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Microfiche Collection of Clearinghouse Documents Reported in Abstracts of Research and Related Materials in Vocational and Technical Education

(ARM)

Compiled and Indexed by The ERIC Clearinghouse
on Vocational and Technical Education

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The Center for Vocational and Technical Education
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INTRODUCTION

This collection of microfiche consists of the documents which are announced with VT number only in the Summer 1969 issue of Abstracts of Research and Related Materials in Vocational and Technical Education (ARM). Microfiche availability is shown in the resume as MF AVAILABLE IN VT-ERIC SET. The documents are grouped in VT number sequence and filmed continuously as a microfiche set. These documents are not available on microfiche as individual items, but are obtainable only through purchase of this set, or from agencies who have this set and have the capability of reproducing microfiche. The microfiche set includes the following sections:

1. Vocational Technical (VT) Number Index to Microfiche Collection of Clearinghouse Documents Reported in ARM, Summer 1969.

2. Selected indexes from ARM, Summer 1969.

   a. Personal and Institutional Author Index.
   b. Vocational and Supporting Services Index.
   c. Subject and Identifier Index.

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3. The full text of documents listed in the Vocational Technical (VT) Number Index to Microfiche Collection of Clearinghouse Documents Reported in ARM, Summer 1969.

VT 004 971 appearing on page 751 of ARM Summer 1969 lists availability as "MF AVAILABLE IN VT-ERIC SET". This statement should be "DOCUMENT NOT AVAILABLE FROM EDRS". Copies of the document are available from Institute for Community Development and Services, Continuing Education Service, Michigan State University, East Lansing, Michigan 48823.

TABLE OF CONTENTS

Introduction ii

Vocational Technical (VT) Number Index
to Microfiche Collection 1

Personal and Institutional Author Index 2

Vocational and Supporting Services Index 18

Subject and Identifier Index 25

Document Texts Listed in Vocational Technical (VT) Number Index
to Microfiche Collection follow in VT-Number Order.

Vocational Technical (VT) Number

Index to Microfiche Collection of Clearinghouse Documents

Reported in ARM, Summer 1969

VT Number	VT Number	VT Number	VT Number	VT Number
VT 000 240	VT 001 680	VT 004 781	VT 005 406	VT 006 566
VT 000 572	VT 001 689	VT 004 831	VT 005 428	VT 006 744
VT 000 602	VT 001 692	VT 004 850	VT 005 477	VT 006 813
VT 000 778	VT 001 693	VT 004 899	VT 005 515	VT 007 279
VT 000 812	VT 001 698	VT 004 900	VT 005 527	VT 007 469
VT 000 830	VT 001 699	VT 004 902	VT 005 555	VT 007 492
VT 001 028	VT 001 703	VT 004 911	VT 005 563	VT 007 567
VT 001 173	VT 001 704	VT 004 921	VT 005 567	VT 007 615
VT 001 191	VT 001 706	VT 004 941	VT 005 572	VT 008 166
VT 001 249	VT 001 707	VT 004 949	VT 005 594	VT 008 167
VT 001 311	VT 001 720	VT 004 951	VT 005 644	VT 008 168
VT 001 328	VT 001 723	VT 004 953	VT 005 730	VT 008 203
VT 001 336	VT 001 745	VT 004 955	VT 005 734	VT 008 205
VT 001 338	VT 001 798	VT 004 958	VT 005 746	VT 008 206
VT 001 430	VT 001 800	VT 004 962	VT 005 747	VT 008 207
VT 001 477	VT 001 801	VT 004 964	VT 005 748	VT 008 208
VT 001 485	VT 001 815	VT 004 965	VT 005 749	VT 008 209
VT 001 515	VT 001 828	VT 004 969	VT 005 750	VT 008 210
VT 001 526	VT 001 838	VT 004 974	VT 005 751	VT 008 211
VT 001 527	VT 001 847	VT 004 975	VT 005 752	VT 008 212
VT 001 528	VT 001 884	VT 004 976	VT 005 753	VT 008 213
VT 001 530	VT 001 888	VT 004 977	VT 005 754	VT 008 214
VT 001 566	VT 001 898	VT 004 994	VT 005 755	VT 008 215
VT 001 567	VT 001 899	VT 004 995	VT 005 756	VT 008 216
VT 001 568	VT 001 902	VT 005 002	VT 005 757	VT 008 217
VT 001 578	VT 001 906	VT 005 004	VT 005 864	VT 008 218
VT 001 579	VT 001 915	VT 005 057	VT 006 140	VT 008 285
VT 001 583	VT 002 139	VT 005 058	VT 006 142	VT 008 387
VT 001 595	VT 002 379	VT 005 125	VT 006 161	
VT 001 596	VT 002 943	VT 005 126	VT 006 220	
VT 001 603	VT 002 981	VT 005 127	VT 006 230	
VT 001 613	VT 003 392	VT 005 175	VT 006 304	
VT 001 617	VT 003 520	VT 005 179	VT 006 310	
VT 001 620	VT 003 780	VT 005 235	VT 006 311	
VT 001 622	VT 003 804	VT 005 250	VT 006 322	
VT 001 623	VT 004 002	VT 005 251	VT 006 375	
VT 001 640	VT 004 571	VT 005 266	VT 006 391	
VT 001 650	VT 004 617	VT 005 296	VT 006 463	
VT 001 658	VT 004 642	VT 005 401	VT 006 563	
VT 001 672	VT 004 678	VT 005 405	VT 006 565	

PERSONAL AND INSTITUTIONAL AUTHOR INDEX

Page

ABBOTT, ELLEN M.
VT 008 206 679
Dynamics of the Organizational Power Structure.

ADAMS, JOHN M., JR., AND OTHERS
VT 001 430 720
A Greenhouse for Vocational Agriculture in Kentucky.

ADMINISTRATIVE MANAGEMENT SOCIETY, BATTLE CREEK, MICH. KALAMAZOO CHAPTER
VT 002 981 692
What the Employer Looks for in the High School Business Graduate.

AMERICAN ASSOCIATION OF TEACHER EDUCATORS IN AGRICULTURE, ST. PAUL, MINN.
VT 005 236 ED 024 775 759
An Anthology of Teacher Education in Agriculture.

AMERICAN EDUCATIONAL RESEARCH ASSOCIATION, WASHINGTON, D.C.
VT 004 955 668
Research Opportunities in Comprehensive Public Junior Colleges--Inter- and Intra-College Organizational Problems.

AMERICAN HOME ECONOMICS ASSOCIATION, WASHINGTON, D.C.
VT 008 085 ED 028 290 755
Selected Bibliography of Theses and Research in Family Economics and Home Management.

AMERICAN INDUSTRIAL ARTS ASSOCIATION, WASHINGTON, D.C.
VT 003 392 737
Contemporary Methods of Teaching Industrial Arts.
VT 005 126 738
The Role of Industrial Arts in Tomorrow's Schools.
VT 005 594 739
New Horizons in Industrial Arts.

AMERICAN PERSONNEL AND GUIDANCE ASSOCIATION, WASHINGTON, D.C.
VT 007 634 ED 025 667 754
National Seminar on Vocational Guidance. 1966. Follow-up Study.
VT 007 635 ED 025 668 754
National Seminar on Vocational Guidance. 1966. Final Report.

AMERICAN SOCIETY FOR ENGINEERING EDUCATION, WASHINGTON, D.C.
VT 005 241 ED 024 776 700
Technician Career Opportunities in Engineering Technology.

AMERICAN VOCATIONAL ASSOCIATION, WASHINGTON, D.C.
VT 001 906 737
Industrial Arts in Education.
VT 002 126 ED 021 965 737
Objectives for Vocational and Technical Education in Agriculture.
VT 002 500 ED 016 788 724
Vocational Education Act of 1963, A Case Study in Legislation.
VT 007 634 ED 025 667 754
National Seminar on Vocational Guidance. 1966. Follow-up Study.
VT 007 635 ED 025 668 754
National Seminar on Vocational Guidance. 1966. Final Report.

AMERICAN VOCATIONAL ASSOCIATION, WASHINGTON, D.C. COMMITTEE ON PUBLICATIONS
VT 001 905 770
Definitions of Terms in Vocational, Technical, and Practical Arts Education.

ANNIS, WILLIAM H.
VT 007 761 ED 027 405 685
A Pilot Study to Determine the Need for Curriculum Modification in Vocational-Technical Education in New Hampshire.

ARCHER, ELOIS
VT 005 754 716
Evaluation Materials in Child Development, Ninth Grade.
VT 005 755 716
Evaluation Materials in Child Development, Eleven and Twelfth Grade.

ARIZONA HEALTH SERVICES EDUCATION ASSOCIATION, PHOENIX
VT 004 002 683
A Functional Analysis of Paramedical Occupations. Condensation of the Final Report.

ARKANSAS UNIV., FAYETTEVILLE. DEPT. OF AGRICULTURAL ECONOMICS AND RURAL SOCIOLOGY
VT 004 962 698
State Plan Inventory. Section 3-A, Projections of Employment for the Year 1980.

ARKANSAS UNIV., LITTLE ROCK. INDUSTRIAL RESEARCH AND EXTENSION CENTER
VT 004 951 751
Vocational Education and Training in Arkansas.
VT 004 962 698
State Plan Inventory. Section 3-A, Projections of Employment for the Year 1980.

ARLINGTON COUNTY PUBLIC SCHOOLS, VA.
VT 001 622 660
Industrial Education: Its Place, Purpose, Objectives, Methods, and Organization in the Arlington County Public Schools.

ARLINGTON COUNTY PUBLIC SCHOOLS, VA. DEPT. OF INDUSTRIAL EDUCATION
VT 000 812 736
Results of Survey to Ascertain if the Arlington County Public Schools' Industrial Education Program is Organized and Attuned to Present Trends.

ARNOLD, JOSEPH P.
VT 003 520 683
A Study of Recommendations for Technical Education Curricula.

BACHMAN, JERALD G., AND OTHERS
VT 004 485 ED 026 463 743
Youth in Transition. Volume I.

BAIL, JOE P.
VT 001 603 749
So You Want to Be an Officer in the F.F.A.

BAINES, THOMAS E.
VT 004 571 712
The Effectiveness of a Distributive Education Preparatory Course on Student Progress in Distributive Education II.

BARKIN, SOLOMON
VT 006 379 ED 024 793 706
Technical Change and Manpower Planning: Co-Ordination at Enterprise Level.

BARLOW, MELVIN L.
VT 001 347 770
A Survey of Junior College Work Experience Education Programs, 1962-1963.
VT 007 492 763
Profiles of Trade and Technical Teachers: Revised Summary Report 1968.
VT 007 615 677
Profiles of Trade and Technical Leaders: Summary Report.

BATTELLE MEMORIAL INSTITUTE, COLUMBUS, OHIO. COLUMBUS LABORATORIES
VT 006 301 ED 024 789 703
A Comparative Study of the Employee Skills/Training Acceptable to Employers Under Varying Degrees of Labor Market Stringencies.

BAUGRUD, KIM JULIUS
VT 006 668 ED 023 869 762
Industrial Education for the Visually Limited.

BAYONNE PUBLIC SCHOOLS, N.J.
VT 005 413 ED 024 777 670
The Application of the Judgmental Procedure to Vocational and Practical Arts Education.

BELL, ARTHUR P.
VT 004 573 ED 022 873 712
Characteristics and Performances of High School Graduates and Non-Graduates in One-Year Programs in the Community College System of Institutions in North Carolina.

BELL, KENNETH D.
VT 004 899 697
Tires and Tubes, Labor Market Developments.

BERMAN, ABRAHAM J.
VT 003 601 ED 026 459 742
The New York State Department of Labor's Manpower Projections for the State and Its Areas: A Preliminary Report on Methodology.

BERMAN, KATRINA V.
VT 001 563 770
Worker-Owned Plywood Companies, An Economic Analysis.

BISHOP, C. E.
VT 002 039 ED 025 585 728
The Epople Left Behind; Seminar on Manpower Policy and Program.

BJORKQUIST, DAVID C.
VT 008 215 718
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. NAITTE Research Committee.

BJORKQUIST, DAVID C., AND OTHERS
VT 006 628 ED 024 801 762
Trade and Industrial Teacher Education: A Research Critique and Model for Action.

PERSONAL AND INSTITUTIONAL AUTHOR INDEX

Page

BOORTZ, NATHAN H.
VT 001 693 682
The Dental Assisting Curriculum--Content and Scope.

BOSTON UNIV., MASS. SCHOOL OF EDUCATION
VT 005 770 ED 024 786 753
Differences in Some Initial Attitudes of Students Who Complete and Students Who Drop Out in the Wellesley, Massachusetts Adult Education Program.

BOTTOMS, GENE
VT 001 338 748
Counselor's Guide to Georgia Area Vocational-Technical Schools.

BOTTOMS, JAMES E.
VT 006 230 673
A Plan for Disseminating Vocational Education Research Materials.

BOUCHARD, ANDRE JOSEPH
VT 004 574 ED 022 874 694
Training Needs of County Agricultural Extension Agents in Quebec, Canada.

BRESINA, BERTHA
VT 005 757 717
Evaluation Materials in Foods for Ninth Grade.

BRONSON, CLEMENT A.
VT 004 530 ED 022 868 759
An Evaluation of Selected Aspects of Agricultural Education Programs in the Inter-Regional Land-Grant Institutions of the United States.

BROWN, GEORGE J., AND OTHERS
VT 008 207 679
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Industrial Arts General Meetings.

BRUN, H. D.
VT 001 640 661
The Ohio Young Farmer Manual.

BRUNNER, KEN AUGUST
VT 002 425 ED 024 759 682
Guide to Organized Occupational Curriculums in Higher Education.

BUCKS COUNTY PUBLIC SCHOOLS, DOYLESTOWN, PA.
VT 005 477 671
New Horizons in Vocational Technical Occupational Education. Summary of a Pennsylvania Conference.

BURCHINAL, LEE G.
VT 004 324 MP 000 380 730
Rural Youth in Crisis.

BUREAU OF EMPLOYMENT SECURITY (DOL), WASHINGTON, D.C.
VT 004 900 697
Department Stores, Labor Market Developments.
VT 004 902 697
Hired Farmworkers in the United States.
VT 004 903 ED 024 769 743
Training and Reference Manual for Job Analysis.
VT 004 921 697
Community Organization for Employment Developments.
VT 004 925 ED 022 888 698
Farm Labor Developments. Employment and Wage Supplement.
VT 006 161 702
Developments in the Community Employment Program.

BUREAU OF EMPLOYMENT SERVICE (DOL), WASHINGTON, D.C.
VT 004 899 697
Tires and Tubes, Labor Market Developments.

BUREAU OF LABOR STATISTICS (DOL), WASHINGTON, D.C.
VT 001 567 690
Area Wage Survey, The Portland, Oregon-Washington, Metropolitan Area, May 1966.
VT 001 568 690
Area Wage Survey, The Greenville, South Carolina, Metropolitan Area, May 1966.
VT 006 374 ED 023 853 705
Occupational Employment Statistics.
VT 006 383 ED 024 794 706
Economic Background to Manpower Planning and Control.

BURTON, JOHN R., AND OTHERS
VT 004 263 ED 022 864 693
A Study of the Opportunities for, Requirements of, and Knowledge, Abilities, and Related Characteristics Needed by Beginning Office Workers in the State of Connecticut.

BUSSEY, ELLEN M.
VT 004 849 ED 024 768 696
Manpower and Employment Policies for Developing Countries.

CALIFORNIA COORDINATING UNIT FOR OCCUPATIONAL RESEARCH AND DEVELOPMENT, SACRAMENTO
VT 002 436 ED 025 587 711
Evaluation in Vocational Education.
VT 007 229 ED 023 908 771
Home Economics Education, Research Summary.

CALIFORNIA STATE DEPT. OF EDUCATION, SACRAMENTO
VT 001 596 660
Technical Education, Title III George-Barden Act (Formerly Title VIII, N.D.E.A.). How to Obtain Approval for Assistance.

CALIFORNIA STATE DEPT. OF EDUCATION, SACRAMENTO. BUREAU OF AGRICULTURAL EDUCATION
VT 001 888 665
Guide for Establishment and Conduct of Local Advisory Committees for Vocational Agricultural Departments.

CALIFORNIA STATE DEPT. OF EDUCATION, SACRAMENTO. BUREAU OF BUSINESS EDUCATION
VT 001 328 659
In-School Work Experience Education for Office Occupations. An Operational Handbook.

CALIFORNIA STATE DEPT. OF EDUCATION, SACRAMENTO. BUREAU OF INDUSTRIAL EDUCATION
VT 001 347 770
A Survey of Junior College Work Experience Education Programs, 1962-1963.
VT 007 492 763
Profiles of Trade and Technical Teachers: Revised Summary Report 1968.
VT 007 615 677
Profiles of Trade and Technical Leaders: Summary Report.

CALIFORNIA STATE DEPT. OF EMPLOYMENT, SACRAMENTO. RESEARCH AND STATISTICS SECTION
VT 004 813 ED 022 885 696
Estimating Agricultural Employment from a Sample of Employers.

CALIFORNIA TEACHERS ASSOCIATION, BURLINGAME. COMMISSION ON EDUCATIONAL POLICY
VT 001 507 ED 021 960 736
Vocational Education in the Public Schools.

CALIFORNIA UNIV., BERKELEY. SCHOOL OF EDUCATION
VT 001 620 660
Employment Trends in Selected Service Occupations in the San Francisco Bay Area.
VT 002 714 ED 024 760 666
Education in the Privately Owned Vocational Schools in Alameda and Contra Costa Counties. Report No. 1967-2.

CALIFORNIA UNIV., LOS ANGELES. DIV. OF VOCATIONAL EDUCATION
VT 001 328 659
In-School Work Experience Education for Office Occupations. An Operational Handbook.
VT 001 347 770
A Survey of Junior College Work Experience Education Programs, 1962-1963.
VT 007 492 763
Profiles of Trade and Technical Teachers: Revised Summary Report 1968.
VT 007 615 677
Profiles of Trade and Technical Leaders: Summary Report.

CALIFORNIA UNIV., LOS ANGELES. INST. OF INDUSTRIAL RELATIONS
VT 006 605 ED 023 864 708
Manpower Planning and Forecasting.

CALLAHAN, LOIS
VT 001 328 659
In-School Work Experience Education for Office Occupations. An Operational Handbook.

CAMPBELL, ROBERT E., AND OTHERS
VT 007 814 ED 026 534 754
Vocational Guidance in Secondary Education. Results of a National Survey.
VT 008 209 755
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Vocational Guidance General Meetings.

CARROLL, ADGER B.
VT 002 183 ED 025 586 691
Costs and Returns for Investments in Technical Schooling by a Group of North Carolina High School Graduates.

CELLEY, LORRAN
VT 001 579 728
Some Programs of Vocational Education for Persons with Special Needs in Wisconsin.

PERSONAL AND INSTITUTIONAL AUTHOR INDEX

Page

CHADDERDON, HESTER
VT 005 747 714
Evaluation Materials in Family Relations, Tenth Grade.
VT 005 748 715
Evaluation Materials in Family Relations, Eleventh and Twelfth Grade.
VT 005 749 715
Evaluation Materials in Housing, Ninth Grade.
VT 005 750 715
Evaluation Materials in Housing, Tenth Grade.
VT 005 751 715
Evaluation Materials in Foods, Tenth Grade.
VT 005 752 716
Evaluation Materials in Clothing, Tenth Grade.
VT 005 753 716
Evaluation Materials in Clothing, Ninth Grade.
VT 005 754 716
Evaluation Materials in Child Development, Ninth Grade.
VT 005 755 716
Evaluation Materials in Child Development, Eleven and Twelfth Grade.
VT 005 756 717
Evaluation Materials in Family Relations, Ninth Grade.
VT 005 757 717
Evaluation Materials in Foods for Ninth Grade.

CHADDERDON, HESTER, AND OTHERS
VT 005 746 714
Estimating the Clothing Construction Ability of 8th, 9th, 10th, and 11/12th Grade Pupils.

CHAMBER OF COMMERCE OF THE UNITED STATES, WASHINGTON, D.C.
VT 005 020 ED 026 470 699
Target: Employment.

CHENEY, HAL C.
VT 001 620 660
Employment Trends in Selected Service Occupations in the San Francisco Bay Area.

CHICAGO UNIV., ILL. NATIONAL OPINION RESEARCH CENTER
VT 005 638 ED 025 600 714
A Nationwide Evaluation of MDTA Institutional Job Training Programs.

CHRISTENSEN, VIRGIL E.
VT 002 335 ED 022 845 742
Special Training Project for Educational Researchers in the Nation's Large Cities. December 1, 1966-January 31, 1967. Final Report.

CHRISTMANN, PHYLLIS ALICE
VT 006 295 ED 026 482 703
Recognized Problems of Single Girls in Iowa Entering the Work World Following High School Graduation.

CITIZENS ADVISORY COUNCIL ON THE STATUS OF WOMEN, WASHINGTON, D.C.
VT 004 665 ED 022 883 696
Equal Employment Opportunities for Women Under Title VII of the Civil Rights Act of 1964.

Page

CLEMSON UNIV., S.C. DEPT. OF AGRICULTURAL EDUCATION
VT 001 899 665
Agricultural File Index.

CLEMSON UNIV., S.C. VOCATIONAL EDUCATION MEDIA CENTER
VT 005 235 670
Tentative Work Material for Occupational Home Economics Programs.

COCHRAN, LESLIE H.
VT 008 215 718
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. NAITTE Research Committee.

COFFEY, PAUL, AND OTHERS
VT 005 730 720
D. E. Classroom Layouts.

COLORADO STATE UNIV., FORT COLLINS
VT 004 845 ED 025 466 731
Mental Health and Manpower Employment Adjustment for Psychiatric Patients.

COLORADO UNIV., BOULDER. BUREAU OF BUSINESS RESEARCH
VT 001 526 689
A Least Squares Analysis of Colorado Nonfarm Employment, 1939-1963, With Projections to 1970.

COLUMBUS AREA VOCATIONAL-TECHNICAL SCHOOL, GA.
VT 004 977 751
Counselor's Manual.

CONGRESS OF THE U.S., WASHINGTON, D.C.
VT 007 323 ED 026 505 677
Vocational Education Amendments of 1968.

CONNECTICUT STATE DEPT. OF EDUCATION, HARTFORD. DIV. OF VOCATIONAL EDUCATION
VT 002 943 682
Potential for Food Handling and Distribution Training in Connecticut.
VT 004 263 ED 022 864 693
A Study of the Opportunities for, Requirements of, and Knowledges, Abilities, and Related Characteristics Needed by Beginning Office Workers in the State of Connecticut.
VT 004 911 667
Standards of Library Services in the Connecticut Vocational-Technical Schools.

CONNECTICUT UNIV., STORRS. SCHOOL OF EDUCATION
VT 004 263 ED 022 864 693
A Study of the Opportunities for, Requirements of, and Knowledges, Abilities, and Related Characteristics Needed by Beginning Office Workers in the State of Connecticut.

CONTRA COSTA COLL., SAN PABLO, CALIF.
VT 001 847 664
They Came to Contra Costa College, 1966-67.

Page

COOK, ALFRED W.
VT 004 994 713
The Navajo Rehabilitation Project, Pre-Vocational Laboratory. Navajo Rehabilitation Project Technical Report No. 8.

COUNCIL FOR DISTRIBUTIVE TEACHER EDUCATION
VT 004 182 ED 022 862 758
Needed Improvements in Distributive Teacher Education.
VT 005 644 760
The Historical Development of a Post High School Distributive Education Program with Implications for Teacher Education.

CUMMENS, W.G.
VT 008 205 678
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Apprenticeship and Manpower Training Programs.

CUSHMAN, HAROLD R.
VT 005 236 ED 024 775 759
An Anthology of Teacher Education in Agriculture.
VT 006 744 676
Organizing and Conducting Young Farmer Programs in New York State.

CUSHMAN, HAROLD R., AND OTHERS
VT 005 938 ED 022 910 672
The Teacher-Coordinator's Manual for Directed Work-Experience Programs in Agriculture.
VT 005 939 ED 022 911 673
The Development and Improvement of Directed Work-Experience Programs in Expanded Vocational Education Offerings in Agriculture at the Secondary School Level. Final Report.
VT 006 447 ED 022 919 674
Guidelines and Procedures: Directed Work-Experience Programs in Vocational Agricultural Education.

DALTON, L.C., AND OTHERS
VT 008 203 678
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Agricultural Education Division General Session.

DECARLO, CHARLES R.
VT 004 592 ED 020 349 695
Systems Design and Nature of Work. Seminar, 1966.

DECKER, JOHN P.
VT 004 002 683
A Functional Analysis of Paramedical Occupations. Condensation of the Final Report.

DELAWARE OCCUPATIONAL RESEARCH AND COORDINATING UNIT, DOVER
VT 007 469 677
Zoned Analysis Techniques in Planning and Curriculum Development.

DENVER UNIV., COLO.
VT 005 937 ED 024 788 732
Operation Gap-Stop: A Study of the Application of Communications Techniques in Reaching the Unreachable Poor. Final Report, Vol. I.

PERSONAL AND INSTITUTIONAL AUTHOR INDEX

Page

VT 007 436 ED 024 816 734
Operation Gap-Stop: A Study of the Application of Communications Techniques in Reaching the Unreachable Poor. Final Report, Vol. II.

DEPARTMENT OF LABOR, WASHINGTON, D.C.
VT 001 025 ED 020 299 658
Manpower Report of the President Including a Report on Manpower Requirements, Resources, Utilization and Training.
VT 005 942 ED 021 142 717
New Perspectives on Manpower Problems and Measures.
VT 005 943 732
Barriers to Employment of the Disadvantaged.
VT 005 944 ED 021 144 701
Bridging the Gap from School to Work.
VT 005 945 ED 021 145 701
Geographic Factors in Employment and Manpower Development.
VT 005 946 ED 021 146 702
Review of Manpower Developments in 1967.
VT 005 947 ED 021 147 673
New Developments in Manpower Programs.

DEWOLFF, PIETER, AND OTHERS
VT 006 365 ED 023 852 705
Wages and Labour Mobility.

DICKINSON-IRON AREA VOCATIONAL EDUCATION STUDY COMMITTEE, MICH.
VT 001 720 663
Vocational-Technical Education Study of Dickinson and Iron Counties of Michigan.

DILLON, ROY D.
VT 006 357 ED 024 792 705
Occupational Commonalities: A Base for Course Construction.

DORFMAN, SHELDON
VT 003 601 ED 026 459 742
The New York State Department of Labor's Manpower Projections for the State and Its Areas: A Preliminary Report on Methodology.

DREXLER, VIOLET
VT 007 917 ED 027 423 686
The Process and Product of Machine Shorthand Programs in New York State Schools.

DROSTE, LEO A.
VT 001 526 689
A Least Squares Analysis of Colorado Nonfarm Employment, 1939-1963, With Projections to 1970.

DUNSING, MARILYN
VT 008 085 ED 028 290 755
Selected Bibliography of Theses and Research in Family Economics and Home Management.

DUPREE, ROBERT LEE
VT 006 602 ED 026 488 675
A Cost-Benefit Study of Post-High School Technical Education in Oklahoma.

Page

EASLEY, JOHN, JR.
VT 004 965 712
Evaluation Problems of the UICSM (University of Illinois Committee on School Mathematics) Curriculum Project.

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VT 007 782 ED 026 533 734
Education, Employment, and Negro Equality.

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VT 001 336 689
Ex-Farm Operators in a Low-Income Area.

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VT 001 477 689
Employers' Needs in Technical Occupations, Northern Virginia.

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VT 005 267 ED 020 414 713
Report on New York State Data from a National Follow-up Study of High School Level T and I Vocational Graduates.

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VT 005 026 ED 023 818 669
Demonstrating Innovations in Vocational Education: Initial Application Submitted to the Office of Education, Department of Health, Education and Welfare: Plans and Operation Grant.

EHRESMAN, NORMAN D.
VT 001 595 659
Suggested Procedures for Planning and Conducting County FFA Cooperative Acquaintanceship Programs.

ELLIOTT, JO ELEANOR
VT 000 836 ED 026 450 766
Toward More Effective Teaching in WCHEN Schools; The Report of a Course in New Training Techniques for Nurse Faculty.

ELSON, DONALD EUGENE
VT 006 910 ED 022 954 745
Abstracts of Studies in Vocational Education.

ELY, VIVIEN KING
VT 005 428 714
Five Year Follow-up Survey of Distributive Education.

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VT 001 828 664
Youth Employment Program of the United States Employment Service.

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VT 001 311 720
Area Vocational-Technical School. Bethlehem Area, Hellertown-Lower Saucon, Northampton Area, Pennsylvania.

ENGINEERS'COUNCIL FOR PROFESSIONAL DEVELOPMENT, NEW YORK, N.Y.
VT 005 241 ED 024 776 700
Technician Career Opportunities in Engineering Technology.

Page

ENINGER, MAX U.
VT 005 267 ED 020 414 713
Report on New York State Data from a National Follow-up Study of High School Level T and I Vocational Graduates.

ENNS, ABRAM, AND OTHERS
VT 002 714 ED 024 760 666
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ERNST, HOWARD E.
VT 004 678 759
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FELDMAN, LLOYD
VT 003 894 ED 022 855 729
The Mentally Retarded: Their Special Training Needs.
VT 003 896 ED 022 856 729
Family Breadwinners: Their Special Training Needs.

FERENCZ, DOROTHY
VT 007 554 ED 026 518 767
A Comparison of a Master Teacher and Instructional Assistants in Automated Shorthand and Typewriting Instruction.

FERNDALE HIGH SCHOOL, MICH. DEPT. OF HOME ECONOMICS
VT 004 781 666
Vocational Training Program for Childcare Aides, Report of Pilot Study.

FERRIS STATE COLL., BIG RAPIDS, MICH.
VT 001 485 758
A Follow-Up Study of the First Fifty Graduates of Trade Technical Education.

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VT 004 617 695
Michigan Technician Needs Study, Summary Report.
VT 005 826 ED 027 375 701
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FINE, SIDNEY A.
VT 003 764 ED 024 762 693
Guidelines for the Design of New Careers. Staff Paper.

FISCUS, KEITH EUGENE
VT 004 559 ED 022 869 693
A Comparison of Certain Knowledges in Agriculture Needed by Workers in Farming.

FISHER, W. HALDER, AND OTHERS
VT 006 301 ED 024 789 703
A Comparative Study of the Employee Skills/Training Acceptable to Employers Under Varying Degrees of Labor Market Stringencies.

FISHMAN, JACOB R.
VT 006 721 ED 022 925 675
Procedural Guide for Program Development in New Careers.

PERSONAL AND INSTITUTIONAL AUTHOR INDEX

Page

FLITTER, HESSEL H.
VT 005 433 ED 022 899 670
Nursing in the South.

FLORIDA STATE DEPT. OF EDUCATION, TALLAHASSEE
VT 000 683 ED 019 395 770
The Florida Study of Vocational-Technical Education.

FLORIDA STATE DEPT. OF EDUCATION, TALLAHASSEE. TECHNICAL AND HEALTH OCCUPATIONS EDUCATION SECTION
VT 006 220 721
Educational Specifications for Practical Nursing Facilities.

FLORIDA STATE UNIV., TALLAHASSEE
VT 004 303 ED 024 763 730
The Development of Pre-Vocational Education Literacy Courses for Use with Computer-Assisted Instruction of Disadvantaged Youths and Adults. Final Report.

FORD FOUNDATION, NEW YORK, N.Y.
VT 004 974 668
Tapestry for Tomorrow, The Ford Foundation Program in the Middle East.

FORT LOGAN MENTAL HEALTH CENTER, DENVER, COLO.
VT 004 845 ED 025 466 731
Mental Health and Manpower Employment Adjustment for Psychiatric Patients.

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VT 007 734 ED 027 403 685
The Feasibility of Teaching History of Technology in Vocational and Pre-Technical Secondary Schools.

FROELICH, LOREN H.
VT 006 503 ED 022 921 762
Factors Related to the Tendency of Iowa State University Agricultural Education Graduates to Not Enter or to Leave the Vocational Agriculture Teaching Profession.

FUKA, GEORGE J.
VT 002 379 665
A Graphic Analysis for the Development of a Master Plan Concept.

FULLER, GERALD R.
VT 007 125 ED 022 966 733
Development of Human Resources Through a Vocationally Oriented Educational Program for Disadvantaged Families in Depressed Rural Areas. Interim Report 3.
VT 007 126 ED 022 967 733
Development of Human Resources Through a Vocationally Oriented Educational Program for Disadvantaged Families in Depressed Rural Areas. Interim Report 2.
VT 007 127 ED 022 968 733
Development of Human Resources Through a Vocationally Oriented Educational Program for Disadvantaged Families in Depressed Rural Areas. Interim Report 1.

GASPARI, CAROLE
VT 004 994 713
The Navajo Rehabilitation Project, Pre-Vocational Laboratory. Navajo Rehabilitation Project Technical Report No. 8.
VT 004 995 713
Education as a Process of Vocational Evaluation. Navajo Rehabilitation Project Technical Report No. 6.

GEORGE WASHINGTON UNIV., WASHINGTON, D.C.
VT 007 249 ED 023 913 740
The Design and Evaluation of Vocational Technical Education Curricula Through Functional Job Analysis.

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VT 006 230 673
A Plan for Disseminating Vocational Education Research Materials.

GEORGIA STATE DEPT. OF EDUCATION, ATLANTA
VT 004 850 720
Industrial Arts Facilities.

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VT 001 338 748
Counselor's Guide to Georgia Area Vocational-Technical Schools.

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VT 003 400 ED 025 458 682
Institute for Home Economics Teachers on Initiating, Developing, and Evaluating Programs at the Post High School Level. Volume I.
VT 007 682 ED 026 524 685
Institute for Home Economics Teachers on Initiating, Developing, and Evaluating Programs at the Post High School Level. Volume II.

GIESE, HARLAN E.
VT 005 125 699
Training Needs for Metal Tradesmen in Iowa.

GILBERT, ARDYCE LUCILE
VT 001 818 ED 026 454 758
Clinical Evaluation of Predictive Data for Prospective Home Economics Teachers.

GREAT CITIES PROGRAM FOR SCHOOL IMPROVEMENT, CHICAGO, ILL. RESEARCH COUNCIL
VT 002 379 665
A Graphic Analysis for the Development of a Master Plan Concept.

GREEN, RALPH
VT 007 472 ED 026 509 684
Development of Multi-Media Programmed Instructional Materials for the Training of Law Enforcement Officers. Final Report.
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Development of Multi-Media Programmed Instructional Materials for the Training of Law Enforcement Officers. Initial Curriculum Study.

GREIBER, C.L., AND OTHERS
VT 008 212 679
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Post Secondary Department General Meetings.

GRIFFITH, JOHN R.
VT 006 813 676
Abstracts of Hospital Management Studies. Volume 4, Number 3.

GUAM DEPT. OF EDUCATION. VOCATIONAL REHABILITATION
VT 004 949 667
Vocational Rehabilitation in America's Outpost in the Central Pacific.

HAILES, CHARLES W.
VT 005 555 744
Establishment of an Occupational Research and Development Coordinating Unit for the State of Rhode Island. Progress Report, January 1 to March 31, 1968.

HAMILTON, JAMES B.
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Youth with Special Needs in Non-Metropolitan Ohio High Schools.

HANKIN, EDWARD K., AND OTHERS
VT 004 303 ED 024 763 630
The Development of Pre-Vocational Education Literacy Courses for Use with Computer-Assisted Instruction of Disadvantaged Youths and Adults. Final Report.

HANUMANTHAPPA, HANUMANTHAPPA SANJEEVAPPA
VT 004 577 737
A Basis for Developing Programs of Adult Farmer Education in India.

HARMS, LOUIS T., AND OTHERS
VT 003 369 MP 000 159 742
Development of Models for Projecting Employment by Industry and by Occupation.

HARRIS, JO ANNE
VT 008 285 755
A Report on Project CVIS (Computerized Vocational Information System) in Operation at Willowbrook High School, Villa Park, Illinois.

HART, EVELYN
VT 005 057 669
Report of 1967 Forum on Homemaker-Home Health Aide Service (New York City, May 4-5, 1967).

HAVENER, CHARLES PAUL
VT 001 723 710
Part-Time Cooperative Industrial Education as Viewed by Cooperating Employers in Ames, Marshalltown and Newton.

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VT 005 405 744
Quarterly Technical Progress Report; Sixth, October 1, 1967 - December 31, 1967.

HAYES, GLENN WARREN
VT 004 578 ED 022 877 766
The Relationship of Socio-Economic Status of Pupils to Their Comprehension of Reference Materials Written at Different Levels of Readability.

HEANEY, DONALD S.
VT 004 579 ED 022 878 694
Off-Farm Agricultural Occupations in Montana: Employment and Education.

PERSONAL AND INSTITUTIONAL AUTHOR INDEX

Page

HEMP, PAUL E.
VT 001 595 659
Suggested Procedures for Planning and Conducting County FFA Cooperative Acquaintanceship Programs.

HENDRIX, VERNON L.
VT 004 955 668
Research Opportunities in Comprehensive Public Junior Colleges--Inter- and Intra-College Organizational Problems.

HENSEL, JAMES W.
VT 006 370 ED 025 616 745
A Planning Study to Determine the Feasibility of a Research Project Concerning Employment Opportunities and Training Needs in Farming and Off-Farm Agricultural Business and Industry.

HESSLER, TORE
VT 006 563 674
The Vocational School System in Sweden.

HILL, ALBERTA D.
VT 006 416 ED 022 918 761
Institute for Home Economics Teacher Educators on Preparing Teachers for Occupational Programs. Final Report.

HOERNER, THOMAS ALLEN
VT 003 579 ED 025 589 692
Factors Related to Employment of Iowa State University Graduates in Agricultural Education.
VT 004 560 ED 022 870 759
Factors Related to Employment of Iowa State University Graduates in Agricultural Education.

HORNBAKE, R. LEE
VT 005 594 739
New Horizons in Industrial Arts.

HORNER, JAMES T.
VT 006 357 ED 024 792 705
Occupational Commonalities: A Base for Course Construction.

HOUSEHOLDER, WILLIAM ALLEN
VT 004 561 711
An Evaluation of Work Experience Programs as an Element of Agricultural Education in a Panamanian School of Agriculture.

HULL, WILLIAM L.
VT 007 304 ED 023 922 763
Personal and Situational Variables which Inhibit or Stimulate the Adoption of Agricultural Occupations Curricula.

HUNSICKER, NORMA ANN
VT 006 296 ED 026 483 703
Management Problems of Young Employed Homemakers.

HUNTER, BILL
VT 005 572 701
Manpower in Oklahoma, State Summary. Preliminary Release.

HURKAMP, ROSEMARY C.
VT 005 770 ED 024 786 753
Differences in Some Initial Attitudes of Students Who Complete and Students Who Drop Out in the Wellesley, Massachusetts Adult Education Program.

IDAHO STATE DEPT. OF EMPLOYMENT, BOISE
VT 000 415 ED 025 582 688
A Survey of Demand in Selected Metalworking Occupations for Major Areas in Idaho.

IHNEN, LOREN A.
VT 002 183 ED 025 586 691
Costs and Returns for Investments in Technical Schooling by a Group of North Carolina High School Graduates.

ILLINOIS STATE BOARD OF VOCATIONAL EDUCATION AND REHABILITATION, SPRINGFIELD. DIV. OF VOCATIONAL AND TECHNICAL EDUCATION
VT 005 567 671
Essentials and Requirements for Reimbursable Office Education Programs, Part I-V. Series B, Bulletin No. 182, Revised.

ILLINOIS UNIV., URBANA. COLL. OF EDUCATION
VT 004 964 668
Administration and the Educational Program.
VT 004 965 712
Evaluation Problems of the UICSM (University of Illinois Committee on School Mathematics) Curriculum Project.
VT 007 125 ED 022 966 733
Development of Human Resources Through a Vocationally Oriented Educational Program for Disadvantaged Families in Depressed Rural Areas. Interim Report 3.
VT 007 126 ED 022 967 733
Development of Human Resources Through a Vocationally Oriented Educational Program for Disadvantaged Families in Depressed Rural Areas. Interim Report 2.
VT 007 127 ED 022 968 733
Development of Human Resources Through a Vocationally Oriented Educational Program for Disadvantaged Families in Depressed Rural Areas. Interim Report 1.

INDIANA MANPOWER RESEARCH ASSOCIATION, LAFAYETTE
VT 003 780 693
Inventory of Manpower Research Projects in Indiana, Number 1.
VT 007 279 746
Inventory of Manpower Research Projects in Indiana.

INDIANA STATE DEPT. OF PUBLIC INSTRUCTION, INDIANAPOLIS. DIV. OF VOCATIONAL EDUCATION
VT 001 680 661
An Administrative Handbook for Vocational Distributive Education in Indiana.

INDIANAPOLIS HOSPITAL DEVELOPMENT ASSOCIATION, IND.
VT 001 801 690
A Summary of Preliminary Findings, Conclusions and Recommendations of a Study of Manpower Requirements and Education and Training Programs of Selected Health Occupations.

INTERNATIONAL LABOUR OFFICE, GENEVA (SWITZERLAND)
VT 006 386 ED 022 052 725
Trends in Training--Six Years of CIRF Abstracts.

INTERSTATE, DANVILLE, ILL.
VT 005 592 753
Your Introduction to Learning by Doing in Vocational Agriculture.

IOWA AGRICULTURE AND HOME ECONOMICS EXPERIMENT STATION, AMES
VT 003 579 ED 025 589 692
Factors Related to Employment of Iowa State University Graduates in Agricultural Education.
VT 005 746 714
Estimating the Clothing Construction Ability of 8th, 9th, 10th, and 11/12th Grade Pupils.
VT 005 747 714
Evaluation Materials in Family Relations, Tenth Grade.
VT 005 748 715
Evaluation Materials in Family Relations, Eleventh and Twelfth Grade.
VT 005 749 715
Evaluation Materials in Housing, Ninth Grade.
VT 005 750 715
Evaluation Materials in Housing, Tenth Grade.
VT 005 751 715
Evaluation Materials in Foods, Tenth Grade.
VT 005 752 716
Evaluation Materials in Clothing, Tenth Grade.
VT 005 753 716
Evaluation Materials in Clothing, Ninth Grade.
VT 005 754 716
Evaluation Materials in Child Development, Ninth Grade.
VT 005 755 716
Evaluation Materials in Child Development, Eleven and Twelfth Grade.
VT 005 756 717
Evaluation Materials in Family Relations, Ninth Grade.
VT 005 757 717
Evaluation Materials in Foods for Ninth Grade.

IOWA BOARD OF DENTAL EXAMINERS
VT 006 463 707
Licensed Dental Hygienists in Iowa.

IOWA STATE DEPT. OF PUBLIC INSTRUCTION, DES MOINES. DIV. OF VOCATIONAL EDUCATION
VT 005 746 714
Estimating the Clothing Construction Ability of 8th, 9th, 10th, and 11/12th Grade Pupils.
VT 005 747 714
Evaluation Materials in Family Relations, Tenth Grade.
VT 005 748 715
Evaluation Materials in Family Relations, Eleventh and Twelfth Grade.
VT 005 749 715
Evaluation Materials in Housing, Ninth Grade.
VT 005 750 715
Evaluation Materials in Housing, Tenth Grade.
VT 005 751 715
Evaluation Materials in Foods, Tenth Grade.
VT 005 752 716
Evaluation Materials in Clothing, Tenth Grade.
VT 005 753 716
Evaluation Materials in Clothing, Ninth Grade.

PERSONAL AND INSTITUTIONAL AUTHOR INDEX

Page

VT 005 754 716
Evaluation Materials in Child Development, Ninth Grade.
VT 005 755 716
Evaluation Materials in Child Development, Eleven and Twelfth Grade.
VT 005 756 717
Evaluation Materials in Family Relations, Ninth Grade.
VT 005 757 717
Evaluation Materials in Foods for Ninth Grade.

IOWA STATE DEPT. OF PUBLIC INSTRUCTION, DES MOINES. VOCATIONAL AGRICULTURE SECTION
VT 003 579 ED 025 589 692
Factors Related to Employment of Iowa State University Graduates in Agricultural Education.

IOWA STATE EMPLOYMENT SERVICE, SIOUX CITY
VT 004 941 698
The Employment Service Goes to an Armour Plant Closing.

IOWA STATE UNIV. OF SCIENCE AND TECHNOLOGY, AMES
VT 001 723 710
Part-Time Cooperative Industrial Education as Viewed by Cooperating Employers in Ames, Marshalltown and Newton.
VT 001 818 ED 026 454 758
Clinical Evaluation of Predictive Data for Prospective Home Economics Teachers.
VT 006 295 ED 026 482 703
Recognized Problems of Single Girls in Iowa Entering the Work World Following High School Graduation.
VT 006 296 ED 026 483 703
Management Problems of Young Employed Homemakers.
VT 006 297 ED 026 484 703
Analysis of Tasks in Three Home Related Occupations.
VT 006 416 ED 022 918 761
Institute for Home Economics Teacher Educators on Preparing Teachers for Occupational Programs. Final Report.

IOWA STATE UNIV. OF SCIENCE AND TECHNOLOGY, AMES. DEPT. OF EDUCATION
VT 003 579 ED 025 589 692
Factors Related to Employment of Iowa State University Graduates in Agricultural Education.
VT 006 503 ED 022 921 762
Factors Related to the Tendency of Iowa State University Agricultural Education Graduates to Not Enter or to Leave the Vocational Agriculture Teaching Profession.

IOWA STATE UNIV. OF SCIENCE AND TECHNOLOGY, AMES. INDUSTRIAL RELATIONS CENTER
VT 006 376 ED 026 485 745
An Interdisciplinary Approach to Manpower Research.
VT 006 759 ED 025 627 676
Comprehensive Health Manpower Planning.

IOWA UNIV., IOWA CITY. DIV. OF MEDICAL SERVICES
VT 002 139 691
A Study of Practical Nurses Who Have Been Licensed in Iowa But Are Not Presently Employed in Iowa as Practical Nurses.

JACOBS, CLINTON O.
VT 004 580 ED 022 879 694
An Analysis of Activities in Farmstead Mechanization Experienced by Selected Farmers and Associated Businesses.

JAKUBAUSKAS, EDWARD B., ED.
VT 006 376 ED 026 485 745
An Interdisciplinary Approach to Manpower Research.

JAMES, RHETT H.
VT 008 166 734
Effective Trade and Industrial Programs for the Disadvantaged Persons with Special Needs.

JANEZECK, ELIZABETH G.
VT 001 249 659
A Survey of Federal Government Publications of Interest to Small Business.

JEFFERSON COUNTY PUBLIC SCHOOLS, LOUISVILLE, KY. DEPT. OF SUPERVISION AND CURRICULUM DEVELOPMENT
VT 001 617 660
Distributive Education in Jefferson County. A Reference Manual for Distributive Education Coordinators.

JEREMIAS, HERMINE, AND OTHERS
VT 008 208 679
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Business and Office Education General Meetings.

JOHNSON, BENTON, AND OTHERS
VT 004 336 ED 025 591 750
Religion and Occupational Behavior; An Annotated Bibliography.

JONES, BRIAN G., AND OTHERS
VT 008 210 718
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Research Section Meetings.

KANSAS STATE BOARD FOR VOCATIONAL EDUCATION, TOPEKA
VT 001 698 662
The Advisory Committee, Organization and Function in Vocational Education.

KANSAS VOCATIONAL EDUCATION RESEARCH COORDINATING UNIT, TOPEKA
VT 006 910 ED 022 954 745
Abstracts of Studies in Vocational Education.

KAPLAN, JEROME
VT 000 240 658
Homemaker-Health Aide Training Project.

KAUFMAN, JACOB J., AND OTHERS
VT 004 685 ED 026 464 743
The Development and Utilization of Human Resources; A Guide for Research.

KAVANAUGH, W.A.
VT 005 767 ED 024 784 761
An Introduction to Teaching Vocational Technical Education.

KEENAN, TERRANCE
VT 004 974 668
Tapestry for Tomorrow, The Ford Foundation Program in the Middle East.

KELLY, JAMES D.
VT 004 617 695
Michigan Technician Needs Study, Summary Report.

KENTUCKY RESEARCH COORDINATING UNIT, LEXINGTON
VT 005 724 ED 024 782 760
A Clinical Workshop in Mental Health and Psychiatric Nursing for Instructors in Schools of Practical Nursing. Final Report.
VT 006 346 ED 024 791 704
Employment Opportunities and Competencies Needed in Farm Occupations in Selected Counties in Kentucky.

KENTUCKY STATE DEPT. OF EDUCATION, FRANKFORT. BUREAU OF VOCATIONAL EDUCATION
VT 005 724 ED 024 782 760
A Clinical Workshop in Mental Health and Psychiatric Nursing for Instructors in Schools of Practical Nursing. Final Report.

KENTUCKY STATE DEPT. OF EDUCATION, FRANKFORT. DIV. OF VOCATIONAL AGRICULTURAL EDUCATION
VT 006 346 ED 024 791 704
Employment Opportunities and Competencies Needed in Farm Occupations in Selected Counties in Kentucky.

KENTUCKY STATE DEPT. OF EDUCATION, FRANKFORT. VOCATIONAL HOME ECONOMICS DIV.
VT 001 699 662
Sketches of Some Recent Laws Affecting Vocational Home Economics Programs.

KENTUCKY UNIV., LEXINGTON
VT 001 613 749
Survey of Pupil Interest in Three Home Economics Related Occupations: Child Care Aide, Clothing Construction Aide, Food Service Occupations.

KISHWAUKEE COMMUNITY COLL. COMMITTEE, ILL.
VT 001 884 665
Kishwaukee Community College Study. Final Report.

KIVETT, VIRA R.
VT 001 630 ED 024 757 749
Educational and Vocational Goals of Rural Youth in North Carolina.

PERSONAL AND INSTITUTIONAL AUTHOR INDEX

Page

KLIEVER, DOUGLAS
VT 002 500 ED 016 788 724
Vocational Education Act of 1963, A Case Study in Legislation.

KNOUSE, RENO S.
VT 004 182 ED 022 862 758
Needed Improvements in Distributive Teacher Education.

KNOX, GHERNOT L.
VT 005 401 743
Massachusetts Vocational Education Research Coordinating Unit, Second Report for the Period October 1 to December 31, 1967.

KOHEN, RAY W.
VT 004 902 697
Hired Farmworkers in the United States.

KOSAKI, RICHARD H.
VT 005 405 744
Quarterly Technical Progress Report; Sixth, October 1, 1967 - December 31, 1967.

KRAMER, ERNEST G., AND OTHERS
VT 008 217 680
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Supervision and Administration.

KREPS, JUANITA M.
VT 005 218 ED 026 472 700
Training and Retraining Older Workers, an Annotated Bibliography.

KUNDEL, LAVONNE
VT 005 751 715
Evaluation Materials in Foods, Tenth Grade.

LAMAR, CARL F., AND OTHERS
VT 005 724 ED 024 782 760
A Clinical Workshop in Mental Health and Psychiatric Nursing for Instructors in Schools of Practical Nursing. Final Report.

LARADON HALL OCCUPATIONAL CENTER, DENVER, COLO.
VT 004 180 MP 000 343 729
The Occupational Success of the Retarded, Critical Factors, Predictive Tests and Remedial Techniques. Summary.

LARSON, MILTON E.
VT 007 370 ED 023 926 722
A Guide for Planning Facilities for Occupational Preparation Programs in the Machine Trades.

LARSON, ROLAND S.
VT 001 173 748
Follow-Up Study of 1963 St. Louis Park Graduates.

LAW, GORDON F.
VT 005 037 ED 016 872 770
Research Visibility. Vocational Education is People--Youth With Special Needs.

LAWS, RALPH
VT 005 218 ED 026 472 700
Training and Retraining Older Workers, an Annotated Bibliography.

Page

LEBO, CHARLES F.
VT 005 175 669
A Manual for Planning and Conducting an Agricultural Mechanics Fair.

LEIN, CHARLES D., COMP.
VT 007 194 ED 026 500 745
Selected Proceedings and Information from the 1967 Summer Workshop in Research in Vocational-Technical Education.

LE RAY, NELSON L.
VT 001 336 689
Ex-Farm Operators in a Low-Income Area.

LETSON, JOHN W., AND OTHERS
VT 008 168 678
Speeches Presented at the National Conference on Exemplary Programs and Projects. (Atlanta, March 12-14, 1969).

LIPHAM, JAMES M.
VT 004 964 668
Administration and the Educational Program.

LITTLE, WAYNE G.
VT 005 644 760
The Historical Development of a Post High School Distributive Education Program with Implications for Teacher Education.

LOCKETTE, RUTHERFORD E.
VT 005 413 ED 024 777 670
The Application of the Judgmental Procedure to Vocational and Practical Arts Education.

LOOMBA, R.P.
VT 005 179 700
A Study of the Re-Employment and Unemployment Experiences of Scientists and Engineers Laid Off from 62 Aerospace and Electronics Firms in the San Francisco Bay Area During 1963-1965, Executive Summary.

LOWE, JAMES L.
VT 003 810 ED 026 461 750
The Northwest Missouri State College Studies; Volume XXVII, Number 3, Educational and Occupational Aspirations of High School Seniors, Part I.
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The Northwest Missouri State College Studies; Volume XXVII, Number 4, Educational and Occupational Aspirations of High School Seniors. Part II.

LUDWICK, WILLIAM E., AND OTHERS
VT 005 732 ED 023 835 683
Greater Utilization of Dental Technicians. Report of Training.
VT 005 733 ED 023 836 672
Greater Utilization of Dental Technicians. II. Report of Clinical Tests.

LYNN, DAVID R.
VT 005 405 744
Quarterly Technical Progress Report; Sixth, October 1, 1967 - December 31, 1967.

Page

MCGEE, IVAN C.
VT 004 564 ED 022 872 694
The Identification and Analysis of Agricultural Occupations in Seventeen Pennsylvania Counties.

MCGILL UNIV., MONTREAL, CANADA. INDUSTRIAL RELATIONS CENTRE
VT 006 727 ED 025 626 739
Human Values and Technological Change, Annual Conference, 1967.

MCGUIRE, JAMES E.
VT 004 581 ED 022 880 683
Teaching Basic Production Economic Principles to Secondary School Students of Vocational Agriculture: An Evaluative Case Study.

MCINTOSH, WILLIAM A.
VT 007 371 ED 023 927 722
A Guide for Planning Facilities for Occupational Preparation Programs in Data Processing.

MCNEELEY, ROBERT F.
VT 001 568 690
Area Wage Survey, The Greenville, South Carolina, Metropolitan Area, May 1966.

MAIN, EARL D.
VT 005 638 ED 025 600 714
A Nationwide Evaluation of MDTA Institutional Job Training Programs.

MALEY, DONALD
VT 003 392 737
Contemporary Methods of Teaching Industrial Arts.
VT 007 031 ED 022 965 717
The Implementation and Further Development of Experimental Cluster Concept Programs. Interim Report.

MANNING, DORIS, ED.
VT 005 254 ED 026 474 738
Recommendations from the White House Conference on Children and Youth for Home Economics Teachers on The Family Today. Part 2.
VT 005 255 ED 026 475 738
Recommendations from the White House Conference on Children and Youth for Home Economics Teachers on The Family Today. Part 1.

MANNING, SARAH L.
VT 008 085 ED 028 290 755
Selected Bibliography of Theses and Research in Family Economics and Home Management.

MANPOWER ADMINISTRATION (DOL), WASHINGTON, D.C.
VT 003 777 ED 023 801 725
The Manpower Development and Training Act: A Review of Training Activities.
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Systems Design and Nature of Work. Seminar, 1966.
VT 006 140 732
Joblessness and Poverty in Urban Slums. A Reprint from the 1967 Manpower Report.
VT 006 390 ED 024 795 707
Manpower Research Institutional Grant Program: Progress Report for July 1, 1966-June 30, 1967.

PERSONAL AND INSTITUTIONAL AUTHOR INDEX

Page

MANPOWER ADMINISTRATION (DOL), WASHINGTON, D.C. BUREAU OF APPRENTICESHIP AND TRAINING
VT 001 021 ED 017 643 724
Apprenticeship Past and Present.

MANPOWER ADMINISTRATION (DOL), WASHINGTON, D.C. INTERNATIONAL MANPOWER INST.
VT 004 849 ED 024 768 696
Manpower and Employment Policies for Developing Countries.

MANPOWER ADMINISTRATION (DOL), WASHINGTON, D.C. OFFICE OF MANPOWER, AUTOMATION AND TRAINING
VT 001 528 736
Training in the Perspective of Technological Change.
VT 005 058 699
Manpower and Immigration.

MANSFIELD MEMORIAL HOMES, INC., OHIO
VT 000 240 658
Homemaker-Health Aide Training Project.

MARSHALL, JANE N.
VT 006 218 ED 026 481 753
Aviation--Where Career Opportunities are Bright; Counselor's Guide.

MARTIN, ANN M.
VT 007 924 ED 026 544 755
A Multimedia Approach to Communicating Occupational Information to Noncollege Youth. Technical Report.

MARTINSON, JOHN, AND OTHERS
VT 007 734 ED 027 403 685
The Feasibility of Teaching History of Technology in Vocational and Pre-Technical Secondary Schools.

MASSACHUSETTS VOCATIONAL EDUCATION RESEARCH COORDINATING UNIT, WOBURN
VT 005 401 743
Massachusetts Vocational Education Research Coordinating Unit, Second Report for the Period October 1 to December 31, 1967.

MATHIS, GILBERT LANDER
VT 004 582 ED 022 881 695
Managerial Perception and Success in Farming.

MAYER, LEON ALBERT
VT 006 470 ED 023 857 707
Occupational Education for Meat Inspection and Laboratory Animal Caretaker Jobs.

MECKLEY, RICHARD F., AND OTHERS
VT 006 618 ED 022 924 721
A Guide for Planning Facilities for Home Economics Occupational Preparation Programs.

MEHTA, M.M.
VT 001 508 ED 021 961 742
Program of Research in the Field of Human Resources Development With Special Reference to Asia and the Far East.

MENDELSOHN, HAROLD, AND OTHERS
VT 005 937 ED 024 788 732
Operation Gap-Stop: A Study of the Application of Communications Techniques in Reaching the Unreachable Poor. Final Report, Vol. I.

Page

VT 007 436 ED 024 816 734
Operation Gap-Stop: A Study of the Application of Communications Techniques in Reaching the Unreachable Poor. Final Report, Vol. II.

MESICS, EMIL A.
VT 006 391 707
Training and Education for Manpower Development.

MEYER, MERLIN
VT 001 567 690
Area Wage Survey, The Portland, Oregon-Washington, Metropolitan Area, May 1966.

MEZOFF, MAURICE W.
VT 001 412 ED 025 451 728
Neighborhood Manpower Programs.

MICHIGAN STATE DEPT. OF EDUCATION, LANSING. DIV. OF VOCATIONAL EDUCATION
VT 005 826 ED 027 375 701
Michigan Technician Need Study. The Present and Projected Demand for Technically Trained People in Michigan.

MICHIGAN STATE DEPT. OF PUBLIC INSTRUCTION, LANSING. DIV. OF VOCATIONAL EDUCATION
VT 003 804 666
Guidelines for Preparatory Programs, Trade and Industrial Services.

MICHIGAN STATE UNIV., EAST LANSING. AGRICULTURAL EXPERIMENT STATION
VT 001 503 ED 026 452 689
Project '80; Rural Michigan Now and in 1980. Economic Prospects of Farmers.

MICHIGAN STATE UNIV., EAST LANSING. DISTRIBUTIVE TEACHER EDUCATION SERVICE
VT 004 182 ED 022 862 758
Needed Improvements in Distributive Teacher Education.

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VT 002 611 ED 023 795 692
Worker Requirements and Methods of Entry into Home and Community Occupations Related to Home Economics.

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VT 004 971 751
The Young Job-Seeker's Guide to Technical Occupations and the Skilled Trades, Michigan, 1966.

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VT 006 813 676
Abstracts of Hospital Management Studies. Volume 4, Number 3.

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VT 004 485 ED 026 463 743
Youth in Transition. Volume I.

Page

MILLS, CHESTER O., AND OTHERS
VT 008 214 680
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Adult Education Department Meetings.

MILWAUKEE INST. OF TECHNOLOGY, WIS. CURRICULUM DEPT.
VT 000 830 658
School Program for Practical Nurses.

MILWAUKEE PUBLIC SCHOOLS, WIS.
VT 001 692 662
Handbook for Home Economics Teachers.

MILWAUKEE SCHOOL OF ENGINEERING, WIS.
VT 002 069 ED 019 429 724
Six Decades of Service, 1903-1963.

MILWAUKEE VOCATIONAL, TECHNICAL AND ADULT SCHOOLS, WIS. CURRICULUM DEPT.
VT 000 830 658
School Program for Practical Nurses.

MINISTRY OF LABOUR, LONDON (ENGLAND)
VT 004 642 696
The Training Specialist in Industry.

MINNESOTA STATE DEPT. OF EDUCATION, ST. PAUL
VT 004 969 751
Careers with the State of Minnesota.

MINNESOTA STATE DEPT. OF EDUCATION, ST. PAUL. VOCATIONAL EDUCATION SECTION
VT 005 767 ED 024 784 761
An Introduction to Teaching Vocational Technical Education.

MINNESOTA UNIV., CROOKSTON. DIV. OF BUSINESS
VT 005 644 760
The Historical Development of a Post High School Distributive Education Program with Implications for Teacher Education.

MISSLING, LORRAINE, ED.
VT 007 501 ED 026 514 767
Selected Readings in Business and Office Occupations--Designed Especially for the Classroom Teacher.

MOORE, JAMES W.
VT 001 515 748
Reducing the School Dropout Rate--A Report on the Holding Power Project.

MORSE, WAYNE
VT 008 216 740
Education for Jobs in a Technological Society.

MURPHY, MARY KAY
VT 006 230 673
A Plan for Disseminating Vocational Education Research Materials.

NAPA COUNTY SUPERINTENDENT OF SCHOOLS, CALIF.
VT 001 527 749
Education and Career Study.

PERSONAL AND INSTITUTIONAL AUTHOR INDEX

Page

NATIONAL AEROSPACE EDUCATION COUNCIL, WASHINGTON, D.C.
VT 006 218 ED 026 481 753
Aviation--Where Career Opportunities are Bright; Counselor's Guide.

NATIONAL BUSINESS EDUCATION ASSOCIATION, WASHINGTON, D.C.
VT 007 499 ED 026 512 767
New Media in Teaching the Business Subjects.
VT 007 501 ED 026 514 767
Selected Readings in Business and Office Occupations--Designed Especially for the Classroom Teacher.

NATIONAL COMMITTEE ON EMPLOYMENT OF YOUTH, NEW YORK, N.Y.
VT 003 981 ED 022 859 729
Help for Out-of-Work Youth; A Manual for a Job Preparation Program in Your Community.

NATIONAL COUNCIL FOR HOMEMAKER SERVICES, INC., NEW YORK, N.Y.
VT 005 057 669
Report of 1967 Forum on Homemaker-Home Health Aide Service (New York City, May 4-5, 1967).
VT 006 322 674
Standards for Homemaker-Home Health Aide Services.

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VT 004 942 ED 024 770 750
Engineering Technology Careers; Career Guidance Information for Engineering Technicians.
VT 005 241 ED 024 776 700
Technician Career Opportunities in Engineering Technology.

NATIONAL COUNCIL ON THE AGING, INC., NEW YORK, N.Y.
VT 005 218 ED 026 472 700
Training and Retraining Older Workers, an Annotated Bibliography.

NATIONAL EDUCATION ASSOCIATION, WASHINGTON, D.C.
VT 005 156 ED 022 892 752
Holding Power/Large City School Systems.

NATIONAL EDUCATION ASSOCIATION, WASHINGTON, D.C. DEPT. OF HOME ECONOMICS
VT 005 254 ED 026 474 738
Recommendations from the White House Conference on Children and Youth for Home Economics Teachers on The Family Today. Part 2.
VT 005 255 ED 026 475 738
Recommendations from the White House Conference on Children and Youth for Home Economics Teachers on The Family Today. Part 1.

NATIONAL HEALTH COUNCIL, NEW YORK, N.Y.
VT 001 566 659
Organizing Comprehensive State Health Careers Councils.

Page

NATIONAL LEAGUE FOR NURSING, NEW YORK, N.Y. DEPT. OF ASSOCIATE DEGREE PROGRAMS
VT 005 213 ED 026 471 670
Criteria for the Evaluation of Educational Programs in Nursing Leading to an Associate Degree.

NATIONAL LEAGUE FOR NURSING, NEW YORK, N.Y. MENTAL HEALTH AND PSYCHIATRIC NURSING ADVISORY SERVICE
VT 002 476 ED 025 588 766
A Study of the Effectiveness of the Case Method in Teaching Interpersonal Relations to Psychiatric Aides.

THE NATIONAL SANITATION FOUNDATION, ANN ARBOR, MICH.
VT 006 409 ED 025 618 761
Program of Teacher Education for Environmental Technology (POTEET).

NATIONAL VOCATIONAL TRAINING COMMISSION, REPUBLIC OF CHINA
VT 007 567 677
A Catalogue of Vocational Training Programmes in Republic of China.

NAVAL TRAINING CENTER, GREAT LAKES, ILL. DENTAL RESEARCH FACILITY
VT 005 732 ED 023 835 683
Greater Utilization of Dental Technicians. Report of Training.
VT 005 733 ED 023 836 672
Greater Utilization of Dental Technicians. II. Report of Clinical Tests.

NEBRASKA AGRICULTURAL EXPERIMENT STATION, LINCOLN
VT 006 357 ED 024 792 705
Occupational Commonalities: A Base for Course Construction.

NEW HAMPSHIRE RESEARCH COORDINATING UNIT FOR VOCATIONAL-TECHNICAL EDUCATION, CONCORD
VT 007 761 ED 027 405 685
A Pilot Study to Determine the Need for Curriculum Modification in Vocational-Technical Education in New Hampshire.

NEW HAMPSHIRE UNIV., DURHAM
VT 007 761 ED 027 405 685
A Pilot Study to Determine the Need for Curriculum Modification in Vocational-Technical Education in New Hampshire.

NEW JERSEY STATE DEPT. OF EDUCATION, TRENTON
VT 005 413 ED 024 777 670
The Application of the Judgmental Procedure to Vocational and Practical Arts Education.

NEW JERSEY STATE DEPT. OF EDUCATION, TRENTON. DIV. OF VOCATIONAL EDUCATION
VT 001 838 664
Developing Human Resources, A Report of Progress in New Jersey Vocational-Technical Education Since January 1965.
VT 007 472 ED 026 509 684
Development of Multi-Media Programmed Instructional Materials for the Training of Law Enforcement Officers. Final Report.

Page

VT 007 473 ED 025 645 684
Development of Multi-Media Programmed Instructional Materials for the Training of Law Enforcement Officers. Initial Curriculum Study.

NEW MEXICO OCCUPATIONAL RESEARCH AND DEVELOPMENT COORDINATING UNIT, SANTA FE
VT 005 406 744
New Mexico Research Coordinating Unit, Progress Report, December 1, 1967 - February 29, 1968.

NEW YORK AGRICULTURAL EXPERIMENT STATION, ITHACA
VT 001 336 689
Ex-Farm Operators in a Low-Income Area.

NEW YORK STATE COLL. OF AGRICULTURE, ITHACA
VT 001 603 749
So you Want to Be an Officer in the F.F.A.

NEW YORK STATE DEPT. OF LABOR, ALBANY. RESEARCH AND STATISTICS OFFICE
VT 004 958 698
Unemployment Insurance Claimants, 1962-1963, Characteristics and Benefit Experience of New York Workers.

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VT 003 601 ED 026 459 742
The New York State Department of Labor's Manpower Projections for the State and Its Areas: A Preliminary Report on Methodology.

NEW YORK STATE EDUCATION DEPT., ALBANY. BUREAU OF GUIDANCE
VT 001 515 748
Reducing the School Dropout Rate--A Report on the Holding Power Project.

NEW YORK STATE EDUCATION DEPT., ALBANY. BUREAU OF OCCUPATIONAL EDUCATION RESEARCH
VT 005 266 713
Report on New York State Data from a National Follow-up Study of High School Level Trade and Industrial Vocational Graduates; An Abstract of the Study.

NEW YORK STATE EDUCATION DEPT., ALBANY. DIV. OF EVALUATION
VT 007 917 ED 027 423 686
The Process and Product of Machine Shorthand Programs in New York State Schools.

NEW YORK STATE EDUCATION DEPT., ALBANY. OFFICE OF RESEARCH AND EVALUATION
VT 005 515 753
Color Perception and Color Blindness.

NEW YORK STATE SCHOOL OF INDUSTRIAL AND LABOR RELATIONS, ITHACA
VT 006 391 707
Training and Education for Manpower Development.

PERSONAL AND INSTITUTIONAL AUTHOR INDEX

Page

NEW YORK UNIV., N.Y. CENTER FOR THE STUDY OF UNEMPLOYED YOUTH
VT 001 412 ED 025 451 728
Neighborhood Manpower Programs.
VT 004 212 ED 022 863 730
Workshop on Nonprofessional Careers for Disadvantaged Youth.

NEWHOUSE, JOHN
VT 006 142 702
Men vs. Machines: Automation in a Wisconsin Community.

NEWPORT NEWS PUBLIC SCHOOLS, VA.
VT 004 571 712
The Effectiveness of a Distributive Education Preparatory Course on Student Progress in Distributive Education II.

NIETUS, WALTER S.
VT 007 031 ED 022 965 717
The Implementation and Further Development of Experimental Cluster Concept Programs. Interim Report.

NIX, JAMES C.
VT 004 902 697
Hired Farmworkers in the United States.

NORTH CAROLINA AGRICULTURAL EXPERIMENT STATION, RALEIGH
VT 001 630 ED 024 757 749
Educational and Vocational Goals of Rural Youth in North Carolina.

NORTH CAROLINA STATE BOARD OF EDUCATION, RALEIGH. DEPT. OF COMMUNITY COLLEGES
VT 001 898 710
Manual for Institutional Self-Study--Community Colleges, Technical Institutes, Industrial Education Centers.

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VT 007 468 ED 025 644 763
Trade and Industrial Teacher Education and Certification: Report of a National Invitational Research Development Seminar.

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VT 001 630 ED 024 757 749
Educational and Vocational Goals of Rural Youth in North Carolina.

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VT 002 183 ED 025 586 691
Costs and Returns for Investments in Technical Schooling by a Group of North Carolina High School Graduates.

NORTHERN ARIZONA UNIV., FLAGSTAFF
VT 004 994 713
The Navajo Rehabilitation Project, Pre-Vocational Laboratory. Navajo Rehabilitation Project Technical Report No. 8.
VT 004 995 713
Education as a Process of Vocational Evaluation. Navajo Rehabilitation Project Technical Report No. 6.

NORTHERN ILLINOIS UNIV., DE KALB
VT 001 884 665
Kishwaukee Community College Study. Final Report.

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VT 001 477 689
Employers' Needs in Technical Occupations, Northern Virginia.

NORTHWEST MISSOURI STATE COLL., MARYVILLE
VT 003 810 ED 026 461 750
The Northwest Missouri State College Studies; Volume XXVII, Number 3, Educational and Occupational Aspirations of High School Seniors, Part I.
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The Northwest Missouri State College Studies; Volume XXVII, Number 4, Educational and Occupational Aspirations of High School Seniors. Part II.

OBION COUNTY CENTRAL HIGH SCHOOL, TROY, TENN.
VT 001 583 728
Summary and Evaluation of the Vocational Special Needs Pilot Program.

O'DONNELL, BEATRICE
VT 002 611 ED 023 795 692
Worker Requirements and Methods of Entry into Home and Community Occupations Related to Home Economics.

OFFICE OF EDUCATION (DHEW), WASHINGTON, D.C.
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The Vocational Education Act of 1963, A Summary of Part A of Public Law 88-210.
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Standard Industrial Classification for Use in Distributive Education.
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Guide to Organized Occupational Curriculums in Higher Education.

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Progress in Technical Vocational Education Programs under Title III of the George-Barden Act, Fiscal Years 1959-1964.

OFFICE OF EDUCATION (DHEW), WASHINGTON, D.C. TECHNICAL EDUCATION BRANCH
VT 001 707 720
Area Vocational Technical Schools and Programs, A Summary of Developments by States.

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VT 004 324 MP 000 380 730
Rural Youth in Crisis.

OFFICE OF MANPOWER, AUTOMATION, AND TRAINING (DOL), WASHINGTON, D.C.
VT 003 894 ED 022 855 729
The Mentally Retarded: Their Special Training Needs.
VT 003 896 ED 022 856 729
Family Breadwinners: Their Special Training Needs.
VT 005 263 ED 025 596 700
The Length of Working Life for Males, 1900-60.

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VT 004 864 ED 026 467 667
The Structure of Technical Training Administration in the United States.

OHIO DEPT. OF INDUSTRIAL RELATIONS, COLUMBUS. DIV. OF WOMEN AND MINORS AND MINIMUM WAGE
VT 001 915 691
A Teenager's Guide in Employment.

OHIO STATE BOARD OF EDUCATION, COLUMBUS
VT 005 864 672
Annual Report to the Governor and the Members of the 107th General Assembly, 1967.

OHIO STATE DEPT. OF EDUCATION, COLUMBUS
VT 005 002 738
A Position Paper on Vocational Education in the Public Schools.

OHIO STATE DEPT. OF EDUCATION, COLUMBUS. DISTRIBUTIVE EDUCATION SERVICE
VT 005 730 720
D. E. Classroom Layouts.

OHIO STATE DEPT. OF EDUCATION, COLUMBUS. DIV. OF GUIDANCE AND TESTING
VT 004 976 751
Ohio Notebook of Public Technical Education Programs, 1965-1966.

OHIO STATE DEPT. OF EDUCATION, COLUMBUS. DIV. OF VOCATIONAL EDUCATION
VT 001 028 658
Procedures for Conducting a Vocational Education Community Study.
VT 001 640 661
The Ohio Young Farmer Manual.
VT 001 650 661
School District Organization. The Vocational School and the Intermediate District.
VT 004 831 667
Projected Program Activities with Estimate of Total Expenditures for Vocational Education--Fiscal Year 1967.

OHIO STATE DEPT. OF EDUCATION, COLUMBUS. DIV. OF VOCATIONAL HOME ECONOMICS
VT 001 706 724
Twenty Years of Progress, 1945-1965. History of the Ohio Association of Future Homemakers of America.

OHIO STATE DEPT. OF EDUCATION, COLUMBUS. HOME ECONOMICS SECTION
VT 001 578 659
Criteria for Determining Approval of Vocational Units and Fractional Units in Home Economics.

OHIO STATE DEPT. OF EDUCATION, COLUMBUS. TRADE AND INDUSTRIAL EDUCATION SERVICE
VT 000 778 710
Trade and Industrial Education Program Analysis Questionnaire.

PERSONAL AND INSTITUTIONAL AUTHOR INDEX

Page

OHIO STATE DEPT. OF EDUCATION, COLUMBUS. VOCATIONAL AGRICULTURE SERVICE
VT 001 689 662
Vocational Agriculture in the Next Five Years, 1963-1968.

OHIO STATE UNIV., COLUMBUS
VT 006 471 ED 022 920 767
A Study of the Block-of-Time Scheduling in the Secondary Business and Office Education Program in Ohio.

OHIO STATE UNIV., COLUMBUS. CENTER FOR VOCATIONAL AND TECHNICAL EDUCATION
VT 002 335 ED 022 845 742
Special Training Project for Educational Researchers in the Nation's Large Cities. December 1, 1966-January 31, 1967. Final Report.
VT 006 370 ED 025 616 745
A Planning Study to Determine the Feasibility of a Research Project Concerning Employment Opportunities and Training Needs in Farming and Off-Farm Agricultural Business and Industry.
VT 006 618 ED 022 924 721
A Guide for Planning Facilities for Home Economics Occupational Preparation Programs.
VT 007 370 ED 023 926 722
A Guide for Planning Facilities for Occupational Preparation Programs in the Machine Trades.
VT 007 371 ED 023 927 722
A Guide for Planning Facilities for Occupational Preparation Programs in Data Processing.
VT 007 468 ED 025 644 763
Trade and Industrial Teacher Education and Certification: Report of a National Invitational Research Development Seminar.
VT 007 725 ED 027 401 722
A Guide for Planning Facilities for Occupational Preparation Programs in Business and Office Occupations.
VT 007 814 ED 026 534 754
Vocational Guidance in Secondary Education. Results of a National Survey.
VT 008 751 ED (See Oct. '69 RIE) 771
Abstracts of Research and Related Materials in Vocational and Technical Education (ARM), Spring 1969
VT 008 784 ED (See Oct. '69 RIE) 771
Microfiche Collection of Clearinghouse Documents Reported in Abstracts of Research and Related Materials in Vocational and Technical Education (ARM), Spring 1969

OHIO STATE UNIV., COLUMBUS. DEPT. OF AGRICULTURAL EDUCATION
VT 001 689 662
Vocational Agriculture in the Next Five Years, 1963-1968.

OHIO STATE UNIV., COLUMBUS. DIV. OF DISTRIBUTIVE EDUCATION
VT 005 730 720
D. E. Classroom Layouts.

OKLAHOMA EMPLOYMENT SECURITY COMMISSION, OKLAHOMA CITY. LABOR MARKET INFORMATION SECTION
VT 005 572 701
Manpower in Oklahoma, State Summary. Preliminary Release.

OKLAHOMA STATE DEPT. OF VOCATIONAL-TECHNICAL EDUCATION, OKLAHOMA CITY
VT 005 572 701
Manpower in Oklahoma, State Summary. Preliminary Release.

Page

OKLAHOMA STATE UNIV., STILLWATER
VT 006 602 ED 026 488 675
A Cost-Benefit Study of Post-High School Technical Education in Oklahoma.

OKLAHOMA STATE UNIV., STILLWATER. RESEARCH FOUNDATION
VT 007 304 ED 023 922 763
Personal and Situational Variables which Inhibit or Stimulate the Adoption of Agricultural Occupations Curricula.

OREGON STATE DEPT. OF EDUCATION, SALEM. DIV. OF COMMUNITY COLLEGES AND VOCATIONAL EDUCATION
VT 008 232 ED 028 301 721
Guide for Planning Industrial Arts Laboratory Facilities.

OREGON UNIV., EUGENE
VT 005 482 ED 024 780 752
Planned and Unplanned Aspects of Occupational Choices by Youth. Final Report.

OREGON UNIV., EUGENE. CENTER FOR RESEARCH IN OCCUPATIONAL PLANNING
VT 004 336 ED 025 591 750
Religion and Occupational Behavior; An Annotated Bibliography.

ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT, PARIS (FRANCE)
VT 000 079 ED 025 581 688
Problems of Manpower in Agriculture.
VT 006 365 ED 023 852 705
Wages and Labour Mobility.
VT 006 377 ED 023 854 706
Manpower Problems in the Service Sector.
VT 006 379 ED 024 793 706
Technical Change and Manpower Planning: Co-ordination at Enterprise Level.
VT 006 380 ED 025 617 706
Workers' Attitudes to Technical Change: An Integrated Survey of Research.
VT 007 260 ED 023 917 708
Enterprise Planning for Change; Co-ordination of Manpower and Technical Planning.

ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT, PARIS (FRANCE). SOCIAL AFFAIRS DIV.
VT 004 963 ED 025 592 699
Adaptation of Rural and Foreign Workers to Industry, International Joint Seminar.

PALOMBA, NEIL A., ED.
VT 006 376 ED 026 485 745
An Interdisciplinary Approach to Manpower Research.

PEEVEY, MICHAEL R.
VT 003 896 ED 022 856 729
Family Breadwinners: Their Special Training Needs.

PENNSYLVANIA STATE DEPT. OF PUBLIC INSTRUCTION, HARRISBURG.
VT 001 623 661
State-Local Plan for Administration of Distributive Education.
VT 004 975 720
A Progress Report on Area Vocational-Technical School Developments to June 30, 1966.
VT 006 375 674
A Progress Report on Area Vocational-Technical School Developments to June 30, 1967.

Page

PENNSYLVANIA STATE DEPT. OF PUBLIC INSTRUCTION, HARRISBURG. BUREAU OF CURRICULUM PLANNING AND SCHOOL EVALUATION
VT 004 176 ED 022 861 711
Evaluative Criteria for Vocational Technical Programs.

PENNSYLVANIA STATE UNIV., PHILADELPHIA. DEPT. OF VOCATIONAL EDUCATION
VT 006 628 ED 024 801 762
Trade and Industrial Teacher Education: A Research Critique and Model for Action.

PENNSYLVANIA STATE UNIV., UNIVERSITY PARK. COLL. OF AGRICULTURE. DEPT. OF AGRICULTURAL EDUCATION
VT 000 572 748
Exploring Careers in Modern Agriculture Related to Land Use and Conservation.

PENNSYLVANIA STATE UNIV., UNIVERSITY PARK. DEPT. OF AGRICULTURAL EDUCATION
VT 005 175 669
A Manual for Planning and Conducting an Agricultural Mechanics Fair.

PENNSYLVANIA STATE UNIV. UNIVERSITY PARK. INST. FOR RESEARCH ON HUMAN RESOURCES
VT 004 685 ED 026 464 743
The Development and Utilization of Human Resources; A Guide for Research.

PENNSYLVANIA UNIV., PHILADELPHIA
VT 005 477 671
New Horizons in Vocational Technical Occupational Education. Summary of a Pennsylvania Conference.

PERKINS, CARL D.
VT 007 323 ED 026 505 677
Vocational Education Amendments of 1968.

PERRIGO, JOSEPH E.
VT 007 761 ED 027 405 685
A Pilot Study to Determine the Need for Curriculum Modification in Vocational-Technical Education in New Hampshire.

PERRY, REGINALD
VT 001 021 ED 017 643 724
Apprenticeship Past and Present.

PHIPPS, LLOYD J.
VT 007 125 ED 022 966 733
Development of Human Resources Through a Vocationally Oriented Educational Program for Disadvantaged Families in Depressed Rural Areas. Interim Report 3.
VT 007 126 ED 022 967 733
Development of Human Resources Through a Vocationally Oriented Educational Program for Disadvantaged Families in Depressed Rural Areas. Interim Report 2.
VT 007 127 ED 022 968 733
Development of Human Resources Through a Vocationally Oriented Educational Program for Disadvantaged Families in Depressed Rural Areas. Interim Report 1.

PERSONAL AND INSTITUTIONAL AUTHOR INDEX

Page

PITTSBURGH UNIV., PA.
VT 007 924 ED 026 544 755
A Multimedia Approach to Communicating Occupational Information to Noncollege Youth. Technical Report.

PLENKE, JOHN R.
VT 001 579 728
Some Programs of Vocational Education for Persons with Special Needs in Wisconsin.

PLUSCH, JAMES OSCAR
VT 000 870 ED 025 583 688
A Study of the Employment Problems and Prospects of a Selected Group of Male Occupationally Oriented High School Graduates.

POLLIARD, FORBES W.
VT 001 801 690
A Summary of Preliminary Findings, Conclusions and Recommendations of a Study of Manpower Requirements and Education and Training Programs of Selected Health Occupations.

THE PRESIDENT'S COMMITTEE ON EMPLOYMENT OF THE HANDICAPPED, WASHINGTON, D.C. WOMEN'S COMMITTEE
VT 004 953 731
Guidelines for Compiling a Directory of Community Services in Rehabilitation and Employment of Handicapped Men and Women.

PRICE, JOEL W.
VT 005 406 744
New Mexico Research Coordinating Unit, Progress Report, December 1, 1967 - February 29, 1968.

PRULL, RICHARD W.
VT 007 488 ED 025 650 763
A Description and Evaluation of Vocational Teacher Training Programs in the State of Rhode Island.

PUBLIC HEALTH SERVICE (DHEW), ARLINGTON, VA. DIV. OF NURSING
VT 005 734 672
Guidelines for Project Grants for Improvement in Nurse Training.

PUBLIC HEALTH SERVICE (DHEW), WASHINGTON, D.C.
VT 005 527 671
Public Health Service Grants for Training Projects, Policy Statement.

PUBLIC HEALTH SERVICE (DHEW), WASHINGTON, D.C. DIV. OF HEALTH MOBILIZATION
VT 005 563 671
Model State Emergency Health Service Plan.

PUBLIC HEALTH SERVICE (DHEW), WASHINGTON, D.C. DIV. OF OCCUPATIONAL HEALTH
VT 004 967 ED 024 772 668
Health Education of Workers.

PUBLIC HEALTH SERVICE (DHEW), WASHINGTON, D.C. NATIONAL CENTER FOR HEALTH STATISTICS
VT 006 578 ED 023 861 708
State Licensing of Health Occupations.

Page

PURDUE UNIV., LAFAYETTE, IND.
VT 003 520 683
A Study of Recommendations for Technical Education Curricula.

REEDER, WILLIAM W.
VT 001 336 689
Ex-Farm Operators in a Low-Income Area.

REESE, ROBERT M.
VT 007 468 ED 025 644 763
Trade and Industrial Teacher Education and Certification: Report of a National Invitational Research Development Seminar.

REINHART, BRUCE
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Occupational Education in the Great Cities.

REYNOLDS, HARRIS W., AND OTHERS
VT 004 176 ED 022 861 711
Evaluative Criteria for Vocational Technical Programs.

RHODE ISLAND OCCUPATIONAL RESEARCH AND DEVELOPMENT COORDINATING UNIT, PROVIDENCE
VT 005 555 744
Establishment of an Occupational Research and Development Coordinating Unit for the State of Rhode Island. Progress Report, January 1 to March 31, 1968.
VT 007 488 ED 025 650 763
A Description and Evaluation of Vocational Teacher Training Programs in the State of Rhode Island.

RHODES, ERIC, AND OTHERS
VT 001 477 689
Employers' Needs in Technical Occupations, Northern Virginia.

RICHMOND PROFESSIONAL INST., VA. SCHOOL OF DISTRIBUTION
VT 005 428 714
Five Year Follow-Up Survey of Distributive Education, 1957-1961.

ROBERTS, ROY W.
VT 004 951 751
Vocational Education and Training in Arkansas.

ROBERTSON, ALAN G.
VT 005 515 753
Color Perception and Color Blindness.

ROCKWELL MANUFACTURING COMPANY, PITTSBURGH, PA.
VT 006 805 ED 026 496 721
School Shop Development: Research and Planning.

SAMSON, HARLAND E.
VT 007 376 ED 023 932 684
Regional Workshops in Project Development for Distributive Education Curricula.

Page

SAN JOSE STATE COLL., CALIF. CENTER FOR INTERDISCIPLINARY STUDIES
VT 005 179 700
A Study of the Re-Employment and Unemployment Experiences of Scientists and Engineers Laid Off from 62 Aerospace and Electronics Firms in the San Francisco Bay Area During 1963-1965, Executive Summary.

SCHAEFFER, GERALDINE
VT 007 472 ED 026 509 684
Development of Multi-Media Programmed Instructional Materials for the Training of Law Enforcement Officers. Final Report.
VT 007 473 ED 025 645 684
Development of Multi-Media Programmed Instructional Materials for the Training of Law Enforcement Officers. Initial Curriculum Study.

SCHREIBER, DANIEL
VT 005 156 ED 022 892 752
Holding Power/Large City School Systems.

SCHROEDER, ERNEST F.
VT 004 900 697
Department Stores, Labor Market Developments.

SEDGWICK, LORRY K.
VT 002 729 ED 024 761 658
Teacher Model; A Model to Guide Curriculum Development for the American Industry Project.

SELDEN, WILLIAM
VT 007 725 ED 027 401 722
A Guide for Planning Facilities for Occupational Preparation Programs in Business and Office Occupations.

SHIPLEY, ANNA FRANCES
VT 006 297 ED 026 484 703
Analysis of Tasks in Three Home Related Occupations.

SHOEMAKER, BYRL R.
VT 005 002 738
A Position Paper on Vocational Education in the Public Schools.

SHONTZ, DAVID F.
VT 000 572 748
Exploring Careers in Modern Agriculture Related to Land Use and Conservation.

SHOTWELL, THOMAS K.
VT 004 568 725
Technology and Educational Reform in Early America.

SIMPSON, ELIZABETH, ED.
VT 005 254 ED 026 474 738
Recommendations from the White House Conference on Children and Youth for Home Economics Teachers on The Family Today. Part 2.
VT 005 255 ED 026 475 738
Recommendations from the White House Conference on Children and Youth for Home Economics Teachers on The Family Today. Part 1.

PERSONAL AND INSTITUTIONAL AUTHOR INDEX

Page

SINGLETARY, THOMAS ALEXANDER
VT 006 674 ED 025 622 762
An Analysis of Metal Finishing Technology and its Status in Industrial Teacher-Education.

SINHA, HARI SHANKER PRASAD
VT 004 569 725
The Development of Agricultural Education in India.

SODOFSKY, STANLEY
VT 004 212 ED 022 863 730
Workshop on Nonprofessional Careers for Disadvantaged Youth.

SOUTH CAROLINA STATE DEPT. OF EDUCATION, COLUMBIA. HOME ECONOMICS EDUCATION SECTION
VT 005 235 670
Tentative Work Material for Occupational Home Economics Programs.

SOUTH CAROLINA STATE DEPT. OF EDUCATION, COLUMBIA. VOCATIONAL AGRICULTURE
VT 001 899 665
Agricultural File Index.

SOUTHERN REGIONAL EDUCATION BOARD, ATLANTA, GA.
VT 005 433 ED 022 899 670
Nursing in the South.

SPERRY, IRWIN V.
VT 001 630 ED 024 757 749
Educational and Vocational Goals of Rural Youth in North Carolina.

SPINTI, ROBERT JAMES
VT 006 672 ED 023 870 726
The Development of Trade and Industrial Education in Wisconsin.

STANISLAUS COUNTY MULTI-OCCUPATIONAL ADULT RETRAINING PROJECT, MODESTO, CALIF.
VT 001 530 710
Nurse Aide Training.

STARR, HAROLD, AND OTHERS
VT 008 213 718
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Department of Research and Evaluation General Meetings.

STATE UNIV. OF NEW YORK, ITHACA, AGRICULTURAL EDUCATION DIV. AT CORNELL UNIV.
VT 005 236 ED 024 775 759
An Anthology of Teacher Education in Agriculture.

STATE UNIV. OF NEW YORK, ITHACA. COLL. OF AGRICULTURE AT CORNELL UNIV.
VT 005 938 ED 022 910 672
The Teacher-Coordinator's Manual for Directed Work-Experience Programs in Agriculture.
VT 005 939 ED 022 911 673
The Development and Improvement of Directed Work-Experience Programs in Expanded Vocational Education Offerings in Agriculture at the Secondary School Level. Final Report.
VT 006 447 ED 022 919 674
Guidelines and Procedures: Directed Work-Experience Programs in Vocational Agricultural Education.

Page

VT 006 744 676
Organizing and Conducting Young Farmer Programs in New York State.

STEAGALL, PAUL HENRY, JR.
VT 006 471 ED 022 920 767
A Study of the Block-of-Time Scheduling in the Secondary Business and Office Education Program in Ohio.

STEPHENSON, DON RAY
VT 001 847 664
They Came to Contra Costa College, 1966-67.

STERLING TOWNSHIP HIGH SCHOOL, ILL.
VT 005 251 752
Vocational Guidance Through Videotaping and Television.

STEVENS, GLENN Z.
VT 000 572 748
Exploring Careers in Modern Agriculture Related to Land Use and Conservation.

STILES, PHILIP G., AND OTHERS
VT 002 943 682
Potential for Food Handling and Distribution Training in Connecticut.

STOUT STATE UNIV., MENOMONIE, WIS.
VT 002 729 ED 024 761 758
Teacher Model; A Model to Guide Curriculum Development for the American Industry Project.

STORM, GEORGE
VT 005 607 ED 025 599 760
The Successful Teacher in Technical Education: The Preparation of the Successful Teacher.

STRINER, HERBERT E.
VT 001 528 736
Training in the Perspective of Technological Change.

SWANSON, EDWIN A., ED.
VT 007 499 ED 026 512 767
New Media in Teaching the Business Subjects.

SWATSLEY, DOLORES E.
VT 002 476 ED 025 588 766
A Study of the Effectiveness of the Case Method in Teaching Interpersonal Relations to Psychiatric Aides.

THE SWEDISH INSTITUTE, STOCKHOLM (SWEDEN)
VT 006 563 674
The Vocational School System in Sweden.
VT 006 565 675
The Municipal Vocational Schools of Stockholm, A Survey.
VT 006 566 675
Vocational Training for Adults in Sweden. Sweden Today.

TAYLOR, ARLIN G.
VT 001 527 749
Education and Career Study.

TEMPLE UNIV., PHILADELPHIA, PA. BUREAU OF ECONOMIC AND BUSINESS RESEARCH
VT 003 369 MP 000 159 742
Development of Models for Projecting Employment of Industry and by Occupation.

Page

TENNESSEE STATE DEPT. OF EDUCATION, NASHVILLE. DIV. OF VOCATIONAL EDUCATION
VT 001 658 690
A Vocational Home Economics Education Survey.

TENNISON, PATSY
VT 005 750 715
Evaluation Materials in Housing, Tenth Grade.

TENOPYR. MARY L.
VT 000 602 766
Race and Socioeconomic Status as Moderators in Predicting Machine-Shop Training Success.

TERRIS, SHIRLEY
VT 006 721 ED 022 925 675
Procedural Guide for Program Development in New Careers.

TEXAS A AND M UNIV., COLLEGE STATION. ENGINEERING EXTENSION SERVICE
VT 001 672 661
Industrial Cooperative Training, A Handbook for Industrial Cooperative Teacher Coordinators.

TEXAS EDUCATION AGENCY, AUSTIN. VOCATIONAL INDUSTRIAL EDUCATION DIV.
VT 001 672 661
Industrial Cooperative Training, A Handbook for Industrial Cooperative Teacher Coordinators.

THOMAS, A.I.
VT 008 166 734
Effective Trade and Industrial Programs for the Disadvantaged Persons with Special Needs.

TONKIN, WILLIAM J.
VT 005 251 752
Vocational Guidance Through Videotaping and Television.

TOURAINE, ALAIN, AND OTHERS
VT 006 380 ED 025 617 706
Workers' Attitudes to Technical Change: An Integrated Survey of Research.

TRAVIS, DOROTHY L., ED.
VT 007 501 ED 026 514 767
Selected Readings in Business and Office Occupations--Designed Especially for the Classroom Teacher.

TRENTON STATE COLL., N.J.
VT 005 413 ED 024 777 670
The Application of the Judgmental Procedure to Vocational and Practical Arts Education.

TROUTMAN, FRANK H.
VT 004 951 751
Vocational Education and Training in Arkansas.

TURNER, ROBERT E.
VT 005 572 701
Manpower in Oklahoma, State Summary. Preliminary Release.

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VT 001 508 ED 0[illegible] 961 742
Program of Research in the Field of Human Resources Development With Special Reference to Asia and the Far East.

PERSONAL AND INSTITUTIONAL AUTHOR INDEX

Page

UNIVERSITY OF NORTHERN IOWA, CEDAR FALLS
VT 005 125 699
Training Needs for Metal Tradesmen in Iowa.

UNIVERSITY RESEARCH CORP., WASHINGTON, D.C. INFORMATION CLEARINGHOUSE
VT 006 721 ED 022 925 675
Procedural Guide for Program Development in New Careers.

URJOHN (W.E.) INST. FOR EMPLOYMENT RESEARCH, KALAMAZOO, MICH.
VT 003 764 ED 024 762 693
Guidelines for the Design of New Careers. Staff Paper.

VAN TRUMP, W.F.
VT 001 485 758
A Follow-Up Study of the First Fifty Graduates of Trade Technical Education.

VENTURA COUNTY VOCATIONAL RESOURCES COMMITTEE, CALIF.
VT 005 127 699
Occupational Information Conference Report (Oxnard, California, October 11, 1967).

VERY, PHILIP S.
VT 005 555 744
Establishment of an Occupational Research and Development Coordinating Unit for the State of Rhode Island. Progress Report, January 1 to March 31, 1968.
VT 007 488 ED 025 650 763
A Description and Evaluation of Vocational Teacher Training Programs in the State of Rhode Island.

VIRGINIA DEPT. OF COMMUNITY COLLEGES, RICHMOND
VT 001 477 689
Employers' Needs in Technical Occupations, Northern Virginia.

VOCATIONAL REHABILITATION ADMINISTRATION (DHEW), WASHINGTON, D.C. DIV. OF STATISTICS AND STUDIES
VT 004 972 ED 026 469 712
Statistics in Vocational Rehabilitation. Proceedings of a Seminar, 1966.

WARMBROD, ROBERT J., AND OTHERS
VT 008 218 680
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Board Members Meeting.

WASHINGTON DEPT. OF EMPLOYMENT SECURITY, SEATTLE. RESEARCH AND STATISTICS SECTION
VT 002 491 ED 022 848 691
Youth in the Labor Market.

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VT 001 745 663
Code Book of Industries, Occupations and Course Titles.

WASHINGTON STATE UNIV., PULLMAN. BUREAU OF ECONOMIC AND BUSINESS RESEARCH
VT 001 563 770
Worker-Owned Plywood Companies, An Economic Analysis.

Page

WASHINGTON STATE UNIV. PRESS, PULLMAN
VT 001 563 770
Worker-Owned Plywood Companies, An Economic Analysis.

WAYNE STATE UNIV., DETROIT, MICH. INDUSTRIAL EDUCATION DEPT.
VT 001 440 ED 024 755 748
Project PIT; A Summer Industrial Work Experience and Occupational Guidance Program.

WEBER, EARL M.
VT 005 126 738
The Role of Industrial Arts in Tomorrow's Schools.

WEDDERBURN, DOROTHY
VT 007 260 ED 023 917 708
Enterprise Planning for Change; Co-ordination of Manpower and Technical Planning.

WEINBERG, PAUL, ED., AND OTHERS
VT 006 727 ED 025 626 739
Human Values and Technological Change, Annual Conference, 1967.

WELTZHEIMER, O.C., AND OTHERS
VT 001 698 662
The Advisory Committee, Organization and Function in Vocational Education.

WEST VIRGINIA STATE DEPT. OF EDUCATION, CHARLESTON. BUREAU OF VOCATIONAL, TECHNICAL, AND ADULT EDUCATION
VT 001 902 711
Evaluative Criteria for Vocational Agriculture Programs.

WEST VIRGINIA STATE DEPT. OF EDUCATION, CHARLESTON. BUSINESS EDUCATION SERVICE
VT 001 703 662
Criteria, Standards and Policies for Vocational Business and Office Education.

WESTERN INTERSTATE COMMISSION FOR HIGHER EDUCATION, BOULDER, COLO.
VT 000 836 ED 026 450 766
Toward More Effective Teaching in WCHEN Schools; The Report of a Course in New Training Techniques for Nurse Faculty.

WICK, S.K.
VT 005 767 ED 024 784 761
An Introduction to Teaching Vocational Technical Education.

WIERSTEINER, S.R.
VT 008 205 678
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Apprenticeship and Manpower Training Programs.

WILLIAMS, DAVID L.
VT 007 304 ED 023 922 763
Personal and Situational Variables which Inhibit or Stimulate the Adoption of Agricultural Occupations Curricula.

WILLOWBROOK HIGH SCHOOL, VILLA PARK, ILL.
VT 005 250 752
Computerized Vocational Information System (CVIS).

Page

WIMAN, ANNA
VT 006 566 675
Vocational Training for Adults in Sweden. Sweden Today.

WISCONSIN STATE BOARD OF VOCATIONAL, TECHNICAL AND ADULT EDUCATION, MADISON
VT 001 579 728
Some Programs of Vocational Education for Persons with Special Needs in Wisconsin.
VT 001 704 663
Long Range Plans, Wisconsin State Board of Vocational, Technical and Adult Education.

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VT 001 191 688
Seven Basic Areas of the World of Work; Introduction and Summary.

WISCONSIN UNIV., MADISON
VT 007 310 ED 026 504 676
Vocational Education.

WISCONSIN UNIV., MADISON. CENTER FOR PRODUCTIVITY MOTIVATION
VT 006 142 702
Men vs. Machines: Automation in a Wisconsin Community.

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VT 005 296 771
Selected List of Acquisitions. Vol. 1, No. 1-4.

WISCONSIN UNIV., MADISON. SCHOOL OF EDUCATION
VT 007 375 ED 023 931 683
Workshop Report: Distributive Education Project Development Workshop, June 19-30, 1967.
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Workshop Report: Distributive Education Project Development Workshop, July 30-August 11, 1967.

WITHEROW, MARY, AND OTHERS
VT 008 211 679
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Secondary Department General Meetings.

WOMEN'S BUREAU (DOL), WASHINGTON, D.C.
VT 006 304 704
Report of Conference on Unions and the Changing Status of Women Workers, 1964.
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Report of Statewide Meeting of the Governor's Commission on the Status of Women, 1964.
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Report of Arrowhead Regional Conference on the Status of Women in Northern Minnesota (Duluth, Minn., July 17, 1964).

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VT 007 194 ED 026 500 745
Selected Proceedings and Information from the 1967 Summer Workshop in Research in Vocational-Technical Education.

PERSONAL AND INSTITUTIONAL AUTHOR INDEX

Page

YAGI, KAN, AND OTHERS
VT 007 249 ED 023 913 740
The Design and Evaluation of Vocational Technical Education Curricula Through Functional Job Analysis.

YARBOROUGH, RALPH
VT 008 167 678
Tomorrow, Today.

YOUNG, ROBERT C.
VT 005 004 669
Planning for Technical Education in the CMD (Calcutta Metropolitan District), an Outline.

ZAHAREVITZ, WALTER
VT 006 218 ED 026 481 753
Aviation--Where Career Opportunities are Bright; Counselor's Guide.

ZANCANELLA, JAMES, COMP.
VT 007 194 ED 026 500 745
Selected Proceedings and Information from the 1967 Summer Workshop in Research in Vocational-Technical Education.

VOCATIONAL AND SUPPORTING SERVICES INDEX

Page

AGRICULTURAL EDUCATION

VT 000 572 748
Exploring Careers in Modern Agriculture Related to Land Use and Conservation.

VT 001 430 720
A Greenhouse for Vocational Agriculture in Kentucky.

VT 001 595 659
Suggested Procedures for Planning and Conducting County FFA Cooperative Acquaintanceship Programs.

VT 001 603 749
So You Want to Be an Officer in the F.F.A.

VT 001 640 661
The Ohio Young Farmer Manual.

VT 001 689 662
Vocational Agriculture in the Next Five Years, 1963-1968.

VT 001 888 665
Guide for Establishment and Conduct of Local Advisory Committees for Vocational Agricultural Departments.

VT 001 899 665
Agricultural File Index.

VT 001 902 711
Evaluative Criteria for Vocational Agriculture Programs.

VT 002 126 ED 021 965 737
Objectives for Vocational and Technical Education in Agriculture.

VT 003 579 ED 025 589 692
Factors Related to Employment of Iowa State University Graduates in Agricultural Education.

VT 004 530 ED 022 868 759
An Evaluation of Selected Aspects of Agricultural Education Programs in the Inter-Regional Land-Grant Institutions of the United States.

VT 004 559 ED 022 869 693
A Comparison of Certain Knowledges in Agriculture Needed by Workers in Farming.

VT 004 560 ED 022 870 759
Factors Related to Employment of Iowa State University Graduates in Agricultural Education.

VT 004 561 711
An Evaluation of Work Experience Programs as an Element of Agricultural Education in a Panamanian School of Agriculture.

VT 004 564 ED 022 872 694
The Identification and Analysis of Agricultural Occupations in Seventeen Pennsylvania Counties.

VT 004 568 725
Technology and Educational Reform in Early America.

VT 004 569 725
The Development of Agricultural Education in India.

VT 004 574 ED 022 874 694
Training Needs of County Agricultural Extension Agents in Quebec, Canada.

VT 004 577 737
A Basis for Developing Programs of Adult Farmer Education in India.

VT 004 578 ED 022 877 766
The Relationship of Socio-Economic Status of Pupils to Their Comprehension of Reference Materials Written at Different Levels of Readability.

VT 004 579 ED 022 878 694
Off-Farm Agricultural Occupations in Montana: Employment and Education.

VT 004 580 ED 022 879 694
An Analysis of Activities in Farmstead Mechanization Experienced by Selected Farmers and Associated Businesses.

VT 004 581 ED 022 880 683
Teaching Basic Production Economic Principles to Secondary School Students of Vocational Agriculture: An Evaluative Case Study.

VT 004 582 ED 022 881 695
Managerial Perception and Success in Farming.

VT 004 813 ED 022 885 696
Estimating Agricultural Employment from a Sample of Employers.

VT 004 902 697
Hired Farmworkers in the United States.

VT 004 925 ED 022 888 698
Farm Labor Developments. Employment and Wage Supplement.

VT 005 175 669
A Manual for Planning and Conducting an Agricultural Mechanics Fair.

VT 005 236 ED 024 775 759
An Anthology of Teacher Education in Agriculture.

VT 005 592 753
Your Introduction to Learning by Doing in Vocational Agriculture.

VT 005 938 ED 022 910 672
The Teacher-Coordinator's Manual for Directed Work-Experience Programs in Agriculture.

VT 005 939 ED 022 911 673
The Development and Improvement of Directed Work-Experience Programs in Expanded Vocational Education Offerings in Agriculture at the Secondary School Level. Final Report.

VT 006 346 ED 024 791 704
Employment Opportunities and Competencies Needed in Farm Occupations in Selected Counties in Kentucky.

VT 006 370 ED 025 616 745
A Planning Study to Determine the Feasibility of a Research Project Concerning Employment Opportunities and Training Needs in Farming and Off-Farm Agricultural Business and Industry.

VT 006 447 ED 022 919 674
Guidelines and Procedures: Directed Work-Experience Programs in Vocational Agricultural Education.

VT 006 470 ED 023 857 707
Occupational Education for Meat Inspection and Laboratory Animal Caretaker Jobs.

VT 006 503 ED 022 921 762
Factors Related to the Tendency of Iowa State University Agricultural Education Graduates to Not Enter or to Leave the Vocational Agriculture Teaching Profession.

VT 006 744 676
Organizing and Conducting Young Farmer Programs in New York State.

VT 007 304 ED 023 922 763
Personal and Situational Variables which Inhibit or Stimulate the Adoption of Agricultural Occupations Curricula.

VT 008 203 678
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Agricultural Education Division General Session.

BUSINESS AND OFFICE EDUCATION

VT 001 249 659
A Survey of Federal Government Publications of Interest to Small Business.

VT 001 328 659
In-School Work Experience Education for Office Occupations. An Operational Handbook.

VT 001 703 662
Criteria, Standards and Policies for Vocational Business and Office Education.

VT 002 981 692
What the Employer Looks for in the High School Business Graduate.

VT 004 263 ED 022 864 693
A Study of the Opportunities for, Requirements of, and Knowledges, Abilities, and Related Characteristics Needed by Beginning Office Workers in the State of Connecticut.

VT 005 567 671
Essentials and Requirements for Reimbursable Office Education Programs, Part I-V.

VT 006 471 ED 022 920 767
A Study of the Block-of-Time Scheduling in the Secondary Business and Office Education Program in Ohio.

VT 007 371 ED 023 927 722
A Guide for Planning Facilities for Occupational Preparation Programs in Data Processing.

VT 007 499 ED 026 512 767
New Media in Teaching the Business Subjects.

VT 007 501 ED 026 514 767
Selected Readings in Business and Office Occupations--Designed Especially for the Classroom Teacher.

VT 007 554 ED 026 518 767
A Comparison of a Master Teacher and Instructional Assistants in Automated Shorthand and Typewriting Instruction.

VT 007 725 ED 027 401 722
A Guide for Planning Facilities for Occupational Preparation Programs in Business and Office Occupations.

VT 007 917 ED 027 423 686
The Process and Product of Machine Shorthand Programs in New York State Schools.

VT 008 208 679
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Business and Office Education General Meetings.

DISTRIBUTIVE EDUCATION

VT 001 617 660
Distributive Education in Jefferson County. A Reference Manual for Distributive Education Coordinators.

VT 001 623 661
State-Local Plan for Administration of Distributive Education.

VOCATIONAL AND SUPPORTING SERVICES INDEX

Page

VT 001 680 661
An Administrative Handbook for Vocational Distributive Education in Indiana.
VT 001 800 663
Standard Industrial Classification for Use in Distributive Education.
VT 002 943 682
Potential for Food Handling and Distribution Training in Connecticut.
VT 004 182 ED 022 862 758
Needed Improvements in Distributive Teacher Education.
VT 004 571 712
The Effectiveness of a Distributive Education Preparatory Course on Student Progress in Distributive Education II.
VT 005 428 714
Five Year Follow-up Survey of Distributive Education. 1957-1961.
VT 005 644 760
The Historical Development of a Post High School Distributive Education Program with Implications for Teacher Education.
VT 005 730 720
D. E. Classroom Layouts.
VT 007 375 ED 023 931 683
Workshop Report: Distributive Education Project Development Workshop. June 19-30, 1967.
VT 007 376 ED 023 932 684
Regional Workshops in Project Development for Distributive Education Curricula.
VT 007 377 ED 023 933 684
Workshop Report: Distributive Education Project Development Workshop. July 30-August 11, 1967.

HEALTH OCCUPATIONS EDUCATION
VT 000 240 658
Homemaker-Health Aide Training Project.
VT 000 830 658
School Program for Practical Nurses.
VT 000 836 ED 026 450 766
Toward More Effective Teaching in WCHEN Schools; The Report of a Course in New Training Techniques for Nurse Faculty.
VT 001 530 710
Nurse Aide Training.
VT 001 566 659
Organizing Comprehensive State Health Careers Councils.
VT 001 693 682
The Dental Assisting Curriculum--Content and Scope.
VT 001 801 690
A Summary of Preliminary Findings, Conclusions and Recommendations of a Study of Manpower Requirements and Education and Training Programs of Selected Health Occupations.
VT 002 139 691
A Study of Practical Nurses Who Have Been Licensed in Iowa But Are Not Presently Employed in Iowa as Practical Nurses.
VT 002 476 ED 025 588 766
A Study of the Effectiveness of the Case Method in Teaching Interpersonal Relations to Psychiatric Aides.
VT 004 002 683
A Functional Analysis of Paramedical Occupations. Condensation of the Final Report.

Page

VT 004 967 ED 024 772 668
Health Education of Workers.
VT 005 057 669
Report of 1967 Forum on Homemaker-Home Health Aide Service (New York City, May 4-5, 1967).
VT 005 213 ED 026 471 670
Criteria for the Evaluation of Educational Programs in Nursing Leading to an Associate Degree.
VT 005 433 ED 022 899 670
Nursing in the South.
VT 005 527 671
Public Health Service Grants for Training Projects, Policy Statement.
VT 005 563 671
Model State Emergency Health Service Plan.
VT 005 724 ED 024 782 760
A Clinical Workshop in Mental Health and Psychiatric Nursing for Instructors in Schools of Practical Nursing. Final Report.
VT 005 732 ED 023 835 683
Greater Utilization of Dental Technicians. Report of Training.
VT 005 733 ED 023 836 672
Greater Utilization of Dental Technicians. II. Report of Clinical Tests.
VT 005 734 672
Guidelines for Project Grants for Improvement in Nurse Training.
VT 006 220 721
Educational Specifications for Practical Nursing Facilities.
VT 006 322 674
Standards for Homemaker-Home Health Aide Services.
VT 006 409 ED 025 618 761
Program of Teacher Education for Environmental Technology (POTEET).
VT 006 463 707
Licensed Dental Hygienists in Iowa.
VT 006 578 ED 023 861 708
State Licensing of Health Occupations.
VT 006 759 ED 025 627 676
Comprehensive Health Manpower Planning.
VT 006 813 676
Abstracts of Hospital Management Studies. Volume 4, Number 3.

HOME ECONOMICS EDUCATION
VT 001 578 659
Criteria for Determining Approval of Vocational Units and Fractional Units in Home Economics.
VT 001 613 749
Survey of Pupil Interest in Three Home Economics Related Occupations: Child Care Aide, Clothing Construction Aide, Food Service Occupations.
VT 001 658 690
A Vocational Home Economics Education Survey.
VT 001 692 662
Handbook for Home Economics Teachers.
VT 001 699 662
Sketches of Some Recent Laws Affecting Vocational Home Economics Programs.
VT 001 706 724
Twenty Years of Progress, 1945-1965. History of the Ohio Association of Future Homemakers of America.
VT 001 818 ED 026 454 758
Clinical Evaluation of Predictive Data for Prospective Home Economics Teachers.

Page

VT 002 611 ED 023 795 692
Worker Requirements and Methods of Entry into Home and Community Occupations Related to Home Economics.
VT 003 400 ED 025 458 682
Institute for Home Economics Teachers on Initiating, Developing, and Evaluating Programs at the Post High School Level. Volume I.
VT 004 781 666
Vocational Training Program for Childcare Aides, Report of Pilot Study.
VT 005 235 670
Tentative Work Material for Occupational Home Economics Programs.
VT 005 254 ED 026 474 738
Recommendations from the White House Conference on Children and Youth for Home Economics Teachers on The Family Today. Part 2.
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Recommendations from the White House Conference on Children and Youth for Home Economics Teachers on The Family Today. Part 1.
VT 005 746 714
Estimating the Clothing Construction Ability of 8th, 9th, 10th, and 11/12th Grade Pupils.
VT 005 747 714
Evaluation Materials in Family Relations, Tenth Grade.
VT 005 748 715
Evaluation Materials in Family Relations, Eleventh and Twelfth Grade.
VT 005 749 715
Evaluation Materials in Housing, Ninth Grade.
VT 005 750 715
Evaluation Materials in Housing, Tenth Grade.
VT 005 751 715
Evaluation Materials in Foods, Tenth Grade.
VT 005 752 716
Evaluation Materials in Clothing, Tenth Grade.
VT 005 753 716
Evaluation Materials in Clothing, Ninth Grade.
VT 005 754 716
Evaluation Materials in Child Development, Ninth Grade.
VT 005 755 716
Evaluation Materials in Child Development, Eleven and Twelfth Grade.
VT 005 756 717
Evaluation Materials in Family Relations, Ninth Grade.
VT 005 757 717
Evaluation Materials in Foods for Ninth Grade.
VT 006 295 ED 026 482 703
Recognized Problems of Single Girls in Iowa Entering the Work World Following High School Graduation.
VT 006 296 ED 026 483 703
Management Problems of Young Employed Homemakers.
VT 006 297 ED 026 484 703
Analysis of Tasks in Three Home Related Occupations.
VT 006 416 ED 022 918 761
Institute for Home Economics Teacher Educators on Preparing Teachers for Occupational Programs. Final Report.

Page

VT 006 618 ED 022 924 721
A Guide for Planning Facilities for Home Economics Occupational Preparation Programs.
VT 007 229 ED 023 908 771
Home Economics Education, Research Summary.
VT 007 682 ED 026 524 685
Institute for Home Economics Teachers on Initiating, Developing, and Evaluating Programs at the Post High School Level. Volume II.
VT 008 085 ED 028 290 755
Selected Bibliography of Theses and Research in Family Economics and Home Management.

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VT 000 812 736
Results of Survey to Ascertain if the Arlington County Public Schools' Industrial Education Program is Organized and Attuned to Present Trends.
VT 001 906 737
Industrial Arts in Education.
VT 002 729 ED 024 761 758
Teacher Model; A Model to Guide Curriculum Development for the American Industry Project.
VT 003 392 737
Contemporary Methods of Teaching Industrial Arts.
VT 004 850 720
Industrial Arts Facilities.
VT 005 126 738
The Role of Industrial Arts in Tomorrow's Schools.
VT 005 594 739
New Horizons in Industrial Arts.
VT 006 674 ED 025 622 762
An Analysis of Metal Finishing Technology and its Status in Industrial Teacher-Education.
VT 006 805 ED 026 496 721
School Shop Development: Research and Planning.
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VT 001 025 ED 020 299 658
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VT 001 191 688
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VT 001 526 689
A Least Squares Analysis of Colorado Nonfarm Employment, 1939-1963, With Projections to 1970.

Page

VT 001 528 736
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VT 001 563 770
Worker-Owned Plywood Companies, An Economic Analysis.
VT 001 567 690
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VT 001 915 691
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VT 002 039 ED 025 585 728
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VT 004 899 697
Tires and Tubes, Labor Market Developments.
VT 004 900 697
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VT 004 921 697
Community Organization for Employment Development.
VT 004 941 698
The Employment Service Goes to an Armour Plant Closing.
VT 004 958 698
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Manpower and Immigration.
VT 005 179 700
A Study of the Re-Employment and Unemployment Experiences of Scientists and Engineers Laid Off from 62 Aerospace and Electronics Firms in the San Francisco Bay Area During 1963-1965, Executive Summary.

Page

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The Length of Working Life for Males, 1900-60.
VT 005 572 701
Manpower in Oklahoma, State Summary. Preliminary Release.
VT 005 942 ED 021 142 717
New Perspectives on Manpower Problems and Measures.
VT 005 943 732
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VT 005 944 ED 021 144 701
Bridging the Gap from School to Work.
VT 005 945 ED 021 145 701
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VT 005 946 ED 021 146 702
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VT 005 947 ED 021 147 673
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VT 006 140 732
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Education, Employment, and Negro Equality.

OCCUPATIONAL PSYCHOLOGY
VT 001 338 748
Counselor's Guide to Georgia Area Vocational-Technical Schools.

VOCATIONAL AND SUPPORTING SERVICES INDEX

Page

VT 004 180 729
The Occupational Success of the Retarded, Critical Factors, Predictive Tests and Remedial Techniques. Summary.

OCCUPATIONAL SOCIOLOGY
VT 001 336 689
Ex-Farm Operators in a Low-Income Area.
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Guide to Organized Occupational Curriculums in Higher Education.
VT 003 520 683
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Technician Education Yearbook, 1963-1964.

Page

VT 004 864 ED 026 467 667
The Structure of Technical Training Administration in the United States.
VT 004 942 ED 024 770 750
Engineering Technology Careers; Career Guidance Information for Engineering Technicians.
VT 004 976 751
Ohio Notebook of Public Technical Education Programs, 1965-1966.
VT 004 977 751
Counselor's Manual.
VT 005 004 669
Planning for Technical Education in the CMD (Calcutta Metropolitan District), an Outline.
VT 005 296 771
Selected List of Acquisitions. Vol. 1, No. 1-4.
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VT 008 212 679
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VT 000 602 766
Race and Socioeconomic Status as Moderators in Predicting Machine-Shop Training Success.
VT 000 778 710
Trade and Industrial Education Program Analysis Questionnaire.

Page

VT 001 485 758
A Follow-Up Study of the First Fifty Graduates of Trade Technical Education.
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Technical Education, Title III George-Barden Act (Formerly Title VIII, N.D.E.A.). How to Obtain Approval for Assistance.
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VT 003 804 666
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VT 004 617 695
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VT 004 642 696
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VT 004 678 759
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VT 004 903 ED 024 769 743
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VT 006 628 ED 024 801 762
Trade and Industrial Teacher Education: A Research Critique and Model for Action.
VT 006 668 ED 023 869 762
Industrial Education for the Visually Limited.

VOCATIONAL AND SUPPORTING SERVICES INDEX

Page

VT 006 672 ED 023 870 726
The Development of Trade and Industrial Education in Wisconsin.
VT 007 031 ED 022 965 717
The Implementation and Further Development of Experimental Cluster Concept Programs. Interim Report.
VT 007 370 ED 023 926 722
A Guide for Planning Facilities for Occupational Preparation Programs in the Machine Trades.
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Trade and Industrial Teacher Education and Certification: Report of a National Invitational Research Development Seminar.
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The Florida Study of Vocational-Technical Education.
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Apprenticeship Past and Present.
VT 001 028 658
Procedures for Conducting a Vocational Education Community Study.
VT 001 173 748
Follow-Up Study of 1963 St. Louis Park Graduates.
VT 001 311 720
Area Vocational-Technical School. Bethlehem Area, Hellertown-Lower Saucon, Northampton Area, Pennsylvania.
VT 001 347 770
A Survey of Junior College Work Experience Education Programs, 1962-1963.
VT 001 412 ED 025 451 728
Neighborhood Manpower Programs.

Page

VT 001 440 ED 024 755 748
Project PIT; A Summer Industrial Work Experience and Occupational Guidance Program.
VT 001 477 689
Employers' Needs in Technical Occupations, Northern Virginia.
VT 001 507 ED 021 960 736
Vocational Education in the Public Schools.
VT 001 508 ED 021 961 742
Program of Research in the Field of Human Resources Development With Special Reference to Asia and the Far East.
VT 001 515 748
Reducing the School Dropout Rate--A Report on the Holding Power Project.
VT 001 527 749
Education and Career Study.
VT 001 579 728
Some Programs of Vocational Education for Persons with Special Needs in Wisconsin.
VT 001 583 728
Summary and Evaluation of the Vocational Special Needs Pilot Program.
VT 001 630 ED 024 757 749
Educational and Vocational Goals of Rural Youth in North Carolina.
VT 001 650 661
School District Organization. The Vocational School and the Intermediate District.
VT 001 698 662
The Advisory Committee, Organization and Function in Vocational Education.
VT 001 704 663
Long Range Plans, Wisconsin State Board of Vocational, Technical and Adult Education.
VT 001 707 720
Area Vocational Technical Schools and Programs, A Summary of Developments by States.
VT 001 720 663
Vocational-Technical Education Study of Dickinson and Iron Counties of Michigan.
VT 001 798 736
The Vocational Education Act of 1963, A Summary of Part A of Public Law 88-210.
VT 001 815 664
Progress in Technical Vocational Education Programs Under Title III of the George-Barden Act, Fiscal Years 1959-1964.
VT 001 838 664
Developing Human Resources, A Report of Progress in New Jersey Vocational-Technical Education Since January 1965.
VT 001 847 664
They Came to Contra Costa College, 1966-67.
VT 001 884 665
Kishwaukee Community College Study. Final Report.
VT 001 898 710
Manual for Institutional Self-Study--Community Colleges, Technical Institutes, Industrial Education Centers.
VT 001 905 770
Definitions of Terms in Vocational, Technical, and Practical Arts Education.
VT 002 183 ED 025 586 691
Costs and Returns for Investments in Technical Schooling by a Group of North Carolina High School Graduates.

Page

VT 002 335 ED 022 845 742
Special Training Project for Educational Researchers in the Nation's Large Cities. December 1, 1966-January 31, 1967. Final Report.
VT 002 379 665
A Graphic Analysis for the Development of a Master Plan Concept.
VT 002 407 ED 019 445 665
Technician Education Yearbook, 1965-1966.
VT 002 425 ED 024 759 682
Guide to Organized Occupational Curriculums in Higher Education.
VT 002 436 ED 025 587 711
Evaluation in Vocational Education.
VT 002 500 ED 016 788 724
Vocational Education Act of 1963, A Case Study in Legislation.
VT 002 714 ED 024 760 666
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VT 003 764 ED 024 762 693
Guidelines for the Design of New Careers. Staff Paper.
VT 003 777 ED 023 801 725
The Manpower Development and Training Act; A Review of Training Activities.
VT 003 894 ED 022 855 729
The Mentally Retarded: Their Special Training Needs.
VT 003 981 ED 022 859 729
Help for Out-of-Work Youth; A Manual for a Job Preparation Program in Your Community.
VT 004 176 ED 022 861 711
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VT 004 212 ED 022 863 730
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VT 004 303 ED 024 763 730
The Development of Pre-Vocational Education Literacy Courses for Use with Computer-Assisted Instruction of Disadvantaged Youths and Adults. Final Report.
VT 004 324 MP 000 380 730
Rural Youth in Crisis.
VT 004 336 ED 025 591 750
Religion and Occupational Behavior; An Annotated Bibliography.
VT 004 573 ED 022 873 712
Characteristics and Performances of High School Graduates and Non-Graduates in One-Year Programs in the Community College System of Institutions in North Carolina.
VT 004 665 ED 022 883 696
Equal Employment Opportunities for Women Under Title VII of the Civil Rights Act of 1964.
VT 004 831 667
Projected Program Activities with Estimate of Total Expenditures for Vocational Education--Fiscal Year 1967.
VT 004 845 ED 025 466 731
Mental Health and Manpower Employment Adjustment for Psychiatric Patients.
VT 004 864 ED 026 467 667
The Structure of Technical Training Administration in the United States.
VT 004 911 667
Standards of Library Services in the Connecticut Vocational-Technical Schools.

VOCATIONAL AND SUPPORTING SERVICES INDEX

Page

VT 004 942 ED 024 770 750
Engineering Technology Careers; Career Guidance Information for Engineering Technicians.
VT 004 949 667
Vocational Rehabilitation in America's Outpost in the Central Pacific.
VT 004 951 751
Vocational Education and Training in Arkansas.
VT 004 953 731
Guidelines for Compiling a Directory of Community Services in Rehabilitation and Employment of Handicapped Men and Women.
VT 004 955 668
Research Opportunities in Comprehensive Public Junior Colleges--Inter- and Intra-College Organizational Problems.
VT 004 964 668
Administration and the Educational Program.
VT 004 965 712
Evaluation Problems of the UICSM (University of Illinois Committee on School Mathematics) Curriculum Project.
VT 004 969 751
Careers with the State of Minnesota.
VT 004 971 751
The Young Job-Seeker's Guide to Technical Occupations and the Skilled Trades, Michigan, 1966.
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VT 004 974 668
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VT 004 975 720
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VT 004 976 751
Ohio Notebook of Public Technical Education Programs, 1965-1966.
VT 004 977 751
Counselor's Manual.
VT 004 994 713
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VT 004 995 713
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VT 005 002 738
A Position Paper on Vocational Education in the Public Schools.
VT 005 013 ED 025 593 731
Annotated Bibliography of Instructional Media; Vocational Education for the Deaf.
VT 005 014 ED 025 594 731
Trends in Vocational Education for the Deaf. Report of the Workshop, 1967.
VT 005 015 ED 025 595 731
Trends in Prevocational Education for the Deaf. Report of the Workshop, 1967.
VT 005 020 ED 026 470 699
Target: Employment.
VT 005 026 ED 023 818 669
Demonstrating Innovations in Vocational Education: Initial Application Submitted to the Office of Education, Department of Health, Education and Welfare: Plans and Operation Grant.

Page

VT 005 037 ED 016 872 770
Research Visibility. Vocational Education is People--Youth With Special Needs.
VT 005 127 699
Occupational Information Conference Report (Oxnard, California, October 11, 1967).
VT 005 156 ED 022 892 752
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Technician Career Opportunities in Engineering Technology.
VT 005 250 752
Computerized Vocational Information System (CVIS).
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Vocational Guidance Through Videotaping and Television.
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Selected List of Acquisitions. Vol. 1, No. 1-4.
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VT 005 413 ED 024 777 670
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VT 005 477 671
New Horizons in Vocational Technical Occupational Education. Summary of a Pennsylvania Conference.
VT 005 482 ED 024 780 752
Planned and Unplanned Aspects of Occupational Choices by Youth. Final Report.
VT 005 515 753
Color Perception and Color Blindness.
VT 005 555 744
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VT 005 607 ED 025 599 760
The Successful Teacher in Technical Education: The Preparation of the Successful Teacher.
VT 005 638 ED 025 600 714
A Nationwide Evaluation of MDTA Institutional Job Training Programs.
VT 005 767 ED 024 784 761
An Introduction to Teaching Vocational Technical Education.
VT 005 770 ED 024 786 753
Differences in Some Initial Attitudes of Students Who Complete and Students Who Drop Out in the Wellesley, Massachusetts Adult Education Program.
VT 005 864 672
Annual Report to the Governor and the Members of the 107th General Assembly, 1967.

Page

VT 005 937 ED 024 788 732
Operation Gap-Stop: A Study of the Application of Communications Techniques in Reaching the Unreachable Poor. Final Report, Vol. I.
VT 006 161 702
Developments in the Community Employment Program.
VT 006 218 ED 026 481 753
Aviation--Where Career Opportunities are Bright; Counselor's Guide.
VT 006 230 673
A Plan for Disseminating Vocational Education Research Materials.
VT 006 243 ED 023 845 673
Technician Education Yearbook, 1967-1968.
VT 006 301 ED 024 789 703
A Comparative Study of the Employee Skills/Training Acceptable to Employers Under Varying Degrees of Labor Market Stringencies.
VT 006 357 ED 024 792 705
Occupational Commonalities: A Base for Course Construction.
VT 006 374 ED 023 853 705
Occupational Employment Statistics.
VT 006 375 674
A Progress Report on Area Vocational-Technical School Developments to June 30, 1967.
VT 006 386 ED 022 052 725
Trends in Training--Six Years of CIRF Abstracts.
VT 006 391 707
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VT 006 563 674
The Vocational School System in Sweden.
VT 006 565 675
The Municipal Vocational Schools of Stockholm, A Survey.
VT 006 566 675
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VT 006 721 ED 022 925 675
Procedural Guide for Program Development in New Careers.
VT 006 910 ED 022 954 745
Abstracts of Studies in Vocational Education.
VT 007 125 ED 022 966 733
Development of Human Resources Through a Vocationally Oriented Educational Program for Disadvantaged Families in Depressed Rural Areas. Interim Report 3.
VT 007 126 ED 022 967 733
Development of Human Resources Through a Vocationally Oriented Educational Program for Disadvantaged Families in Depressed Rural Areas. Interim Report 2.
VT 007 127 ED 022 968 733
Development of Human Resources Through a Vocationally Oriented Educational Program for Disadvantaged Families in Depressed Rural Areas. Interim Report 1.
VT 007 158 ED 023 897 733
Youth with Special Needs in Non-Metropolitan Ohio High Schools.
VT 007 187 ED 023 905 739
Occupational Education in the Great Cities.
VT 007 194 ED 026 500 745
Selected Proceedings and Information from the 1967 Summer Workshop in Research in Vocational-Technical Education.

Page

VT 007 249 ED 023 913 740
The Design and Evaluation of Vocational Technical Education Curricula Through Functional Job Analysis.

VT 007 310 ED 026 504 676
Vocational Education.

VT 007 323 ED 026 505 677
Vocational Education Amendments of 1968.

VT 007 436 ED 024 816 734
Operation Gap-Stop: A Study of the Application of Communications Techniques in Reaching the Unreachable Poor. Final Report, Vol. II.

VT 007 469 677
Zoned Analysis Techniques in Planning and Curriculum Development.

VT 007 488 ED 025 650 763
A Description and Evaluation of Vocational Teacher Training Programs in the State of Rhode Island.

VT 007 567 677
A Catalogue of Vocational Training Programmes in Republic of China.

VT 007 634 ED 025 667 754
National Seminar on Vocational Guidance. 1966. Follow-Up Study.

VT 007 635 ED 025 668 754
National Seminar on Vocational Guidance. 1966. Final Report.

VT 007 734 ED 027 403 685
The Feasibility of Teaching History of Technology in Vocational and Pre-Technical Secondary Schools.

VT 007 761 ED 027 405 685
A Pilot Study to Determine the Need for Curriculum Modification in Vocational-Technical Education in New Hampshire.

VT 007 814 ED 026 534 754
Vocational Guidance in Secondary Education. Results of a National Survey.

VT 007 924 ED 026 544 755
A Multimedia Approach to Communicating Occupational Information to Noncollege Youth. Technical Report.

VT 008 167 678
Tomorrow, Today.

VT 008 168 678
Speeches Presented at the National Conference on Exemplary Programs and Projects (Atlanta, March 12-14, 1969).

VT 008 209 755
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Vocational Guidance General Meetings.

VT 008 210 718
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Research Section Meetings.

VT 008 211 679
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Secondary Department General Meetings.

VT 008 212 679
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Post Secondary Department General Meetings.

Page

VT 008 213 718
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Department of Research and Evaluation General Meetings.

VT 008 214 680
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Adult Education Department Meetings.

VT 008 216 740
Education for Jobs in a Technological Society.

VT 008 217 680
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Supervision and Administration.

VT 008 218 680
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Board Members Meeting.

VT 008 285 755
A Report on Project CVIS (Computerized Vocational Information System) in Operation at Willowbrook High School, Villa Park, Illinois.

VT 008 751 ED (See Oct. '69 RIE) 771
Abstracts of Research and Related Materials in Vocational and Technical Education (ARM), Spring 1969.

VT 008 784 ED (See Oct. '69 RIE) 771
Microfiche Collection of Clearinghouse Documents Reported in Abstracts of Research and Related Materials in Vocational and Technical Education (ARM), Spring 1969.

SUBJECT AND IDENTIFIER INDEX

Page

ABSTRACTS
VT 006 910 ED 022 954 745
Abstracts of Studies in Vocational Education.
VT 007 229 ED 023 908 771
Home Economics Education, Research Summary.

ACADEMIC ASPIRATION
VT 003 810 ED 026 461 750
The Northwest Missouri State College Studies; Volume XXVII, Number 3, Educational and Occupational Aspirations of High School Seniors, Part I.
VT 003 811 ED 026 462 750
The Northwest Missouri State College Studies; Volume XXVII, Number 4, Educational and Occupational Aspirations of High School Seniors. Part II.

ACADEMIC PERFORMANCE
VT 004 573 ED 022 873 712
Characteristics and Performances of High School Graduates and Non-Graduates in One-Year Programs in the Community College System of Institutions in North Carolina.

ACCREDITATION (INSTITUTIONS)
VT 005 213 ED 026 471 670
Criteria for the Evaluation of Educational Programs in Nursing Leading to an Associate Degree.

ACHIEVEMENT TESTS
VT 005 746 714
Estimating the Clothing Construction Ability of 8th, 9th, 10th, and 11/12th Grade Pupils.
VT 005 747 714
Evaluation Materials in Family Relations, Tenth Grade.
VT 005 748 715
Evaluation Materials in Family Relations, Eleventh and Twelfth Grade.
VT 005 749 715
Evaluation Materials in Housing, Ninth Grade.
VT 005 750 715
Evaluation Materials in Housing, Tenth Grade.
VT 005 751 715
Evaluation Materials in Foods, Tenth Grade.
VT 005 752 716
Evaluation Materials in Clothing, Tenth Grade.
VT 005 753 716
Evaluation Materials in Clothing, Ninth Grade.
VT 005 754 716
Evaluation Materials in Child Development, Ninth Grade.
VT 005 755 716
Evaluation Materials in Child Development, Eleven and Twelfth Grade.
VT 005 756 717
Evaluation Materials in Family Relations, Ninth Grade.
VT 005 757 717
Evaluation Materials in Foods for Ninth Grade.

ACTIVITY LEARNING
VT 001 328 659
In-School Work Experience Education for Office Occupations. An Operational Handbook.

Page

ADJUSTMENT PROBLEMS
VT 006 295 ED 026 482 703
Recognized Problems of Single Girls in Iowa Entering the Work World Following High School Graduation.

ADJUSTMENT (TO ENVIRONMENT)
VT 004 963 ED 025 592 699
Adaptation of Rural and Foreign Workers to Industry, International Joint Seminar.

ADMINISTRATIVE ORGANIZATION
VT 001 898 710
Manual for Institutional Self-Study--Community Colleges, Technical Institutes, Industrial Education Centers.
VT 004 955 668
Research Opportunities in Comprehensive Public Junior Colleges--Inter- and Intra-College Organizational Problems.

ADMINISTRATIVE POLICY
VT 001 692 662
Handbook for Home Economics Teachers.
VT 001 703 662
Criteria, Standards and Policies for Vocational Business and Office Education.
VT 005 527 671
Public Health Service Grants for Training Projects, Policy Statement.
VT 006 379 ED 024 793 706
Technical Change and Manpower Planning: Co-ordination at Enterprise Level.
VT 007 260 ED 023 917 708
Enterprise Planning for Change; Co-ordination of Manpower and Technical Planning.

ADMINISTRATIVE PROBLEMS
VT 005 477 671
New Horizons in Vocational Technical Occupational Education. Summary of a Pennsylvania Conference.
VT 007 615 677
Profiles of Trade and Technical Leaders: Summary Report.

ADMINISTRATOR BACKGROUND
VT 007 615 677
Profiles of Trade and Technical Leaders: Summary Report.

ADMINISTRATOR CHARACTERISTICS
VT 007 615 677
Profiles of Trade and Technical Leaders: Summary Report.

ADMINISTRATOR ROLE
VT 008 217 680
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Supervision and Administration.

ADOLESCENTS
VT 004 485 ED 026 463 743
Youth in Transition. Volume I.

ADOPTION (IDEAS)
VT 007 304 ED 023 922 763
Personal and Situational Variables which Inhibit or Stimulate the Adoption of Agricultural Occupations Curricula.

Page

ADULT BASIC EDUCATION
VT 001 579 728
Some Programs of Vocational Education for Persons with Special Needs in Wisconsin.

ADULT DROPOUTS
VT 005 770 ED 024 786 753
Differences in Some Initial Attitudes of Students Who Complete and Students Who Drop Out in the Wellesley, Massachusetts Adult Education Program.

ADULT EDUCATION
VT 000 683 ED 019 395 770
The Florida Study of Vocational-Technical Education.
VT 004 995 713
Education as a Process of Vocational Evaluation. Navajo Rehabilitation Project Technical Report No. 6.
VT 005 937 ED 024 788 732
Operation Gap-Stop: A Study of the Application of Communications Techniques in Reaching the Unreachable Poor. Final Report, Vol. I.

ADULT EDUCATION PROGRAMS
VT 005 770 ED 024 786 753
Differences in Some Initial Attitudes of Students Who Complete and Students Who Drop Out in the Wellesley, Massachusetts Adult Education Program.

ADULT FARMER EDUCATION
VT 004 577 737
A Basis for Developing Programs of Adult Farmer Education in India.

ADULT VOCATIONAL EDUCATION
VT 001 530 710
Nurse Aide Training.
VT 001 579 728
Some Programs of Vocational Education for Persons with Special Needs in Wisconsin.
VT 003 981 ED 022 859 729
Help for Out-of-Work Youth; A Manual for a Job Preparation Program in Your Community.
VT 005 218 ED 026 472 700
Training and Retraining Older Workers, an Annotated Bibliography.
VT 005 296 771
Selected List of Acquisitions. Vol. 1, No. 1-4.
VT 005 638 ED 025 600 714
A Nationwide Evaluation of MDTA Institutional Job Training Programs.
VT 006 566 675
Vocational Training for Adults in Sweden. Sweden Today.
VT 007 472 ED 026 509 684
Development of Multi-Media Programmed Instructional Materials for the Training of Law Enforcement Officers. Final Report.
VT 007 473 ED 025 645 684
Development of Multi-Media Programmed Instructional Materials for the Training of Law Enforcement Officers. Initial Curriculum Study.
VT 007 567 677
A Catalogue of Vocational Training Programmes in Republic of China.

SUBJECT AND IDENTIFIER INDEX

Page

VT 008 214 680
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Adult Education Department Meetings.

ADVISORY COMMITTEES
VT 001 698 662
The Advisory Committee, Organization and Function in Vocational Education.
VT 001 888 665
Guide for Establishment and Conduct of Local Advisory Committees for Vocational Agricultural Departments.

AEROSPACE INDUSTRY
VT 005 179 700
A Study of the Re-Employment and Unemployment Experiences of Scientists and Engineers Laid Off from 62 Aerospace and Electronics Firms in the San Francisco Bay Area During 1963-1965. Executive Summary.
VT 006 218 ED 026 481 753
Aviation--Where Career Opportunities are Bright; Counselor's Guide.

AGRICULTURAL EDUCATION
VT 004 530 ED 022 868 759
An Evaluation of Selected Aspects of Agricultural Education Programs in the Inter-Regional Land-Grant Institutions of the United States.
VT 004 561 711
An Evaluation of Work Experience Programs as an Element of Agricultural Education in a Panamanian School of Agriculture.
VT 004 568 725
Technology and Educational Reform in Early America.
VT 004 569 725
The Development of Agricultural Education in India.
VT 004 577 737
A Basis for Developing Programs of Adult Farmer Education in India.
VT 004 579 ED 022 878 694
Off-Farm Agricultural Occupations in Montana: Employment and Education.
VT 005 236 ED 024 775 759
An Anthology of Teacher Education in Agriculture.
VT 006 370 ED 025 616 745
A Planning Study to Determine the Feasibility of a Research Project Concerning Employment Opportunities and Training Needs in Farming and Off-Farm Agricultural Business and Industry.
VT 006 470 ED 023 857 707
Occupational Education for Meat Inspection and Laboratory Animal Caretaker Jobs.
VT 006 503 ED 022 921 762
Factors Related to the Tendency of Iowa State University Agricultural Education Graduates to Not Enter or to Leave the Vocational Agriculture Teaching Profession.
VT 006 744 676
Organizing and Conducting Young Farmer Programs in New York State.
VT 006 910 ED 022 954 745
Abstracts of Studies in Vocational Education.

Page

VT 008 203 678
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Agricultural Education Division General Session.
VT 008 214 680
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Adult Education Department Meetings.

AGRICULTURAL ENGINEERING
VT 005 175 669
A Manual for Planning and Conducting an Agricultural Mechanics Fair.

AGRICULTURAL LABORERS
VT 004 813 ED 022 885 696
Estimating Agricultural Employment from a Sample of Employers.
VT 004 902 697
Hired Farmworkers in the United States.
VT 004 925 ED 022 888 698
Farm Labor Developments. Employment and Wage Supplement.

AGRICULTURAL MACHINERY
VT 004 580 ED 022 879 694
An Analysis of Activities in Farmstead Mechanization Experienced by Selected Farmers and Associated Businesses.

AGRICULTURAL MACHINERY OCCUPATIONS
VT 004 564 ED 022 872 694
The Identification and Analysis of Agricultural Occupations in Seventeen Pennsylvania Counties.
VT 004 580 ED 022 879 694
An Analysis of Activities in Farmstead Mechanization Experienced by Selected Farmers and Associated Businesses.

AGRICULTURAL MECHANICS PROJECT FAIRS
VT 005 175 669
A Manual for Planning and Conducting an Agricultural Mechanics Fair.

AGRICULTURAL OCCUPATIONS
VT 000 572 748
Exploring Careers in Modern Agriculture Related to Land Use and Conservation.
VT 002 126 ED 021 965 737
Objectives for Vocational and Technical Education in Agriculture.
VT 006 370 ED 025 616 745
A Planning Study to Determine the Feasibility of a Research Project Concerning Employment Opportunities and Training Needs in Farming and Off-Farm Agricultural Business and Industry.

AGRICULTURAL PERSONNEL
VT 004 574 ED 022 874 694
Training Needs of County Agricultural Extension Agents in Quebec, Canada.

AGRICULTURAL PRODUCTION
VT 004 925 ED 022 888 698
Farm Labor Developments. Employment and Wage Supplement.

Page

AGRICULTURAL SKILLS
VT 004 559 ED 022 869 693
A Comparison of Certain Knowledges in Agriculture Needed by Workers in Farming.
VT 004 564 ED 022 872 694
The Identification and Analysis of Agricultural Occupations in Seventeen Pennsylvania Counties.

AGRICULTURAL TRENDS
VT 001 503 ED 026 452 689
Project '80; Rural Michigan Now and in 1980. Economic Prospects of Farmers.

AGRICULTURE
VT 000 079 ED 025 581 688
Problems of Manpower in Agriculture.

AMERICAN INDUSTRY PROJECT
VT 002 729 ED 024 761 758
Teacher Model; A Model to Guide Curriculum Development for the American Industry Project.

AMERICAN VOCATIONAL ASSOCIATION CONVENTION, DALLAS, TEXAS, DECEMBER 9-13, 1968
VT 008 166 734
Effective Trade and Industrial Programs for the Disadvantaged Persons with Special Needs.
VT 008 167 678
Tomorrow, Today.
VT 008 203 678
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Agricultural Education Division General Session.
VT 008 205 678
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Apprenticeship and Manpower Training Programs.
VT 008 206 679
Dynamics of the Organizational Power Structure.
VT 008 207 679
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Industrial Arts General Meetings.
VT 008 208 679
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Business and Office Education General Meetings.
VT 008 209 755
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Vocational Guidance General Meetings.
VT 008 210 718
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Research Section Meetings.
VT 008 211 679
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Secondary Department General Meetings.
VT 008 212 679
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Post Secondary Department General Meetings.

SUBJECT AND IDENTIFIER INDEX

Page

VT 008 213 718
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Department of Research and Evaluation General Meetings.
VT 008 214 680
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Adult Education Department Meetings.
VT 008 215 718
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. NAITTE Research Committee.
VT 008 216 740
Education for Jobs in a Technological Society.
VT 008 217 680
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Supervision and Administration.
VT 008 218 680
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Board Members Meeting.
VT 008 387 764
Proceedings of the National Association of Industrial and Technical Teacher Educators (NAITTE) Executive Committee Business Meetings at the Annual Vocational Convention of the American Vocational Association. 1968.

ANIMAL CARETAKERS
VT 006 470 ED 023 857 707
Occupational Education for Meat Inspection and Laboratory Animal Caretaker Jobs.

ANNOTATED BIBLIOGRAPHIES
VT 000 836 ED 026 450 766
Toward More Effective Teaching in WCHEN Schools; The Report of a Course in New Training Techniques for Nurse Faculty.
VT 001 249 659
A Survey of Federal Government Publications of Interest to Small Business.
VT 004 336 ED 025 591 750
Religion and Occupational Behavior; An Annotated Bibliography.
VT 005 013 ED 025 593 731
Annotated Bibliography of Instructional Media; Vocational Education for the Deaf.
VT 005 218 ED 026 472 700
Training and Retraining Older Workers, An Annotated Bibliography.
VT 006 391 707
Training and Education for Manpower Development.
VT 006 813 676
Abstracts of Hospital Management Studies. Volume 4, Number 3.
VT 007 279 746
Inventory of Manpower Research Projects in Indiana.
VT 008 751 ED (See Oct. '69 RIE) 771
Abstracts of Research and Related Materials in Vocational and Technical Education (ARM), Spring 1969.

Page

VT 008 784 ED (See Oct. '69 RIE) 771
Microfiche Collection of Clearinghouse Documents Reported in Abstracts of Research and Related Materials in Vocational and Technical Education (ARM), Spring 1969.

ANNUAL CONFERENCE ON HUMAN VALUES AND TECHNOLOGICAL CHANGE, MAY 16-17, 1967
VT 006 727 ED 025 626 739
Human Values and Technological Change, Annual Conference, 1967.

ANNUAL REPORTS
VT 005 864 672
Annual Report to the Governor and the Members of the 107th General Assembly, 1967.

ANNUAL RESEARCH CONFERENCE, BEVERLY HILLS, CALIFORNIA, APRIL 10-11, 1967
VT 006 605 ED 023 864 708
Manpower Planning and Forecasting.

APPRENTICESHIPS
VT 001 021 ED 017 643 724
Apprenticeship Past and Present.
VT 004 864 ED 026 467 667
The Structure of Technical Training Administration in the United States.

APTITUDE TESTS
VT 001 338 748
Counselor's Guide to Georgia Area Vocational-Technical Schools.

AREA VOCATIONAL SCHOOLS
VT 001 311 720
Area Vocational-Technical School. Bethlehem Area, Hellertown-Lower Saucon, Northampton Area, Pennsylvania.
VT 001 650 661
School District Organization. The Vocational School and the Intermediate District.
VT 001 707 720
Area Vocational Technical Schools and Programs, A Summary of Developments by States.
VT 004 678 759
Profiles of Minnesota Day School Trade and Industrial Teachers in the Area Vocational Schools.
VT 004 975 720
A Progress Report on Area Vocational-Technical School Developments to June 30, 1966.
VT 004 977 751
Counselor's Manual.
VT 005 026 ED 023 818 669
Demonstrating Innovations in Vocational Education: Initial Application Submitted to the Office of Education, Department of Health, Education and Welfare: Plans and Operation Grant.
VT 006 375 674
A Progress Report on Area Vocational-Technical School Developments to June 30, 1967.

ARLINGTON COUNTY PUBLIC SCHOOLS
VT 000 812 736
Results of Survey to Ascertain if the Arlington County Public Schools' Industrial Education Program is Organized and Attuned to Present Trends.

Page

VT 001 622 660
Industrial Education: Its Place, Purpose, Objectives, Methods, and Organization in the Arlington County Public Schools.

ARROWHEAD REGIONAL CONFERENCE ON THE STATUS OF WOMEN IN NORTHERN MINNESOTA, DULUTH, MINNESOTA, JULY 17, 1964
VT 006 311 704
Report of Arrowhead Regional Conference on the Status of Women in Northern Minnesota (Duluth, Minn., July 17, 1964).

ATTENDANCE
VT 004 975 720
A Progress Report on Area Vocational-Technical School Developments to June 30, 1966.

AUTOMATION
VT 006 142 702
Men vs. Machines: Automation in a Wisconsin Community.
VT 006 605 ED 023 864 708
Manpower Planning and Forecasting.

AVIATION INDUSTRY
VT 006 218 ED 026 481 753
Aviation--Where Career Opportunities are Bright; Counselor's Guide.

BEHAVIOR PATTERNS
VT 004 336 ED 025 591 750
Religion and Occupational Behavior; An Annotated Bibliography.

BEHAVIORAL SCIENCE RESEARCH
VT 004 002 683
A Functional Analysis of Paramedical Occupations. Condensation of the Final Report.

BIBLIOGRAPHIES
VT 002 436 ED 025 587 711
Evaluation in Vocational Education.
VT 003 780 693
Inventory of Manpower Research Projects in Indiana, Number 1.
VT 005 037 ED 016 872 770
Research Visibility. Vocational Education is People--Youth With Special Needs.
VT 005 296 771
Selected List of Acquisitions. Vol. 1, No. 1-4.
VT 007 229 ED 023 908 771
Home Economics Education, Research Summary.
VT 008 085 ED 028 290 755
Selected Bibliography of Theses and Research in Family Economics and Home Management.

BLIND
VT 006 668 ED 023 869 762
Industrial Education for the Visually Limited.

BOARDS OF EDUCATION
VT 005 864 672
Annual Report to the Governor and the Members of the 107th General Assembly, 1967.

BREADWINNERS
VT 003 896 ED 022 856 729
Family Breadwinners: Their Special Training Needs.

SUBJECT AND IDENTIFIER INDEX

Page

BROOKINGS CONFERENCE ON VOCATIONAL EDUCATION, BROOKINGS INSTITUTE, WASHINGTON, D.C., APRIL 17-18, 1967.
VT 007 310 ED 026 504 676
Vocational Education.

BUILDING DESIGN
VT 004 850 720
Industrial Arts Facilities.

BUSINESS EDUCATION
VT 006 471 ED 022 920 767
A Study of the Block-of-Time Scheduling in the Secondary Business and Office Education Program in Ohio.
VT 007 371 ED 023 927 722
A Guide for Planning Facilities for Occupational Preparation Programs in Data Processing.
VT 007 499 ED 026 512 767
New Media in Teaching the Business Subjects.
VT 007 501 ED 026 514 767
Selected Readings in Business and Office Occupations--Designed Especially for the Classroom Teacher.
VT 007 725 ED 027 401 722
A Guide for Planning Facilities for Occupational Preparation Programs in Business and Office Occupations.
VT 007 917 ED 027 423 686
The Process and Product of Machine Shorthand Programs in New York State Schools.
VT 008 208 679
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Business and Office Education General Meetings.

CAREER CHOICE
VT 001 527 749
Education and Career Study.
VT 006 503 ED 022 921 762
Factors Related to the Tendency of Iowa State University Agricultural Education Graduates to Not Enter or to Leave the Vocational Agriculture Teaching Profession.

CAREER OPPORTUNITIES
VT 003 764 ED 024 762 693
Guidelines for the Design of New Careers. Staff Paper.
VT 004 212 ED 022 863 730
Workshop on Nonprofessional Careers for Disadvantaged Youth.
VT 004 942 ED 024 770 750
Engineering Technology Careers; Career Guidance Information for Engineering Technicians.
VT 004 969 751
Careers with the State of Minnesota.
VT 005 241 ED 024 776 700
Technician Career Opportunities in Engineering Technology.
VT 006 218 ED 026 481 753
Aviation--Where Career Opportunities are Bright; Counselor's Guide.

CAREER PLANNING
VT 002 379 665
A Graphic Analysis for the Development of a Master Plan Concept.
VT 005 250 752
Computerized Vocational Information System (CVIS).
VT 005 251 752
Vocational Guidance Through Videotaping and Television.
VT 008 285 755
A Report on Project CVIS (Computerized Vocational Information System) in Operation at Willowbrook High School, Villa Park, Illinois.

CAREERS
VT 003 764 ED 024 762 693
Guidelines for the Design of New Careers. Staff Paper.

CERTIFICATION
VT 006 578 ED 023 861 708
State Licensing of Health Occupations.

CHILD CARE OCCUPATIONS
VT 007 682 ED 026 524 685
Institute for Home Economics Teachers on Initiating, Developing, and Evaluating Programs at the Post High School Level. Volume II.

CHILD CARE WORKERS
VT 004 781 666
Vocational Training Program for Childcare Aides, Report of Pilot Study.
VT 007 682 ED 026 524 685
Institute for Home Economics Teachers on Initiating, Developing, and Evaluating Programs at the Post High School Level. Volume II.

CHILD DEVELOPMENT
VT 005 754 716
Evaluation Materials in Child Development, Ninth Grade.
VT 005 755 716
Evaluation Materials in Child Development, Eleven and Twelfth Grade.

CHILD LABOR LAWS
VT 001 915 691
A Teenager's Guide in Employment.

CIRF ABSTRACTS
VT 006 386 ED 022 052 725
Trends in Training--Six Years of CIRF Abstracts.

CIVIL RIGHTS ACT OF 1964
VT 004 665 ED 022 883 696
Equal Employment Opportunities for Women Under Title VII of the Civil Rights Act of 1964.

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VT 004 665 ED 022 883 696
Equal Employment Opportunities for Women Under Title VII of the Civil Rights Act of 1964.

CLASSIFICATION
VT 001 800 663
Standard Industrial Classification for Use in Distributive Education.
VT 002 729 ED 024 761 758
Teacher Model; A Model to Guide Curriculum Development for the American Industry Project.

CLASSROOM ARRANGEMENT
VT 005 730 720
D. E. Classroom Layouts.

CLASSROOM FURNITURE
VT 005 730 720
D. E. Classroom Layouts.

CLERICAL WORKERS
VT 002 981 692
What the Employer Looks for in the High School Business Graduate.
VT 006 296 ED 026 483 703
Management Problems of Young Employed Homemakers.

CLOSED CIRCUIT TELEVISION
VT 005 251 752
Vocational Guidance Through Videotaping and Television.

CLOTHING INSTRUCTION
VT 005 746 714
Estimating the Clothing Construction Ability of 8th, 9th, 10th, and 11/12th Grade Pupils.
VT 005 752 716
Evaluation Materials in Clothing, Tenth Grade.
VT 005 753 716
Evaluation Materials in Clothing, Ninth Grade.

CLUSTER CONCEPT PROGRAM
VT 007 031 ED 022 965 717
The Implementation and Further Development of Experimental Cluster Concept Programs. Interim Report.

COCURRICULAR ACTIVITIES
VT 005 175 669
A Manual for Planning and Conducting an Agricultural Mechanics Fair.

CODIFICATION
VT 001 745 663
Code Book of Industries, Occupations and Course Titles.

COLLEGE GRADUATES
VT 003 579 ED 025 589 692
Factors Related to Employment of Iowa State University Graduates in Agricultural Education.
VT 006 503 ED 022 921 762
Factors Related to the Tendency of Iowa State University Agricultural Education Graduates to Not Enter or to Leave the Vocational Agriculture Teaching Profession.

COLLEGE TEACHERS
VT 006 409 ED 025 618 761
Program of Teacher Education for Environmental Technology (POTEET).

COLUMBUS AREA VOCATIONAL TECHNICAL SCHOOL
VT 004 977 751
Counselor's Manual.

COMMUNICATION (THOUGHT TRANSFER)
VT 005 937 ED 024 788 732
Operation Gap-Stop: A Study of the Application of Communications Techniques in Reaching the Unreachable Poor. Final Report, Vol. I.

COMMUNITY AGENCIES (PUBLIC)
VT 006 322 674
Standards for Homemaker-Home Health Aide Services.

SUBJECT AND IDENTIFIER INDEX

Page

COMMUNITY COLLEGES
VT 001 847 664
They Came to Contra Costa College, 1966-67.
VT 001 884 665
Kishwaukee Community College Study. Final Report.
VT 001 898 710
Manual for Institutional Self-Study--Community Colleges, Technical Institutes, Industrial Education Centers.

COMMUNITY COOPERATION
VT 006 161 702
Developments in the Community Employment Program.

COMMUNITY DEVELOPMENT
VT 004 921 697
Community Organization for Employment Development.

COMMUNITY ORGANIZATIONS
VT 004 921 697
Community Organization for Employment Development.
VT 005 020 ED 026 470 699
Target: Employment.
VT 006 161 702
Developments in the Community Employment Program.

COMMUNITY PROGRAMS
VT 005 020 ED 026 470 699
Target: Employment.

COMMUNITY SURVEYS
VT 001 028 658
Procedures for Conducting a Vocational Education Community Study.
VT 001 720 663
Vocational-Technical Education Study of Dickinson and Iron Counties of Michigan.
VT 001 884 665
Kishwaukee Community College Study. Final Report.

COMPANIONS (OCCUPATION)
VT 000 240 658
Homemaker-Health Aide Training Project.
VT 005 057 669
Report of 1967 Forum on Homemaker-Home Health Aide Service (New York City, May 4-5, 1967).
VT 006 322 674
Standards for Homemaker-Home Health Aide Services.

COMPARATIVE ANALYSIS
VT 004 571 712
The Effectiveness of a Distributive Education Preparatory Course on Student Progress in Distributive Education II.
VT 007 554 ED 026 518 767
A Comparison of a Master Teacher and Instructional Assistants in Automated Shorthand and Typewriting Instruction.
VT 007 917 ED 027 423 686
The Process and Product of Machine Shorthand Programs in New York State Schools.
VT 008 215 718
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. NAITTE Research Committee.

Page

COMPUTER ASSISTED INSTRUCTION
VT 004 303 ED 024 763 730
The Development of Pre-Vocational Education Literacy Courses for Use with Computer-Assisted Instruction of Disadvantaged Youths and Adults. Final Report.

COMPUTER ORIENTED PROGRAMS
VT 008 285 755
A Report on Project CVIS (Computerized Vocational Information System) in Operation at Willowbrook High School, Villa Park, Illinois.

CONCEPTUAL SCHEMES
VT 005 482 ED 024 780 752
Planned and Unplanned Aspects of Occupational Choices by Youth. Final Report.

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Rural Youth in Crisis.

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CONFERENCE REPORTS
VT 002 039 ED 025 585 728
The People Left Behind; Seminar on Manpower Policy and Program.
VT 004 324 MP 000 380 730
Rural Youth in Crisis.
VT 004 849 ED 024 768 696
Manpower and Employment Policies for Developing Countries.
VT 004 963 ED 025 592 699
Adaptation of Rural and Foreign Workers to Industry, International Joint Seminar.
VT 004 972 ED 026 469 712
Statistics in Vocational Rehabilitation. Proceedings of a Seminar, 1966.
VT 005 057 669
Report of 1967 Forum on Homemaker-Home Health Aide Service (New York City, May 4-5, 1967).
VT 005 127 699
Occupational Information Conference Report (Oxnard, California, October 11, 1967).
VT 005 477 671
New Horizons in Vocational Technical Occupational Education. Summary of a Pennsylvania Conference.
VT 006 304 704
Report of Conference on Unions and the Changing Status of Women Workers. 1964.
VT 006 310 704
Report of Statewide Meeting of the Governor's Commission on the Status of Women. 1964.
VT 006 311 704
Report of Arrowhead Regional Conference on the Status of Women in Northern Minnesota (Duluth, Minn., July 17, 1964).
VT 006 376 ED 026 485 745
An Interdisciplinary Approach to Manpower Research.

Page

VT 006 605 ED 023 864 708
Manpower Planning and Forecasting.
VT 006 727 ED 025 626 739
Human Values and Technological Change, Annual Conference, 1967.
VT 007 194 ED 026 500 745
Selected Proceedings and Information from the 1967 Summer Workshop in Research in Vocational-Technical Education.
VT 007 310 ED 026 504 676
Vocational Education.
VT 007 635 ED 025 668 754
National Seminar on Vocational Guidance. 1966. Final Report.
VT 008 387 764
Proceedings of the National Association of Industrial and Technical Teacher Educators (NAITTE) Executive Committee Business Meetings at the Annual Vocational Convention of the American Vocational Association. 1968.

CONSERVATION EDUCATION
VT 000 572 748
Exploring Careers in Modern Agriculture Related to Land Use and Conservation.

CONSUMER EDUCATION
VT 008 085 ED 028 290 755
Selected Bibliography of Theses and Research in Family Economics and Home Management.

CONTINUATION EDUCATION
VT 001 579 728
Some Programs of Vocational Education for Persons with Special Needs in Wisconsin.

CONTRA COSTA COLLEGE
VT 001 847 664
They Came to Contra Costa College, 1966-67.

CONVENTIONAL INSTRUCTION
VT 006 471 ED 022 920 767
A Study of the Block-of-Time Scheduling in the Secondary Business and Office Education Program in Ohio.

COOPERATIVE EDUCATION
VT 001 347 770
A Survey of Junior College Work Experience Education Programs, 1962-1963.
VT 001 617 660
Distributive Education in Jefferson County. A Reference Manual for Distributive Education Coordinators.
VT 001 672 661
Industrial Cooperative Training, A Handbook for Industrial Cooperative Teacher Coordinators.
VT 001 723 710
Part-Time Cooperative Industrial Education as Viewed by Cooperating Employers in Ames, Marshalltown and Newton.
VT 005 938 ED 022 910 672
The Teacher-Coordinator's Manual for Directed Work-Experience Programs in Agriculture.
VT 005 939 ED 022 911 673
The Development and Improvement of Directed Work-Experience Programs in Expanded Vocational Education Offerings in Agriculture at the Secondary School Level. Final Report.

SUBJECT AND IDENTIFIER INDEX

Page

VT 006 447 ED 022 919 674
Guidelines and Procedures: Directed Work-Experience Programs in Vocational Agricultural Education.

COOPERATIVE PLANNING
VT 001 528 736
Training in the Perspective of Technological Change.

COOPERATIVE PROGRAMS
VT 008 208 679
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Business and Office Education General Meetings.

COOPERATIVES
VT 001 563 770
Worker-Owned Plywood Companies, An Economic Analysis.

CORE CURRICULUM
VT 003 520 683
A Study of Recommendations for Technical Education Curricula.

COST EFFECTIVENESS
VT 006 602 ED 026 488 675
A Cost-Benefit Study of Post-High School Technical Education in Oklahoma.
VT 007 310 ED 026 504 676
Vocational Education.
VT 008 213 718
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Department of Research and Evaluation General Meetings.
VT 008 218 680
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Board Members Meeting.

COUNSELOR ROLE
VT 005 127 699
Occupational Information Conference Report (Oxnard, California, October 11, 1967).

COURSE EVALUATION
VT 004 571 712
The Effectiveness of a Distributive Education Preparatory Course on Student Progress in Distributive Education II.

COURSE ORGANIZATION
VT 005 767 ED 024 784 761
An Introduction to Teaching Vocational Technical Education.

COURSES
VT 001 745 663
Code Book of Industries, Occupations and Course Titles.

CULTURALLY DISADVANTAGED
VT 006 721 ED 022 925 675
Procedural Guide for Program Development in New Careers.

CURRICULUM
VT 002 425 ED 024 759 682
Guide to Organized Occupational Curriculums in Higher Education.

CURRICULUM DESIGN
VT 007 249 ED 023 913 740
The Design and Evaluation of Vocational Technical Education Curricula Through Functional Job Analysis.

CURRICULUM DEVELOPMENT
VT 003 400 ED 025 458 682
Institute for Home Economics Teachers on Initiating, Developing, and Evaluating Programs at the Post High School Level. Volume I.
VT 004 002 683
A Functional Analysis of Paramedical Occupations. Condensation of the Final Report.
VT 004 303 ED 024 763 730
The Development of Pre-Vocational Education Literacy Courses for Use with Computer-Assisted Instruction of Disadvantaged Youths and Adults. Final Report.
VT 006 370 ED 025 616 745
A Planning Study to Determine the Feasibility of a Research Project Concerning Employment Opportunities and Training Needs in Farming and Off-Farm Agricultural Business and Industry.
VT 007 031 ED 022 965 717
The Implementation and Further Development of Experimental Cluster Concept Programs. Interim Report.
VT 007 375 ED 023 931 683
Workshop Report: Distributive Education Project Development Workshop, June 19-30, 1967.
VT 007 376 ED 023 932 684
Regional Workshops in Project Development for Distributive Education Curricula.
VT 007 377 ED 023 933 684
Workshop Report: Distributive Education Project Development Workshop. July 30-August 11, 1967.
VT 007 472 ED 026 509 684
Development of Multi-Media Programmed Instructional Materials for the Training of Law Enforcement Officers. Final Report.
VT 007 473 ED 025 645 684
Development of Multi-Media Programmed Instructional Materials for the Training of Law Enforcement Officers. Initial Curriculum Study.
VT 007 501 ED 026 514 767
Selected Readings in Business and Office Occupations--Designed Especially for the Classroom Teacher.
VT 007 682 ED 026 524 685
Institute for Home Economics Teachers on Initiating, Developing, and Evaluating Programs at the Post High School Level. Volume II.

CURRICULUM EVALUATION
VT 004 581 ED 022 880 683
Teaching Basic Production Economic Principles to Secondary School Students of Vocational Agriculture: An Evaluative Case Study.
VT 004 965 712
Evaluation Problems of the UICSM (University of Illinois Committee on School Mathematics) Curriculum Project.
VT 005 939 ED 022 911 673
The Development and Improvement of Directed Work-Experience Programs in Expanded Vocational Education Offerings in Agriculture at the Secondary School Level. Final Report.
VT 007 761 ED 027 405 685
A Pilot Study to Determine the Need for Curriculum Modification in Vocational-Technical Education in New Hampshire.
VT 007 917 ED 027 423 686
The Process and Product of Machine Shorthand Programs in New York State Schools.

CURRICULUM PLANNING
VT 004 964 668
Administration and the Educational Program.
VT 007 469 677
Zoned Analysis Techniques in Planning and Curriculum Development.

CURRICULUM RESEARCH
VT 003 520 683
A Study of Recommendations for Technical Education Curricula.
VT 007 472 ED 026 509 684
Development of Multi-Media Programmed Instructional Materials for the Training of Law Enforcement Officers. Final Report.

THE DAILEY VOCATIONAL TESTS
VT 001 338 748
Counselor's Guide to Georgia Area Vocational-Technical Schools.

DATA PROCESSING
VT 007 371 ED 023 927 722
A Guide for Planning Facilities for Occupational Preparation Programs in Data Processing.

DEAF EDUCATION
VT 005 013 ED 025 593 731
Annotated Bibliography of Instructional Media; Vocational Education for the Deaf.
VT 005 014 ED 025 594 731
Trends in Vocational Education for the Deaf. Report of the Workshop, 1967.
VT 005 015 ED 025 595 731
Trends in Prevocational Education for the Deaf. Report of the Workshop, 1967.

DECISION MAKING
VT 004 964 668
Administration and the Educational Program.

DEMONSTRATION PROGRAMS
VT 007 127 ED 022 968 733
Development of Human Resources Through a Vocationally Oriented Educational Program for Disadvantaged Families in Depressed Rural Areas. Interim Report 1.

DEMONSTRATION PROJECTS
VT 005 767 ED 024 784 761
An Introduction to Teaching Vocational Technical Education.

DENTAL ASSISTANTS
VT 001 693 682
The Dental Assisting Curriculum--Content and Scope.

DENTAL AUXILIARIES
VT 005 732 ED 023 835 683
Greater Utilization of Dental Technicians. Report of Training.
VT 005 733 ED 023 836 672
Greater Utilization of Dental Technicians. II. Report of Clinical Tests.

SUBJECT AND IDENTIFIER INDEX

Page

DENTAL HYGIENISTS
VT 006 463 707
Licensed Dental Hygienists in Iowa.

DENTISTRY
VT 005 732 ED 023 835 683
Greater Utilization of Dental Technicians. Report of Training.
VT 005 733 ED 023 836 672
Greater Utilization of Dental Technicians. II. Report of Clinical Tests.

DENTISTS
VT 005 733 ED 023 836 672
Greater Utilization of Dental Technicians. II. Report of Clinical Tests.

DEPARTMENT STORES
VT 004 900 697
Department Stores, Labor Market Developments.

DEPRESSED AREAS (GEOGRAPHIC)
VT 005 945 ED 021 145 701
Geographic Factors in Employment and Manpower Development.

DEVELOPING NATIONS
VT 004 849 ED 024 768 696
Manpower and Employment Policies for Developing Countries.
VT 004 974 668
Tapestry for Tomorrow, The Ford Foundation Program in the Middle East.

DICTIONARIES
VT 001 905 770
Definitions of Terms in Vocational, Technical, and Practical Arts Education.

DICTIONARY OF OCCUPATIONAL TITLES
VT 002 611 ED 023 795 692
Worker Requirements and Methods of Entry into Home and Community Occupations Related to Home Economics.

DIFFUSION
VT 007 304 ED 023 922 763
Personal and Situational Variables which Inhibit or Stimulate the Adoption of Agricultural Occupations Curricula.

DIRECTORIES
VT 002 407 ED 019 445 665
Technician Education Yearbook, 1965-1966.
VT 002 425 ED 024 759 682
Guide to Organized Occupational Curriculums in Higher Education.
VT 003 546 ED 021 975 666
Technician Education Yearbook, 1963-1964.
VT 004 953 731
Guidelines for Compiling a Directory of Community Services in Rehabilitation and Employment of Handicapped Men and Women.
VT 006 243 ED 023 845 673
Technician Education Yearbook, 1967-1968.

DISADVANTAGED ENVIRONMENT
VT 008 166 734
Effective Trade and Industrial Programs for the Disadvantaged Persons with Special Needs.

Page

DISADVANTAGED GROUPS
VT 004 303 ED 024 763 730
The Development of Pre-Vocational Education Literacy Courses for Use with Computer-Assisted Instruction of Disadvantaged Youths and Adults. Final Report.
VT 005 943 732
Barriers to Employment of the Disadvantaged.
VT 005 947 ED 021 147 673
New Developments in Manpower Programs.
VT 007 125 ED 022 966 733
Development of Human Resources Through a Vocationally Oriented Educational Program for Disadvantaged Families in Depressed Rural Areas. Interim Report 3.
VT 007 126 ED 022 967 733
Development of Human Resources Through a Vocationally Oriented Educational Program for Disadvantaged Families in Depressed Rural Areas. Interim Report 2.
VT 008 166 734
Effective Trade and Industrial Programs for the Disadvantaged Persons with Special Needs.

DISADVANTAGED YOUTH
VT 004 212 ED 022 863 730
Workshop on Nonprofessional Careers for Disadvantaged Youth.
VT 005 037 ED 016 872 770
Research Visibility. Vocational Education is People--Youth With Special Needs.
VT 007 127 ED 022 968 733
Development of Human Resources Through a Vocationally Oriented Educational Program for Disadvantaged Families in Depressed Rural Areas. Interim Report 1.
VT 007 158 ED 023 897 733
Youth with Special Needs in Non-Metropolitan Ohio High Schools.

DISTRIBUTIVE EDUCATION
VT 001 617 660
Distributive Education in Jefferson County. A Reference Manual for Distributive Education Coordinators.
VT 001 623 661
State-Local Plan for Administration of Distributive Education.
VT 001 680 661
An Administrative Handbook for Vocational Distributive Education in Indiana.
VT 001 800 663
Standard Industrial Classification for Use in Distributive Education.
VT 002 943 682
Potential for Food Handling and Distribution Training in Connecticut.
VT 004 182 ED 022 862 758
Needed Improvements in Distributive Teacher Education.
VT 004 571 712
The Effectiveness of a Distributive Education Preparatory Course on Student Progress in Distributive Education II.
VT 005 428 714
Five Year Follow-up Survey of Distributive Education. 1957 - 1961.
VT 005 644 760
The Historical Development of a Post High School Distributive Education Program with Implications for Teacher Education.

Page

VT 005 730 720
D. E. Classroom Layouts.
VT 007 375 ED 023 931 683
Workshop Report: Distributive Education Project Development Workshop. June 19-30, 1967.
VT 007 376 ED 023 932 684
Regional Workshops in Project Development for Distributive Education Curricula.
VT 007 377 ED 023 933 684
Workshop Report: Distributive Education Project Development Workshop. July 30-August 11, 1967.

DISTRIBUTIVE EDUCATION TEACHERS
VT 005 644 760
The Historical Development of a Post High School Distributive Education Program with Implications for Teacher Education.

DISTRIBUTIVE EDUCATION PROJECT DEVELOPMENT WORKSHOPS
VT 007 375 ED 023 931 683
Workshop Report: Distributive Education Project Development Workshop. June 19-30, 1967.
VT 007 376 ED 023 932 684
Regional Workshops in Project Development for Distributive Education Curricula.
VT 007 377 ED 023 933 684
Workshop Report: Distributive Education Project Development Workshop. July 30-August 11, 1967.

DROPOUT CHARACTERISTICS
VT 001 515 748
Reducing the School Dropout Rate--A Report on the Holding Power Project.

DROPOUT IDENTIFICATION
VT 005 770 ED 024 786 753
Differences in Some Initial Attitudes of Students Who Complete and Students Who Drop Out in the Wellesley, Massachusetts Adult Education Program.

DROPOUT PREVENTION
VT 001 583 728
Summary and Evaluation of the Vocational Special Needs Pilot Program.

DROPOUT RESEARCH
VT 001 515 748
Reducing the School Dropout Rate--A Report on the Holding Power Project.

DROPOUTS
VT 001 515 748
Reducing the School Dropout Rate--A Report on the Holding Power Project.
VT 002 491 ED 022 848 691
Youth in the Labor Market.
VT 004 573 ED 022 873 712
Characteristics and Performances of High School Graduates and Non-Graduates in One-Year Programs in the Community College System of Institutions in North Carolina.
VT 005 156 ED 022 892 752
Holding Power/Large City School Systems.

SUBJECT AND IDENTIFIER INDEX

Page

ECONOMIC COOPERATION AND DEVELOPMENT ORGANIZATION INTERNATIONAL JOINT SEMINAR, WIESBADEN, DECEMBER 10-13, 1963.
VT 004 963 ED 025 592 699
Adaptation of Rural and Foreign Workers to Industry, International Joint Seminar.

ECONOMIC DEVELOPMENT
VT 004 849 ED 024 768 696
Manpower and Employment Policies for Developing Countries.
VT 004 921 697
Community Organization for Employment Development.
VT 005 945 ED 021 145 701
Geographic Factors in Employment and Manpower Development.
VT 006 161 702
Developments in the Community Employment Program.

ECONOMIC DISADVANTAGEMENT
VT 004 902 697
Hired Farmworkers in the United States.
VT 005 945 ED 021 145 701
Geographic Factors in Employment and Manpower Development.
VT 006 140 732
Joblessness and Poverty in Urban Slums. A Reprint from the 1967 Manpower Report.

ECONOMIC FACTORS
VT 005 946 ED 021 146 702
Review of Manpower Developments in 1967.

ECONOMIC PROGRESS
VT 005 946 ED 021 146 702
Review of Manpower Developments in 1967.

ECONOMIC RESEARCH
VT 002 183 ED 025 586 691
Costs and Returns for Investments in Technical Schooling by a Group of North Carolina High School Graduates.

ECONOMICALLY DISADVANTAGED
VT 005 937 ED 024 788 732
Operation Gap-Stop: A Study of the Application of Communications Techniques in Reaching the Unreachable Poor. Final Report, Vol. I.
VT 007 436 ED 024 816 734
Operation Gap-Stop: A Study of the Application of Communications Techniques in Reaching the Unreachable Poor. Final Report, Vol. II.

ECONOMICS
VT 004 581 ED 022 880 683
Teaching Basic Production Economic Principles to Secondary School Students of Vocational Agriculture: An Evaluative Case Study.

EDUCABLE MENTALLY HANDICAPPED
VT 003 894 ED 022 855 729
The Mentally Retarded: Their Special Training Needs.

EDUCATION
VT 007 782 ED 026 533 734
Education, Employment, and Negro Equality.

Page

EDUCATIONAL ADMINISTRATION
VT 008 217 680
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Supervision and Administration.

EDUCATIONAL ATTITUDES
VT 005 413 ED 024 777 670
The Application of the Judgmental Procedure to Vocational and Practical Arts Education.

EDUCATIONAL BACKGROUND
VT 004 678 759
Profiles of Minnesota Day School Trade and Industrial Teachers in the Area Vocational Schools.

EDUCATIONAL BENEFITS
VT 002 183 ED 025 586 691
Costs and Returns for Investments in Technical Schooling by a Group of North Carolina High School Graduates.
VT 006 602 ED 026 488 675
A Cost-Benefit Study of Post-High School Technical Education in Oklahoma.

EDUCATIONAL CHANGE
VT 004 964 668
Administration and the Educational Program.
VT 005 413 ED 024 777 670
The Application of the Judgmental Procedure to Vocational and Practical Arts Education.

EDUCATIONAL COORDINATION
VT 005 477 671
New Horizons in Vocational Technical Occupational Education. Summary of a Pennsylvania Conference.

EDUCATIONAL ECONOMICS
VT 007 310 ED 026 504 676
Vocational Education.
VT 008 218 680
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Board Members Meeting.

EDUCATIONAL FACILITIES
VT 001 311 720
Area Vocational-Technical School. Bethlehem Area, Hellertown-Lower Saucon, Northampton Area, Pennsylvania.
VT 001 430 720
A Greenhouse for Vocational Agriculture in Kentucky.
VT 006 220 721
Educational Specifications for Practical Nursing Facilities.
VT 006 618 ED 022 924 721
A Guide for Planning Facilities for Home Economics Occupational Preparation Programs.
VT 007 370 ED 023 926 722
A Guide for Planning Facilities for Occupational Preparation Programs in the Machine Trades.
VT 007 371 ED 023 927 722
A Guide for Planning Facilities for Occupational Preparation Programs in Data Processing.
VT 007 725 ED 027 401 722
A Guide for Planning Facilities for Occupational Preparation Programs in Business and Office Occupations.

Page

EDUCATIONAL FINANCE
VT 001 311 720
Area Vocational-Technical School. Bethlehem Area, Hellertown-Lower Saucon, Northampton Area, Pennsylvania.
VT 001 578 659
Criteria for Determining Approval of Vocational Units and Fractional Units in Home Economics.
VT 001 699 662
Sketches of Some Recent Laws Affecting Vocational Home Economics Programs.

EDUCATIONAL GUIDANCE
VT 005 250 752
Computerized Vocational Information System (CVIS).

EDUCATIONAL HISTORY
VT 004 568 725
Technology and Educational Reform in Early America.
VT 004 569 725
The Development of Agricultural Education in India.

EDUCATIONAL IMPROVEMENT
VT 001 698 662
The Advisory Committee, Organization and Function in Vocational Education.
VT 005 734 672
Guidelines for Project Grants for Improvement in Nurse Training.

EDUCATIONAL INNOVATION
VT 005 026 ED 023 818 669
Demonstrating Innovations in Vocational Education: Initial Application Submitted to the Office of Education, Department of Health, Education and Welfare: Plans and Operation Grant.
VT 005 413 ED 024 777 670
The Application of the Judgmental Procedure to Vocational and Practical Arts Education.
VT 008 168 678
Speeches Presented at the National Conference on Exemplary Programs and Projects. (Atlanta, March 12-14, 1969).

EDUCATIONAL LEGISLATION
VT 001 699 662
Sketches of Some Recent Laws Affecting Vocational Home Economics Programs.
VT 002 500 ED 016 788 724
Vocational Education Act of 1963, A Case Study in Legislation.
VT 008 167 678
Tomorrow, Today.
VT 008 216 740
Education for Jobs in a Technological Society.

EDUCATIONAL METHODS
VT 003 392 737
Contemporary Methods of Teaching Industrial Arts.

EDUCATIONAL NEEDS
VT 000 415 ED 025 582 688
A Survey of Demand in Selected Metalworking Occupations for Major Areas in Idaho.
VT 001 311 720
Area Vocational-Technical School. Bethlehem Area, Hellertown-Lower Saucon, Northampton Area, Pennsylvania.

SUBJECT AND IDENTIFIER INDEX

Page

VT 001 477 689
Employers' Needs in Technical Occupations, Northern Virginia.
VT 001 503 ED 026 452 689
Project '80; Rural Michigan Now and in 1980. Economic Prospects of Farmers.
VT 001 528 736
Training in the Perspective of Technological Change.
VT 001 704 663
Long Range Plans, Wisconsin State Board of Vocational, Technical and Adult Education.
VT 001 720 663
Vocational-Technical Education Study of Dickinson and Iron Counties of Michigan.
VT 001 884 665
Kishwaukee Community College Study. Final Report.
VT 002 611 ED 023 795 692
Worker Requirements and Methods of Entry into Home and Community Occupations Related to Home Economics.
VT 002 943 682
Potential for Food Handling and Distribution Training in Connecticut.
VT 003 520 683
A Study of Recommendations for Technical Education Curricula.
VT 003 894 ED 022 855 729
The Mentally Retarded: Their Special Training Needs.
VT 003 896 ED 022 856 729
Family Breadwinners: Their Special Training Needs.
VT 004 182 ED 022 862 758
Needed Improvements in Distributive Teacher Education.
VT 004 263 ED 022 864 693
A Study of the Opportunities for, Requirements of, and Knowledges, Abilities, and Related Characteristics Needed by Beginning Office Workers in the State of Connecticut.
VT 004 559 ED 022 869 693
A Comparison of Certain Knowledges in Agriculture Needed by Workers in Farming.
VT 004 574 ED 022 874 694
Training Needs of County Agricultural Extension Agents in Quebec, Canada.
VT 004 579 ED 022 878 694
Off-Farm Agricultural Occupations in Montana: Employment and Education.
VT 004 849 ED 024 768 696
Manpower and Employment Policies for Developing Countries.
VT 005 125 699
Training Needs for Metal Tradesmen in Iowa.
VT 005 218 ED 026 472 700
Training and Retraining Older Workers, an Annotated Bibliography.
VT 006 346 ED 024 791 704
Employment Opportunities and Competencies Needed in Farm Occupations in Selected Counties in Kentucky.
VT 006 470 ED 023 857 707
Occupational Education for Meat Inspection and Laboratory Animal Caretaker Jobs.
VT 007 158 ED 023 897 733
Youth with Special Needs in Non-Metropolitan Ohio High Schools.

Page

VT 007 761 ED 027 405 685
A Pilot Study to Determine the Need for Curriculum Modification in Vocational-Technical Education in New Hampshire.
VT 008 212 679
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Post Secondary Department General Meetings.

EDUCATIONAL OBJECTIVES
VT 000 812 736
Results of Survey to Ascertain if the Arlington County Public Schools' Industrial Education Program is Organized and Attuned to Present Trends.
VT 001 622 660
Industrial Education: Its Place, Purpose, Objectives, Methods, and Organization in the Arlington County Public Schools.
VT 001 689 662
Vocational Agriculture in the Next Five Years, 1963-1968.
VT 001 798 736
The Vocational Education Act of 1963, A Summary of Part A of Public Law 88-210.
VT 001 898 710
Manual for Institutional Self-Study--Community Colleges, Technical Institutes, Industrial Education Centers.
VT 001 902 711
Evaluative Criteria for Vocational Agriculture Programs.
VT 001 906 737
Industrial Arts in Education.
VT 002 126 ED 021 965 737
Objectives for Vocational and Technical Education in Agriculture.
VT 003 392 737
Contemporary Methods of Teaching Industrial Arts.
VT 004 530 ED 022 868 759
An Evaluation of Selected Aspects of Agricultural Education Programs in the Inter-Regional Land-Grant Institutions of the United States.
VT 004 577 737
A Basis for Developing Programs of Adult Farmer Education in India.
VT 005 126 738
The Role of Industrial Arts in Tomorrow's Schools.
VT 005 594 739
New Horizons in Industrial Arts.
VT 007 187 ED 023 905 739
Occupational Education in the Great Cities.
VT 007 249 ED 023 913 740
The Design and Evaluation of Vocational Technical Education Curricula Through Functional Job Analysis.

EDUCATIONAL OPPORTUNITIES
VT 004 617 695
Michigan Technician Needs Study, Summary Report.
VT 004 951 751
Vocational Education and Training in Arkansas.
VT 004 971 751
The Young Job-Seeker's Guide to Technical Occupations and the Skilled Trades, Michigan, 1966.

Page

VT 005 826 ED 027 375 701
Michigan Technician Need Study. The Present and Projected Demand for Technically Trained People in Michigan.

EDUCATIONAL PHILOSOPHY
VT 003 392 737
Contemporary Methods of Teaching Industrial Arts.
VT 004 568 725
Technology and Educational Reform in Early America.
VT 005 002 738
A Position Paper on Vocational Education in the Public Schools.
VT 005 594 739
New Horizons in Industrial Arts.
VT 008 216 740
Education for Jobs in a Technological Society.

EDUCATIONAL PLANNING
VT 001 704 663
Long Range Plans, Wisconsin State Board of Vocational, Technical and Adult Education.
VT 001 884 665
Kishwaukee Community College Study. Final Report.
VT 005 004 669
Planning for Technical Education in the CMD (Calcutta Metropolitan District), an Outline.
VT 005 413 ED 024 777 670
The Application of the Judgmental Procedure to Vocational and Practical Arts Education.
VT 006 375 674
A Progress Report on Area Vocational-Technical School Developments to June 30, 1967.

EDUCATIONAL POLICY
VT 001 507 ED 021 960 736
Vocational Education in the Public Schools.
VT 001 906 737
Industrial Arts in Education.

EDUCATIONAL PROBLEMS
VT 007 187 ED 023 905 739
Occupational Education in the Great Cities.

EDUCATIONAL PROGRAMS
VT 001 595 659
Suggested Procedures for Planning and Conducting County FFA Cooperative Acquaintanceship Programs.
VT 003 400 ED 025 458 682
Institute for Home Economics Teachers on Initiating, Developing, and Evaluating Programs at the Post High School Level. Volume I.
VT 004 951 751
Vocational Education and Training in Arkansas.
VT 005 527 671
Public Health Service Grants for Training Projects, Policy Statement.
VT 007 682 ED 026 524 685
Institute for Home Economics Teachers on Initiating, Developing, and Evaluating Programs at the Post High School Level. Volume II.

EDUCATIONAL RESEARCH
VT 002 335 ED 022 845 742
Special Training Project for Educational Researchers in the Nation's Large Cities. December 1, 1966-January 31, 1967. Final Report.

SUBJECT AND IDENTIFIER INDEX

Page

VT 005 037 ED 016 872 770
Research Visibility. Vocational Education is People--Youth With Special Needs.
VT 005 401 743
Massachusetts Vocational Education Research Coordinating Unit, Second Report for the Period October 1 to December 31, 1967.
VT 005 405 744
Quarterly Technical Progress Report; Sixth, October 1, 1967 - December 31, 1967.
VT 005 406 744
New Mexico Research Coordinating Unit, Progress Report, December 1, 1967 - February 29, 1968.
VT 005 555 744
Establishment of an Occupational Research and Development Coordinating Unit for the State of Rhode Island. Progress Report, January 1 to March 31, 1968.
VT 006 230 673
A Plan for Disseminating Vocational Education Research Materials.
VT 006 628 ED 024 801 762
Trade and Industrial Teacher Education: A Research Critique and Model for Action.
VT 006 910 ED 022 954 745
Abstracts of Studies in Vocational Education.
VT 007 194 ED 026 500 745
Selected Proceedings and Information from the 1967 Summer Workshop in Research in Vocational-Technical Education.
VT 007 229 ED 023 908 771
Home Economics Education, Research Summary.
VT 007 468 ED 025 644 763
Trade and Industrial Teacher Education and Certification: Report of a National Invitational Research Development Seminar.
VT 008 085 ED 028 290 755
Selected Bibliography of Theses and Research in Family Economics and Home Management.
VT 008 208 679
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Business and Office Education General Meetings.
VT 008 209 755
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Vocational Guidance General Meetings.
VT 008 210 718
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Research Section Meetings.
VT 008 213 718
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Department of Research and Evaluation General Meetings.
VT 008 751 ED (See Oct.'69 RIE) 771
Abstracts of Research and Related Materials in Vocational and Technical Education (ARM), Spring 1969.
VT 008 784 ED (See Oct.'69 RIE) 771
Microfiche Collection of Clearinghouse Documents Reported in Abstracts of Research and Related Materials in Vocational and Technical Education (ARM), Spring 1969.

Page

EDUCATIONAL RESEARCHERS
VT 002 335 ED 022 845 742
Special Training Project for Educational Researchers in the Nation's Large Cities. December 1, 1966-January 31, 1967. Final Report.

EDUCATIONAL RESOURCES
VT 005 013 ED 025 593 731
Annotated Bibliography of Instructional Media; Vocational Education for the Deaf.

EDUCATIONAL SOCIOLOGY
VT 004 568 725
Technology and Educational Reform in Early America.

EDUCATIONAL SPECIFICATIONS
VT 006 618 ED 022 924 721
A Guide for Planning Facilities for Home Economics Occupational Preparation Programs.

EDUCATIONAL STATUS COMPARISON
VT 007 814 ED 026 534 754
Vocational Guidance in Secondary Education. Results of a National Survey.

EDUCATIONAL STRATEGIES
VT 004 965 712
Evaluation Problems of the UICSM (University of Illinois Committee on School Mathematics) Curriculum Project.

EDUCATIONAL TRENDS
VT 005 014 ED 025 594 731
Trends in Vocational Education for the Deaf. Report of the Workshop, 1967.
VT 005 015 ED 025 595 731
Trends in Prevocational Education for the Deaf. Report of the Workshop, 1967.
VT 005 236 ED 024 775 759
An Anthology of Teacher Education in Agriculture.

ELECTRONIC DATA PROCESSING
VT 005 250 752
Computerized Vocational Information System (CVIS).

ELECTRONICS INDUSTRY
VT 005 179 700
A Study of the Re-Employment and Unemployment Experiences of Scientists and Engineers Laid Off from 62 Aerospace and Electronics Firms in the San Francisco Bay Area During 1963-1965, Executive Summary.

ELEMENTARY EDUCATION
VT 004 569 725
The Development of Agricultural Education in India.

EMPLOYEE ATTITUDES
VT 006 380 ED 025 617 706
Workers' Attitudes to Technical Change: An Integrated Survey of Research.

EMPLOYER ATTITUDES
VT 001 723 710
Part-Time Cooperative Industrial Education as Viewed by Cooperating Employers in Ames, Marshalltown and Newton.
VT 002 981 692
What the Employer Looks for in the High School Business Graduate.

Page

VT 006 297 ED 026 484 703
Analysis of Tasks in Three Home Related Occupations.
VT 006 301 ED 024 789 703
A Comparative Study of the Employee Skills/Training Acceptable to Employers Under Varying Degrees of Labor Market Stringencies.
VT 007 761 ED 027 405 685
A Pilot Study to Determine the Need for Curriculum Modification in Vocational-Technical Education in New Hampshire.

EMPLOYMENT
VT 007 782 ED 026 533 734
Education, Employment, and Negro Equality.

EMPLOYMENT EXPERIENCE
VT 004 902 697
Hired Farmworkers in the United States.
VT 004 958 698
Unemployment Insurance Claimants, 1962-1963, Characteristics and Benefit Experience of New York Workers.
VT 005 638 ED 025 600 714
A Nationwide Evaluation of MDTA Institutional Job Training Programs.

EMPLOYMENT LEVEL
VT 004 902 697
Hired Farmworkers in the United States.

EMPLOYMENT OPPORTUNITIES
VT 000 415 ED 025 582 688
A Survey of Demand in Selected Metalworking Occupations for Major Areas in Idaho.
VT 000 870 ED 025 583 688
A Study of the Employment Problems and Prospects of a Selected Group of Male Occupationally Oriented High School Graduates.
VT 001 191 688
Seven Basic Areas of the World of Work; Introduction and Summary.
VT 001 503 ED 026 452 689
Project '80; Rural Michigan Now and in 1980. Economic Prospects of Farmers.
VT 001 620 660
Employment Trends in Selected Service Occupations in the San Francisco Bay Area.
VT 003 894 ED 022 855 729
The Mentally Retarded: Their Special Training Needs.
VT 004 579 ED 022 878 694
Off-Farm Agricultural Occupations in Montana: Employment and Education.
VT 004 900 697
Department Stores, Labor Market Developments.
VT 004 971 751
The Young Job-Seeker's Guide to Technical Occupations and the Skilled Trades, Michigan, 1966.
VT 005 826 ED 027 375 701
Michigan Technician Need Study. The Present and Projected Demand for Technically Trained People in Michigan.
VT 006 346 ED 024 791 704
Employment Opportunities and Competencies Needed in Farm Occupations in Selected Counties in Kentucky.

SUBJECT AND IDENTIFIER INDEX

Page

VT 006 470 ED 023 857 707
Occupational Education for Meat Inspection and Laboratory Animal Caretaker Jobs.

EMPLOYMENT PATTERNS
VT 004 813 ED 022 885 696
Estimating Agricultural Employment from a Sample of Employers.
VT 005 946 ED 021 146 702
Review of Manpower Developments in 1967.
VT 006 304 704
Report of Conference on Unions and the Changing Status of Women Workers. 1964.
VT 006 311 704
Report of Arrowhead Regional Conference on the Status of Women in Northern Minnesota (Duluth, Minn., July 17, 1964).
VT 006 365 ED 023 852 705
Wages and Labour Mobility.
VT 006 383 ED 024 794 706
Economic Background to Manpower Planning and Control.

EMPLOYMENT PRACTICES
VT 001 567 690
Area Wage Survey, The Portland, Oregon-Washington, Metropolitan Area, May 1966.
VT 001 568 690
Area Wage Survey, The Greenville, South Carolina, Metropolitan Area, May 1966.
VT 002 981 692
What the Employer Looks for in the High School Business Graduate.
VT 006 301 ED 024 789 703
A Comparative Study of the Employee Skills/Training Acceptable to Employers Under Varying Degrees of Labor Market Stringencies.

EMPLOYMENT PROBLEMS
VT 000 870 ED 025 583 688
A Study of the Employment Problems and Prospects of a Selected Group of Male Occupationally Oriented High School Graduates.
VT 004 941 698
The Employment Service Goes to an Armour Plant Closing.
VT 005 943 732
Barriers to Employment of the Disadvantaged.
VT 006 140 732
Joblessness and Poverty in Urban Slums. A Reprint from the 1967 Manpower Report.
VT 006 377 ED 023 854 706
Manpower Problems in the Service Sector.

EMPLOYMENT PROGRAMS
VT 003 777 ED 023 801 725
The Manpower Development and Training Act: A Review of Training Activities.
VT 004 212 ED 022 863 730
Workshop on Nonprofessional Careers for Disadvantaged Youth.
VT 004 921 697
Community Organization for Employment Development.
VT 005 020 ED 026 470 699
Target: Employment.
VT 005 947 ED 021 147 673
New Developments in Manpower Programs.
VT 006 721 ED 022 925 675
Procedural Guide for Program Development in New Careers.

Page

EMPLOYMENT PROJECTIONS
VT 000 415 ED 025 582 688
A Survey of Demand in Selected Metalworking Occupations for Major Areas in Idaho.
VT 001 503 ED 026 452 689
Project '80; Rural Michigan Now and in 1980. Economic Prospects of Farmers.
VT 003 369 MP 000 159 742
Development of Models for Projecting Employment by Industry and by Occupation.
VT 003 601 ED 026 459 742
The New York State Department of Labor's Manpower Projections for the State and Its Areas: A Preliminary Report on Methodology.
VT 004 617 695
Michigan Technician Needs Study, Summary Report.
VT 004 962 698
State Plan Inventory. Section 3-A, Projections of Employment for the Year 1980.
VT 005 572 701
Manpower in Oklahoma, State Summary. Preliminary Release.
VT 005 826 ED 027 375 701
Michigan Technician Need Study. The Present and Projected Demand for Technically Trained People in Michigan.
VT 006 383 ED 024 794 706
Economic Background to Manpower Planning and Control.

EMPLOYMENT QUALIFICATIONS
VT 001 191 688
Seven Basic Areas of the World of Work; Introduction and Summary.
VT 002 611 ED 023 795 692
Worker Requirements and Methods of Entry into Home and Community Occupations Related to Home Economics.
VT 002 981 692
What the Employer Looks for in the High School Business Graduate.
VT 004 642 696
The Training Specialist in Industry.
VT 006 357 ED 024 792 705
Occupational Commonalities: A Base for Course Construction.

EMPLOYMENT SERVICES
VT 001 828 664
Youth Employment Program of the United States Employment Service.
VT 004 921 697
Community Organization for Employment Development.
VT 004 941 698
The Employment Service Goes to an Armour Plant Closing.
VT 006 161 702
Developments in the Community Employment Program.

EMPLOYMENT STATISTICS
VT 003 369 MP 000 159 742
Development of Models for Projecting Employment by Industry and by Occupation.
VT 004 925 ED 022 888 698
Farm Labor Developments. Employment and Wage Supplement.
VT 005 433 ED 022 899 670
Nursing in the South.
VT 006 383 ED 024 794 706
Economic Background to Manpower Planning and Control.

Page

EMPLOYMENT TRENDS
VT 001 526 689
A Least Squares Analysis of Colorado Nonfarm Employment, 1939-1963, With Projections to 1970.
VT 001 620 660
Employment Trends in Selected Service Occupations in the San Francisco Bay Area.
VT 004 900 697
Department Stores, Labor Market Developments.
VT 004 962 698
State Plan Inventory. Section 3-A, Projections of Employment for the Year 1980.
VT 005 946 ED 021 146 702
Review of Manpower Developments in 1967.
VT 006 383 ED 024 794 706
Economic Background to Manpower Planning and Control.

ENGINEERING EDUCATION
VT 002 069 ED 019 429 724
Six Decades of Service, 1903-1963.

ENGINEERING TECHNICIANS
VT 004 942 ED 024 770 750
Engineering Technology Careers; Career Guidance Information for Engineering Technicians.
VT 005 241 ED 024 776 700
Technician Career Opportunities in Engineering Technology.

ENGINEERS
VT 005 179 700
A Study of the Re-Employment and Unemployment Experiences of Scientists and Engineers Laid Off from 62 Aerospace and Electronics Firms in the San Francisco Bay Area During 1963-1965, Executive Summary.

ENTRY WORKERS
VT 004 263 ED 022 864 693
A Study of the Opportunities for, Requirements of, and Knowledges, Abilities, and Related Characteristics Needed by Beginning Office Workers in the State of Connecticut.
VT 006 301 ED 024 789 703
A Comparative Study of the Employee Skills/Training Acceptable to Employers Under Varying Degrees of Labor Market Stringencies.

ENVIRONMENTAL INFLUENCES
VT 006 380 ED 025 617 706
Workers' Attitudes to Technical Change: An Integrated Survey of Research.

ENVIRONMENTAL RESEARCH
VT 006 295 ED 026 482 703
Recognized Problems of Single Girls in Iowa Entering the Work World Following High School Graduation.

ENVIRONMENTAL TECHNICIANS
VT 006 409 ED 025 618 761
Program of Teacher Education for Environmental Technology (POTEET).

EQUAL OPPORTUNITIES (JOBS)
VT 004 665 ED 022 883 696
Equal Employment Opportunities for Women Under Title VII of the Civil Rights Act of 1964.

SUBJECT AND IDENTIFIER INDEX

Page

VT 007 782 ED 026 533 734
Education, Employment, and Negro Equality.

EQUIPMENT STANDARDS
VT 006 805 ED 026 496 721
School Shop Development: Research and Planning.

EVALUATION
VT 001 563 770
Worker-Owned Plywood Companies, An Economic Analysis.
VT 004 995 713
Education as a Process of Vocational Evaluation. Navajo Rehabilitation Project Technical Report No. 6.

EVALUATION CRITERIA
VT 000 778 710
Trade and Industrial Education Program Analysis Questionnaire.
VT 001 902 711
Evaluative Criteria for Vocational Agriculture Programs.
VT 004 176 ED 022 861 711
Evaluative Criteria for Vocational Technical Programs.
VT 005 213 ED 026 471 670
Criteria for the Evaluation of Educational Programs in Nursing Leading to an Associate Degree.

EVALUATION METHODS
VT 001 898 710
Manual for Institutional Self-Study--Community Colleges, Technical Institutes, Industrial Education Centers.
VT 004 994 713
The Navajo Rehabilitation Project, Pre-Vocational Laboratory. Navajo Rehabilitation Project Technical Report No. 8.

EVALUATION NEEDS
VT 004 965 712
Evaluation Problems of the UICSM (University of Illinois Committee on School Mathematics) Curriculum Project.

EVALUATION TECHNIQUES
VT 002 436 ED 025 587 711
Evaluation in Vocational Education.

EXHIBITS
VT 005 175 669
A Manual for Planning and Conducting an Agricultural Mechanics Fair.

EXPERIMENTAL CURRICULUM
VT 008 205 678
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Apprenticeship and Manpower Training Programs.

EXPERIMENTAL PROGRAMS
VT 004 845 ED 025 466 731
Mental Health and Manpower Employment Adjustment for Psychiatric Patients.
VT 007 031 ED 022 965 717
The Implementation and Further Development of Experimental Cluster Concept Programs. Interim Report.

Page

VT 008 211 679
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Secondary Department General Meetings.

EXTENSION AGENTS
VT 004 574 ED 022 874 694
Training Needs of County Agricultural Extension Agents in Quebec, Canada.

FACILITIES
VT 004 975 720
A Progress Report on Area Vocational-Technical School Developments to June 30, 1966.

FACILITY EXPANSION
VT 001 707 720
Area Vocational Technical Schools and Programs, A Summary of Developments by States.

FACILITY GUIDELINES
VT 001 430 720
A Greenhouse for Vocational Agriculture in Kentucky.
VT 004 850 720
Industrial Arts Facilities.
VT 005 730 720
D. E. Classroom Layouts.
VT 006 220 721
Educational Specifications for Practical Nursing Facilities.
VT 006 618 ED 022 924 721
A Guide for Planning Facilities for Home Economics Occupational Preparation Programs.
VT 006 805 ED 026 496 721
School Shop Development: Research and Planning.
VT 007 370 ED 023 926 722
A Guide for Planning Facilities for Occupational Preparation Programs in the Machine Trades.
VT 007 371 ED 023 927 722
A Guide for Planning Facilities for Occupational Preparation Programs in Data Processing.
VT 007 725 ED 027 401 722
A Guide for Planning Facilities for Occupational Preparation Programs in Business and Office Occupations.
VT 008 232 ED 028 301 721
Guide for Planning Industrial Arts Laboratory Facilities.

FACILITY REQUIREMENTS
VT 007 725 ED 027 401 722
A Guide for Planning Facilities for Occupational Preparation Programs in Business and Office Occupations.

FACTOR ANALYSIS
VT 007 469 677
Zoned Analysis Techniques in Planning and Curriculum Development.

FACTOR STRUCTURE
VT 005 482 ED 024 780 752
Planned and Unplanned Aspects of Occupational Choices by Youth. Final Report.
VT 007 469 677
Zoned Analysis Techniques in Planning and Curriculum Development.

Page

FAMILY ATTITUDES
VT 007 125 ED 022 966 733
Development of Human Resources Through a Vocationally Oriented Educational Program for Disadvantaged Families in Depressed Rural Areas. Interim Report 3.

FAMILY LIFE EDUCATION
VT 005 255 ED 026 475 738
Recommendations from the White House Conference on Children and Youth for Home Economics Teachers on The Family Today. Part 1.
VT 005 937 ED 024 788 732
Operation Gap-Stop: A Study of the Application of Communications Techniques in Reaching the Unreachable Poor. Final Report, Vol. I.
VT 007 436 ED 024 816 734
Operation Gap-Stop: A Study of the Application of Communications Techniques in Reaching the Unreachable Poor. Final Report, Vol. II.

FAMILY PROBLEMS
VT 005 254 ED 026 474 738
Recommendations from the White House Conference on Children and Youth for Home Economics Teachers on The Family Today. Part 2.
VT 005 255 ED 026 475 738
Recommendations from the White House Conference on Children and Youth for Home Economics Teachers on The Family Today. Part 1.

FAMILY PROGRAMS
VT 007 127 ED 022 968 733
Development of Human Resources Through a Vocationally Oriented Educational Program for Disadvantaged Families in Depressed Rural Areas. Interim Report 1.

FAMILY RELATIONSHIP
VT 005 254 ED 026 474 738
Recommendations from the White House Conference on Children and Youth for Home Economics Teachers on The Family Today. Part 2.
VT 005 255 ED 026 475 738
Recommendations from the White House Conference on Children and Youth for Home Economics Teachers on The Family Today. Part 1.
VT 005 747 714
Evaluation Materials in Family Relations, Tenth Grade.
VT 005 748 715
Evaluation Materials in Family Relations, Eleventh and Twelfth Grade.
VT 005 756 717
Evaluation Materials in Family Relations, Ninth Grade.

FAMILY ROLE
VT 005 254 ED 026 474 738
Recommendations from the White House Conference on Children and Youth for Home Economics Teachers on The Family Today. Part 2.

SUBJECT AND IDENTIFIER INDEX

Page

VT 005 255 ED 026 475 738
Recommendations from the White House Conference on Children and Youth for Home Economics Teachers on The Family Today. Part 1.

FARM MANAGEMENT
VT 004 580 ED 022 879 694
An Analysis of Activities in Farmstead Mechanization Experienced by Selected Farmers and Associated Businesses.
VT 004 582 ED 022 881 695
Managerial Perception and Success in Farming.

FARM OCCUPATIONS
VT 006 346 ED 024 791 704
Employment Opportunities and Competencies Needed in Farm Occupations in Selected Counties in Kentucky.

FARMER COOPERATIVES
VT 001 595 659
Suggested Procedures for Planning and Conducting County FFA Cooperative Acquaintanceship Programs.

FARMERS
VT 001 336 689
Ex-Farm Operators in a Low-Income Area.
VT 001 503 ED 026 452 689
Project '80; Rural Michigan Now and in 1980. Economic Prospects of Farmers.
VT 004 559 ED 022 869 693
A Comparison of Certain Knowledges in Agriculture Needed by Workers in Farming.
VT 004 580 ED 022 879 694
An Analysis of Activities in Farmstead Mechanization Experienced by Selected Farmers and Associated Businesses.
VT 004 582 ED 022 881 695
Managerial Perception and Success in Farming.
VT 006 346 ED 024 791 704
Employment Opportunities and Competencies Needed in Farm Occupations in Selected Counties in Kentucky.

FEASIBILITY STUDIES
VT 001 801 690
A Summary of Preliminary Findings, Conclusions and Recommendations of a Study of Manpower Requirements and Education and Training Programs of Selected Health Occupations.
VT 006 370 ED 025 616 745
A Planning Study to Determine the Feasibility of a Research Project Concerning Employment Opportunities and Training Needs in Farming and Off-Farm Agricultural Business and Industry.
VT 007 734 ED 027 403 685
The Feasibility of Teaching History of Technology in Vocational and Pre-Technical Secondary Schools.

FEDERAL AID
VT 001 596 660
Technical Education, Title III George-Barden Act (Formerly Title VIII, N.D.E.A.). How to Obtain Approval for Assistance.

Page

VT 001 707 720
Area Vocational Technical Schools and Programs, A Summary of Developments by States.
VT 005 527 671
Public Health Service Grants for Training Projects, Policy Statement.
VT 005 734 672
Guidelines for Project Grants for Improvement in Nurse Training.
VT 007 323 ED 026 505 677
Vocational Education Amendments of 1968.

FEDERAL LAWS
VT 001 596 660
Technical Education, Title III George-Barden Act (Formerly Title VIII, N.D.E.A.). How to Obtain Approval for Assistance.
VT 001 699 662
Sketches of Some Recent Laws Affecting Vocational Home Economics Programs.
VT 001 798 736
The Vocational Education Act of 1963, A Summary of Part A of Public Law 88-210.
VT 007 323 ED 026 505 677
Vocational Education Amendments of 1968.

FEDERAL LEGISLATION
VT 002 500 ED 016 788 724
Vocational Education Act of 1963, A Case Study in Legislation.
VT 005 058 699
Manpower and Immigration.

FEDERAL PROGRAMS
VT 001 025 ED 020 299 658
Manpower Report of the President Including a Report on Manpower Requirements, Resources, Utilization and Training.
VT 001 412 ED 025 451 728
Neighborhood Manpower Programs.
VT 001 798 736
The Vocational Education Act of 1963, A Summary of Part A of Public Law 88-210.
VT 003 777 ED 023 801 725
The Manpower Development and Training Act: A Review of Training Activities.
VT 005 945 ED 021 145 701
Geographic Factors in Employment and Manpower Development.
VT 005 947 ED 021 147 673
New Developments in Manpower Programs.

FELLOWSHIPS
VT 008 207 679
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Industrial Arts General Meetings.

FEMALES
VT 004 665 ED 022 883 696
Equal Employment Opportunities for Women Under Title VII of the Civil Rights Act of 1964.
VT 008 206 679
Dynamics of the Organizational Power Structure.

FINANCIAL NEEDS
VT 002 039 ED 025 585 728
The People Left Behind; Seminar on Manpower Policy and Program.

Page

FINANCIAL SUPPORT
VT 001 596 660
Technical Education, Title III George-Barden Act (Formerly Title VIII, N.D.E.A.). How to Obtain Approval for Assistance.

FINISHING PROCESSES
VT 006 674 ED 025 622 762
An Analysis of Metal Finishing Technology and its Status in Industrial Teacher-Education.

FOLLOWUP STUDIES
VT 002 491 ED 022 848 691
Youth in the Labor Market.
VT 005 428 714
Five Year Follow-up Survey of Distributive Education. 1957 - 1961.
VT 007 634 ED 025 667 754
National Seminar on Vocational Guidance. 1966. Follow-Up Study.

FOOD INSPECTORS
VT 006 470 ED 023 857 707
Occupational Education for Meat Inspection and Laboratory Animal Caretaker Jobs.

FOOD SERVICE OCCUPATIONS
VT 003 400 ED 025 458 682
Institute for Home Economics Teachers on Initiating, Developing, and Evaluating Programs at the Post High School Level. Volume I.

FOOD STORES
VT 002 943 682
Potential for Food Handling and Distribution Training in Connecticut.

FOODS INSTRUCTION
VT 005 751 715
Evaluation Materials in Foods, Tenth Grade.
VT 005 757 717
Evaluation Materials in Foods for Ninth Grade.

FOREIGN COUNTRIES
VT 000 079 ED 025 581 688
Problems of Manpower in Agriculture.
VT 001 508 ED 021 961 742
Program of Research in the Field of Human Resources Development With Special Reference to Asia and the Far East.
VT 004 569 725
The Development of Agricultural Education in India.
VT 004 577 737
A Basis for Developing Programs of Adult Farmer Education in India.
VT 004 642 696
The Training Specialist in Industry.
VT 006 365 ED 023 852 705
Wages and Labour Mobility.
VT 006 377 ED 023 854 706
Manpower Problems in the Service Sector.
VT 006 379 ED 024 793 706
Technical Change and Manpower Planning: Co-ordination at Enterprise Level.
VT 006 380 ED 025 617 706
Workers' Attitudes to Technical Change: An Integrated Survey of Research.

SUBJECT AND IDENTIFIER INDEX

Page

VT 006 563 674
The Vocational School System in Sweden.
VT 006 565 675
The Municipal Vocational Schools of Stockholm, A Survey.
VT 006 566 675
Vocational Training for Adults in Sweden. Sweden Today.

FOREIGN WORKERS
VT 004 963 ED 025 592 699
Adaptation of Rural and Foreign Workers to Industry, International Joint Seminar.

FORMER TEACHERS
VT 003 579 ED 025 589 692
Factors Related to Employment of Iowa State University Graduates in Agricultural Education.
VT 004 560 ED 022 870 759
Factors Related to Employment of Iowa State University Graduates in Agricultural Education.

FORUM ON HOMEMAKER-HOME HEALTH AIDE SERVICE, NEW YORK CITY, MAY 4-5, 1967
VT 005 057 669
Report of 1967 Forum on Homemaker-Home Health Aide Service (New York City, May 4-5, 1967).

FOUNDATION PROGRAMS
VT 004 974 668
Tapestry for Tomorrow, The Ford Foundation Program in the Middle East.

FUTURE FARMERS OF AMERICA
VT 001 603 749
So You Want to Be an Officer in the F.F.A.

FUTURE FARMERS OF AMERICA COOPERATIVE ACQUAINTANCESHIP PROGRAMS
VT 001 595 659
Suggested Procedures for Planning and Conducting County FFA Cooperative Acquaintancesnip Programs.

FUTURE HOMEMAKERS OF AMERICA
VT 001 706 724
Twenty Years of Progress, 1945-1965. History of the Ohio Association of Future Homemakers of America.

GENERAL EDUCATION
VT 005 126 738
The Role of Industrial Arts in Tomorrow's Schools.

GEORGE BARDEN ACT TITLE III
VT 001 596 660
Technical Education, Title III George-Barden Act (Formerly Title VIII, N.D.E.A.). How to Obtain Approval for Assistance.
VT 001 815 664
Progress in Technical Vocational Education Programs under Title III of the George-Barden Act, Fiscal Years 1959-1964.

GOAL ORIENTATION
VT 004 582 ED 022 881 695
Managerial Perception and Success in Farming.

GOVERNMENT EMPLOYEES
VT 004 969 751
Careers with the State of Minnesota.

GOVERNMENT PUBLICATIONS
VT 001 249 659
A Survey of Federal Government Publications of Interest to Small Business.

GOVERNMENT ROLE
VT 002 500 ED 016 788 724
Vocational Education Act of 1963, A Case Study in Legislation.

GRADUATE SURVEYS
VT 001 173 748
Follow-Up Study of 1963 St. Louis Park Graduates.
VT 001 485 758
A Follow-Up Study of the First Fifty Graduates of Trade Technical Education.
VT 005 428 714
Five Year Follow-up Survey of Distributive Education. 1957 - 1961.

GRAPHS
VT 002 379 665
A Graphic Analysis for the Development of a Master Plan Concept.

GREENHOUSES
VT 001 430 720
A Greenhouse for Vocational Agriculture in Kentucky.

GROUP NORMS
VT 001 338 748
Counselor's Guide to Georgia Area Vocational-Technical Schools.

GUIDANCE SERVICES
VT 007 634 ED 025 667 754
National Seminar on Vocational Guidance. 1966. Follow-Up Study.
VT 007 635 ED 025 668 754
National Seminar on Vocational Guidance. 1966. Final Report.
VT 007 814 ED 026 534 754
Vocational Guidance in Secondary Education. Results of a National Survey.

GUIDELINES
VT 001 028 658
Procedures for Conducting a Vocational Education Community Study.
VT 001 689 662
Vocational Agriculture in the Next Five Years, 1963-1968.
VT 001 888 665
Guide for Establishment and Conduct of Local Advisory Committees for Vocational Agricultural Departments.
VT 003 764 ED 024 762 693
Guidelines for the Design of New Careers. Staff Paper.
VT 003 804 666
Guidelines for Preparatory Programs, Trade and Industrial Services.
VT 004 953 731
Guidelines for Compiling a Directory of Community Services in Rehabilitation and Employment of Handicapped Men and Women.
VT 005 014 ED 025 594 731
Trends in Vocational Education for the Deaf. Report of the Workshop, 1967.

GUIDES
VT 001 899 665
Agricultural File Index.
VT 001 915 691
A Teenager's Guide in Employment.

HANDICAPPED
VT 004 953 731
Guidelines for Compiling a Directory of Community Services in Rehabilitation and Employment of Handicapped Men and Women.

HAWAII VOCATIONAL EDUCATION RESEARCH COORDINATING UNIT
VT 005 405 744
Quarterly Technical Progress Report; Sixth, October 1, 1967 - December 31, 1967.

HEALTH EDUCATION
VT 004 967 ED 024 772 668
Health Education of Workers.

HEALTH MOBILIZATION PROGRAM
VT 005 563 671
Model State Emergency Health Service Plan.

HEALTH OCCUPATIONS
VT 001 566 659
Organizing Comprehensive State Health Careers Councils.
VT 001 801 690
A Summary of Preliminary Findings, Conclusions and Recommendations of a Study of Manpower Requirements and Education and Training Programs of Selected Health Occupations.
VT 005 433 ED 022 899 670
Nursing in the South.
VT 006 578 ED 023 861 708
State Licensing of Health Occupations.

HEALTH OCCUPATIONS EDUCATION
VT 000 240 658
Homemaker-Health Aide Training Project.
VT 000 830 658
School Program for Practical Nurses.
VT 000 836 ED 026 450 766
Toward More Effective Teaching in WCHEN Schools; The Report of a Course in New Training Techniques for Nurse Faculty.
VT 001 530 710
Nurse Aide Training.
VT 001 693 682
The Dental Assisting Curriculum--Content and Scope.
VT 001 801 690
A Summary of Preliminary Findings, Conclusions and Recommendations of a Study of Manpower Requirements and Education and Training Programs of Selected Health Occupations.
VT 002 139 691
A Study of Practical Nurses Who Have Been Licensed in Iowa But Are Not Presently Employed in Iowa as Practical Nurses.
VT 002 476 ED 025 588 766
A Study of the Effectiveness of the Case Method in Teaching Interpersonal Relations to Psychiatric Aides.
VT 004 002 683
A Functional Analysis of Paramedical Occupations. Condensation of the Final Report.
VT 005 527 671
Public Health Service Grants for Training Projects, Policy Statement.
VT 005 732 ED 023 835 683
Greater Utilization of Dental Technicians. Report of Training.

SUBJECT AND IDENTIFIER INDEX

Page

VT 006 220 721
Educational Specifications for Practical Nursing Facilities.
VT 006 463 707
Licensed Dental Hygienists in Iowa.

HEALTH PERSONNEL
VT 006 759 ED 025 627 676
Comprehensive Health Manpower Planning.

HEALTH SERVICES
VT 004 967 ED 024 772 668
Health Education of Workers.
VT 006 759 ED 025 627 676
Comprehensive Health Manpower Planning.

HIGH SCHOOL GRADUATES
VT 000 870 ED 025 583 688
A Study of the Employment Problems and Prospects of a Selected Group of Male Occupationally Oriented High School Graduates.
VT 001 173 748
Follow-Up Study of 1963 St. Louis Park Graduates.
VT 002 491 ED 022 848 691
Youth in the Labor Market.
VT 002 981 692
What the Employer Looks for in the High School Business Graduate.
VT 004 573 ED 022 873 712
Characteristics and Performances of High School Graduates and Non-Graduates in One-Year Programs in the Community College System of Institutions in North Carolina.
VT 005 266 713
Report on New York State Data from a National Follow-up Study of High School Level Trade and Industrial Vocational Graduates; An Abstract of the Study.
VT 005 267 ED 020 414 713
Report on New York State Data from a National Follow-up Study of High School Level T and I Vocational Graduates.

HIGH SCHOOL STUDENTS
VT 001 527 749
Education and Career Study.
VT 001 650 661
School District Organization. The Vocational School and the Intermediate District.
VT 003 810 ED 026 461 750
The Northwest Missouri State College Studies; Volume XXVII, Number 3, Educational and Occupational Aspirations of High School Seniors, Part I.
VT 003 811 ED 026 462 750
The Northwest Missouri State College Studies; Volume XXVII, Number 4, Educational and Occupational Aspirations of High School Seniors. Part II.
VT 004 578 ED 022 877 766
The Relationship of Socio-Economic Status of Pupils to Their Comprehension of Reference Materials Written at Different Levels of Readability.
VT 005 251 752
Vocational Guidance Through Videotaping and Television.
VT 007 158 ED 023 897 733
Youth with Special Needs in Non-Metropolitan Ohio High Schools.

HIGH SCHOOLS
VT 001 692 662
Handbook for Home Economics Teachers.
VT 005 592 753
Your Introduction to Learning by Doing in Vocational Agriculture.

HIGHER EDUCATION
VT 002 425 ED 024 759 682
Guide to Organized Occupational Curriculums in Higher Education.

HISTORICAL REVIEWS
VT 001 706 624
Twenty Years of Progress, 1945-1965. History of the Ohio Association of Future Homemakers of America.
VT 002 069 ED 019 429 724
Six Decades of Service, 1903-1963.
VT 006 386 ED 022 052 725
Trends in Training--Six Years of CIRF Abstracts.
VT 006 672 ED 023 870 726
The Development of Trade and Industrial Education in Wisconsin.

HISTORY
VT 001 021 ED 017 643 724
Apprenticeship Past and Present.
VT 007 734 ED 027 403 685
The Feasibility of Teaching History of Technology in Vocational and Pre-Technical Secondary Schools.

HOME ECONOMICS EDUCATION
VT 001 692 662
Handbook for Home Economics Teachers.
VT 001 818 ED 026 454 758
Clinical Evaluation of Predictive Data for Prospective Home Economics Teachers.
VT 005 254 ED 026 474 738
Recommendations from the White House Conference on Children and Youth for Home Economics Teachers on The Family Today. Part 2.
VT 005 255 ED 026 475 738
Recommendations from the White House Conference on Children and Youth for Home Economics Teachers on The Family Today. Part 1.
VT 005 746 714
Estimating the Clothing Construction Ability of 8th, 9th, 10th, and 11/12th Grade Pupils.
VT 005 747 714
Evaluation Materials in Family Relations, Tenth Grade.
VT 005 748 715
Evaluation Materials in Family Relations, Eleventh and Twelfth Grade.
VT 005 749 715
Evaluation Materials in Housing, Ninth Grade.
VT 005 750 715
Evaluation Materials in Housing, Tenth Grade.
VT 005 751 715
Evaluation Materials in Foods, Tenth Grade.
VT 005 752 716
Evaluation Materials in Clothing, Tenth Grade.
VT 005 753 716
Evaluation Materials in Clothing, Ninth Grade.
VT 005 754 716
Evaluation Materials in Child Development, Ninth Grade.
VT 005 755 716
Evaluation Materials in Child Development, Eleven and Twelfth Grade.
VT 005 756 717
Evaluation Materials in Family Relations, Ninth Grade.
VT 005 757 717
Evaluation Materials in Foods for Ninth Grade.
VT 006 295 ED 026 482 703
Recognized Problems of Single Girls in Iowa Entering the Work World Following High School Graduation.
VT 006 296 ED 026 483 703
Management Problems of Young Employed Homemakers.
VT 006 910 ED 022 954 745
Abstracts of Studies in Vocational Education.
VT 007 2[illegible]9 ED 023 908 771
Home Economics Education, Research Summary.
VT 008 085 ED 028 290 755
Selected Bibliography of Theses and Research in Family Economics and Home Management.

HOME ECONOMICS SKILLS
VT 002 611 ED 023 795 692
Worker Requirements and Methods of Entry into Home and Community Occupations Related to Home Economics.

HOME ECONOMICS TEACHERS
VT 001 818 ED 026 454 758
Clinical Evaluation of Predictive Data for Prospective Home Economics Teachers.

HOME FURNISHINGS
VT 005 750 715
Evaluation Materials in Housing, Tenth Grade.

HOME MANAGEMENT
VT 006 296 ED 026 483 703
Management Problems of Young Employed Homemakers.
VT 008 085 ED 028 290 755
Selected Bibliography of Theses and Research in Family Economics and Home Management.

HOMEMAKER-HEALTH AIDE TRAINING PROJECT
VT 000 240 658
Homemaker-Health Aide Training Project.

HOMEMAKING EDUCATION
VT 001 578 659
Criteria for Determining Approval of Vocational Units and Fractional Units in Home Economics.
VT 001 706 724
Twenty Years of Progress, 1945-1965. History of the Ohio Association of Future Homemakers of America.

HOMEMAKING SKILLS
VT 000 240 658
Homemaker-Health Aide Training Project.

HOSPITALS
VT 006 813 676
Abstracts of Hospital Management Studies. Volume 4, Number 3.

SUBJECT AND IDENTIFIER INDEX

Page

HUMAN RESOURCES
VT 001 025 ED 020 299 658
Manpower Report of the President Including a Report on Manpower Requirements, Resources, Utilization and Training.
VT 001 508 ED 021 961 742
Program of Research in the Field of Human Resources Development With Special Reference to Asia and the Far East.
VT 004 685 ED 026 464 743
The Development and Utilization of Human Resources; A Guide for Research.

IMMIGRANTS
VT 005 058 699
Manpower and Immigration.

INCOME
VT 005 638 ED 025 600 714
A Nationwide Evaluation of MDTA Institutional Job Training Programs.

INDEXING
VT 001 899 665
Agricultural File Index.

INDIVIDUAL CHARACTERISTICS
VT 001 336 689
Ex-Farm Operators in a Low-Income Area.
VT 002 139 691
A Study of Practical Nurses Who Have Been Licensed in Iowa But Are Not Presently Employed in Iowa as Practical Nurses.
VT 003 894 ED 022 855 729
The Mentally Retarded: Their Special Training Needs.
VT 003 896 ED 022 856 729
Family Breadwinners: Their Special Training Needs.
VT 008 166 734
Effective Trade and Industrial Programs for the Disadvantaged Persons with Special Needs.

INDUSTRIAL ARTS
VT 001 485 758
A Follow-Up Study of the First Fifty Graduates of Trade Technical Education.
VT 001 622 660
Industrial Education: Its Place, Purpose, Objectives, Methods, and Organization in the Arlington County Public Schools.
VT 001 906 737
Industrial Arts in Education.
VT 003 392 737
Contemporary Methods of Teaching Industrial Arts.
VT 005 126 738
The Role of Industrial Arts in Tomorrow's Schools.
VT 005 594 739
New Horizons in Industrial Arts.
VT 006 674 ED 025 622 762
An Analysis of Metal Finishing Technology and its Status in Industrial Teacher-Education.
VT 008 207 679
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Industrial Arts General Meetings.
VT 008 232 ED 028 301 721
Guide for Planning Industrial Arts Laboratory Facilities.

Page

VT 008 387 764
Proceedings of the National Association of Industrial and Technical Teacher Educators (NAITTE) Executive Committee Business Meetings at the Annual Vocational Convention of the American Vocational Association. 1968.

INDUSTRIAL ARTS LABORATORIES
VT 004 850 720
Industrial Arts Facilities.

INDUSTRIAL ARTS POLICY AND PLANNING COMMITTEE
VT 001 906 737
Industrial Arts in Education.

INDUSTRIAL EDUCATION
VT 000 812 736
Results of Survey to Ascertain if the Arlington County Public Schools' Industrial Education Program is Organized and Attuned to Present Trends.
VT 006 668 ED 023 869 762
Industrial Education for the Visually Limited.
VT 006 805 ED 026 496 721
School Shop Development: Research and Planning.
VT 008 215 718
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. NAITTE Research Committee.

INDUSTRIAL PERSONNEL
VT 004 941 698
The Employment Service Goes to an Armour Plant Closing.
VT 004 967 ED 024 772 668
Health Education of Workers.

INDUSTRIAL STRUCTURE
VT 001 563 770
Worker-Owned Plywood Companies, An Economic Analysis.
VT 006 142 702
Men vs. Machines: Automation in a Wisconsin Community.

INDUSTRIAL TRAINING
VT 004 642 696
The Training Specialist in Industry.
VT 006 391 707
Training and Education for Manpower Development.
VT 007 567 677
A Catalogue of Vocational Training Programmes in Republic of China.

INDUSTRY
VT 001 745 663
Code Book of Industries, Occupations and Course Titles.
VT 003 601 ED 026 459 742
The New York State Department of Labor's Manpower Projections for the State and Its Areas: A Preliminary Report on Methodology.
VT 004 962 698
State Plan Inventory. Section 3-A, Projections of Employment for the Year 1980.
VT 004 963 ED 025 592 699
Adaptation of Rural and Foreign Workers to Industry, International Joint Seminar.
VT 006 377 ED 023 854 706
Manpower Problems in the Service Sector.

Page

INFORMATION DISSEMINATION
VT 006 230 673
A Plan for Disseminating Vocational Education Research Materials.

INFORMATION SOURCES
VT 006 374 ED 023 853 705
Occupational Employment Statistics.

INFORMATION STORAGE
VT 001 899 665
Agricultural File Index.
VT 002 729 ED 024 761 758
Teacher Model; A Model to Guide Curriculum Development for the American Industry Project.

INFORMATION SYSTEMS
VT 008 285 755
A Report on Project CVIS (Computerized Vocational Information System) in Operation at Willowbrook High School, Villa Park, Illinois.

INSTITUTES (TRAINING PROGRAMS)
VT 002 335 ED 022 845 742
Special Training Project for Educational Researchers in the Nation's Large Cities. December 1, 1966-January 31, 1967. Final Report.
VT 007 682 ED 026 524 685
Institute for Home Economics Teachers on Initiating, Developing, and Evaluating Programs at the Post High School Level. Volume II.

INSTITUTIONAL ADMINISTRATION
VT 006 813 676
Abstracts of Hospital Management Studies. Volume 4, Number 3.

INSTRUCTIONAL IMPROVEMENT
VT 005 014 ED 025 594 731
Trends in Vocational Education for the Deaf. Report of the Workshop, 1967.
VT 005 015 ED 025 595 731
Trends in Prevocational Education for the Deaf. Report of the Workshop, 1967.

INSTRUCTIONAL INNOVATION
VT 008 211 679
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Secondary Department General Meetings.

INSTRUCTIONAL MATERIALS
VT 004 903 ED 024 769 743
Training and Reference Manual for Job Analysis.

INSTRUCTIONAL MEDIA
VT 005 013 ED 025 593 731
Annotated Bibliography of Instructional Media; Vocational Education for the Deaf.
VT 007 499 ED 026 512 767
New Media in Teaching the Business Subjects.

INSTRUCTIONAL PROGRAMS
VT 001 680 661
An Administrative Handbook for Vocational Distributive Education in Indiana.

SUBJECT AND IDENTIFIER INDEX

Page

VT 006 674 ED 025 622 762
An Analysis of Metal Finishing Technology and its Status in Industrial Teacher-Education.

INSTRUCTIONAL TECHNOLOGY
VT 000 836 ED 026 450 766
Toward More Effective Teaching in WCHEN Schools; The Report of a Course in New Training Techniques for Nurse Faculty.
VT 007 499 ED 026 512 767
New Media in Teaching the Business Subjects.
VT 008 167 678
Tomorrow, Today.

INSTRUCTOR COORDINATORS
VT 001 672 661
Industrial Cooperative Training, A Handbook for Industrial Cooperative Teacher Coordinators.

INTEGRATED CURRICULUM
VT 005 026 ED 023 818 669
Demonstrating Innovations in Vocational Education: Initial Application Submitted to the Office of Education, Department of Health, Education and Welfare: Plans and Operation Grant.

INTERDISCIPLINARY APPROACH
VT 006 376 ED 026 485 745
An Interdisciplinary Approach to Manpower Research.

INTERNATIONAL MANPOWER SEMINAR, SEPTEMBER 28 - DECEMBER 10, 1966
VT 004 849 ED 024 768 696
Manpower and Employment Policies for Developing Countries.

INTERPERSONAL RELATIONSHIPS
VT 002 476 ED 025 588 766
A Study of the Effectiveness of the Case Method in Teaching Interpersonal Relations to Psychiatric Aides.

IOWA GOVERNOR'S COMMISSION ON THE STATUS OF WOMEN, DES MOINES, IOWA, NOVEMBER 20-21, 1964
VT 006 310 704
Report of Statewide Meeting of the Governor's Commission on the Status of Women. 1964.

JOB ANALYSIS
VT 001 191 688
Seven Basic Areas of the World of Work; Introduction and Summary.
VT 004 263 ED 022 864 693
A Study of the Opportunities for, Requirements of, and Knowledges, Abilities, and Related Characteristics Needed by Beginning Office Workers in the State of Connecticut.
VT 004 903 ED 024 769 [illegible]
Training and Reference Manual for Job Analysis.
VT 007 249 ED 023 913 740
The Design and Evaluation of Vocational Technical Education Curricula Through Functional Job Analysis.

JOB APPLICANTS
VT 000 602 766
Race and Socioeconomic Status as Moderators in Predicting Machine-Shop Training Success.

JOB LAYOFF
VT 004 941 698
The Employment Service Goes to an Armour Plant Closing.
VT 005 179 700
A Study of the Re-Employment and Unemployment Experiences of Scientists and Engineers Laid Off from 62 Aerospace and Electronics Firms in the San Francisco Bay Area During 1963-1965, Executive Summary.

JOB SKILLS
VT 004 580 ED 022 879 694
An Analysis of Activities in Farmstead Mechanization Experienced by Selected Farmers and Associated Businesses.
VT 006 297 ED 026 484 703
Analysis of Tasks in Three Home Related Occupations.
VT 006 346 ED 024 791 704
Employment Opportunities and Competencies Needed in Farm Occupations in Selected Counties in Kentucky.
VT 006 357 ED 024 792 705
Occupational Commonalities: A Base for Course Construction.

JOB TENURE
VT 001 336 689
Ex-Farm Operators in a Low-Income Area.
VT 005 263 ED 025 596 700
The Length of Working Life for Males, 1900-60.

JOB TRAINING
VT 003 981 ED 022 859 729
Help for Out-of-Work Youth; A Manual for a Job Preparation Program in Your Community.

JUDGMENTAL PROCEDURE
VT 005 413 ED 024 777 670
The Application of the Judgmental Procedure to Vocational and Practical Arts Education.

JUNIOR COLLEGES
VT 004 955 668
Research Opportunities in Comprehensive Public Junior Colleges--Inter- and Intra-College Organizational Problems.

LABOR ECONOMICS
VT 003 780 693
Inventory of Manpower Research Projects in Indiana, Number 1.
VT 006 365 ED 023 852 705
Wages and Labour Mobility.

LABOR FORCE
VT 000 079 ED 025 581 688
Problems of Manpower in Agriculture.
VT 001 191 688
Seven Basic Areas of the World of Work; Introduction and Summary.
VT 001 526 689
A Least Squares Analysis of Colorado Nonfarm Employment, 1939-1963, With Projections to 1970.
VT 006 310 704
Report of Statewide Meeting of the Governor's Commission on the Status of Women. 1964.
VT 006 357 ED 024 792 705
Occupational Commonalities: A Base for Course Construction.
VT 006 374 ED 023 853 705
Occupational Employment Statistics.
VT 006 383 ED 024 794 706
Economic Background to Manpower Planning and Control.

LABOR LAWS
VT 004 665 ED 022 883 696
Equal Employment Opportunities for Women Under Title VII of the Civil Rights Act of 1964.
VT 006 311 704
Report of Arrowhead Regional Conference on the Status of Women in Northern Minnesota (Duluth, Minn., July 17, 1964).

LABOR MARKET
VT 004 899 697
Tires and Tubes, Labor Market Developments.
VT 005 127 699
Occupational Information Conference Report (Oxnard, California, October 11, 1967).

LABOR SUPPLY
VT 000 079 ED 025 581 688
Problems of Manpower in Agriculture.

LABOR UNIONS
VT 006 304 704
Report of Conference on Unions and the Changing Status of Women Workers. 1964.

LAND GRANT UNIVERSITIES
VT 004 530 ED 022 868 759
An Evaluation of Selected Aspects of Agricultural Education Programs in the Inter-Regional Land-Grant Institutions of the United States.

LAW ENFORCEMENT
VT 007 472 ED 026 509 684
Development of Multi-Media Programmed Instructional Materials for the Training of Law Enforcement Officers. Final Report.
VT 007 473 ED 025 645 684
Development of Multi-Media Programmed Instructional Materials for the Training of Law Enforcement Officers. Initial Curriculum Study.

LEADERS GUIDES
VT 001 603 749
So You Want to Be an Officer in the F.F.A.

LEADERSHIP RESPONSIBILITY
VT 004 642 696
The Training Specialist in Industry.

LEARNING THEORIES
VT 007 924 ED 026 544 755
A Multimedia Approach to Communicating Occupational Information to Noncollege Youth. Technical Report.

LIBRARY COLLECTIONS
VT 005 296 771
Selected List of Acquisitions. Vol. 1, No. 1-4.

LIBRARY SERVICES
VT 004 911 667
Standards of Library Services in the Connecticut Vocational-Technical Schools.

SUBJECT AND IDENTIFIER INDEX

Page

LIBRARY STANDARDS
VT 004 911 667
Standards of Library Services in the Connecticut Vocational-Technical Schools.

LITERACY EDUCATION
VT 004 303 ED 024 763 730
The Development of Pre-Vocational Education Literacy Courses for Use with Computer-Assisted Instruction of Disadvantaged Youths and Adults. Final Report.

LITERATURE REVIEWS
VT 002 729 ED 024 761 758
Teacher Model; A Model to Guide Curriculum Development for the American Industry Project.
VT 006 386 ED 022 052 725
Trends in Training--Six Years of CIRF Abstracts.
VT 006 391 707
Training and Education for Manpower Development.
VT 007 473 ED 025 645 684
Development of Multi-Media Programmed Instructional Materials for the Training of Law Enforcement Officers. Initial Curriculum Study.

LONGITUDINAL STUDIES
VT 004 485 ED 026 463 743
Youth in Transition. Volume I.

LOW ACHIEVERS
VT 001 583 728
Summary and Evaluation of the Vocational Special Needs Pilot Program.

LOW INCOME COUNTIES
VT 001 336 689
Ex-Farm Operators in a Low-Income Area.

LUMBER INDUSTRY
VT 001 563 770
Worker-Owned Plywood Companies, An Economic Analysis.

MALES
VT 005 263 ED 025 596 700
The Length of Working Life for Males, 1900-60.

MANAGEMENT
VT 006 813 676
Abstracts of Hospital Management Studies. Volume 4, Number 3.

MANAGEMENT DEVELOPMENT
VT 001 249 659
A Survey of Federal Government Publications of Interest to Small Business.

MANAGEMENT EDUCATION
VT 004 972 ED 026 469 712
Statistics in Vocational Rehabilitation. Proceedings of a Seminar, 1966.

MANPOWER DEVELOPMENT
VT 001 025 ED 020 299 658
Manpower Report of the President Including a Report on Manpower Requirements, Resources, Utilization and Training.
VT 001 412 ED 025 451 728
Neighborhood Manpower Programs.
VT 001 508 ED 021 961 742
Program of Research in the Field of Human Resources Development With Special Reference to Asia and the Far East.
VT 001 566 659
Organizing Comprehensive State Health Careers Councils.
VT 001 801 690
A Summary of Preliminary Findings, Conclusions and Recommendations of a Study of Manpower Requirements and Education and Training Programs of Selected Health Occupations.
VT 003 777 ED 023 801 725
The Manpower Development and Training Act: A Review of Training Activities.
VT 003 780 693
Inventory of Manpower Research Projects in Indiana, Number 1.
VT 004 685 ED 026 464 743
The Development and Utilization of Human Resources; A Guide for Research.
VT 004 849 ED 024 768 696
Manpower and Employment Policies for Developing Countries.
VT 005 947 ED 021 147 673
New Developments in Manpower Programs.
VT 006 376 ED 026 485 745
An Interdisciplinary Approach to Manpower Research.
VT 006 390 ED 024 795 707
Manpower Research Institutional Grant Program: Progress Report for July 1, 1966-June 30, 1967.
VT 006 605 ED 023 864 708
Manpower Planning and Forecasting.
VT 007 279 746
Inventory of Manpower Research Projects in Indiana.

MANPOWER DEVELOPMENT AND TRAINING ACT PROGRAMS
VT 001 579 728
Some Programs of Vocational Education for Persons with Special Needs in Wisconsin.
VT 003 777 ED 023 801 725
The Manpower Development and Training Act: A Review of Training Activities.
VT 003 896 ED 022 856 729
Family Breadwinners: Their Special Training Needs.
VT 004 845 ED 025 466 731
Mental Health and Manpower Employment Adjustment for Psychiatric Patients.
VT 004 951 751
Vocational Education and Training in Arkansas.
VT 005 638 ED 025 600 714
A Nationwide Evaluation of MDTA Institutional Job Training Programs.
VT 005 947 ED 021 147 673
New Developments in Manpower Programs.

MANPOWER INSTITUTIONAL GRANT PROGRAM
VT 006 390 ED 024 795 707
Manpower Research Institutional Grant Program: Progress Report for July 1, 1966-June 30, 1967.

MANPOWER NEEDS
VT 000 079 ED 025 581 688
Problems of Manpower in Agriculture.
VT 001 025 ED 020 299 658
Manpower Report of the President Including a Report on Manpower Requirements, Resources, Utilization and Training.
VT 001 412 ED 025 451 728
Neighborhood Manpower Programs.
VT 005 125 699
Training Needs for Metal Tradesmen in Iowa.
VT 005 433 ED 022 899 670
Nursing in the South.
VT 005 942 ED 021 142 717
New Perspectives on Manpower Problems and Measures.
VT 006 376 ED 026 485 745
An Interdisciplinary Approach to Manpower Research.
VT 006 390 ED 024 795 707
Manpower Research Institutional Grant Program: Progress Report for July 1, 1966-June 30, 1967.
VT 006 759 ED 025 627 676
Comprehensive Health Manpower Planning.

MANPOWER UTILIZATION
VT 001 025 ED 020 299 658
Manpower Report of the President Including a Report on Manpower Requirements, Resources, Utilization and Training.
VT 003 601 ED 026 459 742
The New York State Department of Labor's Manpower Projections for the State and Its Areas: A Preliminary Report on Methodology.
VT 003 780 693
Inventory of Manpower Research Projects in Indiana, Number 1.
VT 004 212 ED 022 863 730
Workshop on Nonprofessional Careers for Disadvantaged Youth.
VT 004 899 697
Tires and Tubes, Labor Market Developments.
VT 005 942 ED 021 142 717
New Perspectives on Manpower Problems and Measures.
VT 006 379 ED 024 793 706
Technical Change and Manpower Planning: Co-ordination at Enterprise Level.
VT 006 390 ED 024 795 707
Manpower Research Institutional Grant Program: Progress Report for July 1, 1966-June 30, 1967.
VT 007 260 ED 023 917 708
Enterprise Planning for Change; Co-ordination of Manpower and Technical Planning.
VT 007 279 746
Inventory of Manpower Research Projects in Indiana.

MANUALS
VT 001 640 661
The Ohio Young Farmer Manual.
VT 001 692 662
Handbook for Home Economics Teachers.

MANUFACTURING INDUSTRY
VT 005 125 699
Training Needs for Metal Tradesmen in Iowa.

MASSACHUSETTS VOCATIONAL EDUCATION RESEARCH COORDINATING UNIT
VT 005 401 743
Massachusetts Vocational Education Research Coordinating Unit, Second Report for the Period October 1 to December 31, 1967.

SUBJECT AND IDENTIFIER INDEX

Page

MASTER PLANS
VT 002 379 665
A Graphic Analysis for the Development of a Master Plan Concept.

MASTER TEACHERS
VT 007 554 ED 026 518 767
A Comparison of a Master Teacher and Instructional Assistants in Automated Shorthand and Typewriting Instruction.

MEASUREMENT
VT 005 942 ED 021 142 717
New Perspectives on Manpower Problems and Measures.

MEAT PACKING INDUSTRY
VT 004 941 698
The Employment Service Goes to an Armour Plant Closing.

MEDICAL LABORATORY ASSISTANTS
VT 004 002 683
A Functional Analysis of Paramedical Occupations. Condensation of the Final Report.

MEETINGS
VT 001 888 665
Guide for Establishment and Conduct of Local Advisory Committees for Vocational Agricultural Departments.

MENTAL HEALTH
VT 005 724 ED 024 782 760
A Clinical Workshop in Mental Health and Psychiatric Nursing for Instructors in Schools of Practical Nursing. Final Report.

MENTAL ILLNESS
VT 005 724 ED 024 782 760
A Clinical Workshop in Mental Health and Psychiatric Nursing for Instructors in Schools of Practical Nursing. Final Report.

MENTALLY HANDICAPPED
VT 004 180 MP 000 343 729
The Occupational Success of the Retarded, Critical Factors, Predictive Tests and Remedial Techniques. Summary.

METAL WORKING OCCUPATIONS
VT 000 415 ED 025 582 688
A Survey of Demand in Selected Metalworking Occupations for Major Areas in Idaho.
VT 005 125 699
Training Needs for Metal Tradesmen in Iowa.
VT 007 370 ED 023 926 722
A Guide for Planning Facilities for Occupational Preparation Programs in the Machine Trades.

MIGRATION
VT 002 039 ED 025 585 728
The People Left Behind; Seminar on Manpower Policy and Program.
VT 004 902 697
Hired Farmworkers in the United States.
VT 005 945 ED 021 145 701
Geographic Factors in Employment and Manpower Development.

MIGRATION PATTERNS
VT 007 126 ED 022 967 733
Development of Human Resources Through a Vocationally Oriented Educational Program for Disadvantaged Families in Depressed Rural Areas. Interim Report 2.

Page

MILWAUKEE SCHOOL OF ENGINEERING
VT 002 069 ED 019 429 724
Six Decades of Service, 1903-1963.

MINORITY GROUPS
VT 006 605 ED 023 864 708
Manpower Planning and Forecasting.

MODELS
VT 002 729 ED 024 761 758
Teacher Model; A Model to Guide Curriculum Development for the American Industry Project.
VT 003 369 MP 000 159 742
Development of Models for Projecting Employment by Industry and by Occupation.
VT 005 563 671
Model State Emergency Health Service Plan.
VT 006 628 ED 024 801 762
Trade and Industrial Teacher Education: A Research Critique and Model for Action.
VT 008 168 678
Speeches Presented at the National Conference on Exemplary Programs and Projects. (Atlanta, March 12-14, 1969).

MODERN MATHEMATICS
VT 004 965 712
Evaluation Problems of the UICSM (University of Illinois Committee on School Mathematics) Curriculum Project.

MULTIMEDIA INSTRUCTION
VT 007 924 ED 026 544 755
A Multimedia Approach to Communicating Occupational Information to Noncollege Youth. Technical Report.

NATIONAL CONFERENCE ON EXEMPLARY PROGRAMS AND PROJECTS (1968 AMENDMENTS TO THE VOCATIONAL EDUCATION ACT), ATLANTA, MARCH 12-14, 1969
VT 008 168 678
Speeches Presented at the National Conference on Exemplary Programs and Projects. (Atlanta, March 12-14, 1969).

NATIONAL SCHOOL OF AGRICULTURE
VT 004 561 711
An Evaluation of Work Experience Programs as an Element of Agricultural Education in a Panamanian School of Agriculture.

NATIONAL SEMINAR ON VOCATIONAL GUIDANCE, MARQUETTE, MICHIGAN, AUGUST 21-26, 1966
VT 007 634 ED 025 667 754
National Seminar on Vocational Guidance. 1966. Follow-Up Study.
VT 007 635 ED 025 668 754
National Seminar on Vocational Guidance. 1966. Final Report.

NATIONAL SURVEYS
VT 004 485 ED 026 463 743
Youth in Transition. Volume I.
VT 005 607 ED 025 599 760
The Successful Teacher in Technical Education: The Preparation of the Successful Teacher.
VT 006 374 ED 023 853 705
Occupational Employment Statistics.
VT 006 578 ED 023 861 708
State Licensing of Health Occupations.

Page

VT 006 674 ED 025 622 762
An Analysis of Metal Finishing Technology and its Status in Industrial Teacher-Education.
VT 007 472 ED 026 509 684
Development of Multi-Media Programmed Instructional Materials for the Training of Law Enforcement Officers. Final Report.
VT 007 473 ED 025 645 684
Development of Multi-Media Programmed Instructional Materials for the Training of Law Enforcement Officers. Initial Curriculum Study.
VT 007 567 677
A Catalogue of Vocational Training Programmes in Republic of China.
VT 007 814 ED 026 534 754
Vocational Guidance in Secondary Education. Results of a National Survey.

NAVAJO
VT 004 994 713
The Navajo Rehabilitation Project, Pre-Vocational Laboratory. Navajo Rehabilitation Project Technical Report No. 8.
VT 004 995 713
Education as a Process of Vocational Evaluation. Navajo Rehabilitation Project Technical Report No. 6.

NEGROES
VT 007 782 ED 026 533 734
Education, Employment, and Negro Equality.

NEIGHBORHOOD CENTERS
VT 001 412 ED 025 451 728
Neighborhood Manpower Programs.

NEIGHBORHOOD MANPOWER PROGRAMS
VT 001 412 ED 025 451 728
Neighborhood Manpower Programs.

NEW CAREERS PROGRAM
VT 006 721 ED 022 925 675
Procedural Guide for Program Development in New Careers.

NEW MEXICO VOCATIONAL EDUCATION RESEARCH COORDINATING UNIT
VT 005 406 744
New Mexico Research Coordinating Unit, Progress Report, December 1, 1967 - February 29, 1968.

NONCOLLEGE PREPARATORY STUDENTS
VT 000 870 ED 025 583 688
A Study of the Employment Problems and Prospects of a Selected Group of Male Occupationally Oriented High School Graduates.
VT 007 924 ED 026 544 755
A Multimedia Approach to Communicating Occupational Information to Noncollege Youth. Technical Report.

NURSE TRAINING ACT OF 1964
VT 005 734 672
Guidelines for Project Grants for Improvement in Nurse Training.

NURSES
VT 005 433 ED 022 899 670
Nursing in the South.

NURSES AIDES
VT 001 530 710
Nurse Aide Training.

SUBJECT AND IDENTIFIER INDEX

Page

NURSING
VT 000 836 ED 026 450 766
Toward More Effective Teaching in WCHEN Schools; The Report of a Course in New Training Techniques for Nurse Faculty.
VT 005 213 ED 026 471 670
Criteria for the Evaluation of Educational Programs in Nursing Leading to an Associate Degree.
VT 005 734 672
Guidelines for Project Grants for Improvement in Nurse Training.

OCCUPATIONAL ASPIRATION
VT 001 630 ED 024 757 749
Educational and Vocational Goals of Rural Youth in North Carolina.
VT 003 810 ED 026 461 750
The Northwest Missouri State College Studies; Volume XXVII, Number 3, Educational and Occupational Aspirations of High School Seniors, Part I.
VT 003 811 ED 026 462 750
The Northwest Missouri State College Studies; Volume XXVII, Number 4, Educational and Occupational Aspirations of High School Seniors, Part II.
VT 005 482 ED 024 780 752
Planned and Unplanned Aspects of Occupational Choices by Youth. Final Report.

OCCUPATIONAL CHOICE
VT 004 336 ED 025 591 750
Religion and Occupational Behavior; An Annotated Bibliography.
VT 005 482 ED 024 780 752
Planned and Unplanned Aspects of Occupational Choices by Youth. Final Report.

OCCUPATIONAL CLUSTERS
VT 002 611 ED 023 795 692
Worker Requirements and Methods of Entry into Home and Community Occupations Related to Home Economics.
VT 003 601 ED 026 459 742
The New York State Department of Labor's Manpower Projections for the State and Its Areas: A Preliminary Report on Methodology.
VT 004 579 ED 022 878 694
Off-Farm Agricultural Occupations in Montana: Employment and Education.
VT 007 031 ED 022 965 717
The Implementation and Further Development of Experimental Cluster Concept Programs. Interim Report.

OCCUPATIONAL GUIDANCE
VT 000 572 748
Exploring Careers in Modern Agriculture Related to Land Use and Conservation.
VT 005 127 699
Occupational Information Conference Report (Oxnard, California, October 11, 1967).
VT 005 250 752
Computerized Vocational Information System (CVIS).
VT 005 251 752
Vocational Guidance Through Videotaping and Television.
VT 005 515 753
Color Perception and Color Blindness.
VT 007 634 ED 025 667 754
National Seminar on Vocational Guidance. 1966. Follow-up Study.
VT 007 635 ED 025 668 754
National Seminar on Vocational Guidance. 1966. Final Report.
VT 007 814 ED 026 534 754
Vocational Guidance in Secondary Education. Results of a National Survey.
VT 007 924 ED 026 544 755
A Multimedia Approach to Communicating Occupational Information to Noncollege Youth. Technical Report.
VT 008 210 718
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Research Section Meetings.
VT 008 213 718
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Department of Research and Evaluation General Meetings.
VT 008 285 755
A Report on Project CVIS (Computerized Vocational Information System) in Operation at Willowbrook High School, Villa Park, Illinois.

OCCUPATIONAL HOME ECONOMICS
VT 001 578 659
Criteria for Determining Approval of Vocational Units and Fractional Units in Home Economics.
VT 001 613 749
Survey of Pupil Interest in Three Home Economics Related Occupations: Child Care Aide, Clothing Construction Aide, Food Service Occupations.
VT 001 658 690
A Vocational Home Economics Education Survey.
VT 001 699 662
Sketches of Some Recent Laws Affecting Vocational Home Economics Programs.
VT 003 400 ED 025 458 682
Institute for Home Economics Teachers on Initiating, Developing, and Evaluating Programs at the Post High School Level. Volume I.
VT 004 781 666
Vocational Training Program for Childcare Aides, Report of Pilot Study.
VT 005 235 670
Tentative Work Material for Occupational Home Economics Programs.
VT 006 297 ED 026 484 703
Analysis of Tasks in Three Home Related Occupations.
VT 006 416 ED 022 918 761
Institute for Home Economics Teacher Educators on Preparing Teachers for Occupational Programs. Final Report.
VT 006 618 ED 022 924 721
A Guide for Planning Facilities for Home Economics Occupational Preparation Programs.
VT 007 682 ED 026 524 685
Institute for Home Economics Teachers on Initiating, Developing, and Evaluating Programs at the Post High School Level. Volume II.

OCCUPATIONAL INFORMATION
VT 002 407 ED 019 445 665
Technician Education Yearbook, 1965-1966.
VT 002 611 ED 023 795 692
Worker Requirements and Methods of Entry into Home and Community Occupations Related to Home Economics.
VT 003 546 ED 021 975 666
Technician Education Yearbook, 1963-1964.
VT 004 564 ED 022 872 694
The Identification and Analysis of Agricultural Occupations in Seventeen Pennsylvania Counties.
VT 004 942 ED 024 770 750
Engineering Technology Careers; Career Guidance Information for Engineering Technicians.
VT 004 969 751
Careers with the State of Minnesota.
VT 005 241 ED 024 776 700
Technician Career Opportunities in Engineering Technology.
VT 006 218 ED 026 481 753
Aviation--Where Career Opportunities are Bright; Counselor's Guide.
VT 006 243 ED 023 845 673
Technician Education Yearbook, 1967-1968.
VT 006 301 ED 024 789 703
A Comparative Study of the Employee Skills/Training Acceptable to Employers Under Varying Degrees of Labor Market Stringencies.
VT 008 285 755
A Report on Project CVIS (Computerized Vocational Information System) in Operation at Willowbrook High School, Villa Park, Illinois.

OCCUPATIONAL MOBILITY
VT 006 365 ED 023 852 705
Wages and Labour Mobility.

OCCUPATIONAL SURVEYS
VT 000 415 ED 025 582 688
A Survey of Demand in Selected Metalworking Occupations for Major Areas in Idaho.
VT 001 191 688
Seven Basic Areas of the World of Work; Introduction and Summary.
VT 001 477 689
Employers' Needs in Technical Occupations, Northern Virginia.
VT 001 567 690
Area Wage Survey, The Portland, Oregon-Washington, Metropolitan Area, May 1966.
VT 001 568 690
Area Wage Survey, The Greenville, South Carolina, Metropolitan Area, May 1966.
VT 001 620 660
Employment Trends in Selected Service Occupations in the San Francisco Bay Area.
VT 001 658 690
A Vocational Home Economics Education Survey.
VT 002 139 691
A Study of Practical Nurses Who Have Been Licensed in Iowa But Are Not Presently Employed in Iowa as Practical Nurses.
VT 004 617 695
Michigan Technician Needs Study, Summary Report.

SUBJECT AND IDENTIFIER INDEX

Page

VT 004 813 ED 022 885 696
Estimating Agricultural Employment from a Sample of Employers.
VT 004 899 697
Tires and Tubes, Labor Market Developments.
VT 004 900 697
Department Stores, Labor Market Developments.
VT 005 572 701
Manpower in Oklahoma, State Summary. Preliminary Release.
VT 005 826 ED 027 375 701
Michigan Technician Need Study. The Present and Projected Demand for Technically Trained People in Michigan.
VT 006 374 ED 023 853 705
Occupational Employment Statistics.
VT 006 463 707
Licensed Dental Hygienists in Iowa.
VT 007 761 ED 027 405 685
A Pilot Study to Determine the Need for Curriculum Modification in Vocational-Technical Education in New Hampshire.

OCCUPATIONS
VT 001 745 663
Code Book of Industries, Occupations and Course Titles.
VT 005 058 699
Manpower and Immigration.
VT 006 218 ED 026 481 753
Aviation--Where Career Opportunities are Bright; Counselor's Guide.

OFF FARM AGRICULTURAL OCCUPATIONS
VT 004 559 ED 022 869 693
A Comparison of Certain Knowledges in Agriculture Needed by Workers in Farming.
VT 004 564 ED 022 872 694
The Identification and Analysis of Agricultural Occupations in Seventeen Pennsylvania Counties.
VT 004 579 ED 022 878 694
Off-Farm Agricultural Occupations in Montana: Employment and Education.
VT 005 938 ED 022 910 672
The Teacher-Coordinator's Manual for Directed Work-Experience Programs in Agriculture.
VT 005 939 ED 022 911 673
The Development and Improvement of Directed Work-Experience Programs in Expanded Vocational Education Offerings in Agriculture at the Secondary School Level. Final Report.
VT 006 447 ED 022 919 674
Guidelines and Procedures: Directed Work-Experience Programs in Vocational Agricultural Education.
VT 007 304 ED 023 922 763
Personal and Situational Variables which Inhibit or Stimulate the Adoption of Agricultural Occupations Curricula.

OFFICE OCCUPATIONS
VT 004 263 ED 022 864 693
A Study of the Opportunities for, Requirements of, and Knowledges, Abilities, and Related Characteristics Needed by Beginning Office Workers in the State of Connecticut.

Page

OFFICE OCCUPATIONS EDUCATION
VT 001 328 659
In-School Work Experience Education for Office Occupations. An Operational Handbook.
VT 001 703 662
Criteria, Standards and Policies for Vocational Business and Office Education.
VT 004 263 ED 022 864 693
A Study of the Opportunities for, Requirements of, and Knowledges, Abilities, and Related Characteristics Needed by Beginning Office Workers in the State of Connecticut.
VT 005 567 671
Essentials and Requirements for Reimbursable Office Education Programs, Part I-V.
VT 007 554 ED 026 518 767
A Comparison of a Master Teacher and Instructional Assistants in Automated Shorthand and Typewriting Instruction.

OLDER ADULTS
VT 005 218 ED 026 472 700
Training and Retraining Older Workers, an Annotated Bibliography.

ON THE JOB TRAINING
VT 004 864 ED 026 467 667
The Structure of Technical Training Administration in the United States.

ORGANIZATION
VT 001 563 770
Worker-Owned Plywood Companies, An Economic Analysis.
VT 006 563 674
The Vocational School System in Sweden.

ORGANIZATIONAL CHANGE
VT 006 142 702
Men vs. Machines: Automation in a Wisconsin Community.
VT 006 379 ED 024 793 706
Technical Change and Manpower Planning: Co-Ordination at Enterprise Level.
VT 007 260 ED 023 917 708
Enterprise Planning for Change; Co-Ordination of Manpower and Technical Planning.

ORGANIZATIONS (GROUPS)
VT 001 640 661
The Ohio Young Farmer Manual.
VT 008 206 679
Dynamics of the Organizational Power Structure.

ORIENTATION MATERIALS
VT 005 592 753
Your Introduction to Learning by Doing in Vocational Agriculture.

ORNAMENTAL HORTICULTURE OCCUPATION
VT 001 430 720
A Greenhouse for Vocational Agriculture in Kentucky.

OUT OF SCHOOL YOUTH
VT 003 981 ED 022 859 729
Help for Out-of-Work Youth; A Manual for a Job Preparation Program in Your Community.

Page

PARENT CHILD RELATIONSHIP
VT 005 254 ED 026 474 738
Recommendations from the White House Conference on Children and Youth for Home Economics Teachers on The Family Today. Part 2.

PARENT INFLUENCE
VT 003 810 ED 026 461 750
The Northwest Missouri State College Studies; Volume XXVII, Number 3, Educational and Occupational Aspirations of High School Seniors, Part I.

PARTIALLY SIGHTED
VT 006 668 ED 023 869 762
Industrial Education for the Visually Limited.

PARTICIPANT CHARACTERISTICS
VT 004 958 698
Unemployment Insurance Claimants, 1962-1963, Characteristics and Benefit Experience of New York Workers.

PERIODICALS
VT 006 386 ED 022 052 725
Trends in Training--Six Years of CIRF Abstracts.

PERSONNEL SELECTION
VT 006 301 ED 024 789 703
A Comparative Study of the Employee Skills/Training Acceptable to Employers Under Varying Degrees of Labor Market Stringencies.

PHYSICAL FACILITIES
VT 006 220 721
Educational Specifications for Practical Nursing Facilities.

PLANT SCIENCE
VT 001 430 720
A Greenhouse for Vocational Agriculture in Kentucky.

POLICY
VT 005 734 672
Guidelines for Project Grants for Improvement in Nurse Training.
VT 006 377 ED 023 854 706
Manpower Problems in the Service Sector.
VT 008 387 764
Proceedings of the National Association of Industrial and Technical Teacher Educators (NAITTE) Executive Committee Business Meetings at the Annual Vocational Convention of the American Vocational Association. 1968.

POST HIGH SCHOOL GUIDANCE
VT 004 976 751
Ohio Notebook of Public Technical Education Programs, 1965-1966.

POST SECONDARY EDUCATION
VT 003 400 ED 025 458 682
Institute for Home Economics Teachers on Initiating, Developing, and Evaluating Programs at the Post High School Level. Volume I.
VT 004 976 751
Ohio Notebook of Public Technical Education Programs, 1965-1966.
VT 005 644 760
The Historical Development of a Post High School Distributive Education Program with Implications for Teacher Education.

SUBJECT AND IDENTIFIER INDEX

Page

VT 006 602 ED 026 488 675
A Cost-Benefit Study of Post-High School Technical Education in Oklahoma.
VT 007 682 ED 026 524 685
Institute for Home Economics Teachers on Initiating, Developing, and Evaluating Programs at the Post High School Level. Volume II.
VT 008 212 679
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Post Secondary Department General Meetings.

POWER STRUCTURE
VT 008 206 679
Dynamics of the Organizational Power Structure.

PRACTICAL ARTS
VT 001 905 770
Definitions of Terms in Vocational, Technical, and Practical Arts Education.

PRACTICAL NURSES
VT 002 139 691
A Study of Practical Nurses Who Have Been Licensed in Iowa But Are Not Presently Employed in Iowa as Practical Nurses.
VT 006 220 721
Educational Specifications for Practical Nursing Facilities.

PRACTICAL NURSING
VT 000 830 658
School Program for Practical Nurses.
VT 005 724 ED 024 782 760
A Clinical Workshop in Mental Health and Psychiatric Nursing for Instructors in Schools of Practical Nursing. Final Report.

PREDICTIVE ABILITY (TESTING)
VT 004 180 MP 000 343 729
The Occupational Success of the Retarded, Critical Factors, Predictive Tests and Remedial Techniques. Summary.

PREDICTIVE MEASUREMENT
VT 001 818 ED 026 454 758
Clinical Evaluation of Predictive Data for Prospective Home Economics Teachers.

PRESERVICE EDUCATION
VT 005 767 ED 024 784 761
An Introduction to Teaching Vocational Technical Education.
VT 007 488 ED 025 650 763
A Description and Evaluation of Vocational Teacher Training Programs in the State of Rhode Island.

PREVOCATIONAL EDUCATION
VT 004 303 ED 024 763 730
The Development of Pre-Vocational Education Literacy Courses for Use with Computer-Assisted Instruction of Disadvantaged Youths and Adults. Final Report.
VT 004 571 712
The Effectiveness of a Distributive Education Preparatory Course on Student Progress in Distributive Education II.

Page

VT 005 015 ED 025 595 731
Trends in Prevocational Education for the Deaf. Report of the Workshop, 1967.
VT 007 734 ED 027 403 685
The Feasibility of Teaching History of Technology in Vocational and Pre-Technical Secondary Schools.

PRODUCTIVITY
VT 004 592 ED 020 349 695
Systems Design and Nature of Work. Seminar, 1966.
VT 005 732 ED 023 835 683
Greater Utilization of Dental Technicians. Report of Training.
VT 005 733 ED 023 836 672
Greater Utilization of Dental Technicians. II. Report of Clinical Tests.
VT 006 142 702
Men vs. Machines: Automation in a Wisconsin Community.

PROFESSIONAL ASSOCIATIONS
VT 005 213 ED 026 471 670
Criteria for the Evaluation of Educational Programs in Nursing Leading to an Associate Degree.

PROFESSIONAL EDUCATION
VT 006 463 707
Licensed Dental Hygienists in Iowa.

PROFESSIONAL TRAINING
VT 004 574 ED 022 874 694
Training Needs of County Agricultural Extension Agents in Quebec, Canada.

PROGRAM ADMINISTRATION
VT 001 623 661
State-Local Plan for Administration of Distributive Education.
VT 001 672 661
Industrial Cooperative Training, A Handbook for Industrial Cooperative Teacher Coordinators.
VT 001 680 661
An Administrative Handbook for Vocational Distributive Education in Indiana.
VT 001 692 662
Handbook for Home Economics Teachers.
VT 003 804 666
Guidelines for Preparatory Programs, Trade and Industrial Services.
VT 005 563 671
Model State Emergency Health Service Plan.
VT 005 567 671
Essentials and Requirements for Reimbursable Office Education Programs, Part I-V.
VT 005 734 672
Guidelines for Project Grants for Improvement in Nurse Training.
VT 006 566 675
Vocational Training for Adults in Sweden. Sweden Today.
VT 006 744 676
Organizing and Conducting Young Farmer Programs in New York State.

PROGRAM ATTITUDES
VT 005 644 760
The Historical Development of a Post High School Distributive Education Program with Implications for Teacher Education.

Page

PROGRAM DESCRIPTIONS
VT 000 240 658
Homemaker-Health Aide Training Project.
VT 001 347 770
A Survey of Junior College Work Experience Education Programs, 1962-1963.
VT 001 530 710
Nurse Aide Training.
VT 001 622 660
Industrial Education: Its Place, Purpose, Objectives, Methods, and Organization in the Arlington County Public Schools.
VT 001 798 736
The Vocational Education Act of 1963, A Summary of Part A of Public Law 88-210.
VT 001 828 664
Youth Employment Program of the United States Employment Service.
VT 001 906 737
Industrial Arts in Education.
VT 002 407 ED 019 445 665
Technician Education Yearbook, 1965-1966.
VT 003 546 ED 021 975 666
Technician Education Yearbook, 1963-1964.
VT 003 777 ED 023 801 725
The Manpower Development and Training Act: A Review of Training Activities.
VT 004 781 666
Vocational Training Program for Childcare Aides, Report of Pilot Study.
VT 004 831 667
Projected Program Activities with Estimate of Total Expenditures for Vocational Education--Fiscal Year 1967.
VT 004 864 ED 026 467 667
The Structure of Technical Training Administration in the United States.
VT 004 977 751
Counselor's Manual.
VT 005 020 ED 026 470 699
Target: Employment.
VT 005 401 743
Massachusetts Vocational Education Research Coordinating Unit, Second Report for the Period October 1 to December 31, 1967.
VT 005 405 744
Quarterly Technical Progress Report; Sixth, October 1, 1967 - December 31, 1967.
VT 005 406 744
New Mexico Research Coordinating Unit, Progress Report, December 1, 1967 - February 29, 1968.
VT 005 555 744
Establishment of an Occupational Research and Development Coordinating Unit for the State of Rhode Island. Progress Report, January 1 to March 31, 1968.
VT 005 947 ED 021 147 673
New Developments in Manpower Programs.
VT 006 243 ED 023 845 673
Technician Education Yearbook, 1967-1968.
VT 006 409 ED 025 618 761
Program of Teacher Education for Environmental Technology (POTEET).
VT 006 563 674
The Vocational School System in Sweden.
VT 006 566 675
Vocational Training for Adults in Sweden. Sweden Today.

SUBJECT AND IDENTIFIER INDEX

Page

VT 006 744 676
Organizing and Conducting Young Farmer Programs in New York State.
VT 007 488 ED 025 650 763
A Description and Evaluation of Vocational Teacher Training Programs in the State of Rhode Island.
VT 007 567 677
A Catalogue of Vocational Training Programmes in Republic of China.
VT 008 168 678
Speeches Presented at the National Conference on Exemplary Programs and Projects. (Atlanta, March 12-14, 1969).
VT 008 212 679
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Post Secondary Department General Meetings.
VT 008 214 680
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Adult Education Department Meetings.
VT 008 218 680
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Board Members Meeting.

PROGRAM DEVELOPMENT
VT 001 566 659
Organizing Comprehensive State Health Careers Councils.
VT 001 578 659
Criteria for Determining Approval of Vocational Units and Fractional Units in Home Economics.
VT 001 603 749
So You Want to Be an Officer in the F.F.A.
VT 001 693 682
The Dental Assisting Curriculum--Content and Scope.
VT 001 704 663
Long Range Plans, Wisconsin State Board of Vocational, Technical and Adult Education.
VT 001 707 720
Area Vocational Technical Schools and Programs, A Summary of Developments by States.
VT 003 804 666
Guidelines for Preparatory Programs, Trade and Industrial Services.
VT 004 577 737
A Basis for Developing Programs of Adult Farmer Education in India.
VT 004 949 667
Vocational Rehabilitation in America's Outpost in the Central Pacific.
VT 004 967 ED 024 772 668
Health Education of Workers.
VT 004 975 720
A Progress Report on Area Vocational-Technical School Developments to June 30, 1966.
VT 005 004 669
Planning for Technical Education in the CMD (Calcutta Metropolitan District), an Outline.
VT 005 938 ED 022 910 672
The Teacher-Coordinator's Manual for Directed Work-Experience Programs in Agriculture.

Page

VT 005 939 ED 022 911 673
The Development and Improvement of Directed Work-Experience Programs in Expanded Vocational Education Offerings in Agriculture at the Secondary School Level. Final Report.
VT 006 322 674
Standards for Homemaker-Home Health Aide Services.
VT 006 375 674
A Progress Report on Area Vocational-Technical School Developments to June 30, 1967.
VT 006 721 ED 022 925 675
Procedural Guide for Program Development in New Careers.
VT 006 744 676
Organizing and Conducting Young Farmer Programs in New York State.
VT 007 376 ED 023 932 684
Regional Workshops in Project Development for Distributive Education Curricula.
VT 008 214 680
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Adult Education Department Meetings.

PROGRAM EFFECTIVENESS
VT 002 476 ED 025 588 766
A Study of the Effectiveness of the Case Method in Teaching Interpersonal Relations to Psychiatric Aides.
VT 005 413 ED 024 777 670
The Application of the Judgmental Procedure to Vocational and Practical Arts Education.
VT 005 638 ED 025 600 714
A Nationwide Evaluation of MDTA Institutional Job Training Programs.
VT 006 471 ED 022 920 767
A Study of the Block-of-Time Scheduling in the Secondary Business and Office Education Program in Ohio.

PROGRAM EVALUATION
VT 000 778 710
Trade and Industrial Education Program Analysis Questionnaire.
VT 000 812 736
Results of Survey to Ascertain if the Arlington County Public Schools' Industrial Education Program is Organized and Attuned to Present Trends.
VT 001 723 710
Part-Time Cooperative Industrial Education as Viewed by Cooperating Employers in Ames, Marshalltown and Newton.
VT 001 815 664
Progress in Technical Vocational Education Programs Under Title III of the George-Barden Act, Fiscal Years 1959-1964.
VT 001 902 711
Evaluative Criteria for Vocational Agriculture Programs.
VT 002 436 ED 025 587 711
Evaluation in Vocational Education.
VT 004 176 ED 022 861 711
Evaluative Criteria for Vocational Technical Programs.
VT 004 530 ED 022 868 759
An Evaluation of Selected Aspects of Agricultural Education Programs in the Inter-Regional Land-Grant Institutions of the United States.

Page

VT 004 561 711
An Evaluation of Work Experience Programs as an Element of Agricultural Education in a Panamanian School of Agriculture.
VT 005 638 ED 025 600 714
A Nationwide Evaluation of MDTA Institutional Job Training Programs.
VT 007 031 ED 022 965 717
The Implementation and Further Development of Experimental Cluster Concept Programs. Interim Report.
VT 007 376 ED 023 932 684
Regional Workshops in Project Development for Distributive Education Curricula.
VT 007 488 ED 025 650 763
A Description and Evaluation of Vocational Teacher Training Programs in the State of Rhode Island.
VT 008 210 718
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Research Section Meetings.
VT 008 213 718
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Department of Research and Evaluation General Meetings.
VT 008 215 718
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. NAITTE Research Committee.

PROGRAM GUIDES
VT 000 830 658
School Program for Practical Nurses.
VT 001 328 659
In-School Work Experience Education for Office Occupations. An Operational Handbook.
VT 001 617 660
Distributive Education in Jefferson County. A Reference Manual for Distributive Education Coordinators.
VT 001 672 661
Industrial Cooperative Training, A Handbook for Industrial Cooperative Teacher Coordinators.
VT 001 703 662
Criteria, Standards and Policies for Vocational Business and Office Education.
VT 005 175 669
A Manual for Planning and Conducting an Agricultural Mechanics Fair.
VT 005 235 670
Tentative Work Material for Occupational Home Economics Programs.
VT 005 938 ED 022 910 672
The Teacher-Coordinator's Manual for Directed Work-Experience Programs in Agriculture.
VT 006 322 674
Standards for Homemaker-Home Health Aide Services.
VT 006 447 ED 022 919 674
Guidelines and Procedures: Directed Work-Experience Programs in Vocational Agricultural Education.

PROGRAM IMPROVEMENT
VT 002 126 ED 021 965 737
Objectives for Vocational and Technical Education in Agriculture.

SUBJECT AND IDENTIFIER INDEX

Page

VT 004 182 ED 022 862 758
Needed Improvements in Distributive Teacher Education.
VT 004 831 667
Projected Program Activities with Estimate of Total Expenditures for Vocational Education--Fiscal Year 1967.
VT 007 501 ED 026 514 767
Selected Readings in Business and Office Occupations--Designed Especially for the Classroom Teacher.

PROGRAM OF TEACHER EDUCATION FOR ENVIRONMENTAL TECHNOLOGY PROJECT
VT 006 409 ED 025 618 761
Program of Teacher Education for Environmental Technology (POTEET).

PROGRAM PLANNING
VT 000 683 ED 019 395 770
The Florida Study of Vocational-Technical Education.
VT 001 028 658
Procedures for Conducting a Vocational Education Community Study.
VT 001 595 659
Suggested Procedures for Planning and Conducting County FFA Cooperative Acquaintanceship Programs.
VT 001 689 662
Vocational Agriculture in the Next Five Years, 1963-1968.
VT 001 888 665
Guide for Establishment and Conduct of Local Advisory Committees for Vocational Agricultural Departments.
VT 006 230 673
A Plan for Disseminating Vocational Education Research Materials.
VT 006 759 ED 025 627 676
Comprehensive Health Manpower Planning.
VT 007 469 677
Zoned Analysis Techniques in Planning and Curriculum Development.
VT 007 725 ED 027 401 722
A Guide for Planning Facilities for Occupational Preparation Programs in Business and Office Occupations.

PROGRAM PLANS
VT 006 416 ED 022 918 761
Institute for Home Economics Teacher Educators on Preparing Teachers for Occupational Programs. Final Report.

PROGRAM PROPOSALS
VT 001 596 660
Technical Education, Title III George-Barden Act (Formerly Title VIII, N.D.E.A.). How to Obtain Approval for Assistance.
VT 005 026 ED 023 818 669
Demonstrating Innovations in Vocational Education: Initial Application Submitted to the Office of Education, Department of Health, Education and Welfare: Plans and Operation Grant.

PROJECT AGRICULTURE
VT 006 370 ED 025 616 745
A Planning Study to Determine the Feasibility of a Research Project Concerning Employment Opportunities and Training Needs in Farming and Off-Farm Agricultural Business and Industry.

Page

PROJECT COMPUTERIZED VOCATIONAL INFORMATION SYSTEM
VT 005 250 752
Computerized Vocational Information System (CVIS).
VT 008 285 755
A Report on Project CVIS (Computerized Vocational Information System) in Operation at Willowbrook High School, Villa Park, Illinois.

PROJECT NAVAJO REHABILITATION
VT 004 994 713
The Navajo Rehabilitation Project, Pre-Vocational Laboratory. Navajo Rehabilitation Project Technical Report No. 8.
VT 004 995 713
Education as a Process of Vocational Evaluation. Navajo Rehabilitation Project Technical Report No. 6.

PROJECT OPERATION GAP-STOP
VT 005 937 ED 024 788 732
Operation Gap-Stop: A Study of the Application of Communications Techniques in Reaching the Unreachable Poor. Final Report, Vol. I.
VT 007 436 ED 024 816 734
Operation Gap-Stop: A Study of the Application of Communications Techniques in Reaching the Unreachable Poor. Final Report, Vol. II.

PROJECT PROGRAMS OF INDUSTRIAL TRAINING
VT 001 440 ED 024 755 748
Project PIT; A Summer Industrial Work Experience and Occupational Guidance Program.

PROJECT REDY
VT 007 125 ED 022 966 733
Development of Human Resources Through a Vocationally Oriented Educational Program for Disadvantaged Families in Depressed Rural Areas. Interim Report 3.
VT 007 126 ED 022 967 733
Development of Human Resources Through a Vocationally Oriented Educational Program for Disadvantaged Families in Depressed Rural Areas. Interim Report 2.
VT 007 127 ED 022 968 733
Development of Human Resources Through a Vocationally Oriented Educational Program for Disadvantaged Families in Depressed Rural Areas. Interim Report 1.

PROJECT TRAINING METHODS
VT 000 240 658
Homemaker-Health Aide Training Project.
VT 007 375 ED 023 931 683
Workshop Report: Distributive Education Project Development Workshop. June 19-30, 1967.
VT 007 376 ED 023 932 684
Regional Workshops in Project Development for Distributive Education Curricula.
VT 007 377 ED 023 933 684
Workshop Report: Distributive Education Project Development Workshop. July 30-August 11, 1967.

Page

PROPRIETARY SCHOOLS
VT 002 714 ED 024 760 666
Education in the Privately Owned Vocational Schools in Alameda and Contra Costa Counties. Report No. 1967-2.

PSYCHIATRIC AIDES
VT 002 476 ED 025 588 766
A Study of the Effectiveness of the Case Method in Teaching Interpersonal Relations to Psychiatric Aides.

PSYCHIATRIC HOSPITALS
VT 002 476 ED 025 588 766
A Study of the Effectiveness of the Case Method in Teaching Interpersonal Relations to Psychiatric Aides.

PSYCHIATRIC PATIENTS
VT 004 845 ED 025 466 731
Mental Health and Manpower Employment Adjustment for Psychiatric Patients.

PUBLIC HEALTH
VT 005 563 671
Model State Emergency Health Service Plan.

PUBLIC SCHOOLS
VT 001 507 ED 021 960 736
Vocational Education in the Public Schools.
VT 005 002 738
A Position Paper on Vocational Education in the Public Schools.

QUESTIONNAIRES
VT 001 527 749
Education and Career Study.
VT 001 613 749
Survey of Pupil Interest in Three Home Economics Related Occupations: Child Care Aide, Clothing Construction Aide, Food Service Occupations.
VT 001 658 690
A Vocational Home Economics Education Survey.
VT 007 436 ED 024 816 734
Operation Gap-Stop: A Study of the Application of Communications Techniques in Reaching the Unreachable Poor. Final Report, Vol. II.

RACE AND SOCIOECONOMIC STATUS
VT 000 602 766
Race and Socioeconomic Status as Moderators in Predicting Machine-Shop Training Success.

RACIAL DIFFERENCES
VT 000 602 766
Race and Socioeconomic Status as Moderators in Predicting Machine-Shop Training Success.

RACIAL DISCRIMINATION
VT 007 782 ED 026 533 734
Education, Employment, and Negro Equality.

RATING SCALES
VT 001 902 711
Evaluative Criteria for Vocational Agriculture Programs.

SUBJECT AND IDENTIFIER INDEX

Page

READING COMPREHENSION
VT 004 578 ED 022 877 766
The Relationship of Socio-Economic Status of Pupils to Their Comprehension of Reference Materials Written at Different Levels of Readability.

REFERENCE MATERIALS
VT 001 249 659
A Survey of Federal Government Publications of Interest to Small Business.
VT 001 672 661
Industrial Cooperative Training, A Handbook for Industrial Cooperative Teacher Coordinators.
VT 001 800 663
Standard Industrial Classification for Use in Distributive Education.
VT 004 578 ED 022 877 766
The Relationship of Socio-Economic Status of Pupils to Their Comprehension of Reference Materials Written at Different Levels of Readability.
VT 004 903 ED 024 769 743
Training and Reference Manual for Job Analysis.

REHABILITATION PROGRAMS
VT 004 953 731
Guidelines for Compiling a Directory of Community Services in Rehabilitation and Employment of Handicapped Men and Women.

RELIGIOUS FACTORS
VT 004 336 ED 025 591 750
Religion and Occupational Behavior; An Annotated Bibliography.

RESEARCH COORDINATING UNITS
VT 005 401 743
Massachusetts Vocational Education Research Coordinating Unit, Second Report for the Period October 1 to December 31, 1967.
VT 005 405 744
Quarterly Technical Progress Report; Sixth, October 1, 1967 - December 31, 1967.
VT 005 406 744
New Mexico Research Coordinating Unit, Progress Report, December 1, 1967 - February 29, 1968.
VT 005 555 744
Establishment of an Occupational Research and Development Coordinating Unit for the State of Rhode Island. Progress Report, January 1 to March 31, 1968.
VT 006 230 673
A Plan for Disseminating Vocational Education Research Materials.

RESEARCH METHODOLOGY
VT 003 601 ED 026 459 742
The New York State Department of Labor's Manpower Projections for the State and Its Areas: A Preliminary Report on Methodology.
VT 004 485 ED 026 463 743
Youth in Transition. Volume I.
VT 004 903 ED 024 769 743
Training and Reference Manual for Job Analysis.
VT 007 194 ED 026 500 745
Selected Proceedings and Information from the 1967 Summer Workshop in Research in Vocational-Technical Education.

RESEARCH NEEDS
VT 004 685 ED 026 464 743
The Development and Utilization of Human Resources; A Guide for Research.
VT 007 194 ED 026 500 745
Selected Proceedings and Information from the 1967 Summer Workshop in Research in Vocational-Technical Education.
VT 007 468 ED 025 644 763
Trade and Industrial Teacher Education and Certification: Report of a National Invitational Research Development Seminar.

RESEARCH OPPORTUNITIES
VT 004 955 668
Research Opportunities in Comprehensive Public Junior Colleges--Inter- and Intra-College Organizational Problems.

RESEARCH PROBLEMS
VT 004 685 ED 026 464 743
The Development and Utilization of Human Resources; A Guide for Research.
VT 004 965 712
Evaluation Problems of the UICSM (University of Illinois Committee on School Mathematics) Curriculum Project.
VT 005 942 ED 021 142 717
New Perspectives on Manpower Problems and Measures.

RESEARCH PROJECTS
VT 001 801 690
A Summary of Preliminary Findings, Conclusions and Recommendations of a Study of Manpower Requirements and Education and Training Programs of Selected Health Occupations.
VT 006 376 ED 026 485 745
An Interdisciplinary Approach to Manpower Research.
VT 006 390 ED 024 795 707
Manpower Research Institutional Grant Program: Progress Report for July 1, 1966-June 30, 1967.
VT 007 279 746
Inventory of Manpower Research Projects in Indiana.
VT 008 205 678
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Apprenticeship and Manpower Training Programs.

RESEARCH PROPOSALS
VT 006 370 ED 025 616 745
A Planning Study to Determine the Feasibility of a Research Project Concerning Employment Opportunities and Training Needs in Farming and Off-Farm Agricultural Business and Industry.
VT 007 468 ED 025 644 763
Trade and Industrial Teacher Education and Certification: Report of a National Invitational Research Development Seminar.

RESEARCH REVIEWS (PUBLICATIONS)
VT 001 508 ED 021 961 742
Program of Research in the Field of Human Resources Development With Special Reference to Asia and the Far East.
VT 002 436 ED 025 587 711
Evaluation in Vocational Education.
VT 003 780 693
Inventory of Manpower Research Projects in Indiana, Number 1.
VT 006 628 ED 024 801 762
Trade and Industrial Teacher Education: A Research Critique and Model for Action.
VT 007 229 ED 023 908 771
Home Economics Education, Research Summary.

RESEARCH SEMINAR IN VOCATIONAL-TECHNICAL EDUCATION, UNIVERSITY OF WYOMING, SUMMER, 1967
VT 007 194 ED 026 500 745
Selected Proceedings and Information from the 1967 Summer Workshop in Research in Vocational-Technical Education.

RESEARCH TOOLS
VT 004 903 ED 024 769 743
Training and Reference Manual for Job Analysis.

RESOURCE GUIDES
VT 006 218 ED 026 481 753
Aviation--Where Career Opportunities are Bright; Counselor's Guide.

RETIREMENT
VT 005 263 ED 025 596 700
The Length of Working Life for Males, 1900-60.

RETRAINING
VT 005 218 ED 026 472 700
Training and Retraining Older Workers, an Annotated Bibliography.

RHODE ISLAND VOCATIONAL EDUCATION RESEARCH COORDINATING UNIT
VT 005 555 744
Establishment of an Occupational Research and Development Coordinating Unit for the State of Rhode Island. Progress Report, January 1 to March 31, 1968.

ROLE PERCEPTION
VT 004 964 668
Administration and the Educational Program.

RURAL AREAS
VT 007 126 ED 022 967 733
Development of Human Resources Through a Vocationally Oriented Educational Program for Disadvantaged Families in Depressed Rural Areas. Interim Report 2.
VT 007 158 ED 023 897 733
Youth with Special Needs in Non-Metropolitan Ohio High Schools.

RURAL ECONOMICS
VT 002 039 ED 025 585 728
The People Left Behind; Seminar on Manpower Policy and Program.

RURAL ENVIRONMENT
VT 002 039 ED 025 585 728
The People Left Behind; Seminar on Manpower Policy and Program.

RURAL FAMILY
VT 007 125 ED 022 966 733
Development of Human Resources Through a Vocationally Oriented Educational Program for Disadvantaged Families in Depressed Rural Areas. Interim Report 3.

SUBJECT AND IDENTIFIER INDEX

Page

VT 007 126 ED 022 967 733
Development of Human Resources Through a Vocationally Oriented Educational Program for Disadvantaged Families in Depressed Rural Areas. Interim Report 2.

RURAL FARM RESIDENTS
VT 004 963 ED 025 592 699
Adaptation of Rural and Foreign Workers to Industry, International Joint Seminar.

RURAL YOUTH
VT 001 630 ED 024 757 749
Educational and Vocational Goals of Rural Youth in North Carolina.
VT 004 324 MP 000 380 730
Rural Youth in Crisis.
VT 007 127 ED 022 968 733
Development of Human Resources Through a Vocationally Oriented Educational Program for Disadvantaged Families in Depressed Rural Areas. Interim Report 1.

SAFETY EDUCATION
VT 008 207 679
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Industrial Arts General Meetings.

SALARY DIFFERENTIALS
VT 002 183 ED 025 586 691
Costs and Returns for Investments in Technical Schooling by a Group of North Carolina High School Graduates.

SALES OCCUPATIONS
VT 004 900 697
Department Stores, Labor Market Developments.

SAMPLING
VT 004 813 ED 022 885 696
Estimating Agricultural Employment from a Sample of Employers.

SCHOOL DISTRICTS
VT 001 650 661
School District Organization. The Vocational School and the Intermediate District.

SCHOOL HOLDING POWER
VT 005 156 ED 022 892 752
Holding Power/Large City School Systems.

SCHOOL INDUSTRY RELATIONSHIP
VT 008 205 678
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Apprenticeship and Manpower Training Programs.
VT 008 216 740
Education for Jobs in a Technological Society.

SCHOOL ORGANIZATION
VT 004 955 668
Research Opportunities in Comprehensive Public Junior Colleges--Inter- and Intra-College Organizational Problems.

SCHOOL PLANNING
VT 004 850 720
Industrial Arts Facilities.
VT 006 805 ED 026 496 721
School Shop Development: Research and Planning.

Page

VT 008 232 ED 028 301 721
Guide for Planning Industrial Arts Laboratory Facilities.

SCHOOL ROLE
VT 001 507 ED 021 960 736
Vocational Education in the Public Schools.

SCHOOL SHOPS
VT 006 805 ED 026 496 721
School Shop Development: Research and Planning.
VT 008 232 ED 028 301 721
Guide for Planning Industrial Arts Laboratory Facilities.

SCHOOL SYSTEMS
VT 004 964 668
Administration and the Educational Program.

SCIENTISTS
VT 005 179 700
A Study of the Re-Employment and Unemployment Experiences of Scientists and Engineers Laid Off from 62 Aerospace and Electronics Firms in the San Francisco Bay Area During 1963-1965, Executive Summary.

SEASONAL LABORERS
VT 004 925 ED 022 888 698
Farm Labor Developments. Employment and Wage Supplement.

SECONDARY EDUCATION
VT 001 617 660
Distributive Education in Jefferson County. A Reference Manual for Distributive Education Coordinators.
VT 001 623 661
State-Local Plan for Administration of Distributive Education.
VT 004 569 725
The Development of Agricultural Education in India.

SECONDARY GRADES
VT 007 734 ED 027 403 685
The Feasibility of Teaching History of Technology in Vocational and Pre-Technical Secondary Schools.

SECONDARY SCHOOLS
VT 001 515 748
Reducing the School Dropout Rate--A Report on the Holding Power Project.
VT 007 814 ED 026 534 754
Vocational Guidance in Secondary Education. Results of a National Survey.

SELF CONCEPT
VT 004 582 ED 022 881 695
Managerial Perception and Success in Farming.

SELF EVALUATION
VT 001 898 710
Manual for Institutional Self-Study--Community Colleges, Technical Institutes, Industrial Education Centers.
VT 004 176 ED 022 861 711
Evaluative Criteria for Vocational Technical Programs.

Page

SEMINAR ON MANPOWER POLICY AND PROGRAM, WASHINGTON, D.C., DECEMBER 14, 1967
VT 002 039 ED 025 585 728
The People Left Behind; Seminar on Manpower Policy and Program.

SEMINAR ON MANPOWER POLICY AND PROGRAM, WASHINGTON, D.C., NOVEMBER 17, 1966
VT 004 592 ED 020 349 695
Systems Design and Nature of Work. Seminar, 1966.

SEMINAR ON STATISTICS IN STATE VOCATIONAL REHABILITATION AGENCIES, SAN FRANCISCO, CALIFORNIA, NOVEMBER 28-30, 1966
VT 004 972 ED 026 469 712
Statistics in Vocational Rehabilitation. Proceedings of a Seminar, 1966.

SEMINARS
VT 004 592 ED 020 349 695
Systems Design and Nature of Work. Seminar, 1966.
VT 007 634 ED 025 667 754
National Seminar on Vocational Guidance. 1966. Follow-Up Study.
VT 007 635 ED 025 668 754
National Seminar on Vocational Guidance. 1966. Final Report.

SENIORS
VT 003 810 ED 026 461 750
The Northwest Missouri State College Studies; Volume XXVII, Number 3, Educational and Occupational Aspirations of High School Seniors, Part I.
VT 003 811 ED 026 462 750
The Northwest Missouri State College Studies; Volume XXVII, Number 4, Educational and Occupational Aspirations of High School Seniors. Part II.

SERVICE OCCUPATIONS
VT 001 620 660
Employment Trends in Selected Service Occupations in the San Francisco Bay Area.
VT 005 235 670
Tentative Work Material for Occupational Home Economics Programs.
VT 006 297 ED 026 484 703
Analysis of Tasks in Three Home Related Occupations.

SERVICE WORKERS
VT 001 613 749
Survey of Pupil Interest in Three Home Economics Related Occupations: Child Care Aide, Clothing Construction Aide, Food Service Occupations.

SERVICES
VT 006 377 ED 023 854 706
Manpower Problems in the Service Sector.

SEX (CHARACTERISTICS)
VT 001 567 690
Area Wage Survey, The Portland, Oregon-Washington, Metropolitan Area, May 1966.
VT 001 568 690
Area Wage Survey, The Greenville, South Carolina, Metropolitan Area, May 1966.

SUBJECT AND IDENTIFIER INDEX

Page

SIMULATION
VT 008 208 679
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Business and Office Education General Meetings.

SKILL DEVELOPMENT
VT 005 126 738
The Role of Industrial Arts in Tomorrow's Schools.

SKILLED OCCUPATIONS
VT 001 021 ED 017 643 724
Apprenticeship Past and Present.
VT 004 971 751
The Young Job-Seeker's Guide to Technical Occupations and the Skilled Trades, Michigan, 1966.

SLUM ENVIRONMENT
VT 005 943 732
Barriers to Employment of the Disadvantaged.

SMALL BUSINESS
VT 001 249 659
A Survey of Federal Government Publications of Interest to Small Business.

SOCIAL CHANGE
VT 004 324 MP 000 380 730
Rural Youth in Crisis.
VT 005 477 671
New Horizons in Vocational Technical Occupational Education. Summary of a Pennsylvania Conference.

SOCIAL STRUCTURE
VT 007 126 ED 022 967 733
Development of Human Resources Through a Vocationally Oriented Educational Program for Disadvantaged Families in Depressed Rural Areas. Interim Report 2.

SOCIAL VALUES
VT 007 125 ED 022 966 733
Development of Human Resources Through a Vocationally Oriented Educational Program for Disadvantaged Families in Depressed Rural Areas. Interim Report 3.

SOCIAL WELFARE
VT 004 974 668
Tapestry for Tomorrow, The Ford Foundation Program in the Middle East.

SOCIOECONOMIC INFLUENCES
VT 001 336 689
Ex-Farm Operators in a Low-Income Area.
VT 003 811 ED 026 462 750
The Northwest Missouri State College Studies; Volume XXVII, Number 4, Educational and Occupational Aspirations of High School Seniors. Part II.
VT 005 943 732
Barriers to Employment of the Disadvantaged.
VT 006 140 732
Joblessness and Poverty in Urban Slums. A Reprint from the 1967 Manpower Report.

SOCIOECONOMIC STATUS
VT 004 578 ED 022 877 766
The Relationship of Socio-Economic Status of Pupils to Their Comprehension of Reference Materials Written at Different Levels of Readability.

SOCIOLOGICAL STUDIES
VT 004 485 ED 026 463 743
Youth in Transition. Volume I.

SOUTHEASTERN PENNSYLVANIA REGIONAL SEMINAR FOR SECONDARY PRINCIPALS AND COUNSELORS, JUNE 28-30, 1965
VT 005 477 671
New Horizons in Vocational Technical Occupational Education. Summary of a Pennsylvania Conference.

SOUTHERN STATES
VT 005 433 ED 022 899 670
Nursing in the South.

SPECIAL EDUCATION
VT 001 579 728
Some Programs of Vocational Education for Persons with Special Needs in Wisconsin.
VT 001 583 728
Summary and Evaluation of the Vocational Special Needs Pilot Program.

SPECIALISTS
VT 004 642 696
The Training Specialist in Industry.

SPEECHES
VT 005 236 ED 024 775 759
An Anthology of Teacher Education in Agriculture.
VT 008 166 734
Effective Trade and Industrial Programs for the Disadvantaged Persons with Special Needs.
VT 008 167 678
Tomorrow, Today.
VT 008 168 678
Speeches Presented at the National Conference on Exemplary Programs and Projects. (Atlanta, March 12-14, 1969).
VT 008 203 678
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Agricultural Education Division General Session.
VT 008 205 678
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Apprenticeship and Manpower Training Programs.
VT 008 206 679
Dynamics of the Organizational Power Structure.
VT 008 207 679
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Industrial Arts General Meetings.
VT 008 208 679
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Business and Office Education General Meetings.
VT 008 209 755
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Vocational Guidance General Meetings.
VT 008 210 718
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Research Section Meetings.
VT 008 211 679
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Secondary Department General Meetings.
VT 008 212 679
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Post Secondary Department General Meetings.
VT 008 214 680
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Adult Education Department Meetings.
VT 008 215 718
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. NAITTE Research Committee.
VT 008 216 740
Education for Jobs in a Technological Society.
VT 008 217 680
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Supervision and Administration.
VT 008 218 680
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Board Members Meeting.

STANDARDS
VT 001 693 682
The Dental Assisting Curriculum--Content and Scope.
VT 005 213 ED 026 471 670
Criteria for the Evaluation of Educational Programs in Nursing Leading to an Associate Degree.
VT 005 527 671
Public Health Service Grants for Training Projects, Policy Statement.

STATE ACTION
VT 001 838 664
Developing Human Resources, A Report of Progress in New Jersey Vocational-Technical Education Since January 1965.

STATE AGENCIES
VT 001 828 664
Youth Employment Program of the United States Employment Service.
VT 004 969 751
Careers with the State of Minnesota.
VT 004 972 ED 026 469 712
Statistics in Vocational Rehabilitation. Proceedings of a Seminar, 1966.

SUBJECT AND IDENTIFIER INDEX

Page

STATE DEPARTMENTS OF EDUCATION
VT 004 831 667
Projected Program Activities with Estimate of Total Expenditures for Vocational Education--Fiscal Year 1967.
VT 005 864 672
Annual Report to the Governor and the Members of the 107th General Assembly, 1967.

STATE FEDERAL AID
VT 001 815 664
Progress in Technical Vocational Education Programs Under Title III of the George-Barden Act, Fiscal Years 1959-1964.

STATE FEDERAL SUPPORT
VT 001 703 662
Criteria, Standards and Policies for Vocational Business and Office Education.

STATE LEGISLATION
VT 001 707 720
Area Vocational Technical Schools and Programs, A Summary of Developments by States.

STATE LICENSING BOARDS
VT 006 578 ED 023 861 708
State Licensing of Health Occupations.

STATE PROGRAMS
VT 001 623 661
State-Local Plan for Administration of Distributive Education.
VT 001 680 661
An Administrative Handbook for Vocational Distributive Education in Indiana.
VT 001 689 662
Vocational Agriculture in the Next Five Years, 1963-1968.
VT 001 704 663
Long Range Plans, Wisconsin State Board of Vocational, Technical and Adult Education.
VT 001 838 664
Developing Human Resources, A Report of Progress in New Jersey Vocational-Technical Education Since January 1965.
VT 004 176 ED 022 861 711
Evaluative Criteria for Vocational Technical Programs.
VT 004 831 667
Projected Program Activities with Estimate of Total Expenditures for Vocational Education--Fiscal Year 1967.
VT 005 401 743
Massachusetts Vocational Education Research Coordinating Unit, Second Report for the Period October 1 to December 31, 1967.
VT 005 405 744
Quarterly Technical Progress Report; Sixth, October 1, 1967 - December 31, 1967.
VT 005 406 744
New Mexico Research Coordinating Unit, Progress Report, December 1, 1967 - February 29, 1968.
VT 005 555 744
Establishment of an Occupational Research and Development Coordinating Unit for the State of Rhode Island. Progress Report, January 1 to March 31, 1968.
VT 005 563 671
Model State Emergency Health Service Plan.
VT 005 864 672
Annual Report to the Governor and the Members of the 107th General Assembly, 1967.

STATE STANDARDS
VT 000 830 658
School Program for Practical Nurses.
VT 001 578 659
Criteria for Determining Approval of Vocational Units and Fractional Units in Home Economics.
VT 001 623 661
State-Local Plan for Administration of Distributive Education.
VT 001 650 661
School District Organization. The Vocational School and the Intermediate District.
VT 001 680 661
An Administrative Handbook for Vocational Distributive Education in Indiana.
VT 001 703 662
Criteria, Standards and Policies for Vocational Business and Office Education.
VT 003 804 666
Guidelines for Preparatory Programs, Trade and Industrial Services.
VT 005 567 671
Essentials and Requirements for Reimbursable Office Education Programs, Part I-V.

STATE SUPERVISORS
VT 007 635 ED 025 668 754
National Seminar on Vocational Guidance. 1966. Final Report.

STATE SURVEYS
VT 001 347 770
A Survey of Junior College Work Experience Education Programs, 1962-1963.
VT 004 962 698
State Plan Inventory. Section 3-A, Projections of Employment for the Year 1980.
VT 005 572 701
Manpower in Oklahoma, State Summary. Preliminary Release.

STATISTICAL ANALYSIS
VT 001 526 689
A Least Squares Analysis of Colorado Nonfarm Employment, 1939-1963, With Projections to 1970.

STATISTICAL DATA
VT 001 815 664
Progress in Technical Vocational Education Programs Under Title III of the George-Barden Act, Fiscal Years 1959-1964.
VT 005 058 699
Manpower and Immigration.
VT 006 374 ED 023 853 705
Occupational Employment Statistics.

STATISTICS
VT 004 972 ED 026 469 712
Statistics in Vocational Rehabilitation. Proceedings of a Seminar, 1966.

STENOGRAPHY
VT 006 471 ED 022 920 767
A Study of the Block-of-Time Scheduling in the Secondary Business and Office Education Program in Ohio.
VT 007 917 ED 027 423 686
The Process and Product of Machine Shorthand Programs in New York State Schools.

STUDENT ATTITUDES
VT 005 770 ED 024 786 753
Differences in Some Initial Attitudes of Students Who Complete and Students Who Drop Out in the Wellesley, Massachusetts Adult Education Program.

STUDENT CHARACTERISTICS
VT 001 847 664
They Came to Contra Costa College, 1966-67.
VT 004 573 ED 022 873 712
Characteristics and Performances of High School Graduates and Non-Graduates in One-Year Programs in the Community College System of Institutions in North Carolina.
VT 007 158 ED 023 897 733
Youth with Special Needs in Non-Metropolitan Ohio High Schools.

STUDENT DEVELOPMENT
VT 005 126 738
The Role of Industrial Arts in Tomorrow's Schools.

STUDENT ENROLLMENT
VT 001 800 663
Standard Industrial Classification for Use in Distributive Education.
VT 001 838 664
Developing Human Resources, A Report of Progress in New Jersey Vocational-Technical Education Since January 1965.
VT 001 847 664
They Came to Contra Costa College, 1966-67.
VT 002 425 ED 024 759 682
Guide to Organized Occupational Curriculums in Higher Education.

STUDENT EVALUATION
VT 000 778 710
Trade and Industrial Education Program Analysis Questionnaire.
VT 001 723 710
Part-Time Cooperative Industrial Education as Viewed by Cooperating Employers in Ames, Marshalltown and Newton.
VT 005 746 714
Estimating the Clothing Construction Ability of 8th, 9th, 10th, and 11/12th Grade Pupils.
VT 005 747 714
Evaluation Materials in Family Relations, Tenth Grade.
VT 005 748 715
Evaluation Materials in Family Relations, Eleventh and Twelfth Grade.
VT 005 749 715
Evaluation Materials in Housing, Ninth Grade.
VT 005 750 715
Evaluation Materials in Housing, Tenth Grade.
VT 005 751 715
Evaluation Materials in Foods, Tenth Grade.
VT 005 752 716
Evaluation Materials in Clothing, Tenth Grade.
VT 005 753 716
Evaluation Materials in Clothing, Ninth Grade.

SUBJECT AND IDENTIFIER INDEX

Page

VT 005 754 716
Evaluation Materials in Child Development, Ninth Grade.
VT 005 755 716
Evaluation Materials in Child Development, Eleven and Twelfth Grade.
VT 005 756 717
Evaluation Materials in Family Relations, Ninth Grade.
VT 005 757 717
Evaluation Materials in Foods for Ninth Grade.

STUDENT INTERESTS
VT 001 613 749
Survey of Pupil Interest in Three Home Economics Related Occupations: Child Care Aide, Clothing Construction Aide, Food Service Occupations.

STUDENT LEADERSHIP
VT 001 603 749
So You Want to Be an Officer in the F.F.A.

STUDENT NEEDS
VT 008 211 679
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Secondary Department General Meetings.

STUDENT OPINION
VT 001 527 749
Education and Career Study.

STUDENT PROBLEMS
VT 005 515 753
Color Perception and Color Blindness.

STUDENT PROJECTS
VT 007 375 ED 023 931 683
Workshop Report: Distributive Education Project Development Workshop. June 19-30, 1967.
VT 007 377 ED 023 933 684
Workshop Report: Distributive Education Project Development Workshop. July 30-August 11, 1967.

STUDENT TESTING
VT 005 515 753
Color Perception and Color Blindness.

SUBEMPLOYMENT
VT 005 943 732
Barriers to Employment of the Disadvantaged.

SUBPROFESSIONALS
VT 006 721 ED 022 925 675
Procedural Guide for Program Development in New Careers.

SUCCESS FACTORS
VT 000 602 766
Race and Socioeconomic Status as Moderators in Predicting Machine-Shop Training Success.
VT 001 818 ED 026 454 758
Clinical Evaluation of Predictive Data for Prospective Home Economics Teachers.
VT 004 582 ED 022 881 695
Managerial Perception and Success in Farming.
VT 005 607 ED 025 599 760
The Successful Teacher in Technical Education: The Preparation of the Successful Teacher.

SUMMER INSTITUTES
VT 006 416 ED 022 918 761
Institute for Home Economics Teacher Educators on Preparing Teachers for Occupational Programs. Final Report.

SUMMER MANPOWER RESEARCH INSTITUTE, AMES, IOWA, JUNE 12-16, 1967
VT 006 376 ED 026 485 745
An Interdisciplinary Approach to Manpower Research.

SUPERVISION
VT 008 217 680
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Supervision and Administration.

SYSTEMS APPROACH
VT 004 592 ED 020 349 695
Systems Design and Nature of Work. Seminar, 1966.
VT 007 469 677
Zoned Analysis Techniques in Planning and Curriculum Development.

TASK ANALYSIS
VT 006 297 ED 026 484 703
Analysis of Tasks in Three Home Related Occupations.

TAXONOMY
VT 007 249 ED 023 913 740
The Design and Evaluation of Vocational Technical Education Curricula Through Functional Job Analysis.

TEACHER BACKGROUND
VT 007 492 763
Profiles of Trade and Technical Teachers: Revised Summary Report 1968.

TEACHER CERTIFICATION
VT 007 468 ED 025 644 763
Trade and Industrial Teacher Education and Certification: Report of a National Invitational Research Development Seminar.

TEACHER CHARACTERISTICS
VT 001 818 ED 026 454 758
Clinical Evaluation of Predictive Data for Prospective Home Economics Teachers.
VT 002 729 ED 024 761 758
Teacher Model; A Model to Guide Curriculum Development for the American Industry Project.
VT 004 678 759
Profiles of Minnesota Day School Trade and Industrial Teachers in the Area Vocational Schools.
VT 005 607 ED 025 599 760
The Successful Teacher in Technical Education: The Preparation of the Successful Teacher.
VT 006 668 ED 023 869 762
Industrial Education for the Visually Limited.
VT 007 492 763
Profiles of Trade and Technical Teachers: Revised Summary Report 1968.

TEACHER EDUCATION
VT 001 485 758
A Follow-Up Study of the First Fifty Graduates of Trade Technical Education.
VT 004 182 ED 022 862 758
Needed Improvements in Distributive Teacher Education.
VT 004 530 ED 022 868 759
An Evaluation of Selected Aspects of Agricultural Education Programs in the Inter-Regional Land-Grant Institutions of the United States.
VT 005 037 ED 016 872 770
Research Visibility. Vocational Education is People--Youth With Special Needs.
VT 005 236 ED 024 775 759
An Anthology of Teacher Education in Agriculture.
VT 005 594 739
New Horizons in Industrial Arts.
VT 005 644 760
The Historical Development of a Post High School Distributive Education Program with Implications for Teacher Education.
VT 006 409 ED 025 618 761
Program of Teacher Education for Environmental Technology (POTEET).
VT 006 416 ED 022 918 761
Institute for Home Economics Teacher Educators on Preparing Teachers for Occupational Programs. Final Report.
VT 006 628 ED 024 801 762
Trade and Industrial Teacher Education: A Research Critique and Model for Action.
VT 006 674 ED 025 622 762
An Analysis of Metal Finishing Technology and its Status in Industrial Teacher-Education.
VT 007 468 ED 025 644 763
Trade and Industrial Teacher Education and Certification: Report of a National Invitational Research Development Seminar.
VT 007 488 ED 025 650 763
A Description and Evaluation of Vocational Teacher Training Programs in the State of Rhode Island.

TEACHER EDUCATORS
VT 008 387 764
Proceedings of the National Association of Industrial and Technical Teacher Educators (NAITTE) Executive Committee Business Meetings at the Annual Vocational Convention of the American Vocational Association. 1968.

TEACHER EVALUATION
VT 000 778 710
Trade and Industrial Education Program Analysis Questionnaire.
VT 005 607 ED 025 599 760
The Successful Teacher in Technical Education: The Preparation of the Successful Teacher.

TEACHER EXPERIENCE
VT 005 644 760
The Historical Developments of a Post High School Distributive Education Program with Implications for Teacher Education.

TEACHER PERSISTENCE
VT 006 503 ED 022 921 762
Factors Related to the Tendency of Iowa State University Agricultural Education Graduates to Not Enter or to Leave the Vocational Agriculture Teaching Profession.

SUBJECT AND IDENTIFIER INDEX

Page

TEACHER RECRUITMENT
VT 006 409 ED 025 618 761
Program of Teacher Education for Environmental Technology (POTEET).

TEACHER SALARIES
VT 001 485 758
A Follow-Up Study of the First Fifty Graduates of Trade Technical Education.

TEACHER WORKSHOPS
VT 005 724 ED 024 782 760
A Clinical Workshop in Mental Health and Psychiatric Nursing for Instructors in Schools of Practical Nursing. Final Report.
VT 007 375 ED 023 931 683
Workshop Report: Distributive Education Project Development Workshop. June 19-30, 1967.
VT 007 376 ED 023 932 684
Regional Workshops in Project Development for Distributive Education Curricula.
VT 007 377 ED 023 933 684
Workshop Report: Distributive Education Project Development Workshop. July 30-August 11, 1967.

TEACHING GUIDES
VT 000 572 748
Exploring Careers in Modern Agriculture Related to Land Use and Conservation.
VT 005 235 670
Tentative Work Material for Occupational Home Economics Programs.

TEACHING METHODS
VT 000 836 ED 026 450 766
Toward More Effective Teaching in WCHEN Schools; The Report of a Course in New Training Techniques for Nurse Faculty.
VT 002 476 ED 025 588 766
A Study of the Effectiveness of the Case Method in Teaching Interpersonal Relations to Psychiatric Aides.
VT 006 668 ED 023 869 762
Industrial Education for the Visually Limited.
VT 007 499 ED 026 512 767
New Media in Teaching the Business Subjects.
VT 007 501 ED 026 514 767
Selected Readings in Business and Office Occupations--Designed Especially for the Classroom Teacher.
VT 007 554 ED 026 518 767
A Comparison of a Master Teacher and Instructional Assistants in Automated Shorthand and Typewriting Instruction.

TEACHING MODELS
VT 007 924 ED 026 544 755
A Multimedia Approach to Communicating Occupational Information to Noncollege Youth. Technical Report.

TEACHING PROCEDURES
VT 007 501 ED 026 514 767
Selected Readings in Business and Office Occupations--Designed Especially for the Classroom Teacher.

Page

TECHNICAL ASSISTANCE
VT 004 974 668
Tapestry for Tomorrow, The Ford Foundation Program in the Middle East.

TECHNICAL EDUCATION
VT 000 683 ED 019 395 770
The Florida Study of Vocational-Technical Education.
VT 001 596 660
Technical Education, Title III George-Barden Act (Formerly Title VIII, N.D.E.A.). How to Obtain Approval for Assistance.
VT 001 720 663
Vocational-Technical Education Study of Dickinson and Iron Counties of Michigan.
VT 001 815 664
Progress in Technical Vocational Education Programs under Title III of the George-Barden Act, Fiscal Years 1959-1964.
VT 001 838 664
Developing Human Resources, A Report of Progress in New Jersey Vocational-Technical Education Since January 1965.
VT 001 905 770
Definitions of Terms in Vocational, Technical, and Practical Arts Education.
VT 002 069 ED 019 429 724
Six Decades of Service, 1903-1963.
VT 002 126 ED 021 965 737
Objectives for Vocational and Technical Education in Agriculture.
VT 002 183 ED 025 586 691
Costs and Returns for Investments in Technical Schooling by a Group of North Carolina High School Graduates.
VT 002 407 ED 019 445 665
Technician Education Yearbook, 1965-1966.
VT 002 425 ED 024 759 682
Guide to Organized Occupational Curriculums in Higher Education.
VT 003 520 683
A Study of Recommendations for Technical Education Curricula.
VT 003 546 ED 021 975 666
Technician Education Yearbook, 1963-1964.
VT 004 864 ED 026 467 667
The Structure of Technical Training Administration in the United States.
VT 004 942 ED 024 770 750
Engineering Technology Careers; Career Guidance Information for Engineering Technicians.
VT 004 976 751
Ohio Notebook of Public Technical Education Programs, 1965-1966.
VT 004 977 751
Counselor's Manual.
VT 005 004 669
Planning for Technical Education in the CMD (Calcutta Metropolitan District), an Outline.
VT 005 296 771
Selected List of Acquisitions. Vol. 1, No. 1-4.
VT 006 243 ED 023 845 673
Technician Education Yearbook, 1967-1968.
VT 006 602 ED 026 488 675
A Cost-Benefit Study of Post-High School Technical Education in Oklahoma.

Page

VT 007 492 763
Profiles of Trade and Technical Teachers: Revised Summary Report 1968.
VT 008 205 678
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Apprenticeship and Manpower Training Programs.
VT 008 215 718
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. NAITTE Research Committee.
VT 008 751 ED (See Oct. '69 RIE) 771
Abstracts of Research and Related Materials in Vocational and Technical Education (ARM), Spring 1969.
VT 008 784 ED (See Oct. '69 RIE) 771
Microfiche Collection of Clearinghouse Documents Reported in Abstracts of Research and Related Materials in Vocational and Technical Education (ARM), Spring 1969.

TECHNICAL EDUCATION TEACHERS
VT 005 607 ED 025 599 760
The Successful Teacher in Technical Education: The Preparation of the Successful Teacher.

TECHNICAL INSTITUTES
VT 002 069 ED 019 429 724
Six Decades of Service, 1903-1963.
VT 002 183 ED 025 586 691
Costs and Returns for Investments in Technical Schooling by a Group of North Carolina High School Graduates.
VT 004 942 ED 024 770 750
Engineering Technology Careers; Career Guidance Information for Engineering Technicians.

TECHNICAL OCCUPATIONS
VT 001 477 689
Employers' Needs in Technical Occupations, Northern Virginia.
VT 002 407 ED 019 445 665
Technician Education Yearbook, 1965-1966.
VT 003 546 ED 021 975 666
Technician Education Yearbook, 1963-1964.
VT 004 617 695
Michigan Technician Needs Study, Summary Report.
VT 004 971 751
The Young Job-Seeker's Guide to Technical Occupations and the Skilled Trades, Michigan, 1966.
VT 005 826 ED 027 375 701
Michigan Technician Need Study. The Present and Projected Demand for Technically Trained People in Michigan.
VT 006 243 ED 023 845 673
Technician Education Yearbook, 1967-1968.

TECHNOLOGICAL ADVANCEMENT
VT 001 528 736
Training in the Perspective of Technological Change.
VT 004 592 ED 020 349 695
Systems Design and Nature of Work. Seminar, 1966.
VT 005 594 739
New Horizons in Industrial Arts.

SUBJECT AND IDENTIFIER INDEX

Page

VT 006 142 702
Men vs. Machines: Automation in a Wisconsin Community.
VT 006 379 ED 024 793 706
Technical Change and Manpower Planning: Co-ordination at Enterprise Level.
VT 006 380 ED 025 617 706
Workers' Attitudes to Technical Change: An Integrated Survey of Research.
VT 006 605 ED 023 864 708
Manpower Planning and Forecasting.
VT 006 727 ED 025 626 739
Human Values and Technological Change, Annual Conference, 1967.
VT 007 260 ED 023 917 708
Enterprise Planning for Change; Co-ordination of Manpower and Technical Planning.
VT 008 167 678
Tomorrow, Today.

TECHNOLOGY
VT 007 734 ED 027 403 685
The Feasibility of Teaching History of Technology in Vocational and Pre-Technical Secondary Schools.

TELEVISED INSTRUCTION
VT 005 937 ED 024 788 732
Operation Gap-Stop: A Study of the Application of Communications Techniques in Reaching the Unreachable Poor. Final Report, Vol. I.
VT 007 436 ED 024 816 734
Operation Gap-Stop: A Study of the Application of Communications Techniques in Reaching the Unreachable Poor. Final Report, Vol. II.

TENURE
VT 003 579 ED 025 589 692
Factors Related to Employment of Iowa State University Graduates in Agricultural Education.
VT 004 560 ED 022 870 759
Factors Related to Employment of Iowa State University Graduates in Agricultural Education.

TEST CONSTRUCTION
VT 004 180 MP 000 343 729
The Occupational Success of the Retarded, Critical Factors, Predictive Tests and Remedial Techniques. Summary.
VT 005 746 714
Estimating the Clothing Construction Ability of 8th, 9th, 10th, and 11/12th Grade Pupils.
VT 005 747 714
Evaluation Materials in Family Relations, Tenth Grade.
VT 005 748 715
Evaluation Materials in Family Relations, Eleventh and Twelfth Grade.
VT 005 749 715
Evaluation Materials in Housing, Ninth Grade.
VT 005 750 715
Evaluation Materials in Housing, Tenth Grade.
VT 005 751 715
Evaluation Materials in Foods, Tenth Grade.
VT 005 752 716
Evaluation Materials in Clothing, Tenth Grade.
VT 005 753 716
Evaluation Materials in Clothing, Ninth Grade.

Page

VT 005 754 716
Evaluation Materials in Child Development, Ninth Grade.
VT 005 755 716
Evaluation Materials in Child Development, Eleven and Twelfth Grade.
VT 005 756 717
Evaluation Materials in Family Relations, Ninth Grade.
VT 005 757 717
Evaluation Materials in Foods for Ninth Grade.

TESTS
VT 004 180 MP 000 343 729
The Occupational Success of the Retarded, Critical Factors, Predictive Tests and Remedial Techniques. Summary.

TIME BLOCKS
VT 006 471 ED 022 920 767
A Study of the Block-of-Time Scheduling in the Secondary Business and Office Education Program in Ohio.

TIRE AND TUBE INDUSTRY
VT 004 899 697
Tires and Tubes, Labor Market Developments.

TRADE AND INDUSTRIAL EDUCATION
VT 000 602 766
Race and Socioeconomic Status as Moderators in Predicting Machine-Shop Training Success.
VT 000 778 710
Trade and Industrial Education Program Analysis Questionnaire.
VT 000 812 736
Results of Survey to Ascertain if the Arlington County Public Schools' Industrial Education Program is Organized and Attuned to Present Trends.
VT 001 485 758
A Follow-Up Study of the First Fifty Graduates of Trade Technical Education.
VT 001 622 660
Industrial Education: Its Place, Purpose, Objectives, Methods, and Organization in the Arlington County Public Schools.
VT 001 723 710
Part-Time Cooperative Industrial Education as Viewed by Cooperating Employers in Ames, Marshalltown and Newton.
VT 001 745 663
Code Book of Industries, Occupations and Course Titles.
VT 003 804 666
Guidelines for Preparatory Programs, Trade and Industrial Services.
VT 005 004 669
Planning for Technical Education in the CMD (Calcutta Metropolitan District), an Outline.
VT 005 266 713
Report on New York State Data from a National Follow-up Study of High School Level Trade and Industrial Vocational Graduates; An Abstract of the Study.
VT 005 267 ED 020 414 713
Report on New York State Data from a National Follow-up Study of High School Level T and I Vocational Graduates.

Page

VT 006 628 ED 024 801 762
Trade and Industrial Teacher Education: A Research Critique and Model for Action.
VT 006 672 ED 023 870 726
The Development of Trade and Industrial Education in Wisconsin.
VT 007 031 ED 022 965 717
The Implementation and Further Development of Experimental Cluster Concept Programs. Interim Report.
VT 007 370 ED 023 926 722
A Guide for Planning Facilities for Occupational Preparation Programs in the Machine Trades.
VT 007 468 ED 025 644 763
Trade and Industrial Teacher Education and Certification: Report of a National Invitational Research Development Seminar.
VT 007 492 763
Profiles of Trade and Technical Teachers: Revised Summary Report 1968.
VT 007 615 677
Profiles of Trade and Technical Leaders: Summary Report.
VT 008 387 764
Proceedings of the National Association of Industrial and Technical Teacher Educators (NAITTE) Executive Committee Business Meetings at the Annual Vocational Convention of the American Vocational Association. 1968.

TRADE AND INDUSTRIAL TEACHERS
VT 004 678 759
Profiles of Minnesota Day School Trade and Industrial Teachers in the Area Vocational Schools.

UNEMPLOYED
VT 002 139 691
A Study of Practical Nurses Who Have Been Licensed in Iowa But Are Not Presently Employed in Iowa as Practical Nurses.
VT 003 981 ED 022 859 729
Help for Out-of-Work Youth; A Manual for a Job Preparation Program in Your Community.
VT 004 958 698
Unemployment Insurance Claimants, 1962-1963, Characteristics and Benefit Experience of New York Workers.

UNEMPLOYMENT
VT 003 896 ED 022 856 729
Family Breadwinners: Their Special Training Needs.
VT 005 944 ED 021 144 701
Bridging the Gap from School to Work.
VT 005 946 ED 021 146 702
Review of Manpower Developments in 1967.
VT 006 140 732
Joblessness and Poverty in Urban Slums. A Reprint from the 1967 Manpower Report.

UNEMPLOYMENT INSURANCE
VT 004 958 698
Unemployment Insurance Claimants, 1962-1963, Characteristics and Benefit Experience of New York Workers.

Page

URBAN AREAS
VT 002 335 ED 022 845 742
Special Training Project for Educational Researchers in the Nation's Large Cities. December 1, 1966-January 31, 1967. Final Report.
VT 007 187 ED 023 905 739
Occupational Education in the Great Cities.

URBAN SCHOOLS
VT 005 156 ED 022 892 752
Holding Power/Large City School Systems.
VT 006 565 675
The Municipal Vocational Schools of Stockholm, A Survey.

URBAN SLUMS
VT 006 140 732
Joblessness and Poverty in Urban Slums. A Reprint from the 1967 Manpower Report.

URBAN YOUTH
VT 001 440 ED 024 755 748
Project PIT; A Summer Industrial Work Experience and Occupational Guidance Program.

VALUES
VT 006 727 ED 025 626 739
Human Values and Technological Change, Annual Conference, 1967.

VENTURA COUNTY VOCATIONAL RESOURCES COMMITTEE OCCUPATIONAL INFORMATION CONFERENCE, OXNARD, CALIFORNIA, OCTOBER 11, 1967
VT 005 127 699
Occupational Information Conference Report (Oxnard, California, October 11, 1967).

VIDEO TAPE RECORDINGS
VT 005 251 752
Vocational Guidance Through Videotaping and Television.
VT 005 767 ED 024 784 761
An Introduction to Teaching Vocational Technical Education.
VT 007 436 ED 024 816 734
Operation Gap-Stop: A Study of the Application of Communications Techniques in Reaching the Unreachable Poor. Final Report, Vol. II.

VISITING HOMEMAKERS
VT 005 057 669
Report of 1967 Forum on Homemaker-Home Health Aide Service (New York City, May 4-5, 1967).
VT 006 322 674
Standards for Homemaker-Home Health Aide Services.

VISUALLY HANDICAPPED
VT 005 515 753
Color Perception and Color Blindness.

VOCATIONAL ADJUSTMENT
VT 004 180 MP 000 343 729
The Occupational Success of the Retarded, Critical Factors, Predictive Tests and Remedial Techniques. Summary.
VT 004 845 ED 025 466 731
Mental Health and Manpower Employment Adjustment for Psychiatric Patients.
VT 005 944 ED 021 144 701
Bridging the Gap from School to Work.

Page

VT 008 209 755
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Vocational Guidance General Meetings.

VOCATIONAL AGRICULTURE
VT 001 430 720
A Greenhouse for Vocational Agriculture in Kentucky.
VT 001 595 659
Suggested Procedures for Planning and Conducting County FFA Cooperative Acquaintanceship Programs.
VT 001 603 749
So You Want to Be an Officer in the F.F.A.
VT 001 640 661
The Ohio Young Farmer Manual.
VT 001 689 662
Vocational Agriculture in the Next Five Years, 1963-1968.
VT 001 888 665
Guide for Establishment and Conduct of Local Advisory Committees for Vocational Agricultural Departments.
VT 001 899 665
Agricultural File Index.
VT 001 902 711
Evaluative Criteria for Vocational Agriculture Programs.
VT 002 126 ED 021 965 737
Objectives for Vocational and Technical Education in Agriculture.
VT 003 579 ED 025 589 692
Factors Related to Employment of Iowa State University Graduates in Agricultural Education.
VT 004 559 ED 022 869 693
A Comparison of Certain Knowledges in Agriculture Needed by Workers in Farming.
VT 004 560 ED 022 870 759
Factors Related to Employment of Iowa State University Graduates in Agricultural Education.
VT 004 578 ED 022 877 766
The Relationship of Socio-Economic Status of Pupils to Their Comprehension of Reference Materials Written at Different Levels of Readability.
VT 004 581 ED 022 880 683
Teaching Basic Production Economic Principles to Secondary School Students of Vocational Agriculture: An Evaluative Case Study.
VT 005 175 669
A Manual for Planning and Conducting an Agricultural Mechanics Fair.
VT 005 592 753
Your Introduction to Learning by Doing in Vocational Agriculture.
VT 005 938 ED 022 910 672
The Teacher-Coordinator's Manual for Directed Work-Experience Programs in Agriculture.
VT 005 939 ED 022 911 673
The Development and Improvement of Directed Work-Experience Programs in Expanded Vocational Education Offerings in Agriculture at the Secondary School Level. Final Report.
VT 006 447 ED 022 919 674
Guidelines and Procedures: Directed Work-Experience Programs in Vocational Agricultural Education.

Page

VT 007 304 ED 023 922 763
Personal and Situational Variables which Inhibit or Stimulate the Adoption of Agricultural Occupations Curricula.

VOCATIONAL AGRICULTURE TEACHERS
VT 003 579 ED 025 589 692
Factors Related to Employment of Iowa State University Graduates in Agricultural Education.
VT 004 560 ED 022 870 759
Factors Related to Employment of Iowa State University Graduates in Agricultural Education.
VT 006 503 ED 022 921 762
Factors Related to the Tendency of Iowa State University Agricultural Education Graduates to Not Enter or to Leave the Vocational Agriculture Teaching Profession.
VT 007 304 ED 023 922 763
Personal and Situational Variables which Inhibit or Stimulate the Adoption of Agricultural Occupations Curricula.

VOCATIONAL APTITUDE
VT 001 338 748
Counselor's Guide to Georgia Area Vocational-Technical Schools.
VT 004 995 713
Education as a Process of Vocational Evaluation. Navajo Rehabilitation Project Technical Report No. 6.

VOCATIONAL COUNSELING
VT 001 338 748
Counselor's Guide to Georgia Area Vocational-Technical Schools.
VT 001 440 ED 024 755 748
Project PIT; A Summer Industrial Work Experience and Occupational Guidance Program.
VT 004 845 ED 025 466 731
Mental Health and Manpower Employment Adjustment for Psychiatric Patients.
VT 008 209 755
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Vocational Guidance General Meetings.

VOCATIONAL DEVELOPMENT
VT 002 379 665
A Graphic Analysis for the Development of a Master Plan Concept.
VT 003 764 ED 024 762 693
Guidelines for the Design of New Careers. Staff Paper.
VT 008 168 678
Speeches Presented at the National Conference on Exemplary Programs and Projects. (Atlanta, March 12-14, 1969).

VOCATIONAL EDUCATION
VT 000 683 ED 019 395 770
The Florida Study of Vocational-Technical Education.
VT 001 028 658
Procedures for Conducting a Vocational Education Community Study.
VT 001 311 720
Area Vocational-Technical School. Bethlehem Area, Hellertown-Lower Saucon, Northampton Area, Pennsylvania.
VT 001 412 ED 025 451 728
Neighborhood Manpower Programs.

SUBJECT AND IDENTIFIER INDEX

Page

VT 001 477 689
Employers' Needs in Technical Occupations, Northern Virginia.

VT 001 507 ED 021 960 736
Vocational Education in the Public Schools.

VT 001 528 736
Training in the Perspective of Technological Change.

VT 001 583 728
Summary and Evaluation of the Vocational Special Needs Pilot Program.

VT 001 650 661
School District Organization. The Vocational School and the Intermediate District.

VT 001 698 662
The Advisory Committee, Organization and Function in Vocational Education.

VT 001 699 662
Sketches of Some Recent Laws Affecting Vocational Home Economics Programs.

VT 001 704 663
Long Range Plans, Wisconsin State Board of Vocational, Technical and Adult Education.

VT 001 720 663
Vocational-Technical Education Study of Dickinson and Iron Counties of Michigan.

VT 001 798 736
The Vocational Education Act of 1963, A Summary of Part A of Public Law 88-210.

VT 001 815 664
Progress in Technical Vocational Education Programs Under Title III of the George-Barden Act, Fiscal Years 1959-1964.

VT 001 838 664
Developing Human Resources, A Report of Progress in New Jersey Vocational-Technical Education Since January 1965.

VT 001 905 770
Definitions of Terms in Vocational, Technical, and Practical Arts Education.

VT 002 335 ED 022 845 742
Special Training Project for Educational Researchers in the Nation's Large Cities. December 1, 1966-January 31, 1967. Final Report.

VT 002 436 ED 025 587 711
Evaluation in Vocational Education.

VT 002 500 ED 016 788 724
Vocational Education Act of 1963, A Case Study in Legislation.

VT 002 714 ED 024 760 666
Education in the Privately Owned Vocational Schools in Alameda and Contra Costa Counties. Report No. 1967-2.

VT 003 894 ED 022 855 729
The Mentally Retarded: Their Special Training Needs.

VT 004 176 ED 022 861 711
Evaluative Criteria for Vocational Technical Programs.

VT 004 568 725
Technology and Educational Reform in Early America.

VT 004 573 ED 022 873 712
Characteristics and Performances of High School Graduates and Non-Graduates in One-Year Programs in the Community College System of Institutions in North Carolina.

Page

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Page

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SUBJECT AND IDENTIFIER INDEX

Page

VT 008 212 679
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Post Secondary Department General Meetings.
VT 008 213 718
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Department of Research and Evaluation General Meetings.
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Education for Jobs in a Technological Society.
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VT 001 527 749
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VT 004 845 ED 025 466 731
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VT 005 770 ED 024 786 753
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WORKSHOPS
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SUBJECT AND IDENTIFIER INDEX

Page

YOUNG ADULTS
VT 008 209 755
Speeches Presented at the Annual Vocational Convention of the American Vocational Association. Vocational Guidance General Meetings.

YOUNG FARMER ASSOCIATION
VT 001 640 661
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VT 006 744 676
Organizing and Conducting Young Farmer Programs in New York State.

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YOUTH
VT 005 482 ED 024 780 752
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YOUTH AGENCIES
VT 001 828 664
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YOUTH CLUBS
VT 001 603 749
So You Want to Be an Officer in the F.F.A.
VT 001 640 661
The Ohio Young Farmer Manual.
VT 001 706 724
Twenty Years of Progress, 1945-1965. History of the Ohio Association of Future Homemakers of America.

YOUTH EMPLOYMENT
VT 001 828 664
Youth Employment Program of the United States Employment Service.
VT 001 915 691
A Teenager's Guide in Employment.
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Youth in the Labor Market.
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VT 001 706 724
Twenty Years of Progress, 1945-1965. History of the Ohio Association of Future Homemakers of America.

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VT 001 828 664
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YOUTH PROBLEMS
VT 004 324 MP 000 380 730
Rural Youth in Crisis.
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Bridging the Gap from School to Work.

YOUTH PROGRAMS
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Twenty Years of Progress, 1945-1965. History of the Ohio Association of Future Homemakers of America.

Page

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*HEALTH OCCUPATIONS EDUCATION; *HOMEMAKING SKILLS; *COMPANIONS (OCCUPATION); ADULT VOCATIONAL EDUCATION; *PROGRAM DESCRIPTIONS; PROGRAM EVALUATION; PARTICIPANT CHARACTERISTICS; PILOT PROJECTS; *PROJECT TRAINING METHODS; *EMPLOYMENT SERVICES; DISADVANTAGED GROUPS; EMPLOYMENT PROBLEMS; STUDENT PROBLEMS *HOMEMAKER-HEALTH AIDE TRAINING PROJECT; MANSFIELD; OHIO

Eleven students participated, ranging in age from 41 to 69 with formal education from 1 year of elementary school to high school graduation. A social worker and a professional nurse assumed the major teaching responsibility and specialists in other fields contributed. Training took place in a geriatric center and included personal care, psychological aspects of illness, transmission of illness, nutrition, body function, provision of a safe and comfortable home environment, hygiene, grooming, and cleaning, cooking, and laundering. Some problems relating to the trainees were lack of physical stamina, inhibiting racial attitudes, conflicting cultural patterns, emotional insecurity and family instability, problems in relating to authority, and limited abilities to read, write, and conceptualize. Eighty-two percent completed the course Jobs and 73 percent were subsequently employed in the health field. Specific benefits to trainees were improvement in grooming and hygiene, development of feelings of self-worth, increased ability to communicate, and improved living standards. (JK)

VT000 240

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HOMEMAKER - HOME HEALTH AIDE TRAINING REPORT

MANSFIELD MEMORIAL HOMES, INC.
50 BLYMYER AVENUE · MANSFIELD, OHIO, 44903

JULY 25, 1966
TO
SEPTEMBER 1, 1967

CAP 66-8375

VT000240

FINAL REPORT

Homemaker-Health Aide Training Project

of
Mansfield Memorial Homes, Inc.

July 25, 1966 - September 1, 1967

Project No. Chio CAP 66-8375

Based on a training grant from the U.S. Office
of Economic Opportunity

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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TABLE OF CONTENTS

		Page
Transmittal Letter		
I.	Fulfillment of the Purposes	1
II.	Necessary Training Elements	2
	A. Full Professional Health Team	2
	B. Professional Health Setting	3
	C. Close Professional Supervision	4
	D. Adequate Course Content and Repeated Review	4
III.	Career Advancement	5
	A. Methods for Increasing Skill and Understanding Beyond the Core Curriculum	5
	B. Other Areas for Career Advancement	5
IV.	Administration	6
	A. Internal Administration	6
	B. The Advisory Council	6
	C. Trainee Roles in the Advisory Council	6
V.	The Development of Forms	7
VI.	Interviewing Prospective Trainees	8
VII.	The Effects of Past Experiences, Education, Sex and Age on the Functioning and Performance of the Trainees	9
	A. Optimum Past Experience as a Factor	9
	B. Previous Work Experience as a Factor	10
	C. Sex as a Factor	10
	D. Formal Education as a Factor	10
	E. Age and Personal Health as a Factor	10

TABLE OF CONTENTS - continued

		Page
VIII.	Counseling Trainees	12
	A. Maximizing Community Resources	12
	B. Individual Counseling	13
	C. Evaluation	13
IX.	Summary of the Accomplishments and Problems of the Project	14
	A. Positive Results	14
	1. Personal Changes	14
	2. Development of Pride	15
	3. Increased Ability to Communicate	15
	4. Influence of a Steady Income	15
	B. Problems Experienced	16
	1. Lack of Stamina	16
	2. Insufficient Home Placements	16
	3. Social Unrest	16
	4. Effect of Cultural Patterns	16
	5. Difficulty in Acceptance of Certain Terminology	17
	C. Other Special Common Problems	17
	1. Tradition Classroom Reading and Writing	17
	2. Inability to Conceptualize	18
	3. Emotional Insecurity and Family Instability	18
	4. Relating to Authority and Structure	18
	5. Rigidities in Attitude	19
	6. Fatigue	20

TABLE OF CONTENTS - continued

		Page
	D. Productive Training Techniques Identified	20
	1. Complete Professional Health Team	20
	2. High Quality Health Setting	20
	3. Learn by Doing and by Repetition	21
	4. Time, time, time	21
	E. Conclusion	21
X.	Appendix	23
	A. Forms Developed	
	1. Application for Homemaker Home Health Aide Training	24
	2. Applicant Interview Questionnaire	25
	3. Job Description - Homemaker Home Health Aide	26
	4. Certificate of Health	27
	5. Performance Report	28
	6. Letter of Commitment for Employment	29
	7. Trainee Questionnaire	30
	8. Trainee's Evaluation of Training	31
	9. Patient's Daily Record	32
	10. Referral Form for Homemaker Health Aide Service	33
	11. Client/Agency Evaluation Form	34
	12. Recruitment and Homemaker Health Aide Service available leaflets	35
	13. Certificate of Graduation	36

October 16, 1967

Miss Constance Foshay
Project Officer
Home Health Aide Pilot Projects
Health Division
Community Action Program
Office of Economic Opportunity
1111 18th Street, N.W. - Room 508
Washington, D. C. 20506

Chio CAP 66-8375

Dear Miss Foshay:

It is with pleasure that I am transmitting, herewith, the Fifty Seven Week Final Report of Chio CAP 66-8375, the Homemaker-Health Aide training project of Mansfield Memorial Homes.

Eleven (11) different trainees took the 3 basic three (3) month courses and the two (2) advanced career courses. A total of 30 were enrolled since the basic course work was repeated by some trainees once and others twice. We are pleased to report that 82% completed the course work and that 73% are now gainfully employed in the health field. All who completed the course were given opportunities to work in the health field.

It is interesting to note that the level of formal education was not important in the ability of the trainees to achieve the training goals, although simple reading and writing did have a bearing on their attainments. Those with higher formal education grasped concepts more readily, but actual overall performance did not appear to be related to the amount of formal education.

Although personal appearance was not high in the priority when being interviewed for selection since this aspect was considered part of the training, attitudes and interests reflecting flexibility and desire to work with people rather than things were considered vital. Our experience corraborated this pre-judgement. Rigidities in adaptability of certain long time behaviors which became evident were insurmountable in most instances and the trainers had to mobilize other more flexible behaviors to by-pass these rigidities wherever possible so as to elicit learning responses. In this context the trainer's knowledge of the individual trainee's past experience including positions held aided considerably in relating to new content.

October 16, 1967

Among the components considered necessary for successful training as our fifty seven weeks were analyzed are:

1. skill and knowledge of a professional health team in which a professional medical social worker is an integral member
2. high quality training setting so that qualitative standards of personal care can be emulated
3. a one to one trainee-patient ratio
4. an absolute maximum of ten trainees at any one time for proper supervision and guidance
5. continuous relationships with the community to make overt the latent demand for home services so as to provide sufficient home training assignments
6. intensive continuous individualized attention
7. repetition and repetition as a major key to learning
8. the equal willingness of trainers and trainees to learn each others' vocabulary
9. learning by doing with the recognition that traditional classroom reading and writing techniques are not appropriate.

That there were various difficult situations to resolve is evident. Cultural pattern conflicts, such as a male finding it hard to accept authority from a female, were involved. Social unrest produced not only discriminatory feelings between the darker skin Negro trainee and the lighter skin Negro trainee but also produced a fear of entering some homes in portions of the city on the part of both white and Negro trainees, most apparent during and after the Detroit rioting.

Individual health problems were more pronounced than with other employees of the sponsor, Mansfield Memorial Homes, regardless of the ages of the latter. This appeared to be related to cultural patterns of not being accustomed to regular medical and dental check-ups. As a result, a lack of stamina was evident in a high percent of the trainees.

In addition, the trainees were unable to conceptualize and reason from the general to the specific or from a specific to the general. This limited the teaching methodology. Emotional insecurities and family instabilities made it necessary to consistently reassure the trainees while at the same time offering appropriate critique.

October 16, 1967

This necesitated the useage of the professional social worker through consultation and periodically direct contact with the trainee. Further, the trainees experienced difficulties in relating to authority and most specifically to the lines of authority traditional to the health field.

A question is raised as to the durability of future work time because of the impoverished ego structure and/or health and stamina of many of the trainees. This points to our recommendation that training for any duration should include built-in components to follow a trainee for one year and then two years after completion of the training. The data to be obtained and assessed would be invaluable to training programs and to the health field and, of course, to those being trained.

On the positive side, apart from the fact of on-going employment on either a part or full time basis depending upon preferences relating to one's own health or other factors including sources of income, were many individual factors such as:

1. growth of self worth feelings
2. personal grooming enormously enhanced
3. ability to communicate increased
4. capacity to observe multiplied manifold
5. increased involvement in social groups.

In addition to the basic course content, advanced career courses as food service aides, physical therapy aides and occupational therapy aides were given. Other health areas which also appear to be open for advanced training are in the care of the post partum patient, specialized child care such as the retarded and severely physically disabled and as speech therapy aides.

Our findings, while indicative that effective training of sub-professional health practitioners can take place, also holds more profound implications for training programs in the future as attempts are made to fill the increasing shortage of personnel in "quickie" two (2) week workshops for the unskilled. Effective training and learning for sub-professionals takes time if good standards of health care are what we seek and if we are truly desirous of opening up health careers for people previously deprived of such opportunities. Thus, future training courses of this kind should be designed to recognize that a minimum of three and up to nine months for others be included in the time portion of this design, so that such training may be meaningful and effective.

October 16, 1967

Further implications of training based on "learning by doing" suggests that formal classroom approaches, reading assignments and other traditional educational techniques are not valuable and have only a minimal place in this training. Even visual learning through watching demonstrated procedures apparently has only minor value.

In overcoming problems of the trainees' learning and performance, then, our most successful techniques were:

1. repetition of demonstrations and content
2. re-emphasis on performance standards
3. close observation and supervision of their work, and
4. individual evaluation conferences.

The trainees invariably learned more by doing a task themselves, rather than to just be shown or told how to do it.

Thus, the techniques of a professional health team as a faculty, the physical environment of a high quality care setting and repetitive practice of procedures under close professional nurse supervision were found to be among the most significant factors in successful training of Homemaker-Health Aides.

This is, indeed, a highly difficult task, but that it can be accomplished with an enormous amount of energy and dedicated professional talent has been demonstrated.

A momentous training project with import of potential unprecedented magnitude locally and elsewhere has been completed. To all who made this possible - the trustees of Mansfield Memorial Homes, the United States Office of Economic Opportunity, the United States Public Health Service, the United States Administration on Aging, the Mansfield-Richland County Departments of Health, the Richland-Morrow Counties Community Action Program, the Homemaker-Health Aide Advisory Council and to all professionals and citizens who cooperated and especially to the trainees themselves - this service and the enrichment of hopefully all similar services in existance or to be established by training efforts in the United States will remain in grateful tribute. It will be a rare household which will in the years ahead remain untouched by Homemaker-Health Aide services. And many a household will find a new worker adding to its income and its feeling of belonging in an evolving prestigious position.

October 16, 1967

Your views and critique are highly valued and most cordially invited.

Yours sincerely,

Jerome Kaplan

Jerome Kaplan,
Executive Director and
Project Director

JK:sa

Evaluation of the Homemaker-Health Aide Training Project

I. Fulfillment of the Purposes for this Pilot Training Project

The main purposes for Mansfield Memorial Homes to be involved with a pilot training program for Home Health Aides have been met. First of all, we have established methods for training people to become Homemaker-Health Aides. In so doing we learned to delineate the necessary ingredients to successfully train unskilled people in how to give sub-professional health care. We have been able to teach our trainees not only how to give health care but also how to undertake homemaking activities in the variable environment of individual homes.

Secondly, we have had a period of experience in determining when homemaker-health aide service is appropriate or when other kinds of care such as institutional or outpatient therapy or meals on wheels service would be more applicable. On varied occasions we have found that a combination of home services meets patients' needs better than just one service or type or care.

A minimum of two years additional is required to develop more fully Homemaker-Health Aide service requests. We have found that one year was grossly insufficient time to have the number of clients necessary for on-the-job training of Homemaker-Health Aide trainees nor did it give us adequate opportunity in determining appropriateness of Homemaker-Health Aide service as compared to other kinds of service available.

We started this project knowing that the community needed Homemaker-Health Aides. However, only with time and continued effort to acquaint the citizenry and its special publics with the knowledge that such a service exists will it be possible to reach a high percentage of those persons who need Homemaker-Health Aide service.

Finding employment in the health field for untrained persons was another goal of the training project. This was successfully accomplished. Of the eleven (11) different people who began the training program one (1) male had to discontinue training because of his health and one (1) female voluntarily dropped out because of lack of interest. A third trainee, also female, did not graduate from the program although she completed the course work and because of her health and lack of interest is not currently employed by her own choice. Five (5) of the remaining eight (8) are employed as Home Health Aides on either a full time or part time basis according to the amount of time they feel able to work. One of the former trainees (male) is affiliated with the Planned Parenthood Clinic of the local CAP and the two (2) remaining women are working as aide-companions to a chronically ill older woman. Seventy three percent (73%) of the trainees, therefore, have remained in the health field and are making a definite contribution to the health needs of the community.

The present employers of Homemaker-Health Aides were on the Homemaker-Health Aide Advisory Council so that they were well informed about the training project. Prior to employment of a Homemaker-Health Aide, conferences were held with the employer so that the general abilities of the aide were discussed and the specific strengths and weaknesses were identified. This approach is invaluable in providing continued knowledgable supervision of the aide.

II. Necessary Training Elements

A. Full Professional Health Team

One of the necessary elements for training Homemaker-Health Aides is the use of professional personnel with both a social worker and a professional nurse responsible for the overall teaching and supervising.

Other professionals are required as well, so that all the specialized techniques such as ambulating a hemiplegic or serving an appetizing and nutritious meal can be taught by those who know their own field best. The skill and knowledge of a full professional health and nutrition team are requisites, not only as teachers but also as consultants for designing the type and amount of home care to be given. The involvement of a food specialist, speech, physical and occupational therapists, social worker and professional nurse helped to make important contributions to the total training of the Homemaker-Health Aides so that it is difficult to conceive an attempt to train without such a complement of professionals.

B. Professional Health Setting

Another important element in the training of Homemaker-Health Aides is the setting or environment of the training center. We have been fortunate to have the facilities of the GERIATRIC CENTER of Mansfield Memorial Homes available for our use. The GERIATRIC CENTER is accredited as an extended care facility by the Joint Commission on Accreditation of Hospitals and so certified for Medicare by the Social Security Administration. In this building we had a classroom for demonstration. The building further made it possible for the trainees to practice techniques with GERIATRIC CENTER patients and to give personal care under a one to one supervision ratio prior to being placed in home situations. With active therapy departments within the GERIATRIC CENTER there was ample opportunity for close professional supervision of appropriate techniques via demonstration, observation and then practice by the aide trainees. The GERIATRIC CENTER also has a kitchenette-dinette so that homelike cooking equipment was available.

At the GERIATRIC CENTER the trainees had the opportunity to observe modern and progressive care in its highest sense which can be given to the

chronically ill or aged person, ranging from that care related to special dieting needs and means of supplying the patients with food that is physically and psychologically acceptable to providing them with interesting and appropriate diversional activities. The meticulous personal care given to the patients by the nursing staff set excellent examples of quality standards for the trainees to meet when they were the ones giving care.

C. Close Professional Supervision

We found that the trainees needed intensive individulaized attention and direction and that with a maximum of ten in a class we were able to give each one the kind and the amount of supervision that was necessary.

Since each trainee learned at his own rate of speed it is difficult to arbitrarily set a time on course length particularly when teaching those with a variance of intelligence, formal education and past experience. At the end of the first course we wondered if some of our trainees could ever learn enough to be safe, successful Homemaker-Health Aides. We ourselves learned, however, that with added time, constant evaluation and much repetition they could learn.

D. Adequate Course Content, and Repeated Review

In general predicated on our experience, the basic content of the training for Homemaker-Health Aides needs to include:

(1) how to give personal care to people of all ages with emphasis on both the physical abilities and the limitations of those served,

(2) the understanding of psychological effects of illness,

(3) how illness can be transmitted,

(4) normal nutrition,

(5) normal functions of the body,

(6) responsibilities of local public agencies,

(7) the signs and symptoms of illness,

(8) how to provide for a safe, comfortable home environment,

(9) how to clean, cook, and do the laundry using various kinds of equipment,

(10) instruction on good hygiene for the trainee and her patient,

(11) how to achieve good grooming habits,

(12) the relationship between the Homemaker-Health Aide and the employing agency, and

(13) how to improvise in order to give nursing care in diverse settings.

III. Career Advancement

A. Our Methods for Increasing Skill and Understanding Beyond the Core Curriculum

We have trained Homemaker-Health Aides in several areas of career advancement, and, in most instances the Homemaker-Health Aides responded enthusiastically to the specialized area selected. We gave advanced training in the following areas: physical therapy, occupational therapy, nutrition, aide in a protective living residence for the elderly, and as a constant companion to a chronically ill woman. The physical therapist did the instructing of the aide in his department. The food specialist taught the Homemaker-Health Aides in her department by giving intensified teaching and practice on the proper way to store food, plan and prepare meals and how to serve meals. The occupational therapist taught the aide assigned to this department the fundamentals of diversional activity and how to help patients resume the normal activities of daily living. In the other health and nursing component areas of career advancement, the Homemaker-Health Aides were given further training from the Chief Trainer and other professional nurses.

B. Other Areas for Career Advancement

Homemaker-Health Aides could be trained as speech therapy aides, have advanced training in child care, care of the post partum patient among other potential areas. Then, as the need for these special skills arise, the specially prepared Homemaker-Health Aide would be the one given the home assignment.

IV. Administration

A. Internal Administration

The project director was the Executive Director of Mansfield Memorial Homes in which capacity he is directly responsible to the trustees of Mansfield Memorial Homes. He served as the supervisor of the Chief Trainer, who was the deputy director of the training project. The Chief Trainer had the responsibility to train the aides, to coordinate the contributions of the total professional team and to work closely with the project director in creating a climate favorable to translating a community need into actual requests for service.

B. The Advisory Council

An advisory council representing all local health and health related bodies was developed, which included elected membership from the trainees. The council proved to be instrumental as a 'sounding board' for ideas. Regularized reporting was made to the Council. All trainees who were employed, were hired by agencies represented on the council.

At this juncture, attention is called to the minutes of the meetings which were distributed to the sponsor, the council and other involved, interested parties.

The importance of the council lay as a 'sounding board' for ideas, not as a promulgator of ideas. Further, it gave community approval to a much needed service. In addition, it oriented itself to the Homemaker-Health Aide project so that over a period of months the training concept was incorporated within its 'muscles' to the point where several agencies were willing to hire trainees when so approached.

C. Trainee Roles in the Advisory Council

The elected trainees did not undertake any leadership roles in the Council. Their presence, however, probably kept the Council from becoming

involved in issues not directly related to the training project. Membership on the Council did give to the trainees important feelings of status which were then transmitted to all trainees and assisted in the elevation of the Homemaker-Health Aide concept.

V. The Development of Forms

The development of concise, meaningful and workable forms ranging from trainee application forms to the ones used by the receipient of Homemaker-Health Aide service in evaluating the service received, have contributed to organization, clarity, and means of communicating information.

All the forms that have been developed for this training project were the result of the joint efforts of the Project Director, Chief Trainer and Social Worker. These forms, all to be found in the body of the material heretofore forwarded to everyone involved in Ohio CAP 66-8375 and included in the appendix, are:

1. Application for Homemaker Home Health Aide Training
2. Applicant Interview Questionnaire
3. Job Description Homemaker Home Health Aide
4. Certificate of Health
5. Performance Report
6. Letter of Commitment for Employment
7. Trainee Questionnaire
8. Trainee's Evaluation of Training
9. Patient's Daily Record
10. Referral Form For Homemaker Health Aide Service
11. Client/Agency Evaluation Form
12. Recruitment and Homemaker Health Aide service available leaflets
13. Certificate of Graduation

VI. Interviewing Prospective Trainees

Before beginning to interview applicants, conferences were held with the Chief Trainer, Social Worker, Richland-Morrow Counties (Ohio). CAP Assistant Director and the Project Director on which interviewing techniques would best elicit the information and attitudes which were believe to be essential. We agreed that we must determine whether the applicant was genuinely interested in working with all kinds of people, exhibited flexibility, was able to follow simple directions, had a personality suitable to working with those who are ill or debilitated, was interested in learning a marketable skill, give evidence of emotional maturity as well as other areas listed on the interviewing form. We were not concerned whether or not the applicant had achieved a particular level of formal education. We felt, however, that simple reading and writing should not be beyond the capabilities of the applicant. We did not feel that we should let personal appearance and grooming sway our opinion of the applicant one way or the other since we planned on instructing the trainees in these areas to the degree that they needed improvement.

The reason for our concern with attitudes and interests was that we knew these to be exceedingly difficult to modify. On the other hand we felt that the applicant who was interested in doing this kind of work, who liked people, et al, could successfully become a Homemaker-Health Aide with proper training and with the standard of instruction directed toward the level of the trainee's understanding. Thus, selection of applicants was consciously undertaken in such a way so that those selected would have a greater degree of success in a Homemaker-Health Aide training program than haphazard acceptance of anyone who may apply.

During the initial interview, obtaining information related to the applicant's previous work experience was of particular importance. Some of the applicants had worked in commercial laundries, in restaurants, one had most

recently worked at a car wash, another was a railroad baggage handler. Others had done day work as domestics or had been regular baby sitters. Knowing the work background of the trainees made it possible to relate to their past experience in an understanding manner when introducing new material.

VII. The Effects of Past Experiences, Education, Sex and Age on the Functioning and Performance of the Trainees

A. Optimum Past Experience as a Factor

It seems that the most helpful past experience for a Homemaker-Health Aide is that of having done domestic service on a daily basis. For the most part those who had this kind of experience adjusted to not only performing housekeeping activities with diverse equipment in equally diverse environments more readily but quickly adjusted to giving care in first one home and then in another home. More important is the fact that these women did not resent assignments which were primarily with housekeeping components rather than health care components.

Contrary to what was originally thought would happen, throughout the time of the training project we received only one (1) referral for Home Health Aide service that could have been as appropriately filled by a male Aide as by one of the women. During the time that we had men in the training program we did not have any home assignments for them. Our service requests related to intimate personal care for women and/or housekeeping skills that were beyond the abilities of the male trainees. The occasional child care situations that came up were also too complex in nature so that it was not possible to assign our male trainees to them.

The cultural milieu era represented by the background and age of the men who entered the program was such that they had rather definite ideas as to what was "women's work" and what they felt was "man's work."

Giving personal care to men was acceptable to them but some household tasks were not acceptable. For example, ironing was a task that they could not accept as being something that they might do even though it was helpful to the total family situation.

B. Previous Work Experience as a Factor

Because of previous household experience it would seem that women who are trained as Homemaker-Health Aides are the most useful for this kind of service rather than men. Our culture has also frowned on the male being the dominant factor in household duties.

C. Sex as a Factor

Reference is hereby made to the above items, VII A. and B., for the components which made it difficult to either locate home placements for men or to be able to accept certain home placements.

D. Formal Education as a Factor

The formal education of our trainees varied from a year or so of elementary education to those who graduated from high school. Those who had more formal education seemed to grasp concepts more readily but actual overall performance was not related directly to the amount of previous education of the trainee. Native intelligence appeared to influence their learning ability and type of performance.

E. Age and Personal Health as a Factor

Our trainees age range was from forty-one (41) years to sixty-nine (69) years. Before each began the training program their personal physicians stated in writing that their health was good and that they would be able to carry out the vigorous activities of Home Health Aide work. Of the eleven (11) different people who undertook training, nine (9) had health problems that significantly interferred with the work they did or the ability to report for work. We are not referring to illnesses such as colds, gastro-intestinal upsets or other similar, common, transient ills.

The nature of the health problems that our trainees had seems to be related to those more commonly associated with this age group than in younger age groupings and also to their cultural patterns in that they were not accustomed to regular medical and dental checkups, nor did their dietary habits contribute to maintaining good health. Five (5) of the trainees were hypertensives. Of these, two (2) periodically were absent from work or found it necessary to return home during working hours because of their hypertension. Two (2) of the hypertensives were well controlled with medication and their particular chronic condition presented no problems. The other hypertensive usually had no problems as long as she did not try to work too quickly or was not under any kind of stress. This, however, did not make for efficient functioning as a Homemaker-Health Aide.

Several of the trainees had dental problems that resulted in two of them having full mouth extractions, which required hospitalization, while two others had some abscessed teeth that were subsequently extracted.

A number of the Homemaker-Health Aides had arthritis. They were not absent from work because of their arthritis but five (5) were unable to bend down far enough to use good body mechanics in picking up something from the floor. Because of their particular affliction, cleaning things close to the floor was difficult for them.

The two (2) men that were in the training program were unable to tolerate prolonged periods of time standing so this interfered with their work performance.

Some of the trainees exhibited low work tolerance and seemed to need frequent rest periods. As the training continued, a few of these trainees did improve on the amount of work that they could accomplish without resting.

In considering the above, then, it does seem that age is a factor that presents problems with health that would not be as common in those under forty-five (45) years of age.

Age may have been a factor in some of the rigidity of thinking and performing that we encountered during the training periods. On the other hand one of our most flexible Homemaker-Health Aides was also one of the oldest so that we cannot make the statement that all the older trainees exhibited areas of rigidity. Without, however, having undertaken a detailed lifetime personal record and case history and analysis of each trainee, which was not the purpose of this project, it is difficult to assess the cause with the effect. Therefore, the rigidity experienced may have been the same basic behavior patterns of 20-50 years prior.

VIII. Counseling Trainees

From the initial phase of the Homemaker-Health Aide training, the social worker was available to the trainees for individual counseling as needed, including both personal therapeutic counseling as well as maximizing community resources on behalf of the individual trainee, with a specific problem. Such counseling was viewed by the social worker as an ancillary service. Her primary responsibility to the training project was the role of a faculty member. Nevertheless, the easy accessibility to skilled casework services was an added ingredient in terms of a positive training experience for the Homemaker-Health Aide trainees.

A. Maximizing Community Resources

On behalf of three (3) trainees, the social worker worked with the following community agencies: Richland County Welfare Department, including an unsuccessful referral to Title V Work Training program;

Richland County Treatment Center and its Amputee Clinic; Social Security office; and, the Veteran's Service office.

The social worker's knowledge of these agencies, their policies and their available funds was translated into simple understandable terms for these trainees resulting in improved knowledge on the part of certain trainees

in their use of these community agencies. One trainee found it impossible to accept this new knowledge and did not make effective use of the social worker's services in this area.

One trainee who had to leave training for health reasons was enabled to procure a new and better fitting leg prosthesis through the combined resources od Medicare and local philanthropic funds after a social worker referral to a specialized Amputee Clinic in which the trainee's physician also participated.

B. Individual Counseling

The social worker's activities in this area included individual interviews with each trainee, as part of joint evaluation interviews with the Chief Trainer. The chief contribution of the social worker in such interviews would appear to have been in her assistance to each trainee to face certain realities both about his or her particular capacities and in employment following the training period. Motivational techniques were used to test out and stimulate the trainees to become actual workers in the health field. These techniques included ego-supportive approaches to help the trainees to identify with the values and standards of the health field (i.e., the line of authority from physician to R.N. to L.P.N. and Aide, including Homemaker-Health Aide and acceptance of this structure), encouragement of the trainee in terms of his importance as a member of the health team and others.

C. Evaluation

The social worker's observations during the course of the training period suggested that only limited goals could be maintained realistically for this particular group of trainees. The prevalence of numerous health problems during the training period suggested that under actual work conditions, certain trainees might not be able to maintain steady and regular attendance and work performance for health reasons.

The impoverished ego structures of the trainees suggested further that in the unprotected work situation, certain trainees might eventually return to their unemployed condition, being unable to endure the normal stresses and strains of actual work experience. Underlying emotional instability as well as unstable family situations was observed on the part of several trainees which here again would work against successful employment following the training period.

In other words, the social worker had continuing serious questions as to whether such a training project, given under optimum conditions by a full professional team in a high quality health setting could be effective for the majority of the trainees. Such questions can only be answered by the actual demonstrated work experience of the trainees in the months following termination of training.

IX. Summary of the Accomplishments and the Problems of this Training Project

A. Positive Results

1. Personal Changes

We had success in the personal changes that were a direct result of the training. The trainee's grooming habits noticably improved. They began to take pride in their appearance and the cleanliness of their hair. For example, one who had been dying her black hair red, decided that her natural coloring was more attractive and let her hair return to its normal color. Some of the others cut their hair, or in other ways selected a hair style that was pleasing to the eye.

A few of the trainees who had not been in the habit of bathing very frequently began to include this hygiene habit in their daily routine. They took very good care of their uniforms so that they looked neat and clean day after day. Usually their shoes were polished and in good repair. These changes in grooming and hygiene certainly did not occur overnight or even in a week or for a few, a month, but gradually over a period of months with the

encouragement of how nice they looked, these changes did take place.

2. Development of Pride

With the emphasis on how much people with health skills such as they were learning are needed and that they were the first in this area of the state to learn how to be homemakers-health aides, we encouraged the development of pride in themselves and in what they were doing. Many came to us exhibiting a feeling of shame for the kinds of work they had done in the past and for their lack of formal education, but they identified quickly and closely with this training program and referred to themselves as the "pioneers". Whenever there were visitors touring the training center we introduced the Homemaker-Health Aides and their feelings of self worth grew as they learned that we regarded them as being important members of our staff and community.

3. Increased Ability To Communicate

The ability to communicate increased. We used lay vocabulary in discussing anything of a medical nature and found that in time we were able to use some medical terms and that in turn, the trainees not only understood these terms but began to use them too. We stressed our interest in their observations of the patients and the home environment and because of this the trainees related things that they had noticed and also ideas they had to improve such things as the safety of the home or a more efficient way to organize a particular patient's household tasks. The trainees communicated very little initially regarding their patient assignments so the improvement was quite noticeable.

4. Influence of a Steady Income

The influence of a steady income had its impact on the trainees, too. For example one woman has moved four times since November of 1966. Each time she moves it is to an apartment that is a little larger and has more conveniences. She is now living in a three room apartment with central heating,

a shower with hot and cold running water, a gas range, refrigerator and she has a telephone. Others who are becoming more middle class in the way they live do things such as a beauty shop visit once in a while, buy used cars on the installment plan, join social weight reducing clubs among other new variations in social living.

B. Problems Experienced

1. Lack of Stamina

Of the problems we have encountered during the training period, probably the lack of stamina and the poor health of our trainees compared to our other staff was one of the largest.

2. Insufficient Home Placements

The initial lack of sufficient Homemaker-Health Aide clients posed the difficulty of our not being able to have intensive training experience in individual homes to the extent we felt was desirable.

3. Social Unrest

Periodically problems arose because of the current social unrest. Our Negroes discriminated against each other on the basis of the amount of pigmentation some of them had as compared to the amount others had. The location of some of the client's homes was such that many of the Homemaker-Health Aides were afraid to go to this section of town after the Detroit rioting. One of our Negro Homemaker-Health Aides did not want to be assigned to any Negro clients. So race consciousness has had its impact on this project.

4. Effect of Cultural Patterns

We experienced some impediment in the learning and performance of the aides because of their cultural patterns. Our Italian found it hard to accept authority, particularly from women; we had to be very careful so that his ego was in no way bruised. We found his thinking to be very rigid and stereotyped. He was either vocally happy or even more vocally, unhappy.

In all he did,he appeared to be compelled to fit some sort of classic Neopolitan mold.

We also found that our Negro trainees had their own vocabulary with which we became familiar while they increased their vocabulary. An example of the difference in the meaning of a word is the word "bread" which the trainees used to refer to their pay checks. If a friend or far relative died our Negroes felt it imperative to attend the funeral. This resulted in their missing a day or part of a day depending upon whether the funeral was in town or not.

5. Difficulty in Accepting Certain Terminology

For all the trainees the use of socially acceptable terms for elimination was difficult to remember, especially in times of stress. As a result the four letter words which they were accustomed to using were verbalized rather than using their newer vocabulary.

C. Other Special Common Problems

There were certain problems identified as common to all of the trainees. These included their inability to learn effectively through the written or printed word, their inability to apply abstract general health concepts and principles to specific patient situations, their resistance to the authority of professional staff and the prevalence of many emotional and family problems which hindered or retarded effective learning.

1. Traditional Classroom Reading and Writing Techniques Not Appropriate

It was repeatedly evident throughout that the trainees were unable to make effective use of this printed matter for learning despite simplified terms and sentence structure. This approach was abandoned therefore, and used in only a limited way. The trainees had difficulties in transmitting their learning experience in written form as evidenced in writing up their work. It is clear, therefore, that these traditional classroom reading and writing techniques of learning are not useful or appropriate to this type of training course.

2. Inability to Conceptualize

Secondly, the trainees found it extremely difficult to handle an abstract concept and apply it to a specific patient situation. They appeared unable to grasp essential similarities in two (2) stroke patients and only found it possible to discuss each patient separately. They had difficulty in carrying over from one patient to another, so that much time had to be spent by the trainees in helping to broaden the trainees' capacity to do a comparable job with each patient. To put it another way, most of these trainees could not reason effectively from the general to the specific and thus did not have available to them the capacity to maintain a standard of procedure or care from one situation to the next. This was truly a limiting factor to their learning.

3. Emotional Insecurity and Family Instability

A substantial degree of emotional insecurity and family instability was observed among the trainees. These included shaky economic situations, heavy debts with many credit problems, marital problems, problems of child care and with their children generally.

Many personal insecurities were revealed by the trainees in the training discussions and in certain instances proved to be a considerable hindrance to effective learning. Constructive criticism with an eye to improving training and work performance was extremely threatening. Almost always the trainees would react sharply as if under personal attack and apparently were unable to view themselves or their work with much objectivity. A frequent response was to recount specific examples of work done well by the particular trainee, as a method of overcoming the ego blow sustained through the criticism.

4. Relating to Authority and Structure

Many trainees appeared to experience difficulties in relating to authority and most specifically to the lines of authority traditional to the health field. This resistance often expressed itself in passivity, reluctance

to participate in classroom discussion or in clinical demonstrations. Another related method of handling discomfort with authority was in a degree of obsequiousness, or 'apple polishing' with an underlay of resentment only apparent in later comments. Certain aggressive trainees were more forthright in open expressions of disagreement and hostility against the trainer or training coordinator. There appeared to be a deficiency of self-discipline observable in these and other incidents with certain trainees.

In addition to these problem areas there were, as noted earlier, certain other special problems. Specifically identified were 1) rigidities in attitude, related to long-time subcultural minority and/or ethnic group patterns, 2) health problems of some severity with irregular attendance and 3) physical fatigue related to these.

5. Rigidities in Attitude

Of the eleven trainees, 9 were Negro, 2 Caucasian; of the latter two, one was of Italian descent. Of the 9 Negroes, three were of lighter color and were subjected to some hostility by the Negroes of darker pigmentation. Colorful ethnic language describing various bodily functions proved to be deep-seated and difficult to root out. The Italian cultural pattern of supreme masculine authority made it difficult for this male trainee to accept easily, ideas, guidance or direct authority from the woman R.N. trainer. Old folk myths and folk stereotypes in Negro cultural patterns relating to skin care, medications, illness and demands of family members proved stubbornly resistant to modern health concepts and procedures. The wall of passive defense erected for generations by Negroes was clearly observed in these older Negro trainees. It was a real deterrent initially, less so in the later phases of training, to effective training and learning and to free communication.

6. Fatigue

The health of the trainees was generally less good than the other employees of Mansfield Memorial Homes. Of the 11, 5 suffered from hypertension, moderate to severe in degree. Other health conditions noted were diabetes, arthritis, dental problems and in one instance the presence of suspected psychosomatic illness, resembling moderate degree of mental depression. Some of these health conditions appeared stabilized and did not present problems in terms of the training course. In others, irregular attendance related to illness was a negative factor for effective training. In several, fatigue factors related to these chronic health problems appeared to be relevant to low level of work performance.

D. Productive Training Techniques Identified

1. Complete Professional Health Team

It appears that the use of the complete professional health team as faculty for training sub-professional health practitioners is essential in presenting to trainees excellence in standards and variety of skills in the separate disciplines of the professional health team. This technique presents in understandable form the team work concept, so necessary for trainees to grasp and begin their understanding of the importance of their own role in the team effort. We include a professional medical social caseworker as an integral part of the team.

2. High Quality Health Setting

A second factor found effective in training is the use of the high quality health care setting, where standards of care in actual daily practice can be observed and experienced first-hand by the Homemaker-Health Aide trainees.

3. Learn by Doing and by Repetition

Because of the inability of these trainees to learn through use of printed material, repetition of basic concepts many times in the classroom was found to be an effective though time-consuming substitute. Since it was evident that these trainees learned best through repetition, first-hand viewing and most importantly, by actual doing, a large share of content was devoted to "muscle" learning under close supervision. Frequent practice of procedures on a patient with supervising professional nurses at hand became in the majority of instances, the most productive technique of any utilized.

4. Time, Time, time

This finding, while indicative that effective training of sub-professional health practitioners can take place, also holds more profound implications for training programs in the future as attempts are made to fill the increasing shortage of personnel in the health field with "quickie" 2 week workshops for sub-professionals. Clearly, effective training and learning for sub-professionals takes time if good standards of health care are what we seek. Thus, future training courses of this kind must be designed with longer periods of time included in the design, so that such training can be meaningful and effective.

Further implications of training based on "learning by doing" suggests that formal classroom approaches, reading assignments and other traditional educational techniques are not valuable and have only a minimal place in this kind of training. Even visual learning through watching demonstrated procedures apparently has only limited value.

E. Conclusion

<u>In overcoming problems of the trainees' learning and performance, our most successful techniques were:</u>

1. repetition of demonstrations and content
2. re-emphasis on performance standards
3. close observation and supervision of their work, and
4. individual evaluation conferences.

The trainees invariably learned more by doing a task themselves, rather than to just be shown or told how to do it.

Thus, the techniques of a complete professional health team as a faculty, the physical environment of a high quality care setting and repetitive practice of procedures under close professional nurse supervision were found to be the most significant factors in successful training of sub-professional health practitioners as Homemaker-Health Aides.

This is, indeed, a highly difficult task, but that it can be accomplished with a great amount of energy and professional talent has been demonstrated during this momentous period of July 25, 1966 to September 1, 1967.

X. APPENDIX

MANSFIELD MEMORIAL HOMES, INC.

APPLICATION FOR HOMEMAKER HOME HEALTH AIDE TRAINING

PERSONAL INFORMATION:

Date _____ Social Security Number _____

Name _____
Last First Middle Age Sex

Present Address _____
Street City State

Permanent Address _____
Street City State

Phone No. Own Home Rent Board

Date of Birth _____
Height Weight Color Hair Color Eyes

Married Single Widowed Divorced Separated

Number of Children Dependents Other Than Yourself Citizen of U.S.A. Yes No

If Related To Anyone In Our Employ,
State Name and Department

How Did You Learn of the Homemaker Home Health Aide Training Program?

Are You Employed Now? If So May We Inquire Of Your Present Employer

Type of Employment?

EDUCATION:	Name and Location of School	Years Attended	Date Graduated	Subjects Studied
Grammar School				
High School				

REFERENCES: List Below the Names of Three Persons Not Related to You, Whom You Have Known at Lease One Year.

Name	Address	Business	Years Acquainted
1.			
2.			
3.			

IF PREVIOUSLY EMPLOYED:
(List Below, Last Three Employers, Starting With Last One First)

Date Month and Year	Name and Address of Employer	Salary	Position	Reason For Leaving
From To				
From To				
From To				

In Case of Emergency Notify

Name Address Phone No.

Date Signature

DO NOT WRITE BELOW THIS LINE

Interviewed By Date Income Status

Major Strengths Other Comments

Reason for Acceptance

Reason for Rejection

Date of Acceptance for Training _____ Date Training Completed _____

Date Training Begins _____ Placement _____

Reasons for Withdrawing

Reasons For Not Accepting Placement

Supervisor's Assesment If Trainee Does Not Complete Course or Graduate

HOMEMAKER HEALTH AIDE OF MANSFIELD MEMORIAL HOMES

APPLICANT INTERVIEW QUESTIONNAIRE

(To be used by interviewer only)

I

	Yes	No
1. Past Work Experience in General		
2. Past Work Experience Related to Health/Illness		
3. Evidence of Emotional Security		
4. " " Compassion		
5. " " Acceptance of Aging		
6. " " Humor		
7. " " Patience with people		
8. " " Warmth		
9. " " Ability to patiently await results		
10. " " Faith in people		
11. " " Feelings of self worth		
12. " " Flexibility		
13. " " Spontaneity		
14. " " Capacity to develop social relationships		
15. " " Verbal and non verbal communication ability		
16. " " Interest in being employed as an H.H.A.		
17. " " Ability to follow directions		
18. Personality		
a. Introverted or shy		
b. Extrovert		
c. Apathetic		
d. Overly confident		
e. Uncomfortable in the interview situation		
f. Rigid		
g. Nervous mannerisms		
h. Responsive		
19. Family Responsibilities:		
a. Children		
b. Husband		
c. Wife		
d. Other		
e. Any problems due to family responsibilities?		
f. Family relationship/s satisfactory to applicant?		
20. Positive Attitudes Toward:		
a. Children		
b. Men		
c. Women		
d. Aging		
e. Individual religious beliefs		
f. People of all backgrounds (ethnic, religious, racial)		
g. Illness and death as part of life		
h. Possibilities of individual rehabilitation		
i. The interviewer		
j. Toward past work experience		
k. Other		

21. Grooming:

	Satisfactory	Unsatisfactory
a. Clothing		
b. Hair		
c. Make-up		
d. Nails		
e. Shoes		
f. Skin		
g. Teeth		
h. Voice		
i. Body Odor		

II

Other, including additional comments on above

1. Applicant's Interests, including special likes and dislikes.

2. Applicant's reasons for wanting training. Are goals realistic?

3. Applicant's evaluation of own present skills for the position. Appraisal by interviewer of these as valid and realistic, if possible. Self appraisal?

4. Applicant's feelings and attitudes toward both illness generally and the aging process.

5. Applicant's capacity to be flexible, with human relationships and with illness demands.

6. Overall personal appearance and characteristics. (Cleanliness? Voice? Speech? Teeth?)

7. Physical health. Impression of vigor regardless of age.

8. Literacy. Capacity to read, write and understand directions.

9. General impression of intellectual capacity, regardless of educational level.

HOME HEALTH AIDE TRAINING PROJECT

Ohio 66-8375

JOB DESCRIPTION - HOMEMAKER HOME HEALTH AIDE (Man or Woman)

Summary of Duties

Works in the homes of homebound patients under the supervision of a graduate registered nurse and performs many tasks which do not require professional training or education; gives a variety of personal care services to the patient including bath, care of mouth, skin and hair; assists patient to bathroom or in using bed pan, helps patient in and out of bed, assists with ambulation; helps patient with prescribed exercises which patient and home health aide have been taught by appropriate professional personnel; assists with medications, ordinarily self-administered, that have been specifically ordered by a physician; performs such incidental household services as are essential to the patient's health care at home and necessary to prevent or postpone institutionalization, including menu planning, grocery shopping, cooking, errands to pharmacy or other store, laundry and light household cleaning; performs other assigned duties as appropriate.

Performance Requirements

Responsibility for: handling and serving patients in a manner conducive to their safety and comfort; adhering without exception to instructions issued by Nurse Supervisor; performing duties in accordance with established methods and techniques and in conformance with recognized standards; providing maximum home health aide services within limits defined by delegated tasks, maintaining good housekeeping standards.

Physical Demands: Good physical and mental health; constant standing and walking during work periods; turning, stooping, bending, stretching, and lifting to assist patients; make beds, move and operate household equipment and perform other related tasks; visual and hearing acuity.

Special Demands: Genuine interest in people and in caring for sick persons in the home setting; patience and tact in dealing with patients, their families and visitors; flexibility and capacity to use initiative in utilizing equipment and supplies available in the home in an effective way; some judgement in recognizing symptoms indicative of change in patient's condition or adverse reactions to treatments; awareness of own limitations in emergencies and corresponding duty to report emergencies to Nurse Supervisor immediately in all instances where a higher skill and judgement is required.

Qualifications:

Education: No formal level of education required; must be able to read and write, to understand and carry out directions and instructions, to record messages and keep simple records.

Training and Job Knowledge: Must be certified as a graduate of a Home Health Aide training course which has provided specific knowledge of procedures and techniques involved in administering simple treatments and providing related patient-care services.

Working Environment - Works indoors in patient's home with much variety in conditions as to light, ventilation of rooms, bathrooms, stairs, cooking areas with a variety of cooking and cleaning equipment and supplies available. Possibility of cuts, minor burns, and other normal household accidents. May be exposed to communicable diseases. Possibility of strains (back and other) due to moving or ambulating patients and use of equipment.

I_____, have read the above job description and fully understand the conditions set forth therein, and if employed as a Home Health Aide, I will perform these duties to the best of my knowledge and ability.

Date_____ _____
Signature

CERTIFICATE OF HEALTH

Homemaker Health Aide of Mansfield Memorial Homes, Inc.

Name _____

Tbc Skin test ☐ Positive ☐ Negative

Date of Most Recent Chest X-Ray _____

Blood Serology _____

Special Restrictions (allergies, back weakness, other)
(Please comment) _____

_____

This person (is, is <u>not</u>) able to perform the duties of Homemaker Health Aide.

_____ _____ M.D.
Date Signature of Physician

MANSFIELD MEMORIAL HOMES, INC.
HOMEMAKER HEALTH AIDE TRAINEE

PERFORMANCE REPORT

CONFIDENTIAL

Date _____

Name _____ Dept. _____
(Last) (First) (Initial)

(end of 1st month) ☐ (2nd month) ☐ (3rd month) ☐

To The Trainee: This report is designed to provide you with a written record of your supervisor's appraisal of your training so that you will know how you stand and also how you can be effective as a Homemaker Health Aide Trainee. This appraisal is based on your chronological record and other evidence of work performance.

PERFORMANCE STANDARDS GUIDE

QUALITY OF WORK – accuracy, precision, completeness, organization of work; freedom from significant error (disregard quantity).

QUANTITY OF WORK – rapidity of work produced; the amount of work accomplished in a given time; the dispatch with which a task of known difficulty is completed (disregard quality).

DEPENDABILITY – industry; diligence; attentiveness; perseverance; application to duties; concentration on the task at hand.

ATTITUDE – enthusiasm for work; willingness to conform to job requirements, to follow rules and regulations, and to accept suggestions for work improvement; cooperation.

INITIATIVE – resourcefulness; self-reliance; self-starting qualities; alertness; making constructive suggestions.

JUDGMENT – grasping situations and drawing conclusions based on sound reasoning and weighing of outcomes; recognizing and coping with emergencies.

RELATIONSHIPS WITH PEOPLE – getting along with others; effectiveness in dealing with the public, other employees and patients.

GOOD HOUSEKEEPING – personal appearance; attention to neatness, cleanliness, hygienic measures, orderliness, care of equipment, materials and supplies; safety.

ATTENDANCE AND PUNCTUALITY – constructive use of sick leave; promptness in notification of absence; daily reporting habits; use of breaks and other time privileges.

SUPERVISORY ABILITY – proficiency in organizing, laying out and getting out work; leadership.

OVER-ALL RATING – the over-all rating must be consistent with factor ratings and comments, but there is no prescribed formula for computing the over-all rating.

RATING

1	2	3	4	5
Far below Standard	Somewhat below Standard	Standard	Above Standard	Outstanding

Narrative Summary of Rating

Your strong points (where you do your best job; also why items 4 or 5 were checked).

Improvement needed (No one is perfect – this is where you can improve; also why items 1 or 2 were checked).

Comments on Trainee Conference(s): Date(s) of Conference _____

Recommendation to the Administrator:

The services of this trainee have ☐ have not ☐ been consistently up to the standard of a trainee in this position and I recommend:
continuation ☐ graduation ☐ other action _____
(describe)

Signed: _____ _____
(Chief Trainer) (Date Submitted)

HOMEMAKER/HOME HEALTH AIDE (DRAFT)
of
MANSFIELD MEMORIAL HOMES, INC.

Date_____

This is to certify that _____
(Name of Employing Agency)

agrees to employ _____, who has successfully
(Name)

completed the Home Health Aide training program with the following provisions:

1. The extent of commitment of employment by such agency will be realistically related to the current total community demands for such Homemaker/Home Health Aide services at the time of completion of the training course.

   NOTE: The agency agrees that efforts will be made to awaken and stimulate the community to awareness of the projected Home Health Aide Service during the training period.

2. Employment will be offered to the Homemaker/Home Health Aide on the same basis as that for staff of the agency, including six months probationary period, close supervision and periodic job evaluations. It is to be noted that all employees, including Registered Nurses, Certified Social Workers et al are on a six (6) month probationary period with the agency from the date of employment regardless of their training.

3. Continued employment beyond the probationary period will be offered to the Home Health Aide on the same basis as that for staff of the agency. There will be no subsequent screening of applicants for initial employment upon the successful completion and graduation of the Homemaker/Health Aide training course.

4. The agency will pay the Home Health Aide on an hourly basis, starting at a level consistent with local rates but no lower than the Federal minimum wage, the number of hours per week to be related to actual job assignments, community demand and available sources of funds to meet the actual cost of service.

5. The agency will pay an additional sum per month to the Home Health Aide to cover cost of the Home Health Aide's transportation by bus, or as mileage reimbursement for those Home Health Aides' who are using their own cars, such sum to be determined by the agency on a uniform basis at the time of employment.

6. The agency will provide 2 uniforms at the time of acceptance as a trainee. Additional uniforms are the responsibility of the Home Health Aide. Laundry of uniforms will be by Mansfield Memorial Homes at regular intervals as with other Mansfield Memorial Home employees.

7. The agency will include the employed Home Health Aides in all benefits available to its Nurses Aide staff on the same basis as the Nurses Aide staff, including Social Security coverage, Workmen's Compensation, and any additional fringe benefits which may be developed for agency staff in the future.

8. The agency will include the employed Home Health Aides in its regular appropriate refresher training institutes which are available to the staff of the agency, as part of its continuing in-service training program, and will undertake special content for the Home Health Aide, as indicated.

9. The agency's personnel policies and practices, as set out in Manual of Personnel Policies will apply equally to employed Home Health Aide, including, among others, holidays, sick leave, vacation time, jury duty, separation from employment, grievance procedures, pay days, annual physical examinations, annual tbc skin tests and chest x-rays.

10. The agency fully complies with Title VII of the Civil Rights Act of 1964 and Executive Order Number 11246, which prohibit discrimination because of race, color, religion, sex or national origin.

Signed _____ _____
Deputy Director, Homemaker/Health Aide Program — Date

I agree to the above terms of employment

Signed _____ _____
Homemaker Health Aide — Date

Approved
10/17/77 _____ _____
Executive Director — Date

HOMEMAKER HEALTH AIDE OF MANSFIELD MEMORIAL HOMES

Trainee Questionnaire

NAME_____ DATE_____

PLEASE MARK T FOR TRUE AND F FOR FALSE.

_____ 1. Cheese is a source of protein.

_____ 2. Most older people are doing very well both mentally and physically.

_____ 3. Kindergarten age children suck their thumbs because something is lacking in their diet.

_____ 4. Most people over the age of 70 are forgetful.

_____ 5. Anybody can use crutches without any special training.

_____ 6. Older people should be encouraged to be as active as is possible for them.

_____ 7. Laxatives should be used as soon as someone thinks they are constipated.

_____ 8. The Public Health department is concerned with sanitation, safe water supply and and the health needs of the community.

_____ 9. The children of a broken home may show how they feel by having temper tantrums, refusing to eat, go to bed and so on.

_____ 10. Meals on Wheels serves one hot, well-balanced meal a day.

_____ 11. Special diets are those for people who have certain food dislikes.

_____ 12. We should not treat very old people like children.

_____ 13. Retarded or dull children can never be taught to learn anything.

_____ 14. There are four basic food groups from which to select when planning well-balanced meals.

_____ 15. There are certain safe and easy ways to help weak or sick people from a bed to a chair.

_____ 16. All older people are "cantankerous" or bad tempered.

_____ 17. In order to work with people you need to be able to make adjustments.

_____ 18. Patients like to know about your problems and personal life.

_____ 19. It is not important if the patient urinates or passes his water every hour or two.

_____ 20. The patient and what he needs is your first concern.

_____ 21. If the patient has a headache it is a good idea to give him an aspirin.

_____ 22. Your personal cleanliness and hygiene is important to your patients.

_____ 23. It is not important to encourage an older person's wish to do things for himself.

24. Your arrival at your assigned home on time is important.

25. A social worker is not an important member of the health services team.

26. Aging and death are part of the whole life process.

27. Making a bed first on one side and then the other saves both effort and time.

28. Germs can enter our bodies from the food we eat, the air we breathe, an opening in our skin, dirty hands and so forth.

29. The Geriatric Center is another name for Mansfield Memorial Homes.

30. Someone who is chronically ill will be well again in a reasonable length of time.

31. A young child's temperature should always be taken by rectum.

32. The patient's home should be taken care of in a way that is acceptable to him and his family.

33. There are some times during childhood when children aren't growing much and as a result don't have much appetite.

34. A hot water bottle should be filled with boiling water.

35. The public health nurse helps the patient with his shopping.

36. Whenever your patient's bowels don't move you should give him an enema.

37. If throw rugs are used in the home of an elderly or disabled person they should be of the non-skid type.

38. When picking something up to carry it, be sure to bend from the waist only.

39. Teeth should be brushed after each meal or snack.

40. Even if you don't feel very well yourself you should make every effort to get to your assignment for that day.

41. If a patient wants to give you a little gift you should take it so his feelings won't be hurt.

42. Digesting food is one example of normal body function.

43. The occupational therapist helps people, who have been sick, get jobs again.

44. Some people need more sleep and rest than others.

45. It is a good idea to skip breakfast or just have coffee especially if one is trying to lose weight.

46. Bathing, not only cleanses the skin but, gives a sense of well-being and social acceptance.

47. Older people have very little oil in their skin.

48. We should not have long fingernails because they can be dangerous.

49. Bed pans and urinals should be cleaned by first rinsing with cold water.

50. Since milk is the most nearly perfect food, babies should be encouraged to drink it and you shouldn't worry whether or not they eat any other foods.

COMMENTS: This will help both you and the Training Program.

1. Were there any questions that were not clear ? Yes ( ) No ( )

2. If you answered yes, write the numbers of any questions that were not clear to you.

3. Were there any words you did not understand? Yes ( ) No ( )

4.. If you answered yes, what were these words that you did not understand?

TRAINEE'S EVALUATION OF TRAINING

Name _____ Date _____

Do you want more practice in: (Please check)

- [ ] Bedmaking
- [ ] Bathing patients
- [ ] Giving enemas
- [ ] Toileting
- [ ] Taking temperature, pulse and respiration
- [ ] Cooking
- [ ] Menu planning
- [ ] Other procedures (List)

1.
2.
3.
4.
5.

Do you want more discussion of: (Please check)

- [ ] The aging process
- [ ] The patient and his family
- [ ] Normal body functions
- [ ] The effects of illness
- [ ] What is good nutrition
- [ ] Providing for cleanliness and safety in the home
- [ ] Child care
- [ ] Therapy activities
- [ ] Home management
- [ ] Other agencies in the community
- [ ] Functions of the members of the health team
- [ ] How infections are carried
- [ ] Any other items (List below)

1.
2.
3.
4.
5.

11/1/66

PATIENT'S DAILY RECORD

Patient's Name _____

Date _____ Homemaker-Health Aide

Assignment Hours _____ Name _____

TIME	PERSONAL CARE GIVEN	BLADDER AND BOWEL ACTIVITY	APPETITE

TIME	MEDICINE GIVEN	TREATMENTS AND/OR ACTIVITY	OTHER REMARKS

PATIENT ASSIGNMENT

REMARKS

Patient's Name _____

Emergency Name and Phone _____

Physician's Name and Phone _____

Personal Care

- ☐ Bed Bath
- ☐ Tub Bath
- ☐ Mouth Care
- ☐ Grooming
- ☐ Shampoo
- ☐ Other:

_____

Housekeeping

- ☐ Cooking

  Type of Diet _____
- ☐ Cleaning
- ☐ Personal Laundry
- ☐ Shopping
- ☐ Other Errands

Activity

- ☐ Bed Rest
- ☐ Bathroom Privileges
- ☐ Chair
- ☐ Up as Desired
- ☐ Help with Activity
- ☐ Help with Ambulation Devices

  Type _____

Medicine

Type _____

Time _____

Amount _____

- ☐ Special Exercises

  Type _____

Mansfield Memorial Homes Phone 524-4178

Police Department Phone 522-1234

Fire Department Phone 524-2424

REFERRAL FORM FOR HOMEMAKER HEALTH AIDE SERVICE

Name of Client _____ Date Referred _____

Address _____ Telephone Number _____

Emergency Name and Phone _____

Family Members	Age	Family Members	Age

Referring Agency _____

Person Referring _____

Physician Recommending _____

Services Requested:

- [ ] Bathing
- [ ] Toileting
- [ ] Grooming assistance
- [ ] Ambulation
- [ ] Special exercises
- [ ] Enemas
- [ ] Transfer activities
- [ ] Assistance with medications
- [ ] Other

Housekeeping Services

- [ ] Cooking
- [ ] Light laundry
- [ ] Light cleaning
- [ ] Shopping and errands
- [ ] Other

Length of Service Requested:

[ ] less than 1 month [ ] 1 month [ ] 2 months [ ] 3 or more months

Frequency of Service:

[ ] Daily [ ] Twice a week [ ] Once a week [ ] Other (specify)

Hours Requested:

[ ] 8 A.M. - 12 noon [ ] 1 P.M. - 5 P.M. [ ] Other (specify)

(over)

Reason for Request and Nature of Problem:

Treatment Goal:

Disposition of Request:

- [ ] Homemaker-Health Aide assigned Date_____
- [ ] Homemaker-Health Aide assigned on an emergency basis. Date_____
- [ ] Request not fulfilled (specify reason)

Date	Physician's Orders

CLIENT/AGENCY EVALUATION FORM

Date_____

Name of Aide_____

Client's Name _____

Agency_____

Work Assignment

Performance: (please check where applicable)

Personal Care		Satisfactory	Unsatisfactory
1. Bathing	1.		
2. Grooming	2.		
3. Toileting	3.		
4. Moving patient from bed to chair, etc.	4.		
5. Exercising	5.		

Housekeeping			
1. Cooking and menu planning	1.		
2. Light house cleaning	2.		
3. Light laundry	3.		
4. Shopping and other errands	4.		

Do you find the Homemaker-Health Aide		Yes	No
1. Pleasant	1.		
2. Industrious	2.		
3. Punctual	3.		
4. Neat	4.		
5. Adaptable	5.		
6. Understanding	6.		

Comments:

Signed_____

Announcing -

HOMEMAKER HEALTH AIDE TRAINING COURSE

TRAINER: MRS. LUCY PAZ, R. N.

Sponsored by -

MANSFIELD MEMORIAL HOMES, INC.

(UNDER AN OFFICE OF ECONOMIC OPPORTUNITY GRANT, OHIO CAP 66-8375, IN COOPERATION WITH THE U.S. PUBLIC HEALTH SERVICE AND THE U. S. ADMINISTRATION ON AGING)

Are You -

- Interested in being paid while being trained?
- 45 or older?
- On reduced income?
- Interested in training for employment in the health field?
- Interested in caring for sick persons in their own homes?

Call - **MRS. LUCY PAZ, R. N. - 524-4178**
FOR INFORMATION ON
HOMEMAKER HEALTH AIDE TRAINING COURSE

APPLICATIONS NOW BEING TAKEN
AT

MANSFIELD MEMORIAL HOMES, INC.

50 BLYMYER AVENUE • PHONE 524-4178 • MANSFIELD, OHIO 44903

HOMEMAKER HEALTH AIDES

OFFERING PERSONAL AND HEALTH CARE

FOR YOUR FAMILY
IN YOUR OWN HOME

A SERVICE OF

MANSFIELD MEMORIAL HOMES, Inc.

GERONTOLOGICAL TRAINING INSTITUTE
OF
MANSFIELD MEMORIAL HOMES, INC.

THIS IS TO CERTIFY

_____

who has completed the prescribed course of training as a

HOMEMAKER HEALTH AIDE

and is hereby awarded this

CERTIFICATE OF GRADUATION

Date _____

_____

_____

VT 000 572

Shontz, David F.; Stevens, Glenn Z.

Exploring Careers in Modern Agriculture Related to Land Use and Conservation; A Teacher's Plan for Use with Ninth and Tenth Grade Classes. Teacher Education Series, vol. V, no. 3.

Pennsylvania State Univ., University Park. Coll. of Agriculture. Dept. of Agricultural Education

MF AVAILABLE IN VT-ERIC SET.

Pub Date - 64 59p.

*TEACHING GUIDES; *AGRICULTURAL OCCUPATIONS; *CONSERVATION EDUCATION; *OCCUPATIONAL GUIDANCE; ACHIEVEMENT TESTS; UNITS OF STUDY (SUBJECT FIELDS); GRADE 9; GRADE 10

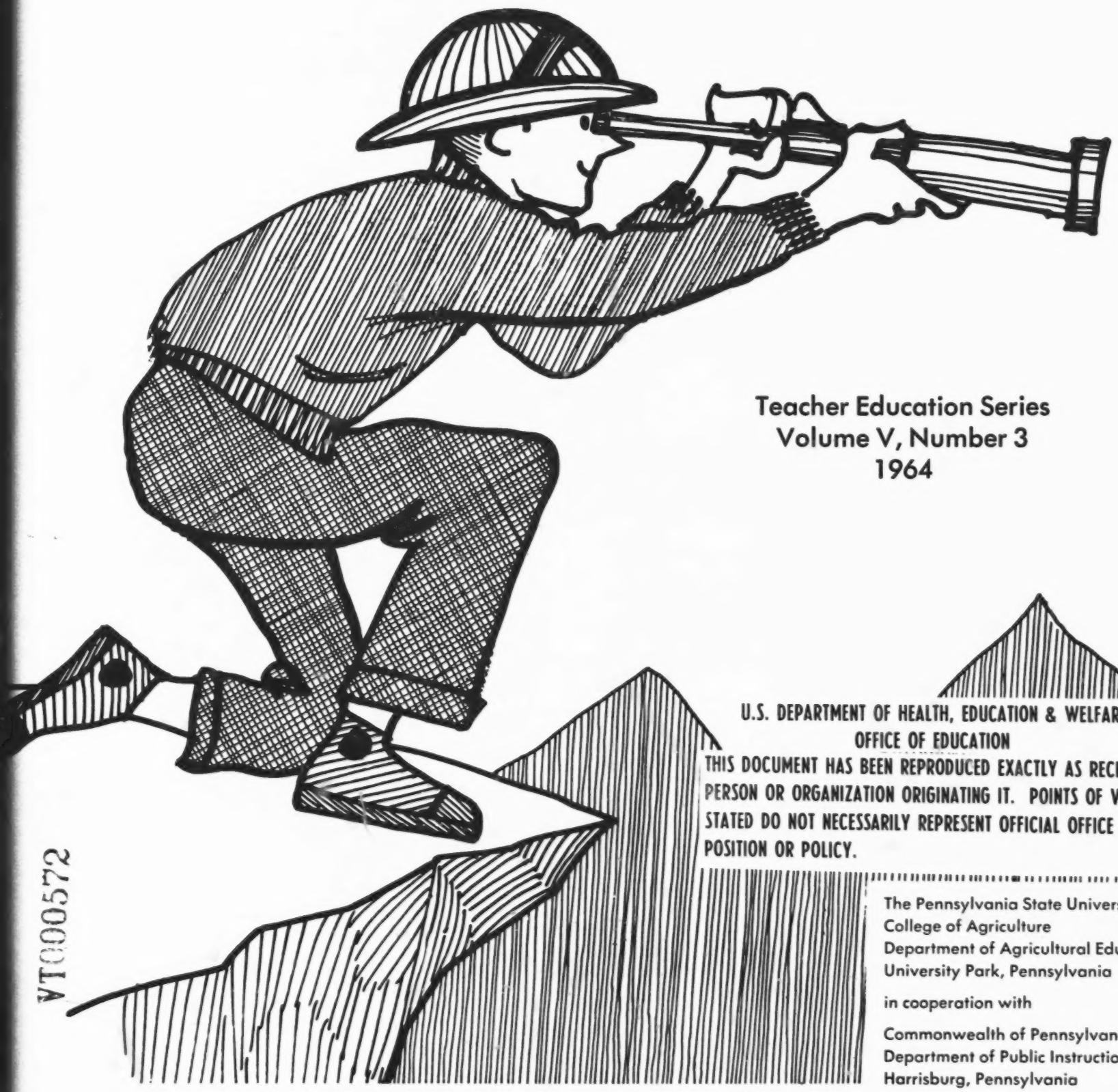
This guide is designed for teacher use in an agricultural careers orientation planning course and a conservation unit for high school freshmen and sophomores. It was developed as part of a study to compare three methods of training. Major problem areas of the Land Use and Conservation Unit are: (1) Soils and Conservation, (2) Land Capabilities, (3) Conservation Plans, (4) Conservation Services, (5) Testing and Soil Fertility, and (6) Forest and Wildlife Conservation. The Agricultural Occupations Unit includes problem areas: (1) Occupational Information, (2) Modern Agriculture, (3) Exploring Occupations, (4) Opportunities in Agriculture, and (5) Planning My Educational Program. Community situation, learning objectives, and additional references are given for each problem area. Objective-type tests for each unit are included. The suggested time allotment is 18 hours. The abstract of the study for which the materials were developed is included. (DM)

VT000572

EDO 31587

EXPLORING CAREERS IN MODERN AGRICULTURE RELATED TO LAND USE AND CONSERVATION

A Teacher's Plan for Use with Ninth and Tenth Grade Classes



Teacher Education Series
Volume V, Number 3
1964

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The Pennsylvania State University
College of Agriculture
Department of Agricultural Education
University Park, Pennsylvania

in cooperation with

Commonwealth of Pennsylvania
Department of Public Instruction
Harrisburg, Pennsylvania

VT000572

T 572

MEMORANDUM

TO: The ERIC Clearinghouse on Vocational and Technical Education
The Ohio State University
980 Kinnear Road
Columbus, Ohio 43212

FROM: (Person) Samuel M. Curtis (Agency) Department of Agricultural Education

(Address) The Pennsylvania State University, University Park, Pennsylvania

DATE: November 20, 1968

RE: (Author, Title, Publisher, Date) Exploring Careers in Modern Agriculture Related to Land Use and Conservation. A Teacher's Plan for Use with Ninth and Tenth Grade Classes. Vol. 5, No. 3. (1964) D. F. Shontz and G. Z. Stevens

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Level of Group Graduate assistant
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Type of Program Exploratory
Occupational Focus Exploratory - Ag. Resources
Geographic Adaptability National
Uses of Material Teacher preparation
Users of Material Teacher

(4) Requirements for Using Material:
Teacher Competency Agriculture
Student Selection Criteria 9th and 10th grade exploratory agriculture
Time Allotment ---

Supplemental Media --
Necessary) (Check Which)
Desirable)

Describe

Source (agency)
(address)

LAND USE AND CONSERVATION

A RESOURCE UNIT
FOR USE BY INSTRUCTORS IN PREPARING A TEACHING PLAN
FOR NINTH AND TENTH GRADE CLASSES

Problem Areas	Dates to be taught
1. Soils and Conservation - Why Is It Necessary to Become Acquainted with Soils and with the Conservation of Soil and Water?	_____
2. Land Capabilities - What Are Land Capability Classes and Why Are They Important?	_____
3. Conservation Plans - How Shall a Soil and Water Conservation Program Be Planned?	_____
4. Conservation Services - Which Conservation Programs and Services Should Be Used?	_____
5. Testing and Soil Fertility - Why Is It Essential to Sample Soil Correctly, to Interpret Test Results Accurately, and to Follow Recommendations Carefully?	_____
6. Forest and Wildlife Conservation - Why Is It Important that We Use Our Forest and Wildlife Resources Wisely?	_____

INTRODUCTION

Current Situation in Community - Students fail to understand:

1. The importance of soil and water conservation.
2. The important decisions which need to be made in land use planning.
3. The necessity of planning a comprehensive conservation program.
4. The place of Government programs and services in conservation.
5. The efficient methods that must be used to increase soil fertility.
6. The importance of forests, wildlife, and recreation to our expanding population.

Learning Objectives - To develop student understanding and appreciation of:

1. The relationship between conservation and standard of living.
2. The factors involved in proper land use classification.
3. The methods to use in planning a comprehensive conservation program.
4. The responsibilities of the Government and the land owner in conservation.
5. The importance of testing soils, interpreting results, and following recommendations.
6. Methods to use in developing forest, wildlife, and recreational resources.

Advance Teacher Preparation:

1. Order visual aids and other materials as indicated in the advance teacher preparation section of each problem area.
2. Make advance arrangements for field trips and resource people.
3. Review objectives and suggested learning activities for each problem area.
4. Assemble booklets and references for each problem area.

Problem Area 1

SOILS AND CONSERVATION - Why Is It Necessary to Become Acquainted with Soils and with the Conservation of Soil and Water?

Current Situation in Community - Students have partial knowledge of:

1. Fundamentals of soil formation
2. Importance of soil and water in land use
3. Importance of conserving soil and water

Learning Objectives:

1. To develop student understanding and appreciation of:
   a. Origin, makeup and importance of soil
   b. Importance of water
   c. Relationship between conservation and standard of living

Advance Teacher Preparation:

1. Review the films: Birth of the Soil and Topsoil
2. Read:
   a. Your Soil - Crumbly or Cloddy?
   b. Our Land and Its Care, pp. 1-17 and 20-25.
   c. Soil Conservation at Home, pp. 1-9.
   d. Land Use and Management Program, pp. 1 and 4.
   e. Gustafson: Using and Managing Soils, Chapter 1.
   f. Foster: Approved Practices in Soil Conservation, pp. 19-31, 44-48.
   g. Knuti, Korpi, Hide: Profitable Soil Management, Chapter 2.

Student Learning Activities:

1. Have each student take the quiz on this problem area.
2. Ask students to look for the important concepts in the film, Birth of the Soil, (10 min.), which you as teacher have identified.
3. After showing the film, discuss the following key points with the class and suggest that important ideas be copied in the student notebook:
   a. What soil is and why it is important.
   b. The composition of an average soil.
   c. On the blackboard, develop with the students a list of the factors important in soil formation. Explain each.
4. With this background, make the following reading assignments followed by a supervised study period and/or reading outside of class:
   a. Your Soil - Crumbly or Cloddy?
   b. Our Land and Its Care, pp. 1-17 and 20-25.
   c. Soil Conservation at Home, pp. 1-9.
   d. Land Use and Management Program, pp. 1 and 4.
5. Have students make a simple drawing of a soil profile so that they are able to recognize and identify various soil layers.
6. Discuss what is meant by "conservation" and why it is important.
7. Have the class make a soil monolith at two different sites (one good type and one poor type).

8. Have students explain how topsoils and subsoils differ in the following characteristics and why each is important:

   a. Color

   b. Texture - (demonstrate how to estimate soil texture by feel)

   c. Structure - (refer to soil monolith)

   d. Moisture-holding capacity

   e. Ease of water and air movement

   f. Depth of soil favorable for root growth

9. Discuss the following key questions:

   a. What are the important factors which reduce the productiveness of Pennsylvania soils?

   b. What steps can a farmer take to increase the productivity of his soils?

   c. How do types of soil affect the city and suburban dweller?

   d. What is the economic importance of soil and water conservation to our Nation?

10. To summarize the study of this problem area, show the class the film, Topsoil.

Suggested List of Additional Learning Resources:

1. Soil Erosion - The Work of Uncontrolled Water. U.S.D.A., S.C.S. A.I.B. 260.

2. How to Control a Gully. U.S.D.A., Farmers' Bulletin 2171.

3. Sediment Is Your Problem. U.S.D.A., S.C.S., A.I.B. 174.

4. How to Recognize Erosion in the Northeast. U.S.D.A., S.C.S., A.I.B. 27.

5. Teaching Soil and Water Conservation. U.S.D.A., S.C.S., Pa. 341.

6. An Outline for Teaching Conservation in High School. U.S.D.A., S.C.S., Pa. 201.

7. Soil Monoliths, local Soil Conservation Service office.

Quiz - Problem Area 1

Circle T for true or F for false.

T F 1. Plants, like people, require air, water, and food.

T F 2. Renewable resources include soil, coal, wildlife, and iron.

T F 3. Soil texture refers to the size of soil particles.

T F 4. Each new family in the U.S. needs, on the average, about one acre for living space, transportation and service facilities.

T F 5. Public agricultural land produces practically all of our Nation's food.

T F 6. Crumb and granular structured soils are unfavorable for plant growth.

T F 7. Soils, like people, have varying capabilities.

T F 8. Permeability is of little importance to the farmer and suburban land owner.

T F 9. A soil survey is an inventory of soil resources.

T F 10. Most soils are composed of layers called horizons.

Problem Area 2

LAND CAPABILITIES - What Are Land Capability Classes and Why Are They Important?

Current Situation in Community - Most students do not understand the basic, important decisions which need to be made in selecting the proper use for each type of soil on each field or suburban lot.

Learning Objectives:

1. To develop student understanding and appreciation of:
   a. Major soil areas of the state
   b. Factors involved in classifying land according to land use capability classes
   c. The necessity for making maximum use of each acre

Advance Teacher Preparation:

1. Review the film: Raindrops and Soil Erosion
2. Read:
   a. Pennsylvania Teaching Guide to Natural Resources Conservation, p. 28
   b. What Is a Conservation Farm Plan?
   c. Agricultural Land Resources, pp. 2-9
   d. Land Use and Management Program, pp. 2-7
   e. Foster: Approved Practices in Soil Conservation, Chapter 1
3. Arrange for field trip to an unplanned farm with S. C. S. personnel as resource persons. Each student needs a clipboard.

Student Learning Activities:

1. On a Pennsylvania map have each student designate six major soil areas of the State. Write a brief general description of the soil in your community.

2. Make the following reading assignment and explain when students are to do the reading:

   a. What Is a Conservation Farm Plan?

   b. Agricultural Land Resources, pp. 2-9

   c. Land Use and Management Program, pp. 2-7

3. On a field trip have:

   a. Students make a simple map of the farm showing need for soil and water conservation.

   b. The S. C. S. representative discuss the following with the class:

      (1) What is the importance of land use classification (or of making a land capability inventory)?

      (2) How can areas or fields be divided and identified for classification purposes?

      (3) Why is depth of soil important?

      (4) What is the importance of permeability (air and water movement in the soil)?

      (5) Why are color and amount of surface soil important?

      (6) Why are texture and structure important physical features?

(7) One or more methods of determining percent of slope and length of slope. Also, have students demonstrate how to determine percent of slope.

(8) Kinds and degree of erosion

(9) Stoniness

(10) Explain how the soil drainage class is determined

(11) Into what two broad groups can all land be classified?

c. Have students judge three or more sites using the land use and management score card.

4. Summarize this problem area with the film, Raindrops and Soil Erosion.

5. Have each boy make a map, similar to the one in activity #3, for his own farm or lot.

Suggested List of Additional Learning Resources:

1. The Measure of Our Land. U.S.D.A., S.C.S., Pa. 128.

2. Soil and Water Conservation Pays Dividends. International Harvester Co., Chicago, Illinois.

3. Work Unit Technical Guide - Vol. I and Vol. II, Soil Conservation Service (consult local County Work Unit Conservationist).

Problem Area 3

CONSERVATION PLANS - How Shall a Soil and Water Conservation Program Be Planned?

Current Situation in Community - A great many students do not understand:

1. The purpose of a comprehensive conservation program for a farm or suburban lot.
2. How to plan a comprehensive conservation program.

Learning Objectives:

1. To develop student understanding and appreciation of:
   a. Why a farmer, a rural non-farm and/or suburban landowner should have a conservation plan.
   b. How a farmer, a rural non-farm and/or suburban landowner may have a conservation plan prepared.

Advance Teacher Preparation:

1. Have students bring in the conservation plans for their home farm or place of residence. If not available, borrow sample plans from the local S. C. S. office.
2. Review the film: Beyond Tomorrow
3. Read:
   a. One Step at a Time
   b. Soil Conservation at Home, pp. 11-17
   c. Soil Conservation Districts--what they are, how they work, how S. C. S. helps them

d. Man is the Steward, pp. 6-11

e. Conservation Agreement Form

4. Arrange for S. C. S. personnel as resource persons

Student Learning Activities:

1. Introduce the problem area with the film, Beyond Tomorrow, (26 minutes). Advise students to note the destructive cycles illustrated, the conservation planning involved, practices explained, etc.

2. After a discussion of the important points of the film, make the following reading assignments:

   a. One Step at a Time

   b. Soil Conservation Districts--what they are, how they work, how S. C. S. helps them.

   c. Man is the Steward, pp. 6-11

   d. Work Unit Technical Guide, Vol. I

   e. Conservation Agreement Form

3. Examine with the students the sample conservation plans and discuss with them what is meant by a conservation plan for a farm, a rural non-farm or suburban lot. Include color coding system, symbols, etc.

4. Discuss the main job of the Soil Conservation District:

   a. List the names and addresses of the local directors.

   b. How are the directors chosen?

   c. How does a landowner become a "cooperator" with the district?

   d. What organization is responsible for furnishing technical assistance to the district?

5. Ask the S. C. S. representative to take the students through the next step following the field trip in problem area 2. Have him discuss with the class the procedure for a farmer or non-farm landowner to follow in preparing a conservation plan.

   a. Important decisions that need to be made in farm planning:

      (1) Consider soil types, crops, livestock, woodlot, wildlife

      (2) Conservation measures needed such as drainage, strip cropping, contouring, terracing, etc.

   b. Who writes the recommendations for the plan?

   c. How would a plan for a residential tract differ from one for a farm?

   d. How is a conservation plan put into operation?

   e. What other people or organizations might be interested in this type of planning?

Suggested List of Additional Learning Resources:

1. Grass Makes Its Own Food. U. S. D. A., A. I. B. 223
2. Soil and Water Conservation Pays Dividends, pp. 8-20, I. H. C.
3. The Measure of Our Land. U. S. D. A., S. C. S., Pa. -128
4. Strip Cropping for Conservation and Production, U. S. D. A. Farmers' Bulletin 1981
5. Grass Waterways in Soil Conservation. U. S. D. A., Leaflet 477
6. Pennsoil. U. S. D. A., S. C. S., Harrisburg, Pa.

Problem Area 4

CONSERVATION SERVICES - Which Conservation Programs and Services Should Be Used?

Current Situation in Community - Students need to understand:

1. How Government programs and services fit into the total conservation program.
2. That many landowners use some of the services available, but are not acquainted with others.

Learning Objectives:

1. To have students:
   a. Learn how to obtain the services of various agricultural agencies.
   b. Become aware of the responsibilities of both the Government and the landowner and/or the operator in putting services and practices into use.

Advance Teacher Preparation:

1. Contact the County A. S. C. S. office manager as one of the resource persons for this problem area. Ask him to secure copies of the current Handbook of the A. C. P. in Pennsylvania, the current County A. S. C. S. Handbook, and of various forms used.
2. Also contact the County Supervisor of the Farmers Home Administration in your county. Ask him to discuss conservation loans available.

3. Read:

   a. A Conservation Partnership

   b. Man is the Steward, p. 12

Student Learning Activities:

1. Point out to your students that this topic is a logical follow-up to problem area 3. After a conservation program has been planned, how can a landowner with limited finances carry it out? Have students read:

   a. A Conservation Partnership

   b. Man is the Steward, p. 12

2. Ask your county A. S. C. S. office manager to discuss and answer questions on:

   a. The A. C. P. Program of the U. S. D. A.

   b. The conservation services available in your county.

   c. How a landowner may obtain the services in which he is interested.

   d. The extent of cost-sharing available in your county.

   e. The responsibilities of participating farmers. (Maintenance must be emphasized).

3. Request the County Supervisor of F. H. A. to discuss and answer questions on:

   a. Types of conservation loans available for carrying to completion conservation practices.

   b. How a landowner may obtain a loan.

4. Discuss the following key questions:

   a. What is the main job of the Agricultural Extension Service in a total conservation program?

   b. When would you use the services of the Pennsylvania Game Commission?

   c. When would you use the services of the Pennsylvania Fish Commission?

   d. When would you use the services of the Pennsylvania Department of Forests and Waters?

Suggested List of Additional Learning Resources:

1. Answers to Questions about the Agricultural Conservation Program. U.S.D.A., A.S.C.S., Pa. 293

2. What Vocational Agriculture Teachers and Supervisors Should Know About A.C.P. Department of Agricultural Education.

Problem Area 5

TESTING AND SOIL FERTILITY - Why Is It Essential to Sample Soil Correctly, to Interpret Results Accurately, and to Follow Recommendations Carefully?

Current Situation in Community - Students need to recognize:

1. That soils of low fertility are more subject to erosion than fertile productive soils.
2. The most economical ways to increase soil productivity.

Learning Objectives:

1. To have students understand and appreciate:
   a. The importance of testing soil and how to develop skill in taking soil samples.
   b. The importance of lime, its effect on acid soils, how to determine the amount of lime needed, the kinds of liming materials available and when and how each should be applied.
   c. How to interpret and apply soil test results in setting up fertilizing plans.

Advance Teacher Preparation:

1. Review the slide set, filmstrip, or leaflet on How to Take a Soil Sample.
2. Secure necessary sampling equipment.
3. Obtain soil test kit and field information forms from County Agent.
4. Read:
   a. How to Get Good Soil Samples

b. Fertilizer Facts - duPont

c. Field Records

Suggested Learning Activities:

1. View and discuss the slides, filmstrip, or the leaflet on How to Take A Soil Sample.

2. Discuss with the students the pamphlets:

   a. How to Get Good Soil Samples.

   b. Fertilizer Facts - the section on soil testing.

3. Demonstrate correct soil sampling procedures in the field:

   a. Discuss the proper time for sampling soil.

   b. Describe and show how to make a composite sample.

   c. Explain the value of the information sheet in applying for a complete soil test and how it is compiled.

4. Have students take soil samples on home farm or lot, prepare and send them in for testing.

5. What are the essential elements needed by plants?

6. On the blackboard, list the important factors to consider in selecting and applying lime.

7. List the important factors to consider in selecting and applying fertilizers.

8. Discuss the type of soil fertility records available:

   a. What records should be kept and why?

   b. Who should assist the farmer in setting up a soil fertility program?

Suggested List of Additional Learning Resources:

1. Know What's in Your Fertilizer Bag. Am. Potash Institute
2. Our Land and Its Care, pp. 18-45. Nat. Plant Food Institute
3. Soils, Phosphates, and Mixed Fertilizers. W.R. Grace and Co., Davison Chmical Division, Baltimore 3, Md.
4. Soil Fertility Records. U.S. Steel Corp., Pittsburgh, Pa.
5. For the Record. Spencer Chemical Co., Kansas City, Mo.
6. Crops and Soils Record Book. The Pennsylvania State University, Agricultural Extension Service

Problem Area 6

FOREST AND WILDLIFE CONSERVATION - Why Is It Important that We Use Forest and Wildlife Resources Wisely?

Current Situation in Community - Most students do not understand:

1. The importance of the forests or the values of wildlife in this state.
2. The many benefits to be derived from proper forest and wildlife management.

Learning Objectives:

1. To develop student understanding and appreciation of:
   a. Importance of forests, forest products, and wildlife.
   b. Multiple uses of our forests.
   c. Proper wildlife management.

Advance Teacher Preparation:

1. Review the film: The Brandywine - A Watershed at Work or Return to Eden.
2. Read:
   a. Our Forest Bounty
   b. Conservation on Farm Woodlands
   c. Forest Land Use - Everybody's Concern
3. Review:
   a. Water for Farm and City
   b. Rural Areas Prosper Through Small Watershed Program

c. More Wildlife Through Soil and Water Conservation

d. A Conservation Project for Future Farmers

e. Food and Cover for Farm Wildlife

f. Outdoor Recreation on the Nation's Farmland

g. What is a Watershed?

4. Arrange for resource persons: District Service Forester; Game Protector; Fish Warden.

Student Learning Activities:

1. Discuss with the students the place and importance of forestry in Pennsylvania.

2. Invite the district forester in for a discussion on managing our Pennsylvania forests for "multiple uses."

   a. Production of Wood and Wood Products.

   b. Water.

   c. Recreation.

   d. Scenic Beauty.

3. Discuss the possibilities of a school forest laboratory and/or a school nursery.

4. Assign one or more students to report on each of the following pamphlets:

   a. More Wildlife Through Soil and Water Conservation.

   b. Outdoor Recreation on the Nation's Farmland.

   c. Water for Farm and City.

d. What is a Watershed?

e. Rural Areas Prosper Through Small Watershed Program.

f. Food and Cover for Farm Wildlife.

g. A Conservation Project for Future Farmers.

6. Ask the local game protector to serve as a resource person to discuss:

a. The Pennsylvania Game Laws

b. The carrying capacity of game lands in your area

c. Why wildlife must be harvested like any other crop

d. How the type of habitat determines the kinds of wildlife found in the area.

e. How the carrying capacity of lands may be improved

f. A Conservation Project for Future Farmers

g. Hunter Safety Program

7. Arrange for the local fish warden to discuss:

a. The Pennsylvania Fish Laws

b. How fish are limited by the carrying capacity of their environment

c. The effects of strip-mining on fishing

d. How to manage a farm pond for best fishing results

8. Discuss the pressing state-wide need for increased private recreational facilities and the possibilities in your area for:

a. Vacation farms

b. Picnicking and sports areas

c. Fishing waters

d. Camping, scenery, and nature recreation areas

e. Hunting areas

f. Hunting preserves

g. Selling, recreation land or recreation use rights

9. Summarize this problem area with one of the films: The Brandywine - A Watershed at Work or Return to Eden

Suggested List of Additional Learning Resources:

1. Better Hunting and Fishing on Small Watershed Projects, U.S.D.I., Cir. 100
2. Making Land Produce Useful Wildlife, U.S.D.A., Farmers' Bulletin 2035
3. Make Your Farm Pond Safe, U.S.D.A., S.C.S., Pa. 396
4. How You Can Become A Tree Farmer - American Forest Products Industries, Inc.
5. Growth of A Tree - American Forest Products Industries, Inc.
6. Soil Conservation Tips for Sportsmen, U.S.D.A., S.C.S., Pa. 400
7. Land of Plenty, Farm Equipment Institute

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Your Soil - Crumbly or Cloddy? U.S.D.A., S.C.S. Leaflet No. 328
Our Land and Its Care. National Plant Food Institute, 1700 K Street, N.W., Washington 6, D. C.
Soil Conservation at Home. U.S.D.A., A.I.B. 244
Land Use and Management Program. Department of Agricultural Education
Pennsylvania Teaching Guide to Natural Resources Conservation, and A Conservation Project for Future Farmers. Department of Public Instruction
What is a Conservation Farm Plan? U.S.D.A. Leaflet 249
Agricultural Land Resources. U.S.D.A., A.I.B. 263
One Step at a Time. U.S.D.A., S.C.S., Pa. 501
Soil Conservation Districts. U.S.D.A., S.C.S., Pa. 417
Man is the Steward. Pennsylvania Department of Agriculture
Conservation Agreement Form. Local Soil Conservation District
A Conservation Partnership. U.S.D.A., A.S.C.S., Pa. 454
How to Get Good Soil Samples. Reprint. Better Crops with Plant Food Magazine, National Plant Food Institute
How to Take a Soil Sample. Leaflet. National Plant Food Institute
Fertilizer Facts. E.I. duPont DeNemours & Co., Wilmington 98, Delaware
Soil Fertility Records. U.S. Steel Co., Pittsburgh, Pa., or Agric. Ext. Service
Our Forest Bounty - American Forest Products Industries, Inc., 1816 N Street, N.W., Washington 6, D. C.
Conservation on Farm Woodlands - U.S.D.A., S.C.S., Pa. 463
Forest Land Use - Everybody's Concern. American Forest Products Industries, Inc.
Water for Farm and City. U.S.D.A., Pa. 411
Rural Areas Prosper Through Small Watershed Program. U.S.D.A., S.C.S., Picture Story 138
More Wildlife Through Soil and Water Conservation, U.S.D.A., S.C.S., A.I.B. 175
Food and Cover for Farm Wildlife. Pa. Game Commission, Harrisburg, Penna.
Outdoor Recreation on the Nation's Farmland. U.S.D.A., Office of Information, Picture Story 140
What is a Watershed? U.S.D.A., S.C.S., Pa. 420
Farm Field Mapping - soil, water, and fertility management, 20 pp. Department of Agricultural Education, 1963
Work Unit Technical Guide - Vol. I and Vol. II, Soil Conservation Service, Harrisburg, Pennsylvania
Yearbooks of Agriculture - 1955, 1957, 1958 - U.S.D.A.
County Soil and Water Conservation District Program. (Many counties are publishing planning bulletins that include excellent soil and water information. Consult local county committee).

Visual Aids

Birth of the Soil, 16mm., 10 min., Dept. of Forests and Waters, Harrisburg, Pennsylvania

Topsoil, 16mm., 11 min., S. C. S., 100 North Cameron Street, Harrisburg, Pennsylvania

Raindrops and Soil Erosion, 16mm., 21 min., S. C. S., Harrisburg, Pennsylvania

Beyond Tomorrow, 16mm., 25 min., color, S. C. S., Harrisburg, Pennsylvania

Return to Eden, 16mm., 17 min., S. C. S., 100 North Cameron Street, Harrisburg, Pennsylvania

Taking a Soil Sample, 35mm., set of 10 slides, $2.50, National Plant Food Institute, 1700 K Street, N. W., Washington 6, D. C.

The Brandywine - A Watershed at Work. Soil Conservation Commission, Harrisburg, Pennsylvania

Suggestions for further reading

Foster: Approved Practices in Soil Conservation. The Interstate, Danville, Ill.

Gustafson: Using and Managing Soils. McGraw-Hill Book Co., Inc., New York

Knuti, Korpi, Hide: Profitable Soil Management. Prentice-Hall, Inc., Englewood Cliffs, New Jersey

EXAMINATION ON LAND USE AND CONSERVATION

ON THE SEPARATE ANSWER SHEET, PLEASE BLACKEN THE LETTER FOR THE BEST ANSWER TO EACH STATEMENT.

1. The greatest amount of damage to the topsoil in the U.S. has been caused by
   a. improper fertilization
   b. erosion
   c. leaching
   d. improper crop rotation

2. The most valuable resource in the following list is
   a. men with intellectual capacity and understanding
   b. iron ore deposits
   c. virgin timberland
   d. crude oil deposits

3. The most important reason for conservation is to
   a. increase the yearly amount of rainfall
   b. reduce a farmer's income tax
   c. prevent drought
   d. insure an adequate water supply for this country

4. The most important practice in soil and water conservation is
   a. terracing
   b. strip cropping
   c. land use planning
   d. crop rotation

5. The total depth in inches of topsoil and subsoil of desirable texture and structure normally needed for the growth of adapted crops is
   a. 56" to 60"
   b. 36" to 40"
   c. 20" to 26"
   d. 10" to 15"

6. On similar types of soil, farmers who use soil and water conservation practices
   a. make less money than farmers who do not
   b. make the same amount of money as farmers who do not
   c. make more money than farmers who do not
   d. quit farming because of a price decline sooner than farmers who do not

7. Texture of surface soil refers to
   a. the rate at which water moves out of the soil
   b. the color of topsoil
   c. the depth of topsoil
   d. the proportion of gravel, sand, silt, and clay (size of soil particles)

8. Which one of the following is not a renewable resource
   a. iron
   b. forests
   c. soil
   d. wildlife

9. Modern conservation has taken a positive approach to conservation which stresses
   a. limiting the use of certain natural resources
   b. forbidding the use of certain natural resources
   c. wise and compatible use of certain natural resources
   d. no set policy concerning the use of certain natural resources

10. Soil structure refers to
    a. the fitness of soil for cultivation
    b. the grouping or arrangement of soil particles
    c. the strength of soil particles
    d. the color and depth of topsoil

11. The most widespread hazard limiting land capability is
    a. excess water
    b. unfavorable soil
    c. adverse climate
    d. susceptibility to erosion

12. Soil, water, plants, and animals are
    a. dependent upon each other
    b. competitors
    c. not related to each other
    d. only distantly related to each other

13. Percent slope is important because
    a. it can be easily measured by use of an Abney level
    b. steeper slopes make the use of farm machinery difficult
    c. it can be measured in more than one place on a long slope
    d. it affects the speed at which water will flow and cause erosion

14. Conservation farm planning involves
    a. determining what crops to grow on your land
    b. deciding how much livestock to keep on your farm
    c. conserving the soil for the future while increasing production efficiency
    d. determining when to remodel the farm buildings

15. Making the decision to practice effective conservation depends largely upon
    a. possessing technical "know-how"
    b. creating the proper attitude
    c. what a neighbor does
    d. the state of fertility of the soil

16. A soil survey map of a farm will show
    a. land capabilities, soil types, slope, erosion, drainage and fertility
    b. the kinds of soil on the farm
    c. the use to be made of each acre
    d. the kind of protection each acre needs

17. The conservation farm plan is based on
    a. the finances available for carrying out the practice
    b. the soil survey map and the needs of the farm enterprise
    c. the suggestions of the Soil Conservation Service personnel
    d. the practices used on neighboring farms

18. The organization responsible for furnishing technical assistance to the soil conservation district is the
    a. State Agricultural Stabilization and Conservation Service
    b. State Agricultural Extension Association
    c. State Soil Conservation Commission
    d. U. S. Soil Conservation Service

19. The main job of a soil conservation district is to help
    a. farmers finance conservation practices
    b. local contractors with soil and water conservation jobs
    c. farmers make and carry out conservation plans
    d. farmers put recommendations into effect immediately

20. When purchasing a home site in a suburban area, select one where the soil has
    a. a deep rooting zone and is of loamy texture and good structure
    b. a balanced nutrient supply
    c. the proper degree of acidity for the plants to be grown
    d. a balanced nutrient supply and proper reaction for plant growth

21. A community land use plan suggests
    a. that each landowner must take care of his own conservation problems
    b. that suburban communities do have erosion and water runoff problems
    c. how private and public improvements and land uses should be related to each other
    d. that the Soil Conservation Service can do little to aid in suburban development

22. The practices included in your county agricultural conservation program are
    a. determined at the Federal level
    b. determined at the State level
    c. the ones farmers already use to the extent needed in the county
    d. selected by representatives of agricultural agencies and organizations within the county

23. The Farmers Home Administration may
    a. lend farmers money for certain conservation practices
    b. assist farmers with technical conservation problems
    c. carry out conservation research work
    d. provide loans for automobiles

24. A watershed refers to
    a. a privately owned area that drains into a particular stream or other body of water
    b. the land area that drains into a particular stream or other body of water
    c. a Federally owned area that drains into a particular stream or other body of water
    d. none of the above

25. A complete soil test indicates whether the soil needs
    a. calcium
    b. phosphorous
    c. potassium
    d. lime, phosphorous and potassium

26. A soil sample should be taken to plow depth which is usually
    a. 2-3 inches
    b. 4-5 inches
    c. 6-8 inches
    d. 9-12 inches

27. How much money a farmer spends for fertilizer depends upon
    a. the market value of the product
    b. the cost of the fertilizer
    c. the productive capacity of the soil
    d. product value, fertilizer cost and soil productivity

28. Subsoil
    a. has no definite effect on plant growth and land use
    b. has a definite effect on plant growth and land use
    c. examination will not indicate leaching or weathering
    d. with different horizons and physical properties is desirable

29. In regard to water potential, Pennsylvania has
    a. more rivers and streams than any other state in the U. S.
    b. the same number of rivers and streams as its largest border state
    c. the same number of rivers and streams as the average state in the U. S.
    d. fewer rivers and streams than any other state in the U. S.

30. Forests are valuable to man for
    a. the approximately 5,000 different wood products
    b. the wildlife produced
    c. the recreational opportunities
    d. all of the above factors

31. Water
    a. is industry's most important raw material
    b. consumption by agriculture exceeds that by industry
    c. use in the U. S. has risen slowly since 1900
    d. problems in the U. S. are of little importance

32. When the pH of a soil is 5.5, it is said to be
    a. neutral
    b. acid
    c. basic
    d. fertile

33. The two forces of nature which are the <u>primary</u> causes of soil erosion are
    a. soil type and slope
    b. wind and soil type
    c. raindrops and wind
    d. water and slope

34. The following soil will hold the most water per cubic foot
    a. fine sand
    b. soil high in humus
    c. silt loam
    d. clay loam

35. Soil conservation practices should
    a. be followed regardless of profits realized
    b. be carried out to maintain soil fertility
    c. increase fertility, production and profits over a period of years
    d. be carried out to obtain maximum production in any one year

36. One of the most serious pollutants of our fishing waters is
    a. silt
    b. tree stumps
    c. sand
    d. gravel

37. Wildlife habitat development should
    a. not be considered in land use planning
    b. be considered a part of a basic land use and conservation plan
    c. be a responsibility of the hunter and fisherman
    d. not be a part of the cropland or woodland areas

38. Cropland practices helpful to wildlife are
    a. clean fall plowing
    b. early season mowing of watercourses and headlands
    c. cropping systems that include grass-legume meadows
    d. burning of fence rows and crop residues

39. Recreation business for farms
    a. can increase the acreage in cropland
    b. can aid in reducing the tax base
    c. is not likely to expand in the future
    d. may provide additional income to farmers

40. Recreation
    a. is a multi-million dollar industry that depends upon clean, attractive water
    b. has limited relation to land use and conservation
    c. facilities available have little effect on attracting industry and labor to an area
    d. will be of less importance in future years

Name _____ Date _____

ANSWER SHEET FOR EXAMINATION ON LAND USE AND CONSERVATION

Directions: Blacken out the letter of the best answer for each question.

---

1. a b c d	21. a b c d
2. a b c d	22. a b c d
3. a b c d	23. a b c d
4. a b c d	24. a b c d
5. a b c d	25. a b c d
6. a b c d	26. a b c d
7. a b c d	27. a b c d
8. a b c d	28. a b c d
9. a b c d	29. a b c d
10. a b c d	30. a b c d
11. a b c d	31. a b c d
12. a b c d	32. a b c d
13. a b c d	33. a b c d
14. a b c d	34. a b c d
15. a b c d	35. a b c d
16. a b c d	36. a b c d
17. a b c d	37. a b c d
18. a b c d	38. a b c d
19. a b c d	39. a b c d
20. a b c d	40. a b c d

AGRICULTURAL OCCUPATIONS

A RESOURCE UNIT FOR USE BY INSTRUCTORS IN PREPARING A TEACHING PLAN FOR NINTH AND TENTH GRADE CLASSES

Problem Area	Dates to be taught
1. Occupational Information - Why Is It Essential for Students to Study Occupational Information?	_____
2. Modern Agriculture - What Does Modern Agriculture Involve?	_____
3. Exploring Occupations - What Are the Three Important Steps?	_____
4. Opportunities in Agriculture - Why Is There a Challenging Future in Agriculture?	_____
5. Planning my Educational Program - How Shall I Prepare for an Agricultural Occupation?	_____

INTRODUCTION

Current Situation in Community:

1. Parents and high school students lack information concerning the scope of and the employment opportunities in modern agriculture.
2. High school students need to learn how to obtain and evaluate occupational information.

Learning Objectives:

1. To develop student understanding and appreciation of:
   a. Why occupational information is important now.
   b. The modern concept of agriculture.
   c. The important steps in exploring occupations.
   d. The career possibilities in the broad field of agriculture.
   e. The procedure for securing and using information and guidance about various careers in order to be realistic in the selection of a vocational goal.
   f. Post-high school preparation for and advancement in production, distribution, technical and professional occupations.

Advance Teacher Preparation:

1. Discuss this unit with the school guidance counselors and administrators.
2. Check student information available in the school guidance office - test scores, grades, class rank, etc.

3. Become thoroughly familiar with career possibilities in agriculture.
4. Order visual aids and other materials as indicated in the advance teacher preparation section of each problem area.
5. Review objectives and suggested learning activities for each problem area.
6. Assemble booklets and references for each problem area.

Problem Area 1

OCCUPATIONAL INFORMATION - Why Is It Essential for Students to Study Occupational Information?

Current Situation in Community:

1. Students may not realize that thought should be given to the selection of a broad occupational field early in their high school years.
2. Students are not aware of the importance of making correct occupational choices.
3. Students have not thought about the possibility of changing jobs perhaps several times during their lifetime.

Learning Objectives:

1. To develop student understanding and appreciation of:
   a. The importance of exploring various occupations at this time in order to locate broad areas of agricultural interests.
   b. The importance of broad, basic agricultural training for our rapidly changing economy.
   c. The importance of choosing a life's work.

Advance Teacher Preparation:

1. Review film: Personal Qualities for Job Success or Choosing Your Occupation or filmstrip - Look at your Future.
2. Read: Your Future is What You Make It., pp. 3-15 or How to Get and Hold the Right Job, pp. 1-7 and pp. 15 & 16. Exploring Careers in Modern Agriculture, pp. 1-8.

Student Learning Activities:

1. List on the chalkboard various jobs in agriculture that students can name quickly in the community, county and state.

2. Ask students to look for the important points stressed in one of the films or in the filmstrip, Look at Your Future. (Initiative, good personal appearance, business-like work habits, willingness to take criticism, ability to get along with others).

3. After showing the film, discuss the key points to be copied in the students' notebooks.

4. With this background, discuss Your Future is What You Make It, pp. 3-15, or How to Get and Hold the Right Job, pp. 1-7, 15-16.

5. After the students have read, Exploring Careers in Modern Agriculture, pp. 1-8, discuss:

   a. Meaning of (1) career (2) occupational information and occupational guidance (3) skilled worker, technician, professional worker.

   b. Major satisfactions people receive from work.

   c. Why people are satisfied in many different kinds of jobs.

6. Explain the common mistakes (blind spots or career hazards) that are responsible for much of the faulty thinking of students about occupations. Examples would include: the outdoor fallacy, parental influence, appeal of glamour or adventure, immediate chance for a job, social status or prestige, failure to consider opportunities for employment, one-track ambition or close-mindedness, mistaken aptitudes, occupations of the future, and the idea that "anyone can succeed in any occupation if he works hard."

Problem Area 2

MODERN AGRICULTURE - What Does Modern Agriculture Involve?

Current Situation in Community:

1. Many persons still believe that agriculture is farming only.
2. Parents and students do not realize the tremendous size and scope of the total agricultural industry.
3. Parents and students do not think of the modern American farmer as a large purchaser of goods and services.

Learning Objectives:

1. To develop student understanding and appreciation of:
   a. The modern concept of agriculture.
   b. The effect of modern agriculture upon the entire American economic system.

Advance Teacher Preparation:

1. Review films: A Step Ahead, A New Word for Farming or Careers In Agriculture.
2. Read: Exploring Careers in Modern Agriculture, pp. 9-15.
   Now--10 Years Later Still Fewer, Larger, Richer, pp. 1-26.
   Background on Our Nation's Agriculture.

Student Learning Activities:

1. Advise students of the concepts to look for in the films:
   a. Exploring Careers in Modern Agriculture, pp. 9-15.

b. Now--10 Years Later Still Fewer, Larger, Richer, pp. 1-26.

3. Discuss the key points in each reference under #2.

a. What is meant by the following terms:

(1) Agindustry

(2) Agribusiness

(3) Off-farm agricultural occupations

(4) Agricultural professions

b. Explain:

(1) The change in number and size of farms

(2) The changes in the output per farmer

c. What phases of the agricultural industry are expanding and employing more people?

d. Why are farmers important purchasers?

e. Describe the modern American farmer

Problem Area 3

EXPLORING OCCUPATIONS - What Are the Three Important Steps?

Current Situation in Community - Students are not aware of:

1. Efficient procedures to follow in considering various occupations.
2. The importance of a thorough investigation of occupations.
3. The various factors which affect the choice of a career.

Learning Objectives:

1. To develop student understanding and appreciation of:
   a. The value of education and training.
   b. The three important steps in exploring occupations:
      (1) Looking at the job.
      (2) Individual appraisal.
      (3) Matching the individual with a job.

Advance Teacher Preparation:

1. Ask a guidance counselor to serve as a resource person.
2. Check: Student information available from school guidance office - various test scores, grades, class rank.
3. Review: Filmstrip and record or the booklet: There's a Future in Your Farm Background. Your Future is What You Make It, pp. 3-15 or How to Get and Hold the Right Job, pp. 1-7 and 15-16.
4. Read: Exploring Careers in Modern Agriculture, pp. 16-20

Student Learning Activities:

After the students have viewed the filmstrip and have read Exploring Careers in Modern Agriculture, pp. 16-20,

1. Review the types of work in the various occupational areas as given by the U.S. Bureau of Census.
2. Discuss the values of education and training in the future world of work.
3. Explain the three important steps in considering any occupation.
4. Discuss with the students the major divisions of a career brief or occupational study outline, and the importance of them in making valid occupational comparisons.
5. What are the main sources of occupational information?
6. Have a school guidance counselor serve as a resource person in discussing:

   a. The importance of considering many factors in occupational exploration.

   b. Various approaches to be used in making an individual appraisal:

      (1) Self-appraisal - preferences, interests, abilities

      (2) Appraisal by others - teachers, guidance counselors, others

      (3) Appraisal through tests

   c. A suggested procedure for matching the individual with a job.

Problem Area 4

OPPORTUNITIES IN AGRICULTURE - Why Is There a Challenging Future in Agriculture?

Current Situation in Community - Many high school students and parents:

1. Think more about farm crop surpluses than they do about rural communities and youth employment opportunities.
2. Are not aware of the importance of the total agricultural industry.
3. Have not given much thought to our rapidly expanding population or to automation.

Learning Objectives:

1. To develop student understanding and appreciation of:
   a. The vast number and variety of agricultural occupations other than farming and ranching.
   b. How and why agricultural occupations are classified.
   c. The importance of as much education and training as one can secure.
   d. The effect of the population "explosion" and automation on career opportunities in agriculture.

Advance Teacher Preparation:

1. Review: Set of slides on Careers in Agriculture.

   Film, Dynamic Careers through Agriculture.

   Exploring Careers in Modern Agriculture, pp. 21-26.

   There's a New Challenge in Agriculture.

   There's a Future in Your Farm Background.

Student Learning Activities:

1. Review the list of agricultural occupations suggested by students in problem area #1.
2. Ask students to identify various agricultural occupations represented in the slides and/or discussed in the reference booklets.
   a. How many of them can be found in your county or state?
3. Discuss Exploring Careers in Modern Agriculture, pp. 21-26, emphasizing the expanding opportunities in agricultural occupations other than farming and ranching.
   a. What is the basis for determining whether an occupation is agricultural or non-agricultural in nature?
4. Discuss the three broad classifications of agricultural occupations and list examples of each.
5. Explain how lists of occupations such as in Hoover: Handbook of Agricultural Occupations, fit into the above classification.
6. Help students to make a list of the various agricultural careers mentioned in the film, Dynamic Careers through Agriculture. Discuss the important ones.

Problem Area 5

PLANNING MY EDUCATIONAL PROGRAM - How Shall I Prepare for an Agricultural Occupation?

Current Situation in Community - Many high school students and parents:

1. Have not given much thought to agricultural occupations other than farming.
2. Have not given enough study to the type of high school program a rural youth should pursue.

Learning Objectives:

1. To develop student understanding and appreciation of:
   a. Various occupations other than farming related to the broad area of Land Use and Conservation.
   b. Why a particular high school program should be followed.

Advance Teacher Preparation:

1. Become thoroughly acquainted with the career briefs and the occupational brochures available.
2. Read: How to Get and Hold the Right Job, p. 8.
   Exploring Careers in Modern Agriculture, pp. 27-50.
3. Review: Your Future is What You Make It, pp. 3-15.
4. Provide a manila folder for each student.
5. Arrange for a field trip or for resource personnel.

Student Learning Activities:

1. Guide each student in the development of an occupational interest folder in which he may place occupational information of special interest to him. Included may be such items as newspaper clippings, magazine articles, occupational brochures, advertisements, notices of training programs, scholarships, etc.
2. Discuss important factors to consider in preparing for a vocation.
3. Arrange for students to become familiar with materials available in the high school guidance office dealing with agricultural occupations.
4. From the following list, have each student choose an occupation in which he is interested. By making use of the career briefs, brochures, and other references available, have each student prepare and present a report to the class.

Soil Conservation Aid	Spreader Operator - bulk lime & fertilizer
Soil Conservationist	Veterinarian
County Agricultural Agent	Nursery Employee
Custom Farm Machine Worker	Horticulturist
Farm Machinery Serviceman	State or National Forest Employee
Teacher of Agriculture	Agronomist
Farm Supply Store Employee	Entomologist
Professional Forester	Landscape Architect
Game Management Employee	Lumberman or Saw Mill Employee
Agricultural Engineer	Grounds Maintenance Employee

5. By means of a field trip or by bringing resource people into the classroom, arrange for one informed person from a non-professional and one from a professional agriculture occupational field to discuss and answer questions on types of jobs, working conditions, and employment opportunities, familiar to each of them (e.g., farm machinery and equipment representative; work unit conservationist).
6. On the basis of the information learned in the unit, have each student develop a vocational and educational plan for himself with the understanding that it may be tentative and need to be revised as he progresses through school.

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Correspondence Courses in Agriculture
Landscape Architecture - Professional Careers in Land Planning
Opportunities in Agricultural Engineering
Prepare for Your Career - in Turfgrass Management; in Farm Equipment Service and Sales; in Ornamental Nursery Management
Pre-Veterinary Education; A Career in Veterinary Medicine
Scientific Careers - in Plant Pest Control; in Agricultural Engineering Research; in Entomology Research; in Plant Quarantine Enforcement; in Soil and Water Conservation Research
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Interesting and Profitable Careers Await Agricultural Education Graduates
Opportunities for You in Agricultural Education

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Make Agronomy Your Career

Pennsylvania State Employment Service in your County
How to Get and Hold the Right Job!

Sales and Marketing Executives, 630 Third Avenue, New York 17, N.Y.
There's a Future in Your Farm Background

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Your Future is What You Make It

United States Department of Agriculture, Washington 25, D. C.
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Wildrick and Miller, Inc., One Rockefeller Plaza, New York 20, N.Y.
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Visual Aids

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EXAMINATION ON AGRICULTURAL OCCUPATIONS RELATED TO LAND USE AND CONSERVATION

ON THE SEPARATE ANSWER SHEET, PLEASE BLACKEN THE LETTER FOR THE BEST ANSWER TO EACH STATEMENT.

1. Modern agriculture includes
   a. production farmers
   b. those who provide supplies and services for farmers
   c. those who process and distribute agricultural products
   d. all of the above groups

2. Individual employees receive satisfaction from different types of work mainly because of
   a. basic individual differences
   b. the wages or salaries paid
   c. the status of the job
   d. the hours of work

3. Occupational information is concerned with
   a. the nature of an occupation
   b. the entrance requirements of an occupation
   c. the advantages and disadvantages of an occupation
   d. all of the above in addition to related information

4. Occupational guidance refers to the process of
   a. exploring a single occupational field
   b. assisting you as an individual to explore various fields of work
   c. explaining to you the technical know-how of a job
   d. studying the Dictionary of Occupational Titles

5. With a technician type of worker
   a. the "know-how" usually exceeds the "know-why."
   b. the "know-why" usually exceeds the "know-how."
   c. the amount of "know-how" and "know-why" may be equal
   d. no training is usually needed

6. U. S. farms have become
   a. larger in number and smaller in acreage
   b. fewer in number and larger in acreage
   c. larger in number and larger in terms of dollars invested
   d. fewer in number and smaller in terms of dollars invested

7. Farmers invest approximately the following percentage of their gross on-farm income in materials and services for further production
   a. 75%
   b. 50%
   c. 33%
   d. 25%

8. Agindustry is a relatively new term which refers to
   a. the industries producing agricultural commodities
   b. the industries supplying and servicing those engaged in agricultural production
   c. the industries making agricultural commodities available to consumers
   d. the agricultural producing, supplying, servicing, and distributing industries

9. Farming and its allied industries
   a. are independent of each other
   b. are distantly related to each other
   c. are dependent upon each other
   d. compete with each other

10. The average farmer can now provide food for himself and
    a. 35 other people
    b. 25 other people
    c. 15 other people
    d. 2.5 other people

11. Vocational agriculture instruction is valuable for those agricultural occupations other than farming which
    a. service the needs of farmers
    b. market products for farmers
    c. require a knowledge of farming and/or involve working with rural people
    d. process products for farmers

12. Non-farming agricultural occupations employ approximately
    a. twice or three times as many people as are employed in farming
    b. as many people as are employed in farming
    c. two-thirds as many people as are employed in farming
    d. one-half as many people as are employed in farming

13. Of the total 66 million persons employed in the U.S. in 1960 approximately
    a. 33 million were working in agriculture
    b. 22 million were working in agriculture
    c. 11 million were working in agriculture
    d. 5.5 million were working in agriculture

14. New opportunities in agricultural occupations other than farming are mainly in the fields of
    a. processing and marketing of agricultural products
    b. supplying equipment and technical services to farmers
    c. providing professional agricultural services
    d. processing, marketing, supplying equipment and services

15. Agricultural professions refer to a group of occupations requiring
    a. technical training
    b. training in various skills
    c. college or university training
    d. practical work experience

16. Adequate education and training is going to be a necessity in the future world of work because of
    a. the increasing competition for employment
    b. better paying jobs
    c. the shorter work week
    d. the labor union regulations

17. In considering an occupation an individual needs to
    a. analyze the job
    b. appraise his own qualifications accurately
    c. strive to match his qualifications against those needed in the job
    d. perform each of the above three steps

18. The best single method for a student to learn about an occupation is
    a. through properly supervised on-the-job experience
    b. to interview workers in the occupation
    c. by means of field trips
    d. by reading occupational literature

19. In a career brief it is essential to include
    a. a description and nature of the work
    b. the educational and personal qualifications needed
    c. a description of the work, qualifications needed, and opportunities available
    d. the entry and advancement opportunities in the occupation

20. In making an individual appraisal, ask yourself
    a. Do I prefer working with things?
    b. Do I prefer working with people, ideas or things?
    c. Do I prefer working with people?
    d. Do I prefer working with facts, figures, ideas?

21. Employers are interested in hiring individuals with the following basic qualifications
    a. willingness to work and to assume responsibility
    b. dependability, responsibility, resourcefulness, cooperativeness
    c. cooperativeness and dependability
    d. resourcefulness and self-reliance

22. In matching your qualifications with the job requirements
    a. consider your preferences, interests, abilities and personality
    b. secure advice from teachers, counselors, parents and others
    c. consider what kind of work you would like to be engaged in ten years from now
    d. carefully weigh all of the above statements

23. To determine whether an occupation is agricultural, one must consider
    a. the nature of the work and the experience or training required to perform it
    b. whether it is done by a farmer
    c. whether it is done on a farm
    d. whether it is done for a farmer by a technician

24. Agricultural occupations are usually classified into
    a. occupations in agricultural production
    b. non-professional off-farm occupations in agricultural business and industry
    c. the agricultural professions
    d. all of the above three groups

25. Other things being equal, a prospective employee for an agricultural occupation who has an agricultural background normally
    a. is at a disadvantage
    b. is neither at an advantage nor a disadvantage
    c. has a definite advantage
    d. should not mention it

26. Non-professional occupations in agindustry
    a. require no training beyond high school
    b. may require some training beyond high school
    c. may require a college degree
    d. are few in number and varied

27. A soil conservationist
    a. works with farmers in preparing land use plans
    b. is employed by the County Commissioners
    c. is required to have two years of college training
    d. works under State Civil Service regulations

28. A soil conservation aid
    a. must furnish his own on-the-job transportation
    b. draws up specifications for small watershed projects
    c. assists in layout and construction of soil and water conservation practices
    d. is required to have a college degree

29. A county agricultural agent
    a. must take a minimum of 18 credits in education courses while in college
    b. works largely with commercial organizations
    c. is required to take a two-year college course
    d. serves as a part of three governmental units - Federal, State and County

30. A custom farm machine worker
    a. must have business ability, mechanical ability, and safety awareness
    b. performs a minor part of his work outdoors
    c. has steady employment throughout the year
    d. has no need for training beyond high school

31. A teacher of agriculture
    a. is qualified for any other job
    b. must have a college or university degree with a minimum number of credits in education
    c. may obtain his degree at any one of three large universities in Pennsylvania
    d. is an employee of The Pennsylvania State University

32. A farm machinery serviceman
    a. usually starts employment as a manager following high school graduation
    b. does not have seasonal peaks of work
    c. needs to know principles as well as basic skills
    d. has little need for post-high school training

33. A professional forester
    a. may perform woodlot management services or specialize in industrial forestry
    b. needs no college training
    c. works largely out of doors
    d. is employed by the U. S. Forest Service

34. A farm supply store employee
    a. performs most of his work outdoors
    b. needs no knowledge of record keeping
    c. should enjoy dealing with rural people and with agricultural supplies
    d. should have a college degree

35. An agricultural engineer
    a. needs good foundation in history, mathematics, philosophy and foreign languages
    b. may design machinery, lay out drainage systems or conduct research
    c. aids farmers with their livestock problems
    d. is required to have three years of college training

36. A spreader operator for bulk lime and fertilizer application
    a. has a decreasing opportunity for employment in Pennsylvania
    b. works regular hours the year round
    c. will be exposed to no health hazards
    d. needs to know how to maintain and operate equipment safely

37. A veterinarian
    a. has very distant working relations with medical doctors
    b. may specialize in the treatment of large and/or small animals and/or wildlife
    c. is required to have completed a four-year college program
    d. is most often employed by a governmental agency

38. A nursery employee
    a. is required to have a college degree
    b. has decreasing opportunities for employment
    c. usually works for the State Forest Service
    d. needs a knowledge of the principles of plant growth

39. A horticulturist
    a. is in a slowly expanding occupation
    b. needs a thorough knowledge of livestock production
    c. may be concerned with fruits, vegetables, flowers, and/or ornamental plants
    d. is required to complete a two-year college course

40. A game management employee
    a. interprets game laws, manages game, inspects wildlife killed and investigates crop damage
    b. performs most of his work indoors
    c. normally has a territory of several states
    d. works regular hours throughout the year

Name _____ Date _____

ANSWER SHEET FOR EXAMINATION ON AGRICULTURAL OCCUPATIONS RELATED TO LAND USE AND CONSERVATION

Directions: Blacken out the letter of the best answer for each question

---

1. a b c d	21. a b c d
2. a b c d	22. a b c d
3. a b c d	23. a b c d
4. a b c d	24. a b c d
5. a b c d	25. a b c d
6. a b c d	26. a b c d
7. a b c d	27. a b c d
8. a b c d	28. a b c d
9. a b c d	29. a b c d
10. a b c d	30. a b c d
11. a b c d	31. a b c d
12. a b c d	32. a b c d
13. a b c d	33. a b c d
14. a b c d	34. a b c d
15. a b c d	35. a b c d
16. a b c d	36. a b c d
17. a b c d	37. a b c d
18. a b c d	38. a b c d
19. a b c d	39. a b c d
20. a b c d	40. a b c d

STUDENT SURVEY

1. Name _____ School _____

2. Home Address _____ Grade ____ Age ____ Date ___

3. Place of residence (check one)
   a. Farm _____
   b. Rural, non farm _____
   c. Urban _____

4. Occupation(s) of father or guardian
   a. Full-time farmer Yes _____ No _____
   b. Part-time farmer Yes _____ No _____
   c. Other (please specify) _____

5. Do you plan to be in military service longer than one enlistment period? Yes _____ No _____

6. Check one of the following which indicates your present post-high school plans for further education:
   a. Attend an agricultural college _____
   b. Attend a non-agricultural college _____
   c. Attend adult education classes at local high school _____
   d. Attend a technical school _____
   e. None _____

7. Is it your present post-high school plan to engage in farming?
   a. Yes, full-time _____
   b. Yes, part-time _____
   c. No _____

8. If it is your present intention to enter an occupation other than farming, please list the occupation and name the particular job.

_____ _____

EXPRESSED OCCUPATIONAL INTEREST CHECKLIST

Indicate your present interest in the following occupations by rating each high, average, or low. Check one column for each occupation.

Occupation	High Interest	Average Interest	Low Interest
Custom Farm Machine Worker	_____	_____	_____
Farm Machinery Serviceman	_____	_____	_____
Farm Supply Store Employee	_____	_____	_____
Game Management Employee	_____	_____	_____
Grounds Maintenance Employee	_____	_____	_____
Lumberman or Saw Mill Employee	_____	_____	_____
Nursery Employee	_____	_____	_____
Soil Conservation Aid	_____	_____	_____
Spreader Operator--Bulk lime or fertilizer	_____	_____	_____
State or National Forest Employee	_____	_____	_____
Agricultural Engineer	_____	_____	_____
Agronomist	_____	_____	_____
County Agent	_____	_____	_____
Entomologist	_____	_____	_____
Forester	_____	_____	_____
Horticulturist	_____	_____	_____
Landscape Architect	_____	_____	_____
Soil Conservationist	_____	_____	_____
Teacher of Agriculture	_____	_____	_____
Veterinarian	_____	_____	_____
_____ (other, specify)	_____	_____	_____

VT 000 602
Tenopyr, Mary L.
Race and Socioeconomic Status as Moderators in Predicting Machine-Shop Training Success.

MF AVAILABLE IN VT-ERIC SET.
Pub Date - 67 17p; Presentation to the American Psychological Association, Washington, D.C., Sept. 4, 1967.

*TRADE AND INDUSTRIAL EDUCATION; *RACIAL DIFFERENCES; *RACE AND SOCIOECONOMIC STATUS; *SUCCESS FACTORS; MACHINE TOOL OPERATORS; RACIAL FACTORS; NEGROES; NEGRO EMPLOYMENT; ANGLO AMERICANS; *JOB APPLICANTS; VERBAL ABILITY; NONVERBAL ABILITY; CULTURAL BACKGROUND; PERFORMANCE FACTORS; TEST VALIDITY; PREDICTIVE ABILITY (TESTING)

Because of differential racial performance on verbal general intelligence tests, culture-fair tests have been developed to emphasize pictorials, spatial, or figural content. A random sample of 187 Anglos, 283 Negroes, and 30 Spanish-Americans was selected from a population of 1,152 who applied for machine shop trainee jobs with a large firm. Variables were treated with analysis of covariance to yield the following results: (1) With socioeconomic status controlled, significant differences between races were found in verbal comprehension, numberical ability, and space visualization, (2) The largest difference was associated with the spatial tests, and (3) Negro job applicants would be put to a greater disadvantage with culture-fair tests. An additional study was conducted to determine whether unfair racial discrimination would result if machine shop training success was predicted on the basis of common regression equations. Selected were 84 Anglos and 83 Negroes hired by a large company in 1966. The socioeconomic status difference between the two groups was not significant, and the tests were found to be equally valid for both with respect to all criteria. The use of Anglo regression lines or common Anglo-Negro regression lines would result in unfair discrimination favoring, not penalizing, the Negro. (DM)

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RACE AND SOCIOECONOMIC STATUS AS MODERATORS IN PREDICTING MACHINE-SHOP TRAINING SUCCESS[1]

Mary L. Tenopyr[2]
California State College at Los Angeles

STUDY I

It has been reasonably well-established that Negroes, on the average, score lower than Anglos on tests of the general intelligence variety (e.g., Shuey, 1958; Dreger and Miller, 1960; United States Department of Labor, 1965). Relatively little is known, however, about the two groups' relative performances on tests developed on the basis of group-factor theories of mental functioning. Possibly because of differential racial performance on highly verbal general intelligence tests, it has been implied (e.g., Lawshe and Balma, 1966) that the greatest racial differences in test performance are most likely to occur on verbal tests. There have been suggestions that the cause of fair employment could be aided, in some instances, by replacing verbal tests with tests of a more culture-free nature (Pennsylvania Human Relations Commission, 1967). The so-called culture-free or culture-fair tests which have been developed to date have emphasized pictorial, spatial, or figural content and minimized verbal content (Lambert, 1964).

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[1]Presentation in symposium on "Selection of Minority and Disadvantaged Personnel" at the annual meetings of the American Psychological Association, Washington, D. C., September 4, 1967.

[2]The author is indebted for the assistance of Miss Susanna J. Wiss, Mr. Edward Z. Hane, Mrs. Benjamin Street, and Mrs. Donald Johnson. Deep appreciation for developing some of the criterion data is expressed to Mrs. Marge Walker and Mr. Edward Gall of the California State Employment Service.

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VT000602

There is a small, but increasing, body of evidence suggesting that the greatest racial differences on tests may not be associated with the verbal abilities, but instead are more likely to be attributable to abilities in the non-language areas. Fifer (1964) found Negro children to score relatively higher on a verbal test than on reasoning, numerical and space tests. Studies by Davidson, Gibby, McNeil, Segal, and Silverman (1950) and by De Stephens (1953) indicated that the performance subtests of the Wechsler contribute somewhat more to ethnic differences than do the verbal subtests. For low socioeconomic status children, Higgins and Sivers (1958) found significant differences between Colored Raven Progressive Matrices means for Caucasians and Negroes, but did not find significant differences between Stanford-Binet means for the same groups, Vernon (1965) in comparing test performance of native British children and Negro Jamaicans, found the smallest differences between the two groups were for verbal tests and that largest differences were for spatial tests such as the Kohs Blocks. Moore and MacNaughton (1966) in a study of job applicants at a southern petroleum refinery, found that the use of essentially non-verbal, spatial-type tests resulted in greater score differences between whites and Negroes than did the use of more verbal tests.

The evidence presented suggests that the Negro job applicant may be at a greater disadvantage when so-called "culture-fair," spatial tests are used in selection, than when verbal tests are utilized. The primary objective of the investigator was to provide, on the basis of a job applicant sample, further empirical information regarding the question of whether verbal or spatial tests yield the larger racial difference in test performance. It is recognized that the degree of generalization which can be made from a study of this type is

limited and highly dependent upon the recruiting methods of the employer and the nature of the applicant populations involved.

A second purpose of the investigator was concerned with whether there are racial differences in the organization of abilities, i.e., do the same tests measure the same factors for Anglos and Negroes? Again, a study on a job applicant sample and limited data could be expected to yield only suggestive, not definitive, information.

METHOD

Subjects. Subjects for this study were 500 applicants for machine-shop trainee jobs with a large firm. These applicants were randomly selected from a population of 1,152 applicants. A small proportion of the applicants was already employed in the company concerned and in jobs at a lower level than the machine-shop jobs. The sample comprised 187 Anglos, 283 Negroes, and 30 Spanish-Americans. The employer had made special efforts to recruit applicants from the low socioeconomic areas of the community. Members of the sample had an average of 11.9 years of education; their mothers' average education was 11.1 years.

Variables. Data relative to the following variables were obtained for the sample:

1. Employee Aptitude Test 1, Verbal Comprehension, a five minute vocabulary test.
2. Employee Aptitude Survey Test 2, Numerical Ability, a ten-minute computational test with three parts involving whole-numbers, decimals, and fractions, respectively.

3. Employee Aptitude Test 5, Space Visualization, a five-minute test requiring visualization in three dimensions from a two-dimensional presentation.
4. Composite score, a score developed for selection purposes and derived by multiplying the Space Visualization score by two and then adding the Numerical Ability score.
5. Age in years
6. Socioeconomic Status, a measure derived on the basis of the work of Heath (1958) and Bianchini, Danielson, Heath, and Hilliard (1966) and developed by first equally weighting the applicant's education and his mother's education and then equally weighting the sum of these with the applicant's rating of the status level of his father's job.

Data Analysis. A mean and a standard deviation were computed for each variable, as were coefficients of correlation between all pairs of variables, for the whole sample and for each ethnic group separately. For each test, the difference between unadjusted means for Anglos and Negroes was tested, and an analysis of covariance with racial status as the treatment variable and socioeconomic status as the covariate was conducted. Box's (1949) test of differences between dispersion matrices was applied to the Anglo and Negro covariance matrices for the three tests and, then, for five-variable matrices in which the part scores for the Numerical Ability test were considered separately.

RESULTS

Coefficients of correlation, means and standard deviations for the whole applicant sample appear in Table 1. The tests were moderately intercorrelated, and the correlations between socioeconomic status and the tests were relatively low. The latter fact may indicate that the socioeconomic measure was not accounting for many of the cultural background factors which could have affected

test performance, or it could be merely a reflection of restriction in range of socioeconomic status for the sample. For a beginning trainee job, one could expect the socioeconomic-status level of applicants to be uniformly low.

In Tables 2, 3, and 4 are reported the coefficients of correlation, the means, and the standard deviations for the separate ethnic groups. The test means were consistently higher for the Anglos than for the Negroes and the Spanish-Americans. In view of the small N for Spanish-Americans and the likelihood that the sample was not representative of the Spanish-American community in the locality, no further computations involving this group were done. The Negro applicant sample was significantly lower in socioeconomic status than the Anglo sample and was slightly, but significantly older.

All of the differences between unadjusted Anglo and Negro test means were highly significant, as indicated in Table 5. The smallest relative difference was for Numerical Ability Part I, involving simple computations with whole numbers. The largest relative difference was for the Space Visualization test. As also indicated in Table 5, the same situation obtained when socioeconomic status was controlled, and differences between adjusted means were tested. All F's associated with differences between adjusted means were highly significant, and the F for Numerical Ability Part I was the smallest and that for Space Visualization was the largest. None of the preliminary tests of difference between slopes for the two groups resulted in a significant F; thus, it may be assumed that the correlation between socioeconomic status and score was the same for the two groups for each test.

The application of Box's test resulted in a chi square of 11.56 ($p > .05$) for the three-variable matrices for Anglos and Negroes. This result suggests

that neither the variances for the tests nor the correlations between tests were different for the two groups, and it may probably be assumed that the tests were measuring the same factors for both groups.

When Box's test was applied to five-variable matrices, including covariances for Verbal Comprehension, the three parts of Numerical Ability, and Space Visualization, the resultant chi square was 74.78 ($p < .01$). Whether the significance of the result is attributable to differences in variances, to differences in correlations, or to a combination of both is questionable.

The coefficients of correlation between parts of the Numerical Ability test appear to be somewhat lower for Negroes than for Anglos. Data provided by the test publisher (Psychological Services, Inc., 1963) suggest that recency of arithmetic training affects some correlations between parts of this test; the less recent the training of the examinees, the lower the intercorrelations.

Since the Negro sample was older than the Anglo sample, it could be assumed that the arithmetic training of the former group was less recent, and hence, the intercorrelations between parts of the Numerical Ability test could be expected, as was found, to be lower for that group. It is suggested, then, that the possible racial differences in factor structure for the tests found when the part scores of the Numerical Ability test were considered separately, may have been a function of the difference in age of the Anglo and the Negro samples.

SUMMARY AND DISCUSSION

For 500 machine-shop trainee job applicants, including 187 Anglos, 283 Negroes, and 30 Spanish-Americans, it was found that, with a socioeconomic status measure controlled, there were, for Anglos and Negroes, highly significant differences between means on three Employee Aptitude Survey Tests: Verbal Comprehension, Numerical Ability, and Space Visualization. The largest

difference between means for the two groups was associated with the spatial, not the verbal test. This finding provides further evidence that Negro job applicants might be put to as great a disadvantage or an even greater disadvantage if verbal employment tests were replaced with spatially-oriented "culture-fair" tests.

Relative to the question of whether the same tests measure the same abilities for both Anglos and Negroes, results of the study indicated, for the tests concerned, that it was likely that the same abilities were being measured for both groups. Certainly, further research regarding possible differential organization of abilities for Anglos and Negroes is advisable.

STUDY II

The question of the extent to which the use of tests or other selection devices results in unfair discrimination, either purposeful or accidental, in the selection process has been a subject of considerable attention by many individuals and organizations, since the famed Motorola case. (Bryant, 1963) A test is merely a measuring device and, as such, cannot, in and of itself, be unfairly discriminatory. A test, however, can be used in such a manner that unfair discrimination results.

Determining whether test use leads to the unfair penalization of certain groups in the selection process is not a simple matter. Certainly, mere comparisons of average test performances of distinct groups or of differences in rejection rates for the groups are not sound bases for deciding whether the use of a test is unfair. Evidence of differential test validity for groups is not, alone, evidence of unfair discrimination in the use of a test. The following definition of unfair discrimination is, therefore, used throughout this study:

> Unfair discrimination, as suggested by Cleary (1966), results when in the use of a measuring device or devices to predict a criterion, consistent nonzero errors of prediction are made for members of any subgroup of the population. In other words, unfair discrimination occurs if too high or too low a criterion score is consistently predicted for members of any subgroup.

If evidence of unfair discrimination, is found in a given selection situation, the possibility of establishing different regression equations or passing scores for different subgroups should be considered. In order to optimize prediction, when the question of unfair discrimination is not necessarily involved, different regression equations are advisable when test validities differ for subgroups.

The research model required in determining the advisability of different regression equations is one involving subgroup analysis or moderator variables (Saunders, 1956). Several government agencies (Fair Employment Practice Commission--State of California, 1965; Equal Employment Opportunity Commission, 1966; Office of Federal Contract Compliance, 1967) have suggested that employers conduct research in which a moderator-variable model is implied. Either race or socioeconomic status has been suggested as a possible moderator by these agencies and by others (Guion, 1966; Wallace, Kissinger, and Reynolds, 1966).

The primary question to be answered by this study was whether unfair racial discrimination, as defined, would result if criteria of machine-shop training success were predicted on the basis of common regression equations, involving three tests and based on a sample of both Anglos and Negroes. It was questioned whether Negroes performed better in training than did Anglos at the same test-score levels and whether the establishment of different regression equations

for the two groups would be advisable.

The second major question to which the study was devoted was whether a common regression line, in the same prediction situation, would be applicable to persons at different socioeconomic levels, within a limited range; i.e., are different regression equations advisable for different socioeconomic groups?

METHOD

Subjects. Subjects (S's) were 167 males, including 84 Anglos, and 83 Negroes, who were hired into industrial machine-shop trainee jobs in a large company in 1966. These men were selected for training on the basis of a minimal cutting score on a composite formed by scores on the Space Visualization test and the Numerical Ability test in a 2:1 ratio. The employer had markedly lowered test performance requirements for entrance into training. Included among the S's were trainees from six separate classes. Excluded from the sample were members of other large minority groups such as the Spanish-Americans, and persons who were in training for so short a period that no criterion data could be obtained.

Training Course. The machine-shop course, lasting 16 weeks, consisted of eight-weeks of training in the training department and eight weeks of on-the-job training in a production department. Half of the first eight-weeks' training was devoted to general subjects such as mathematics, precision measurement, blueprint reading, and metallurgy, and half involved, actual set-up and operation of either milling machine or an engine lathe. There were no racial or socioeconomic group differences relative to the percentage assigned to each type of machine.

Independent Variables. The predictors utilized were the three tests described in Study I, race, and the socioeconomic status measure, previously mentioned.

Dependent Variables. The following ten, criteria, some of them experimentally dependent, were of primary interest:

1. Final grade, general--based on the sum of standard scores on eight weekly objective tests on the general subjects mentioned earlier. Reliability of the grade was estimated to be .84 based on the Spearman-Brown method.
2. Final grade, machine--based on the sum of standard scores on eight weekly objective tests about the operation of the type of machine to which the trainee was assigned. Based on the Spearman-Brown method, the reliability coefficient of the grade was .62.
3. Final grade, total--based on the sum of the final grade, general, and the final grade, machine. Reliability of the total grade was .84, as determined through the Spearman-Brown method.
4. Machining rating after eight weeks, a rating involving machining proficiency and made by the machine shop instructor using a simple graphic rating scale with short descriptive phrases as cues. No reliability estimate was obtained for this criterion.
5. Performance rating after 16 weeks--sum of two ratings made by the employee's supervisor using a 9-item rating scale. The reliability estimate, possibly spuriously high, for this criterion was .93, based on rating and rerating with a two-week period intervening.
6. Short performance rating after 16 weeks--a criterion consisting of the sum of ratings on three items chosen on an *a priori* basis, from the longer rating form and involving quality, quantity, and over-all performance of work. The rating-rerating reliability coefficient was .97.

7. Completion of class or not--a measure of turnover during the 8-week classroom phase of training. Person's who completed the class were coded "1," and those who did not were coded "0."
8. Completion of course or not--a measure of turnover during the whole 16-week course. Person's completing the course were coded "1;" those not completing were coded "0."
9. Completion of class vs. discharge--A criterion formed by coding those who completed the 8-week class as "1" and coding those who were discharged for any cause or resigned when performance was marginal as "0."
10. Completion of course vs. discharge--A criterion formed in the same manner as the one just discussed, but based on the whole 16-week course.

Other criteria were based on test performance during each quarter of the 8-week class.

Moderator Variables. The two variables used as bases for subgrouping were race, and socioeconomic status, as defined in Study I. For computation of coefficients of correlation, Anglos were coded "1" and Negroes, "0;" persons above the socioeconomic status mean for trainees were coded "1," and those below the mean, "0."

Data Analysis. Means, standard deviations, and coefficients of correlation were computed for the whole trainee sample and for the Anglo and the Negro samples separately. For each racial subgroup, coefficients of correlation corrected for the effects of restriction in range of the composite score were computed and compared. To avoid being refined computations on estimated

data and to obviate problems caused because there was differential restriction in range for the subgroups, no computations involving these corrected coefficients were done.

For each of the ten primary criteria, separate R's and regression equations involving the three tests were computed for the whole sample, the separate racial subgroups, and the separate socioeconomic-status subgroups.

Analysis of covariance procedures were then applied for each of the ten criteria to test the differences between Anglo and Negro regression equations and those between the separate regression equations for the high and the low socioeconomic status groups. Computational methods employed in these analyses were formulated by Beaton (1964)

RESULTS

The Negroes selected for training scored significantly lower on all of the tests than did the Anglos. The socioeconomic status difference between the two groups was not significant. On the composite score, which was the basis for selection, the Anglo standard deviation was 21.0 and the Negro standard deviation was 17.0. For the applicant sample, the respective standard deviations for the groups were 25.5 and 25.0. Consequently, it is suggested that there was somewhat greater restriction in range for the Negro sample.

Coefficients of correlation, means, and standard deviations for the whole sample appear in Table 6. Verbal Comprehension and Numerical Ability had their highest correlations with criteria based on grade in the general portion of training, with total grade, and with the machining rating. The numerical test was particularly highly correlated with the general grades. There were very few significant validity coefficients for Space Visualization, possibly because this was the variable subject to the greatest restriction in range. None of the tests was significantly correlated with either the on-the-job training criteria

or the turnover criteria.

Although the criteria based on class grades and ratings were substantially intercorrelated, in some cases partially as a result of experimental dependence, the correlations between class-performance criteria the other criteria were low, most of the r's, not significant. Race, variable 5, was significantly correlated with most criteria. In some instances, race was the only independent variable with a significant validity coefficient. For predicting most criteria, socioeconomic status, variable 6, had essentially zero validity coefficients.

Coefficients of correlation, means, and standard deviations for Anglos appear in Table 7. The same data for Negroes are reported in Table 8. For each group the general pattern of correlations was the same as that for the whole sample. The possibility that restriction in range on some variables was greater for Negroes than for Anglos may account for the validity coefficients for Negroes appearing to be generally lower than those for Anglos.

In Table 9 are reported the R's, the regression equations, the results of the analyses of covariance, and the results of putting Negro test means into each of the three regression equations for each criterion. For the first four criteria, based on 8-week class performance, at least the R for the whole sample was significant. Only one significant R, that for Negroes relative to criterion 8--course completion or not, was found for the remaining criteria, all based upon either on-the-job performance or turnover.

The column labelled "Test of Slopes" in Table 9 indicates the F's resulting from the analysis-of-covariance test of differences between slopes for the Anglo and the Negro regression lines. None of the F's is significant; therefore it may be assumed, relative to each criterion, that the tests' validities were the

same for Anglos and Negroes.

The F's reported in the column labelled "Test of Intercepts" are comparable to the F's resulting from a test of the differences between adjusted means in an ordinary analysis of covariance. The null hypothesis essentially was: "With test performance controlled, there is no difference between Anglo and Negro criterion performance." Six of the ten F's resulting from the tests of intercepts were significant. In all six of these instances, Negro criterion means were lower than those for Anglos. Since test performance was controlled, the lower criterion means for Negroes cannot be attributed to lower Negro test means. Another way of interpreting these data is that race, in each of the six instances involved, was an effective predictor of the criterion, when test scores were controlled. Further evidence relative to the question of whether Negroes' criterion performance was better than that of Anglos at the same score levels is presented in the last column of Table 9. Here the result of, for each criterion, putting the Negro test means into the three regression equations, one for the whole sample, one for Anglos, and one for Negroes is shown. The bottom number in each group of three represents the actual criterion mean for Negroes. Although significant in only six of the ten instances, the general trend was that putting the Negro means into regression equations based on either Anglos alone or on both Anglos and Negroes resulted in predicting Negro criterion performance to be higher than it actually was.

The data reported in Table 10 are similar to those reported in the immediately preceding table. For the first four criteria and the ninth criterion, all based upon performance in the 8-week class, the R's for both socioeconomic groups were significant. Only one other R was significant. The R's and the regression equations for the whole sample were reported previously in Table 9. The results of the two tests of the differences between regression equations for the two socioeconomic groups indicated that, in none of the ten instances, could

either the validities of the tests or the mean criterion performance adjusted for test-score differences be considered different for the two groups.

SUMMARY AND DISCUSSION

For 167 machine-shop trainees, including 84 Anglos and 83 Negroes, who had been administered three tests: Verbal Comprehension, Numerical Ability, and Space Visualization and had been selected partially on the basis of the latter two tests, R's involving the three tests and ten training achievement criteria, some of them experimentally dependent, ranged from substantial to zero.

With respect to all criteria, the tests were found to be equally valid for Anglos and Negroes. Assuming that unfair discrimination results whenever, for any subgroup of the population, the criterion scores predicted from test results are consistently higher or lower than actual criterion scores, it was found, relative to six of the ten criteria, that the use of the common Anglo-Negro regression line would result in unfair discrimination. This discrimination, however, would favor, not penalize, the Negroes. In each of these six instances, the use of a regression line based on Anglos alone would, again, favor, not penalize the Negroes.

For two groups, each representing a slightly different socioeconomic level, the test validities, relative to each criterion, were the same. When test performance was controlled, in no instance were there differences in criterion performance for the two socioeconomic groups.

The exact reasons for this study's results, which are possibly contrary to popular opinion, are far from clear. In five of six instances in which significant differences between intercepts were found, the criterion was based essentially on supervisors' or instructors' ratings. It is difficult,

if not impossible, either to prove or to disprove the possible contention these ratings were subject to racial bias. The raters were all Anglos; however, the production departments to which the trainees were assigned were well-integrated; more than 20% of the employees in some of these departments were Negro.

The question of whether there wereunmeasured cultural differences between the Anglos and the Negroes in the sample deserves further considerations. The socioeconomic status measure employed in the study could not be expected to account for all cultural influences which might affect either test performance or achievement in training. One culturally based factor which might be particularly relevant in explaining the results of the study is achievement motivation. Partially because test results can be easily quantified, much attention has been directed toward the effects of discrimination and cultural disadvantage on test performance. But, could not one expect achievement motivation to be affected as much or even more by these environmental factors?

The results of this study leave many questions unanswered. Certainly any decision on whether different regression equations should be applied for different racial groups should be deferred pending cross-validation. It is suggested that more research relative to the achievement motivation of the low-socioeconomic-status Negro be conducted. A preliminary step would be the development of motivational level indicators which could be used in an employment setting. Motivational training programs should be developed and evaluated.

In conclusion, it should be emphasized that the results of this study apply only to the specific situation and to the subpopulations of Negroes

and Anglos involved; generalization from these results should be done with extreme caution.

VT 000 778
Trade and Industrial Education Program Analysis Questionnaire.

Ohio State Dept. of Education, Columbus. Trade and Industrial Education Service
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OHIO

In order to have an instrument to evaluate trade and industrial education programs in Ohio, a supervisors' workshop group in 1950-51 determined that Section D-10 of "Evaluating Criteria," prepared by the Cooperative Study of Secondary School Standards, should be modified. The results of this effort are presented in the form of instructions and evaluative checklists for organization, nature of offerings, physical facilities, instructional staff, instructional activities, instructional aids and materials, and methods of student progress evaluation. Committees may use these program evaluation criteria as a guide in local evaluation of vocational programs in secondary schools. (EM)

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37

TRADE AND INDUSTRIAL EDUCATION SERVICE

. . . State of Ohio

TRADE AND INDUSTRIAL EDUCATION

PROGRAM ANALYSIS QUESTIONNAIRE

VT000778

Division of Vocational Education • State Department of Education

Columbus 15 • Ohio

4

TRADE & INDUSTRIAL EDUCATION SERVICE

STATE OF OHIO

TRADE AND INDUSTRIAL EDUCATION
PROGRAM ANALYSIS QUESTIONNAIRE

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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State Department of Education
Columbus 15, Ohio

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RE: (Author, Title, Publisher, Date) Ohio State Department of Education

Trade and Industrial Education Service, Columbus

Trade and Industrial Education Program Analysis Questionnaire, 1966

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FOREWORD

During the local supervisors workshops for 1950-1951, it was determined that an organized procedure for an analysis of Trade and Industrial Education programs was needed. Copies of available evaluative plans were studied and an effort made to determine which, if any, of these plans might be followed. Among those studied were Section D- 10 for Vocational Industrial Education as taken from the 1950 Evaluative Criteria Cooperative Study of Secondary School Standards.

As a result of considerable study, the workshop participants determined that Section D- 10 of the Evaluative Criteria seemed to be the most logical to be used as the basis for any evaluation material. It was agreed, however, that as stated Section D- 10 was too general to be of the greatest value to local programs and that each item should be expanded in terms of practical application.

The workshop participants believed that a program should be analyzed for purposes of improvement and that evaluation tended to imply comparison between programs. Therefore, this plan is being called a program analysis in preference to the term program evaluation. This Program Analysis Questionnaire is the result of many hours of work by the workshop participants and by an editing committee.

The questionnaire has been further refined and the procedures altered to make it more adaptable for use by the state staff in cooperation with local school people in making an analysis of a Trade and Industrial Education program in a local community.

Byrl R. Shoemaker
Supervisor, Trade &
Industrial Education Service

TABLE OF CONTENTS

Page

Foreword iii

Table of Contents v

Introduction vii

Policies Guiding the Organization and Administration of a Program Analysis ix

Procedure for a Program Analysis xi

Section

I ORGANIZATION I

II NATURE OF OFFERINGS 7

III PHYSICAL FACILITIES 11

IV DIRECTION OF LEARNING 19

INTRODUCTION

On the pages to follow will be found a program - analysis questionnaire for analyzing a local trade and industrial education program. This questionnaire was prepared by the members of the Fifth Annual Ohio Trade and Industrial Supervisors' Workshop.

It will be noted that the format used is similar to that in Section D-10 of the Evaluative Criteria, 1950 Edition[1], as prepared by the Cooperative Study of Secondary School Standards.

It will be noted that each of the four sections making up the questionnaire is preceded by a statement of guiding principles. This statement is followed by a series of evaluative questions, the answers to which tend to analyze one particular phase of the program. Following each evaluative question is a series of checklist questions. The markings of the checklist questions are intended to provide the factual basis for the choice of an answer to the evaluative question.

The following instructions for marking the checklist and evaluative questions should be studied and followed carefully for they are important to the effective analysis of the program.

CHECKLISTS:

The checklists consist of questions about the provisions for, conditions of, and characteristics found in good trade and industrial education programs. Some of them may not be applicable to all programs. Answers to the checklist questions are intended to provide a factual basis for checking the evaluation.

Following are suggested symbols which may be used in marking the checklist questions:

5 indicates a strongly affirmative answer
4 indicates an affirmative answer
3 indicates a doubtful answer
2 indicates a negative answer
1 indicates the question does not apply

COMMENTS:

An explanatory comment should accompany each checkpoint question receiving a doubtful or negative marking.

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[1] Evaluative Criteria, 1950 Edition. Section D-10, Industrial Vocational Education. General Committee in Charge of Cooperative Study. Washington, D. C.: Cooperative Study of Secondary School Standards, 744 Jackson Place.

POLICIES GUIDING THE ORGANIZATION AND ADMINISTRATION OF A PROGRAM ANALYSIS

1. An analysis will be made only upon request.

2. Such requests will be studied by the supervisory staff and a program analysis provided when justified on the basis of need.

3. The program analysis will be conducted by the supervisory staff with the assistance of the teacher education staff, as needed.

4. Analysis guides will be made available for use in local in-service programs.

5. Results of a program analysis will be kept confidential for the local schools.

6. A written report will be made available to the local administration.

7. No charge will be made for the services of the Trade Industrial staff who will make the analysis or for the final report.

8. No less than two staff members will conduct an analysis. Additional staff members will be utilized as needed.

9. An analysis exam will consist of two staff members plus one observer from the local school administrative staff. Each exam will evaluate two trade areas per day.

PROCEDURES FOR A PROGRAM ANALYSIS

1. Approve request for survey.

2. District supervisor to meet with the local school administrator to:

   a. Review the analysis guide and procedures with the administrator.
   b. Determine scope of the analysis.
   c. Set date and time for survey (date must be cleared with State Office.)
   d. Determine personnel to be contacted and when during analysis.
   e. Review plans for staff orientation.
   f. Determination of local administrative personnel to participate as observers.

3. Visiting staff will meet on the evening before the analysis with the local person in charge to:

   a. Review plans and procedures.
   b. Make a working schedule .
   c. Make assignments - including local observer.

4. Observation of school program and interview personnel in accordance with assignments.

5. Reporting Results:

   a. Following the analysis visits the staff will meet immediately to report major recommendations.
   b. The report will include a listing of general recommendations plus the check list copy. An original and two carbons will be returned.
   c. Written report will be sent to the superintendent.

SECTION I - ORGANIZATION

GREEN

STATEMENT OF GUIDING PRINCIPLES

The local program of trade and industrial education should be so organized as to provide in a manner as efficient as possible the training needed by youth and adults for entrance into or advancement in the occupations of the community.

1. How satisfactory are the attitudes and practices of the administrative staff as they pertain to the trade and industrial education program?

CHECKLIST:

a. Is there evidence that the Board of Education accepts and supports trade and industrial education as an integral part of the total school program? . . . . . ( )

b. Are adequate funds provided and equitably budgeted to each trade and industrial class? . . . . . ( )

c. Are the responsibilities of each staff member clearly defined and is the necessary authority granted to the individual to carry out his responsibilities? . . . . . ( )

d. Is there evidence that the superintendent understands, accepts and supports trade and industrial education as an integral part of the total school program? . . . . . ( )

e. Is there evidence that the principal understands, accepts and supports trade and industrial education as an integral part of the total school program? . . . . . ( )

f. Is there evidence that the principal encourages participation of trade and industrial teachers in school and community affairs? . . . . . ( )

g. Is there evidence that the principal seeks the advice and counsel of trade and industrial personnel regarding matters pertinent to their department? . . . . . ( )

h. Is there evidence that the school staff understands and supports trade and industrial education as an integral part of the total school program? . . . . . ( )

i. Is there evidence that the guidance service of the school provides valid and adequate occupational information, dependable selective processes, and follow-up of student progress? . . . . ( )

SECTION I - ORGANIZATION (Continued)

j. Is there evidence that the other special services of the school such as library, psychological, and health are available to students in the trade and industrial classes? . . . . . ( )

k. Is there evidence that adequate clerical help is provided for the trade and industrial education personnel? . . . . . ( )

l. Is there evidence that there is an efficient system for obtaining equipment and supplies? . . . . . ( )

m. Is there evidence of an efficient custodial service? . . . . . ( )

n. Is there evidence that there is an efficient system of handling and accounting for funds used in the trade and industrial programs? . . . . . ( )

o. Is there evidence that the person immediately in charge of the program is consulted regarding the employment of all trade and industrial personnel? . . . . . ( )

p. Is there evidence that the administrative personnel keeps the entire teaching staff informed regarding the plans for and progress of the trade and industrial program? . . . . . ( )

COMMENTS:

SECTION I - ORGANIZATION (Continued)

2. How adequately is the trade and industrial education program supervised?

CHECKLIST:

a. Is the program under the direction of a person who is well qualified in training and experience? . . . . . ( )

b. Is there evidence of satisfactory leadership? . . . . . ( )

c. Is there evidence that there is an organized and functioning plan for the improvement of instruction? . . . . . ( )

d. Are adequate records of achievement, placement, and follow-up maintained? . . . . . ( )

e. Is there evidence that all the areas of training are being adequately supervised? . . . . . ( )

f. Is there evidence that interested groups such as teachers, students, advisory committees, and employers have confidence in and respect for the supervision provided for the program? . . . . . ( )

g. Is there evidence that the person charged with the responsibility of the supervision of the trade and industrial education program understands and supports the program of general education? . . . . . ( )

h. Is there evidence that the person responsible for trade and industrial supervision cooperates with the personnel in the general education program? . . . . . ( )

i. To what extent does the trade and industrial education representative advisory committee function? . . . . . ( )

j. Is the representative advisory committee drawn from employee and employer groups? . . . . . ( )

k. To what extent do craft committees function in the trade areas represented in the program? . . . . . ( )

l. Is there evidence that special groups or specialists from business and industry are used as consultants? . . . . . ( )

SECTION I - ORGANIZATION (Continued)

m. Is there evidence that the special services such as health and guidance are used? . . . . . ( )

n. Is there evidence of a wholesome supervisory relationship with the trade and industrial education staff? . . . . . ( )

o. Is there evidence that other duties of the supervisor do not interfere with adequate supervision of the trade and industrial education program? . . . . . ( )

p. Is there evidence of a planned and functioning program of public relations? . . . . . ( )

COMMENTS:

SECTION I - ORGANIZATION (Continued)

3. How satisfactory are the local time schedules for students enrolled in industrial education classes?

   a. Are state standards pertaining to time requirements for in-school manipulative, related, and general education classes being met? . . . . . ( )

   b. Are state standards pertaining to time requirements for cooperative trade and occupational classes being met? . . . . . ( )

   c. Do existing class schedules permit in-school students to participate in school activities such as athletics, student councils, and clubs? . . . . . ( )

   d. Are state standards pertaining to time requirements for apprenticeship training being met? . . . . . ( )

COMMENTS:

SECTION II - NATURE OF OFFERINGS

YELLOW

STATEMENT OF GUIDING PRINCIPLES

The nature of offerings should be determined and evaluated on the basis of individual and community needs. The term "community" should be thought of as the area in which those enrolled in the program are or may be employed.

1. How adequate are the procedures used to determine the areas of instruction to be offered?

CHECKLIST:

a. Has an occupational survey been made in the past five years? . . . . . ( )

b. Has a survey of student needs and interests been made recently? . . . . . ( )

c. Was the existing program of trade and industrial education appraised in terms of these surveys and/or recent valid data? . . . . . ( )

d. Does the person directly in charge of trade and industrial education maintain contacts with representatives of employee groups? . . . . . ( )

e. Does the person directly in charge of trade and industrial education maintain contacts with representatives of business and industrial management? . . . . . ( )

f. Does the person directly in charge of trade and industrial education maintain contacts with the employment service and other community groups in regard to employment patterns? . . . . . ( )

COMMENTS:

SECTION II - NATURE OF OFFERINGS (Continued)

2. To what extent is trade and industrial education available?

CHECKLIST:

a. Is there an in-school program? . . . . . ( )

b. Is the in-school program based on adequate knowledge of the needs and employment opportunities? . . . . . ( )

c. Is there an adult program? . . . . . ( )

d. Is the adult program based on adequate knowledge of the needs and employment opportunities? . . . . . ( )

COMMENTS:

SECTION II - NATURE OF OFFERINGS (Continued)

3. How adequately does the trade and industrial education program meet the needs of individuals and the community?

CHECKLIST:

a. To what extent do the placement and follow-up records reveal that the needs of in-school youth were met? . . . . . ( )

b. Is there evidence that the training given to adults meets their needs? . . . . . ( )

c. To what extent does the training being given meet the needs of the community for trained workers as revealed by the most recent occupational survey or other indicators of needs? . . . . . ( )

d. To what extent is needed training given to adults with a limited educational background? . . . . . ( )

e. To what extent is needed training given to in-school youth of limited ability? . . . . . ( )

f. To what extent are the training needs of both the males and females of the community being met? . . . . . ( )

g. Is there evidence that the training being given the in-school students and adults contributes to effective citizenship? . . . ( )

h. Is there evidence that the training being given contributes to better human relations between the employee and his employer, and the employee and his fellow workers? . . . . . ( )

i. Do the in-school students have a functioning social organization based upon their trade interest? . . . . . ( )

COMMENTS:

SECTION II - NATURE OF OFFERINGS (Continued)

4. To what extent do the learning activities provide for the development of an understanding and appreciation of good workmanship?

CHECKLIST:

a. To what extent do the demonstrations made exhibit a high degree of good workmanship? . . . . . ( )

b. To what degree do the jobs or projects completed by the trainees show evidence of a high degree of good workmanship? . . . . . ( )

c. To what extent does an interview with the teacher and/or observation of the students at work indicate that the students possess an adequate degree of job know-how? . . . . ( )

d. Is there evidence to indicate that the trainees have a desire to develop further skills and acquire further knowledge? . . . . . ( )

COMMENTS:

SECTION III - PHYSICAL FACILITIES

BLUE

STATEMENT OF GUIDING PRINCIPLES

The physical facilities for a program of trade and industrial education should be selected or constructed, arranged, and maintained to provide for the efficient and safe training of youth and adults for entrance into, or advancement in, the occupations of the community.

1. How desirable is the site of the building in which trade and industrial education classes are held?

CHECKLIST:

a. Is there room for expansion? . . . . . ( )

b. Is the building site in a desirable section of the community? . . . . . ( )

c. Is the site readily accessible? . . . . . ( )

d. Are public transportation and parking facilities adequate? . . ( )

e. Is the building site convenient to the school(s) serving as the source of student supply? . . . . . ( )

COMMENTS:

2. How adequate is the housing provided for the trade and industrial education program?

CHECKLIST:

a. Are the facilities appropriate for the activity for which they are being used? . . . . . ( )

b. Do the facilities permit expansion? . . . . . ( )

c. Have administrative facilities such as office space, conference rooms, and storage rooms been provided? . . . . ( )

d. Does the building meet state, local, and industrial codes, and/or requirements such as toilets, washrooms, corridor widths, stairs, heating, ventilating, lighting, exits, fire escapes, and others? . . . . . ( )

e. Can facilities required for adult classes be used independently of the rest of the building? . . . . . ( )

f. Are the facilities of adequate size to house all training being given? . . . . . ( )

COMMENTS:

3. To what extent does the layout or floor plan for the manipulative areas make possible effective instruction?

CHECKLIST:

a. Does the instructor have an adequate view of all activities? . . . . . ( )

b. Are the manipulative areas sufficient in size for the proper placement of all necessary equipment? . . . . . ( )

c. Is the equipment so arranged as to provide for efficient and safe instruction and operation? . . . . . ( )

d. Are storage facilities adequate and convenient? . . . . . ( )

e. Are receiving and shipping facilities adequate and convenient? . . . . . ( )

f. Is the number, size, condition, and location of student shop and laboratory lockers satisfactory? . . . . . ( )

g. Are washrooms and toilet facilities adequate and convenient? . . . . . ( )

COMMENTS:

SECTION III - PHYSICAL FACILITIES (Continued)

4. To what extent does the layout or floor plan for the trade technology areas make possible effective instruction?

CHECKLIST:

a. Is the technology laboratory located near or adjacent to the manipulative areas? . . . . . ( )

b. Are the room sizes adequate? . . . . . ( )

c. Are there adequate provisions for using visual aids? . . . . . ( )

d. Are there adequate and convenient storage facilities? . . . . ( )

e. Are washrooms and toilet facilities adequate and convenient? . . . . . ( )

5. How adequate and appropriate are the tools and/or equipment available in the manipulative areas?

CHECKLIST:

a. Are the manipulative areas suitably equipped with the types and varieties of tools and/or equipment to make possible effective training? . . . . . ( )

b. Is the number of tools and/or items of equipment adequate? . . . . . ( )

c. Is the quality of tools and/or items of equipment comparable to those used in business and industry? . . . . . ( )

d. Is the size of tools and/or items of equipment comparable to that of those used in local business and industry? . . . . . ( )

e. Are the tools and/or items of equipment maintained in a satisfactory working condition? . . . . . ( )

f. Is there a functioning plan for the replacement of obsolete, unsafe, and worn out tools and/or items of equipment? . . . . . ( )

g. Are the tools and/or items of equipment found in the shop or laboratory necessary for the successful operation of the existing program or that planned for the future? . . . . . ( )

COMMENTS:

SECTION III - PHYSICAL FACILITIES (Continued)

6. How adequate are the tools and/or items of equipment available for use in the trade technology area?

CHECKLIST:

a. Does the equipment and/or furniture have sufficient flexibility of movement to permit effective demonstration grouping for learning, and independent study? . . . . . ( )

b. Are adequate tools and/or items of equipment available for experiments and/or demonstrations? . . . . . ( )

COMMENTS:

7. How safe are the tools and/or items of equipment and the physical facilities provided for trade and industrial education?

CHECKLIST:

a. Are all tools, machines, and equipment properly guarded? . . ( )

b. Are the floors normally free from hazards, and if necessary, properly marked so as to provide work areas and aisles? . . ( )

c. Are adequate facilities provided for the storage and/or disposal of inflammable materials? . . . . . ( )

d. Is adequate equipment provided for giving a fire alarm, calling the fire department, and extinguishing fire? . . . . . ( )

e. Is all electrical equipment properly installed, fused, controlled, guarded, and designated? . . . . . ( )

f. Is all gas, oil, or air equipment properly installed, controlled, guarded, and designated? . . . . . ( )

SECTION IV - DIRECTION OF LEARNING

A. Instructional Staff

PINK

STATEMENT OF GUIDING PRINCIPLES

The instructional staff should be made up of competent individuals functioning as a cooperative group, having common goals, and motivated by high ideals.

1. To what extent do the personal qualifications and professional attitudes of the instructor contribute to efficient learning on the part of the students?

CHECKLIST:

a. Is the instructor properly groomed and satisfactorily dressed for the instruction to be given? . . . . . ( )

b. Does the instructor have a desirable personality? . . . . . ( )

c. Is there evidence that the instructor has the respect and confidence of the students? . . . . . ( )

d. Is there evidence that the instructor is sincere, loyal, and conscientious in regard to his work? . . . . . ( )

e. Is there evidence that the instructor arouses the students' interest in learning? . . . . . ( )

f. Is there evidence that the instructor reacts favorably to advice and constructive criticism? . . . . . ( )

g. Does the instructor have good physical and mental health? . . ( )

h. Is there evidence that the instructor's attitude toward his job stimulates the development of desirable attitudes toward work on the part of the students? . . . . . ( )

i. Does the instructor use good tone quality, good grammar, and no improper expressions in his speech? . . . . . ( )

j. Is there evidence that the instructor has a sincere interest in and a good understanding of the age group which he instructs? . . . . . ( )

k. Is there evidence that teaching is the primary interest of the full-time instructor and of the part-time instructor while on the job? . . . . . ( )

SECTION IV - DIRECTION OF LEARNING (Continued)

l. Is there evidence that the instructor participates cooperatively in all phases of the school program in which he should be concerned? . . . . . ( )

m. Is there evidence that the instructor recognizes the importance of the objectives of the other departments within the school? . . . . . ( )

n. Is there evidence that the instructor is acquainted with and follows the accepted code of ethics of the school in which he works? . . . . . ( )

COMMENTS:

2. To what extent does the instructor possess the professional qualifications necessary for effective trade and industrial teaching?

CHECKLIST:

a. Is the instructor properly certified? . . . . . ( )

b. Has the instructor qualified for advanced certification according to the years of his teaching experience? . . . . . ( )

c. Has the instructor developed further professional qualifications beyond certification by advanced training? . . . ( )

d. Has the instructor made any professional contributions such as writing for publication, preparing instructional materials, developing instructional methods, or holding office in professional organizations? . . . . . ( )

e. Does the instructor belong to and participate in accepted national, state, and local professional organizations? . . . . . ( )

f. Is there evidence that the instructor has knowledge of safety, first aid, and hygiene as it applies to the trade taught? . . . . . ( )

g. Is there evidence that the instructor willingly participates in the teacher-improvement program, and departmental and staff meetings? . . . . . ( )

h. Is there evidence that the instructor is familiar with the Ohio Plan of Trade and Industrial Education? . . . . . ( )

COMMENTS:

3. To what extent does the instructor's business or industrial experience and knowledge of current practices provide him with an adequate degree of competency for the instruction being given?

CHECKLIST:

a. Is there evidence that the instructor's trade or occupational experience was successful? . . . . . ( )

b. Is there evidence that the instructor's trade or occupational experience is sufficiently recent? . . . . . ( )

c. Is there evidence that the instructor's trade experiences were sufficiently varied? . . . . . ( )

d. Is there evidence that the skills and knowledge taught by the instructor are acceptable to business and/or industry? . . . . . ( )

e. Is there evidence that the instructor makes frequent and purposeful visits or contacts to businesses or industries to keep himself abreast of his trade or occupation? . . . . . ( )

f. Is there evidence that the instructor makes frequent use of current periodicals to keep him abreast of this trade or occupation? . . . . . ( )

COMMENTS:

SECTION IV - DIRECTION OF LEARNING (Continued)

B. Instructional Activities

STATEMENT OF GUIDING PRINCIPLES

The instructional activities should aim to develop saleable trade skills and knowledge, desirable behavior patterns, and acceptable social traits.

1. How satisfactorily does the instructor follow a plan of instruction that contributes to efficient learning on the part of the student?

CHECKLIST:

a. Is there a course of study for each trade taught which includes all the skills and knowledge concerning which instruction should be given? . . . . . ( )

b. Has the course of study been reviewed and approved by an advisory committee? . . . . . ( )

c. Is there evidence that the instruction given is based on the course of study? . . . . . ( )

d. Is there evidence that each day's instruction has been carefully planned? . . . . . ( )

e. Is there evidence that the instruction is so planned that individual learners are encouraged to develop their highest skills and to advance at their maximum rates? . . . . ( )

f. Is there evidence of planning to provide for correlation between the manipulative and technological phases of the training? . . . . . ( )

COMMENTS:

SECTION IV - DIRECTION OF LEARNING (Continued)

2. To what extent does the instructor use the most effective teaching methods in each learning situation? . . . . . ( )

CHECKLIST:

a. Do the instructional methods used seem to secure the attention and interest of the students being taught? . . . . . ( )

b. Do the instructional methods used appear to develop in the student a desire to learn? . . . . . ( )

c. Do the methods used appear to be the most effective means of developing the skills or providing the information being taught? . . . . . ( )

d. Do the methods used motivate good participation on the part of the students? . . . . . ( )

e. Do the methods used make possible instructor evaluation of student progress? . . . . . ( )

f. Is there evidence that the instructor is aware of the individual differences of the learner and teaches accordingly? . . . . . ( )

g. Is there evidence that the instructor chooses wisely from such methods of instruction as lecture, demonstration, conference, resource persons and panels, student committee reports, and business or industrial visitations? . . . . ( )

h. Is there evidence of correlation between the instruction given in the manipulative phases of the trade or occupation and the related technology taught? . . . . . ( )

COMMENTS:

3. Do the methods used by the instructor in the organization and management of the activities in the manipulative and trade technology areas contribute to effective learning on the part of the students?

CHECKLIST:

a. Are the methods of management patterned after those found to be effective in business and industry? . . . . . ( )

b. Is there an efficient student personnel system? . . . . . ( )

c. Is there evidence that the students willingly accept their responsibilities of organization and management? . . . ( )

d. Is there evidence of cooperative planning for organization and management duties? . . . . . ( )

e. Is there an efficient system of handling, conserving, and recording the issuance of materials and supplies? . . . . . ( )

COMMENTS:

C. Instructional Aids and/or Materials

STATEMENT OF GUIDING PRINCIPLES

Appropriate instructional aids and/or materials should be selected and used to stimulate interest, to facilitate learning, and to make possible either individual or group instruction.

1. How satisfactorily do the instructional aids and/or materials used by the instructor meet the specific needs of the students in each manipulative or trade technology class?

CHECKLIST:

a. Are there sufficient up-to-date textbooks and are they used effectively? . . . . . ( )

b. Are manuals, handbooks, periodicals, and manufacturer's publications used effectively? . . . . . ( )

c. Are visual aids, such as films, slides, mock-ups, and cut-aways used effectively? . . . . . ( )

d. Are the machines and tools being used in such a manner as to provide the most effective training? . . . . . ( )

e. Is efficient use made of materials and supplies? . . . . . ( )

f. Is there evidence that instructional aids and/or materials selected for use are appropriate and timely? . . . . . ( )

COMMENTS:

SECTION IV - DIRECTION OF LEARNING (Continued)

2. How effectively does the instructor motivate and guide the students in the use of instructional aids and/or materials?

CHECKLIST:

a. Is there evidence that the students can readily locate and use the instructional aids and/or materials they need? . . . . . ( )

b. Is there evidence that the instructional aids and/or materials used by the student indicate a correlation between his manipulative and trade technology instruction? . . . . . ( )

COMMENTS:

D. Methods of Evaluating the Progress of Students

STATEMENT OF GUIDING PRINCIPLES

Evaluation should be a continuous process; an integral part of instruction concerned with measuring individual growth and development and intended to improve the quality of instruction.

1. Is there an effective plan for the evaluation of student progress used by the instructor?

CHECKLIST:

a. Does the instructor use a rating scale to measure the degree of student progress in trade technology classes? . . . . ( )

b. Does the instructor use a rating scale to measure the degree of skill that a student develops in manipulative work? . . . . . ( )

c. Does the instructor use a rating scale to measure the development of personal and social qualities? . . . . . ( )

d. Does the instructor use a rating scale to measure the development of work qualities and habits? . . . . . ( )

e. Does the instructor also use tests of an appropriate type to measure student progress when necessary? . . . . . ( )

f. Does the instructor schedule his evaluation or tests at the completion of the job, project, or unit of instruction? . . . ( )

g. Does the instructor give periodical tests in keeping with the local school policies? . . . . . ( )

COMMENTS:

SECTION IV - DIRECTION OF LEARNING (Continued)

2. Are there reliable and valid records kept by the instructor which reveal the student's progress?

CHECKLIST:

a. Does the instructor post progress charts which give the essential information regarding each student's current assignment and past record of areas of training? . . . . . ( )

b. Does the instructor keep a grade book in which he records data not listed on progress charts, but which is essential for the determination of a grade or mark for the student? . . . . . ( )

c. Does the instructor maintain a file for each student which contains the student's learner profile charts, complete job plan sheets, work records, and other pertinent information? . . . . . ( )

d. Does the instructor maintain an accurate record of attendance for each student enrolled in his class? . . . . . ( )

COMMENTS:

SECTION IV - DIRECTION OF LEARNING (Continued)

3. Does the instructor secure information by interviews and/or conferences to evaluate student progress?

CHECKLIST:

a. Does the instructor discuss with each student his individual progress? . . . . . ( )

b. Does the instructor-coordinator discuss with employers of students their progress? . . . . . ( )

c. Does the instructor visit with the parents for the purpose of discussing the student's progress? . . . . . ( )

d. Does the instructor discuss with craft committee members the progress of students? . . . . . ( )

e. Does the instructor seek the counsel of other staff members who can help him evaluate student progress? . . . . ( )

COMMENTS:

SECTION IV - DIRECTION OF LEARNING (Continued)

4. How effectively does the instructor use the information provided by rating scales, records of measurement, and individual interviews and/or conferences to improve instruction?

CHECKLIST:

a. Does the instructor re-teach the skills and knowledge which in an evaluation of group learning indicates that they have not been mastered by the students? . . . . . ( )

b. Does the instructor provide further help for any individual whose skills and knowledge have been found inadequate when evaluated? . . . . . ( )

c. Does the instructor take action to revise his plan of instruction or improve his teaching methods when either have been revealed as unsatisfactory? . . . . . ( )

COMMENTS:

VT 000 812
Results of Survey to Ascertain if the Arlington County Public Schools' Industrial Education Program is Organized and Attuned to Present Trends.

Arlington County Public Schools, Va. Dept. of Industrial Education
MF AVAILABLE IN VT-ERIC SET.
Pub Date - Mar66 27p.

*INDUSTRIAL EDUCATION; TEACHER ATTITUDES; INDUSTRIAL ARTS; ADMINISTRATOR ATTITUDES; *TRADE AND INDUSTRIAL EDUCATION; *EDUCATIONAL OBJECTIVES; *PROGRAM EVALUATION; SURVEYS
*ARLINGTON COUNTY PUBLIC SCHOOLS; VIRGINIA

In 1965 a survey was conducted to ascertain whether the curriculum was attuned to present trends, goals, and objectives and to find out if program organization was properly planned for the students. A paper covering the objectives of industrial arts, an explanation of the industrial education program, and proposals for additional courses was written, reviewed, and rewritten. Each staff member submitted his philosophy, goals, and beliefs for industrial education, and from these, 36 statements were compiled. The paper, a chart which differentiated industrial arts and vocational education, the statements with instructions for their evaluation against six criteria, and a cover letter were mailed to county teachers, principals, and counselors, teacher educators, state directors and supervisors, and national leaders. The returns were tabulated in three groups: (1) county instructors, (2) supervisors, teacher educators, national leaders, and (3) principals and counselors. Statements receiving highest agreement concerned (1) development of safe working ability, (2) wise selection and safe use of hand and power tools, (3) development of attitude of perceiving practical problems as challenges, (4) provision for concrete achievement for slow learners, (5) improvement of students' self concept, and (6) personal awareness of social and personal traits which are essential for success. One of the seven conclusions was a comparison of statement rankings indicates considerable difference between teachers and administrators regarding the purpose, place, and methods of instruction for industrial education. (EM)

VT000812

ED0 31587

RESULTS OF SURVEY TO ASCERTAIN IF THE ARLINGTON COUNTY PUBLIC SCHOOLS' INDUSTRIAL EDUCATION PROGRAM IS ORGANIZED AND ATTUNED TO PRESENT TRENDS

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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ARLINGTON COUNTY PUBLIC SCHOOLS
Division of Instruction
Department of Industrial Education
March, 1966

VT 00812

Purpose of the Survey

In late September, 1965 it was suggested that a survey be conducted to ascertain if the existing Arlington County Public Schools' Industrial Education Curriculum was attuned to present trends, goals and objectives and if the organization of the total program was properly planned for Arlington County students.

The findings of the survey are presented in the following manner:

1. A condensation of each statement that was evaluated with comments concluded by comparing the tabulation of the returns.
2. A chart showing the computed means - appendix i
3. A graph used for comparison of the various means - appendix ii
4. General Findings
5. Conclusions.

Proceedings of the Survey

A committee of Industrial Education Instructors and the Industrial Education Supervisor drafted a paper which contained information pertaining to Industrial Education and its place and purpose in the total school curriculum; Industrial Arts - its purpose; the broad objectives for Industrial Arts and how they were formulated; an outline of the total Industrial Education program and the reasons for the organization of the program. Included were descriptions of the Day Trade Program, Trade Extension Programs, and proposals for additional course offerings.

This draft was published and mailed to the total Arlington County Industrial Education staff. Each member was requested to criticize, edit and re-write any part of the draft that did not agree with his

philosophy or ideas; and then return his edited draft to the committee.

The comments, suggestions and ideas received from all members of the staff were included in a final paper which indicated agreement of the total staff.

The second step of the survey was to have each staff member submit, in statement form, his philosophy, goals, and beliefs for Industrial Education. The statements which had similar context were grouped and re-written into a single statement. From all of the returns there emerged thirty-six statements.

Each statement was placed in a list to be evaluated using the following three broad categories:

1. Depth of study for the junior high student
2. Depth of study for the senior high student
3. Importance of the statement toward fulfilling the philosophy of education for the Arlington County Public Schools.

The third phase of the survey was to assemble a packet which contained - the final paper, a chart showing the differences between Industrial Arts and Vocational Education, a list of statements with the instructions for their evaluation, and a cover letter requesting an evaluation of the total program including suggestions for deletion, addition or innovation to the existing total Industrial Education Program.

These packets were mailed to the Arlington County Industrial Arts teachers, secondary principals, assistant principals and head guidance counselors. Within the state of Virginia requests were sent to the State Industrial Education staff, teacher-educators, and local direc-

tors and supervisors of Industrial Education programs. Copies were sent outside of the state to the national leaders in the H.E.W. and American Industrial Arts Association.

A small number of copies were mailed; however, it is believed the sampling received from the leaders in the county and state was adequate to determine valid conclusions. Responses to the mailed packet were as follows:

76% - Arlington Industrial Education staff

33% - Arlington County guidance counselors and administrators

90% - Teacher-educators and local supervisors

100%- National leaders

The fourth step of the survey was to compile information from the returned evaluated forms into workable charts. To expedite tabulating the returns were divided into three groups:

1. Arlington County Industrial Education instructors
2. State supervisors, teacher-educators, local supervisors and national leaders.
3. Local administrators and guidance counselors

Each statement had been evaluated six ways and grouped into three broad categories. The criteria used for evaluation was <u>one</u> as the lowest rating of importance and <u>ten</u> as the highest rating. Means, rather than medians, were made and are graphically presented in four manners for comparison, evaluation and rank. The means were computed for the following:

I. a. Mean for each statement related to depth of study in junior high school as determined by <u>all groups</u>.

b. Mean for each statement related to depth of study in junior high school as determined by each group.

II.

a. Mean for each statement related to depth of study in the senior high school as determined by all groups.

b. Mean for each statement related to depth of study in senior high school as determined by each group.

III.

a. Mean for each statement related to its importance to the total program as determined by all groups.

b. Mean for each statement related to its importance to the total program, as determined by each group*.

* appendix i

The final step was to make a comparison of group evaluations to (1) ascertain patterns, (2) make statements of general findings, and (3) make statements of conclusions.

COMMENTS CONCLUDED BY COMPARING THE TABULATION OF THE RETURNS

The following summary of each statement was made by comparing and ranking the results received from each group.

1. "to develop an awareness of the contributions and impact industrial technology has upon society."

   Returns indicated that the statement received one of the five lowest overall evaluations and was considered to have little importance for the development of students. Teacher-educators and supervisors thought it should be studied in depth in the senior high schools.

2. "to develop an awareness that family life is ever changing due to automation"

   Returns showed this statement to have one of the five lowest overall evaluations. Teachers, supervisors and teacher-educators believed there should be a depth study made in the senior high grades.

3. "Utilization of human resources are desirable if today's citizens are to function intelligently."

   This statement does not warrant study in depth at the junior or senior high level, but should be included in total curriculum. State supervisors and teacher-educators believe this should be studied in depth.

4. "aware of man's attempt to control his environment"

   Returns indicated this statement to be one of the less important studies for senior high, and received one of the five lowest overall evaluations.

5. "Insight into the interdependence of industry, government and business." This statement received one of the five lowest ratings. Teacher-educators and supervisors felt it should be studied to some depth at the senior high level.

6. "Appreciation for the industrial products which are taken for granted"

   Returns showed this statement had an overall rating as one of the five least important studies.

7. "Awareness of the contributions to society of persons engaged in industry"

   This should be studied in some depth at the junior high level and was considered of lesser importance to senior high students.

8. "Awareness of the need for all people to cooperatively work together."

   Returns indicated that a depth study should be made in the junior high schools. Overall a study should be included in the total program as it can be important to achieve the philosophy of education.

9. "Awareness of the dignity of labor and that life and work are compatable"

   Returns showed that a depth study should be made at the junior high level and a lesser study made at the senior high.

10. "a positive attitude toward continuing education"

    All groups indicated a depth study should be made at both levels and it is of average importance in achieving the philosophy of education.

11. "a favorable attitude toward the conservation and use of tools, materials and machines"

    All groups believed this statement to be of importance to the total curriculum and believed it should help to achieve the philosophy of education.

12. "become aware of concepts and structures of industry"

    Returns indicated that all groups believed this statement to be of importance. State leaders believed it to be of extreme

importance for study in the senior high. Little value was given to achieving the philosophy of education.

13. "Awareness of the major subdivisions of industry."

    Returns showed that the state leaders believed this statement to be of extreme importance to the senior high student. Other groups gave it little importance and it was ranked as one of the five lowest.

14. "to discover and develop vocational - industrial or technical skills"

    All groups ranked this as one of the five lowest for junior high students, and placed average importance for senior high. A rather high evaluation was given to its importance to the overall program.

15. "discover and develop his avocational interest"

    All groups evaluated this statement as above average and indicated it was important to the total curriculum.

16. "perform industrial research in the school or shop library"

    Returns indicated that a depth study should not be made in junior or senior high; state leaders placed a high evaluation for senior high study. A rather high evaluation was given to its importance to the overall program.

17. "View industrial plants while they are engaged in production."

    Results showed this statement to have little importance for junior high and average importance to senior high. This statement received one of the five lowest evaluations for junior high. State leaders placed great importance on the study for senior high students.

18. "select, care and use wisely industrial products."

Returns indicated varied beliefs with little importance stressed for junior high study while great emphasis should be placed in senior high study.

19. "develop ability to work safely"

This statement received the highest ranking of importance by all groups. This evaluation could have been predetermined.

20. "to wisely select and safely use hand and power tools."

This statement received one of the five highest rankings of importance by all groups. This evaluation could have been pre-determined.

21. "attitude of perceiving practical problems as challenges and not obstacles"

This statement received one of the five highest evaluations as to importance by all groups.

22. "use democratic process to arrive at a solution for manufacturing an item in the school shop."

Returns indicated a depth study should be made at the junior high level, while a lesser study should be made at the senior high.The returns showed the statement to have average importance for achieving the philosophy of education.

23. "concrete achievement for those who cannot make abstract concepts."

Great emphasis was given to this statement by all groups. It was ranked one of the five highest for senior high study.

24. "to improve self concept through successful completion of a project"

    This statement ranked as one of the five highest for depth of study in junior high and senior high school. The highest overall evaluation was given to this statement for achieving the philosophy of education.

25. "Student should become aware of and develop insight into his behavioral patterns"

    "Returns indicated this statement to be of little importance for junior high study but had significant importance to senior high study. In an overall evaluation it was indicated as being important for the philosophy of education.

26. "to convey thoughts, words or pictures by means of electromechanics or graphic arts."

27. "an understanding of the handcraft industries, their organization, management, tools, products, processes and occupation involved in production."

28. "an understanding of technical achievements of man concerned with methods and processes used in creating articles of value for mass consumption."

28. "an understanding of technical achievements of man concerned with methods and processes used in creating articles of value for mass consumption."

29. "the tools and procedures used in technology of product maintenance and the enhancement of product value."

30. "technology of harnessing and controlling power including its sources, creation, transmission and the use of power devices and vehicles."

Statements 26 - 30 described the activities of the various laboratories. Returns seemed to indicate that specific laboratories for study were not of significant value to junior high students; by comparison a considerably higher importance was given for providing specific laboratories for senior high students. This was unanimously indicated by each group. The returns indicated that general shops should be organized in junior high and unit shops should be organized in the senior highs.

31. "awareness of the industrial design in his total environment."
Returns indicated this statement to be of average importance for study in the junior high and slightly above average in the senior high.

32. "awareness of how some of the major materials are produced"
This showed slightly above average in importance for study in both junior and senior high.

33. "Engage in learning experience of designing, planning, engineering, fabricating and completing an article or transmit his ideas of design, engineering and fabricating"
Returns showed this statement should receive an average study in the junior high and much greater depth of study should be made

in the senior high. It is important to help fulfill the philosophy of education.

34. "Apply his learned body of knowledge with his hands to determine the practicability of his ideas."

    This statement showed to be of average importance to junior high and extremely important to senior high. The statement was evaluated as one of the five highest in importance to assist in fulfilling the philosophy of education.

35. "Should engage in learning experience of exploring and experimenting with tools and materials"

    This statement was evaluated as one of the five most important for both junior and senior high school students, and is of great value to achieve the philosophy of education.

36. 'Become aware of the social and personal traits essential to success as a worker and student"

    This statement was evaluated as one of the more important studies for both junior and senior high and was considered of great importance in fulfilling the philosophy of education.

STATEMENT OF GENERAL FINDINGS

Comparing the lowest mean as evaluated by the total group for a statement to the highest mean as evaluated by the total group for a statement, there is a range from 5.26 to 7.74; therefore, all statements presented for evaluation have value to the total program. The following conclusions then become the degree of value of each statement to the total program rather than elimination of study from the total program.

The list to be evaluated had thirty-six statements and each statement was to be evaluated, using six criteria. This required an evaluator to make two hundred and sixteen evaluations. Ranking, as determined by each group using the mean for each criteria, is shown below.

RANKING BY CRITERIA EVALUATIONS OF EACH GROUP

Number of Evaluations		Highest Group	Middle Group	Lowest Group
122		S.S., T.E.	I.E.I.	A, C.
25		S.S., T.E.	A, C.	I.E.I.
	147	S.S., T.E.		
46		I.E.I.	S.S., T.E.	A, C.
7		I.E.I.	A, C.	S.S., T.E.
	53	I.E.I.		
10		A, C.	S.S., T.E.	I.E.I.
6		A, C.	I.E.I.	S.S., T.E.
	16	A, C.		
Total	216			

Code:

S.S., T.E. - Supervisors, State, Teacher Educators
I.E.I. - Industrial Education Instructors
A, C. - Administrators and Counselors

The evaluations, as ranked, can be interpreted to indicate that teacher-educators and supervisors within the state have, by comparison to the other groups, greater insight into the total industrial education program and through their leadership they are attempting to broaden the scope of Industrial Education.

Administrators indicate, by their seventeen highest evaluations, a need for the teacher to place greater emphasis on helping

the student to build a better self-concept and to help the student discover his abilities.

In order to ascertain any established pattern by a group or groups, the evaluated statements were divided into four categories; those that would aid in:

1. Developing broad understanding or concepts
2. Developing manual skills
3. Developing problem solving skills
4. Developing self concepts and self discovery

Each statement was placed into one of the above categories and was ranked from high to low according to its mean as each group had evaluated the statement. By comparing the ranking of statements by each group the following is implied:

1. In grades 7 - 12 equal emphasis should be placed upon the instruction provided to students for; (a) the study of the broad understandings of conservation and use of tools, materials and machines, (b) developing the broad concepts of the structure of industry, (c) developing an appreciation for industrial design (d) providing the knowledge of how some materials are produced.
2. In the junior high school additional teaching emphasis should be placed on (a) developing the broad understanding of the impact of technology upon society (b) developing an appreciation for the industrial products (c) becoming aware of the contributions workers make to society.
3. The statement rankings indicated that junior high school students should be provided the opportunity to discover

and develop avocational interests followed by a senior high experience that would provide the opportunity for students to develop manual skills for pre-vocational or vocational training.

4. According to the returns all students should be given the opportunity to (a) explore and experiment with tools and materials, (b) test their ideas through the fabrication of materials.

5. The returns indicated that junior and senior high students should design, plan, engineer, fabricate and complete a project.

6. Industrial field trips were not thought too important to junior high instruction. They were believed to be important to senior high instruction.

7. All students are users and consumers of manufactured goods; yet it was felt that the knowledge required for the selection, care and use of industrial products was of little importance to junior high students and of great importance to senior high students.

8. The returns indicated that at all grade levels industrial education teachers should place greater emphasis upon teaching cooperate work habits, the dignity of labor, positive attitude towards continuing education, perceiving practical problems as challenges, democratic group process; helping the student to imporve his self-concept through his successful completion of his projects. The returns emphasized the importance of helping the student recognize his behavioral patterns, and helping the student to become aware of the social and personal traits which are important for success as a worker or student.

CONCLUSIONS

The evaluated returns were divided into three groups as submitted by (1) administrators, (2) Industrial Education instructors, (3) State supervisors, teacher-educators and local directors. The mean was computed for each statement as evaluated by each group and then used for the purpose of ranking and comparing that mean with other groups. All returns were computed to find an overall mean for each statement which was then ranked by importance and compared to each group mean.

From ranking and comparing, the following are concluded:

I. All groups gave a high evaluation to a number of statements which were related to the student's self-appraisal and to the student's learning about himself and little importance was given to the type of laboratory that was provided. This indicates that emphasis should be placed on the development of persons rather than things. This follows the Arlington County philosophy of education and the belief of the industrial education staff.

II. The Junior High Industrial Arts program should provide for the exploration of tools, materials and processes developed in a General Shop environment. The General Shop organization is used in Arlington County Public Schools.

III. The Senior High program should provide the opportunity for the student to develop some pre-vocational or vocational manual skill. Arlington County has organized for the senior students the General Unit Shop and the Unit Shop which provides the facilities for a study in depth in a limited area.

Example: General Metals, Printing, Auto Mechanics. Vocational training is provided through a cooperate work program. Day Trade classes are provided in printing and auto mechanics. A day trade Cosmetology program is in the planning stage.

IV. In junior high school greater emphasis should be placed upon teaching the broad understandings of industry and its place in our technological society. This is in agreement with the definition of Industrial Arts as stated in the Arlington County Public Junior High Industrial Arts Curriculum Guide.

V. Students should plan, design, engineer and fabricate projects. This justifies instruction in design, shop mathematics, problem solving, and research. A county-wide student plan sheet, designed by teachers, is used for this purpose. This plan sheet has virtually eliminated in the county, teacher prepared job sheets which permit little thinking on the part of the students. A more sophisticated program Research and Development, will be inaugurated in a senior high in 1966.

VI. Comparison of statement rankings indicate that between Industrial Education instructors and Administrators there is a considerable difference regarding the purpose, place and methods of instruction for industrial education.

VII. Comparison of statement rankings indicate that between the state leaders and the Arlington County staff, there is a slight difference of opinion regarding the purpose, place and methods of instruction for Industrial Education. This would indicate that

Arlington County Industrial Education Staff is attuned to the State of Virginia.

VII. None of the returns suggested additions, deletions or innovation to the existing program. Therefore, it can be concluded that the Arlington County Public School offerings and organization of its Industrial Education Program is in agreement with present trends, objectives and philosophy.

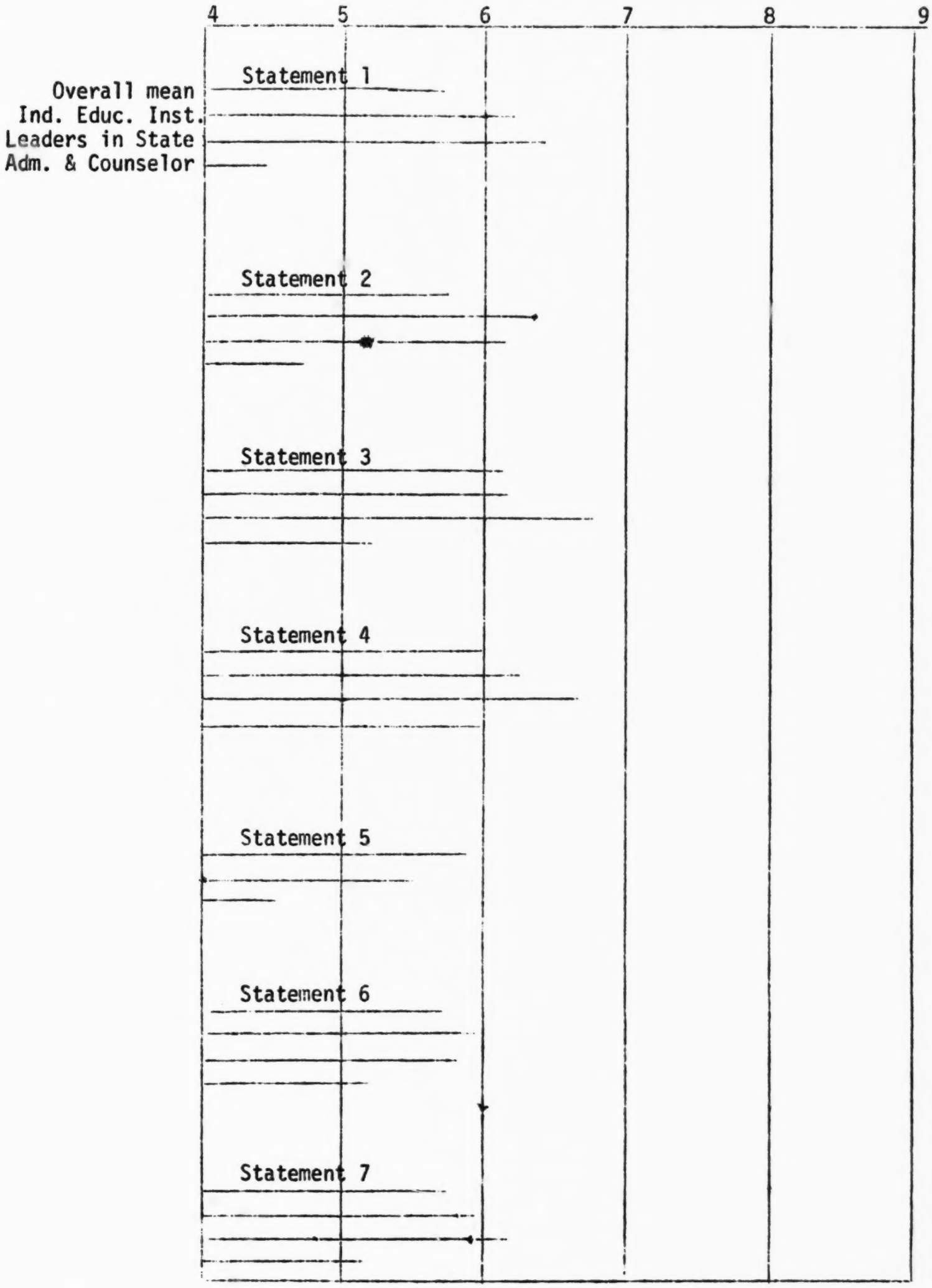
CHART OF MEANS

Appendix i

	Statement Number	Depth of Study for Junior High Group	Mean	Depth of Study for Junior High Group	Mean	Importance to Total Program Group	Mean
Ind. Educ. Inst.		7.17		7.89		6.18	
State Leaders	1	7.54	6.86	8.38	7.38	6.36	5.69
Adm. & Counselors		5.88		5.88		4.52	
		6.86		8.21		6.35	
	2	6.61	6.04	8.00	7.07	6.09	5.71
		4.66		5.00		4.69	
		6.83		7.40		6.11	
	3	7.31	6.42	8.77	7.28	6.77	6.01
		5.11		5.66		5.14	
		6.82		7.59		6.22	
	4	8.15	6.51	8.46	7.02	6.64	5.91
		4.55		5.00		5.86	
		6.76		6.83		5.87	
	5	6.61	6.34	8.23	7.06	5.43	5.26
		5.66		6.11		4.49	
		7.38		7.48		5.98	
	6	7.08	6.93	8.54	7.49	5.79	5.65
		6.33		6.44		5.18	
		6.96		7.23		5.95	
	7	7.39	6.60	8.23	7.19	6.15	5.72
		5.44		6.11		5.07	
		7.76		8.00		6.29	
	8	7.39	7.38	8.38	7.42	6.63	6.23
		7.00		5.88		5.77	
		7.52		7.76		6.00	
	9	8.61	7.41	9.15	7.89	6.86	6.07
		6.11		6.77		6.14	

Ind. Educ. Inst. State Leaders Adm. & Counselors	27	7.11 6.75 6.55	6.80	7.11 7.08 6.89	7.03	5.86 6.06 5.87	5.93
	28	5.96 8.06 6.00	6.67	7.77 8.92 6.55	7.75	5.70 5.91 5.57	5.73
	29	5.72 6.83 5.44	6.00	7.42 8.42 6.44	7.43	5.28 6.86 4.94	5.69
	30	5.38 6.08 5.88	5.78	7.15 8.66 6.33	7.38	5.69 6.57 5.37	5.88
	31	6.73 6.83 6.33	6.63	7.92 8.33 6.66	7.64	6.58 6.54 5.46	6.19
	32	7.50 7 66 6.66	7.27	8.07 8.33 6.66	7.69	6.18 6.51 5.66	6.12
	33	7.69 6.16 5.55	6.80	8.46 8.66 7.77	8.30	7.46 7.97 6.44	7.29
	34	7.23 7.42 6.88	7.18	8.42 9.08 7.44	8.31	7.56 8.19 7.09	7.61
	35	8.35 7.42 8.33	8.03	8.77 9.16 7.66	8.53	7.71 8.29 6.69	7.56
	36	7.88 8.66 7.55	8.03	8.81 9.50 7.44	8.58	7.29 7.79 6.66	7.25

COMPARISON OF EACH GROUP'S
MEAN TO THE OVERALL MEAN



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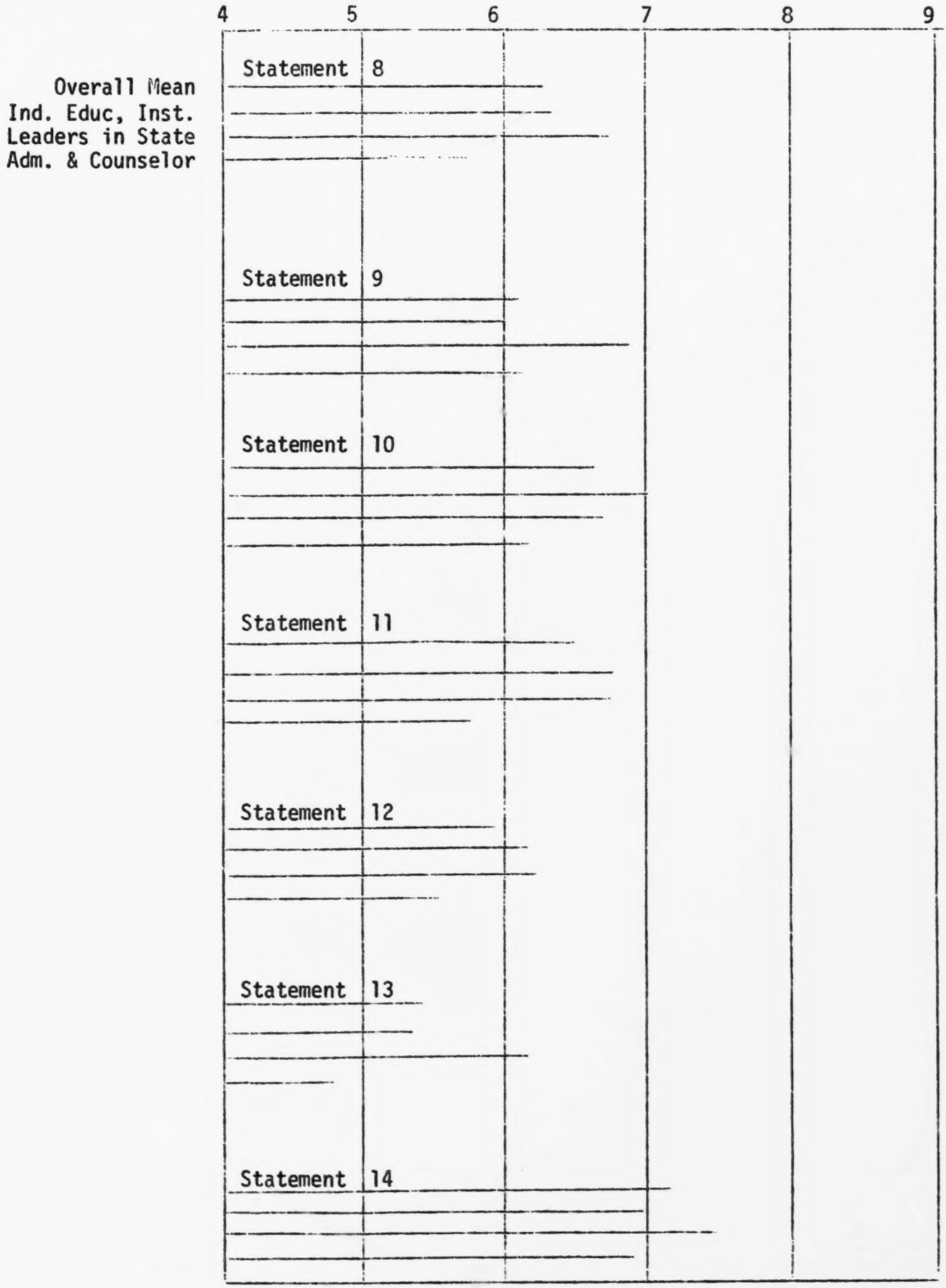

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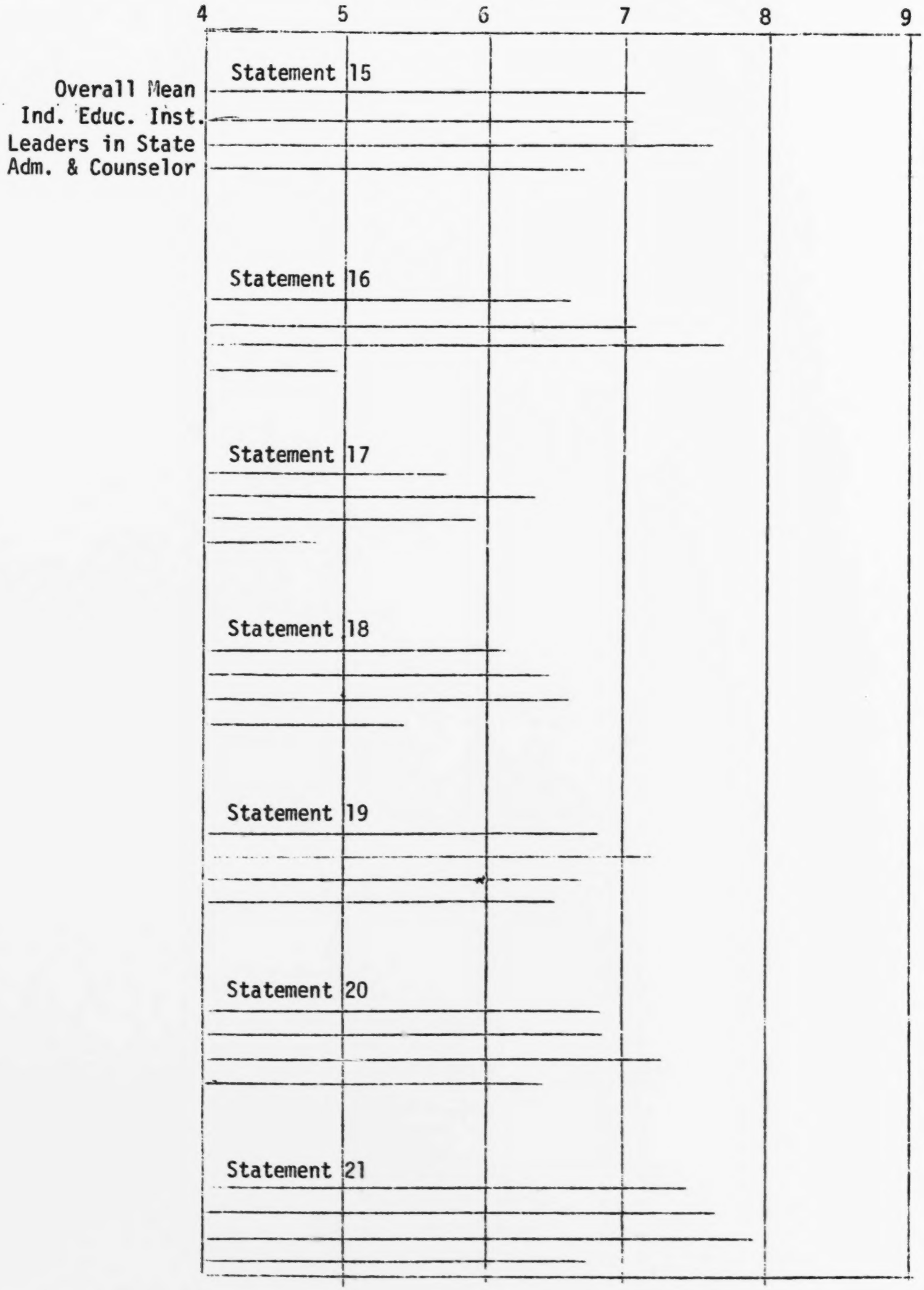

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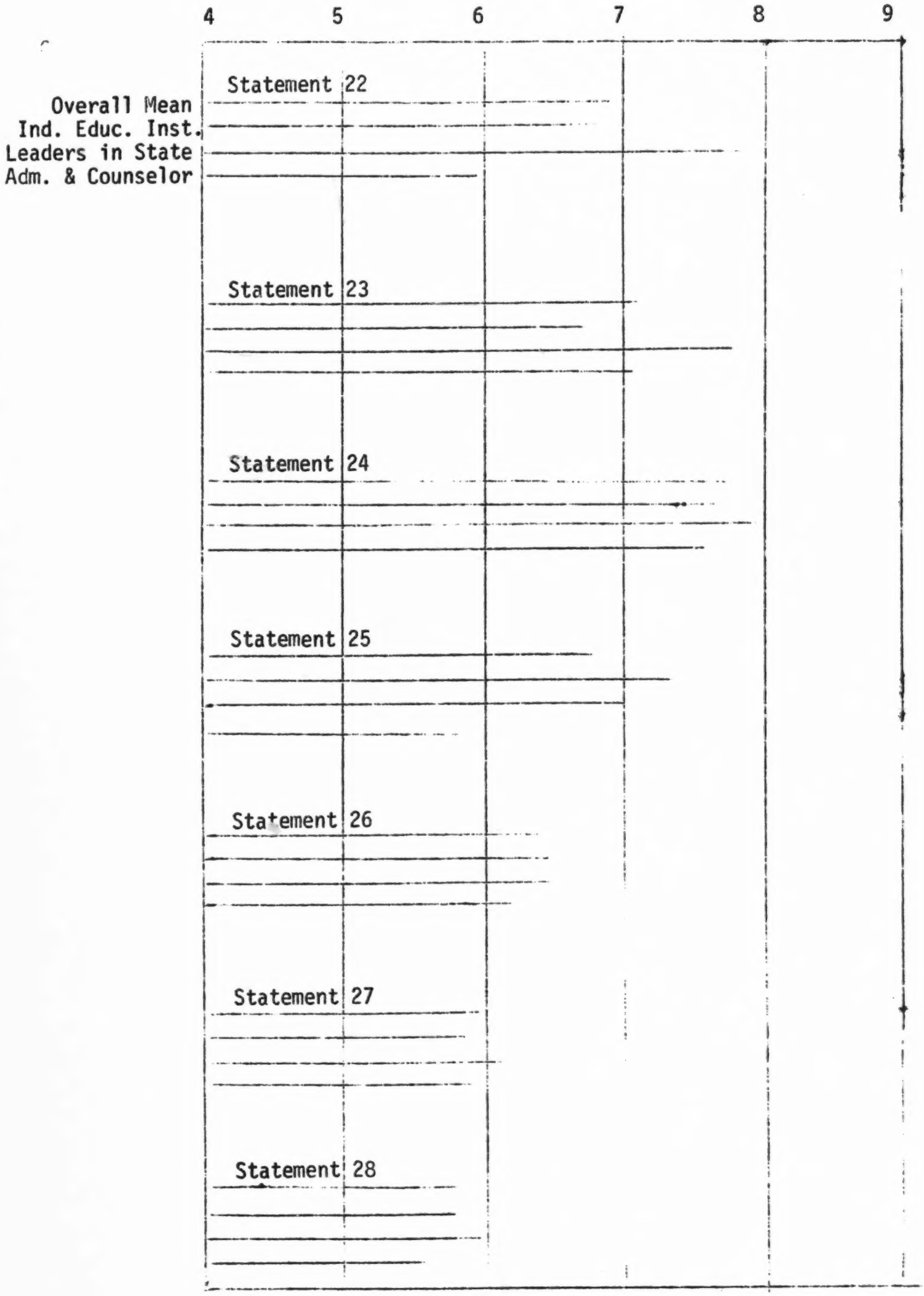
MEAN TO THE OVERALL MEAN



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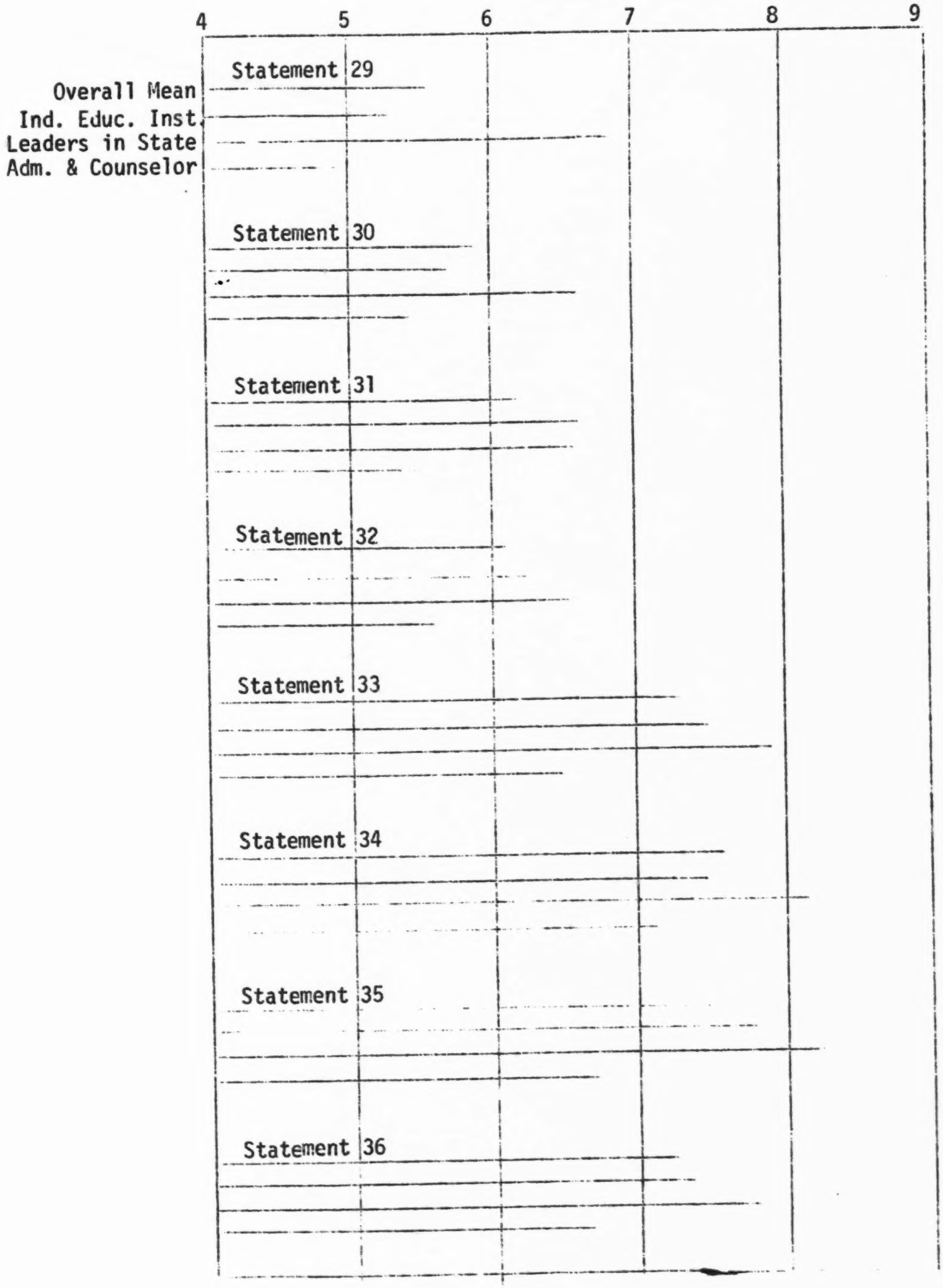
MEAN TO THE OVERALL MEAN



VT 000 830
School Program for Practical Nurses.

Milwaukee Vocational, Technical and Adult Schools, Wis. Curriculum Dept.
Milwaukee Inst. of Technology, Wis. Curriculum Dept.
MF AVAILABLE IN VT-ERIC SET.
Pub Date - Sep66 74p.

STATE CURRICULUM GUIDES; *PRACTICAL NURSING; *STATE STANDARDS; EDUCATIONAL OBJECTIVES; FACILITY REQUIREMENTS; ADMINISTRATIVE ORGANIZATION; STUDENT TEACHER RATIO; *HEALTH OCCUPATIONS EDUCATION; *PROGRAM GUIDES; PROGRAM EVALUATION; ADMINISTRATOR QUALIFICATIONS; ADMINISTRATOR RESPONSIBILITIES; TEACHER QUALIFICATIONS; TEACHER RESPONSIBILITY
WISCONSIN

Developed by registered nurses and an instructional dean and approved by the Wisconsin State Board of Nursing this plan purposes that the Milwaukee Institute of Technology have responsibility for the total practical nursing educational program from the time of recruitment and enrollment through graduation of the student. The revised 12-month curriculum is for use by instructors in course planning. Students should be age 18-55 and be high school graduates or equivalent. Sections in the document are: (1) Philosophy and Objectives, (2) Organization and Administration, (3) Curriculum, (4) Faculty, (5) Students, (6) Facilities and Resources, (7) Records, (8) Evaluations, (9) Cooperating Agencies, and (10) Meeting the Requirements for Curriculum Components. (DM)

VT000830

ED0 31587

SCHOOL PROGRAM FOR PRACTICAL NURSES

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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Milwaukee Institute of Technology

Division of Instruction and Research

Curriculum Department

VT000830

September, 1966

M E M O R A N D U M

TO: The ERIC Clearinghouse on Vocational and Technical Education
The Ohio State University
980 Kinnear Road
Columbus, Ohio 43212

FROM: (Person) Mary D. Vick, Dean, Nursing (Agency) Milwaukee Technical College

(Address) 1015 North Sixth Street, Milwaukee, Wisconsin 53203

DATE: May 24, 1968

RE: (Author, Title, Publisher, Date) School Program for Practical Nurses, Milwaukee (Institute of Technology), September, 1966 Technical College sent January, 1968

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Provide information below which is not included in the publication. Mark N/A in each blank for which information is not available or not applicable. Mark P when information is included in the publication. See reverse side for further instructions.

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(3) Utilization of Material:
Appropriate School Setting Milwaukee Technical College
Type of Program 12-Month Practical Nursing Program
Occupational Focus as above
Geographic Adaptability Wisconsin only
Uses of Material Course planning
Users of Material Instructors of students in Practical Nursing Program

(4) Requirements for Using Material:
Teacher Competency Registered Nurses with at least B.S. degree
Student Selection Criteria shown in publication
Time Allotment shown in publication

Supplemental Media --
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TABLE OF CONTENTS

		Page
A Plan for Curriculum Revision		1
Section I	- Philosophy and Objectives	3
Section II	- Organization and Administration	5
Section III	- Curriculum	11
Section IV	- Faculty: Qualifications, Responsibilities, and Functions	17
Section V	- Students	24
Section VI	- Facilities and Resources	27
Section VII	- Records	29
Section VIII	- Evaluations	30
Section IX	- Cooperating Agencies - Present and Proposed.	33
Section X	- Meeting the Requirements for Curriculum Components as per Code N3.06(5)	38

APPENDIX A

Exhibit I - Organizational Chart

Exhibit II - Sample Agreement

Exhibit III - Student Selection and Admission

Exhibit IV - Advisory Committee

Exhibit V - Admission Forms

Exhibit VI - Assignment (Dates) of Practical Nursing Students to Medical-Surgical, Obstetrics, and Pediatrics at a Typical Cooperating Agency - June 1966 - January 1969

APPENDIX B

Exhibit A^1 - Proposed Plan Showing Relationship of Class Lectures, Laboratory, and Clinical Experience

Exhibit A^2 - Curriculum Plan by Semesters and Summer Session (September class)

Exhibit B - Curriculum Plan Over Total Program for the Typical Student

APPENDIX B (Continued)

Exhibit C - Diagrammatical Chart on Rotation

Exhibit D - Practical Nurse Program - Contrasting Present Versus Projected Clinical Experience Plan

Exhibit E - Plan I - Instructor-Student Ratio (Using Four General Hospitals)

Exhibit E - Plan II - Instructor-Student Ratio (Using Five General Hospitals)

Exhibit F - Plan I - Rotation Chart (Using Four General Hospitals)

Exhibit F - Plan II - Rotation Chart (Using Five General Hospitals)

APPENDIX C

Course Summary Sheets

Outlines of Instruction

(These courses are in the process of revision and rearrangement.)

Three new courses are being constructed as follows:

1 - Nurs 106 MEDICAL AND SURGICAL NURSING 2
(This is at present included in parts of 105, 107, and American Red Cross First Aid.)

2 - Nurs 116 DIET THERAPY
(At present included in Nurs 111. Nurs 111 will include normal nutrition and pregnancy, and aged diets only.)

3 - Nurs 118 DRUGS AND THEIR ADMINISTRATION

Milwaukee Vocational Technical and Adult Schools

Institute of Technology

Department of Practical Nursing

A Presentation to the State Board of Nurses

A Plan for Curriculum Revision

The Milwaukee Institute of Technology Practical Nursing faculty hereby present to the Wisconsin State Board of Nursing a plan for revision of curriculum so that the controlling institution (The Milwaukee Institute of Technology) through the nurse director/faculty counselor will have responsibility for the total educational program from the time of recruitment and enrollment through graduation of the student.

Several factors have influenced the faculty in attempting this revision:

1. The National League for Nursing "Criteria for the Evaluation of Educational Programs in Practical Nursing"[1] has given incentive and has pointed up the need for revision so that the entire program will be the responsibility of the controlling institution.
2. The Wisconsin State Department of Nurses, the Wisconsin State Board of Vocational and Adult Education, and the Administration at the Milwaukee Institute of Technology have recognized the weakness inherent in the present curriculum because the responsibility for the entire program has been divided between the so-called controlling institution and the cooperating agencies. This is evidenced by the fact that the cooperating agencies have subsidized the students with educational stipends which in turn implies that service demands at times may take precedence over educational needs of the student. This has been evidenced by many weekend terms of duty of all students in nearly all the affiliating areas, and usually under the supervision of other

[1]"Criteria for the Evaluation of Educational Programs in Practical Nursing," National League for Nursing, Department of Practical Nursing Programs, 1965.

than the clinical instructors. The cooperating agencies have also very generously employed the clinical instructor or instructors for the students assigned to their cooperating agency. These clinical instructors have in all cases had other dutied assigned them by the agency besides those of the student practical nurse; and rightly so, since the school was not paying for their services to the student.

These factors have been paramount in the consideration for a revision of curriculum. However, until the Vocational Act of 1964 was passed, there was not money enough to pay for the enlarged instructional staff necessary for the revised curriculum. With the aid given from this source, it seems that, at long last, the school can assume its entire responsibility as the controlling educational institution.

The Administration and Faculty of the Practical Nursing Program wish to thank the Wisconsin State Board of Nursing for the consideration of this curriculum revision.

SECTION I

Philosophy and Objectives

Philosophy of MIT

A stated philosophy of the Milwaukee Institute of Technology in the 1963-64 Annual Descriptive Report is as follows: "The primary mission of all schools is to provide vocational and technical training which will lead toward employment, or to provide retraining which may lead to advancement or to a vocational competence in a new or different skill."

Philosophy of the Practical Nurse Faculty

The faculty of the Practical Nursing Program of the Milwaukee Institute of Technology believe that practical nursing is an integral and essential part of all nursing, and that qualified persons can be prepared, in a relatively short period of time, to meet the nursing needs of the community for practitioners who can function safely and efficiently under the direction of a registered nurse or a physician. This belief is founded upon the knowledge that the educational needs of the student must be well defined, that the learning experiences must be carefully selected and supervised, and that the individual must be challenged to become a mature, well-adjusted person, capable of making sound judgments within the scope of her preparation.

Purpose

The purpose of the Practical Nursing curriculum is to provide effective educational and clinical experiences to enable qualified persons to become safe,

competent, licensed practical nurse practitioners, who, working under the supervision of a registered nurse or physician, can assist in meeting the nursing needs of the community.

Purpose (continued)

The objectives are:

Objectives

1. To assist the student to acquire knowledge, to develop skills, and to learn the ability to exercise judgment in nursing situations under the direction of a professional nurse or physician.
2. To assist the student to develop wholesome attitudes, appreciations, and ideals for a successful, happy life.
3. To impart to the student the concepts of good patient care and to instruct her in the practical use of these concepts.
4. To prepare the student to function effectively as a member of a team in various health and social community services.

SECTION II

Organization and Administration

Origin of Practical Nursing at MIT

Practical nurse training was introduced as an organized program at the Milwaukee Institute of Technology in September, 1947, by the Board of Vocational and Adult Education. Because of America's rapidly expanding population, the longer life span of the average individual, and the increase in chronic illness among aging people, there has developed a great need for additional nursing services. The supply of professional nurses is not enough to meet these demands, so a program was started to educate persons to do practical nursing. The trained practical nurse supplements the services of the professional nurse. The program provides effective school and clinical experiences that will result in a development of the skills and related knowledges required to perform safely and intelligently the duties of a practical nurse.

Organizational Plan

The Organizational Chart, Exhibit I, shows the lines of authority and the channels of communication within the controlling educational institution, and the relationship with the personnel of the cooperating agencies.

Administrative Responsibility

The nurse director/faculty counselor has the responsibility for the total program and she in turn is accountable to the director of the controlling educational institution (MIT).

Policies and Finances

The controlling educational institution determines the policies and provides the financial resources for the entire program through local, state, and federal funds.

Instructor Responsibilities

The instructor of the practical nursing program is responsible for those students assigned to her area of instruction in teaching, supervising, evaluating, guiding, and counseling.

On-the-spot disciplinary action is to be carried out by by the instructor in a rational, fair manner when the welfare of the patient is at stake, or when the learning and well-being of fellow associates is hampered by the student's actions. All such disciplinary actions are to be reported as soon as possible to the nurse director/faculty counselor. Further action, if needed, will be the responsibility of the faculty counselor to either take action, or refer the student to the guidance counselor and/or the school psychologist.

Instructor's Professional Assignment

The instructor's professional assignment will provide time for student evaluations, faculty meetings, curriculum development, and in-service education. The percent of her load will be equated to that of other instructors in the controlling institution in accordance with a school policy, but the difference in her kind of responsibilities to those of other disciplines will be considered in her assignment.

It is recognized by the administration that the control cannot be too rigid, but that there needs to be much creativity and flexibility in planning the curriculum so that improvement will not be stymied.

Flexibility of Control

The personnel department has on file each instructor's qualifications, and all personnel policies for the faculty are provided in writing in the procedure manual provided for each faculty member.

Personnel Policies:

These include:

Qualifications for the position (See under Faculty, Section IV) Salary scale and promotion policies.

a. Qualification for Position

The vacation for the practical nurse faculty is the same as the other Milwaukee Institute of Technology faculty during the school year, which includes the school recesses and holiday time.

b. Vacations

Sick leave is provided by the school and includes fifteen days per year accumulative to 120 days.

c. Sick Leave

Since the practical nurse program is a 365-day program, the faculty may be assigned to work an additional period of time during the summer, at the same rate of pay as during the academic year.

d. Summer Work

The school provides for a sabbatical leave for purposes of study following six years of successful teaching on a full-time basis. During this time, the instructor is paid one-half of her monthly salary.

e. Leave of Absence for Study

A State Teacher Retirement plan is provided, and this is paid in accordance with the monthly salary of the instructor. It is deducted from the bi-monthly checks, and the state contributes approximately an equal amount to the fund. This plan is coordinated with social security.

f. Retirement Plan

A major medical insurance program is provided for the employee of the Milwaukee Institute of Technology. This includes both in- and out-patient medical care, as well as for all prescribed drugs. The premium is paid by the school. An employee may elect to include his or her family.

g. Major Medical Insurance Plan

The instructor may elect to come under the group life insurance plan. The individual pays one-half of the premium, and the school pays the rest.

h. Group Life Insurance Plan

After three years of successful teaching, the instructor will come under the provisions of the State Tenure Laws.

i. Tenure

The total program is financed by the controlling institution with money made available through local, state, and federal funds.

Finance and Budgets

Yearly, each instructor is given an opportunity to make a budget for equipment and supplies needed for the betterment of her area of instruction. These budgets are first approved by the nurse director/ faculty counselor and then submitted to the director

of the school for further action by the director and business manager in consultation with the faculty counselor.

Finance and Budgets (continued)

Agreements between the controlling institution (The Milwaukee Institute of Technology) and the cooperating agencies will be drawn up by joint action. The responsibilities of each party will be identified, and special care will be given to indicate the new approach whereby the controlling institution will have full control of the students' learning experiences. Plans for annual review will be written into the agreement. A sample agreement is attached as Exhibit II.

Agreements

An advisory committee has been functioning, and its advice is sought, either as a committee or individually as community citizens. The members composing this committee were selected from all groups concerned with the education of practical nurses. Representation is as follows:

Advisory Committee:

a. Composition

1. a Registered Nurse
2. a Licensed Practical Nurse
3. a Hospital Administrator (from a hospital connected with the practical nursing program)
4. a Director of Nursing (from a hospital which affiliates with the practical nursing program)
5. a Licensed Physician
6. a Public Health Nurse
7. Lay Person

See Exhibit IV.

Minutes are kept of all committee meetings.

Minutes

The program is sensitive to the community nursing needs and is assisted in publicity for purposes of recruitment of students by community resource people, committees, television announcements, newspaper releases, and a specially prepared brochure that is sent to all surrounding community high school guidance counselors. Another means of publicity for purposes of recruitment is the supplying of resource people for career day and future nurse programs.

Publicity Media

SECTION III

Curriculum

Curriculum Plan

a. Relationship of Weeks and Months in each Semester and Summer Session

The curriculum plan over the total program for the typical student is shown in Exhibits A^1, A^2, and B. In Exhibit B, the chart shows the proposed number of hours of instruction for each subject taught in relation to the weeks and months for each semester and summer session. The total hours of instruction will be approximately 1356 - 55' periods or 1243 clock clock hours.

b. Comparison of Old and Revised Curriculum

Exhibit D chart shows the comparison between the old curriculum and the revised as to hours and weeks of clinical experiences.

c. Relationship of Hours of Lecture, Laboratory, and Clinical Experience

In Exhibit A^1, there is shown a relationship of lecture hours, school laboratory hours, and clinical experience hours. The number of hours and weeks spent in each type of clinical area is shown. The weeks in clinical experience is the same as at present; that is, 42 weeks. However, because the experiences are carefully selected and because service to the cooperating agency is only incidental to the students' educational needs, it is thought that there will be a better application and understanding of the selected learning experiences received than in the old curriculum plan.

d. Primary Difference Between Old and Revised Curriculum

The primary difference between the old and the revised curriculum plans is that the total program will be provided by the controlling educational institution. This means that there will be a need for more

instructors paid by the controlling institution; there will be fewer students per instructor in the clinical areas; all students, at all times, will be under the direction of an instructor provided for them by the controlling institution, and all experiences will be selected to meet the students' educational needs.

d. Primary Difference Between Old and Revised Curriculum (continued)

The ratio of instructors to students will increase as the students become more secure and more competent until there will be twice as many students per instructor in the final clinical practicum (from one instructor for nine students to one for eighteen students).

e. Ratio of Instructors to Students

The overall ratio of students per instructor is not as high as it seems at first glance, since in the school lectures there will be either a 1:36 or a 1:72 ratio, but due to the small numbers of students that can be accommodated in the specialized areas of pediatrics and obstetrics, the ratio will of necessity be low in these areas, approximately one instructor for five or six students.

The date of admittance for each class and the rotation to the different areas is shown in Exhibit C. This chart can be used as a Master plan for the classes admitted through February, 1968. Two classes will be admitted each year at the beginning of each semester.

f. Admission and Rotation Dates

An explanation of the Master plan chart in Exhibit C above is as follows:

The entire year is divided into two semesters and one nine-week practicum. Each semester is divided into three six-week periods excluding days for school recesses. Each semester extends over 18-plus weeks. Basic nursing is taught at the school for approximately three weeks before the student is taken into the medical and surgical area of the cooperation agencies. In the medical and surgical area, the student will be introduced to the patients, and will learn to communicate with them and to develop an awareness of their needs. She will perform simple basic nursing procedures assigned by her instructor.

g. Explanation of Master Plan Chart

First Semester

a. First Six Weeks

In the second period of six weeks, the student will remain in the medical and surgical area for clinical experience. She will learn to plan and give nursing care to selected patients "in a variety of nursing situations that are relatively free of complexity,"[1] and in which the patient's condition is comparatively stable, such as encountered in care of the aged and chronic patients in all age groups. The student's experiences will proceed from the simple to the more complex as she nears the end of the second six weeks, depending upon her ability to acquire nursing skills and to learn nursing principles. She will spend two consecutive days each week in this area and will have theory classes the other three days. There will be concurrent application of theory to practice.

b. Second Six Weeks

[1]"Criteria for the Evaluation of Educational Programs in Practical Nursing," National League for Nursing, Department of Practical Nursing Programs, 1965.

First Semester (continued)
c. Third Six Weeks

The third six-week period of the first semester, the student remaining in the medical and surgical areas will be given, in accordance with her capabilities, a chance to care for the more acutely ill and convalescent patients. She will learn to plan and give care to groups of selected patients. Working under the instructor's supervision, she will be taught to assist with more complex procedures, learning to give standard or routine medications, to perform routine treatments, and to do other functions that fall within the accepted roles of the licensed practical nurse. This also will be on two consecutive days each week, with concurrent theory classes taught at school.

Second Semester

At the beginning of the second semester the student will be rotated into the different specialties, i.e., obstetrics, six weeks; pediatrics, six weeks; and mental nursing, six weeks; and will spend three consecutive days each week in the clinical area. Concurrent theory will be taught at school and each instructor will help the student in meaningful application of theory to practice.

Care of Mothers and Newborn

In obstetrics, she will be rotated between nursery and the postpartum care areas. She will learn to plan and give competent, understanding care to mothers who have had uncomplicated pregnancies. She may be allowed to observe some of the complications of pregnancy if opportunity permits. She will be allowed to observe a normal delivery and to assist in the care of the newborn baby, and give routine medications and treatments.

Pediatric Nursing Care

In the second six-week period of the second semester, the student will be rotated into pediatrics, where she will learn to plan and give care to the various age groups of childhood. She will learn to understand the stages of development of children and their normal differences, in addition to having an opportunity to cope with the care of the sick child and to learn how his behavior may be affected by illness. She will have an opportunity to observe individual differences and will help in planning for play therapy. She may assist in giving routine medications and treatments if allowed by hospital policy.

Care of the Mentally Ill

The last six weeks of the second semester, the student will spend in the care of patients with mental illnesses. She will learn to plan, observe, and care for the various types of mentally ill patients. During this period she will help in planning for their rehabilitative therapy and will spend time learning to help the patient communicate. The student will be helped to recognize the different forms of mental illness, and to learn that each patient may show a variety of psychotic symptoms. She will assist in giving medications and treatment to these patients.

Practicum

Following a four-week vacation, the student will go back to the medical-surgical area of her first semester's clinical experience to spend the next eight weeks in practice on a team relationship. She will gradually learn to assume the duties expected of the licensed practical nurse. She will be assisted by

her instructor as needed but on a much less personal relationship. The ratio of numbers of students to instructors will be doubled during this period. Here she will spend approximately 35 hours in clinical practice and clinical classes and one or more periods in advanced medical-surgical classes back at school with other classmates from the various practicum areas.

Practicum (continued)

The last week of her year's program will be spent in the mornings at the same place of medical-surgical nursing and in the afternoons at school where she will have planned conferences with her instructors. Evaluations and achievement reviews will be planned during this week, and the student will be assisted in making application for licensure.

Conferences, Evaluations, and Achievement Testing

In Exhibit A[2], course numbers and titles are shown - three new courses will be added; they are:
Nurs 106 Medical-Surgical Nursing 2; Nurs 116 Diet in Disease; and Nurs 118 Medications. The outlines of instruction for all courses will be found in Appendix B.

Courses Offered in Program, Including Outline of Instruction

SECTION IV

Faculty: Qualifications, Responsibilities, and Functions

Nurse Faculty Composition

The faculty for the practical nursing program beginning in September, 1966, will be increased to include 15-16 full-time, and 2-3 part-time, nursing instructors in addition to the nurse director/faculty counselor. The number of faculty will depend upon the number of areas into which she will accompany students, the number of students, and the percent load she may carry as per school policy.

Non-Nurse Faculty

Non-nursing faculty members will teach in Normal Nutrition, Diet in Disease, Communication Skills, and possibly in Body Structure and Function courses.

Secretarial Help

Full-time and a part-time records secretaries are presently employed. The faculty counselor has a full-time secretary, and the faculty have a student secretary who works the number of hours needed to provide adequate assistance to the faculty.

Guidance Counselor

A nurse guidance counselor, who has had twelve years of teaching experience in the practical nursing program prior to the present appointment, interviews and admits the prospective students in accordance with the admission policies set up by the nursing faculty. See Exhibit III.

The qualifications, responsibilities, and functions are as follows:

Faculty Counselor

A. Faculty Counselor

Qualifications

1. Qualifications of the Faculty Counselor of the Practical Nursing Program.

   a. She shall have completed a Master's degree in nursing with at least twelve hours in education.

   b. She shall hold a currently valid Wisconsin Certificate of Registration as a nurse.

   c. She shall have academic preparation in administration of nursing education, educational principles, curriculum development, teaching, guidance and counseling, current trends in nursing on a graduate level, applied social sciences, and research.

   d. She shall have met certification requirements of the State Board of Trade and Industrial Teachers Certification as applied to the professional nurse.

   e. She shall have completed at least five years in varied nursing experiences, including instruction and assistant to one educational administrator of nursing.

Responsibilities

2. Responsibilities of the Faculty Counselor

   She shall be responsible for carrying forward the total program and for delegating duties and responsibilities to the various members of the faculty in conformity with general school policies, and with the State Administrative Code for such programs.

Functions

3. Functions of the Faculty Counselor

   a. To administer the total program and to be responsible to the director of the Milwaukee Vocational Technical and Adult Schools.

   b. To delegate duties and responsibilities to the faculty as deemed necessary for the efficient management of the program.

   c. To review reports of progress from the faculty and take appropriate action when necessary to enhance the total program.

3. Functions of the Faculty Counselor (continued)

Faculty Counselor

Functions (continued)

d. To evaluate and approve the budget for the department of nursing and route it on for final approval by the director and assistant director.

e. To see that adequate and fair schedules are formulated for all the nurse instructional staff in accordance with school policies.

f. To make periodical evaluation of all instructional nursing staff and assist in upgrading the performance of this staff.

g. To interview, evaluate records, and recommend applicants to the school director for additional instructional staff as needed.

h. To assign subjects to be taught, duties, and activities to each instructor.

i. To approve all rotation schedules and assignments of students to clinical laboratory experiences.

j. To direct nurse faculty on the extended campuses with respect to the student's clinical experiences and progress.

k. To work with the department of student services in maintaining complete, accurate records of all phases of the program. Individual student records are accurately recorded and the necessary copies sent to the state department of nurses.

l. To help the faculty in formulating policies and records on health, welfare, promotion, and graduation.

m. To recommend for appointment by the school director an advisory committee to the program.

n. To hold specific and general meetings with the nursing faculty for the purpose of improving and evaluating the program.

o. To visit, approve, and recommend to the school director additional clinical facilities as needed.

3. Functions of the Faculty Counselor (continued)

Faculty Counselor

Functions (continued)

p. To prepare an annual report to the state department of nursing and to the state department of vocational education.

q. To carry out such additional administrative duties as necessary for improvement of the total program.

B. Instructor

Instructor

1. Qualifications of the Instructor

Qualifications

a. She shall have completed a Bachelor's degree in an accredited college or university with a major in nursing or nursing education or its equivalent.

b. She shall hold a currently valid Wisconsin Certificate of Registration as a nurse.

c. She shall have had two years of practical experience in nursing service.

d. She shall have had at least six months of teaching experience in an accredited school of nursing.

e. She shall meet certification requirements of the State Board of Trade and Industrial Teachers Certification as applied to the professional nurse.

2. Responsibilities of the Instructor

Responsibilities

a. An instructor in the practical nursing program shall, under the guidance of the faculty counselor, be responsible for the preparation and delivery of all instructional material assigned to her.

b. She shall guide, confer with, and evaluate students in their performance in the school and in the clinical areas under her supervision.

c. She shall assist in carrying forward the total program of practical nursing.

3. Functions of the Instructor

Functions

a. To prepare course outlines and objectives for courses assigned to her to teach.

b. To evaluate periodically and assist in improving the instructional programs both at the school and in the clinical areas.

3. Functions of the Instructor (continued)

Instructor

Functions (continued)

c. To implement well-balanced clinical experiences for each student.

d. To engage in appropriate professional and academic activities and development.

e. To be an active member of her professional organizations.

f. To guide, supervise, and counsel the student assigned to her in the learning processes necessary for acquisition of subject matter, proficiency in skills, and use of judgment.

g. To help interpret the school's program and policies to the hospital personnel.

h. To make out student evaluations and prepare and administer tests.

i. To carry out other duties concerned with the efficient management of the practical nursing program as assigned by the faculty counselor in accordance with school policies, such as:

(1) Student health program
(2) Clinical laboratory experience schedules
(3) Records and reports
(4) Career Day and promotional talks
(5) Exhibit window displays
(6) Participation in the preparation and implementation of extracurricular activities

C. Secondary Instructor (a fully qualified instructor who has a secondary assignment)

Secondary Instructor

1. Qualifications of the Secondary Instructor

Qualifications

a. She shall have completed a Bachelor's degree in nursing.

b. She shall have academic preparation in educational psychology, sociology, and clinical specialities.

c. She shall have completed one year of satisfactory nursing care experience in an approved hospital. (Note.--Exception: Provisional or emergency approval.)

2. Responsibilities of Secondary Instructor

Responsibilities

a. She shall be responsible for the instruction, supervision, and evaluation of students assigned to her specific area under the direction of the instructor.

b. She shall relate and implement the school's objectives to the hospital personnel. She shall keep anecdotal records on each student under her teaching supervision.

c. She shall report to the instructor concerning student performance and problems and work together for the betterment of the clinical program.

3. Function of Secondary Instructor

Functions

a. To make out student daily assignments based on student and patient needs in line with the objectives for the clinical experience.

b. To supervise, counsel, and guide the student in all clinical areas assigned to her.

c. To make out student evaluations in conference with the instructors who assist her in the teaching of the student.

d. To assist in the planning and teaching of classes under the direction of the instructor.

e. To assist the instructor in preparation of tests and in carrying out of school policies.

f. To engage in appropriate professional and academic activities and development.

Ratio of Instructors to Students in Clinical Area

The ratio of instructors to students will be higher when in the cooperating agency's clinical areas when students are giving direct nursing care than in the classroom. See Exhibits E and F. In the classroom there will be a 1:36 up to 1:72 ratio, while in the clinical area it may vary from 1:5 to 1:18.

Time will be provided for regular weekly faculty meetings where the faculty will be able to develop the curriculum, plan for implementing the program, develop appropriate objectives, and discuss and resolve student problems, insofar as possible. Records shall be kept of these meetings.

Faculty Meetings

The faculty has set up and will maintain standards of student admissions, progression, and graduation. They will evaluate the achievement of the student according to these standards. The student will be counseled by the instructor assigned to her, as needed.

Faculty Group Activities

SECTION V

Students

Selection of students is delegated to a nurse guidance counselor who is fully acquainted with school policies and requirements for admission. Any major deviation from these must reflect the policies for admission in line with the school's admission requirements. When questions arise on advisibility of admission, a conference is held with the faculty counselor, the student service counselor, and the guidance counselor. Here action is taken and followed through by the guidance counselor. See Exhibit III (Student Selection and Admission) and Exhibit IV (Admission forms).

Admission Policies and Selection of Students

Personnel policies will be made available through a practical nurse student handbook. This is in the process of being prepared.

Student Handbook

A full-time school physician and a full-time registered nurse are available during regular school hours for immediate or emergency health problems. Referral to the student's own physician is made. Each student is encouraged to carry a hospital and medical insurance plan and liability insurance. All students have a terminal X-ray and V.D.R.L. test within the last week of the program. Seven days' sick leave is allowed each student.

Health Care after Admission

Each student has a scheduled conference at mid-term, at the end of each semester, and at the completion of each clinical area. Special conferences can be arranged with faculty, faculty counselor, guidance counselor, and/or school psychologist upon the request of either the student or the instructor.	Counseling and Guidance
Students with financial problems are referred to the guidance counselor in charge of scholarships and loans. Faculty recommendation, as to nursing potential, will be made as necessary for these scholarships and loans.	Scholarships and Loans
Each class receives four weeks of vacation within the one-year program in addition to the scheduled school recesses.	Vacation
A letter system of grading is used based on percentage score: A - 93-100; B - 85-92; C - 77-84; D - 70-76. Final examination in most courses counts 1/3 of final grade. Students must maintain a 2.0 grade-point average to remain in good standing. Mid-term and final grades are sent to the student by the student service department each semester.	Grading System
Permission for outside employment may be granted by the faculty counselor only if a "C" average is maintained in all subjects.	Outside Employment
Provision within the school week will be made for study time and conferences. A balance of classroom and clinical experience will be in approximately a 1:2 ratio.	In-School Time

A practical nurse student chorus under the direction of a school music director performs in all school functions, capping, and graduation exercises. Noontime assemblies, at which time movies are shown, are open to all students. Students are encouraged to participate in student council activities when there is no conflict with scheduled classes. An orientation tea is held the first week of school, and usually the event is held as a big sister-little sister affair. A capping ceremony, with a formal tea, is held after the first six weeks. Parents, relatives, and friends are invited.

February and June graduation exercises are held and a reception given afterward for all.

Swimming or gymnastics is available to all students during the noon hours.

Student Activity

SECTION VI

Facilities and Resources

School Facilities

Ample room has been provided for the practical nursing students. The following rooms are designated and set aside for use by the students of this department: two rooms for 26 students; one room for 72 students; one room for 80 students with TV facilities; one demonstration-lecture room for 50 students; one fully equipped procedure laboratory for 22-24 students; and a tiered room for 125 students.

Other rooms and laboratories are made available when necessary - such as: a fully equipped anatomy and physiology laboratory and a demonstration nutrition room with work area - stove - sink - and refrigerator. Since all these rooms have been assigned to the nurse director/faculty counselor for the Health Occupations departments, they can be used as scheduled by her without prior approval. Office space is provided each instructor.

Teaching Aids

Teaching aids and materials are available at any time. These include teaching machines: opaque projector, 35 and 16 mm projectors, films, record players, tape recorders, overhead projectors, blackboards, manikins, Chase dolls (3), skeletons, bones, microscopes, sterilizers, scales, and all fundamental nursing teaching aids.

The clinical facilities in cooperating agencies will be sufficient when the final surveys are made in March, for additional areas.	Clinical Facilities
All cooperating agencies are approved or licensed by appropriate authorities.	
Agreements will include provision for conference rooms, locker rooms, dining facilities, and office space provided by the cooperating agencies.	Conference Rooms, etc., at Cooperating Agencies
The school's library holdings for practical nursing number 918 and are sufficient. Budget arrangement allows for requisitions in numbers sufficient to keep the books current as well as to add additional volumes. These are available to the student during the school day and on school evenings, Monday through Friday.	Library Holdings
The school will furnish an adequate and current supply of reference books, periodicals, and other materials pertinent to the practical nursing program at the coordinating agencies, as well as in the study areas provided for practical nursing students at school. These will be for the use of both students and instructors in meeting the objectives of practical nurse education.	References, etc., Available at Cooperating Agencies

SECTION VII

Records

All student records are kept on file in the student service office and are available to the faculty and faculty counselor on call. The student records are kept in order and properly recorded by the record secretaries. Strictly confidential material is sealed and opened only at the request/or by the nurse director/ faculty counselor or her representative. Student records are kept up-to-date, and are accurate.	Student Records
Minutes of all meetings are kept on file in the faculty counselor's office, as well as by each individual instructor, since copies are made available to all practical nursing faculty.	Minutes of Meetings
School bulletins and brochures are kept current and available in all faculty offices. School printing services are utilized for this use.	Bulletins and Brochures
A master plan of the curriculum is kept in the faculty counselor's office.	Master Curriculum Plan
Provision for microfilming old records is made and utilized after five years have passed.	Microfilming of Records

SECTION VIII

Evaluations

Evaluation of Controlling Institution

The organization and administration of the controlling institution is examined periodically by the State Department of Nurses to ensure the effective functioning of its facilities and the learning experiences which have been constructed for the students. Annual Reports to the State Department of Nurses and to the State Board of Vocational and Adult Education help in evaluating the effectiveness of the organization and administration of the controlling institution.

Evaluation of Faculty Members

Regular evaluations of each faculty member are made by the nurse director/faculty counselor to determine individual contributions in achieving the program's objectives and personal and professional growth. Class visitation, review of lesson plans, review of course objectives, and personal conferences are the avenues regularly used for evaluation.

Curriculum Evaluation

Periodic assessment is made by the faculty and faculty counselor of the curriculum in light of the beliefs and objectives of the program. A questionnaire is prepared so that the students may assist in evaluating the program by answering pertinent questions.

Evaluation of Clinical Resources

Clinical resources and facilities are evaluated periodically to determine whether needs of the program

are being met. Avenues for evaluation are through visits, teacher reports on clinical resources and facilities, and student growth and adjustment while on clinical experience assignments.

Evaluation of Clinical Resources (continued)

Regular meetings will be held with hospital directors of nurses, head nurses, school instructors, and the nurse director/faculty counselor for the purpose of reviewing objectives, evaluating the effectiveness of the program, and discussing both future needs and problems which may have arisen.

Student achievement, in theoretical and clinical situations, is evaluated by standardized tests, teacher-made tests, and performance throughout the entire program. National League for Nursing achievement tests are also used for evaluating student achievement and program effectiveness. Students participate in evaluating their achievement through self-evaluation and reviewing evaluations made by the faculty.

Evaluation of Student Achievement

Students have an opportunity to evaluate the entire educational program at the end of the course as a means of assessing its total effectiveness.

Student Evaluation of Program

Graduate performance on the State Board Test Pool Examination has been satisfactory in relation to national means. Each state board examination return is separately evaluated to assess the effectiveness of teaching and student performance.

Evaluation of Graduates (State Boards)

A follow-up of graduates is made through a questionnaire sent to graduates and to their places of employment to determine the level of functioning of the graduates in nursing service where they are employed, and to help determine how well the program prepared them for jobs and success in state board performance. Studies are also made of admissions to and withdrawals from the program.

Follow-up of Graduates

All evaluation data are reviewed periodically to improve the program.

SECTION IX

Cooperating Agencies - Present and Proposed

Present Cooperating Agencies

A. The cooperating agencies affiliating with the Milwaukee Institute of Technology Practical Nursing Program for the past several years are as follows:

1. Deaconess, providing three areas for affiliation - medical-surgical, pediatrics, and obstetrics.
2. St. Luke's, providing three areas for affiliation - medical-surgical, pediatrics, and obstetrics.
3. St. Michael, providing one area for affiliation - medical-surgical.
4. Waukesha Memorial, providing three areas for affiliation - medical-surgical, pediatrics, and obstetrics.
5. Milwaukee Children's, providing one area for affiliation - pediatrics.
6. Mental Health Center - North Division, providing one area for affiliation - mental.

Conference Between Cooperating Agencies and School Authority

B. All of these cooperating agencies above were visited by the Milwaukee Institute of Technology director and the nurse director/faculty counselor. In conference with the hospital administration and the director for nursing service, the proposed revised program was explained and the appropriate charts and explanations were left for the administration of the hospital to study, evaluate, and decide on whether they wished to continue or to withdraw from affiliation with the practical nursing program.

In due time the following decisions were conveyed to the faculty counselor:

Results of Conferences

1. Deaconess: would cooperate with the proposed revised program in all three areas mentioned above.

1. Deaconess

2. St. Luke's: would cooperate with the proposed revised program in all three areas mentioned above. (There had been some question concerning the possibility of losing the pediatric area because the University of Wisconsin-Milwaukee wanted it for their students. Hower, the Director of Nursing indicated that they could cooperate in all areas as per the proposed program.)

2. St. Luke's

3. St. Michael: would cooperate with the proposed revised program in medical-surgical area as before, and would also cooperate in the maternity area.

3. St. Michael

4. Waukesha Memorial: would cooperate in all three areas as before. However, due to advance information given to the school at the state level that Waukesha Vocational School planned on starting a practical nursing program in February, 1967, and wished to affiliate at the Memorial Hospital, the school was reluctant to continue in an affiliating agreement with Waukesha Memorial for the following reasons:

4. Waukesha Memorial

a. The Waukesha Vocational School would no doubt draw students from all surrounding areas, making it impossible for the Milwaukee

Reasons for Withdrawing from Affiliation with Waukesha Memorial Hospital

Reasons for Withdrawing from Affiliation with Waukesha Memorial Hospital (continued)

Institute of Technology to obtain students living near Waukesha as in the past.

b. Any student sent to Waukesha Memorial from that area by the Milwaukee Institute of Technology would not have their tuition paid as in the past (if under 21 years of age).

c. It has been hard to find students from Milwaukee who can afford to either drive to or room in Waukesha because of the additional expense.

d. Any instructor sent to Waukesha from the Milwaukee area would have to have mileage paid by the Milwaukee Institute of Technology, adding expense to the program.

e. Most important in the consideration was the fact that a closer school had been selected for students and if Waukesha were still considered as a cooperating agency, at least two additional instructors, if not three, would have to be employed, adding greatly to the expense of the program. Compare Exhibit F - Plan I and Exhibit F - Plan II.

Since Waukesha Memorial Hospital has been an excellent, up-to-date cooperating agency it was with deep regret that it seemed necessary to sever relationships, but the additional cost to the Milwaukee Institute of Technology program needed to be considered. Therefore, at this time, it seems likely that we will withdraw from affiliation with this fine hospital after the present classes have been phased out in February of 1967. The new

class A of September, 1966, would then not be sent to Waukesha.

5. Milwaukee Children's: would cooperate with the proposed program providing two instructors be sent so that students could be assigned to two different areas.

5. Milwaukee Children's

6. Mental Health Center: would cooperate, providing that the practical nursing students be transferred to the South Division on Wards 10 and 12. These two wards had previously been utilized by the Milwaukee Institute of Technology, but the students had been withdrawn pending improvements of the quality of nursing at South Division. This, to some extent, has been accomplished and since the North Division patient count has been lowered considerably, it was deemed unwise to have the practical nursing students continue at North Division. Therefore, the State Department of Nurses has been notified of the Milwaukee Institute of Technology's desire to have South Division surveyed for affiliation.

6. Mental Health Center

C. Misericordia Hospital has asked to affiliate with the Milwaukee Institute of Technology in medical-surgical and obstetrical areas, and the school has asked the State Department of Nurses to survey Misericordia for affiliation. If approved, this would possibly be considered in lieu of Waukesha Memorial Hospital.

Proposed New Facility

D. An explanation of the two proposed plans for clinical affiliation follows. The charts in Exhibit E - Plan II and Exhibit F - Plan II show the ratio of instructors to students needed if affiliation were continued with Waukesha Memorial Hospital and a new affiliation initiated at Misericordia Hospital.

Explanation of Exhibits E and F - Plan II

In Exhibit E - Plan I and Exhibit F - Plan I, the ratio of instructors to students is shown if Misericordia Hospital affiliates instead of Waukesha Memorial. It will be noted that there is an increase of two instructors in Plan II and the ratio of instructors to students will be higher if Plan I is utilized, cutting down on the expense of operating the program.

Explanation of Exhibits E and F - Plan I

The faculty of the Milwaukee Institute of Technology offer this presentation to the State Board of Nursing for consideration of revision of curriculum to start September, 1966. Any further explanation will be provided if the Board so desires. The nurse director/faculty counselor and one or two other practical nursing faculty members would like to be present to personally present this document to the Board of Nursing at their April meeting.

Conclusion

Thank you.

Mary D. Vick

Mary D. Vick and Faculty of the
Milwaukee Institute of Technology
Practical Nursing Program

SECTION X

Meeting the Requirements for Curriculum
Components as per Code N3.06(5)

	Hours Code Requires	Hours School Requires	Subtotal Hours	Total
(a) Area of health, growth and development				
Met as follows:				
1 - Body Structure and Function	30	36	36	
2 - Family Living Growth and Development		18		
Normal Nutrition (including pregnancy diets)		28		
Mental Nursing (units on mental, emotional health, needs and effects)		6		
	50		52	
(a) Total Hours 50				88
(b) Area of Nursing				
Met as follows:				
1 - a - Elementary Nursing Procedure	180	141		
Medications		18		
b - Medical Surgical Nursing 1				
Units on Aging (1st 6 weeks)	16	18		
Clinical Classes - (Conference)		6 - 183		
c - Medical Surgical Nursing 1				
Units on Care of Chronic & Aged (2nd 6 weeks)	16	18		
Clinical Classes - (Conference)		12		
Diet Therapy		8	38	
d - Medical Surgical Nursing 1 (3rd 6 weeks)				
and e Medical Nursing	32	9		
Surgical Nursing	32	9		
Clinical Classes - (Conferences)		12		
d - Medical Surgical Nursing 2				
and e Medical Nursing (includes First Aid and Diversional Activities)		13		
Diet Therapy		6		
Surgical Nursing		13		
Clinical Classes - (Conferences)		18	80	
f - Mothers and Newborn	36			
Post-partum, etc		12		
Newborn		12		
Clinical Classes (Conferences)		12	36	

Rev. 6/66

	Hours Code Requires	Hours School Requires	Subtotal Hours	Total
1 - g- Care of Children	36			
Formal Classes		24		
Clinical Classes (Conferences)		12		
Diet Therapy (for child)		6	42	
h- Care of the Mental Patient	36			
Formal Classes		18		
Clinical Classes (Conferences)		12		
Diet Therapy		6	36	
(b) Total Hours	384			415
(c) Area of Personal and Vocational Relationships Met as follows:				
1 - Personal and Vocational Relationships		18		
Legal Aspects and Employment Practices (includes trend)	48	18		
Student Problems and Evaluations		15	51	
2 - Communication Skills	16	18	18	
(c) Total Hours	64			69
	528			572

Total Hours Required by Code = 528 (does not include clinical practice)
Total Hours Given at School, including clinical classes (Conferences) = 572 (does not include clinical practice)

Rev 6/66

A P P E N D I X A

Exhibits I-VI

Organizational Chart
New

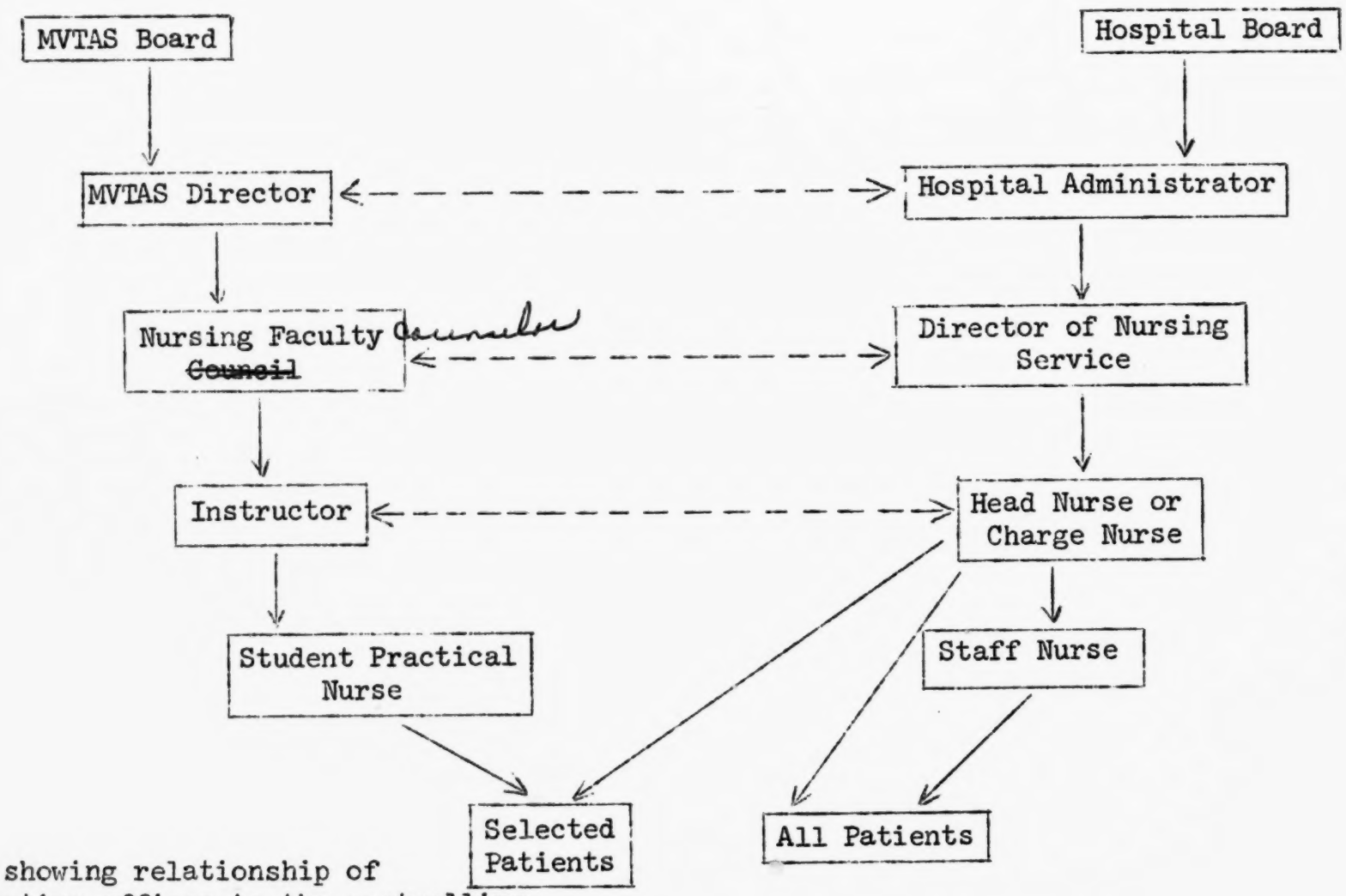
Milwaukee Institute of Technology

Service and Health Occupations Division

Practical Nursing Program

Lines of Communication - Proposed Program September, 1966

Chart I



Diagrammatic plan showing relationship of nursing administrative officer to the controlling institution and to other institutions covering parts of the program in practical nursing.

_____ Direct line of communication

- - - - - Indirect line of communication

EXHIBIT II

AGREEMENT

Between

THE MILWAUKEE INSTITUTE OF TECHNOLOGY
Service and Health Occupations Division
Department of Practical Nursing

and

_____ HOSPITAL
Located at _____
_____

PART I - BASIS and PURPOSE OF THE AGREEMENT

The Milwaukee Institute of Technology, A Division of the Milwaukee Vocational Technical and Adult Schools, and the _____ Hospital acknowledge a public obligation to contribute to education for practical nursing for the benefit of students and for community needs.

In this agreement, the term "Hospital" shall refer to the above-named hospital; and the term "Institute" or "School" shall refer to the Milwaukee Institute of Technology.

The Institute has established a program in practical nursing which requires the clinical facilities of the Hospital for laboratory practice.

The Hospital has clinical facilities suitable for the educational needs of the program in practical nursing in the areas of medical-surgical nursing, obstetrical nursing, and pediatric nursing.

It is to the mutual benefit of both the Institute and the Hospital that students have opportunities for clinical education as students and future practitioners.

PROVISIONS

The following agreement is effected by the proper authorizing bodies of both parties. The agreement is to be governed by the following general concepts of cooperative action:

PART II - RESPONSIBILITIES AND PRIVILEGES OF THE INSTITUTE

A. For the Program in General

The Institute shall assume full responsibility for offering an educational program eligible for accreditation by the Wisconsin State Board of Nursing.

B. For the Learning Experiences at the Hospital

1. The Institute shall provide the necessary faculty for the program in practical nursing who are both qualified teachers and competent registered nurse practitioners.

2. The Institute's faculty will plan, develop, implement, and be responsible for all clinical instruction over which they have direct supervision and control, and for the evaluation of students.

3. The Institute shall provide an orientation period during which nurse faculty can become familiar with Hospital policies, practices, and facilities before instructing students in the Hospital.

4. The Institute shall develop a "Clinical Instruction Plan" for using the Hospital's clinical areas to meet the educational goals of the curriculum in nursing. This plan will be made available to the Hospital at a mutually agreed upon time prior to the beginning of the school year and subject to revision in instances where conflicts with Hospital patient care responsibilities seem to exist.

5. The Institute's faculty shall be responsible for learning and observing the policies and regulations of both the Institute and the Hospital as they apply to the circumstances of clinical teaching.

6. The Institute's faculty shall have reasonable opportunity to serve as resource persons to the Hospital staff in matters contributing to the quality of patient care, such as serving on Nursing Care committees and sharing knowledge as clinical experts.

7. The Institute will assume responsibility for the health and welfare of the students in accordance with the requirements of the Students Health Program and will meet the requirements of the Wisconsin Administrative Code (N3.05(4)(b) on health, and the Hospital standards of health.

C. School Privileges

The Institute has the privilege of regularly scheduled meetings with the Hospital staff including both selected floor personnel and administrative level representatives for the purpose of interpreting, discussing, and evaluating the educational program in practical nursing, as arranged by the Hospital Education Coordinator.

PART III - RESPONSIBILITIES AND PRIVILEGES OF THE HOSPITAL

A. General Responsibilities

1. The Hospital shall maintain standards which make it eligible for approval as a clinical facility for instruction in an accredited program in practical nursing.

2. The Hospital shall permit the faculty and students of the Institute to use its patient care and patient service facilities for clinical education according to a plan approved by the Wisconsin State Board of Nursing. Details of such educational use may be described in the "Clinical Instruction Plan" submitted to the Hospital Education Coordinator and reviewed prior to the arrival of students. It shall be mutually satisfactory to both the educational goals of the Institute and the patient care standards of the Hospital.

B. Facilities and Supplies

1. The Hospital shall make available for educational purposes rooms or areas where groups of students may hold discussions and receive clinical instruction from the Institute's faculty to include:

   a. Areas for demonstration of Hospital equipment,
   b. Areas for clinical conferences,
   c. Desk space where the teacher may make clinical assignments and plans.

2. The Hospital shall permit the educational use of such supplies and equipment as are commonly available for patient care.

3. The Hospital shall provide the following facilities and services to students of practical nursing and faculty:

   a. Locker and dressing areas to change into uniform,
   b. Access to cafeteria or dining room facilities,
   c. Emergency medical care consistent with Hospital policies concerning volunteers.

4. The Hospital shall provide access to sources of information for educational purposes:

   a. Charts, nursing station references such as Kardex, Nursing Care Plans, etc.,
   b. Procedure guides, policy manuals,
   c. Standard clinical references such as medical dictionary, information on diagnostic tests, drugs, and standard references suitable to the clinical area and care program.

5. The Hospital shall allow the use of teaching aids, such as audio-visual equipment, models, and charts.

C. Staff Participation in Education Program

1. The Hospital staff may participate in education on the request of the instructor. This may be in the role of resource persons, clinical experts, or assisting in the planning and implementation of aspects of clinical education. Such participation will be voluntary and shall not interfere with assigned duties.

2. The Hospital shall designate a staff member who will serve as Hospital Education Coordinator for all educational use of the Hospital facilities.

3. The Hospital staff may refuse access to its clinical areas to any student of practical nursing who does not meet its Employee Standards for safety, health, or ethical behavior.

4. The Hospital staff may resolve any problem situation in favor of the patient's welfare and restrict the student involved to the observer role until the incident can be resolved by the staff in charge and the instructor.

5. It is recognized that the Hospital must operate in an efficient manner for the safety and welfare of the patient, but the Hospital accepts the responsibility that it must offer a true teaching experience to the student.

PART IV - STATUS OF STUDENTS

A. Students will have the status of learners and will not replace Hospital staff.

B. Students are subject to authority, policies, and regulations of the Institute. They are subject during clinical assignment to the same standards as are set for Hospital employees in matters relating to the welfare of patients.

PART V - LIABILITY STATUS OF THE CONTRACTING AGENCIES

A. Students and instructor shall carry malpractice public liability and compensation insurance during their clinical experiences.

PART VI - DURATION OF AGREEMENT

This agreement shall be continuing, to be reviewed in June of each year. It may be modified at any time by mutual consent of the Institute and the Hospital. It may be terminated after one year's written notice, to be agreed upon by both the Institute and the Hospital.

Any changes in the agreement shall be in the form of a rider to be attached.

Date _____

Milwaukee Institute of Technology, a Division of the Milwaukee Vocational Technical and Adult Schools

By _____
Director

By _____
Faculty Counselor, Service & Health Occupations

Date _____

_____
Hospital

By _____
Administrator

By _____
Director of Nursing

EXHIBIT III

Student Selection and Admission

A. Qualifications

1. Age

   Applicants must be 18 years of age through 55, determined, in part, by physical fitness.

2. Education Requirement

   Students under 20 years of age should have graduated from high school. Those over 20 years of age, who have not finished high school, must take and pass the equivalency test.

3. Health

   A complete health examination is required before admission. Applicants may obtain this from their private physicians. This is to include serological tests, chest X-ray, tuberculin skin test, and immunization, as required by the Practical Nursing Department. (See immunization record sheet.)

4. Pre-Entrance Tests

   California Reading Test.
   California Mental Maturity Test.
   Pre-Nursing Test - N.L.N.

5. Character and Work References

   The school will consult selected references in respect to character and work qualities.

6. Citizenship

   Proof of United States citizenship or declaration of intent to become a citizen.

B. Admission of Classes

Classes begin two times each year at the beginning of each semester in September and February (starting 9/66).

One day of planned induction and orientation shall precede the actual starting date for the class. Notice of this induction day date will be mailed to students prior to entrance.

EXHIBIT IV

Milwaukee Vocational Technical and Adult Schools

PRACTICAL NURSE ADVISORY COMMITTEE

1966

1. Mrs. Anah (Walter) Block
   2900 North 46th Street
   Milwaukee, Wisconsin

2. Mrs. Clara Brauer, R.N. (Mrs. W. L.)
   Director of Psychiatric Nursing Education and Service
   Milwaukee County Mental Health Center
   North Division
   8844 Watertown Plank Road
   Milwaukee, Wisconsin

3. Frederick E. Foerster, M.D.
   324 East Wisconsin Avenue
   Milwaukee, Wisconsin 53202

4. Mrs. Magdalene Hubbard, R.N.
   St. Joseph's Hospital - Nurses Residence
   3058 North 51st Street
   Milwaukee, Wisconsin

5. Miss Emma Kuehlthau, Executive Director
   Visiting Nurses Association
   1206 North Astor Street
   Milwaukee, Wisconsin

6. Miss Bernice Larson, R.N.
   Director of Nurses
   St. Luke's Hospital
   2900 West Oklahoma Avenue
   Milwaukee, Wisconsin 53257

7. Mr. Edward J. Logan, Administrator
   Milwaukee Children's Hospital
   1700 West Wisconsin Avenue
   Milwaukee, Wisconsin

8. Mrs. Elizabeth Miller, L.P.N.
   4771 North 39th Street
   Milwaukee, Wisconsin

9. Mrs. Patricia Smith, R.N.
   Clinical Instructor
   St. Michael's Hospital
   2400 West Villard Avenue
   Milwaukee, Wisconsin

10. Rev. R. A. Wagner, Administrator
    Evangelical Deaconess Hospital
    620 North 19th Street
    Milwaukee, Wisconsin 53233

Milwaukee Vocational and Adult Schools

Date _____ 19 __

Photo
No Snapshot - Head and Shoulders Only

Institute of Technology

Department of Nursing: Practical

APPLICATION FOR ADMISSION

Name: Miss / Mrs. / Mr. _____ Maiden Name: _____
First Last

Present Address: _____ _____ _____ _____ Telephone _____
Street City Zone State

Permanent Address: _____ _____ _____ _____ Telephone _____
Street City Zone State

Date of Birth: _____ Place of Birth: _____

Height: _____ Weight: _____ Dress Size: _____ Soc. Sec. No. _____

Marital Status: S; M; W; D; Sep. (Circle One) If married, husband's name _____
Husband's occupation _____

Number of Children: _____ Ages: _____

Other Dependents: _____ Ages and Relationships: _____

_____

_____

Citizenship: Yes ☐ No ☐ If naturalized, give number _____

If not naturalized, have you declared intention of citizenship? _____

Name of nearest relative: _____ Relationship: _____
(To be notified in case of emergency)

Address of Nearest Relative: _____ Telephone _____

EDUCATION

Encircle numbers of years of school completed:	Elementary	High School	College	Graduated:
	8	9, 10, 11, 12	1, 2, 3, 4	Yes ☐ No ☐

	Name	Location	Date of Entrance	Graduation Date or Departure Date
Elementary				
High School				
College				

Nurse's Training: Yes ☐ No ☐

Name of School: _____

Address: _____

WORK EXPERIENCE (List all jobs you have had in last 10 years, beginning with the last)

Type of Work	Name of Employer	Complete Address	Employment Dates	Reason for Leaving

REFERENCES (Include at least two former teachers, if graduated within the last two years. No relatives.) These people must be well acquainted with you. State relationship to the person whose name you have given such as teacher, minister, etc. Example of references preferred: minister or priest, professional person, leader of a group in which you participated such as Sunday School, Girl Scouts, etc.

Name Relationship Address

1. _____

2. _____

3. _____

4. _____

HOME RESPONSIBILITIES

1. What home responsibilities do you have that may interfere with your regular and prompt attendance at classes and hospital and supervised practice? Explain.

2. Do you have sufficient funds to cover the cost of the course without employment while taking this course? If not, what other resources can you depend on for assistance?

3. Who will be responsible for your children while you are taking this course? Explain.

4. Will you live in your own home or with others? Explain.

5. Why do you desire to take this course?

6. Please check your preference as to the class you wish to enter.

October ☐ February ☐ June ☐

7. a. What health insurance do you have? _____

b. With what company? _____

c. Who is responsible for payment of your health insurance? _____

8. Designate a personal physician in Milwaukee who can be contacted in case of emergency.

_____

_____

9. Convictions: Have you ever been convicted of a criminal offense, excluding minor traffic violations? _____ If yes, describe, giving dates.
(Yes or No)

The statements and representations made on this application are strictly true and in my own handwriting.

Signed _____

FOR OFFICE USE ONLY

	Initials	Date
Initial Interview		
Acceptable		
Committee Recommendation		
(Medical Records Checked by R.N.)		

Milwaukee Vocational and Adult Schools

Institute of Technology

Department of Nursing: Practical

1015 North Sixth Street, Milwaukee 3, Wisconsin

To Be Filled Out
By Applicant Only

PRE-ENTRANCE MEDICAL HISTORY

Please answer all of
the following questions

Name of Applicant: _____

Address: _____

I. GENERAL HISTORY

1. Date of Birth: _____ Age: _____

2. Height: _____ Weight: _____ _____

3. How would you rate your own general health: Good ☐ Fair ☐ Poor ☐

4. Are you pregnant now? _____

II. MEDICAL HISTORY

1. Significant Family History:

Mother living? _____ If no, cause of death? _____

Father living? _____ If no, cause of death? _____

Number of brothers and sisters living: _____ Ages: _____

Number of brothers and sisters dead: _____ Cause of death: _____

_____

2. Are you subject to or have you ever been subject to:

a. Dizzy spells? _____

b. Fainting spells? _____

c. Blackouts? _____

d. Convulsions? _____

3. Are you subject to or have you ever been subject to:

a. Mental disorders? _____

b. Nervous disorders? _____

c. Migraine headaches? _____

d. Emotional upsets? _____

e. Epilepsy? _____

f. Have you ever been in an institution for a mental or nervous disorder?

_____

3. Have you ever had an operation? ____

If yes, kind of operation(s): _____

Date(s): _____

4. Are you subject to allergic reactions such as:

a. Eczema? _____

b. Psoriasis? _____

c. Hayfever? _____

d. Asthma? _____

e. Sinusitis? _____

If yes, are you on medication? _____ Type of medication: _____

5. Have you had rheumatic fever? _____ Date: _____

Have you had growing pains? ____ If so, duration: _____

6. Are you subject to: Pneumonia _____ or Bronchitis _____

7. Have you ever had tuberculosis? _____ Date: _____

8. a. Do you have any difficulty hearing? _____

b. Have you ever worn a hearing aid? _____

9. a. Do you have any difficulty seeing? _____

b. Do you wear glasses or contact lenses? ____ If so, state which: _____

10. Do you have any menstrual disturbances? ____ If yes, does it interfere with your work? _____ In what way? _____

11. State any health or physical handicaps that you may have.

_____

12. Are you a diabetic? ____ If so, are you on insulin? _____

13. Have you had any childhood communicable diseases? ___ If so, what? _____

14. Do you have varicose veins? _____

Signature of Applicant _____

Date _____

Milwaukee Institute of Technology

Department of Nursing: Practical

1015 North Sixth Street, Milwaukee 3, Wisconsin

PRE-ENTRANCE MEDICAL EXAMINATION

Name of Applicant: _____

Address: _____
Street City State

I. MEDICAL HISTORY

1. Significant Illnesses in Family History: _____
2. Mental or Nervous Disorders (Convulsions or Epilepsy, Migraine Headaches, Emotional Upsets): _____
3. Operations and Dates: _____
4. Injuries or Accidents: _____
5. Allergic Reactions: _____
6. Rheumatic Fever and Dates: _____
7. Pneumonia or Bronchitis: _____
8. Tuberculosis and Date: _____
9. Other Communicable Diseases: _____
10. Physical Handicaps: _____
11. Diabetes: _____
12. Arthritic Conditions: _____

II. GENERAL CONDITION

Place a check (✓) after all positive findings and describe.

General Condition _____ Height _____ Weight _____ Age _____

Temperature _____ Pulse Rate _____ Respirations _____ B.P. _____

Nutrition _____

Skin _____

III. PHYSICAL FINDINGS

Eyes - Vision: R _____ L _____ Corrected: R _____ L _____

Ears - Hearing: RT. ____ LT. _____ Other Findings: _____

Mouth _____

Nose and Throat _____ Sinuses _____

Thyroid _____

Breast _____

Heart - Size: _____ Rate: _____ Murmur: _____

Lungs _____

(Over)

PRE-ENTRANCE MEDICAL EXAMINATION (Continued)

Abdomen _____

Lymph Glands _____

Nervous System: _____

Genito-Urinary _____

Pelvis Examination _____ Papanicolacu Smear if Over 30 _____

Rectal Examination _____ Hemorrhoids _____

Varicose Veins _____

Hernia _____

Orthopedic Impairments - Back: _____ Feet: _____ Other: _____

IV. LABORATORY FINDINGS

Urinalysis: Appearance _____ Sp. Gr. _____

Albumin _____ Sugar _____

Blood: Hgb. _____ Hct. _____

V. ABNORMAL FINDINGS

_____

VI. ADVICE GIVEN _____

VII. Is the applicant on any medication? _____ If so, what medication? _____

VIII. Physical Activities _____
Any Limitations: _____

IX. Working Conditions _____
Any Limitations: _____

X. On the basis of findings, I feel this applicant is mentally and physically fit to enter practical nursing, and is able to work with no restrictions.

Yes ____ No _____ (Why not) _____

Signature: _____ M.D. Address: _____
Street

Date: _____ _____
City State

Milwaukee Vocational and Adult Schools

Institute of Technology — Department of Nursing: Practical

IMMUNIZATION AND HEALTH RECORD

Name of Applicant _____
Last First

Address _____
Street City State

The Pre-Admission requirements MUST be completed prior to admission.

I. PRE-ADMISSION:

Unless otherwise indicated, all tests, initial immunizations, or boosters shall be within the past two (2) years. The physician who administers these immunizations will determine the intervals between immunizations.

SCHICK:
Date: _____ Reaction _____
Signature _____ M.D.

DIPHTHERIA TOXOID:
Dates: 1. _____ 2. _____
3. _____ 4. _____
Signature _____ M.D.

TETANUS TOXOID:
Dates: 1. _____ 2. _____
Booster _____
Signature _____ M.D.

TYPHOID TOXOID:
Dates: 1. _____ 2. _____
3. _____ Booster _____
Signature _____ M.D.

SMALLPOX VACCINATION: (Within past 3 yrs.)
Date: _____ Reaction _____
Signature _____ M.D.

POLIO IMMUNIZATION:
Salk: (If initial not completed within past year, a booster is necessary.)
Dates: 1. _____ 2. _____
3. _____ Booster _____
Signature _____ M.D.

Sabin: (If obtained.)
Dates: 1. _____ 2. _____
Signature _____ M.D.

II. The following is to be completed within three (3) months prior to entrance.

CHEST X-RAY:
Date: _____ Result _____
Signature _____ M.D.

TUBERCULIN TEST:
Date: _____ Result _____
Signature _____ M.D.

V.D.R.L.:
Date: _____ Result _____
Signature _____ M.D.

III. POST-ADMISSION:

CHEST X-RAY:
a. After 6 months (for pos. tuber. test)
Date: _____ Result _____
Signature _____ M.D.
b. Terminal: (for all students)
Date: _____ Result _____
Signature _____ M.D.

V.D.R.L.:
Date: _____ Result _____
Signature _____ M.D.

Tuberculin Testing: (Intracutaneous) for all negative reactors. This will be administered at the Milwaukee Institute of Technology and TB Control Center.

a. First week of school:
Date: _____ Result _____
b. Six months after entrance:
Date: _____ Result _____
c. Terminal:
Date: _____ Result _____

DO NOT FOLD THIS RECORD

Milwaukee Vocational and Adult Schools

Institute of Technology

Nursing Education: Practical

1015 North Sixth Street, Milwaukee 3, Wisconsin

Pre-entrance Dental Record

Name of Applicant _____

Address _____

This is to certify that M _____

on _____ came to me for an examination of her teeth which
Month Day Year

I found to be in _____ condition. Treatment has been: A. Started ☐

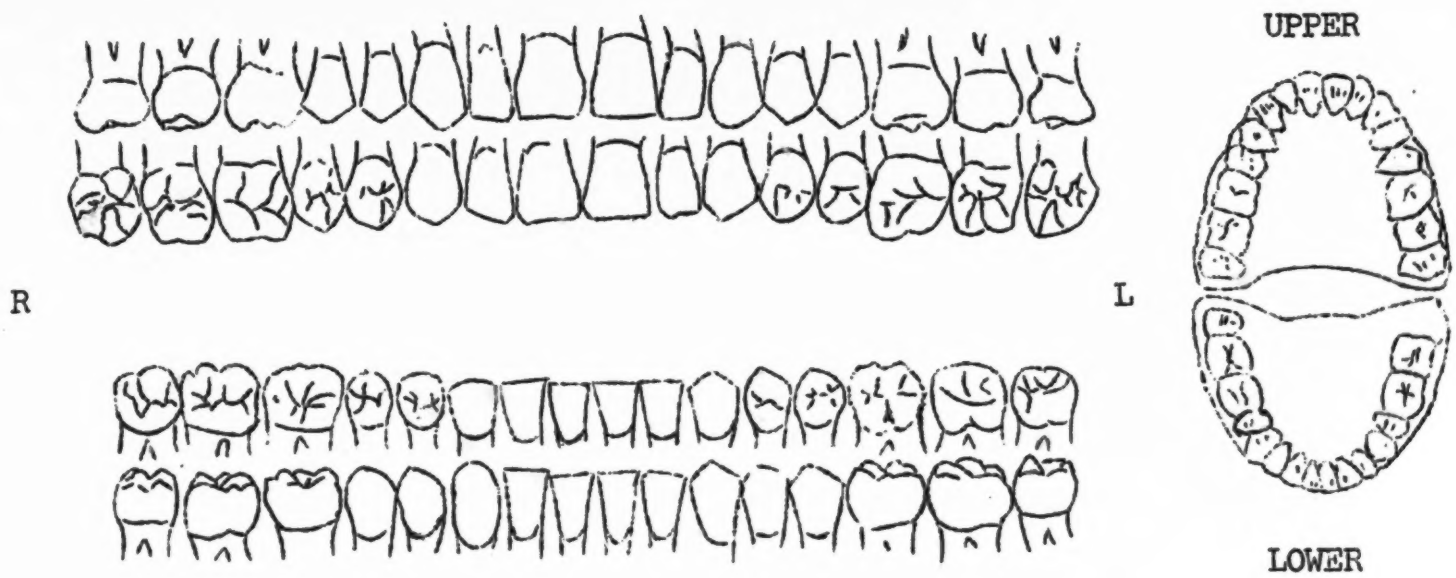
B. Completed ☐ C. None indicated ☐ Please indicate necessary treatment on diagram below.

Date _____, 19___ Signature _____ D.D.S.

Address _____

_____

(Please indicate below condition of teeth.)



TO: ☐ Private Physician

☐ Milwaukee Health Department

☐ a. Tuberculosis Control Center - 1640 South 24 Street

☐ b. Medical Clinic - Room 102-- 841 North Broadway

FROM: Milwaukee Vocational Technical and Adult Schools
Department of Nursing: Practical
1015 North Sixth Street
Milwaukee, Wisconsin 53203

SUBJECT: Referral

Student _____
Last First Middle

Address _____
Street / RFD City State Zip Code

Date of Birth _____
Month Day Year

This student is being referred for:

☐ Tuberculin Test: (encircle one) pos. neg. conv. Date of Latest Test _____

_____
Date Given Date Read Results

☐ Chest X-Ray _____
Date Given Date Read Results

☐ V.D.R.L. _____
Date Given Date Read Results

_____
Signature of Physician

Tests are to be completed on or before _____

Date _____ _____
Faculty Counselor

PLEASE USE THIS SHEET FOR REPLY.

MIT:14G:22

Milwaukee Vocational Technical and Adult Schools
Service and Health Occupation Division
Practical Nurse Program

2/15/66
Exhibit VI

ASSIGNMENT OF PRACTICAL NURSING STUDENTS TO MEDICAL-SURGICAL - PEDIATRICS AND OBSTETRICS CLINICAL PRACTICE AT A TYPICAL COOPERATING AGENCY - JUNE 1966 - JANUARY 1969

Sec.	Wks	From - - - - - To	No. Students in these areas M.S.	Peds	OB	Days a Wk	Remarks
B (44)	6	June 19/66 - July 30/66	0	5	5	4	
	5	July 31/66 - Sept 3/66	0	5	5	4	
	6	Sept 4/66 - Oct 15/66	0	5	5	4	
C (48)	17	June 19/66 - Oct 15/66	*12			*4 M.,W., Sat.	Cut experience to 3 days wks of 10/2, 10/9 to avoid overlap with Sec.A
	6	Oct 16/66 - Nov 26/66	0	5	5	4	Cut experience to 3 days wks of 1/30, 2/6
	5	Nov 27/66 - Dec 31/66	0	5	5	4	
	6	Jan 1/67 - Feb 11/67	0	*5	*5	4 M., F., Sat	
A (72) 1st Sem.	6 (3)	Sept 11/66 - Oct 1/66	0				
	(3)	Oct 2/66 - Oct 22/66	*9			*2 Th., Fr.	2 gps x 1 day
	6	Oct 23/66 - Dec 3/66	9			4	2 gps x 2 days
	8 (Xmas 2)	Dec 4/66 - Jan 28/67	9			4	"
2nd Sem.	6	Jan 29/67 - Mar 11/67		*8	*8	3 Tu., W., Th.	
	7 (Easter)	Mar 12/67 - Apr 29/67		8	8	3	
	6	Apr 30/67 - June 10/67		8	8	3	
Summer Vaca.	4	June 11/67 - July 8/67		Vac	Vac		Vacation
Practicum	9	July 9/67 - Sept 9/67	14-18			5	
B (72) 1st Sem.	6 (3)	Jan 29/67 - Feb 18/67	0				
	(3)	Feb 19/67 - Mar 11/67	9			2	2 gps x 1 day
	7 (Easter)	Mar 12/67 - Apr 29/67	9			4	2 gps x 2 days
	6	Apr 30/67 - June 10/67	9			4	"

* Overlap of two weeks - stagger days so only one group is on at any given time. Cut Sec. "C" to three days per week, last two weeks of affiliation.

Assignment of Practical Nursing Students to Medical-Surgical, Pediatrics and Obstetrics Clinical Practice at a Typical Cooperating Agency - June 1966 - January 1969
B - (Continued)

Sec	Wks	From - - - - - - - To	No. Students in these areas			Days a Wk	Remarks
			M.S.	Peds	OB		
Summer Vacation	4	June 11/67 - July 8/67	Vacation				Vacation
B (72) 2nd Sem	6	July 9/67 - Aug 19/67		8	8	3	
	6	Aug 20/67 - Sept 30/67		8	8	3	
	6	Oct 1/67 - Nov 11/67		8	8	3	
Practicum	11 (Xmas 2)	Nov 12/67 - Jan 13/67	14-18			5	Practicum
A (72) 1st Sem	6 (3)	Sept 10/67 - Sept 30/67	0				
	(3)	Oct 1/67 - Oct 21/67	9			2	
	6	Oct 22/67 - Dec 2/67	9			4	
	8 (Xmas 2)	Dec 3/67 - Jan 27/67	9			4	
		Nov 12/67 - Jan 27/67 - NO STUDENTS IN OB, OR, PEDS---11 weeks					
2nd Sem	6	Jan 28/68 - Mar 9/68		8	8	3	
	7	Mar 10/68 - Apr 27/68		8	8	3	
	6	Apr 28/68 - June 8/68		8	8	3	
Summer Vacation	4	June 9/68 - July 6/68		Vacation	Vacation		Vacation
Practicum	9	July 7/68 - Sept 7/68				5	
B (72) 1st Sem	6 (3)	Jan 28/68 - Feb 17/68	0				
	(3)	Feb 18/68 - Mar 9/68	9			2	2 groups x 1 day
	7 (Easter)	Mar 10/68 - Apr 27/68	9			4	2 groups x 2 days
	6	Apr 28/68 - June 8/68	9			4	" " "
Summer Vacation	4	June 9/68 - July 6/68	Vacation				Vacation
B 2nd Sem	6	July 7/68 - Aug 17/68		8	8	3	
	6	Aug 18/68 - Sept 28/68		8	8	3	
	6	Sept 29/68 - Nov 9/68		8	8	3	
Practicum	11 (Xmas 2 Wks)	Nov 10/68 - Jan 25/69	14-18			5	

A P P E N D I X B

Exhibits A-F

Milwaukee Vocational Technical and Adult Schools

Service and Health Occupations Division

Practical Nurse Program

Proposed Program
1966/67

Exhibit A[1]

PROPOSED PLAN FOR CLASS ENTERING IN SEPTEMBER 1966

Length of Scheduled Program . . . . . 52 Weeks
Length of Scheduled Vacations . . . . . 4 Weeks
Curriculum Content for Total Program . . 1350 Class Hours

Courses	No. of Class Hours in Classroom	No. of Class Hrs. in School Lab.	No. of Planned Clinical Classes	Number of	
				Hours Clinical Experience	Weeks Clinical Experience
Elementary Nurs. Procedures (Basic Med-Surg.)	78	63	6	15	3
Medical-Surgical Nursing 1 (Chronic - Convalescent)	54		24	144	12
Body Structure and Function	36				
Normal Nutrition	28				
Diet in Diseases - 1st Sem.	8				
2nd Sem.	18				
Communication Skills	18				
Personal & Vocational Relationships	18				
Family Living, Growth, and Development	18				
Care of Mother & New Born	24		12	114	6
Care of Children	24		12	114	6
Care of the Mental Patient	24		12	114	6
Medications, Drugs and Their Administration	6	12			
Medical-Surgical Nursing 2 (Care of Adults)	26		18	277	9
Legal Aspects & Employment Practices	18				
Student Problems and Evaluations	15				
TOTALS	413	75	84	778	42

TOTALS = 1350 Class Hours
1238+ Clock Hours
Revised: 6/66

Milwaukee Vocational Technical and Adult Schools
Service and Health Occupations Division
Practical Nurse Program

CURRICULUM PLAN BY SEMESTERS Exhibit A^2

Proposed Program 1966/67
Total - 365 Days

4 Weeks Vacation and School Holidays

September Class Starting Date 9/11/66

Course Number	Course Title	Approximate Hours: First Semester (9/11/66 - 1/28/67)	Second Semester (1/29/67 - 6/10/67)	Summer Session (7/9/67 - 9/9/67)
Nurs 101 lec.	Elementary Nursing Procedures	78		
" " lab.	" " "	63		
" Clin lab.	" " "	21		
Nurs 105 lec.	Medical-Surgical Nurs. 1 -Chronic and Convalescent	54		
" Clin lab.	" " "	168		
Nurs 103 lec.	Body Structure and Function	36		
Nurs 111	Normal Nutrition	28		
Nurs 116	Diet Therapy		18	
Eng 154	Communication Skills	18		
Nurs 113	Personal and Vocational Relationships	18		
Nurs 114	Family Living, Growth, and Development	18		
Nurs 117 lec.	Care of Mothers and New Born	12	12	
" Clin lab.& classes	" " " " " "		126	
Nurs 119 lec.	Care of Children	12	12	
" Clin lab.& classes	" "		126	
Nurs 121 lec.	Care of the Mental Patient	12	12	
" Clin lab.	" " " " "		126	
Nurs 118 lec.	Drugs & Drug Administration		8	
" " lab.& classes			10	
Nurs 106 lec.	Medical-Surgical Nurs. 2		18	8
" " Clin lab.	(Including Clinical Classes)			295
Nurs 127	Legal Aspects and Employment Practices		18	
Nurs 131	Student Problems and Evaluations			15
	TOTALS = 1350 Class Hours 1230 Clock Hours	545	436	318

Rev. 6/66

Milwaukee Vocational Technical and Adult Schools

Service and Health Occupations Division

Practical Nurse Program

Proposed Program
1966/67

Exhibit A3

REVISED CURRICULUM PLAN

TOTAL EXPERIENCE AND INSTRUCTIONAL HOURS IN PROGRAM

School Year	Days Clin. Prac. Per Week	Hours Clin. Prac. Per Week	Total Practice Hours	Clinical Conference Hours		Semester Class Hours	
				Per Week	Total	Ave. per wk.	Total
First Semester							
1st 6 Weeks 3 Wks.	0						
3 Wks.	1	5	15	2	6		
2nd 6 Weeks	2	12	72	2	12	19.8	357
3rd 6 Weeks	2	12	72	2	12		
Second Semester							
1st 6 Weeks	3	19	114	2	12	6	108
2nd 6 Weeks	3	19	114	2	12		
3rd 6 Weeks	3	19	114	2	12		
Summer Session							
8 Weeks	5	33	264	2	16	1	8
1 Week	5	13	13	2	2	15	15
Total Hours			778		84		488

Hours of Instruction and Class Conference = 572
Hours of Practice = 778
Total Hours in Program 1350

Milwaukee Vocational Technical and Adult Schools
Service and Health Occupations Division
Practical Nurse Program

Proposed Program
1966/67

Exhibit B

CURRICULUM PLAN OVER TOTAL PROGRAM FOR THE TYPICAL STUDENT

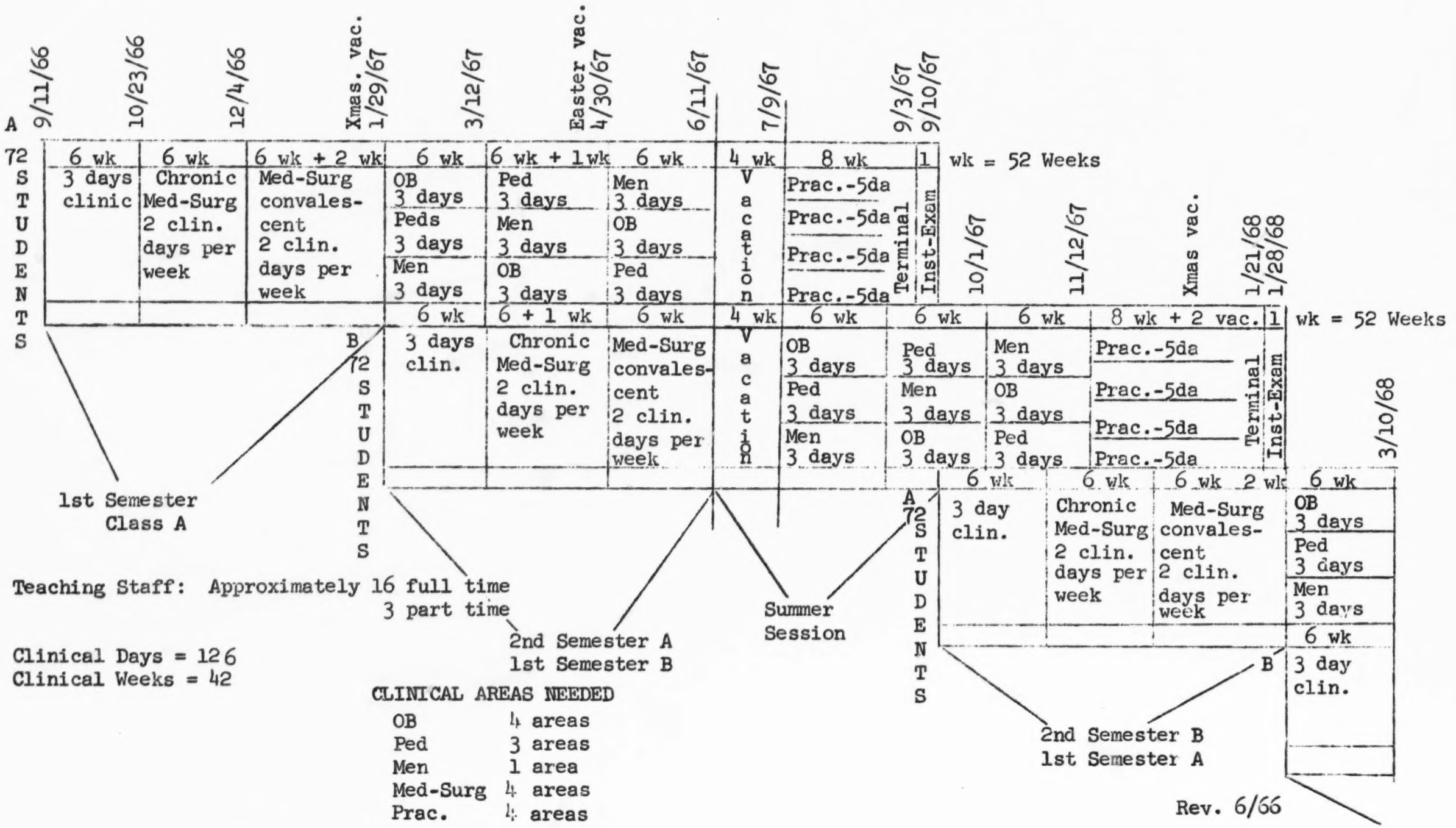
Courses	Number of Hours of Class, Laboratory, and Clinical Experience Each Month													
Months	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Hours
Weeks	3	4	4	3	4	4	5	3	5	1← vac.	→3	5	1	
Elementary Nurs. Procedures:														
Class Hours	15	19	16	12	16									78
Classroom Laboratory Hours	18	21	12	9	12									72
Clinical Experience Hours		18												18
Medical-Surgical Nursing 1 (Chronic, Subacute) All Ages:														
Class Hours	9	12	12											33
Clinical Experience Hours		14	56	14										84
Medical-Surgical Nursing 1- (Convalescent & More Acutely Ill) All Ages:														
Class Hours			9	12										21
Clinical Experience Hours			28	56										84
Normal Nutrition: Class Hours	6	8	8	2										24
Diet in Diseases: Class Hours			4	8	4	5	3	5	11					30
Body Struc. & Func: Class Hours	6	8	8	6	8									36
Pers. & Voc. Rel: Class Hours	3	4	4	3	4									18
Fam., Liv., Growth, & Dev: Class Hours	3	4	4	3	4									18
Comm. Skills: Class Hours	3	4	4	3	4									18
Care of Mothers & New Born: Class Hours				2	4	8	10							24
Clinical Experience Hours						84	42							126
Care of Children: Class Hours				2	4		9	9						24
Clinical Experience Hours							63	63						126
Legal Asp. & Emp. Prac: Class Hours						4	5	3	5	1				18
Care of the Mental Patient: Class Hours				2	4				15	3				24
Clinical Experience Hours									105	21				126
Medical-Surgical Nursing 2 - Adults						4	5	3	5	1	3	5		26
Clin. Exp. Hours, Incl. Post Conf.											105	175	15	295
Student Prob. & Evaluations Class and Conference Hours													15	15
Medications: Class						2	2	1	2	1				8
Lab						2	3	2	3					10
TOTAL HOURS	63	112	124	99	136	108	144	84	140	28	108	180	30	1356

Exhibit C

Milwaukee Vocational Technical and Adult Schools
Service and Health Occupations Division
Practical Nursing Program

TWO-SEMESTER AND SUMMER SCHOOL PLAN - SEPTEMBER 11, 1966

Showing diagrammatically the rotation of 2 classes entering each year



Teaching Staff: Approximately 16 full time
3 part time

Clinical Days = 126
Clinical Weeks = 42

CLINICAL AREAS NEEDED

OB	4 areas
Ped	3 areas
Men	1 area
Med-Surg	4 areas
Prac.	4 areas

Rev. 6/66

Milwaukee Vocational Technical and Adult Schools Exhibit D

Service and Health Occupations Division

PRACTICAL NURSE PROGRAM

Contrasting Present Versus Projected Clinical Experience Plan

PRESENT CLINICAL EXPERIENCE PLAN

FIRST TRIMESTER

Orientation - 4 hrs x 8 wks = 32 hrs.

SECOND TRIMESTER

Medical-Surgical:

Convalescent 30 hrs x 11 wks = 330 hrs.
Chronic 30 hrs x 6 wks = 180 hrs.

THIRD TRIMESTER

Care of Mothers & Infants -
30 hrs x 6 wks = 180 hrs.
Care of Child-30 hrs x 5 wks = 150 hrs.
Care of Mental -
30 hrs x 6 wks = 180 hrs.

Totals 42 wks *1052 hrs.

*1052 hours of experience includes approximately 10 weekends (300 hrs.)

PROJECTED CLINICAL EXPERIENCE PLAN

FIRST SEMESTER - 18+ Weeks

Basic Medical-Surgical Clinical Nursing -
7 hrs x 3 wks = 21 hrs.

Medical-Surgical: (All ages)

Chronic-Aged - 14 hrs x 6 wks = 84 hrs.
Convalescent - 14 hrs x 6 wks = 84 hrs.

Christmas Recess

SECOND SEMESTER - 18 Weeks

Care of Mothers & Infants -
21 hrs x 6 wks = 126 hrs.
Care of Child- 21 hrs x 6 wks = 126 hrs.
Care of Mental Patient -
21 hrs x 6 wks = 126 hrs.

Spring Recess

Vacation - 4 wks.

SUMMER SESSION - 9 Weeks

Practicum (Advanced Medical-Surgical)

35 hrs. x 8 wks = 280 hrs.
15 hrs. x 1 wk = 15 hrs.
295 hrs.

TOTALS: 42 Weeks
*862 Hours, includes 84 planned clin. classes

*862 hours of selected supervised experience and planned clinical classes - school instructors for all phases of the program.

Rev. 6/66

Milwaukee Vocational Technical and Adult Schools

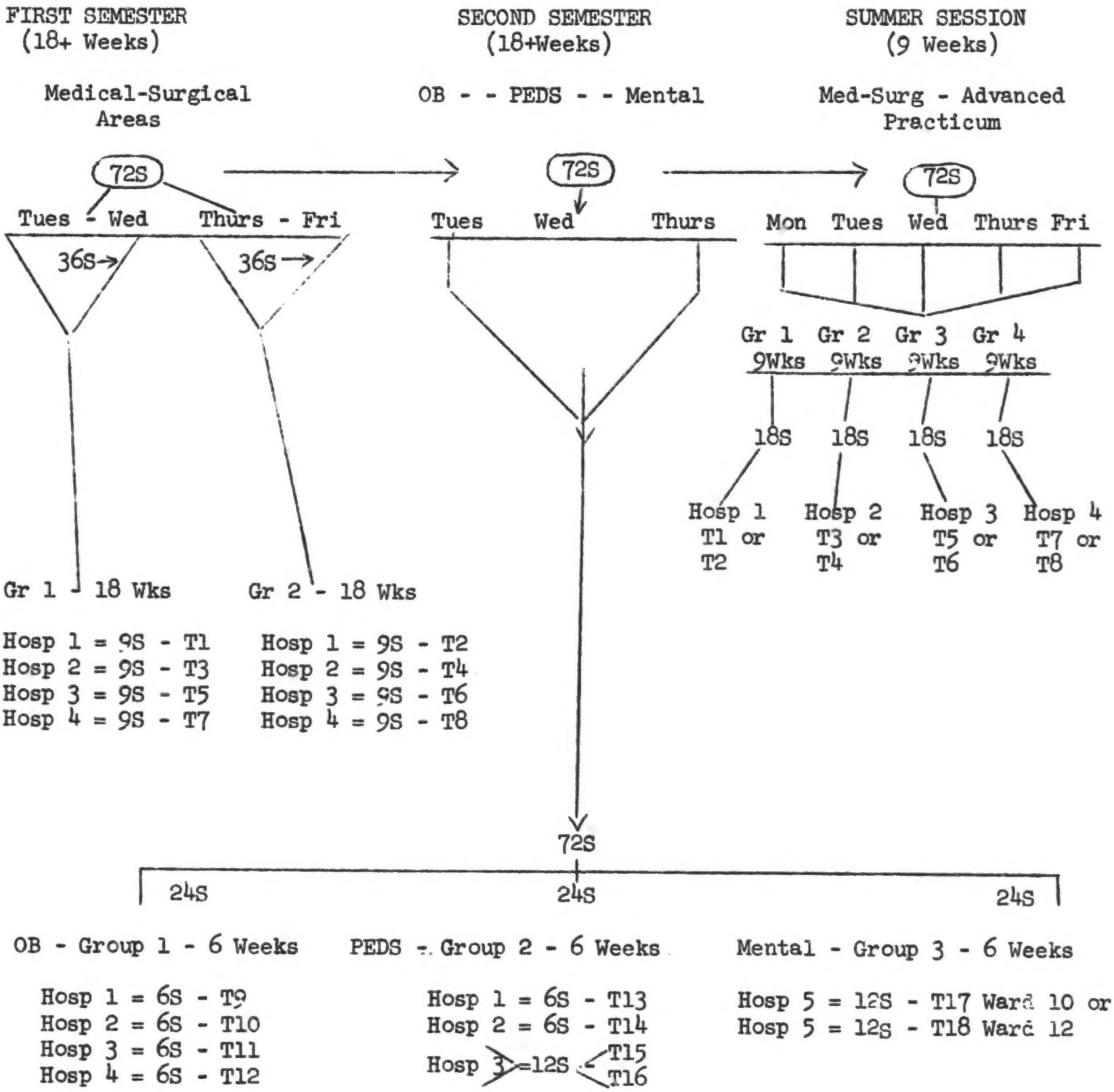
1/21/66
Proposed Program
1966-67

Service and Health Occupation Division
Practical Nurse Program
Rotation

Exhibit E
Plan I

LEGEND:
Gr = Group
T = Instructor
S = Students

INSTRUCTOR-STUDENT RATIO AT EACH HOSPITAL
(Days Per Week)



Milwaukee Vocational Technical and Adult Schools

Exhibit F
Plan I

Institute of Technology
Proposed Rotation of Practical Nursing Students
with their instructors - September 1966-67 (One Class)

Legend:
T = Teacher

3 Weeks in School ← 1st Sem. 18+ Wks. 3 Wks 12 Wks ← 2nd Semester 18+ Weeks → Practicum 9 Weeks

Hosp. No.	Hospital	No. Students M.S.		Number of Students 6 Weeks OB	6 Weeks Peds	6 Weeks M	6 Weeks Peds	6 Weeks M	6 Weeks OB	6 Weeks M	6 Weeks OB	6 Weeks Peds	No. Students in Practicum 4 Wks	4 Wks	1 Wk.
1	Deaconess T_1	T 9	T-W 9	6	6	6	6	6	6	6	6	6	18 →	18 →	18
	Deaconess T_2	Th 9	Th-F 9	T_9	T_{13}		T_{13}		T_9		T_9		T_1	T_2	
	St. Luke's T_3	T 9	T-W 9	6	6	6	6	6	6	6	6	6	18	18	18
	St. Luke's T_4	Th 9	Th-F 9	T_{10}	T_{14}		T_{14}		T_{10}		T_{10}	T_{14}	T_3	T_4	
	St. Michael's T_5	T 9	T-W 9	6	6	6	6	6	6	6	6	6	18	18	18
	St. Michael's T_6	Th 9	Th-F 9	T_{11}					T_{11}		T_{11}		T_5	T_6	
	Miseri-cordia T_7	T 9	T-W 9	6	6	6	6	6	6	6	6	6	18	18	18
	Miseri-cordia T_8	Th 9	Th-F 9	T_{12}					T_{12}		T_{12}		T_7	T_8	
	Milwaukee Childrens				6 T_{15}		6 T_{15}					6 T_{15}			
	Milwaukee Childrens				6 T_{16}		6 T_{16}					6 T_{16}			
	Mental Health Center-So.					12 T_{17}		12 T_{17}		12 T_{17}					
	Mental Health Center-So.					12 T_{18}		12 T_{18}		12 T_{18}					
	No. Teachers	8 → 8		4	4	2	4	2	4	2	4	4			
	No. Students	72 → 72		24	24	24	24	24	24	24	24	24	72 →	72 →	72
	Teacher, Student Ratio	1:9		1:6	1:6	1:12	1:6	1:12	1:6	1:12	1:6	1:6		1:18	

VT 001 028
Procedures for Conducting a Vocational Education Community Study.

Ohio State Dept. of Education, Columbus. Div. of Vocational Education
MF AVAILABLE IN VT-ERIC SET.
Pub Date - Feb66 17p.

*VOCATIONAL EDUCATION; *COMMUNITY SURVEYS; *GUIDELINES; AREA VOCATIONAL SCHOOLS; *PROGRAM PLANNING

The purpose of these procedures is to provide guidance to local communities in the initial planning for a joint vocational school. Topics discussed are the survey request, the interval between the survey request and the survey planning meeting, the survey planning, the interval between the survey planning meeting and the survey dinner, the survey and the period after the survey dinner meeting. The appendixes contain orientation talk which can be given at a study planning meeting and a suggested agenda for planning meeting for executive heads. (SL)

VT 001 028

EDO 31587

1028
C.1
15

PROCEEDURES FOR CONDUCTING A VOCATIONAL EDUCATION COMMUNITY STUDY

February, 1966

Division of Vocational Education Ohio State Department of Education
Columbus 15, Ohio

VT001028

Ohio State Board of Education

E. E. Holt
State Superintendent of Public Education

Byrl R. Shoemaker
Director of Vocational Education

Division of Vocational Education
State Department of Education

February, 1966

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

Foreward

The Division of Vocational Education in Ohio has, in its philosophy, accepted as one of its functions the assistance to local communities on matters pertaining to vocational education. This includes guidance and help from the beginning phase of community discussion.

The Division of Vocational Education, during its years of service in many and varied experiences through contacts in giving help and guidance from small to large communities who possess all kinds of concepts and purposes of vocational education, has accumulated a storehouse of valuable information which can be shared back with local schools. Since much of this experience and information has come about through helping local schools solve their problems, the Division of Vocational Education has tried to make available this information to communities who have had limited experience and are not in a position nor have time to make studies to become versed in all phases and accumulate this storehouse upon which to make a decision for a program.

Recent federal legislation and particularly the Vocational Act of 1963, which has provided more federal aid for vocational education, has catalyzed the local interest in vocational education beyond the conception of most educators. Many communities have no knowledge of vocational education, its purpose, how it may differ from other forms of education, for whom it is intended, how it can serve youth, adults, business and industry of the community, how to go about getting the community acquainted with vocational education and involved in making decisions about it, how to go about getting a program established, how to conduct a community survey for the establishment of a vocational school, how to plan or select a curriculum, the physical facilities and equipment needed, the orientation of a student body to the vocational curriculum opportunities and their responsibilities in choosing a vocational program, and the cost financing and administration of vocational education.

In order to guide and help the community in that phase of discussion and planning for a Joint Vocational School, the supervisory staff always stands ready as in the operational phase. Now, to serve as a written complement, this procedure for helping a community in its discussion and planning phase has been set to words. It in no way dictates the procedure that may be followed, but suggests only a plan whereby the State staff may assist local communities in conducting a vocational education study. Other plans may be used and the State staff will be most happy to participate, for it congratulates the educational leaders and their community on their foresight in studying and planning a vocational education program.

B. R. Shoemaker, Director
Division of Vocational Education
State Department of Education

DIVISION OF VOCATIONAL EDUCATION STAFF

Earl R. Shoemaker	Director of Vocational Education
Warren G. Weiler	Supervisor of Agricultural Education
R. D. Balthaser	Supervisor of Business Education
Bernard C. Nye	Supervisor of Distributive Education
Margaret W. McEniry	Supervisor of Home Economics Education
C. O. Tower	Supervisor of Research and Survey Service
D. R. Purkey	Supervisor of Technical Education
Harry F. Davis	Supervisor of Trade and Industrial Education

TABLE OF CONTENT

	Page
FOREWARD	ii
DIVISION OF VOCATIONAL EDUCATION STAFF	iii
TABLES	v
PROCEEDURES FOR CONDUCTING A VOCATIONAL EDUCATION COMMUNITY STUDY	1
The Survey Request	1
Between the Survey Request and the Survey Planning Meeting	1
At the Survey Planning Meeting	1
Between the Survey Planning Meeting and the Survey Dinner	4
At the Survey Dinner Meeting	5
After the Survey Dinner Meeting	5
APPENDIX A:--ORIENTATION FOR STUDY PLANNING MEETING	7
APPENDIX B:--PLANNING MEETING FOR EXECUTIVE HEADS	9

TABLES

Page

Table 1:--Enrollments and Tax Rates and Duplicates by School Districts 2

Table 2:--Number of Working Certificates Issued 19__ - 19__ 2

Table 3:--Number of High School Graduates Who Entered Post High School Educational Institutions 19__ 2

Table 4:--High School Enrollment Trends, Grades 9-12, 19__ - 19__ for the School Districts Involved 2

PROCEDURES FOR CONDUCTING A VOCATIONAL EDUCATION COMMUNITY STUDY

The Study Request

The individual or Superintendent of Schools desiring to initiate a community vocational study will communicate this interest in writing to the State Director of Vocational Education.

The Director of Vocational Education will notify the supervisor of each vocational education service involved and designate a vocational staff member as Study Coordinator to assume the State's responsibility for the arrangements and details of the study.

Between the Study Request and the Study Planning Meeting

The Study Coordinator will discuss with the Superintendent of Schools, who initiated the request for a vocational community study, his responsibilities:

1. To form a Vocational School Committee with a representative from each school district involved.
2. To orient the facalties of the schools. The State staff personnel will be available if requested.
3. To orient any community representative who will attend the study planning meeting.
4. To select local representatives from the vocational, guidance, and administrative staffs who will work with the State staff representatives for guidance and each vocational education service and who will develop Vocational Service Committees which will work with them as study teams to perform the local action activities particular to each phase of the study.
5. To arrange for the Study Planning Meeting.
6. To secure information called for in:
   Table 1:--Enrollments and Tax Rates and Duplicates by School Districts.
   Table 2:--Number of Working Certificates Issued 19__--19__.
   Table 3:--Number of High School Graduates Who Entered Post High School Educational Institutions 19__.
   Table 4:--High School Enrollment Trends, Grades 9-12, 19__--19__ for the School Districts Involved.

At the Study Planning Meeting

The Superintendent will have at the Study Planning Meeting:

1. The selected local representatives from vocational guidance, and administrative staffs who will act as chairman of the local Vocational Service Committees for guidance and each of the vocational education services.
2. Any other staff members and any community representatives who have been oriented and whom he desires to have present.

Table 1:--Enrollment and School Tax Rate and Duplicate

School District	Gr. 9	Gr. 10	Gr. 11	Gr. 12	Gr. 11 12	Gr. 10 12	Gr. 9 12	School Tax Rate Mills	School Tax Dup. Dollars
1	2	3	4	5	6	7	8	9	10
otal									

Table 2:--Number of Working Certificates Issued 19__ - 19__

Grade	Total Age Years				No. Boys Age Years				No. Girls Age Years			
	T	15	16	17	T	15	16	17	T	15	16	17
9												
10												
11												
12												

Table 3:--Number of High School Graduates Who Entered Post High School Educational Institutions 19__

Type of Institution	Total	No. Boys	No. Girls
4 Year Collegiate Program			
2 Year Technical Program			

Table 4:--High School Enrollment Trends, Grades 9-12, 19__ - 19__

School Districts	October 19__	October 19__
Total		

The Study Coordinator will have at the Study Planning Meeting:
1. A staff member from the Guidance Service.
2. A staff member of each participating vocational service.

The Study Coordinator will orient those present to the purpose of the meeting.

The Superintendent will report on participating schools and pupil population, grades 10 and 11 and 11 and 12.

The Superintendent will introduce the local representative who will be chairman of the local Vocational Guidance Committee.

The Study Coordinator will introduce the State staff representative from Guidance Service who will direct the student vocational interest inventory.

The State staff representative for guidance will discuss:
1. The method of orienting the student body in grades 10 and 11.
2. The administering, scoring, and evaluating procedures for the student vocational interest inventory.

The Study Coordinator will discuss dates and build a schedule with State staff and local administrators for:
1. Orienting pupils and administering student interest inventory.
2. Scoring the vocational interest inventory.
3. Summarizing results.

The Study Coordinator and Superintendent will introduce remaining State staff members and local representatives acting as chairman of the Vocational Service Committee for the local action activities. The Study Coordinator will indicate that each of the vocational services have a plan of activities to discuss with the local chairman of the Vocational Service Committee. The plan includes:
1. The organization of the Vocational Service Committee for each vocational service by the Chairmen of the Vocational Service Committee and the Superintendent.
2. The function of these committees which includes:
   a. Working in cooperation with the Vocational School Committee and the assigned State representative from the Division of Vocational Education to arrive at the areas of vocational education; i.e., identifies occupations, to be included in the study.
   b. Selecting the local industries, businesses, establishments, and services to be included in the survey.
   c. Preparing questionnaires for business and industries on employment, employment policies, training needs, etc., and their interests in both secondary and adult programs.
   d. Conducting interviews with business, industries, and local organization representatives.
   e. Selecting representative to attend Study Dinner Meeting and give future community support.
   f. Preparing materials, if nay, to be sent out with study dinner invitations.

The Study Coordinator will discuss the dinner meeting and the individual service sessions and determine dinner meeting, date, time, and possibly place.

The Vocational School Committee will:

1. Provide and finance by board of education or local community group the facilities including dining room and dinner service, find auxiliary rooms seating 40 persons except Trade and Industrial Education, 80 persons, public address system, and visual aids screens.
2. Provide finance and print the program. The dinner meeting usually includes:
   a. Introduction of local people, the genesis of the study plus setting the stage for the meeting by the chairman of the Vocational School Committee.
   b. Introduction of State staff and reporting of vocational education picture in Ohio by the Coordinator.
   c. Report on vocational guidance and student vocational interest inventory by State guidance representative.
   d. Dispersion of participants into vocational area meeting by letters of invitation.
3. Send letters of invitation.
4. Provide follow-up techniques for dinner meeting attendance.
5. Provide publicity.

Between the Study Planning Meeting and the Study Dinner

The chairman for Guidance Service Committee and the Vocational Guidance Service Committee, with the help of the State staff representative from guidance, will administer the student vocational interest inventory to the 10th and 11th grade pupils of each school district involved in accordance with the instruction from the Division of Guidance and Testing and in accordance with the prepared schedule. If a graduate follow-up study is included in the study, it is conducted by the local staff and coordinated by Business Education with analysis by the Guidance Staff.

The Vocational Service Committees will also furnish the Superintendent a list of representatives, who have agreed to participate in the survey and attend the survey dinner, two weeks before the survey dinner. Suggested minimum numbers are: Agriculture 25, Business Education 30, Distributive Education 25, Home Economics 20, and Trade and Industrial Education 8 for each occupational area involved in the survey.

The Vocational Service Committees will determine occupational areas to be included in the study, prepare forms for collecting information and statistics, and collect said information and statistics before the Study Dinner Meeting or make arrangements for and deliver to the Superintendent information forms and instruction sheets to go with dinner invitations, with invitations lists, two weeks before study dinner.

The Vocational School Committee extends an invitation, by letter, over the signature of the Vocational School Committee chairman, the Superintendent of those representatives of community, business, industries, and organizations, selected by the Vocational Service Committees and others to attend and par-

ticipate in the study dinner, two weeks before the meeting. Included in the letter will be study form on which the persons contacted can list statistics and information needed by the Vocational Service Committees unless the Vocational Service Committees have adopted another method for securing this information.

The Superintendent will or will have done a follow-up by post card if time permits, and again by phone on the day of or before the study dinner meeting of the participants from the community.

The Superintendent will arrange for the study dinner meeting to be held in a place where dinner service may be had and where the group may be divided into individual vocational services for a presentation by the State staff representatives from the Division of Vocational Education.

The Superintendent will administer public relations and public information.

The chairman of each Vocational Service Committee will contact the State staff representative and secure for the study dinner meeting those pieces of equipment such as screens, projectors, etc. as requested by the State staff representatives of the Division of Vocational Education.

At the Study Dinner Meeting

The Superintendent will:

1. Chair the dinner meeting.
2. Make introductions.
3. Report on genesis and purpose of the study.

The Study Coordinator will:

1. Present a background of Vocational Education in Ohio for the study report.
2. Call upon the State staff representative for guidance to present a summary of the student interest inventory and make pertinent remarks there upon.
3. Direct local participants to divide into groups according to areas of vocational education and assemble in assigned rooms.

The State staff representative for the Vocational Education Service will conduct the group survey activities necessary for the completion of the study report and collect the needed data in the group meetings for each vocational service with the help of the local school staff representative who chairs the Vocational Service Committees. The State staff representative will also describe the vocational program under consideration for the particular vocational serivce.

After the Survey Dinner Meeting

The State staff representative for each vocational service will prepare and type the chapter pertaining thereto and file with the Director of Vocational Education.

The Director of Vocational Education will approve the typed reports of each vocational service.

The Study Coordinator will compile the introductory material and publish the final report approximately one month after the date of the study.

APPENDIX A

ORIENTATION FOR STUDY PLANNING MEETING

Orientation for Study Planning Meeting will be taken from the following material:

The staff of the Division of Vocational Education is here on invitation of the chairman of your Vocational School Committee to help you plan your Vocational Education Community Study. Since we have helped many school systems conduct studies, we have found some of the pitfalls and lost motion, and short cuts, effective moves and efficient procedures which will bring you the most action for your efforts.

You are here to receive help and guidance in planning and conducting your study so that your efforts will bring you desired results.

But, why have a study? What will a study contain? How will a study help us? What are the objectives of a study? What will a study do for us that we cannot do without it? What are the goals of a study? These may be some of your questions.

Why have a study? Let us examine this, answer some of those questions, and see how a study may help you turn the dream of a vocational school into reality.

To turn the dream of a vocational school into reality, it takes reliable information upon which to base valid conclusions, much technical knowledge and careful planning of the vocational program, equipment, and physical facilities, considerable public relations to produce an interested public, and educated in the needs and values of a vocational education program, to mention only a few.

To plan a vocational school, information of all kinds is needed. A study may include information on demography and related aspects as: pupil population by grades, pupil population growth, non-college bound pupil population, drop out population, population growth, population density, births, deaths, student vocational interest inventories, anticipated enrollments in various types of programs in Ohio high schools; on employment aspects as: employment by industrial divisions, by level of occupations, and employment by occupations within industrial divisions, projected employment needs by level of occupations, and by occupations within industrial divisions, the place of women in employment, the distribution of employment between agriculture and non-agriculture pursuits, labor force employed within county and outside, rate of unemployment, employment in major industries, business organizations, and interest in vocational education program by representatives of selected industries, businesses, and organizations; on economic aspects as: financial information on income, estimated building and equipment costs, estimated operating costs, and tax rates and duplicates; on adjacent areas as: employment in major industrial divisions that would furnish employment to commutors; on recommended vocational program aspects as: estimated enrollments, recommended vocational programs recommended areas for related and academic facilities and recommended vocational and academic professional staff.

Now a study will serve as a planned method of systematically retrieving this information for drawing the conclusions. It will not only serve as a guide for directing the procurement of the information, it will serve as a time guide to prevent delay.

Some of the information will be supplied by the schools through Executive Heads and Community Vocational Committees as: pupil population by grades, pupil population growth, non-college bound pupil population, drop out population, population growth, and tax rates and duplicates; some by citizens, businesses, industries, and organizations of the community through Vocational Service Committees as: employment and unemployment policies in selected industries, businesses, and organizations; and most of the others by the various services of the Division of Vocational Education.

In this way, the community is first brought into the act and your public relations activities are brought into play. Now you are using your study as a tool with the community to accomplish your goal. The Vocational Service Committees through their contact with local businesses, industries, and interested groups may diffuse the survey information.

To culminate the activities of information gathering, a dinner meeting will be held. This will start the planned diffusion of the study information to the people in order that they may become better educated on the topic of vocational educations and needs and sufficiently learned to spearhead the movement for support in the community.

Now why do you have a study? To give you a planned order of action to collect information on demographic, employment, economic and related aspects; to help draw conclusions on number and kinds of vocational programs, estimated enrollments, building facilities, equipment, financing, teaching personnel, and school districts to be involved; and to involve the public in a study of your vocational needs and the requirements to fulfill these needs in order that they may become an interested public educated in the needs and values of a vocational education program and willing to support a program.

These are the answers to why you should have a study, what a study may contain, how it may help you, and so on.

This is your study, your issues are at stake. This will be your vocational program and your school. If your study falls short and if your levies and bond issues do not pass, then it is your loss.

- -

Have each person take a sheet of paper and write down today's date at the top of the page. Have each person write down "dinner meeting" at the bottom of the page.

- -

First order of the day is to plan the activities between the top of the page and the bottom of the page. The second order of the day is to plan the dinner meeting.

APPENDIX B

PLANNING MEETING FOR EXECUTIVE HEADS

The Study Coordinator will discuss and locate responsibility for the following items appropriate with the Superintendent of Schools and the Executive Heads:

Financing of dinner meeting.
Place of dinner meeting.
Vocational School Committee.
Vocational School Committee chairman.
Responsible for preparing, printing, and paying for dinner meeting program by Vocational School Committee chairman.
Responsibility for publicity by Vocational School Committee.
Sample invitation letter for committee chairman.
Number of study reports needed.
Financing of Joint Vocational School.
Continued foundation financial support of local school districts for pupils who attend Joint Vocational School.
Formation of a Joint Vocational School board.
Procedure for each school district to become a part of the Joint Vocational School District.
Voting of money in a Joint Vocational School District for the support of the Joint Vocational School.

VT 001 173
Larson, Roland S.
Follow-Up Study of 1963 St. Louis Park Graduates.

Saint Louis Park Public Schools, Minn.
MF AVAILABLE IN VT-ERIC SET.
Pub Date - Dec65 11p.

*GRADUATE SURVEYS; *HIGH SCHOOL GRADUATES
*ST. LOUIS PARK; MINNESOTA

Information was gathered during the school year 1964-65. Post card and telephone returns were obtained from 484 of the 488 graduates. Data indicated that 67 percent started college, 13 percent had dropped out of college at the time of the study, 26 percent were employed, 84 percent of the college students were attending colleges in Minnesota, and 16 percent in out-of-state colleges. The highest number of majors were in education (27) and business, economics, accounting, advertising, distributive education (24). Seventy-one percent of the working girls held clerical and office positions. The non-college group more frequently mentioned business education, language arts, and mathematics subjects as being most helpful. The college group more frequently mentioned social studies, language arts, science, and mathematics subjects as being most helpful. Other data include: schools attended, majors of graduates attending college, jobs held by graduates, future plans of graduates, and employers who hired graduates. (PS)

VT001173

ED0 31587

December, 1965

For several years follow-up surveys have been conducted with St. Louis Park students approximately one and one-half years after graduation from high school. Attached is a copy of the Survey for the Class of 1963. The information was gathered during the school year 1964-65.

This data may have possible implications for modification or change in our program. It is hoped that this material will be of some use to you and that the survey data might be discussed if you find that it relates to your work and the school's program.

The purpose of such a study is to gather information as to what happens to our graduates after they leave high school and to get reactions from former students as to how they now view their school experiences. From this it is hoped that we can better evaluate our guidance and counseling services, curriculum, and other facets of the school program so that these services to present and future students might be improved.

If you have any suggestions as to the kinds of information or responses which might be helpful for your department, please let me know. Perhaps such changes can be incorporated into some of our future surveys.

Roland Larson

Roland S. Larson
Coordinator of Student Personnel Services

St. Louis Park, Minnesota

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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VT001173

ST. LOUIS PARK PUBLIC SCHOOLS

FOLLOW-UP STUDY OF 1963 ST. LOUIS PARK GRADUATES

There were 488 graduates in the Class of 1963---237 boys and 251 girls. A double postcard, such as the sample shown below, was sent to each graduate. At a later date another similar postcard was sent to those who failed to respond to the first mailing.

For those individuals who had not responded to either of the two mailings, a telephone call was made. Where possible, we talked directly with the former student, and sometimes with a parent. Hence, the information is not always as complete as where the card was sent in by the former student.

SAMPLE POSTCARD USED IN THIS STUDY

Name:_____ Married?_____
Married Name:(girls)_____
Present Address:_____
Attending school at:_____ Present Major:_____
If Univ. of Minn., what college?_____ Undecided on Maj._____
What do you plan to be doing 5 years from now?_____
Started college but dropped?_____ What college?_____
Now working as (Job Title)_____ at_____
Military service: Branch_____ Enlistment___ yrs. Reserve:_____
High school courses, activities and experiences you feel have been most helpful:_____
_____
Please make any comments or suggestions for improving St. Louis Park High School:_____
_____
_____
_____

TABLE I - RETURNS

RETURNS	ALL GRADUATES		GIRLS		BOYS	
	Number	Percent	Number	Percent	Number	Percent
Post Card Returns	311	64%	157	63%	154	66%
Telephone Returns	173	35%	93	36%	80	33%
TOTAL RETURNS:	484	99%	250	99%	234	99%

TABLE II - CURRENT STATUS OF 1963 GRADUATES

STATUS	ALL GRADUATES		GIRLS		BOYS	
	Number	Percent	Number	Percent	Number	Percent
Employed	130	26%	80	32%	50	22%
Attending College	264	54%	122	48%	142	60%
Started College But Dropped	67	13%	40	16%	27	11%
Other Post-High Training:	48	9%	29	11%	17	8%
Military Service	39	7%	0	0%	39	16%
Unemployed	5	1%	1	1%	4	1%
Married	48	9%	43	18%	5	2%

COMMENTS ON TABLE II:

1. 67% of the 1963 graduates started college. This is 9% less than the Class of 1962, but more like other classes which have usually been around 70% in recent years.

2. At the time of the study, 13% of the class had dropped out of college, which is somewhat less than usual. The rate of retention in college was considerably higher for boys than for girls. More girls than boys were early college dropouts.

3. 26% of all graduates were employed at the time of the survey. There were more girls than boys, possibly due to the fact that a number of boys were in the military services, and more boys than girls persisted in their college work.

4. 29 girls and 17 boys received training beyond high school other than college. (Also, additional boys received training in military services.)

TABLE II (continued)

Table II - continued:

SCHOOLS ATTENDED WERE THE FOLLOWING: (other than college)

		Girls	Boys
Practical Nursing Studies		10	
Abbott	(1)		
General Hospital	(1)		
Methodist Hospital	(2)		
Mt. Sinai Hospital	(1)		
St. Barnabas Hospital	(1)		
St. Mary's Jr. College	(1)		
St. Mary's, Rochester	(1)		
St. Lukes, Duluth	(1)		
Brainerd	(1)		
Beauty Schools		4	
Robinson's Beauty	(1)		
Rogers & Benner	(2)		
Pearl Lowman	(1)		
U. of M. Evening School		3	3
Minnesota School of Business		3	1
Minneapolis Business College		5	
Devry Tech.		1	
Dunwoody Institute			11
Auto Mechanic	(2)		
Die Making	(1)		
Drafting	(1)		
Electronics	(1)		
Printing	(3)		
Sheet Metal	(1)		
Welding	(1)		
Didn't State	(1)		
Vocational		1	1
Cooking	(1)		
Data Processing	(1)		
U. of M. Extension		1	1
California Gem Trade School			1
Rhode Island School of Design		1	
Professional Business Institute		1	
Brown Institute			1

5. The 39 boys in the Military Services were serving as follows:

Navy	12	Air Force	8	Coast Guard	1
Army	9	Marines	9		

6. One percent (1%) of the class was unemployed.

TABLE III:-DISTRIBUTION OF 1963 GRADUATES STILL IN COLLEGE AT TIME OF STUDY.

Name of College	Total:	Girls	Boys
University of Minnesota	159	68	91
(St.Paul & Mpls.Campus)			
Business			2
C.L.A.		43	65
Dental Hygiene		1	
Education		10	1
Forestry, Agric. & Home Ec.			1
General		13	13
Institute of Technology			6
Medical		1	2
Pharmacy			1

(TABLE III-continued)

Table III - continued:

Other Minnesota Colleges & Affiliates:	Total:	Girls	Boys
	63	31	32
Bemidji			3
Carlton		2	
Gustavus		4	2
Hamline		1	1
Macalester			2
Mankato		8	13
Mpls. School of Art		1	
Moorhead			1
St. Benedict		1	
St. Cloud		8	2
St. Olaf		6	6
St. Thomas			1
Rochester Jr. College			1
Out of State Colleges:	**Total**	**Girls**	**Boys**
	41	21	20
Colgate			1
Columbia Jewish Theolog.Seminary		1	
Dana		1	
Davenport (Grand Rapids, Mich.)		1	
Drake		1	
ElCominco			1
Evangel			1
Glendale		1	
Gonzaga		1	
Iowa State		1	
Jamestown			1
John's Hopkins			1
Marjorie Webster, Wash.,D.C.		1	
Menlo			1
Mass. Institute of Tech.			1
New York "U"		1	
Northwestern		1	2
Oakland, California Fine Arts			1
Ohio "U"			1
Radcliffe		1	
Santa Rosa, Cal.		1	
Stout			3
Stanford		1	1
Univ. of Chicago			2
Univ. of Colorado		2	
Univ. of Washington			1
Univ. of Wisconsin		3	
Waldorf			1
Washington "U", St. Louis		1	
Wellesley		1	
Wheaton		1	1

COMMENTS ON TABLE III:

1. 60% of those attending college are at the University of Minnesota (Mpls.-St. Paul campuses)--68 girls; 91 boys.

2. 84% of the Park graduates in college were attending colleges in Minnesota and 16% in out of State colleges. These percentages are identical to last year's study, class of 1962.

(continued)

Table III Comments (continued)

3. A total of 108 boys and girls were attending the College of Liberal Arts at the U. of M.

4. Most boys attending college were at the University of Minnesota--91 at U. of M. and 52 at other Minnesota colleges or out of State schools.

5. 68 girls at U. of M. (52 at other Minnesota colleges or out of State schools)

6. Highest student attendance for colleges other than U. of M. were: Mankato 21; St. Olaf-12; St. Cloud-10; Gustavus-6.

7. Students were in attendance at 46 different colleges in the nation.

TABLE IV - MAJORS OF PARK GRADUATES ATTENDING COLLEGE:

	Total	Girls	Boys
Area Studies	1	1	
Accounting	3	1	2
Advertising	1		1
Anthropology	1		1
Architecture	2		2
Art	16	15	1
Biology	2	1	1
Business	16	1	15
Criminology	1		1
Dental Technician	3	3	
Dentistry	4	1	3
Distributive Education	1		1
Economics	3		3
Education	26	23	3
English	14	12	2
Mechanical Engineering	1		1
Chemical Engineering	1		1
Civil Engineering	1		1
Electrical Engineering	1		1
Foreign Language	11	10	1
History	10	2	8
Home Economics	1	1	
Humanities	1	1	
Industrial Arts	1		1
Industrial Technology	1		1
International Relations	1	1	
Journalism	3	3	
Liberal Arts	1	1	
Literature	2	1	1
Law	2		2
Math	4		4
Medical Technician	3	3	
Pre-Medicine	18	2	16
Music	2	2	
Nursing	1	1	
Pharmacy	1		1
Philosophy	2		2
Physical Education	3	1	2
Physics	3		3
Political Science	7	1	6
Psychology	17	7	10

(Table IV continued)

Table IV (continued)

	Total:	Girls	Boys
Social Sciences	4	1	3
Social Work	2	1	1
Sociology	14	12	2
Special Education	1	1	
Speech Therapy	8	7	1
Physical Therapy	2	2	
Undecided	42	7	35
Did not specify	7	4	3

COMMENTS ON TABLE IV:

1. 51 college students were undecided or did not specify a major, indicating uncertainty as to vocational choice at this point (versus last year, 61).
2. The highest number of stated majors were: Education (27); Business, Economics, Accounting, Advertising, Distributive Education (24); Pre-Medicine (18); Psychology (17); Sociology and Social Work (16); Art (16); English & Literature (16); Foreign Language (11); History (10); Speech Therapy (8).
3. Education majors were most often girls; boys predominated as business majors.
4. 45 students indicated majors in sequences which deal heavily in science and/or math. (Engineering, nursing,med. tech., pharmacy, etc.)
5. More kinds of majors are being specified above than in earlier studies.

TABLE V: FULL-TIME JOBS HELD BY 1963 GRADUATES:

	GIRLS		BOYS
Clerical & Office	57	Cook	1
Secretary	19	Promotions	1
Clerk Typist	4	Order Clerk	2
Bookkeeper	4	Complaint Department	1
File Clerk	2	Coop. Community Labor	1
Multilith Operator	1	Bottle Sterilizer (Hospital)	1
Claims Girl	1	Shipping Clerk	3
Price Clerk	2	Factory	3
Key Punch	3	Machinist	3
Receptionist	8	Stock Manager	2
Accountant	1	Production Line	1
Comptometer	2	Technician	1
Teller	1	Plastic Molder	1
General Office	7	Advertising	1
Cashier	1	Stock Boy	5
Insurance Clerk	1	Station Attendant	1
Miscellaneous	23	Hearing Aid Repairman	1
Dental Assistant	1	Maintenance man	2
Sales Clerk	5	Driver	4
Beautician	2	Mail Clerk	1
Messenger	1	Pressman	1
Stewardess	1	Sells Papers	1
Factory work	2	Chromer	1
Inspector	1	Truck Loader	1
Technician	2	Welder	1
Nurses Aide	3	Mechanic	1
Optometrist's Assistant	1	Disc Jockey	1
Medical Technician	1	Writing	1
Presser	1	Publishing Company	1
Assistant Buyer	1	Didn't State	5
TOTAL - 80		TOTAL - 50	

(Table V. continued)

Table V - continued

COMMENTS ON TABLE V:

1. 71% of the working girls held clerical and office positions

2. As in past years, relatively few boys were working in office positions

TABLE VI: - FUTURE PLANS - "WHAT DO YOU PLAN TO BE DOING FIVE YEARS FROM NOW?"

GIRLS:		BOYS:	
Buyer	1	Sheet Metal Work	1
C.P.A.	1	Car dealer	1
Teaching	54	Doctor	1
Still in school	6	College	15
Social Work	4	Teaching	18
Nursing	7	Still in school-graduate work	49
Stewardess	3	Accountant	2
Foreign Service	1	Architect	1
Interior Decorator	1	Consulting Engineer	1
Journalist	1	Electric Engineer	1
Advertising Researcher	1	Painting	1
Speech Therapist	1	Personnel Work	1
Dental Assistant	2	Military Services	5
Commercial Artist	1	Printer	1
Therapist	1	Technician	1
Pathologist	1	Import	1
Psychologist	1	Broker	1
Public Relations	1	Retail Pharmacy	1
Xray Technician	1	Commercial Pilot	1
Technician	1	Computer Programming	1
Marriage & family	83	Insurance	1
Working (unspecified)	25	Electronics	1
Undecided	16	Drafting	1
No answer	24	Lawyer	1
		Minister	1
		Traveling	1
		Real Estate	1
		Policeman	1
		Working (unspecified)	24
		Undecided	42
		No answer	33

COMMENTS ON TABLE VI:

1. Eight times more boys than girls expected to be pursuing further education. Apparently many boys saw the need for graduate work beyond the four-year degree.

2. Teaching and/or marriage and family life figure heavily in girls' future plans.

TABLE VII: - EMPLOYERS WHO HIRED GRADUATES OF THE CLASS OF 1963

American Hardware Mutual - 1
American Mutual - 1
Amluxen Yard Goods - 1
Applebaum Food Markets - 1
Austin Radio Station - 1
Automatic Control Co. - 1
Automotive Paint - 1
Avenco - 1
Bell Telephone - 1
Bichel Optical Co. - 1
Booker-Walsted - 2
Canada Dry - 1
Chauffeur - 1
Chubb & Son, Inc. - 1
Citizens State Bank - 1
Coast To Coast Stores - 1
Control Data - 1
Coop.Community Labor,Israel - 1
Daffin Corporation - 1
Dayton's - 1
Dental Assistant - 2
Donaldsons - 1
Dura-Process - 1
Edina Coiffure - 1
Edina Village - 1
Employer's Overload - 2
Fairmont Foods - 1
Farmers Home Mutual - 1
Fingerhut - 1
First National Bank - 1
Flo-Tronics, Inc. - 1
Freight Rate - 1
Gamble Skogmo - 1
General Mills - 2
General Motors - 1
General Office Supply - 1
General Science Service - 1
Gold Bond Stamp Co. - 3
Gold Medal Beverage - 1
B. F. Goodrich - 1
Gould-Brown & Bickett - 1
Hartford Insurance Co. - 1
Hearing Aid Company - 1
Paul Hein Beauty Lounge - 1
Hitchcock's - 1
Hoigaard's - 1
Hollander Publishing - 2
Honeywell - 1
Houghton's - 1
Hurd Aerial Surveys - 1
Jensen Optical - 1
Jordan-Marsh - 1
Kieffer's - 1
Kroger Foods - 1
Lutheran Brotherhood - 1
Marquette Bank - 1
Mayo Clinic - 1
McGraw Company - 1
Methodist Hospital - 3
Meyers Outdoor Adv. - 1
Midland Bank - 1
Miller Bag Company - 1
Mills Mutual - 1
Minnesota State Highway - 1
Napco Industries - 1
Nicollet Clinic - 1
Northern Natural Gas - 1
Northland Aluminum - 1
Northwest Airlines - 2
N. W. National Life Ins. - 2
Park Nursing Home - 1
J. C. Penney Co. - 5
Penny's Market - 1
Perkins Pancake House - 1
Philip Optical - 1
Phillips 66 - 1
Powell Candy Company - 1
Powers - 1
Prudential - 2
Qualitek Engineering - 1
Red Owl - 1
Riley Tar & Chemical - 1
C. H. Robinson - 1
S. & K. Products - 1
St. Mary's Hospital - 1
St. Louis Park Theater - 1
Shangri La Beauty - 1
Sigwald Engineering - 1
Slitterman's - 1
Snyder's Drug - 1
Standard Oil - 1
Sterling Company - 1
Stephens Buick - 1
Super Market - 1
Swanson & Youngdale - 1
Title Insurance Co. - 1
Thrifty Super Market - 1
Universal Circuits, Inc. - 1
University Campus Book Store - 1
University of Minnesota - 1
U. of M. Hospital - 1
Village Dry Cleaners - 1
Vogt Air Conditioning - 1
Warren Cadillac - 1
Waldorf Paper - 2
Western Electric - 1
Westwood Drug - 1
Wonder Bread - 1
Woolworth's - 1
Xray Technician - 1
Zoss Drugs - 1

TABLE VIII: COURSES CONSIDERED MOST HELPFUL:

Course	(N-264) College Group		(N-220) Non-College Group		Total Class	
Art		10		7		17
Business Education:		29		51		80
Bookkeeping	3		5		8	
Business Law	3		2		5	
Office Practice	4		12		16	
Shorthand	2		9		11	
Typing	14		16		30	
"Business Courses"	3		7		10	
Foreign Language:		27		4		31
French	2		2		4	
German	10		0		10	
Latin	3		1		4	
Spanish	6		1		7	
"Foreign Language"	6		0		6	
Home Economics		0		4		4
Industrial Arts:		3		18		21
Drafting	1		1		2	
Electronics	1		3		4	
Metal	0		1		1	
Printing	0		5		5	
"Shop"	1		4		5	
"Industrial Arts"	0		4		4	
Language Arts		117		47		164
Drama	6		1		7	
English	90		38		128	
Journalism	3		0		3	
Speech	18		8		26	
Mathematics:		46		34		80
Adv.Algebra	2		4		6	
Accel. Math	1		0		1	
Geometry	4		1		5	
Trig.	2		1		3	
"Mathematics"	37		28		65	
Science		59		22		81
Biology	10		4		14	
Chemistry	13		5		18	
Physics	14		7		21	
"Science"	22		6		28	
Social Studies		115		25		140
Geography	9		5		14	
History	23		2		25	
Humanities	30		1		31	
Social Problems	40		14		54	
"Social Studies"	13		3		16	

COMMENTS ON TABLE VIII:

1. Non-college group more frequently mentioned business education, home economics, industrial arts subjects as being most helpful.

2. College group more frequently mentioned as being most helpful--language arts, social studies, science, mathematics, foreign languages and art.

TABLE IX: EXPERIENCES MENTIONED AS BEING MOST VALUABLE:

Experiences:	College Group(N-264)	Non-college Group(N-220)	Total Class
Athletics	15	4	19
Band	7	1	8
Blue Tri	8	9	17
Canteen	3	0	3
Cheerleading	1	0	1
Chorus	2	0	2
Class Play	2	0	2
Debate	3	1	4
Echo	3	1	4
Echowan	3	0	3
Glee Club	4	2	6
Hi-Y	3	0	3
Leadership Position	1	0	1
Plays	5	2	7
Red Cross	1	0	1
Student Council	11	0	11
Surfbelles	2	0	2
Swimming	5	1	6

COMMENTS ON TABLE IX:

1. Since many students left this item blank, it is difficult to make meaningful comparisons between experiences and activities.

RSL:b
November, 1965

VT 001 191
Seven Basic Areas of the World of Work; Prepared from the Fond du Lac County 1966 Occupational Needs Census. Introduction and Summary and Parts 1-7.

Wisconsin State Employment Service, Madison. Research and Statistics Div.
MF AVAILABLE IN VT-ERIC SET.
Pub Date - 66 114p.

*OCCUPATIONAL SURVEYS; *LABOR FORCE; *JOB ANALYSIS; EDUCATIONAL NEEDS; *EMPLOYMENT QUALIFICATIONS; *EMPLOYMENT OPPORTUNITIES
FOND DU LAC COUNTY; WISCONSIN

In February 1966, an occupational survey of 1,340 employers was made. These firms employed 19,700 workers who represented an estimated 85 percent of the total non-agricultural employees in the county. The identified job openings were analyzed in terms of their significance to "Data," "People," and "Things" as defined in Volume II of the "Dictionary of Occupational Titles." The analysis categorizes each job opening in these ways: (1) its relationship to data, people, and things, (2) its level of complexity, (3) its educational requirement, (4) its experience requirement, (5) its promotion potential, and (6) the date of anticipated openings. Some of the findings were: (1) 35.8 percent of the job openings related to things, 28.6 percent related to data-things, 17.8 percent related to data-people, 9.7 percent related to data, and 5.3 percent related to people, (2) 40 percent required a high school education, 17.2 percent had no educational requirements, 15.8 percent required less than high school education and 24 percent had other requirements, (3) 20.3 percent of the job openings required experience, and (4) 65.6 percent of the job openings had promotion potential. Tabular data indicate current openings and anticipated openings for 1966, 1968, and 1971. (EM)

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SEVEN BASIC AREAS OF

THE WORLD OF WORK

VT001191

SEVEN BASIC AREAS OF THE WORLD OF WORK

Prepared From The
Fond du Lac County
1966 Occupational Needs Census

By
Research and Statistics
Wisconsin State Employment Service
A Division of the Industrial Commission
4802 Sheboygan Avenue
Madison, Wisconsin 53705

INTRODUCTION and SUMMARY

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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TABLE OF CONTENTS

Title	Part
Introduction	
Working With Data	I
Working With Data-People	II
Working With Data-Things	III
Working With Data-People-Things	IV
Working With People-Things	V
Working With People	VI
Working With Things	VII

LIST OF SUMMARY GRAPHS AND TABLES

Page

GRAPHS

Total Job Openings

--Work Area Distribution 10
--Minimum Educational Requirements 11
--Experience Required and Promotional Possibilities 12

Work Area Distribution

--Total Job Openings and Experience Required 13
--Total Job Openings and Promotional Possibilities 14
--Current Job Openings With Percentage Hard to Fill 15
--Future Job Openings Anticipated in 1968 and 1971 16

TABLES

Numerical and Percentage Distribution of Job Openings Within Work Area

--Date of Opening 17
--Educational Requirement 18
--Experience Required and Promotional Possibilities 19

INTRODUCTION

The new third edition of the Dictionary of Occupational Titles (D.O.T.) has provided a unique opportunity to develop this analysis of the Fond du Lac County Occupational Needs Census. This report analyzes the job openings in this census by their significant relationship to Data, People, and Things as defined in Volume II of the D.O.T.

These classifications are found in the fourth (Data), fifth (People), and sixth (Things) digits of the occupational codes. Within each classification of Data, People, and Things are nine levels of complexity. These levels descend in complexity from 0 to 8. All levels, except 8, show a significant relationship to Data, People, or Things. The succeeding pages explain the hierarchy within and the definitions of Data, People, and Things.

This analysis categorizes each job opening in the following ways:

1. The WORK AREA--the job opening's significant relationship to Data, People, or Things, or a combination of them. There are seven Work Areas.

2. The WORKER FUNCTION--the level of complexity within the Work Area.

3. The DATE when the job opening occurs, the EDUCATIONAL requirement, the EXPERIENCE required, and the PROMOTIONAL possibilities of the job openings.

Parts I through VII of this analysis are designated by the seven Work Areas: DATA; DATA-PEOPLE; DATA-THINGS; DATA-PEOPLE-THINGS; PEOPLE-THINGS; PEOPLE; and THINGS.

EXPLANATION OF RELATIONSHIPS WITHIN DATA, PEOPLE, THINGS HIERARCHIES

(Taken from the Third Edition of the Dictionary of Occupational Titles)

Much of the information in this edition of the Dictionary is based on the premise that every job requires a worker to function in relation to Data, People, and Things, in varying degrees. These relationships are identified and explained below. They appear in the form of three hierarchies arranged in each instance from the relatively simple to the complex in such a manner that each successive relationship includes those that are simpler and excludes the more complex.[1] The identifications attached to these relationships are referred to as worker functions, and provide standard terminology for use in summarizing exactly what a worker does on the job by means of one or more meaningful verbs.

A job's relationship to Data, People, and Things can be expressed in terms of the highest appropriate function in each hierarchy to which the worker has an occupationally significant relationship, and these functions taken together indicate the total level of complexity at which he must perform. The last three digits of the occupational code numbers in the Dictionary reflect significant relationships to Data, People, and Things, respectively.[2] These last three digits express a job's relationship to Data, People, and Things by identifying the highest appropriate function in each hierarchy to which the job requires the worker to have a significant relationship, as reflected by the following table:

DATA (4th Digit)	PEOPLE (5th Digit)	THINGS (6th Digit)
0 Synthesizing	0 Mentoring	0 Setting-Up
1 Coordinating	1 Negotiating	1 Precision Working
2 Analyzing	2 Instructing	2 Operating-Controlling
3 Compiling	3 Supervising	3 Driving-Operating
4 Computing	4 Diverting	4 Manipulating
5 Copying	5 Persuading	5 Tending
6 Comparing	6 Speaking-Signaling	6 Feeding-Offbearing
7	7 Serving	7 Handling
8) No significant relationship	8 No significant relationship	8 No significant relationship

[1] As each of the relationships to people represents a wide range of complexity, resulting in considerable overlap among occupations, their arrangement is somewhat arbitrary and can be considered a hierarchy only in the most general sense.

[2] Only those relationships which are occupationally significant in terms of the requirements of the job are reflected in the code numbers. The incidental relationships which every worker has to Data, People, and Things, but which do not seriously affect successful performance of the essential duties of the job, are not reflected.

DATA: Information, knowledge, and conceptions, related to data, people, or things, obtained by observation, investigation, interpretation, visualization, mental creation; incapable of being touched; written data take the form of numbers, words, symbols; other data are ideas, concepts, oral verbalization.

0 Synthesizing: Integrating analyses of data to discover facts and/or develop knowledge concepts or interpretations.

1 Coordinating: Determining time, place, and sequence of operations or action to be taken on the basis of analysis of data; executing determinations and/or reporting on events.

2 Analyzing: Examining and evaluating data. Presenting alternative actions in relation to the evaluation is frequently involved.

3 Compiling: Gathering, collating, or classifying information about data, people, or things. Reporting and/or carrying out a prescribed action in relation to the information is frequently involved.

4 Computing: Performing arithmetic operations and reporting on and/or carrying out a prescribed action in relation to them. Does not include counting.

5 Copying: Transcribing, entering, or posting data.

6 Comparing: Judging the readily observable functional, structural, or compositional characteristics (whether similar to or divergent from obvious standards) of data, people, or things.

PEOPLE: Human beings; also animals dealt with on an individual basis as if they were human.

0 Mentoring: Dealing with individuals in terms of their total personality in order to advise, counsel, and/or guide them with regard to problems that may be resolved by legal, scientific, clinical, spiritual, and/or other professional principles.

1 Negotiating: Exchanging ideas, information, and opinions with others to formulate policies and programs and/or arrive jointly at decisions, conclusions, or solutions.

2 Instructing: Teaching subject matter to others, or training others (including animals) through explanation, demonstration, and supervised practice; or making recommendations on the basis of technical disciplines.

3 Supervising: Determining or interpreting work procedures for a group of workers, assigning specific duties to them, maintaining harmonious relations among them, and promoting efficiency.

4 Diverting: Amusing others.

5 Persuading: Influencing others in favor of a product, service, or point of view.

6 Speaking-Signaling: Talking with and/or signaling people to convey or exchange information. Includes giving assignments and/or directions to helpers or assistants.

7 Serving: Attending to the needs or requests of people or animals or the expressed or implicit wishes of people. Immediate response is involved.

THINGS: Inanimate objects as distinguished from human beings; substances or materials; machines, tools, equipment; products. A thing is tangible and has shape, form, and other physical characteristics.

0 Setting Up: Adjusting machines or equipment by replacing or altering tools, jigs, fixtures, and attachments to prepare them to perform their functions, change their performance, or restore their proper functioning if they break down. Workers who set up one or a number of machines for other workers or who set up and personally operate a variety of machines are included here.

1 Precision Working: Using body members and/or tools or work aids to work, move, guide, or place objects or materials in situations where ultimate responsibility for the attainment of standards occurs and selection of appropriate tools, objects, or materials, and the adjustment of the tool to the task require exercise of considerable judgment.

2 Operating-Controlling: Starting, stopping, controlling, and adjusting the progress of machines or equipment designed to fabricate and/or process objects or materials. Operating machines involves setting up the machine and adjusting the machine or material as the work progresses. Controlling equipment involves observing gages, dials, etc., and turning valves and other devices to control factors as temperature, pressure, flow of liquids, speed of pumps, and reactions of materials. Setup involves several variables and adjustment is more frequent than in tending.

3 Driving-Operating: Starting, stopping, and controlling the actions of machines or equipment for which a course must be steered, or which must be guided, in order to fabricate, process, and/or move things or people. Involves such activities as observing gages and dials; estimating distances and determining speed and direction of other objects; turning cranks and wheels; pushing clutches or brakes; and pushing or pulling gear lifts or levers. Includes such machines as cranes, conveyor systems, tractors, furnace charging machines, paving machines, and hoisting machines. Excludes manually powered machines, such as handtrucks and dollies, and power assisted machines, such as electric wheelbarrows and handtrucks.

4 Manipulating: Using body members, tools, or special devices to work, move, guide, or place objects or materials. Involves some latitude for judgment with regard to precision attained and selecting appropriate tool, object, or material, although this is readily manifest.

5 Tending: Starting, stopping, and observing the functioning of machines and equipment. Involves adjusting materials or controls of the machine, such as changing guides, adjusting timers and temperature gages, turning valves to allow flow of materials, and flipping switches in response to lights. Little judgment is involved in making these adjustments.

6 Feeding-Offbearing: Inserting, throwing, dumping, or placing materials in or removing them from machines or equipment which are automatic or tended or operated by other workers.

7 Handling: Using body members, handtools, and/or special devices to work, move, or carry objects or materials. Involves little or no latitude for judgment with regard to attainment of standards or in selecting appropriate tool, object, or material.

NOTE: Included in the concept of Feeding-Offbearing, Tending, Operating-Controlling, and Setting Up, is the situation in which the worker is actually part of the setup of the machine, either as the holder and guider of the material or holder and guider of the tool.

EXPLANATION
OF
DATE, EDUCATION, EXPERIENCE AND PROMOTION CLASSIFICATIONS

Date

Current - The "current" job openings are those open at the time of the census, February, 1966.
One Month or More - The "one month or more" job openings are included in the "current" job openings. They are itemized separately because job openings of one month or more are defined as "hard to fill".
Later in 1966 - The "later in 1966" job openings are those openings anticipated later in 1966 and do not include "current" job openings.
In 1968 - The "in 1968" job openings are those anticipated in 1968. These include both new and replacement openings.
In 1971 - The "in 1971" job openings are those anticipated in 1971. These include both new and replacement openings.

Education

For this analysis, categories of educational training were established so that uniformity of response could be maintained. These minimum requirements are shown in the following table:

1. No Preference
2. Less than High School Graduate
3. High School Graduate
4. One Year Post-High Vocational Graduate
5. Two Year Post-High Vocational, Technical Graduate
6. Some College
7. College Graduate
8. On-the-Job Training
9. Other (Specify in Comments Section)

NR No Response

Experience and Promotion

In addition to educational requirements, employers were asked to indicate whether prior experience was desired and whether employees in these positions would normally be promoted to higher level jobs. A column (NR) was added for those firms which did not respond to these questions.

These brief statements, with accompanying charts, provide a framework from which to view the individual narrative reports.

Openings

The greatest number of openings, current and anticipated, was found among "Things" jobs.

The greatest number of current openings was found among "Data-Things" jobs.

The greatest number of anticipated openings--later in 1966, in 1968, and in 1971--was found among "Things" jobs.

Education

The minimum educational requirement most often specified by employers was for high school graduation. High school graduation or less was sufficient for a majority of openings in all work areas except "Data-People", and actually was sufficient for 90% of all "Things" job openings.

Overall, the highest educational requirements fell in the "Data-People" work area, reflecting openings for teachers and nurses, in particular.

Among job openings requiring on-the-job training, one-half were in the "Things" work area and more than one-third were in the "Data-Things" work area.

Experience

Experience was required in only 20% of total job openings. Job openings found in the "Things" work area were least likely to require experience.

Promotional Possibilities

Promotional possibilities existed in two-thirds of total job openings, with the highest percentages found in work areas which include a significant "Data" requirement among the worker functions. Promotional possibilities were high in work areas with high educational demands but, interestingly, were highest for "Data" jobs where large numbers of office clerk, typist and steno openings were found. Promotional possibilities existed for only half the "Things" jobs.

POINTS TO REMEMBER.....

The Fond du Lac County Occupational Needs Census was taken in February, 1966, at a time of high employment. Hence, the education and experience requirements sometimes appear to be more "minimum" than would normally be expected. It may be assumed that when labor demand drops, employers become more selective and the requirements rise accordingly.

The census represents 1340 of the employers in Fond du Lac County. They employ approximately 19,700 (an estimated 85%) of the total Fond du Lac County non-agricultural wage and salary employment.

Employers had the option to express "No Preference" regarding education and training, and some did not respond to these questions at all. This occurred in significant proportions in a few instances, particularly in lower skill areas, and implies that only the minimal educational level was required for these openings.

In evaluating anticipated openings, it should be remembered that these do not necessarily represent an enlargement of the employers' labor forces, since the numbers of openings include replacements as well as new job openings.

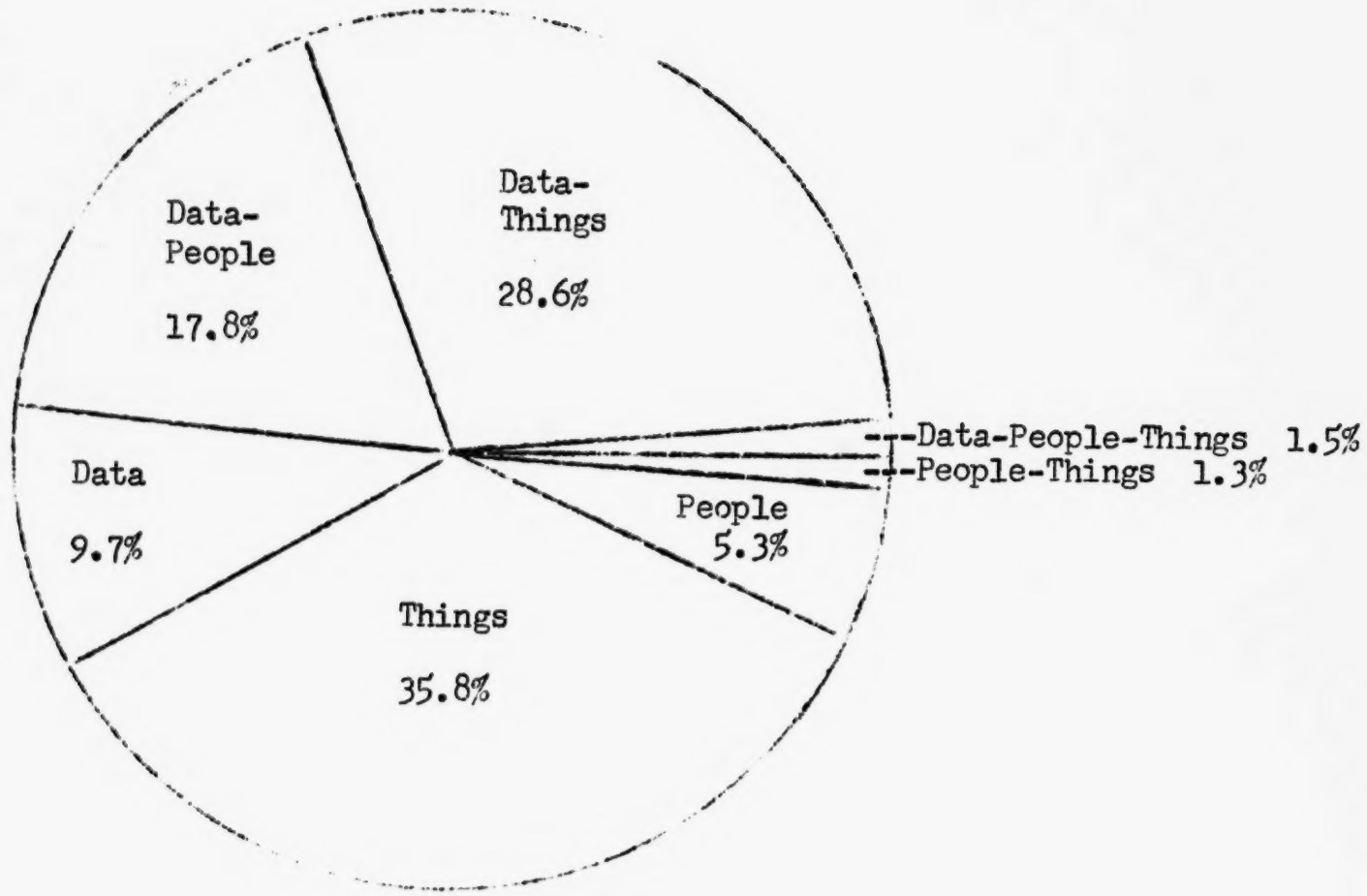
While part-time openings were reported in the occupational census, only full-time openings were included in this analysis.

Occupations with codes ending in digits .780, .781, and .782 were included with those having digits .380, .381, and .482, respectively. It was decided that the job openings which have a relatively complex relationship to "things", as indicated by 0, 1, or 2 in the last digit position, must necessarily have a significant relationship to "data". This relationship was indicated by including these job openings with those having a 3 or 4 in the 4th digit position of the occupational code.

The figures in the narratives are rounded. Exact numbers and percentages are found in the accompanying tables.

WORK AREA DISTRIBUTION

TOTAL JOB OPENINGS



NOTE:

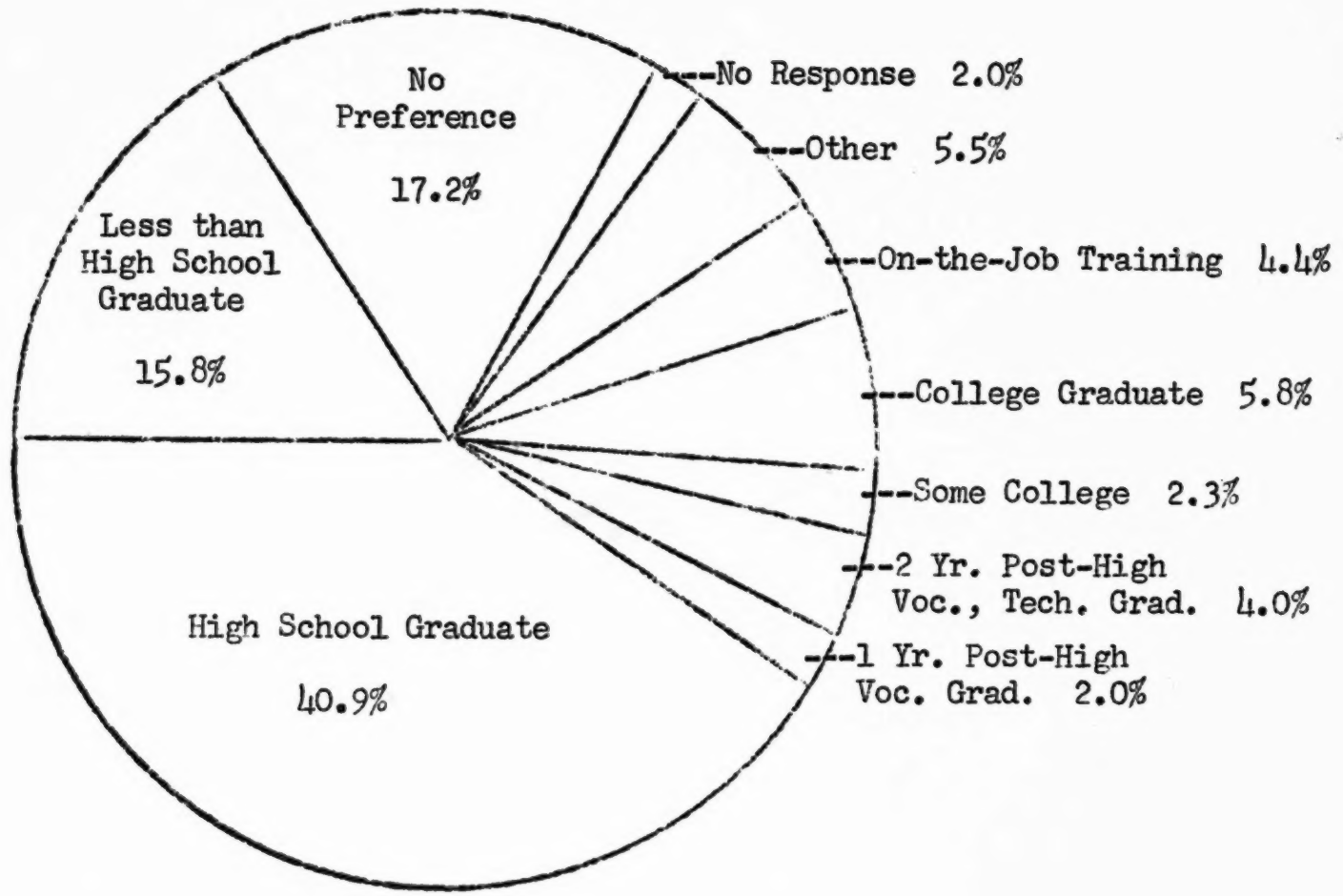
The large percentage of "Things" job openings.

The large percentages of job openings which involve "Data" alone or in combination with other significant worker functions.

The small percentages of job openings which involve "People" alone or in combination with other significant worker functions.

MINIMUM EDUCATIONAL REQUIREMENTS

TOTAL JOB OPENINGS



NOTE:

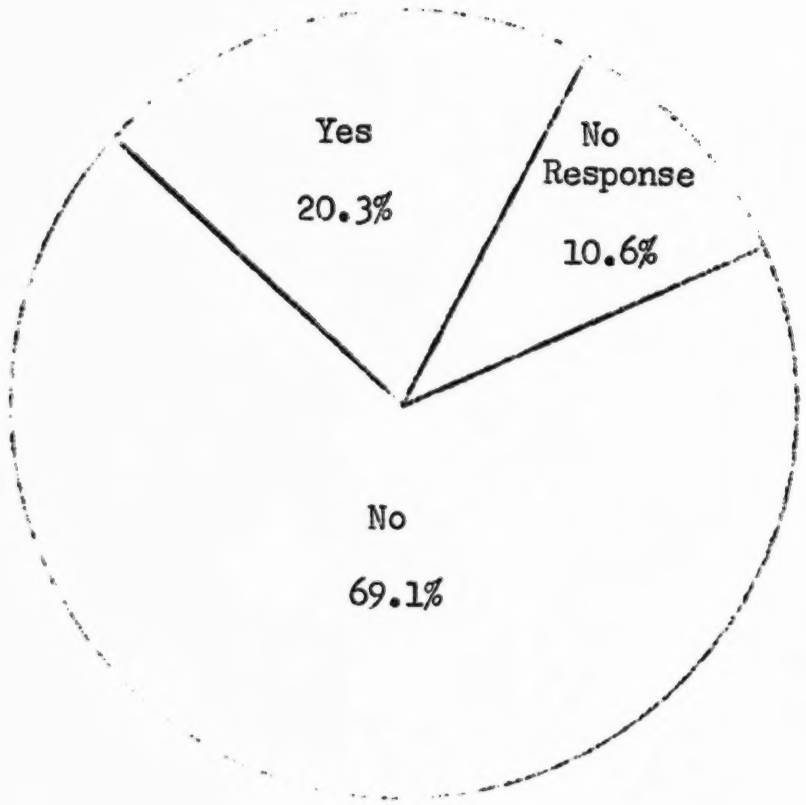
40.9% of all job openings required a high school degree.

64.9% of all job openings required a high school degree or beyond.

Only 5.8% of all job openings required a college degree.

EXPERIENCE REQUIRED

TOTAL OPENINGS

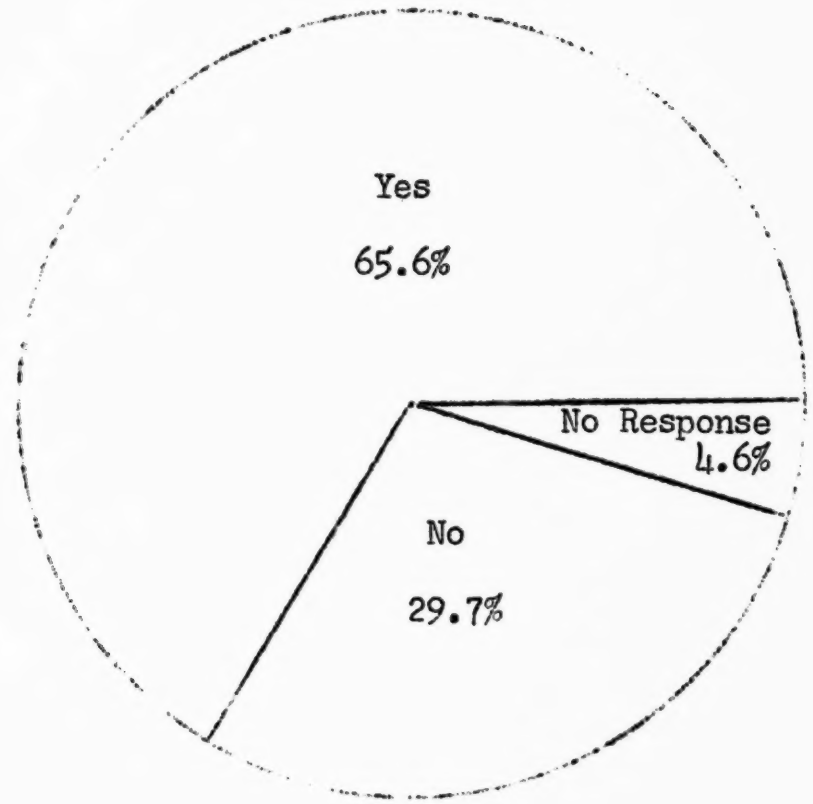


NOTE:

Only 20.3% of all job openings required experience.

PROMOTIONAL POSSIBILITIES

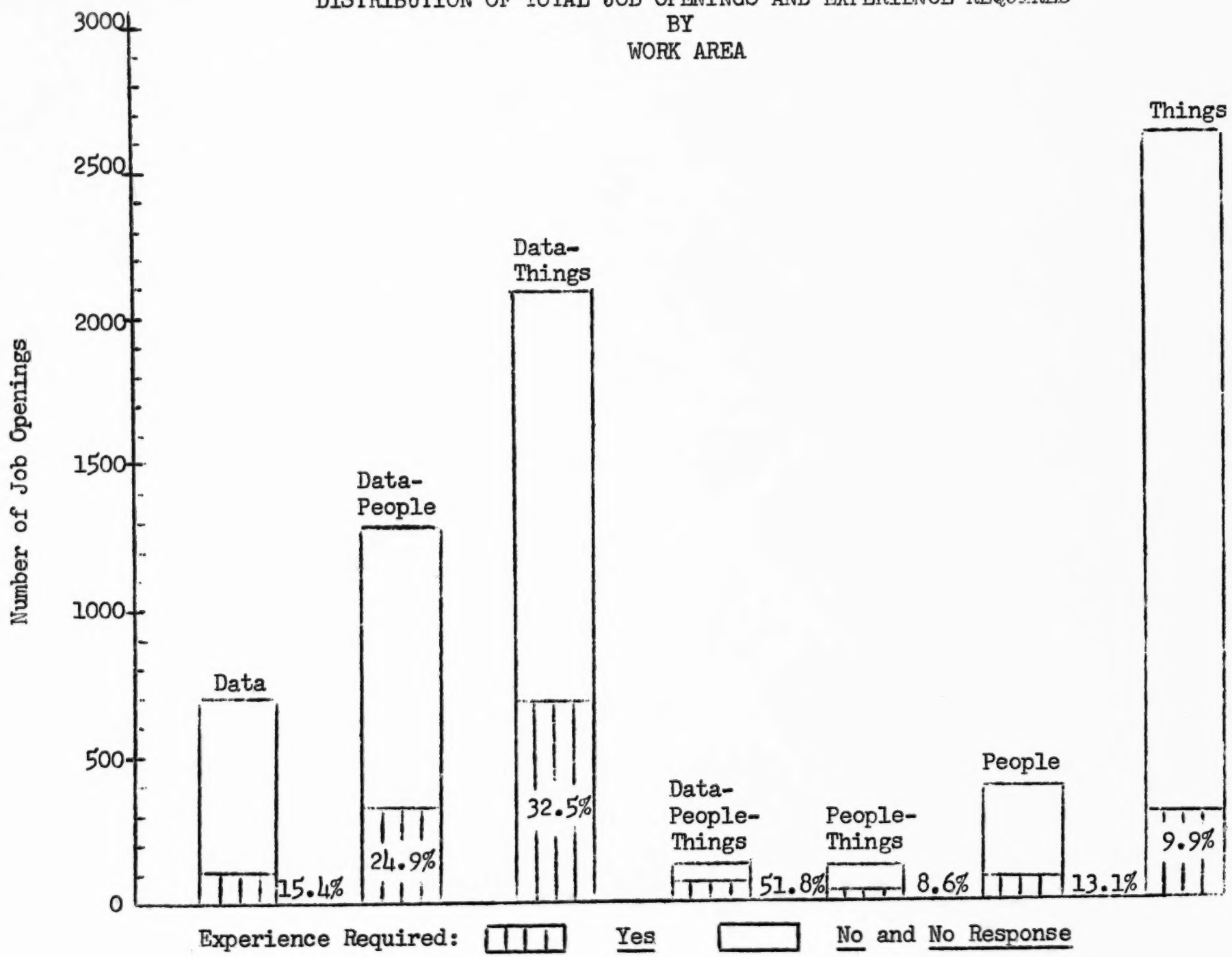
TOTAL OPENINGS



NOTE:

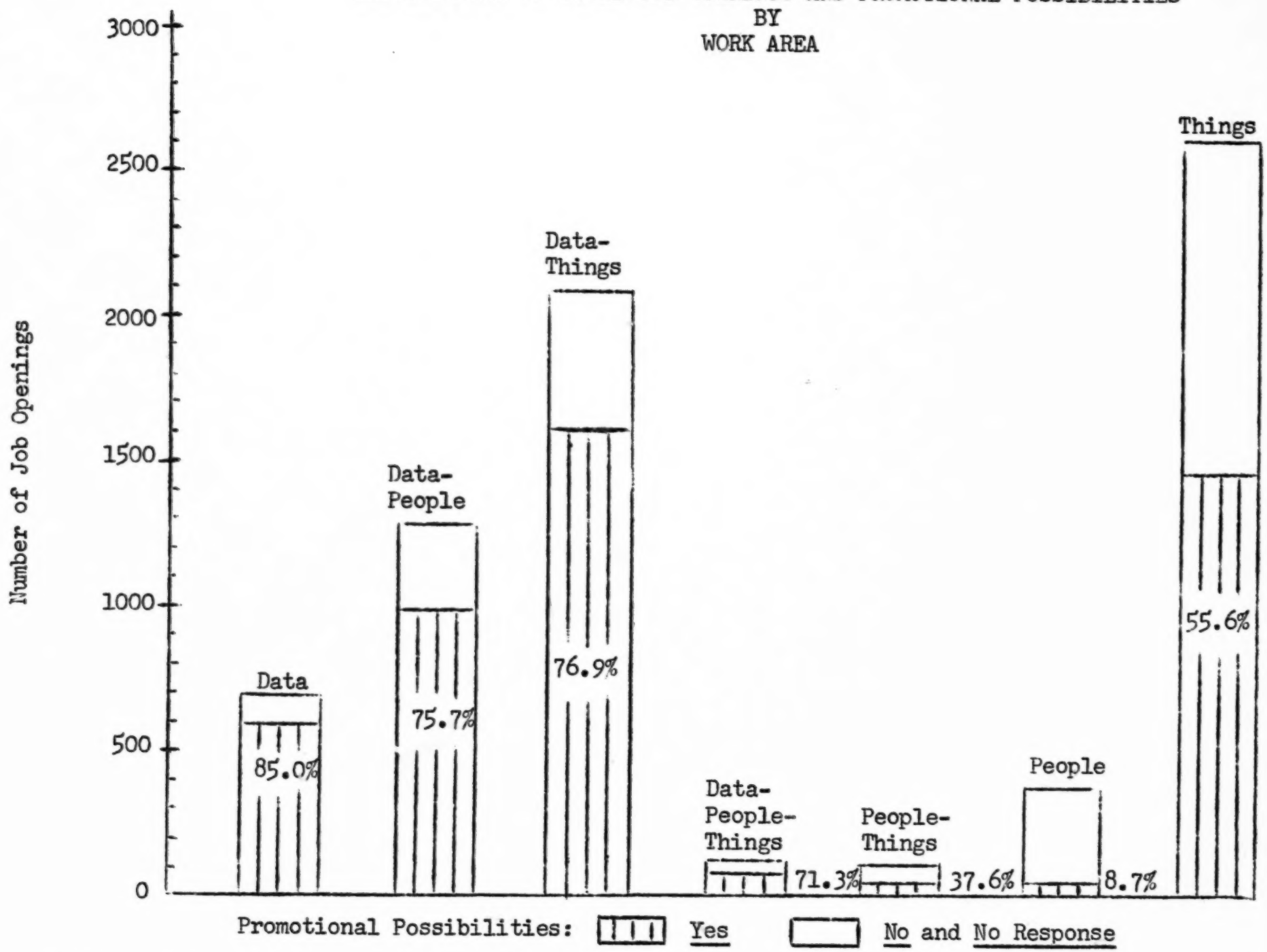
65.6% of all job openings offered promotional possibilities.

DISTRIBUTION OF TOTAL JOB OPENINGS AND EXPERIENCE REQUIRED
BY
WORK AREA



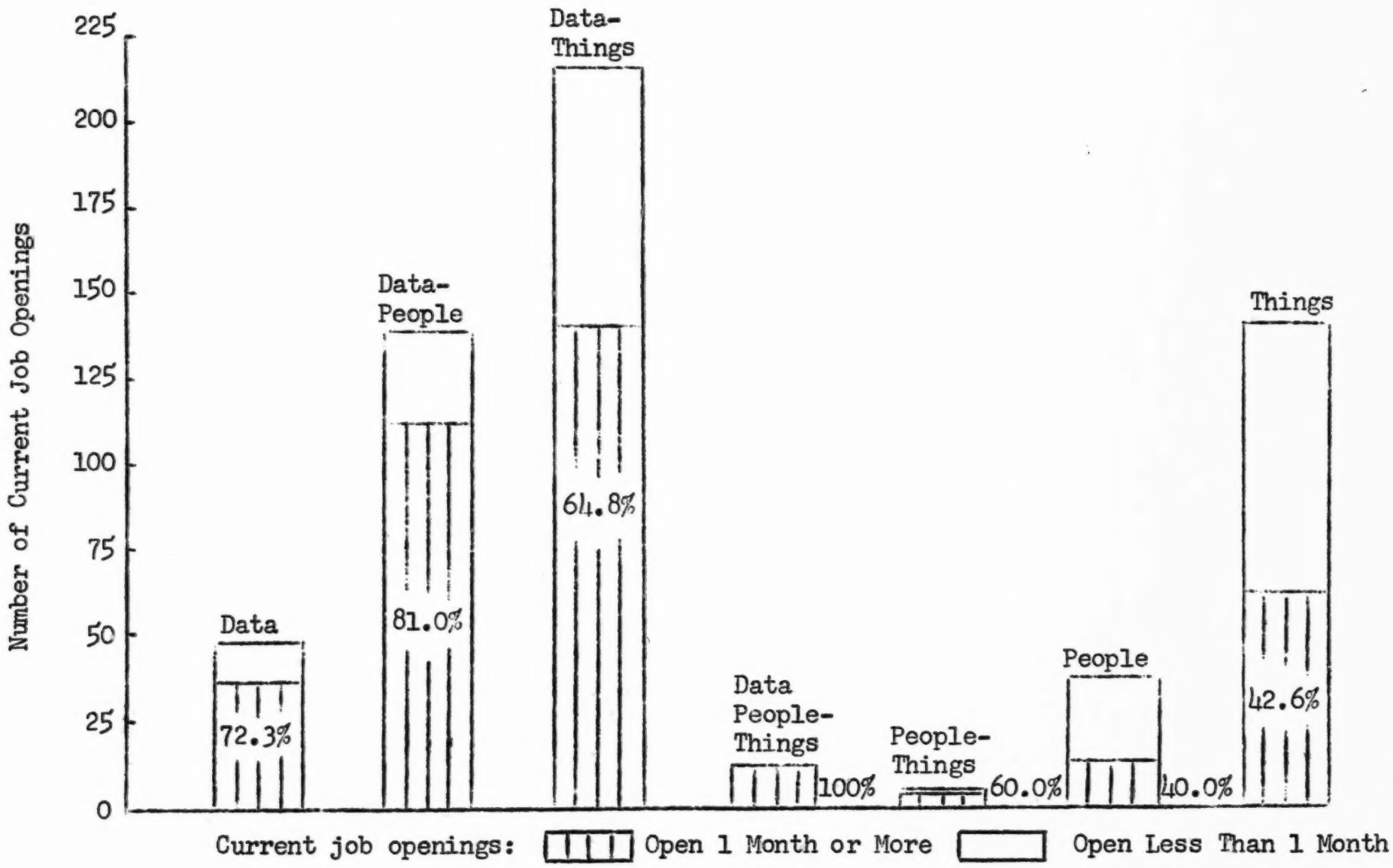
NOTE: The high percentage of "Data-People-Things" job openings which required experience.
The low percentage of "Things" and "People-Things" job openings which required experience.

DISTRIBUTION OF TOTAL JOB OPENINGS AND PROMOTIONAL POSSIBILITIES
BY
WORK AREA



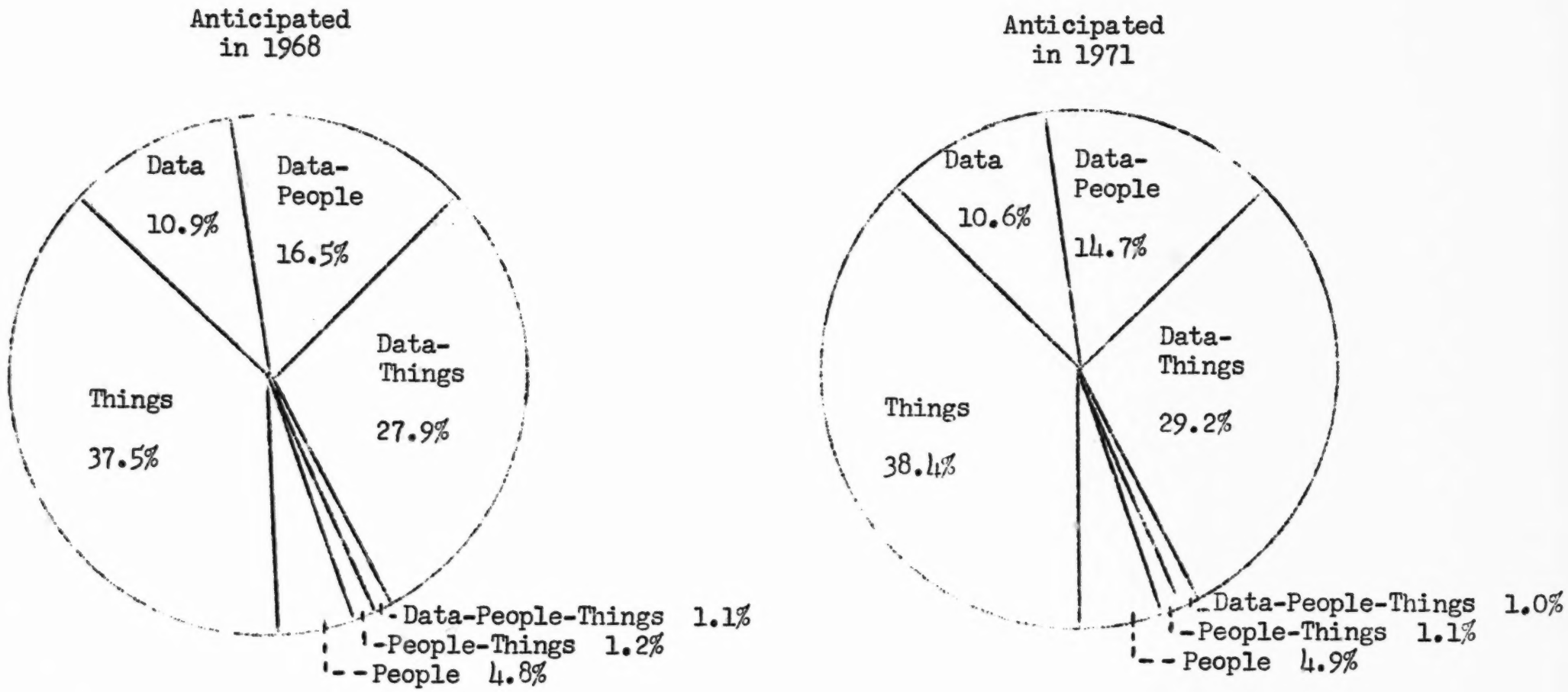
NOTE: The high percentage of "Data" job openings which offered promotional possibilities.
The low percentage of "People" job openings which offered promotional possibilities.

DISTRIBUTION OF CURRENT JOB OPENINGS WITH PERCENTAGE HARD TO FILL*
BY
WORK AREA



*Current job openings are defined as "hard to fill" when open 1 month or more. By this definition, 63% of <u>total</u> current job openings were hard to fill.

DISTRIBUTION OF FUTURE JOB OPENINGS
BY
WORK AREA



NOTE: The majority of future job openings involved "Data" alone or in combination with another significant worker function.

The largest percentage of future job openings in a single work area involved "Things".

WORK AREAS
DISTRIBUTION OF JOB OPENINGS BY DATE OF OPENING

Work Areas	Total Openings	Current Openings	Open 1 Mo. or More	Open Less Than 1 Mo.	Open Later in 1966	Open in 1968	Open in 1971
Numerical Distribution							
Data	709	47	34	13	121	257	284
Data-People	1,297	137	111	26	379	387	394
Data-Things	2,086	216	140	76	430	656	784
Data-People-Things	108	12	12	--	42	26	28
People-Things	93	5	3	2	30	29	29
People	390	35	14	21	110	113	132
Things	2,611	141	60	81	559	880	1,031
TOTAL	7,294	593	374	219	1,671	2,348	2,682
Date Distribution as % of Work Area Totals*							
Data	100%	6.6	4.8	1.8	17.1	36.2	40.0
Data-People	100%	10.6	8.6	2.0	29.2	29.8	30.4
Data-Things	100%	10.4	6.7	3.7	20.6	31.4	37.6
Data-People-Things	100%	11.1	11.1	--	38.9	24.0	25.9
People-Things	100%	5.4	3.2	2.2	32.2	31.2	31.2
People	100%	9.0	3.6	5.4	28.2	29.0	33.8
Things	100%	5.4	2.3	3.1	21.4	33.7	39.5
TOTAL	100%	8.1	5.1	3.0	22.9	32.2	36.8
Work Area Distribution as % of Date Totals*							
Data	9.7	7.9	9.1	5.9	7.2	10.9	10.6
Data-People	17.8	22.9	29.7	11.9	22.7	16.5	14.7
Data-Things	28.6	36.4	37.4	34.7	25.7	27.9	29.2
Data-People-Things	1.5	2.0	3.2	--	2.5	1.1	1.0
People-Things	1.3	0.8	0.8	0.9	1.8	1.2	1.1
People	5.3	5.9	3.7	9.6	6.6	4.8	4.9
Things	35.8	23.8	16.0	37.0	33.4	37.5	38.4
TOTAL	100%	100%	100%	100%	100%	100%	100%

*Totals may not equal 100% due to rounding.

WORK AREAS
DISTRIBUTION OF JOB OPENINGS BY EDUCATIONAL REQUIREMENT

Work Areas	Total Openings	No Preference	Less than H.S. Grad.	High School Grad.	1 Yr. Post-Hi Voc.	2 Yr. Post-Hi Voc.,Tech.	Some College	College Grad.	On the-Job	Other	NR
Numerical Distribution											
Data	709	--	5	561	50	28	18	18	1	26	2
Data-People	1,297	57	58	466	16	38	83	305	9	250	15
Data-Things	2,086	206	316	870	51	179	62	102	171	113	16
Data-People-Things	108	2	16	49	5	12	3	1	10	9	1
People-Things	93	21	11	48	--	--	--	--	1	--	12
People	390	38	152	152	--	1	--	--	7	4	36
Things	2,611	929	596	835	26	38	--	--	123	--	64
TOTAL	7,294	1,253	1,154	2,981	148	296	166	426	322	402	146
Distribution of Educational Requirements as % of Work Area Totals*											
Data	100%	--	0.7	79.1	7.0	3.9	2.5	2.5	0.1	3.7	0.3
Data-People	100%	4.4	4.5	35.9	1.2	2.9	6.4	23.5	0.7	19.3	1.2
Data-Things	100%	9.9	15.1	41.7	2.4	8.6	3.0	4.9	8.2	5.4	0.8
Data-People-Things	100%	1.9	14.8	45.4	4.6	11.1	2.8	0.9	9.2	8.3	0.9
People-Things	100%	22.6	11.8	51.6	--	--	--	--	1.1	--	12.9
People	100%	9.8	39.0	39.0	--	0.2	--	--	1.8	1.0	9.2
Things	100%	35.6	22.8	32.0	1.0	1.4	--	--	4.7	--	2.4
TOTAL	100%	17.2	15.8	40.9	2.0	4.0	2.3	5.8	4.4	5.5	2.0
Work Area Distribution as % of Educational Requirement Totals*											
Data	9.7	--	0.4	18.8	35.1	9.4	10.8	4.2	0.3	6.5	1.4
Data-People	17.8	4.5	5.0	15.6	9.4	12.8	50.0	71.6	2.8	62.2	10.3
Data-Things	28.6	16.4	27.4	29.2	34.4	60.5	37.3	23.9	53.1	28.1	11.0
Data-People-Things	1.5	0.2	1.4	1.6	3.3	4.0	1.8	0.2	3.1	2.2	0.7
People-Things	1.3	1.7	1.0	1.6	--	--	--	--	0.3	--	8.2
People	5.3	3.0	13.2	5.1	--	0.3	--	--	2.2	1.0	24.6
Things	35.8	74.1	51.6	28.0	17.6	12.8	--	--	38.2	--	43.8
TOTAL	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

*Totals may not equal 100% due to rounding.

WORK AREAS

WORK AREAS	TOTAL OPENINGS	DISTRIBUTION OF JOB OPENINGS BY EXPERIENCE REQUIRED — Numerical Distribution: YES	NO	NO RESPONSE	DISTRIBUTION OF JOB OPENINGS BY PROMOTIONAL POSSIBILITIES — Numerical Distribution: YES	NO	NO RESPONSE
Data	709	109	552	48	603	63	43
Data-People	1,297	323	728	246	982	280	35
Data-Things	2,086	678	1,261	147	1,604	416	66
Data-People-Things	108	56	50	2	77	24	7
People-Things	93	8	71	14	35	36	22
People	390	51	207	132	34	289	67
Things	2,611	258	2,169	184	1,453	1,059	99
TOTAL	7,294	1,483	5,038	773	4,788	2,167	339

WORK AREAS	TOTAL OPENINGS	Experience Required as Percent of Work Area Totals*			Promotional Possibilities as Percent of Work Area Totals*		
Data	100%	15.4	77.8	6.8	85.0	8.9	6.1
Data-People	100%	24.9	56.1	19.0	75.7	21.6	2.7
Data-Things	100%	32.5	60.4	7.0	76.9	19.9	3.2
Data-People-Things	100%	51.8	46.3	1.8	71.3	22.2	6.5
People-Things	100%	8.6	76.3	15.0	37.6	38.7	23.6
People	100%	13.1	53.1	33.8	8.7	74.1	17.2
Things	100%	9.9	83.1	7.0	55.6	40.6	3.8
TOTAL	100%	20.3	69.1	10.6	65.6	29.7	4.6

WORK AREAS	TOTAL OPENINGS	Work Area Distribution as Percent of Experience Required Totals*			Work Area Distribution as % of Promotional Possibilities Totals*		
Data	9.7	7.3	11.0	6.2	12.6	2.9	12.7
Data-People	17.8	21.8	14.4	31.8	20.5	12.9	10.3
Data-Things	28.6	45.7	25.0	19.0	33.5	19.2	19.5
Data-People-Things	1.5	3.8	1.0	0.2	1.6	1.1	2.1
People-Things	1.3	0.5	1.4	1.8	0.7	1.7	6.5
People	5.3	3.4	4.1	17.1	0.7	13.3	19.8
Things	35.8	17.4	43.0	23.8	30.8	48.9	29.2
TOTAL	100%	100%	100%	100%	100%	100%	100%

*Totals may not equal 100% due to rounding.

VT 001 249
Janezeck, Elizabeth G.
A Survey of Federal Government Publications of Interest to Small Business. 2nd Edition.

Small Business Administration, Washington, D.C.
MF AVAILABLE IN VT-ERIC SET.
Superintendent of Documents, U.S. Government Printing Office, Washington, D.C., 20402 (SBA 1.18/2:G74, $.45).
Pub Date - Aug65 129p.

*ANNOTATED BIBLIOGRAPHIES; *MANAGEMENT DEVELOPMENT; *REFERENCE MATERIALS; *GOVERNMENT PUBLICATIONS; *SMALL BUSINESS

The purpose of this bibliography is to provide information about publications of the various departments, bureaus, offices, commissions, and other administrative arms of the Federal Government that would be of interest to small business owners. All are available to the small business owner-manager. Some of the material listed outlines the help available from Federal agencies. Other publications explain the laws which agencies enforce, present statistical data useful in marketing or specialized information pertinent to particular industries or trades. Prospective businessmen, educators, or students will find helpful references on many subjects relating to small business management and operation. An annotated bibliography is supplied under an alphabetical listing by subject and titles are given in an alphabetical listing by issuing agency. (MM)

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A Survey of Federal Government Publications of Interest to Small Business

2nd EDITION

VTC04349

SMALL BUSINESS ADMINISTRATION
WASHINGTON, D. C.

A Survey of

FEDERAL GOVERNMENT PUBLICATIONS OF INTEREST TO SMALL BUSINESS

2d Edition

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

Compiled by

ELIZABETH G. JANEZECK

Librarian, Small Business Administration

SMALL BUSINESS ADMINISTRATION

Washington, D.C. 1965

SMALL BUSINESS ADMINISTRATION

EUGENE P. FOLEY, ***Administrator***

OFFICE OF BUSINESS ASSISTANCE

For sale by the Superintendent of Documents, U.S. Government Printing Office
Washington, D.C., 20402 - Price 45 cents

Foreword

Every year many publications are issued by the various departments, bureaus, offices, commissions and other administrative arms of the Federal Government. This published material covers a wide range of subjects and is of interest to many different groups or individuals.

The purpose of this "Survey" is to provide, in a single volume, information about publications of interest to small business owners. From the vast output of booklets, pamphlets, and leaflets published by the various government agencies, those most likely to be of assistance to the small business sector are listed in this volume. Some of these publications are for sale, at nominal prices, by the Superintendent of Documents and many others may be obtained at no cost from the issuing agencies. All are readily available to the small business owner-manager.

Some of the material listed in this book outlines the help available from Federal agencies. Other publications explain, in nontechnical language, the laws which the agencies enforce. Still others present statistical data useful in marketing or specialized information pertinent to particular industries or trades. Small business operators interested, for example, in obtaining a government contract, improving their management, or extending marketing operations abroad, will find publications listed in this book which will provide them with useful information. Prospective businessmen or students will also find helpful references on many subjects relating to small business management and operation.

The first edition was compiled by Elizabeth M. Heidbreder, formerly librarian of the Small Business Administration, with technical assistance by Miss Florence M. May, Research Studies Division. The booklet has been revised by Miss Elizabeth G. Janezeck, Librarian, Small Business Administration. Assistance in the preparation of the manuscript was provided by Thomas O. Barnes, Rose S. Messinger, and Dorothy Ritter.

Eugene P. Foley, ***Administrator***
Small Business Administration

AUGUST 1965

Hints to Users

How To Find References in This Book

For the convenience of the user, publications are listed under two separate classifications: Section I is an alphabetical listing by subject; section II is an alphabetical listing by issuing agency. If, for instance, you want references to publications on export-import trade, look in the alphabetical subject listing. If you want to find a list of recent publications issued by the Atomic Energy Commission, look for that name in the alphabetical agency listing.

Scope of Material Included

Certain limitations have been placed on the type of material included. Reprints, speeches, technical publications, and periodicals have, for the most part, been excluded. The scope of technical literature published by the Government is so large that it could not be listed in its entirety in this "Survey." However, some specialized bibliographies are listed which will aid persons desiring technical information.

Most Government periodicals have not been included in this volume. Exceptions are periodically published lists of agency publications. For information on Government periodicals, consult the annual March issue of the Marketing Information Guide published by the U.S. Department of Commerce, or the February issue of the Monthly Catalog or Price List 36, Government Periodicals, both published by the Superintendent of Documents.

How To Obtain Publications Listed in This "Survey"

The abbreviation GPO used with priced publications indicates that the items may be purchased from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C., 20402. Checks or money orders should be made payable to the Superintendent of Documents. Priced publications may also be ordered from the field offices of the U.S. Department of Commerce.

Free publications are available from the issuing agency, Washington, D.C., unless a different address is indicated. Free publications issued by the Small Business Administration are available at any of the field offices listed on the inside back cover.

Many of the Government publications listed may be consulted at large public or university libraries. The field offices of the Small Business Administration and the U.S. Department of Commerce also have some of these publications available for reference.

CONTENTS

SECTION I—ALPHABETICAL LISTING BY SUBJECT

Subject	*Page*
Accounting (see also Financial Statements, Records)	1
Advertising	2
Aeronautics	3
Air Pollution	3
Atomic Energy	3
Automatic Merchandising	4
Automobile Dealerships	4
Bibliographies (see also Clothing Trade, Laundries, Marketing, New Products, Packaging, Research, Store Location)	5
Bookkeeping	11
Building Industry	12
Business Education	13
Business Enterprises	13
Business Success and Failure	14
Chemical Plants	16
Child Labor	16
Clothing Trade (see also Textile Industry)	16
Copyright	17
Counseling	17
Counterfeits	18
Credit	18
Credit Bureaus (see Credit)	
Defense Contracts (see Government Contracts)	
Direct Selling (see Marketing)	
Directories (see also Fishery Industry, Government Contracts, Marketing, Postal Guides)	19
Drycleaning (see Laundries)	
Efficiency, Industrial	21
Electric Motors	21
Electric Power	21
Employee Benefits	22
Export-Import Trade	22
Feed Industry	24
Finance	25
Financial Statements	28
Fishery Industry (see also Finance)	29
Food Industry (see also Accounting, Fishery Industry, Trade Regulation, Warehouses)	31
Foreign Investment	36
Foreign Trade (see Export-Import Trade)	
Forests and Forestry	36
Franchises	36
Gasoline Service Stations	37
Government Contracts	37
Government Property Sales	38
Government Purchasing (see Government Contracts)	

Subject *Page*
Guided Missiles 39
Hours of Labor 39
Industrial Development 39
Industrial Efficiency (see Efficiency, Industrial)
Industrial Health 41
Information In Industry 41
Insurance 42
Interior Decorating 43
Inventory Control 43
Labor Laws and Legislation 43
Labor Productivity 45
Labor Unions 45
Laboratories 45
Laundries 46
Leasing Equipment 46
Letter Services 46
Lumber Industry 46
Management (see also Office Management) 47
Marketing 50
Materials Handling 52
Mineral Industries 52
Mobile Homes 52
Motels 53
New Products 53
Noise 53
Nurseries (Horticulture) 54
Nursery Schools 54
Nursing Homes 54
Office Management 55
Operations Research 55
Patents 55
Personnel Management 56
Petroleum Plants 58
Plant Location 58
Population 59
Postal Guides 59
Prices 59
Profit Sharing 60
Public Relations 60
Purchasing 60
Records 60
Recreation Industry 61
Regional Area Studies 61
Research 64
Retail Trade 66
Retirement Plans 69
Road Construction 69
Safety 69
Service Industries 70
Shipment of Goods 70
Shoe Industry 70
Social Security 71
Standards 71
Statistics 72

Subject *Page*

Store Location 73
Taxation 74
Texile Industry 75
Tourist Trade 76
Trade Associations 76
Trade Regulation (see also Advertising, Records, Textile Industry) 77
Trademarks 78
Urban Renewal (see also Industrial Development) 78
Virgin Islands 79
Vocational Rehabilitation 79
Wages 79
Warehouses 80
Wholesale Trade (see also Warehouses) 80
Women Workers (see also Labor Laws and Legislation) 81
Wood-using Industries 81

SECTION II—ALPHABETICAL LISTING BY ISSUING U.S. GOVERNMENT AGENCIES.

Agency *Page*

U.S. Department of Agriculture
- Agriculture Marketing Service 83
- Economic Research Service 84
- Farmer Cooperative Service 85
- Forest Service 86
- Office of Information 86
- Statistical Reporting Service 86

U.S. Atomic Energy Commission 86
- Technical Information Service Extension 87

U.S. Department of Commerce 87
- Area Redevelopment Administration 87
- Bureau of the Census 88
- Bureau of International Commerce 88
- Bureau of Public Roads 89
- Business and Defense Services Administration 89
- National Bureau of Standards 89
- Office of Business Economics 90
- Patent Office 90

U.S. Department of Defense 90
Executive Office of the President, Bureau of the Budget 91
Export-Import Bank of Washington 91
Federal Housing Administration 91
Federal Trade Commission 92
Foreign-Trade Zones Board 92
General Services Administration
- Federal Supply Service 92
- National Archives and Records Service 93
- Transportation and Communications Service 93

Agency	*Page*
U.S. Department of Health, Education, and Welfare	
Food and Drug Administration	**93**
Office of Education	**93**
Public Health Service	**93**
Social Security Administration	**94**
Children's Bureau	**94**
Vocational Rehabilitation Administration	**94**
U.S. Department of the Interior	
Bureau of Mines	**94**
Fish and Wildlife Service	**95**
Bureau of Commercial Fisheries	**95**
Bureau of Sport Fisheries and Wildlife	**95**
Office of Territories	**96**
U.S. Department of Labor	**96**
Labor-Management Services Administration	**96**
Manpower Administration	**96**
Bureau of Labor Standards	**96**
Bureau of Labor Statistics	**97**
Wage and Hour and Public Contracts Divisions	**98**
Women's Bureau	**98**
Library of Congress, Copyright Office	**99**
National Aeronautics and Space Administration	**99**
National Labor Relations Board	**99**
National Science Foundation	**99**
Post Office Department	**99**
Securities and Exchange Commission	**100**
Small Business Administration	**100**
U.S. Department of State	
Agency for International Development	**117**
U.S. Tariff Commission	**118**
U.S. Department of the Treasury	
Bureau of Customs	**118**
Internal Revenue Service	**118**
Secret Service	**118**

SECTION I—ALPHABETICAL LISTING BY SUBJECT

Accounting

ACCOUNTING AND FINANCIAL DATA FOR SMALL RETAILERS. (Management Research Summary 211) Small Business Administration. 1964, 2 pp. Free. Highlights from a field study of 171 small retail stores in 58 Oklahoma communities. Discusses the purposes of an accounting system, financial statements, turnover of merchandise inventory, and special statements and schedules.

ACCOUNTING IN SMALL BUSINESS DECISIONS. (Management Research Summary 66) Small Business Administration. 1962, 4 pp. Free. Findings from analysis of actual situations in a variety of small enterprises regarding accounting methods, developing accounting data for use in decision-making, basic principles underlying decisions, with illustrative case studies.

ACCOUNTING PRACTICES IN SMALL FIRMS. (Management Research Summary 76) Small Business Administration. 1962, 4 pp. Free. A summary of findings from an analysis of questionnaire returns from 177 manufacturing firms and 341 nonmanufacturing firms in Massachusetts regarding statement analysis, budgeting and forecasting, cost control, inventory control, break-even analysis, business decisions, attitudes toward accountants, data processing.

GUIDE TO UNIFORM ACCOUNTING FOR LOCKER AND FREEZER PROVISIONERS. (Agriculture Handbook 163) Farmer Cooperative Service, U.S. Department of Agriculture. 1959, 53 pp. Single copies available from Information Division, Farmer Cooperative Service. For sale by GPO, $1. Explains an accounting system designed to help locker and freezer provisioners operate more efficiently.

A GUIDE TO UNIFORM COST AND FINANCIAL ACCOUNTING FOR POULTRY PROCESSORS. (Agriculture Handbook 213) Economic Research Service, U.S. Department of Agriculture. 1961, 13 pp. GPO, 70¢. In three parts: Cost Reporting on a Plant-Wide Basis, Cost Reporting on a Department Basis, and Cost Reporting on a Budgetary Basis.

GUIDES FOR PROFIT PLANNING. (Small Business Management Series 25) Small Business Administration. 1960, 52 pp. GPO, 25¢.

Three basic guides: the break-even point, the level of gross profit, and the rate of return on investment.

IMPROVED ACCOUNTING METHODS FOR WHOLESALE FOOD DISTRIBUTORS. (Marketing Research Report 454) Agricultural Marketing Service, U.S. Department of Agriculture. 1961, 142 pp. Free. Recommended accounting methods are based on studies of the wholesale food distribution business.

IMPROVING FOOD BROKERS' ACCOUNTING PROCEDURES. (Management Research Summary 203) Small Business Administration. 1964, 2 pp. Free. Key points from a survey of 592 food brokers regarding accounting procedures. Discusses financial statements, internal control, account classification, manufacturers' inventory, automatic data processing, and cost control procedures.

MANAGEMENT ACCOUNTING FOR FROZEN FOOD LOCKER AND RELATED PLANTS. (Agricultural Handbook 220) Farmer Cooperative Service, U.S. Department of Agriculture. 1961, 117 pp. GPO, 65¢. Accounting procedures and techniques that provide departmental cost information needed to properly manage small and medium-sized businesses.

OPERATING CONTROLS IN SMALL MANUFACTURING FIRMS. (Management Research Summary 134) Small Business Administration. 1963, 2 pp. Free. Examines the degree to which certain basic control techniques were employed in small firms in Nebraska.

A SUGGESTED SYSTEM OF UNIFORM EXPENSE ACCOUNTING FOR NURSING HOMES AND RELATED FACILITIES. (Public Health Service Publication 835) Public Health Service, U.S. Department of Health, Education, and Welfare. 1961, 125 pp. GPO, $1. A system designed primarily to help administrators maintain adequate expense records and record expenses uniformly.

Advertising

ADVERTISING IN INTERNATIONAL MARKETS. (Management Aids for Small Manufacturers 160) Small Business Administration. 1964, 4 pp. Free. Advertising can be a valuable tool for selling overseas, but it should be considered only after a plan for export selling has been worked out.

ADVERTISING IN SMALL RETAIL STORES. (Management Research Summary 70) Small Business Administration. 1962, 4 pp. Free. Pertinent findings from a study of 357 Nevada retail stores, covering the responsibility for the advertising function; media used; advertising expenditures. Offers recommendations for small retailers in building an advertising program.

ADVERTISING—RETAIL STORE. (Small Business Bibliography 20) Small Business Administration. Revised 1963, 8 pp. Free. A listing of sources which will assist the small retailer in planning and implementing his advertising programs.

DIRECT MAIL ADVERTISING FOR SMALL RETAILERS. (Small Marketers Aids 72) Small Business Administration. 1961, 4 pp. Free. Discusses direct mail advertising for retail stores and gives how-to-do-it suggestions on types of ads, planning mailings, and writing the ad.

GUIDES AGAINST DECEPTIVE PRICING. Federal Trade Commission. Revised January 1964, 6 pp. Free. How the FTC evaluates pricing representations in advertising.

NATIONAL MAILING-LIST HOUSES. (Small Business Bibliography 29) Small Business Administration. Revised 1963, 11 pp. Free. A directory of compilers and brokers of mailing lists of national scope.

Aeronautics

STARTING AND MANAGING AN AVIATION FIXED BASE OPERATION. (The Starting and Managing Series Vol. 6) Small Business Administration. 1963, 52 pp. GPO, 25¢. Describes the advantages and disadvantages of going into this type of business, including the risks involved, desirable personal characteristics, and some helpful management practices.

Air Pollution

A DIGEST OF STATE AIR POLLUTION LAWS. (Public Health Service Publication 711) Public Health Service, U.S. Department of Health, Education, and Welfare. 1963, 196 pp. GPO, $1. Laws designed to curb smoke and noxious fumes.

Atomic Energy

MATERIALS/SERVICES AND FACILITIES AVAILABLE FROM THE UNITED STATES ATOMIC ENERGY COMMISSION. (TID–4559). U.S. Atomic Energy Commission, Technical Information Service Extension, P.O. Box 62, Oak Ridge, Tenn. Second revision. January 1958, 8 pp. Free. Brief discussion of availability for commercial use.

QUESTIONS AND ANSWERS ON U.S. ATOMIC ENERGY COMMISSION ACCESS PERMITS. (TID–4558). U.S. Atomic Energy Commission,

Technical Information Service Extension, P.O. Box 62, Oak Ridge, Tenn. Fourth revision. December 1962, 15 pp. Free. Describes the Access Permit program under which appropriately cleared firms, organizations, and individuals engaged in nuclear science or industrial work may obtain classified information developed in AEC projects.

RADIOISOTOPES IN SCIENCE AND INDUSTRY; A SPECIAL REPORT OF THE UNITED STATES ATOMIC ENERGY COMMISSION. U.S. Atomic Energy Commission. 1960, 176 pp. GPO, $1.25. Extensive discussion of the use of radioisotopes.

SELLING TO AEC. U.S. ATOMIC ENERGY COMMISSION. 1963, 39 pp. GPO, 25¢. Information on who does the buying, what is bought, how much is bought, and where procurement offices are located.

SPECIAL SOURCES OF INFORMATION ON ISOTOPES. (TID–4563). U.S. Atomic Energy Commission, Technical Information Service Extension, P.O. Box 62, Oak Ridge, Tenn. Third revision. January 1962, 83 pp. Free. An annotated bibliography listing government and nongovernment publications.

USAEC PATENTS AVAILABLE FOR LICENSING. (TID–4557). U.S. Atomic Energy Commission, Technical Information Service Extension, P.O. Box 62, Oak Ridge, Tenn. First Revision. December 1959, 3 pp. Free. Scope and availability of patents.

WHAT'S AVAILABLE IN THE ATOMIC ENERGY LITERATURE. (TID–4550). U.S. Atomic Energy Commission, Technical Information Service Extension, P.O. Box 62, Oak Ridge, Tenn. Ninth revision. March 1963, 31 pp. Free. Explains what unclassified atomic energy research information is available; how to locate and use this information.

Automatic Merchandising

AUTOMATIC MERCHANDISING. (Small Business Bibliography 70) Small Business Administration. 1964, 8 pp. Free. Requirements for products most easily sold through vending machines and a list of references available to those in the field of automatic merchandising.

Automobile Dealerships

PROFIT CONTROL IN AUTOMOBILE RETAILING. (Management Research Summary 2) Small Business Administration. 1960, 4 pp. Free. The elements of control as utilized by progressive and profitable dealers.

Bibliographies

ADVERTISING—RETAIL STORE. (See listing under Advertising.)

AVAILABLE LEAFLETS ON FISHERIES. (Fishery Leaflet 9) Fish and Wildlife Service, U.S. Department of the Interior. 1962, 7 pp. Free. Subject listing.

BAKERY PRODUCTS. (See listing under Food Industry.)

BASIC LIBRARY REFERENCE SOURCES FOR BUSINESS USE. (Small Business Bulletin 18) Small Business Administration. Revised 1963, 8 pp. Free. Annotated list of business information sources.

BDSA PUBLICATIONS. Business and Defense Services Administration, U.S. Department of Commerce. 1964, Leaflet. Free. Listing of current publications.

BIBLIOGRAPHY OF INVESTMENT AND OPERATING COSTS FOR CHEMICAL AND PETROLEUM PLANTS, JANUARY–DECEMBER 1962. (Information circular 8180) Bureau of Mines, U.S. Department of the Interior. 1963, 93 pp. GPO, 35¢. Annual abstract bibliography on all facets of cost engineering in petroleum and chemical plants and related facilities.

BOOKSTORE OPERATION. (See listing under Retail Trade.)

BUREAU OF THE CENSUS CATALOG. Bureau of the Census, U.S. Department of Commerce. Quarterly, with annual cumulation. GPO, $1.25 for 4 consecutive issues plus 12 monthly supplements. Detailed listing of all Census reports as they are published.

BUSINESS SERVICE CHECKLIST. U.S. Department of Commerce. Weekly. GPO, Annual subscription $1.50. A guide to Department of Commerce publications of the week.

CATERING. (See listing under Food Industry.)

CHECKLIST OF BIC PUBLICATIONS FOR USE IN FOREIGN MARKET RESEARCH AND TRADE. Bureau of International Commerce, U.S. Department of Commerce. December 1963, 20 pp. Free. In addition to the books and pamphlets listed, a large section of this publication is devoted to the reports of the world trade information service arranged by country. These reports consist of specific economic and foreign trade data for certain countries.

CHECKLIST OF REPORTS ISSUED BY THE AGRICULTURAL MARKETING SERVICE. Marketing Information Division, Agricultural Marketing Service, U.S. Department of Agriculture. Free. Monthly announcements of new publications.

COMMERCIAL STANDARDS; CLASSIFIED LIST REVISED TO MARCH 1964. National Bureau of Standards, U.S. Department of Commerce. 21

pp. Free. List of voluntary standards which give technical requirements for materials, construction, dimensions, tolerances, testing, grading, marking, labeling, etc. They are listed under headings such as apparel, building materials, plastics, and rubber products.

CONSUMER CREDIT. (See listing under Credit.)

CURRENT PUBLICATIONS OF THE WOMEN'S BUREAU. (Leaflet 10) Women's Bureau, U.S. Department of Labor. Revised December 1963, 8 pp. Free.

A DIRECTORY OF COMMUNITY WAGE SURVEYS, 1948–JUNE 1959. Bureau of Labor Statistics, U.S. Department of Labor. 1959, 16 pp. Free. Listing of surveys by city or by date of the more comprehensive reports. Revised periodically.

DISCOUNT RETAILING. (See listing under Retail Trade.)

DRUG STORES. (See listing under Retail Trade.)

FEDERAL TRADE COMMISSION LIST OF PUBLICATIONS. Federal Trade Commission. 1964, 10 pp. Free. A list of FTC publications available either from GPO or the Commission.

FOOD STORE. (See listing under Food Industry.)

FOOTWEAR. (See listing under Shoe Industry.)

FOREST PRODUCTS LABORATORY SUBJECT LISTS. The Laboratory disseminates the results of its research through subject bibliographies. Titles of some of these lists are:

1. HOUSEHOLD FURNITURE INDUSTRY. December 18, 1963. Free.
2. WIRE ROPE INDUSTRY. January 18, 1963. Free.
3. METALLIC WATCH BAND INDUSTRY. June 30, 1962. Free.
4. STATIONERS INDUSTRY. June 15, 1962. Free.
5. LUGGAGE AND RELATED PRODUCTS INDUSTRY. June 30, 1962. Free.

A complete list of Trade Practice Rules may be found in the Federal Trade Commission List of Publications.

FURNITURE RETAILING. (See listing under Retail Trade.)

GIFT AND ART SHOPS. (See listing under Retail Trade.)

HARDWARE RETAILING. (See listing under Retail Trade.)

HOBBY SHOP. (See listing under Retail Trade.)

IMPLICATIONS OF AUTOMATION AND OTHER TECHNOLOGICAL DEVELOPMENTS. A Selected Bibliography (Bulletin 1319) 1962, 136 pp. GPO, 65¢. Supplement (Bulletin 1319–1) 1963, 90 pp. GPO, 50¢. Lists books, articles, reports, pamphlets, speeches, conference proceedings and other readily available materials. Most of the

references are briefly annotated to indicate the subjects covered and the general content of the publication.

INTERIOR DECORATING. (See listing under Interior Decoration.)

LIST OF AVAILABLE PUBLICATIONS OF THE UNITED STATES DEPARTMENT OF AGRICULTURE. Office of Information, U.S. Department of Agriculture. Revised August 1963, 109 pp. GPO, 35¢.

LIST OF BUREAU OF MINES PUBLICATIONS AND ARTICLES, JANUARY 1, TO DECEMBER 31, 1962. (Special Publication 1) 1963, 87 pp. GPO, 60¢. Annual list of all publications issued and articles published by Bureau scientists in technical press.

LIST OF CATALOGS AND SELECTED BIBLIOGRAPHIES. Clearinghouse for Federal Scientific and Technical Information, Office of Technical Services, U.S. Department of Commerce. 1964, 2 pp. Free. List of bibliographies of technical reports on such subjects as batteries, glass, human engineering, transistors.

LIST OF PUBLICATIONS ISSUED BY THE BUREAU OF MINES FROM JULY 1, 1910, TO JANUARY 1, 1960. 1960, 826 pp. GPO, $4.25. Contains 7,500 listings of virtually all scientific and technical publications issued.

LIST OF PUBLICATIONS JULY 1 TO DECEMBER 31, 1963. Forest Products Laboratory, Madison, Wisconsin 53705. 1964, 15 pp. Semiannual. Free. A list intended to supplement their subject lists.

LIST OF UNITED STATES FOREIGN TRADE STATISTICAL PUBLICATIONS. Bureau of the Census, U.S. Department of Commerce. 1964, 3 pp. Free. Lists the detailed and summary reports containing import, export, and shipping statistics, and other pertinent reference material.

MOBILE HOMES. (See listing under Mobile Homes.)

NURSING HOMES. (See listing under Nursing Homes.)

OPERATING COSTS AND RATIOS—RETAIL * * * WHOLESALE. (See listing under Financial Statements.)

PAINTING AND DECORATING. (See listing under Interior Decoration.)

PARTIAL LIST OF GOVERNMENT PUBLICATIONS OF INTEREST TO ARCHITECTS, BUILDERS, ENGINEERS AND RETAIL LUMBERMEN. Forest Service, U.S. Department of Agriculture. 1962, 25 pp. Free. A bibliography on wood, its use, treatment, and preservation.

PUBLICATIONS OF THE COPYRIGHT OFFICE. Library of Congress, Copyright Office. 1963, 1 p. Free.

PUBLICATIONS FOR USE IN MARKETING AND DISTRIBUTION. (See listing under Marketing.)

PUBLICATIONS OF THE FEDERAL HOUSING ADMINISTRATION. (FHA 235) 1963. Federal Housing Administration. Leaflet. Free.

PUBLICATIONS OF THE NATIONAL SCIENCE FOUNDATION. National Science Foundation. Semi-annual. Free. Lists free and for sale publications.

PUBLICATIONS OF THE U.S. DEPARTMENT OF LABOR; SUBJECT LISTING 1958 TO JUNE 1963. U.S. Department of Labor. 1963, 24 pp. Free.

REAL ESTATE AND INSURANCE. (See listing under Insurance.)

REPORTS AND PUBLICATIONS OF USDA'S AGRICULTURAL MARKETING SERVICE. (AMS–523) Agricultural Marketing Service, U.S. Department of Agriculture. January 1964, 45 pp. Free. Lists publications numerically by series.

RESTAURANTS AND OTHER EATING PLACES. (See listing under Food Industry.)

RETAIL CREDIT AND COLLECTIONS. (See listing under Credit.)

RETAIL STORE HOURS. (See listing under Hours of Labor.)

RETAILING. (See listing under Retail Trade.)

SALES MANAGEMENT FOR MANUFACTURERS. (See listing under Personnel Management.)

SCIENTIFIC INFORMATION ACTIVITIES OF FEDERAL AGENCIES. National Science Foundation. (A series of pamphlets describing the policies and procedures of Federal Agencies relative to their scientific information activities.)

1. U.S. DEPARTMENT OF AGRICULTURE. 1958, 8 pp. GPO, 5¢.
2. U.S. DEPARTMENT OF COMMERCE, PART I. 1959, 23 pp. GPO, 15¢. Department-level activities and other information on the Office of Technical Services, Bureau of the Census, Bureau of Public Roads, and the Patent Office.
3. U.S. GOVERNMENT PRINTING OFFICE. 1960, 8 pp. GPO, 5¢.
4. TENNESSEE VALLEY AUTHORITY. 1960, 7 pp. GPO, 5¢.
5. NATIONAL SCIENCE FOUNDATION. 1960, 12 pp. GPO, 10¢.
6. U.S. DEPARTMENT OF COMMERCE, PART II. 1960, 31 pp. GPO, 20¢. Covers the Weather Bureau, Coast and Geodetic Survey, Maritime Administration, Business and Defense Services Administration, Office of Business Economics, and Bureau of Foreign Commerce.
7. U.S. DEPARTMENT OF COMMERCE, PART III. 1960, 12 pp. GPO, 10¢. Activities of the National Bureau of Standards.

8. Federal Communication Commission. 1961, 4 pp. GPO, 5¢.
9. Veterans Administration. 1961, 9 pp. GPO, 10¢.
10. Treasury Department. 1961, 23 pp. GPO, 15¢.
11. U.S. Department of the Interior, Part I. 1961, 34 pp. GPO, 25¢. Covers department-level activities, also Bureau of Reclamation, Office of Saline Water, Fish and Wildlife Service, National Park Service, Bonneville Power Administration, Bureau of Indian Affairs, and Bureau of Land Management.
12. Smithsonian Institution. 1962, 17 pp. GPO, 15¢.
13. Federal Aviation Agency. 1962, 10 pp. GPO, 10¢.
14. U.S. Air Force, Part II. Office of Aerospace Research. 1962, 21 pp. GPO, 20¢.
15. U.S. Department of the Interior, Part II. 1962, 30 pp. GPO, 20¢. Covers United States Geological Survey, Bureau of Mines, Office of Oil and Gas, Office of Mineral Mobilization, Office of Geography, and Office of Coal Research.
16. U.S. Air Force, Part IV. Air Force Systems Command. 1963, 58 pp. GPO, 20¢.
17. U.S. Atomic Energy Commission. 1963, 21 pp. GPO, 15¢.
18. U.S. Navy, Part I. 1963, 40 pp. GPO, 25¢. Includes department-level activities, also U.S. Naval Oceanographic Office, U.S. Naval Observatory, Bureau of Medicine and Surgery, Bureau of Yards and Docks, Bureau of Naval Personnel, and Bureau of Supplies and Accounts.
19. U.S. Navy, Part II. Bureau of Naval Research (Revision of Bulletin No. 2) 1963, 16 pp. GPO, 15¢.
20. U.S. Department of Health, Education, and Welfare, Part I. 1963, 41 pp. GPO, 25¢. Covers department-level activities, also Food and Drug Administration, Saint Elizabeths Hospital, Office of Education, Gallaudet College, Welfare Administration, Social Security Administration, and Vocational Rehabilitation Administration.
21. U.S. Air Force, Part I. 1964, 39 pp. GPO, 25¢. Includes department-level activities, also Aeronautical Chart and Information Center, Project RAND, Operations Analysis Office, Surgeon General USAF, Air Weather Service, Air Photographic and Charting Service, and Air University.
22. U.S. Department of Health, Education, and Welfare, Part II. Public Health Service. 1964, 13 pp. GPO, 10¢.

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23. U.S. Department of Health, Education, and Welfare, Part III. National Institute of Health. 1964, 18 pp. GPO, 15¢.
24. U.S. Navy, Part III. 1964, 19 pp. GPO, 15¢. Includes Bureau of Ships and Bureau of Naval Weapons.
25. Library of Congress. 1964, 17 pp. GPO, 15¢.

Selected List of Publications on Social Security. (Leaflet) Social Security Administration, U.S. Department of Health, Education, and Welfare. 1962. Free.

Selected Publications of the Bureau of Labor Standards 1962. Bureau of Labor Standards, U.S. Department of Labor. 1962, 23 pp. Free.

Selling by Mail Order. (See listing under Retail Trade.)

Simplified Practice Recommendations: Classified List Revised to October 1, 1964. Community Standards Division, U.S. Department of Commerce. 7 pp. Free. These voluntary recommendations give the sizes, kinds, and types of specific manufactured articles called for by the trade.

Small Business Administration Publications: Free Publications Currently Available (115A); For-Sale Booklets (115B); Classification of Management Publications (115E). Small Business Administration. Free. The three separate lists are revised frequently.

Small Office Automation. (Small Business Bibliography 58) Small Business Administration. 1964, 8 pp. Free. A comprehensive list of references on the general subject of office automation.

Special Sources of Information on Isotopes. (TID–4563) U.S. Atomic Energy Commission, Technical Information Service Extension, P.O. Box 62, Oak Ridge, Tenn. Second revision. January 1, 1960, 54 pp. Free. An annotated bibliography listing government and nongovernment publications.

Sporting Goods. (See listing under Recreation Industry.)

Statistics and Maps for National Market Analysis. (See listing under Statistics.)

Store Arrangement and Display. (See listing under Retail Trade.)

Subject Index of Bulletins Published by the Bureau of Labor Statistics, 1915–59, With Annotated Listing of Bulletins, 1895–1959. (Bulletin 1281) Bureau of Labor Statistics, U.S. Department of Labor. 1960, 102 pp. GPO, 55¢.

Technical Studies by the Federal Housing Administration. (FHA 470) Federal Housing Administration. 1964, 49 pp. Re-

vised frequently. Free. Technical building studies under way, completed, or under consideration.

TRAINING COMMERCIAL SALESMEN. (See listing under Personnel Management.)

TRAINING RETAIL SALESPEOPLE. (See listing under Retail Trade.)

TRUCKING AND CARTAGE. (Small Business Bibliography 51) Small Business Administration. Revised 1964, 8 pp. Free. Sources of information for the small operator.

U.S. DEPARTMENT OF COMMERCE PUBLICATIONS 1963 SUPPLEMENT. U.S. Department of Commerce. 1963. GPO, 25¢. A catalog and index of publications issued from January 1962 through December 1963. Cumulates the weekly list Business Service Checklist. A supplement has been issued every year since 1950 when a basic volume was issued.

UNITED STATES SECURITIES AND EXCHANGE COMMISSION: ITS FUNCTIONS AND ACTIVITIES. U.S. Securities and Exchange Commission. 1964, 30 pp. Free. A description of the various laws administered by the Commission. Also contains an annotated list of its publications.

VARIETY STORES. (See listing under Retail Trade.)

VOLUNTARY AND COOPERATIVE CHAINS. (See listing under Food Industry.)

WAREHOUSING. (See listing under Warehouses.)

WHAT'S AVAILABLE IN THE ATOMIC ENERGY LITERATURE. (TID–4550) U.S. Atomic Energy Commission, Technical Service Extension, P.O. Box 62, Oak Ridge, Tenn. Ninth Revision. March 1963, 31 pp. Free. Explains what unclassified atomic energy research information is available, how to locate and use this information.

WHOLESALING. (See listing under Wholesale Trade.)

WOODWORKING SHOPS. (See listing under Wood-using Industries.)

Bookkeeping

STARTING AND MANAGING A SMALL BOOKKEEPING SERVICE. (The Starting and Managing Series Vol. 4) Small Business Administration. 1962, 64 pp. GPO, 30¢. Discusses what it takes to start, experience required, managerial skill, services provided, a look at the future.

Building Industry

CONTROL METHODS FOR HOME BUILDERS. (Management Research Summary 20) Small Business Administration. 1961, 4 pp. Free. Discusses the profit planning concept, sales, production, cost, and investment control.

DEALERS' AND CONTRACTORS' GUIDE: PROPERTY IMPROVEMENT LOANS. (FHA 30A) Federal Housing Administration. Revised 1962, 10 pp. GPO, 10¢. Responsibility of dealers and contractors who participate in FHA's property improvement program.

HOW FHA HELPS IMPROVE HOMEBUILDING TECHNIQUES. (FHA 191) Federal Housing Administration. Revised 1959, leaflet. GPO, 10¢. Describes FHA technical studies program.

MINIMUM PROPERTY STANDARDS FOR LOW COST HOUSING. (FHA 18) Federal Housing Administration. Revised to June 1963, 31 pp. GPO, 25¢. Defines the technical minimum acceptable in all FHA insuring offices. Factors relating to marketability are also considered in FHA underwriting and may affect the maximum insurable mortgage.

MINIMUM PROPERTY STANDARDS FOR MOBILE HOME COURTS. (FHA 2424) Federal Housing Administration. 1962. GPO, 30¢. Minimum planning and construction requirements which apply to mobile home courts offered to FHA as security for an insured mortgage loan.

MINIMUM PROPERTY STANDARDS FOR MULTIFAMILY HOUSING. (FHA 2600) Federal Housing Administration. 1963, 511 pp. GPO, $2.50. Sets forth the over-all minimum standards acceptable to FHA, designed to foster ideas and techniques which will result in better and more economical housing.

MINIMUM PROPERTY STANDARDS FOR NURSING HOMES. (FHA 334) Federal Housing Administration. Revised 1963, 33 pp. GPO, 30¢. These standards set forth the minimum qualities considered necessary in the planning, construction, and development of a property which is to serve as security for an insured mortgage on a nursing home.

MINIMUM PROPERTY STANDARDS FOR ONE AND TWO LIVING UNITS. (FHA 300) Federal Housing Administration. 1963, 315 pp. GPO, $2. Standards for design, materials, equipment, and construction methods.

MINIMUM PROPERTY STANDARDS FOR URBAN RENEWAL REHABILITATION. (FHA 950) Federal Housing Administration. 1963, 55 pp. GPO, 40¢. Sets forth on a national basis the minimum de-

sign and construction standards of the FHA for the rehabilitation of houses located in urban renewal areas.

STARTING AND MANAGING A SMALL BUILDING BUSINESS. (The Starting and Managing Series Vol. 5) Small Business Administration. 1962, 102 pp. GPO, 35¢. Gives helpful information on the building industry. Includes actual case histories.

TECHNICAL STUDIES BY THE FEDERAL HOUSING ADMINISTRATION. (See listing under Bibliographies.)

Business Education

EDUCATION FOR LEADERSHIP IN SMALL BUSINESS. (Management Research Summary 36) Small Business Administration. 1961, 4 pp. Free. Findings from a survey of 161 Louisiana small business executives regarding the variety of their functions and their opinions as to the contribution of business and liberal arts courses to careers in small business management.

A MANAGEMENT TRAINING PROGRAM FOR SMALL BUSINESSMEN: A NONCOMPUTERIZED GAME. (Management Research Summary 128) Small Business Administration. 1963, 4 pp. Free. Describes the workings and results of the "MANTRAP" game designed to help in the solving of day-to-day business problems, the nature of problem-solving, and the use of related information.

SIMULATION TRAINING FOR SMALL BUSINESS EXECUTIVES: A COMPUTERIZED MODEL. (Management Research Summary 126) Small Business Administration. 1963, 4 pp. Free. Describes the method of playing the "simulation game" with the help of a computer.

Business Enterprises

BUYING AND SELLING A SMALL BUSINESS. (Management Research Summary 120) Small Business Administration. 1963, 2 pp. Free. Gives direction and guidance through the maze of complex matters inherent in buying or selling a small business.

CHOOSING A FORM OF BUSINESS ORGANIZATION. (Management Research Summary 98) Small Business Administration. 1963, 4 pp. Free. Describes the various forms of business organization and discusses related legal, financial, and tax considerations, as well as the advantages and disadvantages of the principal forms and their effect on various aspects of doing business.

CONTINUITY PLANNING FOR SMALL ALABAMA FIRMS. (Management Research Summary 135) Small Business Administration. 1963, 2

pp. Free. Outlines some of the basic factors that should be considered by owners of small business in Alabama or by anyone considering starting a business in the State. Primarily concerned with recent statutory and judicial developments.

METHODS OF COUNTING BUSINESS ESTABLISHMENTS. (Management Research Summary 127) Small Business Administration. 1963, 2 pp. Free. Summarizes an economical but accurate method of counting business establishments in a state, by location and type of business.

PUERTO RICAN MANUFACTURING—LOCAL AND NONLOCAL OWNERSHIP. (Management Research Summary 144.) Small Business Administration. 1963, 2 pp. Free. Findings on establishment and testing of statistical techniques and understanding of trends relating to local and outside ownership of enterprises.

THE SQUEEZE-OUT IN SMALL BUSINESS OWNERSHIP. (Management Research Summary 7) Small Business Administration. 1961, 4 pp. Free. Methods used to eliminate associates, devices used as protection against such squeeze-outs, and suggested changes in legal controls for better protection of holders of minority interests.

UNUSUAL SMALL BUSINESSES IN LOUISIANA. (Management Research Summary 92) Small Business Administration. 1962, 4 pp. Free. Briefly discusses factors for consideration by the prospective owner of an unusual small business: adaptation to local materials, adaptation to local markets, marketing methods.

Business Success and Failure

ENVIRONMENT VS. MANAGEMENT IN SMALL BUSINESS FAILURE. (Management Research summary 168) Small Business Administration. 1963, 2 pp. Free. Compares 53 active and 37 discontinued Iowa firms with regard to environmental and managerial factors contributing to growth and decline of small manufacturing firms.

FACTORS IN SMALL BUSINESS SUCCESS OR FAILURE. (Management Research Summary 145) Small Business Administration. 1963, 4 pp. Free. Examines the hypothesis that successful and unsuccessful businessmen differ in their personal attitudes as well as in their applications of business principles.

THE FIRST TWO YEARS: PROBLEMS OF SMALL FIRM GROWTH AND SURVIVAL. (Small Business Research Series 2) Small Business Administration. 1961, 233 pp. GPO, $1. A study of 81 firms in Rhode Island develops information concerning who opens a small business, why individuals go into business, causes of failure, and reasons for survival.

FOUNDERS OF SMALL BUSINESS IN TEXAS AND GEORGIA. (Management Research Summary 157) 1963, 4 pp. Free. Pertinent findings from interviews with 1059 successful Texas and 521 Georgia business founders regarding their business, personal, and social characteristics.

PERSONALITY AND SUCCESS. (Small Business Research Series 4) Small Business Administration. 1964, 84 pp. GPO, 35¢. A study of those personality traits of a successful business manager which have contributed measurably to the success of an enterprise. Helpful in formulating further studies to determine the factors of success in small business management.

SMALL BUSINESS INSTABILITY AND FAILURE. (Management Research Summary 105) Small Business Administration. 1963, 4 pp. Free. Summarizes a statistical study concerning various aspects of business instability and failure in Alabama from 1939 to 1960 and reports on investigation of individual failures through interviews with the principals and their suppliers, competitors, bankers, landlords, and friends. Discusses patterns of instability and presents case studies of failures in a variety of businesses.

SMALL BUSINESS SUCCESS AND FAILURE CASES. (Management Research Summary 58) Small Business Administration. 1962, 4 pp. Free. Undertakes to establish markers to success or failure for construction contractors and home furniture and appliance dealers.

SMALL PLANT TURNOVER AND FAILURE. (Management Research Summary 4) Small Business Administration. 1961, 4 pp. Free. Study of manufacturing turnover and mortality in the Hartford, Conn., area which showed that small firms are not necessarily more liable to turnover and failure than large firms.

A STUDY OF BUSINESS TERMINATIONS. (Management Research Summary 102) Small Business Administration. 1963, 2 pp. Free. Pertinent data from a report based on a study of 2,369 Washington State firms that terminated in 1957. Includes description of the firms (structure, sales volume, age), discusses reasons for terminations, and points out need for further study.

A STUDY OF RETAILER SURVIVAL. (Management Research Summary 151) Small Business Administration. 1963, 2 pp. Free. Highlights from a survey of more than 400 Illinois retailers to determine success characteristics.

SUCCESS PATTERN IN THE REAL ESTATE BUSINESS. (Management Research Summary 122) Small Business Administration. 1963, 2 pp. Free. Outlines the most effective and successful business principles and practices.

SUCCESS OR FAILURE OF NEW SMALL MANUFACTURERS. (Management Research Summary 197) Small Business Administration. 1963, 2 pp. Free. Summarizes a 3-year study of 95 small manufacturers in Michigan to determine trouble areas, causes of failure, characteristics associated with success, and sources of strength.

Chemical Plants

(SEE BIBLIOGRAPHY OF INVESTMENT and OPERATING COSTS FOR CHEMICAL AND PETROLEUM PLANTS listed under *Bibliographies.*)

Child Labor

A GUIDE TO CHILD-LABOR PROVISIONS OF THE FAIR LABOR STANDARDS ACT. Wage and Hour and Public Contracts Divisions, U.S. Department of Labor. Revised December 1963, 30 pp. Free.

HAZARDOUS EMPLOYMENT PROHIBITED FOR MINORS UNDER STATE CHILD-LABOR LAWS. (Bulletin 205) Bureau of Labor Standards, U.S. Department of Labor. 1959, 105 pp. Free. State-by-State summary of laws and rulings. Presented as a supplement to Bulletin 158, State Child-Labor Standards, which is now being revised.

Clothing Trade

APPAREL AND ACCESSORIES FOR WOMEN, MISSES AND CHILDREN. (Small Business Bulletin 50) Small Business Administration. 1961, 16 pp. Free. A brief description of the industry and an extensive bibliography.

CONTROL METHODS FOR MEN'S CLOTHING STORES. (Management Research Summary 27) Small Business Administration. 1961, 4 pp. Free. Summarizes techniques of planning merchandise; controlling merchandise, money, and men.

LEISURE AND WORK CLOTHING: TRENDS AND OUTLOOK. Business and Defense Services Administration, U.S. Department of Commerce. 1961, 29 pp. GPO, 25¢. Production trends, geographical distribution of the industry, marketing factors, consumer demand, etc.

MEN'S AND BOYS' CLOTHING. (Small Business Bibliography 45) Small Business Administration. 1965. Free. Introduction to the industry and a bibliography.

MOTHERS' OPINIONS OF FIBERS IN CHILDREN'S CLOTHES. (Marketing Research Report 429) Agricultural Marketing Service, U.S.

Department of Agriculture. 1960, 37 pp. Free. A summary of interviews on such topics as experience with various materials, predominant material currently in use, preference and reasons for preference.

WOMEN'S ATTITUDES TOWARD COTTON AND OTHER FIBERS IN CLOTHING. (Marketing Research Report 493) Statistical Reporting Service, U.S. Department of Agriculture. 1961, 111 pp. GPO, 40¢. Report of a survey of 2,310 women concerning preferences for material in various types of clothing.

Copyright

GENERAL INFORMATION ON COPYRIGHT. Copyright Office, the Library of Congress. 1963, 9 pp. Free. Explains what may be copyrighted and how to obtain a copyright.

Counseling

BUSINESS ADVISORY SERVICE. FEDERAL TRADE COMMISSION. 1963, 11 pp. Free. Outlines business advisory services available from FTC.

HOW SMALL FIRMS HANDLE THEIR LEGAL PROBLEMS. (Management Research Summary 149) Small Business Administration. 1963, 2 pp. Free. Summarizes the findings from 676 questionnaires and 23 personal interviews of small firms in the State of Washington to determine their principal legal problems, their source of advisors, and the frequency and circumstances involved in consulting lawyers.

MANAGEMENT COUNSELING OF SMALL BUSINESS. (Management Research Summary 123) Small Business Administration. 1963, 2 pp. Free. Brief summary of a study concerned with the external management counseling services available to improve the effectiveness of small business.

MANAGEMENT COUNSELING OF SMALL MANUFACTURING FIRMS. (Management Research Summary 138) Small Business Administration. 1963, 2 pp. Free. Significant findings regarding the need and value of small business counseling, barriers to its use, and the best procedures for its conduct based on actual business counseling to 17 small manufacturers in Mississippi.

OUTSIDE MANAGEMENT COUNSEL FOR SMALL BUSINESS. (Management Research Summary 95) Small Business Administration. 1962, 4 pp. Free. Briefly reports findings from interviews with

425 proprietors of small business and 280 management service agencies, together with analysis of court records of 60 cases of small business bankruptcy. Discusses the need for management assistance, availability of management assistance, personal factors influencing the success of small business operation. Presents conclusions based on findings.

TECHNIQUES OF SMALL-BUSINESS COUNSELING. (Management Research Summary 200) Small Business Administration. 1964, 4 pp. Free. Highlights from report on experiments with group counseling and individual counseling of small businessmen in Utah.

Counterfeits

KNOW YOUR MONEY. U.S. Secret Service, U.S. Department of the Treasury. Revised 1964, 16 pp. GPO, 25¢. How to detect counterfeit money; how to guard against forged Government checks.

Credit

CAN YOU AFFORD INSTALLMENT SELLING? (Small Marketers Aids 76) Small Business Administration. 1962, 4 pp. Free. Discusses questions a retailer should answer before offering installment credit such as "What are my financial resources? What kinds of goods am I offering? What State laws regulate installment selling?"

CONSUMER CREDIT. (Small Business Bulletin 59) Small Business Administration. 1962, 8 pp. Free. List of references pertaining to the economic, statistical, and legal aspects of consumer credit.

CREDIT PRACTICES IN FURNITURE AND HOME APPLIANCES RETAILING. (Management Research Summary 150) Small Business Administration. 1963, 4 pp. Free. Findings from interviews to determine a possible relationship between credit operations and success or failure in the retail business.

THE CREDIT PRACTICES OF OKLAHOMA RETAILERS. (Management Research Summary 177) Small Business Administration. 1963, 4 pp. Free. Pertinent findings from a survey and analysis of the credit practices of Oklahoma retailers representing 12 lines of business: grocery and food stores, restaurants, department stores, variety stores, men's clothing stores, furniture stores, automobile and accessory stores, hardware stores, drug stores, jewelry stores, and gasoline service stations.

RETAIL CREDIT AND COLLECTIONS. (Small Business Bibliography 31) Small Business Administration. Revised 1963, 12 pp. Free.

Compilation of sources of information for managers of retail and service businesses.

SMALL BUSINESS EXPERIENCES IN SEEKING CREDIT. (Management Research Summary 96) Small Business Administration. 1962, 4 pp. Free. Summarizes information in the report obtained from questionnaires answered by 955 small Wisconsin firms and an analysis of published financial ratios of both large and small firms. Discusses the need for outside funds by small businesses, types and purposes of loans, sources of fund, results of loan requests.

STARTING AND MANAGING A SMALL CREDIT BUREAU AND COLLECTION SERVICE. (The Starting and Managing Series, Vol. 2) Small Business Administration. 1959, 187 pp. GPO, 60¢. Capital requirements, organization, recordkeeping, rates, etc.

Directories

DATA SOURCES FOR PLANT LOCATION ANALYSIS. Business and Defense Services Administration, U.S. Department of Commerce. 1959, 41 pp. GPO, 20¢. An annotated bibliography of publications on markets, resources, labor, transportation and other subjects of relevance when picking a site. Also includes addresses of State economic development, water, employment security and tax departments, and private railroad industrial departments.

DIRECTORY OF COMBINATION EXPORT MANAGERS. U.S. Agency for International Development, U.S. Department of State. 1962. In 5 classified sections: Sec. 1.—FOOD, FEED AND FERTILIZER, GPO, 40¢; Sec. 2.—FUEL, GPO, 25¢; Sec. 3.—RAW MATERIALS AND SEMI-FINISHED PRODUCTS, GPO, 75¢; Sec. 4.—MACHINERY AND VEHICLES, GPO, $1; Sec. 5.—MISCELLANEOUS AND UNCLASSIFIED, GPO, $1. Each section includes a commodity listing and an alphabetical listing of Combination Export Managers.

A DIRECTORY OF COMMUNITY WAGE SURVEYS. (See listing under Wages.)

A DIRECTORY OF INDUSTRY WAGE STUDIES AND UNION SCALE STUDIES. Bureau of Labor Statistics, U.S. Department of Labor. 1950–June 1963 (Revised 1963), 29 pp. Free. List of surveys by industry and type of study.

DIRECTORY OF LOCAL HEALTH UNITS. ANNUAL. (Public Health Service Publication 118) Public Health Service, U.S. Department of Health, Education, and Welfare. 1963, 76 pp. GPO 30¢. Listing by State of local units, giving name of health officer or administrative head.

DIRECTORY OF NATIONAL AND INTERNATIONAL UNIONS IN THE UNITED STATES, 1961. (Bulletin 1320) Bureau of Labor Statistics, U.S. Department of Labor. 1962, 82 pp. GPO 50¢. Developments since 1957, structure and membership, listing of national, and international unions, State labor organizations.

DIRECTORY OF NATIONAL ASSOCIATIONS OF BUSINESSMEN 1961. Trade Association Division, BDSA, U.S. Department of Commerce. 1961, 81 pp. GPO 50¢. Includes data on some 2,000 national organizations. Supplements 1949 basic directory National Associations of the United States (out of print) and replaces 1960 Directory.

DIRECTORY OF STATE AND TERRITORIAL HEALTH AUTHORITIES. ANNUAL. (Public Health Service Publication 75) Public Health Service, U.S. Department of Health, Education, and Welfare. 1963, 101 pp. GPO, 35¢. Detailed directory of services, including sanitation inspection and water pollution control.

DIRECTORY OF STATE DEPARTMENTS OF AGRICULTURE 1964. Agricultural Marketing Service, U.S. Department of Agriculture. 1964, 56 pp. Free. Arranged by State, with name and titles of chief officials.

LABOR OFFICES IN THE UNITED STATES AND CANADA. (Bulletin 177) Bureau of Labor Standards, U.S. Department of Labor. Revised February 1964, 63 pp. Free. List of offices by State.

NATIONAL MAILING-LIST HOUSES. (See listing under Advertising.)

PATENT ATTORNEYS AND AGENTS AVAILABLE TO REPRESENT INVENTORS BEFORE THE U.S. PATENT OFFICE. Patent Office, U.S. Department of Commerce. 1961, 116 pp. GPO. 55¢. Listing arranged alphabetically by States, and cities within States, where the registrants have offices.

RESEARCH AND DEVELOPMENT; A LIST OF SMALL BUSINESS CONCERNS INTERESTED IN PERFORMING RESEARCH AND DEVELOPMENT. Small Business Administration. 1963, 678 pp. Free. Limited distribution through SBA field offices. Concerns are listed by classified field of interest. Includes an alphabetical index by firm name and a subject index to the classification system.

SEED AND PLANTING STOCK DEALERS; A DIRECTORY OF COMMERCIAL DEALERS IN SEEDS AND PLANTING SHRUBS. Forest Service, U.S. Department of Agriculture. 1959 (includes 1960 supplemental sheet) 22 pp. Free.

STANDARDIZATION ACTIVITIES IN THE UNITED STATES; A DESCRIPTIVE DIRECTORY. (Miscellaneous Publication 230) National Bureau of Standards, U.S. Department of Commerce. 1960, 210 pp. GPO, $1.75. An alphabetical list of about 350 American organizations,

describing their standardization activities. Both nongovernmental and government agencies are included, but the major part of the directory is devoted to the former.

UNITED STATES ARMY INSTALLATIONS AND MAJOR ACTIVITIES IN THE CONTINENTAL UNITED STATES. (Pamphlet 210–1) Headquarters, Department of the Army. 1961, 18 pp. GPO, 20¢. Section I of the pamphlet is an alphabetical listing showing the post office address of each installation or activity; section II is an alphabetical listing within each U.S. Army Area and the Military District of Washington, U.S. Army, showing the location of each installation or activity.

U.S. GOVERNMENT ORGANIZATION MANUAL, 1964–65. National Archives and Records Service, General Services Administration. Office of the Federal Register. 1964, 783 pp. GPO, $1.75. Official handbook of the Federal Government. Describes the organization and functions of agencies in the legislative, judicial, and executive branches. Revised annually.

Efficiency—Industrial

DESIGNING FOR HIGHER PROFITS. (Technical Aids for Small Manufacturers 75) Small Business Administration. 1961, 4 pp. Free. How the design of a piece of equipment, or a procedure, or a workplace layout can promote efficiency.

PROFITABLE SMALL PLANT LAYOUT. (Small Business Management Series 21) Small Business Administration. 2d ed. 1964, 48 pp. GPO, 25¢. Practical approach on how to improve plant layout when space is sufficient or how to plan an entirely new operation for operating efficiency.

Electric Motors

ELECTRIC MOTOR MAINTENANCE FOR SMALL PLANTS. (Technical Aids for Small Manufacturers 80) Small Business Administration. 1962, 4 pp. Free. Identifies common causes of motor trouble and discusses ways to keep them running.

Electric Power

JUDGING YOUR ELECTRIC POWER NEEDS. (Technical Aids for Small Manufacturers 83) Small Business Administration. 1962, 4 pp. Free. The most common needs for electric power in a small manufacturing plant are discussed.

Employee Benefits

BUYING PRACTICES AND FOOD USE OF EMPLOYEE FOOD SERVICES IN MANUFACTURING PLANTS. (Marketing Research Report 326) Economic Research Service, U.S. Department of Agriculture. 1959, 135 pp. GPO, 75¢. A sample survey of manufacturing plants having 250 or more employees each.

CHARACTERISTICS OF 127,657 WELFARE AND PENSION BENEFIT PLANS. Labor-Management Services Administration, U.S. Department of Labor. 1960, 16 pp. Free. Statistical analysis.

EMPLOYEE FOOD SERVICES IN MANUFACTURING PLANTS; MANAGEMENT APPRAISALS, NATURE AND EXTENT, VENDING MACHINES. (Marketing Research Report 325) Economic Research Service, U.S. Department of Agriculture. 1959, 100 pp. GPO, 50¢. A sample survey of manufacturing plants having 250 or more employees each.

HIGHLIGHTS OF WELFARE AND PENSION PLANS DISCLOSURE ACT, 1962. Labor-Management Services Administration, Office of Labor Management and Welfare-Pension Funds, U.S. Department of Labor. 1963, 6 pp. Free. A comparison of the original law and the law as amended in 1962.

WAGES AND RELATED BENEFITS, 82 LABOR MARKETS (Bulletins 1303–83). Bureau of Labor Statistics, U.S. Department of Labor. 1959, 93 pp. GPO 50¢. Information on plant and office workers. Revised periodically.

Export-Import Trade

CHECKLIST OF BIC PUBLICATIONS FOR USE IN FOREIGN MARKET RESEARCH AND TRADE. (See listing under Bibliographies.)

DIGEST OF EXPORT REGULATIONS. Bureau of Foreign Commerce, U.S. Department of Commerce. May 1961, 6 pp. Free. Regulations concerning commodities that must have licenses to be exported.

EXPORT PROFITS. Bureau of International Commerce, U.S. Department of Commerce. 1962, 8 pp. Free. A brochure containing low-cost marketing aids for higher export profits.

EXPORT TRADE AND THE SMALL MANUFACTURER. (Management Research Summary 71) Small Business Administration. 1962, 4 pp. Free. Present status and problems of the small exporter, the would-be exporter, and the nonexporter. Suggests aids for the small exporter.

EXPORTING TO THE UNITED STATES. Bureau of Customs, U.S. Department of the Treasury. 1963, 86 pp. GPO, 50¢. General infor-

mation on customs laws and regulations covering goods imported into the United States.

FINANCING EXPORT SALES. (Management Aids for Small Manufacturers 149) Small Business Administration. 1963, 4 pp. Free. Discusses five specific types of information a seller should know about when financing export sales.

FOREIGN CURRENCY LENDING BY THE EXPORT-IMPORT BANK OF WASHINGTON. Export-Import Bank of Washington. 1960, Leaflet. Free. Brief discussion of foreign currency loans.

GENERAL POLICIES; EXPORT-IMPORT BANK OF WASHINGTON. Export-Import Bank of Washington. 1960, 23 pp. Free. Explains the type of credit assistance the bank extends to the export and import trade.

HOW THE COMMERCE DEPARTMENT HELPS SMALL MANUFACTURERS IN FOREIGN TRADE. (Management Aids for Small Manufacturers 114) Small Business Administration. Revised 1962, 4 pp. Free. Describes the help which is available to small manufacturers through the various international trade areas of Commerce.

INDIRECT METHODS OF SELLING IN FOREIGN MARKETS. (Revision 3 to Small Business Memo 56–1) Office of Small Business, Agency for International Development, U.S. Department of State. 1961, 4 pp. Free. Also discusses "Exporting Under AID Financing."

LAWS, REGULATIONS, AND OTHER INFORMATION RELATING TO FOREIGN-TRADE ZONES IN THE UNITED STATES. Foreign Trade Zones Board. 1962, 79 pp. GPO, 30¢. How the foreign trade zones in operation in New York, New Orleans, San Francisco, Seattle, Toledo, and Mayaguez, Puerto Rico, may be of use to importers and exporters.

LIST OF UNITED STATES FOREIGN TRADE STATISTICAL PUBLICATIONS. (See listing under Bibliographies.)

PROFITABLE SALES IN U.S. TRADE CENTERS OVERSEAS. Bureau of International Commerce, U.S. Department of Commerce. 1963, 20 pp. GPO, 15¢. Describes how U.S. Trade Centers overseas may be utilized by American businessmen to increase sales in foreign markets.

REQUIREMENTS OF THE UNITED STATES FOOD, DRUG, AND COSMETIC ACT. Food and Drug Administration, U.S. Department of Health, Education, and Welfare. 1964. In press. Information regarding health safeguards, label statements, prohibited descriptions, etc., as specified in the Act applicable to interstate and foreign shipments of various types of foods and drugs.

SELL YOUR PRODUCTS THROUGH U.S. TRADE MISSIONS. Bureau of International Commerce, U.S. Department of Commerce. 1963, 16 pp. GPO, 15¢. Describes how U.S. Trade Missions help sell U.S. products in overseas markets.

SELLING AROUND THE WORLD: HOW COMMERCE HELPS. U. S. Department of Commerce. 1964, 23 pp. GPO, 15¢. Describes the many ways in which Commerce can help the businessman with initiative sell his products overseas.

SERVICES AVAILABLE TO U.S. EXPORTERS. U.S. Department of Commerce. 1962, Leaflet. Free. Describes Department of Commerce services useful to established and prospective foreign traders in increasing their sales and profits.

SOURCES OF INFORMATION ON AMERICAN FIRMS FOR INTERNATIONAL BUYERS. Bureau of International Commerce, U.S. Department of Commerce. 1963, 28 pp. GPO, 15¢. A guide to the principal sources of commercial information on U.S. firms.

A SUMMARY OF U.S. EXPORT CONTROL REGULATIONS. Bureau of Foreign Commerce, U.S. Department of Commerce. Revised June 1962, 22 pp. GPO, 20¢. When an export license is needed and how to apply for it.

TARIFF SCHEDULES OF THE UNITED STATES ANNOTATED (1963) AND SUPPLEMENTS. U.S. Tariff Commission. Subscription, GPO, $5.

U.S. SMALL BUSINESS AND THE LATIN AMERICAN MARKET. (Management Research Summary 142) Small Business Administration. 1963, 2 pp. Free. Summarizes an analysis of the problems and opportunities and suggestions to stimulate exporting. Examines the possibilities for small business to export to Latin America.

WHAT YOU SHOULD KNOW ABOUT EXPORTING; A HOW-TO-GET-STARTED HANDBOOK. U.S. Department of Commerce. 1962, 38 pp. GPO, 25¢. Basic information for businessmen interested in breaking into profitable international markets.

Feed Industry

COSTS OF PROCURING, MANUFACTURING, AND DISTRIBUTING MIXED FEEDS IN THE MIDWEST; CASE STUDY OF FOUR TYPES OF ORGANIZATION. (Marketing Research Report 388) Economic Research Service, U.S. Department of Agriculture. 1960, 76 pp. GPO, 45¢.

PROBLEMS OF LOUISIANA'S SMALL FEED MILLS. (Management Research Summary 176) Small Business Administration. 1963, 2 pp. Free. Pertinent findings from questionnaires, personal inter-

views, and records of 19 Louisiana feed mills describing their characteristics, pointing out some of their problems, and suggesting some solutions.

Finance

ATTITUDES OF BANKERS TOWARD SMALL BUSINESS FINANCING. (Management Research Summary 94) Small Business Administration. 1962, 4 pp. Free. Information from questionnaire returns from 364 commercial banks in Wisconsin regarding attitudes toward growth financing of small firms, term lending, loan criteria, tight money and loan ratios, Government lending agencies. Discusses characteristics of banks included in study as related to attitudes and practices reported in connection with loans to small firms.

CASH PLANNING IN SMALL MANUFACTURING COMPANIES. (Small Business Research Series 1) Small Business Administration. 1960, 276 pp. GPO, $1.25. Case studies of planning cash requirements.

DEALERS' AND CONTRACTORS' GUIDE: PROPERTY IMPROVEMENT LOANS. Federal Housing Administration. Revised 1962, 10 pp. GPO, 10¢. Responsibility of dealers and contractors who participate in FHA's property improvement program.

THE EFFECT OF TIGHT MONEY ON SMALL BUSINESS FINANCING. (Management Research Summary 152) Small Business Administration. 1963, 2 pp. Free. Pertinent findings from a study based on 1946, 1955, and 1957 loan surveys made by the Federal Reserve Bank of Boston and on questionnaires answered by 557 New England manufacturers indicating possible discrimination against small firms during the 1955–1957 tight-money period

EQUITY FINANCING OF SMALL MANUFACTURING FIRMS. (Management Research Sumary 67) Small Business Administration. 1962, 4 pp. Free. Findings of interviews with 124 small New Jersey manufacturing firms, 109 of which went public for the first time during the period 1958–1961. Covers financing before going public, preparation for going public, and costs of floating an issue.

THE FACTOR MARKETS FOR SMALL FIRMS. (Management Research Sumary 171) Small Business Administration. 1963, 4 pp. Free. Summarizes studies of small business problems relating to capital, labor, and management. Discusses bank lending and small business, capital budgeting practices, small business as a career, management resources, fringe benefits, personnel policies, and labor contracts.

FACTS ABOUT SMALL BUSINESS FINANCING. (Management Research Summary 10) Small Business Administration. 1961, 4 pp. Free.

Study of nearly 700 small businesses in South Carolina. One conclusion was that small business relies heavily upon retained earnings or personal investment for equity capital.

FEDERAL FISHING VESSEL MORTGAGE AND LOAN INSURANCE. (Fishery Leaflet 499) Fish and Wildlife Service, U.S. Department of the Interior. 1960, 12 pp. Free. When and how a mortgage or loan may be insured.

FINANCIAL ANALYSIS AND SMALL BUSINESS. (Management Research Summary 33) Small Business Administration. 1961, 4 pp. Free. Summarizes a survey of 299 small businesses in Pennsylvania to determine how records were kept, outside sources of help, use of financial ratios, need for education and training, and recommendations regarding courses and publications.

FINANCIAL PLANNING IN CLOSELY HELD BUSINESSES. (Management Aid for Small Manufacturers 156) Small Business Administration. 1963, 4 pp. Free. Describes pitfalls to be avoided and outlines what should be included.

FINANCING PROBLEMS OF SMALL MANUFACTURERS. (Management Research Summary 187) Small Business Administration. 1963, 2 pp. Free. Significant findings from an analysis of the special financing problems of small New Jersey manufacturers, together with recommendations for helping solve them.

FINANCING SMALL BUSINESS IN SOUTH DAKOTA. (Management Research Summary 28) Small Business Administration. 1961, 4 pp. Free. Findings from a survey of over 600 small business firms in South Dakota to determine sources of borrowed capital; to seek out financial problems; and, on the basis of findings to make recommendations to aid the firms in financial management.

FINANCING SMALL MANUFACTURING FIRMS IN MAINE. (Management Research Summary 79) Small Business Administration. 1962, 4 pp. Free. Information from 73 small manufacturing firms in Maine regarding sources of initial capital, sources of borrowed funds, interbusiness credit, difficulties in obtaining loans, effect of taxation. Outlines attitudes of bankers toward lending to small manufacturing firms and discusses governmental and quasi-governmental agencies providing funds for small business loans.

THE FLOW OF FUNDS IN MANUFACTURING FIRMS. (Management Research Summary 167) Small Business Administration. 1963, 2 pp. Free. Brief summarization of a report presenting flow-of-funds data for 151 firms over a 7-year period, discussion of tables, and illustrations of uses of data, especially in small-business counseling.

FOREIGN CURRENCY LENDING BY THE EXPORT-IMPORT BANK OF WASHINGTON. Export-Import Bank of Washington. 1960, Leaflet. Free. Brief discussion of foreign currency loans.

GENERAL POLICIES; EXPORT-IMPORT BANK OF WASHINGTON. Export-Import Bank of Washington. 1960, 23 pp. Free. Explains the type of credit assistance the Bank extends to the export and import trade.

A HANDBOOK OF SMALL BUSINESS FINANCE. (Small Business Management Series 15) Seventh edition, 1965, 80 pp. Small Business Administration. GPO, 35¢. It points out the major areas of financial management and describes a few of the many techniques that can help the small businessman to understand the results of his past decisions and apply this understanding in making decisions for the future.

INTERBUSINESS FINANCING. (Small Business Research Series 3) Small Business Administration. 1962, 157 pp. GPO, 65¢. A study which brings into focus all the methods of interbusiness financing. It differs from most other works in the field that usually concentrate on one or, at most, only a few of its aspects.

INVESTMENT DECISION MAKING IN SMALL BUSINESS. (Management Research Summary 54) Small Business Administration. 1962, 4 pp. Free. Deals with the search for and choice of investment decisions, methods of evaluating and ranking opportunities.

MEASUREMENT OF THE RISK ATTITUDES OF BANKS. (Management Research Summary 111) Small Business Administration. 1963, 2 pp. Free. Attitudes of Wisconsin banks toward various aspects of long-term needs of small businessmen.

SBA LOANS; LOAN POLICIES, WHO CAN BORROW, HOW TO APPLY, CREDIT REQUIREMENT, LOAN POLICIES. Small Business Administration. 1964, 12 pp. Free. An explanation of the Agency's business loan program.

SBA DISASTER LOANS FOR BUSINESSES, FOR HOMES. Small Business Administration. 1964, 9 pp. Free. Explanation of general disaster loans, and drought and excessive rainfall disaster loans.

SBIC FINANCING FOR SMALL BUSINESS. Small Business Administration. 1965, 10 pp. Free. Explains how small business investment companies assist small businesses with their long-term financing needs and their management problems.

SMALL MANUFACTURERS AND THE FINANCIAL GAP. (Management Research Summary 106) Small Business Administration. 1963, 2

pp. Free. Key findings regarding sources of funds from a report based on questionnaire returns from 151 small manufacturers in Colorado, as well as interviews with 25 of these firms and with all types of financial institutions serving small manufacturers. Describes the "financial gap" as the unavailability of long-term financing to small firms when the need is greatest. Includes a discussion of the sources of funds and conclusions drawn from the study.

SOURCES OF EQUITY AND LONG-TERM FINANCING FOR SMALL MANUFACTURING FIRMS. (Management Research Summary 68) Small Business Administration. 1962, 4 pp. Free. Résumé of survey investigating sources of equity and long-term financing for Minnesota manufacturing firms.

SOURCES OF FUNDS FOR SMALL FIRMS IN WASHINGTON STATE. (Management Research Summary 91) Small Business Administration. 1962, 4 pp. Free. Discusses 11 types of financial institutions as sources of funds.

A STUDY OF SBA FINANCIAL ASSISTANCE IN UTAH. (Management Research Summary 57) Small Business Administration. 1962, 4 pp. Free. Discusses the lenders' and borrowers' viewpoints and lists recommended changes.

WHAT KIND OF MONEY DO YOU NEED? (Management Aids for Small Manufacturers 150) Small Business Administration. 1963, 4 pp. Free. A discussion on the uses of four kinds of money small businessmen need from time: normal trade credit, short-term bank loans, term borrowing, and equity capital.

Financial Statements

COST CONTROL PROBLEMS OF SMALL MANUFACTURERS. (Management Research Summary 3) Small Business Administration. 1960, 4 pp. Free. Four simple approaches to statement analysis.

GUIDES FOR BUSINESS ANALYSIS AND PROFIT EVALUATION. Business and Defense Services Administration, U.S. Department of Commerce. 1959, 76 pp. GPO, 30¢. Shows how use of operating and financial ratios and Government statistics can provide insights into business operations.

OPERATING COSTS AND RATIOS—RETAIL. (Small Business Bibliography 8) Small Business Administration. Revised 1963, 12 pp.

Free. How to analyze operations through operating ratios. Sources of comparative standard ratio data in the retail trades.

OPERATING COSTS AND RATIOS—WHOLESALE. (Small Business Bibliography 11) Small Business Administration. 1963, 8 pp. Free. How to analyze operations through operating ratios. Sources of comparative standard ratio data in the wholesale trade.

RATIO ANALYSIS FOR SMALL BUSINESS. (Small Business Management Series 20) Small Business Administration. Second edition. 1960, 55 pp. GPO, 25¢. How to compare certain common business statistics so as to provide a basis for management control.

A STUDY OF INDUSTRY FINANCIAL AND OPERATING RATIOS. (Management Research Summary 61) Small Business Administration. 1962, 4 pp. Free. Summarizes a report discussing various types of ratios, sources of ratio data, and problems in ratio surveys.

Fishery Industry

AVAILABLE LEAFLETS ON FISHERIES. (See listing under Bibliographies.)

THE BAIT SHRIMP INDUSTRY ON THE GULF OF MEXICO. (Fishery Leaflet 480) Bureau of Commercial Fisheries. Fish and Wildlife Service, U.S. Department of the Interior. 1959, 14 pp. Free. Describes fishing gear and methods of operation, transporting and holding methods, trade practices.

DEALERS IN TROUT AND POND FISHES. (Fishery Leaflet 46) Bureau of Commercial Fisheries, Fish and Wildlife Service, U.S. Department of the Interior. March 1960, 33 pp. Free. List of dealers by State.

FISH BAITS: THEIR COLLECTION, CARE, PREPARATION AND PROPAGATION. (Fishery Leaflet 28) Fish and Wildlife Service, U.S. Department of the Interior. Revised August 1962, 25 pp. Free. Describes the various types of bait, both live and preserved, and their uses.

FISH MARKETING AND CONSUMPTION IN THE PACIFIC COAST STATES. (Special Scientific Report—Fisheries 335) Fish and Wildlife Service, U.S. Department of the Interior. 1959, 183 pp. Free. Survey of the marketing and consumption of fresh, frozen packaged, and smoked fish and shellfish in California, Oregon, and Washington. Makes recommendations concerning consumer and retailer, wholesaler education, and improvement in both service and product.

LIST OF FISHERY ASSOCIATIONS IN THE UNITED STATES. (Fishery Leaflet 254) Bureau of Commercial Fisheries, Fish and Wildlife Service, U.S. Department of the Interior. August 1960, 13 pp.

Free. Associations of fishermen and vessel owners, wholesale and retail dealers, processors, distributors, etc.

A Market Development Plan for the New England Groundfish Industry. (Circular 53) Bureau of Commercial Fisheries, Fish and Wildlife Service, U.S. Department of the Interior. 1958, 22 pp. Free. Findings of the report focus on three general areas: (1) adequate control to maintain high standards of quality of the finished product, (2) satisfactory handling, display and promotion of frozen fish in retail stores, (3) increase of appeal of frozen fish (in comparison with meat and fowl) to consumers' taste, and an increase in consumers' appreciation of its health values.

Partial List of Fishing Boat Builders. (Fishery Leaflet 178) Bureau of Commercial Fisheries, Fish and Wildlife Service, U.S. Department of the Interior. October 1959, 7 pp. Free. List of Atlantic Coast, Gulf Coast, Pacific Coast, and Great Lakes builders.

Partial List of Manufacturers of Fishing Gear and Accessories and Vessel Equipment. (Fishery Leaflet 195) Bureau of Commercial Fisheries, Fish and Wildlife Service, U.S. Department of the Interior. October 1959, 27 pp. Free. Contains two lists—one of products, the other of manufacturers.

Potential Use of Trash Fish Caught by Shrimp Boats. (Management Research Summary 148) Small Business Administration. 1963, 2 pp. Free. Suggestions for increasing the profits of shrimp boats. Potential market analysis on basis of communication with fertilizer, pet food, and chemical manufacturers.

Spiny Lobster Gear and Fishing Methods. (Fishery Leaflet 487) Bureau of Commercial Fisheries, Fish and Wildlife Service, U.S. Department of the Interior. 1959, 17 pp. Free. Contains description and illustrations of the boat and various fishing devices. Estimates equipment costs.

Survey of the United States Shrimp Industry. Two volumes. (Special Scientific Report Fisheries 277 and 308) Fish and Wildlife Service, U.S. Department of the Interior. Volume I, 1958, 311 pp. Volume II, 1959, 167 pp. Free. Comprehensive examination of the shrimping grounds, vessel construction, fishing operations, fishing costs, trends in distribution, packaging, storing, shipping, per capita consumption, prices, wholesaling, retailing, merchandising and consumer preferences. Specific suggestions to improve current practices are made throughout.

The United States Fish and Wildlife Service; Its Responsibilities and Functions. (Circular 97) 1961, 44 pp. Free. Includes discussion of its services to the fishing industry.

WHOLESALE DEALERS AND PRODUCERS OF BAIT FISH. (Fishery Leaflet 191) Bureau of Sport Fisheries and Wildlife, Fish and Wildlife Service, U.S. Department of the Interior. March 1960, 27 pp. Free. List of dealers by State.

Food Industry

ANALYZING FOOD BROKERS' COSTS AND MARGINS. (Management Research Summary 159) Small Business Administration. 1963, 2 pp. Free. Analyzes the commissions, payrolls, employment and organization of food brokerage firms.

BAKERY PRODUCTS. (Small Business Bibliography 19) Small Business Administration. Revised 1964, 8 pp. Free. A descriptive listing of published material concerning technological and managerial advances in the baking industry.

BUYING PRACTICES AND FOOD USE OF EMPLOYEE FOOD SERVICES IN MANUFACTURING PLANTS. (Marketing Research Report 326) Economic Research Service, U.S. Department of Agriculture. 1959, 135 pp. GPO, 75¢. A sample survey of manufacturing plants having 250 or more employees each.

COOPERATIVE ARRANGEMENTS AMONG SMALL FOOD PROCESSORS. (Management Research Summary 146) 1963, 2 pp. Free. Summarizes case studies of 17 cooperative arrangements among small processors of bakery items, dairy products, and fruits and vegetables to determine ways by which small independent Wisconsin food-processing firms could achieve greater economies through cooperative arrangements and thus meet competition more effectively.

COUNSELING AFFILIATED FOOD RETAILERS. (Management Research Summary 113) Small Business Administration. 1963, 2 pp. Free. The role of counseling in an affiliated food wholesaler-retailer relationship.

DISPLAY LOCATION AND CUSTOMER SERVICE IN RETAIL PRODUCE DEPARTMENTS. (Marketing Research Report 501) Agricultural Marketing Service, U.S. Department of Agriculture. 1961, 50 pp. Free. Measures the effectiveness of different produce department layouts, and evaluates methods of weighing produce.

ECONOMIC INQUIRY INTO FOOD MARKETING; PART I: Concentration and Integration in Retailing. Staff Report. Federal Trade Commission. 1960, 338 pp. GPO, $1.25. A study of the integration and concentration of economic power at retail level of distribution in the food industry.

ECONOMIC INQUIRY INTO FOOD MARKETING; PART II: The Frozen Fruit, Juice and Vegetable Industry. Staff Report. Federal

Trade Commission. 1962, 145 pp. GPO, $1.25. A study of integration, concentration and marketing patterns of producers of frozen fruit, juice and vegetable industry.

EFFECTIVENESS OF SELECTED CANNED FOOD DISPLAYS IN SUPERMARKETS. (Marketing Research Report 371) Economic Research Service, U.S. Department of Agriculture. 1959, 30 pp. GPO, 20¢.

EGG GRADING MANUAL. (Agriculture Handbook No. 75) Agricultural Marketing Service, U.S. Department of Agriculture. 1961, 52 pp. Free. An aid in teaching beginners as well as experienced graders the correct interpretation and application of U.S. standards, grades, and weight classes.

EMPLOYEE FOOD SERVICES IN MANUFACTURING PLANTS; MANAGEMENT APPRAISALS, NATURE AND EXTENT, VENDING MACHINES. (Marketing Research Report 325) Economic Research Service, U.S. Department of Agriculture. 1959, 100 pp. GPO, 30¢. A sample survey of manufacturing plants having 250 or more employees each.

FLUID MILK PLANTS IN THE SOUTHEAST; METHODS, EQUIPMENT AND LAYOUT. (Marketing Research Report 232) Agricultural Marketing Service, U.S. Department of Agriculture. 1958, 77 pp. GPO, 30¢. Provides dairy plant operators with data and guidelines which can be used in establishing and operating milk plants more efficiently.

FOOD BROKERS' SALES AND MERCHANDISING PROGRAM. (Management Research Summary 183) Small Business Administration. 1963, 2 pp. Free. Pertinent information from survey regarding agreements between brokers and the manufacturers they represent, basic operating relations, sales management problems, and brokers' retail merchandising activities.

FOOD SERVICE INDUSTRY. TRAINING PROGRAM AND FACILITIES. Office of Education, U.S. Department of Health, Education, and Welfare. 1961, 183 pp. GPO, 65¢. The National Restaurant Association and the American Hotel Association assisted in the preparation of this publication. Discusses the industry, career opportunities, and outlines various food service operations.

FOOD STORES. (Small Business Bulletin No. 24) Small Business Administration. 1962, 8 pp. Free. A bibliography dealing with the many phases of food store operation.

HANDLING GROCERIES FROM WAREHOUSE TO RETAIL STORE SHELVES. (Marketing Research Report 473) Agricultural Marketing Service, U.S. Department of Agriculture. 1961, 47 pp. Free. A cost study of eight systems of handling groceries.

IMPROVED DESIGNS FOR COMMERCIAL EGG GRADING AND PACKING PLANTS. (Marketing Research Report 422) Agricultural Marketing Service, U.S. Department of Agriculture. 1961, 45 pp. Free. Designs developed to provide for efficient and expanding production.

IMPROVED METHODS AMONG WHOLESALE FOOD DISTRIBUTORS FOR INVENTORY CONTROL, SALES ACCOUNTING, AND SHIPMENT OF MERCHANDISE. (Marketing Research Report 271) Agricultural Marketing Service, U.S. Department of Agriculture. 1958, 71 pp. GPO, 40¢. Supplement 1960. 8 pp. GPO, 5¢. A study of 20 firms which recommends specific work methods and equipment.

IMPROVED METHODS OF DISPLAYING AND HANDLING PRODUCE IN RETAIL FOOD STORES. (Marketing Research Report No. 551) Agricultural Marketing Service, Transportation and Facilities Research Division, U.S. Department of Agriculture. 1962, 55 pp. Free. Evaluates and develops improved produce display procedure.

IMPROVING OFFICE PROCEDURES IN FOOD BROKERS' FIRMS. (Management Research Summary 162) Small Business Administration. 1963, 2 pp. Free. Findings from a survey of nearly 600 firms, revealing opportunities for greater efficiency in the management techniques, office practices, and record procedures of food brokers.

THE MARKET FOR FOOD IN PUBLIC SCHOOLS. (Marketing Research Report 377) Economic Research Service, U.S. Department of Agriculture. 1960, 58 pp. GPO, 40¢. An attempt to chart for food manufacturers and distributors the current and potential size of the market for food in public elementary and high schools.

MARKETING MILK IN ALASKA. (Marketing Research Report 385) Economic Research Service, U.S. Department of Agriculture. 1960, 29 pp. GPO, 20¢. Study made in fall of 1957 of market for milk in six largest of Alaska's cities and in the military establishments. Also indicates consumer acceptance of alternative products to fresh bottled milk.

MARKETING THROUGH FOOD BROKERS. (Management Research Summary 158) Small Business Administration. 1963, 2 pp. Free. Brief summary of a survey to determine the role and selection of brokers and the help and functions of food brokers to their principals.

MERCHANDISING PRACTICES FOR FREEZER PROVISIONERS. (Marketing Research Report 453) Farmer Cooperative Service, U.S. Department of Agriculture. 1961, 33 pp. GPO, 20¢. Report of a study of 21 firms merchandising methods in the areas of credit, delivery, membership plans, and advertising.

OUTLOOK FOR ARKANSAS'S INDEPENDENT BROILER PROCESSORS. (Management Research Summary 164) Small Business Administration. 1963, 2 pp. Free. Summarizes study of the commercial broiler industry in Arkansas based on survey of literature, consultation with industry leaders, and examination of operations of poultry processors.

THE OUTLOOK FOR SMALL MEATPACKERS IN MONTANA. (Management Research Summary 147) Small Business Administration. 1963, 2 pp. Free. Significant findings from interviews with 60 Montana meatpacking firms about their organization, purchasing and selling livestock, processing and distribution of meats, and by-products. Discusses expansion possibilities.

THE POTENTIAL FOR VEGETABLE CANNING IN NEBRASKA. (Management Research Summary 189) Small Business Administration. 1963, 2 pp. Free. Summarizes a study of the raw product potential in Nebraska and of canners and firms serving the industry in other midwestern states to determine Nebraska's potential for a vegetable canning industry.

POLICIES AND PRACTICES OF SOME LEADING INSTITUTIONAL WHOLESALE GROCERS. (Marketing Research Report 335) Agricultural Marketing Service, U.S. Department of Agriculture. 1959, 44 pp. GPO, 25¢. Case studies of operating procedures.

POULTRY GRADING AND INSPECTION. (Agriculture Information Bulletin 173) Agricultural Marketing Service, U.S. Department of Agriculture. 1961, 25 pp. GPO, 15¢. Description of the poultry inspection service.

POULTRY GRADING MANUAL. (Agriculture Handbook 31) Agricultural Marketing Service, U.S. Department of Agriculture. 1961, 37 pp. GPO, 30¢. This will aid in obtaining uniform application of the U.S. classes, standards, and grades of poultry. Includes short bibliography.

PROBLEMS AND PROSPECTS OF SOUTH CAROLINA FOOD PROCESSORS. (Management Research Summary 64) Small Business Administration. 1962, 4 pp. Free. Digest of a report of findings from 307 interviews with firms in eight major categories of the food and kindred product industries in South Carolina with respect to the managing, marketing, and operating problems, how they are being resolved, and what the future prospects are for these industries.

PROBLEMS OF LOUISIANA'S FRUIT AND VEGETABLE PROCESSORS. (Management Research Summary 170) Small Business Administration. 1963, 2 pp. Free. Summarizes findings from questionnaires and interviews of 18 fruit and vegetable processors known to have operated in Louisiana during the 1960 season—to provide

a better understanding of the problems faced by this segment of the State's economy.

PROBLEMS OF TENNESSEE'S SMALL MEATPACKERS. (Management Research Summary 73) Small Business Administration. 1962, 4 pp. Free. Summarizes a survey of 58 meat packers regarding management and marketing problems.

PROFITS AND COMPETITION IN RETAIL FOOD PRICING. (Management Research Summary 140) Small Business Administration. 1963, 2 pp. Free. Summarizes the analysis of prices and shelf-movement data in one store and advertised prices of 14 supermarkets over a 24-week period to ascertain the extent retailers should develop their own pricing guides.

PROSPECTS IN NEW MEXICO FOR SMALL FOOD PROCESSORS. (Management Research Summary 136) Small Business Administration. 1963, 2 pp. Free. Evaluates the possibilities for expanding food processing.

REQUIREMENTS OF THE UNITED STATES FOOD, DRUG, AND COSMETIC ACT. Food and Drug Administration, U.S. Department of Health, Education, and Welfare. 1964. In press. Information regarding health safeguards, label statements, prohibited descriptions, etc., as specified in the Act applicable to interstate and foreign shipments of various types of foods and drugs.

RESTAURANTS AND CATERING. (Small Business Bibliography 17) Small Business Administration. Revised 1965, 20 pp. Free. Sources of information on cooking, business operation, etc.

RETAIL PRODUCE MANUAL. Agricultural Marketing Service, U.S. Department of Agriculture. 1960. Five bulletins have been issued which make up five chapters of the Manual:

1. Organization of the Work Area for Handling Produce in Retail Stores. (Marketing Bulletin 2) GPO, 15¢.
2. Ordering, Receiving, and Storage of Produce in Retail Stores. (Marketing Bulletin 3) GPO, 5¢.
3. Trimming Produce in Retail Stores. (Marketing Bulletin 4) GPO, 25¢.
4. Managing and Scheduling of a Retail Produce Department. (Marketing Bulletin 11) GPO, 20¢.
5. Packaging and Price-Marking Produce in Retail Stores. (Marketing Bulletin 14) GPO, 25¢.

STARTING AND MANAGING A SMALL RESTAURANT. (Starting and Managing Series Vol. 9) Small Business Administration. 1964, 116 pp. GPO, 45¢. Describes advantages and disadvantages, risks involved, personal characteristics that will contribute to success, and management practices necessary for success.

TRENDS IN AFFILIATED WHOLESALE-RETAIL FOOD OPERATIONS. (Management Research Summary 121) Small Business Administration. 1963, 2 pp. Free. Discusses market potential, competitive strategy, and training to improve management practices of affiliated retailers and their allied wholesale suppliers.

VERTICAL INTEGRATION IN THE BROILER-GROWING INDUSTRY. (Management Research Summary 25) Small Business Administration. 1961, 4 pp. Free. Summary of a study of the broiler industry in the Delmarva Peninsula, an area which formerly played a leading role in the broiler industry and which is now under competitive pressure.

VOLUNTARY AND COOPERATIVE CHAINS. (Small Business Bulletin 30) Small Business Administration. 1960, 8 pp. Free. References on the function, methods, and operation of voluntary and cooperative chains in the field of grocery distribution.

Foreign Investment

INVESTMENT GUARANTY HANDBOOK . . . U.S. GOVERNMENT GUARANTIES AVAILABLE FOR NEW AMERICAN INVESTMENT ABROAD UNDER THE INVESTMENT GUARANTY PROGRAM. Investment Guaranties Division, Agency for International Development, U.S. Department of State. 1960, 33 pp. Free. Of interest to firms establishing a foreign subsidiary, branch, or affiliate; licensing a foreign company to use its patents or processes; or increasing its investment in an existing foreign venture.

Forests and Forestry

MANAGING THE FAMILY FOREST. (Farmers' Bulletin No. 2187) Forest Service, U.S. Department of Agriculture. 1962, 61 pp. GPO, 20¢. Outlines how to grow more and better species of trees, greater volume of wood in a shorter time, and how to market forest products more profitably.

Franchises

THE FRANCHISE SYSTEM OF DISTRIBUTION. (Management Research Summary 172) Small Business Administration. 1963, 4 pp. Free. Discusses franchisor policies, problems of franchisors and franchisees, and factors to consider in choosing a franchise.

Gasoline Service Stations

STARTING AND MANAGING A SERVICE STATION. (Starting and Managing Series Vol. 3) Small Business Administration. 1961, 80 pp. GPO, 35¢. Basic information on risks, opportunities, and up-to-date management methods.

Government Contracts

CONTRACTORS GUIDE; RESEARCH AND DEVELOPMENT IN THE U.S. ARMY. Office of Chief Research and Development, Department of the Army, U.S. Department of Defense. 1961, 49 pp. Free. Describes Army research and development programs and tells how the small businessman may participate in research and development contracts.

CONTROLLING QUALITY IN DEFENSE PRODUCTION. (Technical Aids for Small Manufacturers 78) Small Business Administration. 1962, 4 pp. Free. Supplies responsibility for quality control systems in Department of Defense contracts.

DOING BUSINESS WITH THE FEDERAL GOVERNMENT; A GUIDE FOR THE BUSINESSMAN. Federal Supply Service, General Services Administration. 1963, 61 pp. and appendix. Free. Explains Government purchasing programs and procedures. Also points out common pitfalls involved in the submission of bids and in contract administration.

A GUIDE TO SPECIFICATIONS AND STANDARDS OF THE FEDERAL GOVERNMENT. Federal Supply Service, General Services Administration. 1963, 39 pp. Free. A booklet aimed particularly at the small businessman, explaining specifications and standards and how they are used in Government purchasing.

INSPECTION ON DEFENSE CONTRACTS IN SMALL FIRMS. (Technical Aids for Small Manufacturers 82) Small Business Administration. 1962, 4 pp. Free. A guide to meeting Government inspection requirements.

AN INTRODUCTION TO THE DEFENSE SUPPLY AGENCY. Department of Defense. 1962, 18 pp. GPO, 15¢. Describes the objectives of this Agency, which was authorized September 12, 1961, by the Secretary of Defense.

THE OFFICE OF NAVAL RESEARCH CONTRACT RESEARCH PROGRAM (ONR–1). Office of Naval Research, Department of the Navy. June 1962, 20 pp. Free. Description of research activities, listing of branch offices, guide for preparation of research proposals.

PRODUCT QUALIFICATIONS AND QUALIFIED PRODUCTS LISTS. Standardization Division, Defense Supply Agency. 1962, 6 pp. Free. Shows when and how the qualification procedure is used in Government procurement.

SELLING TO AEC. (See listing under Atomic Energy.)

SELLING TO NASA. National Aeronautics and Space Administration. 1964, 42 pp. Free. Information on how a small business can sell to NASA.

SELLING TO NAVY PRIME CONTRACTORS. Department of the Navy. 1963, 93 pp. GPO, 50¢. How small firms may obtain a subcontract. Listing of prime contractors by name and State.

SELLING TO THE MILITARY. U.S. Department of Defense. 1961, 27 pp. GPO, 25¢. Basic information on selling products and services to the Department of Defense. Includes list of major purchasing offices.

SELLING TO THE U.S. GOVERNMENT. U.S. Small Business Administration. 1964, 17 pp. Free. Basic information on the Government's buying methods, and on how to compete for Government contracts and orders.

SMALL BUSINESS AND THE AIR FORCE. (Air Force Pamphlet 70–1–4) Office of Small Business, Directorate of Materiel, Headquarters U.S. Air Force. August 1963, 40 pp. Free. The activities currently being conducted by the Air Force. The market for small business in Air Force procurement.

SMALL BUSINESS SPECIALISTS DESIGNATED TO ASSIST THE BUSINESSMAN. Installations and Logistics, U.S. Department of the Army, U.S. Department of Defense. 1963, 52 pp. Free. Specialists are listed by State, alphabetically.

U.S. GOVERNMENT PURCHASING, SPECIFICATIONS AND SALES DIRECTORY; WHO BUYS WHAT AND WHERE, SOURCES OF GOVERNMENT SPECIFICATIONS, WHO SELLS WHAT AND WHERE. Small Business Administration. 1965, 138 pp. GPO, 70¢. Facts for the small businessman on how to sell to or buy from the Federal Government.

Government Property Sales

HOW TO BUY SURPLUS PERSONAL PROPERTY FROM THE U.S. ARMY, U.S. NAVY, U.S. AIR FORCE, U.S. MARINE CORPS. Office of the Secretary of Defense. Being revised. 23 pp. GPO, 15¢. Types of material available; how to get on bidders' lists; list of disposal offices.

Government Purchasing

(See listing under Government Contracts.)

Guided Missiles

(See General Procurement Information on Guided Missile Programs listed under Government Contracts, and Technical Resources Directory listed under Directories.)

Hours of Labor

EMPLOYMENT AND EARNINGS—ANNUAL SUPPLEMENT ISSUE. (May) Bureau of Labor Statistics, U.S. Department of Labor. GPO, $1. Average annual hourly and weekly earnings for production workers by industry, also by State or area. Other tables on labor turnover rates and number of employees.

HANDY REFERENCE GUIDE TO THE FAIR LABOR STANDARDS ACT (The Federal Wage-Hour Law). Wage and Hour and Public Contracts Divisions, U.S. Department of Labor. Reprinted 1963, 17 pp. Free.

HOURS OF OPERATION IN RETAIL STORES. (Management Research Summary 11) Small Business Administration. 1961, 4 pp. Free. Survey of retail stores in Nebraska to determine store-hour policies.

Industrial Development

THE COMMUNITY AND ECONOMIC DEVELOPMENT. Area Redevelopment Administration, U.S. Department of Commerce. 1964, 40 pp. GPO, 30¢. Designed to give local redevelopment groups a general background for understanding and dealing with the tasks they face, and to provide guidance on effective methods of increasing employment.

COMMUNITY-SPONSORED EFFORTS TO DEVELOP INDUSTRY. (Management Research Summary 205) Small Business Administration. 1964, 2 pp. Free. Key points from a report of the experiences of 18 small Oklahoma communities, each of which had been active in developing existing industry or in attracting new industry. Discusses the costs and benefits of community-sponsored efforts in industry development; lists conclusions.

DEVELOPING "HOME-GROWN" INDUSTRY. Area Redevelopment Administration, U.S. Department of Commerce. 1963, 32 pp.

GPO, 15¢. Describes development of local industries as a means of strengthening the local economy.

A Guide to Community Resource Development. (Management Research Summary 198) Small Business Administration. 1964, 2 pp. Free. Summary of a detailed outline of planning and inaugurating a community resource development program. Discusses resource requirements for agricultural processing industries.

How To Make an Industrial Site Survey. Area Redevelopment Administration, U.S. Department of Commerce. 1963, 20 pp. GPO, 15¢. Explains how to identify sites suitable for industry, and how to assemble this information.

Loans to State and Local Development Companies. Small Business Administration. 1961, 13 pp. Free. SBA help in financing plant construction, conversion or expansion, financing of shopping centers.

Planning for Balanced Small Business Development in the U.S. Virgin Islands. (Management Research Summary 166) Small Business Administration. 1963, 2 pp. Free. Summary of a study of the Puerto Rican economy and a suggested economic development program to reduce dependence of the islands on tourism and sugar and rum industries.

Planning for New Growth—New Jobs. (ARA Pub. 62–A) Area Redevelopment Administration, U.S. Department of Commerce. 1962, 28 pp. GPO, 15¢. Designed to assist designated redevelopment areas in their long range planning to restore economic vigor and provide permanent employment opportunities.

Potential Resources for Small Business in Kentucky. (Management Research Summary 169) Small Business Administration. 1963, 2 pp. Free. Discusses potential for development through water resources, agriculture, wood products, and minerals.

Small Business Development in New Hampshire. (Management Research Summary 55) Small Business Administration. 1962, 4 pp. Free. Deals with mineral potentials, manufacturing, forestry, and air transportation.

Small Business in an Expanding Economy. (Management Research Summary 133) Small Business Administration. 1963, 2 pp. Free. Suggests that communities seeking economic expansion should survey local business that could be helped before importing new firms.

Small Business Opportunities in a Redevelopment Area. (Management Research Summary 85) Small Business Administration. 1962, 4 pp. Free. Pertinent findings from a study of three West

Virginia counties (Boone, Logan, and Raleigh) faced with unemployment and emigration because of mechanization in coal mining and the shift to use of fuel other than coal. Discusses opportunities for new businesses in woodworking, handicrafts, tourist services, electronics, plastics, apparel, and textiles.

Industrial Health

CONTROL OF THE PHYSICAL ENVIRONMENT. (Bulletin 211) Bureau of Labor Standards, U.S. Department of Labor. 1960, 13 pp. GPO, 15¢. How to provide a safe and healthy place to work.

CONTROLLING NOISE HAZARDS. (Bulletin 207) Bureau of Labor Standards, U.S. Department of Labor. 1959, 6 pp. GPO, 10¢. Particularly applies to the industrial plant.

DIRECTORY OF STATE AND TERRITORIAL HEALTH AUTHORITIES. Public Health Service, U.S. Department of Health, Education, and Welfare. 1959, 102 pp. GPO, 35¢. Detailed directory of services, including sanitation inspection and water pollution control.

HEALTH MAINTENANCE FOR GREATER EFFICIENCY. (Small Business Management Series 16) Small Business Administration. 2d ed. 1964, 64 pp. GPO, 30¢. Give latest practices and standards in industrial health services as they apply to small business.

OCCUPATIONAL HEALTH HAZARDS; THEIR EVALUATION AND CONTROL. (Bulletin 198) Bureau of Labor Standards, U.S. Department of Labor. 1958, 36 pp. GPO, 25¢. A practical guide for the prevention of occupational diseases.

Information In Industry

BETTER COMMUNICATIONS IN SMALL BUSINESS. (Small Business Management Series 7) Small Business Administration. 2d ed. 1962, 37 pp. GPO, 25¢. Outlines a basis for developing the needed awareness and practical skill to help build better management by effective communications.

BRINGING MANAGEMENT INFORMATION TO SMALL BUSINESS. (Management Research Summary 161) Small Business Administration. 1963, 4 pp. Free. Sources of information and problems of communicating it to small businessmen who need and want it.

COMMUNICATING INFORMATION TO SMALL BUSINESSMEN. (Management Research Summary 155) Small Business Administration. 1963, 2 pp. Free. Examines the methods used by trade associations, the trade press, professional consultants, public libraries,

business schools and universities, and governmental agencies to disseminate their informational aids to small businessmen.

SMALL BUSINESS ADMINISTRATION. WHAT IT IS, WHAT IT DOES. 1964, 17 pp. Free. General information on types of financial and management assistance offered to small business enterprises.

STATE SOURCES OF BUSINESS INFORMATION IN COLORADO. (Management Research Summary 132) Small Business Administration. 1963, 2 pp. Free. Summary of the need and structure of a guide to reports, publications, and services of all State government units of Colorado.

USE OF OUTSIDE INFORMATION IN SMALL FIRMS. (Management Research Summary 56) Small Business Administration. 1962, 4 pp. Free. Summary of report based on questionnaire returns from 472 trade associations and interviews with 162 Colorado businessmen regarding availability and use of business information and subjects in which further education would be desirable.

USE OF PUBLICATIONS AS AIDS IN MANAGING SMALL FIRMS. (Management Research Summary 115) Small Business Administration. 1963, 4 pp. Free. Brief review of a survey of 400 Utah restaurant owners and 56 steel fabricators to ascertain the service and worth of trade journals and other pertinent publications in their businesses. Discusses the reasons for non-use and gives suggestions for the improvement of these printed management aids.

Insurance

INSURANCE MANAGEMENT IN SMALL RETAIL FIRMS. (Management Research Summary 72) Small Business Administration. 1962, 4 pp. Free. Summarizes information from insurance agents, 385 Oregon retailers, and government and private statistical services. Discusses experiences with various types of insurance, agent-dealer relations, and recommends better risk managements.

INSURANCE AND RISK MANAGEMENT FOR SMALL BUSINESS. (Small Business Management Series 30) Small Business Administration. 1963, 74 pp. GPO, 30¢. Discusses the various kinds of insurance that is of the most practical use to the small businessman.

REAL ESTATE AND INSURANCE. (Small Business Bibliography No. 65) Small Business Administration. 1964, 16 pp. Free. A coverage of items written from the operating viewpoint.

RISK MANAGEMENT IN A CATASTROPHE. (Management Research Summary 101) Small Business Administration. 1963, 2 pp.

Free. Summarization of a report based on an examination of court records and claim files and interviews with operators of 76 Roseburg, Oreg., firms most severely affected by a fire and blast in 1959.

Interior Decoration

INTERIOR DECORATING. (Small Business Bulletin 54) Small Business Administration. 1961, 8 pp. Free. A bibliography of publications concerning design, color, furniture, fabrics, lighting, and wood.

PAINTING AND DECORATING. (Small Business Bulletin 60) Small Business Administration. 1962, 12 pp. Free. Sources of information on the technical and economic aspects of the industry.

Inventory Control

INVENTORY CONTROL FOR SMALL WHOLESALERS. (Management Research Summary 100) Small Business Administration. 1963, 2 pp. Free. Brief summary of report based on personal interviews with 62 Alabama wholesalers representing four commodity lines—grocery, drug, hardware, and drygoods—regarding inventory-control systems in use. Discusses stock-card method, strip method, and machine-card method.

POINTERS ON RAW MATERIALS INVENTORY CONTROL. (Management Aid for Small Manufacturers 155) Small Business Administration. 1963, 4 pp. Free. Since raw materials represent a major investment in small plants, proper inventory control can help to increase the return on that investment.

Labor Laws and Legislation

EMPLOYER AND CONSULTANT REPORTING. Labor-Management Services Administration, U.S. Department of Labor. 1963, 16 pp. Free. Instructions in using the form prescribed by the Secretary of Labor for employers and consultants required to report under section 203(a) of the Labor-Management Reporting and Disclosure Act of 1959. Under the act employers must disclose certain financial transactions and arrangements made with labor organizations, union officials, employees, labor relations consultants, or other persons.

EQUAL PAY FACTS. (Leaflet 2) Women's Bureau, U.S. Department of Labor. Revised July 1961, GPO, 5¢. Describes equal pay and shows States in which equal pay laws have been enacted.

FEDERAL LABOR LAWS AND PROGRAMS. (Bulletin 262) Bureau of Labor Standards, U.S. Department of Labor. 1964, 180 pp. In press. Summarizes briefly in the form of a layman's guide the main provisions of important Federal labor laws and programs applicable to employees in private employment.

GROWTH OF LABOR LAW IN THE UNITED STATES. Bureau of Labor Standards, U.S. Department of Labor. 1962, 316 pp. GPO, $1. Describes the beginnings and development of labor laws in this country; shows how these laws began with the regulation of child labor; and discusses the beginnings and expansion of laws on hours, minimum wage, workmen's compensation, unemployment insurance, fair employment practices, and industrial relations.

RECORDS TO BE KEPT BY EMPLOYERS. (29 Code of Federal Regulations Part 516) Wage and Hour and Public Contracts Divisions, U.S. Department of Labor. Reprinted from the Federal Register of March 15, 1962, 6 pp. GPO, 5¢. Describes those records, which by regulation, must be kept by employers under the Fair Labor Standards Act.

SERVICES TO THE PUBLIC UNDER THE FAIR LABOR STANDARDS ACT. Wage and Hour and Public Contracts Divisions, U.S. Department of Labor. 1963, 8 pp. Free. Includes a list of the Divisions' field offices.

STATE LABOR RELATIONS ACTS. (Bulletin 224) Bureau of Labor Standards, U.S. Department of Labor. 1961, 39 pp. GPO, 20¢. An analysis of the provisions of labor relations acts in the 13 States which have them.

STATE MINIMUM-WAGE LAWS AND ORDERS. (Women's Bureau Bulletin 267) Women's Bureau, U.S. Department of Labor. Issued in two parts: PART I: HISTORICAL DEVELOPMENT AND STATUTORY PROVISIONS. 31 pp. GPO, 75¢; PART II: ANALYSIS OF RATES AND COVERAGE. 142 pp. GPO, 60¢. Supplementary pages for Part II available on request to GPO. Part I contains a descriptive summary of the history of minimum-wage laws and a list of industries and occupations covered; Part II analyzes the wage-rate provisions of orders and statutes effective after July 1, 1942.

STATE "RIGHT-TO-WORK" LAWS. (Bulletin 204) Bureau of Labor Standards, U.S. Department of Labor. May 1959, 9 pp. Free. A brief résumé as of May 1959 of right-to-work legislation.

SUMMARY OF THE LABOR-MANAGEMENT RELATIONS ACT AS AMENDED THROUGH 1959 (TAFT-HARTLEY ACT). National Labor Relations Board. 1964, 26 pp. GPO, 15¢. Explanation of the Act's provisions and administration.

THE WAGE-HOUR LAW IN SMALL FIRMS. (Small Marketers Aids 88) Small Business Administration. 1963, 4 pp. Free. A discussion of the changes made in 1961 when Federal wage-hour law was amended to increase the minimum wage and broaden the coverage.

WHAT IS REQUIRED UNDER THE LAW. Bureau of Labor-Management Reports, U.S. Department of Labor. 1959, 14 pp. Free. Description of the provisions of the Labor-Management Reporting and Disclosure Act of 1959.

Labor Productivity

BOOSTING PRODUCTIVITY IN SMALL SHOPS. (Technical Aids for Small Manufacturers 74) Small Business Administration. 1960, 4 pp. Free. Factors affecting labor productivity.

Labor Unions

SMALL BUSINESS AND PATTERN BARGAINING. (Management Research Summary 38) Small Business Administration. 1961, 4 pp. Free. Pertinent information from a survey of companies in the rubber tire and meat-packing industries with regard to the impact of pattern bargaining and employer and union reaction to it.

SMALL BUSINESS AND UNION-WIDE BARGAINING. (Management Research Summary 60) Small Business Administration. 1962, 4 pp. Free. Summarizes findings of a study of collective-bargaining negotiations in District 33 of the United Steelworkers of America (Minnesota and adjoining areas of northern Michigan and western Wisconsin). The study represents an analysis of some 145 nonsteel collective bargaining agreements entered into during the 1950's to determine their conformance with or departure from the successive key bargains of the basic steel industry.

Laboratories

DIRECTORY OF INDEPENDENT COMMERCIAL LABORATORIES. (See listing under Directories.)

SETTING UP A QUALITY CONTROL AND TECHNICAL DEVELOPMENT LABORATORY. (Technical Aids for Small Manufacturers 65) Small Business Administration. 1959, 4 pp. Free. Guidelines for the small manufacturer in equipping, staffing, and using a small laboratory; with a brief discussion of research and laboratory quality control.

Laundries

LAUNDRY AND DRYCLEANING. (Small Business Bibliography 22) Small Business Administration. Revised 1965, 8 pp. Free. References on technical information as well as general management.

Leasing Equipment

RENTED TOOLS CAN IMPROVE EFFICIENCY. (Technical Aids for Small Manufacturers 79) Small Business Administration. 1962, 4 pp. Free. Describes nature and function of leasing, advantages and disadvantages, and various rental plans.

Letter Services

STARTING AND MANAGING A SMALL DUPLICATING AND MAILING SERVICE. (The Starting and Managing Series Vol. 8) Small Business Administration. 1963, 55 pp. GPO, 25¢. This booklet supplies some of the "know-how" necessary to help those persons in this type of business avoid the pitfalls and attain success.

Lumber Industry

DEVELOPING MISSISSIPPI'S HARDWOOD RESOURCES. (Management Research Summary 88) Small Business Administration. 1962, 4 pp. Free. Summarizes information from 109 sawmills, 63 processors of hardwood standard lumber, 15 veneer mills, and 4 pulpmills regarding hardwood resources, raising value of hardwood roundwood, and the use of hardwood sawmill residues.

ECONOMIC PROBLEMS OF ARKANSAS SAWMILLS. (Management Research Summary 193) Small Business Administration. 1963, 2 pp. Free. Trends and problems of the lumber industry from the standpoint of small sawmill operators in Arkansas. Discusses national demand, regional competition, supply conditions, improving operations, and improving industry conditions.

MARKETING MAINE LUMBER FOR BUILDING CONSTRUCTION. (Management Research Summary 143) Small Business Administration. 1963, 2 pp. Free. An investigation into the reasons why Northeastern softwood lumber is not being used to a greater extent in the building-construction industry.

MISSISSIPPI'S FOREST RESOURCES. (Management Research Summary 65) Small Business Administration. 1962, 4 pp. Free. In-

cludes information regarding standing timber supply, species distribution, wood products opportunities, and forest management.

THE PINE LUMBER INDUSTRY IN MISSISSIPPI. (Management Research Summary 59) Small Business Administration. 1962, 4 pp. Free. Pertinent facts from a report of interviews with owners or managers of 83 Mississippi lumber-producing firms, regarding their economic position and industry problems, together with recommended steps to be taken in order to meet competition successfully.

PROBLEMS OF WESTERN OREGON'S SMALL LUMBER FIRMS. (Management Research Summary 137) Small Business Administration. 1963, 2 pp. Free. Discussion of marketing, procurement of raw materials, financing, and management, based on interviews with 137 lumber firms in western Oregon.

Management

ARE YOU USING YOUR SPACE EFFECTIVELY? (Technical Aids for Small Manufacturers 77) Small Business Administration. 1961, 4 pp. Free. Space utilization tips for plant and office.

BUILDING SUCCESS IN SMALL MANUFACTURING INDUSTRIES. (Management Research Summary 51) Small Business Administration. 1962, 4 pp. Free. Discusses 24 business practices found to have contributed to the success of 1 or more of the 7 small manufacturing firms surveyed in the study, including 10 practices which were found in all 7 firms: location, purchasing policies, adequate stocks of raw materials, practical use of funds, maintenance of adequate working capital, addition of manufacturing facilities for purpose of lowering costs, adequate provision for distribution, expansion to meet increased demand, and establishment of a reputation for high-quality products.

BUSINESS ENTERPRISES OF NEGROES IN TENNESSEE. (Management Research Summary 53) Small Business Administration. 1961, 4 pp. Free. A study of over 600 Negro firms in Memphis, Nashville, Knoxville, and Chattanooga, Tenn., covering the enterprise, the owner-manager, the Negro market, problem areas, and management policies.

CHARACTERISTICS IN SMALL BUSINESS SUCCESS. (Management Research Summary 119) Small Business Administration. 1963, 4 pp. Free. A summary of the techniques and distinctive features based on almost 400 interviews with management personnel and 110 small metal working plants in Ohio—to establish criteria for success potential, stability, and growth.

CHECKING YOUR MANAGEMENT METHODS. (Management Aids for Manufacturers 153) Small Business Administration. 1961, 4 pp. Free. Discusses 10 management methods applying to the business itself and six methods pertaining to the owner's work as manager.

CHECKLIST FOR GOING INTO BUSINESS. (Small Marketers Aids 71) Small Business Administration. 1961, 4 pp. Free. Questions to consider before going into business. References for further study.

CONTROL METHODS FOR OIL JOBBERS. (Management Research Summary 21) Small Business Administration. 1961, 4 pp. Free. Discusses profit planning (profit objective, sales planning, expense planning, monthly figures, comparison and control), controlling investment (accounts receivable, inventory, fixed assets), marketing controls (station image, personnel control, fuel-oil marketing).

FACTORS IN THE GROWTH OF MANUFACTURING FIRMS. (Management Research Summary 107) Small Business Administration. 1963, 2 pp. Free. Examination of internal and external factors on the rate of growth of manufacturing firms.

MANAGEMENT AUDIT FOR SMALL MANUFACTURERS. (Small Business Management Series 29) Small Business Administration. 1963, 58 pp. GPO, 25¢. Applies the financial audit approach to management functions in a do-it-yourself appraisal.

MANAGEMENT AUDIT FOR SMALL RETAILERS. (Small Business Management Series 31) Small Business Administration. 1964, 51 pp. GPO, 25¢. Designed as a guide for self-appraisal by the owner-manager of the small retail establishment to determine the strong points and shortcomings of his management practices.

MANAGEMENT PLANNING IN SMALL FIRMS (Management Research Summary 108) Small Business Administration. 1963, 4 pp. Free. Summarizes an investigation of teaching, consultation, and research in managerial planning, covering sources of ideas, making decisions, operations research, break-even analysis, market research, motivation research, forecasting, and budgeting.

MANAGEMENT PROBLEMS IN THE ELECTRONICS INDUSTRY. (Management Research Summary 86) Small Business Administration. 1962, 4 pp. Free. Summary of information from approximately 300 small electronics firms in Southern California. Discusses problems in accounting, finance, industrial relations, marketing, personnel, and administration; presents conclusions and recommendations regarding each of the problem areas.

ORGANIZATION PATTERNS IN SMALL BUSINESS. (Management Research Summary 12) Small Business Administration. 1961, 4 pp. Free. Study of manufacturing companies which found a direct

relationship between the size of a firm and the number of formal units in its organization.

PROBLEMS AND NEEDS OF SMALL MANUFACTURERS. (Management Research Summary 18) Small Business Administration. 1961, 4 pp. Free. The attraction and use of manpower resources was found to be one of the most serious problems in this Georgia study.

PROBLEMS OF SMALL BUSINESS. (Management Research Summary 42) Small Business Administration. 1961, 4 pp. Free. Summarizes a survey based on discussions with 243 New Jersey small businessmen in three types of firms—wholesaling, retailing, and manufacturing—about problems faced by their firms and possible ways of getting help to solve these problems.

PROFITABILITY AND SIZE OF FIRMS. (Management Research Summary 131) Small Business Administration. 1963, 2 pp. Free. Summarizes the results of research into the relation between profitability, as measured by profit ratios, and the size of manufacturing firms. The study covers the relative ability to expand, the effect of taxes on ability to expand, relative profitability of firms showing a profit, and variability of profit ratios.

SBA Management and Research Assistance, Counseling, Courses, Conferences, Research, Publications. Small Business Administration. 1962, 18 pp. Free. How SBA programs strive to strengthen small business management.

SMALL BUSINESS PROBLEM STUDIES. (Management Research Summary 63) Small Business Administration. 1962, 4 pp. Free. A résumé of case studies developed from interviews with top managers of manufacturing, retailing, wholesaling, and service establishments in the Rocky Mountain area.

SOUND OBJECTIVES HELP BUILD PROFITS. (Management Aids for Small Manufacturers 142) Small Business Administration. 1962, 4 pp. Free. Setting up specific objectives can provide organizations with efficient blueprints to guide company progress in an orderly manner.

STARTING AND MANAGING A SMALL BUSINESS OF YOUR OWN. (Starting and Managing Series, Vol. 1) Small Business Administration. 1962, 49 pp. GPO, 25¢. Choosing a business, starting or buying a business, management problems.

THE USE OF CONSULTANTS BY MANUFACTURERS. (Management Research Summary 190) Small Business Administration. 1963, 2 pp. Free. Evaluates the role of the consulting profession in the growth of manufacturing firms.

USE OF EXTERNAL ASSISTANCE BY SMALL MANUFACTURERS. (Management Research Summary 30) Small Business Administration. 1961, 4 pp. Free. Significant findings from a survey of 73 small manufacturing firms in the Hartford, Conn., area regarding the major problems of the firms and the extent to which they used outside services to help solve the problems.

Marketing

ARE YOU SELLING TO TODAY'S CUSTOMERS? (Small Marketers Aids 78) Small Business Administration. 1962, 4 pp. Free. Various characteristics of today's customers and ways to attract them are discussed.

BUILDING SALES TO ESTABLISHED ACCOUNTS. (Small Marketers Aids 79) Small Business Administration. 1962, 4 pp. Free. A discussion of ways by which small marketers can build sales to established accounts through their salesmen.

BUILDING SALES TO YOUNGER CUSTOMERS. (Small Marketers Aids 80) Small Business Administration. 1962, 4 pp. Free. Suggests ways to cultivate the growing teenage market.

CORRECTING THE CAUSES OF MARKETING WASTE. (Small Marketers Aids 90) Small Business Administration. 1963, 4 pp. Free. Outlines causes and presents a roundup of things to look for when trying to correct them.

DISTRIBUTION COST ANALYSIS. (Small Business Bulletin 34) Small Business Administration. 1960, 8 pp. Free. How this cost analysis can affect marketing policy. Sources of further information.

FEEDER CATTLE POOLING; IMPROVED MARKETING THROUGH GRADING AND COMMINGLING. (Marketing Research Report 565) Farmer Cooperative Service, U.S. Department of Agriculture. 1962, 39 pp. GPO, 30¢. Pooling increases prices, reduces marketing costs, and improves net return to producers.

FEEDER PIG POOLING; IMPROVED MARKETING THROUGH GRADING AND COMMINGLING. (Marketing Research Report 566) Farmer Cooperative Service, U.S. Department of Agriculture. 1962, 59 pp. GPO, 40¢. Pooled lots improve bargaining position and encourage production of higher quality pigs.

FORECASTING IN SMALL BUSINESS PLANNING. (Management Research Summary 23) Small Business Administration. 1961, 4 pp. Free. A discussion of short-term and long-term forecasting and forecasting methods, based on interviews with 106 small manufacturers in Minnesota.

House-to-House Selling. (Small Business Bibliography 39) Small Business Administration. Revised 1964, 8 pp. Free. References on selling by salesmen who make personal calls.

Industrial Supply and Distribution in Puerto Rico. (Management Research Summary 160) Small Business Administration. 1963, 2 pp. Free. Examines the adequacy of distribution of raw materials, operating supplies, and containers in Puerto Rico to industry, agriculture, and Government.

Making Your Sales Figures Talk. (Small Business Management Series 8). Small Business Administration. 3d ed. 1963, 36 pp. GPO, 25¢. Takes market analysis out of the realm of guesswork and puts it in the realm of informed judgment. It explains how to analyze sales volume, distribution expense, customer complaints, salesmen's reports, and other phases of marketing.

Market Research and Planning for Small Manufacturers. (Management Research Summary 19) Small Business Administration. 1961, 4 pp. Free. Reviews the information developed through a survey of 106 small manufacturing firms in Minnesota. Includes brief discussion of company experience regarding types of market research in use, marketing-research techniques, marketing-research benefits, market planning.

Marketing Research Procedures. (Small Business Bibliography 9) Small Business Administration. Revised 1963, 12 pp. Free. References on questionnaires, sales forecasting, motivation research, etc.

National Directories for Use in Marketing. (Small Business Bulletin 13) Small Business Administration. Revised 1963, 12 pp. Free. Selected listing of directories with emphasis on directories of business establishments that purchase goods for resale.

Personal Income; A Key to Small-Area Market Analysis. Business and Defense Services Administration, U.S. Department of Commerce. 1961, 60 pp. GPO, 25¢. Sources of personal income data for counties and other small areas with suggested marketing uses of such data.

Publications for Use in Marketing and Distribution. Business and Defense Services Administration, U.S. Department of Commerce. 1961, 31 pp. GPO, 20¢. An annotated listing of publications under three major headings: Census and General Business Statistics, Domestic Trade, and Foreign Trade.

Small Suppliers and Large Buyers in American Industry. (Management Research Summary 48) Small Business Administra-

tion. 1961, 4 pp. Free. Discusses five factors in the relations between small suppliers and big buyers.

STABILITY AND CHANGE IN MARKET SHARES. (Management Research Summary 125) Small Business Administration. 1963, 2 pp. Free. Pertinent findings from data of 205 manufacturing industries regarding the stability in market shares—referring to the degree to which the distribution of sales among the firms in an industry remains the same.

U.S. DEPARTMENT OF COMMERCE PUBLICATIONS FOR USE IN MARKETING AND DISTRIBUTION. U.S. Department of Commerce. 1961, 31 pp. GPO, 20¢. An annotated listing of publications under three major headings: General Business Statistics, Domestic Trade, and Foreign Trade.

Materials Handling

POINTERS ON IN-PLANT TRUCKING. (Technical Aids for Small Manufacturers 73) Small Business Administration. 1960, 4 pp. Free. Factors to be considered before deciding on mechanized equipment.

Mineral Industries

MINERAL FACTS AND PROBLEMS. (Bulletin 585) Bureau of Mines, U.S. Department of the Interior. Second edition. 1960, 1015 pp. GPO, $6. Contains chapters on 87 different metals, minerals, and mineral fuels. Surveys for the production, composition of the industry, technology, use, outlook, etc.

SMALL ZINC-LEAD MINING IN MONTANA. (Management Research Summary 77) Small Business Administration. 1962, 4 pp. Free. Summarizes a report on ores in 72 Montana mines and a marketing analysis for each district in which they are located.

Mobile Homes

MINIMUM PROPERTY STANDARDS FOR MOBILE HOME COURTS. (See listing under Building Industry.)

MOBILE HOMES. (Small Business Bibliography 41) Small Business Administration. Revised 1963, 8 pp. Free. Bibliography on mobile homes and mobile home parks.

Motels

STARTING AND MANAGING A SMALL MOTEL. (The Starting and Managing Series Vol. 7). Small Business Administration. 1963, 70 pp. GPO, 30¢. This booklet covers the opportunities and risks in going into the motel business.

New Products

FINDING NEW PRODUCTS FOR SMALL MANUFACTURERS. (Management Research Summary 52) Small Business Administration. 1962, 4 pp. Free. Discusses stages in the growth of a firm, reasons for seeking new products, conditions for success, and approaches to new-product development.

HELPING SMALL FIRMS DEVELOP AND EXPLOIT NEW PRODUCTS. (Management Research Summary 181) Small Business Administration. 1963, 4 pp. Free. Summarizes results of a project which combined research with education of and assistance to small business firms in developing and marketing new products. Reports 18-month experience of "participating group" with "control group."

NEW PRODUCT DEVELOPMENT AND SALE. (Small Business Bibliography 4) Small Business Administration. Revised 1963, 11 pp. Free. Sources of information on developing and marketing new products.

NEW PRODUCT INTRODUCTION FOR SMALL BUSINESS OWNERS. (Small Business Management Series 17) Small Business Administration. Second edition. 1961, 69 pp. GPO, 30¢. Basic information concerning placing a new or improved product on the market.

PRODUCTS LIST CIRCULAR. Small Business Administration. Monthly, 40-page. GPO, $1.50 a year, 50¢ additional for foreign mailing; 20¢ single copy. Designed to serve as a clearinghouse for new product ideas and processes by describing the type of patents which small companies are specifically seeking.

Noise

CONTROLLING NOISE HAZARDS. (Bulletin 207) Bureau of Labor Standards, U.S. Department of Labor. 1959, 8 pp. GPO, 10¢. Particularly applies to the industrial plant.

KEEPING SHOP NOISE FROM NEARBY RESIDENCES. (Technical Aids for Small Manufacturers 67) Small Business Administration. 1959, 4 pp. Free. Control of industrial noise for good public relations.

NOISE REDUCTION IN THE SMALL SHOP. (Technical Aids for Small Manufacturers 61) Small Business Administration. 1958, 8 pp. Free. Why reduce noise, how to measure it, methods of reduction.

Nurseries (Horticulture)

THE NURSERY BUSINESS. (Small Business Bibliography 14) Small Business Administration. Revised 1964, 8 pp. Free. A 4-page summary of the business with an 8-page bibliography.

PROBLEMS AND PRACTICES OF TENNESSEE NURSERYMEN. (Management Research Summary 8) Small Business Administration. 1961, 4 pp. Free. Report of interviews with 103 nurserymen.

SEED AND PLANTING STOCK DEALERS. (See listing under Directories.)

Nursery Schools

DAY CARE SERVICES. (Children's Bureau Folder 51) Social Security Administration, U.S. Department of Health, Education, and Welfare. 1960, 62 pp. GPO, 25¢. Explains why day-care services are needed, what they should be, how they should be developed and supplementary and supportive services associated with them.

FOOD FOR GROUPS OF YOUNG CHILDREN CARED FOR DURING THE DAY. (Children's Bureau Publication 386–1960) Children's Bureau, Social Security Administration, U.S. Department of Health, Education, and Welfare. 1960, 58 pp. GPO, 25¢. Considers the selection and serving of food and stresses the importance of helping children develop good eating habits and to have pleasant associations with food and eating.

LICENSED DAY CARE FACILITIES FOR CHILDREN. Children's Bureau, Social Security Administration, U.S. Department of Health, Education, and Welfare. 1962, 29 pp. GPO, 25¢. Report of a national survey of departments of State Governments responsible for licensing day care facilities.

Nursing Homes

MINIMUM PROPERTY STANDARDS FOR NURSING HOMES. (See listing under Building Industry.)

NURSING-HOME MORTGAGE INSURANCE. (FHA 696) Federal Housing Administration. Revised June 1963, 12 pp. GPO, 15¢. Discusses Section 232 of the Housing Act of 1959 (Public Law 86–372)

which authorizes the Federal Housing Administration to insure mortgages on qualified proprietary nursing homes.

NURSING HOME STANDARDS GUIDE. (Public Health Service Publication 827) Public Health Service, U.S. Department of Health, Education, and Welfare. 1961, 63 pp. GPO, 45¢. Recommendations relating to standards for establishing, maintaining, and operating nursing homes.

NURSING HOMES; AN ANNOTATED READING LIST. (Public Health Service Publication 907) Public Health Service, U.S. Department of Health, Education, and Welfare. 1962, 46 pp. GPO, 15¢. List of articles and reports published in the period 1956–60.

Office Management

CUTTING OFFICE COSTS. (Small Business Management Series 6) Small Business Administration. 2d ed. 1964, 54 pp. GPO, 25¢. Provides the small manufacturer with useful guides in reviewing office costs and recommends techniques in making some moneysaving procedures.

Operations Research

OPERATIONS ANALYSIS IN SMALL MANUFACTURING FIRMS. (Management Research Summary 97) Small Business Administration. 1963, 4 pp. Free. Briefly discusses results of study aimed at designing some techniques of operations research and analysis suited to small manufacturing operations and applying these techniques to the operations of a few selected firms. Covers financial projection and cash flow, inventory control, job-cost estimating, production planning, and information retrieval.

OPERATIONS RESEARCH IN SMALL BUSINESS. (Management Research Summary 141) Small Business Administration. 1963, 2 pp. Free. Summarizes a study of a small Iowa firm to determine if small firms can use the "systems" approach in decision-making, what the limitations of operations research are, and how services can be provided at affordable prices.

Patents

GENERAL INFORMATION CONCERNING PATENTS. Patent Office, U.S. Department of Commerce. 1960, 35 pp. GPO, 15¢. What can be patented, who may apply, design patents, foreign patents, etc.

GUIDE FOR PATENT DRAFTSMEN. Patent Office, U.S. Department of Commerce. 1961, 16 pp. GPO, 15¢. Contains many illustrations of the type of drawings required.

HOW TO OBTAIN INFORMATION FROM UNITED STATES PATENTS. Patent Office, U.S. Department of Commerce. 1962, 21 pp. GPO, 20¢. A discussion of how to use patents and how to find patents of interest. Gives sources of further information.

OBTAINING INFORMATION FROM PATENTS; PATENT OFFICE CLASSIFICATION AND SEARCH SERVICES. Patent Office, U.S. Department of Commerce. 1964, 3 pp. Free. A short description of these services.

PATENT ATTORNEYS AND AGENTS . . . (see listing under Directories.)

PATENT LAWS. Patent Office, U.S. Department of Commerce. 1961, 97 pp. GPO, 30¢. Excerpts from the U.S. Code.

PATENTS AND INVENTIONS; AN INFORMATION AID FOR INVENTORS. Patent Office, U.S. Department of Commerce. 1959, 25 pp. GPO, 15¢. Basic steps and other information on having an invention patented.

RULES OF PRACTICE OF THE UNITED STATES PATENT OFFICE IN PATENT CASES. Patent Office, U.S. Department of Commerce. 1960, 150 pp. GPO, 50¢. Detailed information on applications, amendments, appeals, determining the priority of inventions, etc.

USAEC PATENTS AVAILABLE FOR LICENSING. (See listing under Atomic Energy.)

Personnel Management

ADJUSTMENTS TO THE INTRODUCTION OF OFFICE AUTOMATION. (Bulletin 1276) Bureau of Labor Statistics, U.S. Department of Labor. 1960, 86 pp. GPO, 50¢. A study of the experiences of large offices in changing to electronic data processing. How it affected employees and particularly older employees.

AN EMPLOYEE SUGGESTION SYSTEM FOR THE SMALL PLANT. (Small Business Management Series 1) Small Business Administration. 3d ed. 1964, 18 pp. GPO, 15¢. Provides basic principles for starting and operating a suggestion system which benefits both employee and management.

EMPLOYEE TRAINING NEEDS OF SMALL MONTANA FIRMS. (Management Research Summary 74) Small Business Administration. 1962, 4 pp. Free. Summarizes report based on returns from over 2,700 Montana employers. Covers present employment, fu-

ture employment needs, employee training, supply of trained labor, barriers to hiring better-trained workers, and recruitment sources.

HANDLING THE PROBLEM EMPLOYEE. (Small Marketers Aids 77) Small Business Administration. 1962, 4 pp. Free. Defines and discusses problem employees and suggests ways to handle them.

HOW SMALL UTAH FIRMS GET AND KEEP THEIR EMPLOYEES. (Management Research Summary 174) Small Business Administration. 1963, 2 pp. Free. Analyzes problems in the recruitment, selection, and retention of employees.

IS WORKER FATIGUE COSTING YOU DOLLARS? (Technical Aids for Small Manufacturers 70) Small Business Administration. 1960, 4 pp. Free. Planning work and rest periods to eliminate costly worker fatigue.

MANAGEMENT STAFFING NEEDS IN ARKANSAS SAWMILLS. (Management Research Summary 46) Small Business Administration. 1961, 4 pp. Free. A survey of managers with regard to organization, delegation of authority and responsibility, and qualifications and training for management positions.

PERSONNEL MANAGEMENT GUIDES FOR SMALL BUSINESS. (Small Business Management Series 26) Small Business Administration. 1961, 52 pp. GPO, 25¢. Covers topics such as hiring, training, wage and salary systems, and management-union relations.

PROVIDING MANAGEMENT TALENT FOR SMALL BUSINESS. (Management Research Summary 47) Small Business Administration. 1961, 44 pp. Free. Discusses levels of management, personal qualities, the need for managers, selection, developing and motivating management personnel.

SALES MANAGEMENT FOR MANUFACTURERS. (Small Business Bibliography 71) Small Business Administration. 1964, 8 pp. Free. A selection of basic sources of information on sales management.

THE FOREMAN IN SMALL INDUSTRY. (Small Business Management Series 14) Small Business Administration. 2d ed., 1962, 28 pp. GPO, 20¢. Outlines the basic principles for developing well qualified foreman to promote plant efficiency.

TRAINING COMMERCIAL SALESMEN. (Small Business Bibliography 56) Small Business Administration. 1965, 8 pp. Free. A bibliography of training aids including sales training films.

WHAT HAPPENS WHEN YOU HIRE PEOPLE. (Small Markers Aids 98) Small Business Administration. 1964, 4 pp. Free. Discusses various aspects of hiring, such as determining the need for an employee, starting the new person, and employee laws.

Petroleum Plants

(See Bibliography of Investment and Operating Costs for Chemical and Petroleum Plants listed under Bibliographies.)

Plant Location

HIGHWAYS AND SMALL MANUFACTURING PLANT LOCATIONS. (Management Research Summary 87) Small Business Administration. 1962, 4 pp. Free. Brief report of a survey of 200 firms in Hartford, Conn., regarding the role of highways and highway proximity in location decisions.

INDUSTRIAL PARKS AND SMALL BUSINESS. (Management Research Summary 182) Small Business Administration. 1963, 2 pp. Free. Summarizes survey of 271 industrial districts in the New England and Middle Atlantic Regions. Includes a summary of a case study of a successful industrial park consisting entirely of small, independent firms.

LOCATION OF MANUFACTURING PLANTS BY COUNTY, INDUSTRY, AND EMPLOYMENT SIZE: 1958. (Based on the 1958 Census of Manufactures; similar series to be published in the 1963 Census of Manufactures.) Bureau of the Census, U.S. Department of Commerce. In 9 parts; paging and prices vary. GPO, price for complete set, $4.50. Information on the number of manufacturing plants presented in State, county, and industry sequence, by employment size.

LOCATION OF MANUFACTURING PLANTS BY INDUSTRY, COUNTY, AND EMPLOYMENT SIZE: 1958. Bureau of the Census, U.S. Department of Commerce. (Based on the 1958 Census of Manufactures; similar series to be published in the 1963 Census of Manufactures.) In 9 parts; paging and prices vary. GPO, price for complete set, $6.25. Information on the number of manufacturing plants presented in industry, State, and county sequence, by employment size.

PERSONAL FACTORS IN CHOOSING A SITE FOR THE SMALL MANUFACTURING PLANT. (Management Research Summary 50) Small Business Administration. 1961, 4 pp. Free. Findings based on interviews with 83 firms in Hartford, Conn., regarding the personal factors involved and the extent to which such factors determine site selection.

SELECTING A SITE FOR THE SMALL MANUFACTURING PLANT. (Management Research Summary 43) Small Business Administration. 1961, 4 pp. Free. Summarizes a study based on interviews with manufacturing firm executives and representatives of organizations assisting in plant location, as well as on a review of published material, to determine steps involved in successful site selection.

Population

MANPOWER—CHALLENGE OF THE 1960's U.S. Department of Labor. 1960, 24 pp. Free. Predictions of the changes in the population and labor force which are expected to take place between 1960 and 1970. Supplementary Statistics. 1960, 36 pp. Free.

POPULATION AND LABOR FORCE PROJECTIONS FOR THE UNITED STATES, 1960 to 1975. (Bulletin 1242) Bureau of Labor Statistics, U.S. Department of Labor. 1959, 56 pp. GPO, 40¢. Projects labor force trends, both in total number and age-sex composition. Predicts a continuing trend toward more part-time workers.

SELECTED MANPOWER INDICATORS FOR STATES. (Manpower Research Bulletin 4) Office of Manpower, Automation, and Training, Manpower Administration, U.S. Department of Labor. 1963, 52 pp. Free. Shows variations as well as relationships among the States on several basic manpower subjects.

Postal Guides

DIRECTORY OF INTERNATIONAL MAIL. U.S. Post Office Department. Issued in looseleaf form. GPO, $2.50 without binder, $5 with binder for an indefinite period. Detailed information, by country.

DIRECTORY OF POST OFFICES. Annual. (July) U.S. Post Office Department. GPO, $2.50. List of post offices by State, with zip code numbers, alphabetical list, and post office addresses for Army and Air Force installations.

INTERNATIONAL MAIL. U.S. Post Office Department. 1963, 12 pp. Free. Short summary of rates, weight and dimensional limits, preparing articles for mailing.

POSTAL MANUAL: Chapters 1 and 2. U.S. Post Office Department. (Chapter 1, DOMESTIC, Chapter 2, INTERNATIONAL). Issued in looseleaf form. GPO, $4 for an indefinite period. Postal information required in running a mail room.

Prices

GUIDES AGAINST DECEPTIVE PRICING. Adopted October 2, 1958. Federal Trade Commission. 5 pp. Free. How the FTC evaluates pricing representations in advertising.

PRICING DECISIONS IN SMALL BUSINESS. (Management Research Summary 44) Small Business Administration. 1961, 4 pp. Free. Summarizes findings from interviews with managers of 88 Ken-

tucky firms (retailers, wholesalers, manufacturers, and landscape nurseries) regarding pricing methods. Discusses full-cost pricing, flexible mark-ups, gross-margin pricing, suggested and "going-rate" pricing.

Profit Sharing

WILL PROFIT SHARING HELP YOUR FIRM? (Management Aids for Small Manufacturers 157) Small Business Administration. 1963, 4 pp. Free. Success of a profit sharing program depends on many factors, including the company's profit potential, a plan tailored to its needs, and employees' continuing interest.

Public Relations

BUILDING THE RIGHT REPUTATION. (Small Marketers Aids 69) Small Business Administration. 1961, 4 pp. Free. Guidelines for determining and developing the right image for a store.

PROFITABLE COMMUNITY RELATIONS FOR SMALL BUSINESS. (Small Business Management Series 27) Small Business Administration. 1961, 36 pp. GPO, 25¢. Discusses relations with the various "communities"—the economic community, the political community, the educational community, etc.

Purchasing

PURCHASING IN THE SMALL MANUFACTURING PLANT. (Management Research Summary 14) Small Business Administration. 1961, 4 pp. Free. A study which suggests several steps that can be taken toward solving problems which hinder the purchaser in the small manufacturing plant.

Records

ELECTRONIC RECORDKEEPING FOR SMALL MARKETERS. (Small Marketers Aids 84) Small Business Administration. 1962, 4 pp. Free. The development of information capturing devices such as punched tape attachments for adding machines and the growth of information centers is bringing automatic data processing within the reach of increasing numbers of small marketers.

GUIDE TO RECORD RETENTION REQUIREMENTS. National Archives and Records Service, General Services Administration. Revised 1964. Office of the Federal Register. GPO, 40¢. Lists published re-

quirements (in laws and regulations) on the keeping of records by the public, including what records must be kept, who must keep them, and how long they must be kept. Revised annually.

KEEPING SCORE WITH EFFECTIVE RECORDS. (Small Marketers Aids 94) Small Business Administration. 1963, 4 pp. Free. A narrative checklist which can help to insure that proper records are kept on: inventory and purchasing, sales, cash, credit, employees, and fixtures and property.

RECORDKEEPING SYSTEMS—SMALL STORE AND SERVICE TRADE. (Small Business Bulletin 15) Small Business Administration. Revised 1962, 11 pp. Free. List and brief description of recordkeeping systems which can be used by operators of small retail and service trade establishments.

Recreation Industry

THE PLEASURE BOATING INDUSTRY IN TENNESSEE. (Management Research Summary 35) Small Business Administration. 1961, 4 pp. Free. Natural and manmade resources, industry development, favorable growth factors, and estimated growth.

SPORTING GOODS. (Small Business Bibliography 62) Small Business Administration. Revised 1964. Free. A bibliography covering the potential, the structure and the operating practices of firms engaged in the distribution of sporting goods.

Regional Area Studies

AIR TRANSPORTATION IN NEW HAMPSHIRE. (Management Research Summary 41) Small Business Administration. 1961, 4 pp. Free. Presents findings from a survey of the status of air service in New Hampshire.

ALASKA; ITS ECONOMY AND MARKET POTENTIAL. Business and Defense Services Administration, U.S. Department of Commerce. 1959, 61 pp. GPO, 70¢. Background information and market characteristics. A map is included.

CONSTRUCTION INDUSTRIES IN SOUTHERN FLORIDA. (Management Research Summary 39) Small Business Administration. 1961, 4 pp. Free. Pertinent findings from a survey of 16 Florida construction firms, regarding size of firm, elements of success, character, and background of owners, capital and credit, management and supervision, bidding and selling, purchasing, subcontracting, labor relations, risks, cost control and accounting, and labor relations.

ECONOMIC OPPORTUNITIES FOR THE STATE OF MAINE. (Management Research Summary 24) Small Business Administration. 1961, 4 pp. Free. Suggestions for strengthening present industries and developing new areas of economic activity.

EXPANDING DISTRIBUTION AND WAREHOUSING IN ALASKA. (Management Research Summary 5) Small Business Administration. 1961, 4 pp. Free. Discussion of pertinent findings on Alaska's economic background as related to the potential for expanding distribution and warehousing in Anchorage and Fairbanks.

FORESTRY AND FOREST PRODUCTS IN NEW HAMPSHIRE. (Management Research Summary 37) Small Business Administration. 1961, 4 pp. Free. Current status of New Hampshire's forest economy and recommendations regarding its improvement.

FOUNDERS OF SMALL BUSINESS IN TEXAS AND GEORGIA. (Management Research Summary 157) Small Business Administration. 1963, 4 pp. Free. Pertinent findings from interviews with 1059 successful Texas and 521 Georgia business founders regarding their business, personal, and social characteristics.

KENTUCKY SMALL BUSINESS—MANAGEMENT, TAXES, AND OUTLOOK. (Management Research Summary 180) Small Business Administration. 1963, 2 pp. Free. Discusses special problems of small-business management, the impact of taxation and tax administration on small business, and the State's potential for 15 types of small business.

KENTUCKY'S SMALL BUSINESS POTENTIAL. (Management Research Summary 163) Small Business Administration. 1963, 2 pp. Free. Report on conditions faced by small businesses in predominantly rural areas and available resources for exploitation by existing or prospective businesses.

A LOCAL ECONOMY IN TRANSITION. (Management Research Summary 118) Small Business Administration. 1963, 2 pp. Free. An outline of a report which describes basic activities in the economy of southwestern Wyoming over two periods of time. The first concerned the loss of the old economy and the latter, the adjustment to a new one based on different industries and employing different types of people.

THE LOCAL GRAIN ELEVATOR BUSINESS IN LOUISIANA. (Management Research Summary 188) Small Business Administration. 1963, 2 pp. Free. Summarizes survey of 15 Louisiana grain elevators regarding ownership and management, capital requirements, volume and kinds of grain handled, pricing, procurement and storage.

LOCAL INVESTMENT IN PUERTO RICAN MANUFACTURING. (Management Research Summary 31) Small Business Administration.

1961, 4 pp. Free. Summary of information from a study of Puerto Rico's current industrial economy, with recommendations for improving the investment environment, strengthening the local development program, identifying and screening manufacturing opportunities, and expanding the market.

LOUISIANA'S RETAIL FARM SUPPLY BUSINESS. (Management Research Summary 173) Small Business Administration. 1963, 2 pp. Free. Summarizes survey of 55 farm supply stores regarding advertising, customer credit, operating ratios, trade group relations, government farm policies, and store size.

MAINE'S POTENTIAL FOR WOOD PARTICLE BOARD MANUFACTURE. (Management Research Summary 62) Small Business Administration. 1962, 4 pp. Free. Summarizes a study based on a survey of major particle-board plants, processes, products, and markets, together with an intensive investigation into Maine's economic qualifications both as a producer and consumer of wood particle board. Includes detailed information about wood particle types, building and equipment requirements, investment, and operating.

MONEY AND MANPOWER FOR KENTUCKY'S SMALL BUSINESS. (Management Research Summary 178) Small Business Administration. 1963, 2 pp. Free. Findings on the State's resources of money and manpower from the standpoint of starting small businesses.

MOTOR FREIGHT MOVEMENTS IN OKLAHOMA. (Management Research Summary 82) Small Business Administration. 1962, 4 pp. Free. Data developed in a study of general commodity carriers regarding the characteristics of motor freight movements as a basis for determining the kind of industry information necessary for making decisions.

NEW HAMPSHIRE MINERAL POTENTIAL. (Management Research Summary 32) Small Business Administration. 1961, 4 pp. Free. Brief discussion of mineral potential and possible industrial uses of pegmatite ores, with recommendations for attracting exploration efforts.

SMALL BUSINESS IN THE HAWAIIAN ECONOMY. (Management Research Summary 117) Small Business Administration. 1963, 2 pp. Free. Evaluates problems and identifies causes of failure and success. Based on a questionnaire survey of 3,702 small firms and case studies of 55 firms which failed and 10 successful firms.

SMALL BUSINESS PATTERNS IN ARIZONA. (Management Research Summary 75) Small Business Administration. 1962, 4 pp. Free. Summarizes information in report obtained through interviews with 435 owner-managers of small business, 64 bank officers, and 57 suppliers regarding the management and operation of the business. Makes recommendations regarding management training, using the

experience of others, undercapitalization, competition, accounting records.

SMALL BUSINESS PROBLEMS IN VERMONT. (Management Research Summary 156) Small Business Administration. 1963, 2 pp. Free. Describes problems and discusses influence of State's location and physical characteristics on such problems.

SMALL MANUFACTURERS IN SOUTH FLORIDA. (Management Research Summary 154) Small Business Administration. 1963, 2 pp. Free. Summarizes results of case studies of 11 firms ranging from failures to highly successful operations.

SMALL MANUFACTURING FIRMS IN NEW HAMPSHIRE. (Management Research Summary 34) Small Business Administration. 1961, 4 pp. Free. Briefly reports findings from a survey of 274 small firms, covering personnel availability, marketing capability, transportation facilities, tax environment, continuity of management, research and development undertaking, and availability of financial resources.

THE STRUCTURE OF SMALL BUSINESS IN ALABAMA. (Management Research Summary 49) Small Business Administration. 1961, 4 pp. Free. Significant points from a study which defines the extent, significance, and contribution of small business to the Alabama economy.

VACATION BUSINESS IN MAINE. (Management Research Summary 13) Small Business Administration. 1961, 4 pp. Free. The importance of the tourist trade to Maine and suggested areas for improvement.

Research

AIR FORCE RESEARCH RESUMES. Office of Aerospace Research, U.S. Department of the Air Force. 1963, 578 pp. $5.25. Gives a résumé of many research projects conducted by the Air Force.

CURRENT PROJECTS ON ECONOMIC AND SOCIAL IMPLICATIONS OF SCIENCE AND TECHNOLOGY. National Science Foundation. 1963. Annual 1964. 158 pp. GPO, 50¢. A survey of current research projects of interest to the businessman.

FEDERAL FUNDS FOR RESEARCH, DEVELOPMENT AND OTHER SCIENTIFIC ACTIVITIES. (Formerly Federal Funds for Science). National Science Foundation. Fiscal Years 1962, 1963, and 1964. Annual. 1964, 180 pp. GPO, $1. Information on expenditures, programs, and organizations doing the work.

FEDERAL ORGANIZATION FOR SCIENTIFIC ACTIVITIES, 1962. National Science Foundation. 1962, 572 pp. GPO, $3.50. Gives infor-

mation on the Government's scientific activities and how they are organized.

NSF PROGRAMS FOR EDUCATION IN THE SCIENCES. National Science Foundation. 1963, 40 pp. Free. Describes principal programs through which the Foundation seeks to strengthen education in the sciences.

PRODUCT TECHNOLOGY AND RESEARCH IN SMALL FIRMS. (Management Research Summary 116) Small Business Administration. 1963, 2 pp. Free. Information about technological research, product diversification and product differentiation in Nebraska firms.

RESEARCH AND DEVELOPMENT: A LIST OF SMALL BUSINESS CONCERNS. (See listing under Directories.)

RESEARCH AND DEVELOPMENT IN INDUSTRY. National Science Foundation. 1961, 123 pp. GPO, 65¢. Provides economic data on financing research and development in industrial firms.

REVIEW OF DATA ON RESEARCH AND DEVELOPMENT. (A series of leaflets devoted to specific aspects of research and development economics.) National Science Foundation. (Price range from 5¢ to 15¢.) Most recent bulletins:

No. 44. DECISION-MAKING ON RESEARCH AND DEVELOPMENT IN THE BUSINESS FIRM. 8 pp. GPO, 10¢.

No. 45. SCIENTISTS AND ENGINEERS IN ENGINEERING SCHOOLS. 8 pp. GPO, 10¢.

SCIENTIFIC INFORMATION ACTIVITIES OF FEDERAL AGENCIES. (See listing under Bibliographies.)

SMALL BUSINESS AND GOVERNMENT RESEARCH AND DEVELOPMENT. (Small Business Management Series 28) Small Business Administration. 1962, 42 pp. GPO, 25¢. Describes the advantages and disadvantages of Government research and the procedures for contracting such research.

SMALL FIRMS IN RESEARCH AND DEVELOPMENT INDUSTRIES. (Management Research Summary 130) Small Business Administration. 1963, 4 pp. Free. Summarizes a survey of 73 firms engaged in research and development in Maryland and the Washington, D.C. metropolitan area pertaining to their operations, growth, success or failure, experiences, and characteristics.

TECHNICAL STUDIES BY THE FEDERAL HOUSING ADMINISTRATION. (See listing under Bibliographies.)

THE U.S. FOREST PRODUCTS LABORATORY. (Report 1698 Revised) Forest Products Laboratory, Madison 5, Wis. 1960, 19 pp. Free.

How the Laboratory's research is designed to help 50,000 small lumber producers.

Retail Trade

ASSESSING THE PROSPECTS FOR NEW RETAIL BUSINESSES. (Management Research Summary 89) Small Business Administration. 1962, 4 pp. Free. Describes three initial steps in assessing retail opportunities, which involve an analysis of interarea competitive potentials, future sales potentials, and the changing structure of the retail trade industry.

BOOKSTORE OPERATION. (Small Business Bibliography 42) Small Business Administration. Revised 1963, 8 pp. Free. References for effective organization and operation of a retail bookstore.

BOOST PROFITS BY CUTTING MARKDOWNS. (Small Marketers Aids 57) Small Business Administration. 1960. 8 pp. Free. Cutting markdowns through better stock control.

BUDGETING FOR SMALL DEPARTMENT STORES. (Management Research Summary 153) Small Business Administration. 1963, 2 pp. Free. Budgeting methods based on studies of almost 100 stores. Discusses the merchandise plan, the expense budget, and the financial budget.

CAREERS FOR WOMEN IN RETAILING. (Bulletin 271) Women's Bureau, U.S. Department of Labor. Reprinted 1963, 52 pp. GPO, 25¢. "Women as Owners of Small Stores," pp. 38–41.

CASE STUDIES OF SMALL RETAIL STORES. (Management Research Summary 45) Small Business Administration. 1961, 4 pp. Free. Synopses of cases regarding the background of the management, setting of the business, and some of the problems facing small retailers: financial, personnel, community, management counsel, price cutting, competition, credit.

COLOR CAN STIMULATE SALES. (Small Marketers Aids 85) Small Business Administration. 1962, 4 pp. Free. Discusses color and cites examples of the use of color such as in sales tickets, wrappings, in the store itself and in direct mail advertising.

CONTROL METHODS FOR HARDWARE DEALERS. (Management Research Summary 29) Small Business Administration. 1961, 4 pp. Free. Discusses factors to consider in setting goals, control procedures relating to capital, cash and accounts receivable, inventory investment, purchasing and stock turnover, advertising, selection and training of personnel.

CONTROL METHODS FOR HOUSEHOLD APPLIANCE DEALERS. (Management Research Summary 40) Small Business Administration. 1961, 4 pp. Free. Condensation of main sections of a manual: determining the profit goal, forecasting expenses, controlling expenses, controlling capital investment, controlling merchandising operations, controlling income, and controlling service operations.

DISCOUNT RETAILING. (Small Business Bulletin 68) Small Business Administration. Revised 1964, 16 pp. Free. Discusses the growth of discount retailing and contains references to assist active and prospective discounters.

DRUG STORES. (Small Business Bulletin 33) Small Business Administration. 1960, 8 pp. Free. Bibliography on drug retailing operations.

FARM EQUIPMENT RETAILING IN LOUISIANA. (Management Research Summary 90) Small Business Administration. 1962, 4 pp. Free. Summarizes information from questionnaires and personal interviews with retail farm equipment firms regarding land and buildings, type of ownership, finances, sales, advertising, credit, customer financing, guarantees, employment, and recordkeeping.

FURNITURE RETAILING. (Small Business Bulletin 48) Small Business Administration. 1961, 16 pp. Free. A basic bibliography which includes references on antiques and a list of furniture marketing events.

[illegible] Administration. 1965, 8 pp. Free. Sources of information for persons now operating or considering the establishment of businesses in this field.

A GUIDE TO ITEM PROFITABILITY FOR RETAIL STORES. (Management Research Summary 191) Small Business Administration. 1963, 2 pp. Free. Describes the uses of merchandise management accounting and its advantages for small retail firms (furniture, appliance, and apparel stores).

HARDWARE RETAILING. (Small Business Bulletin 35) Small Business Administration. 1960, 8 pp. Free. Basic sources of information.

HOBBY SHOP. (Small Business Bulletin 53) Small Business Administration. 1961, 8 pp. Free. A bibliography of material on general retail management and specialized hobby merchandising.

MAIL ORDER PURCHASING AND THE SMALL RETAILER. (Management Research Summary 103) Small Business Administration. 1963, 4 pp. Free. Discussion of a survey made in Missoula, Montana, regarding the amount of mail order buying, types of goods bought, and reasons for such buying. Compares mail-order houses and

local retailers with respect to prices, merchandise selection, service, and convenience.

MAIL-ORDER RETAILING BY SMALL ENTERPRISES. (Management Research Summary 194) Small Business Administration. 1963, 2 pp. Free. Briefly discusses factors essential to the success of mail-order selling: capital, products, markets, prices, product supply, advertising, postal rates, and retail outlets.

PROBLEMS OF SMALL RETAILERS. (Management Research Summary 9) Small Business Administration. 1961, 4 pp. Free. Administrative and managerial problems of Wyoming independent retailers.

REGULATION OF RETAIL COMPETITION IN WASHINGTON STATE. (Management Research Summary 93) Small Business Administration. 1962, 4 pp. Free. Summarizes the report which examines legislative enactments and judicial decisions that govern retail competition in Washington State.

REMODELING FOR BETTER RETAILING. (Small Marketers Aids 99) Small Business Administration. 1964, 4 pp. Free. Some of the things small marketers need to think of when remodeling.

RETAILING. (Small Business Bibliography 10) Small Business Administration. Revised 1963, 8 pp. Free. Sources of information for those with a general interest in the retail field.

STARTING AND MANAGING A SMALL RETAIL HARDWARE STORE. (The Starting and Managing Series Vol. 10). Small Business Administration. 1965, 73 pp. GPO, 30¢. This booklet covers the opportunities and risks in going into the retail hardware business.

SELLING BY MAIL-ORDER. (Small Business Bibliography 3) Small Business Administration. Revised 1964, 15 pp. Free. Though selling by mail is usually thought of as an easy way to make money in spare time, much organization is required. Sets forth the major principles needed by a beginner. Includes bibliography of related materials.

SOLVING SMALL RETAILERS' PROBLEMS. (Management Research Summary 114) Small Business Administration. 1963, 2 pp. Free. Methods and techniques to assist retailers in Wyoming to better understand their administrative and management problems.

STORE ARRANGEMENT AND DISPLAY. (Small Business Bibliography 52) Small Business Administration. Revised 1964, 8 pp. Free. A bibliography concerning general and specialized store arrangement, and display principles and techniques.

TEN SMALL RETAILERS AND THEIR PROBLEMS. (Management Research Summary 109) Small Business Administration. 1963, 2 pp. Free. Alabama case histories of ten small retail stores which are

presented to indicate the sequential nature of their problems and relationships.

TRAINING RETAIL SALESPEOPLE. (Small Business Bibliography 23) Small Business Administration. Revised 1963, 8 pp. Free. References on training for salesmanship and other aspects of retail operation.

VARIETY STORES. (Small Business Bulletin 21) Small Business Administration. 1959, 8 pp. Free. References on topics such as lines of merchandise carried, services rendered, and facilities for customer convenience.

Retirement Plans

RETIREMENT PLANS FOR SELF-EMPLOYED BUSINESSMEN. (Small Marketers Aids 93) Small Business Administration. 1964, 4 pp. Free. Discusses the kinds of plans allowed by the Self-Employed Tax Retirement Act of 1962.

Road Construction

(See Standard Specifications for Construction of Roads * * * listed under Standards.)

Safety

CHEMISTRY FOR THE SAFETY MAN. (Bulletin 222) Bureau of Labor Standards, U.S. Department of Labor. 1960, 25 pp. GPO, 15¢. Brief discussion of the fundamentals of chemistry to help provide understanding of chemical hazards.

COLOR-CODING IN SMALL PLANTS. (Technical Aids for Small Manufacturers 69) Small Business Administration. 1959, 4 pp. Free. How color can reduce accidents, prevent mistakes, and make for better maintenance operations.

CONTROL OF THE PHYSICAL ENVIRONMENT. (Bulletin 211) Bureau of Labor Standards, U.S. Department of Labor. 1960, 13 pp. GPO, 15¢. Providing a safe and healthy place to work.

MECHANICAL HANDLING OF MATERIALS. (Bulletin 219) Bureau of Labor Standards, U.S. Department of Labor. 1960, 29 pp. GPO, 15¢. Various types of equipment are described; safety controls are suggested.

RESPIRATORY PROTECTIVE EQUIPMENT. (SAFETY IN INDUSTRY; ENVIRONMENTAL AND CHEMICAL HAZARDS No. 3) (Bulletin 226)

Bureau of Labor Standards, U.S. Department of Labor. 1961, 34 pp. GPO, 20¢. Provides information on selecting and using the right protective equipment for particular respiratory hazards. Also gives the limitations of such equipment.

Service Industries

BUSINESS METHODS IN SMALL PERSONAL SERVICE FIRMS. (Management Research Summary 81) Small Business Administration. 1962, 4 pp. Free. Discusses objectives and planning, legal practices, insurance, accounting and financial practices, and policies based on interviews with owner-managers of 174 personal-service firms in the Memphis, Tenn., trading area.

PRICING YOUR SERVICES FOR PROFIT. (Small Marketers Aids 89) Small Business Administration. 1963, 4 pp. Free. Outlines steps in analyzing direct and indirect costs and presents a formula for computing prices.

Shipment of Goods

HELP PREVENT LOSS AND DAMAGE. Transportation and Public Utilities Service, General Services Administration. 1960, 44 pp. Free. Hints on packaging, marking, inspection of carriers equipment, etc.

REVENUE QUALITY CONTROL FOR SMALL MOTOR CARRIERS. (Management Research Summary 83) Small Business Administration. 1962, 4 pp. Free. Discussion of pilot revenue quality control tables based on ICC cost studies.

THE TRANSPORTATION FUNCTION IN SMALL BUSINESS. (Management Research Summary 16) Small Business Administration. 1961, 4 pp. Free. Recommendations concerning the handling of shipments as a result of a study of small Minnesota manufacturing firms.

Shoe Industry

FOOTWEAR. (Small Business Bulletin 63) Small Business Administration. 1962, 12 pp. Free. A bibliography dealing with manufacturing, distribution and repairing of shoes. Includes short introduction on production, distribution, shoe repair.

MANUFACTURERS' OPINIONS OF COTTON AND LEATHER USED IN SHOES. (Marketing Research Report 392) Economic Research Service, U.S. Department of Agriculture. 1960, 69 pp. GPO, 40¢. Study which presents shoe manufacturers with an overall view of trends and expected changes in shoe construction and materials.

Social Security

SELECTED LIST OF PUBLICATIONS ON SOCIAL SECURITY. Social Security Administration, U.S. Department of Health, Education, and Welfare. Leaflet. Free.

SOCIAL SECURITY HANDBOOK ON OLD-AGE, SURVIVORS, AND DISABILITY INSURANCE. (OASI–135) Social Security Administration, U.S. Department of Health, Education, and Welfare. 1963, 314 pp. GPO, $1.25. A detailed explanation of the provisions of the Federal old-age, survivors, and disability insurance program: how the program operates, who is entitled to benefits, and how to get them.

SOCIAL SECURITY INFORMATION FOR SELF-EMPLOYED PEOPLE. (OASI-22) Social Security Administration, U.S. Department of Health, Education, and Welfare. 1964, Leaflet. GPO, 5¢.

Standards

COMMERCIAL STANDARDS; CLASSIFIED LIST REVISED TO MARCH 1964. National Bureau of Standards, U.S. Department of Commerce. 21 pp. Free. List of voluntary standards which give technical requirements for materials, construction, dimensions, tolerances, testing, grading, marking, labeling, etc. They are listed under headings such as apparel, building materials, plastics, rubber products.

COMMODITY STANDARDS; WHAT THEY ARE, HOW THEY ARE DONE, WHY THEY ARE USED. National Bureau of Standards, U.S. Department of Commerce. Leaflet. Free. How interested trade groups may have standards developed in cooperation with the Department of Commerce.

A GUIDE TO SPECIFICATIONS AND STANDARDS OF THE FEDERAL GOVERNMENT. Federal Supply Service, Supply Planning Division, General Services Administration. 1963, 39 pp. Free. A booklet, aimed particularly at the small businessman, explaining specifications and standards and how they are used in Government purchasing.

POINTERS ON DIMENSIONS AND TOLERANCES. (Technical Aids for Small Manufacturers 72) Small Business Administration. 1960, 4 pp. Free. How to achieve standards of accuracy.

SIMPLIFIED PRACTICE RECOMMENDATIONS; CLASSIFIED LIST REVISED TO OCTOBER 1, 1964. Commodity Standards Division, U.S. Department of Commerce. 7 pp. Free. These voluntary recommendations give the sizes, kinds, and types of specific manufactured articles called for by the trade.

STANDARD SPECIFICATIONS FOR CONSTRUCTION OF ROADS AND BRIDGES ON FEDERAL HIGHWAY PROJECTS. Bureau of Public Roads, U.S. Department of Commerce. 1961, 383 pp. GPO, $2.25. Divided into two parts, "General Requirements" and "Construction Details."

STANDARDIZATION ACTIVITIES IN THE UNITED STATES. (See listing under Directories.)

U.S. GOVERNMENT PURCHASING, SPECIFICATIONS AND SALES DIRECTORY; WHO BUYS WHAT AND WHERE, SOURCES OF GOVERNMENT SPECIFICATIONS; WHO SELLS WHAT AND WHERE. Small Business Administration. 1965, 138 pp. GPO, 70¢. Facts for the small businessman on how to sell to or buy from the Federal Government.

WEIGHTS AND MEASURES STANDARDS OF THE UNITED STATES: A Brief History. National Bureau of Standards, U.S. Department of Commerce. 1963, 30 pp. GPO, 35¢. Prepared in response to the demand for information about the origins of the metrological standards of the U.S. both from businessmen and the general public.

Statistics

BUSINESS STATISTICS 1963 EDITION. (Biennial) Office of Business Economics, U.S. Department of Commerce. 1963, 353 pp. GPO, $2. General business indicators: (including gross national product, national income, personal income, and plant and equipment expenditures) prices, employment, finance, etc.; statistics extend back to 1939.

CATALOG OF UNITED STATES CENSUS PUBLICATIONS. (See listing under Bibliographies.)

COUNTY AND CITY DATA BOOK: 1962 (A STATISTICAL ABSTRACT SUPPLEMENT). Bureau of the Census, U.S. Department of Commerce. (Issued every several years, usually after the results of a cycle of major censuses have been published.) 669 pp. GPO, $5.25. Information on business, manufacturers, governments, agriculture, population, housing, vital statistics, bank deposits and savings and loan associations, and other subjects.

COUNTY BUSINESS PATTERNS: FIRST QUARTER 1962. Bureau of the Census, U.S. Department of Commerce. (Issued for each year, 1946–51, and for 1953, 1956, and 1959; to be issued annually beginning with issue for 1964.) In 10 parts (15 books); paging and prices vary. GPO, price for complete set, $23.75. Price list for individual books available from Bureau of the Census. Information on number of business and industrial reporting units, num-

ber of employees, taxable payroll, and number of reporting units by employment size-class in each county during the first quarter of the year.

HISTORICAL STATISTICS OF THE UNITED STATES; COLONIAL TIMES TO 1957. Bureau of the Census, U.S. Department of Commerce. 1960, 78 pp. GPO, $6. Basic reference book for earlier statistics.

INDUSTRIAL STATISTICS GUIDE AND FINDER CATALOG; A BIRD'S-EYE VIEW OF THE CENSUS INDUSTRIAL STATISTICS PROGRAM. Bureau of the Census, U.S. Department of Commerce. 1960, 57 pp. 50¢. For sale by the Bureau of Census, or any of the field offices of the Department of Commerce. Summarizes the type of data available in Census publications, such as the Census of Manufacturers, and gives additional sources of information.

NEW CENSUS INFORMATION FOR YOUR BUSINESS. (Small Marketers Aids 70) Small Business Administration. 1961, 4 pp. Free. Examples of how census statistical reports may be used in making informed business decisions.

PRACTICAL BUSINESS USE OF GOVERNMENT STATISTICS. (Small Business Management Series 22) Small Business Administration. 1959, 31 pp. GPO, 20¢. An introduction to utilizing government statistics for marketing and other business purposes.

STATISTICAL ABSTRACT OF THE UNITED STATES 1963. (Annual) Bureau of the Census, U.S. Department of Commerce. 1036 pp. GPO, $3.75. The standard summary of national statistics. Information on the labor force, population, business enterprise, national income, etc.

STATISTICAL SERVICES OF THE UNITED STATES GOVERNMENT. Bureau of the Budget, Executive Office of the President. Revised edition 1963, 136 pp. GPO, $1. A guide to economic and social statistics, with emphasis on the statistical information made available to the public.

STATISTICS AND MAPS FOR NATIONAL MARKET ANALYSIS. (Small Business Bulletin 12) Small Business Administration. 1959, 12 pp. Free. Sources of information useful in national market analysis and measurement.

Store Location

REDISTRIBUTION OF TRADE IN POPULATION SHIFTS. (Management Research Summary 139) Small Business Administration. 1963, 4 pp. Free. Pertinent findings from a study of the effects of mobility from large cities to suburban areas of retail, wholesale, and services trades in metropolitan areas of Rhode Island.

SUBURBAN SHOPPING CENTERS. (Small Business Bibliography 27) Small Business Administration. Revised 1963, 8 pp. Free. Selective list of references.

SITE EVALUATION FOR SMALL RETAILERS. (Management Research Summary 78) Small Business Administration. 1962, 4 pp. Free. Key points from survey of trade associations, trade publications, professional consultant firms, and retailers in seven Oklahoma communities regarding factors that affect the suitability of a retail site. Discusses the drive-in, shopping centers, and downtown location.

SMALL BUSINESS AND THE SUPERHIGHWAY ERA. (Management Research Summary 6) Small Business Administration. 1961, 4 pp. Free. A survey of service and retail businesses in South Dakota to determine how they will be affected by two new interstate highways.

SMALL STORE OPPORTUNITIES IN PLANNED SHOPPING CENTERS. (Management Research Summary 17) Small Business Administration. 1961, 4 pp. Free. Study of 81 shopping centers in the eastern part of the United States which suggests solutions to the problem of creating more opportunities for small retailers in shopping centers.

STORE LOCATION. (Small Business Bibliography 16) Small Business Administration. Revised 1964, 8 pp. Free. Sources of information on selecting a location.

Taxation

DISASTERS, CASUALTIES AND THEFTS; HOW THE FEDERAL INCOME TAX APPLIES. (Document 5174) Internal Revenue Service, U.S. Department of the Treasury. March 1964, 16 pp. Free from local District Director of Internal Revenue. Specifies what property losses are deductible.

EMPLOYER'S TAX GUIDE FOR THE WITHHOLDING, DEPOSIT, PAYMENT, AND REPORTING OF * * * FEDERAL INCOME TAX WITHHELD, SOCIAL SECURITY TAXES AND FEDERAL UNEMPLOYMENT TAX. (Circular E, IRS Publication 15) Internal Revenue Service, U.S. Department of the Treasury. Revised. February 1964, 32 pp. Free, from local District Director of Internal Revenue.

THE ESTATE-TAX VALUATION PROBLEM IN FAMILY-OWNED FIRMS. (Management Research Summary 124) Small Business Administration. 1963, 2 pp. Free. Key points of a survey of 401 officers of manufacturing, mining, trade, and service firms to determine major reasons for decisions to sell or merge; and an examination of 150 court cases on substantial tax valuation issues.

FEDERAL TAXES AND LEGAL FORM OF SMALL FIRMS. (Management Research Summary 129) Small Business Administration. 1963, 2 pp. Free. Special tax problems faced by businesses starting as sole proprietorships and changing to another form.

OVERLAPPING SALES TAXES AND SMALL BUSINESS. (Management Research Summary 15) Small Business Administration. 1961, 4 pp. Free. Alabama study which concluded that some form of integration of State and local taxes should be adopted to reduce uncertainty, promote simplicity, contain overhead expenses, and minimize competitive disadvantages.

TAX COMPLIANCE COSTS IN SMALL FIRMS. (Management Research Summary 186) Small Business Administration. 1963, 4 pp. Free. Pertinent findings from a study regarding nature of taxes small firms are required to collect; activities of the firm directly related to the collection, accounting, reporting, and payment of these taxes; costs of compliance with tax requirements; and ways of controlling the costs.

TAX GUIDE FOR SMALL BUSINESS; INDIVIDUALS, CORPORATION, PARTNERSHIPS, INCOME, EXCISE AND EMPLOYMENT TAXES. (IRS Publication 334) Internal Revenue Service, U.S. Department of the Treasury. Annual, GPO or local District Director of Internal Revenue. 1964 edition 40¢. Discusses many of the Federal tax problems incident to conducting a trade, business, or profession; acquiring a going business; and selling a business.

Textile Industry

ARE YOUR TEXTILE LABELS LEGAL? (Small Marketers Aids 58) Small Business Administration. 1959, 4 pp. Free. An explanation of the Textile Fiber Products Identification Act.

INVENTORIES IN THE TEXTILE CYCLE. Business and Defense Services Administration, U.S. Department of Commerce. 1961, 67 pp. GPO, 45¢. A study of the causes of fluctuations in the textile business cycle.

SMALL SUPPLIERS IN A CHANGING MARKET. (Management Research Summary 69) Small Business Administration. 1962, 4 pp. Free. Pertinent findings from a study of small firms in Utica, N.Y., area which adjusted to electronics and metal trades after the decline of the textile industry.

TEXTILE OUTLOOK FOR THE SIXTIES. Business and Defense Services Administration, U.S. Department of Commerce. 1960, 54 pp. GPO, 35¢. An analysis of projected trends for the economy as a whole and the textile industry.

Tourist Trade

ALASKA'S TOURIST BUSINESS. (Management Research Summary 110) Small Business Administration. 1963, 4 pp. Free. Highlights tourist resources and gives visitor survey statistics.

NORTH DAKOTA'S VACATION AND RECREATION INDUSTRY. (Management Research Summary 99) Small Business Administration. 1963, 4 pp. Free. Discusses adequacy of existing facilities, opportunities for new ones, and methods a small businessman could use to study a given area's potential as a location for tourist-oriented business.

SMALL BUSINESS IN THE EASTERN OKLAHOMA LAKE REGION. (Management Research Summary 22) Small Business Administration. 1961, 4 pp. Free. Summarizes results of survey covering five artificial lake regions in eastern Oklahoma to obtain information about opportunities and problems related to the recreational aspects of inland water development.

TOURISM'S EFFECT ON HAWAIIAN SMALL BUSINESS. (Management Research Summary 165) Small Business Administration. 1963, 2 pp. Free. Evaluates its growth, contribution to income and employment and the outlook for small business in the overall economy.

THE TOURIST AND RECREATION INDUSTRY IN VERMONT. (Management Research Summary 179) Small Business Administration. 1963, 2 pp. Free. The impact of the tourist industry on the State's general economy, on selected retail and service receipts, and on other businesses and government.

THE TOURIST INDUSTRY IN THE U.S. VIRGIN ISLANDS. (Management Research Summary 175) Small Business Administration. 1963, 2 pp. Free. Examines vacation-related businesses, the principle industry of the Virgin Islands, in order to consider ways of further developing tourist trade.

VACATION-TRAVEL BUSINESSES IN NEW HAMPSHIRE. (Management Research Summary 84) Small Business Administration. 1962. 4 pp. Free. Summarizes a report dealing with an inventory of lodging places, the labor force, vacation expenditures, and origin of guests.

Trade Associations

DIRECTORY OF NATIONAL ASSOCIATIONS OF BUSINESSMEN 1961 listed under Directories.

SMALL BUSINESS USE OF TRADE ASSOCIATION PROGRAMS. (Management Research Summary 80) Small Business Administration.

1962, 4 pp. Free. Raises pertinent basic questions which must be dealt with by trade groups seeking to increase the economic well-being of small-firm members. Points out problem areas in trade association services, use of services by small firms, and organization of trade associations.

Trade Regulation

DOING BUSINESS THE PACA WAY * * * POINTERS ON TRADING PRACTICES PRESCRIBED BY THE PERISHABLE AGRICULTURE COMMODITIES ACT. Agricultural Marketing Service, U.S. Department of Agriculture. 1960, 62 pp. Free. A collection of articles on sound trading practices.

EXPORTING TO THE UNITED STATES. Bureau of Customs, U.S. Department of the Treasury. 1963, 86 pp. GPO, 50¢. General information on customs laws and regulations covering goods imported into the United States.

FEDERAL FOOD, DRUG, AND COSMETIC ACT, AS AMENDED, AND GENERAL REGULATIONS FOR ITS ENFORCEMENT, TITLE 21, PART I. Food and Drug Administration, U.S. Department of Health, Education, and Welfare. 1963, Looseleaf. GPO, 50¢. Includes color additive amendments of 1960.

LAWS, REGULATIONS AND OTHER INFORMATION RELATING TO FOREIGN-TRADE ZONES IN THE UNITED STATES. Foreign Trade Zones Board. 1959, 77 pp. GPO, 30¢. How the foreign trade zones in operation in New York, New Orleans, San Francisco, and Seattle may be of use to importers and exporters.

ORGANIZATION, PROCEDURE, AND RULES OF PRACTICE. Federal Trade Commission. August 1963, 70 pp. Free. A description of the functions and operations of the FTC.

THE PACKERS AND STOCKYARDS ACT; WHAT IT IS, HOW IT OPERATES. Agricultural Marketing Service, U.S. Department of Agriculture. (Program Aid 399.) 1963. 9 pp. Free. How the Packers and Stockyards Act regulates business practices of those engaged in interstate and foreign commerce in livestock, live poultry marketing, and meat and poultry packing.

A SUMMARY OF U.S. EXPORT CONTROL REGULATIONS. Bureau of Foreign Commerce, U.S. Department of Commerce. 1962, 22 pp. GPO, 20¢. When an export license is needed and how to apply for it.

TRADE PRACTICE RULES. Federal Trade Commission. These rules are in the nature of advisory opinions for the guidance of businessmen

and are designed to eliminate and prevent, on a voluntary and industry-wide basis, trade practices and methods of competition and business behavior in an industry which constitute violations of laws administered by the Commission. Some of the more recent trade practice rules are as follows:

1. HOUSEHOLD FURNITURE INDUSTRY, December 18, 1963. Free.
2. WIRE ROPE INDUSTRY, January 18, 1963. Free.
3. METALLIC WATCH BAND INDUSTRY, June 30, 1962. Free.
4. STATIONERS INDUSTRY, June 15, 1962. Free.
5. LUGGAGE AND RELATED PRODUCTS INDUSTRY, June 30, 1962. Free.

A complete list of TRADE PRACTICE RULES may be found in the FEDERAL TRADE COMMISSION LIST OF PUBLICATIONS.

WHAT RETAILERS SHOULD KNOW ABOUT BEING LICENSED UNDER THE PERISHABLE AGRICULTURE COMMODITIES ACT. (AMS–357) Agricultural Marketing Service, U.S. Department of Agriculture. 1960. Free.

Trademarks

GENERAL INFORMATION CONCERNING TRADEMARKS. Patent Office, U.S. Department of Commerce. 1960, 27 pp. GPO, 15¢. Definition and functions of trademarks, registration of trademarks, etc.

Urban Renewal

FINANCING AREA DEVELOPMENT. Area Redevelopment Administration, U.S. Department of Commerce. 1962, 11 pp. GPO, 15¢. Deals with the first two provisions of the Area Redevelopment Act—Loans to private industry and loans and grants to communities for needed public facilities.

HANDBOOK OF FEDERAL AIDS TO COMMUNITIES. Area Redevelopment Administration, U.S. Department of Commerce. 1963, 63 pp. GPO, 40¢. Covers nature of programs, eligibility, and available publications.

HOW URBAN RENEWAL PROJECTS AFFECT SMALL BUSINESS. (Management Research Summary 1) Small Business Administration. 1960, 4 pp. Free. A study of dislocated firms in Hartford and New Haven, Conn.

MINIMUM PROPERTY STANDARDS FOR URBAN RENEWAL REHABILITATION. (See listing under Building Industry.)

Virgin Islands

THE VIRGIN ISLANDS OF THE UNITED STATES. Office of the Territories, U.S. Department of the Interior. 1963, 8 pp. Free. General information.

Vocational Rehabilitation

SMALL BUSINESS ENTERPRISES IN VOCATIONAL REHABILITATION. (Rehabilitation Service Series 63–27) Vocational Rehabilitation Administration, U.S. Department of Health, Education, and Welfare. 1963, 42 pp. GPO, 20¢. Discusses opportunities for the physically handicapped in small business.

Wages

DIGEST OF STATE EQUAL-PAY LAWS. Revised as of August 1, 1963. Women's Bureau, U.S. Department of Labor. 23 pp. Free. Summary of laws in those States which have enacted such legislation.

A DIRECTORY OF COMMUNITY WAGE SURVEYS 1948–June 1963. Bureau of Labor Statistics, U.S. Department of Labor. 27 pp. Free. Listing of surveys by city, or by date of the more comprehensive reports. Revised periodically.

EMPLOYMENT AND EARNINGS—ANNUAL SUPPLEMENT ISSUE. (Various months) Bureau of Labor Statistics, U.S. Department of Labor. GPO, $1. Average annual hourly and weekly earnings for production workers by industry, also by State or area. Other tables on labor turnover rates and number of employees.

HANDY REFERENCE GUIDE TO THE FAIR LABOR STANDARDS ACT. Wage and Hour and Public Contracts Divisions, U.S. Department of Labor. Reprinted April 1963, 17 pp. Free.

INDUSTRY WAGE STUDIES. Bureau of Labor Statistics, U.S. Department of Labor. The Bureau issues from time to time detailed reports on the wage structure of specific industries. Some industries studied recently are motor vehicles and parts, women's and misses' dresses, communications, machinery, iron and steel foundries. A more complete list may be found in Publications of the U.S. Department of Labor or one of the industry studies. The studies mentioned are available from the Bureau as long as the supply lasts.

MINIMUM WAGE AND THE WOMAN WORKER. (Pamphlet 8) Women's Bureau, U.S. Department of Labor. 1960, 16 pp. GPO, 15¢.

How and why State minimum-wage laws came about, how they operate, and their impact on the worker, the employer, and the community.

WAGES AND RELATED BENEFITS. PART I: 82 LABOR MARKETS, 1962–63. (Bulletin 1345–83) Bureau of Labor Statistics, U.S. Department of Labor. 1964, 116 pp. GPO, 60¢. Information on plant and office workers. Revised annually. PART II: METROPOLITAN AREAS, UNITED STATES AND REGIONAL SUMMARIES, 1961–62. (Bulletin 1303–83) 1963, 82 pp. GPO, 50¢. Revised annually.

Warehouses

GROCERY WAREHOUSE LAYOUT AND EQUIPMENT FOR MAXIMUM PRODUCTIVITY. (Marketing Research Report 348) Agricultural Marketing Service, U.S. Department of Agriculture. 1959, 58 pp. GPO, 40¢.

LOADING OUT FRUITS AND VEGETABLES IN WHOLESALE WAREHOUSES. (Marketing Research Report 282) Agricultural Marketing Service, U.S. Department of Agriculture. 1959, 53 pp. GPO, 35¢. How to improve warehousing operations.

MEASURES OF OPERATING EFFICIENCY IN WHOLESALE FOOD WAREHOUSES. (Market Research Report 399) Agricultural Marketing Service, U.S. Department of Agriculture. 1960, 32 pp. Free. Measures of warehouse labor productivity, work quality, effective plant and equipment use.

WAREHOUSING. (Small Business Bulletin 49) Small Business Administration. 1961, 8 pp. Free. A guide to the literature on warehouses.

Wholesale Trade

IMPROVED ACCOUNTING METHODS FOR WHOLESALE FOOD DISTRIBUTORS. (See listing under Accounting.)

OPERATING COSTS AND RATIOS—WHOLESALE. (See listing under Financial Statements.)

SMALL WHOLESALE BUSINESS IN NEW JERSEY. (Management Research Summary 26) Small Business Administration. 1963, 2 pp. Free. Condensation of a study made to identify the small independent New Jersey "merchant wholesaler," to examine relationships existing in specific costs of doing business and in specific credit financing operations pertinent to a small wholesaling business, and

to analyze information for steps which might be taken to ease problems confronting small-business wholesalers.

THE STRUCTURE OF WHOLESALE PRODUCE MARKETS. (Agricultural Economics Report 45) Economic Research Service, U.S. Department of Agriculture. 1964, 128 pp. $1. A study of the organization and operation of the wholesale fruit and vegetable markets throughout the country, designed to broaden understanding of the food marketing system, and thereby make it more efficient.

WHOLESALERS' SERVICES TO FOOD RETAILERS. (Management Research Summary 104) Small Business Administration. 1963, 2 pp. Free. Summarizes information obtained through interviews with 4 wholesaler groups and 94 retailers affiliated with the wholesale organizations. Discusses services of the wholesalers, wholesaler-to-retailer communications, retailers' use of wholesalers services, and retailers' suggestions regarding improved wholesaler services.

WHOLESALING. (Small Business Bibliography 55) Small Business Administration. 1965, 20 pp. Free. An extensive bibliography.

Women Workers

1962 HANDBOOK ON WOMEN WORKERS. (Bulletin 285) Women's Bureau, U.S. Department of Labor. Biennial. 1962, 160 pp. GPO, 45¢. Part I—Women in the Labor Force; Part II—Laws Governing Women's Employment and Status; Part III—President's Commission on the Status of Women, Part IV—Organization of Interest to Women, Part V—Bibliography on American Women Workers.

Wood-using Industries

FEDERAL INCOME TAX TIPS FOR THE SMALL TIMBER OWNER. Forest Service, U.S. Department of Agriculture. 1960, 8 pp. Free. Deals primarily with treatment of receipts from sales of timber and other forest products.

FOREST INDUSTRY OPPORTUNITIES IN RURAL DEVELOPMENT. (Agriculture Information Bulletin 222) Forest Service, U.S. Department of Agriculture. 1960, 27 pp. Free. Suggestions for starting small wood-using enterprises.

FOREST PRODUCTS LABORATORY SUBJECT LISTS. (See listing under Bibliographies.)

LOCAL BENEFITS FROM TIMBER INDUSTRY EXPANSION. (Technical Paper 172) Central States Forest Experiment Station, U.S. Depart-

ment of Agriculture, Forest Service, 111 Old Federal Building, Columbus, Ohio, 43215. 1960, 17 pp. Free. An analysis of the operating records of 50 successful forest product manufacturers in eastern Kentucky which gives cost-and-return comparisons for the various production stages and processes in the industry.

New Developments in Wood Technology. (Technical Aids for Small Manufacturers 84) Small Business Administration. 1963, 4 pp. Free. Four newly developed wood products and one new treatment process are described.

The U.S. Forest Products Laboratory. (Report 1698 Revised) Forest Products Laboratory, Madison, Wis., 53705. 1960, 19 pp. Free. How the Laboratory's research is designed to help 50,000 small lumber producers.

Woodworking Shops. (Small Business Bulletin 46) Small Business Administration. 1961, 12 pp. Free. A bibliography.

SECTION II—ALPHABETICAL LISTING BY ISSUING U.S. GOVERNMENT AGENCIES

This section lists alphabetically by title under the issuing Government agencies the same publications that appear in Section I—The alphabetical listing by subject—to which they are cross-referenced. Information regarding availability and price, where applicable, is provided in Section I.

U.S. Department of Agriculture
Agricultural Marketing Service

CHECKLIST OF REPORTS ISSUED BY THE AGRICULTURAL MARKETING SERVICE. See Bibliographies.

DIRECTORY OF STATE DEPARTMENTS OF AGRICULTURE, 1964. See Directories.

DISPLAY LOCATION AND CUSTOMER SERVICE IN RETAIL PRODUCE DEPARTMENTS. (Marketing Research Report No. 501.) See Food Industry.

DOING BUSINESS THE PACA WAY . . . POINTERS ON TRADING PRACTICES PRESCRIBED BY THE PERISHABLE AGRICULTURAL COMMODITIES ACT. See Trade Regulation.

EGG GRADING MANUAL. (Agriculture Handbook 75.) See Food Industry.

FLUID MILK PLANTS IN THE SOUTHEAST; METHODS, EQUIPMENT AND LAYOUT. (Marketing Research Report 232.) See Food Industry.

GROCERY WAREHOUSE LAYOUT AND EQUIPMENT FOR MAXIMUM PRODUCTIVITY. (Marketing Research Report 348.) See Warehouses.

HANDLING GROCERIES FROM WAREHOUSE TO RETAIL STORE SHELVES. (Marketing Research Report 473.) See Food Industry.

IMPROVED ACCOUNTING METHODS FOR WHOLESALE FOOD DISTRIBUTORS. (Marketing Research Report 454.) See Accounting.

IMPROVED DESIGNS FOR COMMERCIAL EGG GRADING AND PACKING PLANTS. (Marketing Research Report 422.) See Food Industry.

IMPROVED METHODS AMONG WHOLESALE FOOD DISTRIBUTORS FOR INVENTORY CONTROL, SALES ACCOUNTING, AND SHIPMENT OF MER-

CHANDISE. (Marketing Research Report 271.) See Food Industry.

IMPROVED METHODS OF DISPLAYING AND HANDLING PRODUCE IN RETAIL FOOD STORES. (Marketing Research Report No. 551.) See Food Industry.

LOADING OUT FRUITS AND VEGETABLES IN WHOLESALE WAREHOUSES. (Marketing Research Report 282.) See Warehouses.

MEASURES OF OPERATING EFFICIENCY IN WHOLESALE FOOD WAREHOUSES. (Marketing Research Report 399.) See Warehouses.

MOTHERS' OPINIONS OF FIBERS IN CHILDREN'S CLOTHES. (Marketing Research Report 42.) See Clothing Trade.

THE PACKERS AND STOCKYARDS ACT; WHAT IT IS, HOW IT OPERATES. (Program Aid 399.) See Trade Regulation.

POLICIES AND PRACTICES OF SOME LEADING INSTITUTIONAL WHOLESALE GROCERS. (Marketing Research Report 335.) See Food Industry.

POULTRY GRADING AND INSPECTION. (Agriculture Information Bulletin No. 173.) See Food Industry.

POULTRY GRADING MANUAL. (Agriculture Handbook No. 31.) See Food Industry.

REPORTS AND PUBLICATIONS OF USDA'S AGRICULTURAL MARKETING SERVICE. (AMS–523.) See Bibliographies.

RETAIL PRODUCE MANUAL: ORGANIZATION OF THE WORK AREA FOR HANDLING PRODUCE IN RETAIL STORES. (Marketing Bulletin 2); ORDERING, RECEIVING, AND STORAGE OF PRODUCE IN RETAIL STORES. (Marketing Bulletin 3); TRIMMING PRODUCE IN RETAIL STORES. (Marketing Bulletin 4); MANAGING AND SCHEDULING OF A RETAIL PRODUCE DEPARTMENT. (Marketing Bulletin 11); PACKAGING AND PRICE-MARKING PRODUCE IN RETAIL STORES. (Marketing Bulletin 14.) See Food Industry.

WHAT RETAILERS SHOULD KNOW ABOUT BEING LICENSED UNDER THE PERISHABLE AGRICULTURAL COMMODITIES ACT. (AMS 357.) See Trade Regulation.

U.S. Department of Agriculture
Economic Research Service

BUYING PRACTICES AND FOOD USE OF EMPLOYEE FOOD SERVICES IN MANUFACTURING PLANTS. (Marketing Research Report 326.) See Employee Benefits or Food Industry.

Costs of Procuring, Manufacturing, and Distributing Mixed Feeds in the Midwest: Case Study of Four Types of Organization. (Marketing Research Report 388.) See Feed Industry.

Effectiveness of Selected Canned Food Displays in Supermarkets. (Marketing Research Report 371.) See Food Industry.

Employee Food Services in Manufacturing Plants; Management Appraisals, Nature and Extent, Vending Machines. (Marketing Research Report 325.) See Employee Benefits or Food Industry.

A Guide to Uniform Cost and Financial Accounting for Poultry Processors. (Agriculture Handbook 213.) See Accounting.

Manufacturers' Opinions of Cotton and Leather Used in Shoes. (Marketing Research Report 392.) See Shoe Industry.

The Market for Food in Public Schools. (Marketing Research Report 377.) See Food Industry.

Marketing Milk in Alaska. (Marketing Research Report 385.) See Food Industry.

The Structure of Wholesale Produce Markets. (Agricultural Economics Report No. 45.) See Wholesale Trade.

U.S. Department of Agriculture
Farmer Cooperative Service

Feeder Cattle Pooling; Improved Marketing Through Grading and Commingling. (Marketing Research and Report 565.) See Marketing.

Feeder Pig Pooling; Improved Marketing Through Grading and Commingling. (Marketing Research Report 566.) See Marketing.

Guide to Uniform Accounting for Locker and Freezer Provisioners. (Agriculture Handbook 163.) See Accounting.

Management Accounting for Frozen Food Locker and Related Plants. (Agriculture Handbook 220.) See Accounting.

Merchandising Practices for Freezer Provisioners. (Marketing Research Report 453.) See Food Industry.

U.S. Department of Agriculture
Forest Service

FEDERAL INCOME TAX TIPS FOR THE SMALL TIMBER OWNER. See Wood-using Industries.

FOREST INDUSTRY OPPORTUNITIES IN RURAL DEVELOPMENT. (Agriculture Information Bulletin 222.) See Wood-using Industries.

FOREST PRODUCTS LABORATORY SUBJECT LISTS. See Bibliographies.

LIST OF PUBLICATIONS JULY 1 TO DECEMBER 31, 1963. See Bibliographies.

LOCAL BENEFITS FROM TIMBER INDUSTRY EXPANSION. (Technical Paper 172.) See Wood-using Industries.

MANAGING THE FAMILY FOREST. (Farmers' Bulletin 2187.) See Forests and Forestry.

PARTIAL LIST OF GOVERNMENT PUBLICATIONS OF INTEREST TO ARCHITECTS, BUILDERS, ENGINEERS, AND RETAIL LUMBERMEN. See Bibliographies.

SEED AND PLANTING STOCK DEALERS; A DIRECTORY OF COMMERCIAL DEALERS IN SEEDS AND PLANTING STOCK FOR COMMON TREES AND SHRUBS. See Directories.

THE U.S. FOREST PRODUCTS LABORATORY. (Report 1698 Revised.) See Research.

U.S. Department of Agriculture
Office of Information

LIST OF AVAILABLE PUBLICATIONS OF THE UNITED STATES DEPARTMENT OF AGRICULTURE. See Bibliographies.

U.S. Department of Agriculture
Statistical Reporting Service

WOMEN'S ATTITUDES TOWARD COTTON AND OTHER FIBERS IN CLOTHING. (Marketing Research Report 493.) See Clothing Trade.

U.S. Atomic Energy Commission

RADIOISOTOPES IN SCIENCE AND INDUSTRY; A SPECIAL REPORT OF THE UNITED STATES ATOMIC ENERGY COMMISSION. See Atomic Energy.

SELLING TO AEC. See Atomic Energy.

U.S. Atomic Energy Commission
Technical Information Service Extension

Extension, P.O. Box 62, Oak Ridge, Tenn.

MATERIALS/SERVICES AND FACILITIES AVAILABLE FROM THE UNITED STATES ATOMIC ENERGY COMMISSION. (TID–4559.) See Atomic Energy.

QUESTIONS AND ANSWERS ON U.S. ATOMIC ENERGY COMMISSION ACCESS PERMITS. (TID–4558.) See Atomic Energy.

SPECIAL SOURCES OF INFORMATION ON ISOTOPES. (TID–4563.) See Atomic Energy or Bibliographies.

USAEC PATENTS AVAILABLE FOR LICENSING. (TID–4557.) See Atomic Energy.

WHAT'S AVAILABLE IN THE ATOMIC ENERGY LITERATURE. (TID–4550.) See Atomic Energy or Bibliographies.

U.S. Department of Commerce

BUSINESS SERVICE CHECKLIST. See Bibliographies. $1.50.

SELLING AROUND THE WORLD: HOW COMMERCE HELPS. See Export-Import Trade.

SERVICES AVAILABLE TO U.S. EXPORTERS. See Export-Import Trade.

U.S. DEPARTMENT OF COMMERCE PUBLICATIONS 1963 SUPPLEMENT. See Bibliographies.

WHAT YOU SHOULD KNOW ABOUT EXPORTING; A HOW-TO-GET-STARTED HANDBOOK. See Export-Import Trade.

U.S. Department of Commerce
Area Redevelopment Administration

THE COMMUNITY AND ECONOMIC DEVELOPMENT. See Industrial Development.

DEVELOPING "HOME-GROWN" INDUSTRY. See Industrial Development.

FINANCING AREA REDEVELOPMENT. See Urban Renewal.

HANDBOOK OF FEDERAL AIDS TO COMMUNITIES. See Urban Renewal.

HOW TO MAKE AN INDUSTRIAL SITE SURVEY. See Industrial Development.

PLANNING FOR NEW GROWTH—NEW JOBS. (ARA Pub. No. 62–A.) See Industrial Development.

U.S. Department of Commerce
Bureau of the Census

BUREAU OF THE CENSUS CATALOG. See Bibliographies.

COUNTY AND CITY DATA BOOK: 1962 (A Statistical Abstract Supplement). See Statistics.

COUNTY BUSINESS PATTERNS: FIRST QUARTER 1962. (Issued for each year, 1946–51, and for 1953, 1956, and 1959; to be issued annually beginning with issue for 1964.) See Statistics.

HISTORICAL STATISTICS OF THE UNITED STATES COLONIAL TIMES TO 1957. See Statistics.

INDUSTRIAL STATISTICS GUIDE AND FINDER CATALOG; A BIRD'S-EYE VIEW OF THE CENSUS INDUSTRIAL STATISTICS PROGRAM. See Statistics.

LIST OF UNITED STATES FOREIGN TRADE STATISTICAL PUBLICATIONS. See Bibliographies.

LOCATION OF MANUFACTURING PLANTS BY COUNTY, INDUSTRY, AND EMPLOYMENT SIZE: 1958. See Plant Location.

LOCATION OF MANUFACTURING PLANTS BY INDUSTRY, COUNTY, AND EMPLOYMENT SIZE 1958. See Plant Location.

STATISTICAL ABSTRACT OF THE UNITED STATES 1963. (Annual.) See Statistics.

U.S. Department of Commerce
Bureau of International Commerce

CHECKLIST OF BIC PUBLICATIONS FOR USE IN FOREIGN MARKET RESEARCH AND TRADE. See Bibliographies.

DIGEST OF EXPORT REGULATIONS. See Export-Import Trade.

EXPORT PROFITS. See Export-Import Trade.

PROFITABLE SALES IN U.S. TRADE CENTERS OVERSEAS. See Export-Import Trade.

SELL YOUR PRODUCTS THROUGH U.S. TRADE MISSIONS. See Export-Import Trade.

SOURCES OF INFORMATION ON AMERICAN FIRMS FOR INTERNATIONAL BUYERS. See Export-Import Trade.

A SUMMARY OF U.S. EXPORT CONTROL REGULATIONS. See Export-Import Trade or Trade Regulation.

U.S. Department of Commerce
Bureau of Public Roads

STANDARD SPECIFICATIONS FOR CONSTRUCTION OF ROADS AND BRIDGES ON FEDERAL HIGHWAY PROJECTS. See Standards.

U.S. Department of Commerce
Business and Defense Services Administration

ALASKA; ITS ECONOMY AND MARKET POTENTIAL. See Regional Area Studies.

BDSA PUBLICATIONS See Bibliographies.

DATA SOURCES FOR PLANT LOCATION ANALYSIS. See Directories.

DIRECTORY OF NATIONAL ASSOCIATIONS OF BUSINESSMEN, 1961. See Directories.

GUIDES FOR BUSINESS ANALYSIS AND PROFIT EVALUATION. See Financial Statements.

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INTERBUSINESS FINANCING. (Small Business Research Series 3.) See Finance.

INTERIOR DECORATING. (Small Business Bulletin 54.) See Interior Decoration.

INVENTORY CONTROL FOR SMALL WHOLESALERS. (Management Research Summary 100.) See Inventory Control.

INVESTMENT DECISION MAKING IN SMALL BUSINESS. (Management Research Summary 54.) See Finance.

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Judging Your Electric Power Needs. (Technical Aids for Small Manufacturers 83.) See Electric Power.

Keeping Score With Effective Records. (Small Marketers Aids 94.) See Records.

Keeping Shop Noise From Nearby Residences. (Technical Aids for Small Manufacturers 67.) See Noise.

Kentucky Small Business—Management, Taxes, and Outlook. (Management Research Summary 180.) See Regional Area Studies.

Kentucky's Small Business Potential. (Management Research Summary 163.) See Regional Area Studies.

Laundry and Drycleaning. (Small Business Bibliography 22.) See Laundries.

Loans to State and Local Development Companies. See Industrial Development.

A Local Economy in Transition. (Management Research Summary 118.) See Regional Area Studies.

The Local Grain Elevator Business in Louisiana. (Management Research Summary 188.) See Regional Area Studies.

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Mail Order Purchasing and the Small Retailer. (Management Research Summary 103.) See Retail Trade.

Mail-Order Retailing by Small Enterprises. (Management Research Summary 194.) See Retail Trade.

Maine's Potential for Wood Particle Board Manufacture. (Management Research Summary 62.) See Regional Area Studies.

Making Your Figures Talk. (Small Business Management Series 8.) See Marketing.

Management Audit for Small Manufacturers. (Small Business Management Series 29.) See Management.

Management Audit for Small Retailers. (Small Business Management Series 31.) See Management.

Management Counseling of Small Business. (Management Research Summary 123.) See Counseling.

MANAGEMENT COUNSELING OF SMALL MANUFACTURING FIRMS. (Management Research Summary 138.) See Counseling.

MANAGEMENT PLANNING IN SMALL FIRMS. (Management Research Summary 108.) See Management.

MANAGEMENT PROBLEMS IN THE ELECTRONICS INDUSTRY. (Management Research Summary 86.) See Management.

MANAGEMENT STAFFING NEEDS IN ARKANSAS SAWMILLS. (Management Research Summary 46.) See Personnel Management.

A MANAGEMENT TRAINING PROGRAM FOR SMALL BUSINESSMEN: A NON-COMPUTERIZED GAME. (Management Research Summary 128.) See Business Education.

MARKET RESEARCH AND PLANNING FOR SMALL MANUFACTURERS. (Management Research Summary 19.) See Marketing.

MARKETING MAINE LUMBER FOR BUILDING CONSTRUCTION. (Management Research Summary 143.) See Lumber Industry.

MARKETING RESEARCH PROCEDURES. (Small Business Bibliography 9.) See Marketing.

MARKETING THROUGH FOOD BROKERS. Management Research Summary 158). See Food Industry.

MEASUREMENT OF THE RISK ATTITUDES OF BANKS. (Management Research Summary 111.) See Finance.

MEN'S AND BOYS' CLOTHING. (Small Business Bibliography 45.) See Clothing Trade.

METHODS OF COUNTING BUSINESS ESTABLISHMENTS. (Management Research Summary 127.) See Business Enterprises.

MISSISSIPPI'S FOREST RESOURCES. (Management Research Summary No. 65.) See Lumber Industry.

MOBILE HOMES. (Small Business Bibliography 41.) See Mobile Homes.

MONEY AND MANPOWER FOR KENTUCKY'S SMALL BUSINESS. (Management Research Summary 178.) See Regional Area Studies.

MOTOR FREIGHT MOVEMENTS IN OKLAHOMA. (Management Research Summary 82.) See Regional Area Studies.

NATIONAL DIRECTORIES FOR USE IN MARKETING. (Small Business Bulletin 13.) See Marketing.

NATIONAL MAILING-LIST HOUSES. (Small Business Bibliography 29.) See Advertising.

NEW CENSUS INFORMATION FOR YOUR BUSINESS. (Small Marketers Aids 70.) See Statistics.

New Developments in Wood Technology. (Technical Aids for Small Manufacturers 84.) See Wood-using Industries.

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Operating Costs and Ratios—Wholesale. (Small Business Bibliography 11.) See Financial Statements.

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Operations Research in Small Business. (Management Research Summary 141.) See Operations Research.

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Outside Management Counsel for Small Business. (Management Research Summary 95.) See Counseling.

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THE PLEASURE BOATING INDUSTRY IN TENNESSEE. (Management Research Summary 35.) See Recreation Industry.

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THE POTENTIAL FOR VEGETABLE CANNING IN NEBRASKA. (Management Research Summary 189.) See Food Industry.

POTENTIAL RESOURCES FOR SMALL BUSINESS IN KENTUCKY. (Management Research Summary 169.) See Industrial Development.

POTENTIAL USE OF TRASH FISH CAUGHT BY SHRIMP BOATS. (Management Research Summary 148.) See Fishery Industry.

PRACTICAL BUSINESS USE OF GOVERNMENT STATISTICS. (Small Business Management Series 22.) See Statistics.

PRICING DECISIONS IN SMALL BUSINESS. (Management Research Summary 44.) See Prices.

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PROBLEMS OF SMALL RETAILERS. (Management Research Summary 9.) See Retail Trade.

PROBLEMS OF TENNESSEE'S SMALL MEATPACKERS. (Management Research Summary 73.) See Food Industry.

PROBLEMS OF WESTERN OREGON'S SMALL LUMBER FIRMS. (Management Research Summary 137.) See Lumber Industry.

PRODUCT TECHNOLOGY AND RESEARCH IN SMALL FIRMS. (Management Research Summary 116.) See Research.

PRODUCTS LIST CIRCULAR. See New Products.

PROFIT CONTROL IN AUTOMOBILE RETAILING. (Management Research Summary 2.) See Automobile Dealerships.

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PROSPECTS IN NEW MEXICO FOR SMALL FOOD PROCESSORS. (Management Research Summary 136.) See Food Industry.

PROVIDING MANAGEMENT TALENT FOR SMALL BUSINESS. (Management Research Summary 47.) See Personnel Management.

PUERTO RICAN MANUFACTURING—LOCAL AND NONLOCAL OWNERSHIP. (Management Research Summary 144.) See Business Education.

PURCHASING IN THE SMALL MANUFACTURING PLANT. (Management Research Summary 14.) See Purchasing.

RATIO ANALYSIS FOR SMALL BUSINESS. (Small Business Management Series 20.) See Financial Statements.

REAL ESTATE AND INSURANCE. (Small Business Bibliography 65.) See Insurance.

RECORDKEEPING SYSTEMS—SMALL STORE AND SERVICE TRADE. (Small Business Bulletin 15.) See Records.

REDISTRIBUTION OF TRADE IN POPULATION SHIFTS. (Management Research Summary 139.) See Store Location.

REGULATION OF RETAIL COMPETITION IN WASHINGTON STATE. (Management Research Summary 93.) See Retail Trade.

REMODELING FOR BETTER RETAILING. (Small Marketers Aids 99.) See Retail Trade.

RENTED TOOLS CAN IMPROVE EFFICIENCY. (Technical Aids for Small Manufacturers 79.) See Leasing Equipment.

RESEARCH AND DEVELOPMENT; A LIST OF SMALL BUSINESS CONCERNS INTERESTED IN PERFORMING RESEARCH AND DEVELOPMENT. See Directories.

RESTAURANTS AND CATERING. (Small Business Bibliography 17.) See Food Industry.

RETAIL CREDIT AND COLLECTIONS. (Small Business Bibliography 31.) See Credit.

RETAILING. (Small Business Bibliography 10.) See Retail Trade.

RETIREMENT PLANS FOR SELF-EMPLOYED BUSINESSMEN. (Small Marketers Aids 93.) See Retirement Plans.

REVENUE QUALITY CONTROL FOR SMALL CARRIERS. (Management Research Summary 83.) See Shipment of Goods.

RISK MANAGEMENT IN A CATASTROPHE. (Management Research Summary 101.) See Insurance.

SALES MANAGEMENT FOR MANUFACTURERS. (Small Business Bibliography 71.) See Personnel Management.

SBA DISASTER LOANS FOR BUSINESSES, FOR HOMES. See Finance.

SBA LOANS; LOAN POLICIES, WHO CAN BORROW, HOW TO APPLY, CREDIT REQUIREMENTS, LOAN POLICIES. See Finance.

SBA MANAGEMENT AND RESEARCH ASSISTANCE; COUNSELING, COURSES, CONFERENCES, RESEARCH, PUBLICATIONS. See Management.

SBIC FINANCING FOR SMALL BUSINESS. See Finance.

SELECTING A SITE FOR THE SMALL MANUFACTURING PLANT. (Management Research Summary 43.) See Plant Location.

SELLING BY MAIL-ORDER. (Small Business Bibliography 3.) See Retail Trade.

SELLING TO THE U.S. GOVERNMENT. See Government Contracts.

SETTING UP A QUALITY CONTROL AND TECHNICAL DEVELOPMENT LABORATORY. (Technical Aids for Small Manufacturers 65.) See Laboratories.

SIMULATION TRAINING FOR SMALL BUSINESS EXECUTIVES: A COMPUTERIZED MODEL. (Management Summary 126.) See Business Education.

SITE EVALUATION FOR SMALL RETAILERS. (Management Research Summary 78.) See Store Location.

SMALL BUSINESS ADMINISTRATION PUBLICATIONS. See Bibliographies.

SMALL BUSINESS ADMINISTRATION. WHAT IT IS, WHAT IT DOES. See Information in Industry.

SMALL BUSINESS AND GOVERNMENT RESEARCH AND DEVELOPMENT. (Small Business Management Series 28.) See Research.

SMALL BUSINESS AND PATTERN BARGAINING. (Management Research Summary 38.) See Labor Unions.

SMALL BUSINESS AND THE SUPERHIGHWAY ERA. (Management Research Summary 6.) See Store Location.

SMALL BUSINESS AND UNION-WIDE BARGAINING. (Management Research Summary 60.) See Labor Unions.

SMALL BUSINESS DEVELOPMENT IN NEW HAMPSHIRE. (Management Research Summary 55.) See Industrial Development.

SMALL BUSINESS EXPERIENCES IN SEEKING CREDIT. (Management Research Summary 96.) See Credit.

SMALL BUSINESS IN AN EXPANDING ECONOMY. (Management Research Summary 133.) See Industrial Development.

SMALL BUSINESS IN THE EASTERN OKLAHOMA LAKE REGION. (Management Research Summary 22.) See Tourist Industry.

SMALL BUSINESS IN THE HAWAIIAN ECONOMY. (Management Research Summary 117.) See Regional Area Studies.

SMALL BUSINESS INSTABILITY AND FAILURE. (Management Research Summary 105.) See Business Success and Failure.

SMALL BUSINESS OPPORTUNITIES IN A REDEVELOPMENT AREA. (Management Research Summary 85.) See Industrial Development.

SMALL BUSINESS PATTERNS IN ARIZONA. (Management Research Summary 75.) See Regional Area Studies.

SMALL BUSINESS PROBLEM STUDIES. (Management Research Summary 63.) See Management.

SMALL BUSINESS PROBLEMS IN VERMONT. (Management Research Summary 156.) See Regional Area Studies.

SMALL BUSINESS SUCCESS AND FAILURE CASES. (Management Research Summary 58.) See Business Success and Failure.

SMALL BUSINESS USE OF TRADE ASSOCIATION PROGRAMS. (Management Research Summary 80.) See Trade Associations.

SMALL FIRMS IN RESEARCH AND DEVELOPMENT INDUSTRIES. (Management Research Summary 130.) See Research.

SMALL MANUFACTURERS AND THE FINANCIAL GAP. (Management Research Summary 106.) See Finance.

SMALL MANUFACTURERS IN SOUTH FLORIDA. (Management Research Summary 154.) See Regional Areas Studies.

SMALL MANUFACTURING FIRMS IN NEW HAMPSHIRE. (Management Research Summary 34.) See Regional Area Studies.

SMALL OFFICE AUTOMATION. (Small Business Bibliography 58.) See Bibliographies.

SMALL PLANT TURNOVER AND FAILURE. (Management Research Summary 4.) See Business Success and Failure.

SMALL STORE OPPORTUNITIES IN PLANNED SHOPPING CENTERS. (Management Research Summary 17.) See Store Location.

SMALL SUPPLIERS AND LARGE BUYERS IN AMERICAN INDUSTRY. (Management Research Summary 48.) See Marketing.

SMALL SUPPLIERS IN A CHANGING MARKET. (Management Research Summary 69.) See Textile Industry.

SMALL WHOLESALE BUSINESS IN NEW JERSEY. (Management Research Summary 26.) See Wholesale Trade.

SMALL ZINC-LEAD MINING IN MONTANA. (Management Research Summary 77.) See Mineral Industries.

SOLVING SMALL RETAILERS' PROBLEMS. (Management Research Summary 114.) See Retail Trade.

SOUND OBJECTIVES HELP BUILD PROFITS. (Management Aids for Small Manufacturers 142.) See Management.

SOURCES OF EQUITY AND LONG-TERM FINANCING FOR SMALL MANUFACTURING FIRMS. (Management Research Summary 68.) See Finance.

SOURCES OF FUNDS FOR SMALL FIRMS IN WASHINGTON STATE. (Management Research Summary 91.) See Finance.

SPORTING GOODS. (Small Business Bibliography 62.) See Recreation Industry.

THE SQUEEZE-OUT IN SMALL BUSINESS OWNERSHIP. (Management Research Summary 7.) See Business Enterprises.

STABILITY AND CHANGE IN MARKET SHARES. (Management Research Summary 125.) See Marketing.

STARTING AND MANAGING AN AVIATION FIXED BASE OPERATION. (The Starting and Managing Series Vol. 6.) See Aeronautics.

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STORE ARRANGEMENT AND DISPLAY. (Small Business Bibliography 52.) See Retail Trade.

STORE LOCATION. (Small Business Bibliography 16.) See Store Locations.

THE STRUCTURE OF SMALL BUSINESS IN ALABAMA. (Management Research Summary 49.) See Regional Area Studies.

A STUDY OF BUSINESS TERMINATIONS. (Management Research Summary 102.) See Business Success and Failure.

A STUDY OF INDUSTRY FINANCIAL AND OPERATING RATIOS. (Management Research Summary 61.) See Financial Statements.

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SUCCESS OR FAILURE OF NEW SMALL MANUFACTURERS. (Management Research Summary 197.) See Business Success and Failure.

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TAX COMPLIANCE COSTS IN SMALL FIRMS. (Management Research Summary 186.) See Taxation.

TECHNIQUES OF SMALL-BUSINESS COUNSELING. (Management Research Summary 200.) See Counseling.

TEN SMALL RETAILERS AND THEIR PROBLEMS. (Management Research Summary 109.) See Retail Trade.

TOURISM'S EFFECT ON HAWAIIAN SMALL BUSINESS. (Management Research Summary 165.) See Tourist Trade.

THE TOURIST AND RECREATION INDUSTRY IN VERMONT. (Management Research Summary 179.) See Tourist Trade.

THE TOURIST INDUSTRY IN THE U.S. VIRGIN ISLANDS. (Management Research Summary 175.) See Tourist Trade.

TRAINING COMMERCIAL SALESMEN. (Small Business Bibliography 56.) See Personnel Management.

TRAINING RETAIL SALESPEOPLE. (Small Business Bibliography 23.) See Retail Trade.

THE TRANSPORTATION FUNCTION IN SMALL BUSINESS. (Management Research Summary 16.) See Shipment of Goods.

TRENDS IN AFFILIATED WHOLESALE-RETAIL FOOD OPERATIONS. (Management Research Summary 121.) See Food Industry.

TRUCKING AND CARTAGE. (Small Business Bibliography 51.) See Bibliographies.

U.S. GOVERNMENT PURCHASING, SPECIFICATIONS AND SALES DIRECTORY; WHO BUYS WHAT AND WHERE. (See Government Contracts or Standards.)

U.S. SMALL BUSINESS AND THE LATIN AMERICAN MARKET. (Management Research Summary 142.) See Export-Import Trade.

UNUSUAL SMALL BUSINESSES IN LOUISIANA. (Management Research Summary 92.) See Business Enterprises.

THE USE OF CONSULTANTS BY MANUFACTURERS. (Management Research Summary 190.) See Management.

USE OF EXTERNAL ASSISTANCE BY SMALL MANUFACTURERS. (Management Research Summary 30.) See Management.

USE OF OUTSIDE INFORMATION IN SMALL FIRMS. (Management Research Summary 56.) See Information in Industry.

USE OF PUBLICATIONS AS AIDS IN MANAGING SMALL FIRMS. (Management Research Summary 115.) See Information in Industry.

VACATION BUSINESS IN MAINE. (Management Research Summary 13.) See Regional Area Studies.

VACATION-TRAVEL BUSINESSES IN NEW HAMPSHIRE. (Management Research Summary 84.) See Tourist Trade.

VARIETY STORES. (Small Business Bulletin 21.) See Retail Trade.

VERTICAL INTEGRATION IN THE BROILER-GROWING INDUSTRY. (Management Research Summary 25.) See Food Industry.

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WHOLESALING. (Small Business Bibliography 55.) See Wholesale Trade.

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Planning is presented for an area vocational-technical school to serve three school systems with a total 1960 population of 119,027. Topics discussed include: (1) enrollment projections, (2) present and proposed program offerings, (3) existing and additional facilities needed, (4) financing and cost to each district, (5) possible solutions--additions at present schools or construction of a new building, and (6) recommendations. It was recommended that a new building be constructed to serve 1,480 pupils at a total cost of $4,000,000. (PS)

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AREA VOCATIONAL-TECHNICAL SCHOOL

Bethlehem Area
Hellertown-Lower Saucon
Northampton Area

July 1966

VT001311

AREA VOCATIONAL-TECHNICAL SCHOOL

Bethlehem Area
Hellertown-Lower Saucon
Northampton Area

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July 1966

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TABLE OF CONTENTS

		Page
	INTRODUCTION	
I	ENROLLMENT PROJECTIONS	1
	Births	1
	Net Migration	2
	General Population Change	8
	Nonpublic Schools	13
	Bethlehem Area School District Enrollments	15
	Hellertown-Lower Saucon School District Enrollments	18
	Northampton Area School District Enrollments	21
	Technical and Vocational Enrollments	24
	Projecting Enrollments for the Area Technical School	25
	Evening Shop Program	31
II	PROGRAM OFFERINGS	32
III	EXISTING FACILITIES	35
IV	POSSIBLE SOLUTIONS AND RECOMMENDATIONS	41
	Additions at Liberty School	41
	Addition Elsewhere	42
	Constructing a New Building Near the Freedom School Site	43
	Constructing a New Building at a Site Outside of Bethlehem	43
	Recommendation	44
V	FINANCING	45
	Cost Analysis	45
	Area Vocational-Technical School Building Reimbursable Percentage and Annual Amortization Rental	45
	Cost to Each District	48
	Cost of Separate Addition	49
	A Separate Addition to the Area Vocational-Technical School	50
	Estimated Costs of Separate Addition to the Area Vocational-Technical School	50
	Summary	53

TABLES

		Page
1	Numbers of Resident Births, Bethlehem City and Northampton County, 1960 through 1965	1
2	Comparison of Births-Deaths Data, Northampton County and City of Bethlehem, 1960 through 1965	2
3	Comparison of Population Data, City of Bethlehem and Northampton County	5
4	Live Births to Residents, Bethlehem-Hellertown/Lower Saucon-Northampton Area, 1959 through 1965	6
5	Population Growth by School District Area, 1930-1960	9
6	Population Density by School District Area, 1960	11
7	Building Permits for Residences by Dwelling Units, 1960 through 1964	12
8	Total Enrollment in Nonpublic Schools of Pupils Residing in Local School District Areas, Elementary and Secondary Grades, 1965-66	14
9	Estimated Future Enrollments by Grades, Bethlehem Area School District, 1961-62 through 1975-76	16
10	Estimated Future Enrollments by Grades, Hellertown-Lower Saucon School District, 1960-61 through 1975-76	19
11	Estimated Future Enrollments by Grades, Northampton Area School District, 1959-60 through 1975-76	22
12	Area Technical School Enrollments, 1965-66 and 1966-67	25
13	Area Technical School Enrollments by Grade and Sex for Public School Sending Districts, 1966-67	28
14	Enrollment Projections for Area Technical School, 1966-67 through 1975-76	29
15	Course Offerings and Enrollments, Area Technical School, 1965-66	32
16	Course Offerings and Enrollments, Area Technical School, 1966-67	33
17	Spaces Required for Area Technical School Program	35
18	Present Shop Areas at Liberty School	37
19	Calculation of State, Federal, and District Shares	47
20	Calculation of State, Federal, and District Shares (Addition)	51

CHARTS

I	Comparison of Births and Deaths, Northampton County	3
II	Comparison of Births and Deaths, City of Bethlehem	4
III	Births in Area Served by Technical School, 1959-1965	7

CHARTS
(continued)

		Page
IV	Population Growth by School District Area, 1930-1960	10
V	Public School Enrollments, Grades 10-12 Total, Bethlehem Area School District	17
VI	Past Enrollments and Enrollment Projections, Grades 10-12, Hellertown-Lower Saucon School District	20
VII	Past Enrollments and Enrollment Projections, Grades 10-12, Northampton Area Schools	23

INTRODUCTION

The approved plan of the State Board of Vocational Education provides for an area technical school which will serve three school systems: the Bethlehem Area Schools, Hellertown-Lower Saucon Schools, and the Northampton Area Schools. There are four aspects to the problem concerning planning for the area school which must be determined. First, how many pupils will need to be served by the area technical school? Secondly, what programs should be offered? Thirdly, what spaces are available and what spaces will be needed to meet these educational needs? And finally, what are the financial implications of such a program?

Each of these topics will be discussed in the chapters which follow.

ENROLLMENT PROJECTIONS

Changes in public school enrollments are related to three basic factors. These factors are the number of births, the net size of in- or out-migration, and enrollments in nonpublic schools.

Births

Complete birth data for each of the individual areas which make up the school systems involved in the area technical school study are not available. However, some idea of the relative numbers involved and of trends may be obtained from birth data for Bethlehem City and for Northampton County as a whole.

Table 1
NUMBERS OF RESIDENT BIRTHS
Bethlehem City and Northampton County
1960 through 1965

Year	Bethlehem City	Northampton County
1960	1,461	3,712
1961	1,453	3,698
1962	1,397	3,594
1963	1,264	3,345
1964	1,191	3,512
1965	1,139	3,159

Both Bethlehem and Northampton County show a definite trend downward in the number of births. The number of women in the most prolific child-bearing age-groups is also small at this time. However, girls born in the years following World War II have just begun to reach the most prolific child-bearing ages. It is possible, therefore, that the downward trend in numbers of births will be halted or reversed.

Net Migration

It is assumed that trends in net migration of public school pupils will parallel closely trends in net migration of the total population. One way in which an approximate measure of net migration may be made is to compare population sizes for two different years, compare the net gain of births over deaths for the intervening years, and attribute the difference to net migration. Table 2 shows birth-death figures for Northampton County and Bethlehem City for the years 1960 through 1965; these data also are shown in Charts I and II.

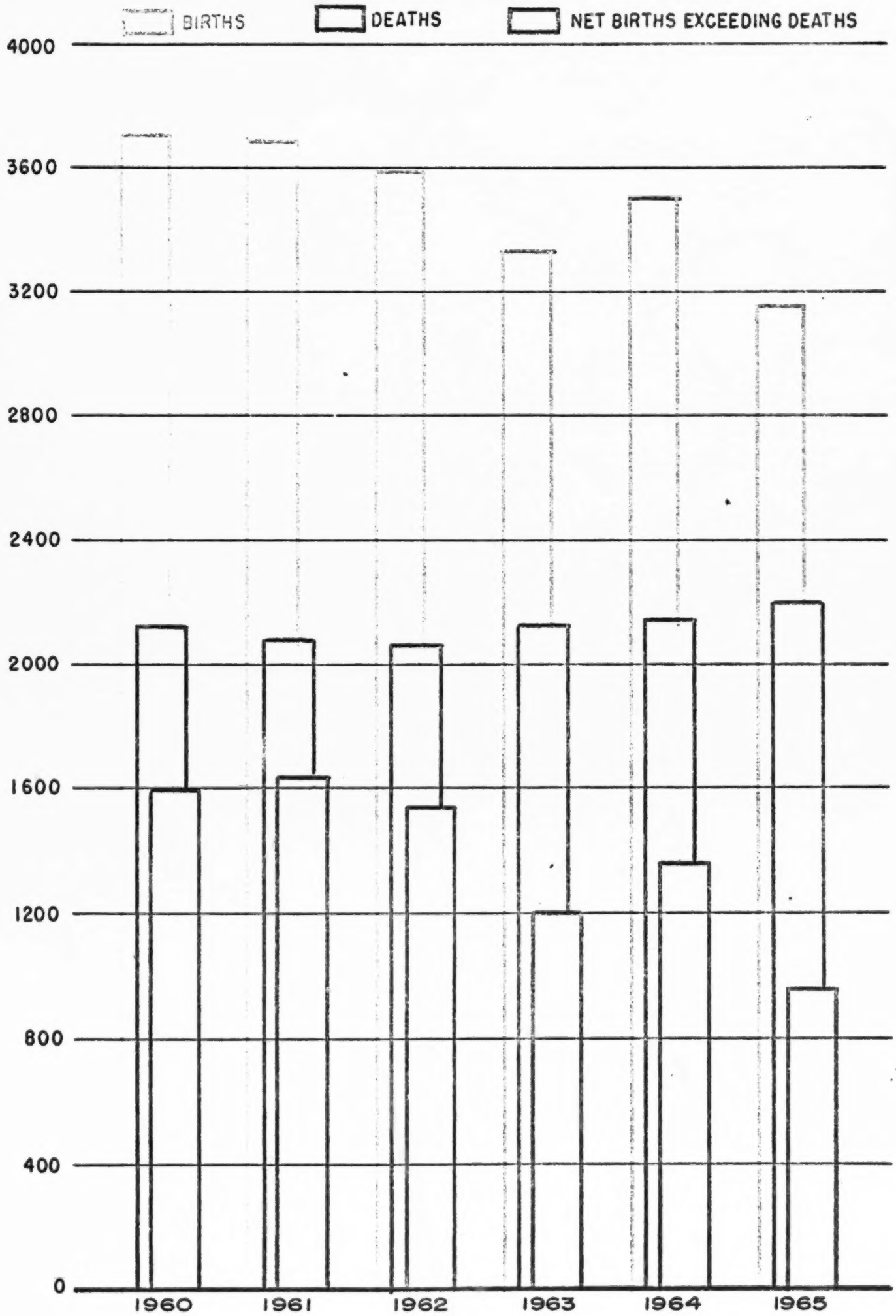
Table 2
COMPARISON OF BIRTHS-DEATHS DATA
Northampton County and City of Behtlehem, Pa.
1960 through 1965

	Northampton County			City of Bethlehem		
Year	Number of Births	Number of Deaths	Births Less Deaths	Number of Births	Number of Deaths	Births Less Deaths
1960	3,712	2,125	1,587	1,461	756	705
1961	3,698	2,082	1,616	1,453	707	746
1962	3,594	2,064	1,530	1,397	735	662
1963	3,345	2,125	1,220	1,264	793	471
1964	3,512	2,149	1,363	1,191	732	459
1965	3,159	2,199	960	1,139	765	374
Total: 1960-1964 ONLY	17,861	10,545	7,316	6,766	3,723	3,043

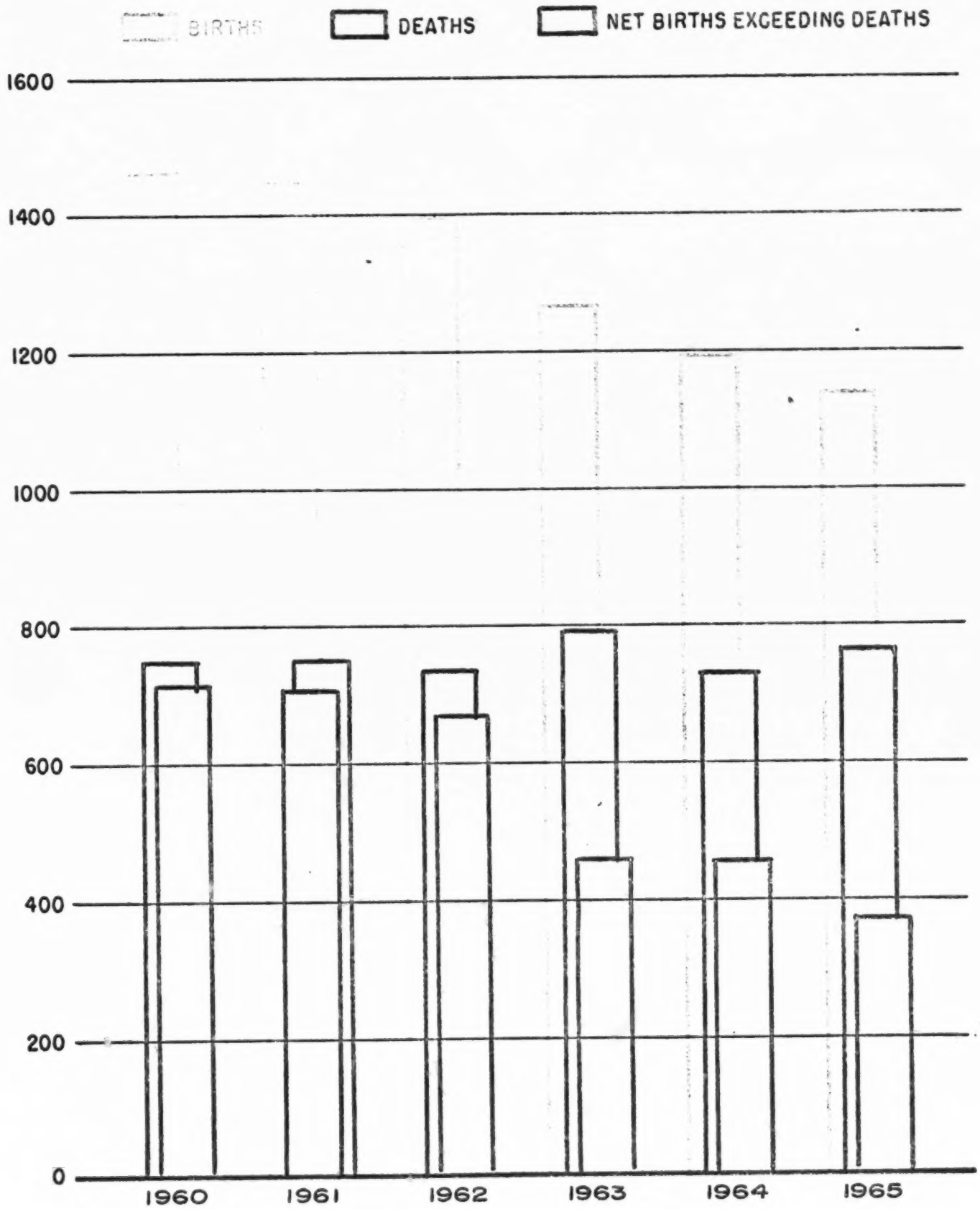
NOTE: Data extracted from annual State statistical reports on population.

CHART I

COMPARISON OF BIRTHS AND DEATHS
NORTHAMPTON COUNTY, PENNSYLVANIA



COMPARISON OF BIRTHS AND DEATHS
CITY OF BETHLEHEM, PENNSYLVANIA



Population studies of the Joint Planning Commission for Lehigh and Northampton Counties in November 1964 showed the population for each area in 1960 and the allocation to each area for 1965 projected by IDE Associates, Inc. These figures are reproduced in the following table.

Table 3
COMPARISON OF POPULATION DATA
City of Bethlehem and Northampton County, Pa.
1960 and 1965

Area	1960*	1965**	Estimated Net Growth 1960-65
Bethlehem (Lehigh County)	20,083	19,989	- 94
Bethlehem (Northampton County)	55,325	54,635	- 690
Total Bethlehem	75,408	74,624	- 784
Northampton County	201,412	206,918	5,506

* Actual
** Estimated

A comparison of this information with Table 2 reveals that, while Northampton County could have grown by 7,316 individuals due to an excess of births over deaths, it was estimated that only 5,506 people would be added to the 1960 population. These data imply a net out-migration of 1,810 people from the County.

A review of birth records for the area served by the technical school reveals a slight decrease in total numbers of births. This is shown in Table 4 and Chart III.

Table 4
LIVE BIRTHS TO RESIDENTS
Bethlehem-Hellertown/Lower Saucon-Northampton Area
1959 through 1965

Area	1959	1960	1961	1962	1963	1964	1965
Bethlehem Area							
Bethlehem City	1,588	1,461	1,453	1,397	1,264	1,191	1,139
Bethlehem Township	73	133	134	131	135	125	130
Hanover Township	33	45	50	35	58	56	46
Freemansburg Borough	20	30	28	19	23	23	22
Fountain Hill Borough	28	97	78	28	85	85	60
	1,742	1,766	1,743	1,610	1,565	1,480	1,397
Hellertown-Lower Saucon							
Hellertown	125	97	120	85	99	95	93
Lower Saucon Township	97	99	89	105	67	111	80
	222	196	209	190	166	206	173
Northampton Area							
Allen Township	27	30	16	22	25	22	25
Bath Borough	25	26	35	41	39	28	39
Chapmans Quarry	--	--	--	1	2	2	--
East Allen Township	26	26	38	28	38	23	40
Lehigh Township	78	99	90	99	91	105	92
Moore Township	51	62	79	79	81	82	90
Northampton Borough	168	171	188	141	149	142	116
	375	414	446	411	425	404	402
TOTALS	2,339	2,376	2,398	2,211	2,156	2,090	1,972

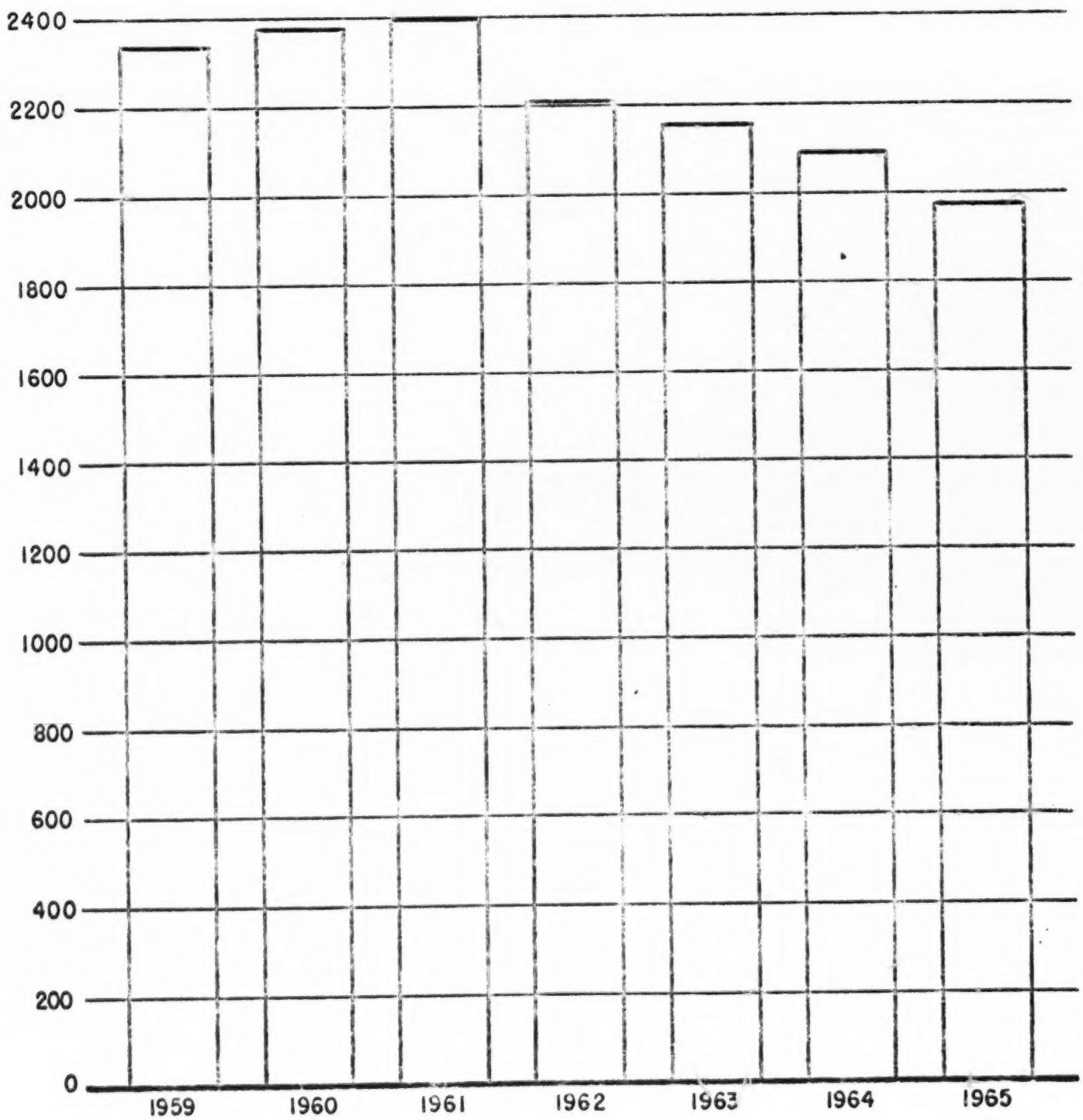
These figures for the City of Bethlehem do not agree in certain details with the projections of the Bethlehem City Planning Commission. The Bethlehem City Planning Commission indicates that, from 1960 through 1964, 363 more dwelling units were created than were destroyed. Since each dwelling unit typically accounts for 3.22 people, this would represent a gain of approximately 1,169 people rather than the loss of 784 estimated by the County planning group.

Actually, since there were 22,652 households in the City of Bethlehem in 1960, a change of less than a tenth of a person per household in the average number of

CHART III

BIRTHS IN AREA SERVED BY TECHNICAL SCHOOL

1959-1965



people per household could reconcile these data; this is possible in view of the decreasing number of births, which acts in the direction of reducing the population per household.

In view of the recent construction activity east of Route 512 and north of Easton Avenue, it seems likely that the population of the City of Bethlehem will continue to grow, although perhaps more slowly than it has in the past.

Similarly, the City of Bethlehem should have grown by 3,043 due to an excess of births over deaths. Instead, a loss of 784 was projected. This implies a net out-migration of 3,827 people.

Finally, comparing the City with the County shows that, since the County's loss due to migration is less than the City's loss, the portion of the County outside of the City had a net in-migration of 2,017 individuals.

General Population Change

A review of population changes since 1930 by school district areas is shown in Table 5 and Chart IV. Growth in the population of the City of Bethlehem far outweighed changes in other communities in its effect upon growth of the population of the area. It has been seen that growth in the City of Bethlehem has leveled off between 1960 and 1965, but growth in the other districts making up the area school district has proceeded rapidly.

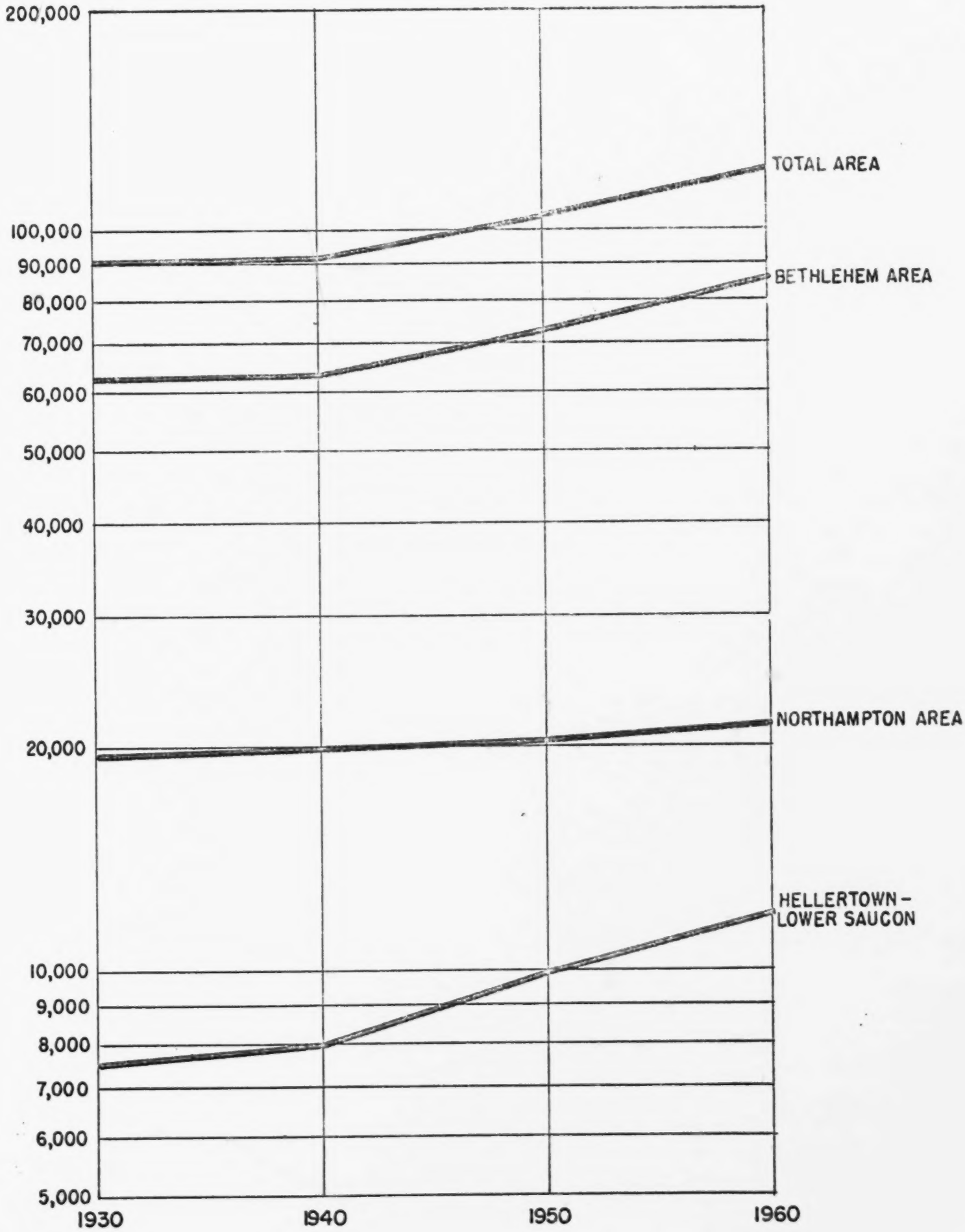
Table 5
POPULATION GROWTH BY SCHOOL DISTRICT AREA
1930 - 1960

Area	1930	1940	1950	1960	Per Cent Change 1950 - 1960
Bethlehem City*	57,892	58,490	66,340	75,408	+ 13.7
Bethlehem Township	2,980	2,950	3,940	6,439	+ 63.4
Freemansburg Borough	1,777	1,728	1,739	1,652	- 5.0
Hanover Township	526	585	891	1,932	+116.8
Bethlehem Area School District:	63,175	63,753	72,910	85,431	+ 17.2
Hellertown Borough*	3,851	4,031	5,435	6,716	+ 23.6
Lower Saucon Township*	3,709	3,907	4,506	5,536	+ 22.9
Hellertown-Lower Saucon:	7,560	7,938	9,941	12,252	+ 23.2
Allen Township	1,060	1,082	1,095	1,183	+ 8.0
Bath Borough	1,625	1,720	1,824	1,736	- 4.8
Chapmans Quarry	232	248	285	237	- 16.8
East Allen Township	1,404	1,229	1,275	1,538	+ 20.6
Lehigh Township	3,022	3,246	3,595	4,411	+ 22.7
Moore Township	2,140	2,407	2,725	3,373	+ 23.8
Northampton Borough	9,839	9,622	9,332	8,866	- 5.0
Northampton Area Schools	19,322	19,554	20,131	21,344	+ 6.0
Recapitulation:					
Bethlehem Area	63,175	63,753	72,910	85,431	+ 17.2
Hellertown-Lower Saucon	7,560	7,938	9,941	12,252	+ 23.2
Northampton Area	19,322	19,554	20,131	21,344	+ 6.0
TOTAL AREA:	90,057	91,245	102,982	119,027	+ 15.6

* Parts of Lower Saucon Township annexed to Bethlehem City in 1942 and to Hellertown Borough in 1941

CHART IV

POPULATION GROWTH BY SCHOOL DISTRICT AREA
1930-1960



In addition, the population is continuing to grow in other parts of the technical school area. A rough idea of the potential for growth may be obtained by examining the population density.

Table 6
POPULATION DENSITY BY SCHOOL DISTRICT AREA
1960

	Area in Square Miles	Population in 1960	Population Density per Square Mile
Bethlehem City	19.7	75,408	3,828
Bethlehem Township	14.8	6,439	435
Freemansburg Borough	0.8	1,652	2,065
Hanover Township	6.9	1,932	280
Fountain Hill Borough	0.8	5,428	6,785
Hellertown Borough	1.4	6,716	4,797
Lower Saucon Township	25.0	5,536	221
Allen Township	11.5	1,183	103
Bath Borough	0.9	1,736	1,929
Chapmans Quarry	0.5	237	474
East Allen Township	14.9	1,538	103
Lehigh Township	30.9	4,411	143
Moore Township	38.3	3,373	88
Northampton Borough	2.6	8,866	3,410

In the Bethlehem Area schools, the greatest potential for growth is in Bethlehem Township and Hanover Township. The new high school should tend to accelerate growth in Bethlehem Township. Lower Saucon has a greater potential population than has Hellertown. Allen, East Allen, Lehigh, and Moore Townships have the greatest potential impact on populations in the Northampton Area schools. Chapmans Quarry's population can grow, but, because of the borough's small size, this would not have the same eventual impact on the total as the other sections with their larger areas.

The Joint Planning Commission for Lehigh and Northampton Counties is optimistic about job opportunities in the area by 1975. They must judge, therefore, that in-migration will take place at a faster rate than would be revealed through vital statistics. Their latest (June 1966) population estimate for the two Counties for 1975 is 520,000, rather than the 491,275 which had been forecast in November, 1964.

Building permit records also may be indicative of the area's growth. For Northampton County, building permits in 1964 were double the number issued in 1960. Of course, not every building permit is used. The building permit record of several communities involved in this study is presented in Table 7.

Table 7
BUILDING PERMITS FOR RESIDENCES BY DWELLING UNITS
1960 through 1964

	Numbers of Units and Families per Unit									
	1960		1961		1962		1963		1964	
	No. Families		No. Families		No. Families		No. Families		No. Families	
Area	1 & 2	3+	1 & 2	3+	1 & 2	3+	1 & 2	3+	1 & 2	3+
Bath	6	0	6	0	2	0	3	0	1	0
Bethlehem City*	143	0	121	0	106	0	95	196	131	237**
Freemansburg	0	0	4	1	3	0	8	0	3	0
Hanover	50	1	74	0	90	0	144	0	147	0
Hellertown	17	2	11	0	14	0	11	0	10	1
Lower Saucon	22	0	36	0	37	1	34	0	42	0
Northampton	19	0	6	0	13	0	17	0	10	0

* During this same period, 666 dwelling units were razed in the City of Bethlehem

** Recent figures for 1965 list 160 one-family and 370 apartment units for City of Bethlehem, a continuation of the recent trend

In Lower Saucon Township, there were 41 permits for homes in 1959, 38 permits in 1962, and 101 permits between January 1 and August 30, 1965. This is a sharp increase and is indicative of growth potential for the area.

In summary, one sees continuous growth for the area. To some extent, this growth has been slowed by the fact that birth rates have been low. Had birth rates remained at 1959 levels, the population of the area would have grown rapidly. Continued job opportunities, particularly in the service trades; an improved network of highways as shown in the JPC Planner, Volume III, Number 1 (March 1966), issued by the Joint Planning Commission, Lehigh-Northampton Counties; and the availability of suitable land will continue to attract people to the area.

Of course, after July 1967, a new State law requires approval of the State Department of Health for individual sewage disposal systems on less than one acre of land. This will tend to increase plot sizes for new houses except in those areas which now have, or are installing, sewers.

School districts in the area will reflect these changes. Future enrollments are estimated later in this report.

Nonpublic Schools

Enrollments in local parochial schools are given in Table 8. In addition, a new 10-room parochial elementary school is being constructed in Colesville which will affect Lower Saucon, and a parochial elementary school in West Bethlehem at Saints Simon and Jude is being replaced by construction which will provide four additional classrooms.

These factors have been reflected in the projected elementary enrollments for the Bethlehem Area schools and for the Hellertown-Lower Saucon schools. However, it is likely that new parochial elementary facilities and possibly high school facilities will

Table 8

TOTAL ENROLLMENT IN NONPUBLIC SCHOOLS OF PUPILS RESIDING IN LOCAL SCHOOL DISTRICT AREAS ELEMENTARY AND SECONDARY GRADES, 1965-66

	ELEMENTARY GRADES									
Schools	K	1	2	3	4	5	6	7	8	Total
Holy Ghost	-	49	41	52	36	44	41	38	34	335
Holy Infancy	-	13	8	19	14	17	11	14	11	107
Moravian Preparatory	-	25	20	24	26	27	39	40	39	275
Our Lady of Pompeii	-	17	18	12	16	17	15	16	18	129
Sacred Heart	-	28	28	32	30	28	38	32	32	248
St. Anne	-	73	70	98	63	71	101	106	101	683
St. John Capistrano	-	37	43	30	28	36	25	35	23	308
St. Joseph	-	17	9	20	17	15	14	19	20	131
SS. Cyril and Methodius	-	41	33	31	29	38	24	36	31	292
SS. Simon and Jude	-	57	45	50	53	58	51	40	47	401
Notre Dame of Bethlehem	-	117	98	107	94	93	78	86	82	745
Our Lady of Perpetual Help	-	31	40	41	32	34	--	--	--	178
St. Ursula	-	50	48	47	42	57	47	36	59	386
St. Theresa	-	33	24	35	27	29	35	24	33	240
Blessed Virgin Mary	-	22	20	17	12	29	16	16	15	147
Our Lady of Hungary	-	76	74	85	76	74	81	54	80	600

	SECONDARY GRADES				
	9	10	11	12	Total
Bethlehem Catholic High School	386	301	196	111	994
Moravian Preparatory	40	34	29	27	130
Moravian Seminary	31	35	42	34	142
Notre Dame High School	176	150	181	176	683
St. Francis Academy	33	44	69	60	206

continue to be built as the area grows in population. While new parochial schools could affect public school enrollments, they would have relatively little effect on population projections for the area technical school. This is so because both public and parochial

pupils are eligible to obtain dual enrollment in the technical school. Therefore, the pupil who needs vocational or technical education will enroll in the area technical school whether or not he is presently enrolled in a public or a parochial school.

In projecting enrollments, it has generally been assumed that approximately the same percentage of pupils would enroll in parochial schools as at present. However, in Bethlehem, the public enrollments in the first eight grades have been reduced by 20 each to reflect the parochial elementary enlargement in West Bethlehem. In the Hellertown-Lower Saucon public schools, the elementary enrollments have been lowered by 40 in each grade to reflect construction of the new elementary school there.

Bethlehem Area School District Enrollments

The following table shows the grade-by-grade enrollments in the Bethlehem Public Schools. There has been a steady growth in total numbers. However, this growth appears to be due to a progression of larger classes through the grades. First grade enrollments for the past several years appear to have stabilized.

It is not anticipated that there will be substantial changes from grade-level survival experiences of the recent past. The enlargement of the new elementary parochial school is reflected in the projection for the first eight grades. These data have been projected as far as the 1975-76 school year for grades ten through twelve, with minor adjustments which reflect better holding power for the schools in grades eleven and twelve. Chart V shows in graphic form the enrollment pattern for grades ten through twelve in the Bethlehem Area School District.

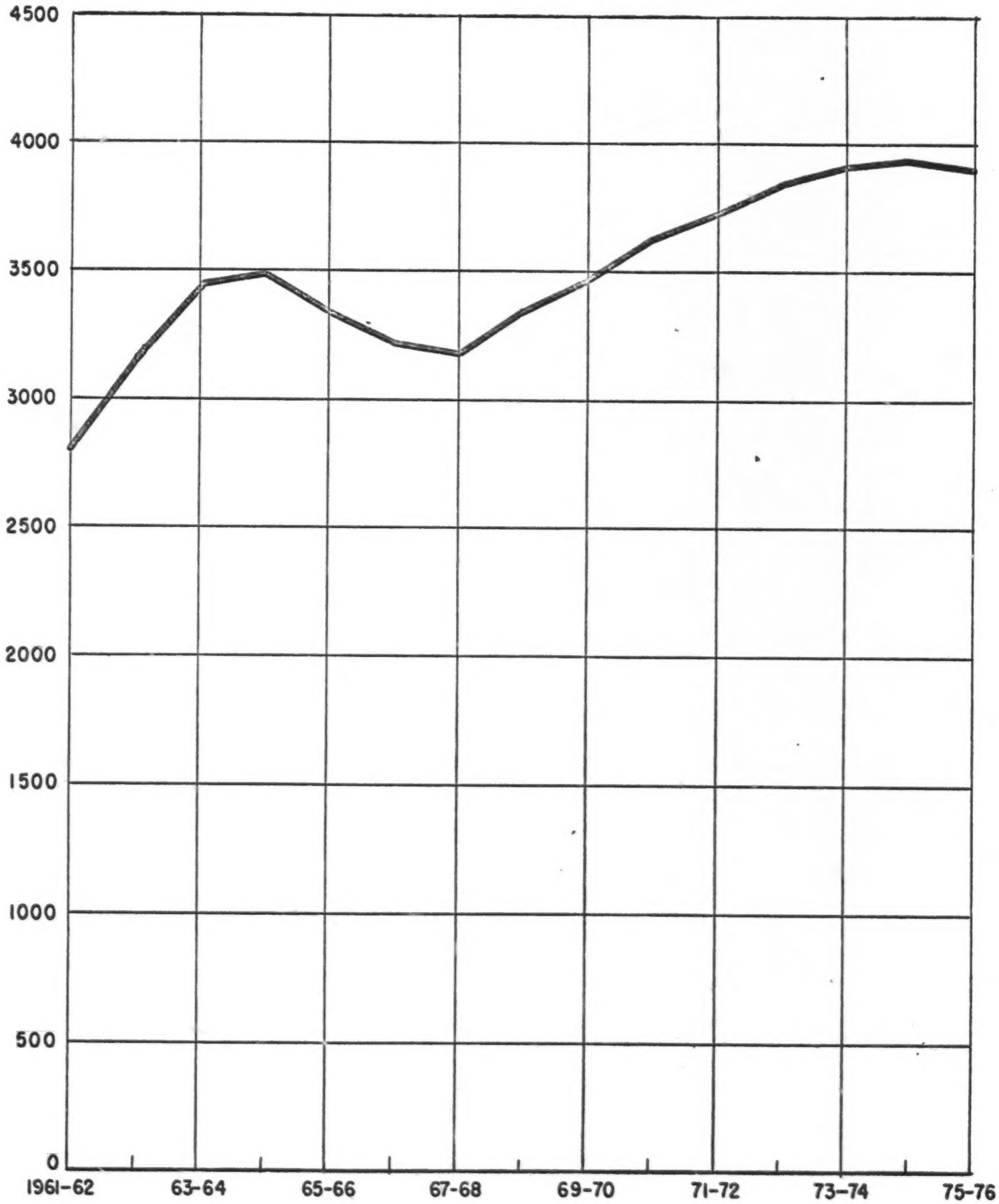
Table 9
ESTIMATED FUTURE ENROLLMENTS BY GRADES
Bethlehem Area School District
1961-62 through 1975-76

Year	K	1	2	3	4	5	6	7	8	9	10	11	12	K-6	7-9	10-12	K-12
1961-62	1,470	1,350	1,233	1,148	1,131	1,087	1,021	1,107	1,177	1,312	1,107	859	830	8,440	3,451	2,796	14,687
1962-63	1,577	1,329	1,257	1,205	1,164	1,081	1,066	1,030	1,101	1,342	1,299	1,042	795	8,679	3,473	3,136	15,288
1963-64	1,541	1,392	1,262	1,237	1,183	1,159	1,051	1,065	1,025	1,168	1,284	1,160	979	8,825	3,258	3,423	15,506
1964-65	1,540	1,387	1,315	1,229	1,242	1,162	1,120	1,067	1,072	1,078	1,175	1,211	1,098	8,995	3,217	3,484	15,696
1965-66	1,512	1,372	1,309	1,310	1,258	1,215	1,147	1,162	1,069	1,132	1,069	1,105	1,168	9,123	3,363	3,342	15,828
1966-67		1,341	1,270	1,276	1,303	1,213	1,171	1,161	1,154	1,122	1,132	1,016	1,072		3,437	3,220	
1967-68			1,259	1,257	1,289	1,277	1,188	1,207	1,173	1,233	1,122	1,075	986		3,613	3,183	
1968-69				1,246	1,270	1,263	1,251	1,224	1,219	1,253	1,233	1,066	1,043		3,696	3,342	
1969-70					1,259	1,244	1,237	1,289	1,236	1,301	1,253	1,171	1,034		3,826	3,458	
1970-71						1,233	1,219	1,274	1,302	1,319	1,301	1,190	1,136		3,895	3,627	
1971-72							1,208	1,256	1,287	1,388	1,319	1,236	1,154		3,931	3,709	
1972-73								1,245	1,269	1,372	1,388	1,253	1,199		3,886	3,840	
1973-74									1,258	1,353	1,372	1,319	1,215			3,906	
1974-75										1,342	1,353	1,303	1,279			3,935	
1975-76											1,342	1,285	1,264			3,891	

NOTE: Enrollment figures for the years 1961-62 through 1965-66 are actual.

CHART V

PUBLIC SCHOOL ENROLLMENTS
GRADES 10-12 TOTAL
BETHLEHEM AREA SCHOOL DISTRICT, PENNSYLVANIA



Hellertown-Lower Saucon School District Enrollments

The grade-by-grade enrollments for the past six years were studied. In contrast to the data for the Bethlehem Area Schools, the kindergarten enrollments were smaller than enrollments in first grade the following year. This appears to be caused by the fact that no transportation had been provided for kindergarten children by the school district. However, this policy was altered in the spring of 1966 and, as a result, kindergarten enrollments will probably rise by about 20 per cent. This change will not be accompanied by higher-than-normal first grade enrollments.

It is considered likely that the established pattern of grade-level survival will remain much the same as it has in the past up until 1970. Due to expected growth of the population of the area, it is anticipated that the rate of survival from 1970 through 1974 will be slightly higher than it has been. This will reflect growth in Lower Saucon due to its proximity to Bethlehem, the connecting Bethlehem speed route, and the availability of sewers. The construction of the new parochial elementary school is reflected in the figures for the first eight grades.

Detailed enrollment projections are shown in Table 10 and Chart VI.

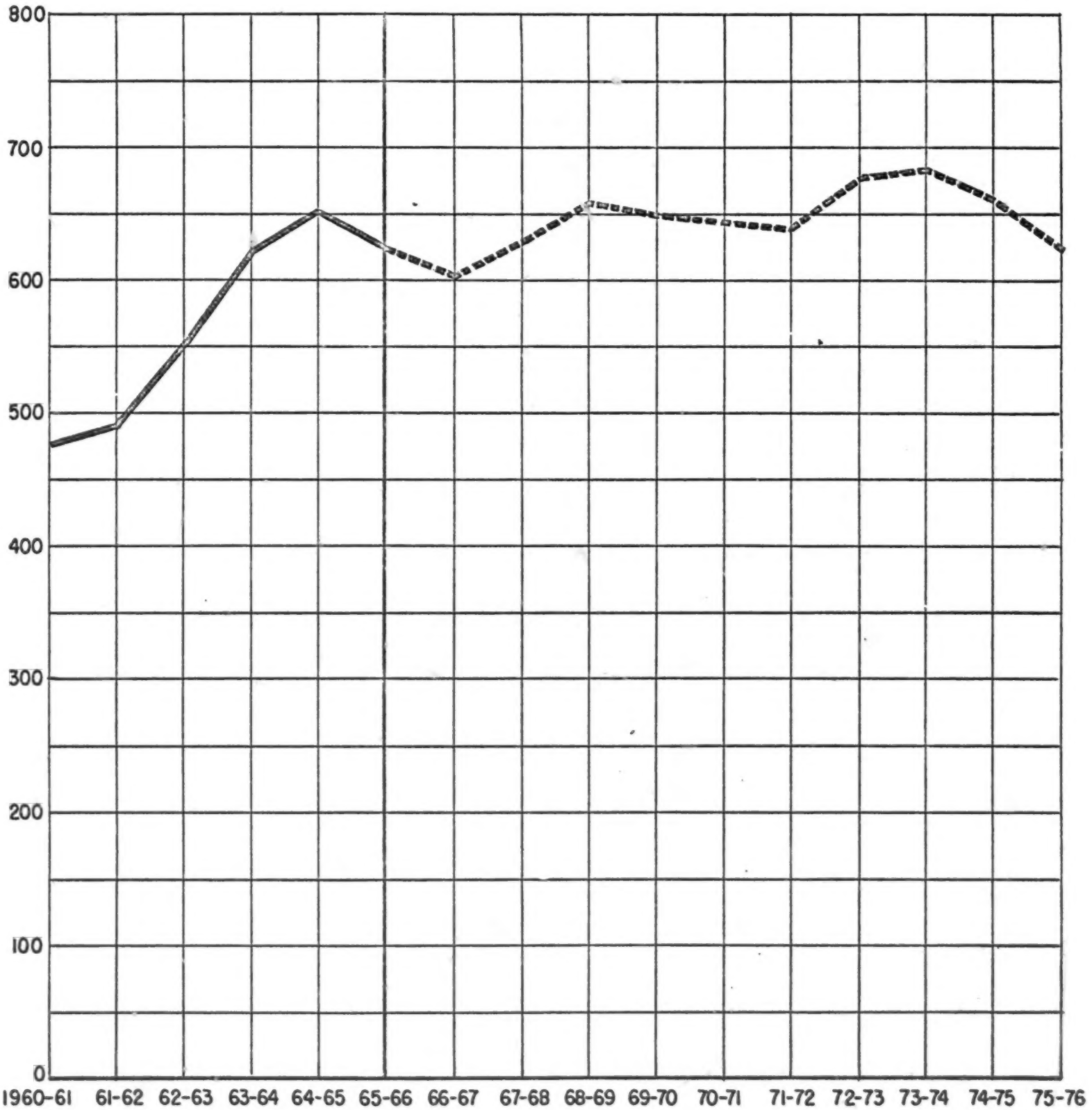
Table 10
ESTIMATED FUTURE ENROLLMENTS BY GRADES
Hellertown-Lower Saucon School District
1960-61 through 1975-76

Year	K	1	2	3	4	5	6	7	8	9	10	11	12	K-6	7-9	10-12	K-12
1960-61	171	208	236	228	192	201	204	231	230	217	147	170	162	1,440	678	479	2,597
1961-62	166	223	200	239	215	192	197	215	238	240	192	145	156	1,432	693	493	2,618
1962-63	179	230	212	196	243	210	201	207	217	241	237	183	136	1,471	665	556	2,692
1963-64	179	233	220	220	201	251	215	202	205	226	225	224	180	1,519	633	629	2,781
1964-65	171	217	231	228	213	208	242	225	213	232	211	226	214	1,510	670	651	2,831
1965-66	169	192	204	225	221	206	198	241	216	220	216	194	213	1,415	677	623	2,715
1966-67		186	186	204	223	221	204	202	241	229	213	207	188		672	608	
1967-68			140	146	162	183	179	168	162	255	222	204	201		585	627	
1968-69				140	144	162	181	183	168	214	247	213	198		565	658	
1969-70					138	144	160	185	183	220	208	237	207		588	652	
1970-71						140	144	166	187	239	216	202	232		592	650	
1971-72							140	150	168	243	234	210	198		561	642	
1972-73								147	154	225	241	229	208		526	678	
1973-74									151	210	223	236	227			686	
1974-75										206	208	219	234			661	
1975-76											204	204	217			625	

NOTE: Enrollment figures for the years 1960-61 through 1965-66 are actual.

PAST ENROLLMENTS AND ENROLLMENT PROJECTIONS
GRADES 10-12

HELLERTOWN-LOWER SAUCON SCHOOL DISTRICT



Northampton Area School District Enrollments

Enrollments in the Northampton Area schools have been rising substantially. At the present time, the district is sparsely settled. Although the one-acre requirement for sanitary disposal will cause some rise in land costs with respect to new homes, tremendous amounts of easily developable land are located in the district. With a favorable location and the possibility of improved transportation links to Allentown and Bethlehem, there is every reason to expect continued growth.

Detailed enrollment projections are contained in Table 11 and Chart VII. The projections indicate a 50-per-cent increase in the population of grades ten through twelve between 1965-66 and 1975-76.

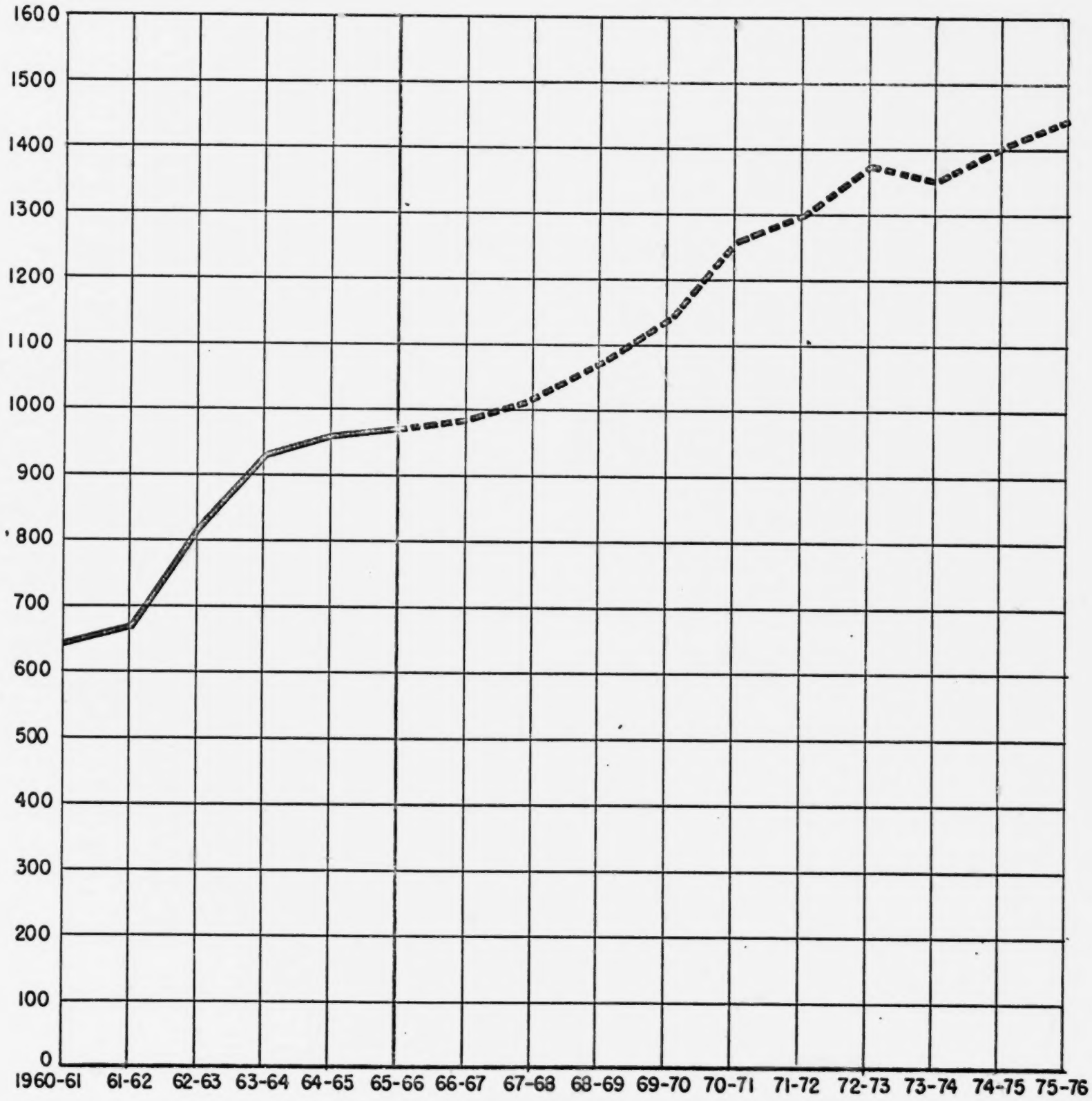
Table 11
ESTIMATED FUTURE ENROLLMENTS BY GRADES
Northampton Area School District
1959-60 through 1975-76

Year	K	1	2	3	4	5	6	7	8	9	10	11	12	K-6	7-9	10-12	K-12
1959-60	141	343	305	292	266	278	302	348	265	258	229	216	226	1,927	871	671	3,469
1960-61	134	352	329	288	285	266	274	313	333	305	229	202	207	1,928	951	638	3,517
1961-62	130	343	331	319	272	290	259	284	308	368	274	211	179	1,944	960	664	3,568
1962-63	149	374	323	330	311	276	290	288	277	364	351	268	191	2,053	929	810	3,792
1963-64	286	380	332	339	331	309	284	318	279	326	348	332	247	2,261	923	927	4,111
1964-65	307	353	369	320	358	331	306	309	313	343	312	327	316	2,344	965	955	4,264
1965-66	345	361	331	370	320	362	333	347	302	356	342	313	313	2,422	1,005	968	4,395
1966-67		414	343	331	377	323	366	370	340	356	352	332	300		1,066	984	
1967-68			393	343	338	381	326	406	363	401	352	341	319		1,170	1,012	
1968-69				393	350	341	385	362	398	428	397	341	327		1,188	1,065	
1969-70					401	354	344	427	355	470	424	385	327		1,252	1,136	
1970-71						409	361	385	423	422	470	416	373		1,230	1,259	
1971-72							417	404	381	503	422	461	404		1,288	1,287	
1972-73								467	400	453	503	414	447		1,320	1,364	
1973-74									462	476	453	493	402			1,348	
1974-75										550	476	444	478			1,398	
1975-76											550	466	431			1,447	

NOTE: Enrollment figures for the years 1959-60 through 1965-66 are actual.

CHART VII

PAST ENROLLMENTS AND ENROLLMENT PROJECTIONS
GRADES 10-12
NORTHAMPTON AREA SCHOOLS



Technical and Vocational Enrollments

The area technical school grew out of the existence of the Bethlehem Area Vocational and Technical School. Before the formation of the area school, pupils from Hellertown-Lower Saucon and the Northampton Area schools were sent to the vocational school on a tuition basis. This meant that they were enrolled full-time at the Liberty High School and ceased to be part of their local high school. This program had only limited appeal for these young people.

As a result of the formation of the area technical school in 1965, attendance at the technical school involved only half a day, with the other half spent at the local high school. This arrangement seems to appeal to the pupils. As a result, enrollments have risen sharply.

The principal's report to the superintendent dated October 18, 1965, showed the following enrollments:

Trade and industrial	532 pupils
Technical	156 "
Distributive education	27 "
Total of	715 pupils

The total included 56 pupils from the Northampton Area plus four full-time tuition pupils. There were 25 pupils from the Hellertown-Lower Saucon schools, plus six full-time tuition pupils.

The enrollment data for 1966-67 shows a total of 877 enrolled, of whom 131 are from Northampton and 60 from Hellertown-Lower Saucon. These data are set forth in Table 12 which follows.

Table 12
AREA TECHNICAL SCHOOL ENROLLMENTS
1965-66 and 1966-67

Year	Sending District	Enrollments: Public Schools Grades 10-12	Area Technical School No.	Area Technical School % P.S. Total
1965-66	Bethlehem Area	3,342	624	19
	Hellertown-Lower Saucon	623	31	5
	Northampton Area	968	60	6
		4,933	715	14
1966-67	Bethlehem Area	3,220	686	21
	Hellertown-Lower Saucon	608	60	10
	Northampton Area	984	131	13
		4,812	877	18

Projecting Enrollments for the Area Technical School

The results of a study being made of post-high-school occupational experiences of 10,000 vocational and 3,000 academic graduates from 1,000 high schools in 38 states* indicates the following:

1. Vocational graduates obtain their first job after graduation much more quickly than do academic graduates; the average time to get a first full-time job for vocational graduates is less than six weeks

2. Vocational graduates enjoy substantially greater employment security than do academic graduates without college education

3. There is very little mobility among vocational graduates; less than 3 per cent obtained a first full-time job by moving to another city; and 11 years after graduation, 87 per cent still reside and work in the city in which they went to school

* "The Process and Product of High School Level Trade and Industrial Vocational Education in the United States," American Institute for Research, Pittsburgh, Pa. 1966.

4. A comparison of vocational and academic graduates without a college education reveals no difference in conversational interests, leisure-time activities, or affiliation with community organizations

It also is important not to overlook the growing role of women in the labor force. One third of the total labor force is made up of women. Half of the women between the ages of 35 and 45 work part- or full-time.

As these facts become more widely appreciated, it seems likely that vocational enrollments will continue to grow. It is not uncommon for 15 per cent of the pupils in grades ten through twelve to be enrolled in trade and industrial education programs. As the area technical school is near the center of the Allentown-Bethlehem-Easton industrial complex, it seems reasonable to assume heavier enrollments in trade and industrial programs than might be typical of schools where fewer potential job opportunities present themselves.

An examination of the Bethlehem Area public school enrollments reveals growth to a point exceeding 21 per cent of the senior high school enrollment. Growth has been slow because of two factors: the lack of space for new programs or the expansion of existing programs, and the comparatively small enrollment of girls in the vocational and technical programs. Only 4 per cent of the technical students and only about one in eight of the trade and industrial (including distributive education) pupils are girls. If facilities and programs were to be provided, it is very likely that the number of girls enrolled in technical and vocational courses would rise considerably. Therefore, it does not seem unreasonable to assume that about 25 per cent of the Bethlehem Area public senior high school pupils might be enrolled in the area technical school. This is but a modest advance from existing percentages.

The Hellertown-Lower Saucon enrollments in the area technical school have doubled in one year, moving from 5 per cent of the public senior high school pupils to 10 per cent for 1966-67. The 1966-67 figure is about three times as large as it was in 1964-65, before the formation of the area technical school. It also is likely that more seniors will be involved as the area technical school enters its third year of operation. A conservative estimate of area technical school enrollments for Hellertown-Lower Saucon places them at 15 per cent of the public senior high school population.

Enrollments in the area technical school from the Northampton Area schools have risen sharply - from 60 in 1965-66 to 131 in 1966-67. In 1965-66, 6 per cent of the high school pupils enrolled in the area technical school; in 1966-67, this figure had risen to 13 per cent. Table 13 shows the comparatively small number of girls involved in 1966-67. This table also shows the considerable interest of tenth grade boys. If additional offerings for girls were developed to stimulate their enrollment along with the very large enrollment of tenth grade boys, it is again conservative to estimate future Northampton enrollments in the area technical school at about 20 per cent of the senior high school enrollments.

It is more difficult to estimate future area technical school enrollments from parochial schools. The area has had very few such enrollments in the past. However, it seems quite clear that parochial pupils are entitled to dual enrollment in the area technical school, just as are public school pupils, based on their residence in the sending area. It is anticipated that area technical school enrollments from parochial high schools will range between 5 and 10 per cent of the enrollment in grades ten through twelve in the Bethlehem Area. Enrollments will probably start slowly at first and eventually reach about 125 in number as space and programs are expanded.

Table 13
AREA TECHNICAL SCHOOL ENROLLMENTS BY GRADE AND SEX
FOR PUBLIC SCHOOL SENDING DISTRICTS
1966-67

Area	Grade	Boys	Girls	Total
Bethlehem	10	210	11	221
	11	222	8	230
	12	188	47	235
		620	66	686
Hellertown-Lower Saucon	10	17	1	18
	11	17	6	23
	12	12	7	19
		46	14	60
Northampton	10	68	1	69
	11	29	1	30
	12	18	14	32
		115	16	131

Enrollment projections for the public schools anticipate that parochial enrollments would continue to take the same percentage of the total number of pupils as at present. In the face of enrollment growth, this assumes continued growth of parochial school enrollments also. Parochial enrollments in the area technical school are included in the table which follows. This table, showing anticipated area technical school enrollments, is based on the assumption that space will be made available to expand the offerings. Obviously, if no space is available, pupils will have to be turned away and the school enrollment will be limited. It is anticipated that growth will proceed gradually for two years until expanded facilities may be provided.

Table 14
ENROLLMENT PROJECTIONS FOR AREA TECHNICAL SCHOOL
1966-67 through 1975-76

		Enrollments		
		Public Schools	Area Technical School	
Year	Sending District	Grades 10-12	No.	% P.S. Total
1966-67	Bethlehem Area	3,220	686	21
	Hellertown-Lower Saucon	608	60	10
	Northampton Area	984	131	13
			877	
1967-68	Bethlehem Area	3,183	732	23
	Hellertown-Lower Saucon	627	75	12
	Northampton Area	1,012	172	17
	Parochial Schools	--	20	-
			999	
1968-69	Bethlehem Area	3,342	836	25
	Hellertown-Lower Saucon	658	99	15
	Northampton Area	1,065	213	20
	Parochial Schools	--	30	-
			1,178	
1969-70	Bethlehem Area	3,458	865	25
	Hellertown-Lower Saucon	652	98	15
	Northampton Area	1,136	227	20
	Parochial Schools	--	50	-
			1,240	
1970-71	Bethlehem Area	3,627	907	25
	Hellertown-Lower Saucon	650	98	15
	Northampton Area	1,259	252	20
	Parochial Schools	--	75	-
			1,332	
1971-72	Bethlehem Area	3,709	927	25
	Hellertown-Lower Saucon	642	96	15
	Northampton Area	1,287	257	20
	Parochial Schools	--	90	-
			1,370	

Table 14 - continued

Year	Sending District	Enrollments: Public Schools Grades 10-12	Area Technical School No.	Area Technical School % P.S. Total
1972-73	Bethlehem Area	3,840	960	25
	Hellertown-Lower Saucon	678	102	15
	Northampton Area	1,364	273	20
	Parochial Schools	--	110	-
			1,445	
1973-74	Bethlehem Area	3,906	977	25
	Hellertown-Lower Saucon	686	103	15
	Northampton Area	1,348	270	20
	Parochial Schools	--	120	-
			1,470	
1974-75	Bethlehem Area	3,935	984	25
	Hellertown-Lower Saucon	661	99	15
	Northampton Area	1,398	280	20
	Parochial Schools	--	125	-
			1,488	
1975-76	Bethlehem Area	3,891	973	25
	Hellertown-Lower Saucon	625	94	15
	Northampton Area	1,447	290	20
	Parochial Schools	--	125	-
			1,482	

Based on these calculations, the area technical school should be able to educate 1,480 pupils. In order to do this, it is recommended that the school be designed to hold a maximum of 1,480 students if each and every course offering were to be fully subscribed.

Evening Shop Program

A shop program is offered at the technical school during the evening hours. The most recent enrollment total was 976. Of course, not all of these people appear at school in the same evening; however, the substantial size of this program indicates the substantial day and evening use of the technical school by residents of the area.

PROGRAM OFFERINGS

During the 1965-66 school year, there were 16 program offerings. These offerings and the enrollment in each are listed in Table 15.

Table 15
COURSE OFFERINGS AND ENROLLMENTS, AREA TECHNICAL SCHOOL
1965-66

Courses		No. Enrolled	Grades in which Offered
Trade & Industrial	Auto Body	25	11,12
	Auto Mechanics	75	10-12
	Building Trades, Construction	26	10-12
	Building Trades, Metal	35	10-12
	Commercial Art	44	10-12
	Drafting	77	10-12
	Electricity	66	10-12
	Machine Shop	67	10-12
	Printing	38	10-12
	Welding	36	10-12
	Woodworking	43	10-12
		532	
Technical	Civil Technology	46	10-12
	Electrical Technology	64	10-12
	Mechanical Production	18	10-12
	Metallurgy	28	10-12
		156	
Other	Distributive Education	27	12
	TOTAL ENROLLMENTS:	715	

The twenty course offerings for 1966-67 are presented in Table 16. A review of this table indicates the enrollment status at this point in time. Additional enrollments or changes in enrollment may alter some of these figures by the time school resumes in the fall of 1966.

Table 16
COURSE OFFERINGS AND ENROLLMENTS, AREA TECHNICAL SCHOOL
1966-67

Courses		No. Enrolled	Grades in which Offered
Trade & Industrial	Appliance Repair	2	12
	Auto Body	29	11,12
	Auto Mechanics	79	10-12
	Building Trades, Construction	41	10-12
	Building Trades, Metal	38	10-12
	Commercial Art	48	10-12
	Drafting	102	10-12
	Electrical	81	10-12
	Food service	8	11,12
	Machine	79	10-12
	Printing	39	10-12
	Welding	46	10-12
	Woodworking	40	10-12
		632	
Technical	Civil Technology	46	10-12
	Electrical Technology	59	10-12
	Mechanical Production	33	10-12
	Metallurgy	28	10-12
		166	
Other	Distributive Education	37	12
	Data Processing	25	12
	Medical and Dental: Office Assistant	27	12
		89	
	TOTAL ENROLLMENTS:	887	

In order to meet the vocational and technical needs of young people in a period of expanding enrollments, it is proposed that some changes and additions to the offerings be made.

Planning forecasts for the area indicate greater diversification of occupations and a greater emphasis upon the service occupations. This is reflected in the recommendations given here. In addition, the building trades construction offering could be expanded to include full programs in the trowel trades and carpentry.

Food service eventually should be developed as a three-year program. Distributive education is sufficiently complex to warrant a two-year program starting in the eleventh grade. Additions to the present program for girls are imperative. Programs which have wide appeal to girls, are socially useful, and customarily afford ready employment include:

Cosmetology	Grades 11 and 12
Practical Nursing	Grade 12

Other suggested additions include the following:

Automotive Technician	Grades 10-12
Building Maintenance	Grades 11 & 12, or Grade 12
Heating, Ventilating, and Air-conditioning	Grades 11 and 12
Instrumentation	Grades 11 and 12

In order to accommodate up to 1,480 pupils in the day-time program at the area technical school, the following spaces are needed for the program.

Table 17
SPACES REQUIRED FOR AREA TECHNICAL SCHOOL PROGRAM

Program	Capacity	No.	Square Feet: Shop Area	Square Feet: Total Area
TRADE & INDUSTRY				
Appliance Repair	40	1	1,500	1,500
Auto Body	40	1	3,300	3,400*
Auto Mechanics	80	2	3,000	6,200*
Building Maintenance	40	1	2,100	2,100
Building Trades, Carpentry	40	1	3,000	3,100*
Building Trades, Trowel	40	1	2,700	2,700
Commercial Art	40	1	1,500	1,500
Cosmetology	40	1	2,750	2,750
Data Processing	40	1	1,800	1,800
Diesel Mechanics	40	1	3,600	3,700*
Distributive Education	80	2	1,600)	
Classroom			850)	
Sales laboratory			850)	
Store			850)	4,150
Drafting	120	3	1,500	4,500
Electrical	40	1	2,700	2,700
Electronics	40	1	1,500	1,500
Food Preparation Kitchen	40	1	2,000**)	
Service			1,000)	3,000
Heating, Cooling, and Ventilating	40	1	2,400***	2,400

* Shower and drying space included
** State suggests additions to kitchen depending upon size of school
*** State recommends 2,100 square feet for Heating and Ventilating alone

Program	Capacity	No.	Square Feet Shop Area	Square Feet Total Area
TRADE & INDUSTRY (continued)				
Instrumentation	40	1	1,800	1,800
Machine	120	3	3,000	9,000
Office Assistant, Medical & Dental	40	1	1,800	1,800
Practical Nursing	40	2	2,700	2,700
Printing, Letterpress & Offset	80	2	5,400	5,400
Sheet Metal	40	1	2,400	2,400
Welding	40	1	1,800	1,800
Woodworking, Cabinet & Mill	40	1	2,700	2,700
Total Trade & Industry:	1,240	32		74,600
TECHNICAL				
Auto Technology	40	1	3,000	3,100*
Civil Technology	40	1	1,500	1,500
Electrical Technology	80	2	1,800	3,600
Mechanical Production	40	1	1,800	1,800
Metallurgy	40	1	1,800	1,800
Total Technical:	240	6		11,800
Total Trade, Industry, and Technical:	1,480	40		86,400
OTHER				
Theory Rooms, at 800 sq. ft.		11	800	8,800
Technical & vocational library				
Reading room for 100			3,500)	
Library office			150)	
Library workroom			300)	
Magazines and periodicals			850)	
Professional references and teachers' workroom for preparation of audio-visual materials			600)	5,400

* Shower and drying space included

Program	Capacity	No.	Square Feet: Shop Area	Square Feet: Total Area
OTHER (continued)				
Administration				
Director		1	250)	
Assistant Director		1	200)	
Counselors and placement officers, at 150 sq. ft.		3	450)	
Conference room		1	400)	
General office & waiting space		1	500)	1,800
TOTAL NET AREA:				102,400
TOTAL ESTIMATED GROSS AREA:				138,000

NOTE: The difference between total net area and total estimated gross area represents allowance for corridors, stairways, toilets, boiler room, custodial storage, general storage, and wall thicknesses.

For purposes of comparison, the present shop areas and capacities are listed in Table 18 below.

Table 18
PRESENT SHOP AREAS AT LIBERTY SCHOOL

Program	Capacity: Present	Capacity: Add'l Needed	Square Feet: Present Area	Square Feet: Add'l Space Needed
TRADE & INDUSTRY				
Appliance Repair	40	-	800	700
Auto Body	30	10	2,400	1,000
Auto Mechanics	30	50	2,400	3,800
Building Trades, Carpentry	40	-	2,300	800
Commercial Art	40	-	1,400	100
Data Processing	30	10	1,500	300

Program	Capacity Present	Capacity Add'l Needed	Square Feet Present Area	Square Feet Add'l Space Needed
TRADE & INDUSTRY (continued)				
Distributive Education	40	40	2,000	2,150
Drafting	120	-	4,500	--
Electricity & Electronics	80	-	6,200	(-2,000)
Food Service	20	20	1,700	1,300
Machine	80	40	7,400	1,600
Office Assistant, Medical & Dental	40	-	1,700	100
Printing	35	45	2,400	3,000
Sheet Metal	40	-	2,300	100
Welding	40	-	1,950	(-150)
Woodworking	40	-	2,700	--
	745	215	43,650	12,800
TECHNICAL				
Civil Technology	40	-	--	1,500
Electrical Technology	40	40	--	3,600
Mechanical Production	30	10	--	1,800
Metallurgy	20	20	--	1,800
	130	70	--	8,700
PROGRAMS NOT OFFERED AT PRESENT				
Building Maintenance	-	40	--	2,100
Building Trades, Trowel	-	40	--	2,700
Cosmetology	-	40	--	2,750
Diesel Mechanics	-	40	--	3,700
Heating, Cooling, Ventilating	-	40	--	2,400
Instrumentation	-	40	--	1,800
Practical Nursing	-	40	--	2,700
Auto Technology	-	40	--	3,100
	-	320	--	21,250
TOTALS:	875	605	43,650	42,750

SUMMARY, PRESENT SHOP AREAS AT LIBERTY SCHOOL

Present pupil capacity	875	
Pupils needing additional space	605	
Total Desirable Number of Students:		1,480
	Square Feet	
Total present shop areas	43,650	
Additional space needed in shops only to meet State standards for 1,480 pupils	42,750	
Total space required to accommodate 1,480 pupils:		86,400

Thus it is clear that the present shop area is roughly half of that which is necessary to accommodate 1,480 pupils.

A review of the present spaces indicates a capacity to offer programs to approximately 875 pupils. However, there are a number of shortcomings in the building at this capacity.

There are really no separate spaces for the technical program. Courses in this program are "borrowing" space in the other shops. Technical programs should have spaces of their own with equipment geared to their advanced character.

The automotive facilities are very limited in size: The auto mechanics shop is wholly inadequate and the body shop is too small. The carpentry shop also is small, which tends to cause some crowding of machines and provides insufficient clear space to develop large projects. The electrical shops and machine shops are ample in size.

The school lacks a good library. The various trade, industrial, and technical books and magazines should be collected in one spot for use by day pupils as well as by evening students, from all over the area served. To duplicate these materials in three or four regular school libraries would be wasteful. It also would be especially difficult for parochial pupils, for whom there would be a problem of availability of these resources.

Most of the shops recommended to handle the growing technical and vocational school population would not fit into existing classroom spaces with their limited corridor-wall to exterior-wall width. Obviously, long narrow shops are inefficient and difficult to supervise. In fact, no shop contemplated for this school should be over twice as long as it is wide if it is to function at all well.

IV

POSSIBLE SOLUTIONS AND RECOMMENDATIONS

Since the present building can accommodate 875 pupils only with some forcing, roughly double the present amount of space must be developed for the additional 605 pupils. There are four possible ways to provide sufficient space for the programs needed:

1. To enlarge the present facility through additional structure or structures at the Liberty School site

2. To construct an addition near another school site, such as the Freedom School

3. To construct an entirely new technical and vocational school at the Freedom School site

4. To construct a new technical and vocational school at a site outside of Bethlehem and away from the existing high school

Each of these possibilities has certain advantages and disadvantages.

Additions at Liberty School

Conversions of the present structure at Liberty School would not be feasible because of the limited corridor-window width mentioned earlier. Obviously, the only way to develop more space would be to expand outward, or upward, or both. Expansion upward is not recommended because many of the proposed shops need convenient access from street level. This is particularly important when moving bulky supplies or equipment in or out. Also, extending an existing structure upward has often proved to be quite expensive. About

the only area that might be considered for this procedure is the space over the welding shop. In addition, there is the State's recommendation for single-story shop buildings. Expansion outward presents real problems. There is no one area sufficiently large for new construction which could accept the proposed spaces as a unified whole. It would mean adding to the front and the rear of the building or else eliminating the football field.

Since Liberty High School is on a small site to begin with, taking further space on the site for buildings is unwise. Parking already is a problem, particularly during evening hours. It should also be recognized that, while the enrollment projections have been carried through 1975-76, this is only a 10-year period. As the area continues to grow, it is likely that the technical and vocational school will need to grow with it. This will not be possible at the Liberty School site. For the good of both the educational program at Liberty High School and those at the area technical school, this probably is the least desirable solution to the problems of overcrowding.

Addition Elsewhere

A second possibility is to construct an addition elsewhere, possibly at the new Freedom School, and to retain the present facilities at Liberty High School. This, however, will lead to a number of problems with regard to bus transportation of pupils. Many extra trips between the buildings will be needed. In addition, the administration of two building complexes adds to staffing problems. Secretarial services, guidance counselors, and administrators will be needed at both locations. There would be greater difficulty in sharing the use of supplies and equipment. Perhaps most important, the school would come

to lack an identity of its own. If anything, this might tend to discourage enrollments from the Hellertown-Lower Saucon and Northampton Areas.

Constructing a New Building Near the Freedom School Site

From the instructional point of view, the construction of a new building near the Freedom School is the best solution to the problem of increasing enrollments. This plan would permit the development of a unified structure having all spaces of the right size and shape for the technical and vocational programs and permitting the location of shops with inter-related programs adjacent to one another. It also would permit organization of the school under a unified administration. Thus the school would have an identity of its own, free from any association with either the Liberty or Freedom Schools.

The building could be located close enough to Freedom School so that pupils from that school could walk to the vocational-technical school, which would help to reduce transportation costs. A further advantage of locating the school on a new and more adequate site is the assurance of the potential for future expansion. The area served by the technical school seems destined to grow steadily. With an increasing population will come increasing space demands upon vocational and technical education.

Constructing a New Building at a Site Outside of Bethlehem

While the proposition of a school located away from Bethlehem enjoys some of the advantages of the preceding one, it presents a transportation problem. Obviously, transportation is simplified if the vocational and technical school is located adjacent to one

of the major senior high schools in the area. This is difficult to do at either Northampton or Hellertown-Lower Saucon and is now a serious problem at Liberty High School. The technical school should be located relatively close to the center of its student population. If a sizable number of its students can walk to vocational school from their regular high school, transportation problems and costs can be reduced.

Recommendation

Since the present technical and vocational school is too small for the expanding pupil population which it must serve and because of limitations at the Liberty School site, the best solution for the educational welfare of students in this program is to construct a new facility at the Freedom School site. Enough land should be provided to permit parking, bus loading, and room for future expansion. Since physical education programs will be handled at the sending schools, 30 acres should be sufficient.

This recommendation provides for a technical and vocational school which will offer improved technical facilities, accommodations for more pupils, a greater variety of programs, and more opportunities in vocational education for girls. It will meet the enrollment needs of the next ten years and can be constructed and located so as to provide for future expansion and development.

V

FINANCING

The inevitable question whenever any additions to buildings or new construction are contemplated is "What will it cost?" The answer to this question is never determined in complete detail until the building or addition is actually constructed and the last bill is paid. However, out of past experience with school buildings and assuming typical costs for usual materials and fixed equipment, cost approximations may be made.

Cost Analysis

Using the format of State Form VE-3A and conditions prescribed by the Pennsylvania Department of Public Instruction, a cost analysis was developed as follows.

AREA VOCATIONAL-TECHNICAL SCHOOL BUILDING
REIMBURSABLE PERCENTAGE & ANNUAL AMORTIZATION RENTAL

A General Information

Estimated area of building - square feet	138,000
Number of shop-laboratories	37
Pupil capacity	1,480
Pupil rated capacity	1,237
Amortization - number of years	20
Interest rate	3%

B Building Construction and Other Costs

1.	Structure costs @ $20 per square foot		$2,760,000
2.	Costs other than structure		1,240,000
	a. Site acquisition (25 acres)	$ 50,000	
	b. Site development	60,000	
	c. Machinery, apparatus, equipment and furniture	860,000	
	d. Architects' fees	170,000	
	e. Contingencies and other expenses	100,000	

C	Total Construction Cost and Bond Issue to Finance	$4,000,000.00
D	Structure Construction Cost and Interest	
	1. Structure construction cost	2,760,000.00
	2. Annual payment to amortize $1,000 over 20 years	67.22
	3. Annual amortization rental	185,527.20
	4. Total structure amortization cost for 20 years	3,710,544.00
E	Maximum Reimbursable Amortization Cost Based on Pupil Rated Capacity	
	1,237 pupil rated capacity x $3,000	3,711,000.00
F	Structure Cost Reimbursable Potential or Percentage	
	Item "E" divided by Item D4	100%
G	Costs Other Than Structure and Interest (fully reimbursable)	
	1. Reimbursable costs other than structure	1,240,000.00
	2. Annual payment to amortize over 20 years	67.22
	3. Annual amortization rental	83,352.80
	4. Total amortization cost for 20 years	1,667,056.00
H	Total Project Annual Amortization Rental for 20 Years	
	Items D3 plus G3	268,880.00

TOTAL PROJECT REIMBURSEMENT PERCENTAGE

I	Total Project Amortization Cost Over 20 Years	
	Items D4 plus G4	5,377,600.00
J	Maximum Approved Reimbursable Amortization Cost	
	Items E plus G4	5,378,056.00
K	Total Project Reimbursement Percentage	
	Item J divided by Item I	100%

Table 19
CALCULATION OF STATE, FEDERAL, AND DISTRICT SHARES

School District	1965 Market Value $	% Total Market Value	Sch. Distr. Share of 4,000,000 $	Reimbursement % Prelim. at 90%	CARF(1)	Prelim. State Reimbursement	Federal Allocation $	Sch. Distr. Share(4) of 3,342,567* $	State Reimbursement(5) $	Cost to Local District $
A	B	C	D	E	F	G(2)	H(3)	I	J	K
Bethlehem Area	380,366,900	72.99	2,919,600	2,627,640	.5000	1,313,820	459,837	2,439,740	1,219,870	1,219,870
Fountain Hill	15,165,100	2.91	116,400	104,760	.5000	52,380	18,333	97,269	48,635	48,634
										1,268,504
Hellertown	22,442,000	4.31	172,400	155,160	.6682	103,678	36,287	144,065	96,264	47,801
Lower Saucon	30,385,900	5.83	233,200	209,880	.5111	107,270	37,545	194,872	99,599	95,273
										143,074
Allen Township	5,205,800	1.00	40,000	36,000	.5940	21,384	7,484	33,426	19,855	13,571
Bath Boro	4,779,500	.92	36,800	33,120	.7046	23,336	8,168	30,752	21,668	9,084
Chapmans Quarry	365,300	.07	2,800	2,520	.8890	2,240	784	2,340	2,080	260
East Allen Tnshp.	9,081,600	1.74	69,600	62,640	.5000	31,320	10,962	58,161	29,081	29,080
Lehigh Township	13,910,100	2.67	106,800	96,120	.7502	72,109	25,238	89,247	66,953	22,294
Moore Township	11,602,600	2.23	89,200	80,280	.6839	54,903	19,216	74,539	50,977	23,562
Northampton Boro	27,781,300	5.33	213,200	191,880	.5000	95,940	33,579	178,159	89,080	89,079
										186,930
	521,086,100	100.00	4,000,000	3,600,000		1,878,380	657,433	3,342,570	1,744,062	1,598,508

(1) CARF = Capital Account Reimbursement Fraction. New fractions for Bethlehem Area, Hellertown-Lower Saucon, and Northampton Area will be available in spring of 1967.
(2) G = Column E x Column F.
(3) H = 35 per cent of Column G.
(4) School District Share = CARF x $3,342,567.
(5) State Reimbursement = CARF x Column I.
* Total cost ($4,000,000) less Federal allocation ($657,433) = $3,342,567.

Cost to Each District

Based on the approved State system of calculating cost of the project to each local district, Table 19 indicates that the local share of the $4,000,000 building project would be $1,598,508, apportioned as follows:

Bethlehem Area	$1,268,504
Hellertown-Lower Saucon	143,074
Northampton Area	186,930

The exact rate of interest for financing will be determined by bond market values at the time of sale. The term is also a matter of judgment. For purposes of estimation, it is assumed that the bonds will be placed for 20 years at 3-3/4 per cent. The annual payment to amortize over 20 years is $71.96 per $1,000. Therefore the annual costs would be as follows:

Bethlehem Area	$ 91,282
Hellertown-Lower Saucon	10,296
Northampton Area	13,451
Total per Year	$ 115,029
Total for 20 Years	$2,300,580

Under State Public School Building Authority rules, an additional 20 per cent must be placed in a reserve fund each year. In effect, the bonds are paid off in a 15-year period rather than over 20 years.

The annual costs for PSBA financing are as follows:

Bethlehem Area	$ 109,538
Hellertown-Lower Saucon	12,355
Northampton Area	16,141
	$ 138,034

Total costs over approximate 15-year period would be $2,070,510.

In the Bethlehem Area the assessed valuation is $237,319,200. Therefore a one-mill tax rate yields $237,319 in taxes. In Hellertown-Lower Saucon the assessed valuation is $31,696,740. Therefore a one-mill tax rate yields $31,697. In Northampton Area the assessed valuation is $43,635,720. Therefore a one-mill tax rate yields $43,636.

The net increase in the tax rates for PSBA financing in the three areas would be as follows:

Bethlehem Area	0.4616 mills
Hellertown-Lower Saucon	0.3898 mills
Northampton Area	0.3699 mills

Therefore, a house assessed at $8,000 in Bethlehem would have an actual tax increase of $3.69 due to the new technical school. Houses assessed at $8,000 in Hellertown-Lower Saucon and Northampton would have tax increases of $3.12 and $2.96 respectively in their yearly tax bills.

If local financing is used, the millage figures would be:

Bethlehem Area	0.3846 mills
Hellertown-Lower Saucon	0.3248 mills
Northampton Area	0.3083 mills

In the same order, these changes would raise annual taxes on a house assessed at $8,000 by $3.08, $2.60, and $2.47 in the respective districts.

Cost of Separate Addition

A separate addition of 42,750 square feet of shop space is the only alternative to this. The space required for such an addition is set forth below.

A SEPARATE ADDITION TO THE AREA VOCATIONAL-TECHNICAL SCHOOL

	Square Feet
Additional shop areas	42,750
5 Theory rooms at 800 square feet	4,000
Library	5,400
Administration	1,450
Total Net Area:	53,600
*Estimated Gross Area:	72,400

*See description in Chapter III

The estimated costs for such a building, using the same basis as for a completely new technical school, is estimated as follows.

ESTIMATED COSTS OF SEPARATE ADDITION TO THE AREA VOCATIONAL-TECHNICAL SCHOOL

A	Building Construction and Other Costs		
	1. Structure costs @ $20 per square foot		$1,448,000.00
	2. Costs other than structure		1,100,000.00
	a. Site acquisition (20 acres)	$ 40,000	
	b. Site development	50,000	
	c. Machinery, apparatus, equipment, and furniture	860,000	
	d. Architects' fees	90,000	
	e. Contingencies and other expenses	60,000	
B	Total Construction Cost and Bond Issue to Finance		2,548,000.00
C	Structure Construction Cost and Interest		
	1. Structure construction cost		1,448,000.00
	2. Annual payment to amortize $1,000 over 20 years @ 3%		67.22
	3. Annual amortization rental		97,334.56
	4. Total structure amortization cost for 20 years		1,946,691.20

D	Costs Other Than Structure and Interest		
	1.	Reimbursable costs other than structure	$1,100,000.00
	2.	Annual payment to amortize over 20 years @ 3%	67.22
	3.	Annual amortization rental	73,942.00
	4.	Total amortization costs for 20 years	1,478,840.00
E	Total Project Annual Amortization Rental for 20 Years @ 3%		171,276.56
F	Total Project 20-Year Amortization Cost at 3%		3,425,531.20

Table 20

CALCULATION OF STATE, FEDERAL, AND DISTRICT SHARES (ADDITION)

School District	Sch. Distr. Share of $2,548,000	Prelim. Est. State Reimbursemt.	Federal Allocation	Sch. Distr. Share of $2,129,155*	State Reimbursement	Cost to Local District
Bethlehem Area	$1,933,932	$ 870,269	$304,594	$1,616,029	$ 808,015	$ 808,014
Hellerton-Lower Saucon	258,367	134,351	47,023	215,896	124,788	91,108
Northampton Area	355,701	192,079	67,228	297,230	178,041	119,189
	$2,548,000	$1,196,699	$418,845	$2,129,155	$1,110,844	$1,018,311

* Total cost ($2,548,000) less Federal allocation ($418,845) = $2,129,155.

Cost to Each District

Based on the State's system of calculating costs, Table 20 shows that the local share of the $2,548,000 addition would be apportioned as follows:

Bethlehem Area	$ 808,014
Hellertown-Lower Saucon	91,108
Northampton Area	119,189
	$1,018,311

Assuming that the annual payment to amortize $1,000 over 20 years will be $71.96, the annual costs would be apportioned as follows:

Bethlehem Area	$ 58,145
Hellertown-Lower Saucon	6,556
Northampton Area	8,577
Total per Year	$ 73,278
Total for 20 Years	$1,465,560

Under PSBA financing, the shares would be as follows:

Bethlehem Area	$ 69,774
Hellertown-Lower Saucon	7,867
Northampton Area	10,292
	$ 87,933

Total costs for an approximate 15-year period would be $1,318,995.

The net increase in the rates for PSBA financing in the three areas would be:

Bethlehem Area	0.2940 mills
Hellertown-Lower Saucon	0.2482 mills
Northampton Area	0.2359 mills

Therefore a house assessed at $8,000 in Bethlehem would have a tax increase of $2.35 for the technical school addition. Houses assessed at $8,000 in Hellertown-Lower Saucon and Northampton would have tax increases of $1.99 and $1.89 respectively.

In other words, in Bethlehem for an extra $1.34 a year in taxes on a house assessed at $8,000, the complete technical school building may be constructed on a single site rather than be split between two locations. The additional tax dollar amounts for Hellertown-Lower Saucon and Northampton Area are $1.13 and $1.07 respectively.

Since a single school building to house the technical-vocational school is infinitely more desirable educationally than housing the program in two buildings and since the cost to the average taxpayer is quite small, there is little to recommend the alternative of building a separate addition to the present vocational-technical school building at Liberty High School. Therefore it is strongly recommended that a single new school building be constructed to house 1,480 pupils on its own separate site.

Summary

In brief, the results of the study indicate a need for an area vocational-technical school designed to serve 1,480 pupils. In addition to the courses being offered at present, the larger school would offer programs in the following areas: trowel trades, cosmetology, practical nursing, automotive technician, building maintenance; heating, ventilating, and air-conditioning; instrumentation; and some expanded offerings for boys and girls in the present subjects.

The new school would require roughly twice as much shop space as the present building provides under the most recent expansion this summer, using shop sizes as recommended by the State. Since a considerable portion of the cost of a vocational-technical school is absorbed by State and Federal aid, the new building can be constructed at very modest local expense. The tax increase, in dollar value, for the owner of a home assessed at $8,000 in each of the three areas is listed below for both local and public school building authority financing.

	Local	PSBA
Bethlehem Area	$3.08	$3.69
Hellertown-Lower Saucon	2.60	3.12
Northampton Area	2.47	2.96

These are small tax increases, yet they will yield a high educational value when spent for the enlarged area technical school to serve both the youth and the adults of the total area.

VT 001 328
Callahan, Lois
In-School Work Experience Education for Office Occupations. An Operational Handbook.

California Univ., Los Angeles. Div. of Vocational Education
California State Dept. of Education, Sacramento. Bureau of Business Education
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*WORK EXPERIENCE PROGRAMS; *OFFICE OCCUPATIONS EDUCATION; *PROGRAM GUIDES; GRADE 12; MANUALS; *ACTIVITY LEARNING; CLERICAL OCCUPATIONS

This handbook suggests ways of planning and operating a program which includes in-service training in general secretarial and clerical work through the various offices of the school, supplemented with classroom instruction and textbook assignments. It was developed by a business education teacher and tested on a small group. The content objectives are: (1) to provide practical experience with duties and standards of office occupations within the school, (2) to integrate previously learned skills and understandings with newly acquired ones, and (3) to develop character traits important to job success. Each week a student usually spends four class periods at a work station under the supervision of an employed clerical person or a teacher and one period in the classroom. In-school training stations are listed with job descriptions, duties, equipment used, and number of students to be assigned to each station. A student manual of operational rules contains suggestions to help the student succeed personnaly, instructions regarding the duties and problems encountered at the training stations, and a spelling list. The appendix contains a collection of sample forms to facilitate the organization and operation of the program. (MM)

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in-school work experience education for office occupations

AN OPERATIONAL HANDBOOK

by Lois Callahan

Chairman, Business Education Department
Hillsdale High School
San Mateo, California

Prepared for: The Bureau of Business Education
California State Department of Education

Published by: The Division of Vocational Education
University of California

013

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MEMORANDUM

TO: The ERIC Clearinghouse on Vocational and Technical Education
The Ohio State University
980 Kinnear Road
Columbus, Ohio 43212

FROM: (Person) J. C. Levendowski (Agency) Bureau of Business Education Calif. State Department of Education

(Address) 721 Capitol Mall, Sacramento, California 95814

DATE: 9/10/68

RE: (Author, Title, Publisher, Date) CALLAHAN, Lois. In-School Work Experience For Office Occupations. Los Angeles: The Division of Vocational Education, University of California

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INTRODUCTION

In-school work experience education programs are expanding rapidly in the schools of California, especially in the office practice area. The reason for this expansion by and large is the increasing number of job opportunities in school connected activities in the clerical and office field.

This is a very important development, for it provides a fine opportunity for young persons while enrolled in an educational program to apply learned skills and understanding to actual job performance.

Mrs. Lois Callahan, Chairman of the Business Education Department, Hillsdale High School, developed this operational handbook. The procedures discussed herein are the result of operational practices used in the In-School Work Experience Education Program in office occupations conducted by Hillsdale High School, San Mateo, California, under the able direction of Mrs. Grace Cavitt.

Miss M. Claire O'Brien, Consultant in Business Education, was the representative of the Bureau of Business Education who worked with Mrs. Callahan on the development of the handbook and in the preparation of materials for publication.

The purpose of this handbook is to suggest ways of planning and operating an In-School Work Experience Education Program. It is hoped that the information contained in this publication will be helpful in assisting administrators and teachers in planning and operating this kind of program in their schools.

R. C. Van Wagenen, Chief
Bureau of Business Education
California State Department of Education

TABLE OF CONTENTS

Chapter		Page
I.	RATIONALE FOR IN-SCHOOL WORK EXPERIENCE EDUCATION	1
	A. Philosophy and Purpose	1
	B. Placement in the Curriculum	2
II.	DEVELOPMENT OF AN IN-SCHOOL WORK EXPERIENCE EDUCATION PROGRAM	3
	A. Determination of Need	3
	B. Designation of Teacher-Coordinater	3
	C. Inauguration of Program	4
	D. Selection of Training Stations	6
III.	ANALYSIS OF TRAINING STATIONS FOR IN-SCHOOL WORK EXPERIENCE EDUCATION STUDENTS	7
	A. Bookkeeper	9
	B. Cashier	11
	C. Clerk, General Office	12
	D. Duplicating Machines Operator	20
	E. File Clerk	21
	F. Issuing and Receiving Clerk	22
	G. Mail Clerk	23
	H. Records Clerk, Medical	24
	I. Stenographer/Transcribing Machine Operator	25
	J. Switchboard Operator	26
	K. Typist, Clerk	27
	L. Typist, Statistical	28
IV.	OPERANT FOR AN IN-SCHOOL WORK EXPERIENCE EDUCATION PROGRAM	29
	A. Orientation and Assignment of Students	29
	B. Supervision of Students	30
	C. Evaluation of Students	31
	D. Rotation of Students	32
	E. Handbook for Students	37
V.	RELATED CLASSWORK AND HOMEWORK	90
VI.	FILING, A UNIT OF INSTRUCTION	95
	APPENDIX	
	A. Selected Text and Supplementary Books	106
	B. Selected Student Reference Books	108
	C. Suggested Sources of Employment Testing Materials	110
	D. Suggested Equipment for Classroom Office Services Pool	111
	E. Flow Chart of Responsibilities of Personnel Involved	112

I. RATIONALE FOR IN-SCHOOL WORK EXPERIENCE EDUCATION

Philosophy and Purpose

In-school work experience education taps the potential of using school offices as laboratory facilities for office education. Inherent motivation exists in such utilization because the student knows his work is useful, not only to him but to the organization as well. The student works under the supervision of a currently employed clerical person or teacher who is responsible for regular office procedures which facilitate the operation of a school. Although the student has opportunity to develop versatility, resourcefulness, and adaptability at the work station, a business teacher is available for immediate assistance, guidance, and instruction when needed. The in-school work experience education program for students in office education has the following objectives:

1. To provide practical experience with duties and standards of office occupations within the school

2. To master office skills and understandings not taught or learned in other business courses

3. To integrate previously learned skills and understandings with newly acquired ones

4. To develop character traits important to job success; i.e., trustworthiness, courtesy, integrity, industry, cheerfulness, willingness and ability to follow directions accurately and completely

Surveys show many office employees lose their jobs because of undesirable personality traits as well as inadequate, unsatisfactory skills. Through in-school work experience education student abilities can be developed toward the optimum by matching training station specifications with student needs and interests. Individual disabilities may be eliminated or lessened through assessment and concerted effort by the student, training station supervisor, and teacher.

The in-school work experience education program also serves a guidance function. Students enrolled in the program are assigned as office assistants and perform office duties in a variety of surroundings. Facilities may range from small to spacious. A student may be assigned to a one-or two-person office or to an office comprised of a group. He may take directions from and perform duties for only one person or several. At times he completes tasks independently and sometimes uses initiative in determining jobs. The duties may be routine or varied. The office assistant will interact with many different personalties. Reactions to and reflections on the various work station assignments can influence him to choose a rewarding office position or may divert him to another field that will be more satisfying.

Relating classroom instruction and homework assignments to the experience of working in school offices allows the student to pursue an

individualized study of office procedures from the vantage point of both theory and practice. Classwork and homework afford the student a chance to remedy any gaps in his training which may become evident during performance in an authentic "world of work" situation. The in-school work experience education program provides opportunity to integrate and expand the student's business training through practical experience, thereby easing the transition from classroom to the business world.

Placement in the Curriculum

In-school work experience education may be offered as a separate program, as part of an office or clerical practice course, or as pre-training for Work-Study or Work Experience Education. Generally, the in-school program is considered a finishing or "polishing" course in vocational office training. Typing ability is the prime requisite for entry. Ability to use other common office machines is desirable, but this training can be acquired concurrently. Ideally the student has a background from as many other business subjects as his personal interests or schedule permitted.

Taking the in-school work experience education course near the time of entering an office occupation is often worthwhile. Realizing, however, that significant discoveries are being made about learning which emphasize the vast range of differences among and within people, a student might (1) profit by taking the course early in his business training for motivational purposes; (2) continue in the program for a longer than normal time period in order to gain a wider range of office experience, particularly if this method of learning proves especially beneficial to him; or (3) use the experience for an overview of office procedures when his schedule does not permit following a recommended sequence of business courses. The forte of the in-school work experience education program is that it permits individualization of instruction methods and subject matter. The learning process takes place at many points along the continuum from tutorship to independent study.

Usually a student enrolls for one class period per day per week, spending four periods at the work station and one in the classroom. However, in schools operating on a flexible schedule consideration could be given to having students allocate one day per week to in-school work experience education, thus creating a "9 to 5" atmosphere.

The consensus of local business education specialists helps resolve the quandary of whether to incorporate in-school work experience education into an existing course or introduce a new subject into the curriculum. Goals of the program prescribe necessary prerequisites, but the teacher may forego them in some instances. The school's daily schedule defines time allotment for the program.

II. DEVELOPMENT OF AN IN-SCHOOL WORK EXPERIENCE EDUCATION PROGRAM

Determination of Need

The first step toward developing a successful in-school work experience education program is to establish a need. This may be accomplished by following up graduates, discovering local employers' assessment of on-the-job performance by beginning office workers, projecting local employment opportunities in entry office occupations, and analyzing the business education curriculum. If the data indicates a need for practical experience in office procedures, the individual principal, as leader of instruction, must be convinced that an in-school work experience education program will be of service to the school and help meet its objectives. With the principal's appointment and approval, the prospective business teacher-coordinator can begin the program by following the local district's prescribed method for changing the course of study.

Designation of Teacher-coordinator

Fulfilling the responsibilities of the teacher-coordinator requires a person who has self-control, enjoys a give-and-take situation, and likes to work with both students and adults. The teacher-coordinator is "on call" and often makes decisions and judgments without benefit of time for planning. Consequently, empathy and versatility are decided assets. The teacher-coordinator also needs a background of diversified office experience in order to supervise production with reference to time and motion efficiency and usability standards. Current business experience implies that instruction will pertain to activities that are prevalent in today's offices and that anticipate tomorrow's changes.

The teacher-coordinator is responsible for executing the following:

1. planning classroom instruction related to the training station duties and experiences

2. directing homework study so that it reinforces the training station experience

3. operating an office services pool in the classroom (See Appendix D)

4. selecting appropriate training stations in school offices

5. placing students in training stations that will enlarge the scope of their business training and that are connected to their individual vocational goals and abilities

6. assisting the training station supervisors in assigning duties which will be profitable office experiences for the student assistants

7. conferring with each training station supervisor to determine how individual office assistants can better perform the duties assigned

8. visiting the student at the training station periodically to provide help on the job

9. conferring with students regarding improvement of training station performance

10. making final appraisal of the student's work, including classwork, homework, and performance at the training station, for grading purposes

11. helping students find office employment during vacations, after-school hours, and upon graduation

Inauguration of Program

Success of the in-school work experience education program depends to a great extent upon the acceptance, cooperation and support of the administrative team, the faculty and clerical personnel of the school. To build interest in and support for a program, the business teacher-coordinator should thoroughly explain the program to all school personnel. The first step is presentation of the program at a general faculty meeting. This description includes purposes and benefits, duties and responsibilities of students and training station supervisors, realistic appraisal of expectations for student production, and authority position of the teacher-coordinator.

Second, a meeting should be arranged with department or division chairmen and appropriate teachers and clerical personnel who are prospective training station supervisors. The purpose of this meeting is to discuss the organizational setup of the program in detail with opportunity for questions and answers. The teacher-coordinator mentions benefits to the training station supervisor from having a student office assistant and emphasizes their joint responsibility to (1) train the student in office procedures relevant to the station and business offices; (2) provide the optimum number of experiences that the station allows; (3) assist the student develop his potential in skills, abilities, and personality traits conducive to success on the job; and (4) evaluate the student's progress. At this meeting the teacher-coordinator may wish to solicit requests for student office assistants. Attaching a brief memorandum summarizing the aims and benefits of the program will help the prospective supervisor complete the Request for Student Office Assistant Form (Illustration I).

REQUEST FOR STUDENT OFFICE ASSISTANT

_____Class Period Desired Office No._____

_____Anticipated Duration of Assignment

Job Description:

Signed_____

Date _____

(Note: Preparing this form on a 4 x 6 inch card makes filing and referral easy.)

ILLUSTRATION I

Third, a conference with counselors to discuss the program in relation to vocational goals and aspirations of students is desirable. This conference assists the counselor in matching student needs with intended course outcomes.

Fourth, informing prospective students about the opportunities of the in-school work experience education program may take a multipronged approach. Program information should be injected into the regular channels used by the guidance department to communicate course information to the entire student body. Because the most likely candidates are probably already enrolled in other business courses, business teachers are in a strategic position to advise students about the program and predict its value to them. An attractive publicity folder can also be prepared for student and parent consumption. However, the teacher-coordinator must consider carefully the feasability of starting the program with less than the maximum students to ensure time to build a solid foundation.

Selection of Training Stations

After completing preliminary steps for incorporating an in-school work experience education program into the course of study, selection of student training stations becomes a significant responsibility of the teacher-coordinator. The program can be only as effective as the training stations permit. In an effective in-school work experience education program, school offices are ideal laboratories for business students. They provide opportunity for the student to perform duties of entry office occupations, including typing, using the telephone, using office machines, handling mail, handling supplies, looking up information, assisting in the preparation of reports, preparing data for computer operations, maintaining records, taking dictation and transcribing, serving as receptionist, computing, billing, checking and proofreading. In addition to demonstrating their office skills, students can discover abilities required for satisfactory performance include spelling correctly, using good English, following directions, concentrating amid distractions, performing work accurately and rapidly. They can test the effect of possessing or lacking personal qualities such as friendliness, courteousness, responsibility, flexibility, and dependability.[1]

In deliberating on the choice of training stations, the criteria for selection will be based on the following factors:

1. Total stations provide for extensive experience in duties performed in entry office occupations.

2. A single station provides for intensive experience in a duty common to entry office occupations.

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[1] Selected Entry Office Jobs for the High School Student, California State Department of Education, Bureau of Business Education, July 1965. (This report contains detailed analyses and summaries of duties, abilities, and personality traits required in specific entry office occupations.)

3. Clerical personnel and teachers acting as training station supervisors (a) understand goals of the program; (b) are willing to train students in performing duties related to entry office occupations; (c) desire to transmit those qualities which have contributed to their success; and (d) can evaluate the student's performance.

III. ANALYSIS OF TRAINING STATIONS FOR IN-SCHOOL WORK EXPERIENCE EDUCATION STUDENTS

This chapter is designed to assist a teacher-coordinator designate appropriate office training stations for business students within the school. The job descriptions are headed with an entry office occupation title and corresponding school office where a student may gain related practical experience. The descriptions were prepared from actual duties recorded in logs by in-school work experience education students during the fall semester of the 1965-1966 school year. Although the descriptions are rather comprehensive, they are not all inclusive. Each school will have its unique training station and duties.

BOOKKEEPER STUDENT STORE OFFICE

A student office assistant assigned to the Student Store Office handles monies daily; therefore, integrity is a prime requirement for this assignment. Record keeping or bookkeeping training would be very helpful in performing the duties. The office assistant works under supervision of the store manager.

Duties

Preparing daily cash balance slip
Verifying cash register audit slip with daily cash balance slip
Stamping coin wrappers, rolling coins
Preparing deposit slip
Depositing receipts
Preparing cash receipts journal, footing and checking to see debits equal credits
Computing tax on purchases
Checking invoice extensions and totals
Typing request for payment forms, orders
Filing orders, invoices, vouchers
Balancing journal
Preparing work sheet
Taking inventory

Equipment Used

Cash register, adding machine, typewriter, books of account

Assignment Prospects

For purposes of internal control two students should be assigned to this work station during the same class period. The class period selected is based on peak selling hours so the cash register can be cleared soon thereafter and deposit of receipts made.

BOOKKEEPER STUDENT BODY FINANCE OFFICE

A student office assistant in the Finance Office works under direct supervision of the school comptroller and has opportunity to participate in the full cycle of bookkeeping for a variety of accounts; i.e., athletics, student organizations, student body. Previous bookkeeping training is essential for competency in this position.

Duties

Entering amounts in cash receipts and cash payments journals
Posting to the accounts payable ledger
Taking trial balance from the general ledger
Making income and expense summary
Recording budget expenditures
Reconciling bank account
Using checkwriter
Voiding checks
Acting as cashier: writing receipts, depositing monies

Related Duties

Verifying invoices and deposit slips
Sorting mail
Dispatching mail
Typing vouchers, envelopes, file folder labels
Filing (numerically and alphabetically): check requisitions, cancelled checks, invoices, vouchers, letters
Stamping coin wrappers
Numbering tickets

Equipment Used

Checkwriter, adding machine, calculator, bookkeeping machine, typewriter, numbering machine, safe, books of account

Assignment Prospects

Depending upon the number of student organizations and their activities, one or two students may be assigned as office assistants in the Finance Office. If more than one student is assigned, the work load can be divided between primary bookkeeping and related clerical duties. The student assistants can better coordinate their efforts if assigned during the same period.

Student activities, insurance, pictures, fines, etc. involve monetary transactions within the school. The responsibility for collecting, receipting, recording and depositing these monies usually rests with an individual called a cashier. Integrity and accuracy are qualities especially important for an office assistant to the cashier.

Duties

Receiving money
Issuing receipts
Preparing deposit records

Equipment Used

Adding machine

Assignment Prospects

If the school has a cashier position, one office assistant can probably be placed in the station. If the school does not have a cashier, a student can be placed in this function under the supervision of a teacher, clerical person, or school comptroller in charge of these duties.

CLERK, GENERAL OFFICE CLASSROOM OFFICE SERVICES POOL

The term General Office Clerk is used as the title for any person with diversified clerical duties. The duties are similar regardless of type or size of the office in which the clerk is employed. The general office clerk should be able to type, have some command of arithmetic and be knowledgeable in office procedures and filing systems. Part of the work may be in longhand, making legible handwriting important. Most of the work requires concentration and attention to details. General office clerks who are not under close supervision must have initiative and be able to assume many responsibilities.

In the classroom Office Services Pool, the in-school work experience education students perform a variety of tasks quickly and accurately, lending a hand where needed. Directions are often in written form.

Duties

Indexing, coding, and cross-referencing
Alphabetizing and sorting
Filing and maintaining various files
Typing: labels, notes, memoranda, notices, letters, forms
Addressing and stuffing envelopes
Dating
Numbering
Keeping records of work in progress, supplies, and equipment
Operating duplicator
Punching, collating
Proofreading
Serving as messenger
Substituting for switchboard operator and file clerks
Assembling information for booklets
Computing and checking computations

Equipment Used

Typewriter, duplicator, adding machine, dater, numbering machine, PBX, various files

Assignment Prospects

If the classroom office pool serves all school personnel, at least one office assistant can be assigned as a general clerk each period of the day.

The Counseling and Guidance Office is the center for processing data and a multitude of forms for every student in the school. It is here that data is prepared for computer operations in some schools. Because many of the records in the Counseling and Guidance Office contain personal information, the office assistant must be especially cognizant of his responsibility to keep in confidence any information he has observed or overheard. The student assistant works under direct supervision of the secretary and his duties should relate only to routine procedures and information of a general nature.

Duties

Typing: student information cards; file labels; headings on programming forms; envelopes; headings on senior rating forms; announcements; homework assignments for absentees; notices on stencils; etc.
Filing: student medical forms; change of program cards; temporary program cards; permanent program cards; grade sheets; college pamphlets, catalogs, and folders; registration cards
Making notations on student program and registration cards
Proofreading
Operating duplicator
Stuffing envelopes
Collating handbooks, class schedules
Sorting and distributing Request to See Counselor forms
Verifying names and numbers on standardized tests
Alphabetizing test forms
Sorting forms by teachers' names
Separating original and carbon copies
Detaching forms
Answering the telephone, transferring calls, taking messages
Tallying
Dovetailing forms
Numbering tests
Collecting student passes
Dating forms
Checking college bulletins in and out

Equipment Used

Typewriter, duplicator, Savasort, numbering machine, dater, moistener, telephone key equipment

Assignment Prospects

One assistant assigned to this office during each class period ensures variety in duties performed. At the beginning and end of each semester and grading periods an additional student may be assigned as a file clerk.

CLERK, GENERAL OFFICE DEANS' OR VICE PRINCIPALS' OFFICE

The student office assistant assigned to the Vice Principals' or Deans' Office works under direct supervision of the secretary. The assistant must be impressed with the confidential nature of the work and that interaction with students requires a businesslike manner. The student assistant also has personal contact with teachers and parents. If the office assistant knows shorthand, this assignment could provide experience in taking dictation and transcribing.

Duties

Typing: suspension forms; envelopes; form letters; memoranda; student work permits; vehicle registration cards; drop slips and notices; labels for file folders; index cards; campus forms; excuse lists on mastersets; forms on stencils
Operating duplicator
Filing: medical excuses; notices in tickler file; vehicle registration forms; government forms; student program cards
Acting as receptionist
Answering the telephone, transferring calls, and taking messages
Dispatching the mail
Writing notations on calendar; writing notations on student program cards
Clipping newspaper articles for publicity scrapbook
Collating athletic excuse lists
Composing letters
Looking up information
Delivering messages

Equipment Used

Typewriter, duplicator, telephone key equipment, tickler

Assignment Prospects

Depending upon the work load of the office, the secretary can usually apportion experiences and duties for two or three assistants during the day. An exceedingly dependable and competent student may fill in for the secretary while she is at lunch.

The departmental offices of a school can provide experience in many office procedures. Most of the departments require a variety of typing duties. The typing, proofreading, duplicating and collating of tests, syllabi, study guides, and assignment sheets is a continuous activity. These offices also use various filing systems. Each department is responsible for inventory records, ordering and receiving supplies, equipment and books. All receive mail. A departmental office assistant works under the supervision of a department head, individual teachers, and/or teacher aides. (Note: Grading papers is not considered a duty related to entry office occupations.)

Common Duties

Answering the telephone and taking messages; placing telephone calls
Typing: letters, envelopes, interschool memoranda, cards, labels, stencils, mastersets, bibliographies, book lists
Proofreading the above
Filing: teaching aids, advertising material, magazine articles, student records, and copies of typed and duplicated materials
Operating the duplicator
Collating tests, syllabi, study guides, booklets, etc.
Taking inventory of equipment, supplies, books
Preparing inventory records
Ordering and receiving supplies and books
Computing extensions and totals; checking invoices
Sorting and distributing mail; dispatching mail
Composing routine letters
Tallying
Alphabetizing
Stuffing envelopes
Caring for equipment; i.e., changing ribbons, cleaning typewriter and duplicator

Peculiar Duties

Business Education: posting repair notations; keeping perpetual inventory records by serial number of all school office equipment
Drama: typing programs for plays, announcements, scripts, tickets, student information cards, invitations, invitation lists, filing catalogs; tallying and recording student points; numbering tickets
English: taking dictation and transcribing; recording budget expenditures; stamping and numbering books; operating transcribing machine
Foreign Language: preparing laboratory schedule; technical typing
Health: technical typing
Homemaking: typing recipes
Industrial Arts: keeping locker and lock records; typing locker number and combination lists, locker cards
Mathematics: statistical typing

Physical Education: keeping locker and lock records; typing locker number and combination lists, locker cards, sports calendar, after-school sports cards, swimming cards, weight cards, medical cards, team lists, physical fitness cards, tags; labeling and numbering equipment; preparing charts and game schedules; numbering tickets; preparing time schedules

Science: technical typing

Social Science: numbering maps; issuing and receiving supplementary reference books; filing magazines

Safety Education: preparing and keeping first aid and student license records; typing licenses and first aid cards

Equipment Used

Typewriters (some with special keyboard), duplicator, adding machine, numbering machine, electric stylus, Savasort, Rollaline, moistener, files

Assignment Prospects

Each department will probably have sufficient office work to provide excellent and varied experience for one student office assistant for the department head and one for every three to four teachers in the department.

CLERK, GENERAL OFFICE INSTRUCTIONAL MATERIALS CENTER

A student office assistant assigned to the Instructional Materials Center works with the secretary and/or director of the center. The assistant has personal contact with students and teachers.

Duties

Typing: film orders, envelopes, mastersets, post cards, reference cards, memoranda, lists and notices of materials
Filing: advertising materials, catalogs, orders, pamphlets, return addresses
Finding above
Delivering messages
Preparing and dispatching packages
Sorting the mail
Taking inventory
Issuing and receiving equipment and materials
Operating duplicator and copying machine

Equipment Used

Copying machine, postage scale, duplicator, typewriter

Assignment Prospects

In a central instructional materials office within a school, there is opportunity to train one student office assistant one period per day if a full-time secretary is hired. If there is not a secretary for the office, additional students will be able to participate in the clerical work.

CLERK, GENERAL OFFICE REGISTRAR'S OFFICE

Because the registrar is guardian of many student records of import, the student office assistant must be completely trustworthy and impressed with the confidential nature of the work.

Duties

Typing: student records, petty cash report, envelopes, lists of students, letters, lists of colleges, memoranda, forms, mastersets, and stencils
Filing: student report cards, drop slips, transcript records
Photostating transcripts
Affixing official seal on transcripts
Answering the telephone
Delivering messages
Preparing file folders
Copying information onto cards
Counting petty cash; preparing petty cash reconciliation
Writing student summons forms

Equipment Used

Copying machine, seal, moistener, typewriter, duplicator

Assignment Prospects

In a large high school and with many of its graduates going on to college, two student assistants could profit from duties required by this office.

CLERK, GENERAL OFFICE LIBRARY

A student office assistant assigned to the library has personal contact with students, teachers, and the library staff. The assistant works under supervision of the librarian and her clerical staff.

Duties

Typing: slips for overdue books, book cards, envelopes, lists of new books, list of study hall students, lists of teachers, book orders with multiple carbons, mastersets, labels, and memoranda
Filing (alphabetically, numerically, and chronologically) and finding: cards, magazines, orders, pamphlets, books
Record keeping: collecting, counting, and recording fines; taking inventory; recording prices of books; preparing count of total books checked out; preparing daily circulation record
Checking: catalog cards by number, books on shelves by decimals, book numbers, student names
Duplicating and collating book lists
Opening and distributing the mail
Numbering and labeling books
Filling out student summons forms
Stamping books with identification stamp
Dating book cards and jackets, magazines
Shelving, covering, issuing and receiving books
Running errands

Equipment Used

Numbering machine, electric pencil, typewriter, duplicator

Assignment Prospects

The number of student office assistants that can be accommodated by the library depends upon the size of the library staff and volume of traffic. Usually one or two students can be assigned to this station each class period.

DUPLICATING MACHINES OPERATOR CLASSROOM OFFICE SERVICES POOL

A primary service provided in the classroom office pool is the preparation and duplication of materials for teachers. An office assistant assigned to the duplicating machines operator station has opportunity to become expert in using duplicating equipment, caring for it, and making adjustments for exact placement on copies. The operator follows written instructions in relation to number of copies, color, size, paper, and assembled order. Attention to details is essential. The operator will become conscious of time and motion economy.

Duties

Running spirit duplicator, mimeograph, master and stencil copying machines
Stacking paper
Sorting copies
Collating
Punching
Trimming paper
Filing copies of duplicated material and stencils
Cleaning and filling spirit duplicator
Changing ink in mimeograph
Using interleaver
Using card holder
Receiving and storing supplies
Operating folding machine

Equipment Used

Electric stapler, saddle stapler, heavy duty stapler, mimeograph, spirit duplicator, collating racks, paper trimmer, stencil files, folding machine, Gestefax and Thermofax

Assignment Prospects

The quantity of duplicating work in a school will ordinarily be sufficient to provide experience for one or two operators each period the Office Services Pool is open. A student may be assigned after school also.

FILE CLERK ATTENDANCE OFFICE

Attendance accounting is an important facit of a school operation, for ADA is a basis for receiving government funds. Attendance Office clerks are custodians of many records for each student in the school. Accuracy in preparing and keeping these records is necessary. An office assistant in this work station performs duties under the direct supervision of an attendance clerk. There is contact with students, teachers, and parents.

Duties

Filing: excuse, tardy, and absence slips; parent notes; student program and registration cards
Recording student absences
Writing student summons forms
Looking up student telephone numbers, classrooms, and attendance records
Delivering messages
Stamping excuse slips
Typing file folder labels
Using the telephone
Tallying
Collecting absence slips

Equipment Used

Adding machine, time clock, typewriter, telephone key equipment, visible files

Assignment Prospects

Depending upon the size of the student population, one or two students may be assigned as office assistants in this area for each attendance period. Because of the routine nature of the work, assistants should be rotated to a new work training station when the duties have been thoroughly mastered.

ISSUING AND RECEIVING CLERK TEXTBOOK OFFICE

The issuing and receiving of textbooks is a never ending task in a school. The student assistant in this position performs office duties similar to those in a business shipping and receiving department. The assistant works with the textbook office clerk.

Duties

Comparing purchase orders and invoices
Checking new books against invoice
Numbering and stamping books
Crating books
Shelving books
Issuing books according to requisitions
Filing: requisitions, invoices, individual book cards, orders
Keeping perpetual inventory records
Typing orders and memoranda

Equipment Used

Typewriter, electric pencil

Assignment Prospects

Except at the beginning and end of a semester when textbook traffic is at its highest point, one student can be assigned to this work station.

MAIL CLERK BUSINESS OR MAIN OFFICE

In some schools the volume of mail may be sufficient to require a class period to perform concomitant duties. If so, a student could profit from the experience but should not be kept at this station too long.

Duties

Sorting and distributing incoming mail
Distributing interschool communiques
Preparing outgoing mail

Equipment Used

Postage scale, mailbags

Assignment Prospects

This work station would require no more than one student during a single period of the day. In many schools these duties can be performed in conjunction with another assignment.

RECORDS CLERK, MEDICAL

HEALTH CENTER

A student office assistant in the Health Center works under direct supervision of the school nurse, who is guardian of multifarious medical records for each student in the school. In addition to receiving students who incur injuries or become ill during the school day, all students have physical examinations, eye and ear tests, and medical emergency information to be recorded. There are communiques to administrators, parents, counselors, and teachers regarding individual student health problems; and a record is kept of these. To expedite communication to individual students, a record of class schedules is maintained for all students. The task of filing seems endless.

Duties

Filing and finding: student health forms and medical records, student passes, student program cards, notices, transfer forms, athletic forms, medical emergency forms, accident reports
Typing: accident and insurance reports, health form cards, memorandums, purchase requisitions, transfer forms, envelopes, daily list of student dropins, medical adaptive forms, PE medical excuses, and file folder labels (many of these forms are typed in triplicate or quadruplicate).
Writing notations on medical charts, of allergies on folders, of vision and physical ability on examination reports
Filling out student summons forms
Answering the telephone; placing telephone calls
Sorting the mail; dispatching the mail
Preparing student passes in duplicate
Verifying student records
Acting as receptionist, taking temperatures, and making beds

Equipment Used

Typewriter, Savasort, transfer files, medical dictionary, visible files, thermometer

Assignment Prospects

The quantity of records and of student dropins provides office work for one student each class period. When the duties are sufficient to support two office assistants, division can be made between filing and other general clerical tasks. Some Health Centers can use a typist one or more periods of the day.

STENOGRAPHER
TRANSCRIBING MACHINE OPERATOR

CLASSROOM OFFICE SERVICES POOL

While the stenographer employed in business and government also performs routine duties of a typist and general clerk, the student assigned to this work station will serve a variety of people similar to a public stenographer and discharge strictly stenographic functions such as taking dictation and transcribing. Previous shorthand training is necessary for taking dictation without benefit of dictating and transcribing equipment.

A transcribing machine operator performs duties of a stenograhic nature when dictation material has been prerecorded. Good knowledge of spelling and grammar is essential for both the stenographer and transcribing machine operator. The work is often of a confidential nature.

Duties

Taking dictation: letters, memoranda, reports
Transcribing material dictated into useable form
Typing multiple carbon copies
Proofreading
Addressing envelopes
Assembling reports
Filing copies of transcribed material
Keeping a record of work in progress

Equipment Used

Typewriter; transcribing machine; duplicator; dictionary, handbooks; supplies, including letterhead, bond, copy, onionskin, manifold, and carbon paper, mastersets and stencils

Assignment Prospects

The school scholarship chairman and teachers association president have continual correspondence to expedite. Various teachers and administrators have intermittent need of stenographic help. Thus, at times an impetus of dictation may occur. This work station should be manned at least one period a day and conceivably could be in operation several periods if the school personnel make use of the service.

SWITCHBOARD OPERATOR BUSINESS OR MAIN OFFICE

The student switchboard operator often creates the first impression of a school; therefore, the importance of maintaining a good public image must be constantly kept in mind. Intercom calls require pleasant dispatch as well. Effective and uninterrupted communication is essential for the smooth operation of any organization, thus the switchboard operator is in an important position. The operator must know names, titles, and location of school personnel. The operator must be careful in taking messages. Because the volume of traffic varies, the operator is sometimes free to perform additional duties. The office assistant in this work station is supervised by the secretary in charge.

Primary Duties — Equipment Used: PBX and intercom

Receiving and transferring incoming telephone calls
Placing outgoing calls
Taking and delivering messages
Acting as receptionist
Training other students to operate the switchboard

Additional Duties — Equipment Used: Typewriter, postage scale, moistener

Sorting and alphabetizing
Typing: cards, envelopes, labels, tags, letters, purchase orders, lists
Filing: purchase orders, report cards
Proofreading
Counting and detaching forms
Folding letters and stuffing envelopes
Writing student summons forms, notations on calendar
*Distributing interschool communiques
*Sorting and distributing incoming mail
*Preparing outgoing mail

Assignment Prospects

The need for a switchboard is continuous. An office assistant can be assigned to this work station every period of the day, at lunch, and before and after school. During peak traffic periods, two students may be assigned--one to the PBX and one to the intercom equipment.

*In a large school, the daily mail may be sufficient to allocate these duties as a single work station for a mail clerk.

TYPIST, CLERK CLASSROOM OFFICE SERVICES POOL*

The clerk-typist works from handwritten or typed rough drafts or other copy, putting them into presentable form. The typist may take dictation at the typewriter and sometimes makes and checks simple computations. The instructions may be plain or corrected, written or verbal. The typist may need to use initiative.

Duties

Arranging material for typing
Typing
- letters
- memoranda
- booklets
- syllabi
- forms
- envelopes
- lists
- notices
- reports
- orders

Proofreading and correcting
Supervising other students assisting in the work

Equipment Used

Typewriter, electric and manual; Rollaline, duplicator; supplies, including correction preparations and various kinds of paper, offset mats, mastersets, and stencils

Assignment Prospects

One or more office assistants can derive clerk-typist training by working in the classroom Office Services Pool each period of the school day.

*Training stations for clerk-typist training may be found in various offices of the school; i.e., Health Center, English Department, Counseling and Guidance Office, Business Office.

TYPIST, STATISTICAL CLASSROOM OFFICE SERVICES POOL

The student assigned to the statistical typist training work station will type mostly figures, generally in tabular form, and may collect information and classify the facts in numbers. Familiarity with symbols and number keyboards becomes essential. The typist uses stencils, mastersets, and various forms in preparing the material.

Duties

Typing
- balance sheet, income and expense summary for Student Body Finance Office
- inventory lists and serial numbers
- departmental grade distributions
- various reports, including charts and graphs
- tests for mathematics teachers

Proofreading and comparing

Equipment Used

Typewriters, electric and manual, with various keyboard and fingering positions

Assignment Prospects

Unless the quantity of statistical material for typing is excessive, one period per day should cover this work station. At times the station may be inactive.

IV. OPERANT FOR AN IN-SCHOOL WORK EXPERIENCE PROGRAM

This chapter includes materials and forms for distribution to in-school work experience education students and training station supervisors. If the teacher-coordinator duplicates the subsequent pages of this publication that are in color, they will comprise a handbook for student reference regarding operation of the program and performance of duties at the training station. Using a handbook accustoms students to the practice in school and therefore they are more apt to follow a company manual when they become employed in a business office.

Orientation and Assignment of Students

In the first session or two of the in-school work experience education class, the teacher-coordinator explains the purposes, responsibilities, and requirements of the program. Page 1 of the Student Handbook gives an introduction to the course. The oral introduction should include comments of employers regarding knowledge of fundamentals, personality traits, attitudes, work habits, and grooming desired in business.[2] The teacher-coordinator will want to elaborate on and suggest plans for improving in these areas.

Reading and discussing rules of the program should be conducted prior to assignment of training stations. The rules on pages 2 to 4 of the student handbook are outlined so students will become accustomed to following "company policy." Any day could be selected for meeting in the classroom. Tuesday is suggested because rush or urgent assignments may occur at the work station on Monday or Friday, and it also avoids the "TGIF" or "Blue Monday" torpor.

Tests are designed to help students pass employment hurdles and provide basis for grading. They cover arithmetic, spelling, personnel, proofreading, filing and telephone rules as well as homework, classwork, and information notices. As the teacher-coordinator learns about new trends in office procedures and observes student difficulties and mistakes in production, she will communicate ideas to the students via class discussion and written memoranda.

Appendices A and B of the handbook are examples of completed log and homework assignment. The log is useful to students in appraising duties at the training station and to the teacher in determining assistance needed by the office assistant or supervisor and in rotating students from one training station to another.

Requiring students to make up absences by overtime equivalent to time absent is recommended because students need to assume responsibility

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[2] Op. cit., pp. 13; 23-27.

for duties at the training station. When they become employed in a business office, a substitute will usually not be provided for absence.

Appendix C of the handbook is a sample Work Order. In operating the classroom Office Services Pool, the form provides instructions to student office assistants and a record of jobs in progress. Filing job orders and a sample of work when completed affords a reference source for questions about the work or assistance in completing similar assignments.

Having students hand in a copy of duplicated work and letters furnishes the teacher-coordinator data on which to base classroom and individual instruction in order to improve the quality of work produced by office assistants.

Before assigning students to training stations, the teacher-coordinator will have them fill out Student Information Form (Illustration II) and compare with Request for Office Assistant Forms (Illustration I) submitted by prospective work station supervisors. The job descriptions may be duplicated for student perusal, resulting perhaps in more realistic requests for training station assignments. At first all assignments should be on a temporary basis so necessary changes can be made easily.

In anticipation of going to assigned training stations, the student should read in the handbook and discuss all tips and instructions related to duties they may perform, including typing details, erasing, using the telephone, duplicating, filing, and spelling. Students assigned as switchboard operators are given Appendix K of Student Handbook. The Telephone Company is sometimes willing to send a representative in the beginning of the school year to train operators.

Supervision of Students

The training station supervisor takes roll, except on Tuesday, and keeps the student assistant working at office duties until the dismissal bell rings. The supervisor also gives directions and instructions for all work to be done at the station and decides upon usability of the completed job. However, the teacher-coordinator may be called upon for assistance by either the office assistant or supervisor.

The log, Appendix A of Student Handbook, informs the teacher-coordinator of duties being performed, and she visits the training station periodically to offer help and gain general impressions. The folder kept for each office assistant at the training station contains samples of all his work and can be used for viewing by the teacher. The student is free to come to the classroom any day during the in-school work experience education period to talk with the teacher-coordinator. She will provide time for and initiate private consultation with either the supervisor or student regarding job problems when they arise.

Students learn to supervise themselves and each other too. Advanced and very competent students do some organizing and directing of production

in the classroom Office Services Pool. On pages i and ii of the Student Handbook is a check list for students to use in planning a schedule to become familiar with equipment, supplies, and techniques to be learned in the classroom. All office assistants are expected to start work without being told, so self-supervision occurs.

All supervision--teacher-coordinator, training station supervisor, and student--aims toward the development of a dependable and competent office employee. Such an employee attends work regularly, starts work promptly, and performs work carefully, skillfully, and pleasantly.

The teacher-coordinator will sometimes deem it advisable to brief the student and/or supervisor on the other's idiosyncrasies and special abilities.

Upon going to the assigned training station, the prospective office assistant introduces himself to the supervisor. He may deliver the memorandum regarding student and supervisor responsibilities, Appendix G of Student Handbook, or it can be sent by intraschool mail. The supervisor will interview the prospective assistant so that they can become acquainted.

Evaluation of Students

Various conferences between teacher-coordinator and the training station supervisor and/or student or between the student and supervisor serve as evaluative activities. Also, the student appraises his work by placing a grade on the log. When this grade differs from the teacher's impression of the student's performance, there is need for reassessment.

Final grading is based upon tests, production at the training station, the teacher-coordinator's judgment, and extra credit points. Appropriate tests cover assignments, instruction, notices, Student Handbook, and simulated employment tests (Appendix C). Grades become more useful if one is assigned to each area tested; such as, arithmetic, proofreading, spelling, filing, etc. Then if a student continues to make poor grades on a particular area his weakness is pointed out for remedial attention. The training station supervisor evaluates the student at the end of marking periods by completing a confidential report, Appendix H of Student Handbook, for each office assistant working with him. The rating sheet has a place for checking superior, above average, average, weak, or unsatisfactory on fourteen points related to the office assistant's performance. Office assistant folders kept at the training station contain samples of completed jobs which the teacher can also use for grading. Students earn extra credit points by doing more work than is required or work of exceptionally fine quality. These points offset penalties and poor test grades within a limit. Quality and quantity of work produced receive more weight than number of hours worked.

After figuring the grade on a Self-Evaluation Sheet, Appendix I of Student Handbook, each student discusses it with the teacher-coordinator,

affording an opportunity to mediate any differences in evaluation by teacher, supervisor, and student. Analysis of progress and designation of areas for improvement by the student result from this self-evaluation.

Rotation of Students

Variation in duties of stations or abilities of students require different time allocations for an office assistant to benefit from the assignment, and generally no single training station provides optimum experience in duties related to entry office occupations. Therefore, rotation is determined by training station duties and student abilities. Usually an office assistant needs to become confident and proficient in his performance; ordinarily any training station assignment will last at least six weeks for assurance and competence to develop. If the learning situation in a particular training station is especially profitable to the student, he may prefer to remain at that station a semester or longer. As the teacher-coordinator, supervisor, and student evaluate his performance and progress, a joint decision can be made in determining the best time to move a student in an effort to provide a variety of experiences. Either the teacher, supervisor, or student (Appendix J of Student Handbook) may initiate request for a change of station.

Handbook for Students

The succeeding pages comprise a manual that in-school work experience education students can easily carry to their individual training stations and use for reference. The Student Handbook is divided into sections containing directions and help in duties common to the training station as well as all course procedures. By preparing the handbook in loose-leaf form, addenda such as Illustration III (1) and (2) and memoranda can be prepared by the teacher-coordinator as changes occur and need arises and then inserted easily by students in the appropriate sections. These notices focus attention on improving and updating particular office methods and knowledge. Preceding the Table of Contents in the Handbook is a handy check list for students to record their progress in meeting training objectives. Section I covers the operational rules for the program. In Section II are suggestions to help the student succeed personally. Sections III through VIII contain instructions regarding the most common duties and problems encountered at the training stations. Section IX, the spelling list, needs revision in accordance with words the teacher and students see frequently misspelled by office assistants. A collection of sample forms designed to facilitate the organization and operation of an in-school work experience education program appears in the Handbook Appendix.

10

STUDENT INFORMATION FORM (Put on 5 x 8 card stock for easy handling)

FRONT

IWE _____ Pd. _____ Date _____
Schedule Year in School _____
Subject Rm. Teacher _____

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

Previous Training Work Stations
1. _____
2. _____
3. _____
4. _____

5-Min. (speed per min. _____
Typing (errors _____

Name _____

Address _____

Telephone _____

Counselor _____

Favorite Subject _____

Desired Training Stations

1. _____

2. _____

3. _____

4. _____

Educational Aim _____

Vocational Aim _____

Work Experience _____

ILLUSTRATION II

STUDENT INFORMATION FORM

BACK

Course and Number		Average Grade
O. P.	_____	_____
O. M.	_____	_____
Typing	_____	_____
Shorthand	_____	_____
Bookkeeping	_____	_____
Record Keeping	_____	_____
Art	_____	_____
English	_____	_____
Foreign Language	_____	_____
Homemaking	_____	_____
Ind. Arts	_____	_____
Math	_____	_____
Science	_____	_____
Soc. Science	_____	_____

Comments:

_____

_____

_____

_____

Machines/Assignments	Know	Special Interest
Elec. Type	_____	_____
IBM	_____	_____
Script	_____	_____
Pica	_____	_____
Small Elite	_____	_____
Masters	_____	_____
Colors	_____	_____
Duplicators	_____	_____
Ditto	_____	_____
Rocket	_____	_____
A B Dick	_____	_____
Gestetner	_____	_____
Stencils	_____	_____
Typing	_____	_____
Programs	_____	_____
Cards	_____	_____
Mimeoscope	_____	_____
Filing	_____	_____
Num. Mach.	_____	_____
Trimmer	_____	_____
10-Key	_____	_____
Transcriber	_____	_____
Calculator	_____	_____
Elec. Stap.	_____	_____
PBX		

ILLUSTRATION II

SUNNYSIDE HIGH SCHOOL
IN-SCHOOL WORK EXPERIENCE EDUCATION STUDENT HANDBOOK, ADDENDA NO. 1

Certificated Personnel*

Mr. Allen Ray	Principal
Mr. George Devonshire	Assistant Principal
Mr. Jack Armstrong	Dean of Boys
Mr. William Smith	Dean of Counseling and Guidance
Mrs. Joan Landing	Dean of Girls
Mr. Ralph Beeseman	Director, Instructional Materials
Miss Jennie Craig	Librarian
Mrs. Evelyn Danzig	Nurse
Mr. Robert Garden	Chairman, Art Department
Mrs. Ann Peterson	Chairman, Business Education Department
Mr. Anthony Callaghan	Chairman, English Department
Mrs. Ruth Morris	Chairman, Foreign Language Department
Miss Constance LaRosa	Chairman, Homemaking Department
Mr. Stephen Huson	Chairman, Industrial Arts Department
Mr. Martin Jimenez	Chairman, Mathematics Department
Mr. Scott Matthews	Music Supervisor
Mr. Benjamin Bradley	Chairman, Science Department
Mr. Alfred Parrish	Chairman, Social Science Department
Mrs. Theda Knight	Chairman, Girls' Physical Education
Mr. Fredric Frank	Chairman, Boys' Physical Education

*IWE students are responsible for knowing correct spelling of names and respective title and position.

ILLUSTRATION III (1)

SUNNYSIDE HIGH SCHOOL
IN-SCHOOL WORK EXPERIENCE EDUCATION STUDENT HANDBOOK, ADDENDA NO. 2

Non-Certificated Personnel*
1965 - 1966

Mrs. Marjorie Andersen	Attendance Office Secretary
Mrs. Kathleen Bloss	Principal's Secretary
Mrs. Diane Secrist	Registrar
Mrs. Jane Jackson	Assistant Attendance Secretary
Mrs. Helen Jacobs	Guidance Secretary
Mrs. Dorothy McNutt	Instructional Materials Secretary
Mrs. Janet Morris	Deans' Secretary
Mrs. Aline Madison	Teachers' Secretary
Mrs. Lorraine Reibold	Assistant Guidance Secretary
Mrs. Margaret Altman	Assistant Librarian
Mrs. Lillian Schaeffer	Assistant Librarian
Mrs. Adelaide Jones	Assistant Principal's Secretary
Mrs. Nettie Knuteson	Head of Cafeteria Staff
Mr. Peter LaRosa	Head of Custodial Staff

*IWE students are responsible for knowing correct spelling of names and respective title and position.

ILLUSTRATION III (2)

SUNNYSIDE HIGH SCHOOL

IN-SCHOOL WORK EXPERIENCE EDUCATION

STUDENT HANDBOOK

Name _____

Period _____

Date _____

CHECK LIST

In addition to specific assignments, all Office Practice students are expected to assume responsibility for observing, becoming acquainted with, and using helpful office techniques, procedures, and equipment. This may be done after school or whenever unassigned a particular job.

The following list indicates some opportunities to be found in the classroom. Discover them all. Use the handy check boxes to keep a record of your progress by date.

	Do Not Know	Need Drill	Know Well
1. Typewriters (typing master--four colors, stencil, letters, envelopes, reports, forms)			
a. IBM electric			
b. Royal electric			
c. Smith electric			
d. Selectric			
e. Small elite			
f. Care and cleaning of above			
g. Ribbon change			
2. Duplicators			
a. Mimeograph			
(1) Slip sheeter			
(2) Color change			
b. Gestefax			
c. Mimeoscope			
d. Spirit duplicator			
3. Ten-key adding machine			
4. Staplers (loading)			
a. Electric			
b. Saddle			
c. Long shank			
5. Numbering machine			
6. Paper			
a. Trimming			
b. Punching			
c. Fanning			
d. Counting			
e. Stacking			
f. Recognizing kinds and uses			
(1) Duplicator			
(2) Mimeograph 20# and 16#			
(3) Card stock			
(4) Manifold			
(5) Corrasible, Excelerase			
(6) Letterhead			
(7) Legal cap			

*SH--Student Handbook

	Do Not Know	Need Drill	Know Well
7. Files			
a. Indexing and Coding			
b. Sorting (Savasort)			
c. Filing			
d. Finding			
e. Recognizing kinds and uses			
(1) Stencil (Gestefile)			
(2) Vertical			
(3) Pigeonhole			
(4) Visible index (Kardex)			
8. Miscellaneous			
a. Copy holders			
b. Collating racks			
c. Moisteners			
d. Switchboard (PBX)			
e. Cleaning supplies			
f. Care of equipment			
g. Sources of information (handbooks and manuals)			
h. Proofreading			

TABLE OF CONTENTS

		Page
I.	RULES	
	Tests	2
	Log	2
	Homework	2-3
	Absences	3
	Housekeeping	3
	PBX	3
	Production--Date, Reference Initials, Supplies, Job Order, Work in Progress, Proofreading, Samples, Letters and Memos	3-4
	Miscellaneous--Conduct	4
II.	TIPS	
	General	5
	Equipment and Supplies	6
	Production--Letter, Masterset, Stencil, Proofreading	7-8
	Study, Extra Credit, and Make-up	8
III.	TYPING DETAILS	9
	Margins	
	Abbreviations	
	Spacing-Memoranda, Letter, Listing	
	Capitalization	
	Telephone Numbers	
	Addresses	
	Salutation and Closing	
	Zip Code	
IV.	ERASING	11
V.	USE OF THE TELEPHONE	12
VI.	THE SPIRIT DUPLICATOR	15
VII.	STENCIL DUPLICATING	21
VIII.	FILING	
	General Rules and Suggestions	23
	Filing Glossary	24
IX.	SPELLING	26
	APPENDIX	
	A. Sample Log	31
	B. Sample Homework	32-33
	C. Sample Job Order	34
	D. Sample Proofreading Record	35
	E. Sample Letter and Memorandum	36-37
	F. Sample Extra Credit Time Sheet	38
	G. Memorandum to Training Station Personnel	39
	H. Supervisor Evaluation Sheet	40
	I. Sample Self-Evaluation Grade Sheet	41
	J. Request for Change of Work Station	42
	K. Memoranda to Student Switchboard Operators	43

INTRODUCTION

In-School Work Experience Education simulates, insofar as possible, actual office procedures followed in Business. It includes in-service training in general secretarial and clerical work through the various offices of the school, supplemented with classroom instruction and textbook assignments. As time and ability permit, students receive instruction and training in the use of electric typewriters, adding machines, spirit duplicators, mimeographs, mimeoscopes, the PBX, various filing methods, and miscellaneous clerical tasks.

Emphasis is placed on the development of character traits important to job success; i.e., trustworthiness, courtesy, integrity, industry, cheerfulness, and willingness and ability to follow instructions accurately and completely.

To do well in the program you should be serious minded, completely trustworthy, willing to take responsibility, and willing to work good-naturedly even when a job is routine.

Business surveys show that many office employees lose their jobs because of undesirable personality traits, and/or inadequate, unsatisfactory skills. Therefore, if you wish to become a successful office worker, it behooves you to build in yourself an employable personality and employable skills. In order to do this, you should analyze yourself to learn your strengths and weaknesses, and then you should do something constructive in regard to those items in which you rate below average.

Your diligent, tenacious, day-by-day adherence to the rules and suggestions in this handbook will result in improved personality traits, increased skills, and broader understanding of business procedures. Whatever your vocation may be, all of these should be of practical value in later life.

RULES

Note: There are exceptions to rules, and if you feel one should be made for a valid reason see your teacher.

TESTS

I. All students report to the classroom each Tuesday for instructions and tests. If a holiday falls on Tuesday, report on the next school day.

II. You are to have your textbook and handbook each time you report for a test.

III. In all true-false questions, the answers should be indicated with a "T" for true, "O" for false, regardless of other instructions on the test.

IV. Unless special arrangements are made with the teacher, tests must be made up after school or during study period within one week of the time originally given.

LOG

V. Every student is required to keep a detailed, concise daily log of what he does during his class period. The log is to run from Tuesday through Monday. If you wish, include one new thing learned related to business. This item may be something learned during the class period, in another class, from your homework, or miscellaneous reading, from discussion, television or radio. The reference in the upper left corner of the log should show dates covered and work station. Below the due date on the daily log give yourself a production grade for the week. Take into consideration both quantity and quality of the work you did. (See Appendix A)

HOME-WORK

VI. All students are expected to spend one-half hour daily on homework. Do it each day, please; don't wait until Monday night and expect to do a week's work in one evening. HOMEWORK IS TO BE TURNED IN EACH TUESDAY, STAPLED UNDER THE LOG.

VII. All homework papers, logs, tests and make-up work should carry DUE DATE. Work must be done on unlined, white paper, 8 1/2 x 11 inches. All papers are to be headed in regular school form, plus the complete assignment notation in the upper left corner. Work involving more than one sheet must be stapled in the upper left corner. Papers should be typed whenever possible; only one side of the paper should be used. Papers done in longhand should be written neatly and legibly in ink. All errors must be corrected; ink is permissible. STRIKEOVERS mean a grade of "F" on the assignment. (See Appendix B)

VIII. Late homework and logs receive a penalty of minus 1 point; missing homework and logs result in a penalty of minus 2 points. To be accepted, all work must be made up within one week of due date or on return from extended absence.

IX. All students are responsible for instructions and information placed on the chalkboard and the bulletin board. Students are also responsible for information given on memoranda from the instructor. Insert these in the handbook for reference and use.

X. ABSENCES Absences must be made up by overtime equivalent to time absent. This may be done during study period or after school. Usually there are no make-up sessions after school on Friday.

XI. HOUSE-KEEPING Unless it is unusually cold in the building, students are not to wear their coats in the classroom or training station. Personal belongings (purse, lunch, books, etc.) should be placed in the compartments provided in the classroom or in a secluded section of the training station.

XII. Fold the cover when you remove it from a typewriter. BE SURE ELECTRIC MACHINES ARE TURNED OFF WHEN YOU HAVE FINISHED. Always leave the work station neater than you found it. When you are preparing a masterset, be sure you clean up the work area when you are finished--including typewriter keyboard.

XIII. PBX All switchboard operators (including before school, lunchtime, after school, and observers as well as regular operators) must sign in and out each time they are on the board. (Appendix K)

XIV. PRO-DUCTION All work should contain a date. Letters, memos, notes, telephone message slips, etc., will have the date at the top. Masters, stencils, etc., should contain the date with the reference initials, usually in lower right corner of the page. Identification by date and typist is extremely important.

XV. (REFERENCE INITIALS) Reference initials should not be conspicuous, but they are essential. Sample forms are:

AC	LC:ac	10/66ac50
For letters		For production (date, typist, copies)

XVI. (SUPPLIES)
A. Students are to get all supplies from the office or department to which they are assigned.
B. Students are not to remove or use <u>anything</u> on the teacher's desk without permission.

XVII. (JOB ORDER) <u>All</u> duplication assignments and any other work requiring more than one typist should be accompanied by a job order with the exact <u>due date</u>. (See Appendix C)

XVIII. (WORK IN PROGRESS) Unless instructed otherwise, DO NOT leave unfinished assignments on the tables and desks. All work is to be placed in the teacher or period folder. NEVER put production materials in your personal folder.

XIX. (PROOF-READING) Duplication work is to be proofread twice. The student who typed the master or stencil should read the original copy. Proofreading slips should be used for stencils. (See Appendix D) Materials that are to be used outside the school or placed for the public to read should receive special care.

XX. (SAMPLES) Save samples of completed work except tests. When preparing test materials, be sure everything you have used is returned to the teacher for whom you are working. Two copies of all other duplicated work (one marked SAMPLE stapled to the job order and one marked FILE) are to be placed in the "Completed Jobs" file tray on the teacher's desk.

XXI. (LETTERS & MEMO-RANDA) Whenever you type a letter at your training station make two carbon copies on manifold--one for the dictator and one for your IWE teacher. Unless otherwise instructed an envelope should be typed for each letter. The envelope address is identical to the inside address. Use No. 6 3/4 for one-page letters without enclosures and No. 10 for two-page letters and letters with enclosures. (See Appendix E)

XXII. CONDUCT The IWE period is for IWE only. Use initiative, go to work promptly. DO NOT ASK the boss or teacher what to do. If you do not have a production job, practice typing or do IWE homework. Do not be a clock watcher. Remain at work UNTIL the dismissal bell rings.

There is to be no visiting while working on any IWE assignment.

TIPS

General:

1. Everything you see, hear, and do in connection with your job is confidential.

2. Listen carefully and get complete instructions the first time they are given. FOLLOW INSTRUCTIONS ACCURATELY. (Get a small loose-leaf notebook and write down instructions--your memory often fails you.)

3. Be ACCURATE FIRST, then work for speed.

4. THINK before you speak or act--use your head.

5. Have all work tools (pencils, notebooks, erasers, etc.) accessible and organized at all times.

6. Keep your training station neat and orderly. Clean it up when you leave.

7. Dress appropriately; be well groomed; be courteous, patient, and pleasant even though it is difficult!

8. Be prompt and don't be reluctant to work overtime.

9. REMEMBER THE GOLDEN RULE: Do unto others as you would have others do unto you.

10. Each student has a folder in the file drawer of the classroom. You will find graded tests, logs, and homework in your folder. Look at the teacher's marks so you will not make the same error again. If there is a note, be sure to let your teacher know you have read it.

11. Proofreading is one of the most difficult and responsible assignments.

12. You are responsible for knowing the correct spelling and position of all school personnel. (Ask teacher for copy of addenda: file at end of this section.)

13. Do not make assumptions; if you are not sure, ask.

14. It is not polite or businesslike to participate in any conversation taking place where you are working unless you are specifically included. Continue with your work as though you do not see or hear.

15. Work to be seen by outsiders should receive special care. Let's maintain a good image of quality work from our school.

Equipment and Supplies:

1. Learn where supplies are kept both in the room and your training station. When you remove supplies, be sure the storage area is left in order (covers on boxes, etc.). If the supply is low, make a note for reordering.

2. Be sure to use expendable supplies (paper, masters, stencils, etc.) from the training station--not IWE room--for production jobs.

3. There are two types of duplicators in the classroom (not counting the typewriters used for carbon copies):
   A. Mimeograph (print with ink)
      1. A. B. Dick
      2. Gestetner (silk screen with 4 color changes)
   B. Spirit (fluid process with carbon)
      1. Standard Rocket
      2. Ditto

4. Most of the typewriters in the classroom are IBM and Royal electrics with elite type.

	Strokes to horizontal inch	Lines to vertical inch
Elite	12	6
Pica	10	6
Small Elite	14	8

5. Clean machines produce clean copy.
   A. It is your responsibility to see that typewriters are cleaned periodically. Do not be satisfied with work that shows "muddy" e's, o's, etc. Brush eraser crumbs out of the typewriter daily. (Of course, you ALWAYS move the carriage to one side as far as possible when you erase.) When a typewriter needs repair, be sure to fill out a repair slip and place it in the repair book on the teacher's desk.
   B. The drum and impression roller on the spirit duplicator must be clean in order to produce usable copies.

Production:

LETTER 1. When typing a letter, be sure that it is placed attractively on the page just as you would frame a picture. Place the date flush with the right margin. Most letters look well with right and left margins approximately 1 1/2 inches wide. You can adjust this normal margin to the length of the letter. Letters are generally single spaced. The closing section begins to the left of center, but it should be adjusted to length of the typed name and title. UNTIL YOU ARE SURE OF YOURSELF make a rough draft of your letter. (See Appendix E)

The address on the envelope is identical to the inside

Production: (Continued)

LETTER address of the letter with the exception that a three-line address is double spaced on the envelope. Include the Zip Code number.

MASTER 2. A. In typing a masterset, do not use just a "teenie, eenie polka dot" piece of carbon for making corrections. Take the carbon from the full width of the master you are typing. Then you can hold the noncarbon edge and avoid smudges.

Don't forget to remove the extra carbon after you have made your correction. Don't forget to remove test letters.

B. When running your master on the spirit duplicator, don't be satisfied with poor copies. Ask your teacher for assistance. Professional looking work is our aim. FAINT COPIES ARE UNACCEPTABLE EVEN IF THEY CAN BE DECIPHERED.

STENCIL 3. A ROUGH DRAFT WITH CARBON COPY is the first step in preparing a stencil. When typing a stencil, please write your name and the typewriter number at the top of the heavy backing sheet (not on the stencil itself) before you type the stencil.

Rough drafts should be approved by the supervisor directing the assignment so any changes can be made before the final copy is typed. This is especially important if you are not quite sure of instructions. You may need the instructor's approval after you have begun a complicated assignment. Call the IWE teacher if you need special help.

When correcting a stencil, use a light coat of thin correction fluid. A thick coat of fluid makes your correction obvious. Be certain, however, that no light or white shows through. The top of the correction fluid must be screwed on tightly after EVERY use; otherwise, the fluid becomes thick and may get spilled.

It is a good idea to do the first proofreading of a stencil while it is still in the machine to eliminate difficulties in realignment.

When you realign a stencil, make test letters near the place of your intended correction. Then block out the test letters when the proper alignment has been made. Ask your teacher to help you if you have trouble.

PROOF-READING 4. All production typing and duplicating should be proofread with great care twice. Make neat, well-concealed corrections. Someone other than the typist should read the copy stencil and master to be used.

Production: (Continued)

5. Get training station supervisor to proofread long-job stencils and masters (3 or more pages) before running.

Study, Extra Credit and Make-up:

1. In preparing for a test, review sections at the end of each unit in your text.

2. Review notes from oral instructions, class discussions, and the chalkboard.

3. Review memoranda and syllabi.

4. Review questions you missed in preceding tests. ALL TESTS ARE CUMULATIVE.

5. Keep up to date on your assignments; cramming is not the best method of learning.

6. Extra credit may be earned (after school, study period, etc.) in several ways. If you are interested, see your teacher. You may earn up to 8 points for extra credit work during any marking period. (See Appendix F)

7. Report to the classroom any night after school except Friday for make-up work. If you have a study period, you may get a pass from your IWE teacher for make-up work at that time.

TYPING DETAILS*

Margins 1. Find the margin before you try to set it.

Abbreviations 2. As a general rule, don't use abbreviations. Exceptions to this rule are Mr., Mrs., No., and degrees. Always spell out months. Miss is not an abbreviation and therefore should not be followed by a period. Ms. is used when a woman's title is unknown.

The abbreviations i.e. and e.g. should be preceded by a semicolon and followed by a comma; i.e., as shown here.

In general, abbreviations made up of lower-case letters and periods have no space between them; e.g., a.m. and p.m. Abbreviations using upper-case letters and periods have a space between them (exception - academic degrees); those using upper-case letters and no periods are typed together. The trend is toward lower-case letters.

A. M. or a.m.
M. for meridies (noon) must be capitalized because it is one initial.

O. K. may be typed either as O. K. or OK (preferred); okay and okeh are acceptable--never use okey. O. K.'d is past tense.

Spacing 3. Always single space a memorandum; usually single space a letter. When single spacing, double space between paragraphs; when double spacing, still double space between paragraphs. Leave two spaces after a colon. This rule is followed whether the colon precedes a horizontal or vertical listing.

Capitalization 4. Capitalize only subjects whose titles are derived from proper nouns: I am studying history and Latin. Course titles are capitalized: I am taking World History. Business Department is capitalized when referring to a specific department. Capitalize Room 228.

Telephone Numbers 5. The new telephone numbers are to be typed as follows: 591-1333. When combined with old-style numbers:
LY 3-1257
591-1333

Addresses 6. 101-A West Hillsdale Blvd. (Apartments designated by letters)
101 West 39 Avenue, Apt. 29 (Apartments designated by numbers)
609 - 19th Avenue or 609 - 19 Avenue (Successive numbers)

*Use a secretarial handbook when you have questions about acceptable ways of presenting typed material.

Salutation and Closing	7.	Gentlemen is the appropriate salutation to use when addressing a company. Dear Sir is out of date. Very truly yours or Yours very truly is always safe to use as a complimentary close.
Zip Code	8.	The zip code number for Sunnyside is 94403. Use it in the return address. The zip code number comes one or two spaces after the state with no punctuation.

ERASING

You will need a typewriter (ink) eraser for original copy, a soft eraser for carbon copies, and a small, stiff card or metal erasing guard for use when erasing on carbons.

Procedure: Move the carriage to the extreme right or left, depending on which side of the page you are going to erase, so that the eraser waste will fall on the table and not into the machine. Your margin-release key must be used to accomplish this.

Hold the paper firmly by pressing it against the roller with your fingers on a blank part of the sheet.

Use a clean eraser, or the paper will be smudged.

Do not dig in or press on the paper when erasing, but use a gentle circular motion or an up-and-down movement. Be sure to make a clean erasure. Never dampen the eraser. Before typing a correction, blow or brush the eraser particles off the paper.

If you are erasing carbon copies, place a card or metal guard between the carbon sheet and the particular copy you are erasing. Use a soft eraser for your carbon copy. Never use a typewriter eraser on the carbon copy, for then the eraser will be too dirty to use on your original with satisfactory results.

In typing corrections, use a light stroke (retype with a still lighter stroke if necessary) so as to blend the erased word into the rest of the copy. On an electric machine, reduce the pressure dial to zero before typing the correction; be sure to return the dial to its normal position before resuming the regular typing. You must strive to conceal the erasure.

Always proofread the copy before removing it from the machine.

If an erasure is necessary very near the bottom of the page, roll the paper back and erase from the bottom end. This will prevent the paper from slipping. If in erasing carbon copies the copies have slipped a little out of alignment, wait until you have completed the page to make the correction. Then reinsert each page separately and make the correction. Engaging the line reset (line finder) avoids slippage of a carbon pack.

If it is found that material having carbon copies must be corrected after it has been removed from the machine, place each copy in the machine separately for correction. You can make a carbon correction on the sheet (rather than a ribbon correction) by holding a small piece of carbon paper over the spot where the correction is to be typed.

USE OF THE TELEPHONE

When you use the telephone, you create an impression--favorable or unfavorable--on the person at the other end of the line. All of us wish to be thought of as considerate and courteous people. Your handling of telephone messages is a mark of your efficiency also.

TO IMPROVE YOUR VOICE QUALITIES display alertness, be expressive, talk naturally, reflect pleasantness, and speak distinctly. If you speak a little slower than you normally do, you will be more easily understood. Don't use slang or unbusinesslike expressions such as "O.K.," "yeh," and "un huh."

REMEMBER COURTESY COUNTS; therefore, greet callers pleasantly, offer to be of service, listen attentively, use caller's name, acknowledge comments appropriately.

TO PLACE A CALL:

1. Plan the call.
2. Look up the number in the directory; only call information when you can't find it in the directory.
3. Give the person you are calling ample time to answer before hanging up.
4. Identify yourself immediately when the person answers.
5. If the person who answers is not the person you want or does not identify himself, ask pleasantly for that person and announce your name.
6. When you do not wish to speak to a particular person, state your wishes in a nice way, preferably in the form of a request.
7. Close the call pleasantly; hang up <u>gently</u>.

TO PLACE A CALL FOR SOMEONE ELSE:

1. Be sure your boss is available when you are placing a call for him.
2. Ask when you may call back if in placing a call you find the person called is not available. In this way you keep control rather than depending on someone else to remember to call you back.

Nobody enjoys answering or calling WRONG NUMBERS and there's an easy way to avoid them:

1. Dial carefully, or give the number you want distinctly.
2. If you receive a wrong-number call, give the other fellow a break.
3. If you're the caller and the voice at the other end sounds strange, ask pleasantly, "Is this Orchard 6-9000?" If it is not, apologize briefly and consult the directory again.

WHEN RECEIVING CALLS <u>ALWAYS</u>

1. Answer promptly.
2. Identify yourself or company.
   At home: "Smith residence, Nancy speaking"

On PBX: "Sunnyside High School, student speaking"
On Intercom: 1. "Main Office, student speaking"
2. "Mr. Oakley's Office, student speaking"
3. "Business Department Office, student speaking"
4. "Room 228, student speaking"

3. Respond to inquiries graciously.

WHEN ANSWERING FOR SOMEONE ELSE:

1. If the person called is available, say "one moment please" to the caller and announce the call to your employer.
2. If the person called is talking over another line or busy at the moment, ask the caller if he prefers to hold the line, to call back, or to leave a message. If the delay is longer than anticipated, go back on the line to give the caller a chance to leave a message.
3. Advise if person is unavailable and offer to take a message.
4. If the caller leaves a message, WRITE IT DOWN. Make a record of the caller's name, his affiliation, his telephone number, date and time that he called as well as the message. WRITE THE MESSAGE LEGIBLY and place your signature on it.
5. If the caller does not identify himself, try to find out tactfully who he is. ("May I tell him who's calling?" or "If you'll give me your name and number, I'll ask Mr. Jones to call you when he returns.")
6. Verify the message with the caller.
7. Place the message on your employer's desk where he will see it as soon as he returns to the office. Have the school secretary OK the message if you are working at the switchboard.
8. Do not let the phone hang by the cord. Place the receiver horizontally on the cradle.
9. Always hang up gently.

WHEN ANSWERING THE SWITCHBOARD remember it is worthwhile to treat all calls as though they were important. Most of them are!

ON PBX CALLS:

1. Answer by identifying the school and yourself: "Sunnyside High School, student speaking."
2. When asked for a particular person say, "Thank you, I'll ring Miss Jones."
3. Transfer the call to the right party immediately; nothing is more irritating than being passed from one extension to another. If there is a delay, say, "One moment please."
4. If the desired extension is busy, explain and ask the caller if he would like to hold the line, speak to someone else (i.e. secretary), call back, or leave a message. If the caller holds the line, go back on the line at near intervals and say, "That line is still busy," and give the caller an opportunity to leave a message.
5. If you are unable to reach the person, ask to take a message. NEVER TAKE MESSAGES FOR STUDENTS.
6. Keep pencil and paper handy. WRITE DOWN MESSAGES IMMEDIATELY. Include date, name of person calling, his affiliation, his telephone number, the time that he called and message. Place

your signature on the message. VERIFY the message with the caller and give to the school secretary for an O.K. before relaying to teacher. Be sure that the person called will receive the message.

7. Never answer questions. Refer to the school secretary.

ON INTERCOM CALLS:

1. Answer promptly by saying "Main Office, student speaking."
2. Ring the appropriate room immediately. Do not make rings too long. Ring again if the party does not answer, ask if you may ring another room; don't leave caller "stranded."
3. When the lines are inadvertently disconnected, go on the line and say, "I'm sorry you were disconnected; I'll reconnect you" or "to which room were you connected?"

NEVER USE SCHOOL PHONES FOR PERSONAL USE.

THE SPIRIT DUPLICATOR*

I. An Introduction

If you expect to work in an office, you must know how to make many copies of notices and announcements, of reports and news releases, of schedules and price changes, and of hundreds of other business papers. Knowing how to make copies is just as important as knowing how to typewrite or answer a telephone.

If you need just 5 or 6 copies, you can write or type them all at once by using carbon paper. But what if you need 25 or 300 copies? It would take too long to write or to type them, even with carbon paper. Besides, the copies might not be exactly alike. So, you would use a machine that makes exact copies of the one copy that you prepare. This machine is called a "duplicator."

THE DIRECT PROCESS works like this:

1. You make one original copy, using a special carbon paper. It is special because it contains aniline dye. The original copy is called the "master."

2. You fasten the master onto the drum (the revolving part) of the duplicating machine.

3. As you turn the handle of the drum, many things happen automatically:

   a. The paper is drawn into the machine.
   b. The paper is dampened with a chemical.
   c. The paper is pressed against the master.
   d. Some of the dye is dissolved from the master making an exact copy.
   e. The paper comes out into a tray.

This process has some other names by which it is called in some offices. Because the paper touches the master directly, it is referred to as the "Direct Process." Because a watery liquid is used, the process is also called a "liquid process."

*Abridged from "How to Make Ditto Direct Process Masters," Ditto, Inc.

TO BE A GOOD DITTO operator, you should:

1. Know what supplies to use.
2. Know how to prepare a good master.
3. Know how to run copies on the machine.
4. Develop these three traits: neatness, carefulness, and personal efficiency.

II. Typing a Master

SUPPLIES Needed:

Masterset (Sheet of master paper, sheet of Ditto carbon)
Type cleaner or brush to clean type
Pencil (hard lead) or ball-pointed pen
Typewriter
Backing sheet

TRAITS to be stressed:

Neatness	Ability to type accurately
Carefulness	Ability to type very evenly
Efficiency	Alertness to the directions

BASIC INFORMATION: The six steps in preparing a typewritten master sheet are:

1. Prepare the typewriter. Clean the type well, giving extra attention to broad letters (like W) and closed letters (like e/o/g).

2. Prepare the masterset. A masterset consists of one sheet of Ditto carbon and one sheet of master paper fastened together at the bottom with a thin sheet of tissue paper separating the two. The tissue must be taken out before you type on a masterset.

3. Type the material. Leave at least one-half inch at the top or bottom of the page. Type with a sharp, even stroke, a few words a minute slower than your normal pace. Type punctuation marks a little more lightly; type capital letters a little more sharply.

4. Proofread the work. (You will learn how to make corrections later.)

5. Remove the pack from the machine. Carefully separate the master from the carbon and cover the carbon side of the master with the protection sheet until you run it.

SPECIAL NOTES

1. If you wish to draw or write on a master, lay it on a sheet of Ditto carbon and write or draw with a ball-pointed pen or pencil with very hard lead. Press evenly, firmly.

2. Master or Ditto carbon paper can be used only once.

III. Running Copies

SUPPLIES Needed:

Master
Scotch tape
Scissors or sharp knife
DITTO Duplicator

TRAITS to be stressed:

Neatness when handling and cutting the master
Extreme carefulness in observing directions
Alertness

BASIC INFORMATION: It is recommended that you get some other experienced operator to show you how to perform these steps for running copies:

1. Get the duplicator ready. Be sure there is fluid in the fluid tank. Place paper on the feed tray. Adjust the rubber grippers and paper guides for the width of paper. See that the paper tray (which catches the copies) is in position. Check the grippers very carefully; if they are too loose, the paper may feed more than one sheet at each turn of the handle. Run some blank paper through the machine to check the positioning of the grippers.

2. "Prime" the machine. Set pressure lever at medium. Each Ditto Direct-Process duplicator has a strip of felt (called the "wick") placed where it moistens a rubber roller which in turn moistens the paper that comes into the machine. The wick must be moist when you are running copies. If the machine has been idle, the wick will need to be "primed" (moistened). If you make the wick very wet, you will get darker copies, but fewer of them. If the wick is too dry you will get light copies, but more of them.

3. Put the master on the machine. Turn the handle clockwise to the six o'clock position (straight down). Open the clamp that will hold the master on the drum, (the cylinder that turns). Insert the top edge of the master into the opening (it goes in about 1/4 inch) so that the side with carbon on it FACES UP when the drum is turned; then return the clamp lever to its normal, locked position.

4. Run the copies. Turn the handle clockwise. Each time you turn it all the way around, you will print one copy of the master.

5. Remove the master. Stop the handle at the six o'clock position. Open the clamp lever, lift out the master (carefully, not touching the carbon), then close the clamp lever unless another master is to be run immediately. If the machine is not to be used at once set the copy control lever and the pressure control lever at zero. Turn the fluid tank OFF on the Standard.

IV. Correcting Masters

SUPPLIES Needed:

Blockout pencil
Razor-Knife or Scalpel
Scotch tape
Pencil eraser

TRAITS to Stress:

Deftness in handling correction material
Ability to do fine, "close" detail work

BASIC INFORMATION: When you type a master, your typing simply puts carbon on the back of the master. When you make an error, you have carbon where you do not want it.

1. If you do not need to type over the mistake, you can (a) CUT IT OUT of the paper with a razor, knife, or scissors. Or, (b) COVER the error with Scotch tape, gummed label, or the "Blockout" wax of a Ditto Blockout Pencil. If the error is cut out or covered over, it cannot reproduce. Either method is good for eliminating an extra letter between words, a word that runs into the margin, an unwanted underscore or punctuation mark, etc.

2. If you must type a correction at the point of the error (as in a misspelled word), you must first eliminate the error. This you do by:

a. lightly scraping off the carbon and coating the error with Blockout wax
b. or erasing the error very thoroughly

After the error has been disposed of, you are ready to type the correction. However, remembering that you "used up" the carbon at that point when you typed the error, you must provide some new carbon there. So, insert a slip of fresh Ditto carbon (torn from the top of the carbon sheet) under the master at the point where you must type. Type the correction; then <u>remove the extra slip</u> before going on.

SPECIAL Correction Short Cuts:

1. You can scrape part of a letter with a blade to change an E to F, an o to c, a B to b, and so on.

2. You can slice up a master and tape it back together in a new arrangement--to move a heading, to delete a paragraph, and so on.

3. You can use a ball pen or hard pencil to "touch up" some errors--to change a comma to a semicolon, to insert a period, to strengthen a letter.

4. You can strike over (lightly) some letters, like an e over c, p over an o, b over h, f over t, etc.

V. Securing Attractive Effects

SUPPLIES Needed:

A Ditto Masterset or sheet of unused Ditto carbon and master
Ditto carbon sheet in red, green, or blue

TRAITS to stress:

Neatness in working with Ditto carbons
Carefulness
Conservative taste in "decorating"

BASIC INFORMATION: There are at least six ways to help secure attractive effects on Ditto copies.

1. Excellence in typewriting is the most important factor. Nothing can make up for errors, uneven stroking, or poor arrangement.

2. Regular typewriting display
   a. Underscoring important words
   b. Centering display headings
   c. Using all capitals for emphasis
   d. Indenting paragraphs extra deep
   e. Putting extra space around headings
   f. Typing key words twice, for boldness
   g. Justifying lines so they end evenly

3. Colored paper gets attention, too. In many offices, all special notices are duplicated on colored paper--green might be for announcements from the President, for example; light blue for notices from the Personnel Director.

4. Illustrations may make a job more attractive. Illustrations include drawings, cartoons, lettering, charts, graphs, and so on. You can include on a master whatever you can trace or draw.

   Step One: Sketch lightly or trace onto a master sheet (without having Ditto carbon under it) the illustration exactly where you want it to be.

   Step Two: Place the master on Ditto carbon and, using a ball pen or pencil with hard lead, go over the drawing, pressing firmly, to get a clear carbon imprint on the back of the master.

5. Color brightens a Ditto master. Ditto carbon is usually purple; but Ditto carbon is also available in red, blue, green and black. You can prepare an entire master in one of these other colors simply by substituting a colored carbon sheet for the purple one. Color is usually reserved, however, for spotlighting important items, like headings, and for indicating loss figures in bookkeeping.

To have part of a master in red, blue, or green, type the master in the regular way; but when you come to a part to be in color, insert a slip of colored Ditto carbon between the regular carbon and the master. Type the material that is to be in color; then remove the color carbon slip and continue.

To use color in an illustration, place the master on a sheet of colored Ditto carbon and trace or draw the part that is to be in color. You can bring different colors close together but must not let them touch or cross.

6. Special effects can be given to a Ditto job by drawing lines or dots around part or all of the material on the master, by inserting series of asterisks (*), and so on.

STENCIL DUPLICATING

DEFINITIONS

1. Film - transparent sheet
2. Stencil - waxed sheet (green, blue and other colors)
3. Cushion Sheet (or typing carbon) - thin coated sheet
4. Typing Plate - stiff plastic sheet
5. Back - heavy white paper attached to back of stencil
6. Interleaving Sheet - thin white sheet (discard)

ASSEMBLING THE STENCIL

For a medium copy, which we usually use in IWE, first remove both interleaving sheets between the stencil and the back. Insert a carbon or cushion sheet (coated side up) directly under the stencil. Place a typing plate between cushion sheet and back. (For a light copy replace the cushion sheet with an interleaving sheet. For a heavy copy omit the typing plate.) The stencil pack does not necessarily demand a film. To help in placement, you may put a sample copy under the stencil in place of the cushion sheet. This sample should not be typed on mimeograph paper. Do not type above line 3.

TYPING THE STENCIL

Before inserting the assembled stencil, clean the typewriter type thoroughly by placing the ribbon indicator on stencil or "white" and typing the alphabet, both upper and lower cases, a few times or until the impression is clear. When typing a stencil on a manual machine, use a heavier stroke for capital letters and a lighter stroke for punctuation marks. The white warning numerals on the stencil are provided to show you how many lines you can type before you reach the bottom of the stencil for your size paper. The lines on the stencil show where the top, bottom, and sides are for the size paper you are going to use.

CORRECTING THE STENCIL

When making corrections, do not remove the stencil from the typewriter. Detach the film from the top of the stencil. Hold the stencil away from the backing sheet. Apply a light coat of thin correction fluid. Be certain, however, that no light or white shows through. Allow it to dry before reattaching the film and typing over the corrected spot. Make sure to screw the top of the correction fluid on tightly after EVERY use, because the fluid will become thick or spilled. It is also a good idea to do the first proofreading (remember all duplicating work must be proofread twice) while the stencil is still in the machine in order to eliminate difficulties in realignment. If a correction must be made after the stencil has been removed, make test letters near the place of your intended correction in order to realign the stencil correctly. Block out these test letters when the correction has been made. To assist in making good corrections, write your name and the typewriter number at the top of the stencil.

STYLUS WORK

To draw, write, trace, or shade on the stencil with styli, remove the top film and use the mimeoscope (illuminated drawing board) and/or drawing plate.

FILING

GENERAL RULES AND SUGGESTIONS

1. Finding not filing is the most important consideration.

2. Always file behind the guides.

3. Letters in individual folders should be arranged in order of date; the most recent at the front of the folder.

4. The miscellaneous folder goes behind its matching primary guide and it is the last folder behind the guide.

5. Filing should be done daily.

6. When removing folders from the file, always hold them by the side or center--never by the tab.

7. When inserting papers in a folder, be sure the paper falls to the bottom of the folder.

8. All headings of papers should be to the left as the file clerk faces the file.

9. Avoid the use of clips and pins; they can cause papers to become "lost."

10. The alphabet is the basis of all filing systems.

11. Don't open more than one file drawer at a time in the same stack. A stack of file drawers may easily tip over if you do.

12. Never place a paper smaller than half of a regular correspondence sheet in the file without first pasting or stapling it onto a full-size sheet of paper.

13. Letters in miscellaneous folders are filed alphabetically.

14. Folder labels may be purchased in continuous rolls or strips.

15. A small filing stool, on rollers, is a handy aid in placing material in the lower file drawers.

16. Nothing precedes something.

FILING GLOSSARY

Alphabetic filing . . . . . filed according to the letters of the alphabet

Alphabetic index order . . the final alphabetic arrangement of the index units

Binder folder . . . . . a folder which contains a metal fastener for holding papers

Business name . . . . . the official name of a company, a corporation, a partnership (firm), an organization, or an association

Coding . . . . . underlining the portion or portions of a name or subject title that are to be used as the first index unit. The initial letter of the coded portion constitutes the letter of the alphabet under consideration

Cross referencing . . . . . the process of filing a letter in one folder and then preparing a cross-reference sheet to be filed in a different folder

Double notation . . . . . A-Az, Ba-Be, Bi-Bri, etc.

Expansion folder . . . . . a folder with additional folds at the bottom

Filing . . . . . the systematic and orderly arrangement and storage of materials (cards, letters, invoices, statements, catalogs, blueprints, newspapers, and other office and personal records) for future reference

Folder . . . . . a container for matter to be filed, made of heavy paper folded at the bottom

Full name . . . . . the surname and at least one given name or initial of a person

Geographic filing . . . . . filed according to the name of the place

Given name . . . . . first name or initial of a person and his middle name or initial, if any

Guides . . . . . pieces of stiff cardboard which divide a file into sections

Indexing . . . . . mentally dividing names into index units for purposes of alphabetizing and then deciding the order in which the units are to be alphabetized

Index unit . . . . . each portion of a name that is used in indexing

Natural order . . . . . the official name of a business or organization and the legal name of a person in the order in which it is written or used

Numeric filing . . . . . filed according to number

One-fifth cut . . . . . a tab which is 1/5 the width of the guide

One-fourth cut . . . . . a tab which is 1/4 the width of the guide

Out folder . . . . . a folder inserted in the files in place of a letter that has been removed

Out guide . . . . . a guide inserted in a folder in place of a letter that has been removed

Personal name . . . . . the legal name of a person, whether that name stands alone or is part of a business name

Single notation . . . . . A, B, Br, C, etc.

Sorting . . . . . arranging the papers in complete sequence by bringing together all papers about one name, one subject, etc. (Sav-a-sort frequently used)

Straight-edge folder . . . a folder having a straight edge at the top

Subject filing . . . . . filed according to the name of the subject that properly identifies the papers

Surname . . . . . family name (last name)

Tab . . . . . an extended portion along the top edge of a folder or guide

Tickler . . . . . a file which serves as a daily reminder of matters that require attention

Written form . . . . . the way in which a name is written for filing purposes. This written form is referred to as a CAPTION when it is used as a heading for a guide or a folder.

SPELLING DEMONS

1. absence
2. absent
3. a cappella
4. accept
5. accessible
6. accommodate
7. accrued
8. acquaintance
9. accross
10. affect
11. align
12. all right
13. alphabet
14. already
15. ampersand
16. analysis
17. analyze
18. angel
19. angle
20. apparel
21. apparent
22. appearance
23. athletic
24. attendance
25. attorneys
26. benefited
27. bicycle
28. brilliant
29. business
30. calendar
31. choreography
32. clock-watchers
33. collate
34. collateral
35. conceal
36. conscientious
37. consolation
38. consultation
39. controversy
40. convenience
41. counselor
42. criticism
43. criticize
44. decision
45. definite
46. delete
47. describe
48. description
49. develop
50. delinquent
51. disappoint
52. disastrous
53. effect
54. eligible
55. ellipsis
56. embarrass
57. empathy
58. equipped
59. eraser
60. erasure
61. exceed
62. existence
63. extension
64. familiar
65. February
66. filing
67. filling
68. foreign
69. fourth
70. fulfill
71. government
72. governor
73. grammar
74. guarantee
75. height
76. homework
77. hyphen
78. immediately
79. incidentally
80. initiative
81. inoculate
*82. judgment
83. legitimate
84. liaison
85. library
86. license
87. maintenance
88. masterset
89. mileage
90. mimeograph
91. mimeoscope
92. miscellaneous
93. mortgage
94. multiple
95. necessary
96. noticeable
97. occasion
98. occurred
99. occurrence
100. omission
101. omitted
102. original
103. overdue
104. pamphlet
105. particle
106. performance
107. permissible
108. persuade
109. pompon
110. possession
111. practical
112. preceding
113. precis
114. precise
115. preferred
116. privilege
117. procedure
118. proceed
119. procrastinator
120. professor
121. proofread
122. psychology
123. quantity
124. questionnaire
125. realign
126. receive
127. recommend
128. reference
129. referred
130. reinsert
131. repetition
132. respectfully
133. respectively
134. roller
135. saddle stapler
136. secretary
137. seized
138. separate
139. sergeant
140. similar
141. slippage
142. smudged
143. sophomore
144. stationary
145. stationery
146. stipend
147. strictly
148. styli
149. stylus
150. succeed
151. summary
152. summons
153. summonses
154. superintendent
155. surprise
156. switchboard
157. syllabi
158. syllabus
159. textbook
160. transferred
161. tread
162. typewriter
163. typewritten
164. undoubtedly
165. unnecessary
166. utensils
167. Wednesday
168. parachute
169. counseling
170. data
171. datum
172. surname
173. ninety
174. pasteurize
175. simulate
176. mutilate
177. Capuchino
178. Crestmoor
179. desirable
**180. usable
181. manager
182. bookkeeper
183. poignant
184. laboratory

*judgement
**useable

STUDENT HANDBOOK APPENDIX

APPENDIX A (1)

Log for week of January 30-February 5
Work station Miss Gordon

Name Jane Doe
IWE 2 Period 3
Due date February 8, 1966

Grade for week B

N. B.: USE REVERSE SIDE OF THIS SHEET IF MORE SPACE IS NEEDED

Tuesday Date February 1, 1966

I was temporarily assigned as Miss Gordon's secretary. I went to her office, but could not find her. I came back to Room 223 and Mrs. Cavitt sent me to the counseling office. There I alphabetically filed temporary program cards. I learned of the complexities of programing students and of keeping a record of each student attending Sunnyside High School.

Today, I learned if, after making an erasure, you find a dark spot on the back of the paper, you can improve the appearance of your work by covering the spot with white chalk.

Wednesday Date February 2, 1966

Miss Gordon showed me where all the supplies were, what I was to do, and also the typewriter with the Spanish and French accents and punctuation marks on the keys. She told me that she would leave a note on what to do when she would not be in the office. She gave me a folder in which she will leave instructions and I will leave questions if I have any.

Today, I learned when forwarding mail over an extended period to the same addressee, number the envelopes so that the addressee will know whether he has received all of them.

Thursday Date February 3, 1966

I started to work for Miss Gordon today. I went to the Language Office and she gave me some books to file. When I finished that, she had me set up her grade book. I misunderstood her directions and put the dates in the wrong places. Miss Gordon straightened me out and I filled in the rest of the book. Then I erased all the mistakes I made. Even though I was not using the typewriter, I was able to use the erasing information since I was working with an ink eraser.

Today, I learned

Friday Date February 4, 1966

I started to clean out the supply cabinet when Miss Gordon came into the Language Office. She had me type up some textbook sign-out sheets and a Spanish study sheet on a master. I ran off 35 copies on the spirit duplicator.

Today, I learned always fill in the subject line on an interoffice memorandum. This makes it easier for the employer to locate a memorandum in a mass of papers. It simplifies filing for the secretary, too.

30 SH

APPENDIX A (1) Continued

Monday Date February 7, 1966

When I got to the Language Office, Miss Gordon sent me to the Main Office with a message of some sort. When I got back she gave me an announcement to type on a master and run off. I ran off the copies and then put one in each teacher's box. When I got back to the office, Miss Gordon was not there so I took up where I left off in cleaning the supply cabinet. I plan to clean a little whenever I have finished my work or have a little spare time.

Today, I learned

APPENDIX A (2)

SAMPLES FROM LOG

Today, I learned:

to replace all equipment used

to approximate time allotted for a task

to center assignment on the master for better appearance

to know the names of the staff at school

to know the location of the important offices at school

when in doubt, check to be certain

how to assemble a stencil properly

how to make corrections on a stencil

what the numbers on the stencil indicate

to strive for accuracy, not for speed

to clean up all materials after using them

to strike the keys evenly for better stencils

to use a light coat of correction fluid for errors

for better masters you should clean the keys occasionally

to ask when not certain of handwriting

to always prime the Ditto duplicator if it hasn't been used that day

to staple diagonally in the left hand corner

to straighten up the paper around the Ditto machine at frequent intervals

to review my tabulation

to save all masters until I have checked with my supervisor

to mark where to stop at the end of the page

to check old tests for previous mistakes made

APPENDIX B (1)

SAMPLE HOMEWORK

Summary of Unit 10
"Writing Business Letters"
Section 1
Pages 196-204

Alice Kintner
In-school Work Experience
Period 5
March 31, 1966

This unit talks about why business letters are important. It gives the tests of a good business letter. When testing the letter, you should look to see if it:

1. is accurate in its statements and is clear to the reader
2. uses language appropriate to the subject and the reader
3. uses simple, clear, and concise wording; "deadwood" eliminated
4. reflects basic good will; sincere, courteous, friendly in tone
5. follows good sales principles--attention, interest, conviction, action
6. is attractive in appearance and arrangement
7. is grammatically correct with no "roadblocks" to hinder the reader
8. achieves its purpose; shows good planning and clear thinking

This unit tells you that you should write from the reader's point of view. This means that instead of using the pronouns I, mine, we, and ours, you use the pronouns you and your.

When writing a letter, you should be concise and eliminate all unnecessary words. You should also be courteous, positive, and pleasant.

You should make your first statement count and close your letter effectively.

APPENDIX B (2)

SAMPLE HOMEWORK

Essay on how to erase
at the typewriter

Jane Doe
In-school Work Experience
Period 3
February 7, 1966

HOW TO ERASE AT THE TYPEWRITER

Knowing how to erase correctly at the typewriter is important to the office worker for two reasons. First, he should want to erase so as to keep his typewriter in good condition. Secondly, he should want to take pride in a neat, typewritten page with concealed corrections.

To accomplish the first of these--keeping the typewriter in good repair--the erasure should be made so that eraser particles don't fall into the machine. To do this, move the carriage to the extreme right or left by using the margin-release key. Thus the waste will fall onto the table and not the machine. Then blow or brush off any waste clinging to the roller before typing the correction.

To obtain a neat, concealed erasure, several rules must be followed. A clean ink eraser is used for the original copy and a clean soft eraser for the carbon copies. If the typewriter eraser were used on the carbon copies it would become too dirty to be used effectively on the original. Hold the paper firmly against the roller while erasing. Use a gentle, circular motion or an up-and-down motion--not a digging one.

To correct a carbon copy, put a card or metal guard between the carbon sheet and the copy being erased. Use a soft eraser. If a correction must be made on a carbon copy that has been removed from the machine, or if the carbon pack slips while erasing, type each correction separately after the pack is removed from the machine. To make a carbon correction rather than a ribbon correction, put a small piece of carbon over the spot to be corrected.

If an erasure must be made at the bottom of the page, roll the pack back and erase from the bottom. When typing over a correction, type over the letter very lightly several times to make it blend with the rest of the typing.

APPENDIX C

TITLE OF JOB Heart and Circulation

SUNNYSIDE HIGH SCHOOL

Business Department Work Order

Date May 4, 1966

From Mr. Shepherd (Supervisor's name) for Science Department (Department or organization)

Ann Harris (Student's name)

Extra-curricular activity advisor's approval _____

Date for desired completion of job May 12, 1966
(Be SPECIFIC--PLEASE do not say "as soon as convenient." Allow one WEEK or more, depending on size of the job.)

INSTRUCTION SHOULD BE SPECIFIC, COPY SHOULD BE CLEAN, LEGIBLE, AND CORRECTLY SPELLED.

Nature of work: (Please describe in DETAIL. All duplicating supplies should be furnished by you--PLEASE SEND WITH JOB.)

☐ MIMEOGRAPH
Paper: size and color

☐ DITTO
Paper size
110 copies
8 1/2 by 11 - white
2 pages - please collate and staple

☐ TYPING

Supplies delivered with this order: Yes (X) No ( )

Rough Ann Harris
Master or Stencil Ann Harris
Proofread Jane Doe - Mary Smith
1st
2nd
Run by Jane Doe

Delivered by

Completed job received
W. Shepherd
(Signed)
3/12/66
(Date)

Sample attached? Yes (X) No ( )

THIS FORM TO BE SIGNED AND RETURNED TO BUSINESS DEPARTMENT WITH ONE SAMPLE ATTACHED EXCEPT TESTS

APPENDIX D

PROOFREADING RECORD

Description of job: Memo to the switchboard operators

Stencil Page 2
(Stencils, masters, letters, etc.)

FIRST proofreading by:

1. Jane Brown

2. Ann Harris Date 1/20/66

Corrections to be made:

Line 5 tho re

Line 13 apropriate--pp

Line 18 " to "

Line 30 5c to 5d

Line __

SECOND proofreading by:

1. Ann Harris

2. Susan Blair Date 1/20/66

Additional corrections to be made:

Line 21 delete (under the glass)

Line __

Corrections made by Susan Blair

READY TO RUN OR TO DELIVER 1/20/66
(Date)

Signed by Susan Blair
(Student)

Approved by Mrs. Peterson
(Teacher)

APPENDIX E (1)

SUNNYSIDE UNION HIGH SCHOOL DISTRICT

Sunnyside, California

March 23, 1966

Association Films, Inc.
25358 Cypress Avenue
Hayward, California

Gentlemen:

Please send me your free-loan film "WHO WROTE THAT?" for use in my Business Communications class during the week of April 11 or 18, 1966. Thirty-five of your corresponding pamphlets that summarize the salient message of the film would be useful, too.

The film will be returned the same week with postage paid.

Yours truly,

Ann Peterson, Head of
Business Education Department

AP:dp

APPENDIX E (2)

MEMORANDUM

TO: F. Frank, Head of Boys' Physical Education Department

FROM: Ann Peterson, IWE Teacher DATE: February 21, 1966

SUBJECT: Supplies

REFERENCE:

The masters and copies of track materials requested by you have all been delivered. If you need any additional copies, please let me know.

We used three reams of paper in addition to the supplies you provided. Please repay at your convenience.

L. C.

mm

APPENDIX F

EXTRA CREDIT TIME SHEET

_____marking period.

Name_____
IWE _____Period_____
Date_____

Date	Time In	Time Out	Description of Work Done	Time

APPENDIX G

MEMORANDUM TO TRAINING STATION PERSONNEL

TO: DATE:

FROM:

SUBJECT:

In-school Work Experience Education is primarily an on-the-job learning experience for students. You should give complete and explicit directions for all work to be done, check on assignments in progress, and verify the accuracy and usability of the completed job. The basis for grading an office practice student is first, quality; second, quantity; and third, improvement and growth throughout the course.

Attendance: The person to whom a student is assigned is responsible for taking attendance every day except Tuesday. On Tuesday, each student must report to the classroom to turn in his weekly homework assignment and take his weekly test.

UNLESS ON AN AUTHORIZED ERRAND, YOUR IWE STUDENT SHOULD REMAIN AT HIS TRAINING STATION FOR THE FULL PERIOD. PLEASE KEEP HIM WORKING IN YOUR ROOM UNTIL THE DISMISSAL BELL RINGS.

Production: Each office assistant should check the typewriter daily to see that it is in good working condition. If the machine needs repair, a repair slip should be filled out completely and given to the office practice teacher.

For difficult ditto masters or mimeograph stencils, a rough draft should be typewritten by the assistant first, so he can check on grammar, placement, spelling, etc.

When filing work is finished, a student should have time to check his work, because finding the material is more important than filing it.

Supplies: All supplies (paper, masters, stencils, correction fluid, etc.) should be furnished by your department for the student assigned to you.

Habits, traits, attitudes: Students are expected to maintain business-like conduct, attitudes and grooming at all times. Students are told to treat all work done in connection with office practice as CONFIDENTIAL. If citizenship or conduct becomes a matter of concern at any time, the teacher-coordinator should be notified immediately.

Grading: A folder is to be kept at the training station for each office assistant with samples of all of his work. This folder is to be available for viewing and grading by the IWE teacher-coordinator at any time.

APPENDIX H

SUPERVISOR EVALUATION SHEET

TO: DATE: _____

FROM:

SUBJECT: Confidential Report of Student Office Assistant Help

_____ Period_____
STUDENT

NUMBER OF DAYS ABSENT_____

Please check the following if you have opinions in these categories:

	Superior	Above Average	Average	Weak	Unsatis-factory
1. Quantity and quality of production					
2. Typing					
3. Filing					
4. Proofreading					
5. Improvement and growth					
6. Dependability					
7. Businesslike conduct					
8. Citizenship					
9. Personality					
10. Grooming					
11. Promptness					
12. Initiative					
13. Cooperation					
14. Orderliness					
15. STUDENT'S GRADE BASED ON ABOVE (summary of 1-14)					

An "A" grade indicates superior rating in the majority of the above classifications.

Comments and suggestions as to how we can give you better service:

APPENDIX I

SELF-EVALUATION GRADE SHEET

NAME
IWE
DATE

PERIOD

		Dates	Grades	Points
1.	Tests			
2.				
3.				
4.				
5.				
6.				
7.				
8.	Production			
9.				
10.				
11.				
12.				
13.				
14.				
15.	Total Number of Grades			
16.	Bonus			
17.				
18.				
19.	Extra Credit Points			

A = 4 points
B = 3 points
C = 2 points
D = 1 point
F - 0 points

20. Total Number of Points . . . . . _____

21. Record of Logs and Homework

	Dates	Logs	HW
22.			
23.			
24.			
25.			
26.			
27.			

28. Penalties for Logs and Homework [ ]

29. Miscellaneous Penalties
30. Absences
31. Cuts and tardies [ ]
32. Textbook [ ]
33. Conduct [ ]
34. Other [ ]

35. Total Penalties . . . . . _____

36. Net Points (subtract line 35 from line 20) . . . . . _____

37. DIVIDE NET POINTS (line 36) BY TOTAL GRADES (line 15); CARRY 2 DECIMAL PLACES (Do your computation on the bottom of this sheet.)

38. Put the appropriate <u>letter</u> grade in the form at the right below.

REPORT CARD GRADES	
First	
Second	
Third	
SEMESTER	

APPENDIX J

Name _____
IWE _____ Period ____
Date _____

REQUEST FOR CHANGE OF TRAINING STATION

Present station

Assignments on present station

1. _____
2. _____
3. _____
4. _____
5. _____

Reasons for change

1. _____
2. _____
3. _____

Stations desired in order of preference

1. _____
2. _____
3. _____

I would like a PBX assignment. _____

1. 7:30 a.m. _____
2. Noon _____
3. 2:45 to 3:45 p.m. _____

Comments _____

_____

_____

_____

APPENDIX K

SUNNYSIDE HIGH SCHOOL*

Office of the Principal

To: SUNNYSIDE STUDENT SWITCHBOARD OPERATORS

From: Allen Ray, Principal

CONGRATULATIONS on your selection as a member of the corps of Sunnyside Student Switchboard operators. As the public's first voice contact with our school, yours is a most important student position. A PLEASANT voice answering the switchboard signal is the unseen receptionist for the Principal's Office. We believe we have the best switchboard operators in the whole School District, and we would like our telephone callers to AGREE that Sunnyside has the MOST COURTEOUS - MOST HELPFUL - MOST PLEASANT - MOST RELIABLE - MOST EASILY UNDERSTOOD telephone operators in San Mateo County. Let's keep our images clear and our halos polished by observing the SSO (Sunnyside Switchboard Operators) rules!!!

RULE No. 1 Good service requires good JUDGMENT. Judgment is acquired through experience. As a new switchboard situation arises each day and is solved, you have acquired a new bit of knowledge to aid you in applying judgment to a situation.

RULE No. 2 You are AT WORK. Do not CHAT in the office. While you are busily socializing, several new situations may have developed around you which, had you been listening and observing, would have added to your experience and JUDGMENT.

Ask for an assignment and if none is available, you are to STUDY or practice typing study material. Reading a library book at the switchboard does not give a businesslike impression, even though the book may be assigned reading.

Concentrated application to study, or typing practice, conveys the best office-practice attitude to those who come to our reception desk. Besides, your future employer may happen through our door at any time, and you want to IMPRESS him with your responsible devotion to duty.

RULE No. 3 Never, NEVER repeat anything you hear, or describe anything you see, in the office. This includes the contents of memoranda, letters, telephone messages, and other communications. This rule relates directly to Rule No. 1 - JUDGMENT!

RULE No. 4 NO personal telephone calls. This applies whether or not you are actually on switchboard duty.

*Originated by Bernard Archbold, Crestmoor High School, San Bruno, California.

Instructions to Switchboard Operators

RULE No. 5 The ONLY proper switchboard greeting is "Sunnyside High School--Student Speaking." Pause briefly after the word "school," so that your greeting can be understood clearly. Always use the words "Student Speaking." Frequently it is important for a caller to know that he is speaking to a student, not a member of the faculty. LISTEN attentively. SPEAK distinctly. DO NOT HURRY your words. Be especially careful of your grammar and telephone etiquette (remember you represent Sunnyside High School).

5a When you are asked for a specific person by name, say, "Thank you" to indicate you understood the request, before making the connection. When a caller asks for a person by title (for example, the Dean of Boys), say "Thank you, that's Mr. Armstrong." This provides the caller with the exact name of the person called and is helpful in starting the conversation. Memorize the names and titles of school personnel. Consult the Schedule of Classes at the switchboard if you are in doubt.

5b When asked for information (switchboard operators can give no information, except as specified in Rule No. 14), say "Thank you, I think Mrs. X--- can help you."

5c When a requested extension is busy, say "Mr. X---'s line is busy. Will you wait, or may I take a message?" If a caller elects to wait, BE CERTAIN NOT TO FORGET THE CALL. About every thirty seconds, open the speaking key and say "Mr. X---'s line is still busy. Will you wait?"

5d Keep pencil and paper at hand for MESSAGES.

RULE No. 6 All messages are IMPORTANT! Some messages are URGENT! An urgent message is one which the caller indicates needs to have immediate attention (before the end of the period). Ask the secretary whether to interrupt the teacher's class to relay a message considered to be urgent.

RULE No. 7 Messages must be DELIVERED to be valuable! Messages must be COMPLETE and ACCURATE to be deliverable! An urgent message is always delivered to the teacher by intercom at the time decided by the secretary. All other messages are delivered to the Attendance Office at the end of the period.

Messages for nonteachers (administrative personnel, custodians, gardeners, etc.) are given to the secretary.

Instructions to Switchboard Operators

After delivering the message to the teacher, write on the back of the telephone notice: Date, Mr. X--- contacted in Room ---, Your name, Time. Place message in teacher's mail box.

If you were UNABLE to locate the teacher, supply the same information with the words "was unable to contact Mr. --- in the following places: ---, ---, ---."

Possible locations for contacting teachers are: (1) last teaching room, (2) next teaching room, (3) Rooms 102 or 201.

RULE No. 8 Messages must be ACCURATE! Messages must be COMPLETE! Copy numbers and names correctly. In your most courteous manner ask the caller to repeat the name, number, or spelling if you do not understand. An appropriate phrase might be, "I'm sorry, sir, will you spell the name for me?" In closing a telephone conversation involving a message, it is well to double-check by saying, "That's S-M-Y-T-H-E, DElaware 3-1682. I'll have Mr. X--- call you, Mr. Smythe." This recheck is especially desirable with the all-number telephone system.

RULE No. 9 Calls for TEACHERS. There are no connections between the switchboard and teachers' classrooms. When you have a request to speak to a teacher, explain to caller that there are no direct lines to the classrooms. Say, "I'm sorry, sir, we have no direct lines to the classrooms. May I take a message and have Mrs. --- call you?" Follow Rules 6, 7, and 8 for messages.

Teachers are NEVER to be interrupted during class except for an URGENT message or on principal's instruction. A secretary will decide whether message is sufficiently urgent. NEVER give location of a teacher's classroom.

RULE No. 10 The ONLY proper greeting to answer the intercom is: Office...Student Speaking. Pause briefly after the word "office" to be understood clearly. Be pleasant, courteous, and businesslike as on the outside switchboard. All general switchboard rules apply.

Rules Nos. 7 and 9 for interrupting a teacher during class are to be used in answering the intercom switchboard, with the following amendment. Since all callers using the intercom will be school personnel, when a call comes for a teacher, first consult the Schedule of Classes (on top of the switchboard) to learn whether the teacher has a class. If so, say "Mr. X--- is teaching a class. Shall I interrupt?" When told it is desirable to interrupt the class, you may proceed to do so.

Instructions to Switchboard Operators

When the teacher being called has a preparation period, he can frequently be located in the department office or in one of his classrooms which is not being used.

In making an intercom connection, ring only ONCE. If the call cannot be completed within thirty seconds, open the listening key and tell the caller, "Your party does not answer. Can you suggest another room I might try?"

RULE No. 11 The ONLY proper greeting to answer an extension on the outside switchboard is: Office...Student Speaking. Remember the difference between the TRUNK lines (calls from persons off the Sunnyside campus) and the EXTENSION lines (calls from persons on the Sunnyside campus). You must be alert to use the proper greeting for each.

RULE No. 12 Sunnyside High School receives occasional calls intended for other schools. If a caller asks to speak to someone whose name is not on the Sunnyside High School staff list, inquire courteously whether the person may be connected with another school. When caller insists the person is at Sunnyside High School, transfer the call to the secretary.

RULE No. 13 Do not engage in lengthy CONVERSATIONS with callers. Make transfers as promptly as possible to free yourself for the next call. Unless specifically directed to do otherwise, transfer ALL calls. See Rule No. 14.

RULE No. 14 In general, do not give information (transfer requests for information to the proper office, or to the secretary). This rule is modified to the extent that you may answer a VERY short, routine, specific question, as for example: What time is school out? The key words are short, specific and routine. For purposes of this rule, routine information is that of which you are absolutely certain.

RULE No. 15 Switchboard operators are assigned for the purpose of RECEIVING incoming calls. Student operators are not to place calls for anyone (teachers, custodians, office personnel, or visitors) without the principal's permission. When you are asked to place a call, explain courteously that you are NOT permitted to do so. Provide an outside line so that the person may place the call himself.

RULE No. 16 DO NOT TOUCH any of the switchboard's master controls at any time. Cords, plugs and keys are your concern. Do NOT turn off the buzzer - it is your ALERT signal!

Instructions to Switchboard Operators

RULE No. 17 Do not CHEW GUM while operating a switchboard, or serving as receptionist for any office. This is not a habit which is appropriate in a position where you should set a proper example for other students. In addition, gum chewing may interfere with clear enunciation and make your words difficult to understand. Chewing gum means having gum in your mouth at all.

RULE No. 18 APPROPRIATE OFFICE APPEARANCE IS MOST IMPORTANT. You are expected to use good taste in the selection of your school clothes and to be dressed at all times in a manner appropriate to a business office.

18a All clothes are to be worn in a normal manner; i.e., tuck-in blouses are to be tucked in, skirt bands are not to be rolled or folded over at the waist.

18b Skirts and dresses are to be worn at an appropriate length.

18c Eye shadow, eye liner, expressive make-up of all types, and extreme hair styles are strongly discouraged as being inappropriate.

18d The wearing of head scarves and/or all types of hair clips and curlers is forbidden.

18e The wearing of décolleté and/or spaghetti-strap dresses is forbidden.

18f Thongs and sandals are, also, highly undesirable and inappropriate for any business office.

18g You are expected to be courteous and respectful at all times, and any failure to be so will make you liable for removal from your duties.

RULE No. 19 Occasionally you may be the only person in the principal's office. You are then the receptionist for SUNNYSIDE HIGH SCHOOL, in person as well as in voice. It is a special privilege to be allowed to serve as both switchboard operator and receptionist without school personnel being present. It is an IMPORTANT assignment, and you can demonstrate your appreciation of this confidence in your ability by being especially businesslike, especially responsible, especially courteous. When a visitor approaches the reception desk, complete the telephone call you are making, then STAND, and say, "Good morning (or afternoon). May I help you?" A pleasant welcoming smile should be part of your greeting.

Instructions to Switchboard Operators

Follow Rule 9 implicitly for interrupting a teacher in the classroom, or directing a caller where the teacher may be found. Ask courteously whether the caller would like to wait until the end of the period (when you can call the teacher), or leave a message. Provide a pencil and a pad of paper for the message if needed.

Do not make appointments (or promises) for anyone at Sunnyside. Do not give addresses or telephone numbers of anyone at Sunnyside. Make no commitments of any kind. Give no information, except as allowed by Rule No. 14. Take messages ONLY.

Hold all mail or packages received until they have been checked by the secretary. Do not distribute materials of any kind (checks, keys, letters, packages), even though you may be familiar with the distribution procedure. Ask any one of the secretaries to sign for any packages which may be delivered.

When the secretary, or principal, leaves the office without giving you a return time, it is reasonable to assume the absence will be only a few minutes, and you can ask callers to be seated until someone arrives.

RULE No. 20 Volunteering for switchboard duty is a very commendable means of gaining experience in the general office. Even though you are contributing your time OUTSIDE class, you must obey all the switchboard operators' rules. Volunteers, especially, are reminded that at NO time may you have friends in the office to chat, wait, watch, keep you company, or learn switchboard operation. When you volunteer for an office assignment, you must be as businesslike as though you were receiving a salary or completing class time for your efforts. Volunteer work will add invaluable experience to your list of qualifications for employment in the future. In a sense, EXPERIENCE is your salary when you volunteer for office duty.

RULE No. 21 Read these rules frequently to refresh your memory. We want you to be a Sunnyside Switchboard Operator with a sparkling halo - not a cracked one! I know you will do an exceptional job.

Instructions to Switchboard Operators — Reference Information

BE COURTEOUS BE HELPFUL BE RELIABLE BE ACCURATE

Sunnyside High School..(pause)..	Hello....Sunnyside
Yes, sir. Yes, ma'am. Yes.	Yeah. OK. Uh-huh.
Thank you (to acknowledge a request, or indicate you understand).	OK. (Worse..complete silence!)
Mr. X--- is not in his office.	Mr. X--- is not here. Mr. X--- is at North High School. (always leave it to the judgment of the secretary to reveal whereabouts.)
Mrs. Y--- is away from her desk. May I have her call?	Mrs. Y--- is out. Mrs. Y--- is having coffee. She's not here.
Mr. X--- is not in the office today. Perhaps Mrs. Y--- can help you. I'll connect you.	He's not here. He won't be back. Call tomorrow.
One moment, I'll transfer your call to someone who can help you.	I don't know. Wait a minute.

V. RELATED CLASSWORK AND HOMEWORK

V. RELATED CLASSWORK AND HOMEWORK

The total time for formal class presentations of office procedures to in-school work experience education students is limited because the majority of their time is spent in "learning by doing" at the training station. This is the way it should be, for the program design is to synthesize, review, and reinforce office training through practical experience within the school--not to displace other courses in the curriculum. The teacher-coordinator will plan carefully for the weekly meetings which provide opportunity to personally emphasize topics related to satisfactory performance of common office duties. Much has been written about methods of teaching clerical and office subjects that is useful and pertinent to conducting the class meetings. Purposely such material is not reiterated. The following manuals are recommended for teacher-coordinator reference in preparing units of instruction:

> OFFICE PROCEDURES, A Teacher's Manual, Business Education Series. Sacramento, California: California State Department of Education, Bureau of Business Education, 1965.
>
> OFFICE PRACTICE 1 and 2, An Instructional Guide Los Angeles City Schools, Publication No. SC-590, 1962

The impossibility of implementing the many excellent teaching suggestions made in the literature places significance on coordinating homework assignments with classroom and training station instruction. Because each student enters the program with a background of different training and abilities, the teacher-coordinator needs to develop group and individual schemes of homework study to extend and fill in gaps of previous learning. Illustration IV is of homework assignments for two groups. Placement in a group is based on whether the student is a first-or second-semester enrollee and his competency in subject areas related to common office duties. This grouping cannot meet the needs of all individuals, and student time is too valuable to spend it in needless repetition. Therefore, in addition to or in lieu of the regular homework in textbook and supplementary sources (Appendix A), separate reference book (Appendix B) assignments can be given. Also, resource folders prepared on office procedure topics guide interested students in intensive study. The resource folders contain periodical and pamphlet references plus leading questions and suggestions for research at student level.

By providing practical experience, class instruction, homework assignments, and individual projects, the teacher-coordinator endeavors to help all students in the program benefit by qualifying for an entry office occupation. To meet minimum requirements, students will understand and become proficient in the following duties of a general office clerk:

1. Typing
2. Using Selected Office Machines
3. Filing
4. Handling Mail
5. Handling Supplies
6. Using the Telephone
7. Using Mathematics
8. Using Sources of Information
9. Acting as Receptionist

In conjunction with these techniques, the student should develop a desirable personality and his potential abilities to spell correctly and use good English.

GROUP I

DUE DATE		HOMEWORK ASSIGNMENT
1965-66	(1)	Logs only to hand in today
	(2)	Spelling 101-120
Nov. 2	(3)	FIRST MARKING PERIOD FINAL EXAMINATION TODAY
	(1)	Study "Job Tips," page 400.
Nov. 9	(2)	Start on first page of filing practice set with Rule 1 and go through 4. (Get this set from your teacher.) Type (or print legibly) each name in index form on a 3 x 5 card. Start name in the upper left corner of the card approximately 1/4 inch from top and side. Go down 4 lines from the name and type the rule number. In upper right corner type the date and your initials. Put names in index style; that is, the first filing unit comes first, the second unit comes second, the third unit comes third, and so on. Marshall, Robert C. 10/30/65paw Rule 1 SAMPLE
	(3)	Arrange these cards, 37 in all, in one alphabetic set. Then type an alphabetic list of all these names, in index form; that is, last names first just as they appear on your cards. Double space and number your list, two columns to a page. Before you type your list, be sure to check your cards with the key displayed in Room 226.
	(4)	HAND IN LIST. SAVE YOUR CARDS--they will be needed for a later assignment.
	(5)	Spelling 121-140
	(1)	Same as above for Rules 5, 6, 7, and 8. Your first card should be Madame Sophie Mauree. The first number on your list should be 38. Hand in list only.
Nov. 16	(2)	SAVE THESE CARDS AND ALL THE ONES in the following assignments through Rule 23.
	(3)	Spelling 141-160

ILLUSTRATION IV (1)

GROUP II

NOTE: EACH WEEK YOU ARE RESPONSIBLE FOR THE INFORMATION CONTAINED IN ALL GROUP I ASSIGNMENTS. REMEMBER TO CHECK THESE ASSIGNMENTS AND REVIEW THE MATERIAL COVERED--FREQUENTLY YOUR WEEKLY TESTS WILL BE ON I SUBJECT MATTER. IN ADDITION TO THIS WEEKLY REVIEW, YOU ARE REQUIRED TO HAND IN A WEEKLY LOG, AND TO STUDY AND HAND IN THE HOMEWORK LISTED BELOW.

DUE DATE		HOMEWORK ASSIGNMENT
Sept. 21	(1)	Summarize Unit 6, "Using Sources of Information," pages 94-115. Answer questions 1-10, "For You to Discuss," page 111. ALL ANSWERS SHOULD BE IN COMPLETE SENTENCE FORM SO THAT THE READER WILL UNDERSTAND WHAT THE QUESTION IS. FOLLOW THIS FORM IN ALL SUCCEEDING ASSIGNMENTS.
Sept. 28	(1)	Answer questions 1, 2, 3a, 3b, and 4 page 112. Mount clippings for 3a and 3b on a sheet of paper 8 1/2 x 11 inches. Type the source and date above each clipping.
Oct. 5	(1) (2) (3)	Study Unit 1, pages 4-10, "The Secretary--Assistant to the Executive." Write a short summary--200-300 words. Write answer to question 8, page 113. Write answers to all of "Checkup on Fundamentals," page 115. (This includes "Words that Confuse, Words to Pronounce, and Expressing Yourself.")
Oct. 12	(1)	Study and summarize Unit 11, "Business Reports and Legal Forms," Sections 1, 2, 3, 4, pp. 224-235.
Oct. 19	(1)	Study and summarize Unit 11, Sections 5, 6, 7, pp. pp. 236-251.
Oct. 26	(1) (2) (3)	Study and summarize Unit 11, "Business Reports and Legal Forms," Section 8, p. 252. Write questions 1-20 in "For You to Discuss, pp. 253-254. Study "Job Tips," p. 258, and do all of the "Checkup on Fundamentals," p. 259.
Nov. 2	(1)	FIRST MARKING PERIOD FINAL EXAMINATION TODAY
Nov. 9	(1)	Review Unit 10, "Writing Business Letters," pp. 194-223, and hand in answers to questions in "For You to Discuss," page 219.
Nov. 16	(1)	Summarize Unit 12, "Travel and Transportation," pp. 260-293.
Nov. 23	(1)	Write "For You to Discuss," p. 287, and "Checkup on Fundamentals," pp. 292-293. (Include "Expressing Yourself," p. 293.)
Nov. 30	(1)	Summarize Unit 13, "Handling Money and Maintaining Financial Records," pages 294-323.
Dec. 7	(1)	Write "For You to Discuss," pp. 323-324, and all of "Checkup on Fundamentals," p. 331.
Dec. 14	(1) (2) (3)	Summarize Unit 15, "Office Machines," pp. 352-364. Write answers to "For You to Discuss," p. 365. Memorize "Job Tips," p. 366.
Jan. 4	(1)	Make up and answer 50 questions from "Job Tips," pages 12, 28, 42, 70, 92, 114, 132, 160, 192, 222, 258, 291-292, 330, 350-351, 366, 400, 426, and 463.

ILLUSTRATION IV (1)

GROUP II

DUE DATE	HOMEWORK ASSIGNMENT (Continued)	
Jan. 11	(1)	Review Units 1, 2, and 3.
	(2)	Write a one-page summary of each.
Jan. 18	(1)	Review all of Unit 18, pages 428-464.
	(2)	SEMESTER FINAL EXAMINATION TODAY.

ILLUSTRATION IV (2)

VI. FILING, UNIT OF INSTRUCTION*

OBJECTIVES

To recognize the importance of filing and finding
To master the basic rules of indexing and alphabetizing
To be able to file properly and to find materials efficiently in an alphabetic system
To become acquainted with various other systems of filing
To be familiar with filing procedures; such as, charge, follow-up, and cross reference

EQUIPMENT NEEDED

Correspondence filing cabinet; trays for card files; stencil files; visible files; and transfer files

IN, OUT, and FILE trays

Stapler, date stamp, and "File" and "Sample" rubber stamps used in releasing Office Services Pool copies of production work

Desk-type sorters

Stool and/or filing shelf

SUPPLIES NEEDED

Guides, folders, cards, labels, colored pencils

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*Because filing activities are common to all offices, particularly in relation to the duties of beginning office employees, this unit of instruction has been included. If students previously have had intensive training in filing procedures, the teacher-coordinator will want to select only those areas which need review and synthesis; i.e., References 10:113-114, 11:139-144.

Reference numbers refer to Selected Text and Supplementary Books, Appendix A, by numbers preceding the colon and respective pages following the colon.

AREAS OF INSTRUCTION	Notes and References
A. Importance of Filing	
1. Definition of filing Webster's New Collegiate Dictionary: setting in order; laying away (papers, etc.), arranged in a methodical manner	1:197, 2:339, 4:374, 388; 5:1; 15:2; 22:2
2. Need for filing	1:198; 2:339; 3:320, 324; 4:374; 5:2; 15:1; 22:2-4 Discuss personal filing activities; i.e., addresses and telephone numbers, class notebooks, phonograph records, recipes, cancelled checks, income tax records, etc. Observe filing processes in school attendance office.
3. Kinds of material filed	1:199; 2:340-41; 4:374; 5:5-6 Illustrate with materials filed for Office Services Pool, instruction, student records, and correspondence in the classroom.
B. Definitions of Some Common Filing Terms (See Filing Glossary, p. 24 of Student Handbook.)	Explain and demonstrate, using samples of business correspondence and student papers.
1. Alphabetizing: arranging in dictionary order from A to Z	5:15; 13:cover
2. Indexing: mentally dividing names into separate units for purposes of alphabetizing and then deciding the order in which the units are to be alphabetized	1:211; 2:353; 373; 3:321; 4:375; 6:89; 15:37; 22:10
3. Unit: each portion of a name	1:211; 2:353, 3:321; 4:376; 5:17; 22:10
4. Coding: underlining first index units or writing caption for alphabetic consideration	1:232; 2:363, 374; 4:387; 5:65; 6:89; 15:38; 22:44
5. Sorting: preliminary arrangement of papers in sequence	1:233; 2:375; 4:387; 5:68; 6:98; 15:38

6. Inspecting: looking for indication materials have been released for filing	1:231; 2:373; 4:387; 5:63; 6:89 15:37; 22:44
7. Guides: file dividers	1:201; 2:344; 4:408-409, 418; 5:7, 10; 6:75; 15:44-45; 22:42, 45
8. Caption: letter, name, or number under which material is filed	4:415, 418; 5:8; 6:76; 15:45
9. Labels: sticker on which caption is typed and which is then placed on guide or folder tab or on file drawer	1:205; 2:347, 348; 3:325; 5:12 6:77; 15:52; 22:84
C. Common Kinds of Files (11:141-142)	Describe and illustrate.
	Show pictures from office equipment catalogs by using opaque projector; arrange bulletin board display with appropriate labels. Have students tour classroom and school offices to see various files in use.
1. Vertical	1:200; 2:342; 3:373; 4:384, 423-424; 6:74; 15:34
2. Card	
a. Vertical	1:207, 272; 2:349-351; 3:374; 4:425; 5:157-160; 15:137-141
b. Visible	1:262; 2:404; 3:375; 4:425; 5:161-164; 6:152-156; 15:141-143; 22:93, 94
c. Rotary	1:263; 2:405; 3:374; 5:167, 175; 15:89, 138; 22:88, 90, 93
3. Open shelf	1:275; 2:417; 3:373-374; 4:424, 426; 5:137, 174; 15:93, 159; 22:85
4. Bellows	Home files; 6:71, 73
5. Electronic data processing	1:276; 2:418; 4:426; 5:185-190; 15:161; 22:99-102
D. Rules for Indexing and Alphabetizing	1:211-220; 2:353-363; 3:321-323, 330-334, 340-347; 4:375-384; 5:15-21, 27-36, 41-47; 11:140-141; 13:2-56; 15:9-25; 19:covers; 22:11-33

	Provide exercises for mastery of rules, requiring students to prepare 3" x 5" cards at the typewriter. (Typing file cards: 15:21-22) Post key for checking index units and sequence.
	Have students arrange class rolls for teachers, names for music and sports programs.
	Apply skill by alphabetizing student information cards, registration cards, and report cards for school files. (Have a second student check alphabetizing for accuracy.)
E. Sorting	Use sorters and/or trays with guides.
1. Coarse	Sort large number of cards into convenient divisions; i.e., A-E, 1-50, etc.
2. Fine	Sort each division into smaller divisions A, B, C, 1-10, 11-20, etc.
3. Sequence	Sort small divisions into correct order.
F. Finding	
1. Material alphabetized	3:325-326; 4:429; 15:168-169; 22:73-74
2. Unusual listings	Use telephone and city directories to illustrate placement of difficult personal names (Mc and Mac), sound-alike names, business names, and Government agencies.
G. Alphabetic Correspondence Filing	Explain, demonstrate, and discuss using a collection of business papers, records, and correspondence.
1. Definition	1:201; 2:343; 4:375
2. Advantages and Disadvantages	4:422; 15:155
a. Speed of filing and finding; expandable	
b. Congestion	

3. Guides (lettered) — 1:201-203; 2:343-345; 3:373; 4:408-409; 5:10-11, 56-59, 150-151, 177; 6:45, 51, 74-76; 15:44-46; 19:3-5; 22:12, 42

   a. Cuts - 1/3, 1/5, etc.

   b. Captions

   c. Alphabetic

   d. Common name

   e. Special

   f. Out guide

4. Folders — 1:204-206; 2:345-346, 376; 3:372; 4:409-411; 5:12-13, 56-59, 150-152; 15:47-49; 19:4-6; 22:42-44, 84

   a. Individual (for active correspondence)

      1) four or more pieces for a caption
      2) arrangement of material in the folder
      3) avoid congestion

   b. Miscellaneous

      1) correspondence not found in individual folder
      2) arrangement of material in the folder — 1:234
      3) arrangement of the folder in the file
      4) how to avoid congestion

   c. Labels — 1:205-206; 2:347-348, 378; 3:325; 5:56-57; 15:49-52

      Have each student prepare captions for a guide and folder; i.e., their own class folder for homework assignments and tests.

5. Procedures

   a. Collect — 1:231; 2:373; 3:368; 4:385-386; 5:62; 15:35

   b. Read, Inspect — 1:231; 2:373; 3:368; 4:387; 5:63; 6:89; 15:37; 22:44

   c. Index — 1:231; 2:373; 3:368; 4:387; 5:64; 6:89; 15:37; 22:44

d. Code	1:232; 2:374; 3:368; 4:387; 5:65; 6:89-95; 15:38; 19:8; 22:44
e. Cross Reference	1:221-224; 2:363-366, 374; 3:369; 4:387; 5:66; 6:95-97; 13:53-56; 15:26-27, 38; 19:11; 22:35-39
f. Sort	1:233; 2:375; 3:369; 4:387; 5:68; 6:98; 15:38; 19:10; 22:44
g. File (Emphasize headings to left)	1:235-236; 2:377-378; 3:324-325, 371; 4:388-391, 427-428; 5:69-70; 6:99; 10:113-114; 15:39-40; 22:73-74
h. Find	3:325-326; 4:429; 15:168-169; 22:73-74
i. Charge Out	1:269-271; 2:411-413; 3:375; 4-391; 5:72-76; 6:101; 15:67-69; 22:70-72
j. Transfer	1:273-276; 2:415-417; 3:376; 4:392-394; 5:135-139; 6:136-140; 15:74-84; 22:76-80
1) reasons	
2) periodic	
3) perpetual	
4) microfilming	
H. Subject Filing	1:252-255; 2:394-397; 3:353-355; 4:416-418; 5:117-131; 6:124-127; 13:57; 15:122-136; 22:60-65
1. Definition	
2. Advantages and Disadvantages	1:254; 2:396; 4:422; 15:155
a. Grouping by topics and unlimited expansion	
b. Difficulty in classification and provision for miscellaneous papers	
3. Organization	
a. Subject classification	
b. Index	
c. Miscellaneous folders	
4. Guides	

5. Folders	
6. Procedures a. Inspecting, Reading b. Indexing c. Coding d. Cross referencing e. Sorting alphabetically f. Filing	Have students file "Sample" copies of production work from Office Services Pool in classroom subject files. Also assign students to various departmental offices to file instructional materials in subject files, using correct procedures.
I. Numeric Filing	1:248-252; 2:390-394; 3:356-359; 4:414-416; 5:104-114; 6:111-113; 13:58; 15:98-108; 22:56-59
1. Definition	
2. Advantages and Disadvantages a. Accuracy, unlimited expansion, cross references b. Indirectness	1:250; 2:392; 4:422; 5:105; 15:155; 22:58
3. Organization a. Numbered individual folders b. Alphabetic card index c. Numeric miscellaneous folders	Have students check numeric records; i.e., serial numbers of office equipment and/or gym or book locker records.
4. Guides (numbered)	
5. Folders (numbered)	
6. Procedures a. Inspecting, Reading b. Alphabetic indexing and coding c. Alphabetic sorting d. Numeric coding e. Keeping register of codes assigned	

f. Numeric sorting	
g. Filing by number	
h. Finding	22:106-109
	Have students visit library and use alphabetic author and subject files to find particular volumes numerically.
J. Geographic Filing	1:255-258; 2:397-400; 3:360-362; 4:412-414; 5:91-100; 6:105-109; 13:58; 15:111-117; 22:66-68
1. Definition	
2. Advantages and Disadvantages	1:255; 2:400; 4:422; 15:155
a. Direct filing and reference, grouping by location, provision for miscellaneous papers	
b. Expensive, sorting, difficulty in finding	
3. Organization (alphabetical)	
a. State	
b. City	
4. Guides	
5. Folders	
6. Procedures	
a. Inspecting, Reading	
b. Indexing	
c. Coding (state, city, and name)	
d. Cross referencing	
e. Sorting (state, city, and name)	
f. Filing	

K. Other Filing Systems

1. Soundex	1:264-267; 2:406-409; 3:362-363; 4:419-420; 5:113; 15:145-149; 22:95-98
2. Visible	1:261-264; 2:403-406; 3:375; 4:425-426; 5:161-167; 6:152; 15:141-143; 22:91-93
3. Follow-up	1:272; 2:413-414; 4:421; 5:80-82; 6:133; 15:166-167, 170-173; 22:70-71, 88-89
4. Commercial	1:240-245; 2:382-387; 4:411; 5:84-89; 15:53-61; 22:49-55
5. Electronic Data Processing	1:276; 2:418; 4:426; 5: 185-190; 15:161; 22:99-102

TEACHING AIDS

Audio-Visual Materials

"Filing," a filmstrip set for use with Skill Builder, 125-exercise course, Educational Developmental Laboratories, ($62.50)

"It Must Be Somewhere," a film, Remington Rand, (free use)

"Progressive Filing," filmstrip series, 4 strips of approximately 14 minutes w/2 records, Gregg Publishing Division, McGraw-Hill Book Company, ($52)

Printed Materials

Do's and Don'ts of Filing and Science of Filing, Smead Manufacturing Company, Hastings, Minnesota

Filing Manual, The Mutual Life Insurance Company of New York

Filing practice sets, programmed materials, and workbooks: See list of Selected Text and Supplementary Books, Appendix A, References 10, 13, 15, 19, and 23 and coordinated with Nos. 5, 14, and 22.

Filing tests: Business Teacher, Gregg Publishing Division, McGraw-Hill Book Company; U.S. Civil Service Commission

Forty-three New Ways to File, Oxford Filing Supply Company, Clinton Road, Garden City, New York

Local Agency Office Handbook for Beginners, insurance oriented, The Rough Notes Company, Inc., Indianapolis, Indiana 46206 ($1.50 per copy)

TEACHING TIPS

Secure resource material from office equipment stores, manufacturers of filing equipment and supplies, publishers, Government agencies, and business firms for illustrative and practice purposes.

Use actual materials in presenting filing procedures to make instruction interesting and realistic.

Prepare transparencies to use with overhead projector for visual presentation and application of each indexing and alphabetic filing rule.

Post a key to filing exercises or practice sets to help students understand rules and thereby learn from their mistakes.

Students need real practice in indexing, filing, and finding under limited supervision. All work should be checked, and students can learn through looking for errors.

Compile exercises for locating names that are difficult to find. Local telephone and city directories are good sources.

Reusable practice materials should be put into original order before storing.

Field trips build enthusiasm and reinforce importance of filing. Large banks, insurance companies, governmental agencies, or libraries provide opportunity to view various filing systems, including microfilming and electronic data processing.

A section of the bulletin board reserved for cartoons and sample materials which demonstrate special filing applications provides opportunity for student participation in instructional planning.

Have students volunteer their filing skills to community service agencies; i.e., County Historical Society.

Let students report on individual visits to offices within the local business community with particular reference to observations of filing systems and procedures.

APPENDIX

APPENDIX A

SELECTED TEXT AND SUPPLEMENTARY BOOKS FOR IN-SCHOOL WORK EXPERIENCE EDUCATION STUDENTS

TEXTBOOKS

1. Agnew, Peter L. and James R. Meehan. Clerical Office Practice, Third Edition. Cincinnati, Ohio: South-Western Publishing Company, 1961. (Fourth Edition due soon)

2. Agnew, Peter L., James R. Meehan, and Mary Ellen Oliverio. Secretarial Office Practice, Sixth Edition. Cincinnati, Ohio: South-Western Publishing Company, 1960. (Seventh Edition due September, 1966)

3. Archer, Fred, Raymond F. Brecker, and John C. Frakes. General Office Practice, Second Edition. New York: Gregg Publishing Division, McGraw-Hill Book Company, 1963.

4. Gregg, John R., Albert C. Fries, Margaret Rowe, and Dorothy L. Travis. Applied Secretarial Practice, Fifth Edition. New York: Gregg Publishing Division, McGraw-Hill Book Company, 1962. (Sixth Edition due June, 1967)

SUPPLEMENTARY BOOKS

5. Bassett, Ernest D., Peter L. Agnew, and David G. Goodman. Business Filing and Records Control, Third Edition. Cincinnati, Ohio: South-Western Publishing Company, 1964.

6. Brendel, Leroy A. and Doris Near. Spelling Drills and Exercises Programmed for the Typewriter. New York: Gregg Publishing Division, McGraw-Hill Book Company, 1964.

7. Cadwallader, Laura H. and S. Ada Rice. Principles of Indexing and Filing, Fourth Edition. Baltimore: The H. M. Rowe Company, 1958.

8. Craig, Bitha and Louis A. Leslie. Spelling at Your Typewriter, Third Edition. New York: Gregg Publishing Division, McGraw-Hill Book Company, 1954.

9. Dickinson, A. Litchard. Filing and Finding in the Office. Elmhurst, Illinois: The Business Press, 1965.

10. Fahrner, William F. and William E. Gibbs. Basic Rules of Alphabetic Filing, Programmed. Cincinnati, Ohio: South-Western Publishing Company, 1965.

11. Fisher, Robert. Intensive Clerical and Civil Service Training, Third Edition. Cincinnati, Ohio: South-Western Publishing Company, 1959.

12. Goodfellow, Raymond C. and Henry J. Rosenberg. Projects in Clerical Practice, Second Edition. Cincinnati, Ohio: South-Western Publishing Company, 1957.

13. Guthrie, Mearl R. Alphabetic Indexing, Third Edition. Cincinnati, Ohio: South-Western Publishing Company, 1964.

14. Kahn, Gilbert et al. Progressive Filing, Seventh Edition. New York: Gregg Publishing Division, McGraw-Hill Book Company, 1961.

15. Kahn, Gilbert, Jeffrey R. Stewart, and Theodore Yerian. Gregg Quick Filing Practice. New York: Gregg Publishing Division, McGraw-Hill Book Company, 1965.

16. Keily, Helen J. and R. G. Walters. How to Find and Apply for a Job, Second Edition. Cincinnati, Ohio: South-Western Publishing Company, 1960.

17. Malsbary, Dean R. Spelling and Word Power, Second Edition. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1965.

18. Pepe, Philip S. Refresher Typing in 24 Hours, Fourth Edition. New York: Gregg Publishing Division, McGraw-Hill Book Company, 1965.

19. Rowe Filing Practice Set. Baltimore, Maryland: The H. M. Rowe Company.

20. Schacter, Norman. English the Easy Way, Second Edition. Cincinnati, Ohio: South-Western Publishing Company, 1961.

21. Sferra, Adam, Mary E. Wright, and Louis A. Rice. Personality and Human Relations. New York: Gregg Publishing Division, McGraw-Hill Book Company, 1961.

22. Selden, William et al. Filing and Finding. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1962.

23. Travis, Dorothy L. EDL Filing Course. Huntington, New York: Educational Developmental Laboratories, 1964.

24. Whitcomb, Helen. Charm. New York: Gregg Publishing Division, McGraw-Hill Book Company, 1964.

25. Weeks, Bertha M. How to File and Index. New York: The Ronald Press Company.

APPENDIX B

SELECTED STUDENT REFERENCE BOOKS

Agnew, Peter L. and Philip Atkinson. Medical Office Practice. Cincinnati, Ohio: South-Western Publishing Company (to be published Fall 1966).

Becker, Esther R. How to Be an Effective Executive Secretary. New York: Harper and Brothers, 1962.

Becker, Esther R. and Richard L. Lawrence. Success and Satisfaction in Your Office Job. New York: Harper and Brothers, 1954.

Bredow, Miriam. Handbook for the Medical Secretary. New York: Gregg Publishing Division, McGraw-Hill Book Company, 1959. (New publication in preparation)

Burke, Marylin. The Executive Secretary. New York: Doubleday and Company, Inc., 1959.

Cansler, Russell N. Fundamentals of Mimeographing. Chicago: A. B. Dick Company, 1963.

Coffin, Kenneth B. and R. Forrest Colwell. The Medical Secretary. New York: The Macmillan Company, 1959.

Doris, Lillian and Besse May Miller. Complete Secretary's Handbook, Revised Edition. Englewood Cliffs, New Jersey: Prentice-Hall, Inc. 1960.

Hanle, Dorothea. The Hairdo Handbook. New York: Doubleday and Company, Inc., 1964.

Hutchinson, Lois. Standard Handbook for Secretaries, Third Edition. New York: Gregg Publishing Division, McGraw-Hill Book Company, 1965.

Krech, David and Richard S. Crutchfield. Elements of Psychology. New York: Alfred A. Knopf, Inc., 1958.

Leslie, Louis A. and Kenneth B. Coffin. Handbook for the Legal Secretary. New York: Gregg Publishing Division, McGraw-Hill Book Company, 1958.

McLean and Pavis. The Young Woman in Business. Ames, Iowa: Iowa State University Press, 1962.

MacGibbon, Elizabeth. Manners in Business, Revised Edition. New York: The Macmillan Company, 1961.

Newton, Roy. How to Improve Your Personality. New York: Gregg Division, McGraw-Hill Book Company, Inc., 1963.

Office Short Cuts and Time Savers, Better Secretaries Series. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1961.

Personal Success Program booklets. Garden City, New York: Nelson Doubleday, Inc., 1965.

Place, Irene and Charles B. Hicks. Secretarial Procedures. New York: Gregg Publishing Division, McGraw-Hill Book Company, 1964.

Place, Irene and Madeline Strony. The Road to Secretarial Success. New York: Gregg Publishing Division, McGraw-Hill Book Company, 1954.

Russon, Allien R. Business Behavior. Cincinnati, Ohio: South-Western Publishing Company, 1964.

Tolman, Ruth. A Secretary's Guide to Beauty-Charm-Poise. New York: Milady Publishing Corporation, 1962-1963.

APPENDIX C

SUGGESTED SOURCES OF EMPLOYMENT TESTING MATERIALS

Administrative Management Society: Arithmetic and Spelling

California State Department of Employment: Arithmetic and General Clerical

California State Personnel Board: General Clerical and Typing

The H. M. Rowe Company, 11 S. Van Ness Avenue, San Francisco, California: English, Applied and Proghostic

U.S. Civil Service Commission: General Clerical and Typing

PROOFREADING EXERCISES:

W. A. Sheaffer Pen Company, Fort Madison, Iowa

A. W. Faber-Castell Pencil Company, Inc., 41 Dickerson Street, Newark 3, New Jersey

National Blank Book Company, Holyoke, Massachusetts

Eastman Kodak Company, Business Photo Methods Division, Rochester 4, New York

Remington Rand, 315 Fourth Avenue, New York 10, New York

Cluett, Peabody and Company, Inc., 10 East 40th Street, New York City

APPENDIX D

SUGGESTED EQUIPMENT FOR CLASSROOM OFFICE SERVICES POOL*

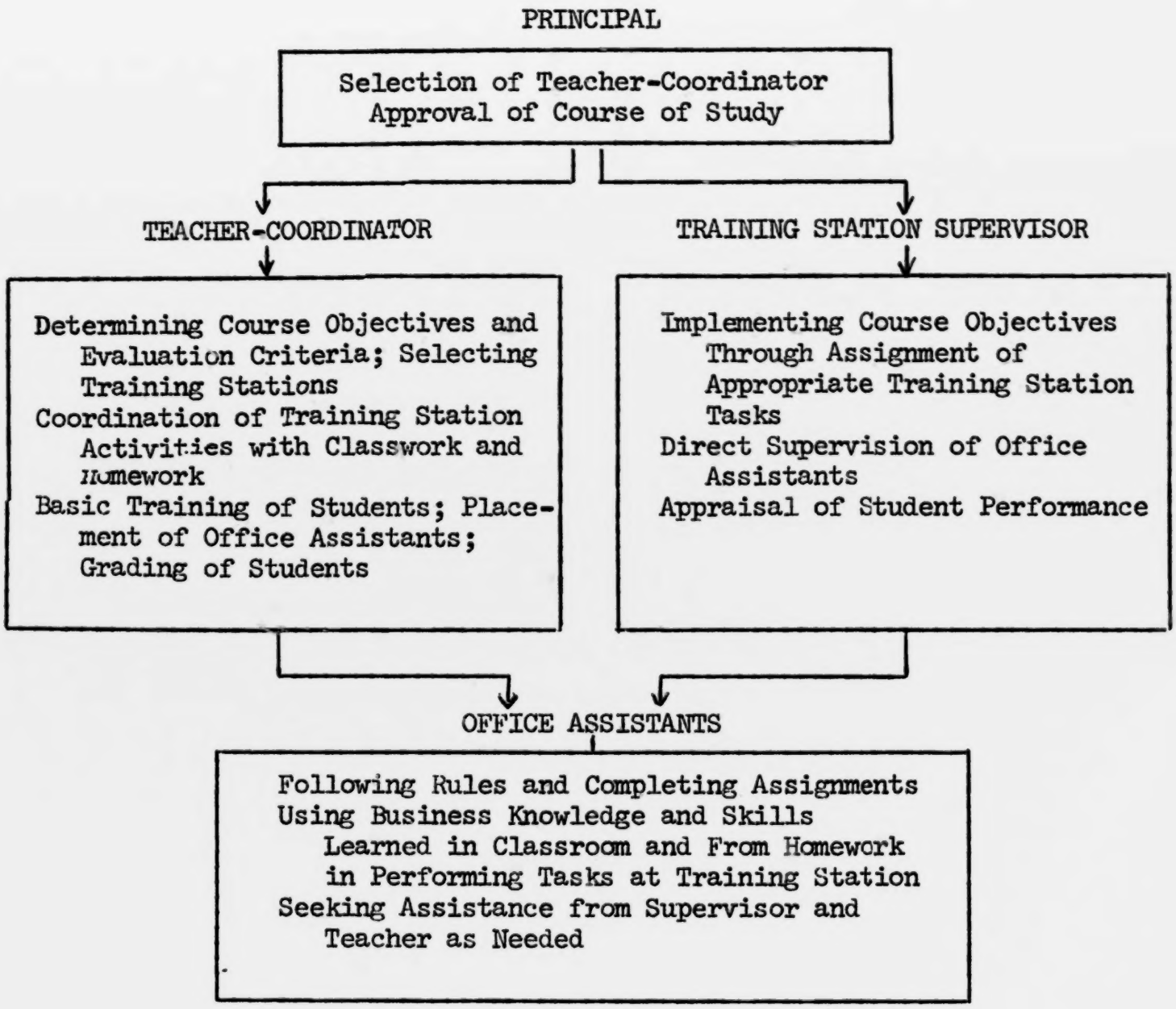
1. Chairs, 20 stack type (needed for weekly class meetings)
2. L-shaped or secretarial-type desks, 6 each with dictionary, secretarial handbook, stapler, stationery supplies
3. Work tables, 2-3
4. Spirit duplicator, 1
5. Mimeograph, 1-2
   electric w/interleaver, card holder, color changes, and cabinet
6. Mimeoscope, 1
   styli, shading screens, lettering guides, plates
7. Folding machine
8. Collating racks; collating machine optional
9. Paper trimmer or cutter, 1
10. Three-hold punch, 2
11. Staplers: 1 electric, 1 saddle, 1 long shank, 1-2 heavy duty, standard 6-8
12. Sink
13. Supply area w/shelving
14. Storage cabinets w/tote trays or pigeonhole space for work in progress
15. Electric typewriters: 1 pica, 1 executive or proportional spacing, 1 Selectric w/manifold and script elements, 2-3 elite (1 with extra wide carriage)
16. Line at a Time Typing aids, 6
17. Cart, 1
18. Roll around typing tables, 4
19. Manual typewriters, as needed (1 with small elite type)
20. Book case, portable
21. Transcribing and dictating machines, 2
22. Files: in and out trays for each desk; legal-size, four-drawer, as needed; visible index; rotary; box; transfer; expansion and tickler
23. Sorters, desk size, 6
24. Numbering machines, 2
25. Dater, 1
26. Copying machines: stencil, 1; master, 1
27. Stool with casters, 1

*If the Office Services Pool does not operate all periods of the day, this equipment can be shared with other courses; i.e., office machines.

APPENDIX E

FLOW CHART

Responsibilities of Personnel Included in the In-School Work Experience Education Program



VT 001 336
Le Ray, Nelson L.; Reeder, William W.
Ex-Farm Operators in a Low-Income Area. Bulletin No. 67-2.

New York Agricultural Experiment Station, Ithaca
Economic Research Service (DOA), Washington, D.C. Economic Development Div.
MF AVAILABLE IN VT-ERIC SET.
Pub Date - Nov65 75p.

*SOCIOECONOMIC INFLUENCES; *FARMERS; *LOW INCOME COUNTIES; *INDIVIDUAL CHARACTERISTICS; JOB SATISFACTION; *JOB TENURE; PART TIME FARMERS; RURAL AREAS; ADJUSTMENT (TO ENVIRONMENT); VOCATIONAL ADJUSTMENT; FAMILY INFLUENCE; DAIRYMEN; EMPLOYMENT OPPORTUNITIES
NEW YORK

Men in a low income northern New York county who left farming during the period 1949 through 1962 were compared with those who remained in farming during this period. Data were obtained from 306 farm operators drawn as part of a 20 percent sample from the 1950 U.S. Census of Agriculture. Some major findings were: (1) 28 percent of the 1949 operators were no longer farming, (2) One-third of those who left were classified as non-commercial operators and one-fourth had been operating relatively large commercial farms, (3) Nearly one-half of the farmers were living in the same residence even though they had left farming, (4) Major reasons for leaving farming were lack of family help, poor health, unable to carry two jobs, couldn't succeed, and no opportunity, (5) Major reasons for being able to leave farming were another source of income, opportunity to sell farm, and others who could take over the farm operation, (6) Those who left farming had smaller farms, were less likely to be dairy farmers, and had a smaller income from agricultural products, (7) Those who left farming were more likely to be under 50 years of age and had averaged more days in off-farm work in 1949, and (8) There were almost no differences in farm and household characteristics between continuing farmers and ex-farmers. In general, there was little selectivity in terms of family physical resource and demographic characteristics. (DM)

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NOVEMBER 1965

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75

EX-FARM OPERATORS IN A LOW-INCOME AREA

by

Nelson L. Le Ray

and

William W. Reeder

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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Department of Rural Sociology
Cornell University Agricultural Experiment Station
New York State College of Agriculture
A Contract College of the State University
Cornell University, Ithaca, New York

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EX-FARM OPERATORS IN A LOW-INCOME AREA

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The authors wish to express their appreciation to Don Huddleston, County Agricultural Agent and Mark Connor, Farmers Home Administration Supervisor, St. Lawrence County, New York, and to the rural people of the area who furnished the data that made this report possible.

EX-FARM OPERATORS IN A LOW-INCOME AREA

TABLE OF CONTENTS

Acknowledgements ii
Highlights v
Introduction 1
The Study Area 3
Reasons for Leaving Farming 4
Factors Making It Possible to Leave Farming 4
Years 1950 to 1962 That Farm Operators Left Farming 7
Present Location 7
The Physical Resource 11
Economic Class of Farm 11
Year Farmer Began to Operate 1950 Farm 13
Land Tenure 14
Type of Farm 14
Acreage Operated and Acreage of Cropland 16
Milk Cows on Place 16
Land Class 20
Value of Land and Buildings and Indebtedness 21
Costs and Returns 23
Summary 23
The Human Resource 28
Age 28
Adjustment Potential - Farm Operator 28
Educational Attainment 30
Days of Off-Farm Work by Farm Operator 30
Household Size 32
Stage of Family Life Cycle 32

Occupational Choice 33
Summary 35
Return to Factors of Production 36
Production for Home Consumption 36
Nonwork Income 39
Household Income 41
Summary 42
Literature Cited 43
Appendix A - Tables 44
Appendix B 55
The Sample and Objectives of the Overall Study 56
Classifications and Terminology 59

HIGHLIGHTS

This report is the second in a series of a study of adjustments in human and physical resource use in a low-income area of Northern New York State. The series is designed to determine the nature and process of socio-economic adjustment during the period 1950 to 1962 for a population of farm families with different resource characteristics and levels of family income. This report is primarily concerned with a group of farm operators who farmed in the study area during 1949, but who did not operate farms in the area during 1962. Comparisons are made between this group and a group that operated farms in the area during 1949 and 1962.

The sample for the study was drawn from the 20 percent sample for the 1950 United States Census of Agriculture for St. Lawrence County, New York. In general, the findings are based on interviews with a selected sample of male farm operators who were under 55 years of age in 1950 and who were still in the study area in 1963.

The study area is one of the leading dairy counties in New York State ranking first in the number of milk cows and third in the value of dairy products sold in 1959. There are few agricultural alternatives to dairying in the area. Farmers have been faced with increasing standards for dairy products and adjustment to new dairy technology. Part of the adjustment to technological change in agriculture has been the forcing of human and physical resources out of agriculture. Land, buildings, techniques and

farm families that were formerly needed in dairying have become obsolete.

This special report compares two categories of 1949 farm operators from a low income area in Northern New York State: (1) those who were still farm operators in 1962 and (2) those who had left farming and were no longer farm operators in 1962. Highlights of the report follow:

1. Of 306 male farm operators who operated a farm in 1949, 85 or 28 percent were no longer operating a farm in 1962.
2. Of those who left farming only two-thirds operated commercial farms during 1949. One-third were classified as noncommercial farmers. Approximately one-fourth had been operating relatively large commercial farms in 1949.
3. Though they had left farming, almost half (38 individuals) were living in the same residence in 1962 as they were in 1949.
4. The main reasons given for leaving farming in order of frequency of mention were:
   a. Lack of family help or family dislike of farming.
   b. Poor health of farm operator or family members.
   c. Unable to carry two jobs.
   d. Couldn't make a go of farming.
   e. No opportunity in farming without expansion.
   f. Off-farm job had more advantages than farming.
   g. Not making any money in farming.
   h. Farming not worth the effort.
   i. Loss of production resources.
5. The main reasons given for being able to leave farming were:
   a. Had another source of income.
   b. Had an opportunity to sell the farm, the livestock and/or equipment.
   c. Had others who could take over the operation of the farm.

6. As compared with the farm operators who remained in farming, the 1949 farm operators who left farming:
   a. Operated smaller farms with fewer acres of cropland in 1949.
   b. Were less likely to be dairy farmers in 1949.
   c. Had a smaller income from agricultural products in 1949.
   d. Had lower farm expenses and lower net farm incomes in 1949.
7. There was no significant difference between those who remained in farming and those who left farming in regard to:
   a. The year the operator began to operate the 1949 place.
   b. Land tenure.
   c. Agricultural income expectancy from the land.
   d. The value of land and buildings owned.
   e. Mortgages on land or building.
8. As compared with those who remained in farming, those who left:
   a. Were more likely to be under 50 years of age, able to work and not retired.
   b. Had averaged more days in off-farm work in the year 1949.
   c. Were more likely to express a preference for a nonfarm occupation.
9. There were no significant differences between continuing farmers and ex-farmers in regard to:
   a. Years of school completed.
   b. Household size.
   c. Stage of the family life cycle.
   d. Preference for a large dairy herd over a small dairy herd.

In conclusion, except for the size of the farm business and the combined age and physical condition of the family head, there were almost no differences in farm and household characteristics between continuing farmers and ex-farmers. The reasons for leaving suggest that an index of the farm operator's state of health might have provided another significant factor.

Special report number one, which deals with cognitive factors related to the last major occupational change indicates that the farmers who are basically similar in their demographic characteristics may have quite different cognitive interpretations of their situations. It should be noted that while there is considerable overlap, special reports one and two are not comparing the same categories of farmers.

In general, there is a tendency to think that the shift from one occupation to another, in times of economic stress, will be highly selective both in terms of the physical resource characteristics of the family and also in terms of the demographic characteristics of the family. These data reveal far less selectivity than had been anticipated and suggest that in a revolutionary situation such as that faced in agriculture, the degree of selectivity is greatly reduced.

Selectivity invites special programs, whereas, the lack of selectivity indicates less need for special programs for different groups, and greater emphasis on the problems which are characteristic of the entire group.

EX-FARM OPERATORS IN A LOW-INCOME AREA

by

Nelson L. Le Ray [1] and William W. Reeder [2]

INTRODUCTION

"I had a steady nonfarm job. Not enough time to take care of animals."

"Bank took the place over. It's hard to borrow money at my age."

"Someone offered to buy the place."

"Farming was not profitable. My sons didn't want to farm. I couldn't work hard anymore."

"I wasn't making a go of it."

The statements quoted above were made by St. Lawrence County residents who operated a farm in St. Lawrence County, New York in 1949 but who did not operate a farm in St. Lawrence County in 1962. During the period 1950 to 1962, 85 or 27.8 percent of a sample of 306 farmers who operated a farm in 1949 left farming. Twenty-five (25.9 percent) of those who left operated a relatively large commercial farm (Census Class I, II and III) during 1949, 32 (37.6 percent) operated a relatively small commercial farm (Census Class IV, V and VI), and 31 (36.5 percent) operated a noncommercial farm (part-time or residential) during 1949. Forty-five percent were living on the same place in 1963 that they farmed in 1949.

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[1] Agricultural Economist, Economic Development Division, Economic Research Service, U. S. Department of Agriculture cooperating with Cornell University Agricultural Experiment Station.

[2] Professor, Department of Rural Sociology, Cornell University.

The number of farms has been declining in the United States, in New York State, and in St. Lawrence County, New York. Farmers have been leaving farming. In 1959 there were 3,942,562 farms in the United States compared with 5,388,437 in 1950; a decrease of 1,445,875 or 26.8 percent. There were 86,042 farms in New York State in 1959 compared with 124,977 in 1950; a decrease of 38,935 or 31.2 percent. In St. Lawrence County, New York, the number of farms dropped from 5,091 in 1950 to 3,544 in 1959; a decrease of 1,547 or 30.4 percent. 1/

This is the second of a series of special reports which deal with adjustments in human and physical resource use in a low-income area of northern New York State during the period 1949 to 1962. The first special report is on factors in occupational change (Reeder, Le Ray, Craig, 1965). In it the hypothesis is tested that behind each occupational change decision there is a relevant cluster of factors and that programs designed to speed up the process of adjustment (programs of planned change) will have greater success if they are designed to take into account the more important factors which enter into occupational adjustment decisions.

The first special report indicates that farmers who are basically similar in their demographic characteristics may have quite different cognitive interpretations of their situation. Occupational decisions are usually based on a small cluster of relevant reasons or components. Each component has direction and loading. After an occupational decision has been made, the decision maker will readjust his relevant cluster of cognitions to bring it more in line with whatever action is taken. 2/

1/ Data are based upon 1950 Census definition applied to 1950 and 1959 U. S. Census data. See: U. S. Bureau of the Census, 1962.

2/ It should be noted that the same categories are not being compared in the special reports 67-1 Factors Influencing Occupational Decisions in a Low-Income Area and 67-2 Ex-Farm Operators in a Low-Income Area. The first special report is concerned with the most recent major occupational decision of individuals who operated farms in 1949 whereas this report is concerned primarily with individuals who farmed during 1949 and who did not farm during 1962. The discontinuation of farming may not have been the most recent major occupational change.

The main objective of the present report is to determine the nature of changes in human and physical resource use for farm operators who remained in the study area but became nonfarm residents during the period 1950 to 1962. Comparison will be made between this group and individuals who were still farming in the area in 1962.

The Study Area

St. Lawrence County borders on the International Line between the United States and Canada. It is the largest county in New York State. Over 41 percent of the land area is used for agricultural purposes. The northeast sector of the county has developed industrially with the building of two aluminum plants, an automobile manufacturing plant (components) and the St. Lawrence Seaway and Power Development Project. However, except for this particular area, the bulk of the remaining area in the county remains primarily agricultural. One observer has noted that the St. Lawrence is:

> Perhaps the most thoroughly underdeveloped area in New York State . . . for it is indeed an area in which the full potential in its natural and human resources had never been approached. In this sense the area is one of the great frontiers of the state and the region. But it is particularly a frontier for American industrialization. (Sufrin and Palmer, 1957, p. 5)

The decline in the number of farms in St. Lawrence County during the period 1950-59 was noted above. During this period, the average size of the farms increased from 174 acres to 210 acres. However, at the same time, some 169,000 acres of farm land were taken out of farming. Despite the fact that one-fourth of those who were farmers in 1950 have left farming, nine out of 10 of these ex-farmers have remained in St. Lawrence County as of 1962. This indicates that these men are working out their adjustments to these changing conditions within the county itself. As a result, this county provides a good test area in which to study the nature and process of human and physical resource use adjustment.

Economic reasons are generally considered to be "the reasons" for many changes--stated simply in terms of monetary loss or gain. This study provides insight into the adjustments that are taking place as related to the movement of human resources out of agriculture.

Reasons for Leaving Farming

The decision of a farm operator to stop farming is a decision which involves his way of life and his way of making a living. There is a cluster of factors related to each occupation change decision. 1/

Table 1 shows the reasons given by farm operators for deciding to leave farming during the period 1950-1962. Frequently reported reasons for leaving farming were: wife or other family member did not like farming or lack of help from family members - 24 times; poor physical health of farm operator or family members - 23 times; couldn't make a go of farming - 14 times; and no opportunity in farming without expansion - 14 times.

"Unable to work both farm and off-farm job" was listed 16 times and "off-farm job had more advantages than farming" was listed 13 times as a reason for leaving farming. When the occupational change was made, farming was the activity that was discontinued. In a large number of cases this was a rational decision based on the respondent's perception that the off-farm job either offered more advantages than farming or the disadvantages of staying in farming were greater than the disadvantages associated with off-farm work.

Factors Making It Possible to Leave Farming

In addition to being asked for reasons for leaving farming, each former farmer was asked, "How were you able to give up farming?" The responses to this question are presented in Table 2. The availability of another source of income was the most frequently mentioned factor making it possible for the farm operator to leave farming (mentioned 34 times) which was followed by "had an opportunity or was forced to

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1/ See Reeder, Le Ray, Craig, 1965 for an analysis of these factors.

Table 1.--Reasons Given for Leaving Farming During 1950-62 by 84 Ex-Farmers, St. Lawrence County, New York 1/

Reason 2/	Number of Mentions
Financial:	
Couldn't make a go of farming	14
Not making any money farming	10
Couldn't afford hired farm help	4
Couldn't keep up payments on livestock, equipment or farm	3
Other financial 3/	5
Total	36
Other limitations of farming:	
No opportunity in farming without expansion	14
Wanted more leisure time	3
Wife or other family members did not like farming or lack of help from family members	24
Farm work too hard	5
Poor land	3
Farming not worth effort	10
Total	59
Off-farm employment:	
Unable to work both farm and off-farm job	16
Off-farm job had more advantages than farming 4/	13
Had a good off-farm job	3
Total	32
Other:	
Poor physical health of farm operator and/or family	23
Loss of production resource 5/	9
Son wanted to farm	1
Called into Armed Forces	2
Total	35
Total	162

1/ Data not available for one individual.

2/ Number of reasons exceed number of respondents because 57 respondents gave more than one reason for leaving farming.

3/ Includes operation costs too high, debt could not be paid from farm income and "others."

4/ Includes better pay, shorter hours, health benefits, retirement plan.

5/ Includes buildings burned, cows died, farm taken for Seaway Project or road construction.

Table 2.--Reasons Given for Being Able to Leave Farming During 1960-62 by 74 Ex-Farmers, St. Lawrence County, New York 1/

Reason 2/	Number of Mentions
Financial:	
Had other source of income 3/	34
Had opportunity to sell or forced to sell farm 4/	28
Had opportunity to sell livestock and/or equipment	22
Had others to take over land operations or able to rent land	11
Able to invest in small business	3
Let bank take farm	3
Little invested in farm	3
Other:	
Tenant - sold livestock	2
Other 5/	6
Total	112

1/ Eleven ex-farmers did not give reasons.

2/ Number of reasons exceed number of respondents because 37 respondents gave more than one reason for being able to leave farming.

3/ Includes other job, savings, Social Security.

4/ Includes taking of farm for Seaway Project.

5/ Includes putting farm in Soil Bank, still in debt, received fire and other insurance payments that covered loss.

sell farm" (mentioned 28 times) and "had an opportunity to sell livestock and/or equipment" (mentioned 22 times).

There is a close relationship between factors making it possible to leave farming and reasons for leaving. For the 85 farmers who left agriculture, the availability of other sources of income and the opportunity to sell land, livestock and/or equipment were important factors in human and physical resource use adjustment.

Years 1950 to 1962 That Farm Operators Left Farming

The 85 farmers who left farming left at different times during the period 1950-1962. Table 3 shows that 64 former farmers (75 percent) had not farmed for five years or more and 27 individuals (32 percent) had not farmed for 10 years or more. The largest number of individuals left farming after the 1950 and 1956 crop years.

Present Location

Not all of the former farmers left their 1950 residence. Of the individuals who operated a farm in St. Lawrence County based on the 20 percent sample for the 1950 Census of Agriculture - and who did not operate a farm in 1962, 38 individuals or 45 percent did not change their residence (Table 4). Twenty-eight of the individuals that did not change residence moved to their present place during the 1941-1950 period while 10 moved to their present residence before 1941.

Of the 47 former farm operators that were not living on the 1949 farm, 16 moved to the 1963 residence during the 1950-54 period, 16 during the 1955-59 period and 15 during the 1960-63 period.

The next section is devoted to a comparison between the farms of the 85 individuals that left agriculture and those of the 221 that were farming in 1962. The comparison is based on the characteristics of the farms in 1949. A word of caution is necessary before concluding these brief introductory remarks. The fact that an individual is not farming at a given point in time does not mean that he will never operate a farm again. Of the 221 individuals who operated a farm during 1949 and 1962, nine or four percent did not operate a farm for

Table 3.--Years 1950-1962 That 85 Ex-Farmers Operated A Farm, St. Lawrence County, New York

Year	Operating Farms	
	Number	Percent
1950	85	100
1951	68	81
1952	58	68
1953	50	59
1954	45	53
1955	40	47
1956	34	40
1957	21	25
1958	19	22
1959	14	16
1960	13	15
1961	8	9
1962	0	0

Table 4.--Residence in 1963 of 85 Ex-Farmers and Year Moved to Residence, St. Lawrence County, New York

Year Moved to 1963 Residence	Number	Percent
Those with same residence in 1950 and 1963:		
1941 - 1950	28	33
1931 - 1940	7	8
1930 or before	3	4
Total	38	45
Those who changed residence between 1950 and 1963:		
1950 - 1954	16	19
1955 - 1959	16	19
1960 - 1963	15	17
Total	47	55
Total	85	100

one or more years during the 1949-62 period. The number of individuals operating a farm in 1949 and 1962 but not operating a farm for one or more years during the period 1949-1962 was as follows:

Year	Number of Individuals
1951	4
1952	5
1953	4
1954	5
1955	5
1956	7
1957	8
1958	8
1959	6
1960	4
1961	2

The distribution by total number of years that individuals did not operate a farm during the period 1950-1962 was:

Years individual did not operate a farm	Number of Individuals
2	2
5	3
9	2
10	1
11	1
Total	9

Occupational mobility between farm and nonfarm activities may be facilitated by land ownership. Individuals that own land have a ready access to two important factors of agricultural production - labor (their own and perhaps other family members) and land (the land they own). Of the 38 individuals that were not farming in 1962, and who had not changed residence, 31 or 82 percent owned three or more acres of land in St. Lawrence County in 1963 compared with 15 individuals or 32 percent of the 47 individuals who were not farming

and who had changed residence since 1950. The average acreage owned by those who had not changed residence since 1950 and who owned three or more acres was 146 acres compared with an average of 138 acres owned by the 15 individuals who had changed residence and who owned three acres or more. The average acreage owned by individuals who were farming in 1949 but did not farm during 1962 is below the average size of farms reported by the U. S. Census of Agriculture for St. Lawrence County for either 1950 (174 acres) or 1959 (210 acres).

THE PHYSICAL RESOURCE

The physical resources used in farming include the land upon which agricultural enterprises are conducted and capital used in the production of agricultural commodities. This section is concerned with a comparison of the physical resources used for agricultural production in 1949 by individuals who were operating a farm in 1962 and those who were not operating a farm in 1962. Data will be presented on the relation of the individual to the land, the size and type of farming operation, land class, value of land and buildings and cost and returns of agricultural production. [1]

Economic Class of Farm [2]

The economic classification of farms for the 1950 Census of Agriculture was made on the basis of three factors - total value of all farm products sold, number of days the farm operator worked off the farm, and the relationship of the income received from nonfarm sources by the operator and members of his family to the value of all farm products sold (U. S. Bureau of the Census, 1952). Information about the economic class of farm operated by individuals who were operating a farm in 1962 and those who were not operating a farm is shown in Table 5.

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[1] The chi square value has been computed for all of the tables used in developing the analysis of data for this report. The five percent level (two-tailed test) was accepted as the level of significance. When differences between individuals who were farming in 1962 and those who were not farming in 1962 are significant at the five percent level, the data are presented in tables in the text of the report. When differences are not significant at the five percent level, the data are presented in Appendix Tables.

[2] See Classifications and Terminology section pp. 59-61 for definitions of Economic Class of Farm for the 1950 Census of Agriculture.

Table 5.--Distribution of 306 Sample Farms by Change in Farm-Nonfarm Status 1949 and 1962 by Economic Class of Farm 1949, St. Lawrence County, New York

Economic Class of Farm 1949 1/	Total		Farm-Nonfarm Status, 1949 and 1962			
			Farm 1949 and 1962		Farm 1949 Nonfarm 1962	
	Number	Percent	Number	Percent	Number	Percent
Commercial:						
Class I & II	31	10.1	27	12.2	4	4.7
Class III	102	33.4	84	38.0	18	21.2
Class IV	67	21.9	45	20.4	22	25.8
Class V & VI	42	13.7	32	14.5	10	11.8
Noncommercial:						
Part-time	27	8.8	17	7.7	10	11.8
Residential	37	12.1	16	7.2	21	24.7
Total:						
Number	306	----	221	----	85	----
Percent	---	100.0	---	100.0	--	100.0

$X^2 = 26.451$ d.f. = 5 $p < .001$

1/ See Classifications and Terminology section for definitions of Economic Class of Farm for the 1950 Census of Agriculture.

Of the total group of 306 individuals who operated farms in 1949, 242 or over three-fourths (79.1 percent) operated commercial farms. Commercial farms were operated by 188 individuals or 85 percent of the individuals who stayed in farming, while of the individuals who quit farming, 54 farmers or 64 percent operated commercial farms. Thirty-one farms (10 percent) were Class I or II, but only four of the individuals (four percent) not farming in 1962 operated this class of farm. The proportion of individuals who farmed in 1949 but did not farm in 1962 by economic class of farm in 1949 was:

Economic Class of Farm	Percent Not Farming
Commercial:	
Class I and II	13
Class III	18
Class IV	33
Class V and VI	24
Noncommercial:	
Part-time	37
Residential	57

Year Farmer Began to Operate 1950 Farm

The distribution of farmers enumerated by the 1950 Census of Agriculture by the year the farmer began to operate "this place" is shown in Appendix Table 1. Nine percent of the sample farmers indicated that they began to operate "this place" prior to 1930, 20 percent began operations during the period 1930-1939, 29 percent during the period 1940-1944 and 42 percent during 1945 or later. Thus, at the time of the 1950 Census of Agriculture, almost three-fourths (71.0 percent) had operated the present farm for 10 years or less.

Land Tenure

Full owner was the most frequent type of tenure arrangement (Appendix Table 2). Of the 306 farms, 237 or 77 percent were operated by full owners, 32 or 11 percent by part owners and 37 or 12 percent by tenants. The high rate of land ownership in the area might be a reflection of the low land values in the area or of the value that individuals in the area place upon ownership of land. There were no significant differences between individuals who left agriculture and individuals who were farming in 1962 in terms of relationship of the farm operator to the land.

Type of Farm

Dairy farming was the predominant agricultural activity in the study area (Table 6). Over three-fourths (78.6 percent) of the farms were classified as dairy, 10 were beef cattle, three poultry, nine general and 43 miscellaneous and unclassified. 1/

A comparison of individuals who were and who were not farming in 1962 shows that a higher proportion of the nonfarmers (25.9 percent) than the farmers (9.5 percent) operated miscellaneous and unclassified farms in 1949. Approximately two-thirds (65.8 percent) of the nonfarmers operated dairy farms compared with over four-fifths (83.6 percent) of the farmers. These data are consistent with data on the economic class of farm and are a further indication that individuals who leave farming are recruited from part-time and residential farm types while those with relatively large farms tend to remain in agriculture. This does not, however, minimize the magnitude of the human and physical resource use adjustment by the 56 farm operators who had dairy farms in 1949 but were not farming in 1962.

1/ Includes part-time, residential, and abnormal farms. It also includes miscellaneous types of commercial farms if 50 percent or more of the total value of products was accounted for by sale of horticultural products or sale of horses, or sale of fur animals, or sale of forest products, or sale of bees and honey, (U. S. Bureau of the Census, 1952, p. xx).

Table 6.--Distribution of 306 Sample Farms by Change in Farm-Nonfarm Status 1949 and 1962 by Type of Farm, 1949, St. Lawrence County, New York

Type of Farm 1949	Total		Farm-Nonfarm Status, 1949 and 1962			
			Farm 1949 and 1962		Farm 1949 Nonfarm 1962	
	Number	Percent	Number	Percent	Number	Percent
Dairy	240	78.6	184	83.6	56	65.8
Miscellaneous & unclassified 1/	43	14.1	21	9.5	22	25.9
Other 2/	22	7.3	15	6.9	7	8.3
Total:						
Number 3/	305	----	220	----	85	----
Percent	---	100.0	---	100.0	--	100.0

$X^2 = 14.248$ d.f. = 2 $p < .001$

1/ Includes part-time, residential and abnormal farms. It also includes miscellaneous types of commercial farms if 50 percent or more of the total value of products was accounted for by sale of horticultural products, or sale of horses, or sale of fur animals, or sale of forestry products, or sale of bees and honey, (U. S. Bureau of the Census, 1952, p. xx).

2/ Includes 10 beef, nine general and three poultry farms.

3/ Data not available for one case.

Acreage Operated and Acreage of Cropland

Acreage operated and acres of cropland are indicators of farm size. There was a significant difference between individuals who continued to operate a farm and individuals who did not operate a farm in 1962 in terms of acres of cropland and acreage operated during 1949 (Table 7 and Table 8). Average acreage operated was 209 and 157 acres for farmers and ex-farmers respectively, while farmers reported an average of 92 acres of cropland compared with an average of only 68 acres of cropland for ex-farmers.

In terms of change in resource use, it is significant that there is a tendency for farm operators who leave agriculture to be those who controlled the smaller amount of the land resources in 1949. For example, 44.7 percent of the ex-farmers had less than 50 acres of cropland in 1949 compared with only 23.6 percent of the individuals who remained in farming.

Milk Cows on Place

Of the individuals who continued to operate a farm in 1962, 91.4 percent reported milk cows in 1950 compared with 83.5 percent of the individuals who left farming. The relationship between farm-nonfarm status in 1962 and number of cows in 1950 is consistent with the relationships with respect to economic class of farm and acreage that were noted above. Table 9 shows that of the individuals with milk cows, the farm operators that stayed in farming had an average of 21 milk cows on April 1, 1950, while the individuals that left farming had an average of 16 milk cows.

Perhaps of greater significance is the finding that about one-third (35.2 percent) of the individuals who left farming during the period 1949-1962 had less than 10 milk cows in 1950 compared with only 16.8 percent for those who did not leave. On the other hand, herds of 25 or more milk cows were reported by approximately one-third (34.2 percent) of the individuals who stayed in farming and by only 16.9 percent of the individuals who were not farming in 1962.

Table 7.--Distribution of 306 Sample Farms by Change in Farm-Nonfarm Status 1949 and 1962 by Total Acres Operated, 1949, St. Lawrence County, New York

Total Acres	Total		Farm-Nonfarm Status, 1949 and 1962			
			Farm 1949 and 1962		Farm 1949 Nonfarm 1962	
	Number	Percent	Number	Percent	Number	Percent
Less than 50	28	9.2	14	6.3	14	16.5
50-99	38	12.4	23	10.4	15	17.6
100-199	129	42.1	95	43.0	34	40.0
200-299	59	19.3	49	22.2	10	11.8
300-399	25	8.2	17	7.7	8	9.4
400 or more	27	8.8	23	10.4	4	4.7
Total:						
Number	306	----	221	----	85	----
Percent	---	100.0	---	100.0	--	100.0
Average acreage	194.8		209.2		157.4	

$X^2 = 15.533$ d.f. = 5 $p < .01$

Table 8.--Distribution of 306 Sample Farms by Change in Farm-Nonfarm Status 1949 and 1962 by Acres of Cropland, 1949, St. Lawrence County, New York

Acres of Cropland	Total		Farm-Nonfarm Status, 1949 and 1962			
			Farm 1949 and 1962		Farm 1949 Nonfarm 1962	
	Number	Percent	Number	Percent	Number	Percent
Under 10	16	5.2	7	3.2	9	10.6
10-24	21	6.9	15	6.8	6	7.1
25-49	53	17.3	30	13.6	23	27.0
50-74	72	23.5	58	26.2	14	16.5
75-99	64	20.9	47	21.3	17	20.0
100-149	48	15.7	37	16.7	11	12.9
150-199	18	5.9	16	7.2	2	2.4
200 and over	14	4.6	11	5.0	3	3.5
Total:						
Number	306	----	221	----	85	----
Percent	---	100.0	---	100.0	--	100.0
Average acreage	85.8		92.5		68.4	

$X^2 = 18.812$ d.f. = 7 $p < .01$

Table 9.--Distribution of 306 Sample Farms by Change in Farm-Nonfarm Status 1949 and 1962 by Milk Cows on Place, 1950, St. Lawrence County, New York

Milk Cows 1/ (April 1, 1950)	Total		Farm-Nonfarm Status, 1949 and 1962			
			Farm 1949 and 1962		Farm 1949 Nonfarm 1962	
	Number	Percent	Number	Percent	Number	Percent
Less than 5	33	12.1	15	7.4	18	25.3
5-9	26	9.5	19	9.4	7	9.9
10-14	34	12.5	27	13.4	7	9.9
15-19	58	21.3	43	21.2	15	21.1
20-24	41	15.0	29	14.4	12	16.9
25-29	35	12.8	30	14.9	5	7.0
30 and over	46	16.8	39	19.3	7	9.9
Total:						
Number 2/	273	----	202	----	71	----
Percent	---	100.0	---	100.0	--	100.0
Average number	19		21		16	

$X^2 = 20.012$ d.f. = 6 $p < .01$

1/ Includes cows and heifers milked, dry milk cows and milk heifers that have calved.

2/ Excludes 33 cases with no milk cows - 19 farm and 14 ex-farm.

Land Class

The type of land upon which an agricultural enterprise is conducted has a mjaor role in determining the success or failure of the enterprise. Sample farms were classified according to the Economic Classification of Farm Areas - St. Lawrence County, New York (Nobe and Conklin, 1957). Under this classification, Land Class I is land where chances for success in full-time farming are extremely low. Land Class II comprises land on which chances for successful farming are too small to expect full-time farming to continue for long. Land Class III comprises land where farm income expectancies are generally low, though high enough to meet minimum requirements for continued operation to 1970 or perhaps a little longer. Land Class IV consists of land with medium income expectancies and Land Class V and VI consist of areas in which a major proportion of the farms have high to very high income expectancies. Land in the Adirondack State Park is generally not suited to intensive agricultural use.

Only 13 or 4.5 percent of the farms in the sample were located on Land Class V and VI - land with high to very high income expectancies in agriculture (Appendix Table 3). Approximately two-thirds (65.3 percent) were on land with low net farm income expectancies (Land Class I, II, III and Adirondack State Park). However, in this study there was no significant relationship between the 1949 land classification of the farm and the 1963 farm-nonfarm status of the family.

Land Class	Farmers 1962 Percent	Ex-Farmers 1962 Percent
Adirondack State Park and unclassified	3.3	3.7
I	9.6	11.0
II	15.3	19.5
III	38.3	28.0
IV	28.7	34.1
V and VI	4.8	3.7
Total	100.0	100.0

Value of Land and Buildings and Indebtedness

Another measure of farm size is the value of land and buildings. Differences in value of land and buildings owned were not significant between individuals who left and individuals who stayed in farming (Appendix Table 4). Approximately three-fourths (76.2 percent) of the farm operators reported that their land and buildings would sell for less than $10,000, if sold in 1950, and only one-fourth reported that they would sell for $10,000 or more. Only nine individuals (3.6 percent) felt that their land and buildings would sell for $20,000 or more.

Taxes paid on land and buildings are an indirect measure of farm size. In 1949 taxes of $300 and over were paid by 12.1 percent of the individuals who stayed in farming and by only 6.3 percent of the individuals who left. On the other hand, 51.6 percent of the individuals who left paid taxes of less than $100 compared with only 29.1 percent of the individuals who continued to farm (Table 10).

The presence or absence of a mortgage gives an indication of the extent to which income is committed to paying off existing debts. It might also be an indication of the extent to which farmers have access to credit or the extent to which farmers have a desire to or feel a need to utilize credit. Over one-half of the farm operators who owned land and/or buildings in 1950 reported no mortgage on their land or buildings (Appendix Table 5). Less than one in 10 (7.1 percent) reported a mortgage of $5,000 or more.

Although not conclusive, these data indicate that the small size of farms - measured in terms of value of land and buildings - is an obstacle to agricultural adjustment in the area. Also important is the finding that significant differences did not exist between individuals who left agriculture and individuals who continued to farm in terms of value of land and buildings and mortgage on land and buildings. The relatively low value of land and buildings and the absence of mortgages under today's technology and agricultural conditions combine to place a serious restriction upon any attempts to increase incomes from agricultural enterprises (Dorner and Sandretto, 1963).

Table 10.--Distribution of 306 Sample Farms by Change in Farm-Nonfarm Status 1949 and 1962 by Taxes on Land and Buildings, 1949, St. Lawrence County, New York

Taxes on Land and Buildings (Dollars)	Total		Farm-Nonfarm Status, 1949 and 1962			
			Farm 1949 and 1962		Farm 1949 Nonfarm 1962	
	Number	Percent	Number	Percent	Number	Percent
Under 50	26	10.6	17	9.3	9	14.1
50-99	60	24.4	36	19.8	24	37.5
100-149	67	27.2	52	28.6	15	23.4
150-199	32	13.0	27	14.8	5	7.8
200-299	35	14.2	28	15.4	7	10.9
300 and over	26	10.6	22	12.1	4	6.3
Total:						
Number 1/	246	----	182	----	64	----
Percent	---	100.0	---	100.0	--	100.0

$X^2 = 11.539$ d.f. = 5 $p < .05$

1/ Data not available or not applicable for 60 cases.

Costs and Returns

Tables 11, 12 and 13 present cost and returns information for 1949. Since there were significant differences between individuals who left farming and those who stayed with respect to size of farm, it is to be expected that there would be differences between these two groups in costs of and returns to production. This expectation is substantiated by the study. Forty percent of the farmers who left agriculture reported a value of all farm products sold during 1949 of less than $1,200 compared with only 17.6 percent of the farm operators who were still farming in 1962. Only 4.7 percent of the ex-farmers had a value of farm products sold of $10,000 or over compared with 13.1 percent of those still farming.

Costs of production were higher for farmers who stayed than for farmers who left, but so was net farm income. After farm expenses were deducted from value of farm products sold, over two-thirds (67.3 percent) of the sample of farmers had net farm incomes of less than $3,000 in 1949. A comparison of net farm incomes during 1949 of those who stayed in farming and those who left shows that of the group that left, 79.9 percent had net farm incomes of less than $3,000 while 62.5 percent of the group that stayed was in this category.

Summary

The analysis of data about physical resources used in farming during 1949 shows some significant differences between resources used by farm operators who were still farming in 1962 and individuals who did not farm in 1962, but continued to live in the area. When compared with the individuals who stayed in farming, a higher proportion of the individuals who left agriculture operated miscellaneous and unclassified farms rather than dairy farms in 1949. Individuals who left agriculture operated smaller farms, had fewer acres of cropland, a smaller value of agricultural products sold, lower farm expenses and lower net farm income than the individuals who continued to farm. Of the group with dairy cows, the individuals who left agriculture had fewer milk cows on the place in 1950 than the group that continued to farm.

Table 11.--Distribution of 306 Sample Farms by Change in Farm-Nonfarm Status 1949 and 1962 by Value of All Farm Products Sold During 1949, St. Lawrence County, New York

Value of All Farm Products Sold (Dollars)	Total		Farm-Nonfarm Status, 1949 and 1962			
			Farm 1949 and 1962		Farm 1949 Nonfarm 1962	
	Number	Percent	Number	Percent	Number	Percent
Under 1,200	73	23.9	39	17.6	34	40.0
1,200-4,999	99	32.4	71	32.1	28	32.9
5,000-9,999	101	32.9	82	37.2	19	22.4
10,000 and over	33	10.8	29	13.1	4	4.7
Total:						
Number	306	----	221	----	85	----
Percent	---	100.0	---	100.0	--	100.0

$X^2 = 20.952$ d.f. = 3 $p < .001$

Table 12.--Distribution of 306 Sample Farms by Change in Farm-Nonfarm Status 1949 and 1962 by Farm Expenses During 1949, St. Lawrence County, New York

Farm Expenses (Dollars)	Total		Farm-Nonfarm Status, 1949 and 1962			
			Farm 1949 and 1962		Farm 1949 Nonfarm 1962	
	Number	Percent	Number	Percent	Number	Percent
Less than 250	49	16.0	29	13.1	20	23.5
250-1,199	61	19.9	35	15.8	26	30.7
1,200-2,499	72	23.5	56	25.3	16	18.8
2,500-4,999	84	27.5	69	31.3	15	17.6
5,000-7,499	29	9.5	21	9.5	8	9.4
7,500 and over	11	3.6	11	5.0	--	----
Total:						
Number	306	----	221	----	85	----
Percent	---	100.0	---	100.0	--	100.0

$X^2 = 17.626$ d.f. = 5 $p < .01$

Table 13.--Distribution of 306 Sample Farms by Change in Farm-Nonfarm Status 1949 and 1962 by Net Farm Income During 1949, St. Lawrence County, New York

Net Farm Income (Dollars)	Total		Farm-Nonfarm Status, 1949 and 1962			
			Farm 1949 and 1962		Farm 1949 Nonfarm 1962	
	Number	Percent	Number	Percent	Number	Percent
Under 1,000	116	37.9	70	31.7	46	54.1
1,000-1,999	49	16.0	34	15.4	15	17.6
2,000-2,999	41	13.4	34	15.4	7	8.2
3,000-3,999	29	9.5	23	10.4	6	7.1
4,000-4,999	24	7.8	19	8.6	5	5.9
5,000 and over	47	15.4	41	18.5	6	7.1
Total:						
Number	306	----	221	----	85	----
Percent	---	100.0	---	100.0	--	100.0

$X^2 = 17.292$ d.f. = 5 $p < .01$

Differences between individuals who did not leave agriculture and ex-farmers were not significant with respect to the year the operator began to operate the 1950 place, the relationship of the operator to the place (land tenure), the agricultural income expectancy from the land (land class), the value of land and buildings owned, or the mortgage on land and buildings.

This section shows that within the study area there was a tendency during the period 1950-1962 for the smaller farmers to leave farming and for the larger farmers to continue to maintain a commitment to agriculture as a way of making a living. The next section will present findings with respect to the human resource that left agriculture during the period under study.

THE HUMAN RESOURCE

In this section attention will be directed to the human resource. Comparisons will be made between the demographic characteristics and occupational preferences of individuals who left agriculture and individuals who were still farming in 1962. As pointed out above, the nature of the physical resource available for agricultural production is an important factor in determining the success or failure of the human resource in agricultural activities.

The technological revolution in agriculture is increasing the demands made upon the managerial factor in agricultural production. The demographic characteristics of the individual and his attitudes toward agriculture play an important role in determining success or failure in agriculture and his willingness and ability to participate in the agricultural revolution.

Age

The individuals who left agriculture averaged 52 years of age in 1963 - not significantly different from the average age of 53 years reported by the individuals who continued in farming (Appendix Table 6). Although age differences between individuals who left and those who stayed in agriculture were not significant, it is significant that 85 or 27.8 percent of the group was able to make a change out of agriculture. Although age alone is not significant, age combined with general physical condition is significant.

Adjustment Potential - Farm Operator

The ability of a farm operator to leave agriculture is in part determined by his age and physical condition. Table 14 shows the adjustment potential of farm operators in the sample based on a combination of age, ability to work and retirement status in 1962. Of the

Table 14.--Distribution of 306 Sample Farms by Change in Farm-Nonfarm Status 1949 and 1962 by Farm Operator Adjustment Potential, 1962, St. Lawrence County, New York

Adjustment Potential 1962	Total		Farm-Nonfarm Status, 1949 and 1962			
			Farm 1949 and 1962		Farm 1949 Nonfarm 1962	
	Number	Percent	Number	Percent	Number	Percent
Under 50 years of age and able to work and not retired	113	36.9	80	36.2	33	38.8
50 years of age and over, and able to work and not retired	165	53.9	127	57.5	38	44.7
Unable to work or retired	28	9.2	14	6.3	14	16.5
Total:						
Number	306	----	221	----	85	----
Percent	---	100.0	---	100.0	--	100.0

$X^2 = 8.853$ d.f. = 2 $p < .02$

total group, only 28 or 9.2 percent indicated that they were physically unable to work or retired during most of 1962. The farm-nonfarm status in 1962 of the 278 individuals able to work and not retired by adjustment potential was:

Able to Work and not Retired	Farmer-1962 Percent	Ex-Farmer 1962 Percent
Under 50 years of age	38.6	46.5
50 years of age or over	61.4	53.5
Total	100.0	100.0

Educational Attainment

The average educational attainment of the farm operators studied is not high. Individuals who continued to farm reported an average (mean) educational attainment of 9.1 years compared with an average of 9.2 years for individuals who left agriculture (Appendix Table 7). The magnitude of the adjustment problem for the group under study is emphasized by the finding that over one-half (55.3 percent) had not gone beyond the eighth grade and almost four-fifths (79.8 percent) had not graduated from high school. Only 20 individuals or 6.5 percent had received some college training.

One-half (10) of the individuals with some college training did not operate a farm in 1962. This may be an indication that individuals with some college education may have more employment alternatives or that they perceive less opportunity for success in farming than do individuals with less education.

Days of Off-Farm Work by Farm Operator

It was shown in the introduction that inability of the individual to operate a farm and hold a nonfarm job at the same time was an important reason for leaving farming. A nonfarm job restricts the amount of time available for farm management or operation.

Of the farm operators covered by the study, over one-half (51.0 percent) did some off-farm work during 1949 (Table 15). Of the individuals

Table 15.--Distribution of 306 Sample Farms by Change in Farm-Nonfarm Status 1949 and 1962 by Days of Off-Farm Work Done by Farm Operator During 1949, St. Lawrence County, New York

Days of Off-Farm Work	Total		Farm-Nonfarm Status, 1949 and 1962			
			Farm 1949 and 1962		Farm 1949 Nonfarm 1962	
	Number	Percent	Number	Percent	Number	Percent
Name	149	49.0	118	53.9	31	36.5
1-49	39	12.8	31	14.2	8	9.4
50-99	14	4.6	11	5.0	3	3.5
100-199	19	6.3	15	6.8	4	4.7
200 or more	83	27.3	44	20.1	39	45.9
Total:						
Number 1/	304	----	219	----	85	----
Percent	---	100.0	---	100.0	--	100.0

$X^2 = 20.514$ d.f. = 4 $p < .001$

1/ Data not available for 2 cases.

who continued to farm, only 46.1 percent worked off the farm in 1949 while of the group that quit farming, 63.5 percent worked off the farm.

The relationship between off-farm work and movement out of agriculture is high for the group of 83 individuals that worked 200 or more days off the farm. Of this group, 39 or almost one-half did not farm in 1962.

Household Size

Although the size of households in the study ranged from one to 14 individuals in 1962, large households were not a characteristic of either the group that lived on a farm or of the group of ex-farm residents. Total persons per household averaged 4.5 for the group that resided on a farm in 1962 and 4.2 for the group that had lived on a farm but who were classified as nonfarm residents in 1962 (Appendix Table 8).

Stage of Family Life Cycle

Since the sample for the study was drawn from a 1950 list of farm operators, it is to be expected that the families in the sample would tend to be in the later stages of the family life cycle. This expectation is verified by Appendix Table 9.

Of the 290 families for which stage of family life cycle was determined, only 17 or 5.9 percent were families composed of childless couples of childbearing age (20-44) or couples with the oldest child living at home under 10 years of age. Over one-fourth (27.9 percent) of the families were composed of couples with the wife over child bearing age and with no single children living at home; 27.6 percent of couples with one or more children under 10 years of age and one or more children 10-21 years of age, single and living at home; and 38.6 percent of couples with youngest child 10-21 years of age, single and living at home.

There was no relationship between the stage of the family life cycle and the farm-nonfarm status of the family in 1962.

Occupational Choice [1]

Since the group under study was composed of farmers and ex-farmers, there was considerable interest in the occupational preferences of these groups. In order to obtain a general indication of occupational preference, each 1950 farm operator under 65 years of age in 1963 was asked, "If you could choose any occupation to work in until retirement, what would be your first choice?" Although only one-third (33.6 percent) of the individuals answering this question indicated farming as their first choice of occupation, the difference between individuals who were farming in 1962 and those who had quit was significant. (Table 16) Of the individuals still farming, 37.5 percent gave farming as a first choice of occupation compared with 24.4 percent of the individuals who were not farming. Therefore, it would seem that of the group not now farming, one-fourth would like to change their occupation to farming and of the group still farming almost two-thirds (62.5 percent) would like to change their occupation to some type of nonfarm work.

To obtain additional insight into the occupational preferences of the group under study, each 1950 farm operator was asked to make a first, second, last and next to last choice from a selected list of occupations. Included in this list were dairy farmer with a 25 cow herd and dairy farmer with an 80 cow herd. The 80 cow herd was considered by professional agricultural advisers to be the herd size capable of maintaining a full-time family farm while the 25 cow herd was considered too small to provide an adequate level of living for a farm family. The results of answers to these questions are shown in Appendix Tables 10, 11, 12 and 13. Differences between individuals still farming and individuals who had left farming were not significant. Less than one-fourth (24.7 percent) of the respondents gave dairy farmer with an 80 cow herd as their first occupational choice and one-tenth gave it as their last choice. For occupational choice of dairy farmer with a 25 cow herd, one-third (33.7 percent) gave this as their first choice and less than one in 20 (4.1 percent)

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[1] This topic is discussed in greater detail in Reeder, Le Ray, and Craig, 1965.

Table 16.--Distribution of 306 Sample Farms by Change in Farm-Nonfarm Status 1949 and 1962 by Choice of Farming As An Occupation Until Retirement by Individuals Under 65 Years of Age, St. Lawrence County, New York, 1963

Farming Was Occupational Choice Until Retirement	Total		Farm-Nonfarm Status, 1949 and 1962			
			Farm 1949 and 1962		Farm 1949 Nonfarm 1962	
	Number	Percent	Number	Percent	Number	Percent
Yes	88	33.6	69	37.5	19	24.4
No	174	66.4	115	62.5	59	75.6
Total:						
Number 1/	262	----	184	----	78	----
Percent	---	100.0	---	100.0	--	100.0

$X^2 = 4.241$ d.f. = 1 $p < .05$

1/ Data not available or not applicable for 44 cases.

indicated that this was their last choice of occupation. From the above, it would seem that many individuals were making choices of a size of farm enterprise that would enable them to earn only a relatively low-income under present day conditions.

Summary

The analysis of data related to the human resource failed to indicate significant differences between 1949 farm operators who were still farming in 1962 and individuals who quit farming with respect to age and education of the farm operator, household size, stage of family life cycle, or choice of 25 cow herd or 80 cow herd as first and last occupational choice.

Differences between individuals who continued to farm and ex-farmers were significant with respect to adjustment potential of the farm operator, days of off-farm work in 1949 and farming as an occupational choice until retirement. Individuals who left agriculture tended to be in the group under 50 years of age, able to work, and not retired. They average more days of off-farm work during 1949 and tended to choose a nonfarm occupation in preference to farming as an occupation to follow until retirement.

RETURN TO FACTORS OF PRODUCTION [1]

In this section, attention will be directed primarily toward a comparison of household incomes where there was a dependency upon agriculture for some income during 1962 as contrasted with households where there was no longer a dependency upon farming for income. Economic returns to agriculture are returns to land, labor capital and management. In general, earnings from off-farm work are only returns to labor. [2]

The previous sections have been concerned with differences in human and physical resources of two groups - those that left and those who stayed in agriculture. These two groups will also be compared in this section.

Production for Home Consumption

Food and fuel items produced on the home place and used in the home represent important items of daily living. To the extent that the value of these items exceeds the cost of production, these items make a contribution to the level of living of the family. Of the 306 families in the study, 259 or 84.6 percent reported some production for home consumption during 1962. A higher proportion of the families still farming (95.9 percent) than of the families that quit farming (55.3 percent) consumed food and fuel items produced on the home place. The various items of home production and consumption during 1962 by farm-nonfarm status during 1962 was:

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[1] A detailed discussion of this topic is beyond the scope of this report. Additional data from the study dealing with this topic are available in Bennett, 1964; Le Ray and Reeder, 1965; Reeder, Le Ray and Craig, 1965.

[2] This introductory statement is intended as a "general statement". It is recognized that with respect to self-employment in off-farm work there is a return to capital and management and in land based activities - for example, outdoor recreation enterprises - there is a return to land. In addition, it is possible to consider part of the return to labor as a return to investment in human capital.

Item of Home Production	Families Reporting			
	Farm (N = 221)		Nonfarm (N = 85)	
	Number	Percent	Number	Percent
Milk	183	82.8	1	1.2
Eggs	65	29.4	3	3.5
Poultry	54	24.4	3	3.5
Pork	59	26.7	0	0.0
Beef	103	46.6	0	0.0
Irish Potatoes	58	26.2	15	17.6
Fruits and Vegetables - Fresh	141	63.8	40	47.0
Vegetables:				
Frozen	79	35.7	11	12.9
Canned	107	48.4	29	34.1
Fruits:				
Frozen	38	17.2	2	2.4
Canned	39	17.6	3	3.5
Fuel Wood	112	50.7	10	11.8
Other 1/	5	2.3	3	3.5

The distribution of sample households by value of food and fuel produced for consumption on the home place is shown in Table 17. Perhaps more important than the finding of significant differences between farmers and ex-farmers in the value of home production is the finding that of the total group of ex-farmers, over one-half (55.3 percent) were still producing food and fuel items for home use. Though they were no longer classified as farm families, they still maintained a contact with the land. It is also significant that almost two-thirds (63.4 percent) of the farm families were able to produce food and fuel with a value of $500 or more in 1962 if these items had been purchased. 2/

1/ Includes butter, honey, maple products and lamb.

2/ See Appendix Table 16 for factors used to compute value of home produced food and fuel.

Table 17.--Distribution of 306 Sample Farms by Change in Farm-Nonfarm Status 1949 and 1962 by Value in Dollars of Items Produced for Consumption and Used in the Home During 1962 if These Items were Purchased, St. Lawrence County, New York

Value of Home Production (Dollars)	Total		Farm-Nonfarm Status, 1949 and 1962			
			Farm 1949 and 1962		Farm 1949 Nonfarm 1962	
	Number	Percent	Number	Percent	Number	Percent
No home production	47	15.4	9	4.1	38	44.7
Under 100	47	15.4	12	5.4	35	41.2
100-399	72	23.5	60	27.1	12	14.1
400-699	58	19.0	58	26.2	0	0.0
700 and over	82	26.7	82	37.2	0	0.0
Total:						
Number	306	----	221	----	85	----
Percent	---	100.0	---	100.0	--	100.0

$X^2 = 175.272$ d.f. = 4 $p < .001$

Nonwork Income

Income from nonwork sources represents income received as a return to capital investments, deferred payments for past services, or transfer of funds from one segment of society to another. (Table 18) One in two (49.8 percent) of the families still farming reported some nonwork income compared with seven in 10 (70.0 percent) of the families that quit farming.

Of the 299 households reporting information about nonwork income, 25.0 percent of the ex-farmer households and 13.3 percent of the farm households received income from nonwork sources of $1,000 or more. Only 5.5 and 10.0 percent of the farm and ex-farm households respectively received $2,000 or more from nonwork sources during 1962.

The sources of nonwork income for these families by farm-nonfarm status during 1962 was:

Nonwork Income Source	Families Reporting			
	Farm (N = 221)		Nonfarm (N = 85)	
	Number	Percent	Number	Percent
Property Income:				
Rent of Land	26	11.8	14	16.5
Rent of House or Buildings . .	23	10.4	5	5.9
Interest or Dividends	31	14.0	15	17.6
Recreation Use of Land	4	1.8	1	1.2
Other Property Income	3	1.4	1	1.2
Total 1/	(62)	(28.0)	(29)	(34.1)
Transfer or Deferred Payments:				
Social Security	23	10.4	9	10.6
Workman's Compensation	1	0.4	2	2.4
Veteran's Payments	3	1.4	2	2.4
Other Retirement or Disability	11	5.0	5	5.9
Unemployment Insurance	19	8.6	11	12.9
Welfare	8	3.6	11	12.9
Total 1/	(60)	(27.1)	(33)	(38.8)
Other 2/	10	4.5	2	2.4
Total 1/	109	49.3	56	65.9

1/ The sum of individual items exceeds total because some households received nonwork income from more than one source.

2/ Includes assistance from children and others.

Table 18.--Distribution of 306 Sample Farms by Change in Farm-Nonfarm Status 1949 and 1962 by Household Income from Nonwork Sources, 1962, St. Lawrence County, New York

Nonwork Income (Dollars)	Total		Farm-Nonfarm Status, 1949-1962			
			Farm 1949 and 1962		Farm 1949 Nonfarm 1962	
	Number	Percent	Number	Percent	Number	Percent
None	139	46.5	111	50.6	28	35.0
Under 1,000	111	37.1	79	36.1	32	40.0
1,000-1,999	29	9.7	17	7.8	12	15.0
2,000 or more	20	6.7	12	5.5	8	10.0
Total:						
Number 1/	299	----	219	----	80	----
Percent	---	100.0	---	100.0	--	100.0

$X^2 = 8.299$ d.f. = 3 $p < .05$

1/ Data not available for 7 cases.

Household Income [1]

Data about household income goes to the heart of the human and physical resource use adjustment problem. The amount of income received by a household determines to a large degree the access that the household has to goods and services. If income is inadequate, access to goods and services is restricted. When individual or households have incomes so low that basic needs for goods and services are unmet, a state of poverty exists. Persons are considered to be living in poverty when they are members of families with net cash incomes of less than $3,000 or unrelated individuals with incomes of less than $1,500 (persons living alone or in non-family units) (Bird, 1946, p. 1).

Data about net cash household income and net cash household income plus value of home production, if purchased, are presented in Appendix Tables 14 and 15. Of the 296 families for which total net cash family income information was available for 1962, about one-fourth (24.3 percent) reported incomes of less than $3,000. Incomes of less than $3,000 were reported for 27.6 percent of the farm families and 15.2 percent of the ex-farm families.

The addition of value of home production, if sold, to net cash household income results in a significant reduction in the number of households in the poverty class. When the value of home production is added to net cash household income, the number of households with real incomes of under $3,000 is reduced from 72 to 61. None of this reduction takes place within the ex-farmer group. The decrease from 60 to 49 or 22.4 percent of farm families with incomes of under $3,000 is significant. Also of significance is the finding that the inclusion of value of home production in the net family income picture increased the number of farm families with incomes of $6,000 or over from 82 to 94 - an increase of 14.6 percent.

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[1] Total household income data are available only for 1962. Therefore, household income comparisons for 1949 or other years are not possible.

Summary

The analysis of selected data relative to the return to the factors of production during 1962 failed to reveal significant differences with respect to household income between households where the 1950 farm operator continued to farm and households that were now nonfarm. Farm households reported a higher value of home production while ex-farm households had a higher incidence of nonwork income.

Within the sample population, change has taken place. Of an original group of 306 farm operators, 85 or 27.8 percent were not farming in 1962. However, a high proportion of both groups - those that stayed in agriculture and those that left are living in poverty. Human and physical resource use adjustment is still necessary if the individuals and families studied are to meet their basic needs for goods and services if they are to achieve their just place in the great society.

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APPENDIX A

Tables [1]

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[1] The chi square value has been computed for all of the tables used in developing the analysis of data for this report. The five percent level (two-tailed test) was accepted as the level of significance. When differences between individuals who were farming 1962 and those who were not farming in 1962 are significant at the five percent level, the data are presented in tables in the text of the report. When differences are not significant at the five percent level, the data are presented in Appendix Tables.

Appendix Table 1.--Distribution of 306 Sample Farms by Change in Farm-Nonfarm Status 1949 and 1962 by Year Farm Operator Began to Operate 1950 Farm, St. Lawrence County, New York

Year Farmer Began to Operate Place	Total		Farm-Nonfarm Status, 1949 and 1962			
			Farm 1949 and 1962		Farm 1949 Nonfarm 1962	
	Number	Percent	Number	Percent	Number	Percent
Before 1930	28	9.3	22	10.1	6	7.2
1930-1939	59	19.7	48	22.1	11	13.3
1940-1944	87	29.0	64	29.6	23	27.7
1945 or after	126	42.0	83	38.2	43	51.8
Total:						
Number 1/	300	----	217	----	83	----
Percent	---	100.0	---	100.0	--	100.0

$X^2 = 5.636$ d.f. = 3 $p < .20$

1/ Data not available for 6 cases.

Appendix Table 2.--Distribution of 306 Sample Farms by Change in Farm-Nonfarm Status 1949 and 1962 by Land Tenure, 1949, St. Lawrence County, New York

Land Tenure	Total		Farm-Nonfarm Status, 1949 and 1962			
			Farm 1949 and 1962		Farm 1949 Nonfarm 1962	
	Number	Percent	Number	Percent	Number	Percent
Full owner	237	77.4	168	76.0	69	81.1
Part owner	32	10.5	26	11.8	6	7.1
Tenant	37	12.1	27	12.2	10	11.8
Total:						
Number	306	----	221	----	85	----
Percent	---	100.0	---	100.0	--	100.0

$X^2 = 1.523$ d.f. = 2 $p < .50$

Appendix Table 3.--Distribution of 306 Sample Farms by Change in Farm-Nonfarm Status 1949 and 1962 by Land Class 1950, St. Lawrence County, New York

Land Class	Total		Farm-Nonfarm Status, 1949 and 1962			
			Farm 1949 and 1962		Farm 1949 Nonfarm 1962	
	Number	Percent	Number	Percent	Number	Percent
Adirondack State Park and unclassified land	10	3.4	7	3.3	3	3.7
I	29	10.0	20	9.6	9	11.0
II	48	16.5	32	15.3	16	19.5
III	103	35.4	80	38.3	23	28.0
IV	88	30.2	60	28.7	28	34.1
V & VI	13	4.5	10	4.8	3	3.7
Total:						
Number 1/	291	----	209	----	82	----
Percent	---	100.0	---	100.0	--	100.0

$X^2 = 3.241$ d.f. = 5 $p < .70$

1/ Data not available for 15 cases.

Appendix Table 4.--Distribution of 306 Sample Farms by Change in Farm-Nonfarm Status 1949 and 1962 by Value of Land and Buildings Owned by Farm Operator, 1949, if Sold, St. Lawrence County, New York

Value of Land and Buildings	Total		Farm-Nonfarm Status, 1949 and 1962			
			Farm 1949 and 1962		Farm 1949 Nonfarm 1962	
	Number	Percent	Number	Percent	Number	Percent
Less than $2,500	22	8.7	16	8.6	6	9.2
$2,500-$4,999	71	28.2	46	24.6	25	38.4
$5,000-$7,499	70	27.8	53	28.3	17	26.2
$7,500-$9,999	29	11.5	25	13.4	4	6.2
$10,000-$19,999	51	20.2	41	21.9	10	15.4
$20,000 and over	9	3.6	6	3.2	3	4.6
Total:						
Number 1/	252	----	187	----	65	----
Percent	---	100.0	---	100.0	--	100.0

$X^2 = 6.869$ d.f. = 5 $p < .30$

1/ Data not available or not applicable for 54 cases.

Appendix Table 5.--Distribution of 306 Sample Farms by Change in Farm-Nonfarm Status 1949 and 1962 by Mortgage on Land and Buildings Owned by Farm Operator - 1949, St. Lawrence County, New York

Mortgage on Land and Buildings	Total		Farm-Nonfarm Status, 1949 and 1962			
			Farm 1949 and 1962		Farm 1949 Nonfarm 1962	
	Number	Percent	Number	Percent	Number	Percent
No Mortgage	145	56.9	107	56.9	38	56.7
Under $1,000	21	8.2	16	8.5	5	7.5
$1,000-$2,499	36	14.1	27	14.4	9	13.4
$2,500-$4,999	35	13.7	24	12.8	11	16.4
$5,000 and over	18	7.1	14	7.4	4	6.0
Total:						
Number 1/	255	----	188	----	67	----
Percent	---	100.0	---	100.0	--	100.0

$X^2 = .726$ d.f. = 4 $p < .95$

1/ Data not available or not applicable for 51 cases.

Appendix Table 6.--Distribution of 306 Sample Farms by Change in Farm-Nonfarm Status 1949 and 1962 by Age of 1949 Farm Operator, St. Lawrence County, New York, 1963

Age of Farm Operator (Years)	Total		Farm-Nonfarm Status, 1949 and 1962			
			Farm 1949 and 1962		Farm 1949 Nonfarm 1962	
	Number	Percent	Number	Percent	Number	Percent
Under 40	22	7.2	13	5.9	9	10.6
40-44	34	11.1	28	12.7	6	7.1
45-49	60	19.6	42	19.0	18	21.2
50-54	51	16.7	34	15.4	17	20.0
55 and over	139	45.4	104	47.0	35	41.1
Total:						
Number 1/	306	----	221	----	85	----
Percent	---	100.0	---	100.0	--	100.0

$X^2 = 5.023$ d.f. = 4 $p < .30$

1/ Data are based on age at time of 1963 interview.

Appendix Table 7.--Distribution of 306 Sample Farms by Change in Farm-Nonfarm Status 1949 and 1962 by Educational Attainment of Farm Operator, St. Lawrence County, New York, 1963.

Educational Attainment	Total		Farm-Nonfarm Status, 1949 and 1962			
			Farm 1949 and 1962		Farm 1949 Nonfarm 1962	
	Number	Percent	Number	Percent	Number	Percent
7 grades or less	46	15.0	30	13.6	16	18.8
8th grade	123	40.3	93	42.1	30	35.3
9-11 grades	75	24.5	57	25.8	18	21.2
12 grades	42	13.7	31	14.0	11	12.9
One or more years of college	20	6.5	10	4.5	10	11.8
Total:						
Number	306	----	221	----	85	----
Percent	---	100.0	---	100.0	--	100.0

$X^2 = 7.325$ d.f. = 4 $p < .20$

Appendix Table 8.--Distribution of 306 Sample Farms by Change in Farm-Nonfarm Status 1949 and 1962 by Household Size, 1962, St. Lawrence County, New York

Household Size	Total		Farm-Nonfarm Status, 1949 and 1962			
			Farm 1949 and 1962		Farm 1949 Nonfarm 1962	
	Number	Percent	Number	Percent	Number	Percent
1 and 2 persons	73	23.8	50	22.7	23	27.1
3 people	53	17.3	39	17.6	14	16.5
4 people	49	16.0	32	14.5	17	20.0
5 people	43	14.1	35	15.8	8	9.4
6 people	40	13.1	29	13.1	11	12.9
7 or more	48	15.7	36	16.3	12	14.1
Total:						
Number	306	----	221	----	85	----
Percent	---	100.0	---	100.0	--	100.0

$X^2 = 3.708$ d.f. = 5 $p < .70$

12

Appendix Table 9.--Distribution of 306 Sample Farms by Change in Farm-Nonfarm Status 1949 and 1962 by Stage of Family Life Cycle, 1962, St. Lawrence County, New York

Stage of Family Life Cycle	Total		Farm-Nonfarm Status, 1949 and 1962			
			Farm 1949 and 1962		Farm 1949 Nonfarm 1962	
	Number	Percent	Number	Percent	Number	Percent
Stage 1 1/	17	5.9	12	5.7	5	6.3
Stage 2 2/	80	27.6	55	26.1	25	31.6
Stage 3 3/	112	38.6	85	40.2	27	34.3
Stage 4 4/	81	27.9	59	28.0	22	27.8
Total:						
Number 5/	290	----	211	----	79	----
Percent	---	100.0	---	100.0	--	100.0

$X^2 = 1.246$ d.f. = 3 $p < .80$

1/ Includes childless couples with wife of child-bearing age (20-44) and couples with oldest child living at home under 10 years of age.

2/ Includes couples with one or more children under 10 years of age and one or more children 10-21 years of age and single and living at home.

3/ Includes couples with youngest child 10-21 years of age, single and living at home.

4/ Includes couples with wife over child-bearing age and no single children living at home.

5/ Data not available for 2 cases. Excludes broken families, married children living at home and single children over 21 years of age.

Appendix Table 10.--Distribution of 306 Sample Farms by Change in Farm-Nonfarm Status 1949 and 1962 by Choice of Dairy Farmer-80 Cow Herd As First Choice of Occupation, St. Lawrence County, New York, 1963

80 Cow Herd First Occupation Choice	Total		Farm-Nonfarm Status, 1949 and 1962			
			Farm 1949 and 1962		Farm 1949 Nonfarm 1962	
	Number	Percent	Number	Percent	Number	Percent
Yes	72	24.7	48	22.5	24	30.4
No	220	75.3	165	77.5	55	69.6
Total:						
Number 1/	292	----	213	----	79	----
Percent	---	100.0	---	100.0	--	100.0

$X^2 = 1.909$ d.f. = 1 $p < .20$

1/ Data not available for 14 cases.

Appendix Table 11.--Distribution of 306 Sample Farms by Change in Farm-Nonfarm Status 1949 and 1962 by Choice of Dairy Farmer-80 Cow Herd As Last Choice of Occupation, St. Lawrence County, New York, 1963

80 Cow Herd Last Occupation Choice	Total		Farm-Nonfarm Status, 1949 and 1962			
			Farm 1949 and 1962		Farm 1949 Nonfarm 1962	
	Number	Percent	Number	Percent	Number	Percent
Yes	30	10.3	19	8.9	11	13.9
No	262	89.7	194	91.1	68	86.1
Total:						
Number 1/	292	----	213	----	79	----
Percent	---	100.0	---	100.0	--	100.0

$X^2 = 1.565$ d.f. = 1 $p < .30$

1/ Data not available for 14 cases.

Appendix Table 12.--Distribution of 306 Sample Farms by Change in Farm-Nonfarm Status 1949 and 1962 by Choice of Dairy Farmer-25 Cow Herd As First Choice of Occupation, St. Lawrence County, New York

25 Cow Herd First Choice Occupation	Total		Farm-Nonfarm Status, 1949 and 1962			
			Farm 1949 and 1962		Farm 1949 Nonfarm 1962	
	Number	Percent	Number	Percent	Number	Percent
Yes	99	33.7	78	36.4	21	26.2
No	195	66.3	136	63.6	59	73.8
Total:						
Number 1/	294	----	214	----	80	----
Percent	---	100.0	---	100.0	--	100.0

$X^2 = 2.712$ d.f. = 1 $p < .10$

1/ Data not available for 12 cases.

Appendix Table 13.--Distribution of 306 Sample Farms by Change in Farm Nonfarm Status 1949 and 1962 by Choice of Dairy Farmer-25 Cow Herd As Last Choice of Occupation, St. Lawrence County, New York

25 Cow Herd Last Choice Occupation	Total		Farm-Nonfarm Status, 1949 and 1962			
			Farm 1949 and 1962		Farm 1949 Nonfarm 1962	
	Number	Percent	Number	Percent	Number	Percent
Yes	12	4.1	10	4.7	2	2.5
No	282	95.9	204	95.3	78	97.5
Total:						
Number 1/	294	----	214	----	80	----
Percent	---	100.0	---	100.0	--	100.0

$X^2 = .702$ d.f. = 1 $p < .50$

1/ Data not available for 12 cases.

Appendix Table 14.--Distribution of 306 Sample Farms by Change in Farm-Nonfarm Status 1949 and 1962 by Net Cash Household Income During 1962, St. Lawrence County, New York

Net Cash Household Income (Dollars)	Total		Farm-Nonfarm Status, 1949 and 1962			
			Farm 1949 and 1962		Farm 1949 Nonfarm 1962	
	Number	Percent	Number	Percent	Number	Percent
Under 3,000	72	24.3	60	27.6	12	15.2
3,000-5,999	105	35.5	75	34.6	30	38.0
6,000 and over	119	40.2	82	37.8	37	46.8
Total:						
Number 1/	296	----	217	----	79	----
Percent	---	100.0	---	100.0	--	100.0

$X^2 = 5.071$ d.f. = 2 $p < .10$

1/ Data not available for 13 cases.

Appendix Table 15.--Distribution of 306 Sample Farms by Change in Farm-Nonfarm Status 1949 and 1962 by Net Cash Household Income and Value of Home Consumption If Purchased, 1962, St. Lawrence County, New York

Net Cash Household Income Plus Value of Home Production If Purchased (Dollars)	Total		Farm-Nonfarm Status, 1949 and 1962			
			Farm 1949 and 1962		Farm 1949 Nonfarm 1962	
	Number	Percent	Number	Percent	Number	Percent
Under 3,000	61	20.6	49	22.6	12	15.2
3,000-5,999	104	35.1	74	34.1	30	38.0
6,000 and over	131	44.3	94	43.3	37	46.8
Total:						
Number 1/	296	----	217	----	79	----
Percent	---	100.0	---	100.0	--	100.0

$X^2 = 1.944$ d.f. = 2 $p < .50$

1/ Data not available for 10 cases.

Appendix Table 16.--Factors Used to Compute Value of Home Produced Food and Fuel

	Unit	Return if Sold (Dollars)	Cost if Bought (Dollars)
Milk	Quart	.07	.22
Butter	Pound	.60	.70
Eggs	Dozen	.36	.50
Poultry (dressed)			
Ducks	Pound	.38	.60
Turkeys	Pound	.28	.45
Chickens	Pound	.25	.40
Pork (dressed)	Pound	.25	.40
Beef (dressed)	Pound	.30	.50
Lamb (dressed)	Pound	.25	.40
Fruits and Vegetables 1/			
Frozen or Canned	Quart	.35	.35
Fresh			
Less than seven family members--7.50 for each family member for each $\frac{1}{4}$ acre of garden.			
Seven or more family members--52.00 for each $\frac{1}{4}$ acre of garden.			
Irish Potatoes	Bushel	1.50	2.00
Honey	Pound	.35	.45
Maple Syrup	Gallon	5.00	5.00
Fuel Wood	Cord	6.00	6.00

SOURCE: Guide for Home-Produced Food, FHA-NY 431-1, Farmers Home Administration, U. S. Department of Agriculture, Syracuse, New York, October 1962; Home Demonstration Agent, St. Lawrence County, New York; Respondents for St. Lawrence County Study; Department of Household Economics and Management, College of Home Economics, Cornell University; and Department of Welfare, St. Lawrence County, New York.

1/ For farm households, production expenses are included under farm expenses. For nonfarm household expenses for home production were charged at the rate of $20 for $\frac{1}{4}$ acre or less and $20 for each additional $\frac{1}{4}$ acre.

APPENDIX B

THE SAMPLE AND OBJECTIVES OF THE OVER-ALL STUDY

The objectives of the over-all project were to determine for a given population of rural farm families in an area of northern New York State with different resource characteristics and levels of family income the following:

A. The nature and processes of socio-economic adjustment over the past decade in human and physical resource use and their basic causes;

B. The community, area, and economy-wide characteristics and developments which comprise the general socio-economic environment within which adjustments have evolved.

Stated more specifically, the objectives of the over-all study were:

1. To develop the nature, processes, and causes of change in the sizes and types of farm organization and land use.
2. To relate incidence of part-time and full-time commercial farming to patterns of occupational mobility between farm and nonfarm activities and level of agricultural and nonfarm economic activity of the economy.
3. To explore the relationship of different patterns of farm organization and land use to patterns of communication, rate of adoption of selected farm practices, and goals and values.
4. To develop a typology of part-time farmers based upon relative commitment to farm and nonfarm activity.
5. To develop a typology of part-time farm households based upon source of household income.
6. To compare present and base period social and economic characteristics of persons in the basic sample who have: (a) migrated from the area, (b) remained in the area as farmers, and (c) become nonfarm residents within the area.

The sample for the study was drawn from the 20 percent sample for the 1950 U. S. Census of Agriculture for St. Lawrence County, New York. The 20 percent sample yielded the names of 1,017 individuals who were operating farms in St. Lawrence County in 1949. Individuals who were 55 years of age or over in 1950 were excluded from the study. As a result of this selection, this study is not representative of all farms or farm operators in the area. It represents farm operators, their farms, and their families meeting the criteria outlined above.

Of the total 417 farm operators who were in the sample based on the 1950 Census of Agriculture, 32 had died and eight could not be located (Table A). Of the 377 remaining, only 26 or 6.9 percent had left the county. In other words, more than nine out of 10 of the 1950 farm operators are trying to work out their adjustments within the area. Even though this is a county which is classified as an area of substantial and persistent unemployment by the Department of Labor, these farm operators are not moving to areas of greater opportunity. Of 320 farm operators who were engaged in farming in 1950 and who have remained in the area and for whom we have information, 234 or 73 percent were still engaged in farming on a full-time basis in 1962. In other words, of those who remain in the area more than seven out of 10 are still engaged in farming on a full-time or part-time basis.

Data for this special report were obtained from the responses of the male respondents who were living in the St. Lawrence County area during the summer of 1963.

Table A.--Distribution of 417-1950 Farm Operators Who Were Under 55 Years of Age in 1950 by Availability for Interview and Farm-Nonfarm Classification, St. Lawrence County, New York, 1963

Item	Number	Percent
No Interviews:		
Deceased	32	7.7
Moved out of St. Lawrence County area	26	6.2
Unable to locate	8	1.9
Not available for interview during the time that survey team was in the field	7	1.7
Refused to be interviewed	16	3.8
Total	89	21.3
Interviews:		
Not farming in 1950	4	1.0
Incomplete interview	4	1.0
Complete interviews	(320)	
Farming in 1962 1/	234	56.1
Not farming in 1962 2/	86	20.6
Total	328	78.7
Total Sample	417	100.0

1/ Includes three female farm operators.

2/ Includes one female who operated a farm in 1950.

CLASSIFICATIONS AND TERMINOLOGY

Concepts preceded by an asterisk (*) were operationally defined for purposes of analysis. Concepts not preceded by an asterisk (*) were operationally defined for purposes of enumeration. Except when noted, enumeration definitions have not been changed for purposes of analysis.

Dwelling Unit - Dwelling unit is a house, a group of rooms, or a room occupied as separate living quarters. A single room occupied as separate living quarters is a dwelling unit if it has separate cooking equipment or if it is the only living quarters in the structure. The basis of distinction is separateness or self-containment. In the majority of cases, a dwelling unit is a house, an apartment, or a trailer.

Economic Class of Farm -

> For the 1950 Census of Agriculture, places of three or more acres were counted as farms if the value of agricultural products in 1949, exclusive of home gardens, amounted to $150 or more. The agricultural products could have been either for home use or for sale. Places of less than three acres were counted as farms only if the value of sales or agricultural products in 1949 amounted to $150 or more. 1/

The economic classification of farms for the 1950 Census data:

> . . . was made on the basis of three factors; namely, total value of all farm products sold, number of days the farm operator worked off the farm, and the relationship of the income received from nonfarm sources by the operator and members of his family to the value of all farm products sold.
>
> In making the classification of farms by economic class, farms have been grouped into two major groups, namely, commercial farms and other farms. In general, all farms with a value of sales of farm products amounting to $1,200 or more were classified as commercial. Farms with a value of sales of $250 to $1,199 were classified as commercial only if the farm operator worked off the farm less than 100 days and the income of the farm operator and members of his family received from nonfarm sources was less than the total value of all farm products sold.

1/ U. S. Department of Commerce, Bureau of the Census, U. S. Census of Agriculture 1950, Vol. 1, Part 2, Middle Atlantic States. Washington, D. C., 1952, p. XII, XIX.

Commercial farms were divided into six groups on the basis of the total value of farm products sold, as follows:

Class:	Value of Farm Products Sold
I	$25,000 or more
II	$10,000 to $24,999
III	$5,000 to $9,999
IV	$2,500 to $4,999
V	$1,200 to $2,499
VI	*$250 to $1,199

*Provided the farm operator worked off the farm less than 100 days and provided the income the farm operator and members of his family received from nonfarm sources was less than the value of all farm products sold.

Other farms were grouped into three classes as follows:

Part-time farms.--Farms with a value of sales of farm products of $250 to $1,199 were classified as part-time provided the farm operator reported (1) 100 or more days of work off the farm in 1949, or (2) the nonfarm income received by him and members of his family was greater than the value of farm products sold.

Residential farms.--Residential farms include all farms except abnormal farms with a total value of sales of farm products of less than $250. Some of these represent farms on which the operator worked off the farm more than 100 days in 1949. Some represent farms on which the income from nonfarm sources was greater than the value of sales of agricultural products. Others represent subsistence and marginal farms of various kinds. Some farms are included here, which under normal conditions, would have qualified as commercial farms.

Abnormal farms.--Insofar as it was possible to identify them, abnormal farms include public and private institutional farms, community enterprises, experiment station farms, grazing associations, etc. 1/

For the 1959 Census of Agriculture:

Places of less than 10 acres in 1959 were counted as farms if the estimated sales of agricultural products for the year amounted to at least $250. Places of 10 or more acres in 1959 were counted as farms if the estimated sales of agricultural products for the year amounted to at least $50. 2/

1/ Ibid., p. XIX.

2/ 1959 Census of Agriculture (Washington: U. S. Department of Commerce, Bureau of the Census, 1961), Vol. 1, Part 7, Counties (New York), p. XIV.

The economic classification of farms for the 1959 Census of Agriculture was made on the same general basis as that employed for the 1950 Census.

Commercial farms were divided into six economic classes on the basis of the total value of all farm products sold, as follows:

Class of Farm	Value of Farm Products Sold
I	$40,000 and over
II	$20,000 to $39,999
III	$10,000 to $19,999
IV	$5,000 to $9,999
V*	$2,500 to $4,999
VI	$50 to $2,499

*Provided the farm operator was under 65 years of age, and--(1) he did not work off the farm 100 or more days, and (2) the income that he and members of his household received from nonfarm sources was less than the total value of farm products sold.

Farm - For purposes of this study, a farm is all of the land upon which some agricultural enterprises were conducted by an individual either by his own labor alone, or with the assistance of members of his household or hired employees during 1962. For enumeration purposes, it was considered that agricultural enterprises were conducted during 1962 if:

(a) Any livestock--hogs, cattle, sheep, goats, or horses--were kept on the land.

(b) A combined total of 20 or more chickens, turkeys and ducks were raised or kept on the land.

(c) Any grain, hay, or other field crops were grown on the land either for sale or home use.

(d) A combined total of 20 or more bearing or non-bearing fruit trees, grapevines, and nut trees were on the land and not abandoned.

(e) Any vegetables, berries, or nursery or greenhouse products were grown on the land for sale.

(f) A combined total of one-fourth acres of vegetables, berries, grapevines, fruit trees, or nut trees were grown on the land either for home consumption or for sale.

(g) A combined total of 10 or more days were spent in harvesting forest products or in carrying out reforestation or timber stand improvement practices on the land.

The above requirements resulted in the enumeration of farm information for 1962 from some individuals that were classified as nonfarm when the criteria for classifying individuals and farms were applied to the questionnaires during the analysis. However, it was felt desirable to obtain this information to permit more detailed classification and for uses beyond the scope of this thesis.

This enumeration procedure is comparable to the procedure used by the Bureau of the Census. Enumerators are instructed to obtain an agricultural questionnaire for each person who had charge of one or more agricultural operations whether or not the individual considered himself to be a farm operator. During the office processing operations that follow the enumeration, criteria are applied to sort out for tabulation those questionnaires that represent farms according to the Census definition of farm.[1/] As has been noted, the basic sample for the present study is the 20 percent sample of the 1950 Census of Agriculture for St. Lawrence County, New York. Therefore, all the individuals in the sample for the present study were farm operators in 1950 as determined by the office processing operations of the Bureau of the Census that followed the 1950 enumeration.

Farm Operator - 1950 - The individual designated on Form A1 Agricultural Questionnaire 1950 - U. S. Department of Commerce, as the person in charge of agricultural operations on April 1, 1950.

Farm Work - Farm work is work put on crops, work with livestock, maintenance work on farm improvements, farm machinery and equipment, and management of the farm including maintaining records and accounts. It does not include time spent redecorating, remodeling, or repairing the family living quarters or time spent at nonfarm businesses operated from the home place--for example, auto repair business or dressmaking shops.

Included as farm work on the home place are any work, chores, or

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[1/] U. S. Bureau of the Census, U. S. Census of Agriculture: 1959, Vol. II, General Report Statistics by Subjects, (Washington, D. C. 1962).

planning necessary to the agricultural operations of the place, such as the following:

(1) Working in fields, orchards, or home gardens;

(2) Feeding and caring for livestock and poultry;

(3) Irrigating crops;

(4) Hauling farm or ranch products to market;

(5) Hauling feed, fertilizer, and other supplies to the farm or ranch;

(6) Cleaning and caring for milk pails and separators;

(7) Cleaning and repairing machinery and other farm equipment;

(8) Constructing or repairing buildings and fences with regular farm help;

(9) Contract farm work for which labor is hired, but for which machines and equipment are furnished by the farm operator;

(10) Planning farm work;

(11) Keeping farm records;

(12) Supervising hired employees.

Not included are:

(1) Housework;

(2) Contract construction work;

(3) Custom work for which equipment is hired from a contractor who also supplies the labor for operating the equipment;

(4) Repair, installation, or construction work done by persons employed specifically for such work.

Farmer - Farmer is an individual who conducted an agricultural enterprise upon a farm during 1962 either by his own labor alone or with the assistance of members of his household or hired employees during 1962.

Household - Household, as used in this study, includes all persons who occupy a house, an apartment, a group of rooms, or a room that constitutes a dwelling. A household includes the family and also lodgers, foster children, wards or employees who share the dwelling unit. A person living alone in a dwelling unit or a group of unrelated persons sharing a dwelling unit as partners is also counted as a household.

Persons who came away from the sample unit because they were inmates of the following types of institutions at the time of enumeration were

not considered members of the household unit. As inmates, they were considered usual residents at the institution. These institutions include:

(1) Penal institutions;

(2) Homes for the aged, infirmed, and needy;

(3) Mental institutions (including mental hospitals for veterans);

(4) Nursing, convalescent and rest homes;

(5) Other hospitals and homes providing specialized care.

*Labor Force - Labor force refers to all persons 14 years old or over who are either (1) employed; (2) unemployed; or (3) members of the Armed Forces.

Land:

Land Operated - Land operated represents the total of all land used for agriculture by the person in charge---including land he owns, land he rents or leases from others, land he occupies rent free, and land he works on shares for others. Not included is land he rents to others, land he permits others to use rent free, and land worked on shares for him by others.

Land Rented to Others - Land rented to others is the total acreage of all land which the person in charge rents or leases to others, land he permits others to use rent free, and land worked for him by others on shares. Included is cropland, pasture-land, woodland, wasteland, and other land whether in one tract or several.

Land Rented from Others - Land rented from others is the total acreage of all land which the farm operator rents or leases from others, uses rent free, or works on shares for others.

Land in Crops - Land in crops include all of the following for reporting period:

(1) Land seeded with the expectation of harvesting a crop;

(2) Land from which a crop was harvested;

(3) Land in both bearing and non-bearing fruit trees, nut trees, and grapevines, including those on which the blossoms, but not the trees, were killed by freezing;

(4) Land in nursery and greenhouse products;

(5) Land used for pasture if this could have been used for crops without additional improvement (such as brush clearing, stone removal, tree clearing, etc.);

(6) Land that was idle but that has been cropped in recent years.

Other Pasture - Other pasture includes all land other than woodland and cropland that was used only for pasture and grazing. Include non-crop open or brush pasture and cutover or deforested land improved and used for pasture.

Woodland - Woodland refers to all woodlots or timber tracts, natural or planted and to cutover and deforested land with young growth which has or will have value for wood products. It does not include cutover or deforested land that has been improved for pasture; such land is reported as other pasture.

Woodland not Pastured - Woodland not pastured is all woodland not used for pasture or grazing in 1962.

Major Activity - Major economic activity is the activity at which an individual spent the greatest amount of his time during the period under study.

Income:

Net Cash Farm Income - Net cash farm income includes cash receipts from sales of farm products, custom farm work, and government agricultural payments minus cash farm expenditures.

Net Farm Income - Net farm income is net cash farm income plus perquisites. This definition does not include an allowance for depreciation on farm machinery and equipment or a change in livestock or equipment inventory.

Nonwork Income - Nonwork income is income other than wages or salary, e.g., from rents, royalties, interest, dividends, veterans allotments, social security, unemployment insurance, public assistance.

Nonfarm Work Income - Nonfarm work income is the total wages or salaries earned at nonfarm work.

Off-Farm Work Income - Off-farm work income is the total wages or salaries earned off the farm.

Perquisites - For this study, perquisites are farm products including food produced on the home place and consumed in the home. For purposes of analysis, dollar values were assigned to have production on the basis of cost if purchased locally or return if sold through usual marketing channels in the area.

Unpaid Family Workers - Unpaid family workers are persons who worked without direct compensation on a farm or in a business. They are usually related by blood or marriage to the operator of the farm or business.

*Underemployment - Underemployment refers to under-utilization of a worker's time and ability through (1) employment for less than a full working year or (2) employment at work which does not make full use of his training and ability.

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The purpose of this booklet is to provide norms based on Georgia students which will enable the counselor to use Dailey Vocational Test Scores in assisting students to choose courses in Georgia's area vocational-technical schools appropriate to their abilities. The recently developed norms will enable the counselor to interpret scores by direct comparison with scores of students enrolled in various courses in area schools. In each table raw scores have been converted to 15 designated percentile values. Separate norms are not provided for males and females. Norms tables are given for 14 occupational groups or technologies for a combination of categories. Addresses and curriculums for 23 area vocational-technical schools are included. (EM)

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Counselor's Guide to

Georgia Area Vocational-Technical Schools

for use with

STUDENTS PLANNING TO ENROLL IN
VOCATIONAL OR TECHNICAL PROGRAMS

by

GENE BOTTOMS

State Supervisor, Vocational Guidance

Division of Vocational Education
State Department of Education
Atlanta, Georgia

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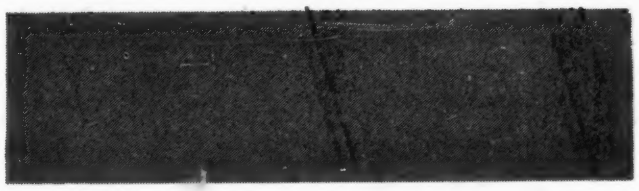

By Gene Bottoms

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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TABLE OF CONTENTS

Section I. Introduction 5

Section II. Interpretation 11

Section III. Tables of Normative Data for Georgia

Tables 1-3, for Technical Occupations 18
Tables 4-12, for Skilled Occupations 21
Table 13, for Health Occupations 30
Table 14, for Office Occupations 31
Table 15, for all occupations combined 32

Section IV. Georgia Area Vocational-Technical Schools: Courses, Admission Procedures, and Addresses 33

PREFACE

Georgia is among those states which have taken the lead in recent years in developing a program of Area Vocational-Technical Schools. Since these institutions are new, the Vocational Education Division of the State Department of Education recognizes the need for providing counselors with information and data that will enable the counselor to assist students in relating their abilities and interests to courses offered in the vocational-technical field. Primarily, this publication is designed to provide the counselor with additional data on Georgia's Area School Program.

The Vocational Education Division is indebted to Houghton Mifflin Company not only for furnishing the test booklets, answer sheets, and scoring service used in collecting and analyzing the data, but also for the personal service of Dr. John Hornaday for his assistance in the final editing of the **Guide.**

The data found in the **Guide** could not have been collected without the assistance of the following area school personnel: George M. Hardy, Director of the Augusta Area School; Maurice D. Boatwright, Director of the Swainsboro Area School; James H. Marlowe, Director of Student Personnel Services at North Georgia Technical and Vocational School; Owen K. Sterner, Director of Student Personnel Services at DeKalb Area School; Milton Earnest, Director of Student Personnel Services at Hoke Smith Technical School; W. T. Bodenhamer, Jr., Director of Marietta-Cobb Area School; C. Maurice Culberson, Director of Coosa Valley Vocational-Technical School; Kenneth W. Simonds, Director of Student Personnel Services at Upson County Area School; Jere M. Richardson, Director of Columbus Area School; John H. Smith, Director of Muscogee Area School; James E. Spradlin, Director of Student Personnel Services at South Georgia Technical and Vocational School; William M. Sellers, Director of Student Personnel Services at Albany Area School; B. B. White, Director of Monroe Area School; W. W. Hobbs, Director of Moultrie Area School; Paul G. Sewell, Director of Thomas Area School; Edward H. Smith, Director of Walton Area School; and Seab H. Miller, Director of Student Personnel Services at Valdosta Area School. For the general assistance rendered by each of these persons, the Vocational Education Division expresses its sincere appreciation.

I. Introduction

Purpose

The purpose of the **Counselor's Guide to Georgia Area Vocational-Technical Schools** is to provide data that will enable the counselor to use **The Dailey Vocational Tests** scores in assisting students to relate their abilities to courses offered in Georgia's Area Vocational-Technical Schools. Because of changes in our economic structure in recent years, Georgia's counselors have seen an increased need for assisting high school students to enter training programs designed to prepare individuals for employment in technical, skilled, business, and health occupations. As counselors examined instruments currently used for vocational appraisal, they found that most were inferior when compared with the quality of appraisal instruments used for college admissions. Counselors have frequently indicated a need for improved instruments to assist students in making a specific choice of school to attend and course to follow. Recently developed norms for **The Dailey Vocational Tests,** based on students in Georgia's Area Schools, will enable the counselor to interpret scores by direct comparison with scores of students enrolled in various courses in area schools. This comparison will provide valuable information not heretofore available to the counselor and student. The tests, used in conjunction with this **Guide,** will provide more accurate knowledge about the student's potential for successful completion of Georgia's vocational and technical programs.

Guide to Area School Programs and Specific Courses

Section IV of this **Guide** provides a listing of the area schools and the course offerings of each. This information should be read carefully by each counselor and should be made available to students. There is also a description of general admission procedures applicable to most area schools. For more specific information on a given school regarding cost, admission procedures and requirements, entrance dates, and course offerings, the counselor or student should write to the Director of Student Personnel Services for that particular school. The address of each school is given in Section IV.

This **Guide** makes it possible for the high school counselor to compare scores made by high school juniors and seniors on **The**

Dailey Vocational Tests with scores made by students enrolled in the courses offered by the area schools. For this purpose, tables of norms have been set up for various course categories. The counselor will note that separate norms tables are not given for all of the courses offered but rather that certain courses are grouped to form course categories. Courses were grouped by similarity of abilities, aptitudes, and achievement needed to be successful in particular courses as indicated by experience with other standardized tests. Use of norms developed for specific course categories enables the high school counselor to assist Georgia boys and girls in understanding their abilities as they relate to courses offered in Area Vocational-Technical Schools. It should be pointed out that **The Dailey Vocational Tests** are not designed to become the admissions instrument used in the area schools. Most of the area schools plan to continue use of the **General Aptitude Test Battery** as their selection criterion, and development of norms for **The Dailey Vocational Tests** on area school students has been done primarily to assist students in selecting the course to be pursued. Examination of the content of **The Dailey Vocational Tests** and the **General Aptitude Test Battery** indicates that the two are related and there should be little conflict between scores made on the two tests.

Description of The Dailey Vocational Tests

The Dailey Vocational Tests are designed to measure the potential of students for a wide range of occupations. The occupational structure of the United States is becoming one of skilled workers, and there is a need for greater emphasis on guidance in high school for postsecondary training other than college. **The Dailey Vocational Tests** meet a part of this need, and in several ways they are unique among vocational tests. They meet the need for guidance material specifically designed for academic and vocational guidance, especially with students who are planning to enter training in commercial, vocational, and technical courses. The **Counselor's Guide** has been prepared primarily to assist counselors in using **The Dailey Vocational Tests** at the junior and senior high school levels with those Georgia boys and girls who are anticipating entrance into one of Georgia's Area Vocational-Technical Schools. Used most effectively, the tests and **Guide** should help counselors in finding occupations the student can successfully pursue rather than merely setting limits and ruling out areas in which he would have great difficulty.

The tests measure a number of the most important skills commonly found to be associated with successful training in technical and vocational programs. Although unique in a number of important respects, they are generally the kinds of tests which have been widely and successfully used with both youths and adults for more than two decades. The tests are unique in that (a) they are specifically designed for use as vocational guidance tests, (b) they are developed for students who are vocationally oriented, and (c) they reflect technical and academic knowledge as well as aptitude required for development of competence in a variety of occupations and educational programs. The design of the test facilitates administration, scoring, and interpretation. Recognizing that time is a critical factor in guidance work, care has been taken to minimize the time required for administration and scoring.

The Dailey Vocational Tests consist of three tests: **Technical and Scholastic Test** (TST), **Spatial Visualization Test** (SVT), and **Business English Test** (BET). They may be administered separately or as a battery. The **Technical and Scholastic Test** contains 150 items which measure knowledge and abilities important for success in technical, trade, business, and health occupations. The questions are designed to test the student in three ways: (a) to assess technical knowledge acquired through practical experience with electrical and mechanical equipment, (b) to measure knowledge acquired through academic study of the physical sciences, and (c) to indicate general scholastic ability. These aims relate directly to three practical questions: (a) How much useful working knowledge of electrical and mechanical equipment does the student possess now? (b) How adequate is the student's background in the physical sciences and mathematics? (c) What is the student's potential for profiting from further training? This **Guide** provides norms on the Electrical, Mechanical, and Scholastic scales as well as the Total scale for the **Technical and Scholastic Test,** and this test will be particularly useful in counseling those students who are vocationally oriented.

The **Spatial Visualization Test** consists of 30 items measuring ability to visualize objects presented in two-dimensional drawings as they would appear in three-dimensional space. Specifically, the items require the subject to match the edges of a folded and unfolded figure. Each figure has from six to twelve edges so that choice is

made among six to twelve answers per item. This minimizes the number of correct answers by chance and makes possible several items per diagram. A single score is obtained from the administration of the twenty-minute test. This **Guide** provides norms for the **Spatial Visualization Test** for the courses offered in area schools. The measure of spatial reasoning ability represented by this score should be important in connection with guidance for such occupations as drafting, electronics technology, machine shop, and mechanical technology.

The **Business English Test** contains 111 items. It comprehensively measures knowledge of spelling, punctuation, capitalization, and correct usage or grammar. The single score on this test has proven to be valuable in predicting school performance, and the test will be useful for counseling high school students who are considering taking business training.

This brief description is intended to acquaint the counselor with some of the more important characteristics of the tests. Information on the interpretation of scores can be found in Section II of this **Guide.** If the counselor needs further information about the background, structure, reliability, and validity of these tests, he should consult the **Examiner's Manual for The Dailey Vocational Tests** (Boston: Houghton Mifflin Company, 1965). Some of the descriptive material in this section has been adapted from the **Examiner's Manual** by permission of Houghton Mifflin Company.

Establishing Norms for The Dailey Vocational Tests on Georgia's Area Schools

The courses offered in Georgia's Area Vocational-Technical Schools were grouped into fourteen specialized course categories on the basis of similarity of aptitudes and educational skills needed to pursue the the course. The following seventeen Area Vocational-Technical Schools were used in developing these norms:

South Georgia Technical-Vocational School (State)
North Georgia Technical-Vocational School (State)
Albany Area Vocational-Technical School
Monroe Area Vocational-Technical School
Atlanta (Hoke Smith) Vocational-Technical School
Augusta Area Vocational-Technical School

Columbus Area Vocational-Technical School
Muscogee Area Vocational-Technical School
DeKalb Area Vocational-Technical School
Marietta-Cobb Area Vocational-Technical School
Moultrie Area Vocational-Technical School
Coosa Valley Area Vocational-Technical School
Swainsboro Area Vocational-Technical School
Upson County Area Vocational-Technical School
Thomas Area Vocational-Technical School
Walton Area Vocational-Technical School
Valdosta Area Vocational-Technical School

Norms for the tests were developed on area school students who are similar to high school seniors in age and educational achievement. For most courses, norms were established on day school students who had been enrolled in the Area Vocational-Technical School for six months or less. Day students were used since most of them were recent high school graduates and were close to high school students in chronological age. Also, the use of day students who had been enrolled for less than six months minimized the influence of achievement or learning resulting from study at the area school. In order to have a sufficient number of students for development of norms in the fields of data processing, chemical technology, mechanical technology, drafting and design, and medical laboratory assistant, it was necessary to include all day and night students enrolled in these courses. Therefore, high school counselors, in comparing students' scores with scores made by students enrolled in these specific courses, should take into consideration the effect of learning by students in the area schools. It will be more difficult for the high school student to reach the median raw score or to obtain a given percentile in those areas where all students were used in preparing the tables of norms.

Students enrolled in programs for office training, medical office assistant, and dental assistant were administered the **Technical and Scholastic Test** and the **Business English Test;** students in all other programs were administered the **Technical and Scholastic Test** and the **Spatial Visualization Test.** Those students who express interest in one of the specific programs of study should be given the appropriate tests as indicated above. If a student does not know the course of

study he wishes to follow, all of the tests in the Dailey series should be administered so that the scores from three tests can be used as an aid in selecting a course of study.

Interpretation of test scores should be given to students individually or in small groups. In some cases, it may be desirable to prepare individual profiles for the students' use. The obtained percentiles will be most meaningful if norms based on students in our Area Vocational-Technical Schools, rather than on national samples, are used to interpret the raw scores. The procedure for making most effective use of the Georgia norms for purposes of interpretation is described in the next section of this **Guide.**

II. Interpretation

Description of the Norms Tables

Section III presents, in fifteen tables of normative data, the distribution of scores made by area school students for various course categories. The norms presented in this **Guide** are expressed in terms of percentile rank equivalents. Tables 1 through 13 present norms on the **Spatial Visualization Test** and **Technical and Scholastic Test** for the course categories listed above each table. Norms are given for the Total score as well as the Electrical, Mechanical, and Scholastic subscales of the **Technical and Scholastic Test.** Students interested in entering courses listed in Tables 1 through 13 should be given both the **Spatial Visualization Test** and the **Technical and Scholastic Test.** Table 14 presents norms on the **Technical and Scholastic Test** and **Business English Test** for courses in office training, medical office assistant, and dental assistant. Students interested in entering courses listed in Table 14 should be given both the **Business English Test** and the **Technical and Scholastic Test.** Table 15 presents combined norms for the course categories included in Tables 1 through 14.

Counselors should note that the caption of each table presents the group of courses making up the course category for that table. Some tables present norms for only one course while other tables combine as many as eight courses. One item of information which appears in the tables under each test is that "N" equals a certain number. "N" is the number of area school students used for determining the percentiles in each course category.

Reading the Norms Tables

The norms tables presented in this **Guide** have been devised to encourage realistic interpretation of the test scores. In each table, raw scores have been converted to seventeen designated percentile values. The use of finer percentile units has been avoided since such units would give an appearance of exaggerated precision to the percentile ranking and to differences between rankings.

In using the tables, the counselor should select the appropriate tables for courses which a given student is considering. Percentile ranks corresponding to the individual's raw scores on each test represent his placement within the group of students enrolled in each

course category. Raw scores on each test or scale should be located within the body of the table, and the corresponding percentile rank should be read from the percentile column located on the sides of the table.

Separate norms are not provided for males and females; therefore, high school students' scores should be compared with scores made by individuals currently enrolled in the area schools regardless of sex.

Several examples may serve to illustrate the use of the tables. Let us assume that John Jones, a twelfth-grade student, has taken the **Technical and Scholastic Test** and the **Spatial Visualization Test** and that the raw scores shown below were obtained.

Test	Raw Scores	Percentiles for Electronics (Table 1)
Technical and Scholastic Test		
Electrical	52	50
Mechanical	40	30
Scholastic	42	30
Total	94	40
Spatial Visualization Test	15	20

John plans to make application to one of Georgia's Area Schools to enroll in the electronics course. In the table above, the applicant's raw scores and corresponding percentile values are listed. The percentiles were obtained by reference to Table 1 of the **Guide** and no attempt is made to interpolate. It should be recognized that the percentiles represent an approximation within five percentile points. The counselor notes that John's scores place him in the lower one-half of those students with less than six months' study in the course. In electronics, then, the counselor can assume that John might be successful in electronics but would probably be an average or below average student.

In helping students look at their abilities in relation to course alternatives, the counselor may wish to analyze a student's raw scores in terms of two or more different course categories. This would be particularly recommended if a student's percentiles fall below 20 when his scores are compared with those made by students

enrolled in a particular course category. For example, let us continue with John Jones and compare his scores with other course categories.

Test	Raw Score	Percentile for Electronics (Table 1)	Percentile for Radio & TV (Table 6)	Percentile for Ind. Elec. (Table 7)	Percentile for Air Cond. (Table 8)
Technical and Scholastic Test					
Electrical	52	50	80	95	95
Mechanical	40	30	60	70	50
Scholastic	42	30	60	80	60
Total	94	40	70	90	75
Spatial Visualization Test	15	20	50	70	40

The table above presents John's raw scores and corresponding percentile values for four course categories all of which deal to some tricity, or air conditioning than in electronics, although we would probably be more successful in radio and television, industrial electricy, or air conditioning than in electronics, although we would expect adequate performance in electronics as well. In general, if a student's raw scores fall below the 20th percentile for the course under consideration, he should explore course alternatives.

Once the counselor has provided the student with this information, the student will need further assistance from the counselor in deciding which course he wishes to study. The student's decision should be based only in part upon results of these tests. His interests, values, motivations, need to achieve, and an awareness of the similarities and differences among course categories should play a part as well. For information about course content and other related information regarding job opportunities, see the recently published **Area School Catalog**.

Often counselors work with students who plan to enroll in an area school but have only a vague idea of the course they wish to study. For example, Bobbie Carr, a twelfth-grade girl, might approach the counselor for aid in deciding which course to study at the DeKalb Area School. Having no clear goals, Bobbie is unable to select a course of study in which she would be interested and capable. She does make vague reference to office work and to work as a medical assistant. When students are unsure of the area they want to pursue,

the counselor should administer the full battery of **The Dailey Vocational Tests.**

Test	Raw Scores	Percentiles	
		Business Education Medical Assistant (Table 14)	Practical Nursing (Table 13)
Technical and Scholastic Test			
Electrical	17	10	30
Mechanical	24	10	50
Scholastic	36	20	60
Total	53	15	50
Business English Test	73	15	—
Spatial Visualization Test	17	—	80

The table above presents raw scores and corresponding percentile values for two course categories. The results suggest that Bobbie should consider practical nursing. Bobbie's low BET score indicates that she would probably have difficulty catching up because of a poor start in English, and her performance compared to students enrolled as medical assistants is below the 20th percentile, thus raising a question about her potential for that field. It should be clear to both the counselor and the student that these tests reflect both what the student **can do now** and what the student is **capable of learning to do.** The tests do not reveal what the student wants to do nor do they indicate personality characteristics that might play a role in determining success. The counselor may wish to use other means, in addition to the Dailey tests, to help Bobbie examine her interests and values regarding the world of work. Since she had expressed some interest in medical work, she might be interested in the practical nursing field. Comparison of her scores with scores made by students enrolled in practical nursing raises her percentiles. There is evidence that she has ample potential in practical nursing. With this information and with further help from the counselor, Bobbie will be in a better position to make a final decision as to the course she plans to study at an area school.

It should be pointed out that any set of raw scores would yield higher percentiles when interpreted through the practical nursing table than when interpreted through the medical assistant table. In the case of Bobbie Carr, however, percentiles were sufficiently low

on the medical assistant profile to justify exploring other possible courses of study. Had she achieved between the 30th to 50th percentile or higher on medical assistant (and still higher in practical nursing), she might go into the medical assistant course with an expectation of being about average as a student. She would then have been in the position of John Jones, the first example cited, and could choose among several courses as determined by her interests or other characteristics.

Additional illustrative cases and further suggestions for interpretation can be found in the **Examiner's Manual,** pages 11 and 22. The major change in procedure offered by this **Guide** is the use of Georgia's normative data tables as a basis for interpretation. In using this **Guide,** counselors should be aware of its limitations. First, it should be noted that some of the norms are based on fewer students than is considered desirable. Second, at this point no data have been collected which demonstrate the validity of **The Dailey Vocational Tests** on Georgia populations. (The **Examiner's Manual for The Dailey Vocational Tests** does present evidence of a significant relationship between test scores and success in training for national samples.) In spite of these limitations, it is evident that these norms will have practical value for Georgia's counselors. Thus, it was decided to publish the norms tables now. A second edition of the **Guide** is planned. It will include a larger number of students in each course category and will present validity data related to students' scores in Georgia's Area Schools. If the counselor will keep these limitations in mind, this **Guide** will become a valuable first step in providing counselors with adequate guidance information that can be used with students considering entrance into technical, skilled, business, and health occupations.

III. Tables of Normative Data for Georgia

When completed tests have been either hand scored or machine scored (see **Examiner's Manual**), raw scores may be converted to percentiles by using tables in the **Examiner's Manual** to reveal the student's standing relative to a national sample. Percentiles derived from the tables in this **Guide**, however, will be of greater practical value for those students who are considering further training in Georgia's Area Vocational-Technical Schools. In many areas, the difference in percentiles derived from the two sources is striking; in some cases the national sample yields higher percentiles and in other cases lower percentiles than those obtained from the Georgia sample. Occasionally, it will be helpful to obtain both the Georgia and the national percentiles for the raw scores. In the **Examiner's Manual**, an individual Profile Sheet is described which can be used for plotting the student's Georgia percentile or national percentile or both.

In the following pages, fifteen tables present percentiles obtained by students in various courses of study. To obtain Georgia percentiles, the counselor should select the table representing the course of study under consideration, look up the raw score in the body of the table, and read the corresponding percentile on the same line in the column to the left or right of the table. If the tests have been machine scored, there is sufficient space on the Student Report Form to write in the Georgia percentile. If hand scored, there is space on the answer sheets to write both national and Georgia percentiles if desired. For most students planning to enter a Georgia Area School, only the Georgia percentiles need be recorded and used in guidance.

Listed below are the courses offered by Area Vocational-Technical Schools in the school year 1965-66 (a table on page 34 lists the schools offering each of these courses). Table numbers and page numbers are given after each course of study listed on page 17 for convenience in referring to the tables of norms.

TECHNICAL OCCUPATIONS	Table	Page
Chemical Technology	3	20
Data Processing Technology	3	20
Drafting and Design Technology	9	26
Electrical Technology	1	18
Electronic Techonology	1	18
Mechanical Technology	2	19
SKILLED OCCUPATIONS		
Air Conditioning and Heating	8	25
Automobile Body Repair	5	22
Automobile Mechanics	4	21
Aviation Mechanics	1	18
Brick, Tile, and Stone Masonry	12	29
Carpentry and Cabinetmaking	12	29
Cosmetology	11	28
Diesel Mechanics	4	21
Electrical Appliance Servicing	6	23
Electrical Con. and Maintenance	7	24
Fabric Maintenance	*	
Industrial Electricity	7	24
Machine Shop	10	27
Mechanical Drafting	9	26
Office Machine Repair	12	29
Photography	5	22
Printing	*	
Radio and Television Repair	6	23
Shoe Repair	12	29
Small Gasoline Engine Repair	4	21
Upholstering	12	29
Watch Repair	12	29
Welding	12	29
OFFICE OCCUPATIONS		
Accounting	14	31
Secretarial Science	14	31
HEALTH OCCUPATIONS		
Dental Assistant	14	31
Dental Technician	*	
Medical Laboratory Assistant	3	20
Medical Office Assistant	14	31
Practical Nursing	13	30

*No Georgia table of norms available for these courses.

TABLE I.

Norms for Students Specializing in

Electronic Technology, Electrical Technology, and Aviation Mechanics

(For both tests, N = 139)

RAW SCORES

Percentile	Spatial Visualization Test	Technical and Scholastic Test: Electrical	Mechanical	Scholastic	Total	Percentile
99	30	70-75	58-60	71-75	138-150	99
95	29	67-69	55-57	66-70	133-137	95
90	28	66	53-54	64-65	128-132	90
85	27	64-65	52	62-63	123-127	85
80	26	63	51	61	121-122	80
75	25	62	50	59-60	117-120	75
70	24	59-61	49	56-58	113-116	70
60	23	55-58	46-48	54-55	109-112	60
50	20-22	51-54	44-45	50-53	102-108	50
40	18-19	47-50	42-43	44-49	94-101	40
30	17	44-46	40-41	41-43	83-93	30
25	16	41-43	38-39	39-40	80-82	25
20	14-15	39-40	36-37	37-38	76-79	20
15	13	34-38	32-35	35-36	71-75	15
10	11-12	32-33	30-31	32-34	66-70	10
5	9-10	30-31	26-29	25-31	57-65	5
1	0-8	0-29	0-25	0-24	0-56	1

TABLE 2.

Norms for Students Specializing in

Mechanical Technology

(For SVT, N = 105; for TST, N = 106)

RAW SCORES

Percentile	Spatial Visualization Test	Technical and Scholastic Test: Electrical	Mechanical	Scholastic	Total	Percentile
99	30	70-75	58-60	68-75	136-150	99
95	29	66-69	57	67	131-135	95
90	28	63-65	55-56	65-66	126-130	90
85	—	60-62	54	63-64	120-125	85
80	27	57-59	53	62	116-119	80
75	26	55-56	52	61	111-115	75
70	25	52-54	51	58-60	107-110	70
60	24	48-51	49-50	55-57	104-106	60
50	22-23	44-47	45-48	52-54	99-103	50
40	21	42-43	43-44	50-51	91-98	40
30	19-20	39-41	41-42	45-49	82-90	30
25	18	37-38	40	42-44	80-81	25
20	17	34-36	39	39-41	77-79	20
15	16	33	36-38	38	73-76	15
10	13-15	31-32	34-35	35-37	67-72	10
5	9-12	26-30	32-33	30-34	58-66	5
1	0-8	0-25	0-31	0-29	0-57	1

TABLE 3.
Norms for Students Specializing in

Data Processing Technology, Chemical Technology, and Medical Laboratory Assistant

(For both tests, N = 127)

RAW SCORES

Percentile	Spatial Visualization Test	Technical and Scholastic Test				Percentile
		Electrical	Mechanical	Scholastic	Total	
99	30	63-75	57-60	70-75	129-150	99
95	29	56-62	53-56	67-69	117-128	95
90	28	52-55	52	66	111-116	90
85	27	49-51	50-51	64-65	108-110	85
80	26	47-48	49	62-63	105-107	80
75	25	45-46	47-48	60-61	101-104	75
70	24	41-44	44-46	58-59	97-100	70
60	22-23	36-40	41-43	55-57	93-96	60
50	20-21	32-35	39-40	52-54	86-92	50
40	18-19	29-31	37-38	50-51	82-85	40
30	16-17	26-28	35-36	47-49	73-81	30
25	14-15	24-25	32-34	43-46	71-72	25
20	13	23	33	42	66-70	20
15	11-12	21-22	28-32	40-41	62-65	15
10	9-10	20	26-27	37-39	58-61	10
5	6-8	17-19	24-25	32-36	51-57	5
1	0-5	0-16	0-23	0-31	0-50	1

TABLE 4.

Norms for Students Specializing in

Automobile Mechanics, Diesel Mechanics, and Small Gasoline Engine Repair

(For both tests, N = 120)

RAW SCORES

Percentile	Spatial Visualization Test	Technical and Scholastic Test				Percentile
		Electrical	Mechanical	Scholastic	Total	
99	26-30	61-75	54-60	58-75	118-150	99
95	25	51-60	51-53	53-57	102-117	95
90	23-24	50	48-50	50-52	97-101	90
85	22	47-49	47	47-49	92-96	85
80	21	45-46	45-46	43-46	88-91	80
75	20	44	44	41-42	86-87	75
70	18-19	42-43	42-43	39-40	78-85	70
60	16-17	39-41	40-41	35-38	72-77	60
50	14-15	36-38	37-39	32-34	68-71	50
40	11-13	33-35	35-36	30-31	63-67	40
30	10	30-32	31-34	27-29	59-62	30
25	9	29	29-30	25-26	55-58	25
20	7-8	27-28	27-28	23-24	49-54	20
15	6	23-26	23-26	22	46-48	15
10	5	21-22	21-22	18-21	44-45	10
5	3-4	18-20	18-20	14-17	35-43	5
1	0-2	0-17	0-17	0-13	0-34	1

TABLE 5.

Norms for Students Specializing in

Automobile Body Repair and Photography

(For SVT, N = 70; for TST, N = 66)

RAW SCORES

Percentile	Spatial Visualization Test	Technical and Scholastic Test: Electrical	Mechanical	Scholastic	Total	Percentile
99	23-30	46-75	46-60	44-75	86-150	99
95	20-22	39-45	42-45	37-43	75-85	95
90	18-19	35-38	38-41	34-36	70-74	90
85	16-17	33-34	35-37	32-33	62-69	85
80	14-15	31-32	33-34	31	58-61	80
75	13	30	31-32	29-30	55-57	75
70	12	27-29	28-30	25-28	51-54	70
60	10-11	23-26	25-27	23-24	48-50	60
50	8-9	22	21-24	19-22	39-47	50
40	7	19-21	19-20	18	37-38	40
30	6	18	17-18	17	25-36	30
25	5	17	16	16	33-34	25
20	4	16	15	15	32	20
15	3	15	14	14	29-31	15
10	2	14	13	11-13	27-28	10
5	1	10-13	11-12	10	20-26	5
1	0	0-9	0-10	0-9	0-19	1

TABLE 6.

Norms for Students Specializing in

Radio and Television Repair and Electrical Appliance Servicing

(For both tests, N = 109)

RAW SCORES

Percentile	Spatial Visualization Test	Technical and Scholastic Test: Electrical	Mechanical	Scholastic	Total	Percentile
99	28-30	66-75	55-60	62-75	121-150	99
95	27	62-65	51-54	58-61	116-120	95
90	24-26	60-61	49-50	54-57	110-115	90
85	23	55-59	47-48	50-53	103-109	85
80	22	52-54	45-46	47-49	100-102	80
75	21	51	43-44	45-46	99	75
70	19	49-50	42	44	94-98	70
60	17-18	46-48	40-41	41-43	87-93	60
50	15-16	42-45	37-39	38-40	80-86	50
40	12-14	39-41	34-36	35-37	73-79	40
30	11	36-38	31-33	33-34	69-72	30
25	10	34-35	30	31-32	65-68	25
20	9	32-33	28-29	29-30	61-64	20
15	8	29-31	26-27	26-28	57-60	15
10	6-7	26-28	23-25	22-25	50-56	10
5	4-5	20-25	16-22	14-21	34-49	5
1	0-3	0-19	0-15	0-13	0-33	1

TABLE 7.

Norms for Students Specializing in

Electrical Construction and Maintenance and Industrial Electricity

(For both tests, N = 77)

RAW SCORES

Percentile	Spatial Visualization Test	Technical and Scholastic Test: Electrical	Mechanical	Scholastic	Total	Percentile
99	24-30	55-75	53-60	56-75	112-150	99
95	22-23	50-54	48-52	52-55	100-111	95
90	20-21	47-49	45-47	48-51	90-99	90
85	19	46	43-44	45-47	87-89	85
80	18	44-45	42	42-44	83-86	80
75	16-17	42-43	41	41	81-82	75
70	15	40-41	39-40	39-40	79-80	70
60	14	38-39	36-38	37-38	74-78	60
50	12-13	35-37	33-35	34-36	68-73	50
40	10-11	33-34	31-32	32-33	65-67	40
30	9	31-32	29-30	30-31	61-64	30
25	8	29-30	26-28	27-29	59-60	25
20	7	28	25	25-26	56-58	20
15	—	26-27	23-24	23-24	50-55	15
10	6	21-25	20-22	19-22	46-49	10
5	3-5	18-20	11-19	15-18	33-45	5
1	0-2	0-17	0-10	0-14	0-32	1

TABLE 8.

Norms for Students Specializing in

Air Conditioning and Heating

(For SVT, N = 90; for TST, N = 89)

RAW SCORES

Percentile	Spatial Visualization Test	Technical and Scholastic Test: Electrical	Mechanical	Scholastic	Total	Percentile
99	28-30	60-75	55-60	64-75	112-150	99
95	24-27	51-59	51-54	57-63	108-111	95
90	23	50	49-50	54-56	103-107	90
85	22	49	48	50-53	100-102	85
80	21	48	47	49	95-99	80
75	20	46-47	46	48	92-94	75
70	19	45	44-45	45-47	88-91	70
60	18	42-44	42-43	42-44	83-87	60
50	16-17	39-41	40-41	39-41	79-82	50
40	14-15	35-38	37-39	36-38	73-78	40
30	12-13	33-34	35-36	34-35	66-72	30
25	11	32	33-34	32-33	63-65	25
20	10	31	32	30-31	62	20
15	9	28-30	29-31	28-29	59-61	15
10	8	24-27	27-28	25-27	50-58	10
5	4-7	18-23	17-26	14-24	37-49	5
1	0-3	0-17	0-16	0-13	0-36	1

TABLE 9.

Norms for Students Specializing in

Drafting and Design Technology and Mechanical Drafting

(For both tests, N = 75)

RAW SCORES

Percentile	Spatial Visualization Test	Technical and Scholastic Test: Electrical	Mechanical	Scholastic	Total	Percentile
99	28-30	59-75	55-60	62-75	120-150	99
95	27	55-58	51-54	60-61	112-119	95
90	26	53-54	50	58-59	107-111	90
85	—	49-52	49	57	104-106	85
80	25	48	48	54-56	98-103	80
75	—	45-47	47	52-53	96-97	75
70	24	44	46	51	92-95	70
60	23	41-43	44-45	49-50	89-91	60
50	21-22	38-40	42-43	45-48	83-88	50
40	20	35-37	40-41	43-44	78-82	40
30	19	32-34	39	41-42	75-77	30
25	17-18	29-31	37-38	39-40	72-74	25
20	16	28	35-36	36-38	68-71	20
15	15	27	31-34	34-35	63-67	15
10	13-14	25-26	29-30	30-33	57-62	10
5	9-12	21-24	24-28	22-29	49-56	5
1	0-8	0-20	0-23	0-21	0-48	1

TABLE 10.

Norms for Students Specializing in

Machine Shop

(For SVT, N = 108; for TST, N = 106)

RAW SCORES

Percentile	Spatial Visualization Test	Technical and Scholastic Test: Electrical	Mechanical	Scholastic	Total	Percentile
99	29-30	62-75	57-60	64-75	122-150	99
95	27-28	52-61	53-56	58-63	104-121	95
90	26	49-51	50-52	53-57	98-103	90
85	24-25	47-48	49	50-52	95-97	85
80	23	46	47-48	48-49	93-94	80
75	22	44-45	46	47	91-92	75
70	21	41-43	43-45	45-46	85-90	70
60	19-20	39-40	42	42-44	82-84	60
50	17-18	36-38	40-41	40-41	74-81	50
40	15-16	33-35	38-39	38-39	71-73	40
30	13-14	30-32	36-37	35-37	65-70	30
25	12	28-29	34-35	34	63-64	25
20	10-11	26-27	30-33	31-33	59-62	20
15	9	25	28-29	29-30	55-58	15
10	8	23-24	26-27	24-28	48-54	10
5	6-7	19-22	22-25	21-23	43-47	5
1	0-5	0-18	0-21	0-20	0-42	1

TABLE 11.

Norms for Students Specializing in Cosmetology

(For SVT, N = 142; for TST, N = 141)

RAW SCORES

Percentile	Spatial Visualization Test	Technical and Scholastic Test: Electrical	Mechanical	Scholastic	Total	Percentile
99	26-30	35-75	37-60	54-75	84-150	99
95	22-25	32-34	35-36	51-53	78-83	95
90	19-21	28-31	34	49-50	73-77	90
85	18	27	33	44-48	69-72	85
80	17	26	31-32	42-43	67-68	80
75	15-16	25	30	41	64-66	75
70	13-14	23-24	28-29	39-40	60-63	70
60	12	21-22	25-27	35-38	57-59	60
50	10-11	20	23-24	29-34	50-56	50
40	9	18-19	21-22	27-28	46-49	40
30	8	17	19-20	24-26	44-45	30
25	7	16	18	23	42-43	25
20	—	15	17	22	38-41	20
15	6	14	14-16	19-21	34-37	15
10	5	12-13	13	14-18	29-33	10
5	3-4	10-11	10-12	10-13	22-28	5
1	0-2	0-9	0-9	0-9	0-21	1

TABLE 12.

Norms for Students Specializing in

Brick, Tile, and Stone Masonry; Carpentry and Cabinetmaking; Upholstery; Office Machine Repair; Welding; Watch Repair; and Shoe Repair

(For both tests, N = 79)

RAW SCORES

Percentile	Spatial Visualization Test	Technical and Scholastic Test: Electrical	Mechanical	Scholastic	Total	Percentile
99	25-30	51-75	52-60	56-75	100-150	99
95	22-24	42-50	46-51	46-55	88-99	95
90	20-21	41	43-45	44-45	82-87	90
85	19	37-40	42	41-43	77-81	85
80	16-18	36	39-41	40	75-76	80
75	15	34-35	37-38	38-39	74	75
70	14	32-33	35-36	34-37	68-73	70
60	13	28-31	30-34	32-33	58-67	60
50	11-12	24-27	26-29	27-31	51-57	50
40	8-10	21-23	22-25	23-26	44-50	40
30	7	20	20-21	21-22	42-43	30
25	6	19	19	19-20	39-41	25
20	5	18	17-18	18	37-38	20
15	—	17	16	17	34-36	15
10	4	14-16	14-15	13-16	28-33	10
5	1-3	9-13	11-13	11-12	20-27	5
1	0	0-8	0-10	0-10	0-19	1

TABLE 13.

Norms for Students Specializing in

Practical Nursing

(For SVT, N = 158; for TST, N = 160)

RAW SCORES

Percentile	Spatial Visualization Test	Technical and Scholastic Test: Electrical	Mechanical	Scholastic	Total	Percentile
99	25-30	38-75	43-60	57-75	92-150	99
95	21-24	32-37	38-42	53-56	83-91	95
90	19-20	30-31	36-37	51-52	80-82	90
85	18	29	34-35	48-50	75-79	85
80	17	27-28	32-33	46-47	71-74	80
75	16	26	31	44-45	69-70	75
70	14-15	25	29-30	39-43	61-68	70
60	12-13	23-24	27-28	36-38	59-60	60
50	10-11	21-22	24-26	32-35	53-58	50
40	8-9	19-20	21-23	30-31	48-52	40
30	7	17-18	19-20	26-29	44-47	30
25	—	16	18	25	42-43	25
20	6	15	16-17	22-24	38-41	20
15	5	14	15	20-21	36-37	15
10	4	12-13	13-14	17-19	30-35	10
5	3	10-11	9-12	12-16	24-29	5
1	0-2	0-9	0-8	0-11	0-23	1

TABLE 14.

Norms for Students Specializing in Secretarial Science, Accounting, Medical Office Assistant, and Dental Assistant

(For BET, N = 179; for TST, N = 180)

RAW SCORES

Percentile	Business English Test	Technical and Scholastic Test: Electrical	Mechanical	Scholastic	Total	Percentile
99	104-111	43-75	46-60	63-75	98-150	99
95	101-103	36-42	42-45	59-62	90-97	95
90	98-100	32-35	40-41	56-58	85-89	90
85	97	31	38-39	54-55	82-84	85
80	96	29-30	37	52-53	81	80
75	94-95	27-28	36	51	78-80	75
70	92-93	26	34-35	48-50	73-77	70
60	89-91	25	33	45-47	70-72	60
50	85-88	23-24	31-32	43-44	66-69	50
40	83-84	22	29-30	40-42	62-65	40
30	80-82	21	28	38-39	60-61	30
25	78-79	20	27	37	58-59	25
20	75-77	19	26	35-36	55-57	20
15	72-74	18	25	33-34	52-54	15
10	64-71	16-17	23-24	31-32	50-51	10
5	53-63	15	20-22	26-30	43-49	5
1	0-52	0-14	0-19	0-25	0-42	1

TABLE 15.

Norms for Students Specializing in Combination of All Course Categories for Vocational-Technical Schools in The State of Georgia

(For SVT, N = 1,399; for TST, N = 1,574; for BET, N = 179)

RAW SCORES

Percentile	Spatial Visualization Test	Technical & Scholastic Test: Electrical	Mechanical	Scholastic	Total	Business English Test	Percentile
99	29-30	65-75	55-60	66-75	127-150	104-111	99
95	27-28	57-64	52-54	61-65	113-126	101-103	95
90	25-26	52-56	49-51	57-60	105-112	98-100	90
85	24	49-51	47-48	54-56	99-104	97	85
80	22-23	46-48	45-46	52-53	94-98	96	80
75	21	43-45	43-44	50-51	89-93	94-95	75
70	19-20	39-42	40-42	46-49	82-88	92-93	70
60	17-18	35-38	37-39	43-45	77-81	89-91	60
50	15-16	30-34	34-36	39-42	70-76	85-88	50
40	12-14	26-29	31-33	35-38	64-69	83-84	40
30	11	24-25	28-29	32-34	58-63	80-82	30
25	9-10	22-23	26-27	30-31	54-57	78-79	25
20	8	20-21	24-25	27-29	50-53	75-77	20
15	7	19	21-23	24-26	45-49	72-74	15
10	5-6	16-18	19-20	20-23	38-44	64-71	10
5	3-4	13-15	13-18	14-19	28-37	53-63	5
1	0-2	0-12	0-12	0-13	0-27	0-52	1

IV. Georgia Area Vocational-Technical Schools: Courses, Admission Procedures, and Addresses

When assisting a student to make a decision as to the area school and course in which he plans to enroll, the counselor will need certain basic information about the area school program. It is the purpose of this section of the **Guide** to provide the counselor with information about the general admission procedures, the courses offered by each area school, and the address of each area school. For more specific information about a particular area school, the counselor should contact the school or refer to the **Area School Catalog.**

General Admission Procedure for Entrance Into Area Schools

1. Contact the area school and request information and application forms.
2. Complete all forms and return to the area school.
3. Request the high school counselor to mail a transcript of credits to the area school. Transcripts of any college or other post-high school education should also be requested.
4. Take the **General Aptitude Test Battery** (GATB) at the area school. Notification of the test dates will be sent applicants along with information on any additional tests which might be required.
5. Report for a personal interview at the appointed time and place.

Some schools also request a recent photograph, a physician's health certificate, and a short autobiography. Health occupation programs and cosmetology require a physical examination, X-ray report, and dental certificate.

SCHOOL (and Location) / COURSE OF STUDY	TECHNICAL OCCUPATIONS									SKILLED OCCUPATIONS							
	Chemical Technology	Data Processing Technology	Drafting & Design Technology	Electrical Technology	Electronic Technology	Instrumentation Technology	Mechanical Technology	Research Laboratory Assistant		Air Conditioning & Heating	Automobile Body Repair	Automobile Mechanics	Aviation Mechanics	Barbering	Brick, Tile & Stone Masonry	Carpentry & Cabinetmaking
STATE OPERATED SCHOOLS																
South Georgia (Americus)					x		x				x	x	x			x
North Georgia (Clarkesville)			x	x	x		x			x	x	x			x	x
AREA SCHOOLS																
Albany Area (Albany)				x	x		x			x		x				
Athens Area (Athens)		x		x			x	x		x	x					
Augusta Area (Augusta)			x		x					x		x				
Columbus Area (Columbus)					x		x			x		x				
Coosa Valley Area (Rome)				x	x		x			x	x					
DeKalb Area (Clarkston)	x	x		x	x		x			x		x				
Griffin-Spalding Area (Griffin)					x							x			x	
Hoke Smith Area (Atlanta)		x		x	x		x			x		x				
Lanier Area (Gainesville)			x		x					x		x				
Macon Area (Macon)					x		x			x		x		x		
Marietta-Cobb Area (Marietta)		x		x	x		x			x		x				
Moultrie Area (Moultrie)			x		x					x		x				
Pickens County Area (Jasper)			x		x					x		x				
Savannah Area (Savannah)			x	x	x	x	x			x		x			x	
Swainsboro Area (Swainsboro)			x		x					x		x				
Thomas Area (Thomasville)			x		x					x		x				
Troup County Area (LaGrange)					x					x						
Upson County Area (Thomaston)			x		x					x		x				
Valdosta Area (Valdosta)				x	x		x					x				
Walker County Area (LaFayette)				x						x		x				
Waycross Area (Waycross)					x					x		x		x		

		X						X		X			X					X		X		X	X		Cosmetology
															X								X		Diesel Mechanics
	X			X				X				X			X	X	X		X			X			Electrical Appliance Servicing
			X			X	X				X	X			X			X				X	X		Electrical Construction & Main.
																						X			Fabric Maintenance
X																									Industrial Electricity
X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X			X		X	X		Machine Shop
X	X								X	X	X		X		X	X			X			X			Mechanical Drafting
										X									X				X		Office Machine Repair
											X														Offset Printing
																						X			Photography
													X												Printing
	X	X	X		X		X			X	X		X		X		X	X		X		X	X		Radio & TV Repair
																						X			Shoe Repair
												X										X			Small Gasoline Engine Repair
																									Textile
													X										X		Upholstery
																						X			Watch Repair
	X		X	X			X	X	X	X	X	X	X	X					X						Welding
																									OFFICE OCCUPATIONS
X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X		X	X	X		X	X		Accounting
X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X		X	X	X		X	X		Secretarial Science
																									HEALTH OCCUPATIONS
													X												Dental Assistant
													X												Dental Technician
																						X			Medical Laboratory Assistant
															X										Medical Office Assistant
X		X	X	X	X	X	X			X	X		X	X	X	X			X	X		X	X		Practical Nursing

ADDRESS FOR EACH AREA SCHOOL

ALBANY

Albany Area Vocational-Technical School
1800 Slappey Drive
Albany, Georgia 31705
Telephone: 436-0395 Area Code 912

AMERICUS

South Georgia Technical-Vocational School
Americus, Georgia 31709
Telephone: 924-2981 Area Code 912

ATHENS

**Athens Area Vocational-Technical School
419 Pope Street
Athens, Georgia 30601
Telephone: 546-1860 Area Code 404

ATLANTA

Hoke Smith Vocational-Technical School
535 Hill Street, S.E.
Atlanta, Georgia 30312
Telephone: 525-7431 Area Code 404

AUGUSTA

Augusta Area Vocational-Technical School
2025 Lumpkin Road
Augusta, Georgia 30906
Telephone: 798-4343 Area Code 404

CLARKESVILLE

North Georgia Technical-Vocational School
Clarkesville, Georgia 30523
Telephone: 754-2131 Area Code 404

COLUMBUS

Columbus Area Vocational-Technical School
4460 River Road
Columbus, Georgia 31904
Telephone: 321-1798 Area Code 404

DeKALB COUNTY

DeKalb Area Vocational-Technical School
495 N. Indian Creek Road
Clarkston, Georgia 30021
Telephone: 443-7151 Area Code 404

GAINESVILLE

**Lanier Area Vocational-Technical School
Gainesville, Georgia 30501
Telephone: 532-6055 Area Code 404

GRIFFIN

**Griffin-Spalding Area Vocational-Technical School
P. O. Box 131
Griffin, Georgia 30223
Telephone: 228-2817 Area Code 404

JASPER

***Pickens County Area Vocational-Technical School
Jasper, Georgia 30143
Telephone:

LaGRANGE

**Troup County Area Vocational-Technical School
LaGrange, Georgia 30240
Telephone: 884-7634 Area Code 404

MACON

**Macon Area Vocational-Technical School
Forsyth Street
Macon, Georgia 31201
Telephone: 743-7481 Area Code 912

MARIETTA

Marietta-Cobb Area Vocational-Technical School
210 South Cobb Drive
Marietta, Georgia 30060
Telephone: 422-1660 Area Code 404

MOULTRIE

Moultrie Area Vocational-Technical School
Moultrie, Georgia 31768
Telephone: 985-2297 Area Code 912

ROME

Coosa Valley Vocational-Technical School
112 Hemlock Street
Rome, Georgia 30161
Telephone: 232-6478 Area Code 404

SAVANNAH

**Savannah Vocational-Technical School
214 W. Bay Street
Savannah, Georgia 31401
Telephone: 236-3400 Area Code 912

SWAINSBORO

Swainsboro Area Vocational-Technical School
201 Kite Road
Swainsboro, Georgia 30401
Telephone: 237-7316 Area Code 912

THOMASTON

Upson County Area Vocational-Technical School
Highway 19, South
Thomaston, Georgia 30286
Telephone: 647-9616 Area Code 404

THOMASVILLE

Thomas Area Vocational-Technical School
Thomasville, Georgia 31792
Telephone: 226-3750 Area Code 912

VALDOSTA

Valdosta Area Vocational-Technical School
Valdosta, Georgia 31601
Telephone: 244-2316 Area Code 912

WALKER COUNTY

**Walker County Area Vocational-Technical School
LaFayette, Georgia 30728
Telephone:

WAYCROSS

*Waycross Area Vocational-Technical School
Carswell Avenue
Waycross, Georgia 31501
Telephone: 288-4874 Area Code 912

*School not included in establishing tables of norms. (A Second Edition of this Guide is planned; data from this school may be included in that edition.)

**School not included in establishing tables of norms. (A Second Edition of this Guide is planned; data from this school may be included in that edition. Opening of area school planned for fall, 1966.)

***School not included in establishing tables of norms. (A Second Edition of this Guide is planned; data from this school may be included in that edition. Opening of area school planned for fall, 1967.)

VT 001 430
Adams, John M., Jr., And Others
A Greenhouse for Vocational Agriculture in Kentucky.

MF AVAILABLE IN VT-ERIC SET.
Pub Date - 67 6p.

*VOCATIONAL AGRICULTURE; *PLANT SCIENCE; *GREENHOUSES; *ORNAMENTAL HORTICULTURE OCCUPATIONS; *FACILITY GUIDELINES; *EDUCATIONAL FACILITIES; CONSTRUCTION COST

Greenhouse plans were developed because of the need for programs of instruction in ornamental horticulture, flower and vegetable production, bedding plant production, and plant science at the secondary level. Greenhouse facilities can also be used to advantage in teaching production agriculture by serving as a laboratory to demonstrate plant responses to light, fertilizer, seed placement, soil preparation, moisture, disease and insect control, and other growth factors. The document includes: Need, Potential, Development, School Facilities, Greenhouse Use, Floor Plan, and Construction. A suggested floor plan, plans for bench construction, and estimated material costs are illustrated. (DM)

VT001430

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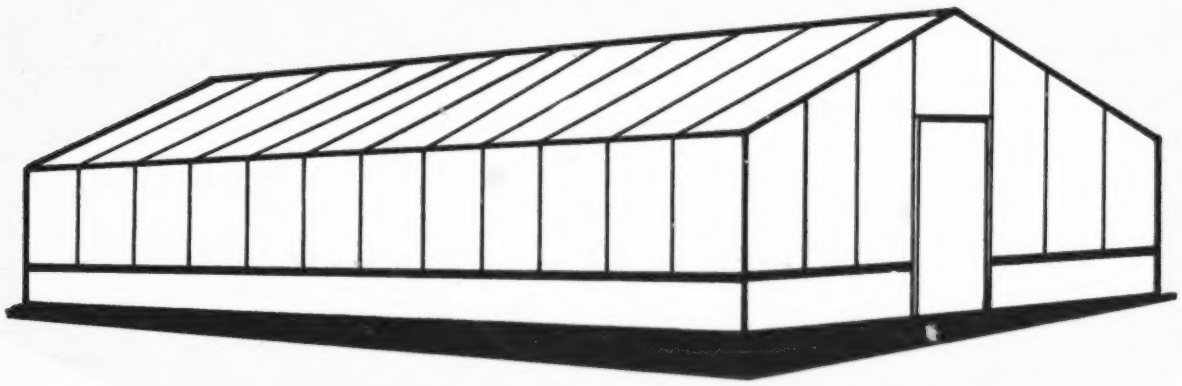
A GREENHOUSE FOR VOCATIONAL AGRICULTURE IN KENTUCKY



For Teaching

Ornamental Horticulture
Flower and Vegetable Production
Bedding Plant Production
Plant Science

1967

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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VT001430

GREENHOUSE FOR TEACHING HORTICULTURE & AGRONOMY

NEED

There is a great need to develop programs of instruction in ornamental horticulture and greenhouse operation at the secondary level in Kentucky. Vocational agriculture has been broadened under the Vocational Education Act of 1963 to include vocational horticulture in the high school and post-secondary curriculums. To conduct effectively such programs, a greenhouse is needed. Greenhouse facilities can also be used to advantage in teaching production agriculture or farming by serving as a laboratory to demonstrate plant responses to light, fertilizer, seed placement, soil preparation, moisture, disease and insect control, and other growth factors. This brochure is to assist in planning a greenhouse for use in such programs.

POTENTIAL

Greenhouse production and ornamental horticulture have tremendous potential in Kentucky. More plants are being used inside and outside of homes, around public and private buildings, along streets and highways, in parks and recreational areas. The National Beautification Program has created a critical shortage of plant materials and trained workers for ornamental horticulture. Year-around consumer demand for fresh vegetables makes greenhouse production a very promising business. Kentucky's nearness to masses of population in our country presents a good outlook for the development of the industry and the occupational opportunities related to it.

DEVELOPMENT

Before the horticulture industry can reach its potential in Kentucky, training programs must be expanded at all levels. More people must be made aware of the opportunities. This can best be done at the secondary level. Students receiving such training will be able to enter jobs in horticulture, develop individual businesses, or pursue additional training at the technical and professional levels.

SCHOOL FACILITIES

Good supervised experience must be an integral part of the instructional program in vocational horticulture. This experience must support the course of study by helping students secure learnings and skills important in an occupation or a cluster of occupations. In the past supervised experience in agriculture has been done on home farms. This is not practical to the extent necessary in greenhouse operation. Therefore, school administrators and teachers of agriculture are becoming more aware of the necessity of providing the opportunity for practice. They are requesting help in designing and developing greenhouses and related facilities for teaching horticulture and plant science.

GREENHOUSE USE

The school greenhouse should be used as a student laboratory rather than as a commercial house. It should be used to provide occupational experience through both individual and group projects in general greenhouse operation and in the production of plants considered important in the specific course of study for the area.

The greenhouse should be adapted to the needs in a local program. It will make possible:

- Propagation of plants from seed or preparation of seedflats
- Propagation of plants from softwood cuttings
- Propagation of nursery stock from hardwood cuttings
- Production of the following crops:
  - Bedding plants—petunias, pansies, ageratum, etc.
  - Cut flowers—chrysanthemums, snapdragons, carnations, etc.
  - Potted plants—chrysanthemums, poinsettias, geraniums, etc.
  - Forcing vegetables—tomatoes, lettuce, cucumbers, etc.

In addition to the area for production, which includes both benches and ground beds, limited space is available for storage, demonstration, preparation of plant-growing media, and for potting plants. To the extent these operations can be transferred to adjacent existing or newly constructed areas, the use of the greenhouse can be expanded.

CONSTRUCTION

STRUCTURAL FEATURES

The basic structural requirement of a greenhouse is to provide support for the glazing at a low cost, with the least framing so that shading is minimized. A rigid frame, as in the University of Kentucky designs, meets this requirement. Long maintenance-free life is assured by using pressure-treated lumber. This design is adaptable to commercial or farm fabrication. It can serve the functional needs of a school program and also as a model for potential greenhouse operators in the school-patronage area.

FOUNDATION

The foundation must be capable of withstanding high lateral loads. A solid concrete foundation with minimal steel reinforcement should be used in the school greenhouse. (Piers spaced four feet apart may be used in commercial houses.)

GLAZING

Rigid corrugated greenhouse-grade plastic (fiberglass) is recommended for the covering. It is almost equal to glass in light transmission and is much more resistant to damage. These materials are permanent, but can require resurfacing with a liquid varnish-like material every five years. Light does not pass directly through this material but is diffused. This results in a soft, relatively glare-free light of uniform intensity. The diffusing property keeps one from seeing through the plastic; therefore, students are not distracted by outside activity. Neither can persons outside observe activities in the greenhouse. An inner liner of film plastic is recommended.

ENVIRONMENTAL CONTROL

Fully automatic environment-control equipment such as the modulated damper system developed at the University of Kentucky (AES Bulletin 275A) should be used. The system must not only provide for heating during cold weather, but also for control of excessive temperature rise during the sunny days. This can be most easily accomplished with positive fan ventilation.

ESTIMATED MATERIAL COSTS 28' x 48' GREENHOUSE, EXCLUDING BENCHES AND STORAGE UNITS

Structural Material	
Lumber pressure treated with water-borne preservative at $0.20/bd.-ft.	$ 240.00
Exterior plywood, 3/8"	40.00
Wire bracing, nails, door hardware, glue	10.00
Exterior white paint, 3 gallon	18.00
Rigid corrugated fiberglass	450.00
UV Polyethylene 4 mil film	64.00
Concrete	342.00
Reinforcing steel	20.00
Sub-total	$1184.00
Cost per sq. ft.	$ .88
Ventilation System	
Fan and motor	$ 85.00
Dampers, 3'0" x 4'0" (two required)	120.00
Anti-back draft shutter	24.00
Damper motor, thermostat, damper linkage	100.00
Sub-total	$ 329.00
Cost per sq. ft.	$ .24
Heating System	
LP Gas forced hot air furnace	$ 250.00
24 hour electric time clock	12.00
Thermostat	10.00
Heat duct, gas pressure regulator, gas piping, vent pipe, vent cap	40.00
Sub-total	$ 312.00
Cost per sq. ft.	$ .23
Site improvement, including running of services to site, basic electric wiring	$ 200.00
Total	$2025.00
Contingency (20%)	405.00
	$2430.00
Cost per sq. ft.	$ 1.81

FLOOR PLAN

STORAGE

The suggested floor plan provides space for essential greenhouse operations. Three soil-storage bins are provided. Soil should be sterilized outside the greenhouse, brought in as required, and stored in the bins. Artificial soil media such as peat and soil mixes could be accommodated. These storage units should be limited in height to reduce shading. A partition between soil-storage and plant-preparation areas is not required. If one is used, it should be made of transparent material.

Storage must be provided for chemicals, pots, flats, fertilizer, equipment, and other miscellaneous items. Many of these materials take considerable space and storage for them should be provided, preferably outside the greenhouse.

SOIL PREPARATION

The benches in the plant- and soil-preparation area should be made of solid material which will tolerate alternate wetting and drying. Exterior plywood, asbestos, or heavy galvanized sheet metal is recommended. Well-lighted benches should be sloped slightly to the front so that moisture will not stand on them. Two convenient electric outlets and floor drain should be provided in this area.

GROUND BEDS

To minimize shading problems, the ground beds are on the south side and the benches on the north. A variety of crops such as lettuce, tomatoes, cut flowers, field crops, and ornamentals could be grown in this area. Normally, the rows would run across the house and watering can be achieved by furrow watering between alternate rows of plants. Exterior ground surface should be graded so that surface water is directed away to prevent the contamination of the soil in the greenhouse. To maintain adequate levels of fertility and organic matter, soil in the ground bed should be tested and treated at least annually. Greenhouse soil tests are performed by the University of Kentucky, Department of Regulatory Services. The ground bed should be sterilized annually.

BENCHES

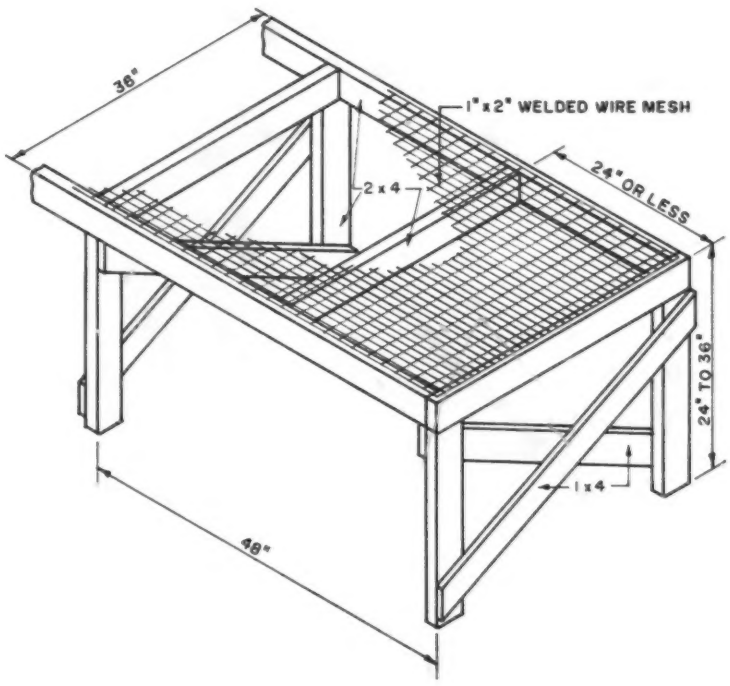
At least one-half of the benches should be the solid type. The remainder could be the open type. The solid benches can be filled with soil and used as bench culture for cut flowers and propagating. Pot production can also be done on these benches. The open benches are only adaptable to pot production. This type of bench, however, permits excellent air circulation among the pots and is relatively inexpensive. Sketches of the two types of benches are shown.

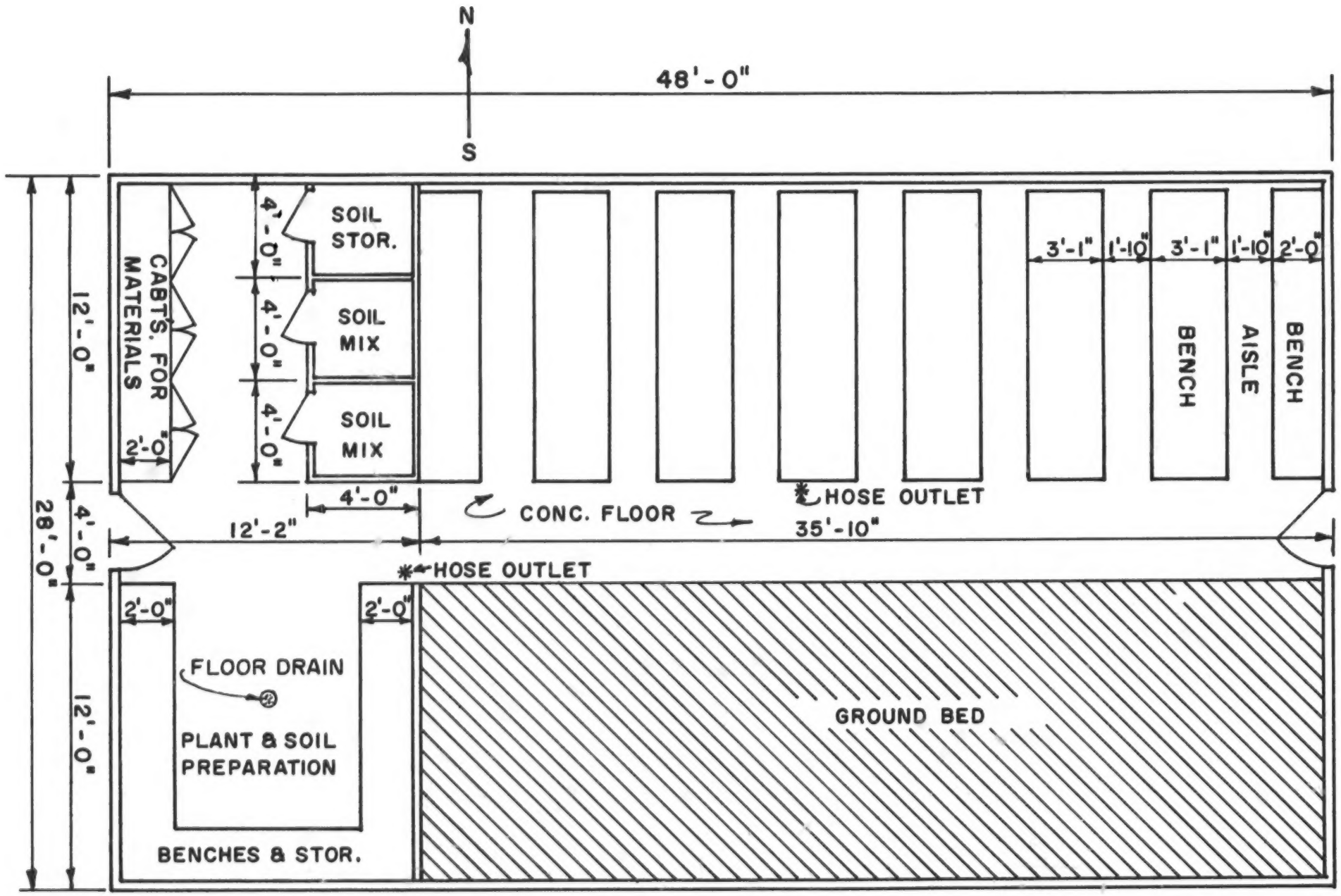
Bench width is approximately 3 feet. End benches are 2 feet. Wider benches could be provided, but the narrower ones are more convenient and the larger number of benches increases the flexibility. Bench height should be 24 inches to 36 inches. The aisle between benches should be a minimum of 18 inches—24 inches being more desirable.

Since plants are injured by most preservatives containing oil, lumber pressure treated with one of the water-borne salt preservatives should be used. Such material must be redried prior to use.

The propagating bench must be equipped with a misting system. This can easily be provided with inexpensive misting nozzles, an electric solenoid water valve, and a time clock. To prevent spray from wetting aisles and other production areas, clear plastic film can be used to erect walls around the propagating bed area and to restrict the mist to that area.

OPEN BENCH

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28'-0"
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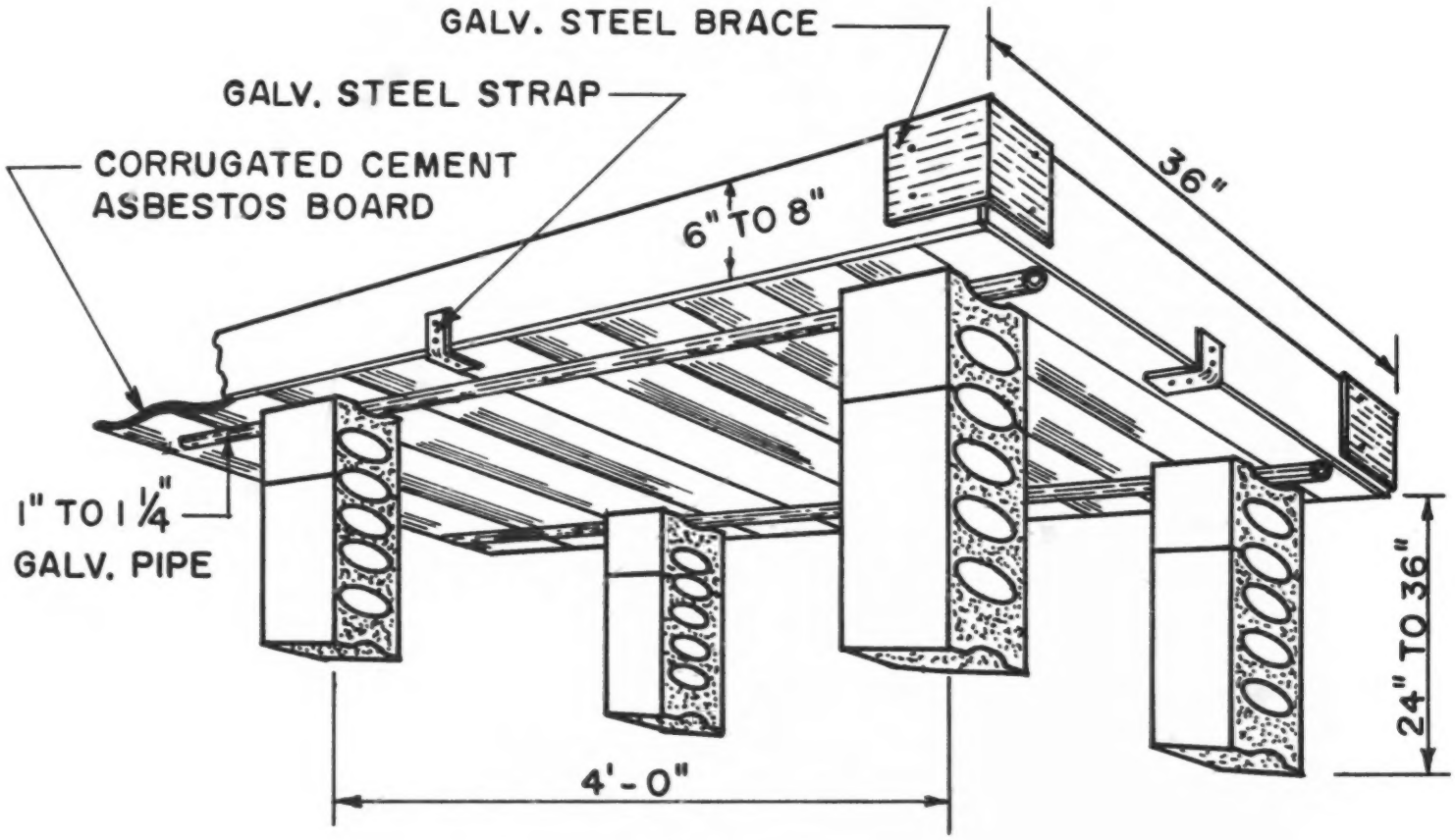
4'-0"
12'-2"
CONC. FLOOR
HOSE OUTLET
35'-10"
3'-1"
1'-10"
3'-1"
1'-10"
2'-0"
BENCH
AISLE
BENCH
HOSE OUTLET
2'-0"
2'-0"
FLOOR DRAIN
PLANT & SOIL PREPARATION
BENCHES & STOR.
12'-0"
GROUND BED

SOLID BENCH



Brochure Prepared by

John M. Adams, Jr.
State Department of Education
Frankfort, Kentucky

William R. Bingham
Department of Agricultural Education

and

John N. Walker
Department of Agricultural Engineering
University of Kentucky

1967

Brochures Available From Above

Blueprints For Greenhouses Available From
Department of Agricultural Engineering,
University of Kentucky

VT 001 477
Rhodes, Eric, And Others
Employers' Needs in Technical Occupations, Northern Virginia.

Northern Virginia Community Coll., Bailey's Crossroads, Va.
Virginia Dept. of Community Colleges, Richmond
Educational Service Bureau, Inc., Arlington, Va.
MF AVAILABLE IN VT-ERIC SET.
Pub Date - 66 64p.

LABOR FORCE; CURRICULUM PLANNING; *OCCUPATIONAL SURVEYS; *VOCATIONAL EDUCATION; *EDUCATIONAL NEEDS; COURSE CONTENT; *TECHNICAL OCCUPATIONS; CURRICULUM DEVELOPMENT
VIRGINIA

Information from 738 employers in agriculture, construction, manufacturing, transportation, communication, wholesale and retail trade, finance, insurance, real estate, and the public utilities was gathered to obtain employment data which had implications for post secondary education. Employment increased 84,207 from 1950 to 1960 in Northern Virginia. Employers' estimates indicated an employment increase of 90 percent in fields requiring post secondary education. Estimated annual needs for 32 occupations range from 1599 automotive technicians to 26 air-conditioning-refrigeration designers. Employers were also asked to furnish information for 32 occupations concerning educational requirements in mathematics, chemistry, physics, biology, drafting, English, accounting, typing, shorthand, data processing, electronics, and instrumentation. These responses are given. (EM)

VT001477

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EMPLOYERS' NEEDS IN TECHNICAL OCCUPATIONS, NORTHERN VIRGINIA

Department of Community Colleges

Commonwealth of Virginia

Prepared by:

Educational Service Bureau, Inc.
2201 Wilson Boulevard
Arlington, Virginia

VT 010 177

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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EMPLOYERS' NEEDS IN TECHNICAL OCCUPATIONS,

NORTHERN VIRGINIA

Prepared for:

Northern Virginia Community College
Bailey's Crossroads, Virginia

and

Department of Community Colleges
Commonwealth of Virginia
Richmond, Virginia

Prepared by:

Educational Service Bureau, Inc.
2201 Wilson Boulevard
Arlington, Virginia

TABLE OF CONTENTS

CHAPTER		PAGE
I	The Survey	1
II	Urgently Needed Occupations	4
III	Instructional Fields Required by Employers	11
IV	Course Content Required	23
V	Employer Participation in the Community College Program	58

TABLES

NUMBER		PAGE
1	Employment and Amount of Increase by Locality in Northern Virginia, 1950-60	5
2	Estimated Personnel Needed Annually, Urgently Needed Occupations, Northern Virginia	6
3	Occupational Trends and Estimates of New Workers Needed in Selected Occupations, Northern Virginia	9
4	Estimated Number of Employers, Urgently Needed Occupations, Northern Virginia	10
5	Subject Areas Required by Employers, for Needed Occupations, Northern Virginia	12

EDUCATIONAL SERVICE BUREAU, INC.

Staff for the Employers' Needs Survey

Eric Rhodes, Director
Harold Kaplan
Harmon Pippin
Albert Baker
Betty Boadwine
Bernice Labrozzi
Ann Toner

ACKNOWLEDGEMENTS

Appreciation should be expressed to all those businesses and industries which participated in the survey. Particular attention should be directed to those owners, managers and personnel directors who gave so generously of their time in the interests of improving educational opportunities for the area.

CHAPTER I

THE SURVEY

A study of employment needs in technical occupations in Northern Virginia was authorized by the State Board of Technical Education, at the request of the Northern Virginia Technical College, to begin in February, 1966.

Also to be included in related studies were the development of curricula and course descriptions for those technical fields which were of highest priority to be added to the existing college program. The college began with 7 curricula in September, 1965. Recommended facilities and space requirements for the curricula were also to be set forth where special facilities were necessary.

This report, plus two other reports and a companion exhibit, are the culmination of that study. The recommendations on curricula and facilities are contained in the two companion reports. It is anticipated that adaptations of these curriculum designs can be made for other technical programs in other colleges developed by the State in the future.

A Study of Employer Needs

The detailed study of employers' needs is designed to provide information in the following areas:

1. The relative need by employers for various occupations, to help in establishing priorities for adding future curricula in Northern Virginia.
2. A reliable estimate of the number of students who should be

prepared in each of the technical fields now being offered or being planned currently for offering in the Northern Virginia college. A previous study of anticipated demand of students for enrollment in various curricula, conducted by the consultants, gave evidence of those curricula which could be offered successfully with reasonable expectations of adequate enrollment. This present study has as one purpose, the further verification of curricula which can be offered successfully with adequate employment demand to absorb the graduates.

3. A third purpose of the study was to get additional data on the specific course subjects employers require for various occupations, and what course content they expect employees to have in these occupations. Information on these subjects is contained in this study.

4. A valuable additional result of the study is the acquisition of lists of employers willing to participate in advisory committees on the various technical subject fields, thereby assisting the college in both the development and the updating of their curriculum offerings in these fields, and the development of a list of employers willing to provide work experience for students in these occupations.

Approach to the Survey

Because of the vast numbers of employers in the Northern Virginia region served by the Northern Virginia Technical College, it was impossible to interview or survey every employer. A list of all employers having four or more

employees was used as the basis of the survey, and this list was divided into two parts. The consultants contacted every employer with more than 50 employees. In addition, a sample of all other employers in the basic list was drawn and every employer in this sample was contacted for information. Information derived from contacts with the sample list was statistically expanded to represent the total number of employers involved, and these results were then combined with the results from the survey of larger employers to give estimated totals for the entire region.

The survey covered employers in the widely diverse fields of agriculture, construction, manufacturing, transportation, communication, electric, gas, and sanitary services, wholesale and retail trade, finance, insurance and real estate. The important research and development industry in Northern Virginia was carefully studied. National, State and local government agencies were not included in the survey.

In all, 738 employers were asked to participate in the study of employment needs in Northern Virginia. Within the total number of employers surveyed, virtually all types of technical and other occupations requiring post-high school training are involved.

CHAPTER II

URGENTLY NEEDED OCCUPATIONS

The increase in number of employees between 1950 and 1960 in each of the counties and cities comprising the Northern Virginia college district is shown in Table 1. Estimates derived from the survey show that increases in technically-trained occupations will be much more rapid than the increase rates shown in Table 1.

The employers were asked to estimate the number of employees they would need in technical fields five years from now. They estimated an increase of 90 percent in these fields requiring post-high school education.

Numbers Needed Annually

Based upon the responses of the employing organizations surveyed, the estimated number of persons needed to be employed in such occupations, either as new or replacement workers, during the next 12 months has been derived. These requirements for new or replacement employees during the coming year are shown in Table 2 for occupations requiring 25 or more new employees.

Every contact with automobile dealers has revealed what amounts to a starvation in the supply of qualified people to do sophisticated diagnosis of automobile problems and to handle such repairs. The automotive program now being installed at the Northern Virginia college thus apparently will have no problem in placing its trainees. The problem, more likely, will lie in expanding the program sufficiently to begin to scratch the surface of the need.

Table 1

EMPLOYMENT AND AMOUNT OF INCREASE

BY LOCALITY IN NORTHERN VIRGINIA, 1950-1960*

Locality	Employment 1950	Employment 1960	Increase
Alexandria	26,373	36,776	10,403
Arlington	53,983	68,996	15,013
Fairfax (including Fairfax City)	30,218	79,785	49,567
Falls Church	2,504	3,728	1,224
Loudoun	7,550	9,126	1,576
Prince William	5,601	12,025	6,424
Total	126,229	210,436	84,207

* Number and percent of residents employed, regardless of place of employment. Based on U. S. Census data.

Table 2

ESTIMATED PERSONNEL NEEDED ANNUALLY,
URGENTLY NEEDED OCCUPATIONS,
NORTHERN VIRGINIA

Occupation	Estimated Number of Persons Needed
Automotive Technician	1599
Secretary, Advanced	1001
Salesman, Supervisory	973
Electronics Technician	876
Draftsman and Machine Designer	734
Bank Executive	633
Retail Store Manager	615
Food Administrator	605
General Business	504
Accountant	495
Hotel-Motel Manager	464
Key Punch Operator, Data Processing	418
Building Construction Technician	401
Machine Operator, Data Processing	355
Clerk-Typist	350
Bookkeeper	296
Air Conditioning/Refrigerating Technician	272
Mechanical Technician	262
Electrical Technician	255
Insurance Agent	253
Sheet Metal Worker	242
Nurse, RN and LPN	224
Laboratory Technician	211
Commercial Artist	199
Real Estate Agent	192
Civil Engineer Technician	102

Occupation	Estimated Number of Persons Needed
Programmer, Data Processing	87
Merchandising Manager	80
Dental Assistant	48
News Broadcaster	40
Communications Technician	30
Air Conditioning/Refrigerating Designer	26

Other top priorities revealed, in terms of numbers needed, are advanced secretarial trainees, sales managers, electronics technicians, and draftsmen and designers. Curricula in all of these fields are being offered by the Northern Virginia College. Relative needs for expansion into other areas can be estimated with the help of the data in Table 2.

The estimated overall need for new workers in the area by broad occupational categories, is shown in Table 3. These figures, drawn from census data, indicate that the proportion of all new workers which the college could expect to educate still would be small under any existing plans.

Estimated Number of Employers Needing Technical Employees

From the interview data, an estimate has been made of the total number of employers who would be in the market for students trained in the various technical fields. The number of employers involved can give a better idea of the scope of placement opportunities, work experience opportunities, and the complexity of contacts between the employers in these occupational groups and the college.

The estimated number of employers needing new employees in fields requiring training beyond high school is shown in Table 4. The estimated number of employers by occupation is shown where the total number is 20 or more.

In the exhibit document which accompanies the report, samples of responses from interviews showing the technical occupations needed by employers are included. This exhibit serves to illustrate the fact that the typical employer may require various technical occupations in his one business. Of course, as the business grows larger, the range of employees required is likely to increase.

Table 3

OCCUPATIONAL TRENDS AND ESTIMATES OF NEW WORKERS

NEEDED IN SELECTED OCCUPATIONS, NORTHERN VIRGINIA

Occupation	Actual Employment 1960	Estimated Employment 1965	Estimated Annual Growth	Replacements Needed Annually	Total New Workers Needed Annually
Professional, Technical & Kindred	46,515	58,382	5,897	1,676	7,573
Medical & Health	4,054	4,412	229	166	395
Farmers & Managers	1,397	1,225	(48)	27	(21)
Managers, Officials & Proprietors	22,545	27,548	2,534	675	3,209
Public Administrators	62,441	67,369	3,234	2,095	5,329
Clerical & Kindred	52,098	57,704	3,347	2,400	5,747
Sales	15,552	18,320	1,446	581	2,047
Craftsmen, Foremen & Kindred	25,120	26,594	1,090	548	1,638
Construction Workers	8,830	8,440	(219)	169	(50)
Operatives	12,838	13,823	664	351	1,015
Private Household Workers	5,119	5,331	176	260	436
Service	12,481	14,606	1,139	494	1,633
Farm Laborers & Foremen	1,726	1,570	(53)	33	(20)
Other Laborers	4,926	4,904	(44)	101	57

Parentheses ( ) indicate decreases

Table 4

ESTIMATED NUMBER OF EMPLOYERS,
URGENTLY NEEDED OCCUPATIONS,
NORTHERN VIRGINIA,
1966

Occupation	Estimated Number of Employers
Secretary, Advanced	491
Accountant	393
Salesman, Supervisory	318
Draftsman and Machine Designer	218
General Business	183
Electronics Technician	175
Building Construction Technician	166
Bookkeeper	142
Automotive Technician	135
Bank Executive	129
Clerk-Typist	129
Machine Operator, Data Processing	109
Mechanical Technician	103
Insurance Agent	102
Retail Store Manager	89
Real Estate Agent	72
Electrical Technician	63
Air Conditioning/Refrigerating Technician	59
Laboratory Technician	59
Food Administrator	58
Nurse, RN and LPN	52
Civil Engineer Technician	35
Commercial Artist	31
Dental Assistant	24
Programmer, Data Processing	20

CHAPTER III

INSTRUCTIONAL FIELDS REQUIRED BY EMPLOYERS

One important question to be answered by the survey was just how many employers actually require certain subject fields to be taught their employees. What is included, in the employers' minds, in the education of a draftsman? Of a mechanical technician? Help in answering these questions can be found in the survey results.

Subjects Wanted and Percentages of Employers Wanting Each

The percentages of employers requiring various subject fields within the preparation of the technicians whom they expect to employ are shown in Table 5. Subjects under each occupational area are ranked according to the percentage of employers requiring them.

It is interesting to note that, while English is considered important by a substantial number of employers in almost every category, knowledge of mathematics ranks substantially higher, on the average, throughout most of the employment categories.

What the actual content of the math course should be for various occupations requires, of course, more careful analysis. Greater detail on the content expected in subject fields by occupation is shown in the next chapter.

Table 5

SUBJECT AREAS REQUIRED BY EMPLOYERS FOR NEEDED OCCUPATIONS, NORTHERN VIRGINIA

Accountant

Subject Area	Percent of Employers Requiring
Accounting	100.0
Math	97.0
English	60.6
Typing	60.6
Data Processing	13.3

Advanced Secretary

Subject Area	Percent of Employers Requiring
Typing	100.0
Shorthand	97.3
English	65.7
Math	63.1
Accounting	34.2
Data Processing	15.8

Air Conditioning/Refrigerating Designer

Subject Area	Percent of Employers Requiring
Math	100.0
Physics	100.0
Instrumentation	100.0
Drafting	100.0
Electronics	50.0
Typing	50.0

Air Conditioning/Refrigerating Technician

Subject Area	Percent of Employers Requiring
Math	100.0
Drafting	75.0
Electronics	75.0
Instrumentation	75.0
Chemistry	75.0
Physics	62.5
English	62.5

Automotive Technician

Subject Area	Percent of Employers Requiring
Instrumentation	100.0
Math	77.0
Electronics	69.2
Drafting	38.0
English	38.0
Accounting	30.4
Typing	30.4
Physics	22.8
Chemistry	15.2

Bank Executive

Subject Area	Percent of Employers Requiring
Accounting	100.0
Math	80.0
English	70.0
Typing	50.0
Shorthand	50.0
Data Processing	50.0

Bookkeeper

Subject Area	Percent of Employers Requiring
Accounting	100.0
Math	94.1
Typing	82.2
English	41.1
Data Processing	41.1

Building Construction Technician

Subject Area	Percent of Employers Requiring
Math	77.7
Drafting	66.6
English	66.6
Accounting	33.3
Instrumentation	22.2
Electronics	11.1

Civil Engineer Technician

Subject Area	Percent of Employers Requiring
Math	100.0
Physics	100.0
Instrumentation	100.0
Drafting	100.0
English	71.0
Data Processing	57.2
Electronics	42.8
Biology	42.8
Accounting	42.8
Chemistry	42.8
Typing	14.2

Clerk-Typist

Subject Area	Percent of Employers Requiring
Typing	100.0
English	100.0
Accounting	100.0
Math	100.0
Shorthand	87.5

Commercial Artist

Subject Area	Percent of Employers Requiring
Freehand Drafting	100.0
Instrumentation	100.0
Math	66.6
Typing	66.6

Communications Technician

Subject Area	Percent of Employers Requiring
Electronics	100.0
Math	100.0
Physics	87.5
Drafting	75.0
Instrumentation	75.0
English	62.5
Data Processing	25.0

Dental Assistant

Subject Area	Percent of Employers Requiring
Math	100.0
Chemistry	100.0
Biology	100.0
English	100.0
Accounting	100.0
Typing	100.0
Shorthand	100.0
Instrumentation	100.0

Draftsman and Machine Designer

Subject Area	Percent of Employers Requiring
Drafting	100.0
Math	94.1
English	58.5
Physics	32.3
Electronics	26.5
Instrumentation	23.5

Electrical Technician

Subject Area	Percent of Employers Requiring
Instrumentation	100.0
Math	80.0
Physics	80.0
Drafting	80.0
Electronics	70.0
English	60.0
Typing	10.0

Electronics Technician

Subject Area	Percent of Employers Requiring
Electronics	100.0
Math	82.5
Drafting	56.6
Physics	52.1
Instrumentation	43.6
English	34.8
Data Processing	30.5

Food Administrator

Subject Area	Percent of Employers Requiring
Math	85.7
Accounting	85.7
English	71.4
Chemistry	42.8
Data Processing	42.8
Biology	28.5
Typing	28.5
General Business	14.2
Home Economics	14.2

General Business

Subject Area	Percent of Employers Requiring
Math	68.1
English	63.2
Accounting	54.5
Typing	40.6
Drafting	31.5
Data Processing	27.3
Electronics	27.3
Instrumentation	13.6

Hotel-Motel Manager

Subject Area	Percent of Employers Requiring
Accounting	100.0
Math	100.0
English	100.0
Typing	100.0
Data Processing	75.0
Drafting	75.0
Biology	50.0
Chemistry	25.0

Insurance Agent

Subject Area	Percent of Employers Requiring
English	100.0
Math	85.0
Typing	43.0
Accounting	28.5
Public Speaking	14.2

Key Punch Operator, Data Processing

Subject Area	Percent of Employers Requiring
Data Processing	100.0
Math	100.0
Typing	100.0
English	33.3
Accounting	33.3

Laboratory Technician

Subject Area	Percent of Employers Requiring
Math	100.0
Chemistry	90.0
Biology	80.0
Instrumentation	70.0
English	60.0
Physics	50.0
Data Processing	50.0
Drafting	20.0
Electronics	10.0
Accounting	10.0

Machine Operator, Data Processing

Subject Area	Percent of Employers Requiring
Data Processing	100.0
Math	90.9
Typing	63.6
English	54.5
Accounting	36.4

Mechanical Technician

Subject Area	Percent of Employers Requiring
Instrumentation	100.0
Math	66.6
Physics	66.6
Drafting	50.0
Electronics	50.0
English	33.3
Chemistry	16.6

Merchandising Manager

Subject Area	Percent of Employers Requiring
Accounting	100.0
Math	100.0
English	100.0
Data Processing	75.0
Drafting	75.0

News Broadcaster

Subject Area	Percent of Employers Requiring
Math	100.0
English	100.0
Typing	100.0
Electronics	100.0

Nurse, RN and LPN

Subject Area	Percent of Employers Requiring
Chemistry	100.0
Biology	100.0
English	100.0
Physics	66.6
Math	50.0
Instrumentation	50.0
Psychology	50.0
Typing	33.3
Data Processing	16.6
Social Science	16.6
Ethics	16.6

Programmer, Data Processing

Subject Area	Percent of Employers Requiring
Data Processing	100.0
Math	90.0
Accounting	54.5
English	54.5
Electronics	45.5
Physics	36.2
Drafting	36.2
Chemistry	18.1

Real Estate Agent

Subject Area	Percent of Employers Requiring
Math	100.0
English	100.0
Drafting	66.6
Typing	66.6
Title Research	33.1
Salesmanship	33.1
Accounting	33.1

Retail Store Manager

Subject Area	Percent of Employers Requiring
Accounting	100.0
English	100.0
Math	83.3
Data Processing	83.3
Drafting	16.6
Basic Psychology	16.6

Salesman and Supervisor

Subject Area	Percent of Employers Requiring
English	85.7
Math	75.0
Typing	50.0
Accounting	46.4
Drafting	28.0
Physics	10.7'

Sheet Metal Worker

Subject Area	Percent of Employers Requiring
Drafting	100.0
Math	80.0
Instrumentation	40.0
English	40.0
Blue Print Reading	20.0

CHAPTER IV

COURSE CONTENT REQUIRED

On the pages which follow, the specific requirements in terms of course content within the desired courses for each occupation, as revealed by employers interviewed, are shown.

Each occupational field, among those most widely in demand, is shown on a separate page. On that page, the subject areas desired by employers are indicated. Then, for each subject area, a summary of the course content as described by employers is shown.

Since these descriptions by occupational field represent the needs of all those employers requiring accountants, for example, the course content described represents a composite of the course content needs set forth. Therefore, some employers may require less than others.

An example may be found in the field of advanced secretarial training. The secretaries in an electronics firm should know basic electronics terminology, which is shown on the page. Naturally, not every secretary needs to know this. A secretary in a research and development organization may be required to know Greek alphabet symbols, as shown. Many others would not need such information. A secretary in an architectural firm might need to know vari-typing, which is shown on the form.

It therefore seems reasonable to the consultants that a good secretarial course would include not only the general requirements expected of all secretaries, but a survey, at some point in the curriculum, of the types of special

knowledge which the secretaries may be required to have in various specialized employment situations.

A similar approach would seem to be a reasonable part of preparation for work in other occupational fields.

While instrumentation, as a special field of electronics, is a sophisticated technology involving fine measurements, the term on the following pages has been used variously by the employers in various fields. To employers in the building construction business, instrumentation may have meant basic transit work, as shown on that page. For secretaries, it is the basic knowledge of terminology. In civil engineering, use of the tools of surveying is shown under the title of instrumentation. This is why it is well to analyze the specific meaning of a course in the minds of the employers in each occupational field.

URGENTLY NEEDED OCCUPATIONS,

NORTHERN VIRGINIA,

RELATED DATA

Occupation Accounting

For this occupation the worker should know

		Yes	No		Describe the content briefly:
1.	Math	X		1.	Fundamentals of Business Mathematics - Basic mathematics for accounting, statistics, finance, etc. Percentages and ratios, logarithms, interest and discount, investment accumulation, annuities, amortization, capitalization, sinking funds, interdependable variables, etc.
2.	Chemistry		X	2.	
3.	Physics		X	3.	
4.	Biology		X	4.	
5.	Drafting		X	5.	
6.	English	X		6.	Advanced training in grammar and composition
7.	Accounting	X		7.	Introductory, intermediate and advanced (consolidations branch accounting, mergers, costs, budgets, system design and installation).
8.	Typing		X	8.	
9.	Shorthand		X	9.	
10.	Data Processing	X		10.	Particular emphasis on payroll and other accounting applications
11.	Electronics		X	11.	
12.	Instrumentation		X	12.	
13.	Others Taxes			13.	Federal and state income, Social Security, property sales, etc.
14.	Internal Auditing (for control)			14.	Procedures used to verify accounts and financial statements and extent to which policies and procedures in general are being carried out as intended. Preparation of complete audit working papers of an extended audit problem up to and including audit report.
15.				15.	
16.	Business Law			16.	Contracts, Agency, Negotiable Instruments, Business Organization (partnerships, corporations, Trusts), Bailments, Sales, Property, Bankruptcy, etc. Legal concepts and functions. Court systems.

Occupation : Air Conditioning/Regrigeration Designer

For this occupation the worker should know

	Yes	No		Describe the content briefly:
1. Math	X		1.	Technical Math
2. Chemistry		X	2.	
3. Physics	X		3.	
4. Biology		X	4.	
5. Drafting	X		5.	Detail assembly and layout drafting
6. English	X		6.	Technical report writing
7. Accounting		X	7.	
8. Typing	X		8.	
9. Shorthand		X	9.	
10. Data Processing		X	10.	
11. Electronics	X		11.	Basic electrical - AC & DC
12. Instrumentation	X		12.	Automatic Controls
13. Others Building Construction			13.	Basic knowledge
14. Mechanical Design			14.	Basic knowledge
15. Refrigeration theory			15.	Basic knowledge
16.			16.	

Occupation : Air Conditioning/Refrigeration Technician

For this occupation the worker should know

		Yes	No		Describe the content briefly:
1.	Math	X		1.	Technical Math
2.	Chemistry		X	2.	
3.	Physics	X		3.	Basic principles
4.	Biology			4.	
5.	Drafting	X		5.	Layout and assembly - blue print reading
6.	English	X		6.	Grammar and composition
7.	Accounting		X	7.	
8.	Typing		X	8.	
9.	Shorthand		X	9.	
10.	Data Processing		X	10.	
11.	Electronics	X		11.	Basic knowledge
12.	Instrumentation	X		12.	Automatic controls
13.	Others Refrigeration theory			13.	
14.	Heat transform theory			14.	
15.				15.	
16.				16.	

Occupation : Automotive Technician

For this occupation the worker should know

		Yes	No		Describe the content briefly:
1.	Math	X		1.	Technical Math
2.	Chemistry	X		2.	Knowledge of fuels and lubricants
3.	Physics	X		3.	Basic laws of heat and energy as applicable
4.	Biology		X	4.	
5.	Drafting	X		5.	Blue print reading
6.	English	X		6.	Grammar and composition
7.	Accounting		X	7.	
8.	Typing		X	8.	
9.	Shorthand		X	9.	
10.	Data Processing		X	10.	
11.	Electronics	X		11.	Electrical circuits
12.	Instrumentation	X		12.	Hand and power tools and their use
13.	Others Internal combustion motors			13.	Complete knowledge of automobiles
14.	Chart Analysis			14.	
15.				15.	
16.				16.	

Occupation : Bank Executive

For this occupation the worker should know

		Yes	No		Describe the content briefly:
1.	Math	X		1.	Business Math - Aptitude for figures
2.	Chemistry		X	2.	
3.	Physics		X	3.	
4.	Biology		X	4.	
5.	Drafting		X	5.	
6.	English	X		6.	Ability to speak well with customers
7.	Accounting	X		7.	Knowledge of financial statements
8.	Typing	X		8.	Helpful
9.	Shorthand		X	9.	
10.	Data Processing	X		10.	Basic knowledge
11.	Electronics			11.	
12.	Instrumentation			12.	
13.	Others Currency			13.	Familiarity with domestic and foreign currency
14.				14.	Good personality and pleasing appearance
15.	Loans			15.	Knowledge of FHA and VA loans
16.	Business Law			16.	

Occupation : Bookkeeper

For this occupation the worker should know

		Yes	No		Describe the content briefly:
1.	Math	X		1.	Business Math - knowledge of statistics and finance, etc.
2.	Chemistry		X	2.	
3.	Physics		X	3.	
4.	Biology		X	4.	
5.	Drafting		X	5.	
6.	English	X		6.	Advanced training in grammar and composition
7.	Accounting	X		7.	Basic knowledge
8.	Typing	X		8.	Basic
9.	Shorthand	X		9.	Basic
10.	Data Processing	X		10.	Application to payroll and other basic bookkeeping systems
11.	Electronics		X	11.	
12.	Instrumentation		X	12.	
13.	Others Business Law			13.	
14.				14.	
15.				15.	
16.				16.	

Occupation : Building Construction Technician

For this occupation the worker should know

		Yes	No		Describe the content briefly:
1.	Math	X		1.	Basic - Algebra, Geometry & Trigonometry Cost estimating
2.	Chemistry		X	2.	
3.	Physics		X	3.	
4.	Biology		X	4.	
5.	Drafting	X		5.	Basic architectural and mechanical - blue print reading
6.	English	X		6.	Business English
7.	Accounting	X		7.	How to cost material
8.	Typing		X	8.	
9.	Shorthand		X	9.	
10.	Data Processing		X	10.	
11.	Electronics		X	11.	
12.	Instrumentation	X		12.	Basic transit work
13.	Others			13.	
14.				14.	
15.				15.	
16.				16.	

Occupation : Civil Engineering, Technician

For this occupation the worker should know

	Yes	No	Describe the content briefly:
1. Math	X		1. Algebra - Trigonometry
2. Chemistry	X		2. General chemistry
3. Physics	X		3. General physics
4. Biology		X	4.
5. Drafting	X		5. Blue print reading - structural design
6. English	X		6. Technical English - report writing
7. Accounting	X		7. Basic
8. Typing		X	8.
9. Shorthand		X	9.
10. Data Processing	X		10. Knowledge of capabilities
11. Electronics	X		11.
12. Instrumentation	X		12. Use of transit -level and basic instrumentation
13. Others Strength of Materials			13. Basic knowledge of materials desirable
14.			14.
15.			15.
16.			16.

Occupation : Clerk-typist

For this occupation the worker should know

		Yes	No		Describe the content briefly:
1.	Math	X		1.	Business Math
2.	Chemistry		X	2.	
3.	Physics		X	3.	
4.	Biology		X	4.	
5.	Drafting		X	5.	
6.	English	X		6.	Business English - necessary
7.	Accounting	X		7.	Helpful
8.	Typing	X		8.	Necessary
9.	Shorthand	X		9.	Desirable
10.	Data Processing	X		10.	Key punch operation
11.	Electronics		X	11.	
12.	Instrumentation	X		12.	Desk calculators
13.	Others			13.	
14.				14.	
15.				15.	
16.				16.	

Occupation : Commercial Artist

For this occupation the worker should know

		Yes	No		Describe the content briefly:
1.	Math	X		1.	Business Math with some Algebra
2.	Chemistry		X	2.	
3.	Physics		X	3.	
4.	Biology		X	4.	
5.	Drafting	X		5.	Technical and figure illustrations - freehand drawing
6.	English	X		6.	
7.	Accounting		X	7.	
8.	Typing		X	8.	
9.	Shorthand		X	9.	
10.	Data Processing		X	10.	
11.	Electronics		X	11.	
12.	Instrumentation		X	12.	
13.	Others Layout & Design			13.	
14.	Basic Printing Methods			14.	
15.				15.	
16.				16.	

Occupation : Communications Technician

For this occupation the worker should know

		Yes	No		Describe the content briefly:
1.	Math	X		1.	Algebra, trigonometry, some Calculus
2.	Chemistry		X	2.	
3.	Physics	X		3.	Basic electrical and mechanical principles
4.	Biology		X	4.	
5.	Drafting	X		5.	Read drawings and plot charts - simple sketches
6.	English	X		6.	Composition and grammar - technical report writing
7.	Accounting		X	7.	
8.	Typing		X	8.	
9.	Shorthand		X	9.	
10.	Data Processing	X		10.	Basic knowledge of processes
11.	Electronics	X		11.	See below
12.	Instrumentation	X		12.	Electronic instrumentation desirable
13.	Others Electronics			13.	Basic electricity - AC & DC theory Basic electronics - vacuum tube, transistor, circuit theory, schematic drawing reading, Class II radio license
14.				14.	
15.				15.	
16.				16.	

Occupation : Data Processing Machine Operator

For this occupation the worker should know

	Yes	No		Describe the content briefly:
1. Math	X		1.	General math ability required to advance in field
2. Chemistry		X	2.	
3. Physics		X	3.	
4. Biology		X	4.	
5. Drafting		X	5.	
6. English	X		6.	Enough English knowledge so instructions can be followed and can communicate with personnel
7. Accounting	X		7.	Principles of accounting desirable
8. Typing		X	8.	
9. Shorthand		X	9.	
10. Data Processing	X		10.	Have basic wiring knowledge of E.A.M. equipment and ability to operate machines
11. Electronics	X		11.	Knowledge of computer operations
12. Instrumentation		X	12.	
13. Others			13.	
14.			14.	
15.			15.	
16.			16.	

Occupation : Data Processing Programmer

For this occupation the worker should know

	Yes	No		Describe the content briefly:
1. Math	X			Equal to 2 years college math
2. Chemistry		X	2.	
3. Physics	X		3.	
4. Biology		X	4.	
5. Drafting	X		5.	Ability to abstract info. from B/Ps and Schematics
6. English	X		6.	Equal to 1 year college Technical writing and language
7. Accounting	X		7.	Application of EAM equipment to accounting systems
8. Typing		X	8.	
9. Shorthand		X	9.	
10. Data Processing	X		10.	Programming, tab machine - business application and languages - knowledge of computer capability
11. Electronics		X	11.	
12. Instrumentation		X	12.	
13. Others			13.	Ability to recognize and solve problems and properly document procedures
14.			14.	
15.			15.	
16.			16.	

Occupation : Dental Assistant

For this occupation the worker should know

	Yes	No	Describe the content briefly:
1. Math	X		1. College math, at least 1 year
2. Chemistry	X		2. 1 or 2 yr. chemistry with laboratory
3. Physics	X		3. 1 yr. physics with laboratory
4. Biology	X		4. 1 yr. biology with laboratory
5. Drafting		X	5.
6. English		X	6.
7. Accounting	X		7. Basic
8. Typing	X		8. Basic
9. Shorthand		X	9.
10. Data Processing		X	10.
11. Electronics		X	11.
12. Instrumentation	X		12.
13. Others Dental anatomy			13.
14. Physical Properties of Dental Materials			14.
15. Physiology			15.
16. Pathology			16.
17. X-ray techniques			

Occupation : Drafting & Machine Design

For this occupation the worker should know

		Yes	No		Describe the content briefly:
1.	Math	X		1.	Technical Descriptive Geometry, College Math., Analytic Geometry, College Algebra
2.	Chemistry		X	2.	
3.	Physics	X		3.	Basic Physics Principles
4.	Biology		X	4.	
5.	Drafting	X		5.	Detail Drafting, Assembly Drafting, Layout Drafting, Machine Design
6.	English	X		6.	Composition, Report Writing (technical)
7.	Accounting		X	7.	
8.	Typing		X	8.	
9.	Shorthand		X	9.	
10.	Data Processing		X	10.	Basic knowledge helpful
11.	Electronics	X		11.	Basic Electronics, Basic Electrical Engineering, AC & DC
12.	Instrumentation		X	12.	
13.	Others Machine Shop Practices			13.	Lathe, Drill press, milling machine, shaper, planer, spinning equipment, production equipment
14.	Engineering Mechanics			14.	Principles employed to solve Mechanics problems
15.	Materials			15.	Mechanics of Materials (stress, strain, etc.)
16.				16.	

Occupation : Electrical Technician

For this occupation the worker should know

		Yes	No		Describe the content briefly:
1.	Math	X		1.	Algebra, Trigonometry, Analytical Geometry and Calculus, Calculus
2.	Chemistry		X	2.	
3.	Physics	X		3.	General Physics with physics laboratory
4.	Biology		X	4.	
5.	Drafting	X		5.	Engineering Drawing - emphasis on blue print reading
6.	English	X		6.	English composition, technical English
7.	Accounting		X	7.	
8.	Typing		X	8.	
9.	Shorthand		X	9.	
10.	Data Processing		X	10.	
11.	Electronics	X		11.	Basic to complex including applications. Microwaves, Semiconductors
12.	Instrumentation	X		12.	Measurements, Instrumentation, Industrial Controls
13.	Others Electrical Fundamentals			13.	Electrical shop, electrical circuits, AC & DC machinery, associated laboratories electrical power and transmission
14.				14.	
15.				15.	
16.				16.	

Occupation : Electronics Technician

For this occupation the worker should know

		Yes	No		Describe the content briefly:
1.	Math	X		1.	Equal to 2 years college math - algebra, geometry, trigonometry
2.	Chemistry	X		2.	Basic 1st year college chemistry
3.	Physics	X		3.	2 years college physics - mechanics, electricity and magnetism
4.	Biology		X	4.	
5.	Drafting	X		5.	Basic 1st year college drafting Ability to read B/Ps and Schematics
6.	English	X		6.	Technical Report writing
7.	Accounting		X	7.	
8.	Typing		X	8.	
9.	Shorthand		X	9.	
10.	Data Processing	X		10.	Fundamentals of computer programming - Fortran
11.	Electronics	X		11.	2 years Electronics - DC circuits, AC circuits, AC machines, pulse & digital circuits
12.	Instrumentation	X		12.	1 year Test Equipment, lab measurement techniques
13.	Others Circuit theory			13.	
14.	Knowledge of soldering and welding techniques			14.	
15.				15.	
16.				16.	

Occupation : Food Administrator

For this occupation the worker should know

		Yes	No		Describe the content briefly:
1.	Math	X		1.	Business Math
2.	Chemistry	X		2.	Organic & inorganic or food chemistry
3.	Physics		X	3.	
4.	Biology	X		4.	Basic
5.	Drafting		X	5.	
6.	English			6.	
7.	Accounting	X		7.	Basic bookkeeping, ledger - cost accounting - inventory control
8.	Typing		X	8.	
9.	Shorthand		X	9.	
10.	Data Processing	X		10.	Basic knowledge
11.	Electronics		X	11.	
12.	Instrumentation			12.	
13.	Others Food production - Preparation			13.	Techniques of food preparation, quality control, sanitation
14.	Business Administration			14.	Personnel management - business law
15.	Public Relations			15.	
16.	Labor Relations			16.	Unions, union relations, labor laws, grievance handling, recruiting

Occupation : General Business

For this occupation the worker should know

		Yes	No		Describe the content briefly:
1.	Math	X		1.	Business Math - Statistics
2.	Chemistry		X	2.	
3.	Physics		X	3.	
4.	Biology		X	4.	
5.	Drafting		X	5.	
6.	English	X		6.	Grammar and Composition
7.	Accounting			7.	Knowledge of internal auditing for control
8.	Typing	X		8.	Helpful
9.	Shorthand		X	9.	
10.	Data Processing	X		10.	Basic fundamentals of computer sciences
11.	Electronics		X	11.	
12.	Instrumentation		X	12.	
13.	Others Economics			13.	Basics
14.	Psychology			14.	
15.	Public Speaking			15.	
16.	Business Law			16.	

Occupation : Hotel-Motel Manager

For this occupation the worker should know

	Yes	No	Describe the content briefly:
1. Math	X		1. Business Math
2. Chemistry		X	2.
3. Physics		X	3.
4. Biology		X	4.
5. Drafting	X		5. Minimum for remodeling
6. English	X		6. Meeting public
7. Accounting	X		7. Cost accounting and knowledge of financial statements
8. Typing	X		8. Helpful
9. Shorthand		X	9.
10. Data Processing	X		10. Basic knowledge
11. Electronics		X	11.
12. Instrumentation		X	12.
13. Others Business Law			13.
14. Food Services			14.
15. Restaurant Management			15.
16. Public Relations			16.

Occupation : Insurance Agent

For this occupation the worker should know

		Yes	No		Describe the content briefly:
1.	Math	X		1.	Working knowledge - through Algebra
2.	Chemistry		X	2.	
3.	Physics		X	3.	
4.	Biology		X	4.	
5.	Drafting		X	5.	
6.	English	X		6.	Business English
7.	Accounting	X		7.	Basic
8.	Typing		X	8.	Helpful
9.	Shorthand		X	9.	
10.	Data Processing		X	10.	
11.	Electronics		X	11.	
12.	Instrumentation		X	12.	
13.	Others Public Speaking			13.	Group Discussions
14.	Business Law			14.	
15.	Ethics			15.	
16.	Insurance			16.	Fundamentals of all types of insurance

Occupation : Key Punch Operator - Data Processing

For this occupation the worker should know

		Yes	No		Describe the content briefly:
1.	Math	X		1.	Business Math
2.	Chemistry		X	2.	
3.	Physics		X	3.	
4.	Biology		X	4.	
5.	Drafting		X	5.	
6.	English	X		6.	Business English
7.	Accounting	X		7.	Basic Principles helpful
8.	Typing	X		8.	Desirable
9.	Shorthand		X	9.	
10.	Data Processing	X		10.	Knowledge of machine capability and other data processing machines
11.	Electronics			11.	
12.	Instrumentation			12.	
13.	Others			13.	
14.				14.	
15.				15.	
16.				16.	

Occupation : Laboratory Technician

For this occupation the worker should know

	Yes	No		Describe the content briefly:
1. Math	X		1.	Algebra and Trigonometry
2. Chemistry	X		2.	Basic laboratory technical and fundamental understanding
3. Physics	X		3.	
4. Biology		X	4.	
5. Drafting		X	5.	
6. English	X		6.	Business English - technical report writing
7. Accounting		X	7.	
8. Typing		X	8.	
9. Shorthand		X	9.	
10. Data Processing	X		10.	Basic knowledge of processes
11. Electronics	X		11.	Basic knowledge of electrical circuits
12. Instrumentation	X		12.	Measurements, basic instrumentation
13. Others			13.	
14.			14.	
15.			15.	
16.			16.	

Occupation : Mechanical Technician

For this occupation the worker should know

	Yes	No		Describe the content briefly:
1. Math	X		1.	College math
2. Chemistry	X		2.	Metal testing
3. Physics	X		3.	Strength of materials
4. Biology		X	4.	
5. Drafting	X		5.	Engineering drawing - emphasis on blue print reading
6. English	X		6.	Technical report writing
7. Accounting		X	7.	
8. Typing		X	8.	
9. Shorthand		X	9.	
10. Data Processing		X	10.	
11. Electronics		X	11.	
12. Instrumentation	X		12.	Precision tools and gauges
13. Others Diesel tech.			13.	Engines, power transmission units
14. Welding tech.			14.	Hand and automatic
15. Hydraulics Systems			15.	
16. Heavy Machinery			16.	Fixed and mobile

Occupation : Merchandising Manager

For this occupation the worker should know

		Yes	No		Describe the content briefly:
1.	Math	X		1.	Arithmetic, Algebra, Geometry
2.	Chemistry		X	2.	
3.	Physics		X	3.	
4.	Biology		X	4.	
5.	Drafting	X		5.	Freehand for display
6.	English	X		6.	Grammar, composition
7.	Accounting	X		7.	Elementary course
8.	Typing		X	8.	
9.	Shorthand		X	9.	
10.	Data Processing	X		10.	Knowledge of capabilities
11.	Electronics		X	11.	
12.	Instrumentation		X	12.	
13.	Others Marketing			13.	Basic principles
14.	Statistics			14.	Basic principles
15.	Personnel Management			15.	Personnel Relations
16.	Fashion Designing			16.	

Occupation : Nursing

For this occupation the worker should know

		Yes	No		Describe the content briefly:
1.	Math	X		1.	Thru Algebra
2.	Chemistry	X		2.	Basic nursing course
3.	Physics	X		3.	Basic nursing course
4.	Biology	X		4.	Basic nursing course
5.	Drafting		X	5.	
6.	English	X		6.	Grammar, composition
7.	Accounting		X	7.	
8.	Typing	X		8.	Helpful
9.	Shorthand		X	9.	
10.	Data Processing		X	10.	
11.	Electronics		X	11.	
12.	Instrumentation	X		12.	
13.	Others Anatomy			13.	
14.	Nursing Arts			14.	Two semesters
15.	Physiology			15.	
16.	Sociology			16.	

Occupation : Radio News Broadcaster

For this occupation the worker should know

		Yes	No		Describe the content briefly:
1.	Math	X		1.	Basic knowledge
2.	Chemistry		X	2.	Knowledge would be desirable
3.	Physics		X	3.	Knowledge would be desirable
4.	Biology		X	4.	Knowledge would be desirable
5.	Drafting		X	5.	
6.	English	X		6.	An absolute must
7.	Accounting		X	7.	
8.	Typing	X		8.	
9.	Shorthand		X	9.	Knowledge would be helpful
10.	Data Processing		X	10.	
11.	Electronics	X		11.	Basic understanding
12.	Instrumentation		X	12.	
13.	Others			13.	Should be widely read on all subjects
14.				14.	
15.				15.	
16.				16.	

Occupation : Real Estate Agent

For this occupation the worker should know

		Yes	No		Describe the content briefly:
1.	Math	X		1.	Business Math
2.	Chemistry		X	2.	
3.	Physics		X	3.	
4.	Biology		X	4.	
5.	Drafting	X		5.	Basic knowledge of architectural drafting
6.	English	X		6.	Business English
7.	Accounting	X		7.	Knowledge of financial statements
8.	Typing	X		8.	
9.	Shorthand		X	9.	
10.	Data Processing		X	10.	
11.	Electronics		X	11.	
12.	Instrumentation		X	12.	
13.	Others Public Speaking			13.	Group Discussions
14.	Salesmanship			14.	
15.	Property Management			15.	Basic - Leasing - Maintenance
16.	Real Estate Law			16.	Contracts, deeds, rights and obligations

Occupation 2: Retail Store Management

For this occupation the worker should know

	Yes	No		Describe the content briefly:
1. Math	X		1.	Business Math
2. Chemistry		X	2.	
3. Physics		X	3.	
4. Biology		X	4.	
5. Drafting		X	5.	
6. English	X		6.	Grammar, Composition, Report writing, Business English
7. Accounting	X		7.	Elementary course - cost accounting
8. Typing		X	8.	
9. Shorthand		X	9.	
10. Data Processing	X		10.	Basic Fundamentals
11. Electronics		X	11.	
12. Instrumentation		X	12.	
13. Others Marketing			13.	Basic principles - buying, retailing, merchandising - research
14. Statistics			14.	Basic principles
15. Personnel Management			15.	Personnel relations
16. Public Speaking			16.	
17. Economics				

Occupation : Salesmen & Supervisor

For this occupation the worker should know

	Yes	No		Describe the content briefly:
1. Math	X		1.	Business Math
2. Chemistry		X	2.	
3. Physics		X	3.	
4. Biology		X	4.	
5. Drafting	X		5.	Helpful
6. English	X		6.	Advanced training in grammar and composition Public Speaking
7. Accounting	X		7.	Cost Accounting
8. Typing	X		8.	Helpful
9. Shorthand		X	9.	
10. Data Processing	X		10.	Basic knowledge
11. Electronics		X	11.	
12. Instrumentation		X	12.	
13. Others Sales Management			13.	Organization of sales department, qualifications, duties of sales manager - recruiting, selection and training of salesmen. Planning, conducting of sales campaigns, sales trend studies, forecasts sales and cost control
14.			14.	
15.			15.	
16.			16.	

Occupation : Secretarial - advanced

For this occupation the worker should know

		Yes	No		Describe the content briefly:
1.	Math	X		1.	Basic college math, algebra
2.	Chemistry	X		2.	First year college chemistry
3.	Physics	X		3.	Basic principles
4.	Biology			4.	
5.	Drafting		X	5.	
6.	English	X		6.	Composition, grammar, spelling
7.	Accounting	X		7.	Basic principles
8.	Typing	X		8.	Proofreading, text arrangement, technical typing, proportional spacing, tabulation, equations 60-70 wpm, technical typing, training on bond, vellum, pastel, multilith
9.	Shorthand	X		9.	90-120 wpm, dictaphone as well
10.	Data Processing	X		10.	Basic programming principles
11.	Electronics	X		11.	Basic terminology
12.	Instrumentation	X		12.	Basic terminology
13.	Others Office equipment -			13.	IBM standard electric typewriter, executive proportional spacing typewriter, dictaphone, etc.
14.	Vari-typing			14.	
15.	Greek alphabet			15.	Use of Greek alphabet for expressing variables
16.				16.	

Occupation : Sheetmetal Workers

For this occupation the worker should know

		Yes	No		Describe the content briefly:
1.	Math	X		1.	
2.	Chemistry		X	2.	
3.	Physics		X	3.	
4.	Biology		X	4.	
5.	Drafting	X		5.	Emphasis on blue print reading
6.	English		X	6.	
7.	Accounting		X	7.	
8.	Typing		X	8.	
9.	Shorthand		X	9.	
10.	Data Processing		X	10.	
11.	Electronics		X	11.	
12.	Instrumentation	X		12.	Hand and power tools and their use
13.	Others Metallurgy			13.	Basic knowledge of metals
14.				14.	
15.				15.	
16.				16.	

CHAPTER V

EMPLOYER PARTICIPATION IN THE COMMUNITY COLLEGE PROGRAM

Employers, when interviewed, were asked about their willingness to participate in the program of the college, either through work on curriculum advisory committees or through providing work experience for students. A substantial number of employers responded cordially and affirmatively in both areas.

Advisory Committees

Not all employers were asked if they would be willing to serve on advisory committees. Not all who were asked responded. But the question was asked particularly to employers in occupations related to the technical fields considered in this report. Among those who were asked if they would participate, 55 percent said "yes." This tends to indicate that, in the development of advisory committees, at least half of the employers in the affected fields will be willing to participate on such committees. The names and addresses of those who were asked and who did respond affirmatively to the question of serving on a curriculum advisory committee are shown in the companion exhibit which accompanies the report.

Work Experience

Among employers who had businesses specializing in fields relating to technical occupations to be offered by the college, a number responded to the

question of their willingness to provide work experience for students at the college.

Of those asked about their willingness to provide such experience, 40 percent said they would provide on-the-job work experience for a few hours a week to students. Nineteen percent said no, and 41 percent indicated that they would not be able to make a decision without further facts for consideration. The probability is that many of these employers might also participate.

Names and addresses of those employers willing to participate in such a program are shown in the companion exhibit to this report.

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Van Trump, W.F.
A Follow-Up Study of the First Fifty Graduates of Trade Technical Education.

Ferris State Coll., Big Rapids, Mich.
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*GRADUATE SURVEYS; GRADUATE STUDY; *TEACHER EDUCATION; *TRADE AND INDUSTRIAL EDUCATION; *INDUSTRIAL ARTS; TECHNICAL EDUCATION; *TEACHER SALARIES; SALARIES; QUESTIONNAIRES
FERRIS STATE COLLEGE

Questionnaires were sent to 50 persons who had graduated between March 1961 and January 1966. Responses, obtained from 46, indicated: (1) 2 were in graduate school, (2) 13 were teaching in senior high, (3) 2 were teaching in junior high, (4) 4 were teaching in post high schools, (5) 2 were teaching in corrective institutions, (6) 20 were employed in industry, and (7) 1 was in the United States Air Force. Better salaries were listed by 14 persons as the reason for working in industry. Graduate study at the Master's level was being done by 12, and 2 were working beyond the Master's level. Graduate study was planned by seven others. The salary range for the group was from $5,000 to over $12,000. The modal salary was $8,200 for non-teachers and $6,658 for teachers. However, when adjusted by contract length the difference was not great. Conclusions were: (1) Graduates exhibit a professional interest in teaching, (2) Non-teachers felt work experience was a necessary part of their teacher preparation, (3) Teachers are interested in graduate study for professional growth, (4) Most teachers are high school vocational teachers, and (5) Post secondary and college level teaching was the future employment choice for both groups. Questionnaires, comments, and graduates' names, addresses, and occupations are included. (EM)

VT001485

ED0 31587

A FOLLOW-UP STUDY OF THE FIRST FIFTY GRADUATES OF TRADE TECHNICAL EDUCATION

W. F. Van Trump

Director, Trade-Technical Education

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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Ferris State College
Big Rapids, Michigan
1966

VT 01485

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TABLE OF CONTENTS

		Page
Introduction		1
Statement of the Problem		1
Presentation & Interpretation of Data		
Teachers and Graduate Students		2
Non-Teachers		6
Summary		8
Conclusions		10
Questionnaire Forms	Appendix	A
Comments from Graduates who are Teaching	Appendix	B
Directory of Trade-Technical Education Graduates	Appendix	C

INTRODUCTION

The first students were accepted in Trade-Technical Education the Spring Quarter of 1961. At this time a total of twelve applicants were considered and eleven were accepted. Six have since been graduated with the B. S. Degree in Trade-Technical Education. Three are currently teaching in public schools and three are employed in industry. One additional member of the original applicants returned to Ferris State College following his military service and is completing his degree requirements during summer sessions while teaching on the secondary level during the regular school year.

In the period since March 1961 to January 1966, a total of fifty students have completed the teacher education program. These graduates were accepted in the period from March 1961 to February 1964. During this period a total of 111 applications were processed and 94 students were accepted. In addition to the number who have been graduated, nine are still in school or have graduated since January 1966.

STATEMENT OF THE PROBLEM

This study is concerned with what has happened to the fifty graduates of the Trade-Technical Education program as of the end of the Winter Quarter of the 1965-66 school year. Statistical treatment of the data is limited because of the small population which is divided into two major classifications (teachers and non-teachers). Six areas of specialization (Automotive Service, Heavy Equipment and

Diesel, Drafting, Printing, Radio and Television, and Machine Tool) further complicate the treatment of the data. The following information about the graduates is provided:

1. Name, address, place of employment and job title of each graduate.
2. Salaries earned from employment by teachers and non-teachers.
3. Additional schooling since graduation.
4. Marital status and family size.
5. Additional work experience since graduation.
6. Future professional plans.

The above information was obtained through the use of a two-part questionnaire which was sent to each graduate.[1] One part was to be used if the graduate was actually engaged in public school teaching or attending school. The other part is to be used if employed in industry.

Of the fifty graduates, responses were received from a total of forty-six representing 92 percent return. One graduate is known to be in the Marine Corps, leaving only three for whom there is no specific information. The data are presented under two main headings, treating first the teacher group and second those working in industry.

PRESENTATION AND INTERPRETATION OF DATA

Teachers and Graduate Students

A total of twenty-five graduates reported being directly associated with teaching, twenty-three of whom were teaching during the 1965-66 school year. The other two were attending graduate school on a full-time basis. Twenty-one teachers reported they were teaching in the area of their specialization. In the two exceptions

1. See Appendix A for questionnaire forms.

one indicated he was teaching mathematics and working on plans for a machine shop in which he would later teach. In the other case, the graduate was working as a coordinator in the neighborhood youth corps program.

In response to the question of the level at which they were teaching, the largest number (thirteen) indicated the senior high school. Two reported junior high school, four post high school and two in corrective institutions. In four cases supplemental employment on the adult level was indicated.

Twelve graduates reported they were teaching in vocational programs with two additional teaching in training units which were vocational in nature. Five indicated they were teaching in Industrial Arts programs and one reported a combination of Industrial Arts and Vocational program.

The graduates were asked to report their contract salary, supplemental income and total salary. All twenty-three supplied this information and the results are shown in Table I, which shows a distribution of salaries in increments of 1,000 dollars. The modal salary for the twenty-three teachers was 6,658 dollars.

TABLE I

SALARIES OF TEACHING GRADUATES

Salary increments	Number of graduates
11,000 - 12,000	2
10,000 - 11,000	0
9,000 - 10,000	0
8,000 - 9,000	2
7,000 - 8,000	5
6,000 - 7,000	10
5,000 - 6,000	4

The wide range of salaries can be partially explained by the number of years of teaching experience and the length of the contract period. In Table II, the salaries are equated with the number of years of teaching experience. Graduates with two and three years of experience were all making in excess of 6,000 dollars per year. Further, only one with less than two years of teaching experience was making over 7,000 dollars per year.

TABLE II

SALARIES OF TEACHING GRADUATES
AND YEARS OF TEACHING EXPERIENCE

Salary	Teaching experience	Number
11,000 - 12,000	3 years	2
8,000 - 9,000	2 years	3
7,000 - 8,000	3 years	3
	1 year	1
6,000 - 7,000	3 years	2
	2 years	5
	1 year	1
	Less than 1 year	3
5,000 - 6,000	Less than 1 year	4

Table III reflects salaries as compared to length of contract period. These figures show an average of 400 dollars additional for a 10-month contract and 1,700 dollars additional for a 12-month contract over the nine-month contract.

TABLE III

MEDIAN SALARIES OF TEACHING GRADUATES AND LENGTH
OF CONTRACT

Length of contract period	Number	Median salary(dollars)
12 months	5	7,800
10 months	8	6,500
9 months	10	6,100

Other factors which may have had a bearing on salaries were the level and the type of program in which the teacher was working, the amount of graduate study completed, the geographic area in which he was teaching and the amount of work experience in the trade.

Graduates were asked to report the number of months of work experience they have accumulated in their trade since graduation. This being a factor in certification as well as salary, it was important along with teaching experience and graduate study. Nine teachers reported a total of 70 months of work experience as shown in Table IV.

TABLE IV

TEACHING GRADUATES AND MONTHS OF WORK EXPERIENCE

Work experience	Teachers
2 months	1
3 months	3
5 months	1
7 months	1
9 months	1
14 months	1
24 months	1

Other information of interest that was obtained from the questionnaire was the age of the teacher, his marital status and the number of children. The mean age of the twenty-five teachers was 26.8 years which was thought to be somewhat older than the typical teacher with from one to three years teaching experience. Seventeen reported they were married and had a total of eighteen children.

The twenty-five teaching graduates were asked to supply information about advanced study since being graduated from Ferris. Two had completed their master's at the University of Michigan and were working beyond the master's. Twelve were working for the master's degree and seven contemplated graduate study in the future. Table V shows this information tabulated by school.

TABLE V

TEACHING GRADUATES AND THEIR PARTICIPATION IN GRADUATE STUDY BY SCHOOLS

School	Plan graduate study	Working on Master's	Completed master's	Working beyond
Colorado State University	1			
Eastern Michigan University	1	1		
Michigan State University	2	4		
Northern Michigan University		1		
University of Michigan	2	2	1	1
Wayne State University		3		
Western Michigan University	1	1		
Totals	7	12	1	1

NON-TEACHERS

Twenty graduates reported they were employed in industry and one reported he was a navigator in the United States Air Force. Of the four graduates who did not return their questionnaires one was known to be in the Marine Corps. The other three were believed to be working in industry.

Four graduates reported their employment was not closely related to their education at Ferris State College. Another graduate indicated he had taken a temporary job while waiting to begin graduate

study. In the other two cases, they had changed occupations because of better opportunities. Three of the twenty-one reporting said their employment was in some way related to teaching in industry. Six others reported that a teaching degree was necessary for obtaining their present position. Fourteen indicated they were giving consideration to teaching in the future.

In responding to the question of why positions were sought and obtained in industry rather than in teaching, the most frequent reason was better salaries. This was mentioned fourteen times. Other frequently-mentioned reasons were better advancement opportunities, need for more work experience, and teaching positions were not available at time of graduation.

Five reported they were going to school on a part-time basis. Three of these were in organized programs leading to advanced degrees.

The salaries of the twenty-one non-teachers reporting were ranked. The modal salary was 8,200 dollars. Table VI shows a distribution of salaries in increments of 1,000 dollars.

TABLE VI

SALARIES OF NON-TEACHING GRADUATES

Salary increments	Number of graduates
Above 12,000	1
11,000 - 12,000	1
10,000 - 11,000	1
9,000 - 10,000	3
8,000 - 9,000	6
7,000 - 8,000	6
6,000 - 7,000	3

In comparing the two groups (teachers and non-teachers) it is found that twenty-five (exactly half) were assiciated with teaching in public schools or are attending graduate schools. At least three others were engaged in a teaching situation in industry. The responses of the non-teachers definitely suggested an interest in teaching for the future. Fourteen of the nineteen reporting so indicated. In most cases the reasons for being in industry relate to salary and/or a need for additional work experience.

SUMMARY

Table VII reveals a breakdown of the fifty graduates by majors and classified as teachers, non-teachers and non-reporting.

TABLE VII

TEACHING GRADUATES AND NON-TEACHING GRADUATES
CLASSIFIED BY MAJORS

	Teachers	Non-Teachers	Non-reporting
1. Automotive Service	5	3	1
2. Drafting	1	2	
3. Heavy Equipment & Diesel	2	1	
4. Machine Tool	7	3	
5. Printing	7	9	2
6. Radio and Television	3	3	1
	25	21	4

A comparison of the two groups reveals the salaries are substantially better for non-teachers. However, the mean contract period for teachers was found to be ten months. Other factors were involved which tended to render any attempt to make a comparison difficult. Such things as the opportunity for supplemental income, holidays, paid vacations, fringe benefits and the opportunity for

advancement could only be evaluated on a personal basis. Table VIII compares salaries as they were reported with no attempt to adjust for the work year or other factors mentioned above.

TABLE VIII

COMPARISON OF SALARIES OF TEACHING GRADUATES WITH NON-TEACHING GRADUATES

Salary increments	Number of teachers	Number of non-teachers
Over 12,000	0	1
11,000 - 12,000	2	1
10,000 - 11,000	0	1
9,000 - 10,000	0	1
8,000 - 9,000	2	6
7,000 - 8,000	5	6
6,000 - 7,000	10	3
5,000 - 6,000	4	0

The teaching graduates were asked to comment on their professional preparation at Ferris State College.[2] These comments reflected an attitude of interest and a desire to contribute to the study on the part of the graduates. Some of the comments were edited in the interest of brevity. Several respondents made similar comments in which case they were not repeated.

A directory listing the names of the fifty graduates, their addresses, the names and addresses of their employers and their job titles was prepared.[3] This information may be of interest and value to the reader in one or more of the following ways:

a. Renewing contacts with former friends.

b. Locating qualified personnel for filling vacancies.

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2. See Appendix B for comments.
3. See Appendix C for directory.

c. Creating better rapore between Ferris State College and the graduates.

d. Encouraging participation in future follow-up studies.

CONCLUSIONS

The data gathered within the limitations of this study would seem to support the following conclusions concerning the graduates of the Trade-Technical Education program at Ferris State College.

1. The graduates appear to have a high professional interest in teaching as evidenced by the fact that twenty-three taught during the 1965-66 school year and two others attended graduate school. Only six of the forty-six graduates reporting indicated no future interest in teaching. Of the twenty employed in industry, three were engaged in teaching activity. Fourteen of this group indicated a definite interest in teaching in the future.

2. As a group, the non-teachers seemed to feel their work experience was a necessary part of their preparation for teaching.

3. Better salaries offered by industry constituted a major contributing factor for not teaching. This reason does not appear to be sound when actual salaries are compared. Although salaries reported were somewhat higher for the non-teaching group, the difference did not seem great when the length of contract year, work week, vacation, opportunities for graduate study and other intangables were taken into consideration.

4. Interest in graduate study as a means of professional growth was high with the teacher group. A total of twenty-one of the twenty-five had completed, were working on, or planned to work on an advanced

degree. The teachers appeared to prefer graduate study over work experience as a means of professional growth. Only nine of the teachers had collected work experience outside of teaching since graduation. These nine had accumulated a total of 64 months of such experience.

5. Most of the teachers had found employment at the high school level in vocational-type programs.

6. Their preference for future employment as expressed by both teachers and non-teachers was at the post-high-school level in community colleges and four year institutions. They seemed to feel that additional work experience and an advanced degree would qualify them for this level of teaching.

It was evident that graduates of the Ferris State College Trade-Technical Education program, whether teaching or not teaching were enthusiastic about their undergraduate preparation. This conclusion was drawn from the nature of the comments made by the participants along with the enthusiasm with which the information for this report was supplied.

APPENDIX A - QUESTIONNAIRE FORMS

April 26, 1966

To Graduates of Ferris State College
With Majors in Trade-Technical Education

Gentlemen

Because of the tremendous response received from Trade-Technical Education graduates to a follow-up questionnaire last year, it has been decided to make this contact with you annually each spring. I hope you like the idea and will respond spontaneously.

The follow-up study is intended to perform a real service for you in assisting you in your professional growth. For example, I have a folder of many good job opportunities--especially for teachers who have the Masters degree with work and teaching experience. Many jobs are not being filled because of the short supply of teachers, and believe it or not, salaries are getting better.

You will note that some of the questions are rather detailed and personal. I must have this kind of information if I am to be of maximum service to you. For example, there would be little sense in my recommending you for a $10,000 job if you are already making $12,000 per year; or of recommending you at all if you have no desire to move.

Many inquiries come from industry as well as from the teaching profession, therefore, I need to maintain the contact with you non-teaching graduates as well. Then too you might just be interested in coming back into teaching if the economics were conducive.

In any event, we have gone to a good deal of work to put together a two part follow-up questionnaire which is intended primarily to help us help you. I trust that you will fill out the appropriate part as applicable to you and fire it back in the envelope provided. We in turn will send you a summary of the study when available.

Sincerely

W. F. VanTrump, Director
Trade-Technical Education

WFVT:dmw

Enclosures

APPENDIX A-QUESTIONNAIRE FORMS (cont)

FOLLOW-UP STUDY OF GRADUATES OF FERRIS STATE COLLEGE
WITH MAJORS IN TRADE-TECHNICAL EDUCATION
April 1966

TO BE FILLED OUT BY TEACHERS AND STUDENTS IN GRADUATE SCHOOL

Name _____ Age _____
Last Name First Initial

Present Address _____
Street and Number

_____
City State Zip Code

Married ____ Yes
____ No

Number of Children ____ boys
____ girls

(1) Name and address of Employer _____

_____

(2) Are you teaching in the curriculum area from which you graduated from Ferris? If no, please explain. _____

_____

(3) At what level are you teaching? Jr. High ( ) Senior High ( ) Post High ( ) Ungraded ( ) Industry ( ) Comments _____

_____

(4) Type of program in which you are teaching. Industrial Arts ( ) Vocational Education ( ) Manpower Retraining-MDTA ( ) Training Unit ( ) Other ( )

Comments _____

_____

(5) What is your present salary?
NOTE: One thing we hope to learn from this study is how the earnings of our graduates who are employed in Education compare with those in other fields outside education. You salary will be held in strictest confidence and will be revealed only in table form; so please provide us with complete data on this point. A summary of the study will be sent to each respondent. From this you can tell how you are doing salary-wise in comparison with others.

(a) Regular Contract Salary $_____

(b) Supplemental Annual Salary (summer school, consultant fees, etc. if paid separately) $_____

(c) Total annual salary earned this year through your profession. $_____

(6) Length of Contract Year 9 Months ( ) 10 Months ( ) 11 Months ( ) 12 Months ( ).

(7) Indicate the number of years of teaching experience. _____

(8) In the table below, list the additional education you have had since graduation from Ferris:

Table I

Name of Institution	Address of Institution	Major Field of Training (i.e., Ind. Ed., School Adm., Welding, etc.)	Type of Training Full time, Military, Summer School, On-the-job, Private, Industry sponsored, Night School, Correspondence, Public

(9) In the table below, list any degrees which you have received since graduation from Ferris:

Table II

Degrees Received	Year	Institution Conferring the Degree

(10) If you are currently working toward a graduate degree, give the following data:

(a) Type of degree _____ in _____
M.A., Ed.D. Major Area

(b) College or University _____

(11) If the preceding question does not apply to you; do you plan to begin work toward a graduate degree in the future? Yes ( ) No ( ) Uncertain ( ) If you plan graduate work in the future, where do you plan to do your graduate work?

_____

_____

(12) Do you plan to continue at your present position? Yes ( ) No ( ).
If no, please describe the type of position of interest for which you feel you can qualify.

_____

_____

_____

(13) Are you accumulating additional Vocational experience by virtue of supplimentary employment? Yes ( ) No ( ).

(14) In the table below, list any work experience which you have received since graduation from Ferris. (List most recent employment first).

Table III

Dates of Employment				Aver. hrs. worked per week	Name and Address of Employer	Brief Description of Duties
From		TO				
Month	Year	Month	Year			

(15) What could have been included in your teacher preparation that would have increased your efficiency as a teacher?

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

FOLLOW-UP STUDY OF GRADUATES OF FERRIS STATE COLLEGE
WITH MAJORS IN TRADE-TECHNICAL EDUCATION
April 1966

TO BE FILLED OUT BY NON-TEACHERS

Name _____ Age _____
Last Name First Initial

Present Address _____
Street and Number

_____
City State Zip Code

Married ____ Yes
____ No

Number of Children _____ boys
_____ girls

---

(1) Name and address of Employer _____

_____

(2) Are you working in the major area in which you were trained at Ferris?
Yes ( ) No ( ).

(3) What is your present job title? _____

_____

(4) Record of Employment (List present position first).

Date of Employment				Name and Address of Employer
From		To		
Month	Year	Month	Year	

(5) What is your present salary?
NOTE: One thing we hope to learn from this study is how the earnings of our graduates who are employed in Education compare with those in other fields outside education. Your salary will be held in strictest confidence and will be revealed only in table form; so please provide us with complete data on this point. A summary of the study will be sent to each respondent. From this you can tell how you are doing salary wise in comparison with others.

(a) Regular Salary or Wages $_____

(b) Supplemental Annual Salary(Commission, etc.) $_____

(c) Total annual salary earned this year through your job.

$_____

(6) Was a degree in teaching necessary to obtain your present position? Yes ( ) No ( ).

(7) Why did you select industry instead of teaching? State reasons _____

_____

_____

_____

(8) Are you considering teaching in the future? Yes ( ) No ( ).

(9) Would you like to be notified of teaching positions for which you would qualify? Yes ( ) No ( ). If yes, please answer questions 7, 8, and 9 of the teachers questionnaire.

(10) Describe briefly the type of teaching position that would interest you, and for which you feel you qualify.

_____

_____

_____

(11) This questionnaire does not apply to me. Reasons _____

_____

_____

(12) Other comments. _____

_____

_____

APPENDIX A - Questionnaire Forms

May 17, 1966

Forms designed to gather information from the graduate of the Ferris State College Trade-Technical Education program were mailed on April 27, 1966.

The response to the forms has been very encouraging. To date, 21 replies have been received out of the 51 mailed; however, our records indicate that your form has not yet been received. We realize, of course, that you are busy and may have put the form aside temporarily. The information requested is needed in order to secure an appraisal of the teacher education program. Also, it is intended to provide information of value to you, the graduate of Trade-Technical Education.

Would you therefore, please fill out the form today and return it so we can include your information in the study.

An additional form and return envelope is provided in the event the original has been misplaced. If you have already mailed the completed form, please disregard this letter.

A summary of the information gathered will be available for you at a later date.

Sincerely

W. F. VanTrump, Director
Trade-Technical Education

WFVT:dmw

Enclosures

APPENDIX B

COMMENTS FROM GRADUATES WHO ARE TEACHING

1. Need a course in student discipline.

2. Need a course on the culturally deprived student--how to help them with their problems which they face.

3. Need some experience with students on the secondary level.

4. Need a practical course dealing with problem students and discipline. Things were too ideal at Ferris State College.

5. Need more training in technical research. Have more problems in keeping up with the trade area than with presenting information to students.

6. Need a brief introduction to the use of the opaque and overhead projector.

7. I am planning a new shop. Many concepts were not covered in the college course.

8. I feel that the Ferris Trade-Technical Education program will not take second place to any college which offers a similar type of program. The standards are high--the Trade program is the best--the teacher education program is the best. Keep the standards high, and our good reputation will always follow us.

9. Need more secondary education experience and more information in the teaching of specific areas.

10. Need better organized and supervised work experience requirements.

11. Need more diversified work experience both in school and in industry. Six months is really a rather short time. Fewer students for each piece of equipment at Ferris would help a great deal.

12. A good instructional materials course, including visual aids would have been most helpful. By good, I mean one programmed exclusively for vocational technical educators and preferably taught by someone with a background in vocational teaching.

13. Somewhere along the line educational statistics should be introduced to give the student enough background so he can understand research.

14. Some knowledge of how local, city, county, and state education is organized.

Appendix B (continued)

15. A course in psychology dealing with the understanding of human beings would have been helpful.

16. Would liked to have had my student teaching in a high school.

17. How to sell the need for up-to-date equipment to the school administration.

18. I feel I would have benefited more by doing my student teaching on the high school level.

19. I would of liked a class in federal vocational laws and how to apply for federal funds.

20. Possibly a course in adolescent psychology.

APPENDIX C

DIRECTORY OF TRADE-TECHNICAL EDUCATION GRADUATES

Alward, Walter E. Lot 25, 6335 Park Lane Road Bath, Michigan 48808 Major--Automotive Service	Oldsmobile Division Lansing, Michigan Technical Writer
Anderson, Jeffrey L. Route #6, Box 205D Dawagiac, Michigan Major--Heavy Equip. & Diesel	Clark Equipment Company Pipestone Road Benton Harbor, Michigan Assistant Service Training Manager
Arcy, Thomas H. 4271 Ann Saginaw, Michigan 48603 Major--Radio & Television	Saginaw Township Community Schools Saginaw, Michigan Teacher (electronics)
Barrick, Gerald 18531 Wildwood Lansing, Illinois Major--Printing	Rand McNally Company Hammond, Indiana Industrial Engineer
Bilby, James K. 413 South River Road Saginaw, Michigan 48603 Major--Printing	Saginaw Township Community Schools 5685 Shattuch Road Saginaw, Michigan Teacher (printing)
Brown, William H. 7436 Madison Forest Park, Illinois Major--Printing	The Veritone Company 2020 Ruby Street Melrose Park, Illinois Production Control Operator
Cable, Larry G. 26235 W. Warren Avenue Dearborn Heights, Michigan 48127 Major-- Drafting	General Motors (Fisher Body Div.) Technical Center Warren, Michigan Project Engineer(Safety Analysis Group)
Cron, John W. 1080 Crestlane Saginaw, Michigan 48601 Major--Drafting	Saginaw Steering Gear 3900 Holland Road Saginaw, Michigan Jr. Tool Designer
DeFouw, Eugene A. 526 Packard Street Apartment 201 Ann Arbor, Michigan 48104 Major--Drafting	Ford Motor Company Product Engineering Office 20000 Rotunda Drive Dearborn, Michigan Product Design Engineer

APPENDIX C (continued)

(DIRECTORY OF TRADE-TECHNICAL EDUCATION GRADUATES)

DeKryger, William Major--Automotive Service	Marine Corps
Dilley, Robert W. 2346 Stair Street Detroit, Michigan Major--Printing	Miller Junior High School 2322 Dubois Street Detroit, Michigan Teacher (printing)
Duddles, Allen L. 505 Rockland Avenue Mamaroneck, New York 10543 Major--Radio and Television	The Technical Material Corp. 700 Fenimore Road Mamaroneck, New York 10543 Field Engineer
Fox, Richard D. 126 E. Crescent Street Marquette, Michigan Major--Printing	Public Service Garage Washington Street Marquette, Michigan Mechanic (fill in service manager)
Garvelink, Leland 692 W. 26th Street Holland, Michigan Major--Machine Tool	Lear Siegler Inc. 4141 E. Stern Avenue Grand Rapids, Michigan Fabrication Process Engineer
Harris, Richard F. 2124 S. Harvey Berwyn, Illinois 60402 Major--Printing	LaSalle Extension University 417 S. Dearborn Chicago, Illinois Graphic Arts Buyer
Howard, Richard H. 2860 Taft Avenue, Apt. 9 Wyoming, Michigan 49509 Major--Heavy Equip. & Diesel	Kent Intermediate School District 316 Ottawa Avenue, N.W. Grand Rapids, Michigan Teacher-coordinator
Hugel, John E. 24837 Calvin Dearborn, Michigan 48124 Major--Radio and Television	Dearborn Public Schools Dearborn, Michigan Teacher (Radio and Television)
Jenson, Larry L. 85 Hamilton Plaza Fond Du Lac, Wisconsin Major--Machine Tool	Fond Du Lac Vocational Technical & Adult School 805 East Johnson Fond Du Lac, Wisconsin Teacher (machine tool)

APPENDIX C (continued)

(DIRECTORY OF TRADE-TECHNICAL EDUCATION GRADUATES)

Johnson, Roger L.D. 508 Corning Avenue Frankfort, Michigan 49635 Major--Printing	Presscraft Papers, Inc. Benzonia, Michigan Production Control
LaFlame, Patricia J. 612 Lilac Avenue Big Rapids, Michigan 49307 Major--Printing	Michigan State University East Lansing, Michigan Graduate Student
MacDonald, Keith 6437 Reuter Dearborn, Michigan 48126 Major--Printing	Detroit Public Schools School Center Building Detroit, Michigan Teacher (printing)
Malish, Edmund	No information
Mallick, Lawrence	No information
Mason, Charles E. 1716 Lynwood Lane Pueblo, Colorado 81004 Major--Automotive Service	Southern Colorado State College 900 W. Orman Pueblo, Colorado 81000 Teacher (automotive)
McInerney, Brian W. 1130 S. Washington Saginaw, Michigan Major--Radio and television	Saginaw Steering Gear Plant 3, 3900 Holland Saginaw, Michigan Graduate Training
Meurer, Peter 1021 North Baywood Holland, Michigan Major--Machine Shop	Rutgers Tool & Die Holland, Michigan Die Maker
Mikols, John F. 453 Jones Ionia, Michigan 48846 Major--Machine Tool	Michigan Training Unit Ionia, Michigan Teacher (machine tool)
Miller, Larry D. 715 West Avenue Big Rapids, Michigan Major--Machine Tool	Hanchett Magna-Lock Corp. 1020 East Maple Street Big Rapids, Michigan 49307 Engineer

APPENDIX C (continued)

(DIRECTORY OF TRADE-TECHNICAL EDUCATION GRADUATES)

Nagy, Bill A. 19200 Huron River Drive New Boston, Michigan 48164 Major--Machine Tool	Belleville High School Belleville, Michigan Teacher (Machine Tool)
Norsworthy, Robert J. 212 Pilgrim Avenue Highland Park, Michigan Major--Printing	Aronsson Printing Company Highland Park, Michigan Salesman
Omness, Loren O. 120 Cornell S.E., Apt. 105 Albuquerque, New Mexico 87106 Major--Machine Tool	Albuquerque Technical Vocational Inst. 525 Buena Vista S.E. Albuquerque, New Mexico 87106 Teacher (machine tool)
Perpich, Edward L. 29065 Badelt Westland, Michigan Major--Printing	Ford Motor Company Dearborn, Michigan Coordinator A
Pierson, Thomas M. 11185 Secor Road Temperance, Michigan Major--Machine Tool	Bedford High School 8285 Jackman Road Temperance, Michigan Teacher (machine tool)
Prins, Paul W. 521 LaSalle Street St. Joseph, Michigan Major--Machine Tool	Coloma Community Schools Coloma, Michigan Teacher (machine tool)
Pugsley, Ronald L. 4906 East Pickard Mt. Pleasant, Michigan 48858 Major--Radio and Television	Dow Chemical Company 615 Building Midland, Michigan Teacher (Electronics and Math)
Ranger, George E. 1091 Belding Road Orleans, Michigan 48865 Major--Automotive Service	Michigan Training Unit Box 492 Ionia, Michigan Teacher (Automotive)
Riemenschneider, E. Michael 2400 Augustine Drive Parma, Ohio 44134 Major--Automotive Service	Ford Motor Company 5800 Grant Cleveland, Ohio Service Claims Adjustor
Rosebrook, James B. Colonial House Apartment 30 Big Rapids, Michigan 49307 Major--Printing	Ferris State College Big Rapids, Michigan 49307 Teacher (Printing)

APPENDIX C (continued)

(DIRECTORY OF TRADE-TECHNICAL EDUCATION GRADUATES)

Rye, Glenn W. Hessel, Michigan 49745 Major--Automotive Service	Sault Ste. Marie Public Schools Sault Ste. Marie, Michigan Teacher (automotive)
Sage, James E. 830 Merton Road Detroit, Michigan Major--Radio and Television	Detroit Board of Education Detroit, Michigan Teacher (radio and television)
Sandri, Kenneth J. 3045 Maffett Street Muskegon, Michigan Major--Printing	School District of Muskegon Heights Peck and Sherman Muskegon Heights, Michigan Teacher (Printing)
Scott, Elton D. 212 Nora Street S.E. Grand Rapids, Michigan Major--Machine Tool	Wyoming Public Schools Wyoming, Michigan Teacher (machine tool)
Selvius, Norman Columbus, Ohio Major--Radio and Television	Columbus Public Schools 270 E. State Street Columbus, Ohio Teacher (Radio & Television)
Smith, Ronald D. 2408 Moraine Circle, Apt. 2 Rancho Cordova, California Major--Automotive Service	United States Air Force Navigator
Stechschulte, Robert L. 4154 Oriole Avenue S.W. Wyoming, Michigan Major--Printing	Edward Brothers Inc. 2500 South State Ann Arbor, Michigan Salesman
Tims, Michael A. 24071 Seneca Oak Park, Michigan 48237 Major--Automotive Service	Melvindale-Northern Allen Park Public Schools 18656 Prospect Melvindale, Michigan Teacher (automotive service)
VandenBosch, Adrian J. 1500 Marlbora Roosevelt Park, Muskegon, Michigan Major--Heavy Equipment & Diesel	Muskegon Community College 349 Webster Avenue Muskegon, Michigan Teacher (Heavy Equip. & Diesel)

APPENDIX C (continued)

(DIRECTORY OF TRADE-TECHNICAL EDUCATION GRADUATES)

VanOordt, Paul K. 1244 Blakeslee Kalamazoo, Michigan 49007 Major--Printing	Lansing School District Cedar-Holmes Building 3426 S. Cedar Lansing, Michigan 48910 Teacher (printing)
Wenzlaff, Robert C. 606 Bjornsen, E-7 Big Rapids, Michigan 49307 Major--Automotive Service	Ferris State College Big Rapids, Michigan 49307 Teacher (automotive)
Worrell, Stanley O. 550 Harrison Avenue, Apt. 67 Lincoln Park, Michigan Major--Printing	West Senior High School Garden City, Michigan Teacher (printing)

VT 001 515
Moore, James W.
Reducing the School Dropout Rate--A Report on the Holding Power Project.
New York State Education Dept., Albany. Bureau of Guidance
MF AVAILABLE IN VT-ERIC SET.
Pub Date - Jul65 18p.

*DROPOUT RESEARCH; *DROPOUTS; *DROPOUT CHARACTERISTICS; *SECONDARY SCHOOLS
NEW YORK

Objectives of the project were: (1) to improve the holding power of the secondary schools, (2) to determine factors for predicting and preventing dropouts, and (3) to continue improvement of guidance services. In 1954, more than 12,000 pupils, who would complete high school as the class of 1960, in 89 school districts, were selected as a sample for a longitudinal study. The schools were selected from 54 of the state's 62 counties. A reporting system was established which provided information on the progress of all the sample, especially dropouts or potential dropouts. Percentages, by grade, of pupils who stayed in school are: (1) grade 7, 99.5 percent, (2) grade 8, 17.7 percent, (3) grade 9, 94.2 percent, (4) grade 10, 89.4 percent, (5) grade 11, 84.1 percent, (6) grade 12, 80.5 percent and (7) graduates, 77.9 percent. During the study, dropouts totalled 2,616. Dropouts occurred all during the year with the summer months accounting for 24 percent and September and January accounting for 11 percent. The project revealed that school retention rates can be improved if personnel: (1) work on the problem, (2) involve the parents, and (3) take advantage of the predictive possibilities of the project-developed checklist, "Pupil Holding Power Data." (EM)

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REDUCING THE SCHOOL DROPOUT RATE –

A REPORT ON THE HOLDING POWER PROJECT

VT 01515

The University of the State of New York
The State Education Department
Bureau of Guidance
Albany, 1965

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Sg113-Je65-1000

REDUCING THE SCHOOL DROPOUT RATE –

A REPORT ON THE HOLDING POWER PROJECT

First printing July 1963
Second printing May 1964
Third printing June 1965

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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The University of the State of New York
The State Education Department
Bureau of Guidance
Albany, 1965

FOREWORD

"Nation Needs More Skilled Manpower," "Youth Unemployment Grows," "School Dropouts Unprepared for Work"—such headlines are numerous. They emphasize the great concern in the nation for fuller utilization of human potentialities and the greater implementation of the concept of universal secondary school education for all our youth.

The phrase, "stay in school," has been used over and over as an admonition and encouragement for youth to be persistent in their school attendance. A companion phrase, "keep them in school," might well be coined and used to highlight the school's responsibility for a deeper commitment to providing appropriate education for all children and youth.

Over the years, there have been many studies of school dropouts. A unique feature of the study reported in this bulletin is its longitudinal aspect. In this project, school and pupil characteristics and outcomes in relation to holding power were studied for six years.

This report gives a brief summary of more extensive information gathered and compiled by the Bureau of Guidance. Much of this information has been presented to project schools and other group meetings of school personnel throughout the State. Materials mentioned in the report have been distributed widely and are still available through the Bureau of Guidance. The 1958 "Stay-in-School" letter of Associate Commissioner Walter Crewson, which is still very timely, can also be obtained through the Bureau of Guidance.

When do dropouts leave school? What are the characteristics of dropouts? How can a school improve its holding power? These are some of the questions on which this report focuses attention. The project was carried out by 89 school districts in co-operation with the Bureau of Guidance, during the years when Bruce E. Shear was Chief. The concept of the 6-year holding power study was Mr. Shear's. Dr. Harold L. Munson, now of The University of Rochester, was project co-ordinator for the first 5 years, followed by James W. Moore. The latter has been responsible for preparation of this report, under the supervision of Dr. Irving Ratchick, present Chief.

June 1, 1963

Erwin Kleeck

Assistant Commissioner for Pupil Personnel Services and Adult Education

Reducing the School Dropout Rate

(A Report on the Holding Power Project)

I. Purpose

The Holding Power Project was conducted by the Bureau of Guidance in co-operation with 89 school districts between 1954 and 1960. The specific objectives of the project were these:

1. The improvement of the holding power of the secondary units of the co-operating school districts
2. The determination of factors by which early school leaving might be predicted and prevented
3. The continuous improvement of the guidance services in the co-operating districts

II. Procedures

Holding power was defined as the ratio of the number of graduates from a single class in a secondary school, to the potential number of graduates from that class, expressed as a per cent. All pupils who were ever members of the class during its secondary school years and who did not voluntarily leave the group were considered potential graduates. Thus, pupils entering the group by transfer or retardation were considered potential graduates, and pupils transferred or retarded out of the group were not so listed. Dropouts were included as potential graduates.

The project began in 1954, when members of the class of 1960 in the co-operating schools entered grade 7 and commenced their secondary program. More than 12,000 pupils, including all those enrolled in grade 7 in the schools, were involved initially.

As with the other projects co-ordinated by the Bureau, the Holding Power Project was primarily conceived for demonstration purposes. For this reason, wide geographical distribution of co-operating districts was sought and achieved. Because the U.S. Office of Educa-

tion was pursuing a study of the school retention rates in large cities at the time the Holding Power Project was being developed, the largest cities in the State were not included in the project. The 89 participating districts were located in 54 of the 62 counties in the State. The number of project pupils in the districts ranged from less than 20 to approximately 700. Twenty per cent of the districts enrolled 50 per cent of the total project population.

The aims of the project were pursued through activities which emphasized early identification of potential dropouts and the development of effective measures to retain them in school. A reporting system was established which provided information on the progress of all members of the pupil population, especially those thought to be potential dropouts and those who did become dropouts.

Individual members of the class were carefully identified. This practice was repeated for all members entering and leaving the study group at each grade level until graduation of the class in June 1960. The disposition of each member of the group toward early school leaving was estimated annually through reference to a list of student characteristics known to be associated with "dropping out." This instrument *(Pupil Holding Power Data)* was prepared by the Bureau. Special efforts were made by the school personnel to prolong the attendance of students whose ratings included a preponderance of "vulnerable" items. Annual reports describing the status of all members of the project population were prepared for school use and copies forwarded to the Bureau. Additional data were supplied concerning those pupils who did withdraw voluntarily from school; i.e., the dropouts.

To assist schools in the systematic collection of information concerning project activities, several forms were developed by the Bureau. The *Record Check List* outlined the types of pupil information that the districts were advised to collect, maintain, and use concerning each pupil. The rating scale, *Pupil Holding Power Data,* has been described above. The *Identification and Separation Record* detailed for each pupil in the study population, the conditions under which he arrived in or departed from the group. The *Voluntary Withdrawal Data Sheet,* prepared only for dropouts, included an account of certain critical pupil characteristics. The *Annual Holding Power Summary Sheet* summarized, at the end of each year, the movements of individual members of the population during the year and listed the net registration at the end of the year. The *Annual Sum-*

mary Sheet was forwarded each year to the Bureau, together with all data pertaining to dropouts during the year.

These forms — as well as a series of bulletins prepared at the end of each project year which described effective practices noted in the schools *(Holding Power Practices Bulletin 1–6)* — may be obtained from the Bureau of Guidance, State Education Department, Albany, New York 12201, upon request. These practices were observed by Bureau supervisors during their visits to the schools to assist local staff members in implementing project objectives. Beginning in 1954–55, and continuing through the term of the project, each school was visited by a Bureau supervisor twice each year. To provide for exchange of ideas, area meetings of project district representatives were held the first 2 years of the project.

Beyond the preparation of certain uniform reports and the annual survey to discover potential dropouts, the co-operating schools did vary in their project efforts. In some instances the reduction of early school leaving was accepted as a challenge by the co-operating school staffs and truly fruitful attacks on the problem were made. In some cases, project activity gradually became limited to record keeping. The consistent intent of the Bureau was to stimulate and encourage schools in their attempts to reduce the incidence of early school leaving rather than merely to observe and describe the situation as it existed.

III. Findings

A. Holding Power Rates

1. The total pupil population

   a. The percent of potential graduates retained in school at the end of each grade level is recorded below:

Grade	% of retention (holding power)
7	99.5
8	97.7
9	94.2
10	89.4
11	84.1
12	80.5
Graduated	77.9 (data from 81 of 89 schools reported)

b. The per cent of males graduated was 73.1 and of females, 82.8.

2. School holding power rates

   a. The median per cent of potential graduates retained through the end of grade 12 in all 89 districts was 80.

   b. The median per cent of potential graduates actually graduated in the 81 districts which reported this figure was 77.

   c. In 81 districts which reported, the per cent of potential graduates actually graduated both for the class of 1954 and the class of 1960, the median rate improved from 72 per cent in 1954 to 77 per cent in 1960.

3. During the project term, a total of 2,616 pupils left the total study population as dropouts, distributed by grade level as follows:

Grade	Number of dropouts
7	55
8	211
9	519
10	679
11	657
12	495

B. Factors Affecting School Holding Power

1. **Size of the Class:** Schools in which the study population included less than 100 pupils or more than 200 pupils did not retain proportionately as many pupils as those with classes in the range between 100 and 200 pupils. This, of course, relates to the community factor, below.

2. **Community Type:** The retention rates in large cities and small rural districts were not so high as those in communities of intermediate size and location.

3. **School Retention Efforts:** Schools which improved their holding power rates the most over the term of the project exerted more efforts of all types to retain pupils than did schools which improved their rates the least. The difference between the levels of efforts was statistically significant.

4. **Educational Appreciations:** On a pupil questionnaire, seniors in high holding power schools indicated more appreciation of the values inherent in education than did seniors in low holding power schools. The difference between the degrees of appreciation was statistically significant.

C. Dropout Mobility

The careful identification of members of the project group in each school has been mentioned. This process was essential to the accurate determination of holding power per cent. However, a further advantage has been its usefulness in determining the mobility of the project group, and particularly the voluntary withdrawals from it.

Of those pupils who left the class as dropouts, approximately one third came to be in the class because they were members of it when the project started, another third entered as transfers from other school systems, and the final third joined the class when they failed to be promoted to a higher secondary grade within the school system.

Of all those pupils who joined the class because of retardation, nearly 40 per cent eventually chose to drop out of school, frequently before a year had elapsed. The negative effect of retardation was further highlighted by the fact that only 3 per cent of a sample of project pupils who remained in school through grade 12 joined this class as retardees during their secondary school years.

The act of transferring from school to school did not appear to predispose pupils to early school leaving, since the per cent of dropouts who entered the project class as transfers and the per cent of pupils who remained in school but who joined their graduating class as transfers were approximately equal.

The pupil accounting process made available information concerning the apparent destinations of voluntary withdrawals. Of those known by school officials, " employment " was the largest, at each grade level. However, the popularity of this item declined as the project progressed with " enlistment " for boys and " marriage " for girls assuming ever increasing importance. In grade 12, 31 per cent of the dropouts entered employment, 31 per cent of the dropout boys joined the armed services, and 25 per cent of the girls left to become married.

D. Reasons for Dropout

The reflections of pupils who chose to leave school and the reflec-

tions of their counselors, upon this decision, were collected for study. Ostensibly, these were recorded following an exit interview which project practice required for each voluntary withdrawal. In some cases, particularly those of summer withdrawals, an interview was impossible, but the counselors' comments were nonetheless solicited.

More than half of the situations described by counselors as affecting the decision to depart grew out of factors inherent in the reactions of pupils to their school environment. It was considered impractical to attempt to assign the precipitating role to either the pupil or the school in these situations. The per cent of such problems ascribed to males was nearly one and one-half times that for females.

Two other categories included most of the other withdrawal influences identified by school officials. Those associated with the family of the dropout accounted for one quarter, and those resident uniquely in the pupils themselves (physical, social-emotional problems), another seventh.

The specific elements most often described by counselors included the attitude of the pupil's parents, the pupil's lack of success in school, his low ability, and his indifference to the demands of the school environment. For girls alone, considerations related to marriage were frequently mentioned.

Following the exit interview, the counselors also noted the reasons advanced by pupils for their decision to leave. Most frequently cited were " dislike school," " prefer job to school," " failure in subjects," "want own income," and for females, " desire to marry."

A comparison of the rationale of interviewers and dropouts shows a surprising degree of agreement.

E. School Retention Efforts

Together with the attention cited above to the reasons for withdrawal, interviewers were asked to note briefly, for individuals who left school, the efforts expended before their departure to assist them to remain. Slightly more than one third received no special attention according to the information provided. It is, of course, possible that this statistic reflects a weakness in record keeping rather than a lack of service. The counselor assisted 42 per cent, program adjustments were reported for 23 per cent, and the parents of 20 per cent were sought out for help with the problem.

The program adjustments generally took the form of admission to courses of study closer to the needs of the pupil than the offerings

otherwise available, or exemption from some of the school's regulations.

Female dropouts were less well served than males. No efforts were reported for a greater percentage of females. Also, counselors, teachers, and other staff members were listed as making efforts to retain a greater percentage of males than females. Further, a greater percentage of males than females was granted program adjustments, and more contacts were attempted with their parents.

F. Characteristics of Voluntary Withdrawals

Beginning with voluntary withdrawals in grade 8, the second year of the project, information concerning certain of the characteristics of the departing pupils was recorded. To add meaning to our analysis of these data, similar studies were made of the characteristics of pupils who remained in school, on topics where this treatment was pertinent.

1. **Month of Withdrawal:** During the summer months, when school was not in session, 24 per cent of the dropouts severed their connection with the school. September and January, months of new beginnings in school, were each chosen by 11 per cent as the date of departure. Smaller percentages were recorded for all other months during the school year.

2. **Age at Withdrawal:** As the project shifted its emphasis from grade level to grade level in concert with the progress of the class of 1960, an increase in the median age of withdrawal was noted. From 16–0 for pupils leaving in grade 7, the range extended to more than 18 years for senior boys and 17½ years for senior girls.

3. **Academic Accomplishments:** Pupils who chose to withdraw voluntarily did not fare well academically before departure, although the performance of girls was more satisfactory than that of boys. On the last report before departure, only one in five boys was credited with " passing work " in all his subjects in contrast with one in three girls. The academic subjects of English, social studies, mathematics, and science were more troublesome to early school leavers than other areas of study, although the failure rate of those in business education approached that of the academic subjects mentioned. Of special interest is the observation that the rate of failure in English was twice as high for males as females. Most programs of departing pupils included some combination of these subjects: English, social studies, mathematics, science, business education, and art. To this

list, boys most often added industrial arts; girls, homemaking education.

4. **Grades Repeated:** To be legally eligible to leave school at the median ages reported for the early grades of the study, it is obvious that our voluntary withdrawals must have spent more than the usual interval at some of the preceding grade levels. At least one grade had been repeated by 71 per cent of male withdrawals and 50 per cent of the girls. Only 9 per cent of the project members who completed the final year in the study population had this history.

The early secondary grades were most frequently repeated by early school leavers followed by grades at the elementary school level. At the former level, 44 per cent were not promoted regularly, 36 per cent at the latter. By way of contrast, among those pupils who did not drop out but who repeated some grades, 62 per cent were "held back" during the elementary years, but only 15 per cent repeated in the early secondary grades. The percentages who were not regularly advanced through the senior high school are approximately equal for the two pupil classifications.

5. **Measured Ability:** Some explanation of the scholastic difficulties of those who withdrew is apparent in their reported measured abilities, especially for withdrawals from the junior high school grades. Their median intelligence quotient was 84. For pupils who left during the senior high school grades, the median was 96. Most striking was the regular increase in the median quotient of pupils leaving at the several grade levels through which the project group progressed. From 75 in grade 7, this figure ascended to 100 in grade 12.

In comparison with pupils who remained in the group, voluntary withdrawals typically did not score well on measures of ability, although there was some overlapping in the distributions of the scores of the two groups. Intelligence quotients of more than 100 were reported for 75 per cent of those who remained in school but for only 36 per cent of those who left from the senior high school grades. The median quotient reported for pupils who remained in school was 108.

6. **Physical Condition:** Five of every six early school leavers were considered to be in good or excellent health. Females were regarded as slightly less robust than males. However, 17 per cent of the dropouts were described as in fair or poor health, but only 6 per cent of the retained students.

7. Attendance: Before withdrawal, students who eventually became dropouts attended school less regularly than students generally. Their percentage of attendance was 3 points less than that of all pupils in the year prior to withdrawal but 8 points less in the year during which they departed.

8. Family Attributes: The family structure of both junior and senior high school dropouts was less often "usually" organized (both parents present in the home) than were those of students who remained in school. However, as with other characteristics, the greatest disparity appeared among the junior high school group. The percentages of families so described were 64 for junior high school dropouts, 71 for those who left from the senior high school grades, and 84 among pupils who did not leave school before the end of grade 12.

The attitude of the parents of pupils toward continued school attendance for their children seemed to be of crucial importance. According to school officials, only one third of the parents of pupils who withdrew were positively oriented toward this question, in contrast with 90 per cent of the parents of pupils who remained in school.

G. Characteristics Reviewed

Our data suggest that to speak of a typical dropout is inaccurate. For example, what we have called the "asymptotic trend" was discovered, which suggests that, as students leave from successively higher grade levels, they become more and more similar to pupils who remain in school, in the degree to which they manifest certain characteristics, such as age at grade levels, measured ability, rated vulnerability to early school leaving, and academic success. Neither are the attributes of male and female dropouts interchangeable. Before citing some of these general differences, it may be of interest to note that the ratio of male to female dropouts was two to one in grades 7–9, five to four in grades 10–12, and three to two for the full project term.

Although very alike in measured ability, females were much more successful in their school work than males. Males, however, received more attention from school officials. Perhaps this was due to their poor work. Although we have no specific measure of the relative aggressiveness of the two sexes, it seems reasonable to expect more from the males, which also would bring them more often to the attention of school personnel. Problems growing out of reactions

of the pupil to his school setting were more often attributed to males. In the later phases of the study, females tended to leave at a younger age than males, frequently because of impending marriages.

H. The Reactions of Retained Pupils

An attempt was made to determine if the reactions of pupils to their educational programs generally, and specifically their guidance programs, were related to the holding power of their classes. The responses to two questionnaires of pupils in schools in the top and bottom quarters of the holding power distribution were compared.

Although the results for the two groups were more similar than dissimilar, certain important differences did appear. In high holding power schools, more pupils than in low holding power schools:

1. Exhibited needs for assistance in matters revealing a desire to exploit fully their present educational opportunities, including those which related to assistance in continuing their education
2. Had plans to continue their education
3. Had plans to enter professional occupations
4. Had tentative, rather than specific, choices of the eventual occupations they planned to enter
5. Did not plan to obtain a job following graduation

Further, in high holding power schools, more parents of pupils had been in contact with the counselor than was the case in low holding power schools. Also, pupils in the lower group of schools indicated a higher availability of counseling service, which was sufficient to their needs. This last was interpreted as perhaps due to less pressure in these schools for counseling assistance.

The types of assistance by the counselor to the two groups of pupils were not as distinctly unique as the differences portrayed above. There was evidence, however, that, in the important matters of educational and occupational planning, the counselor was regarded as the prime source of help more often by the lower than the higher group. Paralleling and partially explaining this preference is the suggestion, in our data, that high holding power school pupils seemed more independent of school resources in several areas than their counterparts in low holding power schools.

Previous experiences with one of the questionnaires, which had included an analysis of the results in terms of the socioeconomic status of the pupil respondents, revealed much the same variation

in counselor regard and general independence, between high and low status pupils as we have discovered between pupils in high and low holding power schools.

I. Prediction

A major objective of the project was " the determination of factors by which dropouts might be predicted and prevented." Prediction was attempted through a technique which required the annual rating of all pupils in the population on a scale, the items of which were associated in the literature with early school leaving. This device, developed by Bureau members, was entitled *Pupil Holding Power Data.* A study of the results for pupils who voluntarily withdrew, and for those who remained in school, indicated that the scale did predict future dropouts with acceptable accuracy. The ratings revealed, however, that greater success may be expected in the detection of potential male dropouts than female. Approximately 80 per cent of the males were identified as possible early school leavers at least a year before withdrawal, and the figure was about 70 per cent for females.

Two trends, which appeared together, were discovered. The first was another manifestation of the " asymptotic trend " earlier noted. In this instance, it was displayed as a decreasing average vulnerability rating as withdrawals from successively higher grades were studied. The second was the increase of the average annual vulnerability ratings for withdrawals at specific grade levels as the year of their withdrawal approached. This was interpreted as evidence that staff members were sensitive to the pupils' growing inclinations to leave.

The items on the scale which most effectively distinguished early school leavers from their peers who did not leave were "age," "grade retardation," "learning rate," and "pupil's interest." The items which had the least predictive value were "physical size," "health," "father's occupation," and "school to school transfers." Because of the importance of occupation as a determinant of status, and the apparent relation of that factor to school holding power, an explanation was attempted of the low predictive value of the "occupation" item. It was suggested that, in future use, the structure of this item should be revised.

J. Practices and Results

Prevention factors were less specifically identified. An attempt

to relate the use of each of a number of project techniques in a sample of schools to the holding power for the project group in these schools was unsuccessful. Turning to the broader "retention efforts" listed for dropouts, and examining these efforts in the two groups of schools whose holding power had improved the most and the least over the project term, did yield statistically significant results. More efforts were expended to retain pupils by schools which displayed the greatest gains. Interestingly, it was discovered that these efforts in high gain schools had been emphasized for males. However, these findings were qualified by the suggestions that the status of communities in which the high gains were realized was higher than that of the communities in which the low gain schools were situated. In effect, successful retention efforts and favorable community dispositions seemed to be concomitant essentials to the improvement of holding power. This finding argues powerfully for the involvement of community leaders, and especially parents, in any attempt to increase the holding power of schools.

IV. Conclusions

In sum, the project has revealed that school retention rates can be improved when counselors and staff members together attack the problem, when they earnestly work to involve the parents of potential dropouts in their efforts, and when they take advantage of the predictive possibilities of the project-developed check list (*Pupil Holding Power Data*) to focus their efforts on potential dropouts.

The special role of the counselor may be to provide a communication center for the staff team attempting to assist individual students. By virtue of his position, he has greater access to students, parents, and teachers, as well as to pupil record information, than do some of his colleagues. This is not to say his contribution is any more vital than that of any other staff members, and certainly not to indicate that he alone must bear the responsibility for the reduction of early school leaving. Each member of the staff must offer his own unique assistance to individual potential dropouts. The counselor, in addition, serves as a liaison between the team members.

Specifically, school districts interested in improving their holding power rates may wish to consider the following steps: (1) Ascertain the holding power of one or more recent graduating classes and study

the reasons that pupils left school in grades 7–12. (2) Develop and keep up to date a good record of pertinent information for each pupil. (3) Identify potential dropouts systematically. (4) Be particularly alert to dropout proneness in nonpromoted students and those whose school marks take a marked turn downward. (5) Arrange and co-ordinate staff efforts to prevent early school leaving. (6) Consider for potential dropouts school program adjustments, school-work experience programs, additional counseling, summer contacts by school personnel, and extracurricular activities. (7) Closely involve the parents of potential dropouts in all retention efforts.

Schools frequently seek standards with which to compare their retention (holding power) rates. Logically, the only relevant standard is the local school's capacity to assist pupils. If a study of the characteristics of pupils who have dropped out of the local school reveals that substantial numbers could have been assisted to remain with "reasonable" efforts on the part of the local staff, then the retention rate, regardless of its magnitude, cannot be termed satisfactory. A consensus on the definition of "reasonable" must be reached by the local staff, since the problem seems to yield only to long-term commitments by the majority of those working with individual potential dropouts. Unless most staff members accept the finding that something can be done to assist such pupils, those otherwise in a minority will find it most difficult to improve effectively the local retention rate.

Our results suggest that small-rural and large-urban school districts, in which the socioeconomic level of parents may be somewhat less than in districts that fall between these extremes, may have special problems in improving their holding power rate. In terms of the high rate of dropouts and the large number of pupils served, particular and early attention should be given to increasing the holding power of schools in the larger urban centers of the State.

V. Summary

The Holding Power Project was conducted by the Bureau of Guidance between 1954 and 1960 in co-operation with 89 secondary schools in New York State. Its purpose was essentially to launch an attack on the problem of early school leaving through extended

and improved programs of guidance service. Members of the class of 1960 were designated as the study population, and project efforts were concentrated on these students from the time they entered grade 7 in 1954 until the class was graduated in 1960. A number of forms and procedures for the collection of data and the prediction of potential dropouts was developed by the Bureau.

It was determined that potential school dropouts can be systematically identified well in advance of their departure, that the attitude of parents significantly affects the decision of students to leave school early, and that only combined efforts of many types by counselors and their professional colleagues are positively related to a reduction of early school leaving. It was also found that small-rural and large-urban districts tend to retain a smaller percentage of pupils than districts of intermediate size and location.

The study suggests that more pupils will remain in school when their counselors and teachers co-operate closely in retention efforts, when the parents of potential dropouts participate actively in the attempts of school personnel to assist their children, and when potential dropouts are systematically identified for early and increased attention.

Prepared by JAMES W. MOORE

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A Least Squares Analysis of Colorado Nonfarm Employment, 1939-1963, With Projections to 1970.

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*STATISTICAL ANALYSIS; *EMPLOYMENT TRENDS; *LABOR FORCE
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The main purpose of this analysis was to provide projections of major Colorado non-farm employment classifications to 1970: (1) government, (2) retail and wholesale, (3) manufacturing, (4) service, (5) transportation, communication, and public utilities, (6) construction, and (7) mining. The projections of employment are based on data from the Bureau of Labor Statistics. Figures have been available by major classifications since 1939, and these figures through 1963 were used to develop the trend line. No attempt was made to analyze the reasons for the increases and decreases which occur. The middle year (1951) was taken as the origin year and assigned the X value of 0. Total non-farm employment in Colorado in 1963 was 560,400 an increase of 329,000 jobs since 1939. An average annual increase of 13,404 was calculated. The projection for 1970 was 643,600 jobs. Retail and wholesale trades will remain the largest employment classification. Government employment was the fastest growing industry. (SL)

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ECONOMIC DEVELOPMENT NOTES

A LEAST SQUARES ANALYSIS OF COLORADO NONFARM EMPLOYMENT 1939-1963 With Projections to 1970

By

Leo A. Droste

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Introduction

The economic growth in Colorado and the importance of the state in relation to the economy of the Rocky Mountain region has resulted in a considerable interest in projections of nonfarm employment to 1970. The major purpose of this analysis is to provide such projections by major employment classifications. It is hoped that these projections will provide a guide to businessmen, economists, and others in analyzing potential economic growth in Colorado.

The projections of employment to 1970 are based on data from the Bureau of Labor Statistics. Although the major employment classifications can be further subdivided, comparable figures for Colorado were available only from 1947. However, figures were available by major classifications since 1939, and these figures through 1963 were used to develop the trend line.

The use of Bureau of Labor Statistics classifications does present problems. Several areas are grouped together and reported as one figure, such as Finance, Insurance and Real Estate. However, it is not the purpose of this study to attempt to project employment for each of these areas. Nor has any attempt been made to analyze the reasons for the increases and decreases which occur. The projections given in this report are comparable to the basic figures found in the report Employment and Earnings Statistics for States and Areas, 1939-1962, United States Department of Labor, Bureau of Labor Statistics, Washington, D. C., 1963.

Note: The statistical method for computing the trend in employment was "The Least Squares Method--Linear." The Short Method for Computing Trend--Odd Number of Years was used for the trend computation. Some of the advantages of using the Least Squares method are (1) the method expresses trend in the form of a mathematical formula which may be easily interpreted, (2) results obtained under the method are definite and independent of any subjective estimate on the part of the statistician, and (3) the resulting equation is in convenient form for extension into the future or past. Some of the disadvantages of this method are (1) the technique used is mathematical, and (2) the method is based on the assumption that the data follows a trend that can be expressed by a mathematical equation.

The middle year (1951) is taken as the origin year, thereby assigning to it an X value of zero. A minus sign is generally given to the X values for the years previous to the origin year and a plus sign to those following the origin year. The Simplified "Normal" Equations for Straight Line (Origin at midpoint of data) is:

I Sum (Y) = Na

II Sum (XY) = b sum (X^2)

Solve: a which is Y
b which is X

Where:

Sum Y = Total Employment for Years

N = Total Number of Years

Sum XY = Total Value of (X x Y)

Sum X^2 = Total Value of all Squares of X

Thus in the calculation, 1951 is considered as the base year and "a" the estimated trend value of the series for 1951 and "b" the annual increase.

A Least Squares Analysis of Colorado's Nonfarm Employment, 1939-1963, With Projections to 1970

One of the most common methods used to measure growth is employment. The remainder of this report is a presentation of nonfarm employment projections by year to 1970 by industry classification.

Nonfarm Employment

Total nonfarm employment in Colorado in 1963 was 560,400, an increase of 329,000 jobs since 1939. An average annual increase of 13,404 has been calculated. The following table shows the projected employment figures to 1970.

Total Nonfarm Employment
Projections to 1970

Year	Computed Trend
1964	563,200
1965	576,600
1966	590,000
1967	603,400
1968	616,800
1969	630,200
1970	643,600

Government Employment

Total government employment was 126,900 in 1963, an increase of 86,200 jobs since 1939. 1963 was the first year that government replaced retail and wholesale trade as the largest employer of the nonfarm classifications. The average annual increase is 3,427 jobs each year.

Government Employment
Projections to 1970

Year	Computed Trend
1964	121,700
1965	125,100
1966	128,600
1967	132,000
1968	135,400
1969	138,900
1970	142,300

Retail and Wholesale Trade Employment

Employment in retail and wholesale trade increased 63,700 jobs from 59,900 in 1939 to 123,600 in 1963. Prior to a decline of 5,300 jobs in 1963 over 1962, trade was the largest nonfarm employer. The computed trend indicates an increase of 3,197 jobs per year.

Retail and Wholesale Trade Employment
Projections to 1970

Year	Computed Trend
1964	135,500
1965	138,700
1966	141,900
1967	145,100
1968	149,300
1969	151,500
1970	154,700

Manufacturing Employment

Manufacturing, the third largest employer in Colorado, employed 93,900 persons in 1963, an increase of 58,900 from the 1939 figure of 35,000. The computed trend is 1,963 jobs per year.

Manufacturing Employment
Projections to 1970

Year	Computed Trend
1964	92,500
1965	94,500
1966	96,500
1967	98,400
1968	100,400
1969	102,300
1970	104,300

Service Employment

Employment in the service industry was 81,900 jobs in 1963, an increase of 51,800 jobs since 1939. The computed trend is an increase of 2,221 jobs per year.

Service Employment
Projections to 1970

Year	Computed Trend
1964	82,600
1965	84.900
1966	87,000
1967	89,300
1968	91,500
1969	93.800
1970	96,000

Transportation, Communication and Public Utilities Employment

More people are employed in this area than are employed in construction or finance or mining. In 1963 employment was 43,800, an increase of 15,100 jobs from 1939. However, the computed trend is only an increase of 476 jobs per year.

Transportation, Communication and Public Utilities Employment
Projections to 1970

Year	Computed Trend
1964	47,800
1965	48,300
1966	48.800
1967	49,300
1968	49,700
1969	50,200
1970	50.700

Construction Employment

Employment in construction has provided 22,100 new jobs since the 1939 figure of 13,100. The computed trend is 1,112 jobs per year.

Construction Employment
Projections to 1970

Year	Computed Trend
1964	38,500
1965	39,600
1966	40,700
1967	41,800
1968	42,900
1969	44,000
1970	45,200

Finance, Insurance and Real Estate Employment

Other than mining, fewer people are employed in this classification. In 1963 employment was 28,900, an increase of 19,200 jobs since 1939. However, this increase of jobs exceeded that of the transportation and public utilities employment, which employs over 43,000 persons. The computed trend is 859 jobs per year.

Finance, Insurance and Real Estate Employment
Projections to 1970

Year	Computed Trend
1964	28,200
1965	29,000
1966	29,900
1967	30,800
1968	31,600
1969	32,500
1970	33,400

Mining Employment

Fewer people are employed in mining than any of the other nonfarm classifications. This is also the only industry of this group which has shown a decline in employment since 1939. In 1963 employment was 11,900, a decline of 2,300 jobs from 1939. However, the computed trend shows that employment will probably increase, but at the rate of only 13 jobs per year.

Mining Employment
Projections to 1970

Year	Computed Trend
1964	13,900
1965	13,900
1966	13,900
1967	13,900

Mining Employment
Projections to 1970
(Continued)

Year	Computed Trend
1968	13,900
1969	13,900
1970	13,900

Conclusions

Several observations can be drawn from the projection of the trend lines. Total nonfarm employment should continue to grow, reaching an estimated 643,000 jobs by 1970. Employment since 1960 has been above the trend line, with a slightly decreasing curve line in 1963. Changes will also occur in the ranking of the various industry groups.

Retail and wholesale trade will continue to remain the largest single employer. However, government employment is increasing faster than trade employment. In fact the trend line indicates that government employment is the fastest growing industry. Service industries is the second fastest growing industry, growing more rapidly than manufacturing. However, manufacturing will continue to employ more people than service for many years. A major change which will probably occur in the next twenty years is in construction. By the early 1980's construction employment may overtake and pass employment in transportation, communication and public utilities. The following table presents a brief outline of what has happened over the years. The industries are ranked according to computed trend increases.

Colorado Nonfarm Employment

Industry	Least-Squares Trend, Yearly Increases	1963 Employment	Number Increase 1939-1963
Total Nonfarm Employment	13,404	560,400	329,000
Government	3,427	126,900	86,200
Retail and Wholesale Trade	3,197	123,600	63,700
Service	2,221	81,900	51,800

Colorado Nonfarm Employment
(Continued)

Industry	Least-Squares Trend, Yearly Increases	1963 Employment	Number Increase 1939-1963
Manufacturing	1,963	93,900	58,900
Construction	1,112	35,200	22,100
Finance, Insurance and Real Estate	859	28,900	19,200
Transportation, Communication, Public Utilities	476	43,800	15,100
Mining	13	11,900	-2,300

It would thus appear that government and trade will dominate the increases in total nonfarm employment, followed closely by service, manufacturing and construction. Projected increases in transportation, communication and public utilities, and especially mining, will have relatively minor effect on the total employment increases.

Nonfarm Employment in Colorado

	1940	1950	1960	1970
Retail and Wholesale Trade	61,200	92,300	123,600	154,700
Government	41,500	66,800	110,100	148,300
Manufacturing	36,800	61,600	87,700	104,300
Service Industry	32,300	48,300	76,200	96,000
Transportation, Communications, Public Utilities	29,300	42,400	43,700	50,700
Construction	11,100	22,100	33,500	45,200
Finance, Insurance and Real Estate	9,800	14,700	25,200	33,400
Mining	14,400	10,000	15,400	13,900

A P P E N D I X

Population
1939-1963

Year	Colorado	Percent Change	United States	Percent Change
1939	1,120,000		131,028,000	
1940	1,130,000	0.9%	132,594,000	1.2%
1941	1,124,000	-0.5	133,894,000	1.0
1942	1,133,000	0.8	135,361,000	1.1
1943	1,151,000	1.6	137,250,000	1.4
1944	1,124,000	-2.4	138,916,000	1.2
1945	1,113,000	-1.0	140,468,000	1.1
1946	1,196,000	7.5	141,936,000	1.0
1947	1,236,000	3.3	144,698,000	1.9
1948	1,263,000	2.2	147,208,000	1.7
1949	1,295,000	2.5	149,767,000	1.7
1950	1,335,000	3.1	152,271,000	1.7
1951	1,319,000	-1.2	154,878,000	1.7
1952	1,368,000	3.7	157,553,000	1.7
1953	1,436,000	5.0	160,184,000	1.7
1954	1,492,000	3.9	163,026,000	1.8
1955	1,547,000	3.7	165,931,000	1.8
1956	1,655,000	7.0	168,903,000	1.8
1957	1,693,000	2.3	171,984,000	1.8
1958	1,690,000	-0.2	174,882,000	1.7
1959	1,727,000	2.2	177,830,000	1.7
1960	1,758,000	1.8	180,676,000	1.6
1961	1,841,000	1.8	183,742,000	1.7
1962	1,907,000	3.6	186,660,000	1.6
1963	1,960,000	2.8	189,380,000	1.5
Average Percent Change		2.4		1.5

Source: U.S. Department of Commerce, Office of Business Economics, Business Statistics, 1963; Survey of Current Business, March, 1964.

Total Personal Income
1939-1963

Year	Colorado	Percent Change	United States	Percent Change
1939	$ 578,000,000		$ 72,753,000,000	
1940	617,000,000	6.7%	78,522,000,000	7.9%
1941	728,000,000	18.0	95,953,000,000	22.2
1942	1,010,000,000	38.7	122,417,000,000	27.6
1943	1,185,000,000	17.3	148,409,000,000	21.2
1944	1,195,000,000	0.8	160,118,000,000	7.9
1945	1,317,000,000	10.2	164,549,000,000	2.8
1946	1,429,000,000	8.5	175,701,000,000	6.8
1947	1,654,000,000	15.7	189,077,000,000	7.6
1948	1,760,000,000	6.4	207,414,000,000	9.7
1949	1,794,000,000	1.9	205,452,000,000	-1.0
1950	1,930,000,000	7.6	225,473,000,000	9.7
1951	2,284,000,000	18.3	252,960,000,000	12.2
1952	2,468,000,000	8.1	269,050,000,000	6.4
1953	2,492,000,000	1.0	283,140,000,000	5.2
1954	2,519,000,000	1.1	285,339,000,000	0.8
1955	2,729,000,000	8.3	306,598,000,000	7.5
1956	3,064,000,000	12.3	330,380,000,000	7.8
1957	3,367,000,000	9.9	348,724,000,000	5.6
1958	3,550,000,000	5.4	357,498,000,000	2.5
1959	3,769,000,000	6.2	381,326,000,000	6.7
1960	4,039,000,000	7.2	399,028,000,000	4.6
1961	4,314,000,000	6.8	414,954,000,000	4.0
1962	4,520,000,000	4.8	439,661,000,000	6.0
1963	4,678,000,000	3.5	460,580,000,000	4.8
Average Percent Change		9.4		8.2

Source: U.S. Department of Commerce, Office of Business Economics, Business Statistics, 1963; Survey of Current Business, March, 1964.

Per Capita Personal Income
1939-1963

Year	Colorado	Percent Change	United States	Percent Change
1939	$ 516		$ 556	
1940	546	5.8%	595	7.0%
1941	648	18.7	719	20.8
1942	891	37.5	909	26.4
1943	1,030	15.6	1,102	8.3
1944	1,063	3.2	1,194	8.3
1945	1,183	11.3	1,234	3.4
1946	1,195	1.0	1,249	1.2
1947	1,338	12.0	1,316	5.4
1948	1,394	4.2	1,420	7.9
1949	1,385	-0.7	1,382	-2.7
1950	1,446	4.4	1,491	7.9
1951	1,732	19.8	1,649	10.6
1952	1,804	4.2	1,727	4.7
1953	1,735	-3.8	1,788	3.5
1954	1,688	-2.7	1,770	-1.0
1955	1,764	4.5	1,866	5.8
1956	1,851	4.9	1,975	3.7
1957	1,989	7.5	2,048	0.8
1958	2,101	5.6	2,064	4.8
1959	2,182	3.9	2,163	2.5
1960	2,283	4.6	2,217	2.3
1961	2,343	2.6	2,267	2.3
1962	2,388	1.9	2,366	4.4
1963	2,386	-0.1	2,443	3.3
Average Percent Change		6.9		6.4

Source: U.S. Department of Commerce, Office of Business Economics, Business Statistics, 1963; Survey of Current Business, March, 1964.

Nonfarm Employment
1939-1963

Year	Colorado	Percent Change	United States	Percent Change
1939	231,400		36,140,000	
1940	236,400	2.2%	37,980,000	5.1%
1941	257,900	9.1	41,250,000	8.6
1942	304,500	18.1	44,500,000	7.9
1943	305,000	0.2	45,390,000	2.0
1944	289,400	-5.1	45,010,000	-0.8
1945	293,500	1.4	44,240,000	-1.7
1946	312,100	6.3	46,930,000	6.1
1947	335,000	7.3	49,557,000	5.6
1948	344,700	2.9	51,156,000	3.2
1949	338,400	-1.8	50,406,000	-1.5
1950	358,200	5.9	52,251,000	3.7
1951	393,400	9.8	53,736,000	2.8
1952	412,600	4.9	54,243,000	0.9
1953	417,400	1.2	55,390,000	2.1
1954	411,900	-1.3	54,395,000	-1.8
1955	432,900	5.1	56,225,000	3.4
1956	452,300	4.5	58,135,000	3.4
1957	470,800	4.1	58,789,000	1.1
1958	470,900	0.02	58,122,000	-1.1
1959	492,500	4.6	59,745,000	2.8
1960	515,400	4.6	60,958,000	2.0
1961	536,700	4.1	61,333,000	0.6
1962	550,500	2.6	62,657,000	2.2
1963	560,400	1.8	63,863,000	1.9
Average Percent Change		3.9		2.4

Source: U.S. Department of Commerce, Office of Business Economics, Business Statistics, 1963; Survey of Current Business, March, 1964.

Colorado Annual Nonfarm Employment
1939-1963

Year	Nonfarm Employment	Trend, Nonfarm Employment
1939	231,400	228,120
1940	236,400	241,524
1941	257,900	254,928
1942	304,500	268,332
1943	305,000	281,736
1944	289,400	295,140
1945	293,500	308,544
1946	312,100	321,948
1947	335,000	335,352
1948	344,700	348,756
1949	338,400	362,160
1950	358,200	375,564
1951	393,400	388,968
1952	412,600	402,372
1953	417,400	415,776
1954	411,900	429,180
1955	432,900	442,584
1956	452,300	455,988
1957	470,800	469,392
1958	470,900	482,796
1959	492,500	496,200
1960	515,400	509,604
1961	536,700	523,008
1962	550,500	536,412
1963	560,400	549,816

Colorado Government Employment
1939-1963

Year	Government Employment	Trend, Government Employment
1939	40,700	36,040
1940	41,500	39,467
1941	45,000	42,894
1942	50,600	46,321
1943	56,300	49,748
1944	57,400	53,175
1945	58,900	56,602
1946	59,600	60,029
1947	59,300	63,456
1948	60,000	66,883
1949	62,100	70,310
1950	66,800	73,737
1951	75,300	77,164
1952	80,900	80,591
1953	80,900	84,018
1954	81,600	87,445
1955	85,400	90,872
1956	90,600	94,299
1957	96,500	97,726
1958	99,600	101,153
1959	103,800	104,580
1960	110,100	108,007
1961	116,900	111,434
1962	122,400	114,861
1963	126,900	118,288

Colorado Retail and Wholesale Trade Employment
1939-1963

Year	Trade Employment	Trend, Trade Employment
1939	59,900	55,584
1940	61,200	58,781
1941	63,700	61,978
1942	64,100	65,175
1943	62,900	68,372
1944	61,500	71,569
1945	64,000	74,766
1946	75,700	77,963
1947	84,900	81,160
1948	88,700	84,357
1949	87,700	87,554
1950	92,300	90,751
1951	98,000	93,948
1952	102,200	97,145
1953	105,600	100,342
1954	105,000	103,539
1955	110,500	106,736
1956	113,400	109,933
1957	113,700	113,130
1958	113,200	116,327
1959	119,200	119,524
1960	123,600	122,721
1961	125,200	125,918
1962	128,900	129,115
1963	123,600	132,312

Colorado Service Employment
1939-1963

Year	Service Employment	Trend, Service Employment
1939	30,100	27,124
1940	32,300	29,345
1941	33,000	31,566
1942	35,500	33,787
1943	37,300	36,008
1944	37,300	38,229
1945	38,000	40,450
1946	42,700	42,671
1947	46,400	44,892
1948	48,100	47,113
1949	46,600	49,334
1950	48,300	51,555
1951	53,600	53,776
1952	55,200	55,997
1953	55,300	58,218
1954	56,300	60,439
1955	59,200	62,660
1956	61,100	64,881
1957	65,400	67,102
1958	67,000	69,323
1959	71,500	71,544
1960	76,200	73,765
1961	80,600	75,986
1962	85,500	78,207
1963	81,900	80,428

Colorado Manufacturing Employment
1939-1963

Year	Manufacturing Employment	Trend, Manufacturing Employment
1939	35,000	43,448
1940	36,800	45,411
1941	42,900	47,374
1942	61,900	49,337
1943	69,700	51,300
1944	57,900	53,263
1945	57,400	55,226
1946	55,700	57,189
1947	60,300	59,152
1948	60,400	61,115
1949	56,800	63,078
1950	61,600	65,041
1951	68,500	67,004
1952	70,400	68,967
1953	71,100	70,930
1954	67,900	72,893
1955	69,400	74,856
1956	72,400	76,819
1957	76,300	78,782
1958	75,300	80,745
1959	80,800	82,708
1960	87,700	84,671
1961	92,000	86,634
1962	93,000	88,597
1963	93,900	90,560

Colorado Construction Employment
1939-1963

Year	Construction Employment	Trend, Construction Employment
1939	13,100	10,680
1940	11,100	11,800
1941	15,200	12,912
1942	30,200	14,028
1943	13,200	15,144
1944	8,300	16,260
1945	9,900	17,376
1946	12,800	18,492
1947	17,200	19,608
1948	19,100	20,724
1949	19,100	21,840
1950	22,100	22,956
1951	26,900	24,072
1952	28,800	25,188
1953	27,100	26,304
1954	25,700	27,420
1955	28,000	28,536
1956	30,400	29,652
1957	34,100	30,768
1958	34,000	31,884
1959	33,700	33,000
1960	33,500	34,116
1961	34,300	35,232
1962	35,800	36,344
1963	35,200	37,464

Colorado Finance, Insurance and Real Estate Employment
1939-1963

Year	Finance Employment	Trend, Finance Employment
1939	9,700	6,736
1940	9,800	7,595
1941	10,000	8,454
1942	10,100	9,313
1943	9,900	10,172
1944	9,900	11,031
1945	10,200	11,890
1946	11,800	12,749
1947	12,700	13,608
1948	13,300	14,467
1949	13,200	15,326
1950	14,700	16,185
1951	16,100	17,044
1952	17,000	17,903
1953	17,900	18,762
1954	18,600	19,621
1955	20,200	20,480
1956	21,600	21,339
1957	22,300	22,198
1958	23,200	23,057
1959	24,500	23,916
1960	25,200	24,775
1961	26,500	25,634
1962	28,200	26,493
1963	28,900	27,352

Colorado Transportation, Communication
and Public Utilities Employment
1939-1963

Year	Transportation Employment	Trend, Transportation Employment
1939	28,700	35,944
1940	29,300	36,420
1941	32,300	36,896
1942	35,700	37,372
1943	40,700	37,848
1944	43,900	38,324
1945	42,900	38,800
1946	41,300	39,276
1947	41,100	39,752
1948	42,500	40,228
1949	42,100	40,704
1950	42,400	41,180
1951	44,000	41,656
1952	45,800	42,132
1953	46,600	42,608
1954	43,600	43,084
1955	44,700	43,560
1956	45,700	44,036
1957	45,900	44,512
1958	43,300	44,988
1959	43,700	45,464
1960	43,700	45,940
1961	43,700	46,416
1962	44,000	46,892
1963	43,800	47,368

Colorado Mining Employment
1939-1963

Year	Mining Employment	Trend, Mining Employment
1939	14,200	13,534
1940	14,400	13,547
1941	15,200	13,560
1942	16,400	13,574
1943	15,000	13,587
1944	13,200	13,600
1945	12,200	13,613
1946	12,500	13,626
1947	13,100	13,639
1948	12,600	13,652
1949	10,800	13,666
1950	10,000	13,679
1951	11,000	13,692
1952	12,300	13,705
1953	12,900	13,718
1954	13,200	13,732
1955	15,500	13,745
1956	16,100	13,758
1957	16,600	13,771
1958	15,300	13,784
1959	15,300	13,797
1960	15,400	13,810
1961	14,500	13,824
1962	12,700	13,837
1963	11,900	13,850

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*VOCATIONAL INTERESTS; SURVEYS; *CAREER CHOICE; *STUDENT OPINION; *QUESTIONNAIRES; *HIGH SCHOOL STUDENTS
NAPA COUNTY SCHOOLS; CALIFORNIA

This study was undertaken to identify student vocational education needs based on student opinions. It, therefore, represents only a segment of information to be used with other sources. A questionnaire was administered to 543 female juniors, 503 male juniors, 480 female seniors, and 547 male seniors; all were high school students in Napa County schools, a rural county with no town larger than 30,000 population. The data are categorized by grade, sex, and school and are presented in table form showing response to individual and groups of items. Some of the questions asked concerned: (1) field chosen as a career choice, (2) occupational choices, (3) source of advice sought for occupational guidance, and (4) occupational mobility of students. It was recommended that an answer be sought for the question, "What are the trends of students' vocational certainty and how does this relate to the accuracy of vocational selection as determined by longitudinal studies?" The appendix contains the survey instrument. (SL)

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EDUCATION and CAREER STUDY

VT001527

NAPA
COUNTY
SUPERINTENDENT
OF SCHOOLS OFFICE, Calif.

Percy C. Holliday

VT001527

Office of
NAPA COUNTY SUPERINTENDENT OF SCHOOLS
PIERCY C. HOLLIDAY

EDUCATION AND CAREER STUDY

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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JAN 4 1967

Compiled by Arlin G. Taylor
Director, Vocational Education
December 8, 1966

TABLE OF CONTENTS

Forward . . . . . Pages 1-4

Degree of Certainty of Career Choice . . . . . Pages 5-6

Courses Important for Chosen Career . . . . . Pages 7-8

Importance of School Marks in the Future. . . . . Pages 9-10

School Marks in Regard to Popularity. . . . . Pages 11-12

Factors Believed to have Greatest Effect on Career. . . . . Pages 13-14

Field Chosen as a Career Choice . . . . . Pages 15-18

Occupational Choices . . . . . Pages 19-20

Training Required for Career Choice . . . . . Pages 21-22

Employment Related Conditions Considered Important. . . . . Pages 23-24

Source of Advice Sought for Occupational Guidance . . . . . Pages 25-26

Consulting Parents About Career Choice. . . . . Pages 27-28

Parental Approval of Occupational Choice. . . . . Pages 29-30

Anticipated Source of Occupational Training . . . . . Pages 31-32

Number of Years of Schooling Beyond High School . . . . . Pages 33-34

University or College Anticipated to Attend . . . . . Page 35

Students Not Anticipating Further Schooling Who Would Attend Vocational Education Courses . . . . . Pages 36-37

Interest of Potential High School Terminal Students in Vocational Education at High School Level . . . . . Pages 38-39

Interest in Vocational Education Courses as General Education Rather than Occupational Preparation . . . . . Pages 40-41

Interest in Participating in a Work Experience Program. . . . . Pages 42-43

Subjects Students Thought Should be Offered . . . . . Page 44

Occupational Mobility of Students . . . . . Pages 45-46

Recommendations . . . . . Pages 47

Survey Instrument . . . . . Pages 48-53

I. PROBLEM

There is in the United States an increasing awareness of public responsibility for the economic and social well being of all the American people. This is attested to by the many laws and acts being passed and by programs promoted by federal, state, and private organizations for minority and other groups with special needs.

Education may be seen as one of the greatest tools in the fight to strengthen America. Education has in varying degrees appeared as a luxury to various people of the world and has, to a great extent, been reserved for a select few. However, we in this country have progressively taken steps to provide educational opportunities for all people with equal consideration.

In recent years we have become more aware of the gap that exists between theory and practice. More nearly adequate education programs must be provided to help bridge this gap. Occupational education may not only help bring theory and practice closer together, but in so doing can play an increasingly important part in aiding this country's efforts to become an even stronger world power. In the United States, fewer opportunities are available each year for those who qualify for only unskilled or semi-skilled jobs. Occupational education must accept the challenge of meeting the need for training and retraining programs to provide skills for the unemployable or underemployed.

The secondary school has an important part to play in the planning, developing and/or expanding its occupational education offerings to assist in filling this nation's need for occupational training, for increasing the enjoyment of its citizens through a better understanding of our technological culture, and to strengthen our national defenses. A knowledge of the present status of the occupational programs in the public secondary schools of Napa County would help provide a "taking-off-point" for sound planning of future programs.

The rapidly changing industrial and technological scene requires an extreme alertness on the part of educators. Future planning must anticipate and involve the interests and needs of students.

It is in the spirit of this anticipation of student vocational education needs that this study was conducted.

II. METHODOLOGY

Instrument

Literature was surveyed and those variables which authors suggested to be related to occupational success were built into the instrument. Additional variables included were based on a priori assumption by the author.

The majority of the items were quite well structured and required only an opinion from the Ss. Some of the items, however, were open-ended allowing for free responses. There were a total of twenty-one items dealing with areas of career selection, vocational guidance and vocational course offerings.

Sample

The questionnaire was administered to 543 number of female juniors, 503 number of male juniors, 480 number of female seniors and 547 number of male seniors.

Due to the nature of the questionnaire no special instructions other than to inform the Ss:

1. The data would not be used for grading purposes.
2. The purpose as explained to the Ss was:

   The purpose of this survey is to use the data to identify areas in Vocational Education that need to be maintained, extended, and improved so that persons of all ages in Napa County will have ready access to vocational training which is of high quality, which is realistic in the light of actual or anticipated opportunities for gainful employment. It would also be used as an initial instrument for the establishment of a comprehensive and continuing follow-up study of high school graduates and/or dropouts.

Controls

Several of the questionnaires were not filled out completely. These were returned to the students for completion. All questionnaires were used and the only missing data was where a particular S did not respond to a specific item. The "no responses" were accepted on the assumption that the S had no opinions on that particular item.

Limitation

This sample is representative only of high school students in Napa County. Therefore, the findings cannot be generalized to other populations. Napa County, however, is a typical rural county with no students living in a town larger than 30,000.

The findings then could be similar in other similar counties, but in reality this project was tailor-made for Napa County schools.

Another limitation of this project is that the findings represent only the opinions of students. Obviously occupational programs must include other types of activities and sources of information such as curriculum studies, needs of industry, expert opinions, etc.

This study then represents only a segment of information to be used in addition to other cources.

III FINDINGS

The data was analyzed according to the following variables: grade, sex, and school. The data are presented in table form showing responses of individual items or groups of items.

Students were asked, "How certain are you now what your career will be when you have completed your education?"

It may be seen in tables 1-4 that there were significant differences among the schools. Seventeen percent of the students from Napa said they had selected their life's work, while only seven percent from St. Helena and only six percent from Calistoga said they had done so. The percentage of students who indicated they were uncertain of career choice seemed to be significantly higher in St. Helena and Calistoga when compared with Napa.

Table 1. Degree of certainty of career choice upon completion of education as indicated by 11th grade female students.

Certainty	School					
	Napa	%	St. Helena	%	Calistoga	%
a. Absolutely certain	92	19	3	8	2	10
b. Fairly sure	279	58	18	48	10	45
c. Uncertain	113	23	16	44	10	45
TOTAL	484	100	37	100	22	100

Table 2. Degree of certainty of career choice upon completion of education as indicated by 11th grade male students.

Certainty	School					
	Napa	%	St. Helena	%	Calistoga	%
a. Absolutely certain	51	12	3	2	2	3
b. Fairly sure	239	56	19	43	12	42
c. Uncertain	137	32	24	55	16	55
Total	427	100	46	100	30	100

Table 3. Degree of certainty of career choice upon completion of education as indicated by 12th grade female students.

Certainty	School					
	Napa	%	St. Helena	%	Calistoga	%
a. Absolutely certain	95	23	9	20	1	7
b. Fairly sure	209	49	23	53	4	32
c. Uncertain	118	28	12	27	8	61
Total	422	100	45	100	13	100

Table 4. Degree of certainty of career choice upon completion of education as indicated by 12th grade male students.

Certainty	School					
	Napa	%	St. Helena	%	Calistoga	%
a. Absolutely certain	81	16	5	9	1	5
b. Fairly sure	233	50	28	51	7	38
c. Uncertain	160	34	22	40	10	55
Total	474	100	55	100	18	100

Tables 5-8 give student responses to the question, "Even though you may or may not be certain what your 'final career' will be, which school subjects do you think will best fit you for a career?" Male students indicate that occupational courses would be most beneficial to them. Occupational courses were ranked no lower than second place by any group of students with the exception of eleventh grade female students from St. Helena and Calistoga who rank them sixth in importance.

It is interesting to note that male students place greater importance on mathematics and science than female students.

Foreign Languages were rated last in importance in every instance.

Table 5. Courses selected by 11th grade female students which are considered important in fitting them for their chosen career.

	School					
Courses	Napa	Rank	St. Helena	Rank	Calistoga	Rank
Occupational	154	1	15	1.5	16	1
Commercial	151	2	10	4	11	3
English	133	3	7	6	8	4.5
Mathematics	88	4	14	3	14	2
Sciences	82	5	15	1.5	8	4.5
Social Sciences	68	6	8	5	5	6
Foreign Languages	51	7	2	7	3	7

Table 6. Courses selected by 11th grade male students which are considered important in fitting them for their chosen career.

	School					
Courses	Napa	Rank	St. Helena	Rank	Calistoga	Rank
Occupational	163	1	15	1.5	16	1
Mathematics	157	2	14	3	14	2
Sciences	140	3	15	1.5	8	4.5
Social Sciences	93	4	8	5	5	6
Commercial Courses	87	5	10	4	11	3
English	83	6	7	6	8	4.5
Foreign Languages	29	7	2	7	3	7

Table 7. Courses selected by 12th grade female students which are considered important in fitting them for their chosen career.

	School					
Courses	Napa	Rank	St. Helena	Rank	Calistoga	Rank
English	153	1	20	1	4	3
Occupational	145	2	9	6	1	6.5
Commercial	111	3	15	3.5	5	~~1.5~~ 2
Social Sciences	92	4	18	2	6	1.5 1
Sciences	59	5	15	3.5	2	4.5
Mathematics	58	6	11	5	2	4.5
Foreign Languages	55	7	7	7	1	6.5

Table 8. Courses selected by 12th grade male students which are considered important in fitting them for their chosen career.

	School					
Courses	Napa	Rank	St. Helena	Rank	Calistoga	Rank
Mathematics	179	1	29	1.5	2	4.5
Occupational	152	2	29	1.5	9	1
English	129	3	19	4	1	6
Sciences	117	4	20	3	3	3
Commercial	109	5	13	5	4	2
Social Sciences	87	6	10	6	2	4.5
Foreign Languages	16	7	3	7	0	7

Tables 9-12 pertain to the question, "How important do you think your school marks are to your future?"

The responses of students in all grade levels, in all schools and of both sexes were generally the same in regard to this question. Very few students believe school marks to be unimportant, while the large majority believe them to be very important.

In summarizing tables 9-12, 46% of all students believe school marks are very important, 49% fairly important and only 5% unimportant.

Table 9. The opinion of 11th grade female students as to the importance of school marks on their future.

Degree of Importance	School					
	Napa	Percent	St. Helena	Percent	Calistoga	Percent
a. Very important	181	37	19	51	13	59
b. Fairly important	133	27	16	43	7	32
c. Unimportant	8	2	2	6	2	9
No response	162	34	0	0	0	0
Total	484	100	37	100	22	100

Table 10. The opinion of 11th grade male students as to the importance of school marks on their future.

Degree of Importance	School					
	Napa	Percent	St. Helena	Percent	Calistoga	Percent
a. Very important	215	50	17	37	12	40
b. Fairly important	111	26	26	57	16	53
c. Unimportant	7	2	3	6	2	7
No response	94	22	0	0	0	0
Total	427	100	46	100	30	100

Table 11. The opinion of 12th grade female students as to the importance of school marks on their future.

Degree of Importance	School					
	Napa	Percent	St. Helena	Percent	Calistoga	Percent
a. Very important	220	52	21	46	9	69
b. Fairly important	177	42	22	50	4	31
c. Unimportant	21	5	2	4	0	0
No response	4	1	0	0	0	0
Total	422	100	45	100	13	100

Table 12. The opinion of 12th grade male students as to the importance of school marks on their future.

Degree of Importance	School					
	Napa	Percent	St. Helena	Percent	Calistoga	Percent
a. Very important	223	47	16	29	4	22
b. Fairly important	212	45	34	62	14	78
c. Unimportant	33	7	5	9	0	0
No response	6	1	0	0	0	0
Total	472	100	55	100	18	100

Tables 13-16 pertain to the question, "How important do you think school marks are to your popularity?". The responses of all students were generally the same in regard to this question. Only a relative few believed that school marks were "very important". About 50% of the students indicated they thought grades were unimportant and had little to do with student popularity.

Table 13. The opinion of 11th grade female students as to the importance of school marks in relation to their popularity with other students.

Degree of Importance	School					
	Napa	%	St. Helena	%	Calistoga	%
a. Very important	61	13	1	3	2	8
b. Fairly important	179	37	20	54	7	32
c. Unimportant	206	42	11	30	4	59
No response	38	58	5	13	0	0
Total	484	100	37	100	13	100

Table 14. The opinion of 11th grade male students as to the importance of school marks in relation to their popularity with other students.

Degree of Importance	School					
	Napa	%	St. Helena	%	Calistoga	%
a. Very important	24	6	2	4	2	7
b. Fairly important	155	36	20	44	15	50
c. Unimportant	231	54	24	52	12	40
No response	17	4	0	0	1	3
Total	427	100	46	100	30	100

Table 15. The opinion of the 12th grade female students as to the importance of school marks in relation to their popularity with other students.

Degree of Importance	School					
	Napa	%	St. Helena	%	Calistoga	%
a. Very important	20	5	4	8	0	0
b. Fairly important	182	43	26	59	5	38
c. Unimportant	203	48	15	33	8	62
No response	17	4	0	0	0	0
Total	422	100	45	100	13	100

Table 16. The opinion of 12th grade male students as to the importance of school marks in relation to their popularity with other students.

Degree of Importance	School					
	Napa	%	St. Helena	%	Calistoga	%
a. Very important	34	7	4	7	0	0
b. Fairly important	193	41	28	51	11	61
c. Unimportant	235	50	21	38	7	39
No response	12	2	2	4	0	0
Total	474	100	55	100	18	100

Students were asked to indicate which of a list of factors would have the greatest effect on their career. Differences in grade level, schools, and sex were very slight with hard work, intelligence, and personality listed as the factors having the greatest effect. This information may be seen in tables 17-20.

Table 17. Factors believed by 11th grade female students to have greatest effect on career.

School	Napa		St. Helena		Calistoga	
Factors	No.	Rank	No.	Rank	No.	Rank
Hard work	442	1	33	1	21	1.5
Intelligence	408	2	31	3	16	3
Personality	385	3	32	2	21	1.5
Money	69	4	4	5	5	4
Other	51	5	2	6.5	1	6.5
Good or bad breaks	28	6	2	6.5	3	5
Influential friends	11	7.5	5	4	1	6.5
Influential relatives	11	7.5	1	8	0	8

Table 18. Factors believed by 11th grade male students to have greatest effect on career.

School	Napa		St. Helena		Calistoga	
Factors	No.	Rank	No.	Rank	No.	Rank
Hard work	353	1	39	1	26	1
Intelligence	317	2	36	2	18	3
Personality	302	3	22	3	21	2
Good or Bad breaks	82	4	8	5	14	4
Money	73	5	17	4	7	5
Influential friends	40	6	5	6	5	6
Other	26	7	2	7	2	7
Influential relatives	9	8	1	8	1	8

Table 19. Factors believed by 12th grade female students to have greatest effect on career.

School	Napa		St. Helena		Calistoga	
Factors	No.	Rank	No.	Rank	No.	Rank
Hard work	361	1	44	1	12	2
Intelligence	341	2	39	2	13	1
Personality	322	3	36	3	11	3
Money	72	4	7	4	1	5
Other	37	5	2	7	0	7.5
Influential friends	27	6	3	6	0	7.5
Good or bad breaks	25	7	6	5	1	5
Influential relatives	8	8	0	8	1	5

Table 20. Factors believed by 12th grade male students to have greatest effect on career.

School	Napa		St. Helena		Calistoga	
Factors	No.	Rank	No.	Rank	No.	Rank
Hard work	408	1	55	1	18	1
Intelligence	368	2	38	2	12	3
Personality	316	3	34	3	13	2
Good or bad breaks	79	4	9	5.5	4	5
Money	71	5	14	4	6	4
Influential friends	42	6	9	5.5	1	6
Other	38	7	1	8	0	7.5
Influential relatives	12	8	3	7	0	7.5

The students were asked to make a 1st, 2nd, and 3rd career choice from a list of occupational fields.

Tables 21-24 show student responses. Business, teaching, and clerical fields were considered highest in choices by girls of 11th and 12th grades, while boys indicated skilled trades and engineering. Other items considered highly as a career choice by boys were: business, armed forces, law, teaching, and science. Included high on the girls list were: social service, medicine, the arts, sales, and public relations.

Table 21. Field chosen by 11th grade female students as a career choice.

Schools	Napa			St. Helena			Calistoga		
		Weighted			Weighted			Weighted	
Career Fields	No.	No.	Rank	No.	No.	Rank	No.	No.	Rank
Business	165	361	1	10	31	1	13	30	1
Teaching	149	320	2	9	33	5	4	6	6
Clerical	127	288	3	12	30	2	5	13	4
Medicine	116	271	4	7	24	4	5	18	2
Social Service	136	258	5	12	27	3	8	16	3
The Arts	95	217	6	4	11	6	8	0	11.5
Public Relations	68	115	7	3	3	16.5	2	2	13
Sales	65	108	8	4	7	10	0	0	17.5
Entertainment	45	75	9	3	6	11.5	2	6	6
Advertising	39	68	10	3	3	16.5	3	5	8
Civil Service	36	59	11	1	3	16.5	2	2	10
Journalism	30	52	12	2	3	16.5	1	2	13
Armed Forces	25	50	13	5	9	8.5	2	1	13
Engineering	16	43	14	1	2	19	1	0	15
Religious Occup.	17	34	15	1	1	20	0	3	17.5
Financial	18	32	16	2	4	13.5	2	0	10
Law	19	30	17	5	9	8.5	0	0	17.5
Skilled Trade	11	29	18	3	10	7	0	0	17.5
Farming	11	19	19	2	4	13.5	2	6	6
Science	46	11	20	3	6	11.5	2	3	10
No Response	228			0			22		

Table 22. Field chosen by 11th grade male students as a career choice.

Schools	Napa			St. Helena			Calistoga		
		Weighted			Weighted			Weighted	
Career Fields	No.	No.	Rank	No.	No.	Rank	No.	No.	Rank
Skilled Trade	181	411	1	23	47	1	17	50	1
Engineering	136	311	2	15	39	2	16	35	2
Armed Forces	124	230	3	12	20	6	9	13	4
Business	103	208	4	5	10	10	9	19	3
Law	56	121	5	7	19	7	4	8	9
Teaching	54	115	6	9	24	4	6	10	7.5
Science	47	96	7	11	26	3	0	0	17.5
Medicine	42	86	8	9	21	5	4	12	5.5
The Arts	29	66	9	5	12	9	6	10	7.5
Farming	32	61	10	8	13	8	1	2	11
Civil Service	35	49	11	5	8	12	1	1	13.5
Sales	28	47	12	1	2	19	0	0	17.5
Church	19	45	13	1	3	17.5	0	0	17.5
Entertainment	24	38	14	2	5	15.5	6	12	5.5
Social Service	19	35	15	4	6	13.5	2	2	11
Public Relations	22	32	16	1	1	20	0	0	17.5
Clerical	16	31	17	3	9	11	1	1	13.5
Advertising	17	28	18	4	6	13.5	1	2	11
Journalism	16	26	19	3	5	15.5	0	0	17.5
Financial	15	24	20	1	3	17.5	0	0	17.5
No response	266			9			7		

Table 23. Field chosen by 12th grade female students as a career choice.

Schools	Napa			St. Helena			Calistoga		
Career Fields	No.	Weighted No.	Rank	No.	Weighted No.	Rank	No.	Weighted No.	Rank
Teaching	164	391	1	16	36	2	4	10	3.5
Business	146	329	2	8	20	6	4	10	3.5
Clerical	120	266	3	20	45	1	5	10	3.5
Social Service	123	236	4	12	21	5	7	11	1
The Arts	80	176	5	6	32	4	4	10	3.5
Medicine	77	173	6	13	33	3	3	4	8
Public Relations	73	109	7	10	17	7	2	2	12
Sales	58	104	8	8	12	8	1	1	13
Civil Service	32	80	9	2	3	14.5	0	0	14
Entertainment	37	76	10	1	2	16.5	0	0	14
Law	28	60	11	1	2	16.5	1	3	10
Journalism	34	57	12	3	6	11	3	5	6.5
Advertising	30	43	13	4	5	12	2	5	6.5
Science	23	42	14	6	11	9.5	1	3	10
Armed Forces	21	34	15	3	3	14.5	0	0	0
Engineering	11	29	16	0	0	19	1	3	10
Skilled Trade	12	28	17	6	11	9.5	0	0	14
Church	17	27	18	0	0	19	0	0	14
Financial	15	18	19	2	4	13	0	0	14
Farming	7	14	20	0	0	19	0	0	14
No response				5			2		

Table 24. Field chosen by 12th grade male students as a career choice.

Schools	Napa			St. Helena			Calistoga		
Career Fields	No.	Weighted No.	Rank	No.	Weighted No.	Rank	No.	Weighted No.	Rank
Skilled Trade	187	424	1	34	72	1	10	25	1
Engineering	150	346	2	19	50	2	5	7	5.5
Business	131	284	3	13	31	4	6	14	2
Armed Forces	114	201	4	19	39	3	5	8	4
Teaching	91	197	5	8	16	7.5	1	3	10.5
Science	174	156	6	6	16	7.5	3	9	3
Law	68	143	7	5	7	12	1	2	13.5
The Arts	47	111	8	5	12	9	0	0	16
Civil Service	54	95	9	6	6	14	2	3	10.5
Sales	53	94	10	4	8	10	4	7	5.5
Medicine	34	78	11	8	21	6	2	6	7.5
Entertainment	36	72	12	5	7	12	2	2	13.5
Social Service	30	57	13	1	1	18.5	3	5	9
Farming	27	45	14	13	24	5	2	0	16
Church	19	43	15	1	1	18.5	1	2	13.5
Advertising	22	42	16	2	4	15.5	2	2	13.5
Journalism	21	40	17	5	7	12	0	0	16
Clerical	17	35	18	2	2	17	0	0	16
Public Relations	22	33	19	2	4	15.5	3	6	7.5
Financial	21	31	20	0	0	20	0	0	16

Students were asked, "If the specific occupation you have chosen is not found on the above list, what is it?"

Tables 25-28 have been provided to show unsolicited responses given by students pertaining to career choices. These responses were placed on a line marked "other".

Because they were free responses a given number of write-in responses are likely to be more indicative of intent than a like number responding to an item that was listed.

Important "write-in" responses by the girls were; airline stewardesses, beautician, and marriage. The boys "write-in" responses included: forestry, airline pilot, and law enforcement.

Table 25. Occupational choices indicated by 11th grade female students that were not provided in tables 21, 22, 23, 24.

	Schools		
	Napa	St. Helena	Calistoga
Occupation	Number	Number	Number
Airline Stewardess	44	2	4
Beautician	35	5	3
Marriage	12	1	0

Table 26. Occupational choices indicated by 11th grade male students that were not provided in tables 21, 22, 23, 24.

	Schools		
	Napa	St. Helena	Calistoga
Occupation	Number	Number	Number
Forestry	25	2	1
Airline Pilot	15	0	0
Law Enforcement	7	0	0

Table 27. Occupational choices indicated by 12th grade female students that were not provided in tables 21, 22, 23, 24.

	Schools		
	Napa	St. Helena	Calistoga
Occupation	Number	Number	Number
Airline Stewardess	26	3	0
Marriage	20	2	0
Beautician	15	2	0

Table 28. Occupational choices indicated by 12th grade male students that were not provided in tables 21, 22, 23, 24.

	Schools		
	Napa	St. Helena	Calistoga
Occupation	Number	Number	Number
Forestry	20	1	0
Airline Pilot	17	1	0
Law Enforcement	13	2	1
Pro-Sports	10	0	0

Students were asked, "Have you studied and have some knowledge of the training required for the career of your choice?"

Tables 29-32 show the findings pertaining to this question. It may be noted that a higher percentage of girls indicated they have studied and have knowledge about needed career training than boys. With the exception of the 12th grade girls in Calistoga, students indicated "yes" less than did other students in general.

Table 29. 11th grade females response to the question - "Have you studied and have some knowledge about the training required for the career of your choice?"

	Napa	%	St. Helena	%	Calistoga	%
Yes	413	85	26	70	16	73
No	63	13	9	24	4	18
No Response	8	2	2	6	2	9
Total	484	100	37	100	22	100

Table 30. 11th grade males response to the question -"Have you studied and have some knowledge about the training required for the career of your choice?"

	Napa	%	St. Helena	%	Calistoga	%
Yes	354	83	35	76	20	67
No	70	16	11	24	9	30
No response	3	1	0	0	1	3
Total	427	100	46	100	30	100

Table 31. 12th grade females response to the question -"Have you studied and gained some knowledge about the training required for the career of your choice?"

	Napa	%	St. Helena	%	Calistoga	%
Yes	361	86	40	89	12	92
No	46	11	3	7	1	8
No response	15	3	2	4	0	0
Total	422	100	45	100	13	100

Table 32. 12th grade males response to the question -"Have you studied and gained some knowledge about the training required for the career of your choice?"

	Napa	%	St. Helena	%	Calistoga	%
Yes	367	77	46	84	13	62
No	81	17	9	16	5	28
No response	26	6	0	0	0	0
Total	474	100	55	100	18	100

Students were asked which factors they believed were most important when choosing a career. The findings may be seen on tables 33-36. Male students listed future security first and opportunity for advancement second. Though numbers are small, St. Helena and Calistoga students rate challenging and interesting work first and opportunity for advancement second.

The girls listed challenging, interesting work first, future security second, and opportunity for advancement third.

Some differences exist in the rank order of responses between students from the different schools, but the general rank order is the same. The larger number of students from Napa dominate the rank order. Standing in the community was listed last by all the schools, grades, and sexes.

Table 33. Employment related conditions considered important by 11th grade females.

Schools	Napa		St. Helena		Calistoga	
Conditions	No.	Rank	No.	Rank	No.	Rank
Challenging, interesting work	375	1	26	1	18	1
Future security	273	2	14	4	11	2
Opportunity for advancement	247	3	18	3	8	4
Pleasant working conditions	223	4	22	2	9	3
Service to mankind	124	5	12	5	4	6
High pay	111	6	5	6	6	5
Standing in community	17	7	1	7	2	7

Table 34. Employment related conditions considered important by 11th grade males.

Schools	Napa		St. Helena		Calistoga	
Conditions	No.	Rank	No.	Rank	No.	Rank
Future security	267	1	16	5	15	3
Opportunity for advancement	257	2	21	2	18	2
Challenging, interesting work	245	3	35	1	20	1
High Pay	150	4	18	4	10	4
Pleasant working conditions	129	5	20	3	9	5
Service to mankind	54	6	5	6	4	6
Standing in community	28	7	3	7	3	7

Table 35. Employment related conditions considered important by 12th grade females.

Schools	Napa		St. Helena		Calistoga	
Conditions	No.	Rank	No.	Rank	No.	Rank
Challenging, interesting work	295	1	37	1	10	2
Future security	254	2.5	20	2	11	1
Opportunity for advancement	232	2.5	17	4	6	3
Pleasant working conditions	176	4	18	3	5	4
High Pay	92	5	7	6	2	5.5
Service to mankind	89	6	14	5	2	5.5
Standing in community	20	7	1	7	1	7

Table 36. Employment related conditions considered important by 12th grade males.

Schools	Napa		St. Helena		Calistoga	
Conditions	No.	Rank	No.	Rank	No.	Rank
Future security	290	1	31	3	10	2.5
Opportunity for advancement	282	2	32	2	12	1
Challenging, interesting work	279	3	37	1	10	2.5
High Pay	142	4	18	5	8	4
Pleasant working conditions	141	5	21	4	6	5
Service to mankind	59	6	5	6	1	6
Standing in community	15	7	1	7	0	7

Tables 37-40 show student responses to the question. "In planning your career, to which three of the following would you go for the most helpful advice?" Students believed that a business or professional man would provide the most helpful advice in every instance, except the 12th grade girls who indicated the school counselor would be most helpful.

Students in every instance list friends their own age as being the least helpful. Students in the Napa Valley Unified School District placed teachers next to last in providing vocational guidance. The importance of teacher advice was rated somewhat higher in the St. Helena and Calistoga districts.

Table 37. Source of advice sought by 11th grade females pertaining to occupational guidance.

Schools	Napa		St. Helena		Calistoga	
Source	No.	Rank	No.	Rank	No.	Rank
Business/professional man	242	1	11	5	11	2
My mother	204	2	24	1	8	3.5
My school counselor	196	3	17	2.5	13	1
My father	180	4	17	2.5	8	3.5
Books, magazines or other published material	152	5	10	6	5	6
My teachers	89	6	13	4	6	5
Friends about my age	33	7	3	7	3	7

Table 38. Source of advice sought by 11th grade males pertaining to occupational guidance.

Schools	Napa		St. Helena		Calistoga	
Source	No.	Rank	No.	Rank	No.	Rank
A business/professional man	316	1	34	1	13	3.5
My father	211	2	20	2	17	1
My school counselor	202	3	19	3	14	2
Books, magazines or other published material	118	4	10	4.5	6	8
My mother	77	5	9	6	13	3.5
My teachers	66	6	10	4.5	8	5
Friends about my own age	26	7	6	7	3	7

Table 39. Source of advice sought by 12th grade females pertaining to occupational guidance.

Schools	Napa		St. Helena		Calistoga	
Source	No.	Rank	No.	Rank	No.	Rank
My school counselor	227	1	18	3.5	8	1
A business/professional man	213	2	23	1	6	3.5
My mother	166	3	22	2	5	5
My father	165	4	18	3.5	7	2
Books, magazines or other published material	146	5	14	6	3	6
My teachers	94	6	17	5	6	3.5
Friends about my own age	25	7	1	7	1	7

Table 40. Source of advice sought by 12th grade males pertaining to occupational guidance.

Schools	Napa		St. Helena		Calistoga	
Source	No.	Rank	No.	Rank	No.	Rank
A business/professional man	303	1	29	2	13	1
My father	223	2	30	1	9	2
My school counselor	194	3	21	3	8	3
Books, magazines or other published material	148	4	10	6	3	5.5
My mother	95	5.5	11	5	2	7
My teachers	95	5.5	12	4	4	4
Friends about my own age	44	7	5	7	3	5.5

When asked if they had consulted their parents regarding their career choice, students responded "yes" in the large majority of cases. The lowest number of "yes" responses were the Calistoga 11th grade boys with a response of 57%. This information may be seen in tables 41-44.

Table 41. Response of 11th grade females to the question, "Have you consulted your parents about the career of your choice?"

Schools	Napa		St. Helena		Calistoga	
Response	No.	%	No.	%	No.	%
Yes	424	88	31	84	16	73
No	49	10	4	11	5	23
No response	11	2	2	5	1	4
Total	484	100	37	100	22	100

Table 42. Response of 11th grade males to the question, "Have you consulted your parents about the career of your choice?"

Schools	Napa		St. Helena		Calistoga	
Response	No.	%	No.	%	No.	%
Yes	341	80	32	70	17	57
No	67	16	12	26	10	33
No response	19	4	2	4	3	10
Total	427	100	46	100	30	100

Table 43. Response of 12th grade females to the question, "Have you consulted your parents about the career of your choice?"

Schools	Napa		St. Helena		Calistoga	
Response	No.	%	No.	%	No.	%
Yes	380	90	43	96	11	85
No	30	7	2	4	2	15
No response	12	3	0	0	0	0
Total	422	100	45	100	13	100

Table 44. Response of 12th grade males to the question, "Have you consulted your parents about the career of your choice?"

Schools	Napa		St. Helena		Calistoga	
Response	No.	%	No.	%	No.	%
Yes	363	77	38	69	15	83
No	75	16	16	29	2	11
No response	36	7	1	2	1	6
Total	474	100	55	100	18	100

When asked if parents approved their career choice, students indicated that parents generally are in agreement. This information may be seen in tables 45-48.

Table 45. Parental approval of students occupational choice for 11th grade females.

Schools	Napa		St. Helena		Calistoga	
Approval	No.	%	No.	%	No.	%
Yes	428	88	29	78	20	91
No	14	3	1	3	2	9
No response	42	9	7	19	0	0
Total	474	100	37	100	22	100

Table 46. Parental approval of students oocupational choice for 11th grade males.

Schools	Napa		St. Helena		Calistoga	
Approval	No.	%	No.	%	No.	%
Yes	328	77	40	86	20	67
No	25	6	3	7	4	13
No response	75	17	3	7	6	20
Total	427	100	46	100	30	100

Table 47. Parental approval of students occupational choice for 12th grade females.

Schools	Napa		St. Helena		Calistoga	
Approval	No.	%	No.	%	No.	%
Yes	374	89	43	96	11	85
No	16	4	2	4	1	8
No response	32	7	0	0	1	7
Total	422	100	45	100	13	100

Table 48. Parental approval of students occupational choice for 12th grade males.

Schools	Napa		St. Helena		Calistoga	
Approval	No.	%	No.	%	No.	%
Yes	354	75	41	75	14	78
No	30	6	4	7	0	0
No response	90	19	10	18	4	22
Total	474	100	55	100	18	100

Students were asked where they believed they would obtain their occupational training. Tables 49-52 show that the largest number of students plan 2 or 4 years of college. Approximately 1/4 of all students plan to obtain occupational training on the job. The least indicated source for training was the high school.

Table 49. Anticipated source of occupational training in the opinion of 11th grade female students.

School	Napa		St. Helena		Calistoga	
Source	No.	%	No.	%	No.	%
High School	42	9	3	8	1	5
Junior College	158	33	10	27	11	50
Four Year College	156	32	13	35	2	9
On the Job	128	26	11	30	8	36
Total	484	100	37	100	22	100

Table 50. Anticipated source of occupational training in the opinion of 11th grade male students.

School	Napa		St. Helena		Calistoga	
Source	No.	%	No.	%	No.	%
High School	42	10	3	7	1	3
Junior College	85	20	13	28	8	27
Four Year College	167	39	18	39	13	43
On the Job	121	28	12	26	8	27
No response	12	3	0	0	0	0
Total	427	100	46	100	30	100

Table 51. Anticipated source of occupational training in the opinion of 12th grade female students.

School	Napa		St. Helena		Calistoga	
Source	No.	%	No.	%	No.	%
High School	36	9	0	0	1	8
Junior College	119	28	15	33	3	23
Four Year College	163	39	20	45	8	62
On the Job	104	24	14	22	1	7
Total	422	100	45	100	13	100

Table 52. Anticipated source of occupational training in the opinion of 12th grade male students.

School	Napa		St. Helena		Calistoga	
Source	No.	%	No.	%	No.	%
High School	25	5	3	5	1	6
Junior College	137	29	15	27	6	33
Four Year College	133	28	19	34	6	33
On the Job	179	38	18	34	5	28
Total	474	100	55	100	18	100

Students were asked how many years of schooling beyond high school they anticipated obtaining. The findings are shown in tables 53-56. The number of students who did not plan on some schooling beyond high school was extremely small.

The largest number of male students plan on attending 4 years of college, while the largest number of female students plan on 2 years. Fewer female students plan on more than 4 years of college than male students.

Table 53. Number of years of schooling beyond high school anticipated by 11th grade female students.

School	Napa		St. Helena		Calistoga	
Years	No.	%	No.	%	No.	%
1.	55	11	5	13	7	32
2.	156	33	11	30	6	27
3.	40	8	1	3	0	0
4.	88	18	10	27	4	18
5.	60	12	4	11	0	0
6.	45	9	0	0	0	0
7.	3	1	0	0	0	0
8.	5	1	1	3	0	0
No response	32	7	5	13	5	23
Total	484	100	37	100	22	100

Table 54. Number of years of schooling beyond high school anticipated by 11th grade male students.

School	Napa		St. Helena		Calistoga	
Years	No.	%	No.	%	No.	%
1.	24	6	4	9	1	3
2.	99	23	3	7	4	14
3.	16	4	1	2	3	10
4.	116	27	12	26	10	33
5.	42	10	6	13	1	3
6.	56	13	7	15	4	14
7.	6	1	3	7	1	3
8.	17	4	2	4	2	6
No response	51	12	8	17	4	14
Total	427	100	46	100	30	100

Table 55. Number of years of schooling beyond high school anticipated by 12th grade female students.

School	Napa		St. Helena		Calistoga	
Years	No.	%	No.	%	No.	%
1.	42	10	5	11	2	15
2.	113	27	6	14	3	23
3.	18	4	5	11	0	0
4.	64	15	11	24	3	23
5.	91	22	9	20	3	23
6.	38	9	3	6	0	0
7.	4	1	0	0	1	8
8.	3	1	0	0	0	0
No response	49	11	6	14	1	8
Total	422	100	45	100	13	100

Table 56. Number of years of schooling beyond high school anticipated by 12th grade male students.

School	Napa		St. Helena		Calistoga	
Years	No.	%	No.	%	No.	%
1.	20	4	1	2	0	0
2.	89	19	16	29	5	27
3.	15	3	2	4	1	6
4.	144	30	12	21	5	27
5.	61	13	5	9	0	0
6.	44	9	6	11	1	6
7.	13	3	2	4	0	0
8.	25	5	1	2	1	6
No response	63	14	10	18	5	27
Total	474	100	55	100	13	100

Tables 57 and 58 are provided to show the institutions students planned to attend when their high school program was completed. Napa Junior College was listed by male and female students more often than all other schools combined.

Table 57. University or college 11th grade students indicate they will attend.

School	Napa		St. Helena		Calistoga	
University or College	Boys	Girls	Boys	Girls	Boys	Girls
Napa Junior College	183	224	11	3	6	2
Chico	11	6		2		
San Jose	7	9	1			
S. F. State	8	16	3		1	
U. C.	28	32			1	
Sacramento State	4	10		1		
Vocational	23	76	7	3	2	8
Armed Forces	5	1				
Out-of-State	22	21	4	2	2	
Other Universities	13	3	2	1		
Other state colleges	7	7	5	1	3	1
Other private schools		3				
Other junior colleges	12	18	3	4	4	

Table 58. University or college 12th grade students indicate they will attend.

School	Napa		St. Helena		Calistoga	
University or College	Boys	Girls	Boys	Girls	Boys	Girls
Napa Junior College	247	212	16	11	2	1
Sacramento State	6	10				
U. C.	48	46	7	3		2
San Jose	8	9	1	2		
S. F. State	12	15	4	7	1	1
Armed Forces	17		2	1		
Out-of-State	24	29	4	7	1	1
Vocational	17	62	2	5	1	1
Other Universities	10	5		1		1
Other state colleges	32	31	9	4		
Other private schools	1	3		1		
Other junior colleges	12	13	4	6	2	1

Tables 59-62 are provided to show the number of 11th and 12th grade students who do not anticipate schooling beyond high school but who would enroll in vocational courses should they be offered at Napa Junior College. While the percentage of no responses seems to be quite high, it should be noted that 853 students indicated they would attend classes in vocational education.

Table 59. Students who do not anticipate schooling beyond high school but who would attend Vocational Education Courses should they be offered at Napa Junior College. 11th grade female students.

School	Napa		St. Helena		Calistoga	
Student Response	No.	%	No.	%	No.	%
Yes	239	49	13	35	13	59
No	76	16	8	22	3	14
No response	169	35	16	43	6	27
Total	484	100	37	100	22	100

Table 60. 11th grade male students who do not anticipate schooling beyond high school but who would attend Vocational Education Courses should they be offered at Napa Junior College.

School	Napa		St. Helena		Calistoga	
Student Response	No.	%	No.	%	No.	%
Yes	120	28	18	39	12	40
No	60	14	9	20	5	17
No response	247	58	19	41	13	43
Total	474	100	46	100	30	100

Table 61. 12th grade female students who do not anticipate schooling beyond high school who would attend Vocational Education Courses should they be offered at Napa Junior College.

School	Napa		St. Helena		Calistoga	
Student response	No.	%	No.	%	No.	%
Yes	143	34	19	42	5	38
No	60	14	8	18	1	7
No response	219	52	18	40	7	54
Total	422	100	45	100	13	100

Table 62. 12th grade male students who do not anticipate schooling beyond high school who would attend Vocational Education Courses should they be offered at Napa Junior College.

School	Napa		St. Helena		Calistoga	
Student response	No.	%	No.	%	No.	%
Yes	240	51	21	39	10	56
No	71	15	14	25	3	17
No response	163	34	20	36	5	27
Total	474	100	55	100	18	100

Almost 50% of all students indicated that they would enroll in vocational courses in the high schools if they were fairly sure that these courses would provide them with job entry skills upon graduation. The highest percentage of students indicating that they would not enroll in vocational courses, were the 12th grade girls from St. Helena. This information may be seen in tables 63-66.

Table 63. Interest of potential High School terminal students in Vocational Education at high school level.

Eleventh Grade Females

Schools	Napa		St. Helena		Calistoga	
Response	No.	%	No.	%	No.	%
Yes	219	46	16	43	15	68
No	65	13	4	11	3	14
No response	200	41	17	46	4	18
Total	484	100	37	100	22	100

Table 64. Interest of potential High School terminal students in Vocational Education at high school level.

Eleventh Grade Males

Schools	Napa		St. Helena		Calistoga	
Response	No.	%	No.	%	No.	%
Yes	217	51	15	33	12	40
No	74	17	9	20	5	17
No response	136	32	22	47	13	43
Total	427	100	46	100	30	100

Table 65. Interest of potential High School terminal students in Vocational Education at high school level.

Twelfth Grade Females

School	Napa		St. Helena		Calistoga	
Response	No.	%	No.	%	No.	%
Yes	175	42	15	33	4	31
No	72	17	22	44	4	31
No response	175	41	8	18	5	38
Total	422	100	45	100	13	100

Table 66. Interest of potential High School terminal students in Vocational Education at high school level.

Twelfth Grade Males

School	Napa		St. Helena		Calistoga	
Response	No.	%	No.	%	No.	%
Yes	196	41	14	25	10	56
No	94	20	20	37	2	11
No response	184	39	21	38	6	33
Total	474	100	55	100	18	100

The question was asked, "Would you take vocational courses for general value or background rather than preparation for an occupation?" Approximately 50% of the students surveyed answered they would be interested in taking courses for general background. There were relatively few students who did not respond to this question. The findings may be found in tables 67-70.

Table 67. Eleventh grade female interest in Vocational Education courses as general education rather than occupational preparation.

School	Napa		St. Helena		Calistoga	
Response	No.	%	No.	%	No.	%
Yes	228	47	18	33	14	64
No	212	44	27	49	7	32
No response	44	9	10	18	1	4
Total	484	100	37	100	22	100

Table 68. Eleventh grade male interest in Vocational Education courses as general education rather than occupational preparation.

School	Napa		St. Helena		Calistoga	
Response	No.	%	No.	%	No.	%
Yes	186	44	23	50	20	67
No	173	41	16	35	7	23
No response	68	15	7	15	3	10
Total	427	100	46	100	30	100

Table 69. Twelfth grade female interest in Vocational Education courses as general education rather than occupational preparation.

School	Napa		St. Helena		Calistoga	
Response	No.	%	No.	%	No.	%
Yes	177	42	27	60	6	46
No	171	41	16	36	4	31
No response	74	17	2	4	3	23
Total	422	100	45	100	13	100

Table 70. Twelfth grade male interest in Vocational Education courses as general education rather than occupational preparation.

School	Napa		St. Helena		Calistoga	
Response	No.	%	No.	%	No.	%
Yes	254	54	23	42	10	56
No	165	35	22	40	7	39
No response	55	11	10	18	1	5
Total	474	100	55	100	18	100

Tables 71-74 show that a large majority of 11th grade students of both sexes would be interested in participating in a work experience program. While a majority of 12th grade students also would like to participate, their numbers drop drastically when compared with the 11th grade.

Table 71. Eleventh grade female students interest in participating in a work experience program.

School	Napa		St. Helena		Calistoga	
Response	No.	%	No.	%	No.	%
Yes	385	80	27	73	16	73
No	79	16	10	27	0	0
No response	20	4	0	0	6	27
Total	484	100	37	100	22	100

Table 72. Eleventh grade male students interested in participating in a work experience program.

School	Napa		St. Helena		Calistoga	
Response	No.	%	No.	%	No.	%
Yes	318	74	39	85	25	84
No	77	18	5	11	4	13
No response	32	8	2	4	1	3
Total	427	100	46	100	30	100

Table 73. Twelfth grade female students interested in participating in a work experience program.

Schools	Napa		St. Helena		Calistoga	
Response	No.	%	No.	%	No.	%
Yes	271	56	21	58	11	85
No	68	14	12	31	0	0
No response	145	30	4	11	2	15
Total	484	100	37	100	22	100

Table 74. Twelfth grade male students interested in participating in a work experience program.

Schools	Napa		St. Helena		Calistoga	
Response	No.	%	No.	%	No.	%
Yes	231	49	38	69	16	89
No	79	17	7	13	2	11
No response	164	34	10	18	0	0
Total	474	100	55	100	18	100

Tables 75-76 have been provided to show the results when asked, "What subject or subjects do you think should be offered at the senior high school level that are not now offered?". The largest number of students responding believed that psychology, sociology, and languages (Russian and Italian) should be taught. 30 St. Helena boys indicated they thought auto mechanics should be offered. Many students responding to this question requested courses that were already offered at their respective high schools.

Table 75. Subjects eleventh grade students thought should be offered in high school.

Subject	Napa	St. Helena	Calistoga
Languages (Russian, Italian)	48	31	10
Psychology	72	3	1
Beauty (Cosmetics, Modeling, Grooming)	15		
Forestry	11		1
Sex Education	19	2	
Sociology	36	1	
Typing III	20	1	
Job Preparation	16	1	1
The Arts	26	2	9
Carpentry	16		
Advanced Science	13	3	
Auto Mechanics	Offered	11	1
Law, Law Enforcement	15	1	

Table 76. Subjects twelfth grade students thought should be offered in high school.

Subject	Napa	St. Helena	Calistoga
Languages (Russian, Italian)	67	15	8
Sociology	36	1	1
Psychology	106	11	4
Medical Course	17		
The Arts	26	3	3
Sex Education	37		
Advanced Science	48		
Law, Criminology	17	3	
Auto Mechanics	Offered	19	

Tables 77-80 show that the majority of students would like to be employed in California when they have completed their education. Only a very small percent expect or intend to find employment in Napa County. Only 28 of the total students surveyed failed to answer this question.

Table 77. Occupational mobility of students. An indication of geographical areas in which eleventh grade female students would like to be employed.

Schools	Napa		St. Helena		Calistoga	
Area	No.	%	No.	%	No.	%
Napa County	83	17	6	16	1	5
Bay Area	102	21	8	22	3	14
California	144	30	10	27	5	23
Western United States	33	7	4	11	2	9
Anywhere in USA	122	25	9	24	9	40
No response	0	0	0	0	2	9
	484	100	37	100	22	100

Table 78. Occupational mobility of students. An indication of geographical areas in which eleventh grade male students would like to be employed.

Schools	Napa		St. Helena		Calistoga	
Area	No.	%	No.	%	No.	%
Napa County	63	15	6	13	1	3
Bay Area	79	19	5	11	7	24
California	111	25	16	35	10	33
Western United States	58	14	12	26	4	13
Anywhere in USA	93	22	7	15	5	17
No response	23	5	0	0	3	10
	427	100	46	100	30	100

Table 79. Occupational mobility of students. An indication of geographical areas in which twelfth grade female students would like to be employed.

Schools	Napa		St. Helena		Calistoga	
Area	No.	%	No.	%	No.	%
Napa County	78	18	4	9	0	0
Bay Area	84	20	6	13	2	15
California	126	30	11	24	6	47
Western United States	42	10	6	13	0	0
Anywhere in USA	92	22	18	41	3	23
No response	0	0	0	0	2	15
	422	100	45	100	13	100

Table 80. Occupational mobility of students. An indication of geographical areas in which twelfth grade male students would like to be employed.

Schools	Napa		St. Helena		Calistoga	
Area	No.	%	No.	%	No.	%
Napa County	67	14	7	13	2	11
Bay Area	84	18	5	11	0	0
California	127	27	12	21	11	61
Western United States	73	15	11	19	4	22
Anywhere in USA	92	19	18	32	0	0
No response	31	7	2	4	1	6
	474	100	55	100	18	100

RECOMMENDATIONS

The involvement of students in the assessment and planning of programs has proven to be useful in this project and it is hoped that such an approach will continue to be utilized.

Based on the results of this project the following questions have arisen.

1. To investigate and improve the techniques in using the opinions of students in the development of vocational programs.

2. To investigate the correlation between the certainty of student vocational selection and the accuracy of vocational selection.

3. What are the trends of students vocational certainty and how does this relate to the accuracy of vocational selection as determined by longitudinal studies?

4. In what ways can we improve student accuracy and certainty of vocational selection?

The above information when obtained would be very valuable in the structuring of a vocational training system which would provide more effective guidance, training, and experience.

The author is presently developing a vocational training system which enlarges upon the concepts involved in this project.

SURVEY INSTRUMENT

Office of
NAPA COUNTY SUPERINTENDENT OF SCHOOLS
Piercy C. Holliday

Purpose: The purpose of this survey is to use the data to identify areas in Vocational Education that need to be maintained, extended, and improved so that persons of all ages in Napa County will have ready access to vocational training which is of high quality, which is realistic in the light of actual or anticipated opportunities for gainful employment. It would also be used as an initial instrument for the establishment of a comprehensive and continuing follow-up study of high school graduates and/or dropouts.

Directions: Please answer all questions as honestly as you can.

Name of High School _____

Name of Student _____

Grade 11th ( ) 12th ( )

Age _____ Male ( ) Female ( )

- EDUCATIONAL AND CAREER STUDY -

1. How certain are you now what your career will be when you complete your education?

		1
a.	absolutely certain	( )a
b.	fairly sure	( )b
c.	uncertain	( )c

2. Even though you may or may not be certain what your "final career" will be, which school subjects do you think will best fit you for your career?

		2
a.	Commercial Courses	( )a
b.	Sciences	( )b
c.	Mathematics	( )c
d.	English	( )d
e.	Occupational Courses	( )e
f.	Social Sciences	( )f
g.	Foreign Languages	( )g

3. How important do you think your school marks are to your future?

		3
a.	very important	( )a
b.	fairly important	( )b
c.	unimportant	( )c

4. How important do you think a student's marks are to his popularity?

		4
a.	very important	( )a
b.	fairly important	( )b
c.	unimportant	( )c

5. Which <u>three</u> of the following factors do you think will have the greatest effect on your career? (Be sure to check <u>three</u>)

		5
a.	hard work	( )a
b.	intelligence	( )b
c.	personality	( )c
d.	good or bad "breaks"	( )d
e.	money	( )e
f.	influential friends	( )f
g.	influential relatives	( )g
h.	other (please list)	( )h

6. Which ones of the following fields would you like to make your final career? (Place (1) for your 1st choice, a (2) for your 2nd choice, (3) for your 3rd choice).

		1
a.	clerical	( )a
b.	engineering	( )b
c.	medicine	( )c
d.	teaching	( )d
e.	armed forces	( )e
f.	business	( )f
g.	science	( )g
h.	skilled trade (carpenter, electrician, auto mechanic, etc.)	( )h
i.	farming	( )i
j.	the arts	( )j
k.	law	( )k
l.	entertainment	( )l
m.	journalism	( )m
n.	financial	( )n
o.	social service	( )o
p.	church	( )p
q.	civil service	( )q
r.	advertising	( )r
s.	public relations	( )s
t.	sales	( )t
u.	other	( )u

7. If the specific occupation you have chosen is not found on the above list, what is it? _____ 7

8. Have you studied and have some knowledge of the training required for the career of your choice? 8

Yes ( ) No ( )

9. When you look for your first full-time job, which three of the following do you think would be most important to you?

		9
a.	future security	( )a
b.	opportunity for advancement	( )b
c.	challenging, interesting work	( )c
d.	pleasant working conditions	( )d
e.	service to mankind	( )e
f.	high pay	( )f
g.	standing in my community	( )g

10. In planning your career, to which three of the following would you go for the most helpful advice?

		10
a.	my father	( )a
b.	my mother	( )b
c.	my school counselor	( )c
d.	my teachers	( )d
e.	a business or professional man	( )e
f.	books, magazines or other published material	( )f
g.	friends about my own age	( )g

11. Have you consulted your parents about the career of your choice? 11

Yes ( ) No ( )

12. Do they approve? Yes ( ) No ( ) 12

13. Where do you expect to get the training needed to prepare you for your occupation? 13

a. high school ( )a
b. junior college ( )b
c. 4 year college ( )c
d. on the job (apprentice or other) ( )d

14. How many years of schooling beyond high school do you think will be required to prepare you for your occupational objective? 14

1 ( ) 2 ( ) 3 ( ) 4 ( ) 5 ( ) 6 ( ) 7 ( ) 8 ( )

15. If you plan to continue your education beyond 12th grade what institutions do you plan to attend? 15

_____

_____

16. If you do not at present plan to continue your education beyond the 12th grade, would you attend Napa Junior College if vocational courses were offered that would prepare you for your life's work? 16

Yes ( ) No ( )

17. If you do not at present plan to continue your education beyond 12th grade, would you enroll in vocational courses at your high school if you were fairly certain that upon graduation you could be placed on a job? 17

Yes ( ) No ( )

18. Would you take vocational courses for general value or background rather than preparation for an occupation? 18

Yes ( ) No ( )

19. Would you be interested in participating in a work experience program where part of your school time is spent learning on the job? 19

Yes ( ) No ( )

20. What subject or subjects do you think should be offered at the senior high school level that are not now offered?

a. _____ 20

b. _____

c. _____

21. Where would you prefer to work when you have completed your education?

21

a. Napa County ( )a
b. Bay Area ( )b
c. California ( )c
d. Western United States ( )d
e. Anywhere in the United States ( )e

VT 001 528

Striner, Herbert E.

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We do not have definitive information concerning the extent of unemployment caused by technological change, but we do have good reason to believe that the rate of change has increased and that institutions have not kept pace with technological change. While larger numbers of labor force members are affected by skill obsolescence, there has also developed an increasingly imperfect market mechanism for labor. The basic point is that in order to provide for quicker anticipation of changes, better utilization of information, and development of new types of programs, our institutions concerned with education, placement, counseling, and the utilization of skills must have closer and new relationships. Our philosophy of education in this technologically advanced period must be geared toward a program of life-cycle education that permits people to return again and again for retraining or further education, with a minimal loss of income whenever the need is urgent. Military training is an example of one of a number of precedents for such a plan. The new educational institution must use complicated, sophisticated, job market surveys to devise curriculum content and assure variety of course offerings, with the advice and involvement of industry. State and Federal agencies must work out new, more effective survey and analytical techniques and more effective communication and cooperation with schools, industry, and other government agencies. Discussion followed the address by Dr. Striner, an economist. (ET)

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SEMINAR ON MANPOWER POLICY AND PROGRAM

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Training in the Perspective of Technological Change

by HERBERT E. STRINER

U.S. DEPARTMENT OF LABOR, W. Willard Wirtz, Secretary
MANPOWER ADMINISTRATION, Office of Manpower, Automation and Training

- This report is one in a series of proceedings of Seminars on Manpower Policy and Program sponsored by the Office of Manpower, Automation and Training. It presents a condensed transcript of the seminar held in Washington, D.C., February 5, 1965.

- The purpose of the seminars is to provide a platform for guest speakers and for members of the Department of Labor and other agencies concerned with manpower problems to discuss issues arising from the development of an Active Manpower Policy.

- Expressions of opinion by the speaker, the moderator, and those participating from the audience are not to be construed as official opinions of the U.S. Government or the Department of Labor.

COVER: View of part of an observatory (1673), from John Hevelius, Machina coelestis. The sextant was used to measure the angular separation of celestial bodies.

SEMINAR ON MANPOWER POLICY AND PROGRAM
January 1966

Training in the Perspective of Technological Change

by HERBERT E. STRINER

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

OPENING REMARKS

Chairman—Dr. John P. Walsh, Assistant Manpower Administrator, Manpower Administration

DR. WALSH: Welcome to today's Seminar on Manpower Policy and Program, sponsored by the Office of Manpower, Automation and Training. The purpose of the seminars is to discuss the issues raised in the *Manpower Report of the President* and the development of an active manpower policy.

This Nation's manpower policy recognizes that effective manpower utilization during a period of continued technological change requires a fluidity within the labor force in order to match manpower requirements and resources. Thus education and training become identified as the manpower utilization catalyst. This aspect of our manpower policy will be examined in today's address, "Training in the Perspective of Technological Change."

Dr. Sar Levitan, who is a research associate at the W. E. Upjohn Institute for Employment Research, here in Washington, is the moderator this afternoon. Dr. Levitan has been a member of the faculties of Johns Hopkins and George Washington Universities and is the author of several published articles dealing with aspects of manpower policy.

We are honored today to have as our guest speaker Dr. Herbert E. Striner, director of program development for the W. E. Upjohn Institute for Employment Research. Before assuming his present post he was Washington director of the Urban Studies Program and senior economist with Stanford Research Institute. He has also served on the staff of the Brookings Institution and on the faculty of Johns Hopkins University. Dr. Striner currently serves on the Review Panel of the President's Cabinet Committee on Juvenile Delinquency and Youth Crime and on several other committees.

May I present Dr. Herbert Striner.

TRAINING IN THE PERSPECTIVE OF TECHNOLOGICAL CHANGE

An Address by Dr. Herbert E. Striner

DR. STRINER: Thank you very much, Dr. Walsh.

I want to discuss with you this afternoon some of my ideas on the problem of job training, especially in light of the changes taking place in our economy. I hope to avoid the controversy regarding the problem of structural unemployment vs. aggregate demand. Let me say at the outset that I, for one, feel that there are strong arguments on both sides of the question. I don't mean to straddle the issue, but I do feel strongly that perhaps the continuing argument has done a great disservice to our ability to deal with chronic unemployment and high residual unemployment.

I would like to speak for a while about conclusions I have come to about these problems after serving for about a year and a half on the Review Panel of the President's Cabinet Committee on Juvenile Delinquency and Youth Crime. This may seem to be a bit far afield from the topic "Training in the Perspective of Technological Change." However, I feel that if I spend the opening 10 or 15 minutes discussing training and education in the light of my experience on the Juvenile Delinquency Review Panel, you will begin to see the relevance of this experience to what I think should be done to develop a logical, long-term training program that will help to meet the demands of social and technological change.

IMPORTANCE OF UP-TO-DATE VOCATIONAL TRAINING

I imagine you suspect that the juvenile delinquency program of the Federal Government has to do with corrections and courts. Only in part is this so. This juvenile delinquency program was set up as a pioneering effort to study a social problem—youth crime—not merely from the traditional point of view of courts and corrections and welfare, but also from the standpoint of education, training, and employment. Our objective at the outset was to provide communities with a comprehensive approach to the problem of juvenile delinquency. For this purpose a panel with representatives from various disciplines was established to counsel with community representatives who applied to the Federal Government for funds to combat juvenile delinquency. This panel was supposed to provide the communities with some insight into the meaning of a comprehensive program and to establish criteria for the development of such a program.

As the economist on this team, I was interested in the reactions of my colleagues and the community representatives to my ideas on manpower development in our economy. My colleagues on this panel represented the fields of education, sociology, law, welfare, and corrections. I told these people that vocational training in our new economy could only be effective if information concerning actual job vacancies was gathered and given to the planners of school curricula. This concept was completely new to them. Although for some years people have talked about training in the schools so youngsters can graduate with skills that will enable them to become productive, contributing members of our society, I discovered that no one from the field of manpower or economics had been involved in the development of these programs. And only one member of the panel who happened to have a background in manpower and economics saw such programs as the logical, straightforward attack which I feel they are.

What was most disturbing to me was the indifference or lack of a sense of urgency of many of the community representatives concerning the value of training specifically for employment in light of changing technology and the changing mix of industries, services, and business establishments in their own towns. The

representatives were the community officials—the mayor, the school superintendent, the head of the local employment service, the health and welfare officials—and, interestingly enough, a few citizens from the target area who would usually meet with us to study the prospects after a proposal for a program to deal with juvenile delinquency had been submitted. With one or two exceptions, representatives of roughly 19 communities had no questions about the failure of trainees to find suitable jobs, the adequacy of the educational institutions, or the availability of statistics on job opportunities. Questions were raised about welfare programs, correctional institutions, family agencies, and welfare counseling activities. But, apparently, education and training and other manpower development activities were somehow outside this bailiwick and unrelated to juvenile delinquency. The assumption seemed to be that the pioneering efforts had been made, and that somehow every training program, every educational program, was virtually as good as it could possibly be.

As time went on and I began to observe real problems in existing vocational training programs, it became increasingly apparent to me that very few of the business leaders in the various communities were aware that they had a crucial role to play. Most of the members of the demand side of the spectrum (if education is viewed as the side supplying workers, and business and industry as the side demanding them) seemed content, as representatives of a power structure, to approve the proposed program. The school superintendents did not show much enthusiasm for the idea that their institutions could play a new role (in the solution of the grave problem of juvenile delinquency) through providing better technical and vocational training. Juvenile delinquency was viewed generally as a problem having very little to do with employment and manpower resources. Even in communities where we had an input from the local employment service people, there seemed to be very little interest in new and imaginative programs for job development. For the most part the public employment service was concerned with providing statistics on job orders to the local vocational training people who, hopefully, would use these job orders as a basis for programs to train skilled workers for the open jobs.

Dialogue with Educators

Throughout all the discussion and debate I couldn't help having (and being the object of) a number of very negative reactions. My reaction to the school representatives—and most of them were from metropolitan areas—was: "Don't you see?" I am talking about educators in cities like New York, Chicago, Los Angeles, and San Francisco; I think the smallest community involved was Charleston, West Virginia. I asked the educators: "Don't you see how important it is that you understand the nature of the economic changes taking place in your area and that you understand the meaning of technological change with regard to new skills and job vacancies? You should be attempting to relate your vocational and industrial training programs to the changes in the economy."

Their reaction to my assigning them some responsibility for an entirely new and different function was, very interestingly, a defensive one:

"Dr. Striner, you are not an educator, are you?"

"No, I am an economist."

"I see. Well, you don't have a feeling for the problems of the educator."

"I suppose not. But for what are you educating these people? Apparently one of the reasons you are here is that you are concerned with the high rate of juvenile delinquency and I would assume then that the children you are talking about are not the ones who are going on to a university education. These are children whom we are, I hope, training in a skill which will give them entry into the job market in some position where they can utilize to the fullest whatever abilities they have. Isn't this the role of an educator?"

"Well, yes."

In short, in all but 2 out of 19 communities, each school superintendent seemed to feel that I was prying into educational matters well beyond my scope and understanding, and that their problems could be dealt with much better internally. They were very upset.

Dialogue with Employment Service Personnel

Then there was the reaction of the public employment service. I assume there are some people here today from that organization. It was only with great difficulty that I could get the message through to them that, in spite of what I say, I am really one of the best friends the public employment service has. I sincerely feel that if the United States is to develop a truly effective active manpower policy the public employment service is the mechanism upon which we must pin our fondest hopes. However, we are never going to have more than fond hopes unless we soon recognize where our deficiencies are and decide what to do about them.

The public employment service reaction followed my asking a series of questions: "What do you do to determine the nature of the job market? Do you undertake large-scale, depth surveys of your local or regional industries, business firms, to determine their present needs and the projection of their skill needs for the next 2 to 4 years? Are your people involved in the development or the utilization of new types of testing devices?" (I asked the question on testing because I think that one of our problems, especially with respect to teaching for Manpower Development and Training Act programs, is that many young people cannot take the General Aptitude Test Battery or other types of tests. We must encourage the development and use of non-verbal techniques, which I understand is being done in the experimental and demonstration training programs.)

Their usual reaction was: "Well, we have job information." This was always a little embarrassing; one dislikes hanging dirty linen in front of the sociologists, psychologists, and educators.

So, I gradually had to get my friends from the public employment service to define the difference between job order information and vacancies. This experience proved to be quite a revelation for a number of the businessmen and educators present. They had been assuming that when the public employment service said, "There are 'X' number of job openings in the 'X' trade," this was complete information on local job vacancies. It was a further revelation for them to understand that there are actually no job vacancy statistics in the United States and

that, as a matter of fact, businessmen do not report all jobs that are available. The educators did not know that there is no official program of any sort, that is, a compulsory program, forcing businessmen to report information on job vacancies.

This was a very interesting, mutually educational experience. I felt that some of the public employment service people were equally surprised that the educators relied so completely on the statistics they were getting from the public employment service and on which they based curriculum and course offerings. In a number of communities the public employment service staff very frankly admitted that they would like to get into more sophisticated activity. They would very much like to have the charter and the funds to do a broad vacancy survey in that community—they agreed that this would be ideal.

Dialogue with Businessmen

The reaction of the businessmen was interesting to me. Of the three groups the businessmen emerged best. Their reaction was awfully upsetting to many of my fellow panelists. We all cherish certain images; and usually, of all of the groups in a community, we tend to rate the businessmen down at the bottom—crass, interested only in profit, having very little time for involvement in community activity, and not too much interested in research or in participating in public service programs. But the businessmen, I found, began to lean forward and ask questions. They did not counter with "Whom are you accusing of not getting involved in these programs?" The reaction more frequently was something like this: "Now this is interesting. I have never really thought about it this way, but actually the vocational technical training programs should be equipped to provide me with the skills I need in my work force. I know of a number of businesses in my community where there are severe shortages and no well-trained people to fill them. What you are saying is that perhaps there is a role for me to play. Somehow, I should be getting involved with education and working with the employment service people in a way in which, perhaps, I have never been involved before."

The businessmen give us quite a bit of hope for the changes we have to consider seriously, given the problem of training for

a changing technology. They are, I believe, one of the great untapped resources we must use far more effectively in our efforts to develop more rational programs.

Now to the question, "What does this mean for long-term technological change?" Many of us here probably have read most of the literature on the question of technological change. And I speak for a large number of people in the manpower area when I say that most of us are still very uncomfortable with the data on which we must rely to analyze the rate of technological change and the numbers of workers displaced by it. I don't think we have any definitive studies or data which deal specifically enough with this question to allow us to say with great certainty that there are "X" hundred thousand people unemployed as a result of technological change. I think that after examining all the data we can say only that there seems to be good reason for believing that the rate of change has increased and that, apparently, institutions have not kept pace with technological change.

NECESSITY FOR BASIC CHANGES

Here we are brought to the point of considering training, counseling, early warning devices, and new institutional arrangements, all of which can help us deal with the new problems growing out of increasing obsolescence of skills and products. Unfortunately we have not yet learned to understand the harmful effects of the obsolescent nature of the very institutions that are intended to deal with these problems. The painful truth is twofold: The situation involves larger and larger numbers in the labor force; and, while there is a more rapid rate of technological change, there has also developed an increasingly imperfect market mechanism. Here we come to the heart of an interesting problem in economic theory. Economics teaches that man is concerned essentially with the allocation of resources in a market involving factors for demand and factors for supply. Classically the market is supposed to provide the means by which we can obtain demand information on the basis of which we do something on the supply side to deal with indicated changes in demand. But at the present time—with an increasingly volatile manpower situation—we are being asked to provide information on changes in demand, to process that informa-

tion, digest it, and apply it in better training programs, using a mechanism which is becoming hopelessly inadequate. Our information system is incapable of dealing with these changes in demand.

Now what do we have to do? To begin, we have to recognize that the average rate of unemployment is inadequate as an instrument for indicating needed policy changes. Although we have an average unemployment rate of, let us say, 5 percent, we must always bear in mind that our real problem is dealing with rates of unemployment for sub-groups; these rates may be two or three times higher than the average. It is no news to this sophisticated audience that young male Negroes are in the, let us say, 15- to 20-percent unemployment category. And we all know that there is about 8 or 10 percent unemployment in the group (both white and nonwhite) at the other end of the age spectrum.

The problem is that we are not creating institutions that can deal effectively with unemployment at these levels. Increasing aggregate demand will probably not as quickly affect these rates of unemployment as will the changes in institutions and the development of other devices. If we are to deal with the structural changes in our local economies, we should try to understand what new relationships must be developed. Without these new relationships we will not only continue to have juvenile delinquency problems, but we will also continue to suffer from poor matching between skills (or the potential for providing skills) and jobs.

Change in Schools

The school system should no longer regard itself as guardian of an autonomous function, independent of employment problems and vocational and industrial training. The schools must see themselves as part of a system in which they relate to other institutions. I am referring here to the development of a much closer relationship between schools and the industrial and business community.

What I hope to see develop is a vocational training program geared to a 4- or 5-year planning horizon. I limit myself to this time period because I really do not think, other than as an

interesting academic exercise, we do very well in terms of 10- or 15- or 20-year projections. We all want such projections, but there is a serious difference between wanting something that is helpful, and getting something that is hopeless.

The new educational institution must use complicated, sophisticated, job market surveys to devise curriculum content and assure variety of course offerings. State and Federal agencies must work out new, more effective survey and analytical techniques.

Change in Industry's Relation to Education

In addition, we must utilize active inputs from industry. The industry people themselves must be heavily involved in curriculum design and projections of curriculum changes. They should also be heavily involved in training and retraining instructional staff. We must build an entirely new relationship now.

I find that when you speak of this new relationship with industry people, they do not regard it as something outside their scope. Nor do they regard it as the imposition of an unfair expense. Business people—especially those in industries suffering skill shortages—often indicate a willingness to participate in what they consider a most reasonable investment of their time and funds. In my visits to various communities (in New York, for example, in connection with the Mobilization for Youth Programs) I was surprised at the number of industrial representatives who were interested in retraining vocational training staff in order to provide first-rate, up-to-the-minute training for the students. Here in Washington, a number of printing trades employers have said they would be happy to provide retraining for printing teachers in the school system. Apparently, while visiting one of the vocational programs in printing, they found the level of instruction so far below modern standards that it was practically useless. For wholly selfish reasons, industry wants to be involved. Here is an instance where self-interest can be used to a high degree in achieving an important social goal.

The schools themselves are probably at the core of the problem of change. The public employment service has recognized

the need for modification in the system of education that would include a new relationship between the vocational schools, for example, and the employment service itself. But, because the public employment service is made up of 50 State agencies, the problem cannot be easily solved. Much depends on the State staff's level of sophistication and how far the staff can be prodded or pushed.

Change in Philosophy of Education

It is important also to change our basic philosophy of education. This is the old saw—you have heard it a thousand times—of the theory of continuing education. Now, however, with the stimulus of President Johnson's new program in education, we should emphasize the point that public education should not be limited to a 12- or even a 14-year program. What I am referring to is life-long education. As certain people have emphasized, we can learn much from our experience under the GI Bill about continuing education and the practical nature of this "investment." All of us here know that technological change means the obsolescence of some skills. I hesitate to ask how many in this audience started out doing something they are no longer doing, or how many career changes they have had!

For people who don't have clearly in mind what they are going to be doing for the next 10 or 15 years, or who will be forced to change skills and jobs because of economic and social changes, the effort now must be toward a program of life-cycle education. We must strive for a system of education that permits people to return again and again for retraining or further education, with a minimal loss of income whenever the need is urgent. There are, of course, a number of precedents for such a plan. The military is one example. In the military the high number of inadequately trained men makes training of great importance. The GI Bill after World War II and the recent efforts under MDTA also point the way. In a number of European countries subsidized training is viewed not as a giveaway but as the most logical means of benefiting the entire society through the achievement of individuals who have high-level skills.

Change in Federal Agencies

To make another point: We should be aware that some of our Government agencies—for example, the Department of Labor, the Department of Commerce, and the Department of Health, Education, and Welfare—continually relate to a "constituency." This constituency relationship results in some very significant penalties. For example, the Upjohn Institute has been conducting a study in Erie, Pennsylvania, and one of the things we are learning in discussions and interviews with employers is that a remarkably small percentage of them are aware of MDTA training provisions. A notably high percentage of these people are quite interested in on-the-job training provisions; they are quite interested in programs where, with partial subsidization, they would be able to take on people and provide them with skill training.

I suspect that what easily happens—I don't think that we should be interested any longer in assessing blame—is that there has been a "hardening of the categories" with whom we communicate or do business. Each Department must look at its charter and new legislative responsibilities to determine anew what channels of communication must be developed in order to carry out most effectively the legislative intent of the Congress.

This may mean that the Department of Commerce must have a far different relationship with labor, both union and nonunion. It may mean that the Department of Labor must develop a new relationship with business and management. It may mean that the Department of Health, Education, and Welfare will perceive new relations which it, too, must establish if it is going to make more impact through its programs.

In closing, may I say that the major point I have tried to make today is this: If we expect increasingly rapid changes involving even larger numbers of people and organizations, then we must try to understand the importance of relating our basic institutions to one another. In order to provide for quicker anticipation of changes, better utilization of the information, and development of new types of programs, our institutions concerned with education, placement, counseling, and the utilization of skills must have closer relationships and new relationships.

I do not know if there is really as close a relationship between the physical and the social systems as many believe. I have been somewhat bothered by those who contend that the second law of thermodynamics also has meaning with respect to social institutions. If they are right, then certainly with larger numbers and activities there will be increasing noise in the system and increasing entropy. If this happens, then perhaps we can only throw up our hands and say there is nothing much to be done about it. Hopefully, however, we can develop new, effective filters as we generate more noise in the system.

But in order to do something about all of these problems, we will have to look very closely at some of our institutions and their relationships to determine ways in which they must change. Without new plans which will demand painful adjustments, we cannot reasonably expect to solve the problems that are being generated by increasing rates of technological change and a more fluid society and economy.

Thank you.

DISCUSSION PERIOD

Moderator—Dr. Sar A. Levitan, Research Associate
W. E. Upjohn Institute for Employment Research

DR. LEVITAN: Thank you very much, Dr. Striner. The meeting is now open for questions and comments from the floor.

FROM THE FLOOR: You have implied, Dr. Striner, that technological change is beginning to affect the change makers—engineers and scientists, for example. It is said now that the half life of an engineering graduate is 10 years. This means that in 20 years he retains one fourth of his capability and in 30 years, an eighth—which is a rather small percentage. Will you discuss what can be done to alleviate this type of skill or knowledge obsolescence or what can be done to adjust to the problem?

DR. STRINER: I could talk about this one for a long time. Back in 1953 and 1954 I was with the National Science Foundation and involved in the first survey of research and development in industry. We asked the question, "How many engineers are employed by General Motors?" The answer was, "What do you mean by 'engineer'? You don't mean that fellow we hired

25 years ago as a very good mechanical engineer, but who is now an administrator, do you?" I think that such professionals now will also have to be retrained if they need new skills.

Let me give an example: In agricultural vocational training there are many individuals who teach courses which they should not teach. A teacher of dairy chemistry in Minnesota teaches children how to increase productivity in milk yield at the same time their parents are being asked by the Federal Government to reduce milk output. Someone says, logically, "Why are we funding this program in agricultural vocational training when we are trying to curtail output? This is nonsense. This man shouldn't be teaching this at all." If the teacher hears, of course, that someone is attempting to do away with his job, one of his first reactions is purely defensive. He wants to keep his job. I suggest that we consider retraining this teacher—who is probably a graduate of a first-rate agricultural college and has taken courses in basic chemistry, zoology, botany, physics, mathematics—to teach general chemistry in the local high school, where there is very probably a shortage of good general chemistry teachers.

Returning to the question of the engineer, I think there is nothing wrong with a man trained as an engineer for work in industry considering the possibility of teaching. Neither is there anything wrong with a retraining program which moves an engineer from one area into another. The problem is that one would like to feel that he has been trained for life once he has finished his formal education; this is true whether he is trained as a physician, an engineer, an economist, or a sheet metal worker. But the world changes, and we have to change our perspective and our goals and objectives. Increasingly, individuals during a life period will experience two or three substantial changes in occupation. We must alter our institutions so that this change-over is not done in a sloppy, wasteful manner. If the individual wishes to train even for a basic change—from, let us say, biology to engineering—there should be an opportunity for him to do so. I don't think that this opportunity exists now.

There is another problem, of course, in the physical sciences. The Federal Government now provides the major market for physicists and mathematicians. The Government's demands have

caused the number of such scientists to increase. But changes in the military, political, or diplomatic relationships of the Government can create a glut. An income adjustment, perhaps a painful one, will occur for many scientists as a result. For example, a physicist, recently out of graduate school with a Ph.D., may be hired at $14,000 per year by a private company on contract with the National Aeronautics and Space Administration or with the Department of Defense. After the emergency ends which provided the job, this physicist may have to accept an assistant professorship at a university. His new income level, probably $9,000 to $11,000 per year, is then dictated by a more normal supply-demand relationship.

FROM THE FLOOR: I remember that from 1939 to 1941 and then during wartime, tremendous emphasis was put on in-plant and on-the-job training. Now, in the recent literature, I see almost no reference to the development of on-the-job and in-plant training programs. My question is two-part: First, has there been any change in emphasis by management in industry on these programs? Is the emphasis increasing or decreasing? Second, if there still are such programs, what is their relation to the more formal kind of vocational training programs that you are talking about?

DR. STRINER: I don't think that I can answer the question completely. I will try to answer the part that I am competent to answer, and if Dr. Levitan wants to add something, fine. He probably knows a good deal more about this particular problem than I do.

On-the-job training (OJT) has, I think, been terribly underestimated as a source of skill acquisition and employment. I have not discerned in the past 12 to 18 months any major increase in OJT. It has not been pushed in this country as far as it should be. There is a considerable amount of room for OJT.

In other countries I have observed that OJT is conducted with much more interest and success than in our country. To stimulate OJT here it is necessary to establish a new relationship with industry. Industrial leaders must be asked to give their ideas on development of OJT. They may sometimes reply: "Should we subsidize OJT at all?"

Here perhaps I can anticipate the question of whether industry should do more of its own training. There are real reasons why many industries look to a common source for training rather than do it themselves. Some classical economists feel that industrial policy in this area should be governed by the market mechanism. When the situation gets bad enough, industry will begin to train because the marginal cost of not training is much higher than the marginal cost of training. My reaction is that a number of large, highly competitive industries will not train, because there is no guarantee that they will be able to keep the trainee long enough to get any investment return.

I have asked men in the automobile industry why they don't train more of their own personnel. They gave an honest, reasonable reply. They find that after they train a good carburetor man, for example, it may be only a few weeks before he is hired by another firm. After this happens a few times, they stop training—they merely steal from each other. One individual stated that many auto industry officials would be quite interested, however, in providing some funds and training personnel to a public vocational training program.

In Japan the 1958 Vocational Training Act provides vocational training both for adults and children. (In most countries, vocational training is for adults as well as youngsters.) The Japanese emphasize on-the-job training; their federal government, working through the prefectural government, provides help for curriculum development and capital facilities. Apparently this has worked very well.

FROM THE FLOOR: In Japan isn't there a tendency on the part of the worker to stay with the firm?

DR. STRINER: Only in the very large firms is this true. This training program was not developed for the large firms, because the large ones have their own. The Japanese were trying in 1958 to encourage the growth of small and medium-sized firms. Their efforts have been fairly effective. In Japan a rather paternalistic relationship still exists between the large firm and the worker; usually the worker is there for life.

FROM THE FLOOR: Your comment on on-the-job training is interesting because some recent Office of Manpower, Automa-

tion and Training mimeographed material indicates that firms are having a lot of trouble with middle management people. Such firms train recent college graduates at considerable expense for 2 or 3 years. The trainees work for a couple of years after training and then accept employment with another firm. The companies are seriously reconsidering their training programs.

DR. LEVITAN: I have one footnote on OJT. Private industry does an extremely poor job of publicizing the amount of training that it does. Consequently, the public is not aware of it. Someone remarked to me the other day that General Electric spends more on education and training than Harvard University. I haven't verified this statement, but it indicates the amount of training in private industry.

FROM THE FLOOR: Has automation produced machines and techniques for forecasting production changes in industries so that better predictions concerning job openings can be made?

DR. STRINER: By means of computers and inventory models, we can estimate possible changes in production in certain industries. But machines for making large models concerning future behavior of the economy or the society are well in advance of methodology in using them. We haven't put sufficient research money into the development of long-range forecasting techniques. We are developing better data, but in some cases we don't have enough information. For example, we start out with input-output analyses. We have an input-output table for 1958 which should be a very helpful tool for making predictions. But a 90-order table is really not adequate. A much more complicated table is needed, probably a 400-order table, in order to predict iterative effects of changes in any one column or row.

There are some advances in techniques such as the Program Evaluation and Review Techniques (PERT) which have been applied by the military. They are concerned for the most part with the trade between dollars and time. This is very relevant to education. I wonder whether anyone in the Office of Education is aware of the application of PERT costing techniques to the establishment of criteria for developing new educational programs or even building programs. PERT techniques were

used very successfully in the development of military programs to answer the question: "To what degree is there more money than time?" This discussion is very relevant to education and training, because I suspect that the problems of education and training, especially of the disadvantaged groups in the urban areas, involve trading money for time. I have taken part in a number of discussions where this question has been raised but where no one has been aware of critical evaluation techniques or PERT costing techniques. This is an example of moving technology from one area into another.

A worth-while expenditure of investment funds by OMAT or by other agencies would be the financing of a study of research that has been done by generic areas (categories) to determine to what degree there is a transfer value of research, let us say, from military programs to civilian programs. Another big area which could be explored is research which some major companies have done on logistic problems in military programs. Much of the research and development of decision-making models concerning logistic problems is completely applicable to large urban transportation problems. The names are different, but the generic character of the problem is very much the same.

FROM THE FLOOR: Your experience in the Juvenile Delinquency Committee of orienting 19 cities to the need for training poses the broad question of how to develop the institutional forms for spreading this or any significant information relating to the well-being of the Nation. Will you comment on this.

DR. STRINER: I think the problem of transfer of knowledge is an important one. During 3½ years in military research work I was impressed by the very systematic use that the military makes of its research. The research is step one; the use of the research is step two. We civilians sometimes forget step two.

What civilians should do after research is completed is ask themselves: "Who are the customers? Who are the people for whom this is intended? Is it intended for my next-door colleague? Is it a basis for a good article in the *American Economic Review* or the *Industrial Relations Research Association Bulletin*?" What we really want to do with research is to communicate its results to the proper individuals for action programs.

In the military usually the researchers re-package their research in the form of lectures and seminars appropriate to the varying level of sophistication and understanding of the user organizations. The first briefing, for example, may be for a full colonel or a two-star general. The briefing is intended to indicate to him the import of the research for his operation. He in turn makes sure that this information is passed along in the form of briefings and discussions to others in the organization. I have seen research reports which took a year to prepare and then were briefed for 8, 9, or 10 months. Here almost as much money is spent on the dissemination of that research as on the research itself.

Is this a waste? It's not half as wasteful as doing the research, putting it on a shelf, and then perhaps because no one knows of it, seeing it redone somewhere. I would like to have a hundred dollars for every wheel that has been re-invented unknowingly. This happens in the military, too. When there is a scarce resource—research people or administrators—the question should be not just "How do we get this done?" but "How do we get this done in such a way that we maximize the transfer of this information to the individuals with whom we are really concerned?"

Civilians can profit by this lesson. For example, after the juvenile delinquency panel had been meeting and funding programs for about a year, it was suggested that an analysis be made of what was going on in each city, what had been learned, and the degree to which some of what had been learned in New York, Cleveland or Boston might be relevant for the program in Los Angeles or Houston. This had not been thought of. Each city was operating by itself. What had been learned in the other communities was not being disseminated.

DR. LEVITAN: I want to add a remark dealing with research done on contract for OMAT. One way to disseminate information and speed up publication of the final product would be to eliminate the review process. And as a general rule—there may be exceptions—every time OMAT gives a grant for a research study, "X" number of dollars should be allocated for printing and distributing the product. Copies could then be sent to a number of researchers.

FROM THE FLOOR: We have to give equal time to the Government Printing Office and to the Solicitor's Office.

DR. LEVITAN: Why?

FROM THE FLOOR: Because this isn't the military.

DR. LEVITAN: You mean you are not allowed to have the contractor publish his study?

FROM THE FLOOR: We cannot supply funds for private printing, except under exceptional circumstances, and there are reasons why this makes sense. But I think that you are uncorking a subject that would involve quite another seminar.

DR. STRINER: Let me suggest one simple, inexpensive solution. Every Government contracting grant, except in a security area, should have a stipulation stating that after 90 days the contractor is free to publish any part of the information contained in the report. There may be some exceptions to this, but what I want to do is to make this the rule.

FROM THE FLOOR: This is done.

DR. STRINER: It is done occasionally.

FROM THE FLOOR: True.

DR. STRINER: I have gone through a number of arguments at the Department of Health, Education, and Welfare (HEW). I don't know about all bureaus in the Labor Department and their restrictions.

FROM THE FLOOR: You have broken new ground in the Labor Department.

DR. STRINER: The attitude exists that the contractor does not have the right to publish without consent for 1 year. I finally was able to persuade HEW to change the rule to 3 months. I know that OMAT has this rule, but I do not know if every one of the Labor bureaus has it. I think that in a number of Government agencies the rule tends to be to withhold publication for a year. Unless it can be shown that security is involved or that the nature of the data is so tenuous because the sample was so poor, I think that contractors should be free, and encouraged, to publish.

FROM THE FLOOR: May I change the subject and say that I feel it is not necessary for the government and industry to provide all vocational retraining. The spare time that society generates by technological change—for example, the change in the work day from 16 hours to the present 8—is capital for the individual to invest in learning a hobby, in having a good time, or in teaching himself something. The issue is: "What is the responsibility distribution for training?" Certainly the individual should have some. Certainly the governmental agencies and the companies should have some. Perhaps the companies and the agencies could assist individuals in working out a program for themselves which will, in the light of broader knowledge about possible obsolescences in skills, help to decrease this obsolescence.

DR. STRINER: I agree that there should be more counseling. There is a critical shortage of first-rate counseling at the high school level. We should have complete life-cycle education and complete counseling for people who recognize that they have an obsolescent skill or are in an obsolescent industry. Counseling could assist them in their decisions on type and location of training.

I have not worried very much about the problem of increased leisure time. I have been more concerned—I am not saying this derogatorily—with the problems of the underemployed and the unemployed.

FROM THE FLOOR: We have talked about life-cycle training on the optimistic assumption that if everyone works hard enough and studies enough, there will be enough jobs for everyone. But what about automation? If we don't have enough jobs, what will happen to the unemployed?

DR. STRINER: I have not yet seen studies which contain sufficient evidence to tell us the number of jobs which will be disappearing. Most of the studies concerning technological displacement are based on very simple linear extrapolations of productivity change. Nothing has been done to determine the degree to which there can be transference or to predict increases in the demand for other types of services. The degree to which we need training to move people from one area into

another area is not known. We can look to the services sector, especially semiprofessional services, and to the educational sector for a large number of open jobs, but even there we do not know how many.

I am not trying to "weasel"; unfortunately, we are operating with data such as productivity analyses which do not tell us how many people are being put out of work. One would almost have to trace individuals to find out if they are unemployed. In 1951, when I was in the Bureau of Mines, the United States was producing about the same tonnage of bituminous coal as it is now. But in 1951 there was a bituminous coal labor force of approximately 430,000. Today it consists of about 135,000 miners. This is technological displacement. The real question is to what degree there were job opportunities, perhaps involving some mobility, for which we did not train these individuals.

OMAT is supporting the first study (which should have been supported years ago by other organizations) concerning the psychological, sociological, and economic factors affecting ways in which the unemployed look for work. This is a great credit to the Department of Labor. Three hundred thousand miners were thrown out of work and were never given the opportunity of being re-absorbed into the economy because of various factors which should have been dealt with. This research study will help us learn the factors and give us something to build on.

We tend to look at technological change as a device either for assuaging our consciences or for writing off analyses of the problem. We have yet to come up with an answer as to why we have so much unemployment. Unfortunately we have had neither the courage nor the good luck frequently needed to get the necessary data.

Let me congratulate the Department of Labor. It has made a number of attempts to obtain funds for new types of information for new types of problems. Many of these requests have been turned down by officials who perhaps do not realize that it takes more than just numbers; it takes relevant numbers. I think that everyone in this room has been in the situation of a man dying of thirst in a rowboat in the middle of the Atlantic Ocean. Someone from Mars dropped down who didn't know the difference between salt water and drinking water and asked

him "What is wrong?" The man said, "I am dying of thirst." The Martian replied: "This is nonsense. Look at all this water!" This is very frequently the reaction of someone to whom you say "We need more data," when you have statistical abstracts and Bureau of the Census publications lying on your desk.

I'd like to mention one more thing with respect to unemployment—the problem of too low a level of aggregate demand. Without a sufficiently high level of economic growth, training programs cannot be a solution to unemployment, because only demand creates jobs.

THE CHAIRMAN: Thank you, Dr. Striner and Dr. Levitan, for a very interesting discussion.

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Curtis C. Aller, Director

Office of Manpower, Automation and Training

VT 001 530
Nurse Aide Training.

Stanislaus County Multi-Occupational Adult Retraining Project, Modesto, Calif.
MF AVAILABLE IN VT-ERIC SET.
Adult Division, Modesto Junior College, Modesto, California 95350.
Pub Date - May66 16p.

*HEALTH OCCUPATIONS EDUCATION; *NURSES AIDES; PROGRAM DEVELOPMENT; CURRICULUM DEVELOPMENT; *PROGRAM DESCRIPTIONS; *ADULT VOCATIONAL EDUCATION; PROGRAM EVALUATION; VOCATIONAL FOLLOWUP
STANISLAUS COUNTY MULTI-OCCUPATIONAL ADULT RETRAINING PROJECT; MODESTO; CALIFORNIA

Designed to prepare adult trainees to assist the professional staffs in nursing homes, convalescent homes, and retirement centers, the program developed by college personnel was based upon an outline prepared by representatives of professional associations and the State Department of Health, Welfare, and Education. It began on a five week basis but with the fifth class, began to operate six hours a day for ten weeks. The major phases were: (1) classroom lectures and demonstrations during weeks one through three, (2) clinical work at the State Hospital during weeks four and five, (3) three days in the classroom and two days on field trips during the sixth week, and (4) three days in nursing homes and two days in the classroom during weeks seven through ten. The curriculum centered about: (1) patient care including such activities as admitting and discharging patients, taking temperature and pulse, taking blood pressure, bathing patients, bed-making, specimen collection, and assisting patients to eat and move about, and (2) room and equipment care. Attitudes, personal hygiene, and effective communications are stressed. The teacher was a registered nurse with 33 years of experience including supervision and administration. The 134 students enrolled in the nine classes ranged in age from 18 to 58 with an average age of 35 and an average of nine years of education. At the time of enrollment they had been unemployed, working less than full time, or working at a skill below their ability levels. Selection standards were established by the Department of Employment and the school with screening handled by the Department and including components of the General Ability Aptitude Test Battery as well as personal evaluation by the counselor. Sixty-four of the 121 graduates reported that they were employed at the time of follow-up. (JK)

VT001 530

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NURSE AIDE TRAINING

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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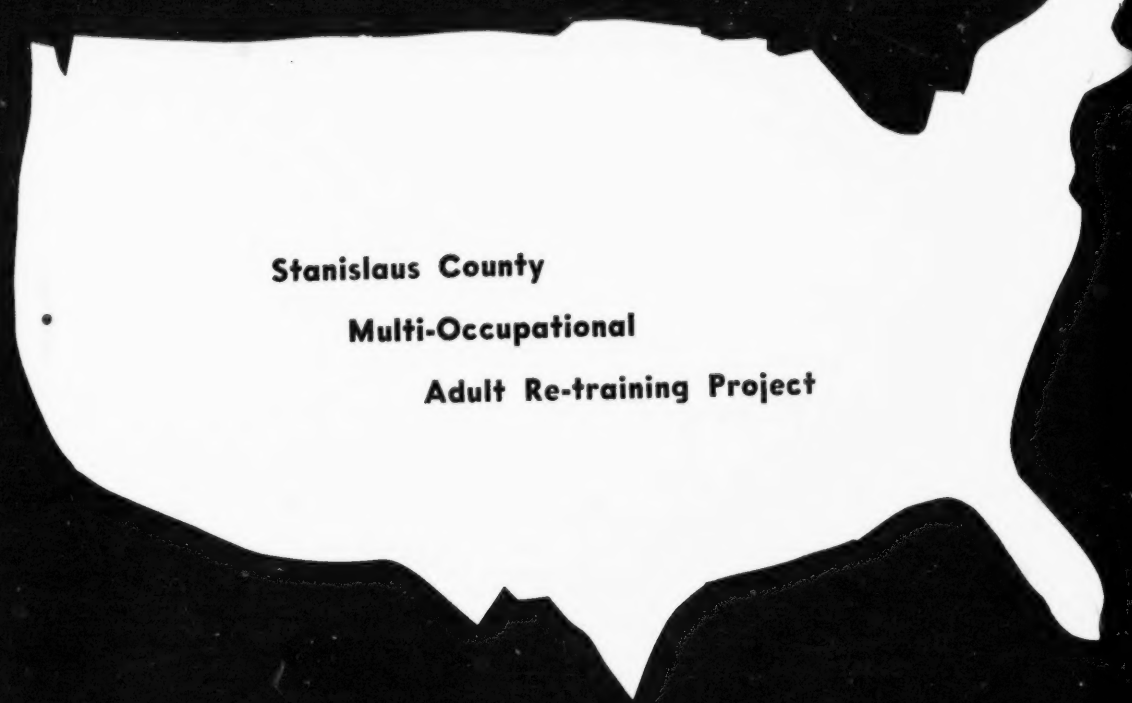

Adult Division
Modesto Junior College
Yosemite Junior College District

MAY 1966

CE 010 IA.

MEMORANDUM

TO: The ERIC Clearinghouse on Vocational and Technical Education
The Ohio State University
980 Kinnear Road
Columbus, Ohio 43212

FROM: (Person) Dr. Patricia C. Hertert (Agency) Adult Division, Modesto Junior College
Curriculum Assistant
(Address) College Avenue, Modesto, California 95350

DATE: May 3, 1968

RE: (Author, Title, Publisher, Date) Nurse's Aide Training
Modesto Multi-Occupational Project
Adult Education Division
Modesto Junior College
Modesto, California -- Dr. Frank Pearce

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Appropriate School Setting Community college, vocational retraining or welfare/ work training.
Type of Program Retraining
Occupational Focus Occupational cluster
Geographic Adaptability Various
Uses of Material Analysis of student group, identification of components of instructional program and verification of results.
~~Users of Material~~
Users of Material Administrators, teachers and agencies

(4) Requirements for Using Material:
Teacher Competency None needed
Student Selection Criteria See attached report

Time Allotment Not pertinent

Supplemental Media -- None
Necessary ____)
Desirable ____) (Check Which)

Describe

Source (agency)
(address)

Facility: Modesto Multi-Occupational Project

Class: Nurse's Aide

Objective: To prepare adult trainees to perform successfully as nurse's aides in nursing homes, convalescent hospitals, and retirement centers.

Background of Trainees: The trainees were either unemployed women who could not find appropriate work because of their lack of education and/or training, or women working less than full time or at a skill below their ability level. Most women who entered the program had some prior work experience, primarily in unskilled work. A few of them had cared for chronically ill persons or individuals with long-term illness in their own family before entering this training.

Nine classes, with a total enrollment of 134 have been completed. The age of these women was between 18 and 58 with an average age of 35. Fifty-six percent of the women were married, 32% were divorced, widowed, or separated, and 12% were single. Forty-one percent were the primary support of their family, with an average of one dependent each. Average number of children for the entire group was 3. They had lived in California an average of 21 years and in Stanislaus County an average of 12 years.

They had completed an average of 9 years of school. All had been employed previously in such jobs as food processing (29%), domestic work (28%), and the culinary field (12%), and had worked an average of 4 years with an average hourly wage of $1.29. Thirty-six were receiving either

unemployment or welfare assistance, and 47% were re-entrants to the labor force. The average annual income per family was less than $3,000 for 54% and under $5,000 for 76%.

Source of Trainees: All trainees were referred to the class by the Department of Employment. Any woman who was unemployed or under-employed, lacking in a skill in demand in the local labor market, 18 years of age or older, available for employment at the end of training and having two years of work experience met the basic eligibility requirements for training. After eligibility had been established, trainees for the course were selected through a specific program of testing and counseling.

Women possessing those attributes that would suggest the ability to profit from the course were referred directly to the nurse's aide class. Those lacking basic skills in reading, writing, arithmetic, or interpersonal relationships were referred to classes designed to provide these abilities before they entered the nurse's aide program. Through this procedure, individuals who were qualified to succeed in this course and find employment upon completion of the course were selected.

Selecting Trainees: Standards for admission to the class were established by the Department of Employment, Modesto office, in conjunction with the educational staff of the Modesto Multi-Occupational Project.

The General Aptitude Test Battery was used for establishing aptitude of the trainees, who were tested at the Department of Employment. Four specific aptitudes were identified by the Employment Service through studying nurse's aides in the labor force. They were as follows:

Intelligence or General Learning Ability - This measures the ability to "catch on" or understand instructions and underlying principles; the ability to reason and make judgments. It is closely related to doing well in school.

Verbal Aptitude - This indicates the ability to understand meaning of words and ideas associated with them, and to use them effectively. An attempt is made to determine the ability to comprehend language, to understand relationships between words, and to understand meanings of whole sentences and paragraphs. It indicates the ability to present information or ideas clearly.

Motor Coordination - This indicates the ability to coordinate eyes and hands or fingers rapidly and accurately in making precise movements with speed. It indicates the ability to make a movement response accurately and swiftly, and is related to reaction time.

Manual Dexterity - This indicates the ability to move the hands easily and skillfully, and the ability to work with the hands in placing and turning motions.

The level of ability needed by a nurse's aide in each area was determined through studying the scores earned by working nurse's aides. These scores were used as guidelines to select the trainees. Those persons who clearly fell below the necessary ability level were not referred to this program.

In addition to a testing program, each trainee received a personal evaluation by an Employment Service counselor. The evaluation was based on such factors as: previous education and/or training, work experience, including skills and abilities, occupational interests and goals, including ambitions, leisure time activities of the prospective trainee,

personal characteristics, including personality and attitudes, environment and financial background, health and physical capacity.

The following standards were established as personal attributes which were needed before one could enter nurse aide training: (1) Adaptability to changing work assignments, (2) Physical strength as required for the job, (3) Ability to read with understanding and to write legibly, (4) Neatness of appearance, (5) A desire to help others, (6) Stability to remain calm under work pressures and in emergency situations, and (7) Education at the eighth grade level.

Background of Teacher: The teacher was required to be a Registered Nurse with a teaching credential.

The present teacher has had 33 years of experience as a nurse, of which twelve have been supervisory, including the following assignments:

4 years as Assistant Director of Nurses, Modesto City Hospital

4 years as Surgical Floor Supervisor, Modesto City Hospital

4 years as Night Supervisor, Medina Community Hospital, Medina, Ohio.

As a nurse, teacher, and supervisor she had accepted for herself and others in her profession a high level of requirements in education, performance standards, and responsibility. She had come to regard these standards as natural, normal, and inevitable. They were the price one paid for the privilege of being a part of the medical profession -- a highly desirable profession -- and the individual had to rise to meet the profession; the profession did not lower its standards to accommodate the individual. This concept of her profession had formulated, to a large degree, her philosophy, her attitude, and certain personality characteristics.

She had developed a thorough knowledge of all the requirements of her profession, both personal and professional, skill, techniques, administrative ability, resourcefulness, determination, and the ability to work with other people in the medical profession. She enjoyed a challenge, and was indefatigable in meeting that challenge, once it had been accepted. She had retired from active duty as a nurse without actually being either mentally, physically, or emotionally ready for or in need of retirement. The establishment of a program to train nurse's aides appealed to her as a challenge worthy of her efforts.

The medical profession had no established program for training nurse's aides. The only known program, in another MDTA project, was in the formative stage also, and the first class of that program had not been particularly successful.

Therefore, in order to establish and successfully conduct such a program, she had to utilize the information, experience, characteristics, and ability developed in her professional life. In this position other characteristics were emphasized such as involvement, personal concern for the individual, imagination, and empathy.

She was empathic and realistic enough to set standards of performance within the reach of the trainees and at the same time acceptable to the work situation they planned to enter.

She understood that the background, previous training, and educational level of the trainees caused many difficulties for them, but she evidenced a conviction that they could, with diligence, overcome those difficulties and pull themselves up. She was direct and candid in pointing out to a trainee that her attitude, personal hygiene, or job

performance required improvement. She was strict, but fair and impartial in evaluating the trainee's progress, and unyielding in requiring that established standards be met.

Much of her success as a teacher was attributable to the fact that she exemplified in her knowledge, attitudes, personal hygiene, and techniques the profession she represented and obviously respected. Her students were, by observing and associating with her, moved to respect her and her profession and try to acquire similar knowledge, attitudes, and techniques.

By setting high standards she prompted good performance.

Time: The course was set up for 10 weeks of training with six hours of instruction a day for a total of 300 hours. (The first four classes were only five weeks long, but this was found to be too short a time to provide the necessary training.) The class was arranged in the following schedule:

Weeks 1 - 3	Classroom for lectures and demonstration
Weeks 4 - 5	State Hospital - Clinical work
Week 6	Three days in classroom Two days on field trips
Weeks 7 - 10	Three days in nursing homes Two days in classroom

Space and Equipment: The class was conducted in the nursing classroom and nursing arts laboratory of Modesto Junior College, in selected nursing homes in this area, and in the State Hospital in Modesto.

Instructional supplies and equipment provided within the budget for the program included binders, paper, pens, pencils, textbooks,

uniforms, shoes, and expendable supplies to be used in classroom demonstration. Specialized equipment needed for demonstrating and practicing methods and techniques was available in the hospital where clinical experience was gained and in the homes where work experience took place.

Curriculum Development: The original curriculum was developed by a committee composed of Dr. Evelyn Pederson, Director of Nurses at Modesto Junior College, Miss Anna Lindbloom, retiring Director of Licensed Vocational Nursing at the Modesto Junior College, and Mrs. Alta Walter, the teacher. These three women consulted with administrators in nursing homes regarding their needs, and with teachers in the nursing program at the Modesto Junior College as to how these needs could be met.

Based upon the information gathered, an outline provided by the medical profession, and their own experience, these women established the curriculum for the first class. The outline of a nurse's aide program, which had been prepared by representatives of the California Medical Association, California League for Nurses, California Hospital Administrators Association, California Association of Nursing Homes, and the State Department of Health, Welfare, and Education, was used as a basis and revised to make it adaptable to this area.

The original curriculum was modified by experience gained with each succeeding class. Student's suggestions arising from their own problems and needs, the comments and suggestions from supervisors at the state hospital and private homes, and the teacher's observation affected and helped to form the curriculum.

Of particular assistance in improving the on-going program and solving problems which arose was an advisory committee which was

established for the class. The committee was composed of six representatives of nursing homes, a representative from a retirement center, the director of nurses from a private hospital, the director of nurses from a state hospital, and a representative of the California Nurses' Association.

This committee offered suggestions and advice on such diverse subjects as length of time needed for the program, need for future classes, methods of orienting nursing home owners to the areas with which the student was familiar, areas needing greater emphasis, budgets, and planning.

Since nine classes have now been completed the program is well established, but it is continually being enlarged in scope to meet community needs.

Course Offering: The contents of the curriculum were developed to train nurse's aides to assist the professional staff in nursing homes, convalescent hospitals, and retirement centers by performing routine tasks, such as the following:

1. Patient Care

    a. Admitting and discharging patients

    b. Watching and answering call lights

    c. Taking temperature, pulse rate, and blood pressure

    d. Assisting patients in personal hygiene, bathing patients, and helping them walk and eat

    e. Bed making

    f. Assisting patients into wheel chairs, on to stretchers, into bed or walker through the use of proper body mechanics

    g. Collecting urine and fecal specimens

h. Making hot and cold applications

i. Attending to the religious and legal aspects of their job in relation to the patients.

2. Room and Equipment Care

a. Cleaning rooms and instruments

b. Caring for equipment and flowers

In addition, the curriculum was designed to help the trainee develop the following:

1. Acceptable attitudes and personality traits

2. Acceptable personal hygiene, cleanliness of self and clothing

3. Understandable written and oral communication with other staff members

4. Understandable oral communication with patients

5. A knowledge of how to apply for and hold a job, and what to expect in a work situation.

Additions to future classes will include training in occupational rehabilitation therapy.

Teaching Methods: The teacher was more concerned with the "matter" of teaching than the "manner," and her emphasis was on subject matter rather than method. She prepared a complete, well-organized course outline and adopted a systematic approach to presentation of the material which stated, illustrated, demonstrated, and re-stated the necessary information.

1. Classroom Work - 1st session

The class started with three weeks of lecture, film, workbook study and demonstrations in the classroom. During this period the teacher covered the essential information the trainees needed before they entered the second phase of their training, clinical experience.

2. Clinical Experience

During the fourth and fifth weeks of the course the trainees were taught through clinical experience in the geriatric wards for women in the state hospital. Here, in teamwork with an employee of the hospital, the trainee helped care for senile women. The purpose of this experience was to allow her to practice what she had been taught about body mechanics, making an occupied bed, communicating with a patient, feeding a patient -- in short, to perform in an actual hospital situation what she had only play acted in a classroom before. To help her learn from this experience, her work was observed and evaluated by supervision in the hospital and by the teacher. On the basis of this observation and evaluation the teacher helped individual trainees improve their performance.

A second purpose of clinical experience was to give the trainee an opportunity to get a true conception of what was involved in being a nurse's aide, and to decide whether she was both capable and desirous of continuing in this occupation.

3. Classroom Work - 2nd session

Clinical experience was both accompanied and followed by classroom study during which the teacher reviewed previous instructions and introduced new material in preparation for work experience in nursing homes and retirement centers.

4. Field Trips

Instruction during the second period of classroom study included two field trips. Field trips were made to physio-therapy, occupational therapy, and rehabilitation centers of the state hospital and to the city morgue or a funeral home. The purpose of the trip to the therapy

center was to introduce trainees to an area of work they would not study in the class but might be interested in learning. Interest and need for this type of training had been increasing steadily since the classes were started, and it will be included in the curriculum for the future nurse's aide training class. The purpose of the visit to the city morgue or funeral home was to have the trainees instructed by a mortician in the correct method of handling and caring for bodies of the deceased until they are placed in the care of the mortician.

5. Guest Speakers

Films and guest speakers were used to augment the lectures and demonstrations given by the teacher. The films were used to illustrate work techniques, acceptable dress, neatness standards, and personality requirements for women working in hospitals and nursing homes. Guest speakers were invited to bring specific information about an area in which they were well qualified. The correct method of emergency lifting was described and demonstrated by a fireman. Provisions and benefits of the Social Security program were presented by an employee from the Social Security office.

6. Work Experience

Presentation of this material was preparation for the seventh through the tenth weeks of the class when the women were placed in nursing homes for work experience. Each woman worked in three different homes, and met the standards and requirements of the home. Purpose of this work experience was to provide additional practice in procedures and techniques, and to re-affirm the classroom instruction as to acceptable dress, personal appearance, health standards, and attitudes

required of the nurse aide. A trainee who was not allowed to work because she had a cold learned very quickly that health standards were vital to her job. Once again work performance was observed and evaluated. A final summing up and review took place in the classroom.

Job Placement: Job placement has been good for women who have been trained in the nine classes so far completed. This has been due to:

1. The demand for nurse's aides in this area, which has exceeded the supply during the period covered by these classes.
2. The work experience in the homes, which acquaints the supervision with the program and the trainees and leads to employment of these women.
3. The job performance of many of the earlier trainees from these classes, which caused their supervisors to hire additional trainees. The four homes which use the greatest number of women employ 15, 10, 8, and 6 respectively. One of these homes hires exclusively from this program unless help is absolutely necessary when trainees are not available.
4. The wide acquaintance and good working relationship of the teacher with supervisory personnel in nursing homes, convalescent homes, retirement centers, and hospitals has helped this program become well known. As a result the teacher is kept informed of job openings and her recommendation of a prospective nurse's aide carries a great deal of influence.
5. The advisory committee and its active interest in the program has helped bring about knowledge and acceptance of the program in homes and centers.

6. The number of hospitals in this area also helps in the placement of nurse's aides. While hospitals will not employ women directly from the course, they will accept them after eight months or more of work experience. As experienced women move into the hospital jobs they leave jobs which can be filled by beginners.
7. The local Employment Service office has personnel assigned to assist in job placement of women who complete this class.

As of December, 1965, there were 722 beds in nursing homes in this area. In addition, there were approximately 585 beds in hospitals, exclusive of the state mental hospital, and plans for the addition of at least 223 beds within two years.

The Stanislaus County Health Planning Council is presently working on a master plan for this county. Their findings and recommendations, coupled with demands for medical personnel which result from the new medi-care program, and a survey to be conducted by the Employment Service, will predict the future demand for nurse's aides and related personnel such as orderlies and home health aides. A greatly increased demand is anticipated.

Conclusion: Some indication of the success of this program may be found from studying the follow-up statistics accumulated by the Department of Employment as shown in the following charts.

Employment Status of Nurse Aide Trainees At Time of Current Follow-Up

Classes 1 through 8

No. Trainees		Currently Employed		Currently Unemployed		Out of Labor Force		No Response	
No.	%	No.	%	No.	%	No.	%	No.	%
121	100	64	53	34	28	10	8	13	11

Classes 1 through 4 *

No.	%	No.	%	No.	%	No.	%	No.	%
62	100	28	45	28	45			6	10

Classes 5 through 8

No.	%	No.	%	No.	%	No.	%	No.	%
59	100	36	61	6	10	10	17	7	11

* Classes 1 through 4 were only 5 weeks in length, and it is considered that the insufficient time allowed for training was responsible for the significant difference in the number and percent of trainees employed.

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Organizing Comprehensive State Health Careers Councils.

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The guidelines, developed as a result of the State Health Careers Councils Personnel Workshop in March, 1966, provide assistance to the states to establish or strengthen councils devoted to seeking solutions to health manpower problems through coordinated activities of the individual agencies working in this area. Presented in question and answer form, the manual treats the need for councils, modes of organization, agency membership, objectives, direct and indirect services, membership activation, committee responsibilities, roles of the board of directors and advisory committees, responsibilities of the executive, fund raising, federal funds, research by the council, and program evaluation. (JK)

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ORGANIZING COMPREHENSIVE STATE HEALTH CAREERS COUNCILS

VT 01566

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

Public Health Service

Organizing Comprehensive State Health Careers Councils.

Developed at a workshop for
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National Health Council
under grants from the
U.S. Public Health Service and
U.S. Vocational Rehabilitation Administration

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Public Health Service
Division of Community Health Services
Arlington, Virginia 22203

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November 1966

PREFACE

The State Health Careers Councils Personnel Workshop met in St. Louis, Missouri, at the end of March 1966. The Workshop made recommendations for national action in the recruitment and training of health personnel and provided a source of new information for the development of additional State Health Careers Councils.

The following guidelines were developed as a result of this meeting. In the form of questions and answers, they provide criteria for States to establish Health Careers Councils and for already existent Councils to strengthen their programs and to develop new approaches to their organizational pattern.

TABLE OF CONTENTS

Page

Definition of State health careers council; need for council; affiliation of council; representation of membership 1

Broad objectives of council; difference between direct and indirect service; components of direct service 2

Components of indirect service; criteria for membership; relationship of member agency. 3

Maximum use of membership; non-health related organizations; steps in organizing 4

Responsibility of objectives committee; of by-laws committee; necessity to incorporate; responsibilities of finance committee 6

Board of Directors 7

Advisory committees; establishment of need; qualifications of executive director. 8

Responsibilities of executive director; fundraising responsibility of executive; professional fundraisers; volunteers 9

Federal funds available; resources for field programs for students; underlying philosphy 10

Broadening existing programs; research; types of research. 11

Evaluation; information regarding other health careers organizations. 12

Index. 13

Conference Committee Members

Arch Lugenbeel (Chairman)
Project Director
South Carolina Hospital Association

James E. Crank
President
Health Careers Council of Alabama

Karl L. Kaufman, M.D.
President
Indiana Health Careers, Inc.

Phillip W. Morgan
Staff Associate for Health Careers
United Hospital Fund of New York

Elizabeth Natti
Executive Secretary
New Hampshire Careers Council

Joseph C. Rhea
Executive Director
Health Careers Council of Illinois

Dorothy J. Tolbert
Assistant Director
Washington State Hospital Education and Research Foundation

National Health Council Staff

Levitt Mendel — Associate Director

Eleanor E. McGuire — Coordinator, Health Careers Program

ORGANIZING COMPREHENSIVE STATE HEALTH CAREERS COUNCILS

1. What is a State Health Careers Council or Committee?

   An organization whose program is devoted to seeking solutions to the health manpower problems of the State through coordinated activities of individual agencies working in this area.

   (Throughout this document, "council" is defined as either a council or committee, depending on organizational structure. It may refer to either a State or a metropolitan organization.)

2. Why do we need a State health careers council?

   To coordinate all educational facilities fully to utilize existing staff as instructors; to conserve the staff and facilities and use these to their maximum.

   Counselors cannot meet the demands of all health practitioner groups and need assistance to provide opportunities for students to be exposed to occupational areas of health. The time has come when health occupations must assume and assert a competitive approach with art, business, industry, and allied science in drawing on a common pool of manpower. A State health careers council can organize programs to reach housewives, the retired, and the handicapped to encourage their entry into health careers. In such programs, the romance and satisfaction of such careers and the potential for advancement should be stressed. Health careers is a field where there is little possibility of complete automation, thereby providing some security.

3. What is the affiliation of a State health careers council?

   There are two types:

   a. A voluntary nonprofit organization with its articles of incorporation, board of directors, advisory committees, program and staff.

   b. A committee or program of an existing voluntary nonprofit agency, such as a health council or a hospital association.

4. What is the representation of the membership of a State health careers council?

   Membership should include all official and nonofficial State agencies relating to health, education and coun-

seling. This would include health practitioners' associations, voluntary health agencies, educational, counseling, parent and civic groups, as well as representatives of business, industry and the legislature.

The strength of the council is the broad representation and support of the entire community.

5. What are the broad objectives of a State health careers council?

Decision has to be made early in the planning whether the objective of the State health careers council is merely to recruit or if it is to marshall all the resources in the State to attack the health manpower problems. This implies identification of resources and stimulation and coordination of the members to accomplish the objective.

Once the objective of the organization has been established, then the articles of incorporation can be developed and the program priorities established before seeking funds and staff to activate this program.

The objectives will also dictate whether the council's program will be on a direct or an indirect service basis.

6. What is the difference between direct and indirect service?

Indirect service is providing consultation and coordinating information to local groups to assist them to develop programs to meet student and counselor needs.

Direct service is providing consultation and information to students and counselors.

Whether the State health careers council is organized to give direct or indirect service, or both, some provision should be made for special research projects and for regular evaluation of the program.

7. What are some of the components of a direct service program?

a. Provision of speakers, panels, and publications aimed at students and counselors.

b. Development and presentation of assembly programs.

c. Conducting specific career days.

d. Conducting field trips to health facilities.

e. Providing scholarship information to students and their families.

f. Referral resources to meet individual student needs.

g. Formation and development of health career clubs.

8. What are the components of an indirect service program?

a. Coordination services for resources and referrals.

b. Publications.

c. Consultation to local groups in organizing career days, field trips.

d. Clearinghouse for materials available on recruitment, educational facilities available in the State, and scholarship information.

e. Conducting seminars for local health career personnel, educators and counselors, as well as volunteers and local committee and Board members.

f. Research projects directed toward State needs and manpower problems, including implementation of findings.

9. What are the criteria for membership?

Any group whose program is directed toward providing service in health or education or whose interest relates to one of these. For example: business and industry should be interested in the health and educational standards and facilities of the community; parents should be interested in the future of their children; students in realistic work situations to assist them in setting their goals for the future.

The State departments of health and education, as well as the practitioners' associations, have as their vital responsibility these two areas and should provide leadership to the State health careers council. Provision for individual memberships may be included in the by-laws.

10. What is the relationship of the member agency to the State health careers council?

Because the program and objectives of the State health careers council are directed toward providing students with educational facilities that will lead toward a career in health services,

the member agencies should have an equal responsibility. There should be joint cooperation to fulfill the objectives of the agency--which is to provide solutions to the broad health manpower and student needs as identified in the individual States.

While each agency must retain its responsibility to its own membership and programs, these should in no way conflict with the broad objectives of the health careers council. In addition there should be assurance that each agency will have equal opportunity to participate and to assume responsibility without a dominant role being assumed by any of the "professions." The council should be the highest form of democratic organization and all members should put their own organization in a subordinate role for the purpose of the council. This should be the prevailing philosophy in a public council and of all those represented on the council.

11. How do we insure the maximum use of the membership?

The success of the council depends on the understanding and close working relationship of the membership.

The entire membership should be aware of the activities of the staff, the Board and the committees, and should assume responsibility in serving and actively participating in all aspects of the council's program.

Each member should protect the entire membership of the council from developing into a passive, static group dominated by the vocal, aggressive members.

It would be a major achievement simply to get representatives of the various professional associations to commit themselves on more than a superficial basis to cooperate in recruitment for all health professions.

12. Should organizations that are not related to health have full membership in a State health careers council?

Yes, including serving on Board and committees, with full vote. These agencies or representatives of groups within the community can do much toward stimulating progressive thinking of the educators and health professions because of their interest and involvement as consumers of health services.

13. What are the steps in organizing a State health careers council?

The first step in organizing a State health careers council would be the formation of a committee representing all of

the State agencies interested in health, education, and the related manpower problems.

The first meeting could be called by anyone who is willing to assume the responsibility of organizing the meetings, making reports of these meetings, and keeping all members of the committee advised.

This initial group should be representative, not only of the organized health practitioner groups, but should include representatives of counseling, education, and voluntary health agencies. Start with a nucleus of people who will do the job--people who can relate to each other.

The agenda for the first meeting should provide for a general discussion and the identification of the health manpower problems and training facilities available in the health area, and the employment potential within the State for these workers. At this first meeting, a chairman should be appointed and a committee to develop the objectives of the organization. A second committee should develop the by-laws and identify which organization in the State would provide the strongest affiliation during the planning period. This by-laws committee should be responsible for investigating the strengths of developing an independent tax-exempt agency or the strengths that would be forthcoming by affiliating with an existing agency.

Another committee should be appointed to investigate the potential sources of funds for financing the program of the incorporated council. In addition, this committee should make recommendations to the full membership concerning the establishment of dues and potential sources to finance the interim period of the committee prior to the organization of the council. This Finance Committee could be reappointed after the organization is incorporated as a Ways and Means Committee.

The date of the next meeting should be established and invitations sent to those agencies which have been identified by this initial committee as having a responsibility and an interest in the proposed council.

The second meeting of this committee should be the organizational meeting of the council at which there should be discussion of the basic philosophy, objectives and proposed by-laws and/or affiliation, and the possible resources available for financing the proposed program. This meeting should terminate in having a date set at

which time the membership present will vote on the type of organization, its affiliation, its by-laws, and its program, with responsibility for election of the Board of Directors or Advisory Committee, and a committee responsible for employing an executive director. A Ways and Means Committee should be appointed to solicit funds for the new organization.

14. What are the responsibilities of the committee to develop the objectives?

Because the entire program and the development of the by-laws of a council depend upon the objectives identified as the responsibility of the group, it is necessary that this committee be broadly representative of the potential membership. The report of their considerations should be presented to the entire membership for discussion and recommendations should be adopted by the membership.

This committee should be a permanent and active committee in the council and should continuously evaluate the objectives and the program jointly with the Program Committee.

15. What is the responsibility of the By-laws Committee?

The By-laws Committee should be broadly representative of the agencies identified as members of the council. This committee should be composed of at least six members who will be charged with the responsibility of drafting the by-laws and constitution of the proposed council. This committee should readily utilize existing by-laws of other agencies and should have the consultation of a lawyer familiar with the legal aspects inherent in an organization of this type.

16. Why is it necessary for this agency to be incorporated?

If the State health careers council is an independent agency it should be incorporated under the laws of the State and secure tax-exempt status to assure that it can be eligible to accept funds for its programming.

If a State health careers committee is a part of an existing agency, this agency should have tax-exempt status and be incorporated under the State.

17. What are the responsibilities of the Finance Committee?

The Finance Committee should be broadly representative

of the agencies identified as members of the council. It should include representatives both of organizations supported by membership dues and those organizations who engage in public fundraising campaigns. It would be wise, wherever possible, to have a representative of a local foundation on this committee.

One important source of financing frequently overlooked by such committees is the support of those agencies which can give services in kind. This type of service is frequently important in the beginning stages of an organization such as a State health careers council. An additional asset frequently available is the fund-raising department of the State voluntary health agencies.

The success of this committee's endeavors frequently depends upon the clarity with which the broad objectives of the council are presented. The vested interests of meeting the needs for specific professionals has less appeal than meeting the general health needs of the public and the needs of the students and counselors.

The Finance Committee should present to the entire membership at its second meeting a proposed projected budget and sources of potential financing. This budget should include salaries with adequate amounts for fringe benefits, travel, rent for adequate office space, operating expenses, and a contingency fund. This budget should be approved at the organizational meeting which forms the council.

This committee would then be dissolved at the organizational meeting and a Ways and Means Committee, under the new Board of Directors, should be appointed (it may include the original members) to carry on the work initiated in identifying sources of financing. The permanent committee should have the entire membership available as resources for contacting various organizations or individuals for funds.

18. What is the Board of Directors (Trustees)?

In organizations that have annual or semiannual meetings of the total membership, the by-laws should provide for the duties, responsibilities and election of a Board of Directors (Trustees). This group conducts the business of the organization between annual meetings and reports its actions and decisions to the parent body (the mem-

bership). The Board of Directors may be authorized to appoint an executive committee and such other committees as it deems necessary.

The by-laws should clearly define the membership and duties of the Board of Directors.

19. How can advisory committees be used?

A State health careers council that is independently incorporated as a nonprofit agency does not have an advisory committee. However, a State health careers committee that is a part of a parent organization, such as a health council or hospital association, should have an Advisory Committee on Health Careers. This group should be broadly representative of the membership of the State health careers committee.

It is important that advisory committee members recognize that they are advisory only and not policy-making. However, they can make suggestions for policy to the Board of Directors of the parent organization.

The primary purpose of the advisory committee is to establish a forum for the discussion of problems relating specifically to health careers. Therefore, it should be broadly representative of health, counseling, education, and the community.

The executive director and the Board of the parent agency must assume the responsibility of utilizing and activating this committee so that it is an implicit part of the program.

20. How do we establish the needs?

Study the curricula available for all levels of health personnel. Determine the employment potential for the health careers students who are being trained and the employment potential for students who would make use of additional studies and courses if the curricula provided for these.

21. What are the qualifications for an executive director of a State health careers council?

There are no specific qualifications for this position. However, it is important that the person who is employed has an understanding of education, counseling, and health occupations. It is imperative that he have a good sense

of public relations and an ability to work with committees, and to coordinate a program which is directed to the specific objectives which are influenced by several vested interest groups.

22. What are the responsibilities of the executive director?

The executive director should be ex officio on all committees and the Board of Directors. He should be responsible for keeping the members advised of progress, or lack thereof, toward meeting the objectives as set by the Board of Directors and members. In some cases, it may be proper for the executive director to make personal contacts with foundations for support.

23. Does the executive director have any responsibility for fundraising?

The main responsibility for fundraising should be the function of a committee--Ways and Means, or Finance. The responsibility of the executive director should be to provide materials and facts to the committee on which they may base their appeals. He also should keep track of what the committee is doing and the progress made.

24. Should professional fundraisers be used?

No, but professional fundraising consultants can give great assistance when the campaign is conducted by the membership and volunteers from within the community.

When the whole effort is conducted by an outside fundraising organization, broken fences can be a long time in the mending when the delicacies of the local situation are not fully understood by the imported fundraisers who leave the community once the campaign is over.

25. How can volunteers be used?

Never underestimate the public relations value of a truly dedicated volunteer who has received satisfaction in the performance of his assignments.

Careful consideration must be given to the orientation and supervision of all volunteers by providing written assignments of duties. Volunteers may be utilized in organizing and administering the health career days, on speakers bureaus, to establish contacts with community leaders, educators, and in public relations appearances.

In addition, they may be used to accomplish the work of the various committees as well as to assist the staff during the peak workloads.

Provision should be made to pay out-of-pocket expenses of volunteers in carrying out their duties as provided by Board action.

26. Are federal funds available for the operation of a State health careers council?

No funds are at present available on a national level from the Federal Government for the operation of a State health careers council. However, there is money available for special projects which can be presented as demonstration or research projects.

27. What are the resources to be utilized in field programs for students to become acquainted with work situations?

Hospitals have been more frequently used in the past for setting up programs where students have opportunity to see a career in action. Women's auxiliaries of hospitals and medical societies have been active in planning and helping to carry out these projects. Youngsters have opportunity to visit laboratories, X-ray rooms, even to watch in an amphitheater at times when minor surgery is being carried out.

Rehabilitation centers have set up summer programs for students who act as assistants to the regular staffs. Many have provided some payment and, if the program is conducted in cooperation with the school, extra credits are allowed after the student prepares a report on his experience.

Day care centers, public health agencies, crippled children's camps, and homes for the aged are resources that should be tapped for such inservice training or orientation.

28. What should be the underlying philosophy of a State health careers council in its program?

Man prizes health and will always need assistance in maintaining his health, whether he be in an air polluted community, on a farm, under the sea, or on the moon. How many health occupations can be identified in the program of the National Aeronautics and Space Administration? There is a place for all levels in health careers. For

the student who likes people there are many opportunities; for the boy who is a loner, there is always the laboratory; for he who is an animal lover, how about veterinary medicine?

With the inroads of automation that are being made, the health occupations will never be outmoded or extinct for there is and will always be a need for man relating to health, be it preventive, curative, or rehabilitative.

29. If a State health careers council is organized and conducting a program, what steps should be taken to broaden the program?

A committee of the Board of Directors should be appointed to evaluate the continued need for the present program and to identify additional needs relating to educational facilities available at all levels. The need may be for new facilities in a different part of the State or for enlarging existing programs; there may be a need to evaluate the programs--or lack of programs--in the State for preparing instructors for educational programs in health areas; or a need for increased emphasis to be placed on career programs directed to the housewife, the college student, the retired person, or the handicapped.

The committee might well have several subcommittees with representatives of the organizations relating to the area under study. It should certainly be broadly representative of the membership of the council and the executive director should serve ex officio or staff the committee.

30. When does a State health careers council begin to evaluate its ability to participate in or initiate research projects?

Formal research projects should be considered by the Board of Directors and the executive director only after they have a well-developed and continuing program which meets the health needs of their State and region. It is wise for the Board of Directors to appoint a committee to identify areas which require research projects and to investigate sources of financial assistance to activate these projects.

31. What kinds of research are pertinent for a State health careers council?

Research should be operational research. It should have something to do with the organization rather than just research for its own sake. There are plenty of interesting questions that can be answered by research because someone wants to know something, but it may not have much relevance to the program. Ask: what will we do with it, once we have it?

The following are examples of pertinent research:

a. Studies of the mobility of people who have been educated and trained in health occupations--both intra-State and inter-State.

b. At what age do students make the decision to embark on a career?

c. Utilization of modern techniques of educational approaches.

d. Evaluation of the effectiveness of the existing program.

e. Education and health professionals should carefully study the contents of secondary school curricula in relation to the requirements for entrance to health occupations, at all levels.

32. What types of evaluation should be carried on?

The council should continuously evaluate the employment potential and health manpower needs of the State. They should keep a sharp eye on the major forces which would influence health and health careers; for example, the impact of Federal legislation. A truly effective and dynamic program is one which is constantly evaluated and adjusted to meet changing needs.

Provision should be made for the Board of Directors to evaluate the effectiveness of the executive director in conducting his responsibilities and should provide the executive director with guidance in evaluating his staff's productivity and effectiveness.

33. How can a State health careers committee obtain information from other State health careers organizations?

National Health Council has a listing of all State health careers committees and councils which may be obtained free on request.

INDEX TO QUESTIONS

Advisory committee 19
Affiliation 3

Board of Directors 18
  Committee to evaluate . . 29
  Research 30
  To evaluate executive . . 32
  When appointed 13
Broadened program 29
By-laws committee 15

Committees:
  Advisory 19
  By-laws 15
  Evaluation 29
  Finance 17,23
  Objectives 14
  Research 30
  Ways and means 17,23
Criteria for membership . . 9

Definition 1
Difference: direct vs
  indirect service 6
Direct service 6,7

Establishment of need . . . 20
Evaluation 32
Evaluation committee 29
Executive director:
  Qualifications 21
  Appointment 18
  Responsibilities 22,23

Federal funds 26
Field program resources . . 27
Finance committee 17,23
Fundraising:
  Executive director 23
  Professional fundraisers . 24

Incorporation 16
Indirect services 6,8

Member agency relationships . . . 10
Membership:
  Criteria 9
  Non-health related agency . . . 12
  Representation 4
  Use of membership 11

Need for council 2
Non-health related organization . 12

Objectives 5
Objectives committee 14
Organization steps 13

Philosophy of program 28
Professional fundraisers 24
Program:
  Field resources 27
  Broadened program 29
Relationships of member
  agencies 10
Representation of membership . . 4
Research 30,31
Resources for field programs . . 27

Steps in organizing 13

Use of membership 11

Volunteers 25

Ways and means committee 17,23

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CLACKAMAS COUNTY; MULTNOMAH COUNTY; WASHINGTON COUNTY; CLARK COUNTY; WASHINGTON; OREGON

The area reported is one of 85 in which the United States Department of Labor's Bureau of Labor Statistics conducts surveys of occupational earnings and related wage benefits. Data were obtained by personal visits of Bureau Field Economists to representative establishments within six broad industry divisions: (1) manufacturing, (2) transportation, communication, and other public utilities, (3) wholesale trade, (4) retail trade, (5) finance, insurance, and real estate, and (6) services. The contents are reported under two broad categories with subtopics: (1) occupational earnings (office occupations, professional and technical occupations, maintenance and power plant occupations, and custodial and material movement occupations), and (2) establishment practices and supplementary wage provisions practices (minimum entrance salaries for women office workers, shift differentials, schedules weekly hours, paid holidays, paid vacations, health, insurance, pension plans, and profit-sharing plans). The appendix presents clarifications of occupational descriptions. (SL)

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Area Wage Survey

The Portland, Oregon–Washington, Metropolitan Area

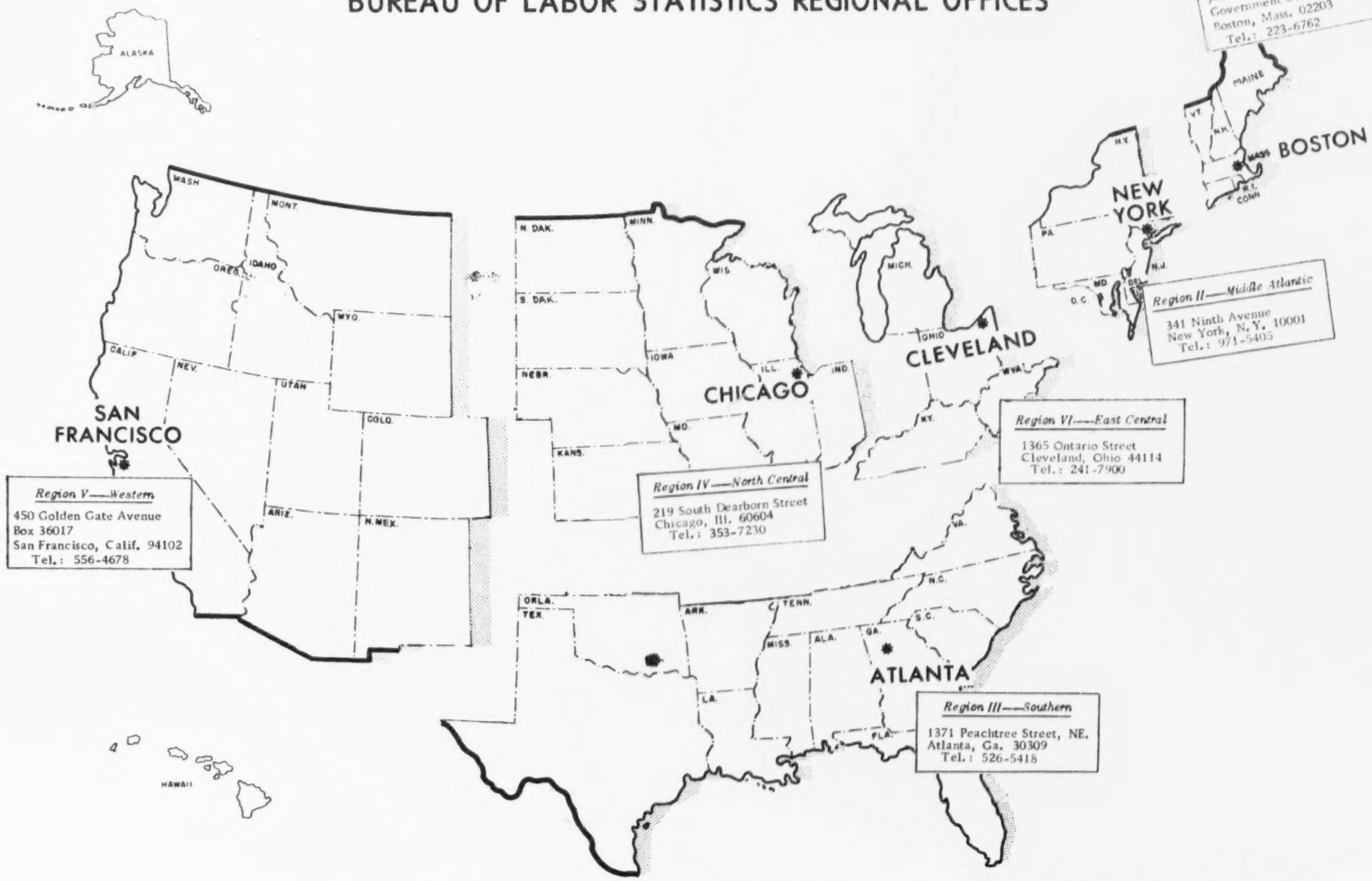
May 1966

Bulletin No. 1465-73

UNITED STATES DEPARTMENT OF LABOR
W. Willard Wirtz, Secretary

BUREAU OF LABOR STATISTICS
Arthur M. Ross, Commissioner

BUREAU OF LABOR STATISTICS REGIONAL OFFICES



Area Wage Survey

The Portland, Oregon—Washington, Metropolitan Area

May 1966

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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July 1966

UNITED STATES DEPARTMENT OF LABOR
W. Willard Wirtz, Secretary

BUREAU OF LABOR STATISTICS
Arthur M. Ross, Commissioner

For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C., 20402 – Price 25 cents

Preface

The Bureau of Labor Statistics program of annual occupational wage surveys in metropolitan areas is designed to provide data on occupational earnings, and establishment practices and supplementary wage provisions. It yields detailed data by selected industry divisions for each of the areas studied, for economic regions, and for the United States. A major consideration in the program is the need for greater insight into (1) the movement of wages by occupational category and skill level, and (2) the structure and level of wages among areas and industry divisions.

At the end of each survey, an individual area bulletin presents survey results for each area studied. After completion of all of the individual area bulletins for a round of surveys, a two-part summary bulletin is issued. The first part brings data for each of the metropolitan areas studied into one bulletin. The second part presents information which has been projected from individual metropolitan area data to relate to economic regions and the United States.

Eighty-five areas currently are included in the program. Information on occupational earnings is collected annually in each area. Information on establishment practices and supplementary wage provisions is obtained biennially in most of the areas.

This bulletin presents results of the survey in Portland, Oreg.–Wash., in May 1966. The Standard Metropolitan Statistical Area, as defined by the Bureau of the Budget through March 1965, consists of Clackamus, Multnomah, and Washington Counties, Oreg.; and Clark County, Wash. This study was conducted by the Bureau's regional office in San Francisco, Calif., Max D. Kossoris, Director; by Merlin Meyer, under the direction of William P. O'Connor. The study was under the general direction of John L. Dana, Assistant Regional Director for Wages and Industrial Relations.

Contents

	Page
Introduction	1
Wage trends for selected occupational groups	4
Tables:	
1. Establishments and workers within scope of survey and number studied	3
2. Indexes of standard weekly salaries and straight-time hourly earnings for selected occupational groups, and percents of increase for selected periods	4
A. Occupational earnings:*	
A-1. Office occupations–men and women	5
A-2. Professional and technical occupations–men and women	8
A-3. Office, professional, and technical occupations–men and women combined	9
A-4. Maintenance and powerplant occupations	10
A-5. Custodial and material movement occupations	11
B. Establishment practices and supplementary wage provisions:*	
B-1. Minimum entrance salaries for women office workers	13
B-2. Shift differentials	14
B-3. Scheduled weekly hours	15
B-4. Paid holidays	16
B-5. Paid vacations	17
B-6. Health, insurance, and pension plans	19
B-7. Health insurance benefits provided employees and their dependents	20
B-8. Profit-sharing plans	21
Appendixes:	
A. Changes in occupational descriptions	22
B. Occupational descriptions	23

* NOTE: Similar tabulations are available for other areas. (See inside back cover.)

Current reports on occupational earnings and supplementary wage provisions in the Portland area are also available for the machinery industries (June 1965) and nursing homes and related facilities (April 1965). Union scales, indicative of prevailing pay levels, are available for building construction, printing, local-transit operating employees, and motortruck drivers and helpers.

Area Wage Survey—

The Portland, Oreg.—Wash., Metropolitan Area

Introduction

This area is 1 of 85 in which the U.S. Department of Labor's Bureau of Labor Statistics conducts surveys of occupational earnings and related wage benefits on an areawide basis. In this area, data were obtained by personal visits of Bureau field economists to representative establishments within six broad industry divisions: Manufacturing; transportation, communication, and other public utilities; wholesale trade; retail trade; finance, insurance, and real estate; and services. Major industry groups excluded from these studies are government operations and the construction and extractive industries. Establishments having fewer than a prescribed number of workers are omitted because they tend to furnish insufficient employment in the occupations studied to warrant inclusion. Separate tabulations are provided for each of the broad industry divisions which meet publication criteria.

These surveys are conducted on a sample basis because of the unnecessary cost involved in surveying all establishments. To obtain optimum accuracy at minimum cost, a greater proportion of large than of small establishments is studied. In combining the data, however, all establishments are given their appropriate weight. Estimates based on the establishments studied are presented, therefore, as relating to all establishments in the industry grouping and area, except for those below the minimum size studied.

Occupations and Earnings

The occupations selected for study are common to a variety of manufacturing and nonmanufacturing industries, and are of the following types: (1) Office clerical; (2) professional and technical; (3) maintenance and powerplant; and (4) custodial and material movement. Occupational classification is based on a uniform set of job descriptions designed to take account of interestablishment variation in duties within the same job. The occupations selected for study are listed and described in appendix B. Earnings data for some of the occupations listed and described are not presented in the A-series tables because either (1) employment in the occupation is too small to provide enough data to merit presentation, or (2) there is possibility of disclosure of individual establishment data.

Occupational employment and earnings data are shown for full-time workers, i.e., those hired to work a regular weekly schedule in the given occupational classification. Earnings data exclude premium pay for overtime and for work on weekends, holidays, and late shifts. Nonproduction bonuses are excluded, but cost-of-living bonuses and incentive earnings are included. Where weekly hours are reported, as for office clerical occupations, reference is to the work schedules (rounded to the nearest half hour) for which straight-time salaries are paid; average weekly earnings for these occupations have been rounded to the nearest half dollar.

The averages presented reflect composite, areawide estimates. Industries and establishments differ in pay level and job staffing and, thus, contribute differently to the estimates for each job. The pay relationship obtainable from the averages may fail to reflect accurately the wage spread or differential maintained among jobs in individual establishments. Similarly, differences in average pay levels for men and women in any of the selected occupations should not be assumed to reflect differences in pay treatment of the sexes within individual establishments. Other possible factors which may contribute to differences in pay for men and women include: Differences in progression within established rate ranges, since only the actual rates paid incumbents are collected; and differences in specific duties performed, although the workers are appropriately classified within the same survey job description. Job descriptions used in classifying employees in these surveys are usually more generalized than those used in individual establishments and allow for minor differences among establishments in the specific duties performed.

Occupational employment estimates represent the total in all establishments within the scope of the study and not the number actually surveyed. Because of differences in occupational structure among establishments, the estimates of occupational employment obtained from the sample of establishments studied serve only to indicate the relative importance of the jobs studied. These differences in occupational structure do not materially affect the accuracy of the earnings data.

Establishment Practices and Supplementary Wage Provisions

Information is presented (in the B-series tables) on selected establishment practices and supplementary wage provisions as they relate to plant and office workers. Administrative, executive, and professional employees, and force-account construction workers who are utilized as a separate work force are excluded. "Plant workers" include working foremen and all nonsupervisory workers (including leadmen and trainees) engaged in nonoffice functions. "Office workers" include working supervisors and nonsupervisory workers performing clerical or related functions. Cafeteria workers and routemen are excluded in manufacturing industries, but included in nonmanufacturing industries.

Minimum entrance salaries (table B-1) relate only to the establishments visited. They are presented in terms of establishments with formal minimum entrance salary policies.

Shift differential data (table B-2) are limited to plant workers in manufacturing industries. This information is presented both in terms of (1) establishment policy,[1] presented in terms of total plant worker employment, and (2) effective practice, presented in terms of workers actually employed on the specified shift at the time of the survey. In establishments having varied differentials, the amount applying to a majority was used or, if no amount applied to a majority, the classification "other" was used. In establishments in which some late-shift hours are paid at normal rates, a differential was recorded only if it applied to a majority of the shift hours.

The scheduled weekly hours (table B-3) of a majority of the first-shift workers in an establishment are tabulated as applying to all of the plant or office workers of that establishment. Paid holidays; paid vacations; health, insurance, and pension plans; and profit-sharing plans (tables B-4 through B-8) are treated statistically on the basis that these are applicable to all plant or office workers if a majority of such workers are eligible or may eventually qualify for the practices listed. Sums of individual items in tables B-2 through B-8 may not equal totals because of rounding.

Data on paid holidays (table B-4) are limited to data on holidays granted annually on a formal basis; i.e., (1) are provided for in written form, or (2) have been established by custom. Holidays ordinarily granted are included even though they may fall on a nonworkday, even if the worker is not granted another day off. The first part of the paid holidays table presents the number of whole and half holidays actually granted. The second part combines whole and half holidays to show total holiday time.

The summary of vacation plans (table B-5) is limited to formal policies, excluding informal arrangements whereby time off with pay is granted at the discretion of the employer. Estimates exclude vacation-savings plans and those which offer "extended" or "sabbatical" benefits beyond basic plans to workers with qualifying lengths of service. Typical of such exclusions are plans in the steel, aluminum, and can industries. Separate estimates are provided according to employer practice in computing vacation payments, such as time payments, percent of annual earnings, or flat-sum amounts. However, in the tabulations of vacation pay, payments not on a time basis were converted to a time basis; for example, a payment of 2 percent of annual earnings was considered as the equivalent of 1 week's pay.

Data are presented for all health, insurance, and pension plans (tables B-6 and B-7) for which at least a part of the cost is borne by the employer, excepting only legal requirements such as workmen's compensation, social security, and railroad retirement. Such plans include those underwritten by a commercial insurance company and those provided through a union fund or paid directly by the employer out of current operating funds or from a fund set aside for this purpose. Death benefits are included as a form of life insurance. Selected health insurance benefits provided employees and dependents are also presented.

Sickness and accident insurance is limited to that type of insurance under which predetermined cash payments are made directly to the insured on a weekly or monthly basis during illness or accident disability. Information is presented for all such plans to which the employer contributes. However, in New York and New Jersey, which have enacted temporary disability insurance laws which require employer contributions,[2] plans are included only if the employer (1) contributes more than is legally required, or (2) provides the employee with benefits which exceed the requirements of the law. Tabulations of paid sick leave plans are limited to formal plans[3] which provide full pay or a proportion of the worker's pay during absence from work because of illness. Separate tabulations are presented according to (1) plans which provide full pay and no waiting period, and (2) plans which provide either partial pay or a waiting period. In addition to the presentation of the proportions of workers who are provided sickness and accident insurance or paid sick leave, an unduplicated total is shown of workers who receive either or both types of benefits.

Catastrophe insurance, sometimes referred to as extended medical insurance, includes those plans which are designed to protect employees in case of sickness and injury involving expenses beyond the normal coverage of hospitalization, medical, and surgical plans. Medical insurance refers to plans providing for complete or partial payment of doctors' fees. Such plans may be underwritten by commercial insurance companies or nonprofit organizations or they may be self-insured. Tabulations of retirement pension plans are limited to those plans that provide monthly payments for the remainder of the worker's life.

Profit-sharing plans (table B-8) are limited to formal plans with definite formulas for computing profit shares to be distributed among employees and whose formulas were communicated to employees in advance of the determination of profits. Data are presented according to provisions for distributing profit shares to employees: (1) Current or cash distribution of profit shares within a short period after determination of profits; (2) deferred distribution of profit shares after a specified number of years or at retirement; (3) combination current and deferred plans; and (4) elective distribution plans, under which each participant is required to select whether to take his share of the current year's profit in cash, have it deferred, or part in cash and part deferred.

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[1] An establishment was considered as having a policy if it met either of the following conditions: (1) Operated late shifts at the time of the survey, or (2) had formal provisions covering late shifts. An establishment was considered as having formal provisions if it (1) had operated late shifts during the 12 months prior to the survey, or (2) had provisions in written form for operating late shifts.

[2] The temporary disability laws in California and Rhode Island do not require employer contributions.

[3] An establishment was considered as having a formal plan if it established at least the minimum number of days of sick leave available to each employee. Such a plan need not be written, but informal sick leave allowances, determined on an individual basis, were excluded.

Table 1. Establishments and workers within scope of survey and number studied in Portland, Oreg.–Wash.,[1] by major industry division,[2] May 1966

Industry division	Minimum employment in establishments in scope of study	Number of establishments		Workers in establishments				
				Within scope of study				Studied
		Within scope of study[3]	Studied	Total[4]		Plant	Office	Total[4]
				Number	Percent			
All divisions	-	656	169	133,500	100	88,300	22,700	74,490
Manufacturing	50	274	69	63,400	47	48,800	5,800	34,740
Nonmanufacturing	-	382	100	70,100	53	39,500	16,900	39,750
Transportation, communication, and other public utilities[5]	50	64	25	21,000	16	10,900	4,100	15,330
Wholesale trade	50	101	21	10,200	8	(6)	(6)	2,850
Retail trade	50	105	28	21,900	16	17,400	2,600	13,750
Finance, insurance, and real estate	50	52	10	9,500	7	(7)	(6)	5,000
Services[8]	50	60	16	7,500	6	(6)	(6)	2,820

[1] The Portland Standard Metropolitan Statistical Area, as defined by the Bureau of the Budget through March 1965, consists of Clackamas, Multnomah, and Washington Counties, Oreg.; and Clark County, Wash. The "workers within scope of study" estimates shown in this table provide a reasonably accurate description of the size and composition of the labor force included in the survey. The estimates are not intended, however, to serve as a basis of comparison with other employment indexes for the area to measure employment trends or levels since (1) planning of wage surveys requires the use of establishment data compiled considerably in advance of the payroll period studied, and (2) small establishments are excluded from the scope of the survey.

[2] The 1957 revised edition of the Standard Industrial Classification Manual and the 1963 Supplement were used in classifying establishments by industry division.

[3] Includes all establishments with total employment at or above the minimum limitation. All outlets (within the area) of companies in such industries as trade, finance, auto repair service, and motion picture theaters are considered as 1 establishment.

[4] Includes executive, professional, and other workers excluded from the separate plant and office categories.

[5] Taxicabs and services incidental to water transportation were excluded.

[6] This industry division is represented in estimates for "all industries" and "nonmanufacturing" in the Series A tables, and for "all industries" in the Series B tables. Separate presentation of data for this division is not made for one or more of the following reasons: (1) Employment in the division is too small to provide enough data to merit separate study, (2) the sample was not designed initially to permit separate presentation, (3) response was insufficient or inadequate to permit separate presentation, and (4) there is possibility of disclosure of individual establishment data.

[7] Workers from this entire industry division are represented in estimates for "all industries" and "nonmanufacturing" in the Series A tables, but from the real estate portion only in estimates for "all industries" in the Series B tables. Separate presentation of data for this division is not made for one or more of the reasons given in footnote 6 above.

[8] Hotels; personal services; business services; automobile repair shops; motion pictures; nonprofit membership organizations (excluding religious and charitable organizations); and engineering and architectural services.

Almost one-half of the workers within scope of the survey in the Portland, Oreg.–Wash. area were employed in manufacturing firms. The following table presents the major industry groups and specific industries as a percent of all manufacturing:

Industry group		Specific industries	
Lumber and wood products (except furniture)	11	Electrical transmission and distribution equipment	8
Primary metals	10	Millwork, veneer, plywood, and prefabricated structural wood products	7
Electrical machinery	9		
Fabricated metal products	8		
Transportation equipment	8		
Machinery (except electrical)	7		

This information is based on estimates of total employment derived from universe materials compiled prior to actual survey. Proportions in various industry divisions may differ from proportions based on the results of the survey as shown in table 1 above.

Wage Trends for Selected Occupational Groups

Presented in table 2 are indexes and percentages of change in average salaries of office clerical workers and industrial nurses, and in average earnings of selected plant worker groups.

For office clerical workers and industrial nurses, the percentages of change relate to average weekly salaries for normal hours of work, that is, the standard work schedule for which straight-time salaries are paid. For plant worker groups, they measure changes in average straight-time hourly earnings, excluding premium pay for overtime and for work on weekends, holidays, and late shifts. The percentages are based on data for selected key occupations and include most of the numerically important jobs within each group.

Office clerical (men and women):
- Bookkeeping-machine operators, class B
- Clerks, accounting, classes A and B
- Clerks, file, classes A, B, and C
- Clerks, order
- Clerks, payroll
- Comptometer operators
- Keypunch operators, classes A and B
- Office boys and girls
- Stenographers, general
- Stenographers, senior
- Switchboard operators, classes A and B
- Tabulating-machine operators, class B
- Typists, classes A and B

Industrial nurses (men and women):
- Nurses, industrial (registered)

Skilled maintenance (men):
- Carpenters
- Electricians
- Machinists
- Mechanics
- Mechanics (automotive)
- Painters
- Pipefitters
- Tool and die makers

Unskilled plant (men):
- Janitors, porters, and cleaners
- Laborers, material handling

NOTE: Secretaries, included in the list of jobs in all previous years, are excluded because of a change in the description this year.

Average weekly salaries or average hourly earnings were computed for each of the selected occupations. The average salaries or hourly earnings were then multiplied by employment in each of the jobs during the period surveyed in 1961. These weighted earnings for individual occupations were then totaled to obtain an aggregate for each occupational group. Finally, the ratio (expressed as a percentage) of the group aggregate for the one year to the aggregate for the other year was computed and the difference between the result and 100 is the percentage of change from the one period to the other. The indexes were computed by multiplying the ratios for each group aggregate for each period after the base year (1961).

The indexes and percentages of change measure, principally, the effects of (1) general salary and wage changes; (2) merit or other increases in pay received by individual workers while in the same job; and (3) changes in average wages due to changes in the labor force resulting from labor turnover, force expansions, force reductions, and changes in the proportions of workers employed by establishments with different pay levels. Changes in the labor force can cause increases or decreases in the occupational averages without actual wage changes. For example, a force expansion might increase the proportion of lower paid workers in a specific occupation and lower the average, whereas a reduction in the proportion of lower paid workers would have the opposite effect. Similarly, the movement of a high-paying establishment out of an area could cause the average earnings to drop, even though no change in rates occurred in other establishments in the area. Data are adjusted where necessary to remove from the indexes and percentages of change any significant effect caused by changes in scope of the survey.

The use of constant employment weights eliminates the effect of changes in the proportion of workers represented in each job included in the data. The percentages of change reflect only changes in average pay for straight-time hours. They are not influenced by changes in standard work schedules, as such, or by premium pay for overtime.

Table 2. Indexes of standard weekly salaries and straight-time hourly earnings for selected occupational groups in Portland, Oreg.—Wash., May 1966 and May 1965, and percents of increase for selected periods

Industry and occupational group	Indexes (May 1961=100)		Percents of increase					
	May 1966	May 1965	May 1965 to May 1966	May 1964 to May 1965	May 1963 to May 1964	May 1962 to May 1963	May 1961 to May 1962	May 1960 to May 1961
All industries:								
Office clerical (men and women)	116.9	113.0	3.4	3.3	4.5	2.9	1.7	2.8
Industrial nurses (men and women)	124.6	121.8	2.3	3.8	1.4	10.7	4.5	2.3
Skilled maintenance (men)	117.2	113.0	3.7	3.8	3.2	2.9	2.5	3.3
Unskilled plant (men)	118.5	115.1	3.0	4.2	2.8	3.7	3.6	3.4
Manufacturing:								
Office clerical (men and women)	113.4	111.1	2.1	3.3	5.0	1.5	.9	3.8
Industrial nurses (men and women)	127.7	([1])	1.8	([1])	([1])	12.1	5.2	1.2
Skilled maintenance (men)	116.1	112.5	3.2	3.7	3.6	2.0	2.7	2.9
Unskilled plant (men)	117.2	112.9	3.8	2.4	6.4	1.1	2.5	2.4

[1] Data do not meet publication criteria.

A. Occupational Earnings

Table A-1. Office Occupations—Men and Women

(Average straight-time weekly hours and earnings for selected occupations studied on an area basis by industry division, Portland, Oreg.–Wash., May 1966)

Sex, occupation, and industry division	Number of workers	Average weekly hours[1] (standard)	Weekly earnings[1] (standard)			Number of workers receiving straight-time weekly earnings of—																				
			Mean[2]	Median[2]	Middle range[2]	$ 50 and under 55	$ 55 - 60	$ 60 - 65	$ 65 - 70	$ 70 - 75	$ 75 - 80	$ 80 - 85	$ 85 - 90	$ 90 - 95	$ 95 - 100	$ 100 - 105	$ 105 - 110	$ 110 - 115	$ 115 - 120	$ 120 - 125	$ 125 - 130	$ 130 - 140	$ 140 - 150	$ 150 - 160	$ 160 - 170	$ 170 and over
MEN																										
			$	$	$ $																					
CLERKS, ACCOUNTING, CLASS A	188	39.5	126.00	131.00	108.00-141.00	-	-	-	-	-	-	-	4	6	-	26	19	3	18	6	8	50	27	21	-	-
MANUFACTURING	63	40.0	121.50	123.50	108.00-139.00	-	-	-	-	-	-	-	4	6	-	-	10	3	7	3	5	12	8	5	-	-
NONMANUFACTURING	125	39.5	128.50	133.00	108.00-146.00	-	-	-	-	-	-	-	-	-	-	26	9	-	11	3	3	38	19	16	-	-
PUBLIC UTILITIES[3]	53	40.0	140.50	146.00	132.50-151.50	-	-	-	-	-	-	-	-	-	-	-	-	-	6	3	3	11	14	16	-	-
CLERKS, ACCOUNTING, CLASS B	122	40.0	111.00	113.50	98.50-123.50	-	-	-	-	-	-	4	9	6	17	10	5	15	17	13	18	8	-	-	-	-
NONMANUFACTURING	103	40.0	111.00	113.50	99.00-123.00	-	-	-	-	-	-	4	7	5	12	9	5	14	14	13	14	6	-	-	-	-
PUBLIC UTILITIES[3]	38	40.0	113.50	119.50	102.00-126.50	-	-	-	-	-	-	4	2	-	2	4	-	4	4	8	4	6	-	-	-	-
CLERKS, ORDER	231	40.0	126.50	123.00	111.00-136.50	-	-	-	-	-	-	-	10	5	6	32	-	27	21	26	23	35	12	8	9	17
NONMANUFACTURING	208	40.0	127.50	124.00	112.00-137.00	-	-	-	-	-	-	-	10	5	-	26	-	27	20	22	22	34	10	8	8	16
CLERKS, PAYROLL	30	40.0	120.50	124.00	107.50-131.00	-	-	-	-	-	-	-	1	-	-	4	6	1	1	3	6	5	2	1	-	-
OFFICE BOYS	64	39.5	69.00	66.50	61.50- 71.50	-	11	16	19	9	-	2	1	1	-	5	-	-	-	-	-	-	-	-	-	-
NONMANUFACTURING	48	39.5	69.00	65.00	61.00- 72.00	-	10	15	10	5	-	2	1	-	-	5	-	-	-	-	-	-	-	-	-	-
TABULATING-MACHINE OPERATORS, CLASS B	61	39.5	110.50	108.50	104.50-118.00	-	-	-	-	-	-	2	1	1	7	5	21	5	8	4	2	3	2	-	-	-
NONMANUFACTURING	37	39.5	107.50	108.00	105.50-111.00	-	-	-	-	-	-	-	-	1	6	1	20	3	5	-	-	1	-	-	-	-
TABULATING-MACHINE OPERATORS, CLASS C	26	39.0	94.00	95.50	87.00-107.00	-	-	1	1	-	1	2	4	4	5	1	3	4	-	-	-	-	-	-	-	-
WOMEN																										
BILLERS, MACHINE (BILLING MACHINE)	128	40.0	81.50	80.50	66.00- 97.00	3	19	8	12	7	13	21	6	5	7	11	1	9	6	-	-	-	-	-	-	-
MANUFACTURING	35	39.5	82.00	81.50	69.00- 91.00	-	-	-	11	-	5	6	4	4	-	5	-	-	-	-	-	-	-	-	-	-
NONMANUFACTURING	93	40.0	81.50	80.50	61.00- 99.50	3	19	8	1	7	8	15	2	1	7	6	1	9	6	-	-	-	-	-	-	-
PUBLIC UTILITIES[3]	26	40.0	108.00	111.50	102.50-115.00	-	-	-	-	-	-	3	-	1	-	6	1	9	6	-	-	-	-	-	-	-
BILLERS, MACHINE (BOOKKEEPING MACHINE)	47	40.0	72.00	68.00	66.00- 71.00	-	-	6	29	4	-	-	2	-	-	6	-	-	-	-	-	-	-	-	-	-
NONMANUFACTURING	41	40.0	68.00	67.50	66.00- 69.50	-	-	6	29	4	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-
BOOKKEEPING-MACHINE OPERATORS, CLASS A	90	40.0	94.00	94.50	85.50-100.00	-	-	4	-	-	3	15	12	13	21	9	-	3	-	8	-	2	-	-	-	-
MANUFACTURING	34	40.0	99.00	96.50	93.00- 99.50	-	-	-	-	-	-	-	2	12	13	-	-	-	-	7	-	-	-	-	-	-
NONMANUFACTURING	56	40.0	90.50	88.00	82.50-101.00	-	-	4	-	-	3	15	10	1	8	9	-	3	-	1	-	2	-	-	-	-
BOOKKEEPING-MACHINE OPERATORS, CLASS B	217	40.0	85.00	87.00	80.50- 92.50	-	-	6	18	12	15	45	31	73	-	12	-	1	2	2	-	-	-	-	-	-
MANUFACTURING	61	40.0	85.50	86.50	80.50- 93.00	-	-	-	5	6	3	13	13	11	-	10	-	-	-	-	-	-	-	-	-	-
NONMANUFACTURING	156	40.0	85.00	87.50	80.50- 92.50	-	-	6	13	6	12	32	18	62	-	2	-	1	2	2	-	-	-	-	-	-
RETAIL TRADE	80	40.0	83.50	90.50	77.00- 93.00	-	-	5	8	6	3	12	1	43	-	2	-	-	-	-	-	-	-	-	-	-
CLERKS, ACCOUNTING, CLASS A	332	40.0	102.00	99.00	90.50-115.50	-	-	1	3	3	8	33	33	35	60	24	11	31	55	13	4	6	8	4	-	-
MANUFACTURING	97	39.5	103.50	101.00	91.50-117.00	-	-	-	-	2	1	13	3	19	9	13	4	6	10	6	2	1	8	-	-	-
NONMANUFACTURING	235	40.0	101.50	99.00	89.50-115.50	-	-	1	3	1	7	20	30	16	51	11	7	25	45	7	2	5	-	4	-	-
RETAIL TRADE	77	40.0	92.50	95.50	88.00- 98.50	-	-	1	2	1	1	10	8	14	31	6	-	1	1	-	-	1	-	-	-	-
CLERKS, ACCOUNTING, CLASS B	643	39.5	81.00	81.50	69.00- 90.50	25	18	67	63	84	34	97	90	66	24	14	14	13	8	8	12	6	-	-	-	-
MANUFACTURING	125	40.0	84.00	80.00	72.00- 94.00	-	-	1	16	33	13	13	12	8	8	7	8	3	2	1	-	-	-	-	-	-
NONMANUFACTURING	518	39.5	80.50	82.00	67.00- 90.00	25	18	66	47	51	21	84	78	58	16	7	6	10	6	7	12	6	-	-	-	-
PUBLIC UTILITIES[3]	52	40.0	101.50	110.00	80.50-122.00	-	-	-	6	5	2	4	1	-	6	1	1	10	1	7	2	6	-	-	-	-
RETAIL TRADE	243	40.0	74.00	78.50	64.00- 86.00	25	7	37	14	30	13	52	33	31	1	-	-	-	-	-	-	-	-	-	-	-

See footnotes at end of table.

Table A-1. Office Occupations—Men and Women—Continued

(Average straight-time weekly hours and earnings for selected occupations studied on an area basis by industry division, Portland, Oreg.-Wash., May 1966)

Sex, occupation, and industry division	Number of workers	Average weekly hours[1] (standard)	Weekly earnings[1] (standard) Mean[2]	Median[2]	Middle range[2]	Number of workers receiving straight-time weekly earnings of— $50 and under $55	$55-60	$60-65	$65-70	$70-75	$75-80	$80-85	$85-90	$90-95	$95-100	$100-105	$105-110	$110-115	$115-120	$120-125	$125-130	$130-140	$140-150	$150-160	$160-170	$170 and over
WOMEN - CONTINUED																										
			$	$	$ $																					
CLERKS, FILE, CLASS A	81	39.5	90.00	80.00	68.50-110.50	-	-	-	30	5	6	6	-	-	-	9	5	4	6	5	5	-	-	-	-	-
NONMANUFACTURING	80	39.5	90.00	79.50	68.50-111.00	-	-	-	30	5	6	5	-	-	-	9	5	4	6	5	5	-	-	-	-	-
CLERKS, FILE, CLASS B	182	39.5	74.50	74.00	62.00- 87.00	15	20	28	14	19	29	4	22	13	6	6	2	-	4	-	-	-	-	-	-	-
MANUFACTURING	25	40.0	71.00	71.00	64.00- 77.50	-	2	6	4	5	5	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-
NONMANUFACTURING	157	39.5	75.00	75.00	61.50- 88.00	15	18	22	10	14	24	2	21	13	6	6	2	-	4	-	-	-	-	-	-	-
PUBLIC UTILITIES[3]	28	40.0	94.50	99.00	78.00-105.00	-	-	-	-	6	2	1	-	1	6	6	2	-	4	-	-	-	-	-	-	-
CLERKS, FILE, CLASS C	122	38.5	63.50	61.50	56.00- 66.50	25	25	37	16	9	-	-	4	6	-	-	-	-	-	-	-	-	-	-	-	-
NONMANUFACTURING	116	38.5	63.50	61.00	56.00- 65.50	25	25	36	14	6	-	-	4	6	-	-	-	-	-	-	-	-	-	-	-	-
CLERKS, ORDER	252	40.0	85.50	83.00	74.50- 94.00	-	-	14	21	30	39	36	17	41	5	5	29	10	-	5	-	-	-	-	-	-
MANUFACTURING	80	40.0	85.00	86.00	81.00- 92.50	-	-	-	14	-	3	21	14	17	2	4	2	3	-	-	-	-	-	-	-	-
NONMANUFACTURING	172	40.0	85.50	80.00	73.50- 96.00	-	-	14	7	30	36	15	3	24	3	1	27	7	-	5	-	-	-	-	-	-
CLERKS, PAYROLL	295	40.0	92.00	91.50	79.50-102.00	-	-	10	16	18	33	36	16	58	23	30	9	9	13	11	9	1	2	1	-	-
MANUFACTURING	131	40.0	90.50	91.00	76.50-103.00	-	-	7	6	15	18	7	8	21	4	23	9	6	1	1	2	1	2	-	-	-
NONMANUFACTURING	164	40.0	93.00	92.00	82.00-100.00	-	-	3	10	3	15	29	8	37	19	7	-	3	12	10	7	-	-	1	-	-
PUBLIC UTILITIES[3]	54	40.0	108.00	112.50	96.50-122.50	-	-	-	-	-	1	4	2	4	8	7	-	3	7	10	7	-	-	1	-	-
RETAIL TRADE	46	40.0	82.00	83.00	77.50- 91.50	-	-	2	3	3	8	12	3	14	1	-	-	-	-	-	-	-	-	-	-	-
COMPTOMETER OPERATORS	230	40.0	90.00	92.00	78.50-102.50	-	5	6	11	8	41	22	17	14	22	56	8	15	5	-	-	-	-	-	-	-
MANUFACTURING	120	40.0	95.50	100.50	86.50-103.50	-	-	1	2	4	8	14	4	9	11	52	6	8	1	-	-	-	-	-	-	-
NONMANUFACTURING	110	40.0	84.50	80.00	75.50- 95.50	-	5	5	9	4	33	8	13	5	11	4	2	7	4	-	-	-	-	-	-	-
RETAIL TRADE	43	40.0	74.50	74.00	65.50- 87.00	-	5	5	9	4	5	2	7	5	1	-	-	-	-	-	-	-	-	-	-	-
DUPLICATING-MACHINE OPERATORS (MIMEOGRAPH OR DITTO)	29	39.5	73.50	73.50	70.50- 78.00	-	4	-	2	13	6	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-
KEYPUNCH OPERATORS, CLASS A	283	39.5	87.50	85.00	77.50- 94.00	-	-	1	4	47	42	48	52	25	5	12	27	8	3	9	-	-	-	-	-	-
MANUFACTURING	58	40.0	83.00	83.00	74.50- 90.00	-	-	-	3	13	10	6	12	8	1	2	3	-	-	-	-	-	-	-	-	-
NONMANUFACTURING	225	39.0	88.50	85.50	78.00- 98.00	-	-	1	1	34	32	42	40	17	4	10	24	8	3	9	-	-	-	-	-	-
PUBLIC UTILITIES[3]	96	40.0	98.00	103.00	83.50-109.50	-	-	-	-	-	14	15	8	2	4	9	24	8	3	9	-	-	-	-	-	-
KEYPUNCH OPERATORS, CLASS B	284	39.5	81.50	80.00	72.00- 91.00	3	3	11	31	59	36	32	30	37	27	8	-	7	-	-	-	-	-	-	-	-
MANUFACTURING	102	40.0	80.50	78.50	71.50- 89.00	-	-	6	15	14	23	7	16	2	9	8	-	2	-	-	-	-	-	-	-	-
NONMANUFACTURING	182	39.5	81.50	81.50	72.00- 92.00	3	3	5	16	45	13	25	14	35	18	-	-	5	-	-	-	-	-	-	-	-
PUBLIC UTILITIES[3]	68	40.0	90.00	92.00	81.00- 97.00	-	-	-	-	11	5	6	6	17	18	-	-	5	-	-	-	-	-	-	-	-
RETAIL TRADE	58	40.0	81.00	84.00	74.00- 91.00	3	3	1	3	6	1	15	8	18	-	-	-	-	-	-	-	-	-	-	-	-
OFFICE GIRLS	190	39.0	60.00	58.50	56.00- 63.00	22	108	24	23	7	-	2	-	-	3	1	-	-	-	-	-	-	-	-	-	-
MANUFACTURING	45	40.0	59.00	57.50	54.00- 65.50	14	17	3	9	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NONMANUFACTURING	145	39.0	60.00	58.50	56.50- 62.50	8	91	21	14	6	-	1	-	-	3	1	-	-	-	-	-	-	-	-	-	-
SECRETARIES[4 5]	1,074	39.5	102.00	99.50	90.50-112.00	-	-	1	14	30	31	74	107	143	150	143	92	49	51	70	30	51	24	6	7	1
MANUFACTURING	385	40.0	99.00	97.50	88.00-107.50	-	-	-	2	7	21	28	63	50	42	63	27	18	19	21	6	14	1	2	-	1
NONMANUFACTURING	689	39.5	104.00	100.50	92.00-115.50	-	-	1	12	23	10	46	44	93	108	80	65	31	32	49	24	37	23	4	7	-
PUBLIC UTILITIES[3]	184	40.0	119.50	120.50	106.50-135.50	-	-	-	-	-	4	4	7	12	8	8	11	14	21	27	15	31	17	4	1	-
RETAIL TRADE	110	40.0	96.00	96.00	88.00-101.00	-	-	1	5	8	1	3	16	14	30	21	2	1	1	-	1	-	-	-	6	-
SECRETARIES, CLASS A[5]	56	39.5	110.00	104.00	96.50-129.00	-	-	-	-	-	-	-	10	1	10	10	4	-	1	6	-	8	3	3	-	-
MANUFACTURING	32	39.5	103.50	102.00	96.00-107.00	-	-	-	-	-	-	-	6	1	6	10	4	-	1	2	-	1	-	1	-	-
SECRETARIES, CLASS B[5]	150	40.0	112.50	110.00	94.00-127.50	-	-	-	-	4	2	9	10	15	8	8	20	16	4	14	6	13	14	-	7	-
MANUFACTURING	38	40.0	109.50	107.00	100.50-120.50	-	-	-	-	-	-	-	2	3	4	6	12	-	2	4	-	4	1	-	-	-
NONMANUFACTURING	112	40.0	113.50	112.50	92.00-135.50	-	-	-	-	4	2	9	8	12	4	2	8	16	2	10	6	9	13	-	7	-
PUBLIC UTILITIES[3]	37	40.0	124.50	130.00	95.00-142.50	-	-	-	-	-	-	-	-	10	-	-	-	-	1	5	3	9	8	-	1	-

See footnotes at end of table.

Table A-1. Office Occupations—Men and Women—Continued

(Average straight-time weekly hours and earnings for selected occupations studied on an area basis by industry division, Portland, Oreg.-Wash., May 1966)

Sex, occupation, and industry division	Number of workers	Average weekly hours[1] (standard)	Weekly earnings[1] (standard) Mean[2]	Median[2]	Middle range[2]	Number of workers receiving straight-time weekly earnings of— $50 and under 55	$55 - 60	$60 - 65	$65 - 70	$70 - 75	$75 - 80	$80 - 85	$85 - 90	$90 - 95	$95 - 100	$100 - 105	$105 - 110	$110 - 115	$115 - 120	$120 - 125	$125 - 130	$130 - 140	$140 - 150	$150 - 160	$160 - 170	$170 and over
WOMEN - CONTINUED																										
SECRETARIES[4 5] - CONTINUED			$	$	$ $																					
SECRETARIES, CLASS C[5]	408	39.5	104.50	102.00	94.00-117.00	-	-	1	5	14	4	14	21	55	63	70	37	14	20	34	16	29	7	3	-	1
MANUFACTURING	130	40.0	104.00	101.50	94.50-112.50	-	-	-	-	2	2	-	13	18	23	26	9	11	8	5	3	8	-	1	-	1
NONMANUFACTURING	278	39.5	105.00	102.50	94.00-120.50	-	-	1	5	12	2	14	8	37	40	44	28	3	12	29	13	21	7	2	-	-
RETAIL TRADE	55	40.0	89.50	96.00	75.00-101.50	-	-	1	5	8	1	2	4	5	11	18	-	-	-	-	-	-	-	-	-	-
SECRETARIES, CLASS D[5]	409	40.0	95.50	94.50	85.50-104.50	-	-	-	9	12	25	49	59	59	59	41	27	18	26	16	8	1	-	-	-	-
MANUFACTURING	168	40.0	93.00	89.00	83.00-101.50	-	-	-	2	5	19	27	37	25	7	16	2	6	8	10	3	1	-	-	-	-
NONMANUFACTURING	241	39.5	97.00	97.00	89.00-106.50	-	-	-	7	7	6	22	22	34	52	25	25	12	18	6	5	-	-	-	-	-
RETAIL TRADE	38	40.0	94.00	96.00	90.50- 98.50	-	-	-	-	-	-	1	8	7	19	1	2	-	-	-	-	-	-	-	-	-
STENOGRAPHERS, GENERAL	530	39.0	82.00	81.00	72.00- 88.00	-	12	33	62	68	72	102	76	12	34	12	2	27	14	4	-	-	-	-	-	-
MANUFACTURING	147	40.0	84.50	84.00	75.00- 96.50	-	-	11	11	15	14	29	21	3	26	11	2	1	2	1	-	-	-	-	-	-
NONMANUFACTURING	383	38.5	81.50	79.50	71.00- 86.50	-	12	22	51	53	58	73	55	9	8	1	-	26	12	3	-	-	-	-	-	-
PUBLIC UTILITIES[3]	69	40.0	102.50	111.00	90.50-114.50	-	-	-	4	-	4	6	3	6	7	-	-	26	10	3	-	-	-	-	-	-
STENOGRAPHERS, SENIOR	435	39.0	91.00	90.50	83.00-100.50	-	1	7	16	22	20	76	70	45	63	51	33	14	16	1	-	-	-	-	-	-
MANUFACTURING	108	40.0	95.00	97.50	87.00-104.50	-	-	1	-	3	6	12	12	5	32	12	16	6	3	-	-	-	-	-	-	-
NONMANUFACTURING	327	39.0	89.50	89.00	82.00- 99.50	-	1	6	16	19	14	64	58	40	31	39	17	8	13	1	-	-	-	-	-	-
PUBLIC UTILITIES[3]	84	40.0	95.50	94.00	86.50-104.00	-	-	-	-	-	4	12	17	12	6	16	6	8	3	-	-	-	-	-	-	-
SWITCHBOARD OPERATORS, CLASS A[5]	40	40.0	94.50	98.00	85.00-108.00	-	-	-	4	2	1	3	5	1	8	-	12	3	-	1	-	-	-	-	-	-
NONMANUFACTURING	30	40.0	101.00	105.50	96.00-109.00	-	-	-	-	-	-	2	3	1	8	-	12	3	-	1	-	-	-	-	-	-
PUBLIC UTILITIES[3]	29	40.0	101.50	106.00	96.50-109.00	-	-	-	-	-	-	2	2	1	8	-	12	3	-	1	-	-	-	-	-	-
SWITCHBOARD OPERATORS, CLASS B[5]	128	39.0	77.50	74.00	67.50- 84.50	-	2	7	48	9	21	11	3	6	4	6	6	5	-	-	-	-	-	-	-	-
NONMANUFACTURING	117	39.0	77.50	73.00	67.50- 84.50	-	2	7	45	8	19	1	3	5	4	5	6	5	-	-	-	-	-	-	-	-
PUBLIC UTILITIES[3]	28	40.0	98.50	102.50	93.00-109.00	-	-	-	-	-	4	1	-	4	3	5	6	5	-	-	-	-	-	-	-	-
SWITCHBOARD OPERATOR-RECEPTIONISTS	320	40.0	79.50	75.00	69.50- 89.00	-	16	33	34	78	16	40	29	33	7	13	10	2	9	-	-	-	-	-	-	-
MANUFACTURING	125	40.0	81.50	81.00	71.00- 90.50	-	-	11	16	28	2	24	12	16	4	3	5	-	4	-	-	-	-	-	-	-
NONMANUFACTURING	195	40.0	78.50	74.00	68.00- 88.00	-	16	22	18	50	14	16	17	17	3	10	5	2	5	-	-	-	-	-	-	-
RETAIL TRADE	54	40.0	75.00	71.00	67.00- 82.50	-	-	6	18	14	-	6	1	9	-	-	-	-	-	-	-	-	-	-	-	-
TABULATING-MACHINE OPERATORS, CLASS B	59	40.0	97.50	98.00	91.50-107.00	-	-	-	1	1	1	1	7	14	8	10	5	11	-	-	-	-	-	-	-	-
NONMANUFACTURING	53	40.0	98.00	99.50	92.00-107.50	-	-	-	1	1	1	1	6	10	8	10	5	10	-	-	-	-	-	-	-	-
TRANSCRIBING-MACHINE OPERATORS, GENERAL	159	40.0	84.50	86.00	75.50- 91.50	-	-	7	8	24	14	19	42	19	11	6	-	9	-	-	-	-	-	-	-	-
NONMANUFACTURING	137	39.5	86.00	86.50	78.00- 92.50	-	-	5	8	15	11	18	38	18	11	4	-	9	-	-	-	-	-	-	-	-
TYPISTS, CLASS A	268	38.5	79.50	75.50	70.50- 86.50	-	-	19	39	75	25	38	19	24	5	12	7	4	1	-	-	-	-	-	-	-
MANUFACTURING	72	40.0	81.50	82.50	70.00- 90.00	-	-	3	15	10	1	14	12	5	5	5	1	-	1	-	-	-	-	-	-	-
NONMANUFACTURING	196	38.0	78.50	74.50	70.50- 84.00	-	-	16	24	65	24	24	7	19	-	7	6	4	-	-	-	-	-	-	-	-
TYPISTS, CLASS B	446	39.5	72.00	71.00	62.50- 80.00	3	65	80	54	93	40	44	20	18	22	6	1	-	-	-	-	-	-	-	-	-
MANUFACTURING	126	40.0	74.00	73.50	65.50- 83.00	-	8	21	22	19	14	19	7	14	2	-	-	-	-	-	-	-	-	-	-	-
NONMANUFACTURING	320	39.5	71.00	70.50	61.50- 78.00	3	57	59	32	74	26	25	13	4	20	6	1	-	-	-	-	-	-	-	-	-
PUBLIC UTILITIES[3]	28	40.0	87.00	84.00	79.00- 99.00	-	-	-	-	-	9	7	1	4	-	6	1	-	-	-	-	-	-	-	-	-
RETAIL TRADE	45	40.0	74.50	80.50	64.00- 83.50	3	6	3	5	5	-	17	-	-	6	-	-	-	-	-	-	-	-	-	-	-

[1] Standard hours reflect the workweek for which employees receive their regular straight-time salaries and the earnings correspond to these weekly hours.

[2] The mean is computed for each job by totaling the earnings of all workers and dividing by the number of workers. The median designates position—half of the employees surveyed receive more than the rate shown; half receive less than the rate shown. The middle range is defined by 2 rates of pay; a fourth of the workers earn less than the lower of these rates and a fourth earn more than the higher rate.

[3] Transportation, communication, and other public utilities.

[4] May include workers other than those presented separately.

[5] Description for this occupation has been revised since the last survey in this area. See appendix A.

Table A-2. Professional and Technical Occupations—Men and Women

(Average straight-time weekly hours and earnings for selected occupations studied on an area basis by industry division, Portland, Oreg.-Wash., May 1966)

Sex, occupation, and industry division	Number of workers	Average weekly hours[1] (standard)	Weekly earnings[1] (standard)			Number of workers receiving straight-time weekly earnings of—																				
			Mean[2]	Median[2]	Middle range[2]	$ 80 and under 85	$ 85 - 90	$ 90 - 95	$ 95 - 100	$ 100 - 105	$ 105 - 110	$ 110 - 115	$ 115 - 120	$ 120 - 125	$ 125 - 130	$ 130 - 135	$ 135 - 140	$ 140 - 145	$ 145 - 150	$ 150 - 155	$ 155 - 160	$ 160 - 165	$ 165 - 170	$ 170 - 175	$ 175 - 180	$ 180 and over
DRAFTSMEN, CLASS A[3]	94	40.0	$144.50	$138.50	$134.00-$156.00	-	-	-	-	-	-	-	4	5	5	13	28	7	6	2	6	5	2	6	-	5
MANUFACTURING	66	40.0	136.00	136.00	131.00-139.00	-	-	-	-	-	-	-	4	5	5	13	28	5	-	2	1	2	-	-	-	1
NONMANUFACTURING	28	40.0	164.00	162.50	149.50-173.00	-	-	-	-	-	-	-	-	-	-	-	-	2	6	-	5	3	2	6	-	4
DRAFTSMEN, CLASS B[3]	222	40.0	125.50	126.00	115.50-136.50	-	-	3	4	13	13	20	37	17	26	23	40	4	12	-	5	5	-	-	-	-
MANUFACTURING	151	40.0	121.00	120.50	112.00-131.50	-	-	3	4	13	12	15	28	14	21	15	18	1	6	-	-	1	-	-	-	-
NONMANUFACTURING	71	40.0	134.50	136.00	125.00-141.50	-	-	-	-	-	1	5	9	3	5	8	22	3	6	-	5	4	-	-	-	-
PUBLIC UTILITIES[4]	49	40.0	132.00	134.00	122.50-139.00	-	-	-	-	-	1	5	5	3	5	8	14	1	4	-	3	-	-	-	-	-
DRAFTSMEN, CLASS C[3]	101	40.0	100.00	100.00	91.00-107.00	5	17	19	10	23	6	3	8	9	-	1	-	-	-	-	-	-	-	-	-	-
MANUFACTURING	73	40.0	97.00	96.00	89.50-103.00	3	17	15	10	19	2	1	-	6	-	-	-	-	-	-	-	-	-	-	-	-
NONMANUFACTURING	28	40.0	108.50	111.00	101.50-118.50	2	-	4	-	4	4	2	8	3	-	1	-	-	-	-	-	-	-	-	-	-
WOMEN																										
NURSES, INDUSTRIAL (REGISTERED)	32	40.0	111.50	110.50	98.50-126.00	1	-	3	6	-	6	5	1	2	4	3	-	-	1	-	-	-	-	-	-	-
MANUFACTURING	29	40.0	110.50	110.00	98.00-124.00	1	-	3	6	-	5	5	1	2	2	3	-	-	1	-	-	-	-	-	-	-

[1] Standard hours reflect the workweek for which employees receive their regular straight-time salaries and the earnings correspond to these weekly hours.
[2] For definition of terms, see footnote 2, table A-1.
[3] Description for this occupation has been revised since the last survey in this area. See appendix A.
[4] Transportation, communication, and other public utilities.

Table A-3. Office, Professional, and Technical Occupations—Men and Women Combined

(Average straight-time weekly hours and earnings for selected occupations studied on an area basis by industry division, Portland, Oreg.–Wash., May 1966)

Occupation and industry division	Number of workers	Average: Weekly hours[1] (standard)	Average: Weekly earnings[1] (standard)
OFFICE OCCUPATIONS			
BILLERS, MACHINE (BILLING MACHINE)	140	40.0	$ 84.00
MANUFACTURING	35	39.5	82.00
NONMANUFACTURING	105	40.0	85.00
PUBLIC UTILITIES[2]	38	40.0	109.50
BILLERS, MACHINE (BOOKKEEPING MACHINE)	47	40.0	72.00
NONMANUFACTURING	41	40.0	68.00
BOOKKEEPING-MACHINE OPERATORS, CLASS A	90	40.0	94.00
MANUFACTURING	34	40.0	99.00
NONMANUFACTURING	56	40.0	90.50
BOOKKEEPING-MACHINE OPERATORS, CLASS B	217	40.0	85.00
MANUFACTURING	61	40.0	85.50
NONMANUFACTURING	156	40.0	85.00
RETAIL TRADE	80	40.0	83.50
CLERKS, ACCOUNTING, CLASS A	520	40.0	111.00
MANUFACTURING	160	39.5	110.50
NONMANUFACTURING	360	40.0	111.00
PUBLIC UTILITIES[2]	105	40.0	131.50
RETAIL TRADE	77	40.0	92.50
CLERKS, ACCOUNTING, CLASS B	765	39.5	86.00
MANUFACTURING	144	40.0	87.00
NONMANUFACTURING	621	39.5	85.50
PUBLIC UTILITIES[2]	90	40.0	106.50
RETAIL TRADE	243	40.0	74.00
CLERKS, FILE, CLASS A	85	39.5	91.50
NONMANUFACTURING	84	39.5	91.50
CLERKS, FILE, CLASS B	185	39.5	75.00
MANUFACTURING	25	40.0	71.00
NONMANUFACTURING	160	39.5	76.00
PUBLIC UTILITIES[2]	31	40.0	96.50
CLERKS, FILE, CLASS C	123	38.5	64.00
NONMANUFACTURING	117	38.5	63.50
CLERKS, ORDER	483	40.0	105.00
MANUFACTURING	103	40.0	92.50
NONMANUFACTURING	380	40.0	108.50
CLERKS, PAYROLL	325	40.0	94.50
MANUFACTURING	145	40.0	93.50
NONMANUFACTURING	180	40.0	95.50
PUBLIC UTILITIES[2]	66	40.0	112.00
RETAIL TRADE	46	40.0	82.00
COMPTOMETER OPERATORS	230	40.0	90.00
MANUFACTURING	120	40.0	95.50
NONMANUFACTURING	110	40.0	84.50
RETAIL TRADE	43	40.0	74.50
OFFICE OCCUPATIONS - CONTINUED			
DUPLICATING-MACHINE OPERATORS (MIMEOGRAPH OR DITTO)	44	40.0	$ 75.50
KEYPUNCH OPERATORS, CLASS A	283	39.5	87.50
MANUFACTURING	58	40.0	83.00
NONMANUFACTURING	225	39.0	88.50
PUBLIC UTILITIES[2]	96	40.0	98.00
KEYPUNCH OPERATORS, CLASS B	284	39.5	81.50
MANUFACTURING	102	40.0	80.50
NONMANUFACTURING	182	39.5	81.50
PUBLIC UTILITIES[2]	68	40.0	90.00
RETAIL TRADE	58	40.0	81.00
OFFICE BOYS AND GIRLS	254	39.0	62.00
MANUFACTURING	61	40.0	61.50
NONMANUFACTURING	193	39.0	62.00
PUBLIC UTILITIES[2]	25	40.0	81.50
SECRETARIES[3 4]	1,083	39.5	102.50
MANUFACTURING	385	40.0	99.00
NONMANUFACTURING	698	39.5	104.50
PUBLIC UTILITIES[2]	193	40.0	120.50
RETAIL TRADE	110	40.0	96.00
SECRETARIES, CLASS A[4]	56	39.5	110.00
MANUFACTURING	32	39.5	103.50
SECRETARIES, CLASS B[4]	155	40.0	113.50
MANUFACTURING	38	40.0	109.50
NONMANUFACTURING	117	40.0	115.00
PUBLIC UTILITIES[2]	42	40.0	127.50
SECRETARIES, CLASS C[4]	411	39.5	105.00
MANUFACTURING	130	40.0	104.00
NONMANUFACTURING	281	39.5	105.50
RETAIL TRADE	55	40.0	89.50
SECRETARIES, CLASS D[4]	410	40.0	95.50
MANUFACTURING	168	40.0	93.00
NONMANUFACTURING	242	39.5	97.50
RETAIL TRADE	38	40.0	94.00
STENOGRAPHERS, GENERAL	546	39.0	83.00
MANUFACTURING	148	40.0	84.50
NONMANUFACTURING	398	38.5	82.50
PUBLIC UTILITIES[2]	84	40.0	104.50
STENOGRAPHERS, SENIOR	438	39.0	91.00
MANUFACTURING	108	40.0	95.00
NONMANUFACTURING	330	39.0	90.00
PUBLIC UTILITIES[2]	87	40.0	96.00
SWITCHBOARD OPERATORS, CLASS A[4]	40	40.0	94.50
NONMANUFACTURING	30	40.0	101.00
PUBLIC UTILITIES[2]	29	40.0	101.50
OFFICE OCCUPATIONS - CONTINUED			
SWITCHBOARD OPERATORS, CLASS B[4]	128	39.0	$ 77.50
NONMANUFACTURING	117	39.0	77.50
PUBLIC UTILITIES[2]	28	40.0	98.50
SWITCHBOARD OPERATOR-RECEPTIONISTS	320	40.0	79.50
MANUFACTURING	125	40.0	81.50
NONMANUFACTURING	195	40.0	78.50
RETAIL TRADE	54	40.0	75.00
TABULATING-MACHINE OPERATORS, CLASS A	26	39.5	123.50
TABULATING-MACHINE OPERATORS, CLASS B	120	40.0	104.00
MANUFACTURING	30	40.0	111.00
NONMANUFACTURING	90	40.0	102.00
PUBLIC UTILITIES[2]	51	40.0	102.00
TABULATING-MACHINE OPERATORS, CLASS C	30	39.0	91.50
TRANSCRIBING-MACHINE OPERATORS, GENERAL	159	40.0	84.50
NONMANUFACTURING	137	39.5	86.00
TYPISTS, CLASS A	268	38.5	79.50
MANUFACTURING	72	40.0	81.50
NONMANUFACTURING	196	38.0	78.50
TYPISTS, CLASS B	446	39.5	72.00
MANUFACTURING	126	40.0	74.00
NONMANUFACTURING	320	39.5	71.00
PUBLIC UTILITIES[2]	28	40.0	87.00
RETAIL TRADE	45	40.0	74.50
PROFESSIONAL AND TECHNICAL OCCUPATIONS			
DRAFTSMEN, CLASS A[4]	97	40.0	144.00
MANUFACTURING	69	40.0	135.50
NONMANUFACTURING	28	40.0	164.00
DRAFTSMEN, CLASS B[4]	225	40.0	125.00
MANUFACTURING	154	40.0	120.50
NONMANUFACTURING	71	40.0	134.50
PUBLIC UTILITIES[2]	49	40.0	132.00
DRAFTSMEN, CLASS C[4]	111	40.0	99.50
MANUFACTURING	77	40.0	96.50
NONMANUFACTURING	34	40.0	106.50
NURSES, INDUSTRIAL (REGISTERED)	32	40.0	111.50
MANUFACTURING	29	40.0	110.50

[1] Standard hours reflect the workweek for which employees receive their regular straight-time salaries and the earnings correspond to these weekly hours.
[2] Transportation, communication, and other public utilities.
[3] May include workers other than those presented separately.
[4] Description for this occupation has been revised since the last survey in this area. See appendix A.

Table A-4. Maintenance and Powerplant Occupations

(Average straight-time hourly earnings for men in selected occupations studied on an area basis by industry division, Portland, Oreg.–Wash., May 1966)

Occupation and industry division	Number of workers	Hourly earnings[1]			Number of workers receiving straight-time hourly earnings of—																						
		Mean[2]	Median[2]	Middle range[2]	Under $ 2.30	$ 2.30 and under 2.40	$ 2.40 – 2.50	$ 2.50 – 2.60	$ 2.60 – 2.70	$ 2.70 – 2.80	$ 2.80 – 2.90	$ 2.90 – 3.00	$ 3.00 – 3.10	$ 3.10 – 3.20	$ 3.20 – 3.30	$ 3.30 – 3.40	$ 3.40 – 3.50	$ 3.50 – 3.60	$ 3.60 – 3.70	$ 3.70 – 3.80	$ 3.80 – 3.90	$ 3.90 – 4.00	$ 4.00 – 4.10	$ 4.10 – 4.20	$ 4.20 – 4.30	$ 4.30 – 4.40	$ 4.40 and over
CARPENTERS, MAINTENANCE	102	$ 3.39	$ 3.44	$ 2.89– $ 3.72	–	–	1	1	1	5	19	14	–	1	–	–	22	8	3	12	3	–	–	1	1	2	8
MANUFACTURING	65	3.42	3.46	2.96– 3.62	–	–	1	1	1	5	–	14	–	1	–	–	18	8	3	4	1	–	–	–	1	2	5
NONMANUFACTURING	37	3.34	2.90	2.85– 3.77	–	–	–	–	–	–	19	–	–	–	–	–	4	–	–	8	2	–	–	1	–	–	3
PUBLIC UTILITIES[3]	25	3.02	2.87	2.83– 3.15	–	–	–	–	–	–	19	–	–	–	–	–	4	–	–	–	2	–	–	–	–	–	–
ELECTRICIANS, MAINTENANCE	325	3.61	3.59	3.45– 3.72	–	–	–	–	–	–	–	–	8	9	2	37	48	69	56	69	3	–	–	4	4	–	16
MANUFACTURING	273	3.64	3.61	3.51– 3.73	–	–	–	–	–	–	–	–	–	9	–	9	43	68	56	69	3	–	–	–	–	–	16
NONMANUFACTURING	52	3.45	3.36	3.31– 3.44	–	–	–	–	–	–	–	–	8	–	2	28	5	1	–	–	–	–	–	4	4	–	–
ENGINEERS, STATIONARY	205	3.41	3.51	3.22– 3.64	–	–	–	–	–	–	16	–	24	2	47	1	10	44	30	9	8	14	–	–	–	–	–
MANUFACTURING	134	3.52	3.57	3.48– 3.67	–	–	–	–	–	–	–	–	24	2	–	–	10	44	29	9	2	14	–	–	–	–	–
NONMANUFACTURING	71	3.21	3.24	3.20– 3.28	–	–	–	–	–	–	16	–	–	–	47	1	–	–	1	–	6	–	–	–	–	–	–
FIREMEN, STATIONARY BOILER	140	2.77	2.74	2.53– 3.03	3	–	28	16	18	13	24	–	13	9	4	4	–	4	4	–	–	–	–	–	–	–	–
MANUFACTURING	124	2.76	2.72	2.50– 2.90	3	–	28	13	17	9	24	–	10	4	4	4	–	4	4	–	–	–	–	–	–	–	–
HELPERS, MAINTENANCE TRADES	113	2.82	2.91	2.71– 2.99	7	4	1	12	1	27	3	34	12	12	–	–	–	–	–	–	–	–	–	–	–	–	–
MANUFACTURING	87	2.80	2.77	2.59– 3.03	6	4	1	12	1	27	3	9	12	12	–	–	–	–	–	–	–	–	–	–	–	–	–
MACHINE-TOOL OPERATORS, TOOLROOM	89	3.34	3.37	3.32– 3.52	–	–	–	–	–	4	3	5	2	1	–	41	7	24	2	–	–	–	–	–	–	–	–
MANUFACTURING	89	3.34	3.37	3.32– 3.52	–	–	–	–	–	4	3	5	2	1	–	41	7	24	2	–	–	–	–	–	–	–	–
MACHINISTS, MAINTENANCE	204	3.59	3.56	3.47– 3.71	–	–	–	–	–	–	–	–	–	–	1	12	56	52	30	44	1	–	–	–	–	–	8
MANUFACTURING	187	3.60	3.57	3.46– 3.72	–	–	–	–	–	–	–	–	–	–	–	12	56	36	30	44	1	–	–	–	–	–	8
MECHANICS, AUTOMOTIVE (MAINTENANCE)	638	3.55	3.61	3.46– 3.68	–	–	–	–	–	–	7	–	20	–	47	17	115	92	228	104	8	–	–	–	–	–	–
MANUFACTURING	152	3.48	3.49	3.44– 3.58	–	–	–	–	–	–	7	–	–	–	–	–	77	38	24	6	–	–	–	–	–	–	–
NONMANUFACTURING	486	3.58	3.63	3.50– 3.69	–	–	–	–	–	–	–	–	20	–	47	17	38	54	204	98	8	–	–	–	–	–	–
PUBLIC UTILITIES[3]	413	3.58	3.64	3.49– 3.70	–	–	–	–	–	–	–	–	20	–	47	3	38	26	190	91	8	–	–	–	–	–	–
MECHANICS, MAINTENANCE	621	3.43	3.50	3.08– 3.73	–	–	1	3	1	–	52	37	75	18	5	27	90	97	–	190	3	–	–	–	–	–	22
MANUFACTURING	597	3.43	3.51	3.07– 3.73	–	–	1	3	1	–	52	37	75	18	5	5	90	97	–	188	3	–	–	–	–	–	22
OILERS	56	2.91	2.97	2.91– 3.06	4	–	–	–	3	1	3	24	13	2	2	4	–	–	–	–	–	–	–	–	–	–	–
MANUFACTURING	56	2.91	2.97	2.91– 3.06	4	–	–	–	3	1	3	24	13	2	2	4	–	–	–	–	–	–	–	–	–	–	–
PAINTERS, MAINTENANCE	75	3.49	3.71	3.35– 3.77	–	–	–	–	1	7	5	–	1	–	–	11	4	5	–	32	4	4	–	1	–	–	–
MANUFACTURING	61	3.53	3.72	3.41– 3.77	–	–	–	–	1	7	–	–	1	–	–	6	4	5	–	32	–	4	–	1	–	–	–
PIPEFITTERS, MAINTENANCE	93	3.62	3.60	3.55– 3.75	–	–	–	–	–	–	–	–	–	–	–	–	–	47	–	44	2	–	–	–	–	–	–
MANUFACTURING	92	3.62	3.65	3.55– 3.75	–	–	–	–	–	–	–	–	–	–	–	–	–	46	–	44	2	–	–	–	–	–	–
TOOL AND DIE MAKERS	160	3.65	3.58	3.51– 3.92	–	–	–	–	–	–	–	3	1	5	14	6	7	56	–	2	16	50	–	–	–	–	–
MANUFACTURING	160	3.65	3.58	3.51– 3.92	–	–	–	–	–	–	–	3	1	5	14	6	7	56	–	2	16	50	–	–	–	–	–

[1] Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.
[2] For definition of terms, see footnote 2, table A-1.
[3] Transportation, communication, and other public utilities.

Table A-5 Custodial and Material Movement Occupations

(Average straight-time hourly earnings for selected occupations studied on an area basis by industry division, Portland, Oreg.–Wash., May 1966)

Occupation[1] and industry division	Number of workers	Hourly earnings[2]			Number of workers receiving straight-time hourly earnings of—																						
		Mean[3]	Median[3]	Middle range[3]	$ 1.20 and under 1.30	$ 1.30 - 1.40	$ 1.40 - 1.50	$ 1.50 - 1.60	$ 1.60 - 1.70	$ 1.70 - 1.80	$ 1.80 - 1.90	$ 1.90 - 2.00	$ 2.00 - 2.10	$ 2.10 - 2.20	$ 2.20 - 2.30	$ 2.30 - 2.40	$ 2.40 - 2.50	$ 2.50 - 2.60	$ 2.60 - 2.70	$ 2.70 - 2.80	$ 2.80 - 2.90	$ 2.90 - 3.00	$ 3.00 - 3.20	$ 3.20 - 3.40	$ 3.40 - 3.60	$ 3.60 - 3.80	$ 3.80 - 4.00
ELEVATOR OPERATORS, PASSENGER (WOMEN)	66	$ 1.57	$ 1.62	$ 1.42- $ 1.75	12	1	19	1	3	27	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NONMANUFACTURING	66	1.57	1.62	1.42- 1.75	12	1	19	1	3	27	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RETAIL TRADE	47	1.58	1.71	1.30- 1.76	12	1	3	1	3	27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GUARDS AND WATCHMEN	153	2.40	2.52	2.05- 2.70	-	-	-	-	14	-	10	3	21	15	5	2	5	10	32	4	8	11	11	2	-	-	-
MANUFACTURING	86	2.46	2.60	2.07- 2.70	-	-	-	-	-	-	10	-	18	7	5	-	-	3	23	-	2	5	11	2	-	-	-
NONMANUFACTURING	67	2.32	2.48	1.99- 2.69	-	-	-	-	14	-	-	3	3	8	-	2	5	7	9	4	6	6	-	-	-	-	-
WATCHMEN:																											
MANUFACTURING	63	2.33	2.26	2.03- 2.65	-	-	-	-	-	-	10	-	18	1	5	-	-	3	23	-	-	3	-	-	-	-	-
JANITORS, PORTERS, AND CLEANERS	1,247	2.21	2.19	2.05- 2.46	-	-	29	32	35	44	11	85	160	268	131	55	136	88	98	43	27	3	2	-	-	-	-
MANUFACTURING	483	2.41	2.46	2.17- 2.63	-	-	-	-	7	10	6	17	49	45	14	18	124	47	88	31	27	-	-	-	-	-	-
NONMANUFACTURING	764	2.09	2.13	1.99- 2.24	-	-	29	32	28	34	5	68	111	223	117	37	12	41	10	12	-	3	2	-	-	-	-
PUBLIC UTILITIES[4]	81	2.36	2.37	2.17- 2.55	-	-	-	-	-	-	4	1	-	21	-	23	6	13	10	-	-	1	2	-	-	-	-
RETAIL TRADE	246	1.93	2.02	1.71- 2.20	-	-	29	4	28	[illegible]	1	35	77	2	53	8	1	-	-	-	-	-	-	-	-	-	-
JANITORS, PORTERS, AND CLEANERS (WOMEN)	364	2.04	2.07	1.98- 2.15	4	-	1	16	7	9	2	68	101	130	14	-	9	2	1	-	-	-	-	-	-	-	-
NONMANUFACTURING	344	2.04	2.08	1.99- 2.15	4	-	1	15	6	1	2	67	97	130	14	-	4	2	1	-	-	-	-	-	-	-	-
PUBLIC UTILITIES[4]	71	2.06	2.05	2.02- 2.08	-	-	-	-	4	1	-	-	59	-	-	-	4	2	1	-	-	-	-	-	-	-	-
LABORERS, MATERIAL HANDLING	1,429	2.83	2.93	2.63- 3.13	-	-	-	-	-	29	14	36	18	16	14	26	50	140	57	104	154	224	375	162	10	-	-
MANUFACTURING	547	2.61	2.69	2.49- 2.84	-	-	-	-	-	24	4	22	4	14	8	24	41	102	34	86	117	-	57	-	10	-	-
NONMANUFACTURING	882	2.97	3.10	2.92- 3.18	-	-	-	-	-	5	10	14	14	2	6	2	9	38	23	18	37	224	318	162	-	-	-
PUBLIC UTILITIES[4]	491	3.08	3.17	3.11- 3.22	-	-	-	-	-	-	-	-	-	-	-	-	1	31	22	3	23	-	249	162	-	-	-
RETAIL TRADE	108	2.42	2.42	1.99- 2.85	-	-	-	-	-	5	10	14	14	2	6	2	8	7	1	10	6	2	21	-	-	-	-
ORDER FILLERS	1,047	2.91	2.96	2.83- 3.10	-	-	-	6	7	3	1	5	15	1	5	5	44	133	12	9	51	351	272	45	82	-	-
MANUFACTURING	172	2.96	2.93	2.51- 3.44	-	-	-	-	1	-	-	3	1	1	3	1	33	3	12	9	19	2	9	-	75	-	-
NONMANUFACTURING	875	2.90	2.97	2.90- 3.08	-	-	-	6	6	3	1	2	14	-	2	4	11	130	-	-	32	349	263	45	7	-	-
RETAIL TRADE	191	2.83	3.11	2.49- 3.17	-	-	-	6	6	3	1	2	14	-	2	4	11	2	-	-	12	26	78	17	7	-	-
PACKERS, SHIPPING	337	2.85	2.93	2.79- 2.97	-	-	-	-	1	-	1	1	2	7	6	5	3	29	16	15	2	244	4	1	-	-	-
MANUFACTURING	67	2.50	2.57	2.28- 2.74	-	-	-	-	1	-	1	1	2	7	6	5	3	11	8	15	2	5	-	-	-	-	-
NONMANUFACTURING	270	2.94	2.95	2.92- 2.97	-	-	-	-	-	-	-	-	-	-	-	-	-	18	8	-	-	239	4	1	-	-	-
RECEIVING CLERKS	142	2.94	3.03	2.75- 3.16	-	-	1	1	1	-	-	-	-	4	-	-	15	7	3	8	18	3	52	16	4	9	-
MANUFACTURING	72	3.00	3.02	2.82- 3.19	-	-	-	-	-	-	-	-	-	4	-	-	3	1	2	4	18	2	22	3	4	9	-
NONMANUFACTURING	70	2.88	3.03	2.55- 3.10	-	-	1	1	1	-	-	-	-	-	-	-	12	6	1	4	-	1	30	13	-	-	-
RETAIL TRADE	30	2.61	2.51	2.44- 3.01	-	-	1	1	1	-	-	-	-	-	-	-	12	6	1	-	-	1	3	4	-	-	-
SHIPPING CLERKS	161	3.00	3.05	2.66- 3.21	-	-	-	-	-	-	-	-	-	5	2	6	8	17	4	4	9	1	64	16	12	6	7
MANUFACTURING	79	3.10	3.09	2.68- 3.55	-	-	-	-	-	-	-	-	-	-	-	2	7	8	4	-	8	1	18	6	12	6	7
NONMANUFACTURING	82	2.90	3.04	2.60- 3.09	-	-	-	-	-	-	-	-	-	5	2	4	1	9	-	4	1	-	46	10	-	-	-
SHIPPING AND RECEIVING CLERKS	183	3.06	3.10	3.01- 3.24	-	-	-	-	-	-	-	-	6	-	7	-	-	1	-	7	11	8	85	34	24	-	-
MANUFACTURING	129	3.13	3.10	3.03- 3.25	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	8	8	74	14	24	-	-
NONMANUFACTURING	54	2.89	3.11	2.60- 3.24	-	-	-	-	-	-	-	-	6	-	[illegible]	-	-	-	-	7	3	-	11	20	-	-	-
TRUCKDRIVERS[5]	2,723	3.23	3.28	3.21- 3.39	-	-	-	-	8	12	-	13	10	15	-	-	5	49	163	36	3	20	218	1557	386	96	132
MANUFACTURING	502	3.35	3.42	3.19- 3.80	-	-	-	-	-	-	-	13	-	10	-	-	5	23	19	13	-	9	39	112	41	91	127
NONMANUFACTURING	2,221	3.21	3.27	3.21- 3.36	-	-	-	-	8	12	-	-	10	5	-	-	-	26	144	23	3	11	179	1445	345	5	5
PUBLIC UTILITIES[4]	1,524	3.20	3.26	3.22- 3.31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	144	16	3	-	48	1238	75	-	-
RETAIL TRADE	299	3.15	3.20	3.14- 3.45	-	-	-	-	8	12	-	-	10	-	-	-	-	-	-	-	-	1	123	13	122	5	5

See footnotes at end of table.

Table A-5. Custodial and Material Movement Occupations—Continued

(Average straight-time hourly earnings for selected occupations studied on an area basis by industry division, Portland, Oreg.–Wash., May 1966)

Occupation[1] and industry division	Number of workers	Hourly earnings[2]			Number of workers receiving straight-time hourly earnings of—																						
		Mean[3]	Median[3]	Middle range[3]	$ 1.20 and under 1.30	$ 1.30 – 1.40	$ 1.40 – 1.50	$ 1.50 – 1.60	$ 1.60 – 1.70	$ 1.70 – 1.80	$ 1.80 – 1.90	$ 1.90 – 2.00	$ 2.00 – 2.10	$ 2.10 – 2.20	$ 2.20 – 2.30	$ 2.30 – 2.40	$ 2.40 – 2.50	$ 2.50 – 2.60	$ 2.60 – 2.70	$ 2.70 – 2.80	$ 2.80 – 2.90	$ 2.90 – 3.00	$ 3.00 – 3.20	$ 3.20 – 3.40	$ 3.40 – 3.60	$ 3.60 – 3.80	$ 3.80 – 4.00
TRUCKDRIVERS[5] - CONTINUED																											
TRUCKDRIVERS, LIGHT (UNDER 1-1/2 TONS)	242	$ 2.57	$ 2.64	$ 2.57- 2.68	-	-	-	-	8	12	-	-	10	-	-	-	4	38	132	20	-	2	7	9	-	-	-
MANUFACTURING	27	2.67	2.58	2.53- 2.76	-	-	-	-	-	-	-	-	-	-	-	-	4	12	-	8	-	1	-	2	-	-	-
NONMANUFACTURING	215	2.56	2.64	2.59- 2.68	-	-	-	-	8	12	-	-	10	-	-	-	-	26	132	12	-	1	7	7	-	-	-
RETAIL TRADE	31	1.86	1.77	1.70- 2.04	-	-	-	-	8	12	-	-	10	-	-	-	-	-	-	-	-	1	-	-	-	-	-
TRUCKDRIVERS, MEDIUM (1-1/2 TO AND INCLUDING 4 TONS)	1,240	3.20	3.25	3.21- 3.30	-	-	-	-	-	-	-	13	-	5	-	-	1	11	31	15	-	18	114	953	25	-	54
MANUFACTURING	177	3.22	3.33	2.71- 3.82	-	-	-	-	-	-	-	13		-	-	-	1	11	19	4	-	8	11	38	18	-	54
NONMANUFACTURING	1,063	3.20	3.25	3.22- 3.29	-	-	-	-	-	-	-	-	-	5	-	-	-	-	12	11	-	10	103	915	7	-	-
PUBLIC UTILITIES[4]	910	3.21	3.26	3.23- 3.29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	11	-	-	-	887	-	-	-
RETAIL TRADE	118	3.15	3.16	3.13- 3.19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	103	13	2	-	-
TRUCKDRIVERS, HEAVY (OVER 4 TONS, TRAILER TYPE)	880	3.38	3.36	3.28- 3.46	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	48	491	285	18	38
MANUFACTURING	118	3.47	3.36	3.27- 3.81	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	72	-	13	33
NONMANUFACTURING	762	3.37	3.36	3.28- 3.45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	48	419	285	5	5
PUBLIC UTILITIES[4]	465	3.32	3.31	3.24- 3.38	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	48	342	75	-	-
TRUCKDRIVERS, HEAVY (OVER 4 TONS, OTHER THAN TRAILER TYPE)	314	3.42	3.44	3.27- 3.67	-	-	-	-	-	-	-	-	-	10	-	-	-	-	-	1	3	-	20	102	60	78	40
NONMANUFACTURING	162	3.30	3.29	3.23- 3.39	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	20	102	37	-	-
TRUCKERS, POWER (FORKLIFT)	1,008	2.99	3.04	2.76- 3.32	-	-	-	-	-	-	4	-	-	30	-	2	30	89	78	34	130	66	115	417	3	-	10
MANUFACTURING	576	2.79	2.82	2.59- 2.96	-	-	-	-	-	-	4	-	-	30	-	2	30	89	78	28	129	66	69	38	3	-	10
NONMANUFACTURING	432	3.26	3.32	3.26- 3.36	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	1	-	46	379	-	-	-
PUBLIC UTILITIES[4]	323	3.29	3.34	3.32- 3.37	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	1	-	-	316	-	-	-
TRUCKERS, POWER (OTHER THAN FORKLIFT)	62	2.94	2.93	2.78- 3.04	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	6	20	11	3	2	-	-
MANUFACTURING	50	2.92	2.92	2.78- 2.98	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16	6	20	3	3	2	-	-

[1] Data limited to men workers except where otherwise indicated.
[2] Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.
[3] For definition of terms, see footnote 2, table A-1.
[4] Transportation, communication, and other public utilities.
[5] Includes all drivers regardless of size and type of truck operated.

B. Establishment Practices and Supplementary Wage Provisions

Table B-1. Minimum Entrance Salaries for Women Office Workers

(Distribution of establishments studied in all industries and in industry divisions by minimum entrance salary for selected categories of inexperienced women office workers, Portland, Oreg.–Wash., May 1966)

Minimum weekly straight-time salary[1]	Inexperienced typists					Other inexperienced clerical workers[2]				
	All industries	Manufacturing		Nonmanufacturing		All industries	Manufacturing		Nonmanufacturing	
		Based on standard weekly hours[3] of—					Based on standard weekly hours[3] of—			
		All schedules	40	All schedules	40		All schedules	40	All schedules	40
Establishments studied	169	69	xxx	100	xxx	169	69	xxx	100	xxx
Establishments having a specified minimum	66	25	25	41	36	75	27	27	48	42
$50.00 and under $52.50	2	-	-	2	2	7	1	1	6	5
$52.50 and under $55.00	5	2	2	3	3	7	2	2	5	5
$55.00 and under $57.50	8	1	1	7	4	10	1	1	9	6
$57.50 and under $60.00	8	3	3	5	4	5	2	2	3	2
$60.00 and under $62.50	7	2	2	5	4	6	2	2	4	3
$62.50 and under $65.00	4	4	4	-	-	5	5	5	-	-
$65.00 and under $67.50	2	1	1	1	1	3	2	2	1	1
$67.50 and under $70.00	6	3	3	3	3	6	3	3	3	3
$70.00 and under $72.50	6	2	2	4	4	5	1	1	4	4
$72.50 and under $75.00	1	1	1	-	-	3	1	1	2	2
$75.00 and under $77.50	1	1	1	-	-	2	1	1	1	1
$77.50 and under $80.00	2	1	1	1	1	2	1	1	1	1
$80.00 and under $82.50	4	-	-	4	4	2	1	1	1	1
$82.50 and under $85.00	2	2	2	-	-	2	2	2	-	-
$85.00 and under $87.50	2	1	1	1	1	2	1	1	1	1
$87.50 and under $90.00	3	1	1	2	2	4	1	1	3	3
$90.00 and over	3	-	-	3	3	4	-	-	4	4
Establishments having no specified minimum	38	22	xxx	16	xxx	45	25	xxx	20	xxx
Establishments which did not employ workers in this category	65	22	xxx	43	xxx	49	17	xxx	32	xxx

[1] These salaries relate to formally established minimum starting (hiring) regular straight-time salaries that are paid for standard workweeks.
[2] Excludes workers in subclerical jobs such as messenger or office girl.
[3] Data are presented for all standard workweeks combined, and for the most common standard workweek reported.

Table B-2. Shift Differentials

(Shift differentials of manufacturing plant workers by type and amount of differential, Portland, Oreg.—Wash., May 1966)

Shift differential	Percent of manufacturing plant workers—			
	In establishments having formal provisions[1] for—		Actually working on—	
	Second shift work	Third or other shift work	Second shift	Third or other shift
Total	96.5	88.1	19.5	6.5
With shift pay differential	94.3	88.0	19.0	6.4
Uniform cents (per hour)	52.4	43.4	11.5	5.1
3 cents	3.6	-	.4	-
4 cents	2.2	-	.2	-
5 cents	3.7	-	1.0	-
7 cents	-	1.0	-	-
7½ cents	1.4	.8	.2	.1
8 cents	7.8	1.1	2.7	.2
9 cents	9.9	-	2.9	-
10 cents	14.3	6.3	1.9	.3
12 cents	1.0	7.8	.3	2.0
Over 12 and under 15 cents	4.9	4.1	1.1	.1
15 cents	1.7	18.5	.4	2.1
Over 15 cents	2.1	3.8	.4	.2
Uniform percentage	15.7	13.6	3.1	.1
5 percent	1.2	-	.4	-
10 percent	14.4	4.4	2.7	.1
15 percent	-	9.2	-	-
Full day's pay for reduced hours	1.2	1.9	.1	.1
Full day's pay for reduced hours plus cents differential	19.1	19.1	2.9	.7
Full day's pay for reduced hours plus percentage differential	1.6	1.7	.6	.1
Other formal pay differential	4.3	8.3	.9	.4
With no shift pay differential	2.2	.1	.5	.1

[1] Includes establishments currently operating late shifts, and establishments with formal provisions covering late shifts even though they were not currently operating late shifts.

Table B-3. Scheduled Weekly Hours

(Percent distribution of plant and office workers in all industries and in industry divisions by scheduled weekly hours of first-shift workers, Portland, Oreg.–Wash., May 1966)

Weekly hours	Plant workers				Office workers			
	All industries [1]	Manufacturing	Public utilities [2]	Retail trade	All industries [3]	Manufacturing	Public utilities [2]	Retail trade
All workers	100	100	100	100	100	100	100	100
30 hours	1	-	-	5	-	-	-	-
35 hours	2	4	4	-	(4)	-	-	-
Over 35 and under 37½ hours	-	-	-	-	4	-	-	-
37½ hours	-	-	-	-	15	2	-	-
Over 37½ and under 40 hours	-	-	-	-	5	1	-	-
40 hours	94	94	95	94	76	97	100	100
Over 40 and under 44 hours	-	-	-	-	(4)	(4)	-	-
44 hours	2	2	-	1	-	-	-	-
45 hours and over	(4)	-	1	-	-	-	-	-

[1] Includes data for wholesale trade, real estate, and services, in addition to those industry divisions shown separately.
[2] Transportation, communication, and other public utilities.
[3] Includes data for wholesale trade; finance, insurance, and real estate; and services, in addition to those industry divisions shown separately.
[4] Less than 0.5 percent.

Table B-4. Paid Holidays

(Percent distribution of plant and office workers in all industries and in industry divisions by number of paid holidays provided annually, Portland, Oreg.–Wash., May 1966)

Item	Plant workers				Office workers			
	All industries [1]	Manufacturing	Public utilities [2]	Retail trade	All industries [3]	Manufacturing	Public utilities [2]	Retail trade
All workers	100	100	100	100	100	100	100	100
Workers in establishments providing paid holidays	96	99	98	89	99	100	100	94
Workers in establishments providing no paid holidays	4	1	2	11	1	-	-	6
Number of days								
Less than 6 holidays	4	2	-	9	1	2	-	1
6 holidays	27	15	5	72	25	26	8	79
6 holidays plus 1 half day	-	-	-	-	(4)	1	-	-
7 holidays	34	44	34	6	42	32	29	13
7 holidays plus 1 half day	1	1	-	-	(4)	1	-	-
7 holidays plus 2 half days	2	4	-	-	2	5	-	-
8 holidays	26	31	59	2	24	31	63	-
8 holidays plus 1 half day	-	-	-	-	1	-	-	-
9 holidays	2	2	-	-	4	2	-	-
Total holiday time [5]								
9 days	2	2	-	-	4	2	-	-
8½ days or more	2	2	-	-	5	2	-	-
8 days or more	30	37	59	2	30	37	63	-
7½ days or more	31	38	59	2	30	39	63	-
7 days or more	65	83	93	8	72	71	92	13
6½ days or more	65	83	93	8	73	71	92	13
6 days or more	91	97	98	80	98	98	100	93
5 days or more	93	99	98	82	99	100	100	93
4 days or more	93	99	98	82	99	100	100	93
3 days or more	95	99	98	87	99	100	100	94
2 days or more	96	99	98	89	99	100	100	94

[1] Includes data for wholesale trade, real estate, and services, in addition to those industry divisions shown separately.
[2] Transportation, communication, and other public utilities.
[3] Includes data for wholesale trade; finance, insurance, and real estate; and services, in addition to those industry divisions shown separately.
[4] Less than 0.5 percent.
[5] All combinations of full and half days that add to the same amount are combined; for example, the proportion of workers receiving a total of 7 days includes those with 7 full days and no half days, 6 full days and 2 half days, 5 full days and 4 half days, and so on. Proportions were then cumulated.

Table B-5. Paid Vacations[1]

(Percent distribution of plant and office workers in all industries and in industry divisions by vacation pay provisions, Portland, Oreg.–Wash., May 1966)

Vacation policy	Plant workers				Office workers			
	All industries[2]	Manufacturing	Public utilities[3]	Retail trade	All industries[4]	Manufacturing	Public utilities[3]	Retail trade
All workers	100	100	100	100	100	100	100	100
Method of payment								
Workers in establishments providing paid vacations	100	100	100	100	100	100	100	100
Length-of-time payment	97	98	84	100	99	100	96	100
Percentage payment	3	2	16	-	1	-	4	-
Flat-sum payment	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-
Workers in establishments providing no paid vacations	-	-	-	-	-	-	-	-
Amount of vacation pay[5]								
After 6 months of service								
Under 1 week	8	11	2	5	2	4	([6])	5
1 week	9	7	35	3	47	24	41	17
Over 1 and under 2 weeks	1	1	4	-	2	9	-	-
2 weeks	-	-	-	-	1	2	-	-
Over 2 and under 3 weeks	-	-	-	-	1	-	3	-
After 1 year of service								
1 week	81	80	77	90	34	34	67	64
Over 1 and under 2 weeks	1	2	-	2	-	-	-	-
2 weeks	16	15	21	8	65	62	29	36
Over 2 and under 3 weeks	-	-	-	-	([6])	-	-	-
3 weeks	2	3	2	-	1	3	-	-
Over 3 and under 4 weeks	-	-	-	-	1	-	3	-
After 2 years of service								
1 week	50	60	45	37	10	7	19	19
Over 1 and under 2 weeks	5	7	7	2	6	4	26	-
2 weeks	42	29	46	60	82	86	52	81
Over 2 and under 3 weeks	-	-	-	-	1	-	-	-
3 weeks	2	3	2	-	1	3	-	-
Over 3 and under 4 weeks	-	-	-	-	1	-	3	-
After 3 years of service								
1 week	2	3	-	-	([6])	2	-	-
Over 1 and under 2 weeks	3	4	-	2	1	4	-	-
2 weeks	92	89	98	98	93	86	97	100
Over 2 and under 3 weeks	-	-	-	-	3	-	-	-
3 weeks	3	4	2	-	2	9	-	-
Over 3 and under 4 weeks	-	-	-	-	1	-	3	-
After 4 years of service								
1 week	2	3	-	-	([6])	2	-	-
Over 1 and under 2 weeks	3	4	-	-	1	4	-	-
2 weeks	91	87	98	98	90	86	97	100
Over 2 and under 3 weeks	1	2	-	2	6	-	-	-
3 weeks	3	4	2	-	2	9	-	-
Over 3 and under 4 weeks	-	-	-	-	1	-	3	-
After 5 years of service								
2 weeks	94	93	98	94	89	91	97	90
Over 2 and under 3 weeks	1	2	-	2	4	-	-	-
3 weeks	4	5	2	4	6	9	-	10
Over 3 and under 4 weeks	-	-	-	-	1	-	3	-

See footnotes at end of table.

Table B-5. Paid Vacations[1]—Continued

(Percent distribution of plant and office workers in all industries and in industry divisions by vacation pay provisions, Portland, Oreg.–Wash., May 1966)

Vacation policy	Plant workers				Office workers			
	All industries[2]	Manufacturing	Public utilities[3]	Retail trade	All industries[4]	Manufacturing	Public utilities[3]	Retail trade
Amount of vacation pay[5]—Continued								
After 10 years of service								
2 weeks	44	37	50	47	41	38	52	46
Over 2 and under 3 weeks	3	4	-	2	1	1	-	-
3 weeks	51	58	50	49	53	60	45	54
Over 3 and under 4 weeks	-	-	-	-	5	-	3	-
4 weeks	2	2	-	2	1	(6)	-	-
After 12 years of service								
2 weeks	25	14	24	41	31	19	34	39
Over 2 and under 3 weeks	4	4	-	2	1	1	-	-
3 weeks	69	81	76	55	62	79	62	61
Over 3 and under 4 weeks	-	-	-	-	5	-	3	-
4 weeks	2	2	-	2	1	(6)	-	-
After 15 years of service								
2 weeks	17	8	-	36	11	14	7	35
Over 2 and under 3 weeks	(6)	-	-	2	(6)	-	-	-
3 weeks	74	87	99	38	81	80	89	65
Over 3 and under 4 weeks	1	2	-	-	1	-	3	-
4 weeks	8	3	1	23	7	5	-	-
After 20 years of service								
2 weeks	15	5	-	36	10	10	7	35
Over 2 and under 3 weeks	(6)	-	-	2	(6)	-	-	-
3 weeks	54	69	29	30	59	53	22	52
Over 3 and under 4 weeks	1	2	-	-	1	-	3	-
4 weeks	28	23	71	30	30	37	68	13
Over 4 weeks	2	2	-	2	1	-	-	-
After 25 years of service								
2 weeks	15	5	-	36	10	10	7	35
Over 2 and under 3 weeks	(6)	-	-	2	(6)	-	-	-
3 weeks	44	59	12	24	44	49	1	35
Over 3 and under 4 weeks	1	2	-	-	1	-	3	-
4 weeks	33	25	88	35	43	35	88	30
Over 4 weeks	6	10	-	2	2	6	-	-
After 30 years of service								
2 weeks	15	5	-	36	10	10	7	35
Over 2 and under 3 weeks	(6)	-	-	2	(6)	-	-	-
3 weeks	44	59	12	24	34	49	1	35
Over 3 and under 4 weeks	1	2	-	-	1	-	3	-
4 weeks	33	25	85	35	52	35	87	30
Over 4 weeks	7	10	4	2	2	6	1	-

[1] Includes basic plans only. Excludes plans such as vacation-savings and those plans which offer "extended" or "sabbatical" benefits beyond basic plans to workers with qualifying lengths of service. Typical of such exclusions are plans in the steel, aluminum, and can industries.

[2] Includes data for wholesale trade, real estate, and services, in addition to those industry divisions shown separately.

[3] Transportation, communication, and other public utilities.

[4] Includes data for wholesale trade; finance, insurance, and real estate; and services, in addition to those industry divisions shown separately.

[5] Includes payments other than "length of time," such as percentage of annual earnings or flat-sum payments, converted to an equivalent time basis; for example, a payment of 2 percent of annual earnings was considered as 1 week's pay. Periods of service were arbitrarily chosen and do not necessarily reflect the individual provisions for progressions. For example, the changes in proportions indicated at 10 years' service include changes in provisions occurring between 5 and 10 years. Estimates are cumulative. Thus, the proportion receiving 3 weeks' pay or more after 5 years includes those who receive 3 weeks' pay or more after fewer years of service.

[6] Less than 0.5 percent.

Table B-6. Health, Insurance, and Pension Plans

(Percent of plant and office workers in all industries and in industry divisions employed in establishments providing health, insurance, or pension benefits,[1] Portland, Oreg.–Wash., May 1966)

Type of benefit	Plant workers				Office workers			
	All industries[2]	Manufacturing	Public utilities[3]	Retail trade	All industries[4]	Manufacturing	Public utilities[3]	Retail trade
All workers	100	100	100	100	100	100	100	100
Workers in establishments providing:								
Life insurance	77	89	89	43	89	93	81	75
Accidental death and dismemberment insurance	65	78	49	46	62	80	41	74
Sickness and accident insurance or sick leave or both[5]	80	84	77	75	86	82	81	79
Sickness and accident insurance	66	77	45	52	51	61	28	39
Sick leave (full pay and no waiting period)	11	9	9	13	47	52	28	27
Sick leave (partial pay or waiting period)	21	11	36	40	9	1	36	22
Hospitalization insurance	97	97	100	95	98	96	100	96
Surgical insurance	96	95	100	95	98	94	100	96
Medical insurance	92	88	100	95	97	88	100	96
Catastrophe insurance	54	49	83	52	79	70	97	55
Retirement pension	78	87	77	68	82	77	70	77
No health, insurance, or pension plan	1	1	-	-	(6)	1	-	(6)

[1] Includes those plans for which at least a part of the cost is borne by the employer, except those legally required, such as workmen's compensation, social security, and railroad retirement.
[2] Includes data for wholesale trade, real estate, and services, in addition to those industry divisions shown separately.
[3] Transportation, communication, and other public utilities.
[4] Includes data for wholesale trade; finance, insurance, and real estate; and services, in addition to those industry divisions shown separately.
[5] Unduplicated total of workers receiving sick leave or sickness and accident insurance shown separately below. Sick leave plans are limited to those which definitely establish at least the minimum number of days' pay that can be expected by each employee. Informal sick leave allowances determined on an individual basis are excluded.
[6] Less than 0.5 percent.

Table B-7. Health Insurance Benefits Provided Employees and Their Dependents

(Percent of plant and office workers in all industries and in industry divisions employed in establishments providing health insurance benefits covering employees and their dependents, Portland, Oreg.–Wash., May 1966)

Type of benefit, coverage, and financing [1]	Plant workers				Office workers			
	All industries [2]	Manufacturing	Public utilities [3]	Retail trade	All industries [4]	Manufacturing	Public utilities [3]	Retail trade
All workers	100	100	100	100	100	100	100	100
Workers in establishments providing:								
Hospitalization insurance	97	97	100	95	98	96	100	96
Covering employees only	27	16	18	53	24	22	16	44
Employer financed	21	10	18	40	19	17	16	23
Jointly financed	6	6	-	13	4	6	1	20
Covering employees and their dependents	70	81	82	42	75	73	84	53
Employer financed	35	35	37	27	23	40	20	2
Jointly financed	13	11	26	15	32	11	38	38
Employer financed for employees; jointly financed for dependents	20	35	-	-	15	21	-	12
Employer financed for dependents; jointly financed for employees	2	-	19	-	5	-	25	-
Surgical insurance	96	95	100	95	98	94	100	96
Covering employees only	27	16	18	53	24	22	16	44
Employer financed	21	10	18	40	19	17	16	23
Jointly financed	6	6	-	13	4	6	1	20
Covering employees and their dependents	69	79	82	42	74	71	84	53
Employer financed	35	35	37	27	23	40	20	2
Jointly financed	12	9	26	15	31	10	38	38
Employer financed for employees; jointly financed for dependents	20	35	-	-	15	21	-	12
Employer financed for dependents; jointly financed for employees	2	-	19	-	5	-	25	-
Medical insurance	92	88	100	95	97	88	100	96
Covering employees only	27	16	18	53	24	22	16	44
Employer financed	21	10	18	40	19	17	16	23
Jointly financed	6	6	-	13	4	6	1	20
Covering employees and their dependents	66	73	82	42	73	66	84	53
Employer financed	31	28	37	27	22	35	20	2
Jointly financed	12	9	26	15	31	10	38	38
Employer financed for employees; jointly financed for dependents	20	35	-	-	15	21	-	12
Employer financed for dependents; jointly financed for employees	2	-	19	-	5	-	25	-
Catastrophe insurance	54	49	83	52	79	70	97	55
Covering employees only	10	8	13	13	15	19	13	12
Employer financed	8	8	12	8	13	17	12	7
Jointly financed	1	-	1	6	1	1	1	5
Covering employees and their dependents	44	42	70	39	65	51	84	43
Employer financed	22	14	43	27	19	24	40	2
Jointly financed	9	9	9	12	27	11	19	38
Employer financed for employees; jointly financed for dependents	11	19	-	-	14	16	-	3
Employer financed for dependents; jointly financed for employees	2	-	19	-	5	-	25	-

[1] Includes plans for which at least a part of the cost is borne by the employer. See footnote 1, table B-6. An establishment was considered as providing benefits to employees for their dependents if such coverage was available to at least a majority of those employees one would usually expect to have dependents, e.g., married men, even though they were less than a majority of all plant or office workers. The employer bears the entire cost of "employer financed" plans. The employer and employee share the cost of "jointly financed" plans.

[2] Includes data for wholesale trade, real estate, and services, in addition to those industry divisions shown separately.

[3] Transportation, communication, and other public utilities.

[4] Includes data for wholesale trade; finance, insurance, and real estate; and services, in addition to those industry divisions shown separately.

Table B-8. Profit-Sharing Plans

(Percent of plant and office workers in all industries and in industry divisions employed in establishments providing profit-sharing plans,[1] by type of plan, Portland, Oreg.–Wash., May 1966)

Type of plan	Plant workers				Office workers			
	All industries[2]	Manufacturing	Public utilities[3]	Retail trade	All industries[4]	Manufacturing	Public utilities[3]	Retail trade
All workers	100	100	100	100	100	100	100	100
Workers in establishments providing profit-sharing plans	18	19	2	37	34	29	8	73
Plans providing for current distribution	2	3	-	-	3	5	-	9
Plans providing for deferred distribution	12	7	2	37	24	12	8	64
Plans providing for both current and deferred distribution	5	9	-	-	6	12	-	-
Plans providing for employee's choice of method of distribution	-	-	-	-	1	-	-	-
Workers in establishments providing no profit-sharing plans	82	81	98	63	66	71	92	27

[1] The study was limited to formal plans (1) having established formulas for the allocation of profit shares among employees: (2) whose formulas were communicated to the employees in advance of the determination of profits; (3) that represent a commitment by the company to make periodic contributions based on profits: and (4) in which eligibility extends to a majority of the plant or office workers.

[2] Includes data for wholesale trade, real estate, and services, in addition to those industry divisions shown separately.

[3] Transportation, communication, and other public utilities.

[4] Includes data for wholesale trade; finance, insurance, and real estate; and services, in addition to those industry divisions shown separately.

Appendix A. Changes in Occupational Descriptions

Since the Bureau's last survey, occupational descriptions for draftsman, secretary, and switchboard operator were revised in order to obtain salary information for more specific categories.

Secretary. The revised descriptions for secretary (classes A, B, C, and D) classify these workers according to levels of responsibility. The size of the organization and the scope of the supervisor's position are considered in distinguishing these levels. Data published under the composite title of secretary are not comparable to data previously published.

Switchboard operator. The revised description for switchboard operator arranges these workers into two defined classes (A and B) instead of a single category, clarifying the criteria of types of calls handled and types of information provided. The combination of class A and class B data, where both are published, is comparable to the single designation, if previously published.

Draftsman. The revised descriptions for draftsman (classes A, B, and C; and draftsman-tracer) replace the previous designations for draftsman (leader, senior, and junior; and tracer) and emphasize the distinction between drafting and design skills. Therefore, data presented for any of these occupations are not comparable to data previously published.

The revised occupational descriptions are included in appendix B.

Appendix B. Occupational Descriptions

The primary purpose of preparing job descriptions for the Bureau's wage surveys is to assist its field staff in classifying into appropriate occupations workers who are employed under a variety of payroll titles and different work arrangements from establishment to establishment and from area to area. This permits the grouping of occupational wage rates representing comparable job content. Because of this emphasis on interestablishment and interarea comparability of occupational content, the Bureau's job descriptions may differ significantly from those in use in individual establishments or those prepared for other purposes. In applying these job descriptions, the Bureau's field economists are instructed to exclude working supervisors, apprentices, learners, beginners, trainees, handicapped, part-time, temporary, and probationary workers.

OFFICE

BILLER, MACHINE

Prepares statements, bills, and invoices on a machine other than an ordinary or electromatic typewriter. May also keep records as to billings or shipping charges or perform other clerical work incidental to billing operations. For wage study purposes, billers, machine, are classified by type of machine, as follows:

Biller, machine (billing machine). Uses a special billing machine (Moon Hopkins, Elliott Fisher, Burroughs, etc., which are combination typing and adding machines) to prepare bills and invoices from customers' purchase orders, internally prepared orders, shipping memorandums, etc. Usually involves application of predetermined discounts and shipping charges, and entry of necessary extensions, which may or may not be computed on the billing machine, and totals which are automatically accumulated by machine. The operation usually involves a large number of carbon copies of the bill being prepared and is often done on a fanfold machine.

Biller, machine (bookkeeping machine). Uses a bookkeeping machine (Sundstrand, Elliott Fisher, Remington Rand, etc., which may or may not have typewriter keyboard) to prepare customers' bills as part of the accounts receivable operation. Generally involves the simultaneous entry of figures on customers' ledger record. The machine automatically accumulates figures on a number of vertical columns and computes, and usually prints automatically the debit or credit balances. Does not involve a knowledge of bookkeeping. Works from uniform and standard types of sales and credit slips.

BOOKKEEPING-MACHINE OPERATOR

Operates a bookkeeping machine (Remington Rand, Elliott Fisher, Sundstrand, Burroughs, National Cash Register, with or without a typewriter keyboard) to keep a record of business transactions.

Class A. Keeps a set of records requiring a knowledge of and experience in basic bookkeeping principles, and familiarity with the structure of the particular accounting system used. Determines proper records and distribution of debit and credit items to be used in each phase of the work. May prepare consolidated reports, balance sheets, and other records by hand.

Class B. Keeps a record of one or more phases or sections of a set of records usually requiring little knowledge of basic bookkeeping. Phases or sections include accounts payable, payroll, customers' accounts (not including a simple type of billing described under biller, machine), cost distribution, expense distribution, inventory control, etc. May check or assist in preparation of trial balances and prepare control sheets for the accounting department.

CLERK, ACCOUNTING

Class A. Under general direction of a bookkeeper or accountant, has responsibility for keeping one or more sections of a complete set of books or records relating to one phase of an establishment's business transactions. Work involves posting and balancing subsidiary

CLERK, ACCOUNTING—Continued

ledger or ledgers such as accounts receivable or accounts payable; examining and coding invoices or vouchers with proper accounting distribution; and requires judgment and experience in making proper assignations and allocations. May assist in preparing, adjusting, and closing journal entries; and may direct class B accounting clerks.

Class B. Under supervision, performs one or more routine accounting operations such as posting simple journal vouchers or accounts payable vouchers, entering vouchers in voucher registers; reconciling bank accounts; and posting subsidiary ledgers controlled by general ledgers, or posting simple cost accounting data. This job does not require a knowledge of accounting and bookkeeping principles but is found in offices in which the more routine accounting work is subdivided on a functional basis among several workers.

CLERK, FILE

Class A. In an established filing system containing a number of varied subject matter files, classifies and indexes file material such as correspondence, reports, technical documents, etc. May also file this material. May keep records of various types in conjunction with the files. May lead a small group of lower level file clerks.

Class B. Sorts, codes, and files unclassified material by simple (subject matter) headings or partly classified material by finer subheadings. Prepares simple related index and cross-reference aids. As requested, locates clearly identified material in files and forwards material. May perform related clerical tasks required to maintain and service files.

Class C. Performs routine filing of material that has already been classified or which is easily classified in a simple serial classification system (e.g., alphabetical, chronological, or numerical). As requested, locates readily available material in files and forwards material; and may fill out withdrawal charge. Performs simple clerical and manual tasks required to maintain and service files.

CLERK, ORDER

Receives customers' orders for material or merchandise by mail, phone, or personally. Duties involve any combination of the following: Quoting prices to customers; making out an order sheet listing the items

CLERK, ORDER—Continued

to make up the order; checking prices and quantities of items on order sheet; and distributing order sheets to respective departments to be filled. May check with credit department to determine credit rating of customer, acknowledge receipt of orders from customers, follow up orders to see that they have been filled, keep file of orders received, and check shipping invoices with original orders.

CLERK, PAYROLL

Computes wages of company employees and enters the necessary data on the payroll sheets. Duties involve: Calculating workers' earnings based on time or production records; and posting calculated data on payroll sheet, showing information such as worker's name, working days, time, rate, deductions for insurance, and total wages due. May make out paychecks and assist paymaster in making up and distributing pay envelopes. May use a calculating machine.

COMPTOMETER OPERATOR

Primary duty is to operate a Comptometer to perform mathematical computations. This job is not to be confused with that of statistical or other type of clerk, which may involve frequent use of a Comptometer but, in which, use of this machine is incidental to performance of other duties.

DUPLICATING-MACHINE OPERATOR (MIMEOGRAPH OR DITTO)

Under general supervision and with no supervisory responsibilities, reproduces multiple copies of typewritten or handwritten matter, using a Mimeograph or Ditto machine. Makes necessary adjustment such as for ink and paper feed counter and cylinder speed. Is not required to prepare stencil or Ditto master. May keep file of used stencils or Ditto masters. May sort, collate, and staple completed material.

KEYPUNCH OPERATOR

Class A. Operates a numerical and/or alphabetical or combination keypunch machine to transcribe data from various source documents to keypunch tabulating cards. Performs same tasks as lower level keypunch operator but, in addition, work requires application

KEYPUNCH OPERATOR—Continued

of coding skills and the making of some determinations, for example, locates on the source document the items to be punched; extracts information from several documents; and searches for and interprets information on the document to determine information to be punched. May train inexperienced operators.

Class B. Under close supervision or following specific procedures or instructions, transcribes data from source documents to punched cards. Operates a numerical and/or alphabetical or combination keypunch machine to keypunch tabulating cards. May verify cards. Working from various standardized source documents, follows specified sequences which have been coded or prescribed in detail and require little or no selecting, coding, or interpreting of data to be punched. Problems arising from erroneous items or codes, missing information, etc., are referred to supervisor.

OFFICE BOY OR GIRL

Performs various routine duties such as running errands, operating minor office machines such as sealers or mailers, opening and distributing mail, and other minor clerical work.

SECRETARY

Assigned as personal secretary, normally to one individual. Maintains a close and highly responsive relationship to the day-to-day work activities of the supervisor. Works fairly independently receiving a minimum of detailed supervision and guidance. Performs varied clerical and secretarial duties, usually including most of the following: (a) Receives telephone calls, personal callers, and incoming mail, answers routine inquiries, and routes the technical inquiries to the proper persons; (b) establishes, maintains, and revises the supervisor's files; (c) maintains the supervisor's calendar and makes appointments as instructed; (d) relays messages from supervisor to subordinates; (e) reviews correspondence, memoranda, and reports prepared by others for the supervisor's signature to assure procedural and typographic accuracy; and (f) performs stenographic and typing work.

May also perform other clerical and secretarial tasks of comparable nature and difficulty. The work typically requires knowledge of office routine and understanding of the organization, programs, and procedures related to the work of the supervisor.

SECRETARY—Continued

Exclusions

Not all positions that are titled "secretary" possess the above characteristics. Examples of positions which are excluded from the definition are as follows: (a) Positions which do not meet the "personal" secretary concept described above; (b) stenographers not fully trained in secretarial type duties; (c) stenographers serving as office assistants to a group of professional, technical, or managerial persons; (d) secretary positions in which the duties are either substantially more routine or substantially more complex and responsible than those characterized in the definition; and (e) assistant type positions which involve more difficult or more responsible technical, administrative, supervisory, or specialized clerical duties which are not typical of secretarial work.

NOTE: The term "corporate officer," used in the level definitions following, refers to those officials who have a significant corporate-wide policymaking role with regard to major company activities. The title "vice president," though normally indicative of this role, does not in all cases identify such positions. Vice presidents whose primary responsibility is to act personally on individual cases or transactions (e.g., approve or deny individual loan or credit actions; administer individual trust accounts; directly supervise a clerical staff) are not considered to be "corporate officers" for purposes of applying the following level definitions.

Class A

a. Secretary to the chairman of the board or president of a company that employes, in all, over 100 but fewer than 5,000 persons; or

b. Secretary to a corporate officer (other than the chairman of the board or president) of a company that employs, in all, over 5,000 but fewer than 25,000 persons; or

c. Secretary to the head (immediately below the corporate officer level) of a major segment or subsidiary of a company that employs, in all, over 25,000 persons.

Class B

a. Secretary to the chairman of the board or president of a company that employs, in all, fewer than 100 persons; or

b. Secretary to a corporate officer (other than chairman of the board or president) of a company that employs, in all, over 100 but fewer than 5,000 persons; or

SECRETARY—Continued

c. Secretary to the head (immediately below the officer level) over either a major corporate-wide functional activity (e.g., marketing, research, operations, industrial relations, etc.) or a major geographic or organizational segment (e.g., a regional headquarters; a major division) of a company that employs, in all, over 5,000 but fewer than 25,000 employees; or

d. Secretary to the head of an individual plant, factory, etc. (or other equivalent level of official) that employs, in all, over 5,000 persons; or

e. Secretary to the head of a large and important organizational segment (e.g., a middle management supervisor of an organizational segment often involving as many as several hundred persons) of a company that employs, in all, over 25,000 persons.

Class C

a. Secretary to an executive or managerial person whose responsibility is not equivalent to one of the specific level situations in the definition for class B, but whose subordinate staff normally numbers at least several dozen employees and is usually divided into organizational segments which are often, in turn, further subdivided. In some companies, this level includes a wide range of organizational echelons; in others, only one or two; or

b. Secretary to the head of an individual plant, factory, etc. (or other equivalent level of official) that employs, in all, fewer than 5,000 persons.

Class D

a. Secretary to the supervisor or head of a small organizational unit (e.g., fewer than about 25 or 30 persons); or

b. Secretary to a nonsupervisory staff specialist, professional employee, administrative officer, or assistant, skilled technician or expert. (NOTE: Many companies assign stenographers, rather than secretaries as described above, to this level of supervisory or nonsupervisory worker.)

STENOGRAPHER, GENERAL

Primary duty is to take dictation involving a normal routine vocabulary from one or more persons either in shorthand or by Stenotype or similar machine; and transcribe dictation. May also type from written copy.

STENOGRAPHER, GENERAL—Continued

May maintain files, keep simple records, or perform other relatively routine clerical tasks. May operate from a stenographic pool. Does not include transcribing-machine work. (See transcribing-machine operator.)

STENOGRAPHER, SENIOR

Primary duty is to take dictation involving a varied technical or specialized vocabulary such as in legal briefs or reports on scientific research from one or more persons either in shorthand or by Stenotype or similar machine; and transcribe dictation. May also type from written copy. May also set up and maintain files, keep records, etc.

OR

Performs stenographic duties requiring significantly greater independence and responsibility than stenographers, general as evidenced by the following: Work requires high degree of stenographic speed and accuracy; and a thorough working knowledge of general business and office procedures and of the specific business operations, organization, policies, procedures, files, workflow, etc. Uses this knowledge in performing stenographic duties and responsible clerical tasks such as, maintaining followup files; assembling material for reports, memorandums, letters, etc.; composing simple letters from general instructions; reading and routing incoming mail; and answering routine questions, etc. Does not include transcribing-machine work.

SWITCHBOARD OPERATOR

Class A. Operates a single- or multiple-position telephone switchboard handling incoming, outgoing, intraplant or office calls. Performs full telephone information service or handles complex calls, such as conference, collect, overseas, or similar calls, either in addition to doing routine work as described for switchboard operator, class B, or as a full-time assignment. ("Full" telephone information service occurs when the establishment has varied functions that are not readily understandable for telephone information purposes, e.g., because of overlapping or interrelated functions, and consequently present frequent problems as to which extensions are appropriate for calls.)

Class B. Operates a single- or multiple-position telephone switchboard handling incoming, outgoing, intraplant or office calls. May handle routine long distance calls and record tolls. May perform limited telephone information service. ("Limited" telephone information service occurs if the functions of the establishment serviced are readily understandable for telephone information purposes, or if the requests are routine, e.g., giving extension numbers when specific names are furnished, or if complex calls are referred to another operator.)

SWITCHBOARD OPERATOR-RECEPTIONIST

In addition to performing duties of operator on a single position or monitor-type switchboard, acts as receptionist and may also type or perform routine clerical work as part of regular duties. This typing or clerical work may take the major part of this worker's time while at switchboard.

TABULATING-MACHINE OPERATOR

Class A. Operates a variety of tabulating or electrical accounting machines, typically including such machines as the tabulator, calculator, interpreter, collator, and others. Performs complete reporting assignments without close supervision, and performs difficult wiring as required. The complete reporting and tabulating assignments typically involve a variety of long and complex reports which often are of irregular or nonrecurring type requiring some planning and sequencing of steps to be taken. As a more experienced operator, is typically involved in training new operators in machine operations, or partially trained operators in wiring from diagrams and operating sequences of long and complex reports. Does not include working supervisors performing tabulating-machine operations and day-to-day supervision of the work and production of a group of tabulating-machine operators.

Class B. Operates more difficult tabulating or electrical accounting machines such as the tabulator and calculator, in addition to the sorter, reproducer, and collator. This work is performed under specific instructions and may include the performance of some wiring from diagrams. The work typically involves, for example, tabulations involving a repetitive accounting exercise, a complete but small tabulating study, or parts of a longer and more complex report. Such reports and studies are usually of a recurring nature where the procedures are well established. May also include the training of new employees in the basic operation of the machine.

Class C. Operates simple tabulating or electrical accounting machines such as the sorter, reproducing punch, collator, etc., with

TABULATING-MACHINE OPERATOR—Continued

specific instructions. May include simple wiring from diagrams and some filing work. The work typically involves portions of a work unit, for example, individual sorting or collating runs or repetitive operations.

TRANSCRIBING-MACHINE OPERATOR, GENERAL

Primary duty is to transcribe dictation involving a normal routine vocabulary from transcribing-machine records. May also type from written copy and do simple clerical work. Workers transcribing dictation involving a varied technical or specialized vocabulary such as legal briefs or reports on scientific research are not included. A worker who takes dictation in shorthand or by Stenotype or similar machine is classified as a stenographer, general.

TYPIST

Uses a typewriter to make copies of various material or to make out bills after calculations have been made by another person. May include typing of stencils, mats, or similar materials for use in duplicating processes. May do clerical work involving little special training, such as keeping simple records, filing records and reports, or sorting and distributing incoming mail.

Class A. Performs one or more of the following: Typing material in final form when it involves combining material from several sources or responsibility for correct spelling, syllabication, punctuation, etc., of technical or unusual words or foreign language material; and planning layout and typing of complicated statistical tables to maintain uniformity and balance in spacing. May type routine form letters varying details to suit circumstances.

Class B. Performs one or more of the following: Copy typing from rough or clear drafts; routine typing of forms, insurance policies, etc.; and setting up simple standard tabulations, or copying more complex tables already setup and spaced properly.

PROFESSIONAL AND TECHNICAL

DRAFTSMAN

Class A. Plans the graphic presentation of complex items having distinctive design features that differ significantly from established drafting precedents. Works in close support with the design originator, and may recommend minor design changes. Analyzes the effect of each change on the details of form, function, and positional relationships of components and parts. Works with a minimum of supervisory assistance. Completed work is reviewed by design originator for consistency with prior engineering determinations. May either prepare drawings, or direct their preparation by lower level draftsmen.

Class B. Performs nonroutine and complex drafting assignments that require the application of most of the standardized drawing techniques regularly used. Duties typically involve such work as: Prepares working drawings of subassemblies with irregular shapes, multiple functions, and precise positional relationships between components; prepares architectural drawings for construction of a building including detail drawings of foundations, wall sections, floor plans, and roof. Uses accepted formulas and manuals in making necessary computations to determine quantities of materials to be used, load capacities, strengths, stresses, etc. Receives initial instructions, requirements, and advice from supervisor. Completed work is checked for technical adequacy.

Class C. Prepares detail drawings of single units or parts for engineering, construction, manufacturing, or repair purposes. Types of drawings prepared include isometric projections (depicting three dimensions in accurate scale) and sectional views to clarify positioning of components and convey needed information. Consolidates details from a number of sources and adjusts or transposes scale as required.

DRAFTSMAN—Continued

Suggested methods of approach, applicable precedents, and advice on source materials are given with initial assignments. Instructions are less complete when assignments recur. Work may be spot-checked during progress.

DRAFTSMAN-TRACER

Copies plans and drawings prepared by others by placing tracing cloth or paper over drawings and tracing with pen or pencil. (Does not include tracing limited to plans primarily consisting of straight lines and a large scale not requiring close delineation.)

and/or

Prepares simple or repetitive drawings of easily visualized items. Work is closely supervised during progress.

NURSE, INDUSTRIAL (REGISTERED)

A registered nurse who gives nursing service under general medical direction to ill or injured employees or other persons who become ill or suffer an accident on the premises of a factory or other establishment. Duties involve a combination of the following: Giving first aid to the ill or injured; attending to subsequent dressing of employees' injuries; keeping records of patients treated; preparing accident reports for compensation or other purposes; assisting in physical examinations and health evaluations of applicants and employees; and planning and carrying out programs involving health education, accident prevention, evaluation of plant environment, or other activities affecting the health, welfare, and safety of all personnel.

MAINTENANCE AND POWERPLANT

CARPENTER, MAINTENANCE

Performs the carpentry duties necessary to construct and maintain in good repair building woodwork and equipment such as bins, cribs, counters, benches, partitions, doors, floors, stairs, casings, and trim made of wood in an establishment. Work involves most of the following: Planning and laying out of work from blueprints, drawings, models, or verbal instructions; using a variety of carpenter's handtools, portable power tools,

CARPENTER, MAINTENANCE—Continued

and standard measuring instruments; making standard shop computations relating to dimensions of work; and selecting materials necessary for the work. In general, the work of the maintenance carpenter requires rounded training and experience usually acquired through a formal apprenticeship or equivalent training and experience.

ELECTRICIAN, MAINTENANCE

Performs a variety of electrical trade functions such as the installation, maintenance, or repair of equipment for the generation, distribution, or utilization of electric energy in an establishment. Work involves most of the following: Installing or repairing any of a variety of electrical equipment such as generators, transformers, switchboards, controllers, circuit breakers, motors, heating units, conduit systems, or other transmission equipment; working from blueprints, drawings, layouts, or other specifications; locating and diagnosing trouble in the electrical system or equipment; working standard computations relating to load requirements of wiring or electrical equipment; and using a variety of electrician's handtools and measuring and testing instruments. In general, the work of the maintenance electrician requires rounded training and experience usually acquired through a formal apprenticeship or equivalent training and experience.

ENGINEER, STATIONARY

Operates and maintains and may also supervise the operation of stationary engines and equipment (mechanical or electrical) to supply the establishment in which employed with power, heat, refrigeration, or air-conditioning. Work involves: Operating and maintaining equipment such as steam engines, air compressors, generators, motors, turbines, ventilating and refrigerating equipment, steam boilers and boiler-fed water pumps; making equipment repairs; and keeping a record of operation of machinery, temperature, and fuel consumption. May also supervise these operations. Head or chief engineers in establishments employing more than one engineer are excluded.

FIREMAN, STATIONARY BOILER

Fires stationary boilers to furnish the establishment in which employed with heat, power, or steam. Feeds fuels to fire by hand or operates a mechanical stoker, or gas or oil burner; and checks water and safety valves. May clean, oil, or assist in repairing boilerroom equipment.

HELPER, MAINTENANCE TRADES

Assists one or more workers in the skilled maintenance trades, by performing specific or general duties of lesser skill, such as keeping

HELPER, MAINTENANCE TRADES—Continued

a worker supplied with materials and tools; cleaning working area, machine, and equipment; assisting journeyman by holding materials or tools; and performing other unskilled tasks as directed by journeyman. The kind of work the helper is permitted to perform varies from trade to trade: In some trades the helper is confined to supplying, lifting, and holding materials and tools and cleaning working areas; and in others he is permitted to perform specialized machine operations, or parts of a trade that are also performed by workers on a full-time basis.

MACHINE-TOOL OPERATOR, TOOLROOM

Specializes in the operation of one or more types of machine tools, such as jig borers, cylindrical or surface grinders, engine lathes, or milling machines, in the construction of machine-shop tools, gages, jigs, fixtures, or dies. Work involves most of the following: Planning and performing difficult machining operations; processing items requiring complicated setups or a high degree of accuracy; using a variety of precision measuring instruments; selecting feeds, speeds, tooling, and operation sequence; and making necessary adjustments during operation to achieve requisite tolerances or dimensions. May be required to recognize when tools need dressing, to dress tools, and to select proper coolants and cutting and lubricating oils. For cross-industry wage study purposes, machine-tool operators, toolroom, in tool and die jobbing shops are excluded from this classification.

MACHINIST, MAINTENANCE

Produces replacement parts and new parts in making repairs of metal parts of mechanical equipment operated in an establishment. Work involves most of the following: Interpreting written instructions and specifications; planning and laying out of work; using a variety of machinist's handtools and precision measuring instruments; setting up and operating standard machine tools; shaping of metal parts to close tolerances; making standard shop computations relating to dimensions of work, tooling, feeds, and speeds of machining; knowledge of the working properties of the common metals; selecting standard materials, parts, and equipment required for his work; and fitting and assembling parts into mechanical equipment. In general, the machinist's work normally requires a rounded training in machine-shop practice usually acquired through a formal apprenticeship or equivalent training and experience.

MECHANIC, AUTOMOTIVE (MAINTENANCE)

Repairs automobiles, buses, motortrucks, and tractors of an establishment. Work involves most of the following: Examining automotive equipment to diagnose source of trouble; disassembling equipment and performing repairs that involve the use of such handtools as wrenches, gages, drills, or specialized equipment in disassembling or fitting parts; replacing broken or defective parts from stock; grinding and adjusting valves; reassembling and installing the various assemblies in the vehicle and making necessary adjustments; and alining wheels, adjusting brakes and lights, or tightening body bolts. In general, the work of the automotive mechanic requires rounded training and experience usually acquired through a formal apprenticeship or equivalent training and experience.

MECHANIC, MAINTENANCE

Repairs machinery or mechanical equipment of an establishment. Work involves most of the following: Examining machines and mechanical equipment to diagnose source of trouble; dismantling or partly dismantling machines and performing repairs that mainly involve the use of handtools in scraping and fitting parts; replacing broken or defective parts with items obtained from stock; ordering the production of a replacement part by a machine shop or sending of the machine to a machine shop for major repairs; preparing written specifications for major repairs or for the production of parts ordered from machine shop; reassembling machines; and making all necessary adjustments for operation. In general, the work of a maintenance mechanic requires rounded training and experience usually acquired through a formal apprenticeship or equivalent training and experience. Excluded from this classification are workers whose primary duties involve setting up or adjusting machines.

MILLWRIGHT

Installs new machines or heavy equipment, and dismantles and installs machines or heavy equipment when changes in the plant layout are required. Work involves most of the following: Planning and laying out of the work; interpreting blueprints or other specifications; using a variety of handtools and rigging; making standard shop computations relating to stresses, strength of materials, and centers of gravity; alining and balancing of equipment; selecting standard tools, equipment, and parts to be used; and installing and maintaining in good order power transmission equipment such as drives and speed reducers. In general, the millwright's work normally requires a rounded training and experience in the trade acquired through a formal apprenticeship or equivalent training and experience.

OILER

Lubricates, with oil or grease, the moving parts or wearing surfaces of mechanical equipment of an establishment.

PAINTER, MAINTENANCE

Paints and redecorates walls, woodwork, and fixtures of an establishment. Work involves the following: Knowledge of surface peculiarities and types of paint required for different applications; preparing surface for painting by removing old finish or by placing putty or filler in nail holes and interstices; and applying paint with spray gun or brush. May mix colors, oils, white lead, and other paint ingredients to obtain proper color or consistency. In general, the work of the maintenance painter requires rounded training and experience usually acquired through a formal apprenticeship or equivalent training and experience.

PIPEFITTER, MAINTENANCE

Installs or repairs water, steam, gas, or other types of pipe and pipefittings in an establishment. Work involves most of the following: Laying out of work and measuring to locate position of pipe from drawings or other written specifications; cutting various sizes of pipe to correct lengths with chisel and hammer or oxyacetylene torch or pipe-cutting machine; threading pipe with stocks and dies; bending pipe by hand-driven or power-driven machines; assembling pipe with couplings and fastening pipe to hangers; making standard shop computations relating to pressures, flow, and size of pipe required; and making standard tests to determine whether finished pipes meet specifications. In general, the work of the maintenance pipefitter requires rounded training and experience usually acquired through a formal apprenticeship or equivalent training and experience. Workers primarily engaged in installing and repairing building sanitation or heating systems are excluded.

PLUMBER, MAINTENANCE

Keeps the plumbing system of an establishment in good order. Work involves: Knowledge of sanitary codes regarding installation of vents and traps in plumbing system; installing or repairing pipes and fixtures; and opening clogged drains with a plunger or plumber's snake. In general, the work of the maintenance plumber requires rounded training and experience usually acquired through a formal apprenticeship or equivalent training and experience.

SHEET-METAL WORKER, MAINTENANCE

Fabricates, installs, and maintains in good repair the sheet-metal equipment and fixtures (such as machine guards, grease pans, shelves, lockers, tanks, ventilators, chutes, ducts, metal roofing) of an establishment. Work involves most of the following: Planning and laying out all types of sheet-metal maintenance work from blueprints, models, or other specifications; setting up and operating all available types of sheet-metal-working machines; using a variety of handtools in cutting, bending, forming, shaping, fitting, and assembling; and installing sheet-metal articles as required. In general, the work of the maintenance sheet-metal worker requires rounded training and experience usually acquired through a formal apprenticeship or equivalent training and experience.

TOOL AND DIE MAKER

(Die maker; jig maker; tool maker; fixture maker; gage maker)

Constructs and repairs machine-shop tools, gages, jigs, fixtures or dies for forgings, punching, and other metal-forming work. Work in-

TOOL AND DIE MAKER—Continued

volves most of the following: Planning and laying out of work from models, blueprints, drawings, or other oral and written specifications; using a variety of tool and die maker's handtools and precision measuring instruments, understanding of the working properties of common metals and alloys; setting up and operating of machine tools and related equipment; making necessary shop computations relating to dimensions of work, speeds, feeds, and tooling of machines; heattreating of metal parts during fabrication as well as of finished tools and dies to achieve required qualities; working to close tolerances; fitting and assembling of parts to prescribed tolerances and allowances; and selecting appropriate materials, tools, and processes. In general, the tool and die maker's work requires a rounded training in machine-shop and toolroom practice usually acquired through a formal apprenticeship or equivalent training and experience.

For cross-industry wage study purposes, tool and die makers in tool and die jobbing shops are excluded from this classification.

CUSTODIAL AND MATERIAL MOVEMENT

ELEVATOR OPERATOR, PASSENGER

Transports passengers between floors of an office building, apartment house, department store, hotel, or similar establishment. Workers who operate elevators in conjunction with other duties such as those of starters and janitors are excluded.

GUARD

Performs routine police duties, either at fixed post or on tour, maintaining order, using arms or force where necessary. Includes gatemen who are stationed at gate and check on identity of employees and other persons entering.

JANITOR, PORTER, OR CLEANER

(Sweeper; charwoman; janitress)

Cleans and keeps in an orderly condition factory working areas and washrooms, or premises of an office, apartment house, or commercial

JANITOR, PORTER, OR CLEANER—Continued

or other establishment. Duties involve a combination of the following: Sweeping, mopping or scrubbing, and polishing floors; removing chips, trash, and other refuse; dusting equipment, furniture, or fixtures; polishing metal fixtures or trimmings; providing supplies and minor maintenance services; and cleaning lavatories, showers, and restrooms. Workers who specialize in window washing are excluded.

LABORER, MATERIAL HANDLING

(Loader and unloader; handler and stacker; shelver; trucker; stockman or stock helper; warehouseman or warehouse helper)

A worker employed in a warehouse, manufacturing plant, store, or other establishment whose duties involve one or more of the following: Loading and unloading various materials and merchandise on or from freight cars, trucks, or other transporting devices; unpacking, shelving, or placing materials or merchandise in proper storage location; and transporting materials or merchandise by handtruck, car, or wheelbarrow. Longshoremen, who load and unload ships are excluded.

ORDER FILLER

(Order picker; stock selector; warehouse stockman)

Fills shipping or transfer orders for finished goods from stored merchandise in accordance with specifications on sales slips, customers' orders, or other instructions. May, in addition to filling orders and indicating items filled or omitted, keep records of outgoing orders, requisition additional stock or report short supplies to supervisor, and perform other related duties.

PACKER, SHIPPING

Prepares finished products for shipment or storage by placing them in shipping containers, the specific operations performed being dependent upon the type, size, and number of units to be packed, the type of container employed, and method of shipment. Work requires the placing of items in shipping containers and may involve one or more of the following: Knowledge of various items of stock in order to verify content; selection of appropriate type and size of container; inserting enclosures in container; using excelsior or other material to prevent breakage or damage; closing and sealing container; and applying labels or entering identifying data on container. Packers who also make wooden boxes or crates are excluded.

SHIPPING AND RECEIVING CLERK

Prepares merchandise for shipment, or receives and is responsible for incoming shipments of merchandise or other materials. Shipping work involves: A knowledge of shipping procedures, practices, routes, available means of transportation, and rates; and preparing records of the goods shipped, making up bills of lading, posting weight and shipping charges, and keeping a file of shipping records. May direct or assist in preparing the merchandise for shipment. Receiving work involves: Verifying or directing others in verifying the correctness of shipments against bills of lading, invoices, or other records; checking for shortages and rejecting damaged goods; routing merchandise or materials to proper departments; and maintaining necessary records and files.

For wage study purposes, workers are classified as follows:

Receiving clerk
Shipping clerk
Shipping and receiving clerk

TRUCKDRIVER

Drives a truck within a city or industrial area to transport materials, merchandise, equipment, or men between various types of establishments such as: Manufacturing plants, freight depots, warehouses, wholesale and retail establishments, or between retail establishments and customers' houses or places of business. May also load or unload truck with or without helpers, make minor mechanical repairs, and keep truck in good working order. Driver-salesmen and over-the-road drivers are excluded.

For wage study purposes, truckdrivers are classified by size and type of equipment, as follows: (Tractor-trailer should be rated on the basis of trailer capacity.)

Truckdriver (combination of sizes listed separately)
Truckdriver, light (under $1^1/_2$ tons)
Truckdriver, medium ($1^1/_2$ to and including 4 tons)
Truckdriver, heavy (over 4 tons, trailer type)
Truckdriver, heavy (over 4 tons, other than trailer type)

TRUCKER, POWER

Operates a manually controlled gasoline- or electric-powered truck or tractor to transport goods and materials of all kinds about a warehouse, manufacturing plant, or other establishment.

For wage study purposes, workers are classified by type of truck, as follows:

Trucker, power (forklift)
Trucker, power (other than forklift)

WATCHMAN

Makes rounds of premises periodically in protecting property against fire, theft, and illegal entry.

Area Wage Surveys*

A list of the latest available bulletins is presented below. A directory indicating dates of earlier studies, and the prices of the bulletins is available on request. Bulletins may be purchased from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C., 20402, or from any of the BLS regional sales offices shown on the inside front cover.

Area	Bulletin number and price	
Akron, Ohio, June 1965	1430-78,	25 cents
Albany–Schenectady–Troy, N.Y., Apr. 1966[1]	1465-60,	25 cents
Albuquerque, N. Mex., Apr. 1966[1]	1465-64,	25 cents
Allentown–Bethlehem–Easton, Pa.–N.J., Feb. 1966[1]	1465-53,	25 cents
Atlanta, Ga., May 1966[1]	1465-71,	30 cents
Baltimore, Md., Nov. 1965	1465-29,	25 cents
Beaumont–Port Arthur–Orange, Tex., May 1966[1]	1465-63,	25 cents
Birmingham, Ala., Apr. 1966	1465-56,	20 cents
Boise City, Idaho, July 1965	1465-1,	20 cents
Boston, Mass., Oct. 1965[1]	1465-12,	30 cents
Buffalo, N.Y., Dec. 1965	1465-36,	25 cents
Burlington, Vt., Mar. 1966	1465-54,	20 cents
Canton, Ohio, Apr. 1966[1]	1465-58,	25 cents
Charleston, W. Va., Apr. 1966[1]	1465-70,	25 cents
Charlotte, N.C., Apr. 1966[1]	1465-67,	25 cents
Chattanooga, Tenn.–Ga., Sept. 1965	1465-7,	20 cents
Chicago, Ill., Apr. 1966[1]	1465-68,	30 cents
Cincinnati, Ohio–Ky.–Ind., Mar. 1966[1]	1465-57,	25 cents
Cleveland, Ohio, Sept. 1965	1465-8,	25 cents
Columbus, Ohio, Oct. 1965	1465-15,	25 cents
Dallas, Tex., Nov. 1965	1465-24,	25 cents
Davenport–Rock Island–Moline, Iowa–Ill., Oct. 1965	1465-16,	20 cents
Dayton, Ohio, Jan. 1966[1]	1465-39,	25 cents
Denver, Colo., Dec. 1965[1]	1465-33,	30 cents
Des Moines, Iowa, Feb. 1966[1]	1465-48,	25 cents
Detroit, Mich., Jan. 1966	1465-45,	25 cents
Fort Worth, Tex., Nov. 1965	1465-26,	20 cents
Green Bay, Wis., Aug. 1965	1465-4,	20 cents
Greenville, S.C., May 1965	1430-69,	20 cents
Houston, Tex., June 1965	1430-82,	25 cents
Indianapolis, Ind., Dec. 1965[1]	1465-31,	30 cents
Jackson, Miss., Feb. 1966[1]	1465-44,	25 cents
Jacksonville, Fla., Jan. 1966	1465-41,	20 cents
Kansas City, Mo.–Kans., Nov. 1965[1]	1465-27,	30 cents
Lawrence–Haverhill, Mass.–N.H., June 1965	1430-75,	20 cents
Little Rock–North Little Rock, Ark., Aug. 1965	1465-6,	20 cents
Los Angeles–Long Beach and Anaheim–Santa Ana–Garden Grove, Calif., Mar. 1966[1]	1465-59,	30 cents
Louisville, Ky.–Ind., Feb. 1966	1465-51,	20 cents
Lubbock, Tex., June 1965	1430-73,	20 cents
Manchester, N.H., Aug. 1965	1465-2,	20 cents
Memphis, Tenn.–Ark., Jan. 1966[1]	1465-42,	30 cents
Miami, Fla., Dec. 1965[1]	1465-30,	25 cents
Midland and Odessa, Tex	(Not previously surveyed)	
Milwaukee, Wis., Apr. 1966	1465-61,	20 cents
Minneapolis–St. Paul, Minn., Jan. 1966	1465-38,	25 cents
Muskegon–Muskegon Heights, Mich., May 1966[1]	1465-72,	25 cents
Newark and Jersey City, N.J., Feb. 1966[1]	1465-50,	30 cents
New Haven, Conn., Jan. 1966[1]	1465-37,	25 cents
New Orleans, La., Feb. 1966	1465-47,	20 cents
New York, N.Y., Apr. 1965[1]	1430-80,	40 cents
Norfolk–Portsmouth and Newport News–Hampton, Va., June 1965[1]	1430-77,	25 cents
Oklahoma City, Okla., Aug. 1965	1465-5,	20 cents
Omaha, Nebr.–Iowa, Oct. 1965[1]	1465-13,	25 cents
Paterson–Clifton–Passaic, N.J., May 1965	1430-71,	25 cents
Philadelphia, Pa.–N.J., Nov. 1965[1]	1465-35,	35 cents
Phoenix, Ariz., Mar. 1966[1]	1465-62,	25 cents
Pittsburgh, Pa., Jan. 1966	1465-46,	25 cents
Portland, Maine, Nov. 1965[1]	1465-23,	25 cents
Portland, Oreg.–Wash., May 1966[1]	1465-73,	25 cents
Providence–Pawtucket–Warwick, R.I.–Mass., May 1966	1465-65,	25 cents
Raleigh, N.C., Sept. 1965[1]	1465-10,	25 cents
Richmond, Va., Nov. 1965[1]	1465-28,	30 cents
Rockford, Ill., May 1966[1]	1465-66,	25 cents
St. Louis, Mo.–Ill., Oct. 1965	1465-22,	25 cents
Salt Lake City, Utah, Dec. 1965	1465-32,	20 cents
San Antonio, Tex., June 1965[1]	1430-81,	25 cents
San Bernardino–Riverside–Ontario, Calif., Sept. 1965[1]	1465-20,	30 cents
San Diego, Calif., Nov. 1965	1465-21,	20 cents
San Francisco–Oakland, Calif., Jan. 1966[1]	1465-45,	30 cents
San Jose, Calif., Sept. 1965[1]	1465-19,	25 cents
Savannah, Ga., May 1966[1]	1465-69,	25 cents
Scranton, Pa., Aug. 1965[1]	1465-3,	25 cents
Seattle–Everett, Wash., Oct. 1965[1]	1465-9,	30 cents
Sioux Falls, S. Dak., Oct. 1965[1]	1465-17,	25 cents
South Bend, Ind., Mar. 1966[1]	1465-55,	25 cents
Spokane, Wash., June 1965[1]	1430-79,	25 cents
Toledo, Ohio–Mich., Feb. 1966	1465-49,	20 cents
Trenton, N.J., Dec. 1965	1465-34,	20 cents
Washington, D.C.–Md.–Va., Oct. 1965	1465-14,	25 cents
Waterbury, Conn., Mar. 1966[1]	1465-52,	25 cents
Waterloo, Iowa, Nov. 1965	1465-18,	20 cents
Wichita, Kans., Oct. 1965	1465-11,	20 cents
Worcester, Mass., June 1965	1430-76,	25 cents
York, Pa., Feb. 1966[1]	1465-40,	25 cents
Youngstown–Warren, Ohio, Nov. 1965[1]	1465-25,	25 cents

[1] Data on establishment practices and supplementary wage provisions are also presented.

* Bulletins dated before July 1965 were entitled "Occupational Wage Surveys."

VT 001 568
McNeeley, Robert F.
Area Wage Survey, The Greenville, South Carolina, Metropolitan Area, May 1966. Bull-1465-74.

Bureau of Labor Statistics (DOL), Washington, D.C.
MF AVAILABLE IN VT-ERIC SET.
Pub Date - Jul66 36p.

*WAGES; *EMPLOYMENT PRACTICES; *OCCUPATIONAL SURVEYS; *SEX (CHARACTERISTICS); FINANCE OCCUPATIONS; INSURANCE OCCUPATIONS; MANUFACTURING OCCUPATIONS; PUBLIC UTILITY OCCUPATIONS; WHOLESALE OCCUPATIONS; RETAIL OCCUPATIONS; SERVICE OCCUPATIONS
GREENVILLE; PICKENS COUNTY; SOUTH CAROLINA

The area reported is one of 85 in which the United States Department of Labor's Bureau of Labor Statistics conducts surveys of occupational earnings and related wage benefits. Data were obtained by personal visits of Bureau Field Economists to representative establishments within six broad industry divisions: (1) manufacturing, (2) transporation, communication, and other public utilities, (3) wholesale trade, (4) retail trade, (5) finance, insurance, and real estate, and (6) services. The contents are reported under two broad categories with subtopics: (1) occupational earnings (office occupations, professional and technical occupations, maintenance and power plant occupations, and custodial and material movement occupations), and (2) establishment practices and supplementary wage provisions practices (minimum entrance salaries for women office workers, shift differentials, scheduled weekly hours, paid holidays, paid vacation, health, insurance, pension plans, and profit-sharing plans). The appendix presents clarifications of occupational descriptions. (SL)

VT001 568

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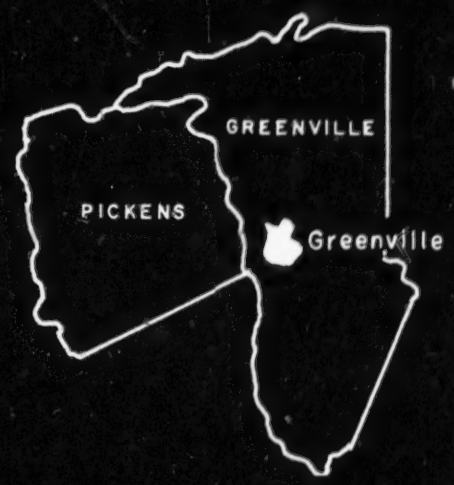
Area Wage Survey

The Greenville, South Carolina, Metropolitan Area

May 1966

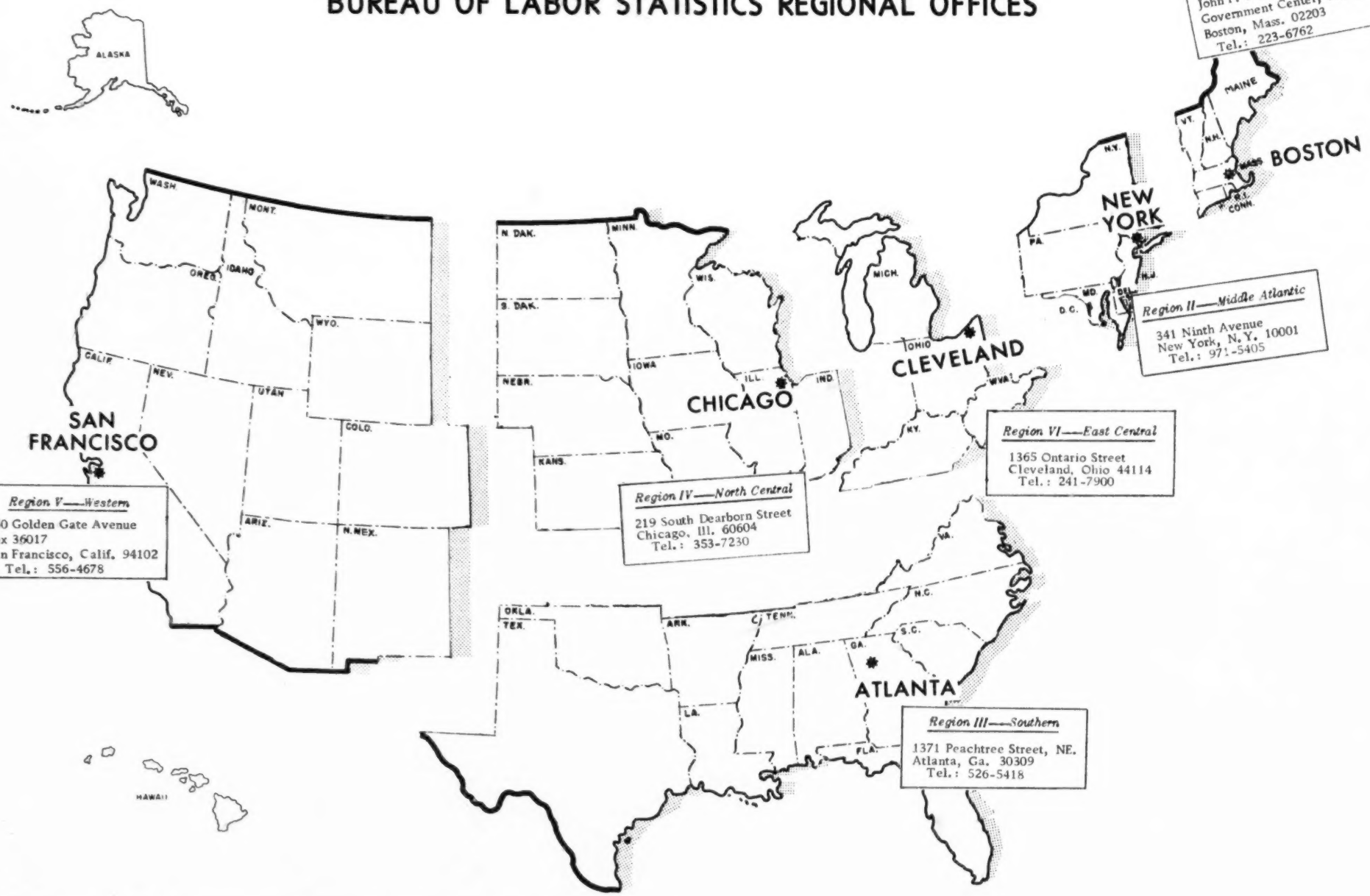


Bulletin No. 1465-74

UNITED STATES DEPARTMENT OF LABOR
W. Willard Wirtz, Secretary

BUREAU OF LABOR STATISTICS
Arthur M. Ross, Commissioner

BUREAU OF LABOR STATISTICS REGIONAL OFFICES



Area Wage Survey

The Greenville, South Carolina, Metropolitan Area

May 1966

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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Bulletin No. 1465-74

July 1966

UNITED STATES DEPARTMENT OF LABOR
W. Willard Wirtz, Secretary

BUREAU OF LABOR STATISTICS
Arthur M. Ross, Commissioner

For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C., 20402 – Price 25 cents

Preface

The Bureau of Labor Statistics program of annual occupational wage surveys in metropolitan areas is designed to provide data on occupational earnings, and establishment practices and supplementary wage provisions. It yields detailed data by selected industry divisions for each of the areas studied, for economic regions, and for the United States. A major consideration in the program is the need for greater insight into (1) the movement of wages by occupational category and skill level, and (2) the structure and level of wages among areas and industry divisions.

At the end of each survey, an individual area bulletin presents survey results for each area studied. After completion of all of the individual area bulletins for a round of surveys, a two-part summary bulletin is issued. The first part brings data for each of the metropolitan areas studied into one bulletin. The second part presents information which has been projected from individual metropolitan area data to relate to economic regions and the United States.

Eighty-five areas currently are included in the program. Information on occupational earnings is collected annually in each area. Information on establishment practices and supplementary wage provisions is obtained biennially in most of the areas.

This bulletin presents results of the survey in Greenville, S.C., in May 1966. The Standard Metropolitan Statistical Area, as defined by the Bureau of the Budget through March 1965, consists of Greenville and Pickens Counties. This study was conducted by the Bureau's regional office in Atlanta, Ga., Brunswick A. Bagdon, Director; by Robert F. McNeely, under the direction of James D. Garland. The study was under the general direction of Donald M. Cruse, Assistant Regional Director for Wages and Industrial Relations.

Contents

	Page
Introduction	1
Wage trends for selected occupational groups	4
Tables:	
1. Establishments and workers within scope of survey and number studied	3
2. Indexes of standard weekly salaries and straight-time hourly earnings for selected occupational groups, and percents of increase for selected periods	4
A. Occupational earnings:*	
A-1. Office occupations—men and women	5
A-2. Professional and technical occupations—men and women	7
A-3. Office, professional, and technical occupations—men and women combined	8
A-4. Maintenance and powerplant occupations	9
A-5. Custodial and material movement occupations	10
B. Establishment practices and supplementary wage provisions:*	
B-1. Minimum entrance salaries for women office workers	12
B-2. Shift differentials	13
B-3. Scheduled weekly hours	13
B-4. Paid holidays	14
B-5. Paid vacations	15
B-6. Health, insurance, and pension plans	17
B-7. Health insurance benefits provided employees and their dependents	18
B-8. Profit-sharing plans	19
Appendixes:	
A. Changes in occupational descriptions	20
B. Occupational descriptions	21

* NOTE: Similar tabulations are available for other areas. (See inside back cover.)

A current report on occupational earnings and supplementary wage practices is also available for cotton textiles (September 1965) in the Greenville–Spartanburg area.

Area Wage Survey—

The Greenville, S.C., Metropolitan Area

Introduction

This area is 1 of 85 in which the U.S. Department of Labor's Bureau of Labor Statistics conducts surveys of occupational earnings and related wage benefits on an areawide basis. In this area, data were obtained by personal visits of Bureau field economists to representative establishments within six broad industry divisions: Manufacturing; transportation, communication, and other public utilities; wholesale trade; retail trade; finance, insurance, and real estate; and services. Major industry groups excluded from these studies are government operations and the construction and extractive industries. Establishments having fewer than a prescribed number of workers are omitted because they tend to furnish insufficient employment in the occupations studied to warrant inclusion. Separate tabulations are provided for each of the broad industry divisions which meet publication criteria.

These surveys are conducted on a sample basis because of the unnecessary cost involved in surveying all establishments. To obtain optimum accuracy at minimum cost, a greater proportion of large than of small establishments is studied. In combining the data, however, all establishments are given their appropriate weight. Estimates based on the establishments studied are presented, therefore, as relating to all establishments in the industry grouping and area, except for those below the minimum size studied.

Occupations and Earnings

The occupations selected for study are common to a variety of manufacturing and nonmanufacturing industries, and are of the following types: (1) Office clerical; (2) professional and technical; (3) maintenance and powerplant; and (4) custodial and material movement. Occupational classification is based on a uniform set of job descriptions designed to take account of interestablishment variation in duties within the same job. The occupations selected for study are listed and described in appendix B. Earnings data for some of the occupations listed and described are not presented in the A-series tables because either (1) employment in the occupation is too small to provide enough data to merit presentation, or (2) there is possibility of disclosure of individual establishment data.

Occupational employment and earnings data are shown for full-time workers, i.e., those hired to work a regular weekly schedule in the given occupational classification. Earnings data exclude premium pay for overtime and for work on weekends, holidays, and late shifts. Nonproduction bonuses are excluded, but cost-of-living bonuses and incentive earnings are included. Where weekly hours are reported, as for office clerical occupations, reference is to the work schedules (rounded to the nearest half hour) for which straight-time salaries are paid; average weekly earnings for these occupations have been rounded to the nearest half dollar.

The averages presented reflect composite, areawide estimates. Industries and establishments differ in pay level and job staffing and, thus, contribute differently to the estimates for each job. The pay relationship obtainable from the averages may fail to reflect accurately the wage spread or differential maintained among jobs in individual establishments. Similarly, differences in average pay levels for men and women in any of the selected occupations should not be assumed to reflect differences in pay treatment of the sexes within individual establishments. Other possible factors which may contribute to differences in pay for men and women include: Differences in progression within established rate ranges, since only the actual rates paid incumbents are collected; and differences in specific duties performed, although the workers are appropriately classified within the same survey job description. Job descriptions used in classifying employees in these surveys are usually more generalized than those used in individual establishments and allow for minor differences among establishments in the specific duties performed.

Occupational employment estimates represent the total in all establishments within the scope of the study and not the number actually surveyed. Because of differences in occupational structure among establishments, the estimates of occupational employment obtained from the sample of establishments studied serve only to indicate the relative importance of the jobs studied. These differences in occupational structure do not materially affect the accuracy of the earnings data.

Establishment Practices and Supplementary Wage Provisions

Information is presented (in the B-series tables) on selected establishment practices and supplementary wage provisions as they relate to plant and office workers. Administrative, executive, and professional employees, and force-account construction workers who are utilized as a separate work force are excluded. "Plant workers" include working foremen and all nonsupervisory workers (including leadmen and trainees) engaged in nonoffice functions. "Office workers" include working supervisors and nonsupervisory workers performing clerical or related functions. Cafeteria workers and routemen are excluded in manufacturing industries, but included in nonmanufacturing industries.

Minimum entrance salaries (table B-1) relate only to the establishments visited. They are presented in terms of establishments with formal minimum entrance salary policies.

Shift differential data (table B-2) are limited to plant workers in manufacturing industries. This information is presented both in terms of (1) establishment policy,[1] presented in terms of total plant worker employment, and (2) effective practice, presented in terms of workers actually employed on the specified shift at the time of the survey. In establishments having varied differentials, the amount applying to a majority was used or, if no amount applied to a majority, the classification "other" was used. In establishments in which some late-shift hours are paid at normal rates, a differential was recorded only if it applied to a majority of the shift hours.

The scheduled weekly hours (table B-3) of a majority of the first-shift workers in an establishment are tabulated as applying to all of the plant or office workers of that establishment. Paid holidays; paid vacations; health, insurance, and pension plans; and profit-sharing plans (tables B-4 through B-8) are treated statistically on the basis that these are applicable to all plant or office workers if a majority of such workers are eligible or may eventually qualify for the practices listed. Sums of individual items in tables B-2 through B-8 may not equal totals because of rounding.

Data on paid holidays (table B-4) are limited to data on holidays granted annually on a formal basis; i.e., (1) are provided for in written form, or (2) have been established by custom. Holidays ordinarily granted are included even though they may fall on a nonworkday, even if the worker is not granted another day off. The first part of the paid holidays table presents the number of whole and half holidays actually granted. The second part combines whole and half holidays to show total holiday time.

The summary of vacation plans (table B-5) is limited to formal policies, excluding informal arrangements whereby time off with pay is granted at the discretion of the employer. Estimates exclude vacation-savings plans and those which offer "extended" or "sabbatical" benefits beyond basic plans to workers with qualifying lengths of service. Typical of such exclusions are plans in the steel, aluminum, and can industries. Separate estimates are provided according to employer practice in computing vacation payments, such as time payments, percent of annual earnings, or flat-sum amounts. However, in the tabulations of vacation pay, payments not on a time basis were converted to a time basis; for example, a payment of 2 percent of annual earnings was considered as the equivalent of 1 week's pay.

Data are presented for all health, insurance, and pension plans (tables B-6 and B-7) for which at least a part of the cost is borne by the employer, excepting only legal requirements such as workmen's compensation, social security, and railroad retirement. Such plans include those underwritten by a commercial insurance company and those provided through a union fund or paid directly by the employer out of current operating funds or from a fund set aside for this purpose. Death benefits are included as a form of life insurance. Selected health insurance benefits provided employees and dependents are also presented.

Sickness and accident insurance is limited to that type of insurance under which predetermined cash payments are made directly to the insured on a weekly or monthly basis during illness or accident disability. Information is presented for all such plans to which the employer contributes. However, in New York and New Jersey, which have enacted temporary disability insurance laws which require employer contributions,[2] plans are included only if the employer (1) contributes more than is legally required, or (2) provides the employee with benefits which exceed the requirements of the law. Tabulations of paid sick leave plans are limited to formal plans[3] which provide full pay or a proportion of the worker's pay during absence from work because of illness. Separate tabulations are presented according to (1) plans which provide full pay and no waiting period, and (2) plans which provide either partial pay or a waiting period. In addition to the presentation of the proportions of workers who are provided sickness and accident insurance or paid sick leave, an unduplicated total is shown of workers who receive either or both types of benefits.

Catastrophe insurance, sometimes referred to as extended medical insurance, includes those plans which are designed to protect employees in case of sickness and injury involving expenses beyond the normal coverage of hospitalization, medical, and surgical plans. Medical insurance refers to plans providing for complete or partial payment of doctors' fees. Such plans may be underwritten by commercial insurance companies or nonprofit organizations or they may be self-insured. Tabulations of retirement pension plans are limited to those plans that provide monthly payments for the remainder of the worker's life.

Profit-sharing plans (table B-8) are limited to formal plans with definite formulas for computing profit shares to be distributed among employees and whose formulas were communicated to employees in advance of the determination of profits. Data are presented according to provisions for distributing profit shares to employees: (1) Current or cash distribution of profit shares within a short period after determination of profits; (2) deferred distribution of profit shares after a specified number of years or at retirement; (3) combination current and deferred plans; and (4) elective distribution plans, under which each participant is required to select whether to take his share of the current year's profit in cash, have it deferred, or part in cash and part deferred.

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[1] An establishment was considered as having a policy if it met either of the following conditions: (1) Operated late shifts at the time of the survey, or (2) had formal provisions covering late shifts. An establishment was considered as having formal provisions if it (1) had operated late shifts during the 12 months prior to the survey, or (2) had provisions in written form for operating late shifts.

[2] The temporary disability laws in California and Rhode Island do not require employer contributions.

[3] An establishment was considered as having a formal plan if it established at least the minimum number of days of sick leave available to each employee. Such a plan need not be written, but informal sick leave allowances, determined on an individual basis, were excluded.

Table 1. Establishments and workers within scope of survey and number studied in Greenville, S.C.,[1] by major industry division,[2] May 1966

Industry division	Minimum employment in establishments in scope of study	Number of establishments		Workers in establishments				
		Within scope of study[3]	Studied	Within scope of study				Studied
				Total[4]		Plant	Office	Total[4]
				Number	Percent			
All divisions	-	214	97	55,500	100	45,900	4,100	33,710
Manufacturing	50	135	56	45,500	82	39,600	2,500	26,530
Nonmanufacturing	-	79	41	10,000	18	6,300	1,600	7,180
Transportation, communication, and other public utilities[5]	50	20	11	2,400	4	1,600	300	1,760
Wholesale trade	50	10	4	800	2	(6)	(6)	340
Retail trade	50	31	14	4,400	8	(6)	(6)	3,160
Finance, insurance, and real estate	50	10	6	1,300	2	(7)	(6)	1,050
Services[8]	50	8	6	1,100	2	(6)	(6)	870

[1] The Greenville Standard Metropolitan Statistical Area, as defined by the Bureau of the Budget through March 1965, consists of Greenville and Pickens Counties. The "workers within scope of study" estimates shown in this table provide a reasonably accurate description of the size and composition of the labor force included in the survey. The estimates are not intended, however, to serve as a basis of comparison with other employment indexes for the area to measure employment trends or levels since (1) planning of wage surveys requires the use of establishment data compiled considerably in advance of the payroll period studied, and (2) small establishments are excluded from the scope of the survey.

[2] The 1957 revised edition of the Standard Industrial Classification Manual and the 1963 Supplement were used in classifying establishments by industry division.

[3] Includes all establishments with total employment at or above the minimum limitation. All outlets (within the area) of companies in such industries as trade, finance, auto repair service, and motion picture theaters are considered as 1 establishment.

[4] Includes executive, professional, and other workers excluded from the separate plant and office categories.

[5] Taxicabs and services incidental to water transportation were excluded.

[6] This industry division is represented in estimates for "all industries" and "nonmanufacturing" in the Series A tables, and for "all industries" in the Series B tables. Separate presentation of data for this division is not made for one or more of the following reasons: (1) Employment in the division is too small to provide enough data to merit separate study, (2) the sample was not designed initially to permit separate presentation, (3) response was insufficient or inadequate to permit separate presentation, and (4) there is possibility of disclosure of individual establishment data.

[7] Workers from this entire industry division are represented in estimates for "all industries" and "nonmanufacturing" in the Series A tables, but from the real estate portion only in estimates for "all industries" in the Series B tables. Separate presentation of data for this division is not made for one or more of the reasons given in footnote 6 above.

[8] Hotels; personal services; business services; automobile repair shops; motion pictures; nonprofit membership organizations (excluding religious and charitable organizations); and engineering and architectural services.

The Greenville Standard Metropolitan Statistical Area was defined in 1961 as Greenville County. The area, as defined through March 1965, includes the addition of Pickens County. This survey, conducted in May 1966, is the first to include the added county.

The increase in scope due to the added county was confined almost exclusively to manufacturing. Manufacturing employment in Pickens County, primarily concentrated in the apparel, machinery, and textile industries, accounted for over a fifth of the total manufacturing employment. Although there were numerous exceptions, salaries of office workers were slightly higher in Greenville County, while wages of plant workers were slightly higher in Pickens County. Wage trends were adjusted to eliminate the effect of the change in area definition.

Four-fifths of the workers within scope of the survey in Greenville and Pickens Counties were employed in manufacturing firms. The following table presents the major industry groups and specific industries as a percent of all manufacturing:

Industry group		Specific industries	
Textile mill products	50	Broad woven fabric mills (cotton)	24
Apparel	20	Broad woven fabric mills (man-made fiber and silk)	15
Machinery (except electrical)	11	Women's, misses', and juniors' outerwear	11
		Special industry machinery (except metalworking)	8
		Men's and boys' furnishings	7

This information is based on estimates of total employment derived from universe materials compiled prior to actual survey. Proportions in various industry divisions may differ from proportions based on the results of the survey as shown in table 1 above

Wage Trends for Selected Occupational Groups

Presented in table 2 are indexes and percentages of change in average salaries of office clerical workers and industrial nurses, and in average earnings of selected plant worker groups.

For office clerical workers and industrial nurses, the percentages of change relate to average weekly salaries for normal hours of work, that is, the standard work schedule for which straight-time salaries are paid. For plant worker groups, they measure changes in average straight-time hourly earnings, excluding premium pay for overtime and for work on weekends, holidays, and late shifts. The percentages are based on data for selected key occupations and include most of the numerically important jobs within each group.

Office clerical (men and women):
- Bookkeeping-machine operators, class B
- Clerks, accounting, classes A and B
- Clerks, file, classes A, B, and C
- Clerks, order
- Clerks, payroll
- Comptometer operators
- Keypunch operators, classes A and B
- Office boys and girls
- Stenographers, general
- Stenographers, senior
- Switchboard operators, classes A and B
- Tabulating-machine operators, class B
- Typists, classes A and B

Industrial nurses (men and women):
- Nurses, industrial (registered)

Skilled maintenance (men):
- Carpenters
- Electricians
- Machinists
- Mechanics
- Mechanics (automotive)
- Painters
- Pipefitters
- Tool and die makers

Unskilled plant (men):
- Janitors, porters, and cleaners
- Laborers, material handling

NOTE: Secretaries, included in the list of jobs in all previous years, are excluded because of a change in the description this year.

Average weekly salaries or average hourly earnings were computed for each of the selected occupations. The average salaries or hourly earnings were then multiplied by employment in each of the jobs during the period surveyed in 1961. These weighted earnings for individual occupations were then totaled to obtain an aggregate for each occupational group. Finally, the ratio (expressed as a percentage) of the group aggregate for the one year to the aggregate for the other year was computed and the difference between the result and 100 is the percentage of change from the one period to the other. The indexes were computed by multiplying the ratios for each group aggregate for each period after the base year (1961).

The indexes and percentages of change measure, principally, the effects of (1) general salary and wage changes; (2) merit or other increases in pay received by individual workers while in the same job; and (3) changes in average wages due to changes in the labor force resulting from labor turnover, force expansions, force reductions, and changes in the proportions of workers employed by establishments with different pay levels. Changes in the labor force can cause increases or decreases in the occupational averages without actual wage changes. For example, a force expansion might increase the proportion of lower paid workers in a specific occupation and lower the average, whereas a reduction in the proportion of lower paid workers would have the opposite effect. Similarly, the movement of a high-paying establishment out of an area could cause the average earnings to drop, even though no change in rates occurred in other establishments in the area. Data are adjusted where necessary to remove from the indexes and percentages of change any significant effect caused by changes in scope of the survey.

The use of constant employment weights eliminates the effect of changes in the proportion of workers represented in each job included in the data. The percentages of change reflect only changes in average pay for straight-time hours. They are not influenced by changes in standard work schedules, as such, or by premium pay for overtime.

Table 2. Indexes of standard weekly salaries and straight-time hourly earnings for selected occupational groups in Greenville, S.C., May 1966 and May 1965, and percents of increase for selected periods

Industry and occupational group	Indexes (April 1961=100)		Percents of increase					
	May 1966	May 1965	May 1965 to May 1966	May 1964 to May 1965	May 1963 to May 1964	May 1962 to May 1963	April 1961 to May 1962	May 1960 to April 1961
All industries:								
Office clerical (men and women)	122.1	114.8	6.4	3.1	4.3	3.3	3.3	2.7
Industrial nurses (men and women)	115.1	113.4	1.8	3.0	4.5	4.7	.7	2.1
Skilled maintenance (men)	122.1	116.5	4.8	4.4	4.9	1.1	5.2	1.5
Unskilled plant (men)	121.9	117.4	3.9	4.3	5.7	1.5	4.8	2.0
Manufacturing:								
Office clerical (men and women)	120.3	113.1	6.3	3.4	3.0	3.5	2.6	3.7
Industrial nurses (men and women)	115.4	113.4	1.8	3.0	4.5	4.7	.7	2.1
Skilled maintenance (men)	123.2	116.7	5.6	4.4	5.2	.7	5.5	1.8
Unskilled plant (men)	125.3	116.9	7.1	3.7	6.2	1.6	4.5	1.7

A. Occupational Earnings

Table A-1. Office Occupations—Men and Women

(Average straight-time weekly hours and earnings for selected occupations studied on an area basis by industry division, Greenville, S. C., May 1966)

Sex, occupation, and industry division	Number of workers	Average weekly hours[1] (standard)	Weekly earnings[1] (standard)			Number of workers receiving straight-time weekly earnings of—																
			Mean[2]	Median[2]	Middle range[2]	$ 45 and under 50	$ 50 - 55	$ 55 - 60	$ 60 - 65	$ 65 - 70	$ 70 - 75	$ 75 - 80	$ 80 - 85	$ 85 - 90	$ 90 - 95	$ 95 - 100	$ 100 - 105	$ 105 - 110	$ 110 - 115	$ 115 - 120	$ 120 - 125	$ 125 and over
MEN																						
CLERKS, ACCOUNTING, CLASS A	24	39.5	$ 96.50	$ 96.00	$ 83.00-107.50	-	-	-	-	-	3	1	4	2	1	7	-	-	2	1	-	3
MANUFACTURING	20	40.0	96.00	96.00	81.50-100.00	-	-	-	-	-	3	1	4	1	-	7	-	-	1	-	-	3
TABULATING-MACHINE OPERATORS, CLASS A	20	40.0	95.50	92.50	87.50-104.00	-	-	-	-	-	-	-	2	6	5	2	1	1	-	2	-	1
TABULATING-MACHINE OPERATORS, CLASS B	15	39.5	80.50	80.00	70.00- 97.50	-	-	-	2	2	3	1	-	1	2	2	1	1	-	-	-	-
WOMEN																						
BILLERS, MACHINE (BILLING MACHINE)	44	40.0	71.00	68.50	63.50- 75.00	-	-	-	16	9	9	-	5	1	2	-	2	-	-	-	-	-
MANUFACTURING	27	40.0	68.00	67.00	63.00- 73.50	-	-	-	12	5	6	-	3	1	-	-	-	-	-	-	-	-
NONMANUFACTURING	17	40.0	75.00	71.50	65.50- 87.50	-	-	-	4	4	3	-	2	-	2	-	2	-	-	-	-	-
BILLERS, MACHINE (BOOKKEEPING MACHINE)	29	40.0	67.00	66.50	55.50- 79.00	-	7	5	2	3	1	6	-	4	1	-	-	-	-	-	-	-
NONMANUFACTURING	25	40.0	64.00	62.50	54.50- 76.00	-	7	5	2	3	1	6	-	-	1	-	-	-	-	-	-	-
BOOKKEEPING-MACHINE OPERATORS, CLASS B	65	40.5	68.50	69.00	64.50- 73.50	2	-	3	13	19	17	2	9	-	-	-	-	-	-	-	-	-
MANUFACTURING	18	40.0	75.00	74.50	71.00- 82.50	-	-	-	-	3	7	1	7	-	-	-	-	-	-	-	-	-
NONMANUFACTURING	47	40.5	66.00	67.00	62.50- 71.00	2	-	3	13	16	10	1	2	-	-	-	-	-	-	-	-	-
CLERKS, ACCOUNTING, CLASS A	57	40.0	78.50	78.50	66.00- 87.50	-	-	-	14	3	5	10	5	14	3	-	-	-	1	-	-	2
MANUFACTURING	44	40.0	79.00	78.50	68.00- 87.00	-	-	-	10	2	4	9	5	9	3	-	-	-	1	-	-	1
CLERKS, ACCOUNTING, CLASS B	103	40.0	69.00	68.50	63.50- 75.00	-	2	6	26	25	20	8	8	5	2	1	-	-	-	-	-	-
MANUFACTURING	68	40.0	68.50	68.00	62.50- 76.00	-	2	6	20	11	12	5	5	5	2	-	-	-	-	-	-	-
NONMANUFACTURING	35	40.0	70.00	69.50	66.00- 74.50	-	-	-	6	14	8	3	3	-	-	1	-	-	-	-	-	-
CLERKS, FILE, CLASS B	17	39.0	61.50	62.50	59.00- 65.50	-	2	3	8	4	-	-	-	-	-	-	-	-	-	-	-	-
CLERKS, FILE, CLASS C	54	39.5	56.00	55.50	52.50- 58.50	-	26	22	2	3	-	1	-	-	-	-	-	-	-	-	-	-
MANUFACTURING	30	40.0	55.50	54.00	52.00- 58.00	-	19	7	2	1	-	1	-	-	-	-	-	-	-	-	-	-
CLERKS, ORDER	21	40.0	79.50	82.50	76.00- 89.00	-	-	-	3	1	1	2	8	2	3	1	-	-	-	-	-	-
MANUFACTURING	15	40.0	82.00	84.00	81.00- 91.50	-	-	-	2	-	-	1	6	2	3	1	-	-	-	-	-	-
CLERKS, PAYROLL	77	39.5	73.00	74.00	66.00- 82.50	-	9	5	4	10	14	12	9	8	2	2	-	-	1	1	-	-
MANUFACTURING	58	40.0	73.50	75.00	66.00- 84.00	-	8	4	1	7	9	10	7	7	2	2	-	-	1	-	-	-
NONMANUFACTURING	19	39.0	72.00	72.00	65.00- 80.00	-	1	1	3	3	5	2	2	1	-	-	-	-	-	1	-	-
KEYPUNCH OPERATORS, CLASS A	24	39.0	74.50	74.50	71.00- 79.00	-	-	-	-	4	9	7	3	-	1	-	-	-	-	-	-	-
MANUFACTURING	17	40.0	73.50	73.50	70.50- 78.00	-	-	-	-	4	7	4	1	-	1	-	-	-	-	-	-	-
KEYPUNCH OPERATORS, CLASS B	115	39.5	64.50	65.00	60.50- 69.50	-	11	14	34	32	9	11	2	2	-	-	-	-	-	-	-	-
MANUFACTURING	89	39.5	64.00	65.00	60.50- 69.00	-	10	10	26	28	5	7	1	2	-	-	-	-	-	-	-	-
SECRETARIES[3 4]	263	39.5	83.50	84.50	75.50- 93.50	-	4	5	13	16	26	29	42	46	26	22	22	5	2	3	2	-
MANUFACTURING	148	39.5	85.00	85.00	79.00- 91.00	-	-	-	-	2	20	19	32	36	12	13	9	1	1	3	-	-
NONMANUFACTURING	115	39.5	81.50	83.00	67.50- 95.50	-	4	5	13	14	6	10	10	10	14	9	13	4	1	-	2	-
SECRETARIES, CLASS A[4]	17	39.5	99.00	100.00	94.00-109.00	-	-	-	-	-	-	-	2	1	2	4	2	3	-	3	-	-

See footnotes at end of table.

Table A-1. Office Occupations—Men and Women—Continued

(Average straight-time weekly hours and earnings for selected occupations studied on an area basis by industry division, Greenville, S. C., May 1966)

Sex, occupation, and industry division	Number of workers	Average weekly hours[1] (standard)	Weekly earnings[1] (standard)			Number of workers receiving straight-time weekly earnings of—																
			Mean[2]	Median[2]	Middle range[2]	$ 45 and under 50	$ 50 - 55	$ 55 - 60	$ 60 - 65	$ 65 - 70	$ 70 - 75	$ 75 - 80	$ 80 - 85	$ 85 - 90	$ 90 - 95	$ 95 - 100	$ 100 - 105	$ 105 - 110	$ 110 - 115	$ 115 - 120	$ 120 - 125	$ 125 and over
WOMEN - CONTINUED																						
SECRETARIES[3 4] - CONTINUED																						
			$	$	$ $																	
SECRETARIES, CLASS B[4]	51	39.0	88.50	88.50	82.50- 97.00	-	-	-	-	2	-	5	11	11	6	9	5	-	1	-	1	-
MANUFACTURING	27	39.0	87.00	88.00	84.00- 95.00	-	-	-	-	-	-	2	6	10	3	5	1	-	-	-	-	-
NONMANUFACTURING	24	39.0	90.50	92.50	81.00-101.00	-	-	-	-	2	-	3	5	1	3	4	4	-	1	-	1	-
SECRETARIES, CLASS C[4]	96	39.5	87.00	88.00	81.00- 94.50	-	-	1	4	4	3	8	17	20	17	7	12	2	1	-	-	-
MANUFACTURING	57	40.0	86.00	86.50	81.50- 90.50	-	-	-	-	1	3	7	13	19	7	3	3	-	1	-	-	-
NONMANUFACTURING	39	39.5	88.00	93.00	81.00-101.00	-	-	1	4	3	-	1	4	1	10	4	9	2	-	-	-	-
SECRETARIES, CLASS D[4]	99	39.5	75.50	75.00	69.00- 84.00	-	4	4	9	10	23	16	12	14	1	2	3	-	-	-	1	-
MANUFACTURING	52	40.0	80.00	79.00	73.50- 85.50	-	-	-	-	1	17	10	11	7	1	2	3	-	-	-	-	-
NONMANUFACTURING	47	39.5	70.50	69.00	62.00- 78.50	-	4	4	9	9	6	6	1	7	-	-	-	-	-	-	1	-
STENOGRAPHERS, GENERAL	184	39.5	74.00	73.50	67.50- 79.50	-	-	4	26	31	47	34	24	9	1	2	2	-	3	1	-	-
MANUFACTURING	125	39.5	72.50	72.50	66.50- 79.00	-	-	4	21	20	33	21	17	7	1	-	-	-	1	-	-	-
NONMANUFACTURING	59	40.0	78.00	75.00	69.50- 81.50	-	-	-	5	11	14	13	7	2	-	2	2	-	2	1	-	-
STENOGRAPHERS, SENIOR	43	40.0	86.50	81.50	76.50- 95.00	-	-	-	-	-	6	15	3	3	6	2	1	2	3	2	-	-
NONMANUFACTURING	23	40.0	94.00	93.00	80.00-110.00	-	-	-	-	-	-	6	-	3	5	1	1	2	3	2	-	-
SWITCHBOARD OPERATOR-RECEPTIONISTS	52	40.0	70.00	70.00	62.50- 77.00	-	-	10	6	10	11	7	4	-	3	-	1	-	-	-	-	-
MANUFACTURING	26	40.0	73.00	72.50	67.50- 79.00	-	-	-	3	7	7	4	2	-	3	-	-	-	-	-	-	-
NONMANUFACTURING	26	40.5	66.50	66.00	58.50- 75.50	-	-	10	3	3	4	3	2	-	-	-	1	-	-	-	-	-
TRANSCRIBING-MACHINE OPERATORS, GENERAL	38	39.0	73.50	72.50	65.50- 82.00	-	-	3	6	10	1	7	6	-	5	-	-	-	-	-	-	-
TYPISTS, CLASS A	33	39.0	71.00	70.00	66.00- 78.50	-	-	2	5	10	5	5	4	2	-	-	-	-	-	-	-	-
TYPISTS, CLASS B	97	39.0	63.00	63.00	58.50- 67.50	-	10	22	29	23	6	2	5	-	-	-	-	-	-	-	-	-
MANUFACTURING	55	40.0	64.50	65.50	58.00- 69.50	-	7	11	9	16	5	2	5	-	-	-	-	-	-	-	-	-
NONMANUFACTURING	42	38.0	61.00	62.00	58.50- 64.50	-	3	11	20	7	1	-	-	-	-	-	-	-	-	-	-	-

[1] Standard hours reflect the workweek for which employees receive their regular straight-time salaries and the earnings correspond to these weekly hours.

[2] The mean is computed for each job by totaling the earnings of all workers and dividing by the number of workers. The median designates position—half of the employees surveyed receive more than the rate shown; half receive less than the rate shown. The middle range is defined by 2 rates of pay; a fourth of the workers earn less than the lower of these rates and a fourth earn more than the higher rate.

[3] May include workers other than those presented separately.

[4] Description for this occupation has been revised since the last survey in this area. See appendix A.

Table A-2. Professional and Technical Occupations—Men and Women

(Average straight-time weekly hours and earnings for selected occupations studied on an area basis by industry division, Greenville, S.C., May 1966)

Sex, occupation, and industry division	Number of workers	Average weekly hours[1] (standard)	Weekly earnings[1] (standard)			Number of workers receiving straight-time weekly earnings of—														
			Mean[2]	Median[2]	Middle range[2]	$ 70 and under 75	$ 75 - 80	$ 80 - 85	$ 85 - 90	$ 90 - 95	$ 95 - 100	$ 100 - 105	$ 105 - 110	$ 110 - 115	$ 115 - 120	$ 120 - 125	$ 125 - 130	$ 130 - 135	$ 135 - 140	$ 140 - 145
MEN																				
DRAFTSMEN, CLASS B[3]	69	40.0	$ 113.00	$ 112.00	$ 104.50-119.50	-	-	-	-	4	-	15	8	18	8	9	1	-	3	3
WOMEN																				
NURSES, INDUSTRIAL (REGISTERED)	22	40.5	86.50	87.00	79.50- 94.00	2	4	3	6	3	1	-	2	1	-	-	-	-	-	-
MANUFACTURING	22	40.5	86.50	87.00	79.50- 94.00	2	4	3	6	3	1	-	2	1	-	-	-	-	-	-

[1] Standard hours reflect the workweek for which employees receive their regular straight-time salaries and the earnings correspond to these weekly hours.
[2] For definition of terms, see footnote 2, table A-1.
[3] Description for this occupation has been revised since the last survey in this area. See appendix A.

Table A-3. Office, Professional, and Technical Occupations—Men and Women Combined

(Average straight-time weekly hours and earnings for selected occupations studied on an area basis by industry division, Greenville, S.C., May 1966)

Occupation and industry division	Number of workers	Average: Weekly hours[1] (standard)	Average: Weekly earnings[1] (standard)
OFFICE OCCUPATIONS			
BILLERS, MACHINE (BILLING MACHINE)	49	40.0	$ 73.50
MANUFACTURING	29	40.0	72.00
NONMANUFACTURING	20	40.0	76.00
BILLERS, MACHINE (BOOKKEEPING MACHINE)	29	40.0	67.00
NONMANUFACTURING	25	40.0	64.00
BOOKKEEPING-MACHINE OPERATORS, CLASS B	65	40.5	68.50
MANUFACTURING	18	40.0	75.00
NONMANUFACTURING	47	40.5	66.00
CLERKS, ACCOUNTING, CLASS A	81	39.5	84.00
MANUFACTURING	64	40.0	84.00
NONMANUFACTURING	17	39.0	84.00
CLERKS, ACCOUNTING, CLASS B	109	40.0	69.50
MANUFACTURING	74	40.0	69.50
NONMANUFACTURING	35	40.0	70.00
CLERKS, FILE, CLASS B	17	39.0	61.50
CLERKS, FILE, CLASS C	55	39.5	56.00
MANUFACTURING	30	40.0	55.50
CLERKS, ORDER	49	40.5	90.50
MANUFACTURING	37	40.0	95.00
CLERKS, PAYROLL	81	39.5	74.50
MANUFACTURING	62	40.0	75.00
NONMANUFACTURING	19	39.0	72.00
OFFICE OCCUPATIONS - CONTINUED			
KEYPUNCH OPERATORS, CLASS A	24	39.0	$ 74.50
MANUFACTURING	17	40.0	73.50
KEYPUNCH OPERATORS, CLASS B	115	39.5	64.50
MANUFACTURING	89	39.5	64.00
SECRETARIES[2 3]	263	39.5	83.50
MANUFACTURING	148	39.5	85.00
NONMANUFACTURING	115	39.5	81.50
SECRETARIES, CLASS A[3]	17	39.5	99.00
SECRETARIES, CLASS B[3]	51	39.0	88.50
MANUFACTURING	27	39.0	87.00
NONMANUFACTURING	24	39.0	90.50
SECRETARIES, CLASS C[3]	96	39.5	87.00
MANUFACTURING	57	40.0	86.00
NONMANUFACTURING	39	39.5	88.00
SECRETARIES, CLASS D[3]	99	39.5	75.50
MANUFACTURING	52	40.0	80.00
NONMANUFACTURING	47	39.5	70.50
STENOGRAPHERS, GENERAL	185	39.5	74.50
MANUFACTURING	125	39.5	72.50
NONMANUFACTURING	60	40.0	78.50
STENOGRAPHERS, SENIOR	43	40.0	86.50
NONMANUFACTURING	23	40.0	94.00
OFFICE OCCUPATIONS - CONTINUED			
SWITCHBOARD OPERATOR-RECEPTIONISTS	52	40.0	$ 70.00
MANUFACTURING	26	40.0	73.00
NONMANUFACTURING	26	40.5	66.50
TABULATING-MACHINE OPERATORS, CLASS A	26	40.0	94.00
MANUFACTURING	24	40.0	91.50
TABULATING-MACHINE OPERATORS, CLASS B	22	39.5	80.00
MANUFACTURING	18	39.5	78.50
TRANSCRIBING-MACHINE OPERATORS, GENERAL	38	39.0	73.50
TYPISTS, CLASS A	33	39.0	71.00
TYPISTS, CLASS B	97	39.0	63.00
MANUFACTURING	55	40.0	64.50
NONMANUFACTURING	42	38.0	61.00
PROFESSIONAL AND TECHNICAL OCCUPATIONS			
DRAFTSMEN, CLASS B[3]	69	40.0	113.00
DRAFTSMEN, CLASS C[3]	68	40.0	75.50
NURSES, INDUSTRIAL (REGISTERED)	22	40.5	86.50
MANUFACTURING	22	40.5	86.50

[1] Standard hours reflect the workweek for which employees receive their regular straight-time salaries and the earnings correspond to these weekly hours.
[2] May include workers other than those presented separately.
[3] Description for this occupation has been revised since the last survey in this area. See appendix A.

Table A-4. Maintenance and Powerplant Occupations

(Average straight-time hourly earnings for men in selected occupations studied on an area basis by industry division, Greenville, S. C., May 1966)

Occupation and industry division	Number of workers	Hourly earnings[1]			Number of workers receiving straight-time hourly earnings of—																						
		Mean[2]	Median[2]	Middle range[2]	$ 1.30 and under 1.40	$ 1.40 - 1.50	$ 1.50 - 1.60	$ 1.60 - 1.70	$ 1.70 - 1.80	$ 1.80 - 1.90	$ 1.90 - 2.00	$ 2.00 - 2.10	$ 2.10 - 2.20	$ 2.20 - 2.30	$ 2.30 - 2.40	$ 2.40 - 2.50	$ 2.50 - 2.60	$ 2.60 - 2.70	$ 2.70 - 2.80	$ 2.80 - 2.90	$ 2.90 - 3.00	$ 3.00 - 3.10	$ 3.10 - 3.20	$ 3.20 - 3.30	$ 3.30 - 3.40	$ 3.40 - 3.50	$ 3.50 and over
		$	$	$ $																							
CARPENTERS, MAINTENANCE	47	2.12	2.06	1.98- 2.27	-	-	-	-	-	2	13	16	3	3	4	1	5	-	-	-	-	-	-	-	-	-	-
MANUFACTURING	47	2.12	2.06	1.98- 2.27	-	-	-	-	-	2	13	16	3	3	4	1	5	-	-	-	-	-	-	-	-	-	-
ELECTRICIANS, MAINTENANCE	90	2.35	2.36	2.18- 2.51	-	-	-	-	-	4	-	4	18	2	31	8	12	3	5	2	1	-	-	-	-	-	-
MANUFACTURING	90	2.35	2.36	2.18- 2.51	-	-	-	-	-	4	-	4	18	2	31	8	12	3	5	2	1	-	-	-	-	-	-
ENGINEERS, STATIONARY	26	2.33	2.34	2.17- 2.51	-	-	-	-	-	-	-	4	4	2	9	1	3	1	2	-	-	-	-	-	-	-	-
MANUFACTURING	18	2.27	2.31	2.14- 2.38	-	-	-	-	-	-	-	3	4	2	7	1	-	1	-	-	-	-	-	-	-	-	-
FIREMEN, STATIONARY BOILER	31	1.69	1.65	1.60- 1.69	-	-	8	17	-	2	1	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MANUFACTURING	31	1.69	1.65	1.60- 1.69	-	-	8	17	-	2	1	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HELPERS, MAINTENANCE TRADES	41	1.66	1.69	1.59- 1.83	6	-	5	11	7	10	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MANUFACTURING	37	1.67	1.71	1.61- 1.84	6	-	3	9	7	10	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MACHINISTS, MAINTENANCE	94	2.31	2.32	2.15- 2.46	-	-	-	-	-	-	-	14	18	9	28	4	12	6	-	2	1	-	-	-	-	-	-
MANUFACTURING	94	2.31	2.32	2.15- 2.46	-	-	-	-	-	-	-	14	18	9	28	4	12	6	-	2	1	-	-	-	-	-	-
MECHANICS, AUTOMOTIVE (MAINTENANCE)	70	2.53	2.55	2.10- 2.79	-	-	-	-	-	-	12	6	6	5	4	-	5	2	14	2	-	-	2	-	12	-	-
MANUFACTURING	26	2.15	2.11	2.00- 2.34	-	-	-	-	-	-	7	6	6	-	3	-	4	-	-	-	-	-	-	-	-	-	-
NONMANUFACTURING	44	2.76	2.76	2.43- 3.31	-	-	-	-	-	-	5	-	-	5	1	-	1	2	14	2	-	-	2	-	12	-	-
PUBLIC UTILITIES[3]	30	2.77	2.88	2.26- 3.34	-	-	-	-	-	-	5	-	-	5	1	-	-	2	1	2	-	-	2	-	12	-	-
MECHANICS, MAINTENANCE	378	2.35	2.30	2.20- 2.45	-	-	-	1	-	2	13	11	63	97	82	33	29	26	4	7	1	-	4	-	-	-	5
MANUFACTURING	376	2.35	2.30	2.20- 2.45	-	-	-	1	-	2	13	11	63	95	82	33	29	26	4	7	1	-	4	-	-	-	5
OILERS	72	1.55	1.54	1.49- 1.58	-	20	44	6	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MANUFACTURING	72	1.55	1.54	1.49- 1.58	-	20	44	6	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PAINTERS, MAINTENANCE	26	1.92	1.96	1.84- 2.05	-	-	1	1	4	2	10	5	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-
MANUFACTURING	25	1.90	1.95	1.83- 2.03	-	-	1	1	4	2	10	5	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOOL AND DIE MAKERS	32	3.11	3.11	2.85- 3.45	-	-	-	-	-	-	-	-	-	-	-	-	2	-	3	7	2	2	4	-	2	6	4
MANUFACTURING	32	3.11	3.11	2.85- 3.45	-	-	-	-	-	-	-	-	-	-	-	-	2	-	3	7	2	2	4	-	2	6	4

[1] Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.
[2] For definition of terms, see footnote 2, table A-1.
[3] Transportation, communication, and other public utilities.

Table A-5. Custodial and Material Movement Occupations

(Average straight-time hourly earnings for selected occupations studied on an area basis by industry division, Greenville, S. C., May 1966)

Occupation[1] and industry division	Number of workers	Hourly earnings[2]			Number of workers receiving straight-time hourly earnings of—																						
		Mean[3]	Median[3]	Middle range[3]	Under $1.10	$1.10 and under 1.20	$1.20 - 1.30	$1.30 - 1.40	$1.40 - 1.50	$1.50 - 1.60	$1.60 - 1.70	$1.70 - 1.80	$1.80 - 1.90	$1.90 - 2.00	$2.00 - 2.10	$2.10 - 2.20	$2.20 - 2.30	$2.30 - 2.40	$2.40 - 2.50	$2.50 - 2.60	$2.60 - 2.70	$2.70 - 2.80	$2.80 - 2.90	$2.90 - 3.00	$3.00 - 3.10	$3.10 - 3.20	$3.20 - 3.30
GUARDS AND WATCHMEN	128	$ 1.60	$ 1.62	$ 1.45- $ 1.75	-	-	14	9	17	19	30	17	11	11	-	-	-	-	-	-	-	-	-	-	-	-	-
MANUFACTURING	127	1.60	1.62	1.46- 1.75	-	-	13	9	17	19	30	17	11	11	-	-	-	-	-	-	-	-	-	-	-	-	-
GUARDS:																											
MANUFACTURING	28	1.70	1.74	1.52- 1.84	-	-	-	-	6	6	-	7	7	2	-	-	-	-	-	-	-	-	-	-	-	-	-
WATCHMEN:																											
MANUFACTURING	99	1.57	1.61	1.43- 1.70	-	-	13	9	11	13	30	10	4	9	-	-	-	-	-	-	-	-	-	-	-	-	-
JANITORS, PORTERS, AND CLEANERS	493	1.48	1.48	1.40- 1.59	8	4	46	62	167	88	65	34	18	-	-	-	-	-	1	-	-	-	-	-	-	-	-
MANUFACTURING	405	1.50	1.49	1.43- 1.60	-	-	31	30	161	82	54	29	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NONMANUFACTURING	88	1.35	1.35	1.27- 1.53	8	4	15	32	6	6	11	5	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
JANITORS, PORTERS, AND CLEANERS (WOMEN)	74	1.35	1.35	1.31- 1.39	-	-	13	50	4	5	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MANUFACTURING	56	1.37	1.36	1.33- 1.39	-	-	-	48	2	4	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NONMANUFACTURING	18	1.30	1.27	1.24- 1.36	-	-	13	2	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LABORERS, MATERIAL HANDLING	478	1.55	1.47	1.41- 1.72	-	-	49	50	194	29	28	60	34	7	14	1	-	-	4	-	-	-	-	-	8	-	-
MANUFACTURING	390	1.52	1.47	1.42- 1.70	-	-	28	37	177	22	27	58	32	7	2	-	-	-	-	-	-	-	-	-	-	-	-
NONMANUFACTURING	88	1.68	1.46	1.31- 2.03	-	-	21	13	17	7	1	2	2	-	12	1	-	-	4	-	-	-	-	-	8	-	-
ORDER FILLERS	128	1.54	1.46	1.35- 1.84	-	-	9	44	20	12	5	4	7	16	9	2	-	-	-	-	-	-	-	-	-	-	-
PACKERS, SHIPPING	167	1.68	1.67	1.60- 1.83	-	-	9	10	5	15	64	16	21	7	2	18	-	-	-	-	-	-	-	-	-	-	-
MANUFACTURING	164	1.68	1.67	1.61- 1.84	-	-	6	10	5	15	64	16	21	7	2	18	-	-	-	-	-	-	-	-	-	-	-
PACKERS, SHIPPING (WOMEN)	67	1.46	1.45	1.35- 1.63	-	-	9	15	20	3	13	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MANUFACTURING	67	1.46	1.45	1.35- 1.63	-	-	9	15	20	3	13	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RECEIVING CLERKS	37	1.93	1.99	1.81- 2.07	-	-	-	-	1	2	1	5	7	3	13	-	3	2	-	-	-	-	-	-	-	-	-
MANUFACTURING	21	1.93	1.97	1.84- 2.09	-	-	-	-	-	2	1	-	6	3	5	-	3	1	-	-	-	-	-	-	-	-	-
NONMANUFACTURING	16	1.92	2.02	1.77- 2.07	-	-	-	-	1	-	-	5	1	-	8	-	-	1	-	-	-	-	-	-	-	-	-
SHIPPING CLERKS	33	2.10	2.09	1.84- 2.47	-	-	-	3	-	-	3	-	6	4	1	-	4	1	5	3	-	3	-	-	-	-	-
MANUFACTURING	30	2.17	2.24	1.88- 2.49	-	-	-	-	-	-	3	-	6	4	1	-	4	1	5	3	-	3	-	-	-	-	-
SHIPPING AND RECEIVING CLERKS	24	2.12	2.15	1.91- 2.38	-	-	-	-	-	1	-	3	2	3	3	-	2	6	4	-	-	-	-	-	-	-	-
MANUFACTURING	23	2.14	2.25	1.93- 2.38	-	-	-	-	-	-	-	3	2	3	3	-	2	6	4	-	-	-	-	-	-	-	-
TRUCKDRIVERS[4]	325	2.21	1.83	1.44- 3.24	-	2	18	47	34	41	14	5	8	3	3	8	-	-	-	10	5	-	-	2	-	-	125
MANUFACTURING	76	1.71	1.62	1.51- 1.86	-	-	-	4	14	18	13	4	8	3	3	-	-	-	-	9	-	-	-	-	-	-	-
NONMANUFACTURING	249	2.37	3.20	1.40- 3.25	-	2	18	43	20	23	1	1	-	-	-	8	-	-	-	1	5	-	-	2	-	-	125
PUBLIC UTILITIES[5]	142	3.03	3.24	3.22- 3.27	-	-	-	-	-	14	-	-	-	-	-	-	-	-	-	1	2	-	-	-	-	-	125
TRUCKDRIVERS, LIGHT (UNDER 1-1/2 TONS)	53	1.46	1.36	1.30- 1.49	-	2	12	23	4	3	1	-	-	-	-	8	-	-	-	-	-	-	-	-	-	-	-
NONMANUFACTURING	51	1.45	1.35	1.29- 1.47	-	2	12	23	3	3	-	-	-	-	-	8	-	-	-	-	-	-	-	-	-	-	-
TRUCKDRIVERS, MEDIUM (1-1/2 TO AND INCLUDING 4 TONS)	124	1.68	1.53	1.41- 1.68	-	-	6	24	20	37	8	2	8	3	3	-	-	-	-	1	2	-	-	-	-	-	10
MANUFACTURING	56	1.61	1.58	1.49- 1.81	-	-	-	4	11	18	7	2	8	3	3	-	-	-	-	-	-	-	-	-	-	-	-
NONMANUFACTURING	68	1.73	1.49	1.36- 1.59	-	-	6	20	9	19	1	-	-	-	-	-	-	-	-	1	2	-	-	-	-	-	10
PUBLIC UTILITIES[5]	27	2.29	1.60	1.55- 3.24	-	-	-	-	-	14	-	-	-	-	-	-	-	-	-	1	2	-	-	-	-	-	10

See footnotes at end of table.

Table A-5. Custodial and Material Movement Occupations—Continued

(Average straight-time hourly earnings for selected occupations studied on an area basis by industry division, Greenville, S. C., May 1966)

Occupation[1] and industry division	Number of workers	Hourly earnings[2]			Number of workers receiving straight-time hourly earnings of—																					
		Mean[3]	Median[3]	Middle range[3]	Under $1.10	$1.10 and under 1.20	$1.20 - 1.30	$1.30 - 1.40	$1.40 - 1.50	$1.50 - 1.60	$1.60 - 1.70	$1.70 - 1.80	$1.80 - 1.90	$1.90 - 2.00	$2.00 - 2.10	$2.10 - 2.20	$2.20 - 2.30	$2.30 - 2.40	$2.40 - 2.50	$2.50 - 2.60	$2.60 - 2.70	$2.70 - 2.80	$2.80 - 2.90	$2.90 - 3.00	$3.00 - 3.10	$3.10 - 3.20	$3.20 - 3.30
TRUCKDRIVERS[4] - CONTINUED																										
TRUCKDRIVERS, HEAVY (OVER 4 TONS, TRAILER TYPE)	93	$ 3.00	$ 3.24	$ 3.21- $ 3.27	-	-	-	-	4	1	-	3	-	-	-	-	-	-	-	9	-	-	-	2	-	-	74
NONMANUFACTURING	82	3.08	3.25	3.22- 3.27	-	-	-	-	4	1	-	1	-	-	-	-	-	-	-	-	-	-	-	2	-	-	74
PUBLIC UTILITIES[5]	74	3.21	3.25	3.23- 3.28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	74
TRUCKDRIVERS, HEAVY (OVER 4 TONS, OTHER THAN TRAILER TYPE)	55	2.84	3.23	2.69- 3.27	-	-	-	-	6	-	5	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	41
NONMANUFACTURING	48	3.02	3.24	3.21- 3.27	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	41
PUBLIC UTILITIES[5]	41	3.21	3.25	3.23- 3.28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	41
TRUCKERS, POWER (FORKLIFT)	186	1.82	1.70	1.49- 2.11	-	-	7	8	34	40	4	22	4	9	10	32	-	-	-	-	-	-	-	-	-	-	16
MANUFACTURING	143	1.72	1.68	1.52- 1.99	-	-	6	4	19	40	4	22	4	9	3	32	-	-	-	-	-	-	-	-	-	-	-
NONMANUFACTURING	43	2.17	2.03	1.44- 3.24	-	-	1	4	15	-	-	-	-	-	7	-	-	-	-	-	-	-	-	-	-	-	16

[1] Data limited to men workers except where otherwise indicated.
[2] Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.
[3] For definition of terms, see footnote 2, table A-1.
[4] Includes all drivers regardless of size and type of truck operated.
[5] Transportation, communication, and other public utilities.

B. Establishment Practices and Supplementary Wage Provisions

Table B-1. Minimum Entrance Salaries for Women Office Workers

(Distribution of establishments studied in all industries and in industry divisions by minimum entrance salary for selected categories of inexperienced women office workers, Greenville, S. C., May 1966)

Minimum weekly straight-time salary[1]	Inexperienced typists					Other inexperienced clerical workers[2]				
	All industries	Manufacturing		Nonmanufacturing		All industries	Manufacturing		Nonmanufacturing	
		Based on standard weekly hours[3] of—					Based on standard weekly hours[3] of—			
		All schedules	40	All schedules	40		All schedules	40	All schedules	40
Establishments studied	97	56	xxx	41	xxx	97	56	xxx	41	xxx
Establishments having a specified minimum	21	12	11	9	7	40	25	23	15	11
Under $50.00	-	-	-	-	-	1	-	-	1	-
$50.00 and under $52.50	6	2	2	4	3	13	5	4	8	6
$52.50 and under $55.00	3	1	1	2	2	5	3	3	2	2
$55.00 and under $57.50	5	4	3	1	-	7	6	5	1	-
$57.50 and under $60.00	1	1	1	-	-	4	3	3	1	1
$60.00 and under $62.50	4	3	3	1	1	7	6	6	1	1
$62.50 and under $65.00	1	-	-	1	1	1	-	-	1	1
$65.00 and under $67.50	1	1	1	-	-	2	2	2	-	-
Establishments having no specified minimum	7	7	xxx	-	xxx	14	12	xxx	2	xxx
Establishments which did not employ workers in this category	69	37	xxx	32	xxx	43	19	xxx	24	xxx

[1] These salaries relate to formally established minimum starting (hiring) regular straight-time salaries that are paid for standard workweeks.
[2] Excludes workers in subclerical jobs such as messenger or office girl.
[3] Data are presented for all standard workweeks combined, and for the most common standard workweek reported.

Table B-2. Shift Differentials

(Shift differentials of manufacturing plant workers by type and amount of differential, Greenville, S.C., May 1966)

Shift differential	Percent of manufacturing plant workers—			
	In establishments having formal provisions[1] for—		Actually working on—	
	Second shift work	Third or other shift work	Second shift	Third or other shift
Total	70.8	68.6	20.1	14.8
With shift pay differential	25.6	65.1	6.1	14.1
Uniform cents (per hour)	22.1	60.8	5.3	13.8
5 cents	15.9	49.4	3.4	12.1
6 cents	1.9	1.1	.6	-
8 cents	3.6	3.6	1.0	.6
9 cents	-	1.4	-	.2
10 cents	.1	3.3	([2])	.4
12 cents	-	1.7	-	.6
18 2/3 cents	.5	-	.2	-
Uniform percentage	3.5	4.3	.8	.3
4 percent	3.5	3.5	.8	.1
5 percent	-	.8	-	.2
With no shift pay differential	45.2	3.6	14.1	.7

[1] Includes establishments currently operating late shifts, and establishments with formal provisions covering late shifts even though they were not currently operating late shifts.
[2] Less than 0.05 percent.

Table B-3. Scheduled Weekly Hours

(Percent distribution of plant and office workers in all industries and in industry divisions by scheduled weekly hours of first-shift workers, Greenville, S.C., May 1966)

Weekly hours	Plant workers			Office workers		
	All industries[1]	Manufacturing	Public utilities[2]	All industries[3]	Manufacturing	Public utilities[2]
All workers	100	100	100	100	100	100
36 1/4 hours	-	-	-	4	-	-
37 1/2 hours	([4])	([4])	-	6	7	26
Over 37 1/2 and under 40 hours	2	-	-	4	1	-
40 hours	68	72	84	80	90	64
Over 40 and under 44 hours	2	-	-	2	-	10
44 hours	4	3	-	2	1	-
Over 44 and under 48 hours	3	2	6	1	([4])	-
48 hours	20	22	-	1	1	-
50 hours	1	-	6	-	-	-
54 hours	([4])	-	5	-	-	-

[1] Includes data for wholesale trade, retail trade, real estate, and services, in addition to those industry divisions shown separately.
[2] Transportation, communication, and other public utilities.
[3] Includes data for wholesale trade; retail trade; finance, insurance, and real estate; and services, in addition to those industry divisions shown separately.
[4] Less than 0.5 percent.

Table B-4. Paid Holidays

(Percent distribution of plant and office workers in all industries and in industry divisions by number of paid holidays provided annually, Greenville, S.C., May 1966)

Item	Plant workers			Office workers		
	All industries[1]	Manufacturing	Public utilities[2]	All industries[3]	Manufacturing	Public utilities[2]
All workers	100	100	100	100	100	100
Workers in establishments providing paid holidays	68	65	100	89	83	100
Workers in establishments providing no paid holidays	32	35	-	11	17	-
Number of days						
1 holiday	5	5	-	1	1	-
2 holidays	11	12	-	1	2	-
3 holidays	7	6	6	3	3	6
4 holidays	13	14	-	13	20	-
5 holidays	15	11	12	36	30	12
6 holidays	10	10	15	22	17	18
7 holidays	7	6	47	12	10	52
8 holidays	1	-	21	1	-	12
Total holiday time						
8 days	1	-	21	1	-	12
7 days or more	8	6	67	12	10	64
6 days or more	18	16	82	34	26	82
5 days or more	33	27	94	71	56	94
4 days or more	46	41	94	84	76	94
3 days or more	53	47	100	87	79	100
2 days or more	63	59	100	88	81	100
1 day or more	68	65	100	89	83	100

[1] Includes data for wholesale trade, retail trade, real estate, and services, in addition to those industry divisions shown separately.
[2] Transportation, communication, and other public utilities.
[3] Includes data for wholesale trade; retail trade; finance, insurance, and real estate; and services, in addition to those industry divisions shown separately.

Table B-5. Paid Vacations[1]

(Percent distribution of plant and office workers in all industries and in industry divisions by vacation pay provisions, Greenville, S.C., May 1966)

Vacation policy	Plant workers			Office workers		
	All industries[2]	Manufacturing	Public utilities[3]	All industries[4]	Manufacturing	Public utilities[3]
All workers	100	100	100	100	100	100
Method of payment						
Workers in establishments providing paid vacations	99	99	94	100	100	100
Length-of-time payment	39	30	94	91	85	100
Percentage payment	60	70	-	9	15	-
Flat-sum payment	-	-	-	-	-	-
Other	-	-	-	([5])	1	-
Workers in establishments providing no paid vacations	1	1	6	-	-	-
Amount of vacation pay[6]						
After 6 months of service						
Under 1 week	28	29	-	6	6	6
1 week	4	1	37	45	37	48
Over 1 and under 2 weeks	([5])	-	-	11	14	-
2 weeks	-	-	-	1	-	-
After 1 year of service						
1 week	96	99	82	40	40	81
Over 1 and under 2 weeks	-	-	-	4	7	-
2 weeks	3	1	12	55	53	19
After 2 years of service						
1 week	83	89	41	14	19	-
Over 1 and under 2 weeks	4	4	-	5	7	12
2 weeks	13	6	53	81	74	88
After 3 years of service						
1 week	67	74	-	11	16	-
Over 1 and under 2 weeks	11	12	5	-	-	-
2 weeks	21	13	89	85	77	100
Over 2 and under 3 weeks	-	-	-	4	7	-
After 4 years of service						
1 week	66	73	-	11	15	-
Over 1 and under 2 weeks	11	12	5	-	-	-
2 weeks	22	14	89	85	78	100
3 weeks	-	-	-	4	7	-
After 5 years of service						
1 week	16	16	-	6	9	-
Over 1 and under 2 weeks	1	-	-	([5])	-	-
2 weeks	81	83	94	87	84	100
Over 2 and under 3 weeks	1	-	-	1	-	-
3 weeks	1	-	-	5	7	-
After 10 years of service						
1 week	16	16	-	6	9	-
2 weeks	69	70	65	66	67	67
Over 2 and under 3 weeks	8	9	-	7	10	-
3 weeks	6	4	29	20	15	33

See footnotes at end of table.

Table B-5. Paid Vacations[1]—Continued

(Percent distribution of plant and office workers in all industries and in industry divisions by vacation pay provisions, Greenville, S.C., May 1966)

Vacation policy	Plant workers			Office workers		
	All industries[2]	Manufacturing	Public utilities[3]	All industries[4]	Manufacturing	Public utilities[3]
Amount of vacation pay[6]—Continued						
After 12 years of service						
1 week	16	16	-	6	9	-
2 weeks	67	68	44	63	62	57
Over 2 and under 3 weeks	8	9	-	7	10	-
3 weeks	8	6	50	24	20	43
After 15 years of service						
1 week	16	16	-	6	9	-
2 weeks	59	62	7	44	51	18
Over 2 and under 3 weeks	5	6	-	1	1	-
3 weeks	19	15	82	49	39	82
Over 3 and under 4 weeks	([5])	-	5	-	-	-
After 20 years of service						
1 week	16	16	-	6	9	-
2 weeks	59	62	7	44	51	18
Over 2 and under 3 weeks	2	2	-	1	1	-
3 weeks	14	13	41	37	31	57
Over 3 and under 4 weeks	3	3	5	-	-	-
4 weeks	6	3	41	12	8	25
After 25 years of service						
1 week	16	16	-	6	9	-
2 weeks	59	62	7	44	51	18
Over 2 and under 3 weeks	2	2	-	1	1	-
3 weeks	12	12	12	29	28	27
Over 3 and under 4 weeks	([5])	-	5	-	-	-
4 weeks	10	7	71	19	7	56
Over 4 weeks		-	-	2	3	-
After 30 years of service						
1 week	16	16	-	6	9	-
2 weeks	59	62	7	44	51	18
Over 2 and under 3 weeks	2	2	-	1	1	-
3 weeks	12	12	-	27	28	4
Over 3 and under 4 weeks	([5])	-	5	-	-	-
4 weeks	10	6	82	20	7	78
Over 4 weeks	1	1	-	2	3	-

[1] Includes basic plans only. Excludes plans such as vacation-savings and those plans which offer "extended" or "sabbatical" benefits beyond basic plans to workers with qualifying lengths of service. Typical of such exclusions are plans in the steel, aluminum, and can industries.

[2] Includes data for wholesale trade, retail trade, real estate, and services, in addition to those industry divisions shown separately.

[3] Transportation, communication, and other public utilities.

[4] Includes data for wholesale trade; retail trade; finance, insurance, and real estate; and services, in addition to those industry divisions shown separately.

[5] Less than 0.5 percent.

[6] Includes payments other than "length of time," such as percentage of annual earnings or flat-sum payments, converted to an equivalent time basis; for example, a payment of 2 percent of annual earnings was considered as 1 week's pay. Periods of service were arbitrarily chosen and do not necessarily reflect the individual provisions for progressions. For example, the changes in proportions indicated at 10 years' service include changes in provisions occurring between 5 and 10 years. Estimates are cumulative. Thus, the proportion receiving 3 weeks' pay or more after 5 years includes those who receive 3 weeks' pay or more after fewer years of service.

Table B-6. Health, Insurance, and Pension Plans

(Percent of plant and office workers in all industries and in industry divisions employed in establishments providing health, insurance, or pension benefits,[1] Greenville, S.C., May 1966)

Type of benefit	Plant workers			Office workers		
	All industries[2]	Manufacturing	Public utilities[3]	All industries[4]	Manufacturing	Public utilities[3]
All workers	100	100	100	100	100	100
Workers in establishments providing:						
Life insurance	96	97	100	98	98	100
Accidental death and dismemberment insurance	50	50	68	51	45	73
Sickness and accident insurance or sick leave or both[5]	53	50	74	66	58	59
Sickness and accident insurance	47	49	21	43	46	22
Sick leave (full pay and no waiting period)	5	([6])	19	43	37	22
Sick leave (partial pay or waiting period)	3	1	34	5	([6])	26
Hospitalization insurance	93	94	100	98	98	100
Surgical insurance	92	93	100	97	98	100
Medical insurance	32	29	66	50	39	71
Catastrophe insurance	30	26	69	55	36	78
Retirement pension	48	47	74	63	57	74
No health, insurance, or pension plan	?	1	-	([6])	-	-

[1] Includes those plans for which at least a part of the cost is borne by the employer, except those legally required, such as workmen's compensation, social security, and railroad retirement.
[2] Includes data for wholesale trade, retail trade, real estate, and services, in addition to those industry divisions shown separately.
[3] Transportation, communication, and other public utilities.
[4] Includes data for wholesale trade; retail trade; finance, insurance, and real estate; and services, in addition to those industry divisions shown separately.
[5] Unduplicated total of workers receiving sick leave or sickness and accident insurance shown separately below. Sick leave plans are limited to those which definitely establish at least the minimum number of days' pay that can be expected by each employee. Informal sick leave allowances determined on an individual basis are excluded.
[6] Less than 0.5 percent.

Table B-7. Health Insurance Benefits Provided Employees and Their Dependents

(Percent of plant and office workers in all industries and in industry divisions employed in establishments providing health insurance benefits covering employees and their dependents, Greenville, S.C., May 1966)

Type of benefit, coverage, and financing[1]	Plant workers			Office workers		
	All industries[2]	Manufacturing	Public utilities[3]	All industries[4]	Manufacturing	Public utilities[3]
All workers	100	100	100	100	100	100
Workers in establishments providing:						
Hospitalization insurance	93	94	100	98	98	100
Covering employees only	29	30	24	38	31	35
Employer financed	15	15	24	21	17	35
Jointly financed	14	14	-	16	15	-
Covering employees and their dependents	64	65	76	60	67	65
Employer financed	5	3	41	7	7	23
Jointly financed	50	51	35	41	40	42
Employer financed for employees; jointly financed for dependents	9	11	-	10	17	-
Employer financed for dependents; jointly financed for employees	(5)	(5)	-	1	2	-
Surgical insurance	92	93	100	97	98	100
Covering employees only	28	29	24	37	31	35
Employer financed	15	15	24	21	17	35
Jointly financed	13	13	-	16	15	-
Covering employees and their dependents	64	65	76	60	67	65
Employer financed	5	3	41	7	7	23
Jointly financed	50	51	35	41	40	42
Employer financed for employees; jointly financed for dependents	9	11	-	10	17	-
Employer financed for dependents; jointly financed for employees	(5)	(5)	-	1	2	-
Medical insurance	32	29	66	50	39	71
Covering employees only	6	4	17	16	8	23
Employer financed	4	3	17	9	6	23
Jointly financed	2	1	-	7	1	-
Covering employees and their dependents	26	24	50	34	32	48
Employer financed	2	1	21	4	3	16
Jointly financed	17	15	29	20	13	32
Employer financed for employees; jointly financed for dependents	7	8	-	9	15	-
Employer financed for dependents; jointly financed for employees	-	-	-	-	-	-
Catastrophe insurance	30	26	69	55	36	78
Covering employees only	13	13	19	29	20	34
Employer financed	6	5	19	16	8	34
Jointly financed	8	8	-	13	12	-
Covering employees and their dependents	17	14	50	26	16	44
Employer financed	2	(5)	50	5	2	38
Jointly financed	15	13	-	19	10	6
Employer financed for employees; jointly financed for dependents	-	-	-	1	2	-
Employer financed for dependents; jointly financed for employees	(5)	(5)	-	1	2	-

[1] Includes plans for which at least a part of the cost is borne by the employer. See footnote 1, table B-6. An establishment was considered as providing benefits to employees for their dependents if such coverage was available to at least a majority of those employees one would usually expect to have dependents, e.g., married men, even though they were less than a majority of all plant or office workers. The employer bears the entire cost of "employer financed" plans. The employer and employee share the cost of "jointly financed" plans.

[2] Includes data for wholesale trade, retail trade, real estate, and services, in addition to those industry divisions shown separately.

[3] Transportation, communication, and other public utilities.

[4] Includes data for wholesale trade; retail trade; finance, insurance, and real estate; and services, in addition to those industry divisions shown separately.

[5] Less than 0.5 percent.

Table B-8. Profit-Sharing Plans

(Percent of plant and office workers in all industries and in industry divisions employed in establishments providing profit-sharing plans,[1] by type of plan, Greenville, S. C., May 1966)

Type of plan	Plant workers			Office workers		
	All industries[2]	Manufacturing	Public utilities[3]	All industries[4]	Manufacturing	Public utilities[3]
All workers	100	100	100	100	100	100
Workers in establishments providing profit-sharing plans	15	13	7	27	21	11
Plans providing for current distribution	-	-	-	-	-	-
Plans providing for deferred distribution	14	13	7	25	21	11
Plans providing for both current and deferred distribution	2	-	-	2	-	-
Plans providing for employee's choice of method of distribution	-	-	-	-	-	-
Workers in establishments providing no profit-sharing plans	85	87	93	73	79	89

[1] The study was limited to formal plans (1) having established formulas for the allocation of profit shares among employees; (2) whose formulas were communicated to the employees in advance of the determination of profits; (3) that represent a commitment by the company to make periodic contributions based on profits; and (4) in which eligibility extends to a majority of the plant or office workers.

[2] Includes data for wholesale trade, retail trade, real estate, and services, in addition to those industry divisions shown separately.

[3] Transportation, communication, and other public utilities.

[4] Includes data for wholesale trade; retail trade; finance, insurance, and real estate; and services, in addition to those industry divisions shown separately.

Appendix A. Changes in Occupational Descriptions

Since the Bureau's last survey, occupational descriptions for draftsman, secretary, and switchboard operator were revised in order to obtain salary information for more specific categories.

Secretary. The revised descriptions for secretary (classes A, B, C, and D) classify these workers according to levels of responsibility. The size of the organization and the scope of the supervisor's position are considered in distinguishing these levels. Data published under the composite title of secretary are not comparable to data previously published.

Switchboard operator. The revised description for switchboard operator arranges these workers into two defined classes (A and B) instead of a single category, clarifying the criteria of types of calls handled and types of information provided. The combination of class A and class B data, where both are published, is comparable to the single designation, if previously published.

Draftsman. The revised descriptions for draftsman (classes A, B, and C; and draftsman-tracer) replace the previous designations for draftsman (leader, senior, and junior; and tracer) and emphasize the distinction between drafting and design skills. Therefore, data presented for any of these occupations are not comparable to data previously published.

The revised occupational descriptions are included in appendix B.

Appendix B. Occupational Descriptions

The primary purpose of preparing job descriptions for the Bureau's wage surveys is to assist its field staff in classifying into appropriate occupations workers who are employed under a variety of payroll titles and different work arrangements from establishment to establishment and from area to area. This permits the grouping of occupational wage rates representing comparable job content. Because of this emphasis on interestablishment and interarea comparability of occupational content, the Bureau's job descriptions may differ significantly from those in use in individual establishments or those prepared for other purposes. In applying these job descriptions, the Bureau's field economists are instructed to exclude working supervisors, apprentices, learners, beginners, trainees, handicapped, part-time, temporary, and probationary workers.

OFFICE

BILLER, MACHINE

Prepares statements, bills, and invoices on a machine other than an ordinary or electromatic typewriter. May also keep records as to billings or shipping charges or perform other clerical work incidental to billing operations. For wage study purposes, billers, machine, are classified by type of machine, as follows:

Biller, machine (billing machine). Uses a special billing machine (Moon Hopkins, Elliott Fisher, Burroughs, etc., which are combination typing and adding machines) to prepare bills and invoices from customers' purchase orders, internally prepared orders, shipping memorandums, etc. Usually involves application of predetermined discounts and shipping charges, and entry of necessary extensions, which may or may not be computed on the billing machine, and totals which are automatically accumulated by machine. The operation usually involves a large number of carbon copies of the bill being prepared and is often done on a fanfold machine.

Biller, machine (bookkeeping machine). Uses a bookkeeping machine (Sundstrand, Elliott Fisher, Remington Rand, etc., which may or may not have typewriter keyboard) to prepare customers' bills as part of the accounts receivable operation. Generally involves the simultaneous entry of figures on customers' ledger record. The machine automatically accumulates figures on a number of vertical columns and computes, and usually prints automatically the debit or credit balances. Does not involve a knowledge of bookkeeping. Works from uniform and standard types of sales and credit slips.

BOOKKEEPING-MACHINE OPERATOR

Operates a bookkeeping machine (Remington Rand, Elliott Fisher, Sundstrand, Burroughs, National Cash Register, with or without a typewriter keyboard) to keep a record of business transactions.

Class A. Keeps a set of records requiring a knowledge of and experience in basic bookkeeping principles, and familiarity with the structure of the particular accounting system used. Determines proper records and distribution of debit and credit items to be used in each phase of the work. May prepare consolidated reports, balance sheets, and other records by hand.

Class B. Keeps a record of one or more phases or sections of a set of records usually requiring little knowledge of basic bookkeeping. Phases or sections include accounts payable, payroll, customers' accounts (not including a simple type of billing described under biller, machine), cost distribution, expense distribution, inventory control, etc. May check or assist in preparation of trial balances and prepare control sheets for the accounting department.

CLERK, ACCOUNTING

Class A. Under general direction of a bookkeeper or accountant, has responsibility for keeping one or more sections of a complete set of books or records relating to one phase of an establishment's business transactions. Work involves posting and balancing subsidiary

CLERK, ACCOUNTING—Continued

ledger or ledgers such as accounts receivable or accounts payable; examining and coding invoices or vouchers with proper accounting distribution; and requires judgment and experience in making proper assignations and allocations. May assist in preparing, adjusting, and closing journal entries; and may direct class B accounting clerks.

Class B. Under supervision, performs one or more routine accounting operations such as posting simple journal vouchers or accounts payable vouchers, entering vouchers in voucher registers; reconciling bank accounts; and posting subsidiary ledgers controlled by general ledgers, or posting simple cost accounting data. This job does not require a knowledge of accounting and bookkeeping principles but is found in offices in which the more routine accounting work is subdivided on a functional basis among several workers.

CLERK, FILE

Class A. In an established filing system containing a number of varied subject matter files, classifies and indexes file material such as correspondence, reports, technical documents, etc. May also file this material. May keep records of various types in conjunction with the files. May lead a small group of lower level file clerks.

Class B. Sorts, codes, and files unclassified material by simple (subject matter) headings or partly classified material by finer subheadings. Prepares simple related index and cross-reference aids. As requested, locates clearly identified material in files and forwards material. May perform related clerical tasks required to maintain and service files.

Class C. Performs routine filing of material that has already been classified or which is easily classified in a simple serial classification system (e.g., alphabetical, chronological, or numerical). As requested, locates readily available material in files and forwards material; and may fill out withdrawal charge. Performs simple clerical and manual tasks required to maintain and service files.

CLERK, ORDER

Receives customers' orders for material or merchandise by mail, phone, or personally. Duties involve any combination of the following: Quoting prices to customers; making out an order sheet listing the items

CLERK, ORDER—Continued

to make up the order; checking prices and quantities of items on order sheet; and distributing order sheets to respective departments to be filled. May check with credit department to determine credit rating of customer, acknowledge receipt of orders from customers, follow up orders to see that they have been filled, keep file of orders received, and check shipping invoices with original orders.

CLERK, PAYROLL

Computes wages of company employees and enters the necessary data on the payroll sheets. Duties involve: Calculating workers' earnings based on time or production records; and posting calculated data on payroll sheet, showing information such as worker's name, working days, time, rate, deductions for insurance, and total wages due. May make out paychecks and assist paymaster in making up and distributing pay envelopes. May use a calculating machine.

COMPTOMETER OPERATOR

Primary duty is to operate a Comptometer to perform mathematical computations. This job is not to be confused with that of statistical or other type of clerk, which may involve frequent use of a Comptometer but, in which, use of this machine is incidental to performance of other duties.

DUPLICATING-MACHINE OPERATOR (MIMEOGRAPH OR DITTO)

Under general supervision and with no supervisory responsibilities, reproduces multiple copies of typewritten or handwritten matter, using a Mimeograph or Ditto machine. Makes necessary adjustment such as for ink and paper feed counter and cylinder speed. Is not required to prepare stencil or Ditto master. May keep file of used stencils or Ditto masters. May sort, collate, and staple completed material.

KEYPUNCH OPERATOR

Class A. Operates a numerical and/or alphabetical or combination keypunch machine to transcribe data from various source documents to keypunch tabulating cards. Performs same tasks as lower level keypunch operator but, in addition, work requires application

KEYPUNCH OPERATOR—Continued

of coding skills and the making of some determinations, for example, locates on the source document the items to be punched; extracts information from several documents; and searches for and interprets information on the document to determine information to be punched. May train inexperienced operators.

Class B. Under close supervision or following specific procedures or instructions, transcribes data from source documents to punched cards. Operates a numerical and/or alphabetical or combination keypunch machine to keypunch tabulating cards. May verify cards. Working from various standardized source documents, follows specified sequences which have been coded or prescribed in detail and require little or no selecting, coding, or interpreting of data to be punched. Problems arising from erroneous items or codes, missing information, etc., are referred to supervisor.

OFFICE BOY OR GIRL

Performs various routine duties such as running errands, operating minor office machines such as sealers or mailers, opening and distributing mail, and other minor clerical work.

SECRETARY

Assigned as personal secretary, normally to one individual. Maintains a close and highly responsive relationship to the day-to-day work activities of the supervisor. Works fairly independently receiving a minimum of detailed supervision and guidance. Performs varied clerical and secretarial duties, usually including most of the following: (a) Receives telephone calls, personal callers, and incoming mail, answers routine inquiries, and routes the technical inquiries to the proper persons; (b) establishes, maintains, and revises the supervisor's files; (c) maintains the supervisor's calendar and makes appointments as instructed; (d) relays messages from supervisor to subordinates; (e) reviews correspondence, memoranda, and reports prepared by others for the supervisor's signature to assure procedural and typographic accuracy; and (f) performs stenographic and typing work.

May also perform other clerical and secretarial tasks of comparable nature and difficulty. The work typically requires knowledge of office routine and understanding of the organization, programs, and procedures related to the work of the supervisor.

SECRETARY—Continued

Exclusions

Not all positions that are titled "secretary" possess the above characteristics. Examples of positions which are excluded from the definition are as follows: (a) Positions which do not meet the "personal" secretary concept described above; (b) stenographers not fully trained in secretarial type duties; (c) stenographers serving as office assistants to a group of professional, technical, or managerial persons; (d) secretary positions in which the duties are either substantially more routine or substantially more complex and responsible than those characterized in the definition; and (e) assistant type positions which involve more difficult or more responsible technical, administrative, supervisory, or specialized clerical duties which are not typical of secretarial work.

NOTE: The term "corporate officer," used in the level definitions following, refers to those officials who have a significant corporate-wide policymaking role with regard to major company activities. The title "vice president," though normally indicative of this role, does not in all cases identify such positions. Vice presidents whose primary responsibility is to act personally on individual cases or transactions (e.g., approve or deny individual loan or credit actions; administer individual trust accounts; directly supervise a clerical staff) are not considered to be "corporate officers" for purposes of applying the following level definitions.

Class A

a. Secretary to the chairman of the board or president of a company that employes, in all, over 100 but fewer than 5,000 persons; or

b. Secretary to a corporate officer (other than the chairman of the board or president) of a company that employs, in all, over 5,000 but fewer than 25,000 persons; or

c. Secretary to the head (immediately below the corporate officer level) of a major segment or subsidiary of a company that employs, in all, over 25,000 persons.

Class B

a. Secretary to the chairman of the board or president of a company that employs, in all, fewer than 100 persons; or

b. Secretary to a corporate officer (other than chairman of the board or president) of a company that employs, in all, over 100 but fewer than 5,000 persons; or

SECRETARY—Continued

c. Secretary to the head (immediately below the officer level) over either a major corporate-wide functional activity (e. g., marketing, research, operations, industrial relations, etc.) or a major geographic or organizational segment (e. g., a regional headquarters; a major division) of a company that employs, in all, over 5,000 but fewer than 25,000 employees; or

d. Secretary to the head of an individual plant, factory, etc. (or other equivalent level of official) that employs, in all, over 5,000 persons; or

e. Secretary to the head of a large and important organizational segment (e. g., a middle management supervisor of an organizational segment often involving as many as several hundred persons) of a company that employs, in all, over 25,000 persons.

Class C

a. Secretary to an executive or managerial person whose responsibility is not equivalent to one of the specific level situations in the definition for class B, but whose subordinate staff normally numbers at least several dozen employees and is usually divided into organizational segments which are often, in turn, further subdivided. In some companies, this level includes a wide range of organizational echelons; in others, only one or two; or

b. Secretary to the head of an individual plant, factory, etc. (or other equivalent level of official) that employs, in all, fewer than 5,000 persons.

Class D

a. Secretary to the supervisor or head of a small organizational unit (e. g., fewer than about 25 or 30 persons); or

b. Secretary to a nonsupervisory staff specialist, professional employee, administrative officer, or assistant, skilled technician or expert. (NOTE: Many companies assign stenographers, rather than secretaries as described above, to this level of supervisory or nonsupervisory worker.)

STENOGRAPHER, GENERAL

Primary duty is to take dictation involving a normal routine vocabulary from one or more persons either in shorthand or by Stenotype or similar machine; and transcribe dictation. May also type from written copy.

STENOGRAPHER, GENERAL—Continued

May maintain files, keep simple records, or perform other relatively routine clerical tasks. May operate from a stenographic pool. Does not include transcribing-machine work. (See transcribing-machine operator.)

STENOGRAPHER, SENIOR

Primary duty is to take dictation involving a varied technical or specialized vocabulary such as in legal briefs or reports on scientific research from one or more persons either in shorthand or by Stenotype or similar machine; and transcribe dictation. May also type from written copy. May also set up and maintain files, keep records, etc.

OR

Performs stenographic duties requiring significantly greater independence and responsibility than stenographers, general as evidenced by the following: Work requires high degree of stenographic speed and accuracy; and a thorough working knowledge of general business and office procedures and of the specific business operations, organization, policies, procedures, files, workflow, etc. Uses this knowledge in performing stenographic duties and responsible clerical tasks such as, maintaining followup files; assembling material for reports, memorandums, letters, etc.; composing simple letters from general instructions; reading and routing incoming mail; and answering routine questions, etc. Does not include transcribing-machine work.

SWITCHBOARD OPERATOR

Class A. Operates a single- or multiple-position telephone switchboard handling incoming, outgoing, intraplant or office calls. Performs full telephone information service or handles complex calls, such as conference, collect, overseas, or similar calls, either in addition to doing routine work as described for switchboard operator, class B, or as a full-time assignment. ("Full" telephone information service occurs when the establishment has varied functions that are not readily understandable for telephone information purposes, e. g., because of overlapping or interrelated functions, and consequently present frequent problems as to which extensions are appropriate for calls.)

Class B. Operates a single- or multiple-position telephone switchboard handling incoming, outgoing, intraplant or office calls. May handle routine long distance calls and record tolls. May perform limited telephone information service. ("Limited" telephone information service occurs if the functions of the establishment serviced are readily understandable for telephone information purposes, or if the requests are routine, e. g., giving extension numbers when specific names are furnished, or if complex calls are referred to another operator.)

SWITCHBOARD OPERATOR-RECEPTIONIST

In addition to performing duties of operator on a single position or monitor-type switchboard, acts as receptionist and may also type or perform routine clerical work as part of regular duties. This typing or clerical work may take the major part of this worker's time while at switchboard.

TABULATING-MACHINE OPERATOR

Class A. Operates a variety of tabulating or electrical accounting machines, typically including such machines as the tabulator, calculator, interpreter, collator, and others. Performs complete reporting assignments without close supervision, and performs difficult wiring as required. The complete reporting and tabulating assignments typically involve a variety of long and complex reports which often are of irregular or nonrecurring type requiring some planning and sequencing of steps to be taken. As a more experienced operator, is typically involved in training new operators in machine operations, or partially trained operators in wiring from diagrams and operating sequences of long and complex reports. Does not include working supervisors performing tabulating-machine operations and day-to-day supervision of the work and production of a group of tabulating-machine operators.

Class B. Operates more difficult tabulating or electrical accounting machines such as the tabulator and calculator, in addition to the sorter, reproducer, and collator. This work is performed under specific instructions and may include the performance of some wiring from diagrams. The work typically involves, for example, tabulations involving a repetitive accounting exercise, a complete but small tabulating study, or parts of a longer and more complex report. Such reports and studies are usually of a recurring nature where the procedures are well established. May also include the training of new employees in the basic operation of the machine.

Class C. Operates simple tabulating or electrical accounting machines such as the sorter, reproducing punch, collator, etc., with

TABULATING-MACHINE OPERATOR—Continued

specific instructions. May include simple wiring from diagrams and some filing work. The work typically involves portions of a work unit, for example, individual sorting or collating runs or repetitive operations.

TRANSCRIBING-MACHINE OPERATOR, GENERAL

Primary duty is to transcribe dictation involving a normal routine vocabulary from transcribing-machine records. May also type from written copy and do simple clerical work. Workers transcribing dictation involving a varied technical or specialized vocabulary such as legal briefs or reports on scientific research are not included. A worker who takes dictation in shorthand or by Stenotype or similar machine is classified as a stenographer, general.

TYPIST

Uses a typewriter to make copies of various material or to make out bills after calculations have been made by another person. May include typing of stencils, mats, or similar materials for use in duplicating processes. May do clerical work involving little special training, such as keeping simple records, filing records and reports, or sorting and distributing incoming mail.

Class A. Performs one or more of the following: Typing material in final form when it involves combining material from several sources or responsibility for correct spelling, syllabication, punctuation, etc., of technical or unusual words or foreign language material; and planning layout and typing of complicated statistical tables to maintain uniformity and balance in spacing. May type routine form letters varying details to suit circumstances.

Class B. Performs one or more of the following: Copy typing from rough or clear drafts; routine typing of forms, insurance policies, etc.; and setting up simple standard tabulations, or copying more complex tables already setup and spaced properly.

PROFESSIONAL AND TECHNICAL

DRAFTSMAN

Class A. Plans the graphic presentation of complex items having distinctive design features that differ significantly from established drafting precedents. Works in close support with the design originator, and may recommend minor design changes. Analyzes the effect of each change on the details of form, function, and positional relationships of components and parts. Works with a minimum of supervisory assistance. Completed work is reviewed by design originator for consistency with prior engineering determinations. May either prepare drawings, or direct their preparation by lower level draftsmen.

Class B. Performs nonroutine and complex drafting assignments that require the application of most of the standardized drawing techniques regularly used. Duties typically involve such work as: Prepares working drawings of subassemblies with irregular shapes, multiple functions, and precise positional relationships between components; prepares architectural drawings for construction of a building including detail drawings of foundations, wall sections, floor plans, and roof. Uses accepted formulas and manuals in making necessary computations to determine quantities of materials to be used, load capacities, strengths, stresses, etc. Receives initial instructions, requirements, and advice from supervisor. Completed work is checked for technical adequacy.

Class C. Prepares detail drawings of single units or parts for engineering, construction, manufacturing, or repair purposes. Types of drawings prepared include isometric projections (depicting three dimensions in accurate scale) and sectional views to clarify positioning of components and convey needed information. Consolidates details from a number of sources and adjusts or transposes scale as required.

DRAFTSMAN—Continued

Suggested methods of approach, applicable precedents, and advice on source materials are given with initial assignments. Instructions are less complete when assignments recur. Work may be spot-checked during progress.

DRAFTSMAN-TRACER

Copies plans and drawings prepared by others by placing tracing cloth or paper over drawings and tracing with pen or pencil. (Does not include tracing limited to plans primarily consisting of straight lines and a large scale not requiring close delineation.)

and/or

Prepares simple or repetitive drawings of easily visualized items. Work is closely supervised during progress.

NURSE, INDUSTRIAL (REGISTERED)

A registered nurse who gives nursing service under general medical direction to ill or injured employees or other persons who become ill or suffer an accident on the premises of a factory or other establishment. Duties involve a combination of the following: Giving first aid to the ill or injured; attending to subsequent dressing of employees' injuries; keeping records of patients treated; preparing accident reports for compensation or other purposes; assisting in physical examinations and health evaluations of applicants and employees; and planning and carrying out programs involving health education, accident prevention, evaluation of plant environment, or other activities affecting the health, welfare, and safety of all personnel.

MAINTENANCE AND POWERPLANT

CARPENTER, MAINTENANCE

Performs the carpentry duties necessary to construct and maintain in good repair building woodwork and equipment such as bins, cribs, counters, benches, partitions, doors, floors, stairs, casings, and trim made of wood in an establishment. Work involves most of the following: Planning and laying out of work from blueprints, drawings, models, or verbal instructions; using a variety of carpenter's handtools, portable power tools,

CARPENTER, MAINTENANCE—Continued

and standard measuring instruments; making standard shop computations relating to dimensions of work; and selecting materials necessary for the work. In general, the work of the maintenance carpenter requires rounded training and experience usually acquired through a formal apprenticeship or equivalent training and experience.

ELECTRICIAN, MAINTENANCE

Performs a variety of electrical trade functions such as the installation, maintenance, or repair of equipment for the generation, distribution, or utilization of electric energy in an establishment. Work involves most of the following: Installing or repairing any of a variety of electrical equipment such as generators, transformers, switchboards, controllers, circuit breakers, motors, heating units, conduit systems, or other transmission equipment; working from blueprints, drawings, layouts, or other specifications; locating and diagnosing trouble in the electrical system or equipment; working standard computations relating to load requirements of wiring or electrical equipment; and using a variety of electrician's handtools and measuring and testing instruments. In general, the work of the maintenance electrician requires rounded training and experience usually acquired through a formal apprenticeship or equivalent training and experience.

ENGINEER, STATIONARY

Operates and maintains and may also supervise the operation of stationary engines and equipment (mechanical or electrical) to supply the establishment in which employed with power, heat, refrigeration, or air-conditioning. Work involves: Operating and maintaining equipment such as steam engines, air compressors, generators, motors, turbines, ventilating and refrigerating equipment, steam boilers and boiler-fed water pumps; making equipment repairs; and keeping a record of operation of machinery, temperature, and fuel consumption. May also supervise these operations. Head or chief engineers in establishments employing more than one engineer are excluded.

FIREMAN, STATIONARY BOILER

Fires stationary boilers to furnish the establishment in which employed with heat, power, or steam. Feeds fuels to fire by hand or operates a mechanical stoker, or gas or oil burner; and checks water and safety valves. May clean, oil, or assist in repairing boilerroom equipment.

HELPER, MAINTENANCE TRADES

Assists one or more workers in the skilled maintenance trades, by performing specific or general duties of lesser skill, such as keeping

HELPER, MAINTENANCE TRADES—Continued

a worker supplied with materials and tools; cleaning working area, machine, and equipment; assisting journeyman by holding materials or tools; and performing other unskilled tasks as directed by journeyman. The kind of work the helper is permitted to perform varies from trade to trade: In some trades the helper is confined to supplying, lifting, and holding materials and tools and cleaning working areas; and in others he is permitted to perform specialized machine operations, or parts of a trade that are also performed by workers on a full-time basis.

MACHINE-TOOL OPERATOR, TOOLROOM

Specializes in the operation of one or more types of machine tools, such as jig borers, cylindrical or surface grinders, engine lathes, or milling machines, in the construction of machine-shop tools, gages, jigs, fixtures, or dies. Work involves most of the following: Planning and performing difficult machining operations; processing items requiring complicated setups or a high degree of accuracy; using a variety of precision measuring instruments; selecting feeds, speeds, tooling, and operation sequence; and making necessary adjustments during operation to achieve requisite tolerances or dimensions. May be required to recognize when tools need dressing, to dress tools, and to select proper coolants and cutting and lubricating oils. For cross-industry wage study purposes, machine-tool operators, toolroom, in tool and die jobbing shops are excluded from this classification.

MACHINIST, MAINTENANCE

Produces replacement parts and new parts in making repairs of metal parts of mechanical equipment operated in an establishment. Work involves most of the following: Interpreting written instructions and specifications; planning and laying out of work; using a variety of machinist's handtools and precision measuring instruments; setting up and operating standard machine tools; shaping of metal parts to close tolerances; making standard shop computations relating to dimensions of work, tooling, feeds, and speeds of machining; knowledge of the working properties of the common metals; selecting standard materials, parts, and equipment required for his work; and fitting and assembling parts into mechanical equipment. In general, the machinist's work normally requires a rounded training in machine-shop practice usually acquired through a formal apprenticeship or equivalent training and experience.

MECHANIC, AUTOMOTIVE (MAINTENANCE)

Repairs automobiles, buses, motortrucks, and tractors of an establishment. Work involves most of the following: Examining automotive equipment to diagnose source of trouble; disassembling equipment and performing repairs that involve the use of such handtools as wrenches, gages, drills, or specialized equipment in disassembling or fitting parts; replacing broken or defective parts from stock; grinding and adjusting valves; reassembling and installing the various assemblies in the vehicle and making necessary adjustments; and alining wheels, adjusting brakes and lights, or tightening body bolts. In general, the work of the automotive mechanic requires rounded training and experience usually acquired through a formal apprenticeship or equivalent training and experience.

MECHANIC, MAINTENANCE

Repairs machinery or mechanical equipment of an establishment. Work involves most of the following: Examining machines and mechanical equipment to diagnose source of trouble; dismantling or partly dismantling machines and performing repairs that mainly involve the use of handtools in scraping and fitting parts; replacing broken or defective parts with items obtained from stock; ordering the production of a replacement part by a machine shop or sending of the machine to a machine shop for major repairs; preparing written specifications for major repairs or for the production of parts ordered from machine shop; reassembling machines; and making all necessary adjustments for operation. In general, the work of a maintenance mechanic requires rounded training and experience usually acquired through a formal apprenticeship or equivalent training and experience. Excluded from this classification are workers whose primary duties involve setting up or adjusting machines.

MILLWRIGHT

Installs new machines or heavy equipment, and dismantles and installs machines or heavy equipment when changes in the plant layout are required. Work involves most of the following: Planning and laying out of the work; interpreting blueprints or other specifications; using a variety of handtools and rigging; making standard shop computations relating to stresses, strength of materials, and centers of gravity; alining and balancing of equipment; selecting standard tools, equipment, and parts to be used; and installing and maintaining in good order power transmission equipment such as drives and speed reducers. In general, the millwright's work normally requires a rounded training and experience in the trade acquired through a formal apprenticeship or equivalent training and experience.

OILER

Lubricates, with oil or grease, the moving parts or wearing surfaces of mechanical equipment of an establishment.

PAINTER, MAINTENANCE

Paints and redecorates walls, woodwork, and fixtures of an establishment. Work involves the following: Knowledge of surface peculiarities and types of paint required for different applications; preparing surface for painting by removing old finish or by placing putty or filler in nail holes and interstices; and applying paint with spray gun or brush. May mix colors, oils, white lead, and other paint ingredients to obtain proper color or consistency. In general, the work of the maintenance painter requires rounded training and experience usually acquired through a formal apprenticeship or equivalent training and experience.

PIPEFITTER, MAINTENANCE

Installs or repairs water, steam, gas, or other types of pipe and pipefittings in an establishment. Work involves most of the following: Laying out of work and measuring to locate position of pipe from drawings or other written specifications; cutting various sizes of pipe to correct lengths with chisel and hammer or oxyacetylene torch or pipe-cutting machine; threading pipe with stocks and dies; bending pipe by hand-driven or power-driven machines; assembling pipe with couplings and fastening pipe to hangers; making standard shop computations relating to pressures, flow, and size of pipe required; and making standard tests to determine whether finished pipes meet specifications. In general, the work of the maintenance pipefitter requires rounded training and experience usually acquired through a formal apprenticeship or equivalent training and experience. Workers primarily engaged in installing and repairing building sanitation or heating systems are excluded.

PLUMBER, MAINTENANCE

Keeps the plumbing system of an establishment in good order. Work involves: Knowledge of sanitary codes regarding installation of vents and traps in plumbing system; installing or repairing pipes and fixtures; and opening clogged drains with a plunger or plumber's snake. In general, the work of the maintenance plumber requires rounded training and experience usually acquired through a formal apprenticeship or equivalent training and experience.

SHEET-METAL WORKER, MAINTENANCE

Fabricates, installs, and maintains in good repair the sheet-metal equipment and fixtures (such as machine guards, grease pans, shelves, lockers, tanks, ventilators, chutes, ducts, metal roofing) of an establishment. Work involves most of the following: Planning and laying out all types of sheet-metal maintenance work from blueprints, models, or other specifications; setting up and operating all available types of sheet-metal-working machines; using a variety of handtools in cutting, bending, forming, shaping, fitting, and assembling; and installing sheet-metal articles as required. In general, the work of the maintenance sheet-metal worker requires rounded training and experience usually acquired through a formal apprenticeship or equivalent training and experience.

TOOL AND DIE MAKER

(Die maker; jig maker; tool maker; fixture maker; gage maker)

Constructs and repairs machine-shop tools, gages, jigs, fixtures or dies for forgings, punching, and other metal-forming work. Work involves most of the following: Planning and laying out of work from models, blueprints, drawings, or other oral and written specifications; using a variety of tool and die maker's handtools and precision measuring instruments, understanding of the working properties of common metals and alloys; setting up and operating of machine tools and related equipment; making necessary shop computations relating to dimensions of work, speeds, feeds, and tooling of machines; heattreating of metal parts during fabrication as well as of finished tools and dies to achieve required qualities; working to close tolerances; fitting and assembling of parts to prescribed tolerances and allowances; and selecting appropriate materials, tools, and processes. In general, the tool and die maker's work requires a rounded training in machine-shop and toolroom practice usually acquired through a formal apprenticeship or equivalent training and experience.

For cross-industry wage study purposes, tool and die makers in tool and die jobbing shops are excluded from this classification.

CUSTODIAL AND MATERIAL MOVEMENT

ELEVATOR OPERATOR, PASSENGER

Transports passengers between floors of an office building, apartment house, department store, hotel, or similar establishment. Workers who operate elevators in conjunction with other duties such as those of starters and janitors are excluded.

GUARD

Performs routine police duties, either at fixed post or on tour, maintaining order, using arms or force where necessary. Includes gatemen who are stationed at gate and check on identity of employees and other persons entering.

JANITOR, PORTER, OR CLEANER

(Sweeper; charwoman; janitress)

Cleans and keeps in an orderly condition factory working areas and washrooms, or premises of an office, apartment house, or commercial or other establishment. Duties involve a combination of the following: Sweeping, mopping or scrubbing, and polishing floors; removing chips, trash, and other refuse; dusting equipment, furniture, or fixtures; polishing metal fixtures or trimmings; providing supplies and minor maintenance services; and cleaning lavatories, showers, and restrooms. Workers who specialize in window washing are excluded.

LABORER, MATERIAL HANDLING

(Loader and unloader; handler and stacker; shelver; trucker; stockman or stock helper; warehouseman or warehouse helper)

A worker employed in a warehouse, manufacturing plant, store, or other establishment whose duties involve one or more of the following: Loading and unloading various materials and merchandise on or from freight cars, trucks, or other transporting devices; unpacking, shelving, or placing materials or merchandise in proper storage location; and transporting materials or merchandise by handtruck, car, or wheelbarrow. Longshoremen, who load and unload ships are excluded.

ORDER FILLER

(Order picker; stock selector; warehouse stockman)

Fills shipping or transfer orders for finished goods from stored merchandise in accordance with specifications on sales slips, customers' orders, or other instructions. May, in addition to filling orders and indicating items filled or omitted, keep records of outgoing orders, requisition additional stock or report short supplies to supervisor, and perform other related duties.

PACKER, SHIPPING

Prepares finished products for shipment or storage by placing them in shipping containers, the specific operations performed being dependent upon the type, size, and number of units to be packed, the type of container employed, and method of shipment. Work requires the placing of items in shipping containers and may involve one or more of the following: Knowledge of various items of stock in order to verify content; selection of appropriate type and size of container; inserting enclosures in container; using excelsior or other material to prevent breakage or damage; closing and sealing container; and applying labels or entering identifying data on container. Packers who also make wooden boxes or crates are excluded.

SHIPPING AND RECEIVING CLERK

Prepares merchandise for shipment, or receives and is responsible for incoming shipments of merchandise or other materials. Shipping work involves: A knowledge of shipping procedures, practices, routes, available means of transportation, and rates; and preparing records of the goods shipped, making up bills of lading, posting weight and shipping charges, and keeping a file of shipping records. May direct or assist in preparing the merchandise for shipment. Receiving work involves: Verifying or directing others in verifying the correctness of shipments against bills of lading, invoices, or other records; checking for shortages and rejecting damaged goods; routing merchandise or materials to proper departments; and maintaining necessary records and files.

For wage study purposes, workers are classified as follows:

Receiving clerk
Shipping clerk
Shipping and receiving clerk

TRUCKDRIVER

Drives a truck within a city or industrial area to transport materials, merchandise, equipment, or men between various types of establishments such as: Manufacturing plants, freight depots, warehouses, wholesale and retail establishments, or between retail establishments and customers' houses or places of business. May also load or unload truck with or without helpers, make minor mechanical repairs, and keep truck in good working order. Driver-salesmen and over-the-road drivers are excluded.

For wage study purposes, truckdrivers are classified by size and type of equipment, as follows: (Tractor-trailer should be rated on the basis of trailer capacity.)

Truckdriver (combination of sizes listed separately)
Truckdriver, light (under $1^1/_2$ tons)
Truckdriver, medium ($1^1/_2$ to and including 4 tons)
Truckdriver, heavy (over 4 tons, trailer type)
Truckdriver, heavy (over 4 tons, other than trailer type)

TRUCKER, POWER

Operates a manually controlled gasoline- or electric-powered truck or tractor to transport goods and materials of all kinds about a warehouse, manufacturing plant, or other establishment.

For wage study purposes, workers are classified by type of truck, as follows:

Trucker, power (forklift)
Trucker, power (other than forklift)

WATCHMAN

Makes rounds of premises periodically in protecting property against fire, theft, and illegal entry.

Available On Request—

The sixth annual report on salaries for accountants, auditors, attorneys, chemists, engineers, engineering technicians, draftsmen, tracers, job analysts, directors of personnel, managers of office services, and clerical employees.

Order as BLS Bulletin 1469, National Survey of Professional, Administrative, Technical, and Clerical Pay, February–March 1965. 45 cents a copy.

Area Wage Surveys*

A list of the latest available bulletins is presented below. A directory indicating dates of earlier studies, and the prices of the bulletins is available on request. Bulletins may be purchased from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C., 20402, or from any of the BLS regional sales offices shown on the inside front cover.

Area	Bulletin number and price	
Akron, Ohio, June 1965	1430-78,	25 cents
Albany–Schenectady–Troy, N.Y., Apr. 1966[1]	1465-60,	25 cents
Albuquerque, N. Mex., Apr. 1966[1]	1465-64,	25 cents
Allentown–Bethlehem–Easton, Pa.–N.J., Feb. 1966[1]	1465-53,	25 cents
Atlanta, Ga., May 1966[1]	1465-71,	30 cents
Baltimore, Md., Nov. 1965	1465-29,	25 cents
Beaumont–Port Arthur–Orange, Tex., May 1966[1]	1465-63,	25 cents
Birmingham, Ala., Apr. 1966	1465-56,	20 cents
Boise City, Idaho, July 1965	1465-1,	20 cents
Boston, Mass., Oct. 1965[1]	1465-12,	30 cents
Buffalo, N.Y., Dec. 1965	1465-36,	25 cents
Burlington, Vt., Mar. 1966	1465-54,	20 cents
Canton, Ohio, Apr. 1966[1]	1465-58,	25 cents
Charleston, W. Va., Apr. 1966[1]	1465-70,	25 cents
Charlotte, N.C., Apr. 1966[1]	1465-67,	25 cents
Chattanooga, Tenn.–Ga., Sept. 1965	1465-7,	20 cents
Chicago, Ill., Apr. 1966[1]	1465-68,	30 cents
Cincinnati, Ohio–Ky.–Ind., Mar. 1966[1]	1465-57,	25 cents
Cleveland, Ohio, Sept. 1965	1465-8,	25 cents
Columbus, Ohio, Oct. 1965	1465-15,	25 cents
Dallas, Tex., Nov. 1965	1465-24,	25 cents
Davenport–Rock Island–Moline, Iowa–Ill., Oct. 1965	1465-16,	20 cents
Dayton, Ohio, Jan. 1966[1]	1465-39,	25 cents
Denver, Colo., Dec. 1965[1]	1465-33,	30 cents
Des Moines, Iowa, Feb. 1966[1]	1465-48,	25 cents
Detroit, Mich., Jan. 1966	1465-45,	25 cents
Fort Worth, Tex., Nov. 1965	1465-26,	20 cents
Green Bay, Wis., Aug. 1965	1465-4,	20 cents
Greenville, S.C., May 1966[1]	1465-74,	25 cents
Houston, Tex., June 1965	1430-82,	25 cents
Indianapolis, Ind., Dec. 1965[1]	1465-31,	30 cents
Jackson, Miss., Feb. 1966[1]	1465-44,	25 cents
Jacksonville, Fla., Jan. 1966	1465-41,	20 cents
Kansas City, Mo.–Kans., Nov. 1965[1]	1465-27,	30 cents
Lawrence–Haverhill, Mass.–N.H., June 1965	1430-75,	20 cents
Little Rock–North Little Rock, Ark., Aug. 1965	1465-6,	20 cents
Los Angeles–Long Beach and Anaheim–Santa Ana–Garden Grove, Calif., Mar. 1966[1]	1465-59,	30 cents
Louisville, Ky.–Ind., Feb. 1966	1465-51,	20 cents
Lubbock, Tex., June 1965	1430-73,	20 cents
Manchester, N.H., Aug. 1965	1465-2,	20 cents
Memphis, Tenn.–Ark., Jan. 1966[1]	1465-42,	30 cents
Miami, Fla., Dec. 1965[1]	1465-30,	25 cents
Midland and Odessa, Tex	(Not previously surveyed)	
Milwaukee, Wis., Apr. 1966	1465-61,	20 cents
Minneapolis–St. Paul, Minn., Jan. 1966	1465-38,	25 cents
Muskegon–Muskegon Heights, Mich., May 1966[1]	1465-72,	25 cents
Newark and Jersey City, N.J., Feb. 1966[1]	1465-50,	30 cents
New Haven, Conn., Jan. 1966[1]	1465-37,	25 cents
New Orleans, La., Feb. 1966	1465-47,	20 cents
New York, N.Y., Apr. 1965[1]	1430-80,	40 cents
Norfolk–Portsmouth and Newport News–Hampton, Va., June 1965[1]	1430-77,	25 cents
Oklahoma City, Okla., Aug. 1965	1465-5,	20 cents
Omaha, Nebr.–Iowa, Oct. 1965[1]	1465-13,	25 cents
Paterson–Clifton–Passaic, N.J., May 1965	1430-71,	25 cents
Philadelphia, Pa.–N.J., Nov. 1965[1]	1465-35,	35 cents
Phoenix, Ariz., Mar. 1966[1]	1465-62,	25 cents
Pittsburgh, Pa., Jan. 1966	1465-46,	25 cents
Portland, Maine, Nov. 1965[1]	1465-23,	25 cents
Portland, Oreg.–Wash., May 1966[1]	1465-73,	25 cents
Providence–Pawtucket–Warwick, R.I.–Mass., May 1966	1465-65,	25 cents
Raleigh, N.C., Sept. 1965[1]	1465-10,	25 cents
Richmond, Va., Nov. 1965[1]	1465-28,	30 cents
Rockford, Ill., May 1966[1]	1465-66,	25 cents
St. Louis, Mo.–Ill., Oct. 1965	1465-22,	25 cents
Salt Lake City, Utah, Dec. 1965	1465-32,	20 cents
San Antonio, Tex., June 1965[1]	1430-81,	25 cents
San Bernardino–Riverside–Ontario, Calif., Sept. 1965[1]	1465-20,	30 cents
San Diego, Calif., Nov. 1965	1465-21,	20 cents
San Francisco–Oakland, Calif., Jan. 1966[1]	1465-43,	30 cents
San Jose, Calif., Sept. 1965[1]	1465-19,	25 cents
Savannah, Ga., May 1966[1]	1465-69,	25 cents
Scranton, Pa., Aug. 1965[1]	1465-3,	25 cents
Seattle–Everett, Wash., Oct. 1965[1]	1465-9,	30 cents
Sioux Falls, S. Dak., Oct. 1965[1]	1465-17,	25 cents
South Bend, Ind., Mar. 1966[1]	1465-55,	25 cents
Spokane, Wash., June 1965[1]	1430-79,	25 cents
Toledo, Ohio–Mich., Feb. 1966	1465-49,	20 cents
Trenton, N.J., Dec. 1965	1465-34,	20 cents
Washington, D.C.–Md.–Va., Oct. 1965	1465-14,	25 cents
Waterbury, Conn., Mar. 1966[1]	1465-52,	25 cents
Waterloo, Iowa, Nov. 1965	1465-18,	20 cents
Wichita, Kans., Oct. 1965	1465-11,	20 cents
Worcester, Mass., June 1965	1430-76,	25 cents
York, Pa., Feb. 1966[1]	1465-40,	25 cents
Youngstown–Warren, Ohio, Nov. 1965[1]	1465-25,	25 cents

[1] Data on establishment practices and supplementary wage provisions are also presented.

* Bulletins dated before July 1965 were entitled "Occupational Wage Surveys."

VT 001 578
Criteria for Determining Approval of Vocational Units and Fractional Units in Home Economics.

Ohio State Dept. of Education, Columbus. Home Economics Section
MF AVAILABLE IN VT-ERIC SET.
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*HOMEMAKING EDUCATION; *OCCUPATIONAL HOME ECONOMICS; STATE LEGISLATION; *EDUCATIONAL FINANCE; SECONDARY SCHOOLS; *PROGRAM DEVELOPMENT; CRITERIA; TEACHER QUALIFICATIONS; COOPERATIVE EDUCATION; *STATE STANDARDS OHIO

The home economics program and the various forms that it may take are described. Suggested as possibilities for secondary schools are: 4-year programs, a 3-year program, 2-year programs, and additional offerings in family living, non-prerequisite home economics, a class for slow learners, special interest classes, and occupational home economics. Specific regulations are listed which apply to time schedules, class size, teacher qualifications, course content, and other aspects of the program. Whole or fractional units are listed for homemaking and occupational home economics as well as for cooperative work experience programs. (MS)

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U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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Revised 1964

The State Department of Education
Division of Vocational Education
Home Economics Section
220 South Parsons Avenue
Columbus, Ohio

CRITERIA FOR DETERMINING APPROVAL OF VOCATIONAL UNITS AND FRACTIONAL UNITS IN HOME ECONOMICS

I. Approval of vocational units under the School Foundation Program for home economics shall be based on the following:

A. A complete home economics program includes the following:

1. Instruction to prepare youth (girls and boys) who are 14 or older for those responsibilities and activities in homemaking.
2. Supervision of home experience work.
3. Home visits.
4. Employment of teacher for instruction beyond the regular school year.
5. Sponsorship of the Association of Future Homemakers of America organization.
6. Provision for instruction of out-of-school youth who are 16 years of age or older and adults.

B. A program may be selected from any one of the following types:

1. 4-year program (Home Economics I, II, III & IV in sequence).
2. 4-year program in sequence with alternating III & IV.
3. 3-year program (Home Economics I, II & III in sequence).
4. 2-year basic program (Home Economics I & II, in sequence), <u>with</u> one or more additional program offerings listed under 1-B-6. These additional program offerings may be structured on a semester or yearly basis and are not part of a sequence.
5. 2-year program (Home Economics I and II in sequence).

6. Additional program offerings:

   a. Class in the Family Living area for students, girls or girls and boys, on the advanced level (11th and 12th grades). This course may be offered to students having no previous home economics in high school.

   b. Class in home economics for girls, irrespective of course major, academic or commercial, etc., on the advanced level (11th and 12th grades). This course may be offered to students having no previous home economics in high school. The offerings of this course should include several areas of homemaking.

   c. Class for slow learners.

   d. Other classes on a semester or yearly basis may be approved as needs may arise.

C. Each of the above types of program shall also conform to the following criteria:

   1. <u>Time Schedule.</u>

      a. When schools operate on a 55 to 60 minute period, one period per day shall be allowed for each class.

      b. When schools operate on a 40 - 45 minute period <u>either</u> two consecutive periods five days a week or single periods three days a week and double (two consecutive) periods for two days a week shall be provided for each class in Homemaking I and II.

      c. A single 40 - 45 minute period daily with limited laboratory instruction for Homemaking III and/or IV, or other advanced level classes may be provided.

d. A double 40 - 45 minute period with laboratory instruction for Homemaking III and IV, and other advanced level classes may be provided if there is a need.

e. Each vocational home economics teacher shall have at least one conference period daily for working with students concerning home experiences and other activities included in the vocational program. An additional conference period may be approved if justifiable.

f. One half day may be allowed for a job training program utilizing home economics knowledge and skills. This time may be devoted to class instruction, planning for and supervising work experience.

2. Size of Class

Class size will be determined by the number of students which the space and equipment can accomodate. These facilities shall be sufficient to accomodate at least 12 to 26 students in any one class and preferably not more than 30 students.

3. Teacher Qualifications.

The teacher shall meet qualifications to teach vocational home economics as prescribed in the State Plan for Vocational Education.

4. Instructional Content.

The scope of instruction shall include foods and nutrition, textiles and clothing, housing, home equipment and furnishings, child development, family relations, consumer education and home management.

5. Department Requirements.

Adequate space, equipment, library, supplies, storage and maintenance must be provided by the local Board of Education.

6. Teacher Travel.

An allowance should be set up by the local Board of Education for travel of the teacher in conducting and supervising the Vocational Home Economics program, and attending State sponsored conferences and meetings. The local Board of Education will be reimbursed approximately 75% of this approved mileage for travel from the Vocational funds.

7. Annual Conferences and Workshops.

The local Board of Education will be reimbursed for a teacher's subsistence during:

a. The Annual Teachers' Conference which is a state department planned in-service training program.

b. State department sponsored non-credit workshops. The expense report must be approved by a member of the state supervisory staff.

8. Reports.

Records shall be kept and reports submitted as needed to the State Supervisor of Home Economics Education.

9. Other Factors.

a. The fiscal year for Vocational Home Economics Education is July 1 to June 30th.

b. A new Vocational program must have a minimum enrollment of 36 students.

c. If a department's total enrollment drops below 36, that department may be carried for the number of years sufficient to permit students the opportunity of completing any sequence started.

d. Pro-rating for fractional units in Vocational Home Economics applies to the regular school term only.

e. Extended Service.

(1) During the extended employment the teacher devotes full time to the program, and, therefore, is employed on a full-time basis for that period of employment chosen.

(2) All teachers on a .75 of a unit or above must be employed for a minimum of four weeks (20 working days) beyond the regular school year.

(3) A teacher may be employed for a period of eight weeks (40 working days) or twelve weeks (60 working days) beyond the regular school year when class enrollment and other planned program and community activities justify the time.

(4) The decision of the length of extended service is to be made by the local administration. This decision should be based on the needs of the community as determined by the administration, teachers and lay representatives, subject to evaluation and recommendations of the State Supervisor of Home Economics.

(5) A written plan for use of extended employment should be developed by the teacher and approved by the local administrator.

D. Programs meeting these criteria may be approved for the following units:

1. One unit of approval will be given when one teacher is employed, when all class periods of the one teacher are devoted to Vocational Home Economics, including the minimum of one conference period per day, and when the enrollment is 45 - 89 students.
2. Two units of approval will be given when two teachers are employed, when all class periods of the two teachers are devoted to Vocational Home Economics, including the minimum of one conference period per day, per teacher, and when the enrollment is from 90 - 179, with a reasonably equal distribution of students between teachers.
3. Three units of approval will be given when three teachers are employed, when all class periods of the three teachers are devoted to Vocational Home Economics, including the minimum of one conference period per day, per teacher, and when the enrollment is from 180 - 269, with a reasonably equal distribution of students among teachers.
4. Four units of approval will be given when four teachers are employed, when all class periods of the four teachers are devoted to Vocational Home Economics, including the

minimum of one conference period per day, per teacher, and when the enrollment is 270 students or above, with a reasonably equal distribution of students among teachers.

5. Departments may be approved for fractions of units based upon the enrollment in, facilities for, and number of periods devoted to Vocational Home Economics, including a minimum of one conference period per day, per teacher. These fractions will be determined on the basis of low enrollment or non-Vocational assignments, whichever is greater.

6. One unit of approval will be given when one teacher is employed, when all class periods of the one teacher are devoted to the occupational work experience program utilizing home economics knowledge and skills for the students of limited ability, and when the enrollment is 15-30 students.

One half-unit of approval will be given when one teacher is employed and devotes one half day to the occupational work experience program and when the enrollment is 8-14 students.

7. One unit of approval will be given when one teacher is employed, when all class periods of the one teacher are devoted to the cooperative work experience program utilizing home economics knowledge and skills, and when the enrollment is 15-30 students.

One-half unit of approval will be given when one teacher

is employed and devotes one-half day to the cooperative work experience program utilizing home economics knowledge and skills and when the enrollment is 8-14 students.

8. Whenever less than full time or less than half-time is devoted to the occupational work experience program or the cooperative work experience program utilizing home economics knowledge and skills, the approved vocational unit or the fraction thereof, will be reduced a corresponding amount.

The following is taken from the "Criteria for Determining Approval of Vocational Units and Fractional Units in Home Economics" - - - Page 6

1. One unit of approval will be given when one teacher is employed, when all class periods of the one teacher are devoted to Vocational Home Economics, including the minimum of one conference period per day, and when the enrollment is 45- 89 students.

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4. Four units of approval will be given when four teachers are employed, when all class periods of the four teachers are devoted to Vocational Home Economics, including the minimum of one conference period per day per teacher, and when the enrollment is 270 students or above, with a reasonably equal distribution of students among teachers.

5. Departments may be approved for fractions of units based upon the enrollment in, facilities for, and number of periods devoted to Vocational Home Economics, including a minimum of one conference period per day per teacher. These fractions will be determined on the basis of low enrollment or non-Vocational assignments, whichever is greater.

The following is taken from, "Criteria For Determining Approval of Voc. Units & Fractional Units in Home Econ."-pp. 4 & 5

b. A new Vocational program must have a minimum enrollment of 36 students.

c. If a department's total enrollment drops below 36, that department may be carried for the number of years sufficient to permit students the opportunity of completing any sequence started.

Explanation: In light of the above Criteria pertaining to unit approval and approval of fractions of units, Column I and II apply to a second, third or fourth teacher, and to those schools whose enrollments have dropped below 36 and are being carried until the students complete their sequence.

TABLE I

Number of Units or Fractions of Units Approved in Vocational Home Economics According to Enrollment of Students in Vocational Home Economics And Number of Periods Devoted to Vocational Home Economics Including a Conference Period or Periods

Sect.	Periods Devoted to Vocational Home Economics Including a Conference Period or Periods Based on Total Periods in the Day.		Enrollment of Students in Vocational Home Economics						
			Column I 15 - 26	Col. II 27 - 35	Col. III 36 - 44	Col. IV 45 - 89	Col. V 90 - 179	Col. VI 180-269	Col. VII 270 - Up
A.	All Periods Devoted to Vocational Home Economics	6/6	.25 unit	.50 unit	.75 Unit	1 unit	2 units	3 units	4 units
		7/7	.25 "	.50 "	.75 "	1 "	2 "	3 "	4 "
		8/8	.25 "	.50 "	.75 "	1 "	2 "	3 "	4 "
		9/9	.25 "	.50 "	.75 "	1 "	2 "	3 "	4 "
B.	All Periods devoted to Voc. Home Economics Except 1	5/6	.25 "	.50 "	.75 "	.83			
		6/7	.25 "	.50 "	.75 "	.86			
		7/8	.25 "	.50 "	.75 "	.875			
		8/9	.25 "	.50 "	.75 "	.89			
C.	All Periods Devoted to Voc. Home Economics Except 2	4/6	.25 "	.50 "	.67 "	.67			
		5/7	.25 "	.50 "	.71 "	.71			
		6/8	.25 "	.50 "	.75 "	.75			
		7/9	.25 "	.50 "	.75 "	.78			
D.	All Periods Devoted to Voc. Home Economics Except 3	3/6	.25 "	.50 "	.50 "	.50			
		4/7	.25 "	.50 "	.57 "	.57			
		5/8	.25 "	.50 "	.625 "	.625			
		6/9	.25 "	.50 "	.67 "	.67			
E.	All Periods Devoted to Voc. Home Economics Except 4	2/6	.25 "	.33 "	.33 "	.33			
		3/7	.25 "	.43 "	.43 "	.43			
		4/8	.25 "	.50 "	.50 "	.50			
		5/9	.25 "	.50 "	.56 "	.56			
F.	All Periods Devoted to Voc. Home Economics Except 5	2/7	.25 "	.29 "	.29 "	.29			
		3/8	.25 "	.375 "	.375 "	.375			
		4/9	.25 "	.44 "	.44 "	.44			
G.	All Periods Devoted to Voc. Home Economics Except 6	2/8	.25 "	.25 "	.25 "	.25			
		3/9	.25 "	.33	.33 "	.33			
H.	All Periods Devoted to Voc. Home Economics Except 7	2/9	.22 "	.22 "	.22 "	.22			

TABLE II

Number of Units or Fractions of Units Approved in Occupational Work Experience or Cooperative Work Experience Programs Utilizing Home Economics Knowledge and Skills According to Enrollment of Students in the Programs and Number of Periods Devoted to the Programs

Sect.	Periods Devoted to Occupational Work Experience or Cooperative Programs Based on Total Periods in the Day.		Enrollment of Students in Occupational or Cooperative Programs: Column I 8 - 14	Column II 15 - 30
A.	All Periods Devoted to Occupational or Cooperative Programs	6/6	.50 unit	1 unit
		7/7	.50 "	1 "
		8/8	.50 "	1 "
		9/9	.50 "	1 "
B.	All Periods Devoted to Occupational or Cooperative Programs except 1	5/6	.50 "	.83 "
		6/7	.50 "	.86 "
		7/8	.50 "	.875 "
		8/9	.50 "	.89 "
C.	All Periods Devoted to Occupational or Cooperative Programs except 2	4/6	.50 "	.67 "
		5/7	.50 "	.71 "
		6/8	.50 "	.75 "
		7/9	.50 "	.78 "
D.	All Periods Devoted to Occupational or Cooperative Programs except 3	3/6	.50 "	.50 "
		4/7	.50 "	.57 "
		5/8	.50 "	.625 "
		6/9	.50 "	.67 "
E.	All Periods Devoted to Occupational or Cooperative Programs except 4	3/7	.43 "	.43 "
		4/8	.50 "	.50 "
		5/9	.50 "	.56 "
F.	All Periods Devoted to Occupational or Cooperative Programs except 5	3/8	.375 "	.375 "
		4/9	.44 "	.44 "
G.	All Periods Devoted to Occupational or Cooperative Programs except 6	3/9	.33 "	.33 "

CENTER FOR VOCATIONAL
AND TECHNICAL EDUCATION
980 KINNEAR ROAD
COLUMBUS, OHIO, 43212

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Plenke, John R.; Celley, Lorran
Some Programs of Vocational Education for Persons with Special Needs in Wisconsin.

Wisconsin State Board of Vocational, Technical and Adult Education, Madison
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*ADULT VOCATIONAL EDUCATION; *CONTINUATION EDUCATION; *ADULT BASIC EDUCATION; *SPECIAL EDUCATION; FAMILY LIFE EDUCATION; OCCUPATIONAL GUIDANCE
MDTA PROGRAMS; *MANPOWER DEVELOPMENT AND TRAINING ACT PROGRAMS

The bulletin explains pre-vocational and vocational offerings under continuation school, Manpower Development and Training Act, cooperative vocational training, adult basic education programs, and other programs. The continuation school program includes occupational and general education courses. The first quarter assists the student to evaluate his abilities and, in the second quarter, he generally takes basic work area courses in one of five occupational fields. The MDTA prevocational program is organized on the basis of three sections, the basic reading group to assist students to advance to functional literacy levels, the diagnostic group to assist in the determination of interests and abilities, and the special projects group to assist personal and social growth. Through cooperation between schools, courses available to a number of public school districts include power mechanics, foundry operations, metals-machine shop, and welding. Adult basic education programs emphasize elementary level education in communication and computation skills through the use of adult experiences in consumer buying practices, health habits, family and community relations, homemaking, and citizenship responsibilities. Other offerings described include a threshold program for the mentally retarded, home economics classes for low income homemakers, and a family living course for parents who had sought assistance from the Family Court. (JK)

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SOME PROGRAMS OF VOCATIONAL EDUCATION

FOR

PERSONS WITH SPECIAL NEEDS

IN

WISCONSIN

Compiled by John R. Plenke and Lorran Celley of the staff of the

Wisconsin State Board of Vocational, Technical and Adult Education

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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C. L. Greiber, Director

State Board of Vocational, Technical and Adult Education

VT001579

BRIDGING THE GAP *

AFTER BREAKING OFF YOUR NORMAL SCHOOL CAREER--

ANOTHER OPPORTUNITY

The State of Wisconsin established day continuation schools for youth who drop out of high school without graduating. Local Boards of Vocational, Technical and Adult Education helps continuation pupils become self-sustaining workers and good citizens.

The completion of a high school course of study is becoming America's educational common denominator. Not all students attain this goal. With parental and school consent such students may transfer to the Continuation School.

Here they get another educational opportunity. The main purpose of the Continuation School is to help each such new pupil "bridge the gap." This is the gap between his interrupted school career and his eventual place in the community as a worker, a good member of a family, and a good citizen.

Using the Milwaukee Continuation School maintained by the Milwaukee Board of Vocational, Technical and Adult Education to explain this type of "special needs" program to help the youth of the State of Wisconsin to receive educational opportunities not otherwise available.

The following is taken from the Milwaukee School Bulletin:

WHO MAY ATTEND?--Any young man or young woman who is 16 or 17 years old and has not completed high school is required by law to attend full-time public or parochial school until he completes high school or becomes 18. He may transfer to the Vocational School with parental consent and the principal's consent when he is 16 years of age and attend full time in the Milwaukee Continuation School.

A NOTE TO STUDENTS AND THEIR PARENTS ABOUT TRADES.--The day when a young man or young woman could quit high school and then study for a trade, later getting a good job in this trade, has largely passed. Very few trade opportunities or apprenticeship opportunities are open today to a student who does not have a high school diploma. Therefore, a student who quits high school and plans to come to the Continuation School of the Milwaukee Vocational, Technical and Adult Schools has closed the door on many of the better job opportunities.

Skilled vocations today require ability in arithmetic and reading, in addition to other skills. Those who do not have the high school background and cannot handle reading and arithmetic with competence cannot expect to secure genuine trade training. However, in your school work, you can develop personal characteristics that will make you valuable to employers. You will be able to take the simpler kind of work that can be learned on the job and then work for promotion on the job.

WHAT CAN A STUDENT WHO HAS DROPPED HIGH SCHOOL LEARN IN THE CONTINUATION SCHOOL? Though you cannot learn a trade immediately, you can learn:

a. Whether you have the ability to learn enough arithmetic and reading to progress toward a trade.

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*The terminology of "Bridging the Gap" is credited to the Milwaukee Vocational, Technical and Adult School

b. Whether you have the special ability to progress in any of the trade areas.

c. How to use certain of the simpler tools that you may meet at home or on the job.

d. How to work hard, to be on time, to get along with people, to follow directions, and to be dependable. These are very important qualities to help you get a job and to help you keep a job.

e. How to be a better citizen and a more worthwhile person.

WHAT ABOUT HIGH SCHOOL CREDIT?--A continuation student cannot expect to get high school credit for his continuation work. The place to get high school credit is in your neighborhood high school. However, if a student wishes to work for his high school diploma in the Milwaukee Adult High School after he is 18 years of age, the work he did as a continuation student will be evaluated. Good attendance and satisfactory grades are essential.

HOW TO REGISTER.--If you are or have been attending a high school in Milwaukee, you may secure a transfer from your present school. Your school officials will tell you how to go about getting a transfer. In order that you and your parents understand the difference between a vocational school and the school you are now attending, both you and at least one parent will be required to attend a program at the Vocational School at which time the work at the Vocational School will be explained.

WHEN TO REGISTER.--Students are accepted at the beginning of quarters in September, November, February, and April. Announcements as to the exact dates as well as the dates for the explanatory programs mentioned above are sent to the various schools in the city.

WHAT ARE THE SCHOOL HOURS?--The continuation student attends from 8:50 to 3:15 daily. Students have 30 minutes for lunch.

WHAT DOES IT COST TO ATTEND THE VOCATIONAL SCHOOL?--This will depend upon the courses that you take. It is important that you learn this before you register for a class. The counselors will help you.

If you need materials for a class project and you want to keep the finished product, you will have to pay the cost of the materials used.

Be sure to have a good padlock to protect your property. A good one can be purchased from the school store. If the lock and two keys are returned at the end of the year, a partial refund will be paid.

WHAT ABOUT GETTING A JOB?--The Vocational School has a Placement Department to assist its students in finding work.

There are very few jobs for people without a high school diploma. If a continuation student has a good attendance record and proves that he is a good worker, the Placement Department can usually help him find after-school or vacation employment. Such students should continue in school after becoming 18 either to study in an adult shop or to complete high school.

The school encourages the continuation student to confer with the Youth Opportunity Center of the Wisconsin State Employment Service.

WHEN MAY NONRESIDENTS ATTEND?--A nonresident student may attend if there is room for him in the classes that he will take. Since there is not enough room in some types of classes, a school official must either write or call the Registrar at the Vocational School and provide information as to test scores in reading, arithmetic, and learning ability. Other than this, the registration procedure is the same for a nonresident as for a resident.

WHAT COURSES MAY YOU CHOOSE?--The first quarter (10 weeks) that you are at the Vocational School will be a "get acquainted" time. You will learn about the school as well as your own abilities. The school will learn about you. During this quarter, you will find out if you can improve your reading and arithmetic and you will learn if you have any special ability to work with your hands.

The young women will take both business and home economics courses; the young men will take two industrial shop courses during the first quarter. The exact course will depend upon the reading and arithmetic ability of the student as well as the classes that are available.

At the end of the first quarter, the student will have to decide upon a program that fits his abilities and interests. A student will usually have a program that is half in some work area and half in general education. The work areas available to the student are described in this bulletin. Once a work area has been selected, it cannot be changed for one quarter.

This first quarter plan is made so that a student can show what he can do. The more ability he shows and the more dependable he becomes, the better will be his chances of entering some skilled field. If a student can bring recommendations from his school principal showing that he has ability to progress and is dependable, the first quarter as described above will not be necessary and he can go directly into a work area.

After one semester, qualified students may enter the Milwaukee Adult School upon recommendation of their major subject teacher and the faculty counselor.

Typical Student Programs

A new student will have a program for the first quarter that looks like this:

A Young Woman's Typical First Quarter Program:

8:50 a.m.	-	10:35 a.m.	Home Economics courses
10:40 a.m.	-	11:30 a.m.	Occupations, Health, and Social Studies
11:35 a.m.	-	12:00 noon	Noon Assembly
12:05 p.m.	-	12:30 p.m.	Lunch
12:35 p.m.	-	1:25 p.m.	Reading
1:30 p.m.	-	3:15 p.m.	General Business courses

A Young Man's Typical First Quarter Program:

8:50 a.m.	-	10:05 a.m.	Shop and Related Shop courses
10:10 a.m.	-	11:30 a.m.	Shop and Related Shop courses
11:35 a.m.	-	12:00 noon	Noon Assembly
12:05 p.m.	-	12:30 p.m.	Lunch
12:35 p.m.	-	1:25 p.m.	Reading
1:30 p.m.	-	2:20 p.m.	Social Studies
2:25 p.m.	-	3:15 p.m.	Occupations and Health

A typical student's program after the first quarter will look like this:

After the First Quarter

8:50 a.m.	-	11:30 a.m.	Work Area
11:35 a.m.	-	12:00 noon	Noon Assembly
12:05 p.m.	-	12:30 p.m.	Lunch
12:35 p.m.	-	1:25 p.m.	Social Studies
1:30 p.m.	-	2:20 p.m.	Practical English
2:25 p.m.	-	3:15 p.m.	Other General Education courses

Milwaukee Continuation School

Diagnostic Quarter

A student entering the Vocational School is called a "diagnostic student" and must normally complete the first quarter of his work in the Diagnostic Quarter. This is a "get acquainted" period. The student learns about the school and about his or her abilities, and the school learns more about the student.

Young women take both business and home economics courses during this quarter; young men usually take two industrial shop courses during this quarter.

The Diagnostic Quarter plan is made so that a student can show what he can do. The more ability he shows and the more dependable he becomes, the better will be his chances of entering some semi-skilled field. If a student can bring recommendations from his school principal showing that he has ability to progress and is dependable, the Diagnostic Quarter as described above will not be necessary and he can go directly into a Work Area.

At the end of the first quarter, the student will have to decide upon a program that best fits his abilities and interests. The program usually is half in some Work Area and half in General Education. The Work Areas available to the student are described later in this bulletin. One a Work Areas has been selected, it cannot be changed for one quarter.

Courses in the diagnostic quarter are as follows: Reading, Measurement, Social Studies, Health, Social Living, General Homemaking I, General Homemaking II, General Business I, General Business II, General Auto Servicing, General Cabinet Making, General Metal--Foundry, General Metal--Welding, General Woodworking--Drawing, General Home Maintenance--Crafts, General Drafting, and General Machine Shop.

Work Area Courses

After completion of the Diagnostic Quarter, most students are given a program that is half in the Work Area and half in General Education. These Work Area courses are three periods in length and enable a student to gain work experiences and to develop work habits and attitudes which may assist him in getting initial employment as a helper.

A student wanting to qualify for better employment opportunities should complete his high school education and then enter a chosen field through an apprenticeship or through completion of a special program in the Milwaukee Adult School.

The exceptional student who shows special skill and ability may be transferred to the Adult School upon recommendation of his major teacher and the faculty counselor.

However, the average student, without his high school training, needs special classwork to develop good work habits and attitudes. This training helps him, after getting his first job, to hold it better and to move ahead faster. The Work Area courses are for this purpose.

The student completing the Diagnostic Quarter who has not decided upon a program that best fits his abilities and interests is assigned to continue in a diagnostic shop program. However, his academic and related work will be in regular General Education courses.

Business Division

Young men and young women who complete the business courses of the diagnostic quarter and have further desire and interest in business training may continue in the business work area courses. The student in a work area course will find the training directed primarily toward the building of proper business habits and attitudes rather than the development of business skills.

Courses available in the work area are:

Introduction to General Record Keeping
Principles of General Business
Typewriting

Graphic and Applied Arts Division

The Division of Graphic and Applied Arts was created to meet the increasing demand for skilled workers in the fields of advertising, commercial arts, photography, printing and publishing, and applied arts and crafts. Commercial art and printing and publishing courses are available to continuation students in this division. These fields are experiencing steady growth spurred on by new equipment, processes, techniques, and materials. Students entering this area of training will find it necessary to have a high school diploma to advance in this vocation. The Milwaukee Continuation School courses do not qualify a student for a job, but are designed to develop interest, attitudes, and work habits that will encourage the student to take further training in the graphic and applied arts field as an adult student.

Several courses in the Graphic and Applied Arts Division are referred to as work area courses. Students who take these courses need not have any previous training or experience. The courses are designed to develop interests, work habits, and attitudes rather than skill. Courses in this area are:

General Visual Communications
General Printing

Students who complete the work area courses in commercial art or printing may continue in more advanced courses in commercial art or printing. These courses are designed for the development of skill. They do not prepare a student for employment but help to determine the feasibility of continuing training in the field of commercial art or printing. Courses of this type are:

Visual Communication Skills
Typesetting and Makeup
Presswork

Home Economics Division

The program in the Home Economics Division is planned for young women who are seeking employment as well as for the ones who expect to become homemakers.

Through its various course offerings the Home Economics Division aims to help students solve problems which arise from social and economic changes affecting home and family life; to prepare them for more effective participation in community affairs and wage-earning occupations; and to develop in them new interests, appreciations, judgments, and ideals related to the various aspects of homemaking.

A description of each department in the Home Economics Division and the courses available is given.

In the classes offered by the Clothing Department, the young woman who likes to sew for herself and for other members of the family is given the opportunity to learn the basic skills required in the construction of clothing. A student may enroll in clothing any semester in which she is in attendance and may progress from the sewing of simple garments to more advanced dress construction.

Students must furnish their own supplies, such as a bobbin, thread, pins, and sewing needles. These items may be purchased at the school store at an approximate cost of sixty cents. The pattern and material for each clothing project also must be furnished by the student.

Garments to be sewn are selected on the basis of the student's ability and with the consent of the instructor. Cotton material is used in making these garments. As soon as one project is completed, the pattern and fabric for the next must be furnished.

It is the responsibility of the parents to see that their daughters have sewing materials and supplies at the time they are needed.

Courses available in this department are:

Clothing I
Clothing II
You and Your Clothes
Needlecraft
Dry Cleaning and Laundry Aide Training

A well-groomed and healthy family is an asset to any community. Members of such a family have a feeling of personal satisfaction as well as more time to devote to church, community, and social activities.

The following courses in the Family Health Department give practical instruction in the areas of personal grooming and family health.

Grooming
Infant and Child Care
Home Nursing
Physiology

To live happily within a family group is something which all persons try to achieve. In order to meet the demands of our changing society, today's teen-ager must understand social poise, manners and behavior at home and away from home, etiquette and conduct at social affairs, table manners, social correspondence, and travel. Preparation for the future also includes an awareness of employment qualifications and job opportunities. Each student will evaluate her reactions to her family and other people.

Courses available in the Family Relations Department are:

Building Your Life
Personal Improvement
You and Your Family
Occupational Orientation

Young women gain practical experience in planning, preparing, and serving meals. Special emphasis is given to planning time and work schedules; establishing good food buying habits; and balancing the food budget. The objectives of the foods program are to develop confidence in the preparation and serving of meals to one's family and friends.

Courses available in the Foods Department are:

Know-How in Food Preparation
Meals for the Family

Good management is to the home what good organization is to industry. A well-regulated home brings happiness to the entire family. It gives the homemaker a feeling of satisfaction in her work and allows her more time to devote to her family, church, community, and social life.

Through the courses offered, the student is taught efficient methods of housekeeping; selection, construction, and care of equipment and furnishings for the home; and good management of time and money.

Students who are desirous of securing part-time or full-time employment as homemaker's assistants will discover that numerous job opportunities exist. Many homemakers need help to perform various tasks, such as weekly and seasonal cleaning, the family meals, and care of clothing. Interested persons should enroll in the Brides' Course.

Courses available in the Home Management and Furnishings Department are:

Managing Your Home
More For Your Money
Furnishing Your Home
Legal Problems for Girls
Brides' Course

Service and Health Occupations Division

The Service and Health Occupations Division, through the Food Service Department, offers young people an opportunity to obtain work experiences needed to enable them to get and hold a beginning job and to make a wise choice of a vocation. Young women interested in becoming waitresses (employment opportunities are limited because of state and local age regulations) are offered the opportunity to acquire the necessary knowledge and skills required to serve food in cafeterias, lunch counters, and other food establishments where alcoholic beverages are not served.

Courses available in the work area are:

General Foods
Waitress Training

Industrial Division

The Milwaukee community is made up of many different types of industries. A large number of continuation students will eventually become workers in these industries. A prospective employer might ask these questions--"What educational background and

skills do you have?" "Do you know how to work?" "Can you take orders and follow through on them?" "Can you read a blueprint, specification, chart, or job order and complete the job with a minimum of help?" "Is your work accurate and up to production standards?"

The Industrial Division offers young people an opportunity to obtain work experiences needed to enable them to get and hold a beginning job and to make a wise choice of a vocation. In making a selection from an industrial work area, remember that these work experiences are stepping stones to a vocation.

The work area courses are for the purpose of developing the proper work habits and attitudes required in a trade. Neatness of work, ability to get along with fellow workers, respect for the boss, reliability, and the proper care of tools are stressed in the work area courses.

Work area courses are:

General Baking
General Cabinetmaking
General Foundry
General Masonry
General Machine Shop
General Mechanical Drafting
General Power Servicing
General Shoe Servicing

For those students who complete a work area course and have the interest and the ability to continue in the Industrial Division, several more advanced courses are available. These courses emphasize the development of shop skills. Students taking the courses listed below are rated on their accomplishment in shop work and their knowledge of course content.

Courses of this type are:

Auto Servicing
Cabinet Making
Carpentry
Bricklaying
Machine Shop
Single--Needle Lockstitch Machines
Shoe Servicing
Fundamentals of Upholstery

General Education Courses

The courses in the General Education Division are designed to help each student become a better citizen in the community and the nation, and to be happier in his daily life. One-half of his school work will be in General Education subjects.

After the first quarter, five periods a week are spent in Social Studies and five in Practical English. The Social Studies work aims to help the student become a better citizen, and the Practical English is to help him write better, speak better, listen better, and understand better. These skills are very important in his personal life and in his work life.

Other General Education subjects include driver education, physical education (including swimming), and a few special-purpose subjects.

All students are required to take driver education (classroom instruction) for a semester, and physical education.

Some General Education courses are continuous in nature--there is no ending or terminal point. A student is graded on his work habits, attitude, knowledge, and progress, whether he has been in the class for one session or for one year. Several courses in this area are required, such as Practical English, Physical Education, and Employment Skills. Some courses of this type are electives.

Course descriptions follow:

Social Living
Practical English I
Practical English II
Everyday Arithmetic
Special Mathematics
Related Shop Mathematics
Special Reading

Boys Recreation or Girls Recreation classes are required of all students. Emphasis is on the proper pupil choice of activity areas within the medical permission of the family or school doctor. Pupil choice is made each of the two times a week he comes to recreation, and he may change his activity each time, if he so chooses. Because of the daily choices possible, there will be no daily health center excuses. Instead, he will choose the area for the day that is within his physical limitations, and be encouraged to seek health center or private medical advice on his own time, before or after school.

Boys Recreation
Girls Recreation

The courses in the Social Studies Department are those that will help in the personal adjustment of the student at home, at school, and in the community.

The courses in the Social Studies Department are those that will help in the personal adjustment of the student at home, at school, and in the community.

The courses described below are available to all students.

You and Your Money 1
You and Your Money 2
Legal Problems
You, and Others

The courses described below require the successful completion of most of the lessons or units before the student receives a completed grade on the course. Most of these courses are one quarter in length, although Driver Education may require a semester to complete.

Driver Education
Behind-the-Wheel
Occupations

The Social Studies courses listed below are designed for the purpose of making the student a better citizen. These include a study of local, state, national, and world governments as well as the social, political, and economic problems that exist in these areas.

Community Social Problems
Government at Work
Human Relations
Our Country
Economics Problems
Basic Employment Skills

Note: A description of all these courses is available through the Milwaukee Vocational, Technical and Adult School.

-0-

Other Examples of Vocational Education Serving Persons with Special Needs:

MDTA Programs

Under the MDTA program in Wisconsin, we operate on the assumption that all of our trainees are students with special problems. For this reason, we resist the use of standard teaching techniques and standard curriculums. Each MDTA project training plan is developed locally with consultation from the state supervisor after a careful study has been made of the MT-1 submitted from the Employment Service. The MT-1, a well known document nationally in MDTA circles, details the skills and knowledges desired by the Employment Service officials who will be responsible for placement of our finished product, the MDTA graduate.

The MT-1 will also prescribe the general characteristics of the trainees that will be referred by WSES and specify such special training requirements as Basic Education or Pre-Vocational Training.

Milwaukee Vocational, Technical and Adult Schools

Manpower Development and Training Act
Pre-Vocational Training Program

This is a three phase program designed to prepare those students who are not presently adequately equipped academically or from the standpoint of personal and emotional attitudes to make a selection for specific occupational training. The program is specially designed to alleviate these educational and personal inadequacies so that a greater degree of vocational success may be expected. Each phase of the program is designed to serve a specialized need. There is a Basic Reading Group, a Diagnostic Group, and a Special Projects Group. The program provides for the internal transfer of a student from any one of these given groups to another (1) when the instructor feels that sufficient progress has been made, or (2) when it has been determined that the student needs specific training in one of the other groups, or (3) when an individual's progress warrants an early choice of a vocational objective. At the conclusion of the Pre-Vocational Training Program, each student will have made a selection of vocational objective, or will have been terminated.

The Basic Reading Group is designed to train students of low reading level in order to bring them up to or near functional literacy levels so that they may more successfully pursue the selected vocational training objective. This group is designed for fifteen students to attend twenty-four weeks. In cases where the student has just begun to show significant progress after completion of the twenty-four week session, he may be permitted to enter the beginning quarter of the next session and continue until the instructor feels that the student is ready for re-assignment. The maximum stay in the Basic Reading Group is forty-eight weeks.

The Diagnostic Group's purpose is to assist the student to discover his mental, emotional, and personal makeup, and to determine what his occupational interests and capabilities are. This groups is designed for a maximum of twenty students who will attend class for twelve weeks.

The Special Projects Group is an orientation course with the primary aim of aiding students' personal and social growth through individual and group guidance, therapeutic teaching, and planned activities. Success in this group will make possible the successful participation in other groups or in a vocational training program. This group is designed for a maximum of twelve students who will attend class for twelve weeks. This group should comprise one unit which enters only at the start.

Group and individual guidance will be an integral part of these three areas, with heavy emphasis in guidance concentrated in the Special Projects Group. The use both of testing and of discussion of personal and social problems will be stressed in order to help the student adjust effectively so that he may become a better trainee, and, ultimately, an understanding and contributing member of society.

REQUIRED COURSES	ALLOTTED HOURS, VARIOUS GROUPS*		
Basic Education	Basic Reading	Diagnostic	Special Project
Basic Human Relations	48		
Basic Personal Skills	48		24
Basic Job Skills	72	24	36
Jobs Today	48	24	48
Diagnostic Projects		120	
Basic Arithmetic 2	120	60	24
Basic English 2	120	24	24
Basic Reading 2	168	60	60
Basic Social Studies	48	12	36
Field Trips			36
Class and Individual Projects			36
Individual and Group Guidance	48	36	36
	720	360	360

*Indicated hours are variable where students' special needs require more time in some areas and less in others.

Cooperative Vocational Training in the High Schools

Pilot program directed and operated by one high school district, but cooperated with other high schools too small to offer a quality program of depth and breadth. Courses offered and available to a number of public school districts through the center school are power mechanics, foundry operations, metals-machine shop and welding.

Note: Program details are available by writing to the Wisconsin Department of Public Instruction.

Adult Basic Education

"Adult basic education" means (a) elementary level education for adults with emphasis on the communication and computational skills such as reading, writing, speaking, listening, and arithmetic; (b) using as content for teaching these skills such adult experiences as consumer buying practices, health habits, relations with other members of the family and community, homemaking, and citizenship responsibilities.

"Adult in need of basic education" means an individual who has attained 18 years of age and whose inability to read and write English constitutes a substantial impairment of his ability to obtain or retain employment or otherwise meet his adult responsibilities.

All adults in need of such education in the State of Wisconsin have an opportunity to (a) become less dependent on others, (b) remain employed or obtain more productive and profitable employment, (c) become better able to meet their adult responsibilities.

Vocational Schools which have developed Adult Basic Education programs under Title III in Wisconsin are: Appleton, Beloit, Fond du Lac, Fort Atkinson, La Crosse, Madison, Marshfield, Kenosha, Racine, Wausau and Wisconsin Rapids. One of the programs developed by the Milwaukee Vocational, Technical and Adult School is described as follows:

Basic Reading - Neighborhood Youth Corps

The classes under this program are designed to do the following: (1) Offer the adult with little or no schooling the opportunity to initiate or continue his education; (2) Provide understanding of the responsibilities which accompany his rights as a citizen; (3) Enable the adult to develop the fundamental skills of communication-listening, speaking, reading, and writing, and the basic skills of numbers; (4) Provide the learner with the opportunity of acquiring the elements of health, science, and social studies that will enable him to better understand and join in the life of his community and his nation; (5) Relate these learnings to the world of work; (6) Develop the confidence of each adult in his own ability to learn; (7) Furnish the learner with a constant series of successful learning experiences to better re-orient his attitudes; (8) Develop the basic skills with continual relevance to their usefulness and meaning in the life of each learner; and (9) Seek the maximum development possible in the minimum time possible.

Instruction is essentially class instruction, but both the structure of the courses and the classroom learning materials are designed to meet the many varying individual student needs.

The course length varies to accommodate the needs of different groups of students. Most students attend school 6 hours per day, 1 day per week, for 13 weeks, followed by 2 hours per day, 1 day per week, for 12 more weeks.

Required Courses are:

BASIC EDUCATION (8-13 BasEd)

371 Basic Reading 1 (or higher - as individually needed)
372 Basic Reading 2 (or lower, or higher - as individually needed)
373 Basic Reading 3 (or lower, or higher - as individually needed)

Through these three basic courses, pertinent job information and pertinent material in health, science, and social studies is introduced.

In addition, to the above, two special programs were established to meet the needs of a specific group: (1) a four week summer program for the Texas migrant workers in a three county area; (2) a winter program for two different tribal councils of Indians in Forest County.

Shoe Servicing and Metal Shop

Economic Opportunity Act--Milwaukee County, Title III
Contract with United Migrant Opportunity Service, Inc.
Objective: Occupational service or orientation

Held on Saturday's for 15 weeks. Used special general shops with 15 students in two shops.

The Madison Plan

The Madison Plan for technical and trade preparatory education for high school youth has the following objectives:

1. To make learning most meaningful and of real value to the student, and to develop in him the essential qualities of a good citizen.

2. To explore the abilities of each individual student so that he may find his best field of educational and vocational interest. This is done by offering exploratory pre-vocational try-out courses, by providing careful guidance, and by administering batteries of tests which reveal the students abilities and interests.

3. To give craftsmanship training to those students who have shown interest and ability in a chosen vocation.

4. To provide education and vocational training for the students who plan to enter industry as technicians, or the building, metal or service trades as apprentices.

Job Threshold Program

I. Students Eligible for the Program

A. Individuals with a diagnosis of mental retardation as established by the Rehabilitation Division, State Board of Vocational, Technical and Adult Education

B. Age--17 or over

II. Students not Eligible for the Course at Present
Those who do not appear to have a job potential

III. Objectives of the Program

A. Direct

1. To help students prepare for employment commensurate with their abilities
2. To orient students to the role of wage earner and citizen

B. Indirect

1. To help students develop personal adequacy as a basis for vocational adequacy
2. To help students adjust better to their homes and communities

IV. Admittance to the Program

A. Referrals must be made to the Supervisor, District Office of the Rehabilitation Division, State Board of Vocational, Technical and Adult Education, at least two months before the beginning of the school term.

B. After interviewing and testing the applicant, the District Supervisor of Rehabilitation decides whether or not the student will be eligible for the program.

C. Only after the student has been approved by the Rehabilitation Office will he be admitted to the program.

D. The student automatically becomes a client of the Rehabilitation Division case supervisor working in his area.

E. The case supervisor and the Job Threshold teacher or the Work Adjustment Training Program teacher at the Opportunity Center works together in planning realistic training for the student.

Home Economics

Home economics classes are offered for low income homemakers in the following cities in Wisconsin: Madison, Port Washington, Ashland, Marinette, Marshfield, and La Crosse.

Program offerings vary and are flexible as to meet the needs of the low income homemaker.

The home economics departments in the local schools are offering home economics classes to persons enrolled in literacy classes. Usually these are for the foreign born.

Examples of other courses offered by local schools through home economics departments.

Family living course in connection with a County Court

(a) For the third year, a fourteen week per semester, two semester course was planned for parents with problems who were seeking assistance from Family Court. A very humanitarian Family Court Judge is vitally interested in using educational techniques in an effort to break the chain of problem families in generation after generation. Parents are required to attend the classes, held in the Court Chamber. Classes were held in the evenings.

The first 30 to 45 minutes is used to present new ideas and to try to influence attitudes and actions through a speaker's presentation or a film. Specific problems are analyzed by an authority on the subject. Following

this general session, discussion groups of 10 to 15 persons meet with a trained discussion leader to analyze the presentation, or to talk about their problems and try to find some solutions. The commonality of problems is used as a basis in forming discussion groups.

About 150 persons attended these classes annually. The course content is developed by the Court's educational consultant and the School's Home Economics Supervisor.

Evaluation of such a program is extremely difficult; the results are intangible. But success might be measured by the improved personal appearance and interest in dress of some of the women, a developing concern for members of their group and efforts to help members solve problems, some response to encouraging members to attend other classes, and some changed behavior.

As visitations were made and school reports were reviewed, there was evidence that management was being included in all areas. Special courses such as the following were taught:

(b) "Home Management for the Handicapped" was offered for the first time last fall. A Home Economist and an Occupational Therapist cooperatively taught the course. Seven handicapped persons reacted very enthusiastically to the course. Being able to make a contribution to less fortunate members of our society was a very satisfying experience for us.

(c) Courses offered at one school to help women with basic homemaking skills and problems:

(1b) Meal Planning and Preparation - offered 2 units, 12 weeks each

(2b) Clothing - offered 1 unit, 12 weeks

(3b) Guiding Our Children - offered 2 units, 4 weeks each

(4b) Home Management - offered 1 unit, 5 weeks

In the Meal Preparation unit, much work was done with using surplus commodity foods and helping the homemaker stretch her food budget but "buy" nutrition.

Three women employed by the County Public Assistance Department as "Homemakers" attended the classes. These women visit clients in their homes and try to help them with specific problems. Their reasons for attending were to up-date their knowledge, and to be able to work more effectively with the clients.

VT 001 583
Summary and Evaluation of the Vocational Special Needs Pilot Program.

Obion County Central High School, Troy, Tenn.
MF AVAILABLE IN VT-ERIC SET.
Pub Date - 12Jul66 6p.

*SPECIAL EDUCATION; COOPERATIVE EDUCATION; *VOCATIONAL EDUCATION; *LOW ACHIEVERS; STUDENT REHABILITATION; *DROPOUT PREVENTION; PILOT PROJECTS
OBION COUNTY; *TENNESSEE

The high drop-out rate in this county was attributed to an inadequate curriculum, students with low academic ability, and lack of motivation. A pilot instructional program was developed to more nearly meet the needs of these special students. The program was designed to meet individual student interest to giving him entry level employment preparation, and to help him become a well-adjusted and contributing citizen. The procedures included an instructional program in language arts, mathematics, social studies, science, physical education, home economics, auto mechanics, and general building trades. During the 1965-66 school year, 15 students were enrolled, average daily attendance was 96 percent, all received on-the-job instruction, and attained such levels of social vocational, and education achievement, that the program was judged highly successful. Recommendations were to continue the program and to supply additional equipment and materials needed for the work. A financial summary and employment record are included. (MS)

VT001 583

ED0 31587

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P-4
July 12, 1966

SUMMARY AND EVALUATION OF THE VOCATIONAL SPECIAL NEEDS PILOT PROGRAM OBION COUNTY CENTRAL HIGH SCHOOL TROY, TENNESSEE

A recent study indicated a high incidence of drop-outs in the Obion County School system and this drop-out rate was largely attributed to low academic ability and lack of motivation. It also revealed that the school program for these students was grossly inadequate. These students were being offered the same curriculum as other students which creates undesirable atmosphere and attitudes with low achievers. They also find it difficult to achieve in vocational areas in competition with more capable students. Finding that these students need constant and individual attention and specific training in one field of work and feeling that the individual student, the school and the community would be greatly benefited by some program which would provide the necessary training, an instructional program was designed to more nearly meet the needs of these special students.

The instructional program was developed to serve high school students who are normally classified as slow learners. The proposed program was designed to meet the individual student interest, and ability level which would include on-the-job training in order to prepare him for employment, make him self-supporting, happy and a contributing citizen in our society.

The specific objectives were as follows:

1. To improve academic skills.
2. To improve manipulative skills.
3. To develop wholesome attitudes.
4. To develop abilities in handling and care of tools and equipment.

VT 001 553

5. To develop vocational skills related to work preferences enabling the student to seek and hold a job upon leaving school.
6. To provide students with on-the-job experiences.
7. To provide maximum academic training for each student on his level.
8. To develop social graces that will enable the student to adjust in our society.
9. To develop good personal habits related to personal hygiene and appearance.
10. To create an environment to eliminate the problems of absenteeism and potential drop-out.

Procedures followed:

1. Instructional program consisted of:
   a. Language Arts
      (1) Speech Arts
      (2) Reading
      (3) Writing
   b. Mathematics (Elementary through Algebra I)
   c. Social Studies
   d. Science
   e. Physical Education
   f. Home Economics
   g. Auto Mechanics
   h. General Building Trades
2. Facilities:

A well designed remedial laboratory in a good location, with good lighting and well arranged for maximum learning is made available by the Obion County Board

of Education. The remedial laboratory is reasonably equipped with audio visual aids and programmed materials. All other school laboratories, departments, gymnasium, library and school audio visual facilities are available to this Special Needs Class.

3. Methods and techniques of instruction:

   a. Student selection:

      (1) Analyzing permanent records.

      (2) Conferences with principal and school staff.

      (3) Conferences with parents and prospective students.

      (4) Testing program supervised by guidance counselor.

   b. Instructional materials were selected from proven MDTA materials, those advised while instructor was attending The University of Tennessee and recommendations of other instructors of remedial classes.

   c. All instruction was on an individual basis and job related at the learning level of each student.

Following are accomplishments made during the 1965-66 school year:

1. Fifteen students were enrolled. A drop-out returned for this special program but dropped out a second time during the school year. There was one addition totaling fifteen to complete the course.

2. Out of a possible 2700 student days, there were only 82 absentees resulting in an average daily attendance of 96%.

3. Each enrollee received on-the-job instruction.

4. Student achievement:

   a. Three students transferred to the regular instructional program on completion of this special needs training. A fourth student achieved a similar level of training but will remain in the special needs class

another year at the request of his parents.

b. Nine other students advanced from one to three grade levels in reading ability and mathematical comprehension; however, these students have not achieved normal secondary levels.

c. The two non-achievers resulted from one with an IQ in the 40's and the second having a rebellious attitude due to home environment.

d. Vocational achievement is evidenced by nine students continuing employment with their cooperative employer during the summer. These students are expected to return to school for the fall term.

e. Social achievement is evident in personal appearance, hygiene and adjustment to society. This is substantiated by the employer parents and instructor.

Commentation:

It is the opinion of the evaluating team that this special needs program has been highly successful. The success of the program, to a large degree, has been due to the knowledge, patience and dedication of Mr. Hurt, the instructor.

Recommendations:

The evaluating committee highly recommends early approval be granted to continue this program for 1966-67. It is also recommended that consideration be given to supplying additional equipment and materials with which to enrich the program:

1. Cash Register
2. Tape Recorder
3. Record Player
4. Four math mates
5. Three learning stations equipped with lights
6. Textbooks, workbooks and reference books
7. Programmed expendable EDL workbooks
8. Additional ADF filmstrips

FINANCING SUMMARY

Instructional Salaries	$ 5,050.00
Instructional Supplies	1,725.00
Travel	200.00
Equipment	2,435.55
Telephone	50.00
TOTAL	$ 9,460.55

The following was supplied from local funds:

1. Two classrooms and an office with approximately 1100 sq. ft.
2. Utilities
3. Custodial Services
4. Clerical Services
5. Duplicating materials
6. Student Transportation
7. Other Incidental Expenses

EMPLOYMENT RECORD OF COOPERATIVE TRAINEES

NAME	SEX	EMPLOYER	DUTIES	HRS.	SALARY
Cleck, Jill	F	Hospital Flower Shop Union City, Tennessee	Floral Arranging	306	$230.14
Ervin, John	M	Ben Franklin Obion, Tennessee	Stock boy and clerk	280	$205.18
Hayes, Penny	F	Obion County Central Library Troy, Tennessee	Card cataloger	240	$186.40
Petty, Jerry	M	Obion County Central Library Troy, Tennessee	Filing and mending	326	$269.18
Petty, Jimmy	M	Obion County High School Lunchroom Program, Troy, Tennessee	Stock and dishes	280	$236.18
Donnell, Jere	M	McCorkle Construction Troy, Tennessee	Carpenter Assistant	402	$332.86
Donnell, Tere	M	Johnson Auto Repair Troy, Tennessee	Mechanic Assistant	263	$228.23
Caksackkar, Randy	M	Obion County Landscaping Troy, Tennessee	Landscaping Assistant	252	$213.10
Buford, Larry	M	Fox Poultry Produce Obion, Tennessee	Production Line	509	$355.52
Pirtle, Mal	M	Obion Central High School Janitorial Staff, Troy, Tennessee	Janitorial Assistant	254	$211.97
Pirtle, Jesse	M	Obion Central High School Janitorial Staff, Troy, Tennessee	Janitorial Assistant	263	$224.80
Callison, Clarence	M	Fox Poultry Produce Obion, Tennessee	Production Line	482	$340.42
Griffin, Judy	F	Polk Station Grocery Troy, Tennessee	Clerk	453	$323.62
Easterwood, Bobby	M	McCorkle Construction Troy, Tennessee	Carpenter Assistant	222	$201.51
Scott, Robert	M	Obion Central High School Janitorial Staff, Troy, Tennessee	Janitorial Assistant	165	$126.43

VT 001 595
Hemp, Paul E.; Ehresman, Norman D.
Suggested Procedures for Planning and Conducting County FFA Cooperative Acquaintanceship Programs.

Illinois Univ., Urbana. Div. of Agricultural Education
Illinois Agricultural Association, Bloomington
MF AVAILABLE IN VT-ERIC SET.
Pub Date - May65 17p.

*FARMER COOPERATIVES; GUIDELINES; PROGRAM ADMINISTRATION; *EDUCATIONAL PROGRAMS; *PROGRAM PLANNING; *VOCATIONAL AGRICULTURE
FARM BUREAU; *FUTURE FARMERS OF AMERICA COOPERATIVE ACQUAINTANCESHIP PROGRAMS

Based upon the findings of an earlier study of FFA Cooperative Acquaintanceship Programs in Illinois, recommendations are given for use by persons who conduct and participate in these programs. The main purpose is to provide county secretaries with a model for developing or improving existing programs sponsored by the Farm Bureau. The pertinent sections of the document include: (1) Objectives, (2) Naming the Program, (3) Preliminary Plans and Contacts, (4) Financing, (5) Planning Meeting Conduct, (6) Program Conduct, (7) Publicity, (8) Facilities and Materials, (9) Evaluation, and (10) Follow-up. A planning worksheet, publicity release, and evaluation form are provided. (JM)

VT001 595

CENTER FOR VOCATIONAL
AND TECHNICAL EDUCATION
980 KINNEAR ROAD
COLUMBUS, OHIO, 43212

ED0 31587

SUGGESTED PROCEDURES FOR PLANNING AND CONDUCTING COUNTY FFA COOPERATIVE ACQUAINTANCESHIP PROGRAMS

Paul E. Hemp, Associate Professor

Norman D. Ehresman, Research Assistant

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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Division of Agricultural Education
Department of Vocatioal and Technical Education
College of Education
University of Illinois

May 1965

VT 01595

EDUCATION REGARDING COOPERATIVE ORGANIZATIONS IN RURAL AREAS

Research staff:

Lloyd J. Phipps, Project Director
Paul E. Hemp, Principal Investigator
Norman D. Ehresman, Associate Investigator
Gerald Fuller, Consultant
A. H. Krebs, Consultant
J. R. Warmbrod, Consultant

Project Sponsors:

Division of Agricultural Education
Department of Vocational and Technical Education
College of Education
University of Illinois
Urbana, Illinois

Illinois Agricultural Association
Bloomington, Illinois

FOREWORD

This publication relating to suggested procedures for planning and conducting county FFA Cooperative Acquaintanceship Programs has resulted from an intensive study of FFA Cooperative Acquaintanceship Programs conducted by the Agricultural Education Division, University of Illinois, in cooperation with the Illinois Agricultural Association Youth Committee. The study of FFA Cooperative Acquaintanceship Programs was a part of a broader study entitled, Education Regarding Cooperative Organizations in Rural Areas. The objectives of this broader study involved (1) determining current educational programs in rural communities regarding cooperative organizations, (2) assessing the relative effectiveness of various educational programs regarding cooperative organizations in rural communities, (3) determining opportunities for educating people in rural areas about their cooperatives and (4) developing plans for fostering understanding of the functions and operating procedures of rural cooperatives.

This publication contributes directly to objectives three and four. Dr. Hemp, principal investigator, and Mr. Norman Ehresman in their study of FFA Cooperative Acquaintanceship Programs have discovered and developed many worthwhile procedures that, if followed, will make future FFA Cooperative Acquaintanceship Programs progressively more functional as educational programs. Persons responsible for conducting and participating in future FFA Cooperative Acquaintanceship Programs will find many helpful suggestions in the following pages that will make their job easier and more effective.

Lloyd J. Phipps
Project Director

Introduction

FFA Cooperative Acquaintanceship Programs were held in 65 counties in Illinois in 1963. The leadership for planning and conducting these county programs was provided by county secretaries of organization (CSOs).

The suggested procedures included in this publication were identified from an earlier study entitled "A Study of FFA Cooperative Acquaintanceship Programs in Illinois" conducted by the Division of Agricultural Education, University of Illinois and sponsored by the Illinois Agricultural Association. As a part of this study a survey was made of all CSOs to identify successful and unsuccessful practices used in planning and conducting FFA Cooperative Acquaintanceship Programs.

The purpose of this publication is to provide county secretaries with a prototype or model for developing new FFA Cooperative Acquaintanceship Programs or for improving existing programs under the sponsorship of Farm Bureaus. All of the practices and procedures outlined in this report have been field-tested and evaluated. It is obvious that no one pattern of procedures will be successful in every county in Illinois; however, county secretaries of organization will find all of the procedures included in this report worthy of consideration and most of them worthy of adoption.

Developing Objectives

The objectives of FFA Cooperative Acquaintanceship Programs should be clearly defined and stated. These programs can be no stronger than the objectives on which they rest. In a recent survey of CSOs the following major objectives of FFA Cooperative Acquaintanceship Programs were identified:

1. To acquaint students with cooperatives.
2. To help students understand how cooperatives function.
3. To help students understand the Farm Bureau and the Illinois Agricultural Association.
4. To acquaint students with job opportunities in cooperatives.

The objectives of FFA Cooperative Acquaintanceship Programs should be educational in nature and compatible with the objectives of the high school vocational agriculture programs in the county. County secretaries of organization should establish objectives which make it possible for these programs to supplement the educational activities of cooperative organizations within the county. In many counties FFA Cooperative Acquaintanceship

Programs sponsored by Farm Bureau and its affiliates are just one of several educational activities sponsored by cooperatives for high school vocational agriculture students. In order to secure maximum benefits from Cooperative Acquaintanceship Programs CSOs and teachers should coordinate the scheduling of all educational activities. For example, teachers may teach a unit on cooperatives to their advanced students, and CSOs may follow through by scheduling the Cooperative Acquaintanceship Program immediately after the instructional unit has been completed at the schools in the county. For some students the Holiday Conference may become the third educational activity of the school year.

Deciding on a Name

An appropriate name for these programs is "FFA Cooperative Acquaintanceship Program, sponsored by _____."

All agricultural cooperative organizations should be encouraged to support and participate in conducting FFA Cooperative Acquaintanceship Programs. The names of those organizations that assist in sponsoring these programs should be included in the title. It is not desirable, from an educational point of view, to limit the sponsorship to any one cooperative organization unless that organization includes the membership of the majority of agricultural cooperatives in the geographical area being served.

Making Preliminary Plans and Contacts

The first contact the CSOs make with the high schools should be made with the building principal or school superintendent. When CSOs visit the high schools to discuss the possibilities of involving the vocational agriculture teachers and FFA members in FFA Cooperative Acquaintanceship Programs they should emphasize the following points:

1. The objectives of these programs are educational in nature.
2. The program will be designed to enrich the instructional program of the vocational agriculture teacher.
3. Vocational agriculture teachers will be asked to participate in a planning meeting to help plan the program.
4. Students who participate in county acquaintanceship programs are eligible to attend a state Holiday Conference at Bloomington, Illinois.
5. Other award tours including a trip to the American Institute of Cooperation are available to certain students.
6. The FFA Cooperative Acquaintanceship Program will be held after school hours.

Before departing from the school administrator's office the CSO should ask permission to contact the vocational agriculture teacher and discuss with him the possibilities for involving the teacher and certain FFA members in the program.

Financing the Program

An abundance of financial support is not one of the criteria for presenting a desirable type of program. A good program does not require that large sums of money be available.

The decision as to how much money to spend and how the money is to be collected must be made at the county level. In most cases, the various sponsoring agencies share in the cost of the total program according to their ability to contribute, and according to benefits which such an educational program may eventually return to them.

A county organization of all the agricultural cooperatives located within the county would be an ideal agency to coordinate the financing of this program. Financial arrangements need to be handled through regular channels of affiliated companies or other sponsoring companies with the approval of the boards of directors. Decisions regarding financing should probably be made at a time when teachers and school administrators are not present. For this reason, the question of financing has not been included in the suggested agenda for planning meetings.

Conducting the Planning Meeting

A planning meeting should be held with the CSO, vocational agriculture teachers, school administrators, and representatives from the sponsoring cooperatives present. This meeting can be held about a month prior to the time when the FFA Cooperative Acquaintanceship Program is to be held. The CSO should be responsible for calling the meeting and serving as chairman. Some questions to be discussed and suggestions to remember in making final decisions are as follows:

1. When and where will the program be held?

   The FFA Cooperative Acquaintanceship Program should be held in the fall or early spring on a school day, but not during school hours. A desirable program would include registration at 3:45 p.m., a general meeting of all participants at 4:00 p.m., small group discussions at 4:45 p.m., and a banquet at 6:00 p.m. The banquet and subsequent program should not last beyond 9:00 p.m.

2. Who will be invited to attend?

   The board members of the various cooperatives and the high school superintendents, principals, and vocational agriculture teachers should be invited to the banquet. Only students enrolled in junior or senior vocational agriculture classes are usually invited to attend the program. Staff members from cooperative organizations are usually asked to participate in the program so they would automatically be included on the guest list.

3. What should be the general nature of the program?

The planning meeting is the time to coordinate the content that is to be discussed at the Acquaintanceship Program with the instructional programs of the schools. The teacher should be asked to suggest questions which they would like to have discussed during the Acquaintanceship Program. The topics to be discussed should be neither too complex nor too simple, but rather adjusted to the level of competency of the FFA members and the time available for discussion. If the nature of the discussion material is too simple, the students will become bored and the purposes of the program will be defeated. If the material covered in the discussion meetings is "above the heads" of the students, they will be lost and again the purposes of the program will be defeated.

The sample program in the appendix of this report may help CSOs plan programs for their counties. Also, the section of this report entitled "Conducting the Program" includes suggested activities which are commonly used in FFA Cooperative Acquaintanceship Programs.

4. Who should be asked to serve as discussion leaders?

The discussion leaders for the program may be chosen from among the cooperative company managers, or other cooperative employees or members who are knowledgeable in the area of cooperatives. Some of the people who can be used for instructors are: CSO, agency manager, service company manager, farm adviser, serum representative, producers seed representative, livestock representative, and other state and field staff of Farm Bureau and cooperatives.

5. What kind of meals should be served?

Providing a meal is an important way to impress guests at the Acquaintanceship Program. The meal can range from a smorgasbord to a banquet. One point to remember is that young men have big appetites--be sure to have plenty of food. Fancy meals and fancy menus are not necessary for a successful banquet. In counties where securing adequate financing is a problem, the meal may be omitted.

One final suggestion regarding planning meetings is that CSOs should use the "Worksheet for Planning FFA Cooperative Acquaintanceship Programs" included in the appendix of this report. As decisions and suggestions are made they can be recorded on the planning sheet. By using the planning sheet, CSOs have both a guide for the planning meeting and a place to record notes and suggestions.

Conducting the Program

Registration procedures should include recording the names of all the participants and assignments of the FFA members to the small study groups. If possible, one member from each school represented should be assigned to each discussion group. FFA members should wear their FFA jackets. Other participants should be given name tags specifying the organization they represent and their positions.

Most high school students have a snack when they arrive home from school. Doughnuts and milk could be served during the registration process to help tide them over since some will be having dinner later than usual.

A general meeting of all the participants should be held following the registration. During this meeting, the CSO or other general chairman should introduce the small group discussion leaders, the school administrators, and the vocational agriculture teachers as well as the other guests, excluding the FFA members.

The main presentation at this meeting could be a speaker, series of speakers, panel of experts, or a movie or other visual presentation that deals with the general topic of cooperatives.

Following the main presentation the discussion groups can be directed to their meeting rooms.

The discussion leaders should be prepared with an outline of the specific questions to be discussed and should make reference to the materials that were handed out during the registration period. All members of the discussion groups should be encouraged to participate in the discussions.

During the discussion group meetings, the agriculture teachers could conduct a meeting of their own. A topic for this meeting might be the total educational activities of the cooperatives or teaching high school classes about cooperatives. It might be well to ask these teachers for ideas on improving the educational programs of the sponsoring cooperatives. A member of the State Supervisory staff in Agricultural Education might be asked to lead the teachers' class as a representative who knows and understands activities being carried out at the sectional, district, and state levels.

Usually some FFA member is capable and willing, if contacted in advance, to give the invocation for the banquet. The general chairman should introduce the more distinguished guests following the meal and acknowledge these groups or persons who helped to make the program possible.

The general chairman should introduce the main program for the evening. The main feature of the program may be a speaker or a film, but should be entertaining in nature as well as informative in the area of cooperatives. Care should be taken to insure that this part of the program is not too long.

The final task of the evening is to collect the completed evaluation check sheets from FFA members and from the other participants.

Publicizing the Program

Public relations is a vital part of any program. It is important that the public, especially members of the various sponsoring cooperatives, be informed prior to and following the FFA Cooperative Acquaintanceship Programs.

Publicity prior to a program should include newspaper releases telling about the planning meetings and the plans for conducting the program. Publicity releases following a program may include newspaper articles and tape recordings for radio programs.

See the Appendix I for a sample news release.

Providing Suitable Facilities and Materials

The FFA Cooperative Acquaintanceship Program may be held at the County Farm Bureau offices or other suitable cooperative facilities in order that the FFA members have a feeling of being guests of the cooperatives.

The lobby of the office, provided with a desk or table, can serve as a registration point for the participants. Name tags should be provided for participants, other than FFA members who will be wearing FFA jackets with their names on them.

The registration point is a desirable place to hand each FFA member a packet of materials including such items as pencils, paper, and a schedule of events for the program. Information booklets and other materials to be used in the small group discussions should be distributed at the small group meetings.

Several small offices or meeting rooms are needed for conducting the small group discussions. These small meeting rooms should be large enough to accommodate from six to 12 persons.

Facilities for the banquet following the discussion meeting can be secured according to the availability of such facilities in the area. If space and facilities are available at the same place that the discussions are taking place, it would be desirable to hold the

banquet there. An alternative arrangement would be to hold the banquet portion of the program at a local restaurant, or to have no banquet.

A meeting room large enough for a general assembly of the participants is needed. Usually the farm bureau general meeting room is large enough for this purpose.

Audio-visual equipment may be needed in the large meeting room and at the banquet.

Evaluating the Program

The program will be evaluated by everyone in attendance. It is a valuable aid to the persons planning next year's program to know how the people evaluated the program.

Observations and suggestions for improving next year's program should be put in writing by the persons involved in presenting the program and handed to the CSO who should file them for use in planning the next program.

Another valuable tool for use in planning the next year's program is the evaluations made by the FFA members. The students should not be asked to make a short talk to the group on how they liked the program or how much they learned, but rather should be given an evaluation check sheet whereby they make their evaluation anonymously. A sample evaluation check sheet is included in Appendix II of this report.

Planning for Program Follow-Up

The major purpose of the FFA Cooperative Acquaintanceship Program is to supplement the other educational programs of both the agriculture teachers and the cooperatives.

A complete year's program of any cooperative organization should include many other activities of an educational nature. Such activities as inviting FFA members to meet with the cooperative's board of directors, forming a junior cooperative, inviting FFA members to act as members, directors, managers, and workers for a day, providing agriculture teachers with teaching aids, acting as resource persons for agriculture class discussions, and supplying information to the teachers about local cooperatives should be a part of the educational program of every agricultural cooperative.

The increased interest and knowledge about cooperatives which will result from conducting an Acquaintanceship Program should give rise to increased requests for information and tours of facilities.

Worksheet for Planning FFA Cooperative Acquaintanceship Programs

A. Name of program _____

_____

B. Date and time _____

C. Purposes:

1. _____
2. _____
3. _____
4. _____

D. Sponsoring groups:

1. _____
2. _____
3. _____
4. _____
5. _____

E. Names of administrators and teachers to contact:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____

F. List of individuals to invite to program:

1. _____ 11. _____
2. _____ 12. _____
3. _____ 13. _____
4. _____ 14. _____
5. _____ 15. _____
6. _____ 16. _____
7. _____ 17. _____
8. _____ 18. _____
9. _____ 19. _____
10. _____ 20. _____

G. Physical facilities and equipment needed:

1. Meeting place _____

2. Rooms to be used for group discussions _____

_____

_____

3. Materials needed at the registration desk _____

_____

_____

4. Handouts and other supplies needed _____

_____

_____

_____

5. Audio-visual equipment needed _____

_____

_____

_____

H. Work assignments:

Duty	Person(s) assigned
1. Registration	_____
2. General chairman	_____
3. Main presentation	_____
4. Discussion leaders	_____
	_____
	_____
	_____
5. Invocation	_____
6. Evaluation	_____
7. Other duties (list)	
_____	_____
_____	_____
_____	_____
_____	_____

I. Program budget:

Budget Items	Amount Budgeted
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
Total cost	_____

Calendar of Planning Activities

Activity	Date to Accomplish
1. Contact school administrators	_____
2. Contact agriculture teachers	_____
3. Hold planning meeting	_____
4. Ask persons to participate in program	_____
5. Send invitations or notices	_____
6. Submit newspaper article describing forthcoming program	_____
7. Check program arrangements	_____
8. Submit newspaper article reporting program	_____
9. Prepare evaluation sheet	_____
10. Write "thank-you" letters	_____

APPENDIX I

LOCAL COOPERATIVES TO HOST COUNTY FFA MEMBERS

Approximately _____ FFA members and their instructors who are junior and senior vo-ag students at all the high schools in the county will be guests of local farm cooperatives at an "FFA Cooperative Acquaintance Day Program."

The program to be held _____ _____ at the
(day) (month & date)
_____County Farm Bureau office is being conducted and sponsored by the _____County Farm Bureau, _____ County Service Company, Country Companies Insurance, _____ _____, _____ _____ and _____ _____.

(List all co-sponsoring affiliates or non-affiliated cooperatives involved).

The purpose of the event is to outline the role of cooperatives in our area, with emphasis on their local functions as farmer-owned and controlled businesses with added emphasis placed on career opportunities for interested young men with farm experience according to _____, County Secretary of Organization and Program Chairman.

Registration for the event will begin when the boys arrive at the local Farm Bureau office following afternoon classes on _____. A welcome and greetings
(day)
to the conferees will be extended by _____ President of the _____ County Farm Bureau (or Service Co.) and _____ _____Sectional FFA Vice President from the _____ Chapter. (Give address if outside county.) A film (name of film) will be shown depicting the importance of cooperatives as one of the four major ways of doing business in America. Mr. _____ of the (name of coop or business) will speak to the group. He is (title & job description) for the (name of coop).

Following the general assembly, the FFA boys will go to small workshop groups where local coop managers will lead discussion regarding their respective business history, operational make-up, functions and services to its members and career opportunities for young men with an interest in farm related industry.

School administrators and Directors of the sponsoring cooperatives will join the FFA boys and conference staff personnel at __(name and location of eating place)__ for a banquet. Highlighting the day's activities will be a humorous and inspirational address by _____, _____.
(name) (title - company and address)

Mr. _____ is a well known speaker throughout _____
(Illinois, Nation or area.)

Note: (Reporters from local news media such as newspapers, radio or T.V. stations should be invited to attend the event. Never underestimate the power of the press if just invited. Be sure and get pictures for your own publication.)

APPENDIX II

EVALUATION FORM

FFA COOPERATIVE ACQUAINTANCESHIP PROGRAM

1. Was the conference as a whole worthwhile? List Reasons.

2. Should the conference be repeated next year?

3. What did you like the best?

4. What did you like the least?

5. How would you improve the conference?

IF YOU NEED MORE WRITING SPACE, PLEASE USE THE BACK OF THIS PAGE.

VT 001 596
Technical Education, Title III George-Barden Act (Formerly Title VIII, N.D.E.A.). How to Obtain Approval for Assistance.

California State Dept. of Education, Sacramento
MF AVAILABLE IN VT-ERIC SET.
Pub Date - Apr65 10p.

*FEDERAL LAWS; *TECHNICAL EDUCATION; *FEDERAL AID; *FINANCIAL SUPPORT; *PROGRAM PROPOSALS
*GEORGE BARDEN ACT TITLE III

Instructions concerning the application for funds for technical education are presented for personnel of public secondary schools, junior colleges, adult schools, or for county superintendents. The contents include: (1) Characteristics of an Occupation Necessary for National Defense, (2) Agencies Eligible to Apply for Assistance, (3) Kinds of Activities that Qualify, (4) Preparation of Application, and (5) Procedure for Submitting an Application. A sample title page and expenditure form is given. Pertinent California addresses are included. (EM)

VT001 596

ED0 31587

TECHNICAL EDUCATION

TITLE III GEORGE-BARDEN ACT
(Formerly Title VIII, N.D.E.A.)

How to Obtain Approval for Assistance

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

CALIFORNIA STATE DEPARTMENT OF EDUCATION
Sacramento
April, 1965

VT01596

CONTENTS

Page

I. PURPOSE 1

II. HIGHLY SKILLED TECHNICIANS IN RECOGNIZED OCCUPATIONS 1

III. CHARACTERISTICS OF AN OCCUPATION NECESSARY FOR NATIONAL DEFENSE 2

IV. AGENCIES ELIGIBLE TO APPLY FOR ASSISTANCE 2

V. KINDS OF ACTIVITIES THAT QUALIFY 3

VI. PREPARATION OF APPLICATION 3

- Identification of District 4
- Fiscal Summary 4
- Description of Project 4
- Form of Final Report of Study or Research Project 4
- Administration and Supervision 5
- Instruction 5
- Equipment and Supplies 6
- Other Personnel Costs 6

VII. PROCEDURE FOR SUBMITTING AN APPLICATION 6

APPENDIX

Application Title Page 8

Summary of Proposed Expenditures 9

TECHNICAL EDUCATION

BASIC PROVISIONS

I. PURPOSE

The purpose of Title III of the George-Barden Act is to provide assistance to the public schools in the field of Technical Education. These funds are to be used in stimulating an educational program designed to fit persons for useful employment as highly skilled technicians in recognized occupations that require scientific knowledge in fields necessary for national defense.

II. HIGHLY SKILLED TECHNICIANS IN RECOGNIZED OCCUPATIONS

The broad field of these occupations covers a wide range of activities, great variations in scope and level of work, and a multitude of payroll job titles. At least two general areas or groups may be distinguished.

- Payroll job titles which are well-known such as are found in manufacturing, construction, operation, processing, maintenance, and other groups. At one time some of these occupations were largely manipulative in character. With modern industrial progress and technological change, the recognized job content has required more and more application of specialized scientific knowledge to specific job situations.

- Occupations of more recent origin are more difficult to classify. They do not encompass the same work responsibilities as those referred to above, although both groups may be involved in similar activities. Examples of these occupations include:

  - Agricultural Industry Technicians
  - Business Data Processing Technicians
  - Electrical Technicians
  - Electronic Industrial Data Processing Technicians
  - Electronic Technicians
  - Engineering Aides
  - Industrial Technicians
  - Instrument Technicians
  - Tool Design Technicians

The main requirement of highly skilled technicians is technical knowledge and the ability to apply it. Such occupations demand the practical application of technology in specific fields and require specialized and technical skills developed through intensive training. They require more than just the understanding of scientific principles. These principles must be applied to specific situations. Basic science and mathematics are foundations for the applied technology, and on these foundations the special applications are developed.

III. CHARACTERISTICS OF AN OCCUPATION NECESSARY FOR NATIONAL DEFENSE

An occupation will be considered necessary for the national defense if:

- A significant number of those engaged in the occupation are employed in the design, development, testing, manufacture, processing, construction, installation, operation, maintenance, or servicing of equipment or products (or parts or accessories thereof) which are of importance particularly for military or other defense activity, or are employed in providing technical services of importance particularly for military or other defense activity, or

- There is a critical shortage of those available for such employment.

In addition to the above provisions, training may be considered to be necessary for the national defense if such training is particularly designed for those employed or to be employed as highly skilled technicians in the military, in supplying of critical products or services to the military, in scientific research using technical assistance, or in making available services or supplying products construed to be of critical importance in national defense and national security.

IV. AGENCIES ELIGIBLE TO APPLY FOR ASSISTANCE

Any public secondary school, junior college, adult school, or office of a county superintendent of schools may submit an application for approval.

V. KINDS OF ACTIVITIES THAT QUALIFY

The Technical Education program provides for pre-employment and supplementary training, and specific activities for which these funds may be used include:

- Salaries and necessary travel expenses of local school personnel, including teachers, coordinators, supervisors, vocational guidance counselors, teacher-trainers, directors, administrators, and others
- Purchase of instructional supplies and teaching aids
- Securing necessary educational information and data as a basis for the proper development of Technical Education programs to insure adequate vocational guidance and counseling
- Occupational studies and surveys needed for the planning and development of Technical Education
- Purchase, rental, or other acquisition; and maintenance and repair of instructional equipment
- Necessary costs of transportation of students
- Work experience education programs
- Travel expenses of members of advisory committees
- Related technical instruction for apprentices
- Maintenance of adequate programs of administration, supervision, and teacher training

VI. PREPARATION OF APPLICATION

The application should explain in detail the nature of the project as well as provide the necessary fiscal information. Since the available funds will not be sufficient to cover all demands made upon them, priority will be given applications in terms of the significance of the project proposed and the degree of local district effort with particular reference to the amount of matching money available. It is expected that at least one-half of the project costs will be borne by local district funds.

Applications must be submitted by October 29, 1965, if they are to be considered in the initial allocation of funds. Applications made after this date may be considered if additional funds are available.

It is suggested that the following items be used as a guide in preparing the application and that there be sufficient detail included under each heading so as to fully explain the nature and purpose of the proposed activities and provide a factual basis for evaluating the application.

- Identification of District -- The first page of the application should follow the format set forth on page 8 of these basic provisions. This page must be properly signed by either the superintendent or his designate.

- Fiscal Summary -- The second page of the application should follow the format set forth on page 9 of these basic provisions. The summary of proposed expenditures will be used to compute the amount of Title III funds that are to be allotted the project.

- Description of Project -- A statement must be prepared by the district indicating the proposed activities of the project. This statement should be in such detail as appropriate to support the request for assistance as follows:

  - Educational objectives of application
  - Procedure of study or research project
  - Courses or curriculums affected
  - Personnel involved

If personnel are already available, they should be named and their background and experience included; if not, indicate the job specifications for the professional positions to be involved.

- Form of Final Report of Study or Research Project -- Sufficient copies of the results of the study or research project should be made available for distribution in the State. The format of the report, the number of copies needed for distribution, and the date for completion of the report should be mutually arranged with the appropriate Regional Supervisor in your area.

- Administration and Supervision -- The exact nature of the services to be performed should be identified, and the organizational framework indicating where such administration and/or supervision fits into the total district organization should also be included. A list of educational advisory committee members and their affiliation shall be attached. The names of all personnel involved in the administration and supervision of the project should be listed. It will be particularly helpful if this listing will include all administrative and/or supervisor personnel involved in the work of the project irrespective of whether or not assistance is being requested for salary paid. Administrative or supervision credentials held should be indicated for each individual and nature of services performed indicated (i.e. administrator, supervise Technical Education program, coordinate electronics classes, etc.). The amount of salary to be charged to project service represents the portion of individual's total salary that reflects the percentage of the total time spent on the project activities.

- Instruction -- When an instructional program operates as a part of, or in relation to, the proposed project, the instructional costs must be identified irrespective of any fiscal support request for such instruction. A list of all technical classes included in the curriculum should be attached and an outline of the course content included or on file in the appropriate Regional Office. The names of all instructors involved in Technical Education courses related to the project should be indicated. It is of particular importance to identify the full extent of the Technical Education program in order that the amount of Title III funds that can be used in California may be ascertained. The amount of salary reported should have reference to Technical Education classes only. If an instructor spends one-half time teaching classes other than those eligible for assistance, only one-half of his total salary should be identified in the application.

- Equipment and Supplies -- Requests for assistance with equipment and supply purchases, in addition to itemization, should clearly indicate how the requested items will improve the instruction program and are necessary to the successful accomplishment of the objectives of the project. All equipment costing $25 or more should be individually listed. Each item should be described with enough detail so that equipment can be later identified if a physical audit is made. All supply items and equipment items under $25 should be classified as supplies. The unit value is the determining factor. For example, a $20 micrometer would be classified as supplies even though 10 micrometers at a total cost of $200 might be involved. Be sure to indicate unit cost in all entries involving quantity purchases.

- Other Personnel Costs -- Any personnel employed not covered under administration, supervision, or instruction, such as special research assistants, clerical, or maintenance persons, are not limited by any specifications in the California Plan for Vocational Education. There should be indications, whenever appropriate, that qualified persons will be employed for specialized assignments.

VII. PROCEDURE FOR SUBMITTING AN APPLICATION

The purpose of the application for approval is to identify the proposed Technical Education project with sufficient detail so that the activities may be evaluated in terms of the provisions of the California Plan for Vocational Education.

- The completed application should be checked for the following:
  - Title page (see page 8)
  - Summary of proposed expenditures (see page 9) attach explanation of each item
  - Description of project (see page 4)
  - Equipment and supply lists (see page 5)
  - Advisory committees list (see page 5)
  - Listing of technical classes (see page 5)

- Three copies of the application must be submitted to the appropriate Regional Supervisor (see below) where the request will be reviewed and subsequently sent to the State Department of Education offices in Sacramento for final approval. In preparing an application, it may be desirable to request assistance from the appropriate Regional Office of the State Department of Education identifying the nature of the project activities and preparing an application. Such assistance may be requested from any one of the following offices:

Bureau of Agricultural Education

47 Warner Street, Chico 95928
5044 State Bldg., 2550 Mariposa St., Fresno 93721
809-C State Bldg., 217 W. First St., Los Angeles 90012
4064 State Bldg., 1111 Jackson Street, Oakland 94607
413 State Education Bldg., 721 Capitol Mall, Sacramento 95814
California State Polytechnic College, San Luis Obispo 93402

Bureau of Business Education

809-I State Bldg., 217 W. First St., Los Angeles 90012
4064 State Bldg., 1111 Jackson Street, Oakland 94607
441 State Education Bldg., 721 Capitol Mall, Sacramento 95814

Bureau of Homemaking Education

47 Warner Street, Chico 95928
5044 State Bldg., 2550 Mariposa St., Fresno 93721
809-B State Bldg., 217 W. First St., Los Angeles 90012
4064 State Bldg., 1111 Jackson Street, Oakland 94607
407 State Education Bldg., 721 Capitol Mall, Sacramento 95814
California State Polytechnic College, San Luis Obispo 93402

Bureau of Industrial Education

217 W. First Street, 809-I State Bldg., Los Angeles 90012
4064 State Bldg., 1111 Jackson Street, Oakland 94607
418 State Education Bldg., 721 Capitol Mall, Sacramento 95814

STATE OF CALIFORNIA
DEPARTMENT OF EDUCATION

APPLICATION FOR APPROVAL OF

TECHNICAL EDUCATION PROJECT

TITLE III GEORGE-BARDEN ACT

SCHOOL YEAR 1965-66

FROM

_____
Name of District

_____
Name of School

_____
Address

Project Title _____

_____

A. The attached descriptive and fiscal information is a firm request for assistance from funds available through Title III of the George-Barden Act. This application is consistent with the purposes of the Act and with the provisions of the California Plan for Vocational Education.

B. The assurance of compliance with Title VI of the Civil Rights Act of 1964, dated _____ applies to this application.
Month Day Year

C. Future correspondence regarding this project should be addressed to:

Name _____ Title _____

Signature _____ Date _____
Superintendent or Designate

Name of School District _____ Post Office Address _____

Project Title _____

SUMMARY OF PROPOSED TECHNICAL EDUCATION EXPENDITURES

SCHOOL YEAR 1965-66

	Total*	Source of Funds	
		Local	Title III
(1)	(2)	(3)	(4)
1. Administration a. Salary			
b. Other			
2. Supervision a. Salary			
b. Other			
3. Instruction a. Salary (1) Pre-employment			
(2) Extension			
b. Instructional Equipment & Supplies			
c. Other			
4. Total			

* Indicate full extent of Technical Education expenditures in the District which meet the standards of Title III of the George-Barden Act. Attach back-up fiscal information for items 1 through 4.

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So You Want to Be an Officer in the F.F.A. Cornell Miscellaneous Bulletin 40.

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*FUTURE FARMERS OF AMERICA

Designed primarily to assist students in assuming positions of leadership in the Future Farmers of America (FFA), this bulletin was based on the author's experience with officers of the FFA at local, county, regional, and state levels. It includes information on the selection, election and training of officers, program activities, officers meetings, and leadership activities for officers and members. It provides guidelines for personal appearance, manners, behavior, meeting people, table manners, and ideals and standards. The qualifications, constitutional duties, and responsibilities are outlined for the organization's president, vice-president, secretary, treasurer, reporter, sentinel, and parliamentarian. A selected list of references is included. (JM)

VT001 603

ED0 31587

So you want to be an officer in the F.F.A.

by Joe P. Bail

VT 01603

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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Cornell Miscellaneous Bulletin 40 New York State College of Agriculture

SO YOU WANT TO BE AN OFFICER IN THE F.F.A.

Joe P. Bail

SECTION I

YOUR JOB AS AN OFFICER IN THE F.F.A.

Organizations are made up of individual members, some of whom become officers to guide and direct the work of the group. It is of primary importance that careful attention be given to the nomination and election of officers who will lead the chapter in a successful program of activities for the year.

SELECTION OF OFFICERS

The boys selected to be officers should have a definite interest in agriculture and the F.F.A. They should be enthusiastic about the organization and be willing to devote their time to making it a success. They must be able to express themselves and be understood by others. The ability to lead and direct the members of the chapter in their various activities is essential. The members selected to be officers should have the potentialities for future advancement and progress in school and F.F.A.

ELECTION OF OFFICERS

Any one of several methods of electing officers may be used with equally satisfactory results, provided the method is varied to suit the particular situation in a given chapter. The most common way to select officers is through the nominating committee. This should be a representative group of members from the chapter who will recommend nominees on the basis of their ability. Neither personal friendship nor popularity should be the deciding factor.

All boys interested in applying or running for office should be interviewed by the nominating committee. The qualities listed under *Selection of Officers* should be the basis for the nominating committee's recommendations. When the committee is ready to report, allow sufficient time for the discussion of each person nominated. Nominations from the floor are also in order and should be treated the same as those nominated by the committee.

After the discussion of candidates, each candidate should be voted on in the order in which he was nominated. The manner of voting should be decided by the chapter unless provisions are made for it in the constitution and by-laws.

TRAINING CHAPTER OFFICERS

The job of being a good F.F.A. officer is not over when the election takes place, but is just beginning. The old saying that leaders are born, not made, has been disproved on numerous occasions. Any member of the F.F.A. who wants to become an officer can succeed if he applies himself. Each chapter, however, must spend time on leadership training if it is to develop capable officers and members who will become future community leaders.

One of the best ways to train chapter officers is to provide a wealth of activities for all members on the local, state, and national level. That we "learn best by doing" is a proven fact. The many activities of the F.F.A. are designed to give every member the opportunity to participate in several events, providing a basis for the all-round development of the future farmer.

PROGRAM OF ACTIVITIES

The success of any chapter depends upon the development of each individual member. The officers must guide the members in planning a program of activities that will provide a variety of experiences for all members. The needs and interests of the individuals should be considered in planning such activities as supervised farming, cooperative enterprises, community service, leadership, thrift, conduct of meetings, scholarship, recreation, and public relations. Each phase of these activities must be included in a well-rounded program.

It is generally neither advisable nor practical for all members to participate in all activities. F.F.A. members, like all young people, have many different interests and inclinations. It is therefore one of the functions of the F.F.A. organization to provide the opportunity for its members to participate in activities that are of interest to the individual and that give promise of being worthwhile and educational to him. Your chapter should attempt to make this opportunity available to its members.

REGULAR OFFICERS MEETING

The importance of regular meetings of the chapter officers and executive committee should not be overlooked. The preparation of an agenda for chapter meetings should

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The material in this bulletin is based on experiences in working with officers of the Future Farmers of America organization in local chapters, county and regional groups, and state associations. This bulletin has been designed primarily to help prepare boys for positions of leadership in the F.F.A. on local, regional, and state levels. Material of a similar nature has been used in leadership training classes in many parts of the country. Special appreciation is expressed to Mr. J. O. Sanders, Executive Secretary, New York Association of Future Farmers of America, for reading the manuscript and making helpful suggestions.

be an important activity of the officers at their sessions. To a considerable extent, the chapter officers are comparable to the board of directors of a business organization. Their actions and thoughts should serve as a basis for much of the final action taken by the members. A well-planned chapter meeting, with an agenda prepared in advance, will help to assure wise use of time.

Activities designed to improve the officers' abilities can be carried on much better during officers' sessions than at any other time. Special topics that will improve the leadership qualities of officers during their term of office may be discussed. Interest frequently lags because time is needlessly spent on minor details that should have been taken care of in the officers' meeting.

LEADERSHIP ACTIVITIES FOR OFFICERS

Shortly after officers are elected, they should meet with the chapter adviser for their first leadership training period. Several points to be considered are:

1. All officers should know their parts in the opening and closing ceremonies. These should be practiced before the first regular meeting when the new officers take over their duties. A good presentation of the ceremonies will insure the confidence and support of the members.

2. All officers should become thoroughly acquainted with the history, aims, and purposes of the F.F.A.

3. Chapter officers' meetings should be held at regular intervals, preferably every two weeks or oftener.

4. The duties and responsibilities of each officer should be discussed; he should then be expected to assume and carry them out.

5. The use of official F.F.A. jackets by chapter officers is strongly recommended. Local chapters may assist officers in purchasing their jackets.

6. Special topics, which are not devoted to specific leadership traits, should be discussed at the officers' meeting. The list might include the following: personality traits; personal appearance; proper manners for all occasions; how to meet people; carrying on a conversation; public speaking; citizenship; community activities; and others.

LEADERSHIP ACTIVITIES FOR ALL MEMBERS

Because all officers are chapter members, training must be provided for everyone to assure a supply of capably trained officer candidates. Many chapter activities are designed to provide learning opportunities for future officers. Some of the successful ways to do this are listed below:

1. Select or appoint a set of assistant officers. Let them substitute for the regular officers occasionally.

2. Use every member on some committee during the year. As many members as possible should serve in the capacity of the chairman.

3. Have well-planned chapter meetings with an agenda set up in advance and made available to members.

4. Use a part of the meeting to discuss citizenship, conduct of members, personal appearance, and other items designed to improve the members.

5. Select different members to represent the chapter at group or regional meetings and other activities.

6. See that all members are familiar with the F.F.A. organization and with the possibilities for advancement within the organization.

7. Urge all members to take an active part in the meetings by discussion, committee reports, or in other ways.

Additional experiences that your chapter might provide for its members are: read one or more books in the F.F.A. library; add ten or more bulletins or books to personal library; subscribe to the National F.F.A. magazine or an agricultural magazine; participate in the chapter public speaking contest, parliamentary procedure practice, or cooperative buying or selling; write one or more newspaper articles for publication; attend one or more county or regional F.F.A. meetings, or meetings of an adult organization; serve on two or more committees; lead a group discussion; participate in one or more chapter programs; participate on one or more of the following: chapter softball, basketball, or other athletic team, chapter quartet, glee club, or band; participate in one or more public programs such as: chapter banquet, chapter school assembly, radio or television, PTA, civic club, farmer's meeting, other public program sponsored by the chapter; participate in one or more of the following campaigns: safety campaign, fire prevention campaign, livestock loss prevention campaign, pasture improvement campaign; participate in one or more of the following chapter contests or awards programs: farm and home improvement, farm electrification, farm mechanics, soil and water conservation, chapter star farmer, state star dairy, poultry, or livestock farmer, chapter activity contest; exhibit one or more animals, agricultural products, or agricultural mechanics projects in a local, county, or state fair.

Other experiences for selected members of the chapter are: attending the State Leadership Training Conference and State Convention; attending the National F.F.A. Convention; and serving as a county or State officer.

SECTION II

CONDUCT OF MEMBERS OF THE F.F.A.

Future Farmers have many opportunities to appear before the public. Because any organization or group is judged by the actions of its members, Future Farmers should be on the alert to conduct themselves properly at all times. An excellent slogan adopted by many chapters regarding their members is, "A Future Farmer is always a gentleman."

PERSONAL APPEARANCE

Dress properly for all occasions. If you are wearing an F.F.A. jacket, be sure it is clean and neatly pressed. Wear it only on those occasions when it will reflect credit upon the organization. The national organization further recommends that no school letters or similar awards be displayed on the jacket. The organization and the individual are both being judged when the jacket is worn. For other times, dress according to what is considered good taste for the occasion. Personal cleanliness and good grooming are a necessity. Shoes should be cleaned and shined at all times. Hold your head high and walk in a manner to indicate that you are proud to be a Future Farmer.

PROPER MANNERS

Respect and consideration for others is the mark of a well-mannered person. Future Farmers should always stand until their elders are seated. Offer your seat to persons older than you and to the ladies. If you must pass directly in front of someone, do so by saying "excuse me." Do not talk across a room, but walk to a person before beginning a conversation. If you are in doubt about what constitutes good manners for a certain occasion, follow the actions of your host or some other mature person.

It is not enough to practice these traits when you are away from home. Your family, your friends, and your community also deserve the respect and courtesies shown to other people. Good manners are practiced daily, not reserved for special occasions. Show your parents, your teachers, and others your appreciation for the many favors and gifts that come your way. A simple "thank you" will return rich dividends.

BEHAVIOR IN PUBLIC

Choose your friends and associates wisely. If you do not want to be seen doing certain things or going to certain places, refrain from these activities. We are judged by what people see; make an effort to let them see you at your best. Respect the rights of others at all times. Neither destroy public property nor approve such actions in others. You can help influence others to abide by rules and regulations because you are in a position to exercise leadership.

MEETING PEOPLE AND HAVING A CONVERSATION

Young people are frequently ill at ease in formal gatherings. If you do not know the persons at a meeting introduce yourself to them. Break the ice in an easy manner. Be sure you understand the person's name and title so you can present him to someone else. Always introduce your parents by saying, "Father (Mother), this is Bill Smith. Bill is the secretary of our F.F.A. chapter." Present your friends to adults in the same way., "Mr. Brown, this is Bill Smith." Always present a gentleman to a lady, and a younger person to an older person. Practice will make you perfect in the matter of making introductions. Try to find something in common to talk about. Do not monopolize the conversation, but feel free to make comments other than yes or no. Be a good listener and you will seldom be uninteresting. Because you are judged by the way you talk, make an effort to express yourself in the best grammar possible. Use words that will be understood and will convey the meaning intended.

MANNERS AT THE DINNER TABLE

Future Farmer banquets and other public dinner gatherings put the F.F.A. member in a position to be closely judged by the public and also provide an opportunity to show that he is a gentleman in every respect. If it is a mixed group, do not be seated until all the women have a a seat. If you are placed next to a lady, offer to assist in seating her. Observe the host or hostess in the proper use of silverware. Take a moderate serving of dishes that are passed, but never fill your plate completely with your favorite food. Cut meat or other food into small particles as you progress through the meal, never all at one time. If a dessert is served, wait until everyone else is ready to eat before you begin. Eat slowly and chew silently. Be willing to take your turn in securing food or other necessary supplies from the kitchen. If an older person is seated at your table, be sure that he is served and taken care of adequately. When you have completed the meal, wait until everyone else has finished before leaving the table. Take time to talk with your neighbor during the meal.

IDEALS AND STANDARDS

The Future Farmer Creed stresses that "playing square" with those with whom you associate is very important. A Future Farmer's word should be his honor. The example you set will be followed by others in the chapter. If you finish what you start and do a good job, you have no reason to be ashamed of your actions, regardless of your measure of success. Promptness and enthusiasm in doing your job will enable you to live up to your ideals and standards. Set them high and endeavor to reach them.

SECTION III

THE JOB OF THE PRESIDENT

QUALIFICATIONS OF THE PRESIDENT

One of the first things to consider in the selection of the president is whether he has the qualifications for doing a good job. Because the president directs the work of the organization, he must be able to get along with people and to make them feel that they are an important part of the group. He must be a part of the group himself and not aloof in his manner or ways.

CONSTITUTIONAL DUTIES

Most constitutions state the duties of the president. The president should make a thorough study of the local chap-

ter constitution and be familiar with its provisions. These duties generally include the following: preside over all regular meetings; call all regular and special meetings of the chapter; call all meetings of chapter officers; appoint all committees and serve as an *ex officio* member of these committees; and represent the chapter at special gatherings unless some other member is designated.

RESPONSIBILITIES OF THE PRESIDENT

The success or failure of a local chapter will depend a great deal on the work of the president. He should not be expected to carry the entire load, but must be capable of providing leadership to reach the goals set by the group. To do this, the following responsibilities should be kept in mind.

Help develop a program of activities to fit local conditions which will challenge every member of the chapter.

Organize the chapter's affairs to give every officer and member something to do.

Be sure that a definite program is planned for every meeting.

Acquire a working knowledge of parliamentary procedure and conduct all meetings accordingly.

Frequently check with the other officers to see that they are doing their jobs well.

Divide the duties of your position with the vice-president. Be sure he has definite responsibilities.

Make a monthly check with each committee chairman on the progress of the group.

Plan far enough ahead for every officer and member to know what is going on.

Learn your part and expect every other officer to know his part in all chapter ceremonies, including initiations.

Be sure your chapter has something to do and is doing it.

Be a *leader* at all times and the rest of the work will be easier.

If the following questions can be answered in the affirmative, your chapter president should be a desirable officer and reflect credit upon the organization:

Is he a leader who will assume the responsibility of directing others?

Does he have the ability to conduct meetings according to accepted parliamentary practices?

Does he have the ability to think clearly and to make decisions?

Does he have a strong clear voice and the ability to speak distinctly?

Does he believe in the organization and will he work unceasingly to insure its success?

Does he show enthusiasm and initiative in the work he is doing?

SECTION IV

THE JOB OF THE VICE-PRESIDENT

The information presented under the job of the president applies equally to the vice-president. A good vice-president will assist the president in every possible way to make the chapter activities a success. He is the president's righthand man on all occasions.

The following specific responsibilities are delegated to the vice-president: preside over meetings in the absence of the president, have charge of committee work in general, be prepared to assume the duties of president at any time, and carry out other duties as designated by the president.

The job of the vice-president will take on meaning only to the extent that he is delegated responsibilities by the president. He must be willing to do many jobs that the president does not have time to do, and to stand in for the president when necessary.

SECTION V

THE JOB OF THE SECRETARY

No organization can function well without the services of a good secretary. A good secretary is aware of all the actions of the group and is ready to supply needed information at any time. His duties are many and varied, with the work of the entire chapter depending a great deal upon the efficiency with which he conducts his office. Some of the commonly known duties of this office are to:

Prepare and read the minutes of previous meetings.

Attend to all official correspondence.

Send out and post notices of meetings.

Prepare chapter reports.

Have available the agenda for the meeting.

Keep abreast of all goings-on in the chapter.

If the secretary is to do the job assigned to him, he must have the necessary supplies and equipment on hand. These will include the following materials:

Official F.F.A. secretary's book.

Official F.F.A. manual (latest edition).

Copies of the local and state constitutions and by-laws.

Copies of the local, state, and national programs of activities.

Copies of the proceedings of the state leadership conference.

Lists of committees and committee reports.

Any other reference material that may be called for during the meeting.

MINUTES OF THE MEETING

The official minutes of the meeting constitute a permanent record of the activities and actions of the chapter. They

must be accurate and complete. Effort must be made to get the correct wording of all motions and the final disposal made of them by the group. The minutes should follow an approved style and be written in a legible manner. They should be neat and easy to read.

HANDLING CORRESPONDENCE

Because the secretary deals with many people outside the local chapter, the impression he makes reflects on the chapter. All letters should be written in an approved manner and in proper style. Attention should be given to correct spelling, proper punctuation, and a good choice of words in the letter. Replies should be brief and prompt. The *prompt* secretary is generally a good secretary.

FILING MATERIAL

A definite plan should be in use for filing F.F.A. material. If the secretary is delegated this responsibility, he should do it thoroughly and neatly. If a satisfactory filing plan is not in use, organize one to meet your local conditions. Files must be kept up to date if they are to be of value. When material has no further use, it should be removed from the files.

EXECUTIVE OFFICER

The secretary has often been called the executive officer of the chapter. He keeps the organization intact, preserves the official records, and is, in many respects, the only contact with other individuals, chapters, and state and national organizations. Therefore, his job is of paramount importance in the overall chapter work.

SECTION VI

THE JOB OF THE TREASURER

KEY MAN IN FINANCES

The treasurer is the key man in the financial aspects of any organization. In the F.F.A. chapter, a definite part of the leadership training deals with handling money and correct procedures for keeping financial records. The F.F.A. treasurer must be well trained if his records are to be accurate and if the financial standing of the chapter is to be kept on a sound basis.

The job of the treasurer will include the following functions:

1. Receive and act as custodian of all chapter funds until they are deposited in the regular school intracurricular account.
2. Study last year's accounts as a basis for making budget recommendations for the coming year.
3. Issue receipts and keep a stub or duplicate for all money received.
4. Secure a receipt for every chapter disbursement.
5. Itemize and summarize the financial operations of each activity with date and title of all transactions.
6. Balance the accounts at regular intervals and check actual cash with the official chapter record.
7. Study and discover legitimate ways of raising money for chapter activities.
8. Supply the information necessary for financial aspects of all annual and school reports.
9. Keep all records neat and up-to-date.
10. Keep a membership record showing dues paid and cards issued.
11. Take part in all chapter ceremonies.
12. Collect all dues early in the year.
13. Send to state treasurer all state and national dues.
14. Build up the financial standing of the chapter in the school and community.
15. Be prepared to report on the financial condition of the chapter at any time.

RAISING MONEY

A good treasurer will have in mind ways to raise funds for carrying out the chapter activities. Without adequate financing, an organization's activities will be greatly curbed. If one method of raising money does not come up to expectations, the treasurer should be prepared to offer other possibilities. The treasurer can also be of help in keeping the chapter members informed of developments that may affect the financial standing of the organization.

IMPROVING YOUR ABILITY AS A TREASURER

After you have become familiar with your duties and responsibilities as a treasurer, feel free to call on the school banking officer for suggestions and advice. They will generally be glad to assist you and other chapter members in problems of chapter finances and also the financing of group or individual enterprises.

A good point to keep in mind is that a financial record cannot be almost correct—it *must be correct.*

SECTION VII

THE JOB OF THE REPORTER

INFORM THE PUBLIC

The foremost job of the reporter is to keep the public informed about the activities of the F.F.A. Your parents, neighbors, school officials, merchants, and other businessmen need to know about the F.F.A. and about agriculture in general. It is commonly agreed that we have little interest in the things we know the least about. If the F.F.A. is to receive the support it needs, a continuing program of public relations must be in effect.

WRITING NEWS ARTICLES

Activities and events in which members of the local chapter take part constitute a ready source of news material. The people of your community are interested in the names

of these boys and what they have done. News must be fresh and must answer the question of who, what, when, where, and why (how). A good news article will generally give these points although not always in the order listed.

STYLE AND STRUCTURE

The two most important factors to be considered in the news story are style and structure. The style has to do with expression and can be determined by the clarity and conciseness with which the article is written. The less effort required to get the meaning of an article, the more desirable it will be. The effectiveness of the style lies in the selection and use of words that will convey the meaning intended and hold the interest of the reader. Conciseness does not mean that you should not use a sufficient number of words to retain the human interest and life of the story. However, unnecessary words only add to the pruning done by the editor. Do not be discouraged if all of your story is not used. Many factors determine what articles will be put in print on a given date.

Structure deals with the arrangement of material within the article. An emphatic beginning with a good lead paragraph will generally determine whether or not the reader continues the article. The article should be written with the most important points first, with succeeding paragraphs of lesser importance. This will enable the editor to use a part of the story if space is limited. The ABC's of writing have been spoken of as accuracy, brevity, and clarity. A good news article will meet this standard.

The following points should be helpful in making your news writing easier: include names of people taking part in activities; write your news article as simply and directly as possible; double space to allow for minor changes or corrections; spell all names correctly and identify all people by their proper titles; try to get the story first-hand if possible; express appreciation for the space allotted for your article.

Do not use excessive words; do not complain if all your article is not used—resolve to do a better job next time; do not try to do a flowery job or "doctor" up the story—simply tell the facts; do not rely on your memory for details—write them down as they happen; do not be late with a story—meet your deadline.

SECTION VIII

THE JOB OF THE SENTINEL

As stated in the opening ceremony, the sentinel is the first person to greet guests and welcome them to the chapter. Because first impressions are important, the sentinel must do a good job of meeting people and making them feel at ease. He must also take the responsibility of providing for their comfort. The ventilation, heat, and lighting must be checked to insure an agreeable meeting place. The room must be ready before the meeting is called to order. This includes getting all the paraphernalia and other equipment in place. Should any changes be necessary, make them as the meeting progresses with as little disturbance and interruption as possible. Following the meeting, the sentinel is responsible for putting the room in order.

SPECIAL ASSIGNMENTS

The sentinel is the person who aids in maintaining order and checks on other disturbances during the meeting. He is not a bouncer, but a courteous and efficient helper. He should have a reasonable knowledge of parliamentary procedure if he expects to do his job well. During initiations, the sentinel will generally take charge and serve as coordinator.

MEETING PEOPLE

Because the sentinel must introduce himself to the guests and introduce the guests to other people, he must know how to make introductions. This can be learned by practicing with other members of the chapter. The sentinel should take advantage of situations that give him experience in meeting people. He should be neatly dressed and make a good appearance. He must use proper grammar and be well-mannered in all respects. He might aptly be called the "front office" man of the local chapter. He may also assist with any entertainment and with serving refreshments if needed. If visitors arrive during the meeting, he sees that they are welcomed and introduced at the appropriate time.

SECTION IX

THE JOB OF THE PARLIAMENTARIAN

ADVISER TO THE PRESIDENT

The office of parliamentarian may be appointive or elective. Because the primary duty of the parliamentarian is to serve as the president's adviser and consultant on procedural matters, it is better if he is appointed by the president. The parliamentarian should pass his advice directly to the presiding officer and not to the assembly. He is a source of parliamentary information but it is up to the president to enforce or ignore his advice.

TACT AND DISCRETION

The parliamentarian should attempt to anticipate any questionable situation and be prepared to advise the president. If a serious error occurs in parliamentary practice, he should tactfully call it to the attention of the presiding officer. An inquiry on parliamentary procedure should be directed to the president, and then, if the president desires, it may be passed on to the parliamentarian. Needless to say, the parliamentarian must have a thorough knowledge of parliamentary procedure. In addition, he should have the necessary sources to refer to in case a decision is questioned.

HOW TO LEARN PARLIAMENTARY PROCEDURE

The best and most effective way of learning parliamentary procedure is by practice in simulated and regular meetings. Various members of the chapter should assume the chair and preside for a period of time. A knowledge of the purpose of the various motions and parliamentary practices is necessary before a desirable understanding of partiamentary procedure may be gained.

Based on *Robert's Rules of Order* — see key below

	S	*D*	*A*	*MV*
I. Main Motions				
1. To introduce business	Y	Y	Y	Y
2. To take from the table	Y	N	N	Y
3. To adopt a resolution	Y	Y	Y	Y
4. To accept a report	Y	Y	Y	Y
5. To reconsider	Y	Y	N	Y
6. To adjourn (with qualifications)	Y	Y	Y	Y
7. To go into committee of the whole	Y	Y	Y	Y
II. Subsidiary Motions				
1. To postpone indefinitely	Y	Y	N	Y
2. To amend	Y	Y	Y	Y
3. To amend proposed amendment	Y	Y	N	Y
4. To refer (includes committee of the whole)	Y	Y	Y	Y
5. To postpone (to a certain time)	Y	Y	Y	Y
6. To limit debate	Y	N	Y	⅔
7. To vote immediately (previous question)	Y	N	N	⅔
8. To lay on the table	Y	N	N	Y
III. Incidental Motions				
1. To rise to a point of order	N	N	N	N
2. To suspend rules	Y	N	N	⅔
3. To rise to request information	N	N	N	N
4. To call for a division of house	N	N	N	N
5. To appeal from the decision of the chair	Y	Y	N	Y
6. To provide manner of voting	Y	Y	Y	Y
7. To withdraw motion	N	N	N	N
IV. Privileged Motions				
1. To rise to a question of privilege	N	N	N	N
2. To move question of privilege	Y	Y	Y	Y
3. To adjourn (without date)	Y	N	N	Y
4. To take recess	Y	N	Y	Y

KEY: S—Seconded; D—Debatable; A—Amendable; MV—Majority Vote; Y—Yes; N—No; ⅔—Requires ⅔ vote for this adoption.

* Under certain conditions, exceptions to these general rules may occur. Consult *Robert's Rule of Order* or other accepted authority for these instances.

SECTION X

CONCLUSION

Election to an office in an organization implies a trust in the individual. In accepting and assuming the responsibility of an office, the member obligates himself to do the best job that he possibly can. To do this means that he must be receptive to suggestions for improvement, willing to study, and aware of the fact that the welfare of the chapter should be put ahead of the welfare of the individual member. Whether you are in a small or a large chapter, a new chapter or an old one, the degree of participation in the activities determines your growth as an officer and leader. Active participation in the chapter activities is the key to successful membership in the F.F.A.

It is only through the efforts of all officers and chapter members that an organization can do the most good. Find your place and be willing to do your part. The personal satisfactions of a job well done will be many. You will then be proud to say "I served as an officer in the F.F.A."

SECTION XI

SELECTED LIST OF REFERENCES

Official F.F.A. Manual.

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A More Effective F.F.A. Stanley Wall, The Interstate Printers, Danville, Ill.

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VT 001 613

Survey of Pupil Interest in Three Home Economics Related Occupations: Child Care Aide, Clothing Construction Aide, Food Service Occupations.

Kentucky Univ., Lexington
MF AVAILABLE IN VT-ERIC SET.
Pub Date - 65 2p.

*STUDENT INTERESTS; CHILD CARE WORKERS; SENIOR HIGH SCHOOLS; *OCCUPATIONAL HOME ECONOMICS; FOOD SERVICE WORKERS; *QUESTIONNAIRES; SURVEYS; VOCATIONAL INTEREST; EDUCATIONAL INTEREST; SEAMSTRESSES; *SERVICE WORKERS

This instrument was developed to determine the interest in several possible occupational home economics programs. The questionnaire was designed to survey the need for the establishment of courses for those interested in the occupations of child care aide, clothing construction aide, or worker in the food service occupations. Students were given an opportunity to indicate an interest, a desire for more information, an indecision, or no interest in the program. Specific questions in each of the three subject areas were used to determine the student's experience in those areas. (MS)

VT001 613

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

ED031587

Survey of Pupils

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H. Ec. Ed. - Wage Earning
U. of Ky., March, 1965
Adapted for Conference Use
Fall, 1965

Survey of Pupil Interest in Three Home Economics Related Occupations: Child Care Aide, Clothing Construction Aide, Food Service Occupations

What are your plans after high school? Are you planning for college, marriage, or getting a job? If it is employment you want, how well prepared are you to get and hold a job? Are you trained in any skills which qualify you for entrance in a career? Perhaps here is what you've been looking for. A training program in Home Economics related occupations is being considered in this school. There is a possibility that a course will be offered next year in one of the following careers for which the most interest is shown.

The Child Care Aide is a person specially trained in understanding and dealing with children and in techniques of caring for children. She is prepared for child care jobs in private homes or in group care centers where she works under the direction of professional child care personnel.

The Clothing Construction Aide is a person who has skills and interests in clothing construction repair and alteration. She performs these and other jobs under the supervision of a qualified, experienced seamstress in an apparel store, dry cleaning establishment, dressmaking or tailoring shop.

Food Service Occupations is a general term covering several jobs for persons who work with food in public eating places. These jobs have special titles as hostess, waitress, cafeteria server or lunch-counter waitress, to mention a few. Workers in these jobs need training in food preparation and service and public relations if they are to be successful on the job.

From these descriptions which occupation do you think you would like best? (check one)

_____ a. Child Care Aide

_____ b. Clothing Construction Aide

_____ c. Food Service Occupations

To help with the planning for these courses, would you answer these questions:

1. If a class were offered at school to prepare you for the job which you checked, would you be interested in taking this class? (check one)
   _____ a. Yes, I am definitely interested
   _____ b. I am interested, but want more information
   _____ c. I am not sure
   _____ d. No, I am not interested
2. Would you like to go into this kind of work after you get out of school? (check one)
   _____ a. Yes, I am definitely interested
   _____ b. I am interested but want more information
   _____ c. I am not sure
   _____ d. No, I am not interested

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3. Check the Home Economics courses you have had:

_____ a. 7th and/or 8th grade Home Economics

_____ b. Home Economics I

_____ c. Home Economics II

_____ d. Home Economics III

_____ e. Home Economics IV

_____ f. Family Living or Special Home Economics course

4. In the space at the left check the statements which apply to the experiences you have had in sewing. Please list sewing experiences in the space provided.

_____ a. I have made complete garments for myself (list types of garments made _____)

_____ b. I have made garments for other people (list types of garments made _____)

_____ c. I have repaired my own clothing (list repairs _____)

_____ d. I have repaired clothing for others (list repairs _____)

_____ e. I have altered my own clothing (list types of alterations _____)

_____ f. I have altered clothing for others (list types of alterations _____)

_____ g. I enjoy sewing for myself and others

5. In the space at the left check the statements which apply to the experiences you have had with children:

_____ a. There are younger children in my family and I am sometimes responsible for them.

_____ b. I have cared for children at church.

_____ c. I have cared for children for pay.

_____ d. I have observed children at school, in my neighborhood, etc.

_____ e. I have worked with children in scouts, camps or other organized activities.

_____ f. I enjoy working with children.

6. In the space to the left check the statements which apply to the experience you have had in working with food:

_____ a. I often prepare snacks and meals for my family.

_____ b. I have helped serve meals to large groups.

_____ c. I have had part-time or summer jobs in some phase of food service.

_____ d. I have worked in the school cafeteria.

_____ e. I enjoy working with food.

VT 001 617
Distributive Education in Jefferson County. A Reference Manual for Distributive Education Coordinators. Vol. 1 No. 1.

Jefferson County Public Schools, Louisville, Ky. Dept. of Supervision and Curriculum Development
MF AVAILABLE IN VT-ERIC SET.
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*DISTRIBUTIVE EDUCATION; *COOPERATIVE EDUCATION; *SECONDARY EDUCATION; *PROGRAM GUIDES; PROGRAM DESCRIPTIONS
JEFFERSON COUNTY PUBLIC SCHOOLS; KENTUCKY

The development of this guide resulted from the cooperative efforts of the Jefferson County distributive education coordinators, administrative personnel of both the Jefferson County School System and the Kentucky Department of Education, and leaders of business in Jefferson County. It is hoped that it will be useful as a ready source of accepted procedures by coordinators and administrators concerned with the development of this area of public vocational education. The contents include: (1) Interpretation of the Distributive Education Program which discusses in considerable detail the objectives, operational procedures, employer, teacher, geographic area, advisory committee, and facilities of the program, (2) Distributive Education Clubs of America (DECA), purpose, organization, and history of the organization, and (3) Kentucky Constitution of DECA. (SL)

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DISTRIBUTIVE EDUCATION

IN

JEFFERSON COUNTY

VT 01617

DISTRIBUTIVE EDUCATION IN JEFFERSON COUNTY

A Reference Manual
for
Distributive Education Coordinators

Vol. I No. I

1965

JEFFERSON COUNTY PUBLIC SCHOOLS

Department of Supervision

and

Curriculum Development

Administrative Staff

Richard VanHoose	Superintendent
James E. Farmer	Assistant Superintendent for Instruction
O. M. Lassiter	Associate Superintendent Supervision and Curriculum

Mabel Bowen
Director of Curriculum

Jefferson County Education Center
3332 Newburg Road
Louisville, Kentucky 40218

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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FOREWORD

In our system of private enterprise and competition there is a need for a program to develop an understanding of the social and economic responsibility of those engaged in distribution and to make the student aware of the various job opportunities in this field. A program of instruction called Distributive Education enables the student to learn and earn by spending part of the day in class and part of the day on the job. The Distributive Education program is designed to provide balanced, comprehensive, instructional programs in all areas of distribution and marketing.

Grateful appreciation is expressed to members of the State Department of Education for their help in the organization and implementation of this program; to the administrators and teacher-coordinators of the Jefferson County School System who are carrying out the details; and to the many business leaders who play a major role in its support.

Richard VanHoose
Superintendent
Jefferson County Schools

TABLE OF CONTENTS

Introduction 1

Interpretation of the Distributive Education Program 3

- Objectives 3
- Student 3
- Operational Procedures of Cooperative Classes 5
- Employer 6
- Teacher 9
- Geographic Area 10
- Advisory Committee 10
- Facilities 11

Distributive Education Clubs of America 13

- Purposes 13
- Organization 13
- History 15

The Distributor's Creed 17

The Emblem of the Distributive Education Clubs of America 18

Distributive Education Clubs of America State Constitution 19

INTRODUCTION

As our society becomes more industrial and urban in character, schools are being called upon to do a more thorough job of developing human resources. Every young person needs an education that meets his needs and abilities, whether he plans to continue his education in college, become a skilled worker, or enter semi-skilled employment. For many boys and girls supervised work experience, with the challenge of an actual job, demonstrates the importance of their formal education.

By working in actual situations, while at the same time they are enrolled in high school courses leading to graduation, these young people find it possible to explore job opportunities open to them and to develop personal initiative, responsibility, and self-confidence.

Distributive Education embraces the fundamental goals which apply to all teaching. These goals have been stated as follows: to encourage, to enable, to enrich, and to ennoble. The pursuit of these goals develops in the student the qualities needed for employment in distribution and marketing--imagination, initiative, and innovation.

The employer has not as yet clearly identified specific preparatory skills basic to successful pursuit of a career in distribution. Observation and experience have revealed the importance of personality and social fitness as well as the academic skills necessary for communication, a facility in the elemental processes of mathematics, and a degree of economic literacy.

Personality and social fitness are essential in any career, but are particularly important in the field of distribution and marketing because of the dependence upon personal contacts in these fields. The student who is preparing for a career in distribution must realize how greatly job opportunities are conditioned by his ability to work cooperatively with others.

He must develop the ability to make sound judgments and become aware of the importance of ethical behavior.

Because of the comparative newness of cooperative work-experience education in Jefferson County, coordinators, employers, and school administrators have suggested the need for a manual outlining, in some detail, many of the important aspects of initiating and supervising a program in Distributive Education.

The development of this guide is the result of the cooperative effort of the Jefferson County distributive education coordinators, of administrative personnel of both the Jefferson County School System and of the State Department of Education, and of leaders in business in Jefferson County.

This publication is not intended to serve as a directive in any final sense; however, it is hoped that it will be useful as a ready source of accepted procedures by the coordinators and those concerned with the development of this area of public vocational education.

INTERPRETATION OF THE DISTRIBUTIVE EDUCATION PROGRAM

Objectives

The distributive education program has for its major objective the fitting of the student for a career in distributive education.

Specific objectives are given below.

To develop the ability of distributive workers to give intelligent, economical, and helpful service to consumers

To develop greater job satisfaction

To increase earning power

To insure advancement on merit

To create a feeling of permanency of employment

To reduce business losses due to inefficient employees as well as to unsound management policies and practices

To develop among employers, employees, and consumers a wider appreciation of the value of trained personnel

To develop a closer tie between the school and the business community

Student

Distributive Education, commonly referred to as DE, identifies a program of vocational education. A distributive education student learns and earns in the program by spending a part of the day in classes and part of the day on the job.

A student enrolled in Distributive Education in the Jefferson County School System must be sixteen years of age or older. He should have an average scholastic standing, a satisfactory attendance record, good character references, and a pleasing personality and appearance. A declared career objective is required and must be clearly defined to the teacher-coordinator as well as to the sponsor-employer. He must carry his required classes while working at a distributive occupation.

The student is allowed to leave school to go to his place of employment after he has completed his required classes, usually at the end of the fourth period; however, he is considered under school supervision throughout the regular school day.

The working hours are regulated by federal and state laws governing the amount of time a student may work. There are special provisions in the Kentucky labor law regarding Distributive Education students. These provisions are as follows:

> A student employed under the distributive education program may be employed as much as 35 hours per week, instead of being limited to 28 hours per week as provided by the Kentucky Child Labor Law for minors 16 and 17 years of age who are attending school.
>
> The Attorney General's opinion dated December 31, 1956, refers to the time spent on the job for which the student receives school credit as 'school induced periods'. Therefore, the time during which the student would be in school, but which is spent instead in on-the-job training, does not count as working time for the purpose of the Child Labor Law.
>
> It is our understanding that the student is excused from school for three hours a day to work on the job as part of his distributive course, and he must work 15 hours a week to earn his credit. Under the provisions of the Child Labor Law, a minor is permitted to work four hours a day making an over-all seven hour day and 35 hours per week for five days. If the student works on Saturday, then the hours worked on week days would have to be less than seven.[1]

During the school year the student must complete a minimum of 540 hours of successful employment in order to receive the designated amount of credit for the course. The employer and the teacher-coordinator together determine the progress of the student. Changes in attitude, improvement of skills, development of habits, and acquisition of knowledge will be a basis for measuring the growth and development of the student.

---

[1] James H. Sandlin, Director, Department of Labor (letter to Robert M. Talbott, Assistant State Supervisor Distributive Education, September 22, 1965).

To remain in the program, a student must be employed and should be working within a reasonable length of time after the beginning of the school year. The DE teacher-coordinator will have the student secure the required work permits, and MUST approve the student training station.

The DE student is required to work. The employer, however, is under no obligation to continue the employment of any student proving to be an unsuccessful worker.

Operational Procedures of Cooperative Classes

Preparatory part-time cooperative classes, providing supervised work experience on the job, shall be organized according to one of the following plans:

(a) Type A classes may cover 2 school years and provide an average of 1 class period (60 minutes) per day for vocational instruction in distribution at the school and not less than 15 hours of employment per week in a distributive occupation for supervised work experience. The school year shall be at least 9 months in length.[2]

Class Period 1	2	3	4	5	6
DE-I or DE-II or Requirement	DE-I or DE-II or Requirement	DE-I or DE-II or Requirement	Requirement or Elective	Co-op	Co-op

A junior should take DE-I and the requirements as shown in the schedule above during the first four periods of the school day to enable him to proceed to his training station at the end of the fourth period.

First period	DE-I	Fourth period	Requirement
Second period	DE-II	Fifth period	Co-op
Third period	Requirement	Sixth period	Co-op

A senior should take DE-II and the other requirements as shown above, and then proceed to his training station.

---

[2]Kentucky State Plan for Vocational Education. (Frankfort, Kentucky: State Board of Education, revised 1964).

The DE teacher-coordinator should be assigned a schedule that will free him from the classroom or from duties confining him to the building by the end of the third period. This provision permits the teacher a flexible program allowing time for cooperation with the employer.

> (b) Type B classes may cover 1 school year of at least 9 months and provide an average of 1 class period (60 minutes) per day of vocational instruction in distribution at the school and not less than 15 hours of employment per week in a distributive occupation for supervised work experience. Class enrollment shall be limited to part-time cooperative students who have completed at least 2 high school units of credit of [4] semesters in distributive subjects.[3]

Class Period 1	2	3	4	5	6
DE (Srs. only) 2 Prerequisites required	Requirement or DE	Requirement or DE	Requirement	Co-op	Co-op

The type B program is provided for Seniors only if they have completed two prerequisites.

Employer

In order to secure satisfactory employment for the student the teacher-coordinator, in many instances, must make repeated calls on the businessman in order to interpret the program to him and in order to secure desirable training stations.

After desirable training stations are secured the employer will recognize the following statements as facts.

> The Distributive Education program in the secondary school is a cooperative plan of action between the school and the business employing a student during half of his school day.
>
> Learning occurs both at school and on the job. Much classroom work is based on suggestions and ideas obtained from discussion with employer, rating sheets, and needs of the student.

[3] Ibid.

The success of the Distributive Education program depends primarily upon cooperative effort on the part of the school administration, the employer, the student, and the coordinator.

Training stations must be carefully selected. Various committees have developed, through studies, a consensus of opinion regarding standards for training stations. A satisfactory job situation displays the following characteristics:

The owner, operator, or manager must be willing to enter into a cooperative training program. He should enjoy working with young people and be open-minded, patient, friendly, and helpful.

The training station should have adequate equipment and kinds of work experience to provide all-round training for the student.

The type of training secured on the job will make it possible for the student to use this training and experience in securing permanent employment upon graduation.

The business should be a permanent organization rather than one of a transient nature.

The merchandise or services sold should be of a nature that will not corrupt the morals of the student.

Adult sponsors should be present in a supervisory position when the student is on the job.

The business should provide part-time employment for the student throughout the school year.

The owner, manager, or operator of the business must be willing to cooperate in the training program for the student as outlined by the teacher-coordinator.

The owner, manager, or operator must be willing to submit periodic reports as to the progress of the student on the job.

Training stations must be located in areas that are accessible under normal avenues of commuting to and from work.

The training station should provide hours of employment in keeping with normal hours of business operation and in accordance with health standards for high school boys and girls.

The business should have a good reputation and be favorably accepted by the community.

An unsatisfactory job situation displays the following characteristics:

Training stations that lead to dead-end jobs

Training stations that cannot provide rotated work experience

Training stations in which the sponsor refuses to allow the student a reasonable opportunity for experiences that provide increased knowledge or skill

Business or services managed by persons with questionable moral character

Training stations that cannot provide continuous work experience during the school year

Training stations that offer undesirable hours of employment for high school youth (The student has responsibilities also to other classes in school, his home, and church life.)

Business or services located in an undesirable section of the city, or that can be reached only by traveling through undesirable sections

Business or services managed or operated by tyrannical types of persons

Business or services managed or owned by relatives of a student (Such situations should be avoided but are not prohibited.)

Business or services that demand too many hours of work on the part of the student each day or each week (The student's hours are governed by labor laws.)

Business or services that demand more maturity in selling skills and abilities than those possessed by high school boys and girls

Training stations that provide unhealthy, physically unsafe, or dangerous working conditions

Business or services that exploit the student in any way

Teacher

The Distributive Education teacher-coordinator is engaged in many activities. These activities call on him to be a combination of business education teacher, guidance counselor, personnel manager, and adult educator. In addition to this he must perform duties required of all regular staff members, so long as these activities do not interfere with the operation of the Distributive Education program.

The Jefferson County School System in conjunction with the Certification Division of the State Department of Education sets forth the following standards for the Distributive Education Coordinator in Jefferson County:

> He must be a graduate of an accredited four year college or university.
>
> He must have completed or be in the process of acquiring sixteen hours of college credit in distributive education. These courses include Principles and Philosophy of Vocational Education, Teaching Methods in Vocational Education, and Trade Analysis. In addition to the required degree and required subjects necessary for certification, the DE teacher must attend a two-week in-service training program at some accepted college or university in the state each summer in order to be currently informed of program changes.
>
> The Distributive Education teacher is required to furnish proof that he has been successfully engaged in a distributive occupation for a period of at least three years, regardless of any teaching experience. This employment must not include any teaching experience.
>
> All coordinators must be approved by the State Director of Distributive Education.
>
> All teachers must have their certificates reviewed and renewed at the beginning of each school year.

A follow-up study is made each year in order to ascertain the degree to which the student has benefitted from participation in the program. This service is performed by the DE teacher-coordinator by means of a thorough inquiry into the current employment status of students who have graduated from the DE program.

Geographic Area

The following plan has been verbally agreed upon by the coordinators of the eight Jefferson County Schools where Distributive Education programs are in operation:

> Each teacher has agreed that he will actively seek acceptable training stations in his own geographic school district; however, this does not restrict employment to this area alone. If a student, on his own resource, obtains a job in another location, this is acceptable.
>
> Reasons for this plan are:
>
> Transportation for the student often is costly, time consuming, and possibly even hazardous when great travel distances are involved.
>
> Saturation of certain shopping areas causing the employer to become involved with too many students from too many schools MUST BE avoided.

Advisory Committee

In May, 1962, the first Jefferson County Distributive Education Advisory Committee was organized with approximately twenty-five guests present. These invited guests included two employer advisory members from each Jefferson County School participating in the DE program, certain administrative personnel, and all Distributive Education teachers.

This group is still active and meets at least one time during each school year with teachers and administrators. Many ideas emanating from these meetings are presently being used in the classrooms by the DE teachers in the Jefferson County School System.

The foremost function of this committee is to serve as a liaison between the school system and the business community. Cooperation of this nature will help to achieve conditions that will be beneficial to the education of the student.

Facilities

Back in the days when distributive education was primarily a job training program, classroom facilities did not seem as important as they are today. But times have changed. The restricted job-training program objectives of ten to twenty-five years ago have been replaced by long-range, student goals oriented toward an established career.

Not only have program objectives changed, but so have instructional techniques. Greater use is being made of role playing, student demonstrations, teacher demonstrations, audio-visual materials, individual occupational study guides, and programmed instruction. Some of these learning activities require a classroom atmosphere simulating that which the student faces in his daily on-the-job experiences; others call for special equipment. The opportunity to master skills in salesmanship, display, care of stock, and good housekeeping, as well as the accumulation of essential business knowledge and the development of attitudes can be enhanced if appropriate facilities are available and are properly used.

Consideration should be given to the flexibility of the use of all equipment. Whenever possible, the equipment should be movable. Size is often an important factor. Each article should be attractive and fit into the decorative scheme of the room or department. Also, it should be up-to-date since good instruction is difficult with outdated equipment.

In order to establish a base from which all program activities can be conducted, office space for the distributive education coordinator is necessary. There should be the usual equipment such as desk, chairs, typewriter, filing cabinet, book shelves for reference materials, and a telephone for business and student contacts.

In the teaching area tables and chairs or desks should be provided for the students. It is also suggested that there be a cash register, a counter

and a wrapping station, and a showcase that can be used in teaching display work.

In the final analysis it must be realized that there is no exact prescription for determining the proper kinds and amounts of facilities needed for a program of a given size. Built-in variables make standard recommendations impractical. Therefore, careful planning at the local level becomes a necessity.

DISTRIBUTIVE EDUCATION CLUBS OF AMERICA

DECA is the national organization to which all Distributive Education students and coordinators belong. The identifying letters DECA refer to the title Distributive Education Clubs of America.

Purposes

To develop a respect for education in marketing and distribution which will contribute to vocational competence

To promote understanding and appreciation for the responsibilities of citizenship in our free, competitive enterprise system

DECA seeks to achieve its purposes by creating interest in all phases of marketing and distribution study, and serving as an avenue of expression for individual talent.

Distributive Education instruction and Distributive Education Clubs of America activities constantly emphasize the American system of competition and private enterprise. History has proven that whenever a nation's channels of distribution fail to function, that nation is shortlived. As DECA attracts more of our nation's youth to study marketing and distribution, the total DE program becomes a vital necessity to our national security.

Organization

Within the structure of DECA organization there are three divisions; the activities of each of these are interdependent upon and interrelated with each other.

The local chapter. Membership in this division is composed of the DE students from an individual school. Each chapter elects its own student officers and the teacher-coordinator of that school serves as Chapter Advisor.

Activities of a chapter include all of the activities in which the chapter participates at the state and national levels as well as employee-employer banquets, and fund raising for scholarships. Recipients of awards resulting from contests and competition within the local chapter are eligible to participate at the state level.

The state association. All chapters within a state comprise a State Association of DECA, which is under the leadership of the State Advisor. Each state association elects its own student leaders. Each year a State Leadership Conference is held for all DE students and coordinators. Opportunities that are available to each individual student, according to his own particular interests and abilities, are various contests featuring specific phases within the areas of retailing and distribution. Examples of such contests are advertising layout, sales demonstration, public speaking, window display, job interview, merchandise manual, chapter activities manual, and others. Competition is offered to students from all chapters in the state. As a culmination of these events, the state winners are sent to the National DECA Conference, under the sponsorship and supervision of the state association. Expenses are paid by the State Association with monies received from various participating organizations and adult supervision is provided by teacher-coordinators. Each student is also granted special insurance coverage for the duration of this trip.

The national association. This division of DECA is composed of membership of all state associations. At the present time forty-nine states and Puerto Rico hold membership in DECA. Each spring a four day National Leadership Conference is held. Each state that offers Distributive Education to students enrolled in public high schools or post secondary schools may send delegates to the National Leadership Conference. Attendance at this conference is composed of delegates from each state who have achieved this honor through competition at the state level.

From the correlation of the activities of DECA as described in the preceding paragraphs, the reader can see that each and every Distributive Education student has an opportunity, commensurate with his individual interest, ability, and effort, to achieve leadership and recognition in a national capacity.

By participating in the Distributive Education program, the student has opportunity to cope with immediate needs as well as to make preparation for a satisfactory career in marketing, management, personnel, salesmanship, advertising, insurance, private business, teaching, and many other related occupations.

History

The first Interstate Conference of Distributive Education was held in Memphis, Tennessee, April, 1947. The second National Leadership Conference was in 1948 at St. Louis, Missouri, at which time a constitution was adopted along with the official name.

Seventeen charter member states were involved, one of which was Kentucky. Since there was a limited number of high schools who offered distributive education as a course of study in their curriculum, it was decided that a state organization would be developed. It was also decided not to affiliate with the national organization until more students in high school could be involved.

In 1962 a meeting of twenty-five distributive education teacher-coordinators was held at the University of Kentucky, under the leadership of Dr. W. Maurice Baker, teacher-trainer of distributive education at that institution. It was decided by the majority that the time was right to establish affiliation with a national organization.

It is interesting to point out the fact that, in 1947, the national membership was 800 pupils, while for the school year 1964-65 the national membership was established at more than 50,000. The number of state associations affili-

ated with this national youth movement has increased to forty-nine plus Puerto Rico. The growth and development of DECA has been rapid. Many interested educators and business organizations have given their advice, their cooperation, and their support. Past growth and future plans give every indication that DECA is destined to become one of the leading youth organizations of our time.

In the school year 1964-65 DECA membership in Kentucky showed the totals of 993 for the high school division and 2176 in the adult (post secondary) division.

For the school year 1965-66 there are thirty-seven high school programs and six adult programs of Distributive Education in the state of Kentucky. The Jefferson County School System offers eight Distributive Education programs at the present time. These are located in the following schools: Butler, Durrett, Fairdale, Pleasure Ridge Park, Southern, Thomas Jefferson, Valley, and Western.[1]

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[1]News item in Your Jefferson County Schools, May, 1965.

THE DISTRIBUTOR'S CREED

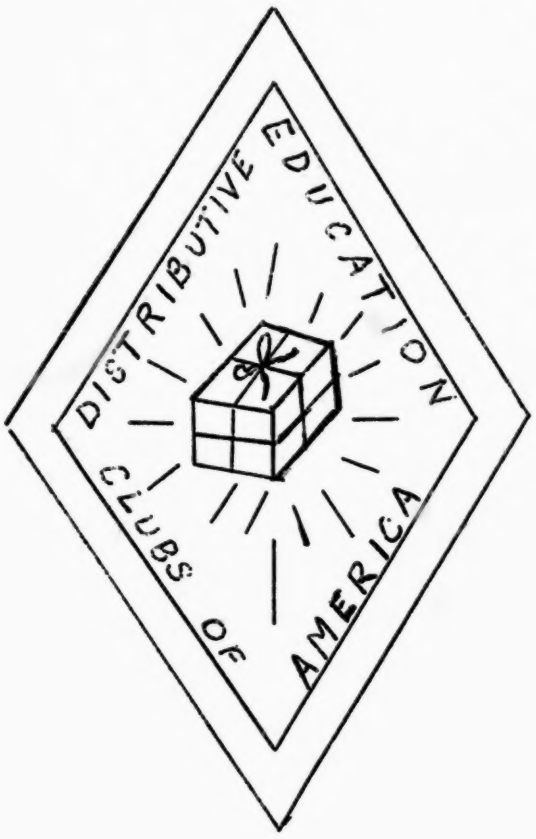
I believe in the future which I am planning for myself in the field of distribution, and in the opportunities which my vocation offers.

I believe in fulfilling the highest measure of service to my vocation, my fellow being, my country and my God--that by so doing, I will be rewarded with personal satisfaction and material wealth.

I believe in the democratic philosophies of private enterprise and competition, and in the freedoms of this nation--that these philosophies allow for the fullest development of my individual abilities.

I believe that by doing my best to live according to these high principles, I will be of greater service both to myself and to mankind.

THE EMBLEM OF THE DISTRIBUTIVE EDUCATION
CLUBS OF AMERICA



SYMBOLISM OF THE FOUR POINTS OF THE DIAMOND

Vocational understanding. Distributive Education students have an understanding of various distributive occupations, types of business and merchandise, of service rendered, and performance expected in working with others, plus opportunities available.

Civic consciousness. Distributive Education students learn to recognize obligations to community needs, planning worthwhile projects, and serving on committees for community betterment.

Social intelligence. Distributive Education students have opportunities to develop socially. Social events planned, financed, and executed by club committees provide ample opportunity for the student to gain an understanding of what is socially acceptable.

Leadership development. Distributive Education students have many opportunities to participate in group activities in which they learn to assume responsibility and to serve in the capacity of both leader and follower.

SYMBOLISM OF THE WRAPPED PACKAGE

The wrapped package symbolizes the close cooperation of student, teacher, parent, and merchant in assisting Distributive Education students to acquire a well-rounded education.

D I S T R I B U T I V E E D U C A T I O N C L U B S

O F A M E R I C A

STATE CONSTITUTION

ARTICLE I----NAME

The official name of this organization shall be the "Kentucky Association of DECA" (Distributive Education Clubs of America)

ARTICLE II----PURPOSES

The purposes of this organization shall be:

.... To assist local chapters in growth and development of DECA

.... To develop competent leadership among its members

.... To promote understanding and appreciation for responsibilities of citizenship

.... To encourage the use of high ethical standards in business and industry

.... To provide for mental, physical and moral growth through social and recreational activities

.... To further develop a respect for education in marketing and distribution

ARTICLE III----ORGANIZATION

SECTION 1 The Kentucky Association of DECA is an organization of local member chapters in the secondary schools of the State of Kentucky, each chapter operating in accordance with the charter granted by National DECA.

SECTION 2 The administration of the Kentucky Association of DECA will be vested in the Board of Governors of this organization.

SECTION 3 The Board of Governors shall consist of:

- The state advisor of the Kentucky Association of DECA
- The president of the DE Teachers organization
- The secretary of the DE Teachers organization
- The chapter advisor of any state officer
- The executive council which consists of all state DECA officers

SECTION 4 The state advisor shall serve as chairman of the Board of Governors. The president of the state teachers organization of DE shall serve as advisor in his absence.

SECTION 5 The chairman of the Board of Governors shall be empowered to call meetings and appoint committee chairmen. The Board of Governors shall be empowered to carry out all activities of the Kentucky Association of DECA.

SECTION 6 The coordinator of each student committee chairman shall automatically become advisor to that committee.

ARTICLE IV----MEMBERSHIP

SECTION 1 Membership of the Kentucky Association of DECA shall be individual members of the DECA chapters, associate members, professional members and honorary life members.

SECTION 2 The classes of these memberships shall be recognized as follows:

Active Members----------Students who are enrolled in a high school program, and have paid established local, state and national dues. They will be eligible to hold state and national office, participate in contests and serve as a voting delegate

Associate Members-------Students enrolled in participating classes which are considered a part of the DE program approved by the state. They will pay established dues, but will not be eligible to hold office, participate in contests or serve as a voting delegate.

Professional Members----Persons associated with DECA. May include the Teacher-Coordinators, Advisory Board Members, Employers, former DECA members or other interested persons. They will pay the established dues, but will not be eligible to hold office, participate in contests or serve as voting delegates.

Honorary Life Members---May be individuals who have made a special contribution to the DECA program and who have been approved by the Board of Governors.

ARTICLE V----VOTING

SECTION 1 Member chapters shall exercise their voting privilege through voting delegates at the state leadership conference. Each local chapter shall be allowed two voting delegates for membership up to twenty-five and one additional delegate for every additional ten members or fraction thereof. No chapter will be allowed more than four voting delegates. Each voting delegate shall be entitled to an individual vote.

ARTICLE VI----MEETINGS

SECTION 1 A state leadership conference shall be held each year with the time and place selected by the Board of Governors. It shall be the official annual meeting.

SECTION 2 Parliamentary procedure of all meetings will be guided by "Robert's Rules of Order, Revised".

ARTICLE VII----OFFICERS

SECTION 1 Officers for the Kentucky Association of DECA shall be elected by majority vote of the voting delegates at the annual meeting of the State Leadership Conference, and shall consist of President, Vice-Presidents (First and Second), Secretary, Treasurer and Historian-Reporter. This collective group shall be known as the Executive Council.

ARTICLE VIII----FINANCES

SECTION 1 Individual chapters will be responsible for the collection of State and National dues. This amount will be payable on or before November 1 of each school year.

SECTION 2 The Board of Governors shall control all finances of the Kentucky Association of DECA.

SECTION 3 The accounts of the outgoing treasurer shall be audited each year by an auditing committee selected by the Board of Governors.

SECTION 4 The treasurer shall report to the Board of Governors, on or before December 1, each year, those whose membership dues are fully paid. These chapters will be considered Chapters in Good Standing.

ARTICLE IX----DELEGATES

SECTION 1 The number of delegates to the National Leadership Conference shall be variable in accordance with the National constitution.

SECTION 2 The incoming state president, the first place contest winners and their advisors are automatically considered delegates. The state association will pay the expenses of the president and the contest winners, but not necessarily the chapter advisors. Those who make up the remaining number of delegates shall be the decision of the Board of Governors. The chapter advisors who will attend the conference, having their expenses paid by the state association, shall be selected as follows:

..One woman teacher for each five girl students or fraction thereof.
..One man teacher for each five boy students or fraction thereof.

..To be selected alphabetically with incoming teachers, after June 15, 1965, being placed at the end of the list.

..Teachers who have served as advisors, having their expenses paid by the state association in 1963, '64, and '65, will be placed at the end of the list for the 1966 National Conference, as paid delegates. This procedure shall be followed each succeeding year.

..If a teacher advisor fails to take advantage of his opportunity he may be considered, as a delegate advisor, the following year.

SECTION 3 Teacher coordinators shall submit to the Board of Governors within one week after the state leadership conference, names of students who would like to be considered as delegates to the National Conference.

ARTICLE X----AMENDMENTS

SECTION 1 This constitution may be amended by two-thirds vote of the authorized voting delegates at any annual State Leadership Conference of the Kentucky Association of DECA.

SECTION 2 Only such amendments shall be made as in keeping with the purposes stated in Article II of this constitution.

SECTION 3 Recommendations for amendments shall be in the hands of the Board of Governors for consideration one month before the annual State Leadership Conference.

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ADOPTED JUNE 16, 1965 TEACHER COORDINATOR'S WORKSHOP

PHOENIX HOTEL, LEXINGTON, KENTUCKY

VT 001 620
Cheney, Hal C.
Employment Trends in Selected Service Occupations in the San Francisco Bay Area. Financial Services, Medical and Health Services, Hotel and Restaurant Services (Research and Development in Vocational-Technical Education). Report no. 1966-3.

California Univ., Berkeley. School of Education
California State Dept. of Education, Sacramento. Vocational Education Section
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*SERVICE OCCUPATIONS; *EMPLOYMENT OPPORTUNITIES; *OCCUPATIONAL SURVEYS; *EMPLOYMENT TRENDS; OCCUPATIONAL CLUSTERS; MANPOWER NEEDS; EMPLOYMENT PATTERNS
SAN FRANCISCO BAY AREA

A study of employment trends in some of the service occupations in this area shows that increases in employment should be most rapid in finance, insurance, real estate, legal, educational, medical, and health occupations. The labor demand should be more in favor of the white collar workers, professional, managerial, clerical, and sales worker, with the professional and technical occupations accounting for more than 25 percent of the Bay Area employment growth in highest demand. Currently there is a persistent demand for well qualified persons such as registered nurses, vocational nurses, secretarial, clerical, and sales workers, bank tellers, title examiners, accountants, computer programers, systems analysts, social workers, group workers, case workers, registered dietitians, x-ray technicians, physical therapists, engineering aides, and precision machinists. Included in the study for most occupations are salaries, training needed, advancement information, job titles, and declining job opportunities. Indications are that the service occupations which will be in short supply in the future are those which require more extensive and difficult periods of training. (MS)

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RESEARCH AND DEVELOPMENT

IN

VOCATIONAL - TECHNICAL EDUCATION

EMPLOYMENT TRENDS IN SELECTED SERVICE OCCUPATIONS IN THE SAN FRANCISCO BAY AREA

REPORT NO. 1966-3

VT 01620

UNIVERSITY OF CALIFORNIA
BERKELEY

EMPLOYMENT TRENDS IN SELECTED SERVICE OCCUPATIONS

IN THE SAN FRANCISCO BAY AREA

Financial services
Medical and health services
Hotel and restaurant services

Report No. 1966-3

Hal C. Cheney
Coordinator of Business Education
Contra Costa Junior College District

This study was made by Mr. Hal C. Cheney as a graduate student and research assistant in a series of studies of vocational-technical education in Alameda and Contra Costa Counties. The study was made under the direction of J. Chester Swanson and was financed by a grant from the Vocational Education Section of the California State Department of Education.

School of Education
University of California, Berkeley
May 1966

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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EMPLOYMENT TRENDS IN SELECTED SERVICE OCCUPATIONS

IN THE SAN FRANCISCO BAY AREA

CONTENTS

	Page
Introduction	1
Projected Employment Trends in Bay Area Counties	2
Fields of Most Rapid Growth	2
Composition of Needed Labor Force	3
Employment in Finance	4
Changing Occupational Patterns in Finance	4
Jobs in Banking	5
Training	6
Occupational Titles in Banking	7
The Service Industries	7
Medical and Health Occupations	8
Expanding Institutional Opportunities	8
Nursing and Other Patient Care Occupations	9
Other Institutional and Industrial Needs	9
Dental Hygienists, Assistants, and Technicians	11
Other Service Occupations	12
Legal Secretaries	12
Nursery School Assistants	12
Automobile Mechanics	13
Appliance Repair	13
Hotel and Restaurant Operations	14
Hotel Employment	15
Restaurant Employment	16
Anticipated Future Opportunities	18
Food Service Occupations	18
Food Preparation Occupations	18
Summary	19

EMPLOYMENT TRENDS IN SELECTED SERVICE OCCUPATIONS IN THE SAN FRANCISCO BAY AREA

INTRODUCTION

This is a study of employment in some of the service occupations in the San Francisco Bay Area which are appropriate for vocational-technical education programs in the high schools and junior colleges. The data used in the study were obtained largely from reports of the California State Department of Employment and the Bureau of Labor Statistics of the United States Department of Labor. Contacts have been made with professional associations, trade associations, government agencies, labor unions, private employment agencies, and private employers. These data were gathered during school years 1963-64 and 1964-65.

PROJECTED EMPLOYMENT TRENDS

IN THE SAN FRANCISCO-OAKLAND BAY AREA COUNTIES

Fields of Most Rapid Growth

Forecasts of total civilian employment indicate a continued increase in job opportunities in the San Francisco-Oakland Metropolitan Area. Employment in government, service occupations, manufacturing, and trade are expected to add the largest numbers to the work force during the next several years. The fastest rate of growth, however, will occur in the finance, insurance, real estate, legal, educational, medical, and health occupations.

A study of Manpower Resources in the Bay Area from 1960 to 1970 published in 1963[1] pointed out that the fastest-growing element in the San Francisco-Oakland economy in the next few years would be occupations in the area of finance. Employment in these occupations will continue to increase rapidly as a result of the volume and complexity of financial transactions, the rising levels of income, and the growing needs of an expanding population for financial services.

The rate of growth in government will be second only to that of finance. The bulk of this increase will stem from the need to provide a wide range of services for a growing population. State and local governments will account for about eight out of ten new jobs created in government. As in recent years, the educational system will account for the largest number of these new jobs.[2]

Employment in the service industries will also expand at a faster rate than total employment in the Bay Area. The service industries will benefit from a growing and affluent population with both the money and the inclination to use the myriad services offered by these industries. Employment trends among the component industries will vary: payrolls in motion pictures, for example, are likely to continue their long-term decline; personal services - laundries, beauty shops, shoe repair services - are expected to record only a small increase. On the other hand, rather rapid growth is forecast for recreation and amusement industries and for most of the professional and semi-professional service industries. Legal services, for example, will expand more than twice as fast as total civilian employment. Medical and health services and private educational services will also increase at a faster rate than total employment. Business services are expected to show a very sharp rise in payrolls. The increase here will be generated primarily by growth of the research and development firms that have sprung up around Bay Area universities in the past decade.

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[1] Manpower Resources of the San Francisco-Oakland Bay Area, 1960-1970. San Francisco: California State Department of Employment, Research Division, May 1963, p. 5.

[2] Ibid., p. 14.

Composition of Needed Labor Force

Generally speaking, the composition of labor demand in the years immediately ahead will be weighted in favor of the white collar workers - professional, managerial, clerical and sales workers - since about two out of three new job openings will occur in these occupations. The reason for this heavy demand is that white collar workers are heavily represented in industries where the most rapid employment growth is expected.

White collar workers, for example, comprise more than 90 percent of the work force in finance and about 60 percent of all workers in services and in public administration, where much higher than average employment gains are anticipated. Even in manufacturing, where about 38 percent of all employees are in white collar occupations, some of the faster-growing industries have almost half of their work forces in white collar occupations such as clerical, research, and engineering. Generally speaking, in industries where only moderate employment growth is projected for the years ahead, white collar workers make up a relatively small proportion of the total work force.

Within the white collar group, the fastest rate of growth will be registered by the professional and technical occupations followed by the clerical occupations. The latter occupations, however, will record the largest net increase in employment. Managerial occupations are expected to show the slowest growth rates in the white collar field and the smallest net increase in employment.[3]

Demand for professional and technical workers will increase proportionately more than for any other group of occupations and will account for over 25 percent of Bay Area employment growth. These workers now constitute over 15 percent of the local labor force compared with 12 percent nationally, and although the demand for these workers will rise rapidly throughout the nation, the Bay Area is expected to continue its lead over the national average.

The current job picture in the Bay Area counties indicates a persistent demand for well qualified persons in the following categories: registered nurses, vocational nurses, secretarial, clerical and sales workers, bank tellers, title examiners, accountants, computer programmers, systems analysts, social workers, group workers, case workers, registered dietitians, x-ray technicians, physical therapists, engineering aides, and precision machinists.[4]

Our observations up to this point regarding the labor market have been somewhat general. In order to get an accurate picture of both quantitative and qualitative needs, it is necessary to study each of these rapidly expanding and changing fields in greater depth.

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[3] Manpower Resources. Loc. Cit., p. 23.

[4] Labor Supply and Demand Reports for the San Francisco-Oakland Labor Market Area, 1964-1966. San Francisco: California State Department of Employment, Research Division. Quarterly Series, Labor Supply and Demand Reports.

EMPLOYMENT IN FINANCE

The San Francisco Bay Area is the West Coast headquarters for financial institutions of all kinds including the insurance industry.

The largest percentage increase in employment recorded in the Bay Area took place in finance, where employment rose to 81,800 in 1962 or 53% above the 1950 level. The reason for the increase was the extension of banking services and facilities as banks followed the population to the suburbs.[5] The expansion of branch offices has been heavy for banks, insurance companies, and savings and loan companies.

Changing Occupational Patterns in Finance

While banks and insurance companies of all types are expanding rapidly, their occupational patterns are being changed radically by modern technology. At the same time that these financial institutions are searching for qualified administrative and technical personnel, their automated systems are doing away with traditional bookkeeping and posting functions.

The manpower studies of banks and insurance companies point out specifically the areas of occupational growth and decline with some appraisal of needs for the years ahead.

Several factors will bring continued employment expansion to the banking industry in Alameda and Contra Costa counties. The most important element is the opening of new offices in the suburbs. Many of the new branches offer drive-up and sidewalk banking services and on-the-spot parking facilities. Along with increased customer facilities has come an increasingly competitive atmosphere in the banking industry, resulting in a much larger range of services (investment counseling, trust fund management, credit cards, check reconciliation services, and freight payment plans) beamed to a mass market. Consequently, banks have rapidly increased their staffs of trained administrative and managerial personnel.

Employment in Bay Area banking is expected to increase over the next few years, although not at the rate which yielded a 50 percent increase from 1952 to 1962. Decreased needs for clerical workers recruited at the high school graduate level will be offset by need for new administrative and technical personnel to staff new bank services and suburban locations. Recruitment emphasis and employment growth will center on occupations requiring considerable training, education, judgment and skills in interpersonal communications.

It appears that banking now uses the full range of advertising media and "hard sell" techniques of other industries - a sharp contrast with the austere professional approach that is still common in the medical and legal professions.

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[5] Manpower Resources, Loc. Cit., p. 11.

While banks are expected to continue their expansion during the next few years, the rate of employment growth will slow down because of the spread of data processing equipment. As a result of automation, routine clerical jobs are fast disappearing and recruitment is directed toward workers with higher skills and educational attainments - data processing equipment personnel and management trainees. A casualty of bank automation is the traditional bank bookkeeping job market for male high school graduates. This job market appears to have been preempted by the machine and by housewives working part-time to supplement their family income. This indicates that this changing manpower demand has an effect on the high school and junior college curriculum.

The introduction of large scale automation into banking displaces bookkeeping staff and substitutes some key punch and tabulating equipment operators, who later become unnecessary as electronic scanning devices and standardized input are introduced. Some banks have not made high school graduation a requisite and have given no screening tests for entry jobs. But with electronic data processing there is more emphasis on service at the window. Consequently, there is now a new type of "professional teller," qualifications for which put a greater premium on ability to meet and handle the public. Better education and a higher degree of maturity call for something more than a recent high school graduate. The junior college is becoming the major source of supply.

No boys just out of high school are hired; their former machine bookkeeping jobs have been taken over by electronic data processing. The lower-level jobs in banks are usually filled by women, and there appears to be little promotional opportunity for routine workers in banking. Tellers may aspire to the post of lending officer in the branch. Some upgrading is possible in those institutions where workers may progress to the level of reconcilers - people who recognize errors and know what to do about them.

Jobs in Banking

Two main classifications of banking jobs are mutually exclusive.

1. Clerical, primarily women, often hired by local branch manager

2. Technical, managerial and administrative occupations, primarily men, chiefly hired by headquarters offices.

Continuous demand is reported by the employment service offices for keypunch operators, tellers, stenographers, clerk typists, check proof machine operators, and general clerks.

Entry jobs in local banks consist chiefly of teller trainee, bookkeeping machine operator, clerk typist, stenographer, file clerk, mail clerk, messenger, secretary, accounting clerk and management trainee.

Professional workers from a wide range of fields are employed by the banking industry. The following listing gives a cross section of the higher level banking jobs listed in the local offices of the Department of Employment: programmer, business service systems analyst, research analyst, travel auditor, accountant, economist, personnel manager, procedure writer, and

salesman-auto contacts. However, since banks promote to many jobs from within the organization, most administrative or specialized banking jobs may never appear among local office job orders.

Banks also employ large numbers of lawyers, engineers and experts in banking operations such as trust officers and financial and investment advisors. With the introduction of electronic data processing equipment, banks are increasing their demands for trained programmers, data processing analysts, and other professional level data processing personnel. In the next few years, these latter occupations will be the fastest growing occupations in the industry.

Hard-to-fill jobs often run the gamut of the occupational structure of the industry. East Bay banks and savings and loan associations still report a severe shortage of qualified escrow secretaries.

The new jobs in the banking industry are primarily the result of installation of data processing equipment. The new jobs include programmers, systems analysts, console operators, tab operators and keypunch operators.

Declining jobs in general are the routine clerical occupations. Mechanization has cut deeply into the ranks of the file clerk, hand posting clerk, mail clerk, and in some locations the bookkeeping machine operator. The introduction of electronic data processing systems, which largely replaced electronic accounting machine installations, has reduced the number of tab operators required but has increased the need for keypunch operators. In general, it may be concluded that as a result of automation, routine clerical jobs are fast disappearing and are being replaced by jobs that have somewhat higher skill requirements. In some outlying communities, demand for full-time tellers has declined but the demand for part-time tellers has picked up. Such temporary jobs as stock transfer and travelers check clerk are now contracted through private agencies such as Manpower, Inc., or Western Girl.

Training

All entry occupations in the clerical field now require at least a high school education. The most sought after applicants in this group are those with some training in typing, bookkeeping, office machines, and other commercial courses.

For management trainee positions the minimum educational requirement is two years of college; however, many institutions specify at least college graduation with a background in accounting, economics or business administration. Banks usually require applicants for these jobs to be between 21 and 30 years of age. Banks conduct on-the-job training for persons in the administrative and managerial fields.

Even though demand is still present for some declining jobs in banking, it is desirable that more of our training programs should be directed toward the jobs that are coming into focus. This illustration of what is occurring in banking is typical of what is happening in varying degrees across the spectrum of vocational and technical occupations. It is particularly true of large offices in fields such as insurance, food processing, public utilities, retailing, wholesaling, government, transportation and manufacturing.

Although bookkeeping is on the decline in large organizations, it will play an important role for some time yet in most small business operations. The principles of accounting are still considered to be a necessary and sound basis for education in data processing of all types, including programming, console operation, and system analysis.

Occupational Titles in Banking

The Department of Employment studies found the following occupational titles in banking:

Accounting clerk
Certified public accountant
Junior accountant
Bookkeeping machine operator
Calculating machine operator
Clerk, general office
Clerk typist
Computer operator
Credit & collection manager
Duplicating machine operator
Economist
Employment interviewer
Escrow officer
File clerk
Guard
Job analyst
Junior executive
Key punch operator
Market research analyst
PBX operator
Personnel manager
Programmer
Proof machine operator
Purchasing agent
Security analyst
Statistician
Stenographer
Tabulating machine operator
Teller
Title examiner

THE SERVICE INDUSTRIES

As the United States continues to grow and prosper, more and more people will leave manufacturing to perform the many services that make life more pleasant and easier for people generally. As the standard of living rises and the length of the work-week decreases, Americans will have more money, more time, and more interest in improved health, better education, and increased recreation. They now rely on laundries, dry cleaners, dressmakers, shoe repair shops, barber shops, and beauty shops to do the things for them that they used to do for themselves. "The service occupations in the Bay Area will benefit from a growing and affluent population with both money and the inclination to use the myriad services offered by these industries."[6]

Business is becoming more complex, more advanced technologically, and companies are developing the habit of calling on advertising services to sell their products. They contract with accounting, auditing, and bookkeeping services to handle their fiscal record-keeping; and they are employing audit bureaus and collection agencies to cope with the increasing use of consumer credit. Service and miscellaneous industries such as educational and repair services will be among the fastest growing during the coming decade, as they have been over the postwar period.[7]

The widening spiral of services reaches out to include many other forms of assistance: public relations, automobile and furniture repair, private employment agencies, business consultants, photography studios, funeral homes,

[6] Manpower Resources, Loc. Cit., p. 14

[7] U. S. Department of Labor, Manpower Report to the President, 1965, p. 53.

legal offices, engineering firms, architectural firms, welfare agencies, religious agencies and research development companies. These functions form one of the fastest growing employment areas on both the national and local scenes.

The Bay Area's attraction for tourists is significant in any labor market analysis in the field of services. It is estimated that the tourist total in the Bay region jumped from roughly 350,000 in 1932 to 1 1/2 million by 1956, and could go to 7 1/2 million by the year 2000.[8] The impact from such an increase, especially for the amusement-recreation and hotel sectors, is obvious.

Most service industries have increased their rates of growth substantially during the past few years.[9] In the San Francisco Bay Area services scored greater gains than such major fields as trade, government, and public utilities during the period from 1950 to 1962.[10] It is anticipated that about 990,000 employees will be added to employment rolls in the service industries (business, repairs, personnel, professional, and amusements) by the year 2020. This is an increase in relative importance from about twenty-one percent in 1957 to nearly twenty-four percent of the labor force by 2020. Services will have increased its employment total in the region by 350 percent between the years 1957 and 2020.[11]

To engage in further dissection of service occupations, the most rapid increases in employment in the Bay Area since 1950 have occurred in the medical and health fields; educational and legal activities; and, in most recent years, in such business services as research and development organizations, advertising agencies, and building-cleaning firms. Moreover, these same fields will hold the best opportunities for the immediate future.[12] Medical-health and business services are given top growth priority in a federal forecast.[13]

MEDICAL AND HEALTH OCCUPATIONS

Expanding Institutional Opportunities

Even before the passage of Medicare, the loudest plea for help was emanating from the medical profession. One of the reasons, of course, is the continuing population boom. More people, more hospital patients, and

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[8] U. S. Department of Commerce, Future Development of the San Francisco Bay Area, 1960 -- 2020, p. 53.

[9] Manpower Report to the President, 1965, Loc. Cit., p. 12.

[10] Manpower Resources, Loc. Cit., p. 11.

[11] Future Development of the San Francisco Bay Area, Loc. Cit., p. 53.

[12] Manpower Resources, Loc. Cit., p. 15.

[13] Manpower Report to the President, 1965, Loc. Cit., p. 55.

since each added bed theoretically requires two and a half additional employees, the growth impact is readily discernible. Health insurance coverage and public enlightenment are stimulating the demand for health services. Some labor unions are now turning their attention toward dental insurance for their members and some have already succeeded in obtaining this new fringe benefit.

Obviously, all this is creating career opportunities across the whole medical service spectrum, from the physician or dentist to the hospital pantry worker. This study, however, is concerned largely with areas in which the high school and junior college can play an important role in preparing people for productive employment.

Realizing the need for more information in this rapidly expanding field, the California Department of Employment completed in July of 1964 a study which attempted to identify the number of job vacancies expected in medical care industries during the two year period 1964-66 in the San Francisco Bay Area. The study covered hospitals, convalescent and rest homes, commercial medical and dental laboratories, and government-operated medical facilities; doctors' and dentists' offices were excluded. Government-operated medical facilities included all Federal hospitals, both military and civilian; all State hospitals, including mental hospitals; and the medical facilities operated by counties, cities, and special districts. The survey covered these medical care activities in all nine counties surrounding the San Francisco Bay -- Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma.[14]

The medical care industries covered employed an estimated 57,700 workers in January 1964, about 43,400 of whom were employed in the 107 occupations included in the survey. Of the 107 occupations investigated, the results indicated that 46 -- or nearly half -- offered substantial opportunities for employment in the Bay Area through 1966.[15]

Nursing and other patient-care occupations account for more than half of the openings. Demand is strong for trained workers in these occupations in each of the Bay Area counties. More than 80 percent of the total demand is accounted for by 14 occupations, of which the largest volume is for Nurse Aides, Staff Nurses, Licensed Vocational Nurses, and Psychiatric Technicians -- all occupations in the nursing and patient-care field.

Some of the hospital administrators interviewed pointed out that one of the reasons for the shortage of registered (staff) nurses is closely related to their working hours. They said it was not difficult to get RN's for the 7 a.m. to 3 p.m. shift; the real problem comes in getting help for the 3 p.m. to 11 p.m. shift, and especially for the 11 p.m. to 7 a.m. shift.

Other Institutional and Industrial needs for which sizable demand exists, principally in the larger metropolitan centers, are clerk-typists, hospital janitors, and institution kitchen workers. There is area-wide demand for surgical technicians, electrocardiograph technicians, stenographers,

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[14] California State Department of Employment, Medical Service Job Opportunities, San Francisco Bay Area, 1964-66.

[15] Ibid., p. 3.

typists, accounting clerks, insurance clerks, and medical records clerks.

The 14 occupations in which the most significant training needs were found are ranked in Table 1 in order of the number of workers needed during the two twelve-month periods ending January 1965 and January 1966.[16]

TABLE I

Rank Order of Technicians Needed in Medical Occupations

Occupation	Workers Needed 12 Months Ending: January 1965	January 1966	Total Demand 1964-66
Nurse Aide	1738	1838	3576
Staff Nurse	1663	1711	3374
Licensed Vocational Nurse	775	732	1507
Psychiatric Technician	520	536	1056
Hospital Janitor	399	427	826
Kitchen Helper	333	354	687
Clerk-Typist	307	336	643
Orderly	302	323	625
Ward Maid	219	282	501
Ward Clerk	209	229	438
Medical Technologist	187	227	414
General Office Clerk	158	145	303
Cook	127	136	263
Medical Secretary	101	110	211

X-ray Technicians are badly needed in the United States as a whole, especially in hospitals and industries, according to leaders in the medical field. Starting pay for qualified technicians averages $3,000 per year nationally, with advancement possible to approximately $10,000.[17]

Medical Record Librarian is a particularly attractive field for women. This "semi-profession" presently requires a specialized 12-month training program after completion of two years of college. The work involves setting up and maintaining a hospital's or clinic's library of files on each patient and analyzing the records for various statistical purposes. Pay is extremely good, starting at

[16] Loc. Cit., p. 4

[17] College of San Mateo, The Job Ahead, Occupational Research Project, 1964, p. 108.

about $5,000 a year, and the demand for librarians is expected to "far exceed" the supply, at least through the rest of this decade. Although more than a junior college education is needed to achieve registered status at present, several hospital executives have voiced the opinion that this occupational field might be accommodated by two-year programs in the future.

Accredited Record Technician is one notch down from the medical record librarian. In large institutions the technician may be the person in charge of the library. Educational requirements are substantially lighter, usually only a year in an approved hospital after high school graduation.

Medical Secretaries and Medical Transcribers have been indicated as the greatest current need by several hospital administrators. These women, according to a 1962 Bay Area survey by the California Association of Medical Record Librarians, were being paid at least $310 a month to start with a potential maximum of $450 in view. That was appreciably above the minimum hospital starting pay for typists ($285) or file clerk ($260). Medical secretaries are assigned to pathologists, radiologists, and members of the hospital or clinic medical staff. They must know medical terminology in addition to the usual secretarial skills. It was suggested that in junior college a course in physiology and another in anatomy would be sufficient accompaniments to the secretarial curriculum to prepare candidates for job openings.[18]

Dental Hygienists, Assistants, and Technicians

While the number of dentists in the San Francisco-Oakland Bay Area is growing very rapidly, there are still far too few dentists to keep up with the demand for dental services. Therefore, there is an increasing need for "ancillary" employees to free the dentist from routine tasks. Dental assistants, dental hygienists, x-ray technicians and dental technicians are examples of such service occupations.

Dental laboratory technicians handle duties which do not involve work performed directly on patients. Most of them are employed in commercial dental laboratories.

An individual employed as a dental technician needs manual dexterity, good color perception, and a liking for detailed work. He prepares metal, hard rubber, plastic and other composition plates and dentures from wax impressions taken by a dentist; he constructs metal clamps, inlays, and bridgework, performing exacting manual work according to the dentist's written prescription. Some dental laboratories are run on a production line basis and in these establishments the technician does only one part of the job -- for example, the acrylic or the chrome work.[19]

After three years of satisfactory "internship" a dental technician is eligible for an examination given by a national board of certification. Starting pay in the Bay Area ranges from $75 to $125 a week, with a top of approximately $250.

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[18] The Job Ahead, Loc. Cit., p. 110.

[19] Medical Service Job Opportunities, Loc. Cit., p. 25.

"Comparative studies have shown clearly that effective use of ancillary personnel and multiple equipment enables the practicing dentist to increase as much as 100 percent the number of patients treated in the course of a year. However, the supply of well qualified personnel is so inadequate that only about 10 percent of the nation's dentists are currently employing dental hygienists and only about two-thirds are utilizing the services of a dental assistant.

"Moreover, the duties of such ancillary workers are sharply limited by existing legislation and by tradition, so that dentists are unable to make maximum use of the personnel now employed. This situation has led to serious consideration by the dental profession of the need for expansion of the functions of dental hygienists and assistants to permit delegation to them of the routine, non-technical services customarily performed by the dentists." [20]

OTHER SERVICE OCCUPATIONS

Legal Secretaries

There is presently great demand in the Bay Area for well qualified legal secretaries. Several personnel specialists in the area have estimated the beginning wage for a qualified woman at $375 a month. It has been pointed out that good employees in this specialty are hard to find and hard to keep. They are eagerly sought and well rewarded.

A private personnel consultant points out that one reason for the fast turnover of secretaries in the legal field may be the fact that a number of women overestimate the "glamour" of working in a law office. He says that the glamour is fictional and that actually lawyers are looking for women who can enjoy what is essentially a very demanding job, and who can learn to live with the fact that it is rarely, if ever, exciting.

To be successful in a law office, a secretary should have at least two years of college and demonstrate excellent skills and high intelligence. She needs also to be discreet, meticulous, and personable.

Nursery School Assistants

Nursery school assistants compose another service occupation in short supply. There is ample evidence that the nursery school business is growing in the East Bay and it is anticipated that it will continue to grow at a faster rate than can be tied wholly to population increase in that age category. Anticipations are based on mounting public realization of the importance of education and the resultant interest in getting the formal process started ahead of the kindergarten year. The present pay scale ranges from $208 to $400 a month. As higher standards now in the works take effect, the remuneration can be expected to rise proportionately.

New quality considerations are being prepared by the State Department of Social Welfare to remedy the fact that there are no set standards

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[20] The Job Ahead, Loc. Cit., p. 108.

of educational qualifications for the staffs of licensed nurseries. As envisioned, the changes would require directors of the schools to have at least an Associate in Arts degree, and teachers at least a high school diploma. Directors and teachers would be required additionally to complete, within a given time, certain college-level courses covering the field.[21]

Automobile Mechanics

Automotive mechanics are still in short supply, according to the California State Department of Employment. "About one out of four repairmen in the Bay Area works in the automotive field - - an indication of the importance of motor vehicles in the economy of this area. There has been a recognized shortage of well qualified automobile mechanics in the Bay Area in recent years."[22] This skill shortage may also be contributing to the rapidly increasing practice of replacing mechanical units instead of repairing them. Another source adds: "The number of automobile mechanics is expected to grow faster than the labor force as a whole. The increasingly complicated automobile continues to create the need for specialists such as automatic transmission specialists . . . . An increasing number of diesel mechanics will also be needed."[23]

A San Mateo Junior College survey states: "Current journeyman minimum hourly wage for automotive mechanics in the San Francisco Bay Area is $3.55, with some making $4.00 to $4.25....Ambitious workers can aim at promotion to jobs as foremen ($175 to $200 a week), and service managers (perhaps $900 a month)."[24] Many young men are starting their own businesses in this field because of the apparent demand. It should be noted, however, that without considerable capital investment, these small businesses are limited in the types of jobs they can take unless they have a cooperative tie-in with a larger garage that can afford the expensive modern equipment required.

Appliance Repairs

Appliance repair is an area in which supply has not caught up with demand for some time. In this field also, the quantitative and qualitative lag in the training of repair personnel has no doubt contributed to the practice of replacement instead of repair. Investigation indicates that good technicians in this field are in constant demand as more and more appliances come on the market and become standard household equipment. Starting pay for a qualified man is about $3.50 an hour, but there are many instances of qualified appliance repairmen grossing more than $10,000 a year.[25] This field is open for qualified people to start their own small

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[21] The Job Ahead, Loc. Cit., p. 12.

[22] Manpower Resources, Loc. Cit., p. 50.

[23] California State Department of Education, A Directory of Occupational-Centered Curriculums in California Junior Colleges and Schools for Adults, 1962. pp. 337-38.

[24] The Job Ahead, Loc. Cit., p. 113

[25] Ibid.

businesses, and without the demands on expensive capital equipment that occur in the field of automotive repair.

HOTEL AND RESTAURANT OPERATIONS

Under the categories set up by the U. S. Census Bureau, Hotels (including motels) come under service occupations, while eating and drinking places are listed under retail trade.

Hotels and restaurants cater to the same clientele and sometimes share the same premises. Seasonality influences the business pattern similarly in hotels and restaurants, and wages for most jobs in both industries are toward the lower end of the scale. Of particular significance to this study are the differences in the number of job opportunities provided by each industry, the divergent employment trends in hotels in contrast to restaurants, and the effect of the business cycle on the welfare of each industry. The contrast in size of the large hotel firms over the more numerous small restaurants also accounts for many of the differences in the character of these two important segments of trade and service. Since the late fifties, the hotel industry in the San Francisco Bay Area has had a resurgence of growth, a trend that has characterized this industry throughout most of the United States. A recent study by the Research and Statistics section of the California State Department of Employment includes the following highlights:[26]

Bay Area hotel and restaurant industries covered by the survey employed an average of 48,900 workers in 1964; three-fourths worked in the area's eating and drinking establishments; one-fourth worked in hotels, motels, and other lodging places.

Of these workers, approximately 27,200 worked 20 or more hours per week in one of the 80 surveyed occupations. The remaining 21,700 worked in jobs where the establishment of training programs under the existing legislation was not considered appropriate, or were on their jobs fewer than 20 hours a week.

Half of those working in surveyed occupations were engaged in the serving of food; an additional third worked in the preparation of food; the remainder were found in exclusively hotel occupations.

Over 3,800 job vacancies for workers in the surveyed occupations are anticipated in the next two years in hotels, motels, restaurants and related establishments in the Bay Area. About half of these openings will develop for replacement purposes; the other half will be new jobs resulting from the opening of new facilities or the expansion of services by existing establishments.

More than half of the expected openings will occur in food service occupations -- in particular for waitresses, waiters, counter men, counter girls, and busboys. Sizeable demand also exists for food preparation occupations such as cooks, pantry men, pantry women, and dishwashers.

[26] Hotel & Restaurant Job Opportunities in the San Frandisco Bay Area, 1964-1966, California State Department of Employment, March 1965, p. 3.

The occupations in which the most significant demand was found are ranked in Table 2 in order of the total number of workers needed for expansion and replacement purposes during 1964-66. The table shows that more than 85 percent of the total demand is accounted for by 9 occupations. More than 50 percent of the total demand in surveyed occupations will be for waitresses, waiters, and cooks.[27]

TABLE 2

Employment in Food-Connected
Hotel and Restaurant Occupations

Occupation	Estimated Employment October 1964			Manpower Needs: 1964-66		
	Full-time	Part time*	Total	Replacement	Expansion	Total
All Surveyed Occupations	23,100	4,100	27,200	1,890	1,930	3,820
High Demand Occupations	19,130	3,590	22,720	1,610	1,730	3,340
Waitresses-Total	5,300	1,400	6,700	620	460	1,080
Cooks (except Chefs)	4,850	350	5,200	320	240	560
Waiters-Total	1,450	550	2,000	100	360	460
Bus Boys-Total	1,600	500	2,100	130	200	330
Dishwashers	1,900	200	2,100	130	150	280
Counter Men, Counter Girls	1,300	300	1,600	110	90	200
Maids-Total	1,400	200	1,600	100	80	180
Pantry Men or Women	800	70	870	50	100	150
Food Service Cashiers	530	20	550	50	50	100

*Part-time employees are those who worked 20 hours or more per week, but less than a full work week.

Hotel Employment

The hotel industry is marked by fairly extreme fluctuations closely linked to economic conditions. Between 1949 and 1958, hotel employment declined nearly 10% in the Bay Area. In the six years from 1958 to 1964, average employment in hotels and other lodging places rose by nearly 500 per year to reach almost 13,000 in 1964. Most of this rise, however, occurred in San Francisco where for many years nearly 7 out of 10 jobs in the industry have been concentrated.

[27] Hotel & Restaurant Job Opportunities in the San Francisco Bay Area, 1964-66, Loc. Cit., p. 3.

In Alameda County the 1964 level of hotel employment was only slightly higher than it had been in 1950 and for most of the intervening years a marked decline in hotel employment in downtown Oakland had resulted in a net loss of jobs in this industry. Most of the upturn has occurred since 1960 in Alameda County. Contra Costa County, on the other hand, showed 50% growth in jobs in this industry between 1950 and 1960, with no increase from 1960 to 1964.

The number of employees in hotels has grown nearly twice as fast since 1960 as total Bay Area employment. However, it did not rise as fast as employment in the entire service industry of which hotels comprise a part. Largely this emphasizes the rapid growth that has been taking place in professional and semi-professional services (legal, medical, educational) in contrast to the slower growth of the lesser skilled jobs that predominate in personal services. Some of these types of jobs are vulnerable to labor-saving innovations.

San Francisco's supremacy in the hotel trade is gradually declining as new motor hotel facilities are appearing in surrounding areas. The new facilities, however, represent only modest increases in the number of new jobs.

A study of wages in Bay Area hotels and motels in 1963 revealed that for non-supervisory jobs the average hourly wage received was $2.01. Bellmen were the lowest paid occupational group among front office hotel workers, although their wages are supplemented by tips from guests. Desk clerks earned the highest average hourly wages among these surveyed occupations.[28]

Two years of college education, with a business major, can put a young man or woman on the first step of the ladder -- desk clerk -- leading to a management post. Human relation skills will determine how far he climbs from the bottom rung. For really competent people, the prospects are very bright. "I know of four or five jobs right in this area now for sharp young men as managers or assistant managers," said one hotel executive. (Managers earn roughly $1,000 a month and up, plus full maintenance.) A particularly pressing need is frequently cited for well-trained culinary personnel. Not enough public school instruction oriented toward the hotel end of the business now exists in the vicinity. As a result, said the executive, "many places are putting up with second-grade help because there's nobody any better available."[29]

Restaurant Employment

Two major factors bear heavily upon the economic health and growth trends of the restaurant industry. One is population growth; the second is the general economic situation, whether booming, stable, or in recession. Eating out, while a luxury for some, is a necessity for others. Adding to the importance of restaurants in the Bay Area is the region's attraction for out-of-town visitors and the tradition for good food and fine restaurants.

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[28] Hotel & Restaurant Job Opportunities in the San Francisco Bay Area, 1964-66, Loc. Cit., p. 9.

[29] The Job Ahead, Loc. Cit., p. 114.

There are many kinds of restaurants in Alameda and Contra Costa Counties -- corner lunch counters catering primarily to office and service workers; roadside hamburger stands; small family-operated restaurants specializing in a particular ethnic fare; motel-connected coffee shops; and the more formal hotel dining rooms and truly luxury establishments. Each has its own special atmosphere. Variations in size and type of restaurants, the quality of service and the nature of clientele, may lead to wide-ranging differences in methods of operation and staffing patterns.

In the five-county Bay Area, the restaurant industry provided jobs for 36,000 workers on the average in 1964, or nearly one of every 20 wage and salary workers in the area.

Restaurant employment in Alameda County grew from 8,400 in September of 1960, to 9,200 in September of 1964 for a gain of 9½%. In Contra Costa County, restaurant employment grew from 2,500 to 3,500 during the same period, for a gain of 40%.

In general, the restaurants of the Bay Area experience their annual peak of activity in September as the last spurt of summer vacation activity brings thousands of travelers to the region.[30]

It is evident that expansion in employment in the restaurant industry has been most marked in those parts of the Bay Area where population growth has been most pronounced.

Many existing restaurant firms constantly undergo remodeling as neighborhoods change character and new restaurants open in newly developing communities, taking the place of marginal firms that succumb to the rigorous competition of the industry.

The trend towards larger restaurants is apparent in data on distribution of employment and the number of firms by size of establishment. Employment since 1960, while declining among the smallest employer classes (from 0 to 9 employees), has risen in all other classes except in the class with 500 or more employees.

Restaurant wages in the Bay Area are among the highest paid anywhere in the United States for comparable work. The lowest wages were paid to waiters and waitresses for whom tips form an important part of total earnings, while head cooks and assistant cooks -- the most highly skilled workers covered in the wage survey -- were the best paid of all non-supervisory restaurant employees.[31]

A San Mateo survey reported that the hardest entry job to fill satisfactorily with all restaurant managers interviewed is cook (paying from approximately $19 to $25 a day). All interviewees predicted their business would grow at a greater rate than the population.[32]

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[30] Hotel & Restaurant Job Opportunities in the San Francisco Bay Area, 1964-66, Loc. Cit., p. 9.

[31] Ibid., p. 12

[32] The Job Ahead, Loc. Cit., p. 79.

Anticipated Future Opportunities

Food service is the largest single job category of hotel and restaurant employees; food preparation is the second largest. Additional jobs in the industry fall primarily into front of the house, (which includes both front office and uniformed service), accounting, and housekeeping. Accounting department jobs, executive and supervisorial jobs are excluded from these survey figures.

Food Service Occupations will comprise the greatest number of job opportunities in restaurants. In fact, more than half of all job openings projected through 1966 were in this category. Demand for waitresses leads this list with over 1,000 vacancies occurring during 1964-66, with replacement jobs outnumbering by 3 to 2 new jobs created by economic growth. Despite this substantial demand, there currently exists a substantial supply of experienced workers in this occupation and the turnover of workers among employers is high. Many of the available workers are so marginally qualified as to be unacceptable to employers, who are continually looking for neat-appearing girls, who can work rapidly and efficiently and who are willing to work split shifts, late hours, and holidays characteristic of this industry. Much of this turnover among employers is also the result of job hopping by employees.

The next largest number of food service job opportunities will be for waiters. Nearly 500 vacancies are expected over the next two years for all the various types of waiter specialties -- formal, informal, banquet, bar and cocktail. In contrast with waitresses the bulk of the expected vacancies for waiters should be created through expansion of the industry rather than through replacement of existing workers.[33]

Food Preparation in the kitchens of restaurants will provide nearly one-third of all anticipated jobs to be added to hotel and restaurant payrolls over the next two years. In these occupations, predominantly performed by men, replacements for workers who permanently leave the local labor market will match the volume of jobs expected to be added in this period by the expansion of existing firms and the opening of new restaurant facilities. The 1,130 food preparation jobs to be filled will be almost entirely full-time jobs, in contrast to the nearly one out of five part-time jobs currently found in food service departments. However, nearly half the food preparation jobs will be for cooks, that is the most skilled of the surveyed occupations in the hotel and restaurant study. Of these the 180 short-order and fry cooks will be the most readily available, for there is a supply of marginally qualified cooks with experience in these occupations, who could locate more permanent jobs given a systematic training in the kind of work they know best. The recently trained and new entry worker has a better chance to find this kind of job in the smaller restaurant where promotion from within is not the usual means of filling such jobs. Some of these jobs will be filled by other kitchen workers such as kitchen helpers, busboys and dishwashers who can acquire on-the-job exposure to the work and its demands and step into a routine cooking job when an opening occurs. In order to fill the jobs of the 220 combination cooks and general cooks, station cooks and second cooks expected to develop, the chances for filling these jobs are best for workers already employed in kitchens, rather than for newly trained

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[33] Hotel & Restaurant Job Opportunities in the San Francisco Bay Area, 1964-66, Loc. Cit., p. 21.

entry workers without practical experience. These jobs are filled wherever possible by promoting from within the establishment, with the result that one is not likely to progress directly from a dishwasher to an advanced cook. A more likely advancement would be for a vegetable man, cook's helper or assistant to a pantryman to be offered a cooking job. The job of a person promoted in this way might then be filled by someone from a less skilled position, and here the busboy, dishwasher or kitchen helper might find his best opportunity for rising to a more highly skilled and better paying job. Kitchen helpers, busboys and dishwashers are the unskilled labor of the restaurant trade. As a consequence jobs in these categories can be filled readily when the willing job seeker comes in contact with an available job.[34]

SUMMARY

It is recognized that this study has dealt with only a few of the occupations that comprise the broad area of services. While few generalities can be made regarding this dynamic family of occupations, it is evident that the service occupations most likely to be in short supply in the years directly ahead are those which require the most extensive and difficult periods of training.

It is also recognized that business, education, and government leaders of the San Francisco Bay Area must maintain the best possible communications concerning the demands and the sources of supply for the increasingly dynamic labor market if the best interests of this region are to be served.

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[34] Hotel & Restaurant Job Opportunities in the San Francisco Bay Area, 1964-66, Loc. Cit., p. 22.

VT 001 622

Industrial Education: Its Place, Purpose, Objectives, Methods, and Organization in the Arlington County Public Schools.

Arlington County Public Schools, Va.
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*INDUSTRIAL ARTS; *TRADE AND INDUSTRIAL EDUCATION; SECONDARY GRADES; *EDUCATIONAL OBJECTIVES; *PROGRAM DESCRIPTIONS
*ARLINGTON COUNTY PUBLIC SCHOOLS; VIRGINIA

The curriculum of industrial education in Arlington county encompasses industrial arts grades 7-12, vocational-day trade grades 11-12, and vocational-trade extension for adults. The organization, place, purpose, and objectives of the curriculum are explained. (PS)

VT 001 622

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INDUSTRIAL EDUCATION: - ITS PLACE, PURPOSE, OBJECTIVES, METHODS AND ORGANIZATION IN THE ARLINGTON COUNTY PUBLIC SCHOOL

INDUSTRIAL EDUCATION - ITS PLACE

"We believe that education is a continuous developmental process ... This process involves the development of communication skills and a disciplined system of thought and problem solving ... It involves the cultivation of an inquiring mind, the desire for knowledge, respect for learning, and rational attitudes toward law and change... to provide opportunity for each child to develop to the greatest extent a positive view of himself ... to provide opportunity for each individual to develop as a responsible, trustworthy and compassionate member of society who contributes to the social, political, economic, and spiritual advancement of mankind, according to his own individual gifts."

Students are provided the opportunities to achieve these ideals in an educational system in which instruction is organized and planned in the following major divisions of learning:

1. Humanities
2. Applied Arts
3. Social Studies
4. Communications
5. Theoretical Sciences

Each of these divisions is a part of the total educational experience leading to the complete integration of the individual into the society in which he lives.

It is then found that there are areas of study needed in the total curriculum which have as their function the development of meaning through application to the occupational and productive activities of our society. Today's person, to become truly educated, must know more than just theoretical aspects; he must build relationships among all subjects and develop a sense of their total purpose. Industrial and related activities are very important to the present technological age, a study of the application of art, science, economics, and mathematics, in the engineering, planning, and production sense gives meaning to many of the major divisions of education and provides orientation for selection and preparation of an occupation. Industrial Education as one of these areas of study then partially fills the need and has a place in the total curriculum by developing meaning through application.

INDUSTRIAL ARTS - ITS PURPOSE

The purpose of Industrial Arts is not clearly understood by all. This was evident throughout the country and prompted the American Council for Industrial Arts Supervisors, in 1961 to clearly define and state the purpose of Industrial Arts in the total educational curriculum. Many committees throughout the country worked to compile this national statement. In 1962 this statement was published by the Council. The Arlington County Industrial Arts Teachers agreed to accept this statement and it has become a part of the Junior High Industrial Arts Curriculum Guide.

> "... Automation, increased production, scientific, engineering and changing occupational needs are indicators of dynamic technological progress ... most students are far removed from actual manufacturing.. Knowledge of the impact of industry on society, development of economic interdependence, fundamentals of industrial process, utilization of human resources are desirable if today's citizens are to function intelligently .... Interpreting industry, discovering and implementing individual interests and abilities .... developing technical knowledge are responsibilities met through Industrial Arts. Provides opportunity for students to participate in representative experiences in industrial skills and processes ... provides practical application of mathematics, science, art, and language arts ... discovery and development of personal aptitudes, interest, creative technical abilities, self reliance, good judgement through problem solving and self expression .... Industrial Arts brings about wholesome change in the learners by affecting his habits, attitudes and understanding .... learns about how materials are made and fabricated ... place of tools, machines and men ... evaluation of craftsmanship and constructive work ... favorable attitude towards creative thinking and assuming self expression and control over environment ..."[2]

INDUSTRIAL ARTS - OBJECTIVES

Many objectives for Industrial Arts have been set forth and postulated from every section of our country. In 1960, a conference called by the Health, Education and Welfare Department, brought together national leaders in the field of industrial arts education to arrive at some national agreement for Industrial Arts objectives. Dr. Ivan Hostetler, Head of the Department of Industrial Arts, North Carolina State College chaired the group of national leaders.

The group made an analysis of the objectives that had been developed for Industrial Arts between 1928 and 1960. The published report refined and redefined the long lists to four major objectives.[3]

In 1961 the American Council of Industrial Arts Supervisors duplicated the efforts of Dr. Hostetler, and took into consideration his findings. During 1962 a common agreement among superivsors was made and the Association acknowledged Dr. Hostetler's work by accepting for national publication his four objectives.

In 1962 the Arlington County Public Schools Industrial Arts instructors agreed to subscribe to these objectives and included them in the published Junior High Industrial Arts guide.[4]

The four objectives subscribed to are:

1. To develop in each student an insight and understanding of changing industry and its place in our culture.

2. To discover and develop talents of students in the technical fields.

3. To develop practical problem-solving skills related to the material and process of industry.

4. To develop in each student skill in the safe use of tools and machines.

These four objectives are considered as a whole basic for Industrial Arts and supplementary objectives are/can be developed for various age groups, grade levels, gifted and slow learner.

INDUSTRIAL ARTS - ORGANIZATION AND METHOD - GRADE 7, 8, 9

Several conditions have influenced the present Industrial Arts program in the Arlington County Public Schools:

1. Parent and student demands for educational opportunities.
2. A student body in most part "academically" oriented.
3. Structure of the school day (6 periods).
4. State and local requirements for graduation.
5. Type of community.
6. Evaluative criteria for Junior and Senior High Schools as set forth by the National Study of Secondary School Evaluation.
7. The feedback from some students through a survey to make the course content more challenging.
8. The feedback from administration to provide for the student who is not academically oriented.
9. Abilities of various types of students who elect to enroll in Industrial Arts.

The preceding greatly influence the organization of the existing programs, construction of shops and selection of equipment to support the overall organization.

The Arlington County Public Schools Industrial Arts Curriculum has incorporated the Guiding Principles of the Evaluative Criteria for Junior High Schools.[5] A self evaluation, using these criteria resulted in a high rating for the following: 1) Organization, 2) Nature of offerings, 3) Physical facilities (with the exception of two schools), 4) Instructional activities, instructional materials and methods of evaluation, and 5) Student outcomes.

The seventh grade course of study, due to the short period of scheduled time and the necessity of rotating the students through three major areas of study within the shops has caused the instruction to become mainly teacher-oriented. The initial experience of seventh grade students is planned to:

1. Explore a broad overview of industry
2. Develop the concepts of drafting and sketching, the language of industry.
3. Provide an opportunity to work with metals, woods, plastics and some crafts.

The methods of instruction may include:

1. A class project in mass production
2. The use of metals to support a unit in power mechanics
3. The designing and fabricating of individual projects to limitations set by the teacher.
4. Thorough instruction in the care, selection and safe use of the basic hand tools and simple machines that are related to the areas of wood, metal and plastics.

Industrial Arts I is a full year elective course. All Arlington students in grade eight are encouraged to enroll. Ninth grade students who have not had a previous industrial arts experience are grouped into these classes. In the past two years several girls have enrolled in this course and in one school a special program for girls has been developed which places the emphasis upon consumer knowledge, home mechanics and home safety.

Instruction for the Industrial Arts I is developed through student-teacher planning. The areas of instruction include:

1. A unit in drafting, planned to introduce the student to: the care and use of the basic instruments, and study orthographic projection which enables the student to express and communicate his ideas on paper.

2. An introduction to, and instruction in, the basic operations of some additional equipment used in woodworking and metalworking.

3. An introduction to foundry practice.

4. An introduction to simple processes of machining metals and forging.

5. A unit in simple electricity.

The methods of instruction may become flexible, to account for different ability and interest groups, and include:

1. Mass/line production,[6] (this is usually developed differently with each class).

2. Problem solving[7] is stressed. The student states his problem, (it may be a "take home" project, experiment, or an item for the school), outlines his solution, makes a working drawing, computes the cost, and the final outcome is evaluated by student and instructor.

3. Group projects[8] involving two or more boys are encouraged.

4. A study of a broad unit of an industry.[9]

Industrial Arts II, a yearly elective, is offered to all ninth grade students who have had Industrial Arts I. Instruction in Industrial Arts II is mainly student-oriented. The major areas of instruction include;

1. A further depth study of the concepts in drafting, and the development of the basic manual skills.

2. Depth in instruction in the safe use of power equipment.

3. A unit for the introduction to simple electric welding.

4. A unit in the industrial ceramic practice.

5. An introductory unit in letterpress printing.

6. An introductory unit to internal combustion engines.

The methods of instruction used are:

1. A student-oriented mass/line production project (the direction for development and execution is different with each class.)

2. Problem-solving is again stressed (this permits instructors to recognize and allow for individual student differences).

3. Individual student selected and designed projects.

The total junior high curriculum for industrial arts is flexible and attempts to provide for the individual differences among students. The program provides more learning experiences than usually advocated by some leaders.[10]

A sample survey[11] was taken of the ninth grade boys to ascertain why more boys did not select Industrial Arts as an elective course in their program. In main, the statements read: 1.) the parents desired the child to start "academic studies," 2.) The offered Industrial Arts course was not challenging. The latter caused the inception of a pilot program for the study of pure electronics, with emphasis placed upon comprehending circuits and electronic components rather than rote trouble shooting. The original intent for the course was terminal and planned for those students who would not be able to elect an industrial arts course in their senior high school schedule. A positive evaluation was given for the course and in 1963 a staff was trained to initiate the program in all junior high schools.[12]

SPECIAL PURPOSES

Limited provision is made in the industrial curriculum for groups to slow learners, mentally retarded and non-academic producers. The educational experiences for these children becomes meaningful as he participates in shop activities which emphasize learning by doing. Through participation in the program, these learners experience the moral-building stimulus that comes with successful accomplishment.

INDUSTRIAL ARTS - GRADE 10, 11, 12

"... When satisfactory vocational facilities are not available the Industrial Arts department must assume some responsibility for this specialized training."[13]

The above guiding principle, broad offerings of the existing junior high industrial arts programs, and a large enrollment in each of the three comprehensive senior highs, have influenced three types of Industrial Arts shops to be developed in Arlington: the General Unit Shop, and two types of Unit Shops,[14] one vocationally oriented and the other type technically oriented. Basically this organization and the content of each course offered in each shop provides the opportunities for a student to select a course according to his interests, abilities and talents. The present composite student body in each senior high school gives changing direction to course offerings in each school.

All courses are elective and are offered to students who meet established criteria for admission.

Basic in all Arlington senior high schools is a Drafting and Electronics course of study, each having a definite sequence of courses directed toward depth in technical training. The instructional emphasis is placed on developing manual skill and acquiring a depth of technical knowledge. It is found that these courses have greater appeal to the more gifted student.

In two schools there are Unit Shops providing the facilities for the Printing and Automotive programs, and each program has a definite course sequence directed toward vocational training. Both programs give emphasis to the development of manual skills and the acquisition of general knowledge. These programs seem to have appeal to the average and below academic average students. Some students select one of the courses to fulfill the prerequisite for admission to Vocational - Day Trade program in their 11th or 12th grade or to meet their avocational interests.

not always true in printing

There is developed General Unit Shop in two schools. These shops provide learning experiences in a broad area of study through limited experiences in several minor areas of the broad study. The courses in General Unit Metals or General Unit Woods provide the opportunity for a student to discover and later to develop his talents and interests in one of the smaller areas of study.

Ex.

General Unit Wood	General Unit Metals
1. House Construction	1. Welding
2. Cabinet Making	2. Machine Shop
3. Building Trades	3. Art Metal
4. Pattern-making	4. Foundry Practice
5. Fiberglassing	5. Forging
6. Boat Building	6. Heat Treating
7. Experimentation with various materials.	7. Sheet Metal

Not much, if any, in power at Wakefield!

In two of the senior high schools Comprehensive General Shops have been developed. The emphasis in these shops is general education and learning experiences are provided in the areas of art, sheet and cold metal, foundry, machine shop, welding, letterpress printing, plastics, and woodworking. These shops were developed for the student who desired a variety of experiences rather than specialization in one narrow area, as offered in the Unit Shop; or, for those students who for the first time, desired an Industrial Arts experience.

One comprehensive general shop has inaugurated a joint program in cooperation with the Science Department for research-experimentation.[15] This program provides the student with an opportunity to define and scientifically outline a solution to a problem with the science instructor, and then use the shop, which provides the facilities and instruction for the student, to learn how to fabricate materials or run tests to complete a solution to his original stated problem.

An experimental course, Commercial Design, is being developed in conjunction with the Art Department. The manipulative skills and processing of materials are taught in the shop. From their shop experiences the students can directly apply the new knowledge to design, causing the total experience to become more meaningful to them.

One senior high school offers a course in Jewelry, Lapidary and Ceramics. This course places emphasis on jewelry design, investigation of semi-precious stones and metals, and development of manual skill. Students select this course for avocational interest or pre-vocational training leading to further study in jewelry repair or as a dental technician.

VOCATIONAL - TRADE AND INDUSTRIAL (DAY TRADE) GRADES 11-12

In the late 1940s there was a severe decline in enrollment of the day trade students which led to deletion of the Vocational-Day Trade programs. The emphasis on education had shifted toward the "academic" and local requirement for high school graduation were increased.

In 1961 the vocational-day trade program was reorganized and vocational offerings were provided all 11th and 12th grade county public school students, at three centers, in the areas of Printing, Auto Mechanics, Masonry, and Air Conditioning-Refrigeration. The main emphasis on these courses was and is to have students develop competencies for an initial entry into a trade. At present, three Vocational-Day Trade programs are in operation; Printing with a very small enrollment, and two Auto Mechanics shops having an over-subscribed enrollment, making it most difficult to select the most deserving students for entry.

INDUSTRIAL COOPERATIVE TRAINING

In addition to the Vocational - Day Trade program, a Vocational - Industrial Cooperative Training program is offered in all senior high schools to all 11th and 12th grade students who meet certain admission prerequisites. The purpose of the program is to develop competencies for initial entry into a specific area of industrial work. The resources of the community become the "shop" and provide the training which the school at present is not equipped to offer.

The students are provided study materials which are directly related to their industrial work. The student devotes a period per day in related study with the coordinator. The student is gainfully employed in the community for a minimum of fifteen hours per week in an on-the-job training experience. This experience is carefully evaluated by the Coordinator. If proper industrial training is not given by the employer the training station is changed by the Coordinator.

Some students who do not meet the criteria for admission to the Industrial Cooperative Training program may elect a Work Training Program. This course emphasizes employee - employer relationship, and work in the community's plants becomes the learning experience. Satisfactory completion of the course allows the student to enroll in the Industrial Co-operative Training Program.

VOCATIONAL - TRADE EXTENSION

Under Vocational-Trade Extension, evening courses are offered for out-of school persons who desire upgrading, retraining or training in the following areas - Auto Mechanics and Electronics. Courses in Drafting, Metalworking and Woodworking have been offered when there has been a demand. An evening course, Jewelry and Lapidary, is offered for avocational interests.

Short terminal courses have been offered in the senior high with few students showing an interest. After school clubs are sponsored by various members of

the Industrial Arts departments. Ex. - Hobby, Radio, Public Address Systems, Auto, Rocket Society. (also — Industrial arts club for those students not currently enrolled)

Arlington County Public School System does offer what is believed to be a well-balanced program in Industrial Arts, grades 7 - 12.

PROPOSALS

There is proposed for administrative approval and 1966-67 budget approval, a county-wide Vocational Cosmetology Laboratory and a Vocational Air Conditioning-Refrigeration or Vocational Electricity Shop. Proposed for the same considerations is a program for "Youth with Special Needs."

Thought and exploration has been given to extending Industrial Arts into grades K-6. The existing elementary curriculum is crowded and classroom space is not available. At this time it does not appear feasible to inaugurate Industrial Arts in the elementary curriculum.

Ours is a changing world. The problem of yesterday is not the problem today. The education of yesterday is not the education of today. In an attempt to improve the total Industrial Education program, can you suggest any deletions, additions, innovations, or direction that you believe we in Industrial Education should make to better serve the students and people of Arlington County?

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Differences Between

	INDUSTRIAL ARTS	VOCATIONAL EDUCATION
OBJECTIVES	A phase of general education pertaining to the tools, materials, processes, products, organization and problems of industry. To develop an insight and understanding of industry and its place in our culture.	Specialized training in a limited area to develop competancies for initial entry into a trade or craft.
GROUPS SERVED	In Arlington County it is mandatory for 7th grade boys, with the exception of those enrolled in music and a foreign language. It is elective for grades 8-12.	Select groups: Student will be 16 years of age upon completion of course. Need for and ability to profit from training. Start training in 11th grade.
LENGTH of COURSE	Adapted to school schedule - 1 period per day, 5 days per week. A few groups may meet 2 periods per day.	Day Trade classes: 3 hours in shop or 2 hours in shop and 1 hour in related study. Industrial Cooperative Training: 1 hour per day related study. Minimum 15 hours per week on-the-job training experience.
CONTENT of COURSE	Directed toward the study of the broad scope of industry and its ramifications.	Directed toward specialized study in a trade. Emphasis is on the technical knowledge. Develop trade skills.
METHODS of INSTRUCTION	Centered around projects; group lessons and demonstrations, reading required, problem solving technique used, mass production field trips, experimentation.	Industrial production procedures followed, lectures, skills emphasized, practical performance tests used. "Mock-ups" used.
TEACHER TRAINING	College graduate with broad technical background. Educated in child growth and development, understands process of learning and teaching methods.	College graduate or competent trade experience 3 years, American citizen, 21 years or older. Approved by State Supervisor. May be required to have some college training, usually 6 hours.
PLACEMENT	Little effort made to place and follow up students. Instruction not intended to prepare for initial job entry, some students may enter the work area.	Placement and success of trainees measure effectiveness of the particular program.
EQUIPMENT	Predominance of hand tools - machines of lightweight construction.	Modern production equipment - heavy duty - expensive.
OUTSIDE AGENCY	No direct obligation to cooperate with outside groups.	A cooperative undertaking with community.
FEDERAL or STATE AID	As yet no funds available. May be in immediate future.	Partial reimbursement for Instructors and Director's salaries and for plant and equipment.

VT 001 623
State-Local Plan for Administration of Distributive Education.

Pennsylvania State Dept. of Public Instruction, Harrisburg
MF AVAILABLE IN VT-ERIC SET.
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*STATE PROGRAMS; *DISTRIBUTIVE EDUCATION; ADULT EDUCATION; POST SECONDARY EDUCATION; *SECONDARY EDUCATION; *PROGRAM ADMINISTRATION; DISTRIBUTIVE EDUCATION TEACHERS; *STATE STANDARDS
PENNSYLVANIA

This publication indicates the current administrative and program policies for distributive education in the state in order to provide assistance to the local school district during the planning stages of a distributive education program. The contents include: (1) orientation to distributive education (objectives of distributive education and opportunities in distribution), (2) plans of operation, (3) reimbursement (operation expense, travel, adult extension, equipment, area vocational-technical school, and research), (4) teacher-coordinator (length of employment, coordination time, and selection and placement of students), (5) training sponsor, (6) advisory committee, (7) Distributive Education Clubs of America, (8) adult extension, and (9) classroom sales-laboratory. (SL)

VT 001 623

ED0 31587

STATE-LOCAL PLAN For ADMINISTRATION Of DISTRIBUTIVE EDUCATION.

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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VT01623

Commonwealth of Pennsylvania
Harrisburg
March, 1966

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William W. Scranton
Governor

DEPARTMENT OF PUBLIC INSTRUCTION

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Superintendent

Neal V. Musmanno
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Preface

Distributive Education in the Commonwealth of Pennsylvania has experienced rather small but steady growth over the past twenty-seven years. The need for this type of education has been pointed out over and over yet, for some reason, school administrators have not seen their way clear to initiate such a program in more than a handful of Pennsylvania's schools.

This publication is intended to indicate the current administrative policies surrounding Distributive Education together with program philosophies and recommendations.

As more and more Federal and State legislation is turned toward realistic vocational education, it is anticipated that more and more local school districts will feel the need to implement such programs. It is in this light that we have written this bulletin to help answer the many questions which may arise during the planning stages of opening or reinstating a Distributive Education program.

J. Thomas Weyant
State Supervisor
Distributive Education

May 1966

Table of Contents

		Page
Section I.	Distributive Education—Orientation	1
	a. Objectives of Distributive Education	1
	b. Opportunities in Distribution	2
Section II.	Distributive Education—Plans of Operation	5
	a. The High School Program	5
	b. The Post-High School Program	7
	c. The Two Year College Program	7
	d. The Adult Program	7
	e. The Special Needs Program	7
	f. All Programs	7
Section III.	Distributive Education—Reimbursement	9
	a. Operation Expense	9
	b. Travel	9
	c. Adult Extension and Pre-Employment Training	9
	d. Equipment	9
	e. Area Vocational-Technical School	10
	f. Research, Experimental, Developmental, and Pilot Projects	10
Section IV.	Distributive Education—The Teacher Coordinator	11
	a. Length of Employment	11
	b. Time to Coordinate	12
	c. Selection and Placement of Students	12
Section V.	Distributive Education—The Training Sponsor	13
Section VI.	Distributive Education—Advisory Committees	14
Section VII.	Distributive Education Clubs of America (DECA)	15
Section VIII.	Distributive Education—Adult Extension	17
	a. Duties of Field Supervisors	17
	b. Under Whose Auspices is the Program Offered?	17
Section IX.	Distributive Education—Classroom Sales-Laboratory	18

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Kenneth M. Pfeiffer	Chief, Instruction Consultation Division	Department of Public Instruction
David Closky	State Advisor	Department of Public Instruction
Charles W. Steadman	Teacher-Educator	University of Pittsburgh
Irwin Iwler	Field-Instructor	University of Pittsburgh
Joseph P. Wolfe	Field-Instructor	University of Pittsburgh
Marvin Hirshfeld	Teacher-Educator	Temple University
Norbert J. Zeimes	Field-Instructor	Temple University
William J. Wiedwald	Field-Instructor	Temple University
Thomas E. Miller	City Supervisor	Pittsburgh
Jacob Kafin	City Supervisor	Philadelphia
Robert Burchfield	Teacher-Coordinator	Altoona
Joseph J. Grande	Teacher-Coordinator	Reading
John C. Lightner	Teacher-Coordinator	York

Section I

DISTRIBUTIVE EDUCATION ORIENTATION

Vocational education in distributive occupations is designed to meet the needs of persons over 14 years of age who have entered or are preparing to enter a distributive occupation.

A distributive occupation means an occupation that is followed by proprietors, managers, or employees engaged primarily in marketing or merchandising of goods or services. These occupations are commonly found in various business establishments such as retailing, wholesaling, manufacturing, storing, transporting, financing, and risk bearing.

Distributive education provides instruction on three levels; employee, supervisory and management. This training may be offered through the high school, post-high school, and the adult in-service programs.

The high school program functions within the framework of the overall curriculum of the school. Therefore, it is a cooperative enterprise using both the facilities of the school and the marketing and merchandising resources of the community. Since most of the student placements have been in retail establishments, the instructional program has been developed largely in that area. This is not to suggest, however, that distributive education in the high school is to be labeled a retailing program. Nor is it principally concerned with the acquisition of specific skills, as an end goal, by the enrollees. The program is concerned with the realm of distribution and not solely with the beginning positions in retailing which, inevitably, are the initiating experiences for the majority of students seeking careers in distribution.

The content of the program of instruction is derived from the functions of marketing and a knowledge of products and services in reference to the occupational objective of the student. Such content is determined through the advice and consultation of the local advisory committee.

OBJECTIVES OF DISTRIBUTIVE EDUCATION

For the student . . .

1. To offer an understanding of the part distribution plays in the economy of the United States.
2. To provide an opportunity for the student to select and prepare for a career in the area of distribution.
3. To provide an educational program that includes a close relationship between theory and practice.

4. To develop the talents of the students to the maximum possible in order that the student can be ready to take advantage of opportunities in distribution as they become available.
5. To assist persons already employed to do a more effective job.
6. To have the student understand problems in human relations in order that he may cope with the problems of the consumer, employer and employee.

For the businessman . . .

1. To assist in the reduction of cost through increased efficiency of the employees.
2. To assist the businessman by helping train people for positions of leadership in the industry.
3. To develop a closer working relationship between the school and the business community.

For the schools . . .

1. To provide an opportunity for the schools to enrich its curriculum, to provide an educational program that provides practical experience with theory.
2. To provide the schools with an opportunity to develop the occupational competencies of its students.

OPPORTUNITIES IN DISTRIBUTION

The opportunities for youth in the expanding area of distribution will result from many things including: (1) the continued rapid growth and mobility of our population (2) increased physical volume of output due to a growing emphasis on plant modernization and automation (3) a rapid expansion in the introduction of new products, resulting from the recent and current acceleration of research and development expenditures (4) the broadening of world markets through increases in international trade, and (5) the dynamic and flexible nature of marketing itself.

At present, more than one half (approximately 55 per cent) of the privately employed workers in the United States are working in distributive and service occupations. According to the United States Census of 1962, more than 19 million persons were employed in retail and wholesale businesses and service establishments in the United States in 1962. The 19 million workers represented an increase of 33 per cent over the corresponding figures in 1948 and about 29 per cent of the employed civilian labor force in 1962.

Nearly 26 million young workers will enter the nation's labor market during the sixties. Estimates indicate that the number of employment opportunities in distributive and service occupations will increase more than 50 per cent by 1970 over 1960 levels. In Pennsylvania alone the

labor force of young workers is expected to increase some 14 per cent by 1970. For the most part, these young people will not have had the benefit of any realistic programs in orientation or training for vocational opportunities. It should also be made clear that the figures cited above do not include the vast numbers of young people who are: (a) employed and who will be seeking to complete their high school education; (b) discontented with their present low salaried positions and will, therefore, be seeking opportunities to qualify for advancement or more stable employment; and (c) in need of retraining because the number of jobs for which they could qualify is limited or reduced due to dynamic changes in several vocations.

Employment opportunities for young workers have increased at a phenomenal rate during the past decade. Indeed, the requirements of our changing society argue well for a continuance of this trend. Distributive education programs in the nation's high schools have also increased in number but nowhere in relation to the increase in the vocational opportunities which they seek to serve. In short, distributive education programs to prepare youth either during the terminal high school years or shortly thereafter are woefully underdeveloped in both scope and number to serve the need. The general belief is that cooperative training programs, such as those in distributive education, can do much to meet many of the needs of young adults and business alike. This belief is held by most responsible agencies and organizations conversant with current employment problems.

New programs and an expansion of proven programs are needed to help cope with the needs of youthful job seekers at the local level. Post-high school cooperative programs offer a systematic means for supervised occupational experiences for a segment of our youth that are virtually neglected. Their practical arrangements for training youth in real occupational situations make possible the identification of responsibilities and the development of attitudes required on jobs that exist in the field. Where tried, such programs have demonstrated their ability to sustain a high degree of student motivation and interest to the satisfaction of schoolmen and cooperating employers alike.

Distributive businesses vary in size from the small store that is owned and operated by the proprietor to the multi-store distributor employing thousands of people. The need for trained employees in distribution is urgent and vital.

Career opportunities can be broadly classified according to function of various departments of the store. Larger stores are organized in five broad areas, merchandising, publicity, control, personnel, and operations.

Most stores have a policy of promotion from within. Some openly state that no man has ever been appointed store manager that has not been

through its training program. This suggests that performance on the job is critical and the fact that a student did not attend college, does not prevent his advancement to more responsible and higher paying positions.

It is not uncommon at present to find students in managerial positions that received their initial training in distributive education not too long ago. One nationally known store has a training program that, assuming normal progress on the part of the student, provides a position of assistant manager upon graduation from high school.

RETAIL

The function of retailing is identified with anyone, regardless of what he calls himself, who sells a product to the ultimate consumer. Some occupational classifications in this area are salesperson, buyer, cashier, produce clerk, waitress, display man, credit authorizer, interior decorator, copy writer, training director, and stock clerk. It would be impractical to list all job opportunities since a single large department store would have hundreds of job classifications in the one retail outlet.

WHOLESALE

The function of wholesaling is identified with anyone, regardless of what he calls himself, who sells products to those whose purpose is to resell them in one form or another. Some occupational classifications in this area are salesperson, warehouse superintendent, shipping supervisor, sales engineer, broker, sales agent, resident buyer, import-export agent, receiving supervisor, and industrial salesman. These occupations may be found in businesses dealing with motor vehicles, drugs, chemicals, groceries, raw materials, hardware and any other product which requires wholesale handling.

SERVICE

The function of performing a service is intangible in nature although direct benefits accrue to those consumers or business organizations purchasing the service. Some occupational classifications in this area are salesperson, cashier, warehouse man, desk clerk, service manager, tour director, investment counselor, route salesman, recreation director, insurance adjuster, and public relations director.

The level of entry jobs in the field of distribution differs according to the degree of individual responsibility and decision-making required of the applicant. There are many starting points. Some are satisfying in themselves as career jobs. Others are necessary stepping stones to the job objectives to which the preparatory training has been directed.

Section II

DISTRIBUTIVE EDUCATION PLANS OF OPERATION

Distributive education is a vocational program of instruction. It may be organized and operated on the high school, post-high school, two-year college, and/or on the adult levels.

THE HIGH SCHOOL PROGRAM

The high school program is described as preparatory instruction—which means—preparatory to regular employment in a distributive occupation. This preparatory instruction includes both project and cooperative classes.

The project method of instruction is usually limited to the first year and involves participation activities in individual training plans and a laboratory classroom facility. A school store operated under the distributive education program shall meet the laboratory classroom facility requirement.

The term cooperative reflects the working relations between the secondary school and the business community to prepare young people for careers in distribution. Properly conceived, the classroom represents the center of the instructional program, and the employment status of the students provides the necessary training experience. The job is an avenue through which each student may apply basic concepts in practical situations. Cooperative part-time employment is viewed as a method of instruction and student earnings received therefrom is secondary to the learning process.

Instruction which is concerned with a basic body of knowledge unique to an explicit area such as distribution is regarded as an instructional discipline. The discipline identified for the preparatory distributive education program is distribution. We may utilize either the cooperative method of training or the project method of training as a means to achieve vocational competency. The discipline of distribution can be most advantageously presented in the classroom if the student can apply his knowledge, judgment skills and attitudes directly and immediately on a distributive job. Employed as a part-time worker, the student has at hand a unique, practical laboratory situation which could never be duplicated in the classroom.

Each student should have a career objective to which the instructional program is directed. This career objective should be in writing and a matter of record. This objective may either be a specific occupation or a cluster of closely related occupations in an occupational field.

Minimum requirements for a reimbursable distributive education program are described below: (All units referred to below are Carnegie Units of instruction.)

For students enrolling in distributive education during the 11th grade, one (1) unit of vocational distributive education is required.

For students enrolling in distributive education during the 12th grade, one (1) unit of vocational distributive education is required for those who have previously completed at least one (1) unit of vocational distributive education or, for those with no prior distributive education units, two (2) units of vocational distributive education is required or, for those who have previously completed two (2) units of another vocational program in a related field, one (1) unit of vocational distributive education is required.

For purposes of reimbursement no student is to be reported more than once in the event they may be enrolled in two (2) vocational programs at the same time.

All students enrolled under the distributive education program during the twelfth (12) year should be legally employed the equivalent of at least an average of fifteen (15) hours a week during the school year. Traditionally, distributive education student-learners have been granted released school time to obtain on-the-job experience. In many communities this practice will continue with the pupils attending classes in the forenoon and reporting to their training stations in the afternoon. In recent years, the advent of shopping centers and related trends have changed customers' preference of shopping hours. A more flexible schedule is now possible to meet these changes.

The distributive education program is designed to serve the needs of the individual in relation to the total economy. The well-educated individual, who is competent in his occupation, strengthens the economy through his productive ability. In this light, it is possible to offer a program of distributive education in practically every type of school organization regardless of its size or location.

In the ideal situation, first year students in distributive education are prepared for their initial jobs in the field of distribution through classroom instruction and meaningful project activities. Project activities may include such things as school store operation, marketing surveys, career objective research and many other meaningful activities including some extra or holiday employment whenever possible. Second year students therefore are well prepared for on-the-job experience and it is

recommended that these job-qualified enrollees be given an opportunity to gain supervised work experience concurrent with their classroom instruction. In those communities where employment opportunities are extremely limited or nonexistent, the second year students may be taught on a nonwork experience basis with a continuation of project activities.

The high school program in distributive education should be recognized as the beginning of training on the adult level for those who are to continue their formal education beyond the 12th grade in distribution.

THE POST-HIGH SCHOOL PROGRAM

With the advent of area vocational-technical schools (AVTS) in this state, the probability of post-high school programs in distributive education is greatly improved. Such programs in either comprehensive schools or AVTS's may be organized in the same manner as high school programs in order to meet reimbursement requirements. It is entirely possible that a 13th or 14th year program might utilize the cooperative plan during both years since the students are older and more mature. These classes shall be limited to persons who have completed or left high school and who are available for full-time study in preparation for entering, or upgrading occupational competencies in the labor market.

The instructional program at the post-high school level may be more clearly identified with a specific occupational objective in the field of distribution such as; advertising, display, midmanagement, etc. or it may be pointed at a specific type of business such as; food marketing, fashion merchandising, shoe selling etc. This is not to say that this cannot take place at the high school level, but a basic and general background is more appropriate whereas the post-high school student is generally in a better position to follow a more specific goal.

THE TWO YEAR COLLEGE PROGRAM

A program covering two (2) school years providing an average of at least twelve (12) semester hours per year of the regular schedule for vocational instruction in distribution in classes limited to the department or division of a junior college, community college, university, or other public education agency.

THE ADULT PROGRAM

Short term preparatory and supplementary classes for adults not available for full-time study leading to a specified occupational achievement or part of a series of classes leading to an occupational goal may be provided through the local educational agencies. See Section VIII for further information.

THE SPECIAL NEEDS PROGRAM

Instruction for full-time students whose occupational goals represent limited employment opportunities will be provided through appropriate programs organized and requested by local educational agencies and approved by the State staff.

ALL PROGRAMS

The local educational agency shall elect the method of operation which best meets the needs of the local community and student body after consultation with a representative of distributive education from the Department of Public Instruction. This representative will supply the application forms necessary to operate a reimbursable program of distributive education.

To contact these representatives write or call the State Supervisor or the State Advisor of Distributive Education, Department of Public Instruction, Harrisburg, Pennsylvania 17126; the Teacher-Educator or Adult Field Instructors of Distributive Education, Cathedral of Learning, University of Pittsburgh, Pittsburgh, Pennsylvania 15213; Teacher-Educator or Adult Field Instructors of Distributive Education, Ritter Hall, 4th Floor, East, Philadelphia, Pennsylvania 19122.

Section III

DISTRIBUTIVE EDUCATION REIMBURSEMENT*

The following reimbursements and financial assistance is available to all approved vocational distributive education programs.

OPERATION EXPENSE

A supplemental payment of fifty ($50) shall be paid each year for each pupil enrolled in average daily membership (A.D.M.) in vocational distributive education curriculums approved by the Superintendent of Public Instruction. (Section 2504, School Laws of Pennsylvania) This payment is limited to 100 students per full time teacher-coordinator of Distributive Education.

TRAVEL

Payment on account of approved travel of teachers, coordinators, supervisors and directors in vocational education shall be reimbursed at the rate of 80% of the sum expended by the school district. (Section 2506, School Laws of Pennsylvania) The local board is required to establish the rate of payment and approve such travel which is subject to acceptable justification and audit.

ADULT EXTENSION AND PRE-EMPLOYMENT TRAINING

Adult distributive education classes shall be reimbursed at a rate of 80% of $4 per hour for teachers or supervisors salaries which equals $3.20 per hour of instruction or supervision. The amount expended for supervisory salaries shall not exceed 20% of the sum expended for teachers salaries. (Section 2507, School Laws of Pennsylvania)

EQUIPMENT

Sales laboratory equipment, supplies, and teaching aids approved for new facilities or for replacing, updating, improving, and expanding present facilities may be reimbursed 50% for any approved course under present stipulations of The State Plan for Vocational Education.

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* In accord with current laws and regulations.

AREA VOCATIONAL-TECHNICAL SCHOOL

In addition to the regular school district reimbursements for general aid, etc. school districts participating in the operation of an AVTS receive up to $75 per pupil cost differential between the per pupil cost for current expenses in the AVTS and the per pupil cost for current expenses in the resident high school. (Section 2504.2, School Laws of Pennsylvania)

RESEARCH, EXPERIMENTAL, DEVELOPMENTAL, AND PILOT PROGRAMS

Research, experimental, developmental, and pilot programs may be reimbursed up to 100% depending on the merits of the particular proposal. These are projects other than educational training programs which involve the development of plans, methods, and research studies, as supporting services to the educational curriculum to develop, improve, or expand vocational education in general.

Section IV

DISTRIBUTIVE EDUCATION
THE TEACHER-COORDINATOR*

The teacher-coordinator occupies a prominent position in the distributive education program since he is responsible for the instruction the students receive and for the operating procedures of the program.

If a teacher is defined as one from whom we learn, then to teach effectively the discipline of distribution the present-day teacher-coordinator must possess a high degree of professional and technical preparation. A teacher-coordinator learns about his specialized field from the technical courses in distribution and marketing and from actual experience in a distributive occupation. Professional courses in distributive education prepare the teacher-coordinator to promote, organize, and conduct the program according to approved patterns.

The teacher-coordinator recognizes that the occupational experience students receive is an essential part of classroom instruction, but that such employment does not take the place of the instruction he provides.

The teacher-coordinator must himself have occupational and educational competencies in the field of distribution. He should continue to learn more about this discipline at every opportunity, keeping up to date in this ever-changing field by working in an actual distributive occupation whenever possible during school vacations and holidays.

LENGTH OF EMPLOYMENT

The employment of the teacher-coordinator for a minimum of one month more than the regular school year is recommended for other than 12 month programs. This provides the opportunity for placement and coordination of the students in the junior class during the summer if desired; visitations to the homes of the students to explain the program and outline the parent's responsibilities; preparation and revision of the curriculum; locating and arranging for proper training stations for the students; and attending in-service workshops and official meetings in distributive education.

Local teacher-coordinators of distributive education shall provide the leadership and supervision necessary to develop and maintain the total local programs of distributive education. Their activities shall include: the initiation, organization, promotion, direction, and supervision of the secondary and/or the post secondary school and adult programs.

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* See Pa. Teacher Certification Regulations (1961).

TIME TO COORDINATE

Local teacher-coordinators of distributive education shall perform coordination activities which include regular consultations and interviews with students, employers and advisory committee. A minimum of two class periods per day shall be made available for coordination and out-of-school activities. These two periods are usually most effective when scheduled during the last two periods of the day. Coordination time will vary in relation to the size of the community, distance to the training stations, and the number of students placed in cooperative on-the-job work experience. Additional coordination time shall be provided when local coordinators are actively engaged in organizing, promoting, and/or teaching in the adult distributive education program. Local teacher-coordinators of distributive education should cooperate fully with adult field instructors in every way possible.

SELECTION AND PLACEMENT OF STUDENTS

Students usually apply for distributive education through the guidance counselor who reviews the application and faculty recommendations, explores student interest, ability, aptitude, attendance and evaluates the student's potential. When all applications have been evaluated, the counselor confers with the coordinator to determine admission and possible placement of prospective students. Admission to the program rests finally with the teacher-coordinator of distributive education.

When a student is placed in a training station certain cooperative arrangements (preferably in writing) between the school providing the instruction and the employers providing on-the-job training through part-time employment of such student learners should be made. Such arrangements shall provide for (a) the employment of student-learners in conformity with Federal, State, and Local Laws and Regulations without resulting in exploitation of such student-learners for private gain; (b) an organized program of training on the job; (c) local coordinator or supervisor who shall direct, coordinate and supervise the program; and (d) supplemental vocational instruction in school.

Section V

DISTRIBUTIVE EDUCATION THE TRAINING SPONSOR

The training sponsor is the individual to whom the distributive education student looks for instruction and training on the job. He may be the owner or manager, or he may be a responsible individual appointed by management. Any student may have one or more training sponsors during the course of his enrollment in the program, depending upon the nature of progressive experiences provided and the size of the distributive enterprise in which the student is employed.

The training sponsor must understand the distributive education program. He should know the career objective currently held by the student under his supervision and appreciate the significance of satisfactory job performance by the student. The teacher-coordinator must recognize his responsibility to help sponsors appreciate the significance of satisfactory job performance by the student and to appreciate their unique assignment to share in the education of youth.

The purpose of on-the-job training is to apply basic knowledge in a job situation, to receive instruction and gain experience in a distributive occupation. The student thereby experiences the realities of business activity paralleling the classroom instruction. In this sense, the employing agency becomes, for the student, a laboratory situation. Job performance should be treated as a necessary step in a series of experiences which contribute to the career objective held by the student.

The importance of the job, however, must not be minimized; for it is from the environment of the training station that the student will emerge as an experienced worker. The influence of this environment will dictate to a great extent the manner in which he will think and perform as he approaches full-time employment.

Because the present job is of vital importance to the student's total career, certain measures must be taken to insure that experience on the job will be educationally sound. Above all, the student must be placed, as far as it is possible, in a training situation in keeping with his career objective. One method used to assure that instruction will take place on the job is to incorporate a written training plan as one of the operating procedures of the cooperative program.

Such an agreement may be prepared jointly by the employer and the teacher-coordinator. Therein, a definite plan of progressive experiences and learning activities, usually referred to as a schedule of experiences, is outlined for the student.

Section VI

DISTRIBUTIVE EDUCATION ADVISORY COMMITTEES

Each local distributive education program shall have an active advisory committee composed of not less than five members representing persons in the field of distribution and education. The local supervisor, director, or coordinator of distributive education shall serve as secretary of this committee and be responsible for the organization and operation of it.

The needs and objectives of the distributive education program will vary in every community and will determine the important issues with which the advisory committee will be concerned. The following list includes only a few of the many ways in which the advisory committee members can contribute to the growth and expansion of the distributive education program:

1. Suggest subjects, course content, and special emphases that should be included in high school training programs.
2. Prevent exploitation of students and assure that the total educational program is of primary concern.
3. Help establish the policy of recognizing the trained DE student by providing preferential job opportunities.
4. Inform high school students of careers in distribution.
5. Observe and participate in the high school program as speakers, demonstrators or contest judges.
6. Act as the steering committee for the adult program.

Section VII

DISTRIBUTIVE EDUCATION CLUBS OF AMERICA (DECA)

The Distributive Education Clubs of America—otherwise known as DECA—is an organization whose program of leadership and development is designed specifically for students enrolled in distributive education. Distributive education is a program of instruction which teaches marketing, merchandising and management.

Any student enrolled in any distributive education instructional program in the nation is eligible for membership in his local DECA Chapter, his State DECA organization, and National DECA. Each Chapter elects its own student officers and the DE teacher-coordinator serves as the Chapter Advisor. All Chapters within a state comprise a State Association of DECA, which is under the leadership of the State DECA Advisor. Each such unit elects student officers as leaders for that particular group. National DECA is composed of State Associations. Student delegates elected by each state in turn elect their own national officers.

DECA is a non-profit, non-political, non-sectarian, youth organization. All Chapters are self-supporting, with members paying state and national dues.

DE students have common objectives and interests. Each is studying for a specific career objective in marketing and distribution. Club activities have a powerful psychological effect upon the attitudes of students and, for many, DECA is the only opportunity which they have to participate in social activities of the school and to develop knowledge of the responsibilities of citizenship.

DECA Chapters are to DE class members what a civic or professional organization is to a group of businessmen. Chapter activities are recognized as a part of the total educational program because of their development of leadership ability, professional attitudes, better citizenship characteristics, and social growth of the individual. DECA Chapter activities are always centered in the school. These Chapter activities serve the teacher-coordinator as a teaching tool by creating interest in all phases of marketing and distribution study.

The DECA Chapter is the showcase for student achievement and progress. Through its activities, students with an interest in marketing and distribution are attracted to the DE program. No set pattern of operation is prescribed for any local Chapter; however, the majority plan activities which include social, civic, professional and benevolent

activities and adopt projects which provide for school and community betterment.

DECA activities teach DECA members to serve as leaders and followers. This organization gives them an opportunity for state and national recognition which they would not have otherwise.

The Pennsylvania Association of DECA has a Board of Trustees comprised of teacher-coordinators and the DECA State Advisor who determine policy for the club in the State. This Board of Trustees has a written constitution which is available upon request. The DECA activities that have become a tradition are: election of State DECA Officers, State Leadership Conference, Governor's Proclamation of DECA Week, State DECAmeron Newsletter, State Officers attending the North Atlantic Workshop Conference, and the National Leadership Conference. Other activities that may be held are workshops within each geographic region of the State, Regional Conferences, election of officers and meetings.

Each local program is encouraged to organize, maintain, improve, and conduct youth and young adult organizations as a part of vocational education to complement the instruction offered.

Teacher-coordinators shall serve in an advisory capacity to youth and other organizations and supervise the activities as part of the program.

Section VIII

DISTRIBUTIVE EDUCATION ADULT EXTENSION

The Department of Public Instruction, Commonwealth of Pennsylvania has four Field Supervisors of Adult Distributive Education on its staff. The Supervisors for the Eastern section of the State have their headquarters in the Distributive Education Department, Temple University, Philadelphia, Pennsylvania; and the Supervisors for the Western section have their headquarters in the Distributive Education Department, University of Pittsburgh, Pittsburgh, Pennsylvania.

DUTIES OF FIELD SUPERVISORS

1. To make available adult training programs to distributive workers throughout the State, especially in towns where there are no cooperative distributive education programs.
2. To aid the local communities in organizing adult distributive education classes.
3. To teach adult classes.
4. To aid in the recruiting of business specialists as teachers for adult classes and to coordinate and supervise these classes.
5. To aid and advise teacher-coordinators in organizing adult classes and planning course outlines.

UNDER WHOSE AUSPICES IS THE PROGRAM OFFERED?

These courses are made possible through the cooperation of:

1. The local school district and merchants
2. Temple University or the University of Pittsburgh
3. The Department of Public Instruction, Commonwealth of Pennsylvania

The classes are under the direct supervision of the local school district. A certificate is awarded to each person completing the course.

Section IX

DISTRIBUTIVE EDUCATION CLASSROOM SALES-LABORATORY

The Distributive Education facility should be at least 1,600 sq. ft. for a combination classroom-sales laboratory and/or school store. If these facilities are to be separate, it is recommended they be 850 sq. ft. each. It is not necessary to have both the sales laboratory and a school store facility, but one or the other (or a combination of both) should definitely be provided.

The educational and training experiences for students develop judgment skills and attitudes needed for career opportunities in the distributive occupations. Distributive Education provides an environment for experimentation and an opportunity to learn distribution principles and concepts.

A classroom equipped with a sales laboratory and display window will naturally require more space than the general classroom facility. The room must accommodate movable tables, desks and chairs, in addition to space allotted for the sales laboratory unit and display window. Storage area and closets should be available for related supplies and equipment as well as office space and a telephone.

Sufficient room will be needed for magazines, brochures, bulletin materials and other current publications in the field of distribution. A small curriculum library in each Distributive Education facility is helpful.

The classroom requirements of each program should be analyzed and planned to complement students' on-the-job experiences. The counsel of the Distributive Education Advisory Committee will be helpful in selecting and procuring the necessary equipment, aids, and supplies.

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Brun, H.D.
The Ohio Young Farmer Manual.

Ohio State Dept. of Education, Columbus. Div. of Vocational Education
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OHIO; *YOUNG FARMER ASSOCIATION; YFA

In this manual, information is provided for vocational agriculture teachers and young farmer groups in organizing and developing young farmer associations. It was developed by a state supervisor from young farmer association chapters programs in Ohio. Major chapter headings are (1) The Ohio Young Farmer Association Manual, (2) Organizing the Young Farmer Association, (3) Developing a Program of Activities, (4) A Sample Schedule of Yearly Young Farmer Association Activities, and (5) Maintaining An Active Association. Possible activities for young farmer association programs listed are education, social and recreation, leadership, community service, earnings and savings, public relations, conduct of meetings, and cooperation. A sample constitution and membership card are included in the appendix. The text is illustrated with photographs. (DM)

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The Ohio YOUNG FARMER Manual

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ADULT EDUCATION IN VOCATIONAL AGRICULTURE

OHIO STATE BOARD OF EDUCATION
E. E. HOLT
State Superintendent of Public Instruction
State Department of Education
Division of Vocational Education

CONTENTS

	Page
FOREWORD	2
OHIO YOUNG FARMER ASSOCIATION MANUAL	3
What Is It?	3
Who Is To Be Served In The Y.F.A.?	3
Why Is The Y.F.A. Needed?	4
The Emblem	6
Symbolism Of The Emblem	6
History Of The Organization In Ohio	7
Initiating The Young Farmer Program - Start With Instruction	8
What Are The Advantages In Organizing?	10
ORGANIZING THE YOUNG FARMER ASSOCIATION	11
Organizing A Chapter	11
Election Of Officers	14
Duties Of Officers	15
President	15
Vice-President	15
Secretary	15
Treasurer	16
Reporter	16
Advisor	17
Training Of Officers	17
DEVELOPING A PROGRAM OF ACTIVITIES	18
Use A Check List	18
Methods To Use	18
Member Support Of Program Is Essential	19
Support Of School Administration	19
Program Developed Annually	20
Printed Programs Of Activity	20
Some Possibilities For Y.F.A. Programs	20
Education	21
Social And Recreation	23
Leadership	24
Community Service	26
Earnings And Savings	26
Public Relations	27
Conduct Of Meetings	29
Cooperation	30
SAMPLE SCHEDULE OF YEARLY Y.F.A. ACTIVITIES	32
MAINTAINING AN ACTIVE ASSOCIATION	34
An Active Expanding Membership	34
Well Planned Meetings	34
Meet On Year-Round Basis	35
Have Adequate Financing	35
Use Of Ritual	36
Working With Other Organizations	36
Relationship Of Local To State Association	36
Sample Ohio Y.F.A. Program Of Activities	38
Securing The Charter	39
APPENDIX	41
Constitution And By-Laws	41
Membership Cards	45

FOREWORD

A family's standard of living is determined largely by its ability to produce or serve efficiently and then make wise decisions in using the returns of that labor for a satisfactory way of life. This is especially true with Young Farmers where family life and the farm business are so closely allied. Good farm management and judicious investments in labor saving machinery and home improvements are necessary in this highly competitive era if a satisfactory standard of living is to be maintained.

Vocational Agriculture can effectively serve these Young Farmers, both single and married, through the Young Farmer Program. Teachers, through class sessions and on-farm instructional visits, can help with the planning and development of the individual farm plans. The exchange of ideas and discussion of common problems will assist Young Farmers in keeping up-to-date technically and help them better understand community, state and national problems. Young Farmers want to become further established in farming and at the same time develop their own homes.

This means that a comprehensive, well planned program to serve Young Farmers should be in operation in every school with a Vo-Ag department. This should include a Young Farmer Chapter to serve as an FFA chapter serves the high school students in providing activities in leadership and cooperation. In addition it provides a means whereby Young Farmers can assist the teacher in developing the instructional, social and recreational phases of the program.

This YFA Manual is designed to aid teachers and Young Farmers in planning and developing a well balanced, annual program. It provides specific suggestions concerning purposes and procedures which may be used in the local association. Some attention is directed to the relationship of the local YFA to the State Association as well as to other agricultural and educational agencies and organizations.

The materials in this Manual have been secured from the programs of YFA Chapters in Ohio and other states. Many of the ideas are the result of staff discussion or the work of individual staff members. Mr. H. D. Brum, Assistant Supervisor of Vocational Agriculture, has been responsible for this revision of the mimeo YFA Manual which was issued in 1953.

WARREN G. WEILER
State Supervisor of
Vocational Agriculture

and

RALPH E. BENDER
Chairman, Department of
Agricultural Education

OHIO YOUNG FARMER ASSOCIATION MANUAL

What Is It?

The local Young Farmer Association is an organization of young men enrolled in Young Farmer classes in vocational agriculture in the public schools and community colleges of Ohio. It serves this group in a manner similar to the way the Future Farmers of America supplements the instructional program of vocational agriculture for high school students.

The Y.F.A. enriches the program of instruction beyond learning improved practices and agriculture. It provides opportunity for members to participate in a program including leadership, cooperation, community improvement, and social and recreational activities.

Who Is To Be Served In The Y.F.A.

Classroom instruction designed to help young farmers increase their operating efficiency.

Membership in the Young Farmer Association is usually open to anyone between the ages of 16 and 35 who is out of school and regularly enrolled in a Young Farmer class in agriculture taught by the teacher of vocational agriculture.

Other characteristics which are common to the Young Farmer membership are:

1. They are engaged in becoming established in the business of farming, or a closely related agricultural industry.
2. They have interests different from high school boys or older adult farmers. They have a combination of qualities which make activity appeal to them more than to

adult farmers yet they have maturity so that instruction in agriculture is of more serious and vital concern than it is to most high school boys. Most Young Farmers have distinct concerns about marriage. They are either in the process of selecting a life's companion or are faced with the problem of establishing a home of their own.

3. They desire to participate in activities which re-unite them with former high school friends.
4. They desire to associate with others who have similar interests and problems in terms of establishing a farm and family.

Young Farmer Associations determine the qualifications for active membership in the local organization. Many associations provide associate membership for those who participate in the instructional program of the group but do not qualify, because of age for example, for active membership. Honorary membership may be awarded individuals who have made special contributions to the Young Farmer program.

Why Is The Y.F.A. Needed?

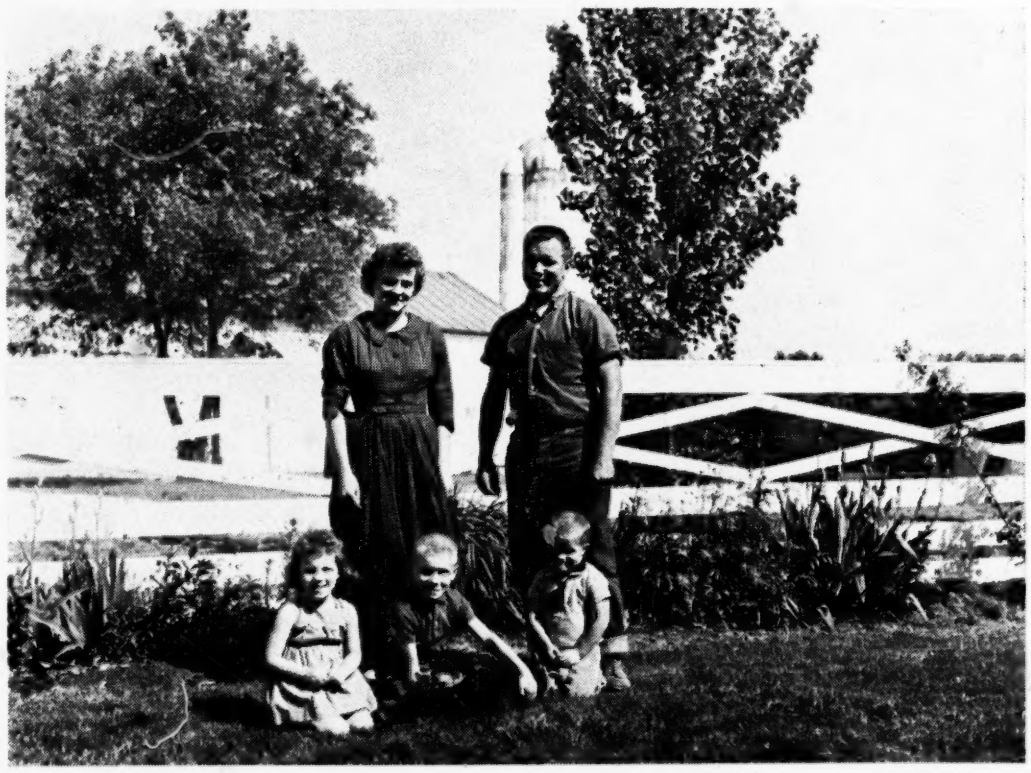
The Y.F.A. Is the in-between organization that provides for continuous educational experience in agriculture from vocational agriculture in high school to adult farmer classes. Education is a process which is never completed. The need for it continues as long as one exists. Without organized programs for young farmers there would be a serious break in young mens' education in agriculture at perhaps the most critical time in their agricultural career. Young Farmer courses of instruction plus the program of the Young Farmer Association are effective means of offering young men real assistance in this critical period of becoming established in the business of farming.

A typical young farmer class discussing a current agricultural problem.

Purposes Of The Local Y.F.A.

The purposes of the local Young Farmer Associations in Ohio are:

1. To interest and aid out-of-school farm youth through a program of organized instruction to become established in farming.
2. To develop a greater appreciation of the opportunities in farming and to foster a love for country life.
3. To develop an understanding of the ways to secure and utilize the services available to farmers in improving their economic status and social and family relations.
4. To cooperate with all agencies and organizations whose objectives are the improvement of the economic, education, and social conditions of rural life.
5. To develop the leadership abilities needed to participate in desirable activities for rural young people.
6. To provide wholesome social, and recreational activities.
7. To plan and render worthwhile community services.
8. To help young people build better farms, better homes and finer families.



A typical Ohio young farm family who have profited from participation in their local Young Farmer program.

Ohio
Young Farmers Association

The Emblem

The emblem adopted by the Ohio Young Farmer Association consists of a farmstead, the risen sun, an American school, and a young man plowing with a tractor, pictured on a cross-section of an ear of corn. Atop the cross-section of the ear of corn are the letters "O-H-I-O" and inscribed within the cross-section of the ear of corn are the letters "Y-F-A" and the words "Vocational Agriculture".

Symbolism Of The Emblem

The cross-section of the ear of corn represents common agricultural interests throughout the state and nation.

The state name — OHIO — denotes the specific location of this organization.

The risen sun indicates the advancement made as Young Farmers become established in farming.

The farmstead signifies rural home life - basic to our national life.

The school with the American Flag calls attention to the fact that continued learning and the development of democratic citizenshop is essential if the farmer is to succeed.

The tractor represents science and technology, the power through which the farmer will accomplish much.

The operator of the tractor represents the Young Farmer serving his nation through his interests in tillage of the soil and his eagerness to improve through further learning and experience.

The letters, "Y-F-A", stand for Young Farmers Association, the name of the organization.

The words, "Vocational Agriculture", remind us that complete programs of vocational agriculture serve Young Farmers as well as high school boys and adults.

The official lapel pin consists of the three letters "Y-F-A" in gold. Persons eligible to wear the pin shall be young farmers in good standing with the Ohio Association of Young Farmers of America. Local chapters of the State Association may present pins to honorary members provided that they are affiliated with the State Association.

More than 300 Young Farmers and their guests enjoying a luncheon sponsored by the Ohio Tractor and Implement Company at annual conference.

History Of The Organization In Ohio

Ohio has been one of the most active states in young farmer work. The first Y.F.A. was organized in 1921-22 at Hamilton Township, Franklin County, Ohio. By 1928 there were 65 Young Farmer Associations organized with a membership of over 1200 young farmers. Growth continued until a peak of 222 associations with a membership in excess of 4500 was reached in 1940-41, just prior to World War II.

During World War II there was a marked decline in Young Farmer Associations, reaching a low enrollment of 772 members in 1945-46. Since that time there has been once again an increase in the number of Young Farmer Associations. In 1951-52 there were 61 associations with 1308 members.

A two-day state-wide conference for Young Farmers in Ohio was held at Ohio State University in 1947. The purpose of this conference was to improve and promote the Y.F.A. program. As a result of this conference, a State Young Farmer Council, composed of ten young farmers, was elected to plan the conference the fol-

lowing year and to disseminate information about the Y.F.A. program throughout the state.

The State Young Farmer Council meets following the Annual Conference.

The annual conference continued to grow. Keeping pace with this growth was an increasing interest in organizing young farmers at the state level. As a result, the Ohio Association of Young Farmers of America was organized March 3, 1951, at Columbus with the adoption of the state constitution and by-laws by delegates from all sections of Ohio. Local associations are presently receiving charters for their local organizations from the Ohio Association of Young Farmers of America.

As of May 1, 1961 there are 70 chartered chapters in Ohio.

Initiating The Young Farmer Program Start With Instruction

A teacher of vocational agriculture desiring to offer instruction in agriculture for young farmers may find the following steps useful in initiating a local Y.F.A. program:

A. Conduct a survey of all prospective Y.F.A. members in the community. This survey may be made by personal contact by the teacher, aided by an instructional planning committee. The information of this survey should reveal the farming status, interests, needs, and characteristics of prospective members.

B. From the propective group select three to seven of the most interested and capable members as a key planning committee. Carefully plan an outline of suggested activities for the key committee. Some activities might be:

1. Help in securing enrollment
2. Contact possible members and help organized travel so young farmers come to meetings in groups
3. Help plan the first meeting
4. Help prepare suggestions for a tentative program of activities to be presented at the first meeting
5. Assist in publicizing the program through newspapers, cards, letters, personal contacts, and telephone.

A local group of young farmers and their wives take part in an instructional session on life-insurance planning.

C. Call the first regular meeting. At this meeting the following could be done:

1. Start the instructional part of class for young farmers and their wives by discussing a problem which meets the needs of the group. Make this first class discussion a good one
2. With the group, plan an instructional program based upon their needs
3. Review with the entire group some of the committee findings concerning instructional and organizational needs of the group

4. If the problem of organizing presents itself, make a study of such needs with the group. Perhaps a committee could be appointed to thoroughly investigate organizing and report at a future meeting.

What Are The Advantages In Organizing?

Some advantages of organizing the Y.F.A. are:

1. It gives the group identity. This identity is essential in public relations and in promoting the activities of the group. It contributes to developing a sense of pride in the organization.
2. Organized cooperative effort is much more powerful than the combined individual efforts without planning. Organizations can conduct activities impossible by individual efforts.
3. Organization makes it possible for members to participate more directly and democratically in the affairs of the group.
4. It lessens the duties of the teacher, thereby, enabling him to do a more effective job of teaching. The Y.F.A. performs many duties in securing membership, maintaining attendance, opening and closing meetings, planning courses of study, taking field trips, etc. which are usually performed by the teacher when the young farmers are not organized.
5. It results in a broader program than agricultural instruction, including leadership, cooperative, social and recreational activities.

Young Farmer and Wives Dinner Meeting in various areas of the State help promote a strong association.

ORGANIZING THE LOCAL YOUNG FARMER ASSOCIATION

Careful planning is necessary before organizing a Young Farmer Association. The success of the organization depends upon capable leadership and a well-rounded program based upon the interests and problems of the young farmers.

PROCEDURES . . . TYPE OF ORGANIZATION

Organizing A Chapter

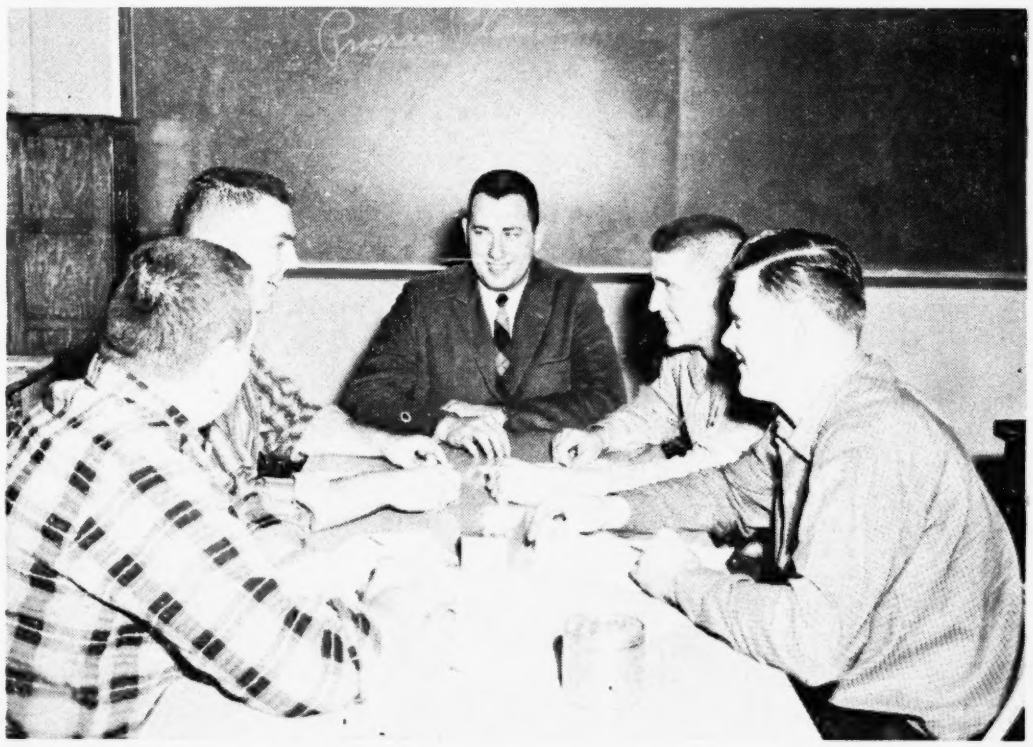
Active chapters of the Ohio Young Farmers Association may be established in any community where there is demonstrated need for such an organization and a vocational agriculture teacher to serve as advisor.

Certain basic criteria must be demonstrated to be true, if the efforts to establish a chapter are to be successful.

1. There must be a real need for such an organization in the community as indicated by the action of the Young Farmers themselves.
2. The vocational agriculture teacher must have sufficient time to devote to this phase of his educational program.
3. The school administration must be fully informed of the purpose of the organization and its proposed program of work. It must have a genuine interest in the welfare and success of the Young Farmers program.
4. In the organization of a Young Farmer Chapter, it seems advisable to consider the eight essentials of a good chapter. Each is self-explanatory and understandable. It would be well for each chapter to examine at least once a year its effectiveness as measured by these essentials.
   a. Interested members
   b. New, young members each year
   c. Capable officers and leaders
   d. A challenging and well-balanced program of work
   e. Distributed responsibility shared by all members
   f. A knowledge of the Young Farmers Association on the part of every member
   g. Adequate financing
   h. A strong publicity program

No definite procedure on organizing a Young Farmer Chapter can be outlined which will fit every situation in the State. It is felt, however, that a definite plan of action should be determined in each case and that the various steps listed below might well be considered.

1. Discuss the possibilities of a Young Farmers' program with the school administration and local board of education.
2. Prepare a list of all young men in the community between 18 and 25 to 30 years old who are interested in agriculture.



A local young farmer planning committee and instructor organizing their program of activities for the year.

3. Select a "key group" of about 4 to 6 young men from this list representative of every area, interest and background in the community.
   a. FFA Alumni
   b. High school graduates who did not take vocational agriculture
   c. Veterans of both the above groups
4. Have a "planning meeting" to discuss:
   a. The need for a Young Farmer Chapter
   b. Membership promotional plans
   c. Year's tentative program of work
   d. The organizational meeting

   (Each of these four items is highly important to a successful planned meeting. They are expanded upon here.)

Do you need a Young Farmer Chapter in your community?

1. What organizations already exist in the community that may appeal to young men between the ages of 18 and 30?
2. What percentage of young men on farms of this age group belong to one of these organizations?
3. What organized assistance are Young Farmers receiving to make their farming activities more profitable and more enjoyable?
4. What kind of an organization do the Young Farmers in the community want?
5. What are high school graduates for the past 10 years who are living on farms or employed in some agricultural activity doing in their spare time?
6. What community needs could a Young Farmer Chapter serve that are not now being provided in the community?
7. What cooperative benefits are Young Farmers in the community now enjoying?
8. What organized recreational and social facilities and activities are available to this group?

How should the organization meeting be presented?

1. The organizational meeting should be well-attended. Every prospective member should be personally contacted and invited and the meeting should be widely advertised.

A well-attended organizational meeting.

2. The "key group" should be encouraged to take an active part at this meeting. A Young Farmer might be appointed chairman to lead the discussion, and the agricultural teacher might choose to be in the background.
3. The organizational meeting does not necessarily have to be held at the high school. Perhaps another meeting place would be more suitable in some situations.
4. The group should discuss some of the following points and come to any decisions that seem appropriate:
   a. Is there a need for an organization of Young Farmers?
   b. Do we want to organize Young Farmer Chapters and become affiliated with the State Association?
   c. What kinds of recreational activities do you want to sponsor during the year?
   d. What kind of an educational program do we need and want?
   e. When and where shall we meet?
   f. What cooperative activities are best suited to this community?
   g. How can this group be of service to the community?
   h. How large a chapter should the community support how shall this membership be attained?

On the basis of decisions reached, temporary officers should be elected, certain committees should be appointed and a second meeting planned.

Election Of Officers

Competent, capable, enthusiastic officers are essential if any organization is to function at maximum capacity.

An effective method of securing good leaders is through the use of a nominating committee. A nominating committee, appointed by the president, is usually able to devote more time to objective thinking concerning persons best qualified for positions of leadership than is found in most nominations from the floor. With a nominating committee, however, there should be opportunity provided for nominations from the membership if they so desire. If this is not the case democratic action is prohibited and the elected officers may not receive the support of all members. In all cases the elected officers should receive the majority vote of all members. The use of secret ballots in voting is usually more desirable than open show-of-hand voting. Secret voting more nearly represents the unbiased opinions of members.

Elect new officers each year. Officers may or may not succeed themselves as desired by members, however, more members will receive experience in leadership if officers are not permitted to hold office for consecutive terms.

The most desirable time for election of officers depends upon the period of time covered by the annual program of activities. If the annual program of activities begins July 1 or in early autumn, officers should be elected in the spring or early summer. This being the situation, the newly elected officers can work with the retiring officers before taking office for a suffiicient period of time to become acquainted with their new positions of leadershp. New officers should be installed at the start of the new annual program of activities.

Duties Of Officers

Of vital importance in developing and carrying out a good program of activities are the officers. Some suggested duties of the officers in a formally organized Young Farmer Association are as follows:

President

1. Presides at all regular meetings of the local association and its executive committee.
2. Serves as an ex-officio member of all organizational planning committees.
3. Appoints all committees.
4. Provides over-all supervision and leadership of activities of the organization.
5. Counsels with advisor concerning matters of organization policy, changes, improvement or special events.
6. Represents Young Farmers in other community organizations or activities.

Vice-President

1. Presides in the absence of the president.
2. Assists the president in the duties of his office.
3. Assumes responsibilities in supervising and assisting with the activities of all standing committees. He keeps the committees active and functioning in promoting the activities of the organization.

Secretary

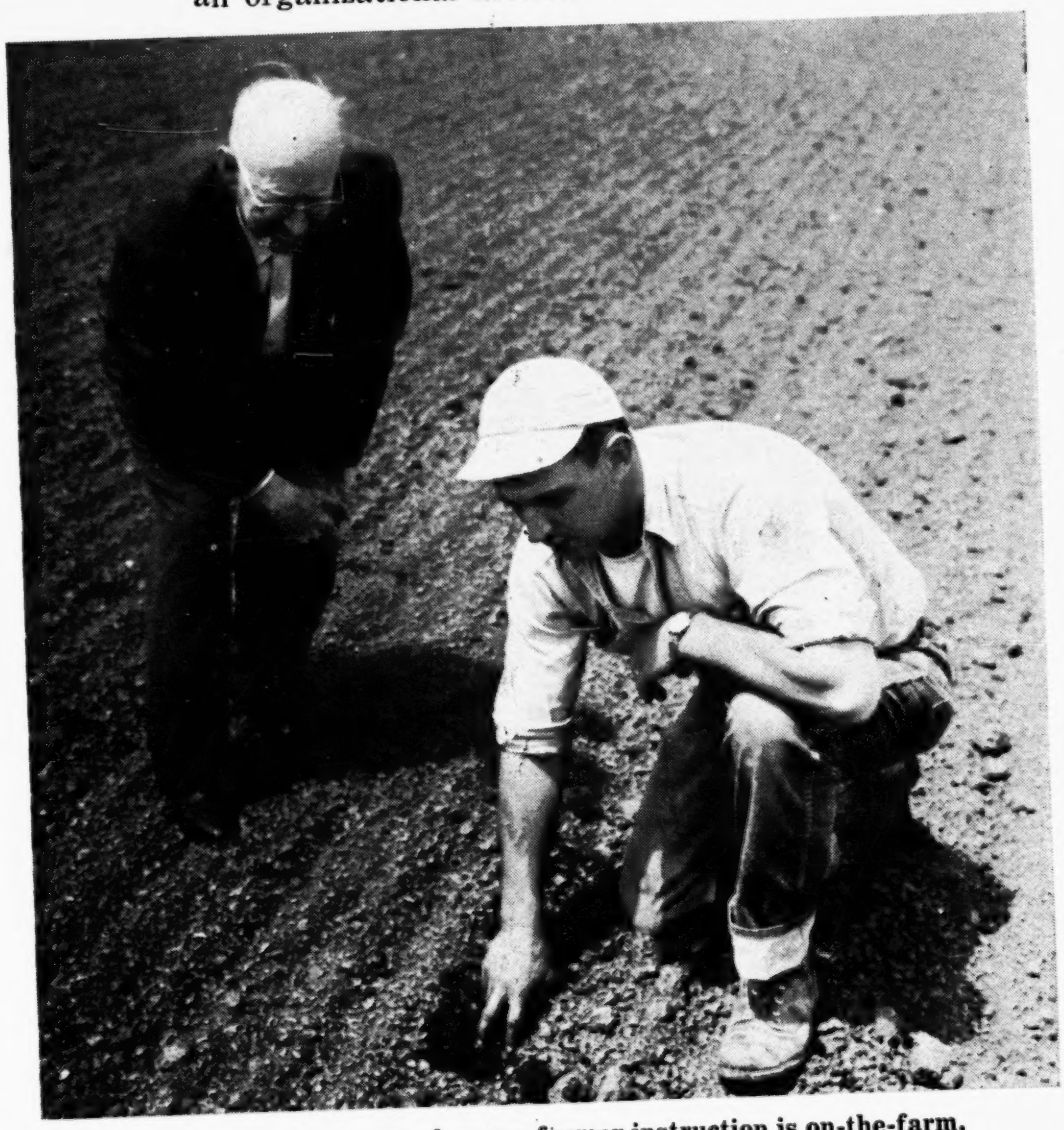
1. Keeps an up-to-date roll of membership containing the correct address of each member.
2. Keeps an accurate record of attendance at meetings.
3. Records the minutes of all meetings.
4. Attends to all communications concerning the organization.
5. Posts a list of old and new items of business for each meeting.
6. Assists the president in counting and recording the voting at meetings.

Treasurer

1. Attends to collecting all dues, fees, or special assessments of the organization.
2. Keeps a complete set of financial records.
3. Assists with the annual budget.
4. Assists with a program of financing chapter activities.
5. Pays all organizational fees, or debts approved for payment by the organization.
6. Gives a financial report at each meeting or as requested.

Reporter

1. Works with local paper, submitting news items of all organizational activities.



An important part of young farmer instruction is on-the-farm.

2. Keeps a record of young farmer activities. May be in form of a history, a scrapbook, or both.
3. Submit news items to other local and state Young Farmer organizations.
4. Assists with all activities in the area of public relations.

Advisor

1. Assists all officers in properly carrying out the duties of their office.
2. Consults with all committees requesting advice or assistance.
3. Provides a challenging instructional and supervisory program for members both in class and on-the-farm.
4. Assists officers in working with school officials and in other public relations.
5. Exerts an ever-present enthusiastic influence upon young farmer work.

In the informal organization the executive or planning committee assumes the responsibilities and duties performed by the specific officers in the formal type organization. The planning committee may designate members of the committee to perform the duties of the specific officers in the formalized organization. It is essential that chairman and secretary are appointed for all regular business meetings. The duties of other officers may be handled in various ways in an informal organization.

Training Of Officers

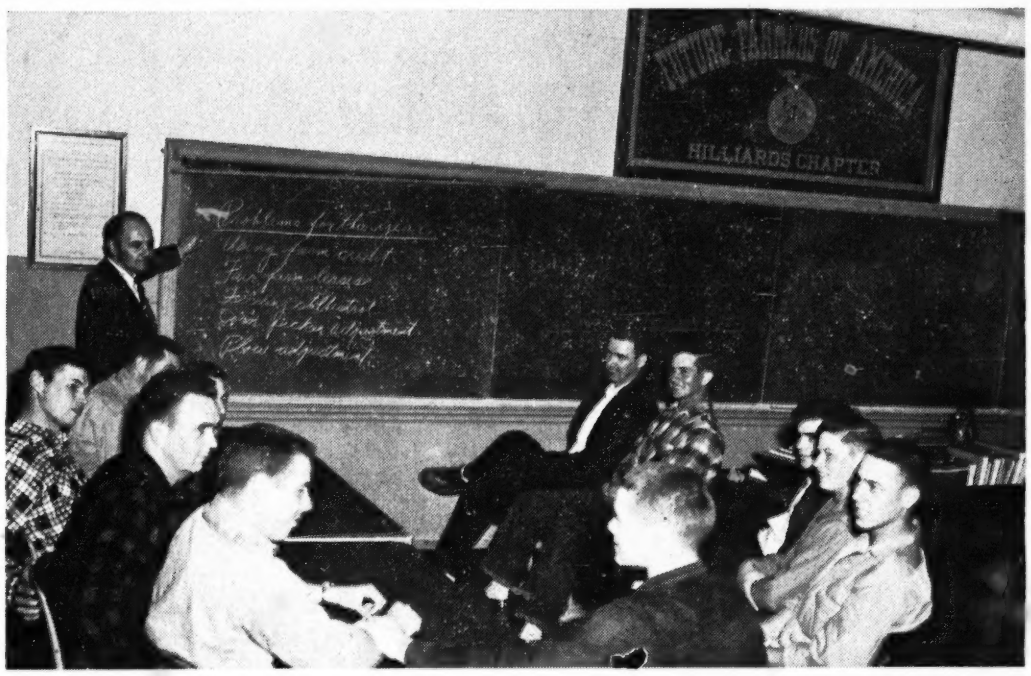
Training of officers should be a continuous process in all associations. The officers should meet in advance of business meetings to plan the meeting. The advisor should take the lead in helping individual officers achieve competency in conducting the affairs of their respective offices.

DEVELOPING A PROGRAM OF ACTIVITIES

A program of activities consists of an organized plan for developing and conducting the activities of the local association for the year. These activities should be adapted to the local community and meet the interests and needs of the members in the organization. A carefully, well-developed, challenging program of activities selected and approved by the Young Farmer Association is the first step toward developing a good organization.

Use A Check List

If the Y.F.A. is to afford maximum opportunities for the development of its members, its program must be based upon the needs and interests of the group. Problems, interests, and needs



Young farmers planning their program of activities.

of a group of young men often are not obvious to the group or the teacher of agriculture. Results of a problem check list will reveal the interests and concerns of young farmers and provide an excellent base upon which to build meaningful, and interesting programs of activity. A good instrument available for use in the Y.F.A. is "Problem Check List, For Rural Youth" by Dr. Ralph E. Bender, Department of Agricultural Education, Ohio State University, Columbus, Ohio

Methods To Use

A common procedure in Ohio is to have the planning or executive committee study the needs of the group and select the initial activities which they feel should comprise the annual program.

At a regular meeting, the committee presents the proposed activities to the organization. Members may make changes, additions, or modifications of the activities and finally accept or reject all activities in the annual program. Once the activities are accepted by majority vote they become the official program of the organization for which all members should feel obligated to carry to completion.

Another method of program planning, which is adapted to large groups, includes the use of committees in each of the different areas, Education, Social and Recreation, Cooperation, Leadership, Conduct of Meetings, Public Relations, Community Service, and Earnings and Savings, for the purpose of selecting appropriate activities. At a regular meeting each committee chairman presents the activities selected by his committee in a partcular area. These activities are discussed, amended, supplemented with additional activities, and approved or rejected by majority vote of the group.

Each planning committee appointed by the president is usually retained on an annual basis and is responsible for successful completion of all activities in their area.

A local young farmer community tractor pulling contest and barbecue.

Member Support Of Program Is Essential

Regardless of the method used, it is necessary that the final program of activities be approved by the majority of young farmers at a regular meeting conducted in the democratic tradition.

If the program becomes a vital concern to all members, they must have direct contact with and participate in the activities making up the program. Thus, all members should be on at least one committee charged with carrying certain activities to completion.

Support Of School Administration

The program of activities should be discussed with the school administrator by the association president and/or the advisor. It

should be in accord with the school policy and receive approval by the school administrator.

Dates of all meetings, banquets, or other activities should be placed on the official calendar of school events for the year. Arrangements should be made for use of the school facilities including such routine matters as having the school heated and regular use of teaching aids and equipment. The use of the school lunch room for meetings, securing the use of the agriculture room, and having the room or kitchen facilities for special events and the gymnasium and athletic equipment should also be arranged with the school administrator. It is good public relations to work with the school administrator and keep him informed of the Young Farmer program.

Program Developed Annually

It is desirable that the program of activities be developed and approved on a yearly basis. It should go into effect at the time new officers take over leadership of the organization. This may be on a calendar year basis, or it may be desirable to begin new annual programs of work in early autumn and continue through late summer of the following year. If it is preferred the annual program could follow the pattern of beginning July 1 and ending the following June 30. The program of work should be revised and improved before the beginning of each new year.

Printed Program Of Activity

The program of activity should not be developed and filed away; it should be printed or mimeographed and distributed to each member, local school administrators, and other interested parties. In addition to activities, the program might include a history of the local association, names and addresses of members, the officers, committee members, and purposes of the association.

Preparation of the program is inexpensive, especially if it is mimeographed. It does much to stimulate member-interest. In addition, copies distributed to "outsiders" constitute excellent opportunities in developing good public relations.

Many chapters list the activities according to the months in which they are to occur. With this arrangement, every member can determine, from the calendar, items of new business which should be included in each meeting.

Some Possibilities for Y.F.A. Programs

Included in the next few pages are a number of possible Y.F.A. activities classified by areas. Some suggested ways and means are stated for each activity. These ideas should be used as a guide to local Y.F.A. groups in developing their program of activities. Activities should be selected only as deemed worthwhile by the members in light of each local situation.

It is more desirable to select a few worthwhile activities and complete them well than to select too many activities and fail to carry them to completion or to do a poor job.

EDUCATION

Effective young farmer instruction is carried out on the farm of the members.

Activities	*Ways and Means*
1. Conduct a year-round instructional program for Young Farmers.	a. Committee develops a yearly schedule of instructional meetings based upon the farming problems of the group.
	b. Conduct an intensive educational program during the winter months consisting of 15-20 meetings.
	c. Plan at least one meeting each month when intensive course is not being conducted.
	d. Have membership approve the program.
2. Have three specialists or resource persons as a part of the instructional program.	a. Contact and arrange for the services of agricultural specialists or capable persons in three problem areas common to the group.

3. Have an educational film at three meetings during the year.	a. Committee work with the vocational agricultural teachers so that the films supplement the instructional program. b. Committee select and secure the film. c. Arrange for showing the film.
4. Have two or more group on-the-farm meetings per year.	a. Committee work with vocational agriculture teacher in planning on-the-farm group meetings. b. Arrange transportation for meetings. c. Make arrangements with the farm operator where the group meetings are to be held.
5. Have one instructional meeting every other month on a topic of interest to both the young farmer and their wives.	a. Committee of young farmer and wives plan the program. b. Secure a meeting place where refreshments or a covered dish dinner can be served as part of the meeting. c. Plan for recreation following the program.
6. Make a tour of the Agricultural Experiment Station.	a. Committee plan the tour. b. Secure adequate transportation. c. Promote the tour.
7. Cooperate with other agricultural organizations on education programs.	a. Keep other organizations informed of Association's program. b. Maintain contacts with other groups.
8. Each member develop a useful library of agricultural publications.	a. Advisor provide lists of sources of technical information, bulletins, books, pamphlets, etc.
9. Keep informed on local school conditions.	a. Have local superintendent or school board member address the group. b. Have county superintendent speak to group.
10. Discuss social and civic problems.	a. Identify interests and needs of the group. b. Make use of specialists and resource persons.

SOCIAL AND RECREATION

The judges enjoy this task of selecting the best cake at Young Farmer Camp.

1. Have annual banquet in March.	a. Committees make arrangements for place, meal and program.
2. Sponsor Halloween party.	a. Invite wives or girl friends. b. Committees to arrange for program and refreshments.
3. Have recreation after instructional meetings.	a. Committee to secure use of gym and equipment. b. Plan organized program.
4. Take a trip to see a major league ball game.	a. Committee to select game, secure tickets, and arrange transportation.
5. Organize a basketball, volly ball team, or bowling team.	a. Committee to enter team in league. b. Members to attend and support the team.

6. Sponsor co-ed recreational activities.	a. Have at least three meetings at members' homes. b. Summer picnic planned by recreation committee for members' families. c. Have a square dance.
7. Have a bowling party.	a. Committee to make arrangements for place and time.
8. Sponsor a fall and spring square dance.	a. Committee to arrange for place, tickets, publicity, music and refreshments.

LEADERSHIP

A State Young Farmer of the Year and his wife. His Vocational Agriculture instructor in the background.

1. Send two delegates to the State Y.F.A. Conference.	a. Select delegates one month before conference. b. Y.F.A. pay a part of expenses.
2. Have Vo-Ag graduates become Y.F.A. members.	a. Invite eligible high school graduates to special May meeting. b. Members to give personal invitations to prespective members. c. Have a joining Y.F.A.-F.F.A. social event.
3. Attend meetings of other organizations.	a. Have members report to group the activities of other organizations. b. Y.F.A. assist in promoting worthwhile programs.
4. Elect officers in March.	a. President to select a nominating committee to select a slate of officers. b. Officers to be ballotted on at annual banquet.
5. Publish a Y.F.A. program of activities booklet.	a. Reporter to assemble the activities of committees and edit program. b. Have program published and distributed to members and interested persons.
6. Prepare Y.F.A. map.	a. Secure map of county at County Engineer's office. b. Frame map and hang on wall with buttons showing location of members' farms.
7. Hold an Officers' Training School.	a. Old officers give suggestions for conducting the office. b. Have F.F.A. team demonstrate parliamentary procedure.
8. Furnish members with a means of identification.	a. Have membership cards printed. b. Issue cards to members when dues are paid.
9. Improve leadership ability of young farmers.	a. Have panel discussions. b. Have reports given by members. c. Have members join the other farm organizations. d. Sponsor public speaking contest. e. Practice parliamentary procedure.

COMMUNITY SERVICE

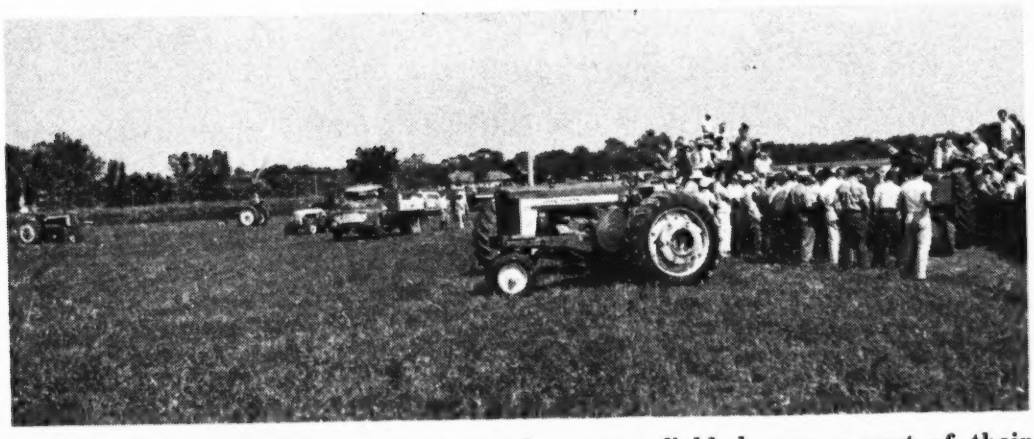
1. Participate in State and County Fairs.
   a. Members under 21 years of age exhibit agricultural products and livestock in the Junior Fair.
   b. Members to enter exhibits in Senior Fair.
   c. Investigate possibility of developing division in local or county fair for Young Farmers and aiding the F.F.A.
2. Conduct farm safety campaign.
   a. Members assist with safety survey.
   b. Members to check list for fire hazards around their homes.
   c. Distribute bulletins on accident prevention.
3. Cooperate with all community service projects of other groups.
   a. Keep other groups informed about the Y.F.A. program.
   b. Assist other groups with worthwhile community projects.
4. Conduct a clean-up campaign.
   a. Prepare and distribute a clean-up check list.
   b. Members to place into operation a clean-up campaign on their own farms.
5. Conduct demonstrations-crops and livestock.
   a. Members place in operation new ideas.
   b. Hold tour to see results.
6. Conduct a program of week control.
   a. Provide chemical spray.
   b. Secure services of others in eradicating especially noxious weeds.
7. Conduct campaign for school bond issue.
   a. Hold special discussion meeting.
   b. Make individual contacts.

EARNINGS AND SAVINGS

1. Have local association set up and use an annual budget.
   a. Earnings and savings committee set up a budget.
      (1) Determine expenses to be encountered from program of work.
      (2) Select fund raising activities to bring in estimated income needed.

	b. Earnings and savings committee set up ways and means to earn money for chapter. c. Individual members present ideas for raising funds.
2. Have Y.F.A. operate with a cash balance in treasury.	a. Payments to be made must be authorized by the association and approved by advisor. b. No obligations made except by authorized persons. c. Select auditing committee and have treasurer's books audited anually. d. Pay all bills promptly. e. Treasurer reports monthly or as requested.
3. Have chapter dues.	a. Set up dates for collection of dues. b. Association determine amount of dues by majority vote.
4. Develop an organized schedule for earning the amount of money required to adequately carry out program of activities.	a. Committee determine the amount of money required. b. Secure Association approval of methods to use in earning money. c. Post a list of fund-raising activities, giving the dates, committees, ways and means, etc., for each activity.

PUBLIC RELATIONS



Many local groups have an annual summer field day as a part of their program of activities.

1. Submit news articles to the local paper. (One article every week during intensive educational program and one article per month the remainder of the year.)	a. Reporter, with help of committees, write article of Y.F.A. activities. b. Have program of activities challenging enough to provide newsworthy material for the Reporter.
2. Give two programs before community organizations.	a. Public relations committee prepare the programs. b. Public relations committee arrange with organization for time and place; give adequate publicity to event, both before and afterwards.
3. Participate in one radio or television program during the year.	a. Public relations committee to make arrangements. b. Publicize program in local community.
4. Promote annual achievement banquet to highlight year's activities.	a. Show pictures of Y.F.A. activities either in film strips, slides, or movies. b. Members tell Y.F.A. activities. c. Members plan the program.
5. Recognize Honorary Young Farmers.	a. Elect a minimum of one each year. b. Confer the Y.F.A. Honorary membership at the banquet. c. Recognize individuals who made an outstanding contribution to the Y.F.A.
6. Distribute copies of the local program of work to local businessmen and to school officials.	a. Public relations committee to handle distribution. b. Y.F.A. to mimeograph copies for distribution.
7. Contribute at least two news articles per year to the Ohio Young Farmer News.	a. Public relations chairman submit articles and photographs to the Ohio Y.F.A. News.

CONDUCT OF MEETINGS

The Executive Secretary-Treasurer congratulating the five outstanding State Young Farmers of The Year.

1. Hold regular scheduled meetings; weekly during intensive instructional period and at least monthly the remainder of the year.
   a. Prepare a schedule of meetings and topics to be discussed and receive approval of school administrator.
   b. Have dates placed on school calendar.
   c. Have meetings start on time.
   d. Executive committee plan for all meetings.
2. Hold executive committee meetings monthly.
   a. Hold regular scheduled meetings at a definite time and place.
   b. President or Chairman to notify all committee members at least one day prior to meeting.
   c. Teacher or Chairman have definite plans ahead of meeting.
3. Have 90 per cent attendance at all meetings.
   a. Have all meetings carefully planned.
   b. Present top-notch instructional programs.
   c. Secretary post notices of all meetings.
   d. Committee arrange for refreshments and entertainment at selected meetings.

	e. Contact members after they have missed meetings.
4. Provide special training for newly elected officers.	a. Old and new officers meet to develop local training program for new officers. b. Organize and conduct officers' training meeting for new officers. c. New officers work with old officers for at least six weeks before assuming duties of their new office.
5. Use good business procedure at all regular meetings.	a. President or Chairman follow the business agenda as outlined in the manual. b. Use Stewart's *Parliamentary Procedure* and official manuals as basis for procedure of meetings. c. Practice praliamentary procedure as needed. d. Advisor give report on procedure at close of certain meetings. e. Install officers using a ceremony which represents the duties of the various officers.

COOPERATION

A group of wives at Young Farmer Camp making wood fibre flowers.

1. Cooperate with local school administration.	a. Have annual program of activities approved by school administration. b. Have Y.F.A. meetings and events listed in the official school calendar of events. c. Assist school in all worthwhile activities which the Y.F.A. could help promote.
2. Cooperate with the local F.F.A. Chapter.	a. Cooperate with F.F.A. Chapter in promotion of social and recreational events. b. Cooperate with the F.F.A. in contributing to at least one altruistic non-school organization. c. Cooperate with the F.F.A. in an officer training program. d. Hold at least one joint meeting with the F.F.A. e. Conduct one joint educational tour with the F.F.A.
3. Cooperate with other Y. F.A. organizations in the state.	a. Invite at least one neighboring Y.F.A. organization to attend a local Y.F.A. meeting. b. Visit at least one other Y.F.A. meeting as a group. c. Plan and take part in one field day or other special Y.F.A. event on a county or district basis. d. Attend State Y.F.A. Convention.
4. Cooperate with other community organizations.	a. Assist other organizations in carrying out worthy community or agricultural ventures.
5. Have 100 per cent of the members to actively participate in one or more cooperative buying and selling activity.	a. Y.F.A. members pool orders for: (1) Livestock supplies (2) Crop supplies (3) Other miscellaneous supplies b. Have Secretary keep posted on the bulletin board price and special opportunities offered by cooperatives. c. Have representatives of Cooperative speak at Y.F.A. meeting.
6. Cooperate with other worthwhile community organizations.	a. Work with all organizations in worthy community or agricultural ventures.

SAMPLE SCHEDULE OF YEARLY Y.F.A. ACTIVITIES

The ladies enjoy craft activities at Young Farmer Camp.

Month	Number Instructional Meetings in Agriculture	Number Business and/or Special Activity Meetings	Nature of Special Activity
January	3	1	Discussion by Guest Speaker "Moral Problems of Young men"
February	3	1	Joint Meeting of Young Farmers and their wives on "Family Insurance Planning"
March	1	1	Y.F.A. Banquet
April	1	1	Discussion by Guest Speaker "Problems in Establishing a Family"
May	1	1	Beautify School Grounds Y.F.A. Square Dance
June	1	1	Film and Discussion - "Highway Safety"
July	1	1	Farm Tour and Picnic

August	1	1	Swimming Party and Softball Game
September	1	2	Y.F.A. Hayride and Weiner Roast "Joint Financial Planning"
October	2	1	Discussion of Civic Problem, such as "The School Bond Issue"
November	3	1	Report on State Y.F.A. Convention Exchange Meeting with the neighboring Y.F.A.
December	3	1	Potluck Supper or Christmas Party
Total	21	13	

MAINTAINING AN ACTIVE ASSOCIATION

An Active Expanding Membership

A basic requirement of a good Young Farmer Association is active, interested members. Most good associations have each member on at least one committee charged with planning and carrying through to completion activities of the organization. Activity by all members is necessary for interested members.

An alert organization is always interested in increasing its membership. Young Farmers should continually contact prospective Young Farmers in their communities. Special effort should be devoted to enrolling vocational agriculture students who graduate from high school or who withdraw from school before graduation. New members add new life to the organization.

Representatives of an outstanding Chapter with the Chapter Award Plaque.

Well Planned Meetings

All meetings should be carefully planned in order that business be clearly presented and properly handled. The Y.F.A. officers or executive council should meet prior to each business meeting to plan the agenda.

Meetings should start and adjourn as scheduled. The meetings should be well-balanced, having sufficient time for business, special events, social and recreational activities. Most business meetings should be followed by refreshments and a social hour.

Many Young Farmer Associations have business meetings once a month while other associations have business meetings as needed in conjunction with the organized instructional program. If the

latter is followed, the instructional period is reduced to allow sufficient time for business.

Special programs, discussion groups, guest speakers, social events, etc., other than instruction in agriculture, may be used effectively to supplement the business meeting.

Meet On Year-Round Basis

Associations should meet on a year-round basis, concentrating most organized instruction during the winter months and continuing to meet monthly during the remainder of the year. Associations which suspend activity during the summer months often find that enthusiasm has cooled when autumn arrives.

Refreshments following class session help increase attendance.

Have Adequate Financing

A systematic program of financing is necessary if Young Farmer Associations are to carry their program of work to successful completion. Each association should plan carefully its annual budget according to the needs of the chapter, as revealed by the program of activities and in line with available acceptable methods of raising money for the association. A carefully-planned program of raising funds should be developed and approved by the association. Care should be exercised against raising money in any way that would not meet with wholehearted school and community approval.

As a general rule the association should not engage in large scale business operations which involve extensive sums of money. The Young Farmer Association is primarily an educational program for the development of its members.

Associations usually find it wise to establish a small membership fee. Payment of membership dues stimulates interest in an organization; it makes for a closer feeling of belonging. At the same time, it provides funds for refreshments, recreation, and other expenses. Care should be taken that the membership fee is not so large as to discourage some individuals from belonging to the association.

Use Of Ritual

Some associations feel that ritual used to open and close meetings adds interest and prestige to the meetings. If this seems desirable to the group, committees should be appointed to develop appropriate ritual based upon Young Farmer purposes and symbolism. The F.F.A. ritual could be used as an aid in the form of the ritual.

Working With Other Organizations

The Y.F.A. can improve its program and at the same time make a greater contribution toward improving farming and rural living by working cooperatively with other local organizations. Certain activities, particularly those of an agricultural nature, can be carried out effectively in cooperation with the local chapter of the F.F.A.

The Y.F.A. should cooperate with agricultural organizations such as the Farm Bureau, the Grange, Agricultural Extension, Soil Conservation, and church groups in promoting community-wide programs that result in progressive communities, better standards of living and improved agriculture.

Often the Y.F.A. can cooperate with the home economics group for out-of-school young people or rural community clubs in the promotion of worthwhile civic, social and recreational activities. An example of a cooperative program with home economics follows:

Time	*Young Men*	*Young Women*
7:30 to 9:00	Young farmers engaged in organized instruction in agriculture in a class taught by the teacher of vocational agriculture.	Young women in home economics class taught by teacher of home economics.
9:00 to 9:30	Both groups meet together in the auditorium. The program may include group singing, amateur dramatics, special speakers, social or recreational events, or a discussion forum. A variety of programs may be planned for joint meetings.	

The Y.F.A. should always be alert to opportunities to contribute to worthy community efforts through cooperation with all other groups interested in improving rural community living or promoting the best community agricultural interests.

Relationship Of Local To State Associations

The Ohio Association of Young Farmers of America is the state organization which coordinates the efforts and activities of

the local Associations. Through its influence, the local organizations have additional strength and prestige. Each local Young Farmer Association should meet the qualifications for membership in the State Association as quickly a possible and take the necessary steps to secure its charter.

Some outstanding events sponsored by the State Association are the Annual Conference, Young Farmer and Wives Camp, and Annual State Tour.

At the conference timely helps in solving agricultural problems are presented by experts in the various areas of agriculture. In addition, plans and programs are devised for improving and expanding activities for Young Farmers in Ohio. An important feature of the conference is the selection of the State Council of the Ohio Association of Young Farmers. These young men strive to acquaint the public with the work of the organization and take the initiative in developing a worthwhile state program which will foster further development of local Young Farmer Associations. They are available to meet with or otherwise aid local groups.

A general discussion on "Family Financial Planning" at the Annual State Young Farmer and Wives Camp.

Sample

Ohio Young Farmers Association

PROGRAM OF ACTIVITIES

January 1 - December 31

A Young Farmer and his son, future agricultural leadership in the making.

Leadership

1. Recognize chapters that have outstanding young farmer programs. Give awards at State Convention, February.
2. Select outstanding Young Farmer in each supervisory district. (Dues paid for 3 chapters.) Give recognition at State Convention, February.
3. Select outstanding Young Farmer in State - Give recognition at State Convention, February.
4. Camp Muskingum, second week-end in September - Young Farmers, wives, teachers.
5. Exchange visits with other states at camp or annual convention.

6. Council members visit young farmer meetings in their area.
7. Conduct area young farmer and wives dinner meetings.

Public Relations

Publish **Ohio Young Farmer** February 1, May 1, August 1, and November 1. Distribute to membership.

Improve Ohio Young Farmer through use of pictures, cartoons, graphs, and print front page.

Invite radio and news editors to Y.F.A. Camp.

Publish directory of local officers in May.

State Organization

Select council members at Annual Convention.

Organize council at time of Annual Convention.

Hold council meetings at convention, camp, April and December.

Provide local organizations with membership cards.

Provide awards for chapter and individual recognition.

Collect annual dues of 50 cents per member.

Hold annual tour in August.

Registering at the Annual Conference.

Securing The Charter

Local associations of young farmers shall apply through H. D. Brum, Executive Secretary-Treasurer, Ohio Young Farmers Association, 220 South Parsons Avenue, Columbus 15, Ohio, to the State Council for affiliation with the Ohio Young Farmer Association. Applications are to be signed by the local president, the sec-

retary, and the advisor. The following need to accompany the application for the charter:

1. A copy of the proposed constitution and by-laws
2. A copy of the annual program of work
3. The number of active members
4. Submit Ohio Young Farmers Association Annual Chapter Membership and Dues Report
5. A list of chapter officers and address of each
6. A remittance of $1.00 to cover the cost of printing and mailing the charter.

The charter will be approved by the officers of the State Council at their next meeting, provided the proposed chapter constitution is in accord with the constitution of the Ohio Association and that it otherwise meets the standards established for Young Farmer groups. The charter will be signed by the state president and the state advisor.

APPENDIX

CONSTITUTION AND BY-LAWS
THE OHIO ASSOCIATION OF YOUNG FARMERS OF AMERICA

Adopted March 3, 1951

Amended February 25, 1961

ARTICLE I — Name and Purpose

Section 1. The name of this organization shall be the Ohio Association of Young Farmers of America.

Section 2. The purposes of this organization are as follows:

a. To interest and aid out-of-school farm youth through a program of systematic and organized instruction to become established in farming.

b. To develop a greater appreciation of the opportunities in farming and to foster a love for country life.

c. To develop an understanding of the ways to secure and utilize the services available to farmers in improving their economic status and social and family relations.

d. To cooperate with all agencies and organizations whose objectives are the improvement of the economic, education and social conditions of rural life.

e. To develop the leadership abilities needed to participate in desirable activities for rural young people.

f. To provide wholesome, social and recreational activities.

g. To plan and render worthwhile community services based on the needs of the community.

ARTICLE II — Organization

Section 1. The Ohio Association of Young Farmers of America is a State organization for out-of-school young men who are engaged in farming. It shall consist of affiliated local chapters that are chartered by the State association and organized in conformity with its constitution and by-laws.

Section 2. Chapters of Young Farmers of America shall be chartered only in schools where recognized systematic instruction is offered for out-of school young farmer groups under the provisions of the approved State Plan for Vocational Education.

Section 3. Delegates from active chapters shall meet in State convention, organize, adopt a constitution and by-laws, elect a council, and set up a State program of work.

Section 4. Local chapters may become and remain affiliated with the State association by complying with the procedures outlined in the by-laws.

ARTICLE III — Membership

Section 1. The members of this organization, shall be of three kinds, — active, associate and honorary.

Section 2. Active Membership.

Any young man 16 to 30 years of age who is out of school and enrolled for instruction in a young farmer class is eligible to be-

come an active member of the local Young Farmer Association. He must, however, receive a majority vote of the members present at any local chapter meeting.

* Amended February 25, to read — any young man 16 to 35 years of age.

Section 3. Associate Members.

Following the termination of active membership status, a young farmer may become an associate member without voting or office-holding privileges, provided, however, they participate in the systematic program of instruction for young farmers.

Section 4. Honorary Membership.

Individuals who have made an outstanding contribution to the young farmer program and to the general improvement of agriculture may, upon recommendation of the State Council, be elected to honorary membership by a majority vote of the members present at any state convention. Honorary members shall neither vote nor hold any office.

ARTICLE IV — Officers

Section 1. The Officers of the Ohio Association of Young Farmers of America shall be: President, Vice-President, Secretary, Executive Secretary-Treasurer, and Adviser. Elective officers of the association shall be elected annually by the State Council from among its membership. The organization meeting will be held immediately following the election of new Council members at the State Convention. The State adviser shall be the State Supervisor of Vocational Agriculture or someone selected by him. The executive secretary-treasurer shall be a member of the supervisory staff.

Section 2. The control of the organization shall be vested in a State Council consisting of ten members each of whom shall serve for a period of two years. Council members are not eligible for re-election.

Five members shall be elected each year at the annual meeting by delegates selected from local chapters. One council member shall be selected each year from different areas of the State — N.E., S.E., N.W., S.W., and Central from nominations made by local chapters.

ARTICLE V — Meetings

Section 1. A convention of the Ohio Association of Young Farmers of America shall be held annually at a time and place to be determined by the State Council.

Section 2. Two delegates from each chapter in good standing shall be elected annually from the active members to represent the chapter at the State convention.

Section 3. Business of the association may be transacted by delegates at any regularly scheduled state wide meeting.

Section 4. A quorum for the Council shall consist of at least half of the members of the Council. A quoroum must be present at any meeting at which business is transacted or a vote taken making recommendations to the association.

Section 5. Parliamentary procedure at all meetings of this association shall be in accordance with Roberts' Rules of Order.

ARTICLE VI — Dues

Section 1. Annual membership dues in the State association shall be fixed by the State Council, subject to approval by a majority vote of the delegates present at the State Convention of Young Farmers of America.

Section 2. A Small registration fee for delegates and others in attendance at the state convention shall be established by the State Council.

Section 3. The dues of any local chapter shall be fixed by the Chapter Executive Committee, subject to approval of a majority vote of the active members of the chapter.

ARTICLE VII — Emblem

Section 1. The emblem of the Ohio Association of Young Farmers of America shall be made up of the following symbols:

a. A farm tractor and operator in the foreground representing tillage of the soil the basis of modern American Agriculture,

b. the rising sun over a typical farm background scene, representing progress, and

c. a public school building denoting the importance of public school adult education to agricultural progress,

d. a cross section of an ear of corn, representing common agricultural interest.

e. The emblem shall also carry the three letters "YFA" and the words "Agriculture Spearhead to Progress" and "Vocational Agriculture".

Section 2. The official lapel pin shall consist of the three letters "YFA" in gold. Persons eligible to wear the pin shall be young farmers in good standing with the Ohio Association of Young Farmers of America. Local chapters of the State association may present pins to honorary members provided said local groups are affiliated with the State association.

ARTICLE VIII — Amendments

Section 1. Proposed amendments to the State constitution or by-laws must be submitted in writing by authorized representatives of a local chapter of Young Farmers of America to the State Council at least 60 days prior to the state convention. Proposed amendments will be reviewed by the State Council. Then, if in order, will be submitted to local chapters in the state at least one month before the next annual state convention. Proposed amendments will be presented to the delegates in the State Convention by the Council with their recommendations. When this procedure is followed, amendments to the State constitution or by-laws may be adopted at any State convention by a two-thirds vote of the delegates present.

BY-LAWS

ARTICLE I — Duties of Officers

Section 1. *President.* It shall be the duty of the president to preside at meetings of the State Association of Young Farmers of America and to serve as chairman of the State Council. The president shall appoint all committees and may serve as an ex-officio member of these committees. He shall call a State convention each year at such time and place as shall be decided by the State Council.

Section 2. *Vice-President.* It shall be the duty of the vice-president to preside at all meetings of the association in absence of the president and assist the president at all times in carrying on the work of the association.

Section 3. *Secretary.* It shall be the duty of the secretary to keep minutes of the meetings of the association and of the State Council.

Section 4. *Executive Secretary-Treasurer.* It shall be the duty of the Executive secretary-treasurer to keep a roster of the active and honorary members, carry on the correspondence of the association, and fulfill such other duties as usually pertain to that office. He shall collect and disburse all funds authorized by the association and maintain complete and accurate records of all transactions. He shall review applications for charters and issue charters. He shall present to the association an annual financial statement of the condition of the treasury.

Section 5. *Adviser.* The State adviser is the ex-officio member of all committees. He is an active member of the State Council of Young Farmers of America and assists State officers in conducting

meetings and other affairs of the association. He reviews action taken by all committees and the State convention to determine whether or not they are in conformity with policies, plans and regulations pertaining to the program of agricultural education as approved by the State Board for Vocational Education.

Section 6. *Council.* The Council shall conduct the business of the State association, subject to such regulations, by-laws, and State program of work as have been adopted by delegates, and in conformity with the policies and plans governing the administration of vocational agriculture in the state.

ARTICLE II — Committees

Section 1. The president of the Ohio Association of Young Farmers of America shall appoint three regular committees regularly: The Nominating Committee, the Auditing Committee, and the Program of Work Committee. Other special committees may be appointed.

Section 2. The Nominating Committee, after careful consideration of the Young Farmers of America personnel, shall place in nomination candidates for the five vacancies on the State Council.

Section 3. The Auditing Committee shall examine annually the books of the secretary-treasurer and report their findings to the delegate body assembled in State Convention.

Section 4. The Program of Work Committee shall set up the objectives and goals of the State association and suggest ways and means of attaining them.

ARTICLE III — Procedures

Section 1. Issuing charters to chapters

Local chapters of Young Farmers of America shall apply through the State adviser to the State Council for affiliation with the State Association of Young Farmers of America. Such application shall be signed by the chapter president, the secretary, and the local adviser. The following material shall accompany the application for a chapter charter:

1. A copy of the proposed constitution and by-laws
2. A copy of the annual program of work
3. Annual membership and dues report
4. A list of chapter officers and address of each
5. A remittance of $1.00 to cover cost of printing and mailing charter.

A charter shall be granted by the officers of the State Council at its next meeting, provided the proposed chapter constitution is in accord with the constitution of the State Association of Young Farmers of America and that it otherwise meets the standards established for Young Farmer groups. The charter will be signed by the State president and the State adviser.

The delegates at any State convention shall have the power to suspend chapter charters upon receipt of evidence of infringement on provisions of the State constitution.

Section 2. Determining standing of chapters

A local chapter of Young Farmers of America shall be considered in good standing with the State Association of Young Farmers provided the following general conditions are met:

1. Local members are enrolled each year in a course of systematic instruction in agriculture organized for young farmers by a regularly employed instructor of vocational agriculture.
2. The local chapter constitution is in accord with the State constitution.
3. The activities of the chapter are in harmony with the purposes of the State association.
4. That programs of work are submitted to the State adviser as requested.

5. The chapter has submitted a copy of the annual membership and dues report together with dues for the current year to the Executive Secretary-Treasurer.

In the event a chapter is not in good standing at the time of the opening of the State convention, the delegates in the convention shall have the power, on the recommendation of the State Council, to withdraw or suspend its charter and refuse such chapter official representation at the annual State convention. When, and if, such action is taken, the members of the chapter in question shall be denied the regular privileges of the association. By meeting the requirements for good standing, a chapter may be reinstated by action of the State Council not earlier than 10 days after the close of the State convention during which it was not in good standing.

ARTICLE IV — Meetings

Section 1. Regular and special meetings of the State Council shall be held at such time and place as determined by the State adviser and a majority of the other members of the State Council.

Section 2. Special meetings of the State association may be called at any time by the State president with the approval of the State adviser and a majority of the other members of the State Council.

Section 3. The order of business at regular meetings shall be: Call to order, roll call, reading of the minutes, reports of officers and committees, unfinished business, new business, special events, and adjournment.

Sample Membership Card

OHIO YOUNG FARMERS ASSOCIATION

A State Organization For Young Men
Studying Vocational Agriculture

THIS IS TO CERTIFY THAT ..... 19.....

Is A Member In Good Standing Until ..... 19.....

Of The ..... Chapter

....

Member's Signature Chapter Secretary

CENTER FOR VOCATIONAL
AND TECHNICAL EDUCATION
980 KINNEAR ROAD
COLUMBUS, OHIO, 43212

VT 001 650
School District Organization. The Vocational School and the Intermediate District.

Ohio State Dept. of Education, Columbus. Div. of Vocational Education
MF AVAILABLE IN VT-ERIC SET.
Pub Date - May66 7p.

STUDENT ENROLLMENT; *VOCATIONAL EDUCATION; STATE PROGRAMS; *AREA VOCATIONAL SCHOOLS; *SCHOOL DISTRICTS; *HIGH SCHOOL STUDENTS; ENROLLMENT INFLUENCES; *STATE STANDARDS
OHIO

Factors relating to the school district organization for a vocational school and intermediate district are briefly discussed. Table 1 presents recommended minimum and optimum enrollment for vocational schools listed by vocational areas and number of different programs with normal and maximum enrollment. Table 2 presents the size of joint vocational or intermediate districts for vocational schools including the number of vocational pupils needed, total pupils in grades 11 and 12, and total pupils in the intermediate school district. Table 3 presents the reommendations for various sizes of school enrollment itemized by number of programs, capital outlay per pupil, and operating cost per pupil. Two conclusions were that the minimum enrollment for a vocational school should be approximately 600 pupils and the minimum enrollment for a joint vocational school for an intermediate district should be approximately 15,000. (SL)

VT001 650

ED0 31587

SCHOOL DISTRICT ORGANIZATION.

May, 1966

Division of Vocational Education, Ohio State Department of Education
Columbus 15, Ohio

VT 01650

Ohio State Board of Education

E. E. Holt
State Superintendent of Public Instruction

Byrl R. Shoemaker
Director of Vocational Education

Division of Vocational Education
State Department of Education

May, 1966

SCHOOL DISTRICT ORGANIZATION

The Vocational School and the Intermediate District
May, 1966

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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Division of Vocational Education Ohio State Department of Education
Columbus 15, Ohio

The Vocational School and the Intermediate School District

From the beginning of free public education in the United States, with the little one-room school house in which the teacher taught all of the subjects to all of the pupils, there have been periodical movements to increase the size of the school district. These movements have not taken place simultaneously over the nation. One part of the country may have been adopting one plan while some other part may have been in the innovating step of another. In essence, it has been a continuous movement for the nation as a whole. The American drive to be the best in business and industry has had its counter part in education. The desire to keep the quality and quantity of education abreast with the growth of the rest of man's activities and environment has been concurrent with the recognition that the standard of living, the strength of the nation and the leadership role of the people are directly related to the education of the citizenry.

Why did the one-room school house exist? Sparsity of population, time consuming means of transportation, low tax base, and limited education curriculum were at least some of the factors.

As roads and highways improved and better and faster means of transportation were developed, the larger school districts became a possibility. With increased size of school districts, a greater pupil population could be brought into one district. Then homogeneous groupings could be made, teachers could specialize, class size could be made large enough to justify new and improved facilities, full utilization of facilities could be made to justified expansions, costs were reduced and the tax bases could be made large enough to provide finances.

Corresponding to this problem in academic education, there is a parallel circumstance involving vocational education. A small district does not have sufficient tax base to furnish capital outlay for vocational education shops and laboratories. Pupil enrollments are too small for classes and, therefore, costs are high. Enrollments are too low to provide realistic programs with a breadth of offering to meet occupational demands.

The Size of the Vocational School

What should be the size of a vocational school? At least three factors should be considered: (1) breadth of program, (2) costs, and (3) pupil travel time. Table 1:--Recommended Minimum and Optimum Enrollments for Vocational Schools, presents the number of programs in each of the vocational areas for recommended minimum and optimum size vocational schools. It also presents normal and maximum enrollments for such centers. It also presents normal and maximum enrollments for such centers. Table 2:--Size of Joint Vocational or Intermediate Districts for Recommended Vocational Schools, presents pupil populations of such districts to produce the enrollments for recommended minimum and optimum size vocational schools. Item "2" assumes that approximately 33 1/3% of the graduating class continue to post high school higher education and that vocational education will be provided in grades eleven and twelve for 50% of the non-college bound. Item "3" is 8.2 times item "1". This is the ratio of total enrollment, K-12, to grades eleven and twelve. Item "3" is the needed pupil population of a joint vocational or intermediate district for a minimum vocational school and the size of the district which can justify an optimum scope of vocational offering. Joint vocational or intermediate districts can serve a larger student body but should consider more than one vocational center as the school district student population approaches 70,000. This would produce two vocational schools of approximately 1400 pupils each.

Table 1:--Recommended Minimum and Optimum Enrollments for Vocational Schools

Vocational Areas	Minimum Size School			Optimum Size School		
	No. Different Programs	Enrollment		No. Different Programs	Enrollment	
		Normal	Maximum		Normal	Maximum
Agriculture Education	2	70	100	6	210	300
Business Education	3	120	150	9	360	450
Distributive Education	1	20	30	3	60	90
Home Economics Education	1	40	50	3	120	150
Trade & Industrial Education	5	200	250	15	600	750
Total	12	450	580	36	1350	1740

Table 2:--Size of Joint Vocational or Intermediate Districts for Recommended Vocational Schools

Item	Minimum Population	Optimum Population
(1) Vocational Pupils From Table 1	580	1,740
(2) Total Pupils Grades 11 and 12	1,740	5,220
(3) Total Pupils Intermediate School District	14,268	42,804

Minimum Enrollments

Table 3:--Recommended Vocational Programs and Related Information for Illustrative Schools of Various Sizes, summarizes the number of programs, capital outlay per pupil and operating cost per pupil for each school as presented in tables 4-19.

Most shops and laboratories can accommodate fifty pupils in two sections. A drafting room can accommodate sixty pupils, but a cosmetology laboratory can accommodate only forty. Therefore, if we divide the enrollment of a vocational school by fifty, we will obtain the approximate number of different programs that the pupil population can support with full utilization of the facilities; see item "1", table 3.

Table 3:--Recommended Vocational Programs and Related Information for Illustrative Schools of Various Sizes

Item	Pupil Enrollment							
	408	620	1,004	1,379	1,719	2,109	2,339	2,779
(1) Enrollment ÷ 50*	8	12	20	28	34	42	47	56
(2) Number Different Programs	15	16	22	27	33	36	39	41
(3) Capital Outlay Per Pupil	$3,994	$3,136	$2,858	$2,589	$2,500	$2,453	$2,415	$2,363
(4) Operating Cost Per Pupil	$ 519	$ 517	$ 480	$ 479	$ 477	$ 474	$ 478	$ 467

*Maximum number of programs for pupil enrollment with full utilization of building.

Start with a school enrollment of 1,379, see table 3. The enrollment divided by fifty gives twenty-eight programs. The table further shows that as the schools become smaller, the different programs which the enrollment will support decreases to 12 then 8. A study of tables 4-19, shows that as schools become smaller, the breadth of the program must be reduced to those common areas of training with greatest employment. In order to minimize this reduction in the breadth of programs in the illustrative schools of less than 1,379 enrollment, class size has been reduced and grade levels combined. This consequently reduces the utilization of the building and increases the capital outlay per pupil, $2,589 - $2,858 - $3,136 - $3,994, and operating cost per pupil, $479 - $480 - $517 - $519. As we go below an enrollment of 620 pupils, in the vocational center, a satisfactory breadth of program can be maintained only by increasing the cost.

Optimum Enrollment

Table 3 also shows that, as schools become larger, the number of different programs, see item "2", increases 33, 36, 39, then 41. The enrollment

divided by fifty produces more programs, 34, 42, 47, then 56, than are offered in the illustrative schools. A study of tables 4-19 further shows that as schools become larger, the breadth of the program can increase into those areas with lesser employment. Although the increased enrollment gives sufficient program selection by pupils to justify opening new courses, it also increases program selection by pupils to more than one shop in the more common areas. Therefore, duplicate programs must be added. As we move upward and pass enrollments of 1,719, the breadth of programs does not increase in proportion to enrollment increases and the capital outlay per pupil $2,453 - $2,415 - $2,363 and operating costs $474 - $478 - $467 are reduced very little.

Vocational education pupils travel additional time from resident school to joint vocational school. Since they ride to resident schools with other students, this extra transportation must be taken from class time. Class schedules of vocational pupils should not be reduced more than one hour per day. It appears that a vocational school of more than 1,700 pupils reduces costs very little, adds new programs in areas not offered by smaller schools but not in proportion to increased enrollments.

Conclusions

It therefore appears that the minimum enrollment for a vocational school should be approximately 600 pupils and consequently a joint vocational or intermediate district of approximately 15,000 in order to give an acceptable vocational program, and it also appears that little is gained by increasing the enrollment above 1,700, which would have a corresponding joint vocational or intermediate district of approximately 42,000 pupils. However, it should be kept in mind that a joint vocational or intermediate district does not have limiting factors by being larger than 42,000 that it does by being smaller than 15,000 as it can operate two vocational schools.

VT 001 658
A Vocational Home Economics Education Survey.

Tennessee State Dept. of Education, Nashville. Div. of Vocational Education
MF AVAILABLE IN VT-ERIC SET.
Pub Date - Jan66 6p.

*QUESTIONNAIRES; *OCCUPATIONAL HOME ECONOMICS; *OCCUPATIONAL SURVEYS

In order to determine needs for programs in home economics occupational preparation, this form was designed to survey household employers. Questions dealt with the use of hired female help for specific tasks inside and outside the home, willingness to hire a trained female worker if one were available, the age of the female which would be acceptable for various tasks, and the hourly wage that the household employer would be willing to pay for various services. Questions related to titles of these occupations and to the occupations of the wage earner of the family were included. (MS)

VT001 658

ED0 31587

STATE OF TENNESSEE
DEPARTMENT OF EDUCATION
DIVISION OF VOCATIONAL EDUCATION

Dear Friends:

Recently enacted legislation has made it possible for training programs to be arranged for many kinds of occupations. Vocational Home Economics will be able to provide instruction that will qualify individuals to engage in occupations involving knowledge and skills in home economics subject-matter areas. Included are such occupations as those which provide services to families in the home, and similar services to others in group situations. Some occupations for which training guides have already been prepared are *The Homemaker's Assistant, Visiting Homemaker, Family Dinner Service Specialist, Companion To An Elderly Person, Clothing Maintenance Specialist, Supervised Food Service Worker,* and *Child Day-Care Worker.* Others may be developed as needs are discovered.

In order to determine needs for training programs in communities in Tennessee, The Elementary, Secondary and Adult Education Section of the Tennessee Home Economics Association and the Division of Vocational Education of the Tennessee State Department of Education have cooperated in preparing this survey form. Appreciation is expressed to Dr. Mary Ruth Swope, Head of Home Economics, Eastern Illinois University, Charleston, Illinois, for permission to incorporate much of a survey form she had developed into this form.

Your answers and your opinions will be most helpful in determining whether or not training programs for occupations using home economics knowledge and skills should be planned and, if so, for what occupation.

Thank you so much for your time, your thinking, and your cooperation.

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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A VOCATIONAL HOME ECONOMICS EDUCATION SURVEY

Please Tell Us:

Have you hired female help for any of the following tasks in the past two years? (Read the following items and circle your answer, using the code at the top of each column of numbers to the left of the items.)

A. TASKS INSIDE THE HOME

REGULARLY-FULL TIME	REGULARLY-PART TIME	OCCASIONALLY	SELDOM	NEVER	
1	2	3	4	5	REGULAR HOUSECLEANING
1	2	3	4	5	SPECIAL HOUSECLEANING
1	2	3	4	5	CHILD CARE
1	2	3	4	5	CARE OF OLDER PERSON
1	2	3	4	5	CARE OF ILL PERSON
1	2	3	4	5	HELP WITH FAMILY MEALS
1	2	3	4	5	HELP WITH GUEST MEALS
1	2	3	4	5	LAUNDRY AND/OR IRONING
1	2	3	4	5	SEWING--NEW GARMENTS
1	2	3	4	5	CLOTHING REPAIR
1	2	3	4	5	MAKING DRAPERIES
1	2	3	4	5	SLIP COVERING
1	2	3	4	5	OTHER: _____

B. TASKS OUTSIDE THE HOME

REGULARLY-FULL TIME	REGULARLY-PART TIME	OCCASIONALLY	SELDOM	NEVER	
1	2	3	4	5	CHILD CARE
1	2	3	4	5	CARE OF OLDER PERSON
1	2	3	4	5	CARE OF ILL PERSON
1	2	3	4	5	HELP WITH GUEST MEALS
1	2	3	4	5	LAUNDRY AND/OR IRONING
1	2	3	4	5	SEWING--NEW GARMENTS
1	2	3	4	5	CLOTHING REPAIR
1	2	3	4	5	MAKING DRAPERIES
1	2	3	4	5	SLIP COVERING
1	2	3	4	5	UPHOLSTERING
1	2	3	4	5	OTHER: _____

For which of the following tasks would you hire a TRAINED female helper, if such a person were available. Place an "x" to the left of each item that applies to you.

A. TASKS INSIDE THE HOME

_____REGULAR HOUSECLEANING
_____SPECIAL HOUSECLEANING
_____CHILD CARE
_____CARE OF OLDER PERSON
_____CARE OF ILL PERSON
_____HELP WITH FAMILY MEALS
_____HELP WITH GUEST MEALS
_____LAUNDRY AND/OR IRONING
_____SEWING--NEW GARMENTS
_____CLOTHING REPAIR
_____MAKING DRAPERIES
_____OTHER: _____

B. TASKS OUTSIDE THE HOME

_____CHILD CARE
_____CARE OF OLDER PERSON
_____CARE OF ILL PERSON
_____HELP WITH GUEST MEALS
_____LAUNDRY AND/OR IRONING
_____SEWING--NEW GARMENTS
_____CLOTHING REPAIR
_____MAKING DRAPERIES
_____SLIP COVERING
_____UPHOLSTERING
_____OTHER: _____

How young a trained girl would you hire to help with the following tasks? (Circle the youngest age you would hire, using the code at the top of each column. Circle the "no preference" column if this applies to you.)

A. TASKS INSIDE THE HOME

AGE 16 AND 17	AGE 18 AND 19	AGE 20 TO 24	AGE 25 OR OLDER	NO AGE PREFERENCE	
1	2	3	4	5	REGULAR HOUSECLEANING
1	2	3	4	5	SPECIAL HOUSECLEANING
1	2	3	4	5	CHILD CARE
1	2	3	4	5	CARE OF OLDER PERSON
1	2	3	4	5	CARE OF ILL PERSON
1	2	3	4	5	HELP WITH FAMILY MEALS
1	2	3	4	5	HELP WITH GUEST MEALS
1	2	3	4	5	LAUNDRY AND/OR IRONING
1	2	3	4	5	SEWING--NEW GARMENTS
1	2	3	4	5	CLOTHING REPAIR
1	2	3	4	5	MAKING DRAPERIES
1	2	3	4	5	SLIP COVERING
1	2	3	4	5	OTHER: _____

B. TASKS OUTSIDE THE HOME

AGE 16 AND 17	AGE 18 AND 19	AGE 20 TO 25	AGE 25 OR OLDER	NO AGE PREFERENCE	
1	2	3	4	5	CHILD CARE
1	2	3	4	5	CARE OF ILL PERSON
1	2	3	4	5	HELP WITH GUEST MEAL
1	2	3	4	5	LAUNDRY AND/OR IRONING
1	2	3	4	5	SEWING--NEW GARMENTS
1	2	3	4	5	CLOTHING REPAIR
1	2	3	4	5	MAKING DRAPERIES
1	2	3	4	5	SLIP COVERING
1	2	3	4	5	OTHER: _____

What hourly wages would you be willing to pay a TRAINED helper for the following tasks? (Circle the highest wage you would pay for each task, using the code at the top of each column.)

A. TASKS INSIDE THE HOME

50 - 75 CENTS AN HOUR	$1.00 AN HOUR	$1.25 AN HOUR	MORE THAN $1.25 AN HOUR	
1	2	3	4	REGULAR HOUSECLEANING
1	2	3	4	SPECIAL HOUSECLEANING
1	2	3	4	CHILD CARE
1	2	3	4	CARE OF OLDER PERSON
1	2	3	4	CARE OF ILL PERSON
1	2	3	4	HELP WITH FAMILY MEALS
1	2	3	4	HELP WITH GUEST MEALS
1	2	3	4	LAUNDRY AND/OR IRONING
1	2	3	4	OTHER: _____

B. TASKS OUTSIDE THE HOME

50 - 75 CENTS AN HOUR	$1.00 AN HOUR	$1.25 AN HOUR	MORE THAN $1.25 AN HOUR	
1	2	3	4	CHILD CARE
1	2	3	4	CARE OF ILL PERSON
1	2	3	4	LAUNDRY AND/OR IRONING
1	2	3	4	OTHER: _____

Would you prefer to secure the services of trained helpers through an employment agency rather than locate them individually?

_____ Yes _____ No _____No preference

In training for occupations which use home economics knowledge and skills, do you think the following titles might be appropriate?

_____Child Care Center Worker
_____Clothing Maintenance Specialist
_____Companion to An Elderly Person
_____Hotel or Motel Housekeeping Aide
_____Dietitian Aide in Hospital
_____Nursery School Assistant
_____Food Service Worker
_____School Lunch Manager
_____Clothing Alterer
_____Homemakers' Assistant

What are the occupations of the chief wage earners in your home?

_____Doctor
_____Lawyer
_____Teacher
_____Secretary
_____Welfare Worker
_____Restaurant Worker
_____Clerk in Store
_____Beautician
_____Truck Driver
_____Factory Worker
_____Government Employee
_____Other Occupations

Please make comments or suggestions:

1 copy for local use
1 copy to be returned
by March 24, 1966
to Miss Carolyn Hi
Tyner High School
Tyner, Tennessee

VOCATIONAL HOME ECONOMICS EDUCATION SURVEY

SUMMARY SHEET

Summary of survey made by _____

County _____

Number of surveys included _____

Number reported hiring female help in the following tasks in past two years:

A. TASKS INSIDE THE HOME

REGULARLY-FULL TIME	REGULARLY-PART TIME	OCCASIONALLY	SELDOM	NEVER
REGULAR HOUSECLEANING				
SPECIAL HOUSECLEANING				
CHILD CARE				
CARE OF OLDER PERSON				
CARE OF ILL PERSON				
HELP WITH FAMILY MEALS				
HELP WITH GUEST MEALS				
LAUNDRY AND/OR IRONING				
SEWING--NEW GARMENTS				
CLOTHING REPAIR				
MAKING DRAPERIES				
SLIP COVERING				
OTHER: _____				

B. TASKS OUTSIDE THE HOME

REGULARLY-FULL TIME	REGULARLY-PART TIME	OCCASIONALLY	SELDOM	NEVER
CHILD CARE				
CARE OF OLDER PERSON				
CARE OF ILL PERSON				
HELP WITH GUEST MEALS				
LAUNDRY AND/OR IRONING				
SEWING--NEW GARMENTS				
CLOTHING REPAIR				
MAKING DRAPERIES				
SLIP COVERING				
UPHOLSTERING				
OTHER: _____				

Number reported possibility of hiring TRAINED female helper, if such a person were available:

A. TASKS INSIDE THE HOME

_____REGULAR HOUSECLEANING
_____SPECIAL HOUSECLEANING
_____CHILD CARE
_____CARE OF OLDER PERSON
_____CARE OF ILL PERSON
_____HELP WITH FAMILY MEALS
_____HELP WITH GUEST MEALS
_____LAUNDRY AND/OR IRONING
_____SEWING--NEW GARMENTS
_____CLOTHING REPAIR
_____MAKING DRAPERIES
_____OTHER: _____

B. TASKS OUTSIDE THE HOME

_____CHILD CARE
_____CARE OF OLDER PERSON
_____CARE OF ILL PERSON
_____HELP WITH GUEST MEALS
_____LAUNDRY AND/OR IRONING
_____SEWING--NEW GARMENTS
_____CLOTHING REPAIR
_____MAKING DRAPERIES
_____SLIP COVERING
_____UPHOLSTERING
_____OTHER: _____

Number who prefer to secure services of a TRAINED helper

_____Through an employment agency
_____Individually

Do the titles seem to be appropriate? _____Yes _____No

Number indicating age preference for helpers for certain tasks:

A. TASKS INSIDE THE HOME

AGE 16 AND 17
AGE 18 AND 19
AGE 20 TO 24
AGE 25 OR OLDER
NO AGE PREFERENCE

REGULAR HOUSECLEANING
SPECIAL HOUSECLEANING
CHILD CARE
CARE OF OLDER PERSON
CARE OF ILL PERSON
HELP WITH FAMILY MEALS
HELP WITH GUEST MEALS
LAUNDRY AND/OR IRONING
SEWING--NEW GARMENTS
CLOTHING REPAIR
MAKING DRAPERIES
SLIP COVERING
OTHER: _____

B. TASKS OUTSIDE THE HOME

AGE 16 AND 17
AGE 18 AND 19
AGE 20 TO 25
AGE 25 OR OLDER
NO AGE PREFERENCE

CHILD CARE
CARE OF ILL PERSON
HELP WITH GUEST MEAL
LAUNDRY AND/OR IRONING
SEWING--NEW GARMENTS
CLOTHING REPAIR
MAKING DRAPERIES
SLIP COVERING
OTHER: _____

Number indicating hourly wages they are willing to pay TRAINED helpers:

A. TASKS INSIDE THE HOME

50 - 75 CENTS AN HOUR
$1.00 AN HOUR
$1.25 AN HOUR
MORE THAN $1.25 AN HOUR

REGULAR HOUSECLEANING
SPECIAL HOUSECLEANING
CHILD CARE
CARE OF OLDER PERSON
CARE OF ILL PERSON
HELP WITH FAMILY MEALS
HELP WITH GUEST MEALS
LAUNDRY AND/OR IRONING
OTHER: _____

B. TASKS OUTSIDE THE HOME

50 - 75 CENTS AN HOUR
$1.00 AN HOUR
$1.25 AN HOUR
MORE THAN $1.25 AN HOUR

CHILD CARE
CARE OF ILL PERSON
LAUNDRY AND/OR IRONING
OTHER: _____

Profile of persons surveyed: (Write in number who checked each item)

Occupations of the chief wage earners in the home

____Doctor	____Welfare Worker	____Truck Driver
____Lawyer	____Restaurant Worker	____Factory Worker
____Teacher	____Clerk in Store	____Government Employee
____Secretary	____Beautician	____Other Occupations

Comments or suggestions: (Write in those which, in your judgment, are significant for local or state planning. This may include your comments, as well as those received from others. Attach another sheet, if needed or desired.)

VT 001 672

Industrial Cooperative Training, A Handbook for Industrial Cooperative Teacher Coordinators.

Texas A and M Univ., College Station. Engineering Extension Service
Texas Education Agency, Austin. Vocational Industrial Education Div.
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*PROGRAM GUIDES; *COOPERATIVE EDUCATION; *REFERENCE MATERIALS; *PROGRAM ADMINISTRATION; *INSTRUCTOR COORDINATORS; TRADE AND INDUSTRIAL EDUCATION; HIGH SCHOOLS

This handbook is a compilation of information and data which the coordinator of industrial cooperative training may need during the school year. The handbook is not intended to replace prescribed procedures for training coordinators, but is intended only as a source reference on matters pertaining to program operation. The chapter titles are: (1) Introduction, (2) The Coordinator, (3) Advisory Committees, (4) Selection of Students, (5) Selection of Occupations, (6) Selection of Training Stations, (7) Placement of Students, (8) Cooperative Training Plans, (9) Classroom Facilities, (10) The Related Subjects Class, (11) Organization of Instructional Material, (12) Coordination, (13) Publicity, and (14) Closing Out the School Year. Each chapter is subdivided into reference topics on specific program activities. The appendix provides the coordinator with supplementary information such as laws affecting cooperative training, information for making program applications, requesting approval of unlisted occupations, and sample letters for hazardous occupations. (HC)

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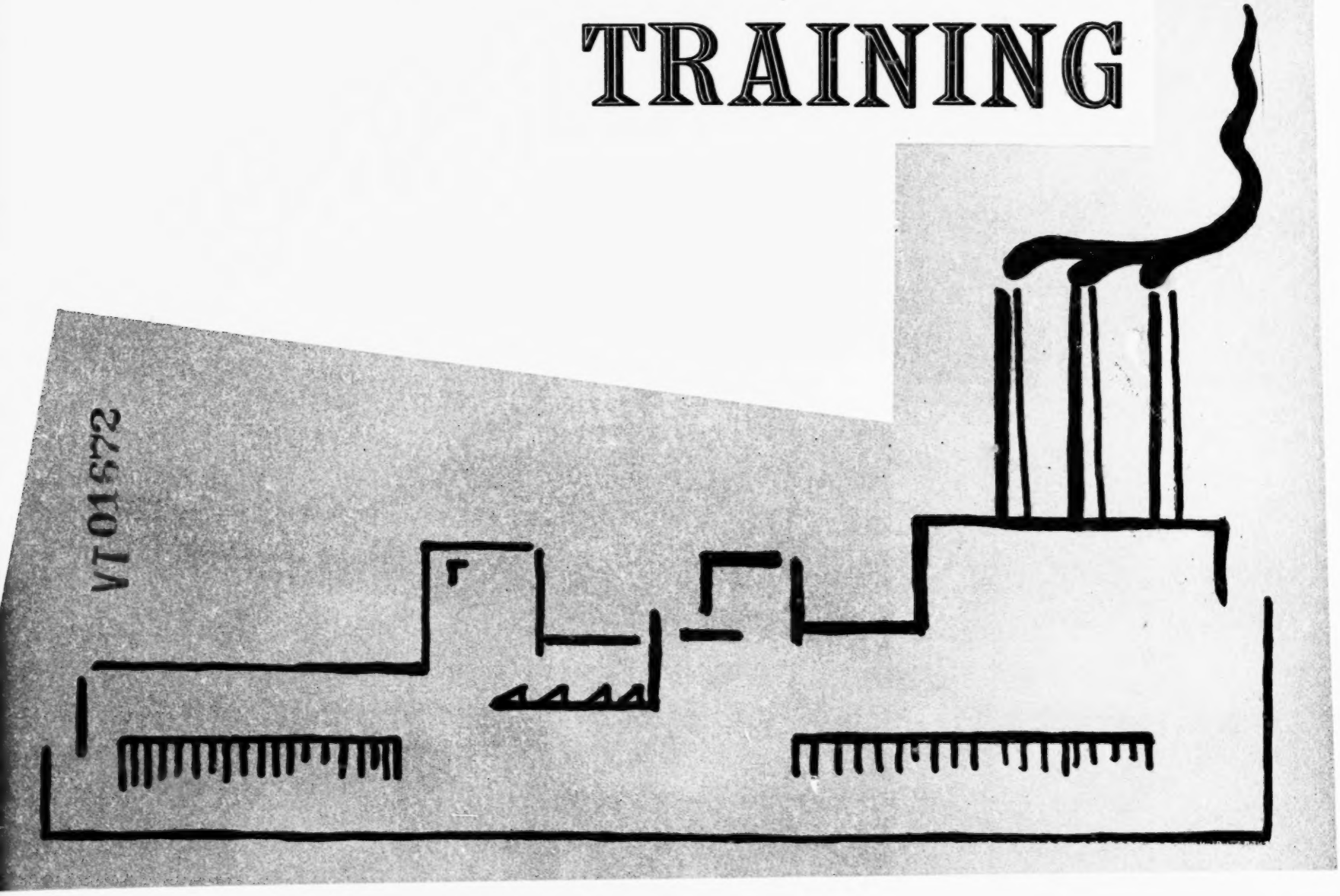
HANDBOOK

INDUSTRIAL COOPERATIVE TRAINING



VT01572

INDUSTRIAL COOPERATIVE TRAINING

A HANDBOOK FOR
INDUSTRIAL COOPERATIVE TEACHER-COORDINATORS

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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ENGINEERING EXTENSION SERVICE
Texas A&M University
cooperating with
VOCATIONAL INDUSTRIAL EDUCATION DIVISION
Texas Education Agency

May 1948

Revised May 1960

Revised May 1965

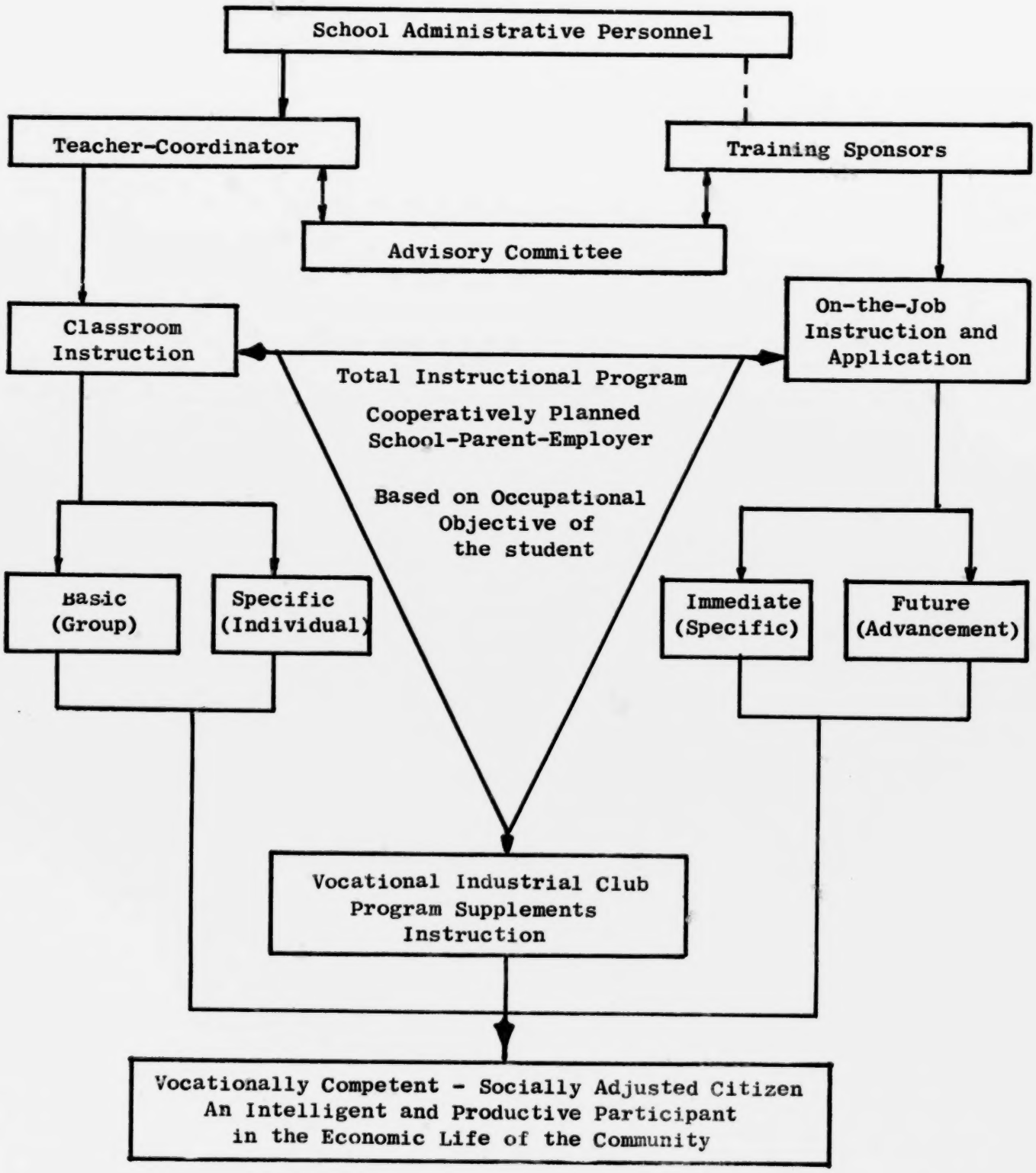
FOREWORD

Few teaching positions require so wide a variety of teacher qualifications -- both personal and educational -- as that of coordinator of industrial cooperative training. A person holding such a position must be a superior teacher. Because of the special requirements of the job and the intimate association with both school and industry, the coordinator -- perhaps more than any other vocational industrial teacher -- has opportunity to develop into a leader in this field of work. In short, the cooperative training field is a logical source of future leaders in vocational industrial education in Texas.

The contents of this handbook is a compilation of information and data which the coordinator may need frequently during the school year. The handbook does not replace regularly prescribed procedures for training coordinators, but is intended only as a source of reference on matters pertaining to legal requirements, standards, objectives, and procedures for organizing and operating industrial cooperative programs.

The first publication was prepared by the Vocational Industrial staff of the Texas Education Agency. This revised edition was prepared by the Teacher Training staff of the Engineering Extension Service of Texas A&M University in cooperation with the Vocational Industrial staff of the Texas Education Agency. It is hoped this handbook will serve the purpose for which it is intended.

ORGANIZATION OF INSTRUCTION FOR AN
INDUSTRIAL COOPERATIVE TRAINING PROGRAM



CONTENTS

Chapter		Page
I.	INTRODUCTION	
	Legal Aspects of Cooperative Training	1
	Terminology	1
	Objectives of Industrial Cooperative Training	1
	Relationship to General Education	2
II.	THE COORDINATOR	
	Duties of the Coordinator	5
	List of Activities	5
	Teacher-Training Requirements	8
III.	ADVISORY COMMITTEES	
	General Advisory Committees	9
	Selection of Committeemen	10
	Craft or Occupational Committees	11
	Organization of Committees	12
IV.	SELECTION OF STUDENTS	
	Need for Guidance	15
	Eligibility of Students	15
	Student Applications	17
V.	SELECTION OF OCCUPATIONS	
	Guiding Factors	21
	Particularly Hazardous Occupations	24
	Prohibited Occupations	24
VI.	SELECTION OF TRAINING STATIONS	
	Factors to Consider	27
	Undesirable Stations	27
VII.	PLACEMENT OF STUDENTS	
	Standards of Student Placement	29
	Placement Activities	30

Chapter | Page

VIII. COOPERATIVE TRAINING PLANS

Explanation of Training Plans 31

IX. CLASSROOM FACILITIES

Minimum Requirements 37
Additional Facilities 37
Maintenance 39
Classroom Library 39
Classroom and Office Files 39

X. THE RELATED SUBJECTS CLASS

Objectives 43
Problems 43
Class Schedules 43
Students' Job Reports 44
Student Lesson Assignments 44
Supervised Study 46
Group Discussion 47
Grading Students' Work 48
Organization Report 48
Information Desired on Organization Report 49

XI. ORGANIZATION OF INSTRUCTIONAL MATERIAL

Type of Material Required 53
Courses of Study 53
Standards for Writing Instructional Material
a. Assignment Sheets 54
b. Experiment Sheets 60
c. Project Sheets 61
d. Information Sheets 62
e. Test Sheets 62
f. Answer Sheets 64
Designation and Classification of Instructional Sheets 64
Sample Instructional Sheets 65

XII. COORDINATION

Meaning and Purpose of Coordination 81
Coordinator's Weekly Schedule 82
Planning Afternoon Visits 83

Chapter | Page

Visiting Training Station 84
Conduct While Visiting 84
Coordination Records and Reports
a. Coordinator's Diary 85
b. Closing Reports 87
c. Employers' Periodic Rating 89
d. Student's Permanent Record Card 89
e. Annual Reports 89

XIII. PUBLICITY

Function of Publicity 95
Publicity in Starting a New Program 95
Talks to Groups 95
Preparation of Newspaper Articles 98
Letters to Students and Businessmen 99
Features and Other Publicity Devices 101
Schedule for Releasing Publicity 104

XIV. CLOSING OUT THE SCHOOL YEAR

Training Certificates 105
Summary of Year's Work 106
Check Sheet for Closing Out School Year 106

APPENDIX

Laws Affecting Cooperative Training 111
Informational Guide for Making Application 125
Application for Certificate 131
Recognition Certificate 133
Employment of Student-Learner 135
Request for Approval of Unlisted Occupation 140
Sample Letter for Hazardous Occupations 142
Twelve Questions Pertaining To The Application
For and Certification Of Student Learners 143

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I. INTRODUCTION

Legal Aspects of Cooperative Training

Industrial cooperative training is not a recent adjunct to vocational education. Training of homogeneous groups of students (all employed in the same occupation) on a cooperative basis between various industries and educational institutions has been carried on in this country for approximately sixty years. Provisions for such training were included in the Smith-Hughes Act in 1917.

Such cooperative training of homogeneous groups is limited chiefly to the larger cities, because in smaller cities and towns employment opportunities are so diversified. Similarly, in many instances, trade preparatory training in school shops is not feasible in smaller cities except those in which there are one or two predominant industries.

Consequently, in 1931, the Federal Board for Vocational Education modified its policies on cooperative part-time education, to permit training of groups of young workers employed in a variety of trades and occupations. Cooperative training of this type is an outgrowth of Part-Time General Continuation Training and -- for budgetary purposes, at least -- is still classified as such. However, due to special requirements and standards that have been set up for it, this type of program is generally looked upon as a special phase of part-time education.

Terminology

The type of cooperative training mentioned above has no fewer than a dozen different designations in the various States. Such terms as Cooperative Part-Time Classes, Part-Time Cooperative Classes, Part-Time Training in Diversified Occupations, Diversified Cooperative Classes, Diversified Occupations (or merely "D. O.") are frequently used interchangeably. It is desirable that a standard term which is brief yet descriptive of the program be adopted for use in this State. The Vocation Industrial Division recommends that the term Industrial Cooperative Training Classes be used since it distinguishes this type of program from all other cooperative classes such as those in distributive education and office training.

Objectives of Industrial Cooperative Training

The basic objectives of industrial cooperative training is to prepare boys and girls for useful employment in occupations of their choice in which there are

available openings. Training of this type is designed for smaller communities in which extensive employment opportunities do not exist. However, in the larger cities in the State, cooperative training has proven to be both practical and advisable in preparing youth for full-time employment in many of the less prevalent occupations for which preemployment training in unit shop courses is not justifiable.

Relationship of Vocational Industrial Education to the Total Education Program

Industrial cooperative training courses are not operated by the State Board for Vocational Education. The program belongs to the local community; coordinators and related subjects teachers are employed by local public schools on the same basis as are other teachers under the Foundation School Program. In order to assist the local schools in maintaining these standards, the State Board makes available the services of area vocational supervisors. Teacher trainers employed by teacher-training institutions are also available for assistance to teachers and coordinators.

In order to assist the coordinator of industrial cooperative training in understanding the relationship between his program and the State organization, the following charts are given: The asterick in Figure 1 locates the Vocational Industrial Division. Figure 2 shows the organization of the Industrial Education Division of the Texas Education Agency.

From these organizational charts (Figure 1 and Figure 2), one can see that vocational education supplements but does not substitute for the general education program. The vocational program is designed to contribute to the educational preparation of youth, enabling them to accept the duties of responsible citizenship. An important part of that responsibility is occupational competency in vocations of their choice. Industrial Cooperative Training programs, one phase of Vocational Industrial Education, provide an opportunity for these youths to begin developing skills which will enable them to be an asset to the community and to fulfill their occupational responsibilities.

TEXAS EDUCATION AGENCY

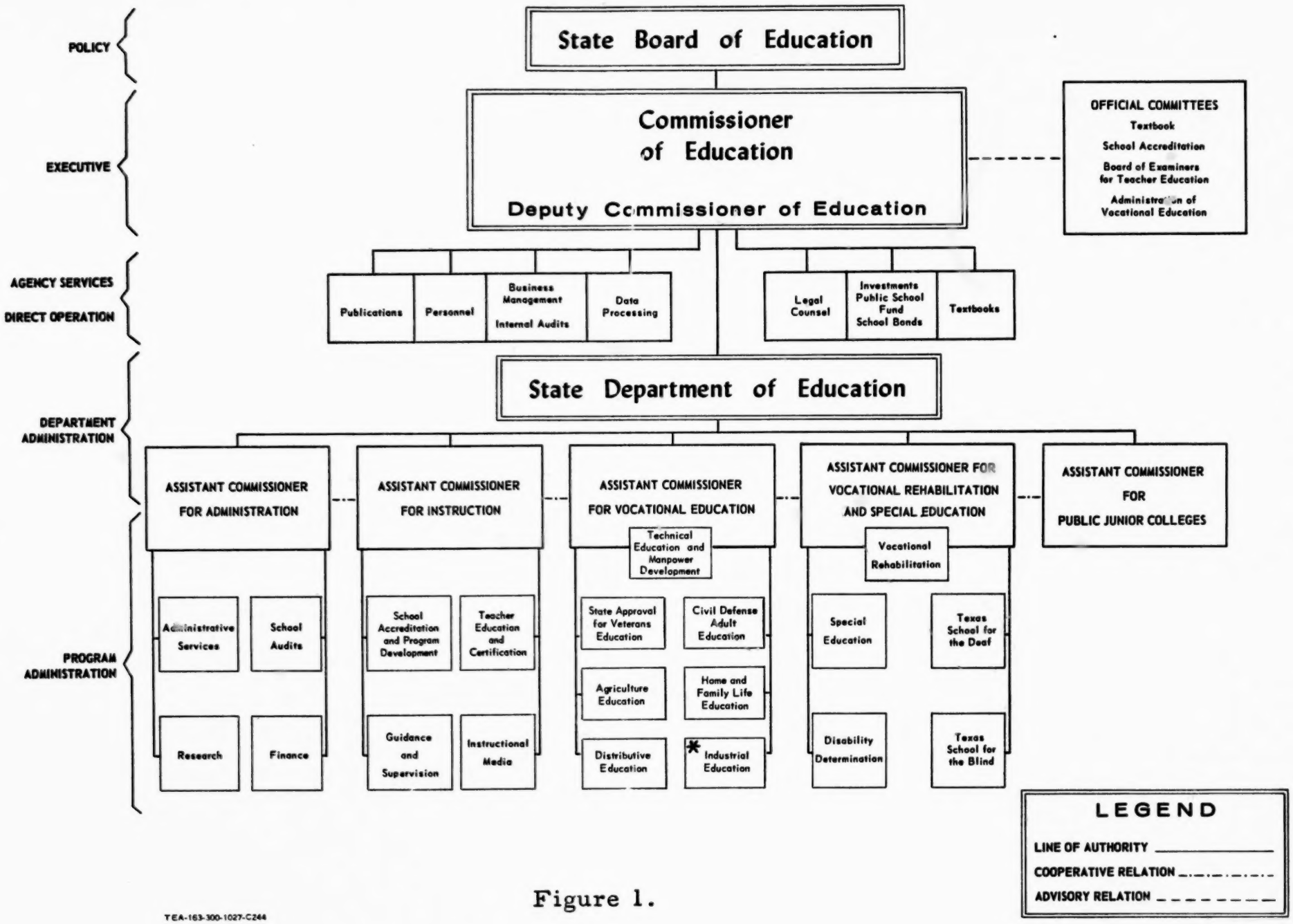

Figure 1.

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VOCATIONAL INDUSTRIAL EDUCATION

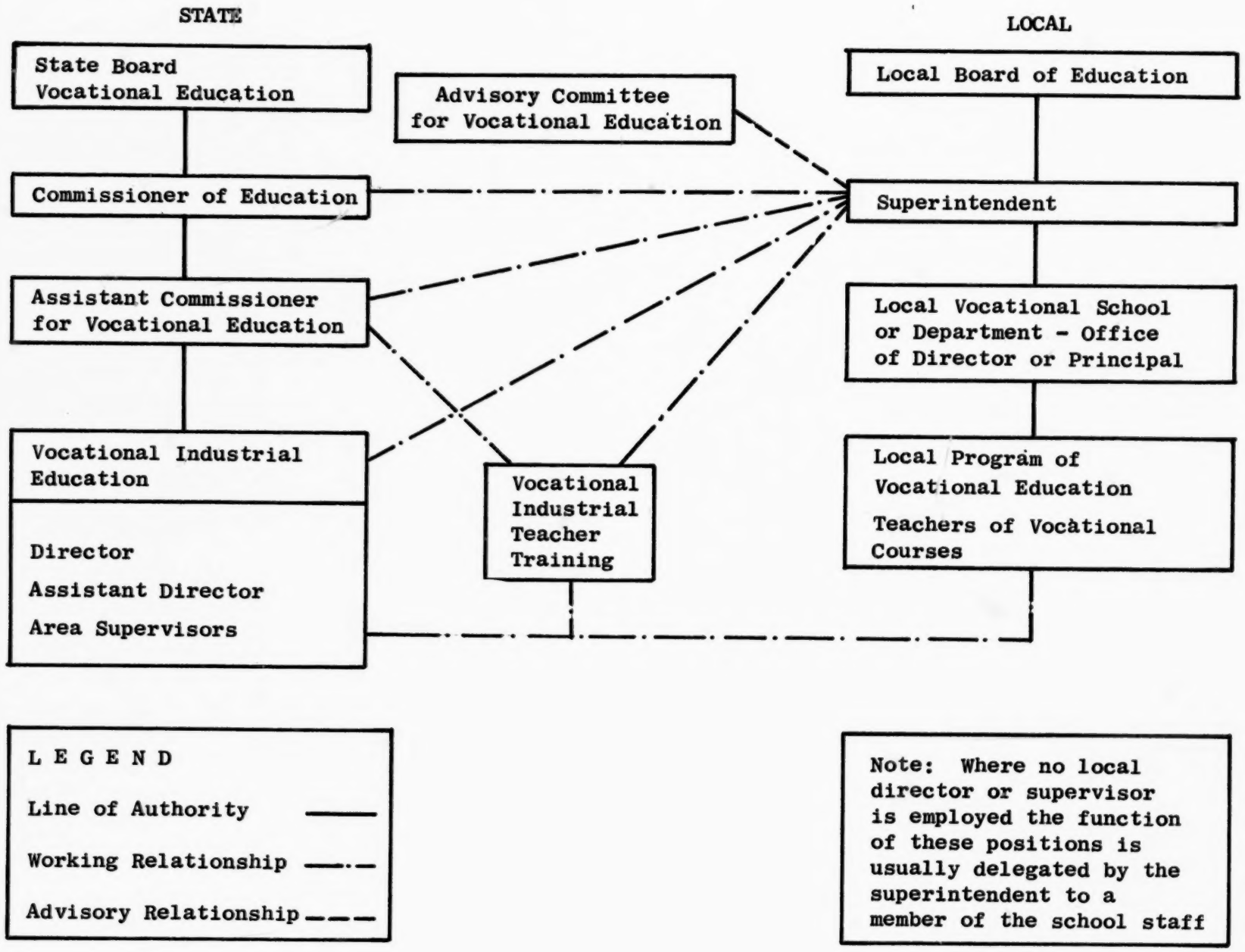


Figure 2.

II. THE COORDINATOR

Duties of the Coordinator

The coordinator of industrial cooperative classes is employed by the local public schools to supervise and correlate the school work and work experiences of part-time students. It is his duty to promote interest in the program, organize his classes, develop and organize instructional material, place students in employment according to their interests and qualifications, and to do follow-up work among employed students. In practically all cases he also supervises the related studies of his students, thus serving in the dual capacity of teacher-coordinator.

In addition to the above duties which are directly related to his program, the coordinator has certain responsibilities to the school in general, such as counseling and disseminating occupational information, and representing the school in conferences with persons in business and industry on matters pertaining to vocational training in general.

List of Activities

Following is a comprehensive list of duties and activities generally associated with the work of a teacher-coordinator. They are not necessarily listed in a sequential order. The teacher-coordinator will, in all probability, carry on several of these activities concurrently:

ACTIVITIES IN ORGANIZING CLASSES

Make occupational surveys

Make school surveys

Assist in organizing advisory committees

Publicize new programs

Interview prospective students

Interview prospective employers

Place students in employment

Register and schedule students in classes

Set up classroom facilities

Set up library

Work out schedules of work experiences with employers

(Activities in Organizing Classes Cont'd)

Select occupations for training

Select training stations

Select students

Make out courses of study

Prepare training plans

Assist students in obtaining social security cards, work permits, student-learner certificates

ACTIVITIES IN TEACHING RELATED SUBJECTS

Assist in making occupational courses

Set up files for instructional material

Make individual student assignments

Supervise study period

Plan group discussions

Lead group discussions

Keep class records

Grade and record written assignments

Give unit tests

Compute and record periodic grade reports as required by local school (6 wks., 9 wks., & semester)

Keep inventories of instructional material

Requisition and order instructional material

Close out semester; school year

ACTIVITIES IN ORGANIZING INSTRUCTIONAL MATERIAL

Make occupational analyses

Adapt analyses to meet local requirements

Outline technical topics paralleling analyses

Evaluate available reference material

Write instructional sheets based on related topics:

Assignment sheets
Information sheets
Experiment sheets
Project sheets
Test sheets

Duplicate above types of instructional sheets

ACTIVITIES IN COORDINATING PROGRAM

Make out weekly time budget

Plan afternoon itineraries (visitation)

Visit training stations

Confer with employers

Secure employer's periodic rating

Confer with advisory committees

Interview prospective students and employers for the next school term

Visit parents of students

Counsel with non-vocational students

Confer with other teachers on students

Publicize activities of class

Secure reference and instructional material

Make out daily coordination records and reports

Keep permanent records of students; keep follow-up records of graduates

EXTRACURRICULAR ACTIVITIES

Sponsor a Vocational Industrial Club Chapter (The Vocational Industrial Club of Texas is a statewide organization for high school students who are enrolled in vocational industrial courses for the purpose of bringing about wholesome attitudes, leadership development and higher trade ethics.)

Confer with management and employee organizations on training needs

Organize extension and part-time adult classes

Supervise extension and part-time classes

Assist in school and civic activities and projects

Participate in professional (teaching) organizations

Teacher-Training Requirements

The coordinator, like all other vocational teachers, must have a valid vocational teachers certificate on file in the office of the Superintendent of Schools where he is employed. The certificate is of two grades: Emergency and Provisional.

A temporary certificate is issued by the State Board for Vocational Education to qualified persons upon receipt of:

1. An application for Texas Vocational Teaching Certificate (IE-5)

2. A contract between the State Board and the local school where the coordinator is employed.

Coordinators will complete three required teacher-training courses and a short orientation course before starting work, or during their first year of teaching. The first three required courses are:

1. Selection, Placement and Follow-up

2. Methods of Teaching

3. Development, Organization and Use of Instructional Material.

A permanent certificate will be issued holders of temporary certificates upon receipt of the usual application after the coordinator has completed three additional teacher-training courses before starting his second year of work:

4. Analysis and Course Making

5. Aims and Objectives of Vocational Education

6. Problems in Cooperative Training.

All the above courses prescribed for coordinators will be taken in regular summer sessions in one of the two designated teacher-training institutions -- the University of Texas and Texas A&M University -- except the orientation course which may be offered on the job or before the coordinator begins his first year's work.

III. ADVISORY COMMITTEES

Since the success of any preemployment training program -- especially one of the cooperative type -- depends upon the close relationship and cooperation between the school and industries of the community, it is obvious that there is a definite need for a committee, composed of representative persons from business and industry, to guide the school in inaugurating and maintaining a program of instructions which will best meet the training needs of the community.

The Texas State Plan for Vocational Education provides for the establishment of such committees in communities operating either cooperative or shop programs. One general committee will suffice for both types of programs in centers where both are operated, but if the fields of training of the two programs differ greatly, separate committees should be set up.

General Advisory Committees

Local advisory committees are of two kinds: (1) the general advisory committee, and (2) occupational or craft committees. The general committee, as the name implies, serves in an advisory capacity to the school on matters of a general nature, not necessarily applicable to each craft or occupation. For cooperative programs, the general committee should perform the following functions:

1. Advise as to general training policies.
2. Advise as to fitness of training stations.
3. Pass upon wage scales.
4. Make recommendations concerning approval of training plans.
5. Make recommendations concerning canceling or transferring training plans when necessary.
6. Assist in conducting industrial education surveys.
7. Assist in promoting and publicizing the program.
8. Assist in evaluating the program.

The contribution which an advisory committee can make to a vocational program is at a maximum when it limits its participation to the above activities.

It should never assume administrative authority nor attempt to operate the program directly.

The general committee should consist of at least six persons: two employers, two employees, a representative of the public, and a representative of the school -- usually the coordinator -- who is without vote. Coordinators are required to furnish the State Office with the names of committee members and the groups they represent. Samples of the manner of listing the general advisory committee members are shown in the illustrated forms, Organization Report and Annual Report, discussed in later sections of this handbook.

Selection of Committeemen

Members of the general advisory committee are appointed by the Superintendent of Schools for one year. They are selected with the assistance of the coordinator from a list of key persons in the community who are qualified to render real service to the schools in an advisory capacity. Some suggestions on the selection of such persons follow:

Employer Groups - Every community has several persons classified as managers, superintendents, or foremen of businesses or industries who are prominent in civic affairs. The selection of committeemen from such a group to represent management is usually an easy task. There are, however, a few factors which the superintendent and coordinator should keep in mind when selecting such persons:

1. Their close relationship to the fields of employment represented.

2. Their reputation in the community.

3. Their participation in civic and school affairs.

4. Their knowledge and interest in educational matters.

These factors do not imply necessarily that the "big shots" of the community are the only qualified persons to serve as committeemen, yet, everything being equal, a person who is highly regarded will be of greater value to the local schools than one who is relatively unknown.

Employee Groups - Committee members from the ranks of employees are frequently difficult to select due to the fact that employees, as a rule, are not so active in civic affairs nor so well known in the community as persons classified as managers. Members selected from employee groups should be leaders in their fields of employment. They represent all the employed persons in

their field and allied fields as well. Various labor groups or organizations in the community should be invited to recommend such leaders as possible committeemen. Factors to be considered in selecting members of the employee group are:

1. Their close relationship to the trades or occupations represented.

2. Their reputation as craftsmen.

3. Their interest in youth and school affairs in general.

Representative of the Public - Insofar as possible, a person who is actually a public agent, or one who, through the nature of his work, is in close contact with the public, should be selected as the so-called "neutral" person on the general advisory committee. Such persons might be connected with the Texas Employment Service, Apprentice Training Service, the press, or any recognized youth organization.

Craft or Occupational Committees

A trade, craft or occupational committee serves in a more specific capacity than the general advisory committee and usually is needed only when several students are being trained in one particular occupation. This group represents its own specific trade or occupation only, and in some instances -- especially in smaller communities -- may consist of no more than two or three members.

In addition to the duties outlined for the general committee, the occupational committee is expected to advise with the coordinator regarding preparation of instructional material and to assist him in setting up standards and policies for training students in their specific occupation. All of the body's activities -- as suggested by its name -- are to apply only to the trade or occupation for which the committee has been chosen. Meetings should be held when necessary.

Both employers and employees should be represented on occupational committees and they should be appointed in official manner by the school superintnedent after consultation with the interested group. No special procedure is required, but it is suggested that committee members be appointed from a list furnished by the group represented.

In certain instances the coordinator may need the advice and assistance of a small group representing a particular occupation for only a short time, as, for example, in reviewing and evaluating instructional material to be used in training in the occupation represented. In such cases, it is suggested that the

coordinator invite the group to meet with him two or three times -- perhaps within a week -- without having them appointed as a permanent committee.

Organization of Committees

Each committee should have a chairman and a secretary selected by the group from its own members. It is suggested that the coordinator act as secretary since he is in a better position to keep records and make reports than anyone else, but in no case should he assume the duties or authority of the committee. Regular meetings of the general advisory committee should be held; called meetings may be held when necessary. Minutes of each meeting should be kept in the coordinator's school files.

It should be remembered that advisory committee members donate their time and effort to aid the school, and the imposition of unnecessary requests for assistance is very unwise. The coordinator should exercise care in preparing plans and agenda for committee meetings, making certain that a meeting is needed and that a definite program is followed. Meetings called merely for the sake of meeting are likely to result in a loss of interest and an eventual loss of the committee. It is imperative, also, that each member of the advisory committee become well acquainted with the aims, objectives, and methods of vocational education in the large sense. This phase of committee work is largely educational, but the success of the cooperative program depends, in a large measure, upon the thoroughness with which it is done.

IV. SELECTION OF STUDENTS

One of the chief factors determining the efficiency of a cooperative training program is the quality of students selected to enter training. "Quality students" does not necessarily mean those in the "Grade A" quartile, but refers to those students who possess the aptitudes and qualifications required for success in a given field of work.

Need for Guidance

A desirable employee can result from the training received under this program only when the student enrolled in it is capable and desirous of receiving training. From the first grade through the twelfth, the general objective of classroom teachers tends to influence boys and girls to plan only to enter college after graduating from high school. This has prevented many excellent students from giving serious consideration to entering skilled occupations. In many schools the general impression is left with the student that any goal of less than college level is an admission of inferiority. Hence, it is necessary to show students that the training necessary for success in a legitimate industrial field requires more than average intelligence, and that the prospects for advancement are as good or better than in many professional fields; since not more than perhaps twenty-five per cent of high school graduates attend college, it is important that careful consideration be given the possibility of entrance into fields in which the greatest opportunities lie. Likewise, the number of positions requiring college graduation, while increasing, is not increasing so fast as is the number of college graduates. This trend forces many college graduates to accept work in fields other than those for which they have been trained. These facts must be given not only to the students but to the teachers. The earnest cooperation of teachers should be solicited in their future work.

The coordinator, more than any other faculty member, has opportunity to disseminate a vast amount of authentic occupational information about his community, both informally and through organized effort. He must have readily available such information as job requirements, employment opportunities, wage schedules, working conditions, training facilities, occupational trends, and the like which may be used in assisting students in making wise and intelligent choices of vocations. The coordinator should by all means have one school period scheduled for counseling and guidance activities.

Eligibility of Students

Students sixteen years of age or older who are of junior or senior classification

are eligible to enter the industrial cooperative program. Applicants may or may not be employed at the time they are admitted to the class. If they are employed and wish to receive further training in their present work, both the occupation and the place of employment -- called the training station -- must meet the standards which have been set up and which are explained in following sections of this handbook.

Students who are employed in the occupation of their choice must be placed in part-time employment by the coordinator. This calls for student selection, based upon the coordinator's knowledge of the occupational requirements of the various fields in which cooperative training is offered.

The coordinator should strive not only to place students according to their interests, but according to their fitness for their chosen work as well. A list of factors which should guide the coordinator in selecting students is given below:

FACTORS IN JUDGING OCCUPATIONAL FITNESS OF APPLICANTS

Interest in receiving training
Physical suitability
Mental suitability
Moral reliability
Social adaptability
Educational background
Disciplinary record
School attendance record
Special interests
Hobbies
Past work experiences
Special personality characteristics
Recommendations
Sex (when a requirement)
Age
Past employers' opinions
Other school activities

In some instances the coordinator may use standard interest and aptitude tests to assist him in judging occupational fitness of applicants. However, he should refrain from accepting as "conclusive" the students' performance on only one or two tests of this type. Interest and aptitude tests have a certain value in guiding students away from certain fields of work for which they are not fitted, but are wholly unreliable in predicting success in any specific field of endeavor.

Another service available to the coordinator which will assist in judging occupational fitness of applicants is your Texas Employment Commission.

The Texas Employment Commission will cooperate with the coordinator by providing GATB (General Aptitude Test Battery) testing and counseling to high school students who desire to enter the various courses of vocational industrial education. The Texas Employment Commission will render testing and counseling in local Texas Employment Commission offices where the GATB is now installed, except in those instances where the District Director decides that an exception is practical and desirable. The coordinator must initiate the desire for this service through the local Texas Employment Commission Director.

Frequently the coordinator will be prevailed upon to place students in training stations which, in his opinion, do not measure up to acceptable standards. He should learn to say "no" after he has analyzed a situation and finds that it does not present desired educational possibilities. Under no condition should he resort to subterfuge in refusing to accept either a student applicant or training station, but should frankly -- yet tactfully - discuss the reasons for his action with the interested parties.

Student Applications

Much of the personal information about applicants can best be secured through personal interviews. Other items of information -- those to which the coordinator may need to refer frequently -- should be contained in the Student Application. The application blank (a suggested copy of which is shown in Figure 3) should be given the student applicant following his first interview with the coordinator.

All applications, signed by the applicant and a parent, should be filed for future reference. When a student has been placed in employment, his application should be placed in the student's personal folder, the contents of which will be discussed later.

Some of the qualifications of applicants, such as attitudes, character, and the like, are difficult to determine through personal interviews and applications. Information of this type can best be obtained through contacts with the students' former teachers, principals, employers, and counselers. Although it is not entirely necessary, a mimeographed form for collecting this information may be used to an advantage. A suggested form is shown in Figure 4.

APPLICATION FOR ADMITTANCE INTO
INDUSTRIAL COOPERATIVE TRAINING CLASSES

YOUR NAME Bill Lawson DATE August 15, 1960 AGE 16

DATE OF BIRTH May 3, 1944 CLASS Jr. HOME ROOM Mrs. Lime

YOUR ADDRESS 314 Branger PHONE VI 6-7444

NAME OF PARENTS Mr. & Mrs. J. L. Lawson

OCCUPATION OF FATHER Plumber FIRM Lee, Inc.

OCCUPATION OF MOTHER Housewife FIRM —

WHAT REQUIRED SUBJECTS DO YOU NEED FOR GRADUATION?

LA. 31 & 32 1/2 Government

LA. 41 & 42 Algebra 11 & 12

American History Electives

WHAT OCCUPATION ARE YOU INTERESTED IN LEARNING?

FIRST CHOICE Refrigeration Mechanic

SECOND CHOICE Bricklayer

IS THERE ANY PARTICULAR SHOP OR PLACE OF BUSINESS WHERE YOU PREFER TO WORK? IF SO, GIVE THE NAME OF PLACE AND EMPLOYER BELOW:

PLACE OF BUSINESS Delta Electric Service Co.

MANAGER: J. B. White

WHERE HAVE YOU WORKED?	LOCATION	MANAGER
1. Daily Eagle	200 W. 3rd	Frank Smith
2. "M" Market	1300 E. 29th	Bill Hackney

HAVE YOU DISCUSSED THE ADVISABILITY OF YOUR ENROLLING IN THIS COURSE WITH YOUR PARENTS OR GUARDIAN? Yes

Approved J. L. Lawson (Parent or guardian) Signed Bill Lawson (Student applicant)

Figure 3.

Date_____

Dear_____:

Student_____has made application for admittance into the Industrial Cooperative training program. Your evaluation of this student on the following characteristics will be greatly appreciated.

Rating: E - Excellent; G - Good; F - Fair; P - Poor

	E	G	F	P
Honesty				
Dependability				
Willingness to work				
Capacity to do work				
Quality of work				
Attitude toward school				
Personal appearance				

(Signed)_____
(Coordinator)

Figure 4

V. SELECTION OF OCCUPATIONS

Guiding Factors

While the industrial cooperative program should be diverse enough to meet the training needs of the community in several fields of employment, the coordinator should not attempt to provide training in such a wide variety of occupations as to make his program unwieldy. Insofar as possible, no more than eight to ten occupations which are prevalent in the community should be selected. In general, those occupations which lend themselves to the apprentice plan of training are preferred.

In order to guide the coordinator in determining what occupations to use for training it is the policy of the Vocational Industrial Division to use the Dictionary of Occupational Titles, Second Edition (1949), as the source of reference to determine titles and definition of occupations.

Occupations printed in capital letters on the approved list of occupations for Industrial Cooperative Training (an up-to-date listing is furnished you by the Vocational Industrial Education Division of the Texas Education Agency and should be referred to frequently by the coordinator) are approvable for training in industrial cooperative programs. Occupational titles listed are those commonly used throughout the nation, and coordinators are requested to use these titles in preparing training plans, organization reports, and other forms.

The five- or six-digit code number immediately following each title identifies the occupational classification into which each occupation falls. In order to define more clearly the training objective of individual students, coordinators are requested to add the code number after the occupational title on each training plan.

The only classification groups of importance in industrial education -- and those into which practically all approvable occupations fall -- are those indicated by the following three-digit code numbers (the first three numbers in a complete six-digit code number):

0-41 to 0-69 - Certain technical and semi-professional occupations.
4-01 to 5-19 - Skilled manufacturing occupations.
5-20 to 5-61 - Skilled non-manufacturing occupations.
5-72 to 5-89 - Skilled miscellaneous occupations.

The proper classification for any given occupation is determined by the training objective of the student-learner--not his status as a learner. For example, during training, a co-op student learning sheet metal work may be considered

a learner, helper, or apprentice (7-97.010). His vocational objective, however, is sheet metal worker (4-80.010) -- a skilled occupation. The latter classification and code number should be used on his training plan.

To be approvable for Industrial Cooperative Training, an occupation must meet all three of the following criteria:

1. The occupation must be a trade and industrial pursuit. Trade and industrial pursuits include occupations in two categories:

   (a) Occupations classified as "skilled" in the Dictionary of Occupational Titles which bear three-digit code numbers 4-01 through 5-89.

   (b) Other technical and semi-professional occupations specified by the U. S. Office of Education as coming within the scope of trade and industrial education, such as nursing (less than college level), laboratory technical work (medical and industrial), drafting, commercial art and designing, and photography.

2. The occupation must require at least 2000 hours of organized training. Such training includes both on-the-job instruction and related technical instruction. The term "2000-hours" is more or less a nominal expression and indicates the approximate number of hours a co-op student spends in training during two school years. A "2000-hour" training period is not meant to include numerous hours spent in repetitive manipulative operations for the purpose of gaining speed of production.

3. The related technical information required must be sufficient to justify the enrollment of students for 350 hours of related instruction. These hours represent the approximate total time devoted to classroom instruction, one hour a day for two school years. A very limited number of occupations (one-year occupations) are exceptions to this two-year requirement and are noted on the approved list.

Following is a list of some of the possible fields of training which are more or less "standard" in this State:

Automobile Body Repairman	5-81.510	Chef	2-26.31
Automobile Mechanic	5-81.010	Commercial Artist	0-44.21
Automobile Parts Man	1-75.22	Dental Technician	0-50.06
Automotive Electrician	5-81.420	Draftsman, Architectural	0-48.05
Baker	4-01.100	Dry Cleaner	5-57.110
Carpenter	5-25.110	Electrical Appliance Serviceman	5-83.041

Electric Motor Repairman	5-83.433	Painter	5-27.010
Electrician	4-97.010	Photographer	0-56.11
Farm Machinery Repairman	3-35.10		0-56.21
Furniture Repairman	4-35.710	Plumber	5-30.210
Machinist	4-75.010	Printer	4-44.010
Machinist, Automobile	4-75.010	Radio Repairman	5-83.411
Medical Technician	0-50.01	Refrigeration Mechanic	5-83.941
Meat Cutter	5-58.100	Sheet Metal Worker	4-80.010
Office Machine Serviceman	5-83.111	Television Repairman	5-83.416
Offset-Pressman	4-48.050	Watchmaker	4-71.510
		Welder (Combination)	4-85.040

In addition to the above fields of work, most communities have other occupations which are suitable for training. In order to guide the coordinator in passing on the acceptability of these occupations, the following list of factors is submitted:

1. Opportunities for employment after training.
2. Stability of the occupation.
3. Opportunities for advancements.
4. Availability of suitable reference material.
5. Time required for training (minimum of 2000 hours).
6. Extent of transfer of training to other occupations.
7. Regularity of employment.
8. Pay (wages).
9. Training facilities.
10. Hazards.

Naturally, the type of occupations in which training is done is influenced to a large extent by the desires of the students as well as the training needs and employment opportunities of the community. Popularity of certain occupations seems to come in "cycles", and it is not uncommon for an abnormally large number of students to apply for training in a "popular" occupation and ignore other occupations with better employment opportunities. Situations like this call for skill in guiding and counseling with student applicants.

In many smaller communities, occupations which are a combination of two or more closely related skilled occupations, are quite common. Some typical examples are:

Printer and pressman
Painter and paperhanger
Sheetmetal and ornamental iron worker
Electric motor and appliance repairman
Bricklayer and tile setter
Machinist and welder

Such occupations present certain difficulties in preparing forms and training plans, particularly in typing long occupational titles and code numbers in short spaces provided.

In designating occupations with dual objectives, coordinators should select and use the predominant occupation if possible. In preparing training plans, the predominant occupation can be used as the training objective of the student, and the dual nature of the training to be provided can be noted on the reverse side under "Schedule of Work Experiences".

NOTE: A combination of two or more unskilled or semi-skilled occupations does not necessarily constitute a "skilled" occupation or an approvable occupation for industrial cooperative training.

When students are placed in unlisted occupations which unquestionably meet all criteria for approval, the occupation will be approved "automatically" with the approval of individual training plans.

In cases where there is an element of doubt as to the eligibility of an occupation, the coordinator should make sure the occupation is approvable before placing a student in it. Since the responsibility for making such a decision is vested in the Division of Vocational Education, it will be well for the Coordinator to secure written approval from the Vocational Industrial Education Office.

In order to facilitate this procedure, a special mimeographed form has been prepared and will be made available to coordinators requesting it. A copy of this form may be found in the appendix.

Particularly Hazardous Occupations

In selecting occupations, it is necessary to comply with certain State and Federal laws regulating labor and the employment of minors. Occupations which have been declared hazardous -- such as those involving the operation of power-driven woodworking machinery, the operation of motor vehicles, and working with certain power-driven hoisting apparatus. A fuller explanation of hazardous occupations is contained in the Digest of Labor Laws found in the Appendix.

On occasions, employers of student-learners in Industrial Cooperative Training programs have failed to comply with certain Hazardous Occupations Orders. In some instances, exemptions are provided for the employment of student-learners, less than 18 years of age, provided certain conditions are met. These conditions for exemptions for student-learners

apply only to Orders No. 5, 8, 10, 12, 14, 16 and 17 and are explained in the Appendix.

In nearly all cases, non-compliance with these Orders is unintentional and coordinators are urged to assist the employer in avoiding future violations in every way possible.

Officials of the Wages and Hours and Public Contracts Division of the U. S. Department of Labor have indicated that a letter similar to the sample in the Appendix would offer protection to the employer and clear the coordinator of any breach of responsibility in instances where compliance with the law might be checked.

Accordingly then, we are recommending use of the same or similar letter, page 142, to employers engaging in interstate commerce who employ students under 18 years of age in any of the seven hazardous occupations mentioned above. It must be remembered that in addition to the letter, a valid Training Plan for each student must also be in the files of the employer.

Prohibited Occupations

The coordinator should avoid selecting occupations for which the State has set up entrance and certification requirements -- such as high school graduation -- which makes it difficult for high school students to earn credit for part-time experience gained prior to graduation. Embalming, beauty shop operation, barbering, and manicuring are examples of this type of occupation.

VI. SELECTION OF TRAINING STATIONS

Factors to Consider

The training station is the store or shop where the student receives his practical work experiences. The employer is the person associated with the training station who hires the student, approves his training plan, and supervises his on-the-job training. Frequently, supervision of the student's work is delegated by the employer to a subordinate, such as a foreman or experienced employee. Such a person is usually referred to as a training sponsor and is the one with whom the coordinator confers in correlating the student's related studies and work experiences.

The chief factor in selecting a particular training station in any particular occupation is the attitude of the employer and his employees toward the cooperative training plan and their willingness to provide well-rounded work experiences. The employer must understand that the student-learner is to be transferred from one job process to another upon reaching the proficiency level required for satisfactory performance in the occupation. The purpose of this rotation is to provide well rounded training for the student-learner. The responsibility of the employer goes much farther than merely providing the student-learner with a job. In addition to the above, there are several other factors which should influence the coordinator in placing students in a particular training station.

1. Respectability and responsibility of the employer.
2. Training equipment available.
3. Competent employees.
4. Volume of business.
5. Variety of work available for training.
6. Wages to be paid student-learner.
7. Company policies toward student-learner.
8. Standards of workmanship to be met.
9. Degree of specialization required.
10. Employer-employee relationships existing.

Undesirable Stations

It is not necessarily true that because a shop is a large one doing a large amount of work, it is the most desirable training station. If the employees work on a piece-rate basis, and no special training facilities are set up, the beginning employee may receive very little training. It may be a case of the student-learner having to "steal" his trade knowledge. Usually if

employees work on a piece-rate basis, their attitudes toward training beginners is not the best. Each training station should be studied thoroughly before placement is made. All prospective places of employment must meet with the approval of the general advisory committee.

Training stations located remote from the community, and those located in unsavory or disreputable sections should be avoided. The State prohibits the employment of minors in places of business located in the same building with, or adjacent to, a brothel or place where alcoholic beverages are sold.

SUPERVISED STUDY

VII. PLACEMENT OF STUDENTS

Placement involves two things: the selection of a particular student by the employer, and the working out of the conditions and plan under which the student is to receive training. These conditions and plan, worked out by the coordinator and employer, are incorporated in the Cooperative Training Plan which will be explained later.

Standards of Student Placement

In working out a plan of training, the coordinator must have clearly in mind the standards which have been set up in this State on the employment of industrial cooperative students. Standards pertaining to several conditions of employment are given below:

Hours - The time a student-learner spends in employment shall not be fewer than 20 nor more than 25 hours per school week. Employment on Saturdays and holidays is optional with the student and employer and is considered "work" instead of supervised training.

Wages - Student-learners shall receive a fair wage for useful work done while undergoing training. The monetary wage rate for beginning student-learners should be comparable to that paid other beginning employees in the same occupation in the community.

There is no maximum wage set for student-learners, but employers should be cautioned against setting the wages of one student inordinately higher than those received by the average member of the class. Aside from creating a certain amount of dissatisfaction on the part of other students, excessively high wages may cause the employer to feel that he must receive the maximum amount of production work from the student and thus hinder the student from being progressed to newer types of work experiences throughout his training period.

Wage Adjustments - Any student-learner who is making satisfactory progress on the job is entitled to a raise in wages at specified intervals. Since it is unlikely that the employer and coordinator can anticipate economic conditions a year or two in advance, the amount of salary raise must be left to the integrity of the employer rather than stipulated in the training plan.

Length of Training - The length of the training period must be two school years, with certain exceptions which the local advisory committee may deem it advisable to make in the cases of a limited number of senior students who possess above-average qualifications.

Probationary Period - Probationary periods -- usually of 30 days duration -- are recommended as protection to both the student and employer. Probationary periods shall not be longer than 60 days.

Placement Activities

Instructions to Students - Before the formal opening of school or during registration week, there are several methods of providing worthwhile instruction to students who have been accepted as being mentally and physically fit to enter the program. One good method is to call the students together for daily one-hour class sessions in which they study and discuss such topics as occupational opportunities, job classifications, employer-employee relationships, local school policies, and methods of approach in applying for a job. Most high school students know very little of the industrial world. These studies are intended to prepare them for entrance into a new environment.

Application Forms - Practically all firms of any size make use of formal employment applications. These, in many instances, are perplexing, even to an adult. Students who are to be placed in employment should be given preliminary instructions in filling out such forms correctly. They should have readily available such personal data as are usually called for in employment applications: social security number, color of hair and eyes, height, weight, educational background, previous positions held (with dates), mother's maiden name, and the like. To anticipate the majority of questions to be answered facilitates answering the questions with a minimum of delay and errors. If possible, practice in filling out application blanks should be afforded students. The coordinator should instruct the student on approved job application procedures.

Introduction of Students - Coordinators are frequently confronted with the question of whether to send the student to interview an employer or to go with the student and introduce him to the employer. There are advantages and disadvantages to both procedures, and the coordinator should decide, from his knowledge of the student, which procedure to use in each case.

Employer's Selection of a Student - Employers who desire to train part-time students are permitted to select from the applications those students whom they wish to interview; they should set the time and date for each interview, and the coordinator should then notify each student when to see his prospective employer. The coordinator should assist the employer in his selection by furnishing all available information about each student but should refrain from giving his personal recommendations or arbitrarily assigning a student to work in a certain training station. It is the employer who should pick the student for the job, not the coordinator. The reason is obvious.

VIII. TRAINING PLANS

One of the chief virtues of cooperative training is the fact that the training -- both practical and theoretical -- is centered around an organized plan. The plan for training each student must be worked out by the coordinator and employer before the student begins work or immediately after placement. It must be approved by the local advisory committee and the Director of Trade and Industrial Education before the student is considered a bona fide trade and industrial student. Training plans are executed in triplicate and sent to the Area Supervisor who reviews and forwards them to the State Office where the original plan is filed. The second and third are returned to the coordinator who places one with the employer for his reference in carrying out a well rounded training program and the other copy is placed in the student's file.

Explanation of Training Plans

The Cooperative Training Plan (Form VIE-010) is designed to fill a three-fold purpose: (1) to serve as a guide to the coordinator and employer in providing the student-learner with both practical work experiences and technical information related to his occupation; (2) to provide a record of the student's progress on the job; and (3) to provide a record of his related studies. A sample of this form is shown in Figure 5, and an explanation of the reverse side is given below and in Figure 6:

Schedule of Work Experiences -- The coordinator, with the assistance of the employer, lists all the various types of jobs or work experiences in which the student-learner may be reasonably expected to engage during his training period. Although it is practically impossible to plan a definite sequence of work experiences months in advance and adhere strictly to the schedule, it is nonetheless imperative that some sort of logical and systematic method of listing the work experiences in the training plan be followed. The three most satisfactory methods of listing work experiences are explained below:

1. Jobs or work experiences may be listed in order of difficulty, from the easiest to the most difficult. Some occupations have a sort of traditional progression order for learners, but in others it is difficult to follow this system. Auto body repairing, meat cutting, and electric motor repairing are examples of occupations in which the jobs may be listed fairly well in order of difficulty.

2. Jobs in occupations having several distinct and more or less independent units of work are listed, as a general rule, according to the type of work done or the machines and tools used. Examples of occupations of this type are printing, auto mechanics, and machine tool work.

3. Jobs for certain occupations can be listed more conveniently according to a "production" order, that is, according to a more or less definite sequence of processes or operations customarily followed in the production of a commodity. Examples: sheet metal work (from laying out to final assembly), and carpentry (from foundation to inside trim work).

Course of Study -- The course of study is to be made out by the coordinator -- with possible suggestions from the employer -- and should consist of topics or subjects of information related to and paralleling the work experiences listed in the first column. In general, the informational topics listed concern tools, equipment, and materials of the occupation; related mathematics, science, and drawing; and operating principles and processes related to the occupation.

Record of Work -- This column takes the place of a separate form for recording the job progress of the student-learner and is to be used by the coordinator for recording the type and frequency of the work experiences of the student in any manner which he chooses. The system of recording job progress illustrated on the reverse side of Figure 5 is one frequently used by trade and industrial teachers and is explained as follows:

Each time a student lists on his daily Student's Job Report a particular type of work which he performed with assistance or under close supervision, the coordinator marks one side of a square in the column opposite the proper job or work experience in the first column. He continues to complete the square or squares from time to time as the same job appears on the student's daily report. When the student is able to do the job by himself and without close supervision, the coordinator marks X as illustrated. Subsequent jobs of the same type may be indicated by ✔ or in any other manner preferred by the coordinator. Jobs which, in the opinion of the employer, have been mastered by the student may be indicated in some suitable manner, such as "OK".

By keeping this record of job progress accurate and up to date, the coordinator or any other interested person will be able to determine at a glance what jobs listed in the training plan the student has gained experience in, how many times he has been assigned a particular job, which jobs he has mastered at any point in his training, and the jobs in which he has yet to receive instruction. The coordinator can also determine from this record which topics of related instruction the student needs to study in his related subjects class.

Record of Studies -- In this column, the coordinator or related -subjects teacher is to indicate in any manner he sees fit the student's performance on any type of assignment or test related to a topic or subject of information included in the course of study. For example, in the illustration, the letters A, B, C indicate grades. From this record the coordinator is able to determine how closely the work experiences and related studies of the student are correlated and where additional lesson assignments should be made.

TEXAS EDUCATION AGENCY
Division of Vocational Education
Industrial Education

Time of day related class meets 8:30 A. M.

Certificate Awarded _____ 19____

Grade 11

Age 16

Cooperative Training Plan

This training plan is to (1) define clearly the conditions and schedule of training whereby student Bill Lawson is to receive training as a (an) _____ Refrigeration Mechanic 5-83.941 and (2) serve as a guide to the cooperating parties: the Delta Electric Service Company (Company) and the New Austin Public Schools, in providing the student with opportunities for training in the basic skills of the occupation and the technical information related to it. In order that a systematic plan which provides for well-rounded training can be followed, a schedule of work experiences and a course of study paralleling it have been worked out and agreed upon by the employer and representative of the school. They are listed on the reverse side of this page.

The student agrees to perform diligently the work experiences assigned by the employer according to the same company policies and regulations as apply to regular employees. The student also agrees to pursue faithfully the prescribed course of study and to take advantage of every opportunity to improve his efficiency, knowledge, and personal traits so that he may enter his chosen occupation as a desirable employee at the termination of the training period.

In addition to providing practical instruction, the employer agrees to pay the student for the useful work done while undergoing training according to the following plan:

1. The beginning wage will be $ .50 per hour for 20 hours per school week, which amount is approximately 33 per cent of that paid competent full-time employees in the same occupation in the community.

2. A review of the wages paid the student will be made jointly by the employer and coordinator at least once each semester for the purpose of determining a fair and equitable wage adjustment consistent with the student's increased ability and prevailing economic conditions.

The training period begins the 4th day of September, 1964 and extends through May, 1966. There will be a probationary period of 30 days during which the interested parties may determine if the student has made a wise choice of an occupation, and if the training should be continued.

This plan has been reviewed and recommended by the Local Advisory Committee. It may be terminated for just cause by either party.

Approvals:

Bill Lawson (Student)

J B White, Mgr. (Employer or Representative) Delta Electric Service Company

Mrs. J. J. Lawson (Parent or Guardian)

J. H. Green (Teacher-Coordinator)

John West (Chairman, Local Advisory Committee)

D Allen Director Industrial Education

TEA-362-6100-1917-B255

(Over)

VIE-01C

Figure 5.

SCHEDULE OF WORK EXPERIENCES	RECORD OF WORK	COURSE OF STUDY	RECORD OF STUDIES
Remove compressor units from cabinets.	□□□[x] ✓✓	Types and uses of various cleaning solvents.	BCB
Clean and condition cabinets. OK	□□[x]✓✓✓	Information on use and care of hand tools and shop equipment.	ABBA
Remove and replace belts. OK	□□□[x]✓✓✓✓✓		
Dismantle compressor units.	□□□[x]✓	Types and uses of solders and fluxes: hard and soft solders.	BB
Clean and inspect parts.	□□□		
Clean and dehydrate compressors.	□□I	Types and uses of lubricants.	BA
Clean and dehydrate condensers.	□□□L	Procedures for purging, cleaning and recharging various types of units.	BCA
Remove, repair and replace: valve plates, service valves, bearings, and seals.		Types and operation of refrigerator seals, pistons, and valves.	A
Replace and align motors.	□□□[x]✓		
Install and adjust: Thermostatic, pressurestatic, and combination switches; Wiring control circuits; Relays and starting switches.	L	Physical laws of heat.	BCBC
		Physical laws of liquids and gases.	BABC BBA
		Principles of refrigeration: heat of vaporization, heat of absorption, transmission of heat, insulation.	BAB
Remove, dehydrate, recondition, and install: flooded and dry expansion evaporators.	□		
Charge and discharge various types of systems.	□	Refrigeration cycles: expansion systems; absorption systems.	A
Test for refrigerant leaks.	□□L	Operation of thermostatic and pressurestatic controls; solenoid, float, and expansion valves.	
Purge various types of systems.	□I		
Install, test, and service various types of commercial units.		Types, sizes, characteristics, and operating principles of refrigerator motors: split phase; repulsion-induction.	
Test capacitor and protector wiring.			
Test and repair motors (except rewiring).		Procedures for testing motors.	
Diagnose troubles in various types of units.		Types and characteristics, of various refrigerants.	
		Procedures for testing refrigerant leaks.	AC
		Reading refrigerator electrical wiring diagrams.	
	(Reverse side)		

Use class time appearing on organization report

TEXAS EDUCATION AGENCY
Division of Vocational Education
Industrial Education

Time of day related class meets _____

Certificate Awarded (Leave blank) 19___

Grade ___ Use 11 or 12.

Age ___ 16 or over

Cooperative Training Plan

Use titles in "Occupations approvable for I.C.T."

This training plan is to (1) define clearly the conditions and schedule of training whereby student (Name used on official school records) _____ is to receive training as a (an) _____ Code No. → _____ and (2) serve as a guide to the cooperating parties: the (Name used on signs, letterheads, etc.) _____ (Company) and the (City only) _____ Public Schools, in providing the student with opportunities for training in the basic skills of the occupation and the technical information related to it. In order that a systematic plan which provides for well-rounded training can be followed, a schedule of work experiences and a course of study paralleling it have been worked out and agreed upon by the employer and representative of the school. They are listed on the reverse side of this page.

The student agrees to perform diligently the work experiences assigned by the employer according to the same company policies and regulations as apply to regular employees. The student also agrees to pursue faithfully the prescribed course of study and to take advantage of every opportunity to improve his efficiency, knowledge, and personal traits so that he may enter his chosen occupation as a desirable employee at the termination of the training period.

In addition to providing practical instruction, the employer agrees to pay the student for the useful work done while undergoing training according to the following plan:

Use cents per hour if possible

1. The beginning wage will be $_____ per _____ for _____ hours per school week, which amount is approximately _____ per cent of that paid competent full-time employees in the same occupation in the community.

Not less than 20 nor more than 25 per school week

Do not leave blank.

2. A review of the wages paid the student will be made jointly by the employer and coordinator at least once each semester for the purpose of determining a fair and equitable wage adjustment consistent with the student's increased ability and prevailing economic conditions.

Date student was placed on job

The training period begins the _____ day of _____, 19___, and extends through (January or May) _____, 19___. There will be a probationary period of _____ days during which the interested parties may determine if the student has made a wise choice of an occupation, and if the training should be continued.

Check for accuracy

Do not leave blank

This plan has been reviewed and recommended by the Local Advisory Committee. It may be terminated for just cause by either party.

Approvals:

The title of the person signing for the company should be supplied

_____ (Student)

_____ (Employer or Representative)

_____ (Parent or Guardian)

_____ (Teacher-Coordinator)

All signatures should be in ink

_____ (Chairman, Local Advisory Committee)

_____ Director Industrial Education

NOTE: The original and two carbon copies of each training plan are to be sent to your area supervisor.

TEA-362-6100-1917-B255

(Over)

VIE-010

Figure 6.

SCHEDULE OF WORK EXPERIENCES	RECORD OF WORK	COURSE OF STUDY	RECORD OF STUDIES
SUGGESTED TERMINOLOGY			
Work experiences in this column are "doing" activities which the student is expected to learn in a two-year period. Each job or operation (not names of "units") should be in the "verb form" and should be worded so as to complete the following: "The student will learn to---"		This column should contain technical subjects or topics directly related to the work experiences listed on the left. Each subject or topic should be worded so as to complete the following: "The student will study---"	
SUGGESTED FORM			
Name of unit (if used) Jobs or operations to be learned Additional lines		Name of unit or subdivision Technical subject or topic Additional lines	
THINGS TO AVOID			
1. Words and phrases with no clear relationship to work experiences or studies			
Hand tools Carburetors Lathe work Drilling		Mathematics Engine lathes Transformers Electricity	
2. Items not actually (or not stated as) work experiences or instructional topics			
Customer relations Shop safety Employer-employee relations Observe good trade practices and procedures		How to chuck work in a lathe Drilling cast iron Use of hand tools Learn about company organization, policies and operation	
3. Poorly worded items (better wording in parentheses):			
Experience in learning to operate vacuum tube tester (Test vacuum tubes) Assist employer and mechanics in keeping shop and tools neat and orderly (Care for shop, equipment and tools) Do battery testing work (Test batteries)		Study of the methods and procedures for aligning IF transformers (Principles of IF transformer alignment) How to recognize and classify different kinds of woods (types and characteristics of wood materials)	
4. Broad areas which are essentially a trade themselves:			
Overhaul engines (for automobile mechanics)		Procedures and theory for testing and repairing radio receivers	

IE-12-53-100

IX. CLASSROOM FACILITIES

Minimum Requirements

The local school is expected to furnish adequate facilities for conducting the related studies of cooperative students. The classroom should contain study tables and chairs, bookcases, chalkboard, bulletin boards, filing cabinets, and a desk for the teacher-coordinator. An adequate supply of instructional material, consisting of reference books, manuals, bulletins, charts, course material, and the like, for each occupation in which training is offered must be furnished by the school. The floor plan of a classroom of average size and containing minimum equipment is shown in Figure 7. The equipment for such a classroom should include:

Tables and chairs to accomodate class members.

One four-drawer letter-size file cabinet.

One cabinet for students' notebooks and completed assignments.

One book case (with lock) for reference books.

One teacher's desk.

One typewriter.

One large chalkboard.

Cork bulletin board (as large as is consistent with available wall space).

One drawing table and stool.

One special case for pamphlets and magazines. (See Figure 9).

Additional Facilities

If adequate floor space is available, glass display cases or cabinets for keeping students' class projects will add materially to the atmosphere of the classroom and the effectiveness of instruction. Experimentation plays an important part in teaching many of the technical aspects of a trade or occupation, and coordinators are urged to include simple experiments in their related instruction whenever possible to do so. It is suggested that a small enclosed area be provided for such activities. Such a booth should contain at least 80 square

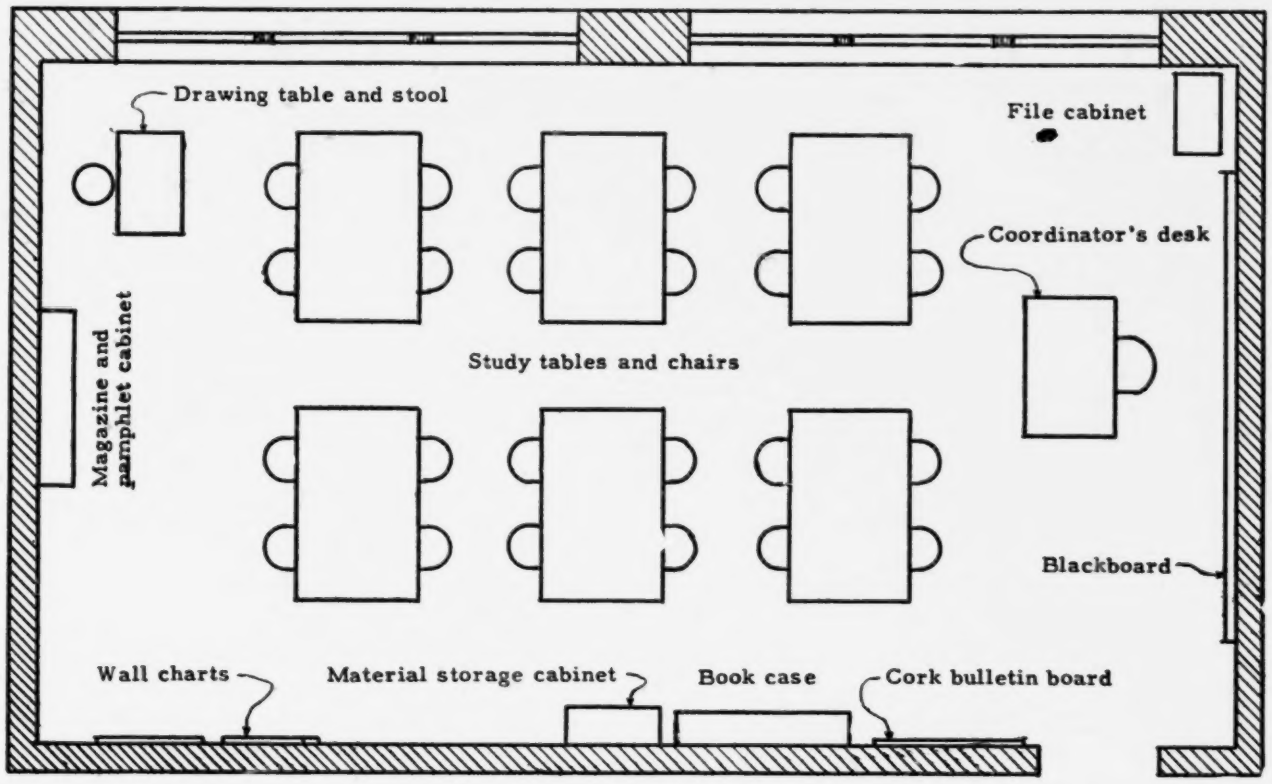


Figure 7. Typical related subjects classroom layout.

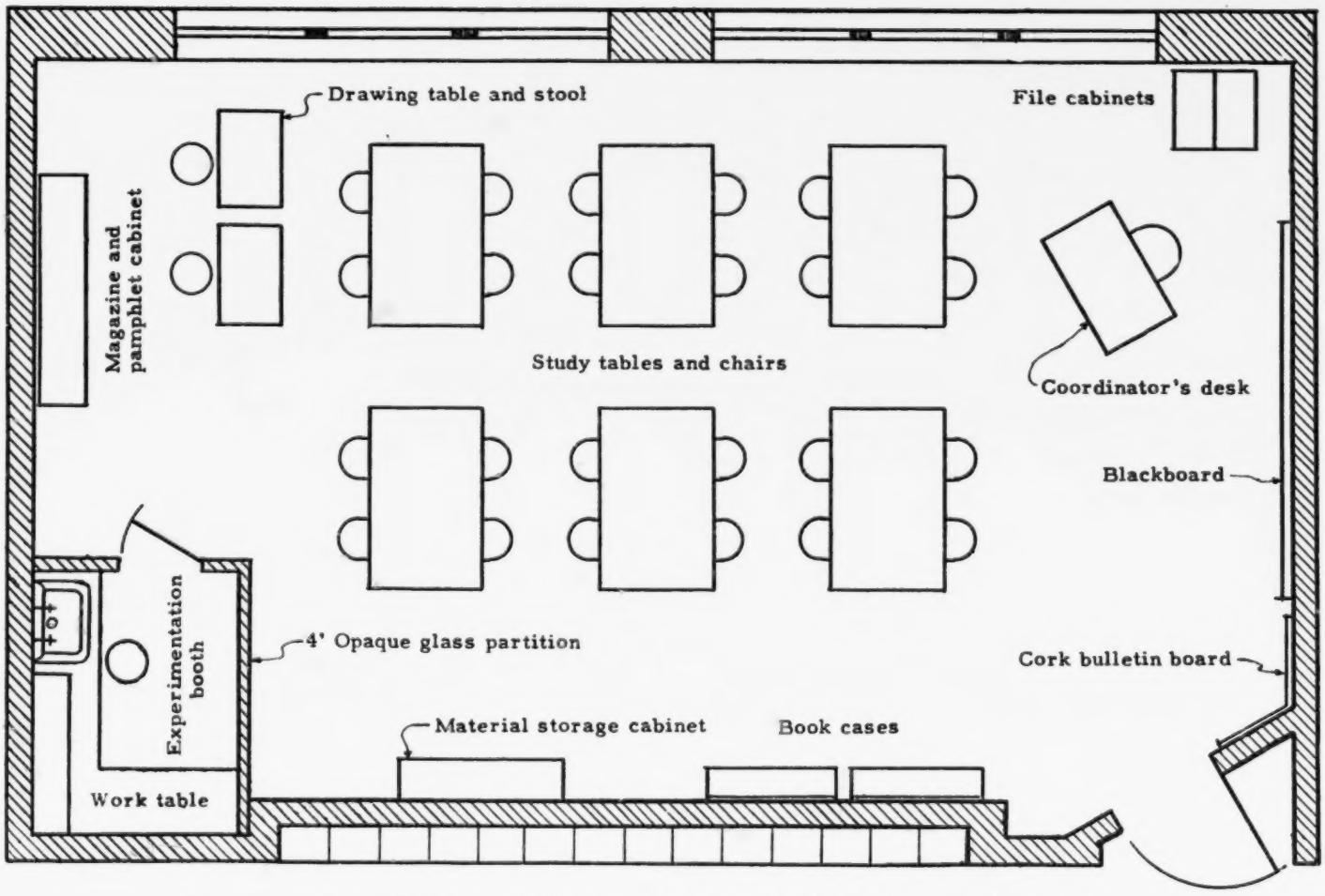


Figure 8. Ideal related subjects classroom layout.

feet and should be provided with water and electrical service outlets. A floor plan of a large related subjects classroom with an experimentation booth is shown in Figure 8.

Maintenance

It must be remembered that the effectiveness of the program is dependent upon class organization and the opportunity a student has to study instructional material related to his occupation. Because of this fact, the local school should set aside an adequate fund each year for the purchase of supplies and study material.

This fund will have to be larger the first year than for succeeding ones. It is estimated that ten dollars per student the first year and five dollars per student each succeeding year will be sufficient. The budget must be set to conform to a plan that will maintain the program in accordance with standards set by the State Board for Vocational Education.

Classroom Library

The library of an industrial cooperative classroom consists of trade books, shop manuals, trade literature, manufacturers' literature, and all other printed matter which may be used by the students in pursuing the course of study set up for them. Such material should be grouped according to the various occupations of subjects of technical information.

In addition to this material related specifically to trades or occupations, the library should contain several books on such subjects as economics, basic science, human relations, safety, and the like, which may be used as references for class discussions on topics of common interest and importance to all the class members. All books should be kept in a case which can be locked when the class is not in session. Magazines, pamphlets, and trade journals should be grouped according to subject matter and may be kept in any manner suited to the equipment of the room.

Every coordinator should have his own "professional" library consisting of books and bulletins on vocational education. A suggested list of professional books is contained in the Appendix.

Classroom and Office Files

It is recommended that the coordinator have at least four file drawers available

for his use; suggested contents of each drawer are given below. The manner in which a coordinator collects and files materials which are useful in operating his program reflects, to a great extent, his efficiency as a coordinator.

FIRST DRAWER

Section 1. Individual Student Folders (active)

Section 2. Individual Student Folders (inactive)

Each student's individual folders should contain, among personal data, the following:

1. Application for Admittance into Industrial Cooperative Program
2. Permanent Record Card (VIE-011)
3. Cooperative Training Plan
4. Employer's Periodic Ratings
5. Student's Daily Job Reports

SECOND DRAWER

The second file drawer should contain material used by the coordinator himself, and should have file guides bearing the following suggested headings:

Advisory Committee, Annual Reports, Bibliographies, Bulletins (Memos), Catalogs, Closing Reports, Coordination Reports, Correspondence, Extension Classes, Forms (State and Local), Group Discussions, Handbooks and Manuals, Instructional Material Lists, Inventories, Labor Laws, News Letters, Organization Reports, Prospective Lists (Student; Employers), Publicity, State Plan (Sec. VI), Surveys, Teacher Training Data, Visual Education, Vocational Industrial Clubs.

THIRD DRAWER

The third file drawer should contain folders for the various courses of study used in the related subjects classes. Daily assignments are selected from these folders and distributed to the students at the discretion of the coordinator. Assignment sheets completed by the students should be returned to the proper place each day so as to prevent the files from becoming confused. Courses not being used at the time should be segregated in a back section of the drawer.

FOURTH DRAWER

The fourth file drawer is reserved for miscellaneous items not previously mentioned which may be used from time to time during the school year.

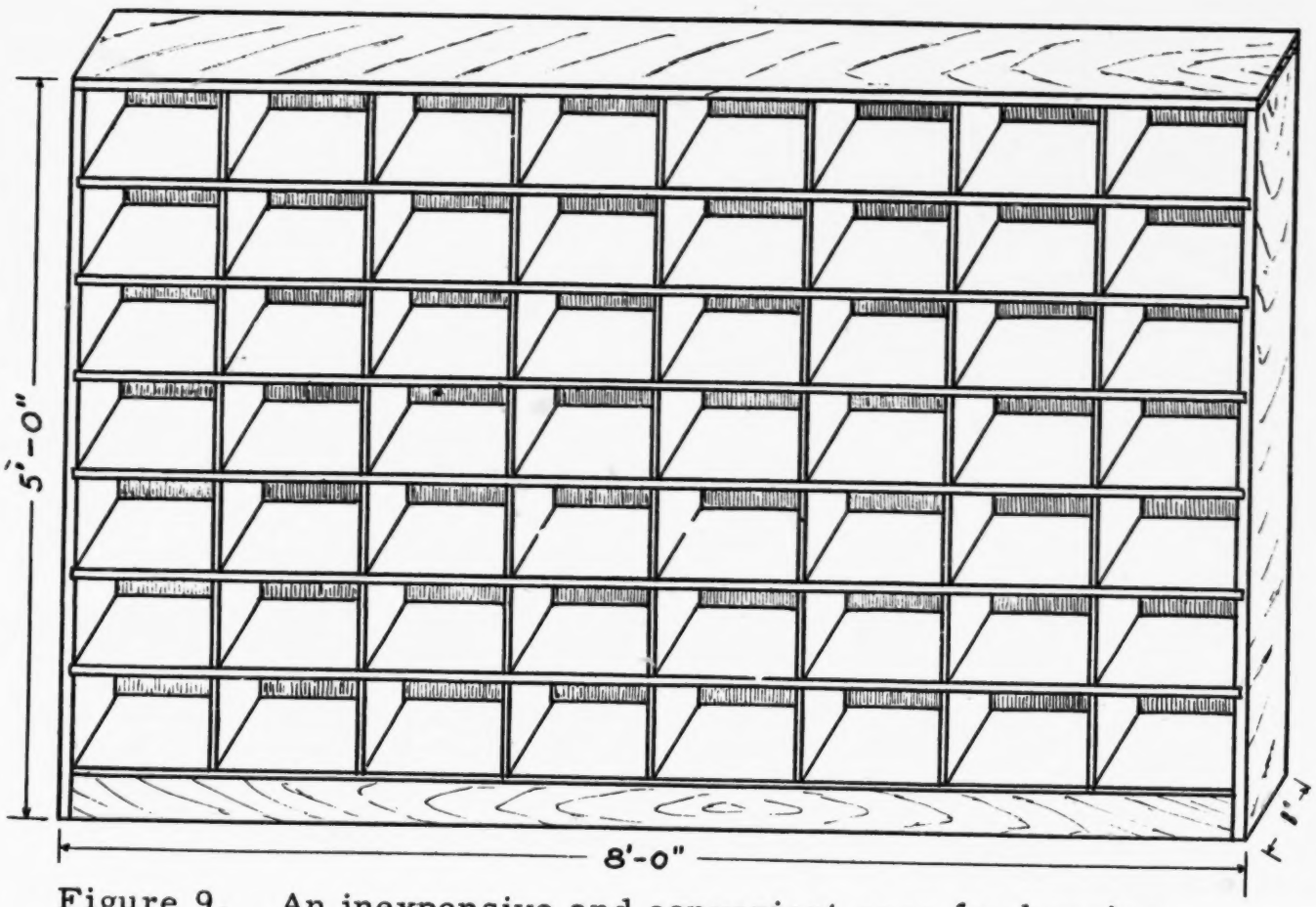


Figure 9. An inexpensive and convenient case for housing small pamphlets and trade literature.

X. RELATED SUBJECTS CLASS

Objectives

The objectives of related subjects classes for industrial cooperative programs are: (1) to provide technical instruction directly related to the daily work experiences of students; (2) to provide a background of technical and auxiliary information that will enable the student-learner to advance beyond mediocrity in his chosen work; (3) to create desirable attitudes on the part of the student toward work, school, and society; and (4) to develop latent leadership abilities of the student.

Problems

Providing related instruction that will attain the above objectives is no easy task. Because of the diversity of occupations included in the program and the difficulty of locating a teacher-coordinator with experience in all these fields of work, related instruction is consequently a phase of cooperative training which requires regular, detailed attention and constant efforts to improve it.

Previous high school teaching experience is desirable and, in fact, a requirement for teacher-coordinators; yet this alone does not necessarily qualify a person as an efficient related subjects teacher. The efficient teacher-coordinator must possess an insatiable curiosity about all industrial procedures and practices coming within the scope of his training program. He should make conscious effort to acquaint himself with the basic technical information surrounding the occupations of his students, particularly those in which he has had little or no practical experience. To provide the mere physical requirements of a class -- reference material, courses of study and the like -- is not enough; without the ability to assist students by interpreting related material and correlating it with accepted industrial practices, the teacher-coordinator has little justification for his being employed in any other capacity than study hall keeper.

Class Schedules

The Texas State Plan for Vocational Education specifies one period of related instruction each school day for industrial cooperative students in schools having 60 minute class periods. In schools using 45 minute class periods, each student will attend class two consecutive periods each day.

Students under the supervision of one full-time teacher-coordinator are to be grouped as first- and second-year students, each group or class meeting at

different periods. No definite order or period is specified for these two classes, but it is suggested that they be scheduled consecutively. Following is a sample half-day schedule for a teacher-coordinator:

Period	Hour	Class
1.	9 - 10	First year group
2.	10 - 11	Second year group
3.	11 - 12	Conference

Students' Job Reports

Each morning, after the usual preliminaries of opening the class, students should be required to fill out their daily job report form, shown in Figure 10. This report summarizes the major jobs or activities performed by the student during the preceding afternoon. When the student has completed one sheet (covering a week's work) it should be placed in his individual folder. Data from these reports are used in making out the semester's Closing Report, and for making entries on the student's permanent record each six weeks. They are also used in guiding the coordinator in making daily lesson assignments which are discussed below. The coordinator should make frequent -- if not daily -- references to each student's work report in order to obtain information that will assist him in making daily lesson assignments. The accumulated job reports of the student should be kept for the duration of his training period.

Student Lesson Assignments

Assuming that adequate reference material and courses of study are available for use in the various occupations, the teacher-coordinator is confronted with the problem of selecting a suitable lesson assignment for each student. This is no easy task, since there are several factors which enter into the judicious choice of a topic of related instruction.

First, the assignment should be directly related to the student's daily work on the job. In many occupations, especially those of the service type, it is difficult to foretell the types of jobs or work experiences in which the student will engage for a week or even a day. It is quite common for a student to engage in two or three different jobs during one afternoon. Close correlation between work experiences and related studies, in such cases, is practically impossible. The coordinator must see that the student's assignments are related to the general type of work the student is doing and the most frequent types of jobs he performs over a period of time. The coordinator has two basic methods of securing this information: through plant visitation and from the student's daily job report.

STUDENT'S JOB REPORT

Student: Bill Lawson Training Station: Delta Elect. Serv-

Week Beginning: March 22 Occupation: Refrigeration serv.

Daily Work Activities To be filled out each class period following an afternoon's work.	Helped on job	Did job by self
Monday Replaced two belts (service calls)		✓✓
Removed unit from Frigedaire		✓
Took down motor for new bearings		✓
Replaced motor bushings Hours worked: 5	✓	
Tuesday		
Helped install walk-in box at		
White's Cafe -	✓	
Hours worked: 4 1/2		
Wednesday		
Cleaned two used cabinets		✓
Replaced door gaskets		✓
Hours worked: 4		
Thursday Tore down compressor -	✓	
Washed + cleaned parts -		✓
Installed new rings, seals,	✓	
and valves. Hours worked: 4 1/2	✓	
Friday Went on service calls with		
boss. Pumped down + recharged		
two compressors	✓✓	
Hours worked: 4		

Wages received this week: $ 12.10 Hours worked this week: 22

Figure 10.

The second fact to be considered in making daily lesson assignments is the individuality of the student. The majority of individuals are able to secure information from the printed page by answering questions and problems and doing research. Some, however, are more effectively reached through other methods of instruction. The teacher-coordinator should attempt to learn the peculiarities and characteristics of each of his students and choose the most effective methods of instruction at his command.

Another factor in making lesson assignments is that of interest. Without a doubt, it is extremely monotonous and even boring to the student to follow the same routine and work on the same type of assignment every day. Written assignment sheets will be used in a majority of cases, but the coordinator should try to make the student's classroom work more varied and interesting through occasional use of such teaching aids as audio-visual devices, experiments, project building, and the like.

Supervised Study

The supervised study plan, such as used in industrial cooperative classes, is the only practical method of providing related instruction to a heterogeneous group. In a sense, it is a modification of the familiar correspondence study plan in which each student works individually on a correspondence course prepared by publishers of trade and technical textbooks. The supervised study plan has several distinct advantages which make it superior to the correspondence study plans in providing technical instruction specifically related to a given trade or occupation.

ADVANTAGES OF THE SUPERVISED STUDY PLAN OVER THE CORRESPONDENCE STUDY PLAN

1. Utilizes flexible courses of study which permits a choice of lessons more closely related to the daily work experiences of the student-learner.

2. Provides courses of study built or adapted to fit local procedures and practices.

3. Provides a teacher-coordinator with sufficient understanding of trade practices to assist the student on problems too difficult for him to solve alone.

4. Provides additional media of learning, such as audio-visual devices, experimentation, and project building.

5. Permits immediate checking and grading of students' written work.

6. Presents more opportunity for student motivation.

In supervising the study of his several class members, the teacher-coordinator has several duties to perform. Merely opening and closing the class and maintaining order are not sufficient. Duties of the teacher-coordinator in supervising related studies include these:

1. To assign (or assist students in selecting) an appropriate daily lesson.

2. To assist students in interpreting the questions and problems.

3. To offer suggestions as to sources of information.

4. To give illustrations, demonstrations, analogies, and applications of difficult technical topics.

5. To assist the students in various phases of writing and problem solving: technical terms, punctuation, spelling, mathematics.

6. To offer encouragement and to inculcate on his students an appreciation of thoroughness, accuracy, and neatness in their related studies.

In order to discharge these duties properly the teacher-coordinator must constantly circulate among his class members. He cannot supervise while sitting at his desk or engaging in some other type of activity. The fact that he makes himself readily available encourages students to consult him on matters pertaining to their studies which they would ignore if the teacher-coordinator appeared to be preoccupied. Some students will request assistance infrequently, while others will ask for aid too often; for this reason, the teacher-coordinator must take care to avoid devoting too much of his time to a few students and neglecting those who seldom ask for assistance.

Group Discussion

A vital part of the cooperative students' time in the related subjects class is devoted to group discussions of topics of interest and importance to the entire group. Subjects bearing on employer-employee relations, job ethics, personality development, economics, safety, and the like, are sufficiently important to merit a sizable portion of the weekly time allotment. Planned discussions in which students take the lead (under guidance of the teacher-coordinator) should be conducted for ten to fifteen minutes each class period or for one entire period each week. Classroom activities of this type, in addition to the

information they put over, are conducive to the development of leadership among the class members. Suggestions on the techniques of planning and leading classroom discussions are contained in a separate State publication, A Manual for Group Discussion Leaders.

Grading Students' Work

Since the inception of cooperative training in diversified class groups, one of the most trying problems confronting the teacher-coordinator has been that of checking or grading the students' written work promptly and accurately. Some teacher-coordinators in the past have maintained that it could not be done; some contended that "spot" checks would suffice, while others made conscientious though inadequate efforts to check each daily assignment thoroughly in the two or three hours per week which they had budgeted for the purpose.

There are numerous reasons why failure of the teacher-coordinator to check or grade every page of written work thoroughly will destroy the effectiveness of his related instruction. Students soon become aware of this practice and consequently become less inclined to do their best work in the classroom. Such a practice may even engender lackadaisical work habits that carry over into the students' job performance. Conversely, nothing tends to motivate the student to do his best and take pride in his work more than the knowledge that his work will be checked promptly and accurately, criticized, and the good points complimented by his teacher.

If adequate attention is to be given the matter of checking and grading, two steps are necessary: (1) sufficient time must be budgeted for the purpose, and (2) more extensive use must be made of answer sheets or keys for scoring answers. A suggested weekly schedule (for teacher coordinators) providing sufficient time for grading work is given in Figure 12. The use of answer sheets and objective tests is discussed in the section on Organization of Instructional Material.

Organization Report

The first State Office report on industrial cooperative classes made by the coordinator after his classes have been organized is the Organization Report (IE-14 Co-op). (Shown in Figure 11) It is due not later than two weeks after the opening date of the class in September and again after the opening of the second semester in January or February. A separate form should be executed for each section or class.

Data on this report are required by the State Office in making out an annual

report to the U. S. Office of Education and in computing training costs. Extreme care should be taken to see that the names of the students, the spelling of their names, the occupational titles, and the names of the places of employment are given accurately. Frequently students are known by both their given names and nicknames. It is suggested that the coordinators use the name of the student which is used in the school records. Needless to say this name should be used consistently on all subsequent records and reports. Refer to Figure 11 for sample Organization Report.

Information Desired on Organization Report

Line--City and School: Reports for town operating only one high school should present no problem here; in cities operating more than one school, it is necessary that both the city and exact school be named.

Line--Time of Day Related Class Meets: This is self-explanatory, but it is essential that it be reported accurately.

Line--Starting Date of Class: This date is necessary not only for making reports for auditing, but also for keying organization reports to contracts, and should be accurate. Classes reported at the beginning of the second semester should show the same starting date (in September) as given on the previous semester's reports if they are a continuation of the semester's class, which is true in nearly all cases.

"Planned Closing Date": This cannot always be exact on the organization report but should be given as nearly correct as possible, and should agree with dates on the contract. The same closing date (usually about the last week of May) should be given on both semester reports.

Lines--Length of Course in Weeks: and Total Starting Enrollment: Practically all school years are of 36 weeks duration.

Line--Name of Teacher-Coordinator: This is obvious. If the program is sufficiently large to justify separate related subjects teachers, the coordinator's name will appear on the same line with the teacher's name.

Line--Semester: Check only; either First or Second.

Lines--Name of Student, Grade, Age, Employer, Occupation: The listing of students by name is for statistical purposes. The listing of grade, age, occupation, and employer is for auditing purposes. The State Board has to make certain guarantees to the United States Office of Education regarding the age, sex, and training status of each student, and this information in turn has to be based on that supplied by operating schools. The names of students listed in this table should be alphabetized and, if so arranged, will

VIE--006
(Form IE-14 (Co-op)

TEXAS EDUCATION AGENCY
Industrial Education Division

Organization Report

INDUSTRIAL COOPERATIVE TRAINING

City: New Austin, Texas School: Senior High School
Time of Day Related Class Meets: 8:30 A. M. to 9:30 A. M. Total Hours per Week 5
Starting date of school: September 4, 1964 Planned closing date of school: May 28, 1965
Length of Course in Weeks: 36 Total Starting Enrollment: Male 13 Female 4
Name of Teacher-Coordinator: T. H. Green
Semester: 1st X ; 2nd ;

NAME OF STUDENT	GRADE 11 or 12	AGE	OCCUPATION	EMPLOYER
1. Boys				
* 2. Allen, Ted	11	16	Carpenter	Woods Construction Company
* 3. Banks, Charles	12	17	Projectionist	State Theatre
4. Belknap, Louis	11	17	Baker	R. E. Hall Bake Shop
5. Blakey, Wayne	11	16	Off. Mach. Repair	Brashier's Office Supply
6. Cantrell, Dayle	12	17	Printer	Sherman Printing Company
7. Francis, Donald	12	17	Radio & TV Repair	City Electric Company
8. John, Tommy	11	16	Draftsman	Hardwicke Etter Company
9. Lawson, William	11	16	Refrig. Mechanic	Delta Electric Service Company
10. Owen, Eugene	11	16	Auto Mechanic	Meeks Motor Company
11. Phillips, Jerry	11	16		
12. Stephens, Vestal	12	17	Welder	Hale Manufacturing Company
13. Swan, John	11	16	Machinist	Central Machine Shop
14. Watts, Henry	11	16	Dry Cleaner	City Cleaners
15. Girls				
16. Bailey, Nancy	11	16	Nurse Aide	Memorial Hospital
17. Cantrell, Gayle	12	17	X-ray Technician	St. Joseph's Hospital
18. Dunne, Shirley	11	17	Dental Assistant	Dr. E. E. Johnson
19. Ellison, Sue	12	17	Floral Designer	House of Flowers
20.				
21.				
22. *Last Year Student - Same Occupation				

ADVISORY COMMITTEE

Employers' Names:	Organization or group represented	Official Position
Johnson, Jimmy (Chairman)	Independent Garageman's Assn.	Garage Owner
Smith, Dr. James	Dental Association	Dentist
Williams, Thomas	Building Contractor's Assn.	Building Contractor
Employees' Names:	**Trade or occupation represented**	
Adams, Dorothy, R. N.	Nursing	Hospital Supervisor
Pearson, Alton	Electric Trades	Electrician
Whatley, James	Printing Trades	Printer
Representative of Public:	**Position**	
Jones, Jack R.	Secretary	Chamber of Commerce

This form must be filled out completely and mailed in triplicate to your Area Supervisor, immediately after each class is organized. Forms are in triplicate; send all three to your Area Supervisor. One copy (pink) will be returned for local school files.

What fee, if any us charged members of this class per month none, or per year none?

Approved: Homer K. Brown
~~Local Director~~ or Superintendent

Date September 15, 19 64

Director, Industrial Education

TEA-463-1M-1583-B167

Figure 11.

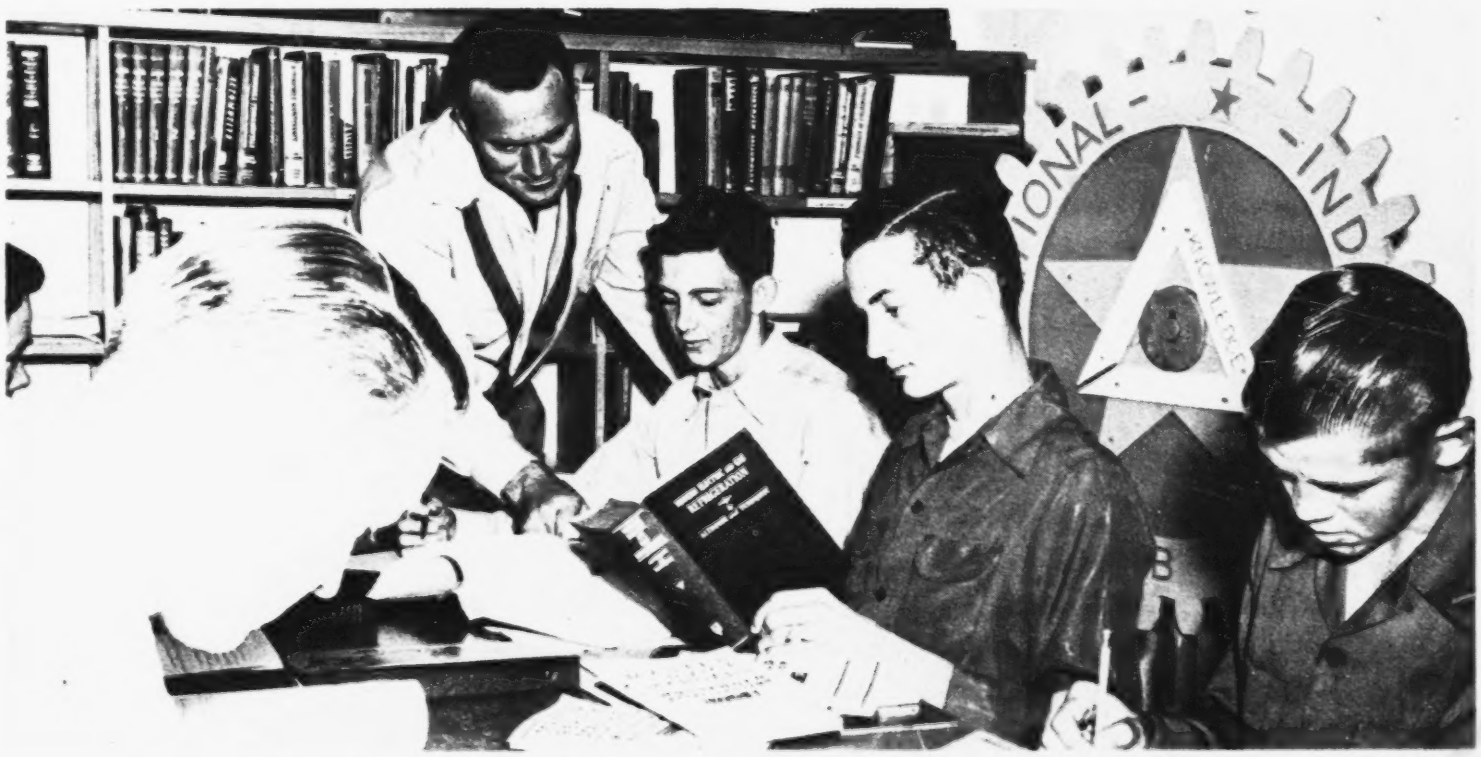
be of material assistance to the State Board for Vocational Education. To distinguish between male and female students, list the boys in one group and follow with the names of girls in the class. Enrollment data by sex is necessary on our annual report.

Students attending class who are unemployed or temporarily unemployed are not considered legitimate trade and industrial students and should not be included in this report unless employment is reasonably certain. In this case, the columns "Employer" and "Occupation" should be left blank so that the proper entry can be made later after the student is placed.

Designations of Occupations (column four) should be consistent. The occupational title should end in a suffix or word which denotes one who, for example, ___er, ___or, ___ist, ___an, ___ic, ___man, ___worker. Indicate students who are "second year" and in the same occupation with an asterisk to the left of his or her name.

Line--Advisory Committee: List committee members, being sure to have equal representation of the employers and employees. Keep in mind that committee members represent a group and not the place of employment or individuals. Owners, managers, superintendents, and foremen are generally regarded as being representatives of the employer group. The individual representing the public (the so-called "neutral" member) should be indicated by the word "Public" in the column headed "Organization or Business Represented".

Line--Fees: If no fee is charged students in a class, which is usually the case, two zeros will completely answer this question.



Study of Directly Related Technical Information

XI. ORGANIZATION OF INSTRUCTIONAL MATERIAL

Type of Material Required

In teaching a heterogeneous group, such as industrial cooperative classes, it is impossible to teach the technical information surrounding several different occupations in the traditional manner of group instruction. The only feasible plan of instruction for such a group is the supervised study plan, previously explained, in which each student works on his individual course of study independent of the group.

Supervised study necessitates daily study assignments. It is the sole responsibility of the teacher-coordinator to see that each student in his related subjects classes has a definite study assignment each day. Assignment sheets in several of the most prevalent occupations have been written, printed, and made available for use. However, course material of this type requires constant revision and supplementing by coordinators in order to keep it up-to-date. When a student is placed in an occupation for which material is not already available, assignments must be written without delay, and in order that the coordinator may produce the best material possible, he must have a thorough knowledge of the techniques and standards which are recommended for the production of instructional material.

Courses of Study

In this discussion, the term course of study implies a series of instructional sheets, grouped according to Units of Instruction and covering all the topics of related instruction which are listed in an analysis of the various jobs or work experiences selected for training. In general, a course of study to be used in industrial cooperative training should contain the following essentials:

1. Title of Course

2. For Whom Intended

3. Objectives of Course

4. Typical Work Experiences (A list of trainable jobs in the occupation, grouped according to Units of similar types of work.)

5. Course Outline (A list of technical topics related to and paralleling the jobs listed under work experiences.)

6. Study assignments, of all types, designed to assist the student in acquiring the technical knowledge contained in the topics listed in the course outline.

7. Unit tests based on the over-all content of the instructional Unit.

8. A bibliography of references used in the study assignments.

Standards for Writing Instructional Material

There is such a wide diversity in formats, content, and terminology used in the production of all types of instructional material in this State that a considerable amount of standardization is imperative. Admittedly, there are several different popular formats and styles which are equally good, and the reasons for selecting a particular standard are not important. The important thing is that the instructional sheets produced in this State be uniform so as to minimize confusion on the part of students who use material produced by different teacher-coordinators. Accordingly, the Trade and Industrial Division adopted the following standards which pertain to the format, content, and quality of all forms of instructional sheets produced for use with industrial cooperative classes:

Types of Assignments - The term "assignment" is taken to mean any type of study or activity which the student is instructed or assigned to do. The term "assignment sheet" is taken to mean a formal sheet to be used by the student in doing research, solving problems, answering questions, making drawings, and the like, concerning the technical information related to his occupation.

"Assignments" may be of several types, chief of which are:

Assignment sheets	Written reports
Experiment sheets	Oral reports
Projects	Test sheets

Each of the different types of assignments will be discussed, along with the standards which have been set up for preparing them.

ASSIGNMENT SHEETS

Assignment sheets will contain the following subdivisions:

Subject: The subject of an assignment should be the name of a

topic of information. It is impractical (if not impossible) to teach the "cooperative" student how to do most of his jobs or operations in the classroom. This is learned on the job. The student can, however, be taught factual information about tools and equipment, materials, science, mathematics, processes, principles, and the like, related to his job that will enable him to learn and understand his "doing" jobs much more quickly. For this reason, the subject of an assignment sheet should, if possible, be a noun or noun phrase rather than a verb, participial phrase, or question. For example:

POOR	BETTER
How to Solder	Principles of Soldering
Filing Metals	Information on Care and Use of Files
How Should a Radiator be Cleaned?	Methods of Cleaning Radiators

References: By references is meant all the printed matter that is to be used by the student in completing an assignment, such as text books, trade literature, charts, information sheets, and the like.

References listed in assignment sheets should show the exact name of the publication, author, and page number.

In choosing and listing references, the person preparing assignment sheets should try to avoid the following bad practices:

a. Abbreviating the name of the references.
b. Using references out of print.
c. Using old editions.
d. Listing articles in back issues of magazines.
e. Listing too many references.
f. Listing only the author, such as "Kuns" or "Dykes".

Explanation: The explanation of an assignment gives the writer of the assignment sheet an opportunity to explain anything about

the subject that he deems advisable. For example, he may explain the following:

a. The object of the assignment sheet -- why it was written or selected.

b. How the assignment ties in to previous assignments.

c. How it ties up with the students' work on the job.

d. Any information not adequately or clearly treated by the reference material.

e. New information about the subject.

f. Local practices or exceptions to the information given in the references.

g. Anything which might be in the nature of Step 1 of a formal lesson.

Directions: The directions are for the student and are intended to assist him in getting started on the assignment and completing it as the writer intended. The writer should try to avoid too frequent use of this type of directions:

"Read the references listed and answer the following questions."

Questions: Questions and problems used in assignment sheets are not to be considered as test questions. They are simply instructional devices designed to motivate and guide the student in "digging out" from the reference material the information intended to be presented in the assignment. They are the Step 2 of a lesson, so to speak.

Formulating good questions and problems for an assignment sheet is admittedly a difficult job and one that requires the writer to be on a constant lookout for poorly worded, ambiguous, and ill-chosen questions that might be written unwittingly. The questions selected should take into account the educational background and experience of the average class member; questions suitable for experienced adults are seldom suitable for students of high

school age. In general, questions used in assignments should conform to the following standards:

1. The questions should be of the type that require terse, concise answers rather than lengthy "essay" type of answers which place undue emphasis upon the students' ability to write. For students of high school age, it is preferable to form a question around only one thought or idea rather than a combination of several ideas.

2. Questions should call for answers that are based on research and reasoning in-so-far as is possible. Those which require merely copying parts of the text or paraphrasing portions of references have little or no educational value. This also applies to copying a drawing from a book.

3. Obviously, problems to be solved, as in mathematics, should be related to the occupation and have a practical application, as illustrated in the following examples which require identical arithmetical calculations:

A current of 5.7 amperes at 115 volts will flow through what resistance?	An electrician wishes to replace the heating element of an iron which draws 5.7 amperes at 115 volts. What resistance should he specify for the new element?
Express as a decimal fraction: 38 ÷ 7.	A ring gear of a certain differential has 38 teeth. The pinion gear has 7 teeth. What is the gear ratio?

4. Particular care should be taken to avoid using poor questions similar to the types given below which were taken at random from courses used in the past. Many could be improved by rewording; others by breaking them up into two or more questions, while some are "hopeless".

a. Avoid asking questions which are vague and indefinite as to what is wanted in the answer and how much in detail the answer should be made. Examples:

What is your opinion of the description given in the text on _____?

Write one or two paragraphs on ____ _____?

How does a carburetor work?

b. Avoid asking questions which require too lengthy an answer or contain too much technical information. Chapters could be written about the following:

Explain the electron theory of electricity.

Explain the operation of a pentagrid converter.

What are the various types of endorsements used on checks? Illustrate each. What is the legal significance of each?

Explain the various methods of chucking work in a lathe.

c. Avoid questions which are so elementary that they border on being "silly". Examples:

Should an air filter (on an automobile) be kept clean?

Is sanitation important from the standpoint of a meat cutter?

What is the purpose of the cooling system of a car?

Why should a mechanic be careful when removing broken glass from a car door?

d. Avoid questions which in themselves are too long or cover too many different ideas:

> What is orange peel (in painting) and tell how it is formed. Tell what effect air pressure at the gun will have on the formation of orange peel; what effect fast and slow thinners will have on its formation; tell of the effect of too much thinner, distance gun is held from work, and all other factors which may effect orange peel formation.

e. Avoid questions which are so worded that they make the answer apparent through the use of qualifying adjectives or adverbs such as very, always, necessarily, and the like. This type of question can usually be answered with "yes" or "no", which is another thing to avoid in asking questions. Examples:

> Will sanding rust spots on a body panel always kill the rust?
>
> Is it necessary to take very fast strokes when sawing with a hand hacksaw?
>
> Why should a delicate pressure regulator not be dropped?
>
> Is it always true that ruined connecting rod bearings are caused by insufficient oil pressure?

f. Avoid questions which "give away" the answer to a preceding question:

> What is the acid solution used in storage batteries called?
>
> What is the usual ratio of water and acid in the electrolyte of storage batteries?

g. Avoid questions which are wholly irrelevant and which might well be answered, "What difference does it make?"

How many elements are there and what was the latest discovered?

Who do you think contributed most to the automotive industry? Haynes? Ford? Oldfield?

(In auto mechanics course.) What is the chemical composition of petroleum?

What is a machinist's scale made of?

EXPERIMENT SHEETS

Experiment sheets are valuable in supplementing other types of assignments in order to put over certain chemical and physical principles related to the students' work which are difficult to explain by words alone. It is not intended that the related subjects class become an experimental laboratory, yet occasional student activities of this type, aside from having definite instructional values, add a certain amount of zest and variety to a course of study. The cooperative part-time student seldom has an opportunity to experiment while on the job, and unless afforded the opportunity to do so in the related class-- or perhaps a regular science class-- will never receive the benefits which are derived from experimenting with and verifying the basic physical laws related to his trade or occupation.

No extensive outlay of high priced equipment is needed; in fact, "home-made" apparatus is preferred. In many instances, working arrangements can be made with the Science Departments of the school for borrowing certain of the higher priced items, such as galvanometers, meters, calorimeters, and the like. In a few instances, apparatus discarded by the Science Department have been put in repair by vocational students. This, itself, has a teaching value if not carried to the extreme.

Coordinators are urged to make out their annual budgets covering Instructional Materials rather than merely Reference Books. The former designation will permit him to spend a small amount each year in accumulating an adequate outlay of inexpensive apparatus for experimental work.

Experiment sheets should contain the following subdivisions:

1. Subject:
2. References: (if needed)
3. Explanation:
4. Materials and Equipment:
5. Procedure: (Including--CAUTIONS)
6. Questions: or Conclusions:

Drawings made for experiment sheets, or drawings required of the student, should be simple yet clear. In general, pictorial drawings are preferable to schematics or diagrams, at least until the student has progressed far enough to be able to read and make schematics.

As a rule, students are not capable of writing good conclusions to experiments. It is suggested that, at least at the outset, the conclusions be drawn through judicious questioning after the experiment has been performed.

PROJECT SHEETS

Projects, built individually or by groups of students, have a definite value in teaching related technical information. They have the added values of lending variety and interest to the course, and if done in a skillful manner, add materially to the "atmosphere" of the classroom when displayed. Well planned projects can be -- and should be -- both educational and interesting to individuals outside the class. They contain an element of "showmanship" and that can serve as an advertising medium for the vocational department.

The term project includes such items as working models, cut-away models, mock-ups, display panels for materials, wall charts, displays of manufacturing processes, and the like. A poorly planned or sloppily built project will be more detrimental than beneficial. The same applies to incompleted projects. When assigning or selecting projects, the ability of the student to carry through with the work should be considered.

Lengthy projects may be carried on for weeks, months, or even semesters along with the students' regular classwork. In general, project building should supplement the course of study and not become a substitute for it. Project sheets should contain adequate directions and suggestions but should be flexible enough to provide for initiative in designing and planning on the part of the students.

INFORMATION SHEETS

Information sheets written by teacher-coordinators are recommended under the following circumstances:

a. To present new information not treated in the basic references used in the course.

b. To enlarge upon information not fully treated in basic references.

c. To condense information treated too fully for a particular use.

d. To consolidate various items of information collected from several sources.

e. To adapt printed information to the level of the learner.

f. To make specific applications or to make analogies of items of information.

Such sheets should not be prepared if the desired information is adequately and suitably treated in a reference. Mimeographed sheets, however authentic, do not carry the prestige of the printed page. Other limitations in the use of information sheets are:

a. Cost in time and money to produce.

b. Difficulty in duplicating good illustrations.

c. Chance of errors and questionable statements unless material is checked by specialists.

d. Problems in filing, distributing, and keeping unbound sets of sheets.

TEST SHEETS

The Need for Test Sheets -- As has been pointed out before, the questions and problems included in various types of assignments are not "tests" at all in the usual sense of the word. The term test as used here is taken to mean a series of questions which are designed to measure the extent to which a student has acquired and retained that technical information which is essential to a particular unit of instruction in his course of study. These tests, of course, are to

be taken by the student without the assistance of reference books or other sources of information.

The chief value of technical tests -- at least from a vocational teaching standpoint -- is to disclose the weaknesses and limitations of the student, thereby serving as a basis upon which to analyze the student's needs and for making future study assignments. The test discussed here should cover one whole unit of instruction in the course of study and should be comprehensive enough to embrace all points of technical information which the student should possess about the subject.

For example, a part-time student training, say, as an auto mechanic will likely have had some amount of practical experience on the job with carburetors during his first year of training. He will have likely completed several assignments in the unit on Carburetion from time to time. He will have picked up additional information about carburetors here and there -- from fellow employees, from reading trade literature, manufacturers' literature, and the like.

It is only reasonable to assume that at some point in his training he should take a comprehensive test on the basic principles of carburetion for the purpose of finding out just what he knows about carburetors in general. The results of such a test may show, for example, that the student in question has an extensive knowledge of the "theoretical" principles involved but is very weak in all the practical aspects of carburetors. This fact, then, should be the cue for the teacher-coordinator to do some re-teaching and possibly alter the type of assignments given this student.

Such a comprehensive test may well be used as a diagnostic test -- to be given the student before he begins work on the course material -- to determine what information about the subject the student already possesses and what phases of the unit should be stressed. The test -- or one similar to it -- given later in the training period, will form a basis of comparison to determine the progress the student has made during the term in his technical studies of the unit.

Form of Test Sheets -- Due to the broad scope of unit tests, they must of necessity contain questions on many items of information in order to get a comprehensive coverage of the subject. For this reason, the questions used in the tests should be of the type which require answers written in the fewest number of words possible and which may be checked and scored in a minimum of time. The objective type test, despite certain limitations, best meets these requirements. The various types of questions usually associated with objective tests are:

a. True - false
b. Completion (word)
c. Completion (drawing)
d. Matching

e. Multiple choice
f. Identification

Each of the above type of question has its own peculiar limitations, and for this reason, it is recommended that a combination of two or more of these types be used in a test rather than one type used exclusive of the others.

ANSWER SHEETS

All assignment sheets and test sheets should be accompanied by answer sheets to be used by coordinators for checking the students' work quickly and accurately. It is suggested that coordinators, after writing a question or problem, immediately formulate the correct answer on a separate sheet. Naturally, coordinators should be careful that such answer sheets never leave their possession.

Designation and Classification of Instructional Sheets -- Instructional sheets are usually applicable to one specific trade or occupation. However, certain topics of information are basic to several occupations. For example, instruction regarding the use of "fastening devices" is needed by the machinist, the auto-mechanic, the sheet metal worker, and perhaps the electrician; the same related instruction unit -- if properly prepared -- will suffice for all of the group. Basic instruction on what we frequently call general topics -- such as are handled in group discussion periods -- can be prepared for entire classes. With these possibilities in mind, it has been decided to prepare material to fall under three classifications for each occupation:

1. General or orientation units for group discussion to be designated with "G".

2. Basic or fundamental units applicable to several occupations to be designated with "B".

3. Applied units for specific occupations to be designated with "A".

Related instruction outlines will be divided into units to be designated by Roman numerals (I, II, III, IV, etc.), and each topic in each unit will receive an Arabic numeral (1, 2, 3, 4, 5, etc.). For example, Unit I in the material prepared for machinists might be devoted to "Hand Tools" -- an assignment common to several of the manual trades; as a part of the hand tool unit might be an assignment (No. 10, say) devoted to the "Factors Affecting the Selection of Hack Saw Blades for Metal Cutting". This last named assignment, under this numbering system, would be given the key number of B-I-10:

B. -- Because it is one of the basic or fundamental units common to a number of occupations;

I. -- Roman one, the unit of the basic Units group devoted to hand tools;

10. -- The tenth topic of the Hand Tool Unit.

Test sheets to determine the students' mastery of instructional units or assignments are regarded as properly separate from assignments themselves, but when prepared they should carry the key number of the assignments for which they are prepared. These tests will be distinguished by a capital "T" and the test number added to the number of the assignment itself. For instance, the test sheet -- or other device used for that purpose -- for assignment B-I-10 described above would be designated as "T2" and the designation would be "B-I-10. T2".

The numerical designation of each assignment sheet, or other instructional sheet should carry a date. It may be carried after the assignment designation in this manner: "B-I-10/6-47". The numeral "6" of course refers to June, and the "47" to A. D. 1947.

Sample Instructional Sheets -- Sample instructional sheets of various types, which conform as closely as possible to the format and standards which have been adopted, are illustrated in the following section. Coordinators are urged to follow these samples as closely as possible when writing assignment sheets either for new courses or as supplementary sheets for existing courses.

Assignment Sheet
in

AUTO MECHANICS

Subject: Construction and Action of Storage Batteries

References: Automotive Mechanics - Crouse pp. 181 - 185
Elements of Automotive Mechanics - Heitner, et al. pp. 285 - 290

Advanced reading:

Elements of Electricity - Hausman pp. 57 - 64

Explanation: The term "storage battery" might suggest that electricity is stored up in the battery. This is not true; -- electricity cannot be stored in batteries. What actually happens is that the charging current produces a chemical action which makes the lead plates "unlike" in composition and thus meet the same requirements as those of a primary cell. (See Assignment, Primary Cells)

This chemical action is a complicated process and is not generally understood except by chemists. It is the purpose of this assignment to explain the elementary chemical processes which take place, both in charging and discharging of storage batteries, and to point out the conditions which affect this chemical action.

NOTE: The term "battery" is used to denote two or more cells connected in series for the purpose of increasing the voltage. Most automobile batteries are composed of three which operate independent of each other, but which are connected together in series just as two or more dry cells may be connected together in series to produce a higher voltage. (Experiment No. E-16)

Directions: First, perform Experiment No. E-19.

Study the reference material listed.

Answer the following questions:

Questions:

1. Describe briefly the construction of the common type of battery case.

2. Of what material are the perforated plate frames made? Why?

3. What material is contained in the grid perforations of the positive plates? Negative plates?

4. How can one distinguish by sight between the positive and negative plates?

5. What is the purpose of the separators? Of what three materials are they commonly made?

6. Sketch a cross section of the most common type of separator.

7. What does "glass insulated" battery mean?

8. What does the term "17 plate" battery mean?

9. Why must the separators be porous?

10. The "electrolyte" of a battery consists of what two substances?

11. What is the meaning of "specific gravity"?

12. What is the normal specific gravity of the electrolyte of a new and fully charged storage battery?

13. With what is the specific gravity of cells commonly tested?

14. What changes take place in the electrolyte as the battery is discharged?

15. What changes take place when the cell is being charged?

16. What is the normal voltage of one charged lead cell?

17. (a) What does the term "capacity" of a battery mean?
    (b) What is the unit for measuring battery capacity?

18. What determines the capacity of a cell?

19. A certain battery can deliver a maximum of 50 amperes of current for two hours. Can this battery deliver 100 amps. in one hour? Explain.

20. How many positive plates does each cell of a 19 plate battery contain?

Thought Questions

21. If a positive and negative place of one cell of a battery has a "dead" short, how will this affect

(a) The output of this cell?
(b) The voltage of the other two cells?
(c) The voltage of the battery?

22. Give two reasons why there is so much battery failure in the winter.

23. Modern automobiles require batteries of higher capacities than those of 10 to 15 years ago. Why?

Answer Sheet
for

AUTO MECHANICS ASSIGNMENT

Subject: Construction and Action of Storage Batteries

1. It is box-like in shape, containing three compartments and is made of hard rubber or other acid resisting material.

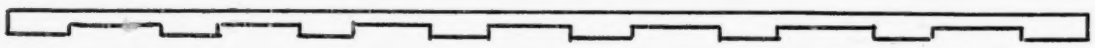
2. (a) Lead-antimony metal.
   (b) To make them acid resistant and to give them rigidity.

3. (a) Lead peroxide.
   (b) Spongy lead.

4. The lead peroxide of the positive plate is dark brown, while the lead of the negative plate is dull gray.

5. (a) To prevent the positive and negative plates from shorting out.
   (b) Wood, spun glass, and rubber.

6.



7. It means that spun glass separators are used.

8. That each cell has 17 plates.

9. To permit the liquid to flow between the plates.

10. Sulphuric acid and water.

11. How many times heavier than water a substance is.

12. 1.280 to 1.300

13. A hydrometer.

14. The sulphuric acid changes to lead sulphate and water.

    The specific gravity of the electrolyte lowers.

15. The lead sulphate and water change back to sulphuric acid.

    The specific gravity rises.

16. 2 volts (2.1 maximum).

17. (a) The amount of current can flow from it in a given time.

    (b) Ampere-hour.

18. The total area of the plates which contacts the electrolyte.

19. No; the chemical action between the plates and electrolyte

cannot take place fast enough at high rates.

20. Nine.

21. (a) There will be no output.
    (b) The voltage of the other two cells will not be changed.
    (c) The battery will show 4 volts.

22. (a) The chemical action of the battery slows at low temperatures.
    (b) Thicker engine oil causes the starting motor to take more power from the battery.

23. Because of many new electrical devices: fans, lighters, heaters, etc.

Experiment Sheet
in

BASIC ELECTRICITY

Subject: Lead-Acid Cells

Explanation: In a previous experiment on Primary Cells, it was shown that a current of electricity may be made to flow through a wire connecting two "dissimilar" metals which are surrounded by an "electrolyte" of dilute acids or alkalies. It is the purpose of this experiment to show how two "like" metals in an electrolyte can be made to produce a current under certain conditions. Cells of this type are called "secondary cells", or more often, "lead-acid cells".

Materials and Equipment:

- 1 voltmeter (0--10v. range)
- 1 dry cell
- 1 glass tumbler
- 1 flashlight bulb, 1-1/2 v.
- 2 strips of lead, approx. 1"x4"
- 2 12" lengths bell wire
- Sulphuric acid

Procedure:

1. Scrape the strips of lead bright. Mark one strip "A" and the other "B". "Skin" all ends of bell wire. Punch nail hole in one end of both strips about 1/4" from end. Connect one wire to each strip, making sure of good connection.

2. Fill tumbler about half full of water and slowly add sulphuric acid until tumbler is about 2/3 full WHILE STIRRING WITH GLASS ROD.

CAUTIONS:

NEVER ADD WATER TO ACID!

TAKE CARE ACID DOES NOT CONTACT EYES, HANDS, CLOTHES OR PERSON!

3. Connect voltmeter to wires as shown in Figure 1, and place both strips in tumbler about 1" apart.

   Is there any deflection (movement) of the pointer of the voltmeter? _____

4. Remove the voltmeter as shown in Figure 2. Connect center dry cell terminal to "A" and the outside terminal to "B".

What action do you note? Describe. _____

_____

At which strip does this action occur? _____

What changes in appearance take place in either strip?

_____

5. Remove the cell after about five minutes and reconnect the voltmeter with the + terminal connected to "A".

Is there any deflection of the pointer of the voltmeter? __

If so, what voltage is indicated? _____

6. Remove the voltmeter and place the 1-1/2 v. flashlight bulb in the circuit.

Did the bulb light? _____ If so, how long did it burn? __

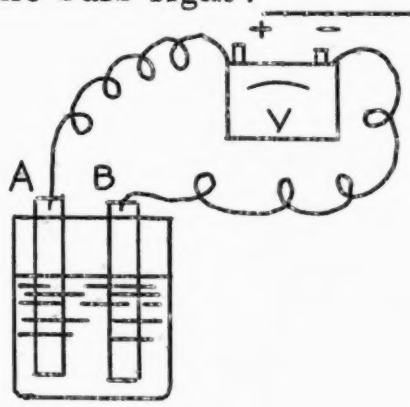


Figure 1.

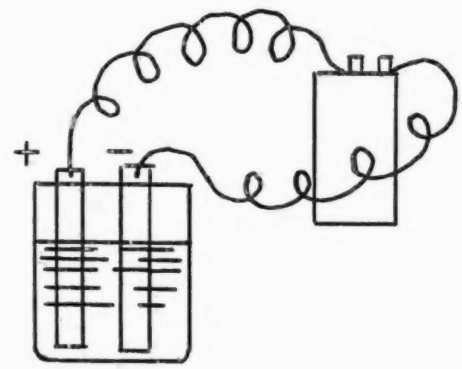


Figure 2.

Conclusion: 1. From this experiment I conclude that a voltage of about _____ v. can be made to exist between the two lead plates of a lead-acid cell provided _____

_____

_____

2. I found that the strip (plate) which was connected to the + terminal of the dry cell became the _____ plate of the lead-acid cell and that its color was _____

_____

Key to Outline

Project Sheet
in

AUTO MECHANICS

Name of project: "Spark Plug Ailments"

References: Champion Spark Plug Service
Champion Spark Plug Co., Toledo, Ohio

Materials: Several discarded spark plugs.
3/8" panel board, approximately 14" x 36"
1" x 2" white pine molding for panel board
8 to 10 blank cards, 3" x 5"
White shellac

Explanation: An experienced mechanic can usually tell by the appearance of a spark plug whether or not it is functioning properly. He can also usually tell the cause of plug failure and thus diagnose many ordinary engine troubles. In order to assist the student in auto mechanics in understanding spark plug troubles, the following project is recommended:

Procedure:

1. Collect several discarded spark plugs from service stations and garages. Do not attempt to clean them.

2. Study the reference material concerning spark plug troubles. Select a suitable plug to illustrate the following troubles:

   a. Cracked insulator
   b. Caked grease and dirt on insulator
   c. Gas leak around insulator
   d. Broken core
   e. Oil fouling
   f. Gas fouling
   g. Burned out electrodes
   h. Crusted electrodes

3. Select two plugs which show evidence of good physical and operating conditions. Clean ore according to acceptable methods.

   NOTE: Since the color and condition of the core,

electrodes, and deposit plays an important part in diagnosing spark plug troubles, it may be well to consult an experienced person to assist in selecting the various plugs for the project.

4. On a piece of wrapping paper, lay out centers for holes in which to mount the spark plugs. The suggested dimensions in Figure 1 may be used.

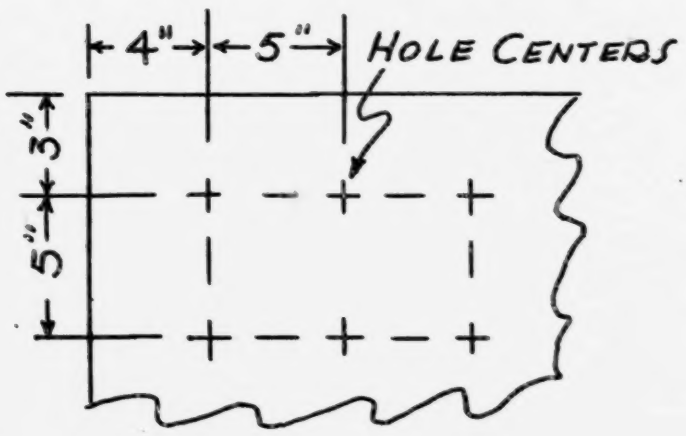


Figure 1

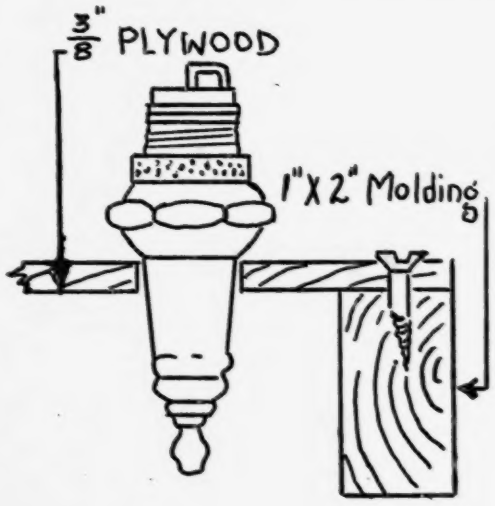


Figure 2

5. Place layout paper on the panel board and mark hole centers with a punch or nail. Drill holes for each plug approximately the thread size of the plug.

6. Attach 1" x 2" molding around the four edges of the panel board as shown in Figure 2.

7. Prepare 3" x 5" cards for each spark plug according to the following suggested example:

GAS FOULED PLUG

Symptoms: Dry, fluffy carbon deposit on entire firing end of spark plug.

Probable causes:

1. Too rich a fuel mixture
2. Poor choke adjustment
3. Too cold a plug
4. Plug cleaned too often

Results on engine performance: Spark shorts through carbon, causing misfiring.

Possible remedies: Lean out the mixture; correct choke adjustment; replace with hotter plug.

8. Mount plugs in holes up side down (except the plug with a cracked insulator) and wire secure with safety wire.

9. Mount cardboards under each spark plug. Brush clear shellac over entire panel.

Unit Test Sheet
on

AUTOMOTIVE ENGINE PRINCIPLES

I. Complete the following to make a true complete statement:

1. A complete cycle of an automobile engine consists of four strokes called: 1._____, 2._____, 3._____, and 4._____.

2. During the intake strokes, the position of the intake valve is_____ and the exhaust valve is_____.

3. The tendency of matter to remain stationary when acted upon by a moving force, and to continue to move after the force ceases, is called_____.

4. In one revolution, the crankshaft revolves_____degrees. In one cycle it revolves_____degrees.

5. Expressed in degrees, each stroke of a piston is_____degrees from the next.

6. The relation of the volume of a cylinder when the piston is at the bottom, to the volume when the piston is at the top, is called_____ _____ratio.

7. The pressure of the mixture when the piston is at top dead center is called_____pressure. The unit for measuring pressure of gases is_____.

8. The pressure within a cylinder caused by the explosion (burning) of the mixture is called_____pressure.

9. The pressure in a cylinder at the moment of the explosion of the mixture is approximately_____times greater than the pressure immediately preceding the explosion.

10. Without altering the bore (diameter) of the cylinder, more power can be developed by increasing the_____of the cylinder.

11. The ratio of the amount of mixture actually drawn into a cylinder on the intake stroke, to the maximum amount the cylinder could hold, is called the_____of the cylinder.

12. This ratio is decreased by any restrictions in the air or mixture intake passages in any of the following parts: 1._____, 2._____, 3._____, 4._____.

13. On the exhaust stroke, the exhaust gases continue to flow out of the cylinder after the piston has reached the top because of the_____ of the moving gases.

14. On the exhaust stroke the exhaust valves in the average automobile engine do not close until the crankshaft has turned approximately _____degrees past top dead center.

15. If the compression pressure of the cylinders of an automobile engine are 110, 110, 90, 110, 100, and 110 lbs. per sq. in., the approximate combustion pressures of the respective cylinders are: _____, _____, _____, _____, _____, and _____ lbs. per sq. in.

16. In the above case, the uneven combustion pressures on the cylinders in their firing order would tend to make the engine_____.

II. Mark + for true and 0 for false opposite the following statements:

___ 1. An automobile engine is a form of heat engine.

___ 2. It develops its power from the fact that burning gases expand in volume.

___ 3. On the intake stroke, the intake valve opens when the piston reaches top dead center.

___ 4. The inertia of the fuel-air mixture and the exhaust gases have an effect upon the timing of the valves.

___ 5. Mixture continues to enter the cylinder after the piston has started upward on the compression stroke.

___ 6. The spark which ignites the mixture occurs slightly before the piston reaches top dead center on the compression stroke.

___ 7. A piston of an automobile engine travels faster on the power stroke than any other.

___ 8. When a piston travels either upward or downward, it moves at a higher rate of speed through the top 90° of the crankshaft rotation than it does through the bottom 90°.

___ 9. On the power stroke, the exhaust valve opens before the piston reaches bottom dead center.

___ 10. On the exhaust stroke, the flow of burnt gases out of the cylinder continues after the piston reaches top dead center.

___ 11. Most of the force applied to a piston is during the last half of the power stroke.

___ 12. The only way to increase the power of a cylinder is to increase its diameter (bore).

___ 13. An increase in the volumetric efficiency of a cylinder increases its power.

___ 14. The volumetric efficiency of a cylinder can be increased by increasing the size of the intake valve opening.

___ 15. Intake and exhaust valves are timed to open and close at top or bottom dead center of the piston.

___ 16. For best efficiency, the intake valve should be timed to close at the instant the mixture stops flowing into the cylinder.

Answer Sheet
for

AUTO MECHANICS UNIT TEST

Test: Automotive Engine Principles

Part I.

1. Intake, compression, power, exhaust.
2. Open; closed
3. Inertia
4. 360; 720
5. 180
6. Compression
7. (a) Compression
   (b) Lbs. per sq. ft.
8. Combustion
9. Four
10. Compression ratio; volumetric efficiency. (Either or both)
11. Volumetric efficiency
12. Air filter; carburetor; intake manifold, intake valve opening.
13. Inertia
14. 40° to 50°
15. 440, 440, 360, 440, 400, 440
16. Vibrate

Part II.

1.	+	7.	0	12.	0
2.	+	8.	+	13.	+
3.	0	9.	+	14.	+
4.	+	10.	+	15.	0
5.	+	11.	0	16.	+
6.	+				

XII. COORDINATION

Meaning and Purpose of Coordination

The objective of coordination of industrial cooperative programs is to correlate all the helpful agencies and factors that contribute to the trade or occupational training of students. Many coordinators are confused concerning the actual duties of coordination. Some suppose that it requires visiting the various training stations and determining whether or not the students are at work, while others suppose that it requires no more than being a good "mixer" and visiting with business men, not necessarily on matters pertaining to the program.

In general, the duties associated with coordination fall into the following categories:

1. Placement of students on satisfactory jobs. It is the responsibility of the coordinator to select students and place them in an employment situation in such a manner that the job will be filled in a manner satisfactory to the employer and yet give the student opportunity to develop to the limit of his capacity.

2. Follow-up after placement. Placement on the job alone is not sufficient. Adjustment of the student on the job, consultation with the student, foreman, plant superintendent, and school instructors are necessary in order that the student may satisfactorily fill the industrial position.

3. Contacts with employers to establish cooperative relationships. The coordinator should continually meet industrial people, not only for the purpose of student placement, but also for the purpose of educating industry as to what the school is doing and how it is doing it, and for the purpose of uncovering ideas and suggestions for improving the school situation.

4. Assistance in making analyses. The coordinator should assist employers in making analyses of their trades or occupations which are to be incorporated into the training plans of students. If the coordinator has a good background in the techniques of trade and job analysis he does not necessarily have to have an intimate knowledge of the trade or occupation to assist in making a creditable analysis of it.

5. Assistance in building courses of study. He should analyze, or assist related subject teachers in analyzing, jobs or work experiences listed

in training plans for teaching content. He should also assist in obtaining necessary references and courses available from other sources.

6. Conferences with students. Because of his experience and contacts with employment conditions, the coordinator should confer with students and advise with them on both personal and employment problems.

7. Contacts with advisory committees. Under the direction of the local director, the coordinator should frequently contact his advisory committees and keep in close touch with their activities. He should also keep them advised as to his activities.

8. Checks on student rotation on the job. When students are placed as learners in industry, the coordinator should see that each student is given an opportunity to learn and is not exploited by keeping him on one particular type of job for unreasonably long periods. He must make certain that the student is rotated through jobs and gets well-rounded experience.

9. Contacts with employers, labor groups, and school administrators regarding over-all program. In his contacts, the coordinator should constantly endeavor to educate school administrators and labor and industrial people as to what vocational services are available and how they are carried on.

10. Relationships with vocational counselors. The selection of students and the preparation of training material must be based on job requirements. School officials, teachers, and counselors need information as to what is needed by employees in certain fields of employment. The coordinator should assist those who select and organize this information.

Coordinator's Weekly Schedule

In order that most benefit can be derived from the coordinator's activities, he should budget his time in such a manner that he will not be apt to overlook or neglect any one of the many duties of coordination.

The coordinator should have a weekly schedule which will not only enable him to discharge his duties more efficiently but will also establish a routine which will enable students, parents, school officials and teachers, and employers to contact him with a minimum of delay on matters pertaining to his program. A suggested schedule of activities is shown in Figure 12. It can be seen from this table that coordination consists of more than merely visiting training stations each afternoon.

Suggested Weekly Schedule for Teacher-Coordinators

Period	School Schedule	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1st	First year group	Group discussion	Lesson assignments	Lesson assignments	Lesson assignments	Group discussion Lesson assignments	Miscellaneous office work
2nd	Second year group	Group discussion	Lesson assignments	Lesson assignments	Lesson assignments	Lesson assignments	Miscellaneous office work
3rd	Conference	Organize class work for week	Grade written work	Organize instructional material	Organize instructional material. Grade work	Organize instructional material	
LUNCH							
4th	Coordination	Interview employers on students' progress during past week.	Revise and organize instructional matter on basis of discussions on previous day Grade written work	Revisit training stations; check on students' work	Promotional activities; call on prospective employers; confer with committees, etc.	Grade written work; Make out records and reports; attend school meetings, etc.	
5th	Coordination						
6th	Coordination						

Figure 12.

Allowances must be made for varying such a schedule at certain times during each semester. For example, at the beginning of each school term when the coordinator is actively engaged in placing students, his entire time each afternoon may be required for conferring with employers, committee members, students, and parents. Whereas, at the close of each semester, when grades, records, and reports require considerable time, the coordinator may spend all his time at the school.

Planning Afternoon Visits -- Before the coordinator leaves the school for visiting training stations down-town he should determine which stations should be visited, the object of each visit, what material to take with him, and, in large centers, the route he will take. It is advisable that he not adopt a set pattern in the matter of visiting training station.

A copy of the coordinator's tentative itinerary for each afternoon he is out of the school should be left in the school office. Of course it is virtually impossible to adhere to the planned itinerary strictly, but leaving an approximate schedule gives school officials at least some idea of the coordinator's whereabouts in case he must be contacted. In cases where his plans have been

changed to a considerable extent, a telephone call to the school office will rectify the situation.

Visiting Training Station -- The coordinator should go about the job of visiting training stations in a business-like manner. He should keep in mind that not everyone who sees him understands the nature of his coordination work, and that a casual manner of going about his work will likely cause adverse criticism.

As a rule, the coordinator should contact the employer, manager, or foreman upon entering a training station for the purpose of securing permission to visit. Despite the fact that the majority of employers will not insist upon this "formaility", it is none the less a good practice.

Short, routine inspections should be made at least once a week to see if the student is on the job, to determine the type of work he is doing, and to give the employer an opportunity to discuss with the coordinator any problem that may have developed. At least once a month, conferences should be held with each employer and the student's training activities discussed. The suggestions and recommendations growing out of these conferences should form a basis for determining the student's study assignments.

The coordinator should be on the alert to detect changes in the student's attitude toward his work and to meet any undesirable situations that may be developing. He must note the attitude of the student toward the occupation, the job at hand, the employer, fellow employees, his related studies, and classmates. Any sudden change in attitude on the part of the student should be noted and analyzed as to cause, effect, and possible remedies. It is easier to correct an unfavorable situation during the development than to wait for it to "come to a head". The coordinator who allows unfavorable situations to develop without attempting to forestall them is not performing his work properly.

The coordinator should see that every employee with whom the student works understands the objectives of the cooperative arrangement: why the student is working and under what conditions. He should occasionally discuss the training being carried out with other employees in order to get their viewpoint.

Conduct While Visiting -- There are several rules of conduct which the coordinator should observe while visiting training stations. He should keep in mind that effective coordination can result only if he is welcome in the various places which he visits. These rules can best be given in "Do" and "Don't" columns.

DO

1. Be alert. Observe what is going on without appearing to "snoop".

2. Be friendly with everyone without fraternizing with them.

3. Show an interest in the work in progress. Be curious; ask questions if the opportunity presents itself.

4. Take notes (after leaving) on items which may be used for a conference with the student or for study assignments.

5. Be quick to sense the employer's desire to terminate a conference.

DON'T

1. Don't call attention to errors, bad practices, unsafe conditions, and the like while visiting the student. Do so in private conference.

2. Don't try to demonstrate to a student how to do a job which he is assigned.

3. Don't pose as an expert or authority on any matter concerning the work going on.

4. Don't request a conference with the employer when he is obviously busy.

5. Don't engage in so-called "friendly" arguments on controversial questions.

6. Don't interrupt or interfere with the student's work.

7. Don't let a visit degenerate into a "bull" session with the employer or employees.

8. Don't appear to be loafing or just "passing the time".

9. Don't handle tools, machines, or equipment unless invited to do so.

Coordination Records and Reports

The Coordinator's Diary -- Information and data obtained through coordination

activities form the basis for building the course of study for each class member. The vocational needs of each student -- obtained through coordination -- become his individual curriculum. Every coordinator should keep adequate records of his coordination activities, including notes, comments, and other pertinent information. Such records need not be formal but may consist of informal entries in the "little black book", so to speak. Such entries are illustrated below:

Thurs. Sept. 11

Conferred with Mr. Baker, Mgr. Hardwicke Etter Co. Worked out training plan for Tommy John. Suggests: "Stress accuracy, — job ethics."

Interviewed Mgrs. of Holt Groc. and Adams Food Stores concerning placing new student as meat cutter. Can possibly work out plan with Adams. Will see again Sat. 10 a.m.

Picked up signed training plans from State Theatre, City Cleaners, Memorial Hospital, & R. E. Holt Bakery. Students doing ok.

Friday, Sept. 12

Made out requisition for additional reference books (printing & refrigeration).

Typed up training plans for Tommy John and Henry Watts. Ordered additional VIE-010's from State office.

Made out Permanent Record Cards for new students.

Attended faculty meeting at 4 p.m.

Figure 13.

Closing Reports -- Notations such as those contained in Figure 13, showing hours spent daily in coordination, contacts with employers, and the like, are needed in order that the coordinator may make out his semester's closing report accurately. Closing Reports VIE-005 (IE-1 Co-op) -- are due in the State Office at the close of each semester. Data obtained from this report are needed before the local school where the coordinator is employed can be reimbursed for salaries paid vocational teachers. A separate report is required for each section or class taught by the coordinator.

Much of the information contained in this report is the same as that in the Organization Report. In fact, the headings of both reports will be the same unless there has been a change in the class schedules. It is suggested that the Closing Report for the first semester be sent in with the Organization Report for the second semester.

INFORMATION DESIRED ON CLOSING REPORT

Line--Date Class Closed: This date corresponds with the "planned closing date" on the Organization Report and must be the date that classes were actually closed at the end of the school year. Since a Closing Report is required at the end of each semester, and since the same form is used for both semesters, be sure and indicate the semester for which the closing report is being submitted as illustrated in Figure 14.

Column--Students in Class When Report is Made: All students who are regularly enrolled in the industrial cooperative program at the time the Closing Report is made are to be listed alphabetically with girls listed separately. Each student's name should correspond with that listed in the Organization Report. Naturally, any students who drop from the program during the semester will not be listed in this column.

Column--Total Hours on Job: This information is obtained by the coordinator from the total of the hours per week listed on the student's daily Job Report. It should represent the total hours worked during the semester, excluding Saturdays.

Column--Total Hours in Class: This information is obtained from the class register.

Line--Students Enrolled Since Organization Report: Names of students listed in the column above. The listing should follow the same procedure as was described for a similar section in the Organization Report. Those who enter late and drop out before the end of the semester should also be listed in this column and indicated with "Dropped".

VIE--005
(Form IE-1(Co-op)

Closing Report

TEXAS EDUCATION AGENCY
Industrial Education Division

Industrial Cooperative Training

City: New Austin, Texas School: Senior High School

Date School Started: September 1, 1970 Date School Closed: May 31, 1971

Time of Day Related Class Met: 8:45 a.m. to 9:40 a.m. Total Hrs. per Wk. 5

Name of Coordinator: James E. Lowe Semester: 1st x ; 2nd

Students in Class When Report is Made	Total Hours		Students in Class When Report is Made	Total Hours	
	On Job	In Class		On Job	In Class
1. Allen, Ted	321	84	13. Watts, Henry	321	84
2. Banks, Charles	440	88	14. Williams, Jack	221	69
3. Belknap, Louis	410	89	15.		
4. Blakey, Wayne	376	87	16.		
5. Cantrell, Dayle	430	86	17.		
6. Francis, Donald	480	87	18.		
7. John, Tommy	450	88	19. Girls		
8. Lawson, William	370	74	20. Bailey, Nancy	352	88
9. Owen, Eugene	280	70	21. Cantrell, Gayle	352	88
10. Phillips, Jerry	340	85	22. Dunne, Shirley	348	87
11. Stephens, Vestal	365	73	23. Ellison, Sue	340	85
12. Swan, John	344	83	24. Franklin, Betty	214	66

STUDENTS ENROLLED SINCE ORGANIZATION REPORT

Name of Student	Date Entered	Grade	Age	Occupation	Employer
1. Williams, Jack	10/15/64	11	16	Auto Mechanic	City Automotive Service
2. Franklin, Betty	10/11/64	12	17	Baker	Blue Bonnet Bakery
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					

FOR REPORTING PERIOD

(1) Total cumulative enrollment since start of school: Male 18 Female 8
(2) Total hours class met 89 (3) Number of calls on parents of pupils 26
(4) Number of contacts with employers 251 (5) Number of advisory committee meetings 4
(6) Total hours spent in coordination 305 (7) Number of meetings with employer and employee organization or groups 5 (8) Total hours spent in activities other than teaching and coordination 114

(LIST ON BACK OF REPORT OR ON A SEPARATE SHEET)

This form must be filled out completely and mailed in triplicate to your Area Supervisor, at the end of each semester. Reimbursement cannot be made until the report is received by your Area Supervisor. Forms are in triplicate; send all three copies to your Area Supervisor. One copy (pink) will be returned for local school files.

Date: January 11, 1970 Signed: James E. Lowe
Coordinator

Henry B. James
Local Director or Superintendent

Director, Industrial Education

TEA-463-1M-1585-B181

Figure 14.

Line -- Total Cumulative Enrollment: This cumulative total should include all students who have entered the class regardless of the time they spent in it.

Lines -- 3, 4, 5, 6, 7, and 8: These lines summarize the non-classroom activities of the teacher-coordinator and the coordination activities of the coordinator for the semester, and are obtained from the coordinator's daily report or "diary". These entries -- 3 through 8 -- pertain to both sections or classes combined and may be omitted from one of the two reports if desired.

Employers' Periodic Rating -- One phase of coordination work is that of securing the employers' periodic ratings on students each six weeks. For this report, a mimeographed form is suggested and is shown in Figure 15. There is no prescribed method of distributing this form and collecting it from the several employers. Some coordinators send them out and receive them by mail each six weeks. However, there is a definite advantage to carrying the forms to the employers in person, and, if possible, having him make his rating while the coordinator is present. This affords an opportunity for the two to discuss the strong and weak points of the students.

It should be pointed out here that employers are frequently prone to rate students higher than their actual progress warrants, and their ratings must be reconciled with the coordinator's own rating of the student for purposes of arriving at an equitable grade to satisfy local school requirements.

Students' Permanent Record Card -- The six-weeks ratings of employers are entered on each student's permanent record card, illustrated in Figure 16. Other data are retained from the coordinator's class records and the student's daily job report.

Follow-up Record: A space for notations on follow-up contacts with the student is provided on the reverse side of the Permanent Record Card. Such records, to determine the employment status and other data about students who have graduated from the cooperative program should be kept for at least two years. This information is valuable for evaluating the cooperative program, for justifying it, and for guidance purposes. It is also necessary for making the Annual Report on industrial cooperative classes.

Annual Reports -- Each year an annual report from each industrial cooperative program is prepared for the U. S. Office of Education; it presents various data on current classes and placement records for the classes of the preceding year. No exact date is set for making this report, but forms are mailed coordinators during the second semester each year for completion and return to the Texas Education Agency before the close of school.

Following is a chart showing the dates on which Industrial Cooperative Training Reports are due. This chart also shows the proper report and to whom sent.

CALENDAR showing dates INDUSTRIAL EDUCATION COOPERATIVE TRAINING reports are due:

Date	Name of Report	To Whom Sent	No. of Copies to be Sent
Monthly	VOC-030, Monthly Travel Report for Teachers and Coordinators of Vocational Education	Local School Administrator	1
September 20	VIE-006, Organization Report, Part-time Cooperative Training	Area Supervisor	3
One month after student is placed in employment	VIE-010, Cooperative Training Plan	Area Supervisor	3
Closing of First Semester	VIE-005, Closing Report, Part-time Cooperative Training	Area Supervisor	3
Beginning of Second Semester	VIE-006, Organization Report, Part-time Cooperative Training	Area Supervisor	3
Closing of Second Semester	VIE-005, Closing Report, Part-time Cooperative Training	Area Supervisor	3

EMPLOYER'S PERIODIC RATING
for
Industrial Cooperative Students

Student BILL LAWSON Date FEBRUARY 26, 1959

Training Station CITY MACHINE WORKS Rated by H. M. Jonkins, Foreman

DIRECTIONS: Please circle one of the numbers (from 1 through 10) opposite each of the five factors in the left-hand column which you think nearest indicates the student's rating for the past six-weeks school period.

FACTORS	UNSATISFACTORY	BELOW AVERAGE	AVERAGE	ABOVE AVERAGE	EXCELLENT
PROGRESS	1 2	3 4	(5) 6	7 8	9 10
Has he advanced in skill and knowledge during the past 6 weeks?	Has made almost no progress.	Has progressed in only a few phases of his training.	Has made average progress in his training.	Has advanced beyond expectations.	Exceptional progress made in skills and knowledge.
INITIATIVE	1 2	3 4	(5) 6	7 8	9 10
Can he originate and carry through on ideas?	Has to be told everything to do.	Seldom goes ahead on his own.	Goes ahead on routine matters.	Frequently looks for additional work to do.	Always finding jobs that need to be done.
RELIABILITY	1 2	3 (4)	5 6	7 8	9 10
Can the student be depended upon in his work?	Can seldom be relied upon.	Frequently fails to come through.	Can be relied upon in most cases.	Only occasionally fails to come through.	Can be relied upon implicitly in all matters.
WORK ATTITUDE	1 2	3 4	5 6	(7) 8	9 10
Does he have a good attitude toward his work?	Bored; shows little enthusiasm.	Rationalizes his shortcomings and mistakes.	Normally enthusiastic about his work.	Tries to improve his work in most cases.	Is always alert to finding ways of improving work.
COOPERATION	1 2	3 4	5 6	7 (8)	9 10
Does he work well with others?	Always wants his own way; is hard-headed.	Hard for others to work with.	Usually congenial and easy to work with.	Works well with his associates.	Cooperates fully in all matters.

ADDITIONAL REMARKS: Needs to develop more speed in work - Seems to be afraid of spoiling a job -

Figure 15.

VIE-011
(IE-27)

Date Left Program 5/31 1959
Cert. Awarded 5/31 1959

TEXAS EDUCATION AGENCY
Division of Vocational Instruction Services
Industrial Education Service

Student's Permanent Record
Industrial Cooperative Training

Student Jones, Rufus J. Age 16
School New Austin High School Grade 11

Occupation	Training Station	Date Placed
Machinist	B & B Metal Work Co	Sept 3, 1957

I. EMPLOYER'S PERIODIC RATINGS

(These ratings based on recommended chart, page 71, Coordinator's Handbook)

(10-9) Excellent (8-7) Above Average (6-5) Average (4-3) Below Average
(2-1) Unsatisfactory

PERIOD (6 or 9 Weeks):	First Year						Second Year					
	1	2	3	4	5	6	1	2	3	4	5	6
PROGRESS - Has student advanced in skill and knowledged of occupation?	5	5	7	6	7	6	6	7	8	8	8	8
INITIATIVE - Can student originate and carry through on ideas?	5	5	6	6	7	7	8	8	8	8	8	8
RELIABILITY - Can student be depended upon in his work?	4	5	7	8	8	8	8	9	9	9	9	9
WORK ATTITUDE - Does student have a good attitude toward his work?	7	8	8	8	8	8	8	9	9	9	9	9
COOPERATION - Does student work well with others?	8	8	9	9	8	9	9	9	9	9	9	9

II. RELATED SUBJECTS

Grades by Periods	C	C	C	B	B	C	A	B	C	B	B	A
Hours in Class	28	31	25	29	30	26	28	31	25	29	30	26

III. WORK EXPERIENCE

Hours on Job	140	150	120	140	150	130	140	155	120	140	150	130
Wages Received	70.00	75.00	60.00	84.00	90.00	78.00	105.00	117.00	90.00	140.00	150.00	130.00

IV. FOLLOW-UP RECORD

Employment (Business or Firm)	Date	Position	Wages
B & B Metal Work Co	6/1/59	Apprentice Mach	$1.30/hr
		Second Year.	

852-2500

(Over)

Figure 16.

V. PERSONAL DATA CONCERNING STUDENT

A. Scholastic ability (quality of work in other classes):

Has 82 grade average in other classes.
Tries hard to improve

B. School activities (clubs, offices held, achievements, etc.):

V.I.C Chapter President - 1958
Hi-Y Vice-President - 1957

C. General remarks (conferences with students, attendance record, home environment, etc.):

Parents interested in Rufus and his work. They are of moderate means financially.
During first two months did not seem to have his heart in school and job. Was frequently absent. After this period work and attitude both in school and on the job improved. This was especially true during the second year.

XIII. PUBLICITY

Function of Publicity

The purpose of publicity for vocational programs is to interpret vocational education to the public; to clarify the understanding of both student and school patrons regarding the aims, objectives, philosophy and the various services of vocational education, and to help them to appreciate the advantage of pre-employment trade training as one step toward a more efficient, enlightened, and happy citizenry.

Acquainting the public with these services is a phase of education itself. The dissemination of publicity regarding industrial cooperative training is definitely as much a part of the teacher-coordinator's duties as doing guidance work, counseling with individuals, and placing students in employment. Good publicity arouses interest and secures cooperation of the public in providing more efficient school programs for the benefit of future citizens.

Publicity in Starting a New Program

The first phase of publicity with which the coordinator will deal is that of "advertising" the starting of a new program in the community. Students, parents, and businessmen must understand the objectives, advantages, and working details of the program, and the coordinator is the logical person to supply this information.

He has at his command several media of publicity: talks before school and business groups, newspaper items, radio "spot" announcements, letters, and the like. Each of these types of publicity requires a somewhat different technique. Space does not permit a comprehensive explanation of each in this handbook. However, a few comments and suggestions on the use of talks to groups, newspaper articles, and letters will be given.

Talks to Groups--The coordinator does not necessarily have to be an accomplished speaker in order to publicize his cooperative program. He should be able to explain briefly the major details of the operation of the program and to show the advantages of cooperative training to various groups. For example, part or all of the following points may be used at some time by the coordinator in talks to various groups:

New Vocational Program in High School

Cooperative Training in Several Occupations Available to Junior and Senior Students

Classes in cooperative occupational training are the most recent additions to the New Austin High School curriculum, according to a recent announcement by Superintendent Homer K. Brown.

T. H. Green

These classes afford students of Junior and Senior standing both practical and theoretical training in a variety of trades and occupations.

Practical work experiences are provided the student through part-time employment each afternoon at some cooperating business or industry within the city. The local school provides technical instruction on a supervised basis in specially scheduled classes. Students may enroll in two other high school subjects needed for graduation.

The course is set up for two years of training and carries four affiliated credits. Students receive wages comparable to those paid beginning workers in the same occupations.

Typical occupations acceptable in the program are: auto mechanics, auto body repairing, electrical work, building trades, meat cutting, machine shop work, radio servicing, refrigeration servicing, welding.

The program will operate under the direction of T. H. Green, Coordinator. Mr. Green will be responsible for the selection and placement of students and will correlate their practical and technical training.

An advisory committee of local business men has been set up by the school to assist Mr. Green in organizing and operating the new program. The committeemen are: Thomas N. Blank, Manager of Howard Hardware Company; Roy Williams, Manager of Acme Electric Co.; J. J. Jones, Secretary of the Chamber of Commerce; James Johnston, Business Manager of the Central Trades Council; and Tom Smith, mechanic at the ABC Garage.

In commenting upon the new vocational program, Superintendent Brown said, "We feel that the inclusion of this type of program will do much to provide the youth of New Austin with a well-rounded educational program that will fulfill the need for practical; down-to-earth training. It will enable that large portion of our students who desire to become occupationally competent to enter full-time employment upon graduating from high school."

Figure 17.

ADVANTAGES OF COOPERATIVE TRAINING TO THE SCHOOL

1. Provides for vocational training without an extensive outlay of equipment and materials.

2. Helps the school keep abreast of modern trends in business and industry.

3. Helps meet the training needs of the community without over-training in any one trade or occupation.

4. Provides a terminal course for students who do not continue their education beyond high school.

5. Provides a qualified staff member to assist in guidance work.

ADVANTAGES TO THE STUDENT:

1. Provides for a certain amount of selection and "try out" in vocations.

2. Provides opportunity to learn a trade or occupation while earning a high school diploma.

3. Provides greater assurance of full-time employment in chosen occupation.

4. Provides training on real jobs under real conditions.

5. Offers opportunity to learn the technical information of a trade as well as the manipulative skills.

6. Provides opportunity to establish a reputation on the job through two years of experience.

ADVANTAGES TO THE EMPLOYER:

1. Provides a better all-round employee than he could ordinarily afford to train himself.

2. Provides assistance in selecting qualified personnel.

3. Makes available full-time employees trained in his own plant.

4. Offers opportunity to participate in an educational enterprise.

Preparation of Newspaper Articles -- Several times during the school year the coordinator will have occasion to release announcements, new items, and interest stories about his cooperative classes. In most cases the newspaper will prefer to have one of its reporters write the story after an interview with the coordinator. In some instances, however, the newspaper -- especially in the smaller centers -- may prefer to print copy prepared by the coordinator, making it advisable for him to know something of the techniques of writing newspaper articles. The following suggestions are intended to assist him in preparing publicity copy:

1. Newspaper articles are of two types: news stories and feature stories. The feature story differs from the news story in that it usually emphasizes the "human interest" element. Both types of articles are necessary to properly publicize school activities.

2. Both types of newspaper stories on vocational programs should be factual. The facts should speak for themselves and the writer should never attempt to "color" the story by injecting his own opinions.

3. If the coordinator feels that his article requires a certain amount of "editorializing", he should make sure that the comments come from some person of authority other than himself, and he should use "quotes" in all cases. For example, the following statement in a newspaper article has far more weight than any number of editorial comments made by the coordinator: "In discussing cooperative training before the Businessmen's Luncheon Club, Superintendent Brown said, 'We feel that this program does much to bridge the wide gap that separates the school and business and industry.'"

4. A good newspaper story seldom starts at the beginning and works toward the climax as is done in fiction writing. The opening paragraph is the most important and should contain the gist of the story.

5. The opening sentence -- or at least the first paragraph -- should answer the following questions: Who? What? When? Where? Why?

6. Sentences, paragraphs, and even words must be short for easy reading.

7. Use action verbs. The active voice is more forceful than the passive voice. "Graduates receive training certificates" is better than "training certificates are received by graduates".

8. There should be a "follow-up" story for every news item printed about the vocational program. The announcement that the school has inaugurated a cooperative training program should be followed

within a reasonable length of time by a story on enrollment, placements, and other data about the program. Likewise, such an item as "Cooperative Students Plan Employer Banquet" should be followed by "Students Honor Employers at Banquet" when the function takes place.

9. Too much publicity is worse than none at all. Avoid the use of "Ballyhoo" and publicity stunts. Do not mislead the public into expecting more of your program than can possibly be accomplished.

10. Clear all publicity releases through the proper channels. Learn the school policy regarding publicity and adhere to it.

11. Miscellaneous suggestions on preparing copy:
    - Use a typewriter.
    - Double space.
    - Do not write the headlines.
    - Indicate who prepared the copy -- it will assist the editors.

NOTE: Coordinators should keep clippings of all newspaper publicity, and send extra clippings to their District Supervisor.

A sample of a newspaper announcement of the opening of a new cooperative training program is shown in Figure 17. It is well for the coordinator to have a small cut of himself similar to the one illustrated; newspapers frequently request them to accompany a news item. Photographs attract attention and cause readers to notice articles which they might otherwise overlook.

Letters to Students and Businessmen -- Newspaper articles are indispensable in publicizing the vocational program, yet they do not have the <u>personal element</u> associated with a letter. An example of a letter sent to a select group of potential students is shown in Figure 18. Although it is much less trouble and expense to mimeograph the body of such letters, they are far more effective if typed.

Frequently it is advisable to use <u>personal letters</u> from the superintendent of Schools to a select group of businessmen. Letters of this type are especially valuable in assisting a new coordinator in making his initial contact with a potential employer whom he has not yet interviewed. It also reflects sincerity and a desire to render greater service on the part of the school. A sample of such a letter is shown in Figure 19. Of course a letter of this type should be sent only to employers whose place of business meets acceptable standards.

NEW AUSTIN PUBLIC SCHOOLS

NEW AUSTIN, TEXAS

August 12, 1959

Dear Harry:

Are you interested in receiving training in an occupation of your choice during your last two years in high school?

If so, it may be possible for you to enroll in a new occupational training course which has been added recently to the list of high school subjects. In this class, called Industrial Cooperative Training, students are employed each afternoon in their chosen occupation in places of business in the city. In addition to receiving practical work experiences, they are paid a fair weekly wage for the work done on the job. Mornings are devoted to the study of regular high school subjects, one of which is a special vocational class in which the students study the "Why and Wherefore" of their specific occupations.

This is a two-year course and carries two affiliated credits per year. Students enrolled may take two other subjects needed for graduation and thus earn a total of four credits per year -- a normal schedule. This plan enables the student to prepare himself for full-time employment and at the same time satisfy graduation requirements. Some eight or ten occupations will be offered this year, the selection depending upon the popular demand of the students. In general, choices may be made from the following types of occupations: auto mechanics, auto body repairing, building trades, drafting, electrical trades, machine trades, printing, radio and television servicing, refrigeration servicing, welding, and several others which require at least two years of training.

If you are interested in obtaining further information about this new course, you may contact Mr. T. H. Green at the High School any morning during the week from 9 to 12 noon. If it is not possible for you to come in person you may mail the attached blank to Mr. Green at the High School.

Yours very truly,

Marvin V. Winters

Marvin V. Winters
Principal

- -

Name: _____ Age Nearest Birthday: _____

Address: _____ Phone: _____

Occupation in which you are interested: _____

Are you working now? _____ If so, where? _____

Figure 18.

Features and Other Publicity Devices

In addition to newspaper announcements and stories of a timely nature, there are many subjects for articles which may be used at various times throughout the school year and which may be classed roughly as feature stories. This type of article is much more difficult to write than "spot" news and should not be attempted by the coordinator unless he possesses an ability to write and has had experience in this type of writing. However, material on suitable subject matter may be prepared by him to be rewritten by a newspaper staff writer.

Some suggested subjects for feature stories that may be used at various times are:

1. Series of student interviews, including photographs of the student at work.

2. Employers' views on cooperative training.

3. Unusual or outstanding training situations.

4. Guidance values of cooperative training.

5. Annual training certificates awarded.

6. Students' views and reactions on working in industry.

7. Objectives and activities of Vocational-Industrial Club.

8. "Should Work Experience be a High School Requirement?"

9. How co-op students invest their money.

10. Interesting follow-up data.

11. Presentation of recognition certificates to training stations.

By and large, newspapers are anxious to obtain copy on such subjects as those listed above and usually have at least one staff member who specializes in this type of writing. The public is interested in its schools and enjoys reading about them, especially if the articles contain a liberal sprinkling of familiar names and places, and describe the achievements of the youth of

NEW AUSTIN PUBLIC SCHOOLS

NEW AUSTIN, TEXAS

August 15, 1959

Mr. H. T. Johnson, Manager
Norton Electric Company
123 North First Street
New Austin, Texas

Dear Mr. Johnson:

We are taking this means of acquainting various employers who are engaged in trade and industrial work within the city of a new course -- Industrial Cooperative Training -- which has been added to our high school curriculum, and which is intended to enable our school to render a more complete service to our local business and industrial establishments by supplying them with better trained personnel from among our graduates.

The Board of Education feels that the inclusion of this type of program will do much to provide the youth of New Austin with a well-rounded educational program that will fulfill the need for practical, down-to-earth training. It will enable that large portion of our students who desire to become occupationally competent to enter full-time employment upon graduation.

As the name of this course suggests, it is carried on through a cooperative arrangement between the businesses and industries of our city and the local schools; practical work experiences are gained by the student through part-time employment in some place of business -- such as yours -- during each afternoon. Studies of technical information related to the students' occupation are provided by our high school in a special class scheduled each morning. Students must be of Junior or Senior standing and must be at least sixteen years of age.

Our Mr. Green, recently appointed coordinator of this program, will make every effort to visit you in the near future and explain the operation of this program more in detail. If you decide that your place of business will be in a position to cooperate in training one or more students, we shall be very happy to include you on our "faculty."

Very truly yours,

Homer K. Brown

Homer K. Brown, Superintendent
New Austin Public Schools

Figure 19.

Several well planned feature stories have appeared in various local newspapers throughout the State in recent years. "Paste-ups" of some of these appear on the following pages. One particularly interesting type of publicity is that of paid advertisements of employers, featuring their trainees. A more elaborate type of illustrated feature story is that appearing in the rotogravure section of a Sunday paper.

Industrial Training Picking Up

Students Are Now Registering for Next Year's Work

One high school girl is a meat cutter, another a dental assistant. A high school boy works in the auto parts section of a motor company, another at a television studio, a third as an engraver.

Juniors and seniors from Miller and Ray High Schools may be found during the afternoons in many lines of work under the Industrial Cooperative Training plan.

Already pre-registering students for next school year are James Cosgrove, Miller coordinator, and Jack W. Humphries, at Ray.

SHIRLEY SEWARD, DENTAL ASSISTANT, CLOWNS
... with her ICT instructor, James Cosgrove

Vocational Students To Fete Employers

For the 29th time since 1935, students in the high school industrial training program will entertain their employers Friday night.

The annual banquet staged by the Vocational Industrial Club will start at 7:30 p.m. in the Wagon Wheel Restaurant. Speaker will be Jack Y. Smith, manager of industrial relations for the Cosden Petroleum Corp.

Smith will speak on the topic, "Where Will You Be in 1965?" He will discuss labor trends since 1955 and attempt to project them to 1965.

The banquet, featuring charcoal steaks, will be financed by the VIClub treasury—funds raised by the students in various projects. About 70 persons are expected to attend, including the 26 vocational industrial students, their employers, and other guests.

Welcome will be extended by Supt. Floyd Parsons of the Big Spring schools. Invocation will be led by Tommy Williams. Entertainment will include a bagpipe pantomime by Jackie Owens and Dalton Conway, a song by Lugenia Smith, and a piano number

Standard Courses Only Half The Training For ICT Pupils

Completion of the standard courses for high school graduation and college entrance is only half the training received by vocational students in Big Spring High School.

The other half consists of on-the-job training in the various vocational and industrial fields.

In addition to going to school, the students spend 20 to 25 hours per week on their jobs. Schedules are arranged so they can complete classroom work during the mornings and shift to the shops laboratories, etc. for the afternoons.

One hour each morning is spent on technical studies related to the various fields in which the students are training. Balance of the school time is spent in regular classes where they take the subjects required for graduation.

Another important part of the Industrial Cooperative Training Program is the Vocational Industrial Club, made up of ICT students. The club works to develop leadership, moral and spiritual qualities, and to assist the students in understanding opportunities and trends in the various vocational fields. The students also study such related subjects as insurance, loans, interest, as a part

fields as electricity, mechanics, the building crafts, nursing, laboratory technology, etc.

Coordinator of the program in Big Spring High is Louis Maneely.

While the program isn't set up to afford students to earn money while going to school, the earnings of the trainees form an interesting facet of the program. Maneely estimated the 26 pupils will earn $18,000 to $20,000 this school year.

Usual pay for a b dents is 75 cents pe some work up to as r after becoming profic trades. The U. S. D Labor sets up qual a training program, sure the students of program. Maneely w

28 in Each Class

Cosgrove's clas bers 28, with an boys and girls, about the same

The two coordin applications now omores and junio juniors and seni The program is s

New SFA Course Seen As Boon To Practical Student

Classes in cooperative occupational training are the most recent additions to the Stephen F. Austin high school curriculum, according to Supt. W. R. Carmichael.

These classes afford students of junior and senior standings both practical and theoretical training in a variety of trades and occupations.

Practical work experience is provided the student through part-time employment each afternoon at some cooperative business or industry within the city.

ed by Pat Murphy, manager of the lo There have been s coordinators since M ed. Maneely took ov

Big Spring stude won nine first place nds and three thir lition at the distric Contests were held i trades. Students wh the district competiti fied to compete in s at Galveston May 7

Officers of the Bi cational Industrial C Williams pres vic cre

Certified Training Stations

Henry Thames, left, is thanked by Roy D. Worley, principal of Spring High School, at a breakfast session honoring employers students in the Trade and Industries Vocational Program. who once was in the program himself, has been a of the advisory committee for many years. There are 23 ich employ the students half a day by training them b. The other half day is spent in school on academic and d studies.

ICT PROGRAM

Training In Skilled Trades Afforded For 29 HS Students

Schedule for Releasing Publicity

Needless to say, the coordinator should plan his publicity campaign and not conduct it in a haphazard manner. Planning includes timing, which is one of the most essential elements in an effective publicity campaign. Following is a suggested schedule which a coordinator may use in making plans for publicizing his program. Of course, he may not (and probably should not) use all the media listed, but he should, however, give consideration to several of the most feasible publicity activities for his particular community and plan them far enough in advance to allow himself sufficient time to carry them out in a creditable manner.

SUGGESTED SCHEDULE FOR RELEASING PUBLICITY

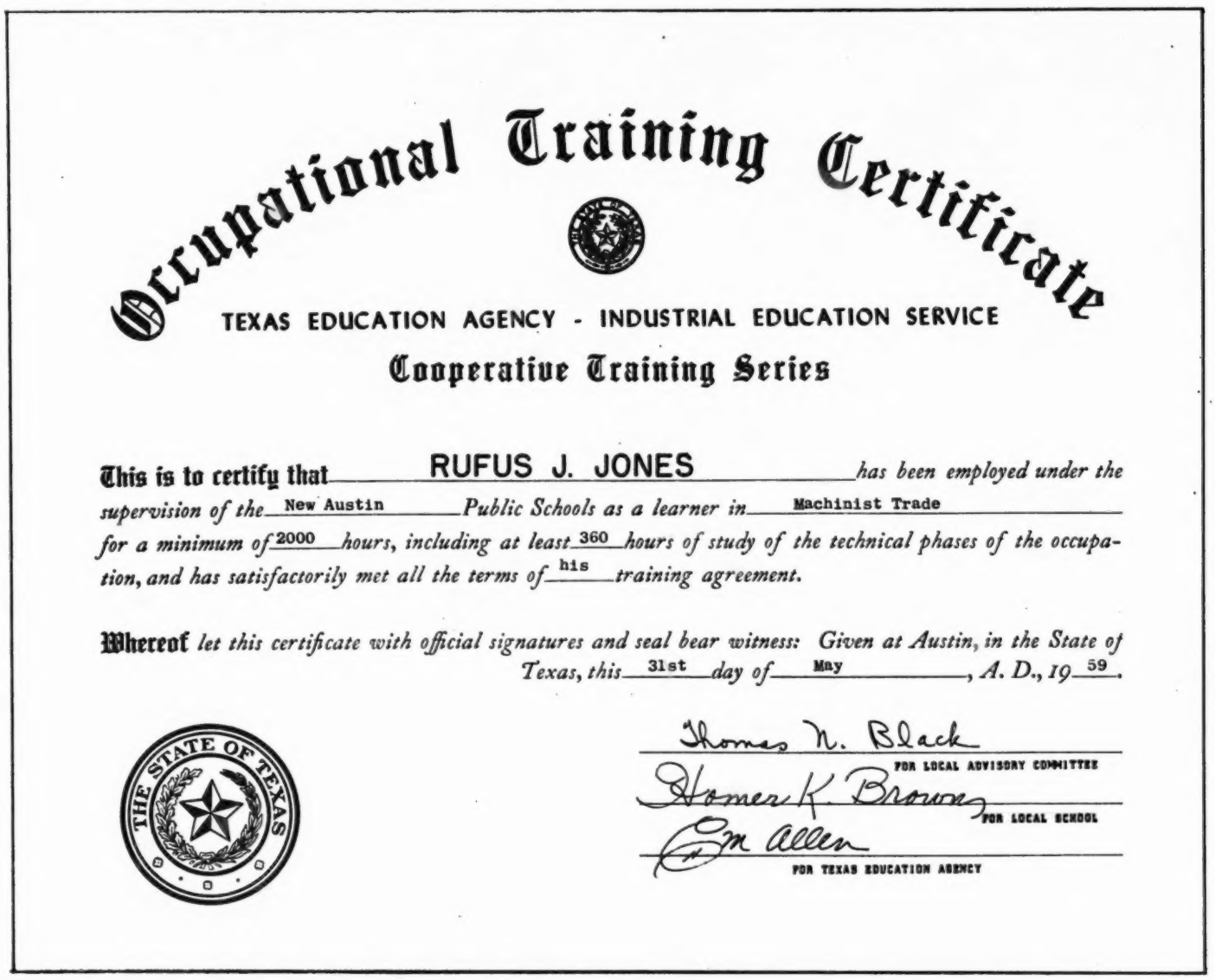
MEDIA OF PUBLICITY	Before opening of school	At opening of school	During each semester	Once during year	At end of school
Newspaper announcements	X	X			
Newspaper features			X		
School publications			X		
School assembly program				X	
Talks to civic clubs	X		X		
Vocational Club activities			X		
Talk to Parent-Teachers Ass'n.				X	
School exhibits and projects		X	X		
School placards and posters			X		
School public address system		X	X		
Employers' newspaper "ads"				X	
Free radio and television time				X	
Section in school yearbook				X	
Letters to students and parents	X				
Employer-employee banquet				X	
Letters of appreciation to employers and parents					X
Recognition certificates				X	

Figure 20.

XIV. CLOSING OUT SCHOOL YEAR

Training Certificates

Students who have satisfied the conditions outlined in their Training Plan and who have completed two school years of training are eligible for an Occupational Training Certificate, Figure 21, issued by the State Board for Vocational Education upon written request from the teacher-coordinator. A student who does not have a Training Plan on file in the State office, or who has changed his occupation during the training period is not eligible for this certificate unless the occupation to which he changed is closely allied to the original occupation.



Occupational Training Certificate

TEXAS EDUCATION AGENCY - INDUSTRIAL EDUCATION SERVICE

Cooperative Training Series

This is to certify that RUFUS J. JONES has been employed under the supervision of the New Austin Public Schools as a learner in Machinist Trade for a minimum of 2000 hours, including at least 360 hours of study of the technical phases of the occupation, and has satisfactorily met all the terms of his training agreement.

Whereof let this certificate with official signatures and seal bear witness: Given at Austin, in the State of Texas, this 31st day of May, A. D., 19 59.

THE STATE OF TEXAS

Thomas N. Black
FOR LOCAL ADVISORY COMMITTEE

Homer K. Brown
FOR LOCAL SCHOOL

C. M. Allen
FOR TEXAS EDUCATION AGENCY

Figure 21.

The usual procedure in awarding these certificates is to present them to graduates at the school commencement exercises, or in some cases, to present them at the annual employer-employee banquet if it is held near the end of the school year.

Summary of Year's Work

Although it is not a part of the standards set up by the State Board for Vocational Education for industrial cooperative programs, coordinators should submit a written summary of their year's work to the school administration and advisory committee. Such a practice is indeed business-like and school superintendents and advisory committee members have commented very favorably upon it. Frequently these persons, especially school administrators, are not fully aware of all the details of the coordinator's work during the year, and a report of this type is a splendid means of maintaining their cooperation and interest in the development of the cooperative program. Suggested data which may be included in such a report are:

1. Cumulative enrollment: boys; girls.
2. Fields of training.
3. Total student hours on job; in class.
4. Total wages received.
5. Student training costs.
6. Training certificates awarded.
7. Contacts with employers, parents, management and labor groups.
8. New library and classroom facilities obtained.
9. Prospects for next year's class; new fields of training.
10. Trade Extension promotional activities.

Check Sheet for Closing Out School Year

Too often when a coordinator fails to return to his work at the beginning of a new school year, the succeeding coordinator--usually a new man in the school system--finds insufficient records and general information about the program he is taking over. Situations like this are inexcusable and result in considerable loss of valuable time to the new coordinator who is obliged to spend several days in seeking out sufficient information about the status of the program to enable him to proceed in organizing his classes. Although a coordinator may fully expect to return to his present position the following term, he should make certain that complete and accurate records pertaining to his program are on file. A suggested check sheet for closing out each school year is shown below. A copy should be left with the high school principal before the coordinator leaves on his summer vacation.

CHECK SHEET for closing out Industrial Cooperative Classes

Items	Where Filed
Advisory Committee Minutes	
Class rolls (register)	
Correspondence	
Inventory of reference books	
Inventory of classroom equipment	
Inventory of courses of study	
Memoranda and bulletins	
Permanent Record Cards	
Prospective student list	
Prospective employer list	
Student applications (new)	
Plans for coming year	
Students' individual folders	
Adult Education records	

Figure 22

Presentation Of Training Certificates

APPENDIX

108/109

LAWS AFFECTING COOPERATIVE TRAINING

The employment of high school students in industrial cooperative programs must conform to State and Federal laws regulating the employment of minors. The State Board for Vocational Education is insistent in maintaining the standard of part-time programs in this respect as high as, or even higher than, those established by the State and Federal Governments.

It is incumbent upon each coordinator to familiarize himself with all such laws and to check each student and training station in his program to see that no irregularities occur.

I. TEXAS CHILD LABOR LAWS

Texas labor laws prohibit the employment of youth under 17 years of age in mines, quarries, and places where explosives are used. They also regulate the employment of youth under the age of 15.

Since part-time programs in Texas do not offer training in the above occupations, nor accept students under 15 years of age, these provisions are automatically complied with.

No girl can work more than 9 hours a day, nor more than 54 hours a week in any type of occupation.

II. CHILD LABOR STANDARDS UNDER FEDERAL LAWS

A 16-year minimum age for school and work programs. Enrollment in part-time classes reimbursed from funds appropriated under the George-Barden Act is limited to workers 16 years of age and over. Under the Fair Labor Standards Act, 16 years is the legal minimum age for work during school hours in any occupation in or about any establishment which produces goods for shipment in interstate commerce. Therefore, the Office of Education and the U. S. Department of Labor agree that a minimum age of 16 years for school and work programs should be observed.

An 18-year minimum age for occupation declared hazardous under the Fair Labor Standards Act. To protect young workers from hazardous employment the Fair Labor Standards Act provides for a minimum age of 18 years in occupations found and declared to be particularly hazardous for minors 16 and 17 years of age. There are to date 17 hazardous-occupations orders which include:

Explosive manufacturing (Order No. 1)
Motor vehicles (Order No. 2)
Coal Mining (Order No. 3)
Logging and sawmilling (Order No. 4)

Power-driven woodworking machines (Order No. 5)
Radioactive substances (Order No. 6)
Power-driven hoisting apparatus (Order No. 7)
Power-driven metal forming, punching, and shearing machines (Order No. 8)
Mining, other than coal (Order No. 9)
Slaughtering and meat packing establishments and rendering plants (Order No. 10)
Bakery machines (Order No. 11)
Paper-products machines (Order No. 12)
Manufacture of brick, tile and kindred products (Order No. 13)
Occupations involved in the operation of circular saws, band saws, and guillotine shears (Order No. 14)
Occupations involved in wrecking, demolition, and ship-breaking operations (Order No. 15)
Occupations involved in roofing operations (Order No. 16)
Occupations in excavation operations (Order No. 17)

The orders that are most likely to have a bearing on school and work programs are Nos. 2, 5, 6, 7, 8, 10, 11, 12. An explanation of each of these orders follows: (The information is taken directly from the Revised Child Labor Bulletin No. 101, U. S. Department of Labor, 1964.)

Motor-Vehicle Occupations (Order No. 2)

The occupations of motor-vehicle driver and helper.

Definitions

The term "motor vehicle" shall mean any automobile, truck, truck-tractor, trailer, semitrailer, motorcycle, or similar vehicle propelled or drawn by mechanical power and designed for use as a means of transportation but shall not include any vehicle operated exclusively on rails.

The term "driver" shall mean any individual who, in the course of his employment, drives a motor vehicle at any time.

The term "helper" shall mean any individual, other than a driver, whose work includes riding on a motor vehicle for the purpose of assisting in transporting or delivering goods, but shall not apply to an individual riding in a passenger-type motor vehicle.

(Effective January 1, 1940; Amended May 16, 1955)

Power-Driven Woodworking Machine Occupations (Order No. 5)

The following occupations involved in the operation of power-driven woodworking machines:

1. The occupation of operating power-driven woodworking machines including supervising or controlling the operation of such machines, feeding material into such machines, and helping the operator to feed material into such machines, but not including the placing of material on a moving chain or in a hopper or slide for automatic feeding.

2. The occupations of setting up, adjusting, repairing, oiling, or cleaning power-driven woodworking machines.

3. The operations of off-bearing from circular saws and from guillotine-action veneer clippers.

Definitions

(1) The term "power driven woodworking machines" shall mean all fixed or portable machines or tools driven by power and used or designed for cutting, shaping, forming, surfacing, nailing, stapling, wire stitching, fastening, or otherwise assembling, pressing, or printing wood or veneer.

(2) The term "off-bearing" shall mean the removal of material or refuse directly from a saw table or from the point of operation. Operations not considered as off-bearing within the intent of this section include: (a) the removal of material or refuse from a circular saw or guillotine-action veneer clipper where the material or refuse has been conveyed away from the saw table or point of operation by a gravity chute or by some mechanical means such as a moving belt or expulsion roller, and (b) the following operations when they do not involve the removal of material or refuse directly from a saw table or from the point of operation: the carrying, moving, or transporting of materials from one machine to another or from one part of a plant to another; the piling, stacking, or arranging of materials for feeding into a machine by another person; and the sorting, typing, bundling, or loading of materials.

Exemptions

Apprentices. -- This order shall not apply to the employment of apprentices in the occupations herein declared particularly hazardous: Provided, that (1) the apprentice is employed in a craft recognized as an apprenticable trade, (2) the work of the apprentice in the occupations herein declared hazardous is incidental to the apprentice training, is intermittent and for short periods of time, and is under the direct and close supervision of a journeyman as a necessary part of such apprentice training, and (3) the apprentice is registered by the Bureau of Apprenticeship and Training of the United States Department of Labor as employed in accordance with the standards established by that Bureau, or is registered by a State agency as employed in accordance

with the standards of the State apprenticeship agency recognized by the Bureau of Apprenticeship and Training, or is employed under a written apprenticeship agreement under conditions which substantially conform to such Federal or State standards as determined by the Secretary of Labor.

Student-learners. -- This order shall not apply to the employment of a student-learner in occupations herein declared particularly hazardous: Provided, however, that such a student-learner is enrolled in a course of study and training in a cooperative vocational training program under a recognized State or local educational authority or in a course of study in a substantially similar program conducted by a private school: Provided, further, that such student-learner be employed under a written agreement which shall provide: (1) that the work of the student-learner in the occupations herein declared hazardous shall be incidental to his training, shall be intermittent and for short periods of time, and shall be under the direct and close supervision of a qualified and experienced person; (2) that safety instruction shall be given by the school and correlated by the employer with on-the-job training; and (3) that a schedule of organized and progressive work processes to be performed on the job shall have been prepared. Such a written agreement shall carry the name of the student-learner, and shall be signed by the employer and the school coordinator or principal. Copies of the agreement shall be kept on file by both the school and the employer. This exemption for the employment of student-learners may be revoked in any individual situation wherein it is found that reasonable precautions have not been observed for the safety of minors employed thereunder.

(Effective August 1, 1941. Amended November 13, 1942; February 18, 1944; July 12, 1944; October 31, 1945; September 27, 1946; November 24, 1951; and September 23, 1958.)

Occupations Involving Exposure to Radioactive Substances and to Ionizing Radiations (Order No. 6)

Any work in any workroom in which (a) radium is stored or used in the manufacture of self-luminous compound; (b) self-luminous compound is made, processed, or packaged; (c) self-luminous compound is stored, used, or worked upon; (d) incandescent mantles are made from fabric and solutions containing thorium salts, or are processed or packaged, (e) other radioactive substances are present in the air in average concentrations exceeding 10 percent of the maximum permissible concentrations in the air recommended for occupational exposure by the National Committee on Radiation Protection, as set forth in Table 3 of National Bureau of Standards Handbook No. 52, "Maximum Permissible Amounts of Radioisotopes in the Human Body and Maximum Permissible Concentrations in Air and Water," issued March 20, 1953.

Any other work which involves exposure to ionizing radiations in excess

of one-tenth the maximum permissible dose recommended by the National Committee on Radiation Protection, as set forth in National Bureau of Standards Handbook No. 59, "Permissible Dose from External Sources of Ionizing Radiation," issued September 24, 1954.

Definitions

As used in this section: the term "self-luminous compound" shall mean any mixture of phosphorescent material and radium, mesothorium, or other radioactive element; the term "workroom" shall include the entire area bounded by walls of solid material and extending from floor to ceiling; the term "ionizing radiations" shall mean alpha and beta particles, electrons, protons, neutrons, gamma, and X-ray and all other radiations which produce ionizations directly or indirectly, but does not include electromagnetic radiations other than gamma and X-ray.

(Effective May 1, 1942. Amended July 9, 1949, and June 23, 1957.)

Power-Driven Hoisting Apparatus Occupations (Order No. 7)

The following occupations involved in the operation of power-driven hoisting apparatus:

1. Work of operating an elevator, crane, derrick, hoist, or high-lift truck, except operating an unattended automatic operation passenger elevator or an electric or air-operated hoist not exceeding 1-ton capacity.

2. Work which involves riding on a manlift or on a freight elevator, except a freight elevator operated by an assigned operator.

3. Work of assisting in the operation of a crane, derrick or hoist performed by crane hookers, crane chasers, hookers-on, riggers, rigger helpers, and like occupations.

Definitions

The term "elevator" shall mean any power-driven hoisting or lowering mechanism equipped with a car or platform which moves in guides in a substantially vertical direction. The term shall include both passenger and freight elevators (including portable elevators or tiering machines), but shall not include dumbwaiters.

The term "crane" shall mean a power-driven machine for lifting and lowering a load and moving it horizontally, in which the hoisting mechanism is an integral part of the machine. The term shall include all types of crane, such

as cantilever gantry, crawler, gantry, hammer-head, ingot-pouring, jib, locomotive, motor truck, overhead traveling, pillar jib, pintle, portal semi-gantry, semiportal, storage bridge, tower, walking jib, and wall cranes.

The term "derrick" shall mean a power-driven apparatus consisting of a mast or equivalent members held at the top by guys or braces, with or without a boom, for use with a hoisting mechanism and operating ropes. The term shall include all types of derricks, such as A-frame, breast, Chicago boom, gin-pole, guy, and stiff-leg derricks.

The term "hoist" shall mean a power-driven apparatus for raising or lowering a load by the application of a pulling force that does not include a car or platform running in guides. The term shall include all types of hoists, such as base-mounted electric, clevis suspension, hook suspension, monorail, overhead electric, simple drum, and trolley suspension hoists.

The term "high-lift truck" shall mean a power-driven industrial type of truck used for lateral transportation that is equipped with a power-operated lifting device usually in the form of a fork or platform capable of tiering loaded pallets or skids one above the other. Instead of a fork or platform, the lifting device may consist of a ram, scoop, shovel, crane, revolving fork, or other attachments for handling specific loads. The term shall mean and include high-life trucks known under such names as fork lifts, fork trucks, fork-lift trucks, tiering trucks, or stacking trucks, but shall not mean low-lift trucks or low-lift platform trucks that are designed for the transportation of, but not the tiering of, material.

The term "manlift" shall mean a device intended for the conveyance of persons which consists of platforms or brackets mounted on, or attached to, an endless belt, cable, chain or similar method of suspension; such belt, cable, or chain operating in a substantially vertical direction and being supported by and driven through pulleys, sheaves or sprockets at the top or bottom.

(Effective September 1, 1946. Amended September 30, 1950; and September 1, 1955.)

Power-Driven Metal Forming, Punching, and Shearing Machine Occupations (Order No. 8)

The occupations of operator of or helper on the following power-driven metal forming, punching, and shearing machines:

1. All rolling machines, such as beading, straightening, corrugating, flanging, or bending rolls; and hot or cold rolling mills.

2. All pressing or punching machines, such as punch presses except those provided with full automatic feed and ejection and with a fixed barrier guard to prevent the hands or fingers of the operator from entering the area between the dies; power presses; and plate punches.

3. All bending machines, such as apron brakes and press brakes.

4. All hammering machines, such as drop hammers and power hammers.

5. All shearing machines, such as guillotine or squaring shears: alligator shears; and rotary shears.

Definitions

The term "operator" shall mean one who operates a forming, punching, or shearing machine by performing such functions as setting up the machine, starting and stopping it, placing the work in the machine and removing the finished work from the machine, and performing other related functions in connection with its operation.

The term "helper" shall mean one who assists in the operation of a forming, punching, or shearing machine by helping place the work in or remove it from the machine.

The term "forming, punching, and shearing machines", shall mean power-driven metal-working machines, other than machine tools, which change the shape of or cut metal by means of tools, such as dies, rolls, or knives which are mounted on rams, plungers, or other moving parts. Types of forming, punching, and shearing machines enumerated in this section are the machines to which the designation is by custom applied.

Exemptions

Apprentices. -- This order shall not apply to the employment of apprentices in the occupations herein declared particularly hazardous: Provided, that (1) the apprentice is employed in a craft recognized as an apprenticeable trade, (2) the work of the apprentice in the occupations herein declared hazardous is incidental to the apprentice training, is intermittent and for short periods of time, and is under the direct and close supervision of a journeyman as a necessary part of such apprentice training, and (3) the apprentice is registered by the Bureau of Apprenticeship of the United States Department of Labor, is employed in accordance with the standards established by that Bureau, or is registered by a State agency as employed in accordance with the standards of the State apprenticeship agency recognized by the Bureau of Apprenticeship, or is employed under a written apprenticeship agreement

under conditions which substantially conform to such Federal or State standards as determined by the Secretary of Labor.

Student-learners. -- This order shall not apply to the employment of a student-learner in occupations herein declared particularly hazardous: Provided, however, that such a student-learner is enrolled in a course of study and training in a cooperative vocational training program under a recognized State or local educational authority or in a course of study in a substantially similar program conducted by a private school: Provided, further, that such student-learner be employed under a written agreement which shall provide: (1) that the work of the student-learner in the occupations herein declared hazardous shall be incidental to his training, shall be intermittent and for short periods of time, and shall be under the direct and close supervision of a qualified and experienced person; (2) that safety instruction shall be given by the school and correlated by the employer with on-the-job training; and (3) that a schedule of organized and progressive work processes to be performed on the job shall have been prepared. Such a written agreement shall carry the name of the student-learner, and shall be signed by the employer and the school coordinator or principal. Copies of the agreement shall be kept on file by both the school and the employer. This exemption for the employment of student-learners may be revoked in any individual situation wherein it is found that reasonable precautions have not been observed for the safety of minors employed thereunder.

(Effective October 30, 1950. Amended September 23, 1958.)

Slaughtering, Meat Packing and Rendering Plant Occupations (Order No. 10)

The following occupations in or about slaughtering and meat packing establishments and rendering plants:

(1) All occupations on the killing floor, in curing cellars, and in hide cellars, except the work of messengers, runners, hand-truckers, and similar occupations which require entering such workrooms or workplaces infrequently and for short periods of time.

(2) All occupations involved in the recovering of lard and oils, except for operation of a lard-roll machine and occupations in the packaging and shipment of such products.

(3) All occupations involved in tankage or inedible rendering of dead animals, animal offal, animal fats, scrap meats, blood, and bones into stock feeds, tallow inedible greases, fertilizer ingredients and the like.

(4) All occupations involved in the operation of feeding of the following power-driven meat-processing machines, including the occupation of setting-up, adjusting, repairing, oiling, or cleaning such machines; meat patty forming machines, meat and bone cutting saws, knives, (except bacon-slicing machines) head splitters, and guillotine cutters; snout pullers and jaw pullers; skinning machines; horizontal rotary washing machines; casing-cleaning machines such as crushing, stripping, and finishing machines; grinding, mixing, chopping, and hashing machines; and presses (except belly-rolling machines).

(5) All boning occupations.

(6) All occupations that involve the pushing or dropping of any suspended carcass, half carcass, or quarter carcass.

(7) All occupations that involve the handlifting or handcarrying of any beef, pork, or horse carcass, half carcass of the same, or any beef or horse quarter carcass.

Definitions

The term "slaughtering and meat packing establishments" shall mean establishments in or about which cattle, calves, hogs, sheep, lambs, goats, or horses are slaughtered and/or subsequently processed. The term shall include establishments which manufacture or process meat products from such animals, establishments which manufacture sausage casings from such animals, and establishments which sell the meat from such animals at wholesale.

The term "rendering plants" shall mean plants engaged in the rendering of dead animals, animal offal, animal fats, scrap meats, blood and bones into stock feeds, tallow inedible greases fertilizer ingredients, and the like.

The term "killing floor" shall mean plants engaged in the rendering where cattle, calves, hogs, sheep, lambs, goats, or horses are shackled and killed and the carcasses are dressed prior to chilling.

The term "curing cellar" shall include that workroom or workplace which is primarily devoted to the preservation and flavoring of meat by curing materials. It does not include that workroom or workplace where meats are smoked.

The term "hide cellar" shall include that workroom or workplace where hides are graded, trimmed, salted and otherwise cured.

The term "all boning occupations" shall mean the removal of bones from meat cuts. It shall not include work that involves cutting, scraping, or trimming meat from cuts containing bones.

Exceptions

This section shall not apply to the following:

Any department of a slaughtering and meat packing establishment engaged solely in the killing and/or processing of poultry, rabbits, or small game provided such department is physically separated from the "killing floor" as such term is defined above.

(Effective May 8, 1952, amended November 15, 1960, December 27, 1962, and December 30, 1963.)

Power-Driven Bakery Machine Occupations (Order No. 11)

The following occupations involved in the operation of power-driven bakery machines:

(1) The occupation of operating, assisting to operate, or cleaning any horizontal or vertical dough mixer; batter mixer; break dividing, rounding, or molding machine; dough brake; dough sheeter; combination bread slicing and wrapping machine; or cake cutting band saw.

(2) The occupation of setting up or adjusting a cooky or cracker machine.

(Effective July 21, 1952.)

Power-Driven Paper-Products Machines (Order No. 12)

The occupations of operating or assisting to operate any of the following power-driven paper-products machines:

(1) Arm-type wire stitcher or stapler, circular or band saw, corner cutter or mitering machine, corrugating and single- or double-facing machine, envelope die-cutting press, guillotine paper cutter or shear, horizontal bar scorer, laminating or combining machine, sheeting machine, scrap-paper baler, or vertical slotter.

(2) Platen die-cutting press, platen printing press, or punch press which involves hand feeding of the machine.

Definitions

The term "operating or assisting to operate" shall mean all work which involves starting or stopping the machine, placing materials into or removing them from the machine, setting up or cleaning the machine, or any other work directly involved in operating the machine.

The term "paper-products machine" shall mean power-driven machines used in the remanufacture or conversion of paper or pulp into a finished product. The term is understood to apply to such machines whether they are used in establishments that manufacture converted paper or pulp products, or in any other type of manufacturing or nonmanufacturing establishment.

Exemptions

Apprentices. -- This order shall not apply to the employment of apprentices in the occupations herein declared particularly hazardous; Provided, that (1) the apprentice is employed in a craft recognized as an apprenticeable trade, (2) the work of the apprentice in the occupations herein declared hazardous is incidental to the apprentice training, is intermittent and for short periods of time, and is under the direct and close supervision of a journeyman as a necessary part of such apprentice training, and (3) the apprentice is registered by the Bureau of Apprenticeship of the United States Department of Labor as employed in accordance with the standards established by that Bureau, or is registered by a State agency as employed in accordance with the standards of the State apprenticeship agency recognized by the Bureau of Apprenticeship, or is employed under a written apprenticeship agreement under conditions which substantially conform to such Federal or State standards as determined by the Secretary of Labor.

Student-learner. -- This order shall not apply to the employment of a student-learner in occupations herein declared particularly hazardous: Provided, however, that such a student-learner is enrolled in a course of study and training in a cooperative vocational training program under a recognized State or local educational authority or in a course of study in a substantially similar program conducted by a private school: Provided, further, that such student-learner be employed under a written agreement which shall provide: (1) that the work of the student-learner in the occupations herein declared hazardous shall be incidental to his training, shall be intermittent and for short periods of time, and shall be under the direct and close supervision of a qualified and experienced person; (2) that safety instruction shall be given by the school and correlated by the employer with on-the-job training; and (3) that a schedule of organized and progressive work processes to be performed on the job shall have been prepared. Such a written agreement shall carry the name of the student-learner, and shall be signed by the employer and the school coordinator

or principal. Copies of the agreement shall be kept on file by both the school and the employer. This exemption for the employment of student-learners may be revoked in any individual situation wherein it is found that reasonable precautions have not been observed for the safety of minors employed thereunder.

(Effective September 11, 1954. Amended September 23, 1958.)

An 18-year minimum age for girls and a 16-year minimum for boys on Government contracts. Under the Public Contracts Act, contractors manufacturing or furnishing goods and supplies for the Federal Government in an amount exceeding $10,000 may not employ a girl under 18 or a boy under 16 years of age on such work.

Information on Federal Laws

Further information on child-labor standards under the Federal laws may be obtained from the nearest office of the Wage and Hour and Public Contracts Divisions, U. S. Department of Labor. School authorities may request the advice of the Wage and Hour and Public Contracts Divisions as to compliance with the Federal law with respect to occupations in which they are placing young people. The Regional Office of the Wage and Hour Public Contracts Divisions, U. S. Department of Labor, is located at:

Regional Office
Room 222
1114 Commerce Street
Dallas 2, Texas 75202

Age and Employment Certificates

Practically all State child-labor laws require employment or age certificates. State employment or age certificates are accepted as proof of age under the child-labor provisions of the Fair Labor Standards Act. Officials should see that age certificates are obtained for minors 16 and 17 years of age in general employment and minors 18 and 19 years of age in occupations declared hazardous. Federal Certificates of Age are issued by the U. S. Department of Labor, Wage and Hour and Public Contracts Divisions, Room 222, 1114 Commerce Street, Dallas, Texas, 75202, or by the local offices of the Texas Employment Commission in your area.

Supervision and Safety

Supervision should be such that students are not only taught how to work but

also how to work safely. In order to insure the protection of minors from accidents, coordinators and/or supervisors may wish to check to see that establishments in which children are placed have an active accident prevention program and that they are covered by workmen's compensation insurance.

Child Labor Standards Under State Laws

State child-labor laws generally regulate the employment of more young people than do Federal laws because they are not limited to establishments producing goods for interstate shipment. State laws may differ from Federal laws in their minimum age and hazardous-occupations regulations and they are often wider in scope than the Federal law, as, for example, in their regulation of maximum hours and night work. When establishments are covered by both Federal and State laws the higher standard prevails. Information on State child-labor standards may be obtained from State Labor Departments.

III. WAGES AND HOURS PROVISIONS OF THE FAIR LABOR STANDARDS ACT

The Federal Wage and Hour Law applies to all those who are engaged in interstate commerce, who produce goods for interstate commerce or perform work related to the production of goods for interstate commerce. Even though workers are covered by the Act, they may be subject to exemption from some of its provisions. Unless an employee is subject to some exemption, he must be paid at least $1.25 an hour, must get overtime after 40 hours in the week at not less than time and one-half his regular rate.

The Act also applies to employees (including student learners) who are not themselves engaged in or producing goods for commerce but who are employed in certain large enterprises engaged in commerce or in the production of goods for commerce. The Fair Labor Standards Act establishes a minimum wage, child labor, and maximum hours and overtime standards for employees subject to its provisions. Effective September 3, 1964, the minimum wage for employees subject to this enterprise coverage was $1.15 an hour with overtime applicable after 42 hours in the workweek. Effective September 3, 1965, this minimum wage will be increased to $1.25 an hour with overtime due after 40 hours in the workweek, which will bring the standards of individual and enterprise coverage to an equal plane.

The Law provides for the employment of certain workers at rates lower than the statutory minimum under the terms of special certificates. Individual certificates are granted for students working part-time in employment related to courses they are receiving in school, when such employment has been arranged by the Coordinator of Distributive Education in the school the student is attending. Many students are placed in employment not subject to the requirements of the Law in which case certificates are not necessary. One type of such employment is that in certain retail and service establishments.

Terms and Conditions Under Which Student Learner Certificates are Issued

No certificate is issued for less than 75 per cent of the applicable minimum wage.

Hours of employment plus hours of schooling should not exceed 40 in a week except under extraordinary circumstances. Generally a certificate does not cover a period longer than one school year.

No certificate may be issued for a student under 16 years of age, and 18 years is the minimum age for employment in an occupation declared to be hazardous by the Secretary of Labor. There are exceptions for student learners in some of these hazardous occupations, provided stipulated conditions are met.

An application must be signed by the employer, the coordinator and the student, each of whom may keep a copy. The original must be sent to the Regional Office of the Wage and Hour Division for consideration and determination as to whether the certificate may be granted. Certificates are issued by that office.

Certificates are not issued retroactively, but temporary authorization to pay a subminimum rate becomes effective the date on which the properly executed application is submitted for consideration.

Exemptions to Both Wages and Hours Provisions. -- Part-time students are not covered by the wages and hours provisions if they are employed in:

1. Small retail and service establishments exempt from the provisions of enterprise coverage.

2. Weekly or semi-weekly newspapers whose circulation is less than 3000.

3. Preparing or processing agricultural commodities or dairy products for market.

IV. STUDENT-LEARNER CERTIFICATES

As stated above, industrial cooperative students, employed in places of business engaging in interstate commerce, may be paid an hourly wage less than the minimum prescribed for the occupation provided certain requirements are met. Regulations on such employment are explained in the following Federal bulletin:

(Rev. 10/63)

U. S. DEPARTMENT OF LABOR
Wage and Hour and Public Contracts Divisions

INFORMATION GUIDE AND INSTRUCTIONS FOR COMPLETING APPLICATION FOR STUDENT-LEARNER CERTIFICATES

Under regulations established pursuant to both the Fair Labor Standards Act and the Walsh-Healey Public Contracts Act student-learners may be employed at wages below the minimum wages established under those acts in accordance with certificates issued by the Wage and Hour and Public Contracts Divisions of the U. S. Department of Labor. The employment of student-learners at special minimum wages is subject to Regulations, Part 520, issued under authority of section 14 of the Fair Labor Standards Act. Section 50-201.1102 of the general regulations under the Walsh-Healey Public Contracts Act recognizes the standards and procedures of Regulations, Part 520, as applicable to the issuance of certificates permitting employment of student-learners at special minimum wages in the performance of Government contracts.

1. COVERAGE: The Fair Labor Standards Act applies to employees (including student-learners) engaged in interstate commerce or in the production of goods for interstate commerce, including any closely related process or occupation directly essential to such production, unless specifically exempt by some provision of the act. The act also applies to employees (including student-learners) who are not themselves engaged in or producing goods for commerce but who are employed in certain large enterprises engaged in commerce or in the production of goods for commerce. Popularly known as the Federal Wage and Hour Law, this act establishes minimum wage, child-labor, and maximum hours and overtime standards for employment subject to its provisions.

The Walsh-Healey Public Contracts Act applies in general to all contracts entered into by the Government for the manufacture or furnishing of materials, supplies, articles or equipment in any amount in excess of $10,000. This act requires the payment to employees engaged in the performance of such contracts of not less than the minimum wage determined by the Secretary of Labor to be prevailing for the industry. In addition, the Public Contracts Act contains special provisions for safety and health standards, restrictions against the use of child labor and convict labor, and special provisions for the payment of overtime for work subject to the act.

Special situations which may arise under these two acts are explained in Section 11 of this guide. The Wage and Hour and Public Contracts Divisions will make available upon request bulletins on the coverage of these acts. If in doubt as to whether either or both of these acts apply to a particular type of employment, a letter setting forth the facts of your situation should be sent to the regional office of these Divisions which serves your area.

2. WHO IS A STUDENT-LEARNER: As defined in the regulation, a student-learner is a student who is receiving instruction in an accredited school, college or university, and who is employed on a part-time basis pursuant to a bona fide vocational training program administered by his school. A bona fide vocational training program is one authorized and approved by a State board of vocational education or other recognized educational body. Such programs must provide for part-time employment training supplemented by and integrated with a definitely organized plan of instruction designed to teach technical knowledge and related industrial information which is given as a regular part of the student-learner's course of study in the educational institution he attends. Such programs may be in retail and service occupations as well as in trade and industrial skills.

3. WHO MAY FILE: Whenever it is believed necessary in order to prevent curtailment of employment opportunities, application may be made for a certificate authorizing an employer to pay student-learners special minimum wages below the applicable statutory (or wage order) minimum wage under the Fair Labor Standards Act or below a minimum wage determination under the Walsh-Healey Public Contracts Act. A separate application on official forms furnished for the purpose must be filed by the employer for each such student-learner. Parts of this application are best completed by a school official, other parts by the employer. The appropriate school official, the employer, and the student-learner must sign the application. Before a certificate can be issued, the conditions specified in Section 520.5 of the regulation must be met.

4. WHERE TO FILE: Applications must be made on official forms supplied by the Divisions. The original of the completed application must be filed with the regional office of these Divisions serving your area. A copy must be retained in the employer's files. Additional copies may be made available to school officials and to the student-learner.

5. WHEN TO FILE: Applications should be filed 15 to 30 days in advance of the date the student-learner begins his employment so that the Divisions can take action on the application before employment begins. CERTIFICATES CANNOT BE ISSUED RETROACTIVELY.

Where the student's employment opportunity might be lost by delay in obtaining a certificate, Section 520.6 (c) (2) of the regulation establishes a procedure for a temporary authorization. A description of this procedure

appears at the top of the fact of the application.

6. AGE AND PROOF OF AGE: Minors under 16 years of age are not eligible for student-learner certificates. Furthermore, in occupations declared to the hazardous by the Secretary of Labor, the student-learner must be at least 18 years of age. (Hazardous Occupations Orders Nos. 5, 8, 10, 12, 14, 16, and 17, permit student-learner employment at 16 and 17 years of age under certain specified conditions.) For information concerning child-labor provisions of the Fair Labor Standards Act, see Child-Labor Bulletin No. 101 which is obtainable from the nearest regional office of the Wage and Hour and Public Contracts Divisions.

For employment subject to the Walsh-Healey Public Contracts Act, male employees must be at least 16 years old and female employees must be at least 18 years old.

In addition to entering the student-learner's birth date in item 3 of the application, the employer should obtain and keep on file an employment or age certificate showing the student-learner to be at least the minimum age for the occupation in which he is employed. In 45 States, the District of Columbia, and Puerto Rico, State employment and age certificates are accepted as proof of age under the child-labor provisions of the Fair Labor Standards Act. (Such certificates also provide assurance that the employment is in compliance with the requirements of the State child-labor law.) In four States, Idaho, Mississippi, South Carolina, and Texas, where State age and employment certificates are not available, Federal certificates of age may be obtained within the State from the Wage and Hour and Public Contracts Divisions. Special arrangements have been made in Guam and Alaska. For information concerning proof of age in these areas consult the nearest office of the Wage and Hour and Public Contracts Divisions.

7. PERIOD OF EMPLOYMENT TRAINING AT SPECIAL MINIMUM WAGES: A certificate may be issued only for that portion of the employment training period for which special minimum wages below the minimum wages under the Fair Labor Standards Act or the Walsh-Healey Public Contracts Act are necessary. This period may not exceed the length of one school year unless a longer period is found to be justified by extraordinary circumstances which must be explained in detail at the time of application. No certificate shall authorize employment training beyond the date of graduation of the student-learner.

Employment training at special minimum wage rates during the summer vacation period will not generally be authorized. However, in exceptional cases summer employment training may be authorized when it is an integral part of the vocational training program. Requests for summer vacation employment must be accompanied by a statement explaining the extraordinary circumstances justifying this employment, including the number of

hours per week for which special minimum wages are requested.

In item 16 of the application, show only the number of weeks of employment during which special minimum wages will be paid. The beginning and ending dates of employment shown in items 8 and 9 should coincide with this period.

8. HOURS OF WORK AND SCHOOL INSTRUCTION: The term "hours of school instruction" applies to all hours spent by the student-learner in actual classes of school instruction and does not include school hours spent in study hall, homeroom, and activity periods for which no academic credit is given.

The combined hours of school instruction and employment training authorized under a certificate may not exceed 40 hours a week unless justified by extraordinary circumstances. Such extraordinary circumstances must be explained in detail in a statement submitted with the application. Hours at special minimum wages in addition to those authorized on a certificate may be worked provided that the total hours worked do not exceed:

(a) 8 hours on any school day when school is not in session;

(b) 40 hours in any week during the school term when school is not in session for the entire week.

The employer shall note in his records the number of such additional hours and that they were worked because school was not in session. (Section 520.6 (d) and (c)). A STUDENT-LEARNER MAY NOT BE EMPLOYED IN ANY WEEK AT SPECIAL MINIMUM WAGE RATES FOR HOURS IN ADDITION TO THOSE AUTHORIZED IN THE PARAGRAPH ABOVE.

In item 17 of the application, show only those hours of employment during a week for which you intend to pay wages below the applicable minimum wage under the Fair Labor Standards Act or below the wage determination minimum applicable under the Public Contracts Act.

9. WAGES RATES: The hourly wage rate shall be not less than 75 percent of the applicable statutory minimum wage under the Fair Labor Standards Act. It is suggested that consideration be given to the payment of a progressive wage schedule, particularly if a full school year of employment training at special minimum wages is requested. If a progressive wage schedule is proposed, the special minimum starting rate must be not less than 75 percent of the applicable statutory minimum. In item 18, show only those wages which are below the applicable minimum wage under the Fair Labor Standards Act. (This paragraph also applies to work subject to Public Contracts Act wage determinations. See section 11 on the following page.)

10. CERTIFICATES: The original of the student-learner certificate will be mailed directly to the employer. Two copies will be mailed to the appropriate school official, one to be retained for his records and the other to be presented to the student-learner. APPLICATIONS WHICH DO NOT CONTAIN ALL REQUESTED INFORMATION MAY BE RETURNED FOR COMPLETION BEFORE ACTION IS TAKEN. Student-learner certificates can be issued with a minimum of delay where the application provides the details requested. For additional information or application forms, communicate with the regional office of these Divisions which serves your area.

11. SPECIAL SITUATIONS UNDER THE WALSH-HEALEY PUBLIC CONTRACTS ACT: The general provisions of this act are explained in the introduction to this guide. The general regulations under the Public Contracts Act permit the employment of student-learners at wages below prevailing minimum wage determinations made under this act in accordance with the same standards and procedures as are prescribed for their employment at wages below the minimum wage applicable under the Fair Labor Standards Act. The provisions of Regulations, Part 520 and the instructions in this guide apply to student-learners employed in the performance of Government contracts subject to the Public Contracts Act. Special situations may arise where the employment is subject to differing rates of pay under the two acts or is subject only to the Public Contracts Act.

An employer who holds or who obtains a student-learner certificate issued in order to prevent curtailment of opportunities for employment under the Fair Labor Standards Act may employ the named student-learner in the performance of a Government contract subject to the Public Contracts Act at the authorized special minimum wage and in accordance with the terms specified in that certificate.

An employer may not need a student-learner certificate in order to prevent the curtailment of employment opportunities under the Fair Labor Standards Act or his employees may not be subject to that act. In either case, an employer performing a Government contracts subject to a minimum wage determination under the Public Contracts Act may, upon proper application, be issued a certificate authorizing a special minimum wage rate not less than 75 percent of the minimum wage determination applicable to the contract being performed. Employment under such certificates is subject to the standards and procedures of Regulations, Part 520.

12. COMPLIANCE: Certificates may not be issued if there are serious outstanding violations of a student-learner certificate previously issued to the employer or if there are serious violations of other provisions of the Fair Labor Standards Act by the employer which provide reasonable grounds to conclude that the terms of the certificate would not be complied with, if issued.

Moreover, no certificate permitting a wage lower than the statutory minimum under the Fair Labor Standards Act or a Public Contracts Act Minimum wage determination will excuse non-compliance with the child-labor, overtime, or other provisions of these acts or the regulations issued thereunder.

A certificate may be withdrawn if it is no longer necessary to prevent curtailment of opportunities for employment or if the employer fails to comply with the limitations in the certificate or otherwise violates the act.

U. S. DEPARTMENT OF LABOR
Wage and Hour and Public Contracts Divisions

APPLICATION FOR A CERTIFICATE TO EMPLOY A STUDENT-LEARNER

The certification of the appropriate school official on the reverse side of this application shall constitute a temporary authorization for the employment of the named student-learner at less than the statutory minimum wage applicable under Section 6 of the Fair Labor Standards Act of 1938, as amended, or at wages below the applicable Walsh-Healey Public Contracts Act minimum wage determination, effective from the date this application is forwarded to the Divisions until a student-learner certificate is issued or denied by the Administrator or his authorized representative, *provided* the conditions specified in Section 520.6(c)(2) of the Student-learner Regulation (29 CFR 520) are satisfied.

PLEASE READ CAREFULLY THE INSTRUCTIONS FOR COMPLETING THIS FORM
PRINT OR TYPE ALL ANSWERS

1. Name and address of establishment making application: Advance Beauty & Barber Supply Random Road Progress, Oklahoma	3. Name and address of student-learner: John Daniels 317 N. Lee Progress, Oklahoma Date of Birth: May 1, 1947
2. Type of business and products manufactured, sold, or services rendered: Wholesale beauty and barber supplies	4. Name and address of school in which student-learner is enrolled: Progress High School Third Street Progress, Oklahoma

Information on school instruction:

5. Number of weeks in school year	36	11. Are Smith-Hughes Act or George-Barden Act funds being used for this program? (Yes or No)	Yes
6. Total hours of school instruction per week	15	12. Was this program authorized by the State board for vocational education?	Yes
7. Number of such hours *directly* related to employment training	5	13. If the answer to item 12 is "No" give the name of the recognized local educational body which has approved this vocational training program:	
8. Proposed beginning date of employment	9/14/64		
9. Proposed ending date of employment	5/21/65		
10. Proposed graduation date of student-learner	5/21/65		

14. Outline the school instruction *directly* related to the employment training. (List courses, etc.)

Advertising and display
Store speech
Personnel management
Store organization

*Student receives individual projects pertaining to his specific need on his job training. Training is geared specifically to make him a better and more effective employee for the firm.

SAMPLE

Form WH-205 (10/63) *ATTACH SEPARATE PAGES IF NECESSARY*

Information on employment training at special minimum wages:

15. How is employment training scheduled (weekly, alternate weeks, etc.)?

Every day weekly

16. Number of weeks of employment training at special minimum wage: 36

17. Number of hours of employment training a week: 25

18. Special minimum wage(s) to be paid student-learner (if a progressive wage scale is proposed, enter each rate and specify the period during which it will be paid):

94 cents per hour

(75 cents per hour until 9/2/64-Retail)
(87 cents per hour on 9/3/64-Retail)

19. Title of Student-learner occupation:

Stock and sales

20. Number of employees in this establishment: 10

21. Number of experienced employees in student-learner's occupation shown in question 19: 4

22. Minimum hourly wage rate of experienced workers in 21: $1.25

23. Is an age or employment certificate on file in this establishment for this student-learner? (If not, see instructions): Yes

24. Is it anticipated that the student-learner will be employed in the performance of a Government contract subject to the Walsh-Healey Public Contracts Act? No

25. Outline training on-the-job (describe briefly the work process in which the student-learner will be trained and list the types of any machines used).

Receives and checks incoming merchandise
Prices and stores merchandise and maintains stock control unit records
Fills and maintains shelves and bins
Fills orders and prepares necessary forms required
Telephone courtesy and customer courtesy

26. Signature of student-learner:

I have read the statements made above and ask that the requested certificate, authorizing my employment training at special minimum wages and under the conditions stated, be granted by the Administrator or his authorized representative.

/s/ John Daniels — 9-1-64
(Signature of Student) — *(Date)*

27. Certification by school official:

I certify that the student named herein will be receiving instruction in an accredited school and will be employed pursuant to a bona fide vocational training program, as defined in section 520.2 of Student-Learner Regulations.

/s/ Richard Roe — 9-1-64
(Signature of School Official) — *(Date)*

Title Coordinator

28. Certification by employer or authorized representative:

I certify, in applying for this special certificate, that all of the foregoing statements are, to the best of my knowledge and belief, true and correct.

/s/ John Doe — 9-1-64
(Signature of employer or representative) — *(Date)*

Title Director Personnel

ATTACH SEPARATE SHEETS IF NECESSARY

WHITE MOTOR COMPANY

has been designated as an

Approved Uraining Station

for

Industrial Cooperative Training

in cooperation with STEPHEN F. AUSTIN HIGH SCHOOL
SCHOOL

for the school year 1959 – 1960

LeRoy Herren
COORDINATOR

J. B. White
ADVISORY COMMITTEE CHAIRMAN

B. M. Hackney
SUPERINTENDENT OR DIRECTOR

Ray Cagle
PRINCIPAL

VOCATIONAL INDUSTRIAL EDUCATION

ENGINEERING EXTENSION SERVICE • TEXAS A&M COLLEGE SYSTEM

The recognition certificates for Training Station and Advisory Committee members can be of use as a public relations medium, a means of publicizing your program and creating good will of the co-operating firm you are using as a training station. Emphasis should be placed on the presentation and followed up with a story in the local newspaper. A suggestion made by coordinators is that it could be a Vocational Industrial Club project to furnish frames for the certificates, string or wire attached and ready to hang on the wall or display in a window upon presentation.

Approval for the use of this certificate should be obtained from your superintendent and principal. The certificates may be obtained from the Engineering Extension Service, Texas A&M University, Box 236 F. E., College Station, Texas.

Industrial Cooperative Training

This is to certify that _____

is a member of the General Advisory Committee

for the Industrial Cooperative Training Program

of the _____ High School

_____ Texas for the period

_____ 19___ to _____ 19___

_____
PRESIDENT,
BOARD OF EDUCATION

_____
SUPERINTENDENT OF SCHOOLS

_____
COORDINATOR

_____
PRINCIPAL

[Text of the Code up to and including January 1, 1962, and any Federal Register amendments issued thereafter, up to and including March 31, 1962.]

PART 520—EMPLOYMENT OF STUDENT LEARNERS [REVISED]

SECTION

520.1 Applicability of the regulations contained in this part
520.2 Definitions
520.3 Applications for a special student-learner certificate
520.4 Procedure for action upon application
520.5 Conditions governing issuance of special student-learner certificates
520.6 Terms and conditions of employment under special student-learner certificates
520.7 Employment records to be kept
520.8 Duration of certificates
520.9 Compliance with established standards
520.10 Reconsideration and review
520.11 Amendment to the regulations in this part

AUTHORITY: Sections 520.1 to 520.11 issued under section 14, 52 Stat. 1068, as amended; 29 U.S.C. 214.

SOURCE: Sections 520.1 to 520.11 appear at 18 F.R. 3290, June 10, 1953, except as otherwise noted.

PRIOR AMENDMENTS

1950: 15 F.R. 396, Jan. 25, 1950; 15 F.R. 3189, May 25, 1950.

Section 520.1

Applicability of the regulations contained in this part.

The regulations contained in this part are issued in accordance with section 14 of the Fair Labor Standards Act of 1938, as amended, to provide for the employment under special certificates of student-learners at wages lower than the minimum wage applicable under section 6 of the act. Such certificates shall be subject to the terms and conditions hereinafter set forth.

Section 520.2

Definitions.

As used in the regulations contained in this part:

(a) A "student-learner" is a student who is receiving instruction in an accredited school, college or university and who is employed on a part-time basis, pursuant to a bona fide vocational training program.

(b) A "bona fide vocational training program" is one authorized and approved by a State board of vocational education or other recognized educational body and provides for part-time employment training which may be scheduled for a part of the workday or workweek, for alternating weeks or for other limited periods during the year, supplemented by and integrated with a definitely organized plan of instruction designed to teach technical knowledge and related industrial information given as a regular part of the student-learner's course by an accredited school, college or university.

Section 520.3

Application for a special student-learner certificate.

(a) Whenever the employment of a student-learner at wages lower than the minimum wage applicable under section 6 of the Fair Labor Standards Act of 1938, as amended, is believed necessary to prevent curtailment of opportunities for employment, an application for a special certificate authorizing the employment of such student-learner at subminimum wages shall be filed by the employer with the authorized representative of the Administrator at the appropriate Regional or Territorial Office of the Wage and Hour and Public Contracts Divisions, United States Department of Labor.

CODIFICATION: Paragraph (a) was amended, 20 F.R. 5897, Aug. 13, 1955. Subsequently, "an application" was substituted for "an original and duplicate copy of every application," 23 F.R. 5663, July 26, 1958.

(b) Application must be made on the official form furnished by these Divisions and must be signed by the employer, the appropriate school official and the student-learner. The application must contain all information required by such form, including among other things, a statement clearly outlining the vocational training program and showing, particularly, the processes in which the student-learner will be engaged when in training on the job; a statement clearly outlining the school instruction directly related to the job; the total number of workers employed in the establishment; the number and hourly wage rate of experienced workers employed in the occupation in which the student-learner is to be trained; the hourly wage rate or progressive wage schedule which the employer proposes to pay the student-learner; data regarding the age of the student-learner; the period of employment training at subminimum wages; the number of hours of employment training a week; the number of hours of school instruction a week; and a certification by the appropriate school official that the student named therein will be receiving instruction in an accredited school, college or university and will be employed pursuant to a bona fide vocational training program, as defined in section 520.2(b).

Section 520.4

Procedure for action upon application.

(a) Upon receipt of an application for the employment of a student-learner, the Administrator or his authorized representative shall issue a special certificate or deny the application. To the extent he deems appropriate, the Administrator or his authorized representative may provide an opportunity to other interested

persons to present data and views on the application prior to granting or denying a special student-learner certificate.

[Paragraph (a) amended, 24 F.R. 204, Jan. 8, 1959]

(b) If a special certificate is issued it shall be mailed to the employer. If a special certificate is denied, notice of such denial shall be mailed to the employer and such denial shall be without prejudice to any subsequent application, except under the circumstances referred to in section 520.6(c)(2)(iii). Two copies of the certificate or notice of denial shall be mailed to the appropriate school official, one of which shall be retained for his records and the other shall be presented to the student-learner.

Section 520.5

Conditions governing issuance of special student-learner certificates.

The following conditions must be satisfied before a special certificate may be issued authorizing the employment of a student-learner at subminimum wages:

(a) Any training program under which the student-learner will be employed must be a bona fide vocational training program as defined in section 520.2;

(b) The employment of the student-learner at subminimum wages authorized by the special certificate must be necessary to prevent curtailment of opportunities for employment;

(c) The student-learner must be at least 16 years of age (or older as may be required pursuant to paragraph (d) of this section);

(d) The student-learner must be at least 18 years of age if he is to be employed in any activity prohibited by virtue of a hazardous occupation order of the Secretary of Labor. (See 29 CFR Part 4, Subpart E, but note the specific exemptions for student-learners in several of the orders.)

[Paragraph (d) amended, 26 F.R. 8009, Aug. 26, 1961]

(e) The occupation for which the student-learner is receiving preparatory training must require a sufficient degree of skill to necessitate a substantial learning period;

(f) The training must not be for the purpose of acquiring manual dexterity and high production speed in repetitive operations;

(g) The employment of a student-learner must not have the effect of displacing a worker employed in the establishment;

(h) The employment of the student-learners at subminimum wages must not tend to impair or depress the wage rates or working standards established for experienced workers for work of a like or comparable character;

(i) The occupational needs of the community or industry warrant the training of student-learners;

(j) There are no serious outstanding violations of the provisions of a student-learner certificate previously issued to the employer, or serious violations of any other provisions of the Fair Labor Standards Act of 1938, as amended, by the employer which provide reasonable grounds to conclude that the terms of the certificate would not be complied with, if issued;

[Paragraph (j) amended, 21 F.R. 1349, Mar. 1, 1956]

(k) The issuance of such a certificate would not tend to prevent the development of apprenticeship in accordance with the regulations applicable thereto (Part 521 of this chapter) or would not impair established apprenticeship standards in the occupation or industry involved.

(l) The number of student-learners to be employed in one establishment must not be more than a small proportion of its working force.

Section 520.6

Terms and conditions of employment under special student-learner certificates.

(a) The special student-learner certificate, if issued, shall specify, among other things, (1) the name of the student-learner, (2) the name and address of the employer, (3) the name of the school which provides the related school instruction, (4) the occupation in which the student is to be trained, (5) the maximum number of hours of employment training in any one week at a specified subminimum wage rate or rates, and (6) the effective and expiration dates of the certificate.

(b) The special minimum wage rate shall be not less than 75 per centum of the applicable minimum under section 6 of the Act.

(c) (1) No special student-learner certificate may be issued retroactively.

(2) The certification by the appropriate school official on an application for a special student-learner certificate authorizing the employment of a student-learner at subminimum wages (see section 520.3(b)) shall constitute a temporary authorization for the employment of a student-learner at less than the statutory minimum wage, effective from the date such application is forwarded to the Divisions in conformance with section 520.3, until a special student-learner certificate is issued or denied by the Administrator or his authorized representative: *Provided*, That the following conditions are satisfied: (i) The application must be properly executed in conformance with section 520.3; (ii) the employment training must conform with the provisions of sections 520.5 (a), (c), (d), and (g), and paragraphs (b) and (d) of this section; and (iii) the occupation must not be one for which a student-learner application was previously submitted by the employer, and a special certificate was denied by the Administrator or his authorized representative.

(d) (1) The number of hours of employment training each week at subminimum wages pursuant to a certificate, when added to the hours of school instruction, shall not exceed 40 hours, except that authorization may be granted by the Administrator or his authorized representative for a greater number of hours if found to be justified by extraordinary circumstances.

(2) When school is not in session on any school day, the student-learner may work a number of hours in addition to the weekly hours of employment training authorized by the certificate: *Provided, however*, That the total hours worked shall not exceed 8 hours on any such day. A notation shall be made in the employer's records to the effect that school not being in session was the reason additional hours were worked on such day.

(3) During the school term when school is not in session for the entire week, the student-learner may work at his employment training a number of hours in the week in addition to those authorized by the certificate: *Provided, however*, That the total hours shall not exceed 40 hours in any such week. A notation shall be made in the employer's records to the effect that school not being in session was the reason additional hours were worked in such week.

(e) A special student-learner certificate shall not constitute authorization to pay a subminimum wage rate to a student-learner in any week in which he is employed for a number of hours in addition to the number authorized in the certificate, except as provided in paragraphs (d) (1), (2), and (3) of this section.

CODIFICATION: In § 520.6, paragraph (b) was amended, 26 F.R. 8009, Aug. 26, 1961, and paragraphs (f) and (g) were revoked, 22 F.R. 5683, July 18, 1957.

Section 520.7

Employment records to be kept.

In addition to any other records required under the record-keeping regulations (Part 516 of this chapter) the employer shall keep the following records specifically relating to student-learners employed at subminimum wage rates:

(a) Any worker employed as a student-learner shall be identified as such on the payroll records, with each student-learner's occupation and rate of pay being shown;

(b) The employer's copy of the application, which is serving as a temporary authorization under section 520.6(c) (2), must be available at all times for inspection for a period of 3 years from the last date of employment of the student-learner;

(c) Notations should be made in the employer's records when additional hours are worked by reason of school not being in session as provided in sections 520.6(d) (2) and (3).

Section 520.8

Duration of certificates.

A special student-learner certificate may be issued for a period not to exceed the length of one school year unless a longer period is found to be

justified by extraordinary circumstances. No certificate shall authorize employment training beyond the date of graduation.

[22 F.R. 5683, July 18, 1957]

Section 520.9

Compliance with established standards.

No provision of the regulations contained in this part, or of any certificate issued pursuant thereto, shall excuse noncompliance with higher standards applicable to student-learners which may be established under any other Federal law, or any State law, municipal ordinance or trade union agreement.

[22 F.R. 5683 July 18, 1957]

Section 520.10

Reconsideration and review.

(a) Any person aggrieved by the action of an authorized representative of the Administrator in denying or granting a special student-learner certificate may, within 15 days after such action, (1) file a written request for reconsideration thereof by the authorized representative of the Administrator who made the decision in the first instance, or (2) file a written request for review of the decision by the Administrator or an authorized representative who has taken no part in the action which is the subject of review.

(b) A request for reconsideration shall be accompanied by a statement of the additional evidence which the applicant believes may materially affect the decision and a showing that there were reasonable grounds for failure to present such evidence in the original proceedings.

(c) Any person aggrieved by the reconsidered determination of an authorized representative of the Administrator may, within 15 days after such determination, file a written request for review.

(d) A request for review shall be granted where reasonable grounds for the review are set forth in the request.

(e) If a request for reconsideration or review is granted, the Administrator or his authorized representative may, to the extent he deems it appropriate, afford other interested persons an opportunity to present data and views.

CODIFICATION: Section 520.10 was amended in the following respects:

1. In paragraph (a), the phrase "in denying, granting, or canceling a special student-learner certificate" was changed to "in denying or granting a special student-learner certificate," 22 F.R. 5683, July 18, 1957.
2. Paragraph (b) was amended to read as set forth above, paragraph (c) was deleted, and paragraphs (d), (e), and (f) were redesignated paragraphs (c), (d), and (e), respectively, 21 F.R. 1349, March 1, 1956.
3. Paragraph (e), as redesignated, was amended to read as set forth above, 24 F.R. 204, January 8, 1959.

Section 520.11

Amendment to the regulations in this part.

The Administrator may at any time upon his own motion or upon written request of any interested person setting forth reasonable grounds therefor, and after opportunity has been given to interested persons to present their views, amend or revoke any of the terms of the regulations contained in this part.

U.S. GOVERNMENT PRINTING OFFICE: 1962

TEXAS EDUCATION AGENCY
Vocational Industrial Education

REQUEST FOR APPROVAL OF UNLISTED OCCUPATION

Industrial Cooperative Training

This form is for applying for approval of certain occupations for Industrial Cooperative Training not included in the current list (or supplementary list) of approved occupations.

It is preferable to submit this form in duplicate to the State Office prior to placing the student and preparing the training plan. One copy of this request form will be returned to the local school.

Occupation:_____ Code No. _____

School_____ Coordinator _____

Student_____ Training Station _____

Proposed practical training	Proposed related instruction
1. List the jobs, duties or types of work normally done by workers in this occupation in your community.	1. List the subjects or topics of related technical information required of workers in this occupation.

(Omit the above if the training plan is attached)

(Use additional sheet if needed)

(Over)

IE-859-200

2. List the major machines, equipment and tools with which this training station is equipped.

2. List the names and sources of available instructional material (texts, study guides, trade literature) suitable for use in related technical instruction.

3. Reasons why you feel that this occupation described above should be approved for cooperative training.

(Do not write below this line)

This occupation is not approvable for the following reasons:

_____ Not a bona fide trade or industrial occupation.
_____ Does not meet the "2000-hour" requirement
_____ Insufficient related instruction
_____ Other_____

This occupation is approved for

_____ one year of training
_____ two years of training

As described above and for the training station listed only.

Signed: _____
Vocational Industrial Education

Date: _____

(SCHOOL LETTERHEAD)

S A M P L E

One copy for employer
One copy for school

(Name and Address of Employer)

Dear Mr. _____:

It is recognized that our Industrial Cooperative Training Student, _____, may during the course of his employment with you be called upon to learn to operate or control machines that the Secretary of Labor has declared particularly hazardous for minors under 18 years of age.

Consequently, this agreement is prepared so that you as the employer, and I as a representative of the school, will know that the work of the student in the occupations declared particularly hazardous shall be incidental to his training; that such work shall be intermittent and for short periods of time, and under the direct and close supervision of a qualified and experienced person; that safety instructions shall be given by the school and correlated by the employer with on-the-job training; and that a schedule of organized and progressive work processes to be performed on the job shall have been prepared.

In recognition of this agreement, and as an indication of your concurrence, please sign this letter in the space provided in the lower left-hand corner, retain the duplicate copy for your files, and return the original copy to me for my files.

Sincerely yours,

_____, Coordinator
Industrial Cooperative Training

_____
(Name and address of employer)

_____
(Date)

TWELVE QUESTIONS PERTAINING TO THE APPLICATION FOR AND CERTIFICATION OF STUDENT LEARNERS

1. In the average situation, for what period of time is a student learner certificate issued?

   Ans. - for one school year only. (Section 520.8). This is an appropriate 36 week period, consisting of 15 to 25 hour workweeks.

2. What rate of pay is applicable to the student learner's employment?

   Ans. - 75% of the applicable minimum wage, i.e., $1.00 per hour-$.75, $1.15 per hour-$.87, and $1.25 per hour-$.94 (Section 520.6 (b)).

3. Does the application for the certificate constitute a temporary certificate?

   Ans. - Yes, if the application is correctly filed. The temporary authorization becomes effective the date the envelope is post marked. Section 520.6 (c) (2)

4. Can a student learner work in some of the occupations declared as particularly hazardous for minors under 18 years of age ?

   Ans. - Yes. (Section 520.5 (d)). If a written agreement is on file as described in the Child Labor Bulletin No. 101, Page 9.

5. May student learners work in any of the Hazardous Occupations that do not have the exemption granted?

   Ans. - No. There is no provision for this.

6. To whom does the Wage and Hour Division look for compliance with the Hazardous Occupations Orders and the terms of the certificate?

   Ans. - the employer.

7. How many hours may a student owrk, under the provisions of a certificate, when school is not in session?

   Ans. - The student may work a number of hours in addition to the weekly hours granted by the certificate: provided, however, that the total hours do not exceed 8 hours on any such day or 40 hours in any week that school is not in session. (Section 520.6 (d) (2) and (3)).

8. How many copies of the application are necessary and who gets them?

Ans. - 4 copies are made. One is given to the student, one is given to the employer, one is given to the school and the original is sent to the Dallas Regional Office address.

9. How many hours may a student learner work at his occupation?

Ans. - He may work a number of hours, that when added to the hours he attends school, will not exceed 40 hours in the workweek. (Section 520.6 (2) (d))

10. May a student learner work under the provisions of a certificate during the summer months?

Ans. - Yes. For example: If a student learner begins his employment at the beginning of the spring semester (approximately January 1), his training may continue through the summer months, provided he is still an undergraduate student, and the summer work is under the auspices of the coordinator.

11. May a student learner ride as a passenger on a vehicle, not as a driver or driver's helper, but as a means of transport to get from job site to job site?

Ans. - Yes. If the student is not primarily engaged in the loading or unloading of the vehicle or as a driver or driver's helper, he may ride on the vehicle as a means of transportation.

12. Is a student learner subject to the Hazardous Occupations Orders, if under 18, whether the employer is paying the minimum wage or not?

Ans. - Yes--and if a student learner s to be employed in a hazardous occupation that carries an exemption (such as Hazardous Occupations Orders No. 5, 8, 10, 12, 14, 16 and 17) there must be a written agreement on file as described in Roman Numeral II under the heading "Student Learner" on the bottom of Page 7 and top of Page 8 of the Child Labor Bulletin No. 101.

VT 001 680

An Administrative Handbook for Vocational Distributive Education in Indiana, Including Guidelines for the Secondary D.E. Program.

Indiana State Dept. of Public Instruction, Indianapolis. Div. of Vocational Education
MF AVAILABLE IN VT-ERIC SET.
Pub Date - 1Sep66 120p.

*DISTRIBUTIVE EDUCATION; *STATE PROGRAMS; *INSTRUCTIONAL PROGRAMS; *PROGRAM ADMINISTRATION; SECONDARY EDUCATION; ADULT EDUCATION; *STATE STANDARDS; COOPERATIVE EDUCATION
INDIANA

This handbook is intended to serve as a reference for the coordinator as well as for local administrators on current distributive education procedures and practices. The major sections are as follows: (1) distributive education section of the Indiana state plan for vocational and technical education, (2) program purposes and objectives, (3) supervision and administration (includes organizational charts, teacher-coordinator duties and responsibilities, and sample of daily class schedule), and (4) program of instruction (indicates the relationship between cooperative and project method programs, the adult programs, and special needs). The appendix contains examples of a community survey, a letter of introduction to the employer, cooperative program forms (14 samples), program form for individual project, and administrative information for state reporting forms. (SL)

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D.E.

an ADMINISTRATIVE HANDBOOK for VOCATIONAL DISTRIBUTIVE EDUCATION in INDIANA

including: GUIDELINES for the SECONDARY D.E. PROGRAM

September 1, 1966

Indiana State Department of Public Instruction
W. E. Wilson, State Superintendent
Division of Vocational Education
600 Old Trails Building
309 West Washington Street
Indianapolis, Indiana 46204

VT 01450

AN
ADMINISTRATIVE HANDBOOK
FOR
VOCATIONAL DISTRIBUTIVE EDUCATION
IN
INDIANA

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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STATE DEPARTMENT OF PUBLIC INSTRUCTION
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William E. Wilson, State Superintendent of Public Instruction
Mearle R. Donica, Director, Vocational and Technical Education

SUPERVISORY STAFF DISTRIBUTIVE EDUCATION

James W. Biddle, State Supervisor, Vocational Distributive Education

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FOREWARD

Our nation is undergoing a transition in which the marketing and distribution of the products and services of our farms and industries is performing an increasingly significant role.

Distribution of goods and services has come to be recognized as a vital segment of the dynamic economic structure which has evolved in Indiana. Employment in distributive occupations has risen much faster than has education for employment in these jobs. If Indiana is to continue to prosper and grow, her greatest natural resource, her people, must be developed fully. The expansion of Vocational Distributive Education in all areas of distribution, for all levels of achievement, to all levels of employment, in all geographical areas will contribute significantly to the total educational and economic growth of Indiana's people.

For the existing, and anticipated expansion of, Distributive Education programs in Indiana, this handbook is intended to serve as a valuable guide to assist the beginning as well as the experienced coordinator. It is also designed to serve as a ready reference for local administrators on current D.E. procedures and practices.

Mearle R. Donica
State Director
Vocational and Technical Education

TABLE OF CONTENTS

THE DISTRIBUTIVE EDUCATION SECTION OF
THE INDIANA STATE PLAN FOR VOCATIONAL
AND TECHNICAL EDUCATION

GENERAL GUIDELINES FOR DEVELOPING A LOCAL PLAN
FOR A HIGH SCHOOL VOCATIONAL DISTRIBUTIVE EDUCATION PROGRAM ----------1

CHARACTERISTICS OF PROGRAM

1. Purposes and Objectives---------- 2

EVIDENCE OF NEED FOR THE PROPOSED PROGRAM

1. The Community Survey---------- 3
2. Report of local Employment Security Division

PROVISIONS FOR SUPERVISION AND ADMINISTRATION

1. Sample Organizational Chart (cooperative) ---------- 4
2. Sample Organizational Chart (Project-Method)---------- 5
3. Administration Personnel Responsibilities---------- 6
4. Teacher-Coordinator Responsibilities
5. Duties of Teacher-Coordinator
6. Provisions for Extended Contract----------7
7. Qualifications of a Vocational D.E. Teacher-Coordinator
8. Provisions for Teacher-Coordinator attending State-Called Workshops ---------- 8
9. Provisions for Reimbursing Travel Expenses for Coordinator
10. Sample Daily Class Schedule of Teacher Coordinator

PROGRAM OF INSTRUCTION

1. The Cooperative (on-the-job) Method ---------- 9
2. General Related Instruction
3. Provisions for Individualized Instruction
4. Program of on-the-job training ---------- 10
   a. criteria for selection of training stations
5. Training Sponsor Responsibilities ----------11
6. Recommended Employment Schedule of Trainees
7. Provisions for on-the-job Training
8. Physical facilities of Classroom ----------12
9. Course Description - Plan C Sample - Cooperative Method---------- 13

Relationship Between Cooperative and Project Methods---------- 14
10. The Projects Method---------- 15
11. Classification of Projects that may be used for Occupational Preparation----------16
    a. Directed Observation
    b. Analysis and Evaluation
    c. Discussion ----------17
    d. Practice and Independent Study
    e. Simulated or Directed Occupational Experience ---------- 18

The Adult Program
Programs for Youth and Adults with Special Needs

ENROLLMENT IN THE PROGRAM

1. Selection Procedures 19
2. Pre-requisites

PROVISIONS FOR THE LOCAL CLUB PROGRAM 20

PROVISIONS FOR LOCAL ADVISORY COMMITTEE

1. Selection and Appointment 21
2. Duties and Responsibilities

PROVISIONS FOR SURVEYS AND FOLLOW-UP STUDIES 22

PROCEDURES FOR LOCAL EVALUATION

1. Classroom Instruction 23
2. On-the-job Training

REPORTS AND FORMS 24

RESPONSIBILITIES AND PROVISIONS FOR REIMBURSEMENT 25

APPENDIX A
The Community Survey

APPENDIX B
Cooperative Forms (Samples)
D.E. Training Memorandum
D.E. Student-Learner Weekly Work Report
Cumulative Hour and Wage Report
D.E. Application Blank
D.E. Personal Interest Sheet
Introduction Card for Co-op Student
Employer's Interview Rating Sheet
Training Rotation Schedule
Training Sponsor's Rating Report
Follow-Up Questionnaire
D.E. Information Sheet
Open letter on D.E.
D.E. Newsletter
D.E.C.A. Participation Record

APPENDIX C

Project Method Form (Sample)
Individual Project Training Plan

APPENDIX D

Administrative Information for
State Reporting Forms

Form D.E. 1 - Agreement for Reimbursement in Vocational Distributive Education

Form D.E. 2 - Student Enrollment in either the Cooperative or the Project-Method Program

Form D.E. 2 (Supplement) - Student Projects in the Project-Method Program

Form D.E. 4 - Preliminary Report for Each Distributive Education class for Out-of-school youth and adults

Form D.E. 5 - Report on Attendance in Each Distributive Education Class for Out-of-school youth and adults

STANDARD INDUSTRIAL CLASSIFICATION (S.I.C.) for USE in DISTRIBUTIVE EDUCATION

FORM D.E. TR-6 - Travel Expense Claim

FORM E - Report of Expenditures for Vocational Instruction

FORM D.E. 746 - Request for Approval of Anticipated Purchase of Equipment under the 1963 Vocational Education Act

Suggested Criteria for a D.E. Work Laboratory Classroom and Equipment

Suggested Room Layout for a D.E. Work Laboratory Classroom

D.E. Form V-52 Supplement - Request for Evaluation of Credentials Related to Vocational Education in Distribution and Marketing

Certification Requirements for Vocational Distributive Education Teacher-Coordinator Endorsement

GLOSSARY

BIBLIOGRAPHY of D.E. MATERIALS

The Distributive Education Section of the Indiana State Plan
for Vocational and Technical Education

The State Plan has been developed by a state committee of professional D.E. people and is an agreement with the U.S. Office of Education that the Vocational Distributive Education program in Indiana will be conducted in accordance with the provisions as outlined in the Plan. The use of George-Barden funds and the Vocational Education Act of '63 funds for the State D.E. program is contingent upon the State's adherance to these provisions.

The total D.E. program in Indiana has been developed to agree with the criteria that have been established in the State Plan.

DISTRIBUTIVE EDUCATION SECTION

of the

INDIANA STATE PLAN

for

VOCATIONAL AND TECHNICAL EDUCATION

* Approved by the U.S. Office of Education, November 3, 1965

(This supercedes all previous D.E. excerpts from former Indiana State Plans)

DISTRIBUTIVE EDUCATION SECTION
of the
INDIANA STATE PLAN
for
VOCATIONAL AND TECHNICAL EDUCATION

8.2 Distributive Education

In addition to the provisions in section 1.0 to 6.0 of the State Plan, particularly those in section 2.0, the following special provisions apply to distributive education under the George- Barden Acts:

8.21 Objectives of instruction

Vocational Education in distributive occupations under the State Plan shall be designed to meet the needs of persons over 14 years of age who have entered or are preparing to enter a distributive occupat on.

8.22 Occupations to be served

A distributive occupation means an occupation that is followed by proprietors, managers, or employees engaged primarily in marketing or merchandising of goods or services. These occupations are commonly found in various business establishments such as retailing, wholesaling, manufacturing, storing, transporting, financing and risk bearing.

8.23 Program of instruction

8.23-1 Nature and content of instruction

(1) Content for distributive subject shall be derived from functions of distribution: selling, sales promotion, buying, operations, marketing research, and management. Product knowledge, service skills, communications, and calculations associated with attainment of occupational objectives shall be incorporated into the instructional program.

8.23-2 In preparatory programs conducted in the full-time school, the following conditions shall prevail:

(1) Only those who normally may be expected to complete a program of training should be enrolled.

(2) The schedule of enrollees and teacher coordinators should be adjusted to accommodate time requirements for supervised cooperative training and participation activities requiring specialized laboratory experience under individual training plans.

8.23-3 Participation activities shall be required in all preparator training.

(1) Classes utilizing supervised cooperative training should be limited to enrollees who will complete no less than 450 hours of regularly scheduled employment during a twelve month period. Such classes should meet the following conditions: (1) school approval of on-the-job training activities, (2) classes utilizing participation activities as identified in 8.23-2 (2) with credit recognition for proficiency in on-the-job assignments, (3) pay for work performed.

8.24 Types of classes

The regular instructional program is designed for full-time students, high school and post high school, whose employment goals represent a group of recognized occupations in a field or function of distribution.

8.24-1 Preparatory classes utilizing supervised cooperative training should be organized according to one of the following plans:

Plan A - a program covering two school years, providing an average of at least one class period per day of the regular schedule for vocational instruction in distribution.

Plan B - a program covering one school year, providing an average of at least two class periods per day of the regular schedule for vocational instruction in distribution.

Plan C - a program covering one school year, providing an average of at least one class period per day of the regular schedule for vocational instruction in distribution in classes limited to the cooperative group enrolling: (a) those who have completed one unit (two semesters) of vocational instruction in distributive subjects incorporating participation activities or (b) those who have completed at least two units (equivalency of four semesters) of instruction in a vocational program approved under the State Plan.

8.24-2 Preparatory classes incorporating participation activities in individual training plans should be organized according to one of the following plans:

Plan D - a program covering two school years, providing an average of at least one class period per day of the regular schedule for vocational instruction in distribution.

Plan E - a program covering one school year, providing an average of at least two class periods per day of the regular schedule for vocational instruction in distribution.

Plan F - a program covering one school year, providing an average of at least one class period per day of the regular schedule for vocational instruction in distribution, enrolling only those who have completed the equivalent of four semesters of instruction in a vocational program approved under the State Plan.

8.24-3 Instruction for full-time students whose occupational goals represent limited initial employment should be provided under intensive, modified or upgraded schedules when organized and approved as demonstration projects.

8.24-4 Instruction designed for persons whose occupational goals also require competencies developed through other vocational programs should be organized.

(1) under Plans C or F, or
(2) as a demonstration project, or
(3) as a separate class taught by a teacher coordinator or a special purpose teacher is one who has occupational competency on one or more specialized areas and holds a non-conventional teaching certificate.

8.25 Program for adults

Preparatory and supplementary classes for adults not available for full-time study should meet for no less than ten hours and lead to a specified occupational achievement or be part of a series of classes leading to an occupational goal.

8.26 Qualifications

8.26-1 Teacher in Preparatory Programs

(1) Education

(a) Professional

A baccalaureate degree from an institution of higher education of standard accreditation.

A minimum of 18 semester hours of credit in professional education always including student teaching, methods of teaching distributive subjects and at least two semester hours in the philosophy, organization and administration of vocational distributive education programs.

(b) Technical

A minimum of 24 semester hours in the technical field of distribution such as marketing; advertising; retailing; salesmanship; color, line and design; economics; management; and textiles and clothing, always including at least two semester hours in each of the following: marketing, advertising, retailing, and salesmanship.

(2) Experience

Two years of successful full-time employment in the distributive occupations or a minimum of 1500 clock hours of approved and supervised work in the distributive field under an approved teacher-training program or a combination equivalent thereto.

Additional approved practical experience over two years may be accepted in lieu of technical training at the rate of one year for three semesters hours with a maximum of nine semester hours allowed.

8.26-9 Teacher Coordinators in Preparatory Programs

Should meet same qualifications as teachers except that two semester hours in Techniques of Coordination are also required in professional education.

8.26-10 Local Supervisory Personnel

Should meet some qualifications as teacher-coordinators plus two years of experience in a distributive education program.

GENERAL GUIDELINES FOR DEVELOPING A LOCAL PLAN FOR A HIGH SCHOOL VOCATIONAL DISTRIBUTIVE EDUCATION PROGRAM

Any recognized public secondary school may be approved to organize a Vocational Distributive Education program and be eligible for reimbursement provided the school meets the requirements of the State Plan.

The essentials and requirements for a reimbursable Vocational Distributive Education program, as presented in this document, are designed to assist school administrators and teacher-coordinators in the preparation of their Local Plan.

The guidelines presented are not meant to be exhaustive, and the various provisions need to be adapted to local situations. The Program of Instruction identifies the various types of programs provided for in the Indiana State Plan. Each school should choose the program which best meets the needs of the D.E. students, the community, and the school.

The generalized provisions included in these guidelines were developed by Mr. Ralph D. Wray in cooperation with the Distributive Education Division of Indiana University and the Distributive Education Section of the Indiana Division of Vocational and Technical Education.

CHARACTERISTICS OF PROGRAM

LOCAL PLAN FOR _____ HIGH SCHOOL
FOR
VOCATIONAL DISTRIBUTIVE EDUCATION

This plan is a cooperatively developed working agreement between _____ High School and the Division of Vocational and Technical Education of the State Department of Public Instruction, which when approved becomes a contractual agreement and an instrument for evaluation.

OBJECTIVES OF DISTRIBUTIVE EDUCATION

To offer instruction in merchandising, marketing, and management in all areas of Vocational education.

To aid in the improvement of the techniques of distribution in all areas of vocational education.

To develop a broader understanding of the social and economic responsibilities of those engaged in distribution in a free, competitive society.

To provide job preparatory vocational training in the marketing and distributive occupations for which there is need for preemployment training.

To develop competencies in basic skills, social skills, and supervisory skills and an understanding of economic concepts and product or service knowledge.

PURPOSE OF DE IN _____ HIGH SCHOOL

The purpose of Vocational Distributive Education in _____ High School is a continued effort to satisfy the vocational, social, and personal needs of each student enrolled. The Distributive Education program will strive to develop skills and present knowledge that will prepare the student for gainful employment, and for advancing in the field of marketing, merchandising, and management, that he has chosen as his vocational career objective in a distributive occupation.

EVIDENCE OF NEED FOR THE PROPOSED PROGRAM

THE NEED FOR THE PROPOSED PROGRAM

Each school system should determine the needs of the community for a Vocational Distributive Education program. This can be accomplished by either one of two methods, or both.

1. The Community Survey will enable the administration and the future coordinator to look at all phases of the future program. The survey should be oriented to include information pertaining primarily to the availability of on-the-job training for students on the cooperative program, and will determine the interest of retail, wholesale, and service organizations in the establishment of a D.E. program in the local school. (See Appendix A)

In the actual school system, a preliminary to the physical survey should be a consensus of students' receptivity to the D.E. program. Their attitude will be a key to one's approach in introducing the program.

2. A documented report from the local office of the Indiana Employment Security Division which indicates the persistent job openings in distributive occupations in the area, and the need for a training program to develop skills for gainful employment in the job openings.

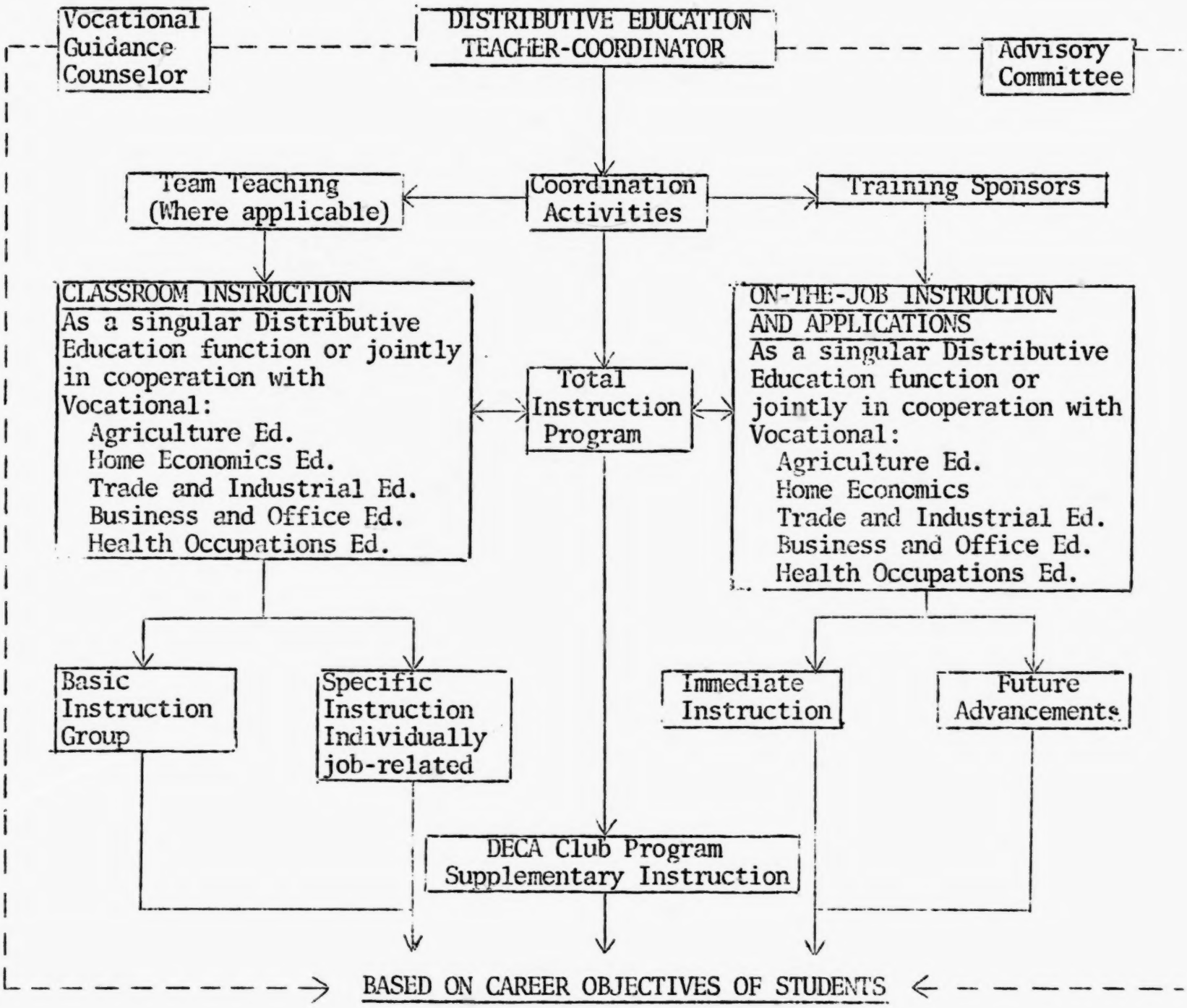
PROVISIONS FOR SUPERVISION AND ADMINISTRATION OF THE PROGRAM

Sample Organizational Chart

PROVISIONS FOR SUPERVISION AND ADMINISTRATION OF PROGRAM
CO-OPERATIVE

State Board for Vocational Education
State Department of Public Instruction
State Director of Vocational Education
State Supervisor of Vocational Distributive Education

Local School Board
Superintendent
Principal
Vocational Director

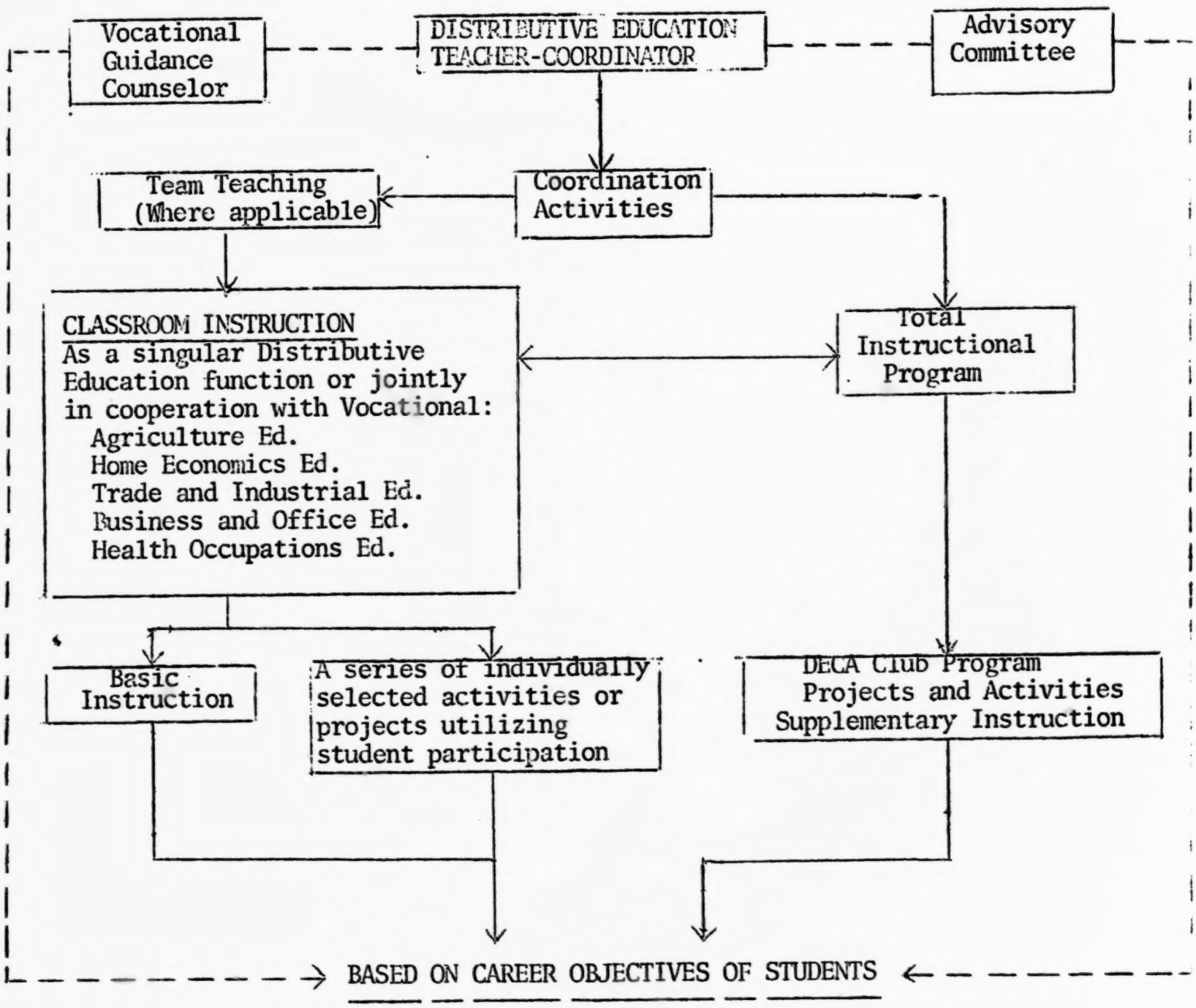


Sample Organizational Chart

PROVISIONS FOR SUPERVISION AND ADMINISTRATION OF PROGRAM
PROJECTS-METHOD

State Board for Vocational Education
State Department of Public Instruction
State Director of Vocational Education
State Supervisor of Vocational Distributive Education

Local School Board
Superintendent
Principal
Vocational Director



ADMINISTRATION PERSONNEL RESPONSIBILITIES

To cooperate with the employer to the fullest extent possible.

To provide the appropriate learning environment and instruction materials.

To provide the materials necessary to promote a successful program.

To strive to arrange schedules of classes in such a manner that DE students will have little difficulty in meeting requirements.

TEACHER-COORDINATOR RESPONSIBILITIES

To recognize that the occupational experience students receive is an essential supplement to classroom instruction but that such employment does not take the place of the instruction provided by the teacher-coordinator.

To continue to learn more about this discipline at every opportunity.

To counsel, guide and work for the improvement of the student.

To cooperate with the employer in all aspects of the training program.

To consult with the employer and plan individualized instruction needed by each trainee.

To assist in placing each student in a job most suitable for his interests and capabilities.

To continually strive to upgrade the entire program.

DUTIES OF TEACHER-COORDINATOR

To teach a preemployment class or classes. (In extreme cases, the preemployment or pre-co-op, classes may be taught by a qualified preparatory teacher, providing there is close cooperation with the teacher-coordinator and the subject matter taught orients the D.E. student to the world of work in the distributive occupations.)

To teach a related instruction class for the students enrolled in cooperative training or to provide instruction and supervision for students enrolled in a vocational project centered training class.

To teach other classes which may be assigned to him, but always being permitted to spend at least 30 minutes per week in coordination activities for each student enrolled in either cooperative training or in projects-method training.

To assist and promote adult education classes in distributive occupational training.

PROVISIONS FOR EXTENDED CONTRACT

It is recommended that the D.E. Teacher-Coordinator be placed on an extended contract of one month beyond the regular school year so that he may have adequate time to devote to coordination and follow-up activities, working with advisory committees, and in other activities contributing to the continued improvement of the program.

Experience has demonstrated this to be very valuable in the development of a sound program, especially in providing sufficient time for the effective placement of student-trainees. There are two periods in which most placement is done. One period is immediately at the close of school in the spring, and the other is just before school starts in the fall.

All of the additional time spent by the coordinator beyond the regular school year on the extended contract is reimbursable at the rate of 100% from vocational education funds.

QUALIFICATIONS OF A VOCATIONAL DISTRIBUTIVE EDUCATION TEACHER COORDINATOR

Teacher-coordinators shall be certified in accordance with the professional, technical and occupational experience requirements as outlined in sections 8.26-8 and 9 of the Distributive Education section of the Indiana State Plan for Vocational and Technical Education, and part (h) pages 30-31 of Bulletin 400 of the Division of Teacher Education and Certification.

Teachers in preparatory programs must meet the same requirements with the exception of the two semester hours in Techniques of Coordination.

A teacher-coordinator of a cooperative program is the approved teacher who teaches the related class and also coordinates the class work of the student-learner with his on-the-job experiences.

It is recommended that the teacher coordinator teach both the preemployment and the cooperative related classes.

Prospective teachers seeking approval as a certified Vocational Distributive Education teacher or teacher-coordinator should arrange to have official transcript(s) of records sent to the State Supervisor of Distributive Education, Division of Vocational and Technical Education,. 600 Old Trails Building, 309 West Washington Street, Indianapolis, Indiana 46204. (Social Security number to be included.)

In addition, the prospective teacher will need to submit two copies of D.E. Form V-52 pertaining to his occupational experience in distributive occupations.

Limited certification may be granted for a period of 1 year for instructional personnel who indicate a definite plan for meeting requirements for full certification. Renewal of limited certificates is contingent upon the completion of necessary courses to eliminate any professional and technical deficiencies.

The Distributive Education Teacher-Coordinator has had professional training in the Distributive competencies plus full-time occupational experience in marketing, merchandising, and management. He, or she, is eager to provide training in the distributive competencies either along as a total, singular function or jointly in cooperation with other vocational disciplines to better prepare young people for gainful employment. His professional training in coordination techniques and the methodology of providing relevant work experience makes it possible for him to coordinate on-the-job training activities for other vocational areas; provided there are trained teachers from the other vocational areas available to teach the related in-school classwork for their specific discipline.

Adult and evening school instructors shall be selected by the teacher-coordinator in cooperation with the Director of Adult Distributive Education, and shall be approved for Non-Conventional Certification by the State Supervisor of Vocational Distributive Education.

PROVISIONS FOR TEACHER-COORDINATOR ATTENDING STATE-CALLED WORKSHOPS

The teacher-coordinator shall attend the Annual Summer Conference for Vocational Distributive Education called by the State Supervisor of Vocational Distributive Education and other state-called workshops or student conferences in which he has student participants.

PROVISIONS FOR REIMBURSING TRAVEL EXPENSES FOR COORDINATOR

The teacher-coordinator shall be reimbursed at the rate of 50% for local travel expense incurred as a result of carrying out his coordination and supervision responsibilities.

Attendance at state-called conferences is reimbursable by the state at the rate of 100%; mileage and per diem will be allowed and reimbursed in full according to state travel regulations.

DAILY CLASS SCHEDULE OF TEACHER-COORDINATOR

COOPERATIVE PROGRAM
PLAN C SAMPLE

PERIOD
1 Econ.,Bus. Law, Bus. Math, Other
2 DE Pre-Co-op. Class (Jr.)
3 DE Related Class (SR.)
4 Lunch
5 Coordination
6 Coordination
7 Coordination

PROJECTS-METHOD
PLAN E SAMPLE

PERIOD
1 Sales, Merch., Type., Other
2 Econ., Bus. Law, Bus. Math,Or Coordinatio
3 Coordination
4 Lunch
5 Coordination
6 } Projects Method Class
7 } (2 hr. block of time)

Note: The two hour block of time for the project methods class can be given in any consecutive 2 hour period during the regular day. Coordination time depends upon number of enrollees in the program at the rate of 30 min. per student per week.

PROGRAM OF INSTRUCTION

PROGRAM OF INSTRUCTION

Each school system should choose the program of instruction which best meets the needs of the students, the community, and the school.

The regular instructional program is designed for full-time students, whose employment goals represent a group of recognized occupations in a field or function of distribution.

The career objective of each student-trainee enrolled in a Vocational Distributive Education program shall be a matter of record, and shall be indicated by S.I.C. numbers from the Standard Industrial Classification for Distributive Education.

There are two methods of providing relevant work experience for student-trainees enrolled in a Vocational Distributive Education program:
(1) The Cooperative Method and (2) The Projects Method

(1) THE COOPERATIVE (ON-THE-JOB TRAINING) METHOD

Preparatory classes utilizing supervised cooperative training should be organized according to one of the following plans:

Plan A - a program covering two school years, providing an average of at least one class period per day of the regular schedule for vocational instruction in distribution. (Schools utilizing this plan enroll both junior and senior students in vocational on-the-job training.)

Plan B - a program covering one school year, providing an average of at least two class periods per day of the regular schedule for vocational instruction in distribution. (Schools utilizing this plan should make the program available to senior students.)

Plan C - a program covering one school year, providing an average of at least one class period per day of the regular schedule for vocational instruction in distribution in classes limited to the cooperative group enrolling: (a) those who have completed one unit (two semesters) of vocational instruction in distributive subjects incorporating participation activities, or (b) those who have completed at least two units (equivalency of four semesters) of instruction in a vocational program approved under the State plan. (Schools utilizing this plan will provide a preemployment class involving participation projects for juniors and related instruction for seniors enrolled in vocational on-the-job training.)

GENERAL RELATED INSTRUCTION

The content of the instructional material is to be selected on the basis of the objectives of the program and is the joint responsibility of the local board of education, the school administrator, and the teacher coordinator. Periodic evaluations of the progress of the program are to be made by the State Supervisor.

PROVISIONS FOR INDIVIDUALIZED INSTRUCTION

The teacher-coordinator will consult with each employer and student to determine individual needs. Instruction can then be geared to the occupational needs and the career objective of the student.

Job study guides and manuals shall be utilized on an individual basis to aid in presenting material which will be more meaningful and are keyed directly to the on-the-job experiences of each student-trainee.

PROGRAM OF ON-THE-JOB TRAINING

Criteria for Selection of Training Stations

The following criteria shall be used in the preliminary selection of training stations:

1. Is the employer in sympathy with the idea of training?

2. Will he be willing to cooperate with the school in a cooperative program of school and on-the-job training?

3. Can he employ school students on a part-time basis.

4. Will he be willing to keep the students during the entire school year?

5. Does the business establishment provide prospective full-time employment for students after the completion of school?

6. Does this business have equipment and working conditions that will provide a good all-round training program and on-the-job work experience for student trainees.

7. Are desirable working conditions present that will not be detrimental to the student's physical, mental, or moral well being?

8. Is a training sponsor or supervisor present who can be assigned the job of helping the part-time worker?

9. Are conditions for pay of employees satisfactory?

10. Is the location of the business establishment satisfactory to the student and for coordination activities?

11. Will the employer really be interested in helping and training his student trainee to become an efficient worker in our economy?

12. Is the occupation one that requires skills, attitudes, and information that can be presented and developed in the classroom to supplement on-the-job experience?

TRAINING-SPONSOR RESPONSIBILITIES

(The training sponsor may be the owner or manager, or he may be a responsible individual appointed by management.)

To provide regular employment, (a minimum of 15 hours per week) throughout the school year for the student working in the training station.

To rotate the student's work assignments so that the student receives training in several aspects of the business.

To counsel with and direct the student regarding means of improving his performance.

To evaluate or rate the student at regular intervals so that the coordinator may better direct the student classroom instruction.

To pay the students at least the going wage for beginning employees.

To dismiss the student only for cause, and after consultation with the coordinator.

To confer with the coordinator on the student's progress.

To assist the coordinator in keeping up to date

RECOMMENDED EMPLOYMENT SCHEDULE OF TRAINEES

Students enrolled in the program are required a minimum of 15 hours per week of supervised employment and on-the-job training or sufficient hours of vocational project centered training. In situations utilizing on-the-job training, at least one-half of this work experience training should be during time that school is in session. Therefore, students shall be released in the afternoon for work experience training according to the agreed upon training schedules.

PROVISIONS FOR ON-THE-JOB TRAINING

The training-sponsor and the teacher-coordinator will agree upon a training program schedule prior to the on-the-job training. This will ensure a minimum of 15 hours per week of supervised employment and on-the-job training during the school year.

There shall be a training memorandum or agreement between the local school and the employing establishment which shall include the interrelationship and responsibilities of the student-learner, teacher-coordinator and the training establishment.

The course of instruction for each student-learner on the job is to be in the form of a step by step training plan which is in turn derived from a realistic analysis of the tasks, duties and responsibilities of the student-learner and his part-time occupation. The step by step training plan shall indicate what is to be learned and whether it is to be taught in the classroom or on the job.

The student learner shall be paid a beginning wage comparable to that paid other learners in similar occupations, and will be in accordance with all state and federal wage regulations.

PHYSICAL FACILITIES

The following equipment is proposed for equipping a classroom to be used for either a cooperative program or a projects-method program. Obviously, schools planning to use vocational project centered training classes will need more extensive equipment planne in accordance with the needs of the community and the students.

Rectangular tables (for students)

Armless chairs that stack

Teacher's desk and chair

Wash basin (for show card writing and display)

Bulletin boards (Instructional aids)

Chalkboards (Instructional aids)

Multiple drawer cabinet (one drawer for each student for job-study-guides and material storage)

Storage Cabinet

Bookcase (for reference books)

Magazine rack (for current publications in the areas of retailing and marketing)

Peg-board (for display purposes)

Tape-recorder (to be used for analysing sales presentations and demonstrations)

Cash-register (to aid in teaching students the proper use of the cash register)

Display case (to aid in the instruction concerning display and to allow the students to experiment in building creative and eye-catching displays)

Wrapping counter (to aid in the instruction concerned with wrapping merchandise and to allow students an opportunity to develop talents in producing a well wrapped package.)

Display window (located so that it will be visible from the main hallway. If this window is to display full-size mannequins the inside height should be at least 8 feet, depth 4 feet, and length according to available space)

Overhead projector (instructional aid)

A separate office and conference room should be provided for the teacher-coordinator. This room is needed for counseling and consultations. The office should be equipped with a telephone to allow the coordinator to maintain close contact with students, training stations, and the business community.

Carpeting is recommended on the classroom and office areas because of the valuable noise elimination, ease of maintenance, and appearance factors.

COURSE DESCRIPTION - PLAN C SAMPLE - COOPERATIVE METHOD

11th Year (Pre-Cooperative)

1st Semester	2nd Semester
Periods	Periods
1 Elective	1 Elective
2 SALESMANSHIP	2 MERCHANDISING
3 Elective	3 Elective
4 Lunch	4 Lunch
5 Requirement	5 Requirement
6 Requirement	6 Requirement
7 Requirement	7 Requirement

12th Year (Cooperative)

1st Semester	2nd Semester
Periods	
1 Requirement	1 Requirement
2 Elective	2 Elective
3 D.E. Related Class	3 D.E. Related Class
4 Lunch	4 Lunch
5 On-the-job	5 On-the-job
6 On-the-job	6 On-the-job
7 On-the-job	7 On-the-job

As an aid to counseling the student who has indicated an interest in the cooperative D.E. program, it is suggested that the following subjects from the general curriculum would be valuable in adding to the vocational competency of the student: (these may be taken prior to or concurrently with the D.E. courses).

Business Math	Business Law	Typing
General Business	Consumer Economics	Speech
Business English		

RELATIONSHIP BETWEEN COOPERATIVE AND PROJECT METHODS

Similarities

1. Both include school approval and involvement in vocational learning experiences - project training or cooperative training.

2. Both have clearly defined instructional goals with the major goal of preparation for gainful employment in a distributive occupation, according to individual career goals.

3. Both provide credit recognition for progress and proficiency in the vocational learning experiences of either project or cooperative training

4. In both adequate time is needed by the coordinator to relate classroom instruction to either project or cooperative training and vice-versa - coordination activities.

5. In both adequate time is needed for student participation in either project or cooperative training.

6. The learning experiences of both project and cooperative training should be related to occupational objectives.

7. Individual project training plans or individual cooperative training plans are recommended for both.

8. Both involve some occupational experience. (It is the primary avenue for vocational approach in the cooperative method.)

9. Both are enriched and supplemented by club activities which provide an opportunity for students to demonstrate and refine the competencies

10. Both are methods of vocational application to assure application to employment requirements.

11. For both, teaching techniques utilizing student participation enable the coordinator to relate classroom instruction to either project or cooperative training and vice-versa.

Differences

1. Greater school involvement and responsibility in the project method.

2. Greater necessity for the individual training plan in the project method.

3. Less credit may be given for project training than for cooperative training.

4. Occupational experience is the primary avenue of vocational application in the cooperative method; it is one type of project in the project method.

5. Club activities serve additionally in the project method as types of projects.

(2) THE PROJECTS METHOD

Schools planning to use vocational project centered training classes should also choose the program of instruction which best meets the needs of the students, the community, and the school.

Preparatory classes incorporating participation activities in individual training plans should be organized according to one of the following plans:

Plan D - a program covering two school years, providing an average of at least one class period per day of the regular schedule for vocational instruction in distribution.

Plan E - a program covering one school year, providing an average of at least two class periods per day of the regular schedule for vocational instruction in distribution

Plan F - a program covering one school year, providing an average of at least one class period per day of the regular schedule for vocational instruction in distribution, enrolling only those who have completed the equivalent of four semesters of instruction in a vocational program approved under the State plan.

The vocational project centered training classes should include both group and individual projects. In order to be more meaningful, a directed occupational experience should be included where possible as an individual project. This would consist of an actual employment experience in a distributive occupation related to the student's career objective for a specified period of time.

The projects-method program may be used as a pre-cooperative training program in the 11th year with cooperative training as the capstone course in the 12th year; or it may be used as a terminal program alone in the 12th year for:

(1) Small schools who do not have a business community large enough to support the cooperative program.

(2) Students who do not wish to take the time for cooperative training but who desire comprehensive training in the distributive education areas of marketing, merchandising and management

(3) Students who, because of ability level, are not ready to be placed on the labor market.

(4) Other specific adaptations are possible

In addition, the projects-method in Distributive Education serves as a valuable adjunct in providing the distributive competencies necessary for the marketing, merchandising, and management phases of the other vocational areas of Agriculture, Home Economics, Office, and Trade and Industrial Education.

Following are five essential elements that should be recognized in planning for the project method:

1. The project method seeks the same learning outcome as does the cooperative method

2. The project method extends classroom instruction into a laboratory environment

3. The project method provides learning experiences individualized according to occupational objectives and student differences

4. The project method gives the teacher-coordinator direct control of the pace and nature of laboratory activities assigned to individual students

5. The project method uses individual training records to document projects assigned and completed by trainees.

CLASSIFICATION OF PROJECTS (SAMPLES) THAT MAY BE USED FOR OCCUPATIONAL PREPARATION

A. Directed Observation - group and individual projects
   1. Field trips
   2. Viewing selected films and televised programs
   3. Street or floor counts
   4. Trade exhibits and museum visits
   5. Non-paid schedules of "over-the-shoulder" observations of personnel in distributive occupations in the employment situation
   6. Trips with management representatives to resources (preferably those in close proximity)
   7. Customer calls with sales representatives or with delivery services
   8. Attendance at shows and sales rallies
   9. Participation in Distributive Education Clubs of America judging competitions

      For example, the project of a student with a mid-management objective in general merchandise might be to observe the effect of weekly advertised promotions on sales procedures, stockroom and warehouse activities, layout, stock control, telephone order, and delivery schedules. A student planning a career in home furnishings might be assigned to a project to observe in a shop specializing in re-upholstering and furniture refinishing or to review and evaluate a film on furniture manufacturing as an employee training device.

B. Analysis and Evaluation (of appropriate situations and materials) - group or individual projects.
   1. Use of the incident process or case studies
   2. Creative marketing problems
   3. Interviews and surveys
   4. Trade journal reading
   5. Listening to tapes and records
   6. Comparing profit and loss statements

For example, a student whose occupational objective is in real estate might analyze the duration of rental living when both husband and wife are working. This project might be assigned in connection with a study of the consumer's influence on product availability or the functions of market research. An objective in apparel sales might suggest a project requiring regular study of a trade paper or magazine with interpretations made in relation to each unit in the curriculum.

C. Discussion - group projects
   1. Panel presentations and discussions
   2. Buzz sessions
   3. Committee work
   4. Conference discussions
   5. Brainstorming
   6. A Distributive Education Clubs of America meeting

A group of students preparing for the grocery field might undertake a project related to self-selection, present their findings in oral reports, and lead a group discussion focusing on management decisions about customer traffic patterns, shopping convenience, automation, pilferage, and suggestion sales. Students needing to gain facility in communications might be assigned projects utilizing buzz groupings to discuss such topics as characteristics of the trade area, customer differences, and product values in relation to the standard of living wage payment plans, uses or credit and job ethics.

D. Practice and independent study - individual and group projects
   (Practice in basic skills gathering and verifying facts and idea creation - individual or group)
   (Independent study assignments - desirable when an investigation of written materials would provide needed depth in a product area, for example.)

   Examples are:
   1. Maintaining an occupational diary
   2. Role playing job incidents with playback by a recording device
   3. Completing programmed materials developed in cooperation with trade associations or training departments of distributive organizations.
   4. Role playing decision-making by means of business games
   5. Developing a product promotion plan
   6. Answering advertisements
   7. Participating in employment interviews

   A student with a job objective in warehousing might be assigned a project based on programmed lessons in inventory controls while that of a student planning a career in industrial sales would require practice of sales representations on a tape recorder, thus permitting the trainee to hear his own performance objectively.

Simulated or Directed Occupational Experience

A. Simulated Occupational Experience - individual and group projects
   1. A school store
   2. A county fair
   3. A bazaar
   4. A franchised product
   5. A Distributive Education Clubs of America activity
   6. A seasonal buyer's market

B. Directed Occupational Experience - individual projects
   (Actual employment experience in a distributive occupation related to the student's career goal for a specified period of time.)

THE ADULT PROGRAM

Provisions For Supervision and Coordination

As a part of the adult evening program, training in marketing and distributive occupations shall be promoted. The program will be supervised by the local teacher-coordinator. Classes will be taught by competent instructors experienced in marketing activities.

Types of Classes

The Distributive Education adult program shall consist of short, intensive courses ranging from help for management to special sessions directed at supervisory sales and service personnel. Each program shall be tailored to meet the needs of the individual group, person, or business establishment.

PROGRAMS FOR YOUTH AND ADULTS WITH SPECIAL NEEDS

Specific programs are to be adapted to the needs of the enrollees, the school and the community.

ENROLLMENT IN THE PROGRAM

ENROLLMENT IN THE PROGRAM

Enrollment in either the cooperative method or the projects method program is dependent upon the Plan (A,B,C, or D,E,F) utilized by the local school corporation as a program of instruction. Cooperative method student-trainees must be eligible for work permits according to State and local regulations.

Selection Procedures

Students enrolling in Vocational Distributive Education shall be expected to declare a career objective. Students will be selected on the basis of their occupational needs and abilities to profit from the training.

Pre-requisites

Any senior enrolling in the cooperative program should have completed a preemployment course successfully during the junior year, or shall have completed four semesters of instruction in another vocational program approved under the State Plan.

PROVISIONS FOR LOCAL CLUB PROGRAM

PROVISIONS FOR THE LOCAL CLUB PROGRAM

Added to the classroom instruction and on-the-job instruction and application, the Distributive Education Club completes the total instruction program. The broad purposes of the club are vocational understanding, civic consciousness, social intelligence and leadership development.

The Distributive Education trainee misses many of the normal social activities of school life. Therefore, social activities should be included in the club program.

Because the business community is involved in civic activities and Distributive Education students are closely associated with the business community, civic activities shall be included in the local club program.

One of the objectives of the Distributive Education program is to develop socially and professionally well-rounded citizens. This objective can be partially achieved through benevolent activities within the DECA program.

The club shall embark on several worthwhile projects such as: (1) Annual Employee-Employer Appreciation Banquet, (2) community service projects, (3) attendance at conferences as well as other civic, educational, and service projects. This will make fund raising activities essential.

The club will also take part in professional activities as opportunities allow.

The Distributive Education Club shall be based upon three principles:

(1) The club shall be utilized as a teaching method
(2) The club shall be conducted as co-curricular
(3) The club purposes shall be educationally sound and identifiable.

The sponsor of the local DECA club shall be the teacher-coordinator.

PROVISIONS

FOR

LOCAL ADVISORY COMMITTEE

PROVISIONS FOR ADVISORY COMMITTEE

An advisory committee shall be established in an initial effort to obtain advice to improve the Vocational Distributive Education program. Nine members shall be chosen from the community; the teacher-coordinator shall serve as a member; and the vocational director or superintendent shall also serve. Members shall be chosen on the basis of the following qualifications. Members must have had recent, successful, firsthand, practical experience in the distributive occupations. They should have the respect and confidence of their associates. Members must be able to keep in close contact with school officials. This means they should be available to meet when requested. Candidates shall also be chosen on the basis of intelligence, integrity, keen and balanced mind, courage and unselfish spirit. They should be potentially responsible, civic minded, and cooperative committee members.

How Selected, Who Appoints

Advisory committee members shall be selected by the teacher-coordinator and approved by the superintendent and school board. Members shall serve for a period of one year. At the end of the year, members shall be either reappointed or replaced.

General Duties and Responsibilities

To provide the school administration with advice on the types of courses in marketing and distribution needed to satisfy the day and evening training needs of the community.

To help in the work of community surveys by determining the data to be gathered and by supporting the studies and gaining the best community reaction to them, as well as by halping to evaluate the returns from the studies.

To help plan courses and establish ways for keeping instruction practical and functional.

To help set up standards for entrance into vocational distributive courses and to assist in obtaining jobs for graduates who have successfully completed their training.

To assist the teacher in relating his instruction to the particular needs of the community.

To recommend applicants for training on the basis of the qualifications required by the organization in which the student is to be taught; help the school conform to the state wage and hour laws; recommend and help to set up the local training standards. The committee should discuss working agreements, changes in job training status and all other student-training program problems.

To offer suggestions and advice in determining wage rates, training stations, types of training, and aid in the general promotion of the program.

PROVISIONS FOR SURVEYS

AND

FOLLOW-UP STUDIES

PROVISIONS FOR SURVEYS AND FOLLOW-UP STUDIES

Surveys shall be conducted as the need becomes apparent. The objectives and scope of surveys shall depend upon the needed information and purpose.

An annual follow-up study of June graduates from the program will be made each fall to determine the value and effectiveness of the vocational training received by the student-trainees. Results of this study are to be submitted to the State Supervisor of Vocational Distributive Education.

Surveys and follow-up studies may be conducted solely by the teacher-coordinator or may be conducted jointly by the teacher-coordinator and the guidance department.

PROCEDURES FOR LOCAL EVALUATION

PROCEDURES FOR LOCAL EVALUATION

Periodic analyses of occupations for which training is being given will be used to determine if the content of courses being offered is effective or needs revision. Outside consultants will be utilized.

Classroom Instruction

Advice and cooperation of the various occupational groups concerned will be used in evaluating both specific and related instruction. Instruction shall also be examined to determine if this phase of the training is effective in developing marketable skills, abilities, understandings, attitudes, work habits, and appreciations to the point of enabling the trainee to get and hold a job in the occupation chosen for his career objective. Instruction shall also be expected to reveal continuous research by the teacher.

On-The-Job Training

The work experience phase of the training will be evaluated on the basis of being educationally defensible. On-the-job training must provide a variety of learning experiences that will challenge the individual-trainee in order to be worthwhile. The teaching must be of such nature that the student-learner will possess skills suitable for entering and succeeding in the occupation upon graduation. Each on-the-job training experience will be periodically evaluated on an individual basis.

REPORTS AND FORMS

REPORTS

Required statistical and descriptive reports of activities shall be submitted by the coordinator to the local school administration and the State Supervisor of Vocational Distributive Education.

FORMS

Sample copies of each of the various forms used by the local school such as application for admittance to program, evaluation forms, training agreements, schedule of training experiences, etc. are included. (See Appendix B,C)

(The samples included are not intended to serve the needs of every program in every community. They are merely indicative of those which have been used effectively in various communities in the State.)

RESPONSIBILITIES

AND

PROVISIONS FOR REIMBURSEMENT

RESPONSIBILITIES

Local School

To operate a distributive education program in accordance to the agreements set forth in this local plan.

To revise this local plan as the need to do so becomes apparent.

Vocational Division
State Department of Public Instruction

To notify the school of revisions in the State Plan which require modifications in the local plan.

To reimburse the school in accordance with state reimbursement procedures.

Distributive Education Division
Indiana University
Indiana State University

To assist the school in the promotion of marketing and distribution programs in both the high school and adult evening programs.

To assist the teacher-coordinator in keeping current on changes in instructional materials, publications, methods and techniques, and other aids.

PROVISIONS FOR REIMBURSEMENT

Reimbursement by the Vocational Division of the State Department of Public Instruction will be recommended according to a schedule to be agreed upon and attached to this plan.

Indicate the amount of the total salary (including extended contract) of the teacher-coordinator.

Using equipment request form DE 746 indicate the items of equipment and the dollar amount for the proposed program.

A P P E N D I X A

(COMMUNITY SURVEY)

COMMUNITY SURVEY

To provide a sound basis for starting a Cooperative Distributive Education program, it is advisable to determine (1) the needs of the community and (2) the community's willingness to cooperate with the school in the program.

A survey will enable the future D.E. Coordinator, or the school, to plan the initial phases of the program more effectively.

The following is a sample survey and may be revised, or adapted, to any school's needs.

(L E T T E R H E A D)

DATE: _____

TO: MANAGER OR PERSONNEL DIRECTOR

_____
(Name of store)

Many men and women have entered the world of commerce in a hap-hazard, accidental, disorganized way. The distributive activities of marketing, merchandising, and management require more than the accidental applicant.

_____ is considering a Distributive
(Name of school)
Education program to expand its vocational curriculum. This survey is being conducted to determine your interest in participating with the school in a Distributive Education program.

DISTRIBUTIVE EDUCATION is a vocational training program in which school and business cooperate to provide specialized training for high-school seniors who are considering a career in business after graduation from high school. It is intended for young men and women who have a career objective in a distributive occupation and who can meet the qualifications set up for entrace into the program.

D.E., as it is commonly referred to, combines the best in high school education with the best in business training experience to enable our young people to become better workers, better citizens, and better persons. A D.E. trainee in the senior year spends the morning in school carrying a bssic school program, and spends the afternoon under the supervision of local stores selected as training establishments. This program brings the business world into the classroom, and the classroom into the business world -- to bridge the gap between theory and actual practice.

Interested? Would you be kind enough to complete the information sheet attached?

Your cooperation will be greatly appreciated. Your early response will be equally important -- for it will expedite the preparation of the survey results. Would you be able to complete the form by _____? The survey is confidential and will not be shown to other community businesses. If you wish, I shall stop by to get it, or you may mail it in the stamped, addressed envelope provided.

Thank you.

_____ _____
(Superintendent, Principal, Vocational Director or other school official) (D.E. Coordinator)

(NAME OF SCHOOL) _____

DISTRIBUTIVE EDUCATION SURVEY

_____

_____

_____ (name of firm)

_____ (type of business)

_____ (address)

_____ (phone)

_____ (manager-proprietor)

_____ (person interviewed, or completing mail form)

Usual number of part-time employees? _____
Do you normally employ high-school students? _____
Number of high school students currently employed? _____

Hours during the week when part-time workers are most needed.

	Morning	Afternoon	Evening
MONDAY	_____	_____	_____
TUESDAY	_____	_____	_____
WEDNESDAY	_____	_____	_____
THURSDAY	_____	_____	_____
FRIDAY	_____	_____	_____
SATURDAY	_____	_____	_____
SUNDAY	_____	_____	_____

IMPORTANT:

Checking one of the following statements in no way obligates your firm. At this time the school is only surveying potential training stations for part-time Distributive Education students. No business would be asked to employ a student unless such an arrangement was beneficial to the business, the student, and the school.

_____(1) The firm named in this questionnaire is interested in participating with the High School in the Cooperative Vocational Distributive Education Program.

_____(2) The firm named in this questionnaire is not interested in participating with the High School in the Cooperative Vocational Distributive Education Program.

Note: If item number (1) was checked, would you please complete the following items:

My firm could normally provide part-time training stations for the following number of Distributive Education student-trainees:

girls_____ boys_____

_____
(signed)

A P P E N D I X B

(COOPERATIVE FORMS)

DISTRIBUTIVE EDUCATION TRAINING MEMORANDUM

Name of trainee _____

Name of business firm _____

Address of business firm _____

The purpose of this memorandum is to set forth a plan for training the student, who is interested in receiving coorelated classroom and job instruction in the important field of distribution. The objective of the plan is to organize the training on the best possible basis, so that maximum learning and advancement in efficiency may be achieved by the student. An outline of the work experiences and a course of study paralleling these experiences has been planned jointly by the employer and coordinator as shown on the second page of this memorandum.

The student agrees to work and study diligently, both when receiving business experience and when attending school. The student also agrees to take advantage of every opportunity to improve in efficiency, knowledge, and personality in order to qualify to continue in his chosen occupation as a full-time employee at the end of the training period. It is understood that the trainee will observe the same regulations which apply to other employees.

The trainee will work a minimum of fifteen (15) hours per week, one-half of these hours (7½) will be on school time (12:30 to 4:00 p.m.), and one-half (7½) on the trainees own time after 4:00 p.m. at night, Saturday, or Sunday.

The Employer agrees to assist the schools in giving the student well-rounded training by assigning the student to several phases of work experience during the training period. Training sponsors, usually department heads, may be appointed to direct the student's job training as each phase of the work is assigned.

In addition to providing practical instruction and experience, the employer agrees to pay the student according to the following plan:

1. The beginning wage will be ____per____for____hrs. per week. (Minimum 15 hrs.)
2. A wage adjustment based upon the abilities of the student and consistent with existing employment conditions in the occupation will be given each___ _____.
3. The trainee will receive a _____% commission on gross sales.

The coordinator will assist the employer in carrying out the continuous training of the student, and will also conduct the classroom instruction and correlate this instruction with the job training received by the student. The coordinator has explained the benefits of Distributive Education training to the parents or guardians of the student, and has secured their permission for the student to receive the classroom instruction and the business experience.

The training period begins on _____19___, and extends through the scholastic year ending_____19____. This plan has been reviewed and approved by the Advisory Committee. It may be terminated, for just cause, by any person named on the memorandum, with the understanding that due notice will be given to all interested parties.

For one semester of successful participation in the cooperative program, the student-learner will earn _____ units of high school credit.

The coordinator will visit the training station at regular intervals to observe the student-learner on the job, to discuss and evaluate his job progress with his employer and job trainer, and to find out what related instruction is needed at a particular time.

OUTLINE OF WORK EXPERIENCES

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

10. _____

_____ (Student-Learner)	_____ (Employer)
_____ (Parent or Guardian)	_____ (Teacher Coordinator)
_____ (Principal of High School)	_____ (Vocational Director)

_____ (Date)

_____ High School
D.E. Student-Learner Weekly Work Report

NAME _____
Last First Middle

Where Employed _____

Week of Report: From _____ to _____

Total Wages _____ Total Hours _____

_____ High School
D.E. Student-Learner Weekly Work Report

NAME _____
Last First Middle

Where Employed _____

Week of Report: From: _____ to _____

Total Wages _____ Total Hours _____

_____ High School
D.E. Student-Learner Weekly Work Report

NAME _____
Last First Middle

Where Employed _____

Week of Report: From _____ to _____

Total Wages _____ Total Hours _____

_____ High School
D.E. Student-Learner Weekly Work Report

Name _____
Last First Middle

Where Employed _____

Week of Report: From _____ to _____

Total Wages _____ Total Hours _____

HIGH SCHOOL
DISTRIBUTIVE EDUCATION

CUMULATIVE HOUR and WAGE REPORT

For: _____
(Student)

	HOURS		GROSS WAGES			HOURS		GROSS WAGES	
Week of:	Weekly Hours	Cumulated Hours	Weekly Wages	Cumulated Wages	Week of:	Weekly Hours	Cumulated Hours	Weekly Wages	Cumulat Wages

APPLICATION BLANK FOR DISTRIBUTIVE EDUCATION
_____ SENIOR HIGH

NAME: _____ Height _____ Weight _____

Date of Birth _____ Sex _____ Race _____

What type of work do you wish to be doing five (5) years from now?

_____

Condition of your health: Good____ Fair____ Poor____

Do you have any defects in: Sight____: Hearing____; Speech____; Limb____:
Body____: Heart____; Other _____

Precautions necessary due to any of the above named defects: _____

_____

How many times have you been absent from school this year? _____
If absent over 5 times, give reason: _____
How do you consider your record as a student? Excellent____; Above Average;____
Average _____; Below Average_____.

Why are you enrolling for this course? (Use back of page, if necessary)_____

_____

What do your parents say about your taking this course?_____

_____

PLACE A CHECK MARK BEFORE SUBJECTS YOU HAVE TAKEN IN HIGH SCHOOL:

( ) Bookkeeping
( ) Business Math
( ) Typewriting
( ) Journalism
( ) Speech
( ) Art

Other subjects related to field of interest: _____

GIVE YOUR TENTATIVE CLASS SCHEDULE FOR NEXT SEMESTER:

Period	Room	Subject	Teacher
1	____	_____	_____
2	____	_____	_____
3	____	_____	_____
4	____	_____	_____
5	____	_____	_____
6	____	_____	_____
7	____	_____	_____
Homeroom:		Homeroom teacher	Counselor

****

I promise that, if I qualify for this course in distributive education, I shall accept whatever responsibilities are placed before me. I shall perform my job in a manner that will do honor to both my school and myself.

DATE: _____ SIGNED _____

DISTRIBUTIVE EDUCATION
PERSONAL INTEREST SHEET
SENIOR HIGH

Name_____Telephone_____

Address_____City_____

Place of Birth_____

Father_____Age___Birthplace_____

Mother_____Age___Birthplace_____

Father and mother are: (living together__, Separated__) Father is deceased__, Mother is deceased__) Father remarried__),Mother remarried__)

Father's occupation_____Employed by_____
Father's education: Less than 8 yrs.__, 8yrs.__, 12 yrs.__, 16 yrs.__

Mother's occupation_____Employed by: _____
Mother's education: Less than 8 yrs.__, 8yrs.__, 12yrs.__, 16 yrs.__

No. of brothers: Their ages are __ __ __ __ __ __ __ __ __ __ __ __
No. of Sisters: Their ages are __ __ __ __ __ __ __ __ __ __ __ __

Do you select and buy your own clothes?____ Who usually assists you in selecting them?_____
Do you make your own bed? ____ Do you mow the lawn? ____ Do you empty the garbage?____ Do you have to keep your room presentable?____
Do you either wash or dry dishes? ___ Do you have any other chores that are assigned to you?____ What are they?_____
Do you like to be with other people? ____: Younger___Older___Same age___

Do you attend Sunday School or Church? ___Name of Church_____

Out of school organizations you belong to:_____
_____
Offices you have held:_____

Musical instruments you play_____Do you sing?_____
Give readings_____Other talents_____

Can you type?____How fast?___Are you right or left handed_____.

H.S. subject you have enjoyed most_____Least_____
Three sports you enjoy watching: _____
Three sports you enjoy playing:_____

Do you like to go on picnics_____Dance_____Roller Skate_____Ice skate_____
Bowling_____.

Is it necessary that you work?____ Why_____
Do you maintain an active savings account?_____
How frequently do you attend picture shows?_____
Do you enjoy reading?_____ Name magazines you read_____
_____
Do you read a daily newspaper?_____ Regularly_____ Occassionally_____
Never_____
Do you have a television set in your home?____ How much time per day do you watch it?_____ Name your favorite programs: 1st_____
2nd_____ 3rd_____
Which do you prefer: Entertaining friends in your home_____ or going to parties in friends' homes_____

In what occupation do you wish to earn your living after you have completed your education?_____

Will you go to college?____ What college?_____
What part of your expenses will you have to pay? None_____; ¼_____; ½_____; 3/4_____; all_____.

LIST ALL WORK EXPERIENCE YOU HAVE HAD FOR WHICH YOU RECEIVED A WAGE

WHERE EMPLOYED List last employment first	TYPE OF WORK	DATES OF EMPLOYMENT

Are you presently employed?_____ Where_____
What kind of work do you do?_____

If you were to win $500 and you were compelled to spend it, what would you do with it? (Not permitted to put it in a savings account)

_____
_____
_____
_____

Are you enthused over the possibility that you may qualify to take this program and start your training in the Distributive Education course? _____

Why?_____
_____
_____

INTRODUCTION CARD

Distributive Education, _____ High School

Date _____

To the prospective employer _____

Firm name _____

This will introduce _____ of the Cooperative Vocational Distributive Education class at _____ High School, who is interested in obtaining part-time employment for at least 15 hours per week to supplement the distribution and marketing training received at school.

_____
Teacher-Coordinator

Accepted _____

Not accepted _____

Comments:

INTERVIEW RATING SHEET

Name of applicant _____ Date _____

Job applied for _____ Interviewed by _____

	Yes	No
Was he or she punctual?	_____	_____
Did he or she use good grammer?	_____	_____
Is he or she confident?	_____	_____
Is he or she qualified?	_____	_____
Was he or she neatly and appropriately dressed?	_____	_____
Was he or she at ease?	_____	_____
Would he or she fit into our organization?	_____	_____
Is he or she interested in the job?	_____	_____

Strong points _____

_____

_____

Weak points: _____

_____

_____

On the basis of the letter of application, qualifications, personal information and the interview, would you hire the applicant for the position?

_____

_____

_____

_____

_____
Interviewer

TRAINING ROTATION SCHEDULE

To be altered and supplemented depending on the type and nature of the training station.

Name of Student _____ Date _____

SALES _____ hours

_____ Personal selling
_____ Handle refunds
_____ Handle exchanges
_____ Handle layaways
_____ Balance cash daily
_____ Prepare sales checks
_____ Prepare want slips
_____ Prepare sales tallies
_____ Telephone selling
_____ Counter care & arrangement
_____ Operation of cash register
_____ Wrapping packages
_____ Giving demonstrations

HANDLING MERCHANDISE _____ hours

_____ Receiving and marking
_____ Stock room arrangement
_____ Markups and markdowns
_____ Storing merchandise
_____ Filing claims for damaged merchandise
_____ Weighing merchandise
_____ Pickup and delivery
_____ Filling orders

PROMOTIONAL ACTIVITIES _____ hours

_____ Interior display
_____ Window display
_____ Preparing advertisements
_____ Making showcards

INVENTORY _____ hours

_____ Taking inventory
_____ Keeping inventory records

BUYING _____ hours

_____ Ordering merchandise
_____ Caring for stock control system
_____ Purchase orders
_____ Pricing

RECORDS _____ hours

_____ Petty cash records
_____ Ledger account entries
_____ Journal entries
_____ Figure extensions on bills
_____ Prepare checks
_____ Bank deposits and withdrawals
_____ Obtain credit ratings
_____ Stock control records
_____ Personnel records
_____ Conditional sales contracts

TYPING

_____ hours

_____ Bills, invoices, statements

_____ General typing

OPERATING EQUIPMENT _____ hours

_____ Cash register

_____ Filing

_____ Telephone

_____ Adding machine & calculator

_____ Postal meter

_____ Numbering machine

ROUTINE _____ hours

_____ Run errands

_____ Janitor work

_____ Handling supplies

OTHER

_____ hours

Training Sponsor's Signature _____

Teacher-Coordinator's Signature _____

_____ HIGH SCHOOL
Distributive Education - Supervisor's Report

Student's Name_____ Cooperative Firm_____

Date of Rating_____ Due_____

Directions: Place a check mark on the line of each descriptive phrase. Additional comments will be helpful.

	POOR	BELOW AVE.	AVERAGE	GOOD	EXCELS
APPEARANCE Cleanliness					
Grooming					
Facial expression					
Conformity to dress reg.					
Comments					
KNOWLEDGE Store policy					
Store system					
Trade terms					
Merchandise facts					
Organization					
Comments					
ATTITUDE Interest in work					
Customer approach					
Toward co-workers					
Response to supervision					
Comments					
INITIATIVE Desire to learn					
Industry					
Originality					
Resourcefulness					
Alertness					
Comments					
PERFORMANCE Sales volume					
Care of stock					
Clerical accuracy					
Care of equipment					
Efficient-dispatch					
Comments					

LOYALTY				
Regular and punctual				
Pride in the firm				
Integrity				
Appreciation of base. values				

Comments

Is he or she conscientious in following directions? _____
Does he or she carry out work assignments well from a quality standpoint? _____

Is this student mature enough to handle situations met by employees with similar experience in your organization? _____

GRADE EVALUATION
Based on the above checks, and grading according to the following scale, what grade do you recommend for this student?

_____

A(Superior); B (Above average); C (Average); D (Below average); F (Failure)

Signature of rater_____Title_____

Please use the remaining space for questions, suggestions, and opinions for use in vocational guidance of the student and for improvement of the on-the-job training programs

FOLLOW-UP QUESTIONNAIRE OF FORMER D.E. STUDENTS
_____ High School

We are still interested in you. Will you please complete this form and return it within five days in the self-addressed envelope. Thank you.

_____ School

_____ Coordinator

_____ City

1. Full Name _____ Male( ) Female ( )

   If married, give maiden name. _____

2. Present Address _____

3. Last year in High School _____ Number of years in D.E. _____
4. Additional Education after High School:
   Number of years in:
   College _____
   Business School _____
   Other (Explain) _____

_____

5. Present Employment:

   A. Are you presently employed? Yes ( ) No ( )

   Company name _____

   Kind of or type of business _____

   Your present job (give title or major duties) _____

   _____

   Number of years at present job _____

   B. In Armed Forces now? Yes ( ) No ( )

   C. If unemployed, give status:

   Full-time homemaker? _____ Seeking employment? _____

   Other _____

6. Has Distributive Education helped you? Yes ( ) No ( )

Explain or make any comments you will below.

DISTRIBUTIVE EDUCATION INFORMATION SHEET

General Information

Distributive Education, commonly referred to as DE, identifies a program of education. DE students learn and earn in the program by spending part of the day in class and part of the day on the job.

The cooperative program is not designed to develop distributive specialists, but rather to provide balanced, comprehensive, instructional programs in all areas of distribution and marketing to aid in improving techniques of distribution, and to help the student develop and understand the social and economic responsibilities of those engaged in distribution.

In his training phase of the program, the student will be engaged in an occupation in marketing, merchandising goods or services. These occupations may be found in various business establishments--including without being limited to--retailing, wholesaling, manufacturing, storing, transporting, financing, and similar enterprises.

The DE class locally is a part of the public school system and operates through high schools and junior colleges. It is NOT a program separate from the regular school curriculum.

DE For the Student Who Plans On Entering College

DE students meet the graduation requirements and do receive a high school diploma. DE credits are accepted by most colleges and universities as elective credits. DE students entering college can profitably pursue careers in marketing, management, personnel, salesmanship, advertising, insurance, private business, and many other related occupations.

A Typical Day for a DE Co-op Student

MORNING----3 or 4 class periods in regular in-school subjects, one of which is the related DE class where the student studies the following:

* Factors affecting marketing, including research, advertising, merchandising, location, customer services, government regulations
* Various financial aspects of distribution, including structure, credit and records
* Place of the consumer in the marketing process.

AFTERNOONS----"on-the-job" training.

The DE student spends an average of 15 hours a week under a "training plan" in a distributive occupation. He secures practical training and experience through actual employment in a business establishment under the supervision of the DE coordinator and a training sponsor appointed by his employer. The job is actually an extension of the "in-class" program, for which the student receives the going rate of pay plus school credit.

Benefits of "On-The-Job" Training

In many cases, the student after graduation, who has been DE trained, has an opportunity to become a full-time employee where he has received his "on-the-job" training. Considering that today a high percentage of the graduates become distributive employees, the DE student has a distinct advantage.

The DE Employer

The local businessmen in your community are willing and anxious to cooperate with the distributive education program. Many of you know your local businessmen and their families. They live in your community and take an active part in community affairs. They are anxious to have the community be one in which they are proud to rear their families. Their distribution facilities operate in the community and are an intimate part of the environment in which the people work, live, play, and worship. These are the men who offer "on-the-job" training to the DE student.

What Is The Future In Distribution

The distributive future is dynamic. Facilities have grown faster than the population with the tremendous expansion of all types of marketing organizations.

****

TO THE PARENTS OF _____ HIGH SCHOOL SOPHOMORES

The _____ Chamber of Commerce would like to bring to your attention a program at _____ High School offered to juniors and seniors --- known as Distributive Education.

There have been many men in the mercantile world who have started in a haphazard accidental, disorganized way. The Chamber of Commerce has an interest in common with the business education (or vocational) department of _____ High School -- we want to inform the parents of young men and women of high school age that marketing, merchandising, and distributive activities require more than the accidental applicant, and that it provides more prosperity then many people realize.

DISTRIBUTIVE EDUCATION is a program of occupational training. It is intended for young men and women who want a career in a distributive field and who can meet the qualifications set up for entrance into the program. D.E., as it is commonly referred to, is a combination of two kinds of schooling -- high school and the school of experience. A D.E. student begins the program in the junior year with one class each semester. A D.E. trainee in the senior year spends the morning in school carrying a basic school program and spends the afternoon under the supervision of local stores selected as training establishments.

DISTRIBUTIVE EDUCATION combines the best in high school education with the best in business training to enable our young people to become better workers, better citizens, and better persons. This program brings the business world into the classroom and the classroom into the business world -- to bridge the gap between theory and actual practice. This is a nation-wide program open to all students interested in obtaining a saleable skill in retailing, wholesaling, or a service occupation. A student enrolled in Distributive Education may gain full credit for entrance into most colleges if he is interested in pursuing a degree in business administration.

FACTS ABOUT DISTRIBUTIVE EDUCATION

PERIOD OF EMPLOYMENT: A student will be hired by the business firm that is participating with the Distributive Education program for the entire school year.

HOURS AND WAGES: A student enrolled in the Distributive Education program must work a minimum of 15 hours a week, half of which must be during regular school time. The wage received for his or her on-the-job instruction at this firm is arrived at by the employer and the student, and is in compliance with federal and state wage regulations.

SUPERVISION: The Distributive Education program is a school organized and supervised program. Each Distributive Education student will work under the direct supervision of a store sponsor and teacher-coordinator will make periodical visits to each business establishment to observe student progress.

ON-THE-JOB INSTRUCTION: All students will be working in carefully selected business establishments that will serve as training stations to the Distri-

butive Education program. Each student upon entering the program, will have the opportunity to select, as nearly as possible, the type of business he desires to be trained in. While working for this firm as a Distributive Education student, he will be trained in various phases of that particular business operation.

CLASSROOM INSTRUCTION: D.E. classes provide the in-school segment of the Distributive Education program. In the junior year, this class meets one period each day during which time a wide variety of business subjects are studied. This is a pre-employment training class that orients the D.E. student to the academic discipline of distribution. The basic areas covered are: marketing, salesmanship, retailing, business organization and management display, merchandising, and advertising. During the senior year, individual instruction is given in the D.E. class to each student that relates directly to the area in which he or she is employed.

CREDITS EARNED: A Distributive Education student receives four units of credit (one per semester during the junior and senior year) for his D.E. classes and two units of credit for his on-the-job instruction work experience (one each semester of the senior year). For his total school program, he receives the same credit as other students.

JUNIOR YEAR
D.E. CLASSES (2 credits)
D.E. 1 and D.E. 2

-Orientation to D.E.
-Store Services
-Salesmanship
-Advertising
-Display
-Personality Development
-Job Analysis
--Credit and Finance
-Store Organization
-Management
-Economic Concepts

SENIOR YEAR
D.E. CLASSES (2 credits)
D.E. 3 and D.E. 4

-Individual Related instruction

SENIOR YEAR
ON-THE-JOB INSTRUCTION (2 credits)
in local firms

(Supervised Instruction)
D.E. 5 and D.E. 6

-Merchandise Information
-Retailing
-Buying and Pricing
-Learns to work with and for people
-Experiences accepting responsibility
-Develops personality and poise
-Opportunity for full time employment
-Job rotation in actual situations
-May use earnings to help finance further education

Very soon now the guidance counselors will be discussing 11th grade programs with sophomores. If your son or daughter has an interest in the vocation of marketing, merchandising, or distribution or in any of the related fields such as advertising, display, personnel work, buying, -- encourage him to ask questions of the counselor about Distributive Education during his conference. Learn how D.E. provides an excellent terminal education or fits into a background for a college course in marketing or business administration.

If you would like more information about the program, call_____ High School, Phone _____, and ask for_____, Coordinator of the Distributive Education program

Sincerely,

Secretary , Chamber of Commerce

NEWSLETTER

To all Distributive Education Student Employer's:

The purpose of this newsletter is threefold. First, I would like to express my appreciation for your wonderful cooperation with the D.E. Program. You are the vital link between theory in the classroom and practice from on-the-job experience.

Second, there has been a growing feeling in the community that the D.E. Program includes only the school and the work station. One vital link has been left out--Distributive Education Clubs of America activities. The most efficient combination would be a one-third relationship between the school, work, and club activities.

Third, I would like to express the purposes of DECA so you may judge the worthiness of our complete program. D.E. students have common objectives and interests. Each is studying for a specific career objective in marketing and distribution. Club activities have a powerful, psychological effect upon the attitudes of students and, for many, DECA is the only opportunity which they have to participate in social activities of the school and to develop knowledge of the responsibilities of citizenship.

DECA Chapters are to DE class members what a civic or professional organization is to a group of businessmen. Chapter activities are recognized as a part of the total educational program because of their development of leadership ability, professional attitudes, better citizenship characteristics, and social growth of the individual. DECA Chapter activities are always centered in the school. These Chapter activities serve the teacher-coordinator as a teaching tool by creating interest in all phases of marketing and distribution study.

The DECA Chapter is the showcase for student achievement and progress. Through its activities, students with an interest in marketing and distribution are attracted to the DE Program. No set pattern of operation is prescribed for any local Chapter; however, the majority plan activities which include social, civic, professional, and benevolent activities and adopt projects which provide for school and community betterment.

Finally, DECA activities teach the members to serve as leaders and followers.

Sincerely yours,

D.E. Coordinator

STUDENT-OF-THE-YEAR

D.E.C.A. Participation
_____ High School

Name _____

Division: Associate _____ Active _____

Points: Attendance-5; Participation-10; office-15; Awards-1st-15, 2nd-10, 3rd- 5

Activity	Place	Date of Attendance	Type of Participation	Office or Award	Points

APPENDIX C

(PROJECTS METHOD FORMS)

INDIVIDUAL PROJECT TRAINING PLAN

Student Participation Activities

Name of Student _____ Occupational Objective _____

S.I.C. Number _____

Instructional Area _____

PROJECT	OBJECTIVE Performance Outcomes	DATES		EVALUATION (Progress)
		To	From	

APPENDIX D

ADMINISTRATIVE INFORMATION
FOR
STATE REPORTING FORMS

Form D.E. - 1 - Agreement for Reimbursement in
in Vocational Distributive Education

Three copies of this form are due in the State Vocational Office on October 1 and April 1. Reimbursement for the time devoted to vocational D.E. activities by the D.E. teacher coordinator (project-method, related instruction, coordination) and the coordinator's extended contract are reported on this form. The total salary on the back of the form must agree with the salary reported during the fiscal year, July 1 - June 30, in (1) on the front of the form. The schedule of the coordinator must be shown with those periods circled for which reimbursement is claimed. Please pay particular attention to statements 1 through 6 on the back of the form when signing this Agreement. The approved TOTAL VOCATIONAL SALARY on the April 1 report is to be reported in the appropriate column on the Distributive Education section of FORM E at the end of the fiscal year.

Form D. E. - 1
(Three Copies Due in State Office
Oct. 1 and April 1)

INDIANA DEPARTMENT OF PUBLIC INSTRUCTION
W. E. WILSON, State Superintendent
Division of Vocational Education
600 Old Trails Building
309 West Washington Street
Indianapolis, Indiana

_____ (COUNTY)

_____ (SCHOOL CORPORATION)

_____ (ADDRESS)

_____ (DATE)

AGREEMENT FOR REIMBURSEMENT VOCATIONAL DISTRIBUTIVE EDUCATION

July 1, 19_____ to June 30, 19_____

We, the local board of education of _____ (Name of School Corporation)
in _____ County, hereby enter into an agreement with the Indiana State Board for Vocational Education to conduct one or more ☐ Part-time Cooperative (and) ☐ Preparatory Non-Cooperative Vocational Distributive Education Training Programs and agree to expend the amount for the salary of the Teacher-Coordinator listed below. (Please mark appropriate box or boxes)

It is further agreed that all phases of the program comply with the Indiana State Plan for Vocational Education.

Name of Coordinator _____ School _____

SALARY

Total Salary to be received from the local school corporation:

1. During the fiscal year, July 1-June 30.....$_____
2. During the regular school year (time classes are in session).....$_____

REGULAR SCHOOL YEAR

CLASS OR ACTIVITY	BEGIN-NING DATE	ENDING DATE	NO. OF WEEKS	NO. OF HOURS DAILY	SALARY ASSIGNED TO CLASS OR ACTIVITY	
Preparatory Non-Cooperative (Project Method)						
Related Vocational D.E. Instruction						
Coordination						
Other: (Include Co-Curricular Activities)						

This section ONLY for Part time Cooperative Programs

PERIOD PRIOR TO OPENING OF SCHOOL

Coordination						Amount of Extended Contract

PERIOD SUBSEQUENT TO CLOSING OF SCHOOL

$_____

Coordination					

SALARY ASSIGNED TO REIMBURSABLE VOCATIONAL ACTIVITIES:

Preparatory Non-Cooperative (Project Method)..... $_____

Related Vocational Instruction..... $_____

Coordination: School Year $____ Extended Contract $_____ Total $_____

TOTAL VOCATIONAL SALARY $_____

TOTAL SALARY ASSIGNED TO NON-REIMBURSABLE ACTIVITIES $_____

TOTAL: $_____

1. All students in the related vocational classes are legally employed in distributive occupations in selected training stations for not less than 15 hours per week during the entire school year. (Check Plan Used - A ☐, B ☐, C ☐)
2. All students are 16 years of age or older.
3. All student-trainees receive a monetary wage commensurate with other workers on the same level, together with high school credit for their on-the-job training and experience.
4. The coordinator should have at least ½ hour per student per week of time scheduled for coordination activities.
5. The teacher-coordinator is meeting the progressive pattern of certification, in this field.
6. All students in the preparatory non-cooperative classes are being given vocational training incorporating participation activities (project method) in individual training plans. (Check Plan Used - D ☐, E ☐, F ☐)

Signed _____ Approved _____ Date _____
Local Coordinator — Local Director or Supt.

Approved _____ Approved _____ Date _____
State Supervisor — State Director Vocational Education

SCHEDULE OF COORDINATOR

CIRCLE THE PERIODS FOR WHICH REIMBURSEMENT IS CLAIMED

Period	Begins	Monday	Tuesday	Wednesday	Thursday	Friday	
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							

FORM D.E. - 2 - Student Enrollment in either the Cooperative or the Projects-Method Program

Each student enrolled in a Vocational Distributive Education program, either cooperative or projects-method, must indicate a Career Objective which becomes a matter of record by title and Standard Industrial Classification (S.I.C.) number. In reporting enrollment for a projects-method program, only the career objective is necessary on D.E. 2. In reporting enrollment for a cooperative program, it is necessary to complete all columns on the front of D.E. 2 plus the first 5 columns on the back for the October report--- all columns on the back are to be completed for the April report. For cooperative student-trainees, it is not necessary that their Present Employment (job title and D.I.C. number) agree with their Career Objective (job title and S.I.C. number). New programs that are initiating a Plan C program beginning with pre-cooperative in the 11th year (and are not using the projects-method) are to report their junior enrollment by name, sex, and career objective , as a matter of record. All existing cooperative programs are to report enrollment in the 11th year pre-cooperative classes by name, sex, and career objective. Three copies of D.E. 2 are due in the State office on October 1 and April 1.

FORM D.E. - 2
(3 Copies to State Office Oct. 1 & April 1)

INDIANA DEPARTMENT OF PUBLIC INSTRUCTION
W. E. WILSON, State Superintendent
Division of Vocational Education
600 Old Trails Building
309 West Washington Street
Indianapolis, Indiana

_____ (COUNTY)

_____ (SCHOOL CORPORATION)

_____ (ADDRESS)

_____ (DATE)

_____ (TEACHER-COORDINATOR)

CLASS:
(Please check)
☐ HIGH SCHOOL
_____ 11th
_____ 12th
☐ POST-SECONDARY
_____ 13th
_____ 14th

Student Enrollment in: ☐ COOPERATIVE DISTRIBUTIVE EDUCATION In-School Program
(Check only one) ☐ PREPARATORY NON-COOPERATIVE D.E. In-School Program

_____ Semester, 19____ to 19____

NAME OF STUDENT	SEX	CAREER OBJECTIVE		*	*	PRESENT EMPLOYMENT	
		JOB TITLE	S.I.C. NO.	NAME OF TRAINING ESTABLISHMENT	TYPE OF BUSINESS	* JOB TITLE	* S.I.C. NO.

*To be used ONLY for Part-Time Cooperative Trainees in addition to Career Objective Section.

Total Enrollment: M____ F____ Total _____

Signed _____
Teacher-Coordinator

Approved _____ Date _____
State Supervisor

Signed _____
Superintendent or Vocational Director

SEE REVERSE SIDE

This section ONLY for Part-time Cooperative Trainees

NAME OF STUDENT	WAGES PER HOUR	HOURS PER WEEK			ENTIRE YEAR	
		IN SCHOOL		AT WORK		
		Other Subjects	Related Subjects		No. Weeks In Class	Total Hours Worked

The above two columns are to be used for the final (April 1) report only.

FORM D.E. 2 (SUPPLEMENT)

The supplementary form to D.E. 2 is used to report the Group Projects and the Individual Projects that are keyed directly to the Career Objective of the student-enrollees in the Projects-Method program as reported on Form D.E. 2. It is evidence that projects have been utilized to prepare the student for gainful employment, and must be substantiated by Individual Project Training Plans (see Appendix C) that are on file in the office of the D.E. Coordinator and/or the Director of Vocational Education. If reimbursement is claimed for a Projects-Method program (either as a total program, in conjunction with a cooperative program, or as preparatory training to a cooperative program), three copies of FORM D.E. 2 (supplement) must be submitted to the State office on October 1 and April 1.

INDIANA STATE DEPARTMENT OF PUBLIC INSTRUCTION
W. E. Wilson, State Superintendent
600 Old Trails Building
309 West Washington Street
Indianapolis, Indiana
46204

Form D.E. 2 (Supplement)
(Three copies due in State Office Oct. 1 and April 1 with Form D.E. 2 for Preparatory Non-Cooperative Programs)

DISTRIBUTIVE EDUCATION PREPARATORY CLASS
INCORPORATING PARTICIPATION ACTIVITIES IN
INDIVIDUAL TRAINING PLANS
_____Semester, 19__ to 19__

PLAN: D /_/ E /_/ F /_/

_____ (County)

_____ (School Corporation)

_____ (Address)

_____ (Date)

NAME	S.I.C. No.	*GROUP PROJECT	*INDIVIDUAL PROJECT	DATE START	DATE COMPLETE
CAREER OBJECTIVE: _____					
CAREER OBJECTIVE: _____					
CAREER OBJECTIVE: _____					

FORM D.E. 2 (Supplement) Continued

NAME	S.I.C. No.	*GROUP PROJECT	*INDIVIDUAL PROJECT	DATE START	DATE COMPLETE
CAREER OBJECTIVE:					
CAREER OBJECTIVE:					
CAREER OBJECTIVE:					
CAREER OBJECTIVE:					
CAREER OBJECTIVE:					

NAME	S.I.C. No.	*GROUP PROJECT	*INDIVIDUAL PROJECT	DATE START	DATE COMPLETE
CAREER OBJECTIVE:					
CAREER OBJECTIVE:					
CAREER OBJECTIVE:					
CAREER OBJECTIVE:					

*PROJECT TRAINING PLANS ARE ON FILE IN THE OFFICE OF THE D.E. COORDINATOR AND/OR THE DIRECTOR OF VOCATIONAL EDUCATION.

Total Enrollment: M__ F__ Total ____

Signed _____
(Teacher-Coordinator)

Approved _____ Date _____

Signed _____
(Superintendent or Vocational Director)

FORM D.E. - 4 - Preliminary Report for Each Distributive Education Class for Out-of-School Youth and Adults

FOUR copies of FORM D.E.-4 are to be submitted to:

INDIANA VOCATIONAL TECHNICAL COLLEGE
c/o Program Analyst
627-641 Architects and Builders Building
333 N. Pennsylvania
Indianapolis, Indiana

at least TWO WEEKS prior to the first scheduled class meeting. Upon approval of the proposed course by the State Supervisor of Distributive Education, one copy of D.E.-4 will be returned to the school corporation initiating the program, one copy will be retained by the State Division of Vocational Education, one copy will be provided the State Adult D.E. Coordinator, and one copy will be sent to the IVTC. Normally these are evening classes and are conducted on a short-term basis, utilizing the physical facilities of the public school, and the services of professional call-staff personnel. A course outline for the course should be submitted with the report. These short-term courses are financed by a combination of enrollment fees and reimbursement. This form covers a general description of the course and a proposed budget, both of which must be approved in order to receive a reimbursement.

FORM D.E.-4
(Three Copies to State Office Prior to First Class Meeting)

INDIANA DEPARTMENT OF PUBLIC INSTRUCTION

WILLIAM E. WILSON, Superintendent
Division of Vocational Education
600 Old Trails Building
309 West Washington Street
Indianapolis, Indiana

_____
(COUNTY)

_____
(SCHOOL CORPORATION)

_____
(ADDRESS)

_____
(DATE)

Preliminary Report for Each DISTRIBUTIVE EDUCATION Class for Out-of-School Youth and Adults

Course Title_____ For what group_____ Estimated enrollment_____

Building and room where class will meet_____ Address_____

Class to start_____, 19____ Class to end_____, 19____ No. meetings_____ No. Min. per Meeting_____

Schedule of meetings (days and hours)_____

Total clock hours_____ Instructor's hourly salary_____ Total salary_____

Instructor_____ Does instructor have Vocational Licenses for this class?_____

Do you have on file in your office an outline of this course?_____

Is a copy on file in the State Office?_____

In what way may a teacher trainer be of assistance to you and your Instructor?_____

_____

I hereby certify that the above class complies with standards of the Indiana State Plan.

Signed_____ Approved_____ Date_____
Local Coordinator — Supt. or Vocational Director

Approved_____ Date_____
State Supervisor

This report must be filed and approved before the class begins.
Make out in triplicate and forward all three copies to the State Supervisor.
Triplicate to be signed by State Supervisor and returned to sender.
Use a separate form for each class or section.

Approved_____
State Director of Vocational Education

FORM D.E. - 5 - Report on Attendance in Each Distributive Education Class for Out-of-School Youth and Adults

FOUR copies of FORM D.E.-5 are to be submitted to:

INDIANA VOCATIONAL TECHNICAL COLLEGE
c/o Program Analyst
627-641 Architects and Builders Building
333 N. Pennsylvania
Indianapolis, Indiana

within TWO WEEKS upon completion of the classes. Enrollment figures are necessary as a matter of record for the annual State report. The amount of reimbursement requested for the program must appear in "ACTUAL COST" report on the back of FORM 5. Upon approval by the State Supervisor of Distributive Education for the amount claimed for reimbursement for the completed program, one copy of D.E. 5 will be returned to the school corporation, one copy will be retained by the State Division of Vocational Education, one copy will be provided the State Adult D.E. Coordinator, and one copy will be sent to the IVTC. The school corporation should report the approved amount of reimbursement on the annual FORM E report at the end of the fiscal year.

FORM D.E.-8
(3 Copies in State Office upon Completion of Course)

(COUNTY) _____

(SCHOOL CORPORATION) _____

(ADDRESS) _____

(DATE) _____

(INSTRUCTOR) _____

INDIANA DEPARTMENT OF PUBLIC INSTRUCTION

WILLIAM E. WILSON, Superintendent
Division of Vocational Education
600 Old Trails Building
309 West Washington Street
Indianapolis, Indiana

Report on Attendance in Each Distributive Class for Out-of-School Youth and Adults

Course Title _____

Class Began _____, 19____. Class Ended _____, 19____. Building where class was held _____

NAME OF ENROLLEES	SEX		TITLE OR POSITION	TYPE OF MERCHANDISE OR SERVICE	S.I.C. NO.	FIRM NAME	NO. OF TIMES PRESENT
	M	F					

Total Enrollment: M_____ F_____ Total_____

I hereby certify that this class complies with State and Federal standards and that the teacher has a vocational license for the subject he is teaching.

Signed_____ Date_____
Instructor

Signed_____ Date_____
Supt. or Vocational Director

Average attendance per meeting_____

Number of meetings_____

Number of minutes per meeting_____

Total hours of instruction_____

Total salary for instruction_____

Approved_____ Date_____
State Supervisor

STANDARD INDUSTRIAL CLASSIFICATION for USE in DISTRIBUTIVE EDUCATION

In reporting S.I.C. numbers on FORMS D.E. 2, D.E. 2 (Supplement), or D.E. 5, use only the major classification numbers that are boxed.

STANDARD INDUSTRIAL CLASSIFICATION

for USE in

DISTRIBUTIVE EDUCATION
OE-82013

U.S. Department of Health, Education, and Welfare

Anthony J. Celebrezze, Secretary

Office of Education
Francis Keppel, Commissioner

DIVISION F. WHOLESALE AND RETAIL TRADE

Retail Trade

*/52/ Lumber, Building Materials, Hardware, Farm Equipment

5211-Lumber yards
5212-Building materials dealers
522- Heating, plumbing equipment dealers
523-Paint, glass, wallpaper stores
524-Electrical supply stores
5251-Hardware stores
5252-Farm equipment dealers

/53/ General Merchandise

531--Department stores
Establishments normally employing 25 or more people and engaged in selling some items in each of the following lines of merchandise:

1. Furniture, home furnishings, appliances, radio and TV sets
2. A general line of apparel for the family
3. Household linen and dry goods

An establishment with a total sales of less than $5 million, in which sales of any one of these groupings is greater than 80 percent of total sales, is not classified as a department store.
An establishment with total sales of $5 million or more is classified as a department store even if sales of one of the groups described above is more than 80 percent of total sales, provided that the combined sales of the other two groups is $500,000 or more.

533-Limited price variety store
5392-Dry goods and general merchandise stores
Establishments which meet the criteria for department stores, but have fewer than 25 employees.
5393-General stores
Establishments primarily selling a general line of merchandise of which the most important line is food, and the most important subsidiary lines are notions, apparel, farm supplies, and gasoline. (Usually known as a country general store)

/54/ Food

541-Supermarkets, grocery stores, delicatessen stores
5422- Meat markets
5423-Fish markets
543- Fruit store, vegetable market
544-Candy, nut, confectionery stores
545- Dairy products store
5462-Retail bakeries-manufacturing (some or all of products baked on premises)
5463-Retail bakeries-non-manufacturing(do not bake any products they sell)
5491-Egg and Poultry Dealers (limited line of groceries frequently carried)
5499-Other-specialized lines, e.g., coffee, spice, health foods

* Numbers boxed are those used in annual report form.

/55/ Automotive Dealers and Gasoline Service Stations

551-Passenger car dealers, franchised
552-Passenger car dealers, non-franchised
553-Tire, battery, accessory dealers
559-Aircraft, boat, motorcycle dealers, others

/554/ Gasoline Service Stations

/56/ Apparel and Accessories

561- Men's, boys' clothing stores
562-Women's ready to wear stores
5631-Millinery Stores
5632-Lingerie Stores
5633 Hosiery Stores
5634-Other specialty stores (women's)
564-Children, infants' wear stores
565-Family clothing stores
5662-Men's shoe stores
5663-Women's shoe stores
5664-Childrens shoe stores
5665-Family shoe stores
567-Custom tailors
568-Furriers, fur shops
569- Miscellaneous apparel

/57/ Furniture, Home Furnishings, and Equipment

5712-Furniture stores
5713-Floor covering stores
5714-Drapery, curtain, upholstery stores
5715-China, glassware, metalware stores
5719-Miscellaneous home furnishings stores (specialized lines--lamps, blinds and window shades, picture frames, etc.)
572-Household appliance stores
5732-Radio and television stores
5733-Record shops, musical instrument stores

/58/ Eating and Drinking Places

Note: Unless food services are operated as leased departments, restaurants, and lunch counters operated by hotels, for example, are classified in Group 70 and by department stores in Group 53.

5812-Restaurants, cafeterias, caterers, railroad dining-cars
5813-Drinking places

/59/ Other Retail Stores

/591/ Drugstores

592-Liquor stores
593-Secondhand stores, antique shops
5942-Book stores
5943-Stationery stores
5952-Sporting goods stores
5953-Bicycle shops
5962-Hay, grain, feed stores
5969-Other farm supply stores garden stores
597-Jewelry stores
5982-Coal and wood dealers
5983-Fuel oil dealers, liquified petroleum(LP) gas dealers
5984-Ice dealers
5992-Florists
5993-Cigar stores, stands
5994-News dealers, news stands
5996-Camera, photographic supply stores
5997-Gift, novelty, souvenier shops
5998-Optical goods stores
5999-Typewriter, luggage, hobby toy, religious goods stores, pet shops; other

Nonstore Retailers

/532/ Mail-order houses

/534/ Merchandise vending machine operators

/535/ Direct selling (house-to-house) organizations

Wholesale Trade

/501/ Motor Vehicles, Automotive Equipment

5012-Automobiles, other motor vehicles
5013-Automotive equipment
5014 - Tires and tubes

/502/ Drugs, Chemicals, Allied Products

5022-Drugs, drug proprietaries, druggists' sundries
5028-Paints, varnishes
5029-Other chemicals, allied products

/503/ Dry Goods, Apparel

5032-Dry goods, piece goods, notions
5035-Apparel and accessories, hosiery and lingerie
5039-Footwear

/504/ Groceries and Related Products

5042-Groceries, general line
5043-Dairy products
5044-Poultry, poultry products
5045-Confectionery
5046-Fish, sea foods
5047-Meat, meat products
5048-Fresh fruits, fresh vegetables
5049-Other groceries and related products

/505/ Farm Products--Raw Materials

Establishments primarily engaged in wholesale distribution of farm products raw materials, most of which are used in manufacturing industries

/506/ Electrical Goods

5062-Electrical merchandise, general line
5063-Electrical apparatus and equipment, wiring supplies, construction materials
5064-Electrical appliances, television, radio sets
5065-Electronic parts, equipment

/507/ Hardware; Plumbing and Heating Equipment and Supplies

5072- Hardware
5074-Plumbing and heating equipment, supplies
5077-Air conditioning equipment, refrigeration, supplies

/508/ Machinery, Equipment, Supplies

5082-Commercial and industrial machinery, equipment, supplies
5083-Farm machinery and equipment
5086-Professional equipment, supplies
5087-Service-establishment equipment, supplies
5088-Transportation equipment, supplies, (except motor vehicle supplies)

/509/ Miscellaneous Wholesale

5091-Metals, minerals
5092-Petroleum bulk stations, terminal
5093-Scrap and waste materials
5094-Tobacco, tobacco products
5095-Beer, wine, alcoholic beverages
5096-Paper, paper products
5097-Furniture, home furnishings
5098-Lumber, construction materials
5099-Other, e.g., farm supplies, jewelry, flowers, and nursery stock

DIVISION H. SERVICES

/70/ Hotels, Camps, and Other Lodging Places

7011- Hotels-year round
7012-Seasonal hotels
7013-Motels and tourist courts
702-Rooming and boarding houses
7031-Trailer parks
7032-Sporting and recreational camps
704-Other, e.g.,lodging houses on membership basis

/72/ Personal Services

7211-Power laundries, family and commercial
7212-Laundries, except power and self-services
7213-Industrial launderers, linen supply
7214- Diaper service
7215-Self-service laundries
7216-Cleaning, dyeing plants
7221-Photographic studios
7231-Beauty shops
7241-Barber shops
7251-Shoe repair shops, shoe shine parlors, hat cleaning shops
7261-Funeral services, crematories
7271-Cleaning, pressing shops, (valet shops), garment repair
7272-Fur repair, storage
7299-Other miscellaneous personal services; e.g.,porter service, clothing rental

/73/ Business Services

7311-Advertising agencies
7312-Outdoor advertising services
7319-Miscellaneous advertising; e.g., shopping news service
7321-Mercantile and consumer credit reporting agencies; adjustment and collection agencies
7331-Duplicating, addressing, mailing mailing list, stenographic services
7332-Blueprinting, photocopying services
7341-Window cleaning
7342-Disinfecting, exterminating services
7349-Miscellaneous services to dwellings, other buildings
7351-News syndicates
7361-Private employment agencies
7391-Research, development, testing laboratories
7392-Business and management consulting services
7399-Other miscellaneous business services;e.g., telephone answering, equipment rental, sign painting shops, interior decorating

/75/ Automobile Repair, Automobile Services, Garage

(Auto repair departments maintained by establishments engaged in the sale of new automobiles are classified as Retail Trade.)

7511-Automobile, truck rentals, without drivers
7521-Parking lots
7522-Parking structures
7531-Top, body repair shops
7535-Paint Shops
7536-Glass replacement, repair shops
7538-General automobile repair
7539-Automobile repair shops not elsewhere listed
7541-Automobile services, except repair; e.g., washing, towing

/76/ Miscellaneous Repair Services

Note: Repair departments in retail stores are not included in the repair classification unless operated as leased departments.

762-Electrical repair shops
763-Watch, clock, and jewelry repair
764-Reupholstery and furniture repair
769-Other repair services

/76/ Motion pictures

781-Motion picture production and distribution
782-Motion picture service industries
783-Motion picture theaters, drive-in theaters

/79/ Amusement and Recreation Service (partial listing)

7911-Ballrooms, dance studios
7921-Theatrical producers, bands, entertainers
7931-Billiard, bowling alleys
7942-Public golf course
7947- Golf clubs, country clubs
7949-Parks, tourist attractions, and other commercial sports

DIVISION E. SPECIAL AREAS

Transportation

/40/ Railroad Transportation

/41/ Local and Suburban Transit and Interurban Passenger Transportation, including taxi-cabs.

/42/ Motor Freight Transportation and Warehousing
421-Trucking, local and long distance
/422/ Public Warehousing

4221-Farm product warehousing and storage
4222-Refrigerated warehousing, except food lockers
4223-Food lockers, with or without food preparation facilities
4224-Household goods warehousing and storing
4225-General warehousing and storage
4226-Special warehousing and storage, not elsewhere classified

/44/ Water Transportation

/45/ Transportation by Air

/46/ Pipe Line Transportation

/47/ Transportation Services

471-Freight forwarding
472-Arrangement of transportation including tour services
473-Stockyards
474-Rental of railroad cars
478-Miscellaneous

/48/ Communications

481-Telephone communication
482-Telegraph communication
483-Radio broadcasting and television

/49/ Electric, Gas, and Sanitary Services
491-Electric companies and systems
492-Gas companies and systems
493-Combination companies and systems
494-Water supply
495-Sanitary services
496-Steam companies and systems
497-Irrigation systems

DIVISION G.
Financing

/60/ Banking

601-Federal Reserve Banks
602-Commercial and stock savings banks
603-Mutual savings banks
604-Trust companies not engaged in deposit banking
605-Establishments performing functions closely related to banking

/61/ Credit Agencies Other than Banks

611-Rediscount and financing institutions for credit agencies other than banks
612-Savings and loan associations
613-Agricultural credit institutions
614-Personal credit institutions, including:
6145-Licensed small loan banks
6146-Installment sales finance companies
615-Business credit institutions
616-Loan correspondents and brokers

/62/ Security and Comodity Brokers, Dealers, Exchanges, and Services

621-Security brokers, dealers, and flotation companies
622-Commodity contracts brokers and dealers
623-Security and commodity exchanges
628-Services allied with the exchange of securities or commodities

Insurance

/63/ Insurance Carriers

631-Life insurance
632-Accident and health insurance
633-Fire, marine, and casualty insurance
635-Surety insurance
636-Title insurance

/64/ Insurance Agency, Brokers, and Service Real Estate

/65/ Real Estate

651-Real estate operators and lessors
653-Agents, brokers, and managers
654-Title abstract companies
655-Subdividers and developers
656-Operative builders

DIVISION D. MANUFACTURING

Note: Include enrollees who are employed by a manufacturing establishment who perform a distributive function or occupation.

For example:

202-Dairy products
205-Bakery products

Establishments processing products for home service delivery are included in Division D.

363-Household Appliances
Company Sales Representatives

FORM D.E.- TR - 6 - Travel Expense Claim

Only those schools with approved D.E. programs will be reimbursed for the D.E. coordinator's travel and/or per diem. Travel and per diem are reimbursed in accordance with State regulations - 8¢ per mile, $10.00 per diem ($2.50 per quarter) in-state, $14.00 per diem ($3.50 per quarter) out-of-state. Requests for travel and per diem to attend out-of-state professional meetings must be submitted to the State Supervisor of Vocational Distributive Education for prior approval. Local travel for coordination and supervision is reimbursed at the rate of 50% (no per diem is allowed) - state-called meetings are reimbursed at the rate of 100% for travel and/or per diem. All housing receipts and registration fee receipts must be attached to one copy of the travel claim.

To be reimbursed for the D.E. coordinator's travel and/or per diem, all claims must be submitted to the State Office on FORM D.E. - TR - 6 by the 15th of the month following travel (i.e., all travel for coordination, state-called meetings, or approved out-of-state meetings in September must be reported by October 15, etc.).

One approved copy of the D.E.-TR-6 will be returned to the school corporation. The amount of approved travel and per-diem on record is to be reported in the appropriate column on the Distributive Education section of the FORM E report at the end of the fiscal year.

Indiana Dept. of Public Instruction
Wm. E. Wilson, Superintendent
Vocational Education Division
600 Old Trails Bldg.
309 West Washington Street
Indianapolis, Indiana

2 copies due in State Vocational Education Office by the 1st of the month following travel

Form DE-TR-6
STATE DEPARTMENT OF PUBLIC INSTRUCTION
VOCATIONAL EDUCATION DIVISION
TRAVEL EXPENSE CLAIM

VOCATIONAL DISTRIBUTIVE EDUCATION

_____ (County)

_____ (School Corporation)

_____ (Month) (Year)

(1)	(2)	(3)	(4) Miles Traveled		(5)* Subsistance Per Diem Hours of		Amount
Date	Person or Place Visited	Purpose of Trip	A In Local Area	B Out of Local Area	A Leaving Home	B Arriving Home	At $2.50 per quarter

Presented by _____
(Supervisor, Coordinator, Teacher) (Date)

Approved by _____
(Superintendent, Director, or Principal) (Date)

Claim Approved by _____
(State Supervisor of Vocational Distributive Education) (Date)

*Meetings approved by State Office

Total Miles Traveled _____

Total Amount of Travel Claimed @ 5¢ per mile _____
Total Subsistance _____
Registration fee _____
Grand Total _____

D.E. 746 - Request for Approval of Anticipated Purchase of Equipment Under the 1963 Vocational Education Act

Form DE 746 is to be used for requesting approval of anticipated purchases of equipment for Vocational Distributive Education under the 1963 Vocational Education Act. The school corporation seeking reimbursement for equipment purchases, first, must have an approved Vocational Distributive Education program, either Part-Time Cooperative or Preparatory Non-Cooperative, in accordance with the Indiana State Plan for Vocational and Technical Education. Reimbursement is at the rate of 50% Federal funds with matching state and/or local funds.

PROCEDURE

The following procedure will be followed in reimbursing equipment purchases by local school corporations through the State Vocational Office:

1. Have an approved Vocational Distributive Education program

2. Submit 2 copies of Form DE 746 to the State Office, listing anticipated purchases (see SPECIFIC section). Please omit brand names on the anticipated purchase request.

3. After receiving approval by the State Office, accept bids locally (if amount of the purchase order requires bids), and issue purchase orders.

4. Submit the purchase orders to the State Office

5. The items of equipment and dollar amount of the purchase order will be checked against the original, approved request for the anticipated purchase of equipment.

6. A voucher then will be issued to the school corporation on the basis of the purchase orders not to exceed 50% of the original total dollar request.

7. After the equipment has been purchased, the paid invoices are to be submitted to the State office at the end of the regular year: (DEC. 31)

Equipment for instruction in the reimbursable Vocational Distributive Education program shall mean durable equipment that is necessary for, and used directly in, the instructional process, rather than equipment that is merely accessory and subordinate to the instructional process. The equipment is to remain in the DE work laboratory.

Furniture, fixtures, and equipment that might be used in any classroom are not reimbursable.

Equipment used for administrative purposes is not reimbursable.

INDIANA DEPARTMENT OF PUBLIC INSTRUCTION
DIVISION OF VOCATIONAL EDUCATION
600 Old Trails Building
309 West Washington Street
Indianapolis, Indiana
46204

SUGGESTED CRITERIA FOR A WORK LABORATORY CLASSROOM AND EQUIPMENT FOR A VOCATIONAL DISTRIBUTIVE EDUCATION PROGRAM IN THE INDIANA PUBLIC SCHOOLS

THE D.E. WORK LABORATORY CLASSROOM

SPACE: 1200 square feet total area for classroom, storage, and office on main floor near an outside entrance

BUILT-IN:

1. Display case facing on corridor (with locking full size door opening in classroom)
2. Counter space for sign-making and merchandise marking equipment
3. Wash basin
4. Chalkboard
5. Tackboard
6. Audio-Visual screen
7. Shelving for reference texts and trade association publications
8. Locking folding doors to secure equipment and merchandise
9. Tri-mirror
10. Storage space for display equipment, merchandise and supplies

ADDITIONAL:

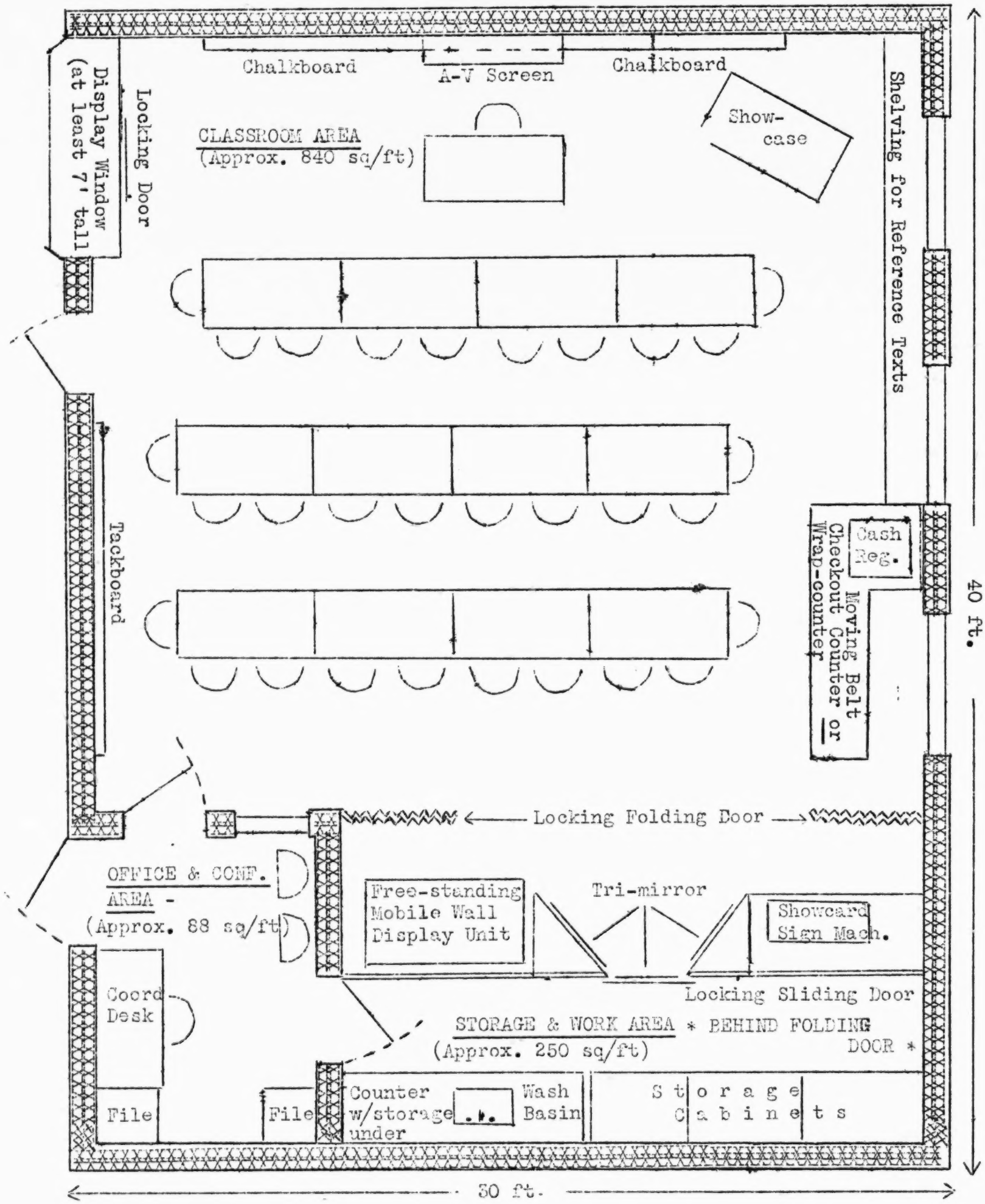
1. Carpeting on classroom and office area
2. Telephone in coordinator's office
3. Black-out curtains for windows

EQUIPMENT:

1. Movable display unit(s)
2. Show case
3. Cash Register
4. Check out stand with moving belt- or- Register-Wrap Counter
5. Showcard sign machine (for interior displays and window display signing)
6. Display equipment (mannequins, sign holders, material, price tags, etc.)
7. Merchandise marking equipment
8. Merchandise measuring equipment
9. Overhead projector (to remain in D.E. room)
10. Tape Recorder (for sales demonstrations and radio commercials)
11. 2½ ft. by 5 ft. work tables

Suggested Plan for Room Layout for DE Work-Laboratory Classroom for either the Projects-Method or the Cooperative Program, or both.

Scale -- $\frac{1}{4}$" to 1'



FORM E
REVISED 1966

THIS CLAIM IS DUE ON OR BEFORE APRIL 1

REPORT OF EXPENDITURES FOR VOCATIONAL INSTRUCTION

FOR THE 19____-19____SCHOOL YEAR

Name of School Corporation (Township or City) ..... (County) .....

Location (Post Office) .....

IMPORTANT NOTICE

One copy of this report is due in DIVISION OF VOCATIONAL EDUCATION, 227 STATE HOUSE, INDIANAPOLIS 4, INDIANA, on April 1, for all schools. Retain one copy for local files. Local school official shall carry full responsibility for the return of this claim on or before the above dates. THE STATE BOARD FOR VOCATIONAL EDUCATION nor its representative agents are responsible for claims presented after April 1.

NAME AND ADDRESS OF INDIVIDUAL TO WHOM THE STATE WARRANT SHOULD BE MAILED

Name (Print or Type) ..... Official Title .....

Post Office Address .....

Chapter 188, 1923 Acts. The state, in order to aid in the maintenance of approved vocational schools or departments for industrial, agricultural home economic education and distributive education, shall, as provided in this act, pay annually after June 30, 1923, to school cities and towns and townships maintaining such schools and departments an amount not to exceed one-third of the sum expended for instruction in vocational and technical subjects authorized and approved by the state board of education. Such cost of instruction shall consist of the total amount raised by local taxation and expended for salaries and official travel of the teachers of approved vocational and technical subjects. (As amended, Acts 1941, p. 237.)

TO THE **INDIANA STATE BOARD FOR VOCATIONAL EDUCATION**

Report of COST OF VOCATIONAL INSTRUCTION from July 1st, 19....., to June 30th, 19.....

Form E
REVISED 1966

AGRICULTURAL EDUCATION

Name of Vocational Teacher (If more than one teacher was employed during the year, list the name of each)	Number of months each teacher was employed	Total Salary Paid to each teacher (excluding pay for evening classes)	Total Salary Paid to each teacher for evening classes	Total travel paid to each teacher (May 1-April 30)	Per Diem	Do not fill in this Column	Number of vocational agriculture classes taught			Do not fill in this Column	Do not fill in this Column
							All-Day Classes	Young Farmer	Adult Farmer		
1	2	3	4	5	6	7	8	9	10	11	12
* Agriculture											
19 Act											
Conference Workshops											
Total Agriculture											

HOME ECONOMICS EDUCATION

* Name of each Voc. Home Economics Teacher	Number of months each teacher was empld.	Total Salary paid to each teacher	Length of school term	Salary for school term only	Number Voc. period per day (9-12)	Sum paid for special Voc. work		DO NOT FILL IN			
						Adult Classes	State Authorized Travel or Service	Reimbursed Day Salary	All-Day Classes	Evening Classes	State Approved Travel Workshop Conference
1	2	3	4	5	6	7	8	9	10	11	12

Form E
Supplement I

HEALTH OCCUPATIONS

* Name of each Teacher in Health Occupations	Course or Subject	Total Annual Salary	Salary for Voc. Work	Instructional Equipment and Supplies	Coor. & Super.	Secretarial Help	Travel	
1963 Act								
Total Health Occupations								

BUSINESS & OFFICE EDUCATION

Name of each Teacher in Business & Office Ed.	Course or Subject	Total Annual Salary	Percentage of time used on:		Reim-bursable Salary	Intensive Laboratory Instruction	Adult Evening and Extension	Related Vocational Instruction	Coor. or Super.	Extended Contract	Official Travel
			Voc.	Non-Voc.							
1963 Act											
Total Business & Office Education											

DISTRIBUTIVE EDUCATION

* Name of each Teacher in Distributive Education	Course or Subject	Total Annual Salary	Percentage of time used on:		Reim-bursable Salary	Related Vocational Instruction	Coor. or Super.	Project Method Instruction	Adult Evening and Extension	Extended Contract	Official Travel
			Voc.	Non-Voc.							
1963 Act											
Total Distributive Ed.											

Total Home Economics											

TRADE & INDUSTRIAL EDUCATION

* Name of each Teacher in Trades and Industry	Course or Subject	Total Annual Salary	Percentage of Time Used on Vocational Work	Total Annual Reimbursable Salary for Vocational Work	Total Annual Salary for Vocational Work						
					All-Day Classes	Evening Trade Ext. Classes	Trade Ext. Apprentice	Related DCE Instruction	DCE Coor.	Coor. or Super.	Official Travel
1	2	3	4	5	6	7	8	9	10	11	12
1963 Act											
Total Trade & Industry											

* George-Barden & Smith-Hughes Act

STATE OF INDIANA, }
_____ COUNTY, } ss:

I, _____ *Township Trustee, or Treasurer of* _____ *School Corporation, do solemnly swear that this report relative to the cost of vocational instruction in said corporation is correct in every particular, and that each teacher of approved vocational subjects has been paid in full.*

Signed _____ *Treasurer of School Board Or Township Trustee.*

Subscribed and sworn to before me, this _____ *day of* _____, *19*____

_____ *Notary Public.*

My commission expires _____, *19*____

[SEAL.]

County_____ School Corp._____ School Year _____

The following space reserved for record of the State Department. Please do not write on this page.

REPORT ON EXPENDITURES AND REIMBURSEMENT

	Expenditures for Vocational Work					Reimbursement	
Type of Class	Total	Paid by Local Funds	State	Smith-Hughes	George-Barden	1963 Act	Total
Agriculture: All-Day							
Adult Farmer							
Young Farmer							
Travel							
Per Diem							
TOTAL							
Home Economics All-Day							
Evening							
St. Author. Trav. or Service							
TOTAL							
Trade & Industry All-Day							
Evening							
Part-Time							
Coordination							
Supervision							
Travel							
Rel. DCE Instr.							
Div. Coop. Ed. Coordination							
Type 'C' Classes							
TOTAL							
Health Occupations							
Salary-Day							
Salary-Eve.							
Coordination							
Supervision							
Equipment							
Travel							
Secretarial Help							
TOTAL							
Distributive Ed. Project Method Instruction							
Adult Eve. & Ext.							
Rel. Voc. Instr.							
Coor. or Super.							
Extended Contract							
Travel							
TOTAL							
Business & Office Ed. Intensive Lab. Instruction							
Adult Eve. & Ext.							
Rel. Voc. Instructi							
Coor. or Super.							
Extended Contract							
Travel							
TOTAL							
GRAND TOTAL							

(Send 2 copies to
State Office)

_____
County

_____
Name of School

_____
Address of School

_____
Date

Division of Vocational Education
600 Old Trails Building
309 West Washington Street
Indianapolis, Indiana

REQUEST FOR APPROVAL OF ANTICIPATED PURCHASE OF EQUIPMENT UNDER THE 1963 VOCATIONAL EDUCATION ACT

Vocational Distributive Education

Description of Item	Where will Equipment Be Located?	Approximate Cost
TOTAL		

Approved by:

_____
State Supervisor of Vocational Distributive Education

_____
Superintendent, Director or Coordinator

_____
Date

DE 746

D.E. FORM V-52 SUPPLEMENT - Request for Evaluation of Credentials Related to Vocational Education in Distribution and Marketing

One of the requirements in the certification pattern for a D.E. teacher coordinator is 2 years successful full time employment in a distributive occupation, or 1500 clock hours of supervised work experience in the distributive field under an approved teacher-training program, or a combination of both. This occupational experience is to be reported on D.E. form V-52. Non-conventional certification (for instructors in post-high and adult evening programs) requires 3 years successful full time employment.

For an evaluation of credentials, please submit information according to the following procedure: (In-state applicant only)

1. Fill out two copies of Form V-52 complete with required signatures. (The Teacher Trainer signature is necessary for those applying for Non-Conventional certification-this signature is not necessary for those applying for conventional certification which requires an official transcript.)
2. Provide official transcripts of all college and/or university courses which have been acquired by the applicant if conventional certification is requested.
3. Send the two completed copies of Form V-52 and all official transcripts (if required) to the State Supervisor of Vocational Distributive Education.

DO NOT SEND MONEY TO THIS OFFICE

In the event there are deficiencies in Occupational Experience and/or academic requirements, recommendations will be made to satisfy the necessary additional requirements in order to comply with the certification pattern as set forth in the INDIANA STATE PLAN FOR VOCATIONAL AND TECHNICAL EDUCATION and BULLETIN 400 of the DIVISION OF TEACHER EDUCATION AND CERTIFICATION.

If there are no deficiencies, the approved credentials will be returned and the procedure for applying for certification to the Division of Teacher Education and Certification will be explained at that time. The teacher-coordinator's certificate will be issued only by the Division of Teacher Education and Certification.

EVALUATION SHEET
FOR
VOCATIONAL DISTRIBUTIVE EDUCATION
TEACHER-COORDINATOR ENDORSEMENT

NAME OF APPLICANT _____

REQUIRED COURSES	REQ. HOURS	ACCEPTED COURSES NAME	HRS.	INSTITUTION
I. BUSINESS ADMINISTRATION	22			
Marketing	2			
Management	2			
Finance	2			
Business Law	2			
Advertising	2			
Retailing	2			
Salesmanship	2			
Accounting (incl. 4 sem. hours of principles.)	8			
Approved work Exp. over 3 years at rate of 1 yr. for 3 sem. hours. (9 sem. hrs. Maximum)				
II. ECONOMICS	9			
Principles of Economics	5			
Adv. Prin. of Economics	2			
Consumer Economics	2			
III. ELECTIVES	6			
From advanced courses in Marketing and Management And from fine Arts and Home Economics				
IV. PROFESSIONAL REQUIREMENTS	8			
Teaching Gen. Bus. & Bkkpg.	2			
Teaching Dist. Ed.	2			
Phil. Org., Admin. of Voc. Dist. Ed.	2			
Tech. of Coord. in Dist. Ed.	2			
V. ELECTIVES	7			
Typewriting-Clerical Group Recommended				

TOTAL SEMESTER REQUIRED HOURS 52 TOTAL ACCEPTED

VI. OCCUPATIONAL EXPERIENCE:

1. Two years successful full time Employment in Distributive Occupation — ACCEPTABLE _____ NOT ACCEPTABLE _____

OR 2. 1500 Clock hours of supervised work in the Dist. field under an approved Teacher-Training Program. — ACCEPTABLE _____ NOT ACCEPTABLE _____

OR 3. A Combination of both — ACCEPTABLE _____ NOT ACCEPTABLE _____

Division of Vocational Education
600 Old Trails Building
309 West Washington Street
Indianapolis, Indiana

D.E. Form V-52 Supplement
(Submit 2 copies to the State Vocational Education Office)

REQUEST FOR EVALUATION OF CREDENTIALS
RELATED TO VOCATIONAL EDUCATION IN DISTRIBUTION AND MARKETING

Name: _____ Date/Birth: _____ Date: _____

Address street and Number _____ Phone: _____

City: _____ State: _____

Types of Classes: Part-time ____ Occupational or
Full-time ____ Subject Area _____

REPORT OF TRAINING

	Years	Name and Location of Institution	Date of Graduation	Degree
High School				
College or University				

DISTRIBUTION AND MARKETING OCCUPATIONAL EXPERIENCE

City or Town	Kind of Work	Name of Firm	No. of Months	Beginning Date	Ending Date	Monthly Salary

REFERENCE

(Superintendent, Principal, Teachers, Foremen, etc.)

NAME	OFFICIAL POSITION	ADDRESS

REPORT OF TEACHING EXPERIENCE

City or Town	Name of Superintendent	Beginning Date	Ending Date	No. of Months Taught	Grade-Subject

RECORD OF LICENSES

Subjects	Kind: Special, Regular, Vocational	Grade: First, Second, Etc.	School: High, Elementary, Part-time or Evening	Date/Issue	For how many years

SCHEDULE OF TRAINING FOR 12 HOUR NON-CONVENTIONAL CERTIFICATE

Date of Training Year, Month, Day Hours	Unit or Units Covered (From Teacher Trainer Plan)	Texts or other Materials Used	Teaching Methods Used	Signature of Person Giving Training

Recommended by: Superintendent of Schools: _____

Local Director or Supervisor: _____

*Teacher Trainer: _____

State Supervisor of Distribution and Marketing Education. _____

*To be signed by Teacher Trainer only after applicant has successfully completed the 12 clock-hours of Teacher Training.

All reporting forms for vocational activities are color coded in the State office for the Division of Vocational and Technical Education.

The color code for the Distributive Education section is: LIGHT GREEN

Additional copies of all D.E. forms in this handbook may be obtained by writing to:

State Supervisor of Vocational Distributive Education
600 Old Trails Building
309 West Washington Street
Indianapolis, Indiana 46204

or phone:

Area Code 317
ME 3-4841

GLOSSARY

GLOSSARY

BASIC JOB CURRICULUMS	-Types of preparatory curriculums which emphasize fundamental techniques in sales and sales-supporting services; and essential marketing concepts, qualifying social competencies, and basic skills in computations and communications; available to prepare enrollees for the elementary or basic level distributive occupations, involving minimal employment responsibility.
Career Development Job Curriculums	-Types of preparatory curriculums which emphasize the functions of marketing, merchandising, and management within the discipline of distribution; available to prepare students for the career development job level, which involves competencies and responsibilities beyond those required for the basic job level and less advanced than those needed by a specialist in distribution
Club Activities	-Activities of the Distributive Education Clubs of America which provide opportunities to demonstrate and to refine the competencies required in employment; they supplement and enrich the cooperative method and the project method in achieving vocational application
Combination Plan	-Organizational pattern for preparatory instruction which combines the cooperative plan, involving regularly scheduled part-time employment, and the project plan, focusing on individually selected activities, both of which relate to career goals.
Competency Areas of Instruction	-Classification of the preparatory curriculum into areas of study identified with the competencies needed in distributive employment; areas are competency in marketing, the discipline; competency in technology; competency in social skills; competency in basic skills; and competency in economic concepts.
Cooperative Method	-Coordination of classroom instruction with on-the-job instruction and application
Cooperative Plan	-Organizational pattern for preparatory instruction which involves regularly scheduled part-time employment that gives students an opportunity to experience theory in practice while developing competencies through training on a job related to their career goals.
Cooperative Training	-Learning experiences encountered in on-the-job instruction and application during regular part-time employment.

Distribution	-The second step in a series of economic processes which bring goods and services from those who make them to those who use them; includes all the methods by which goods are sent from producers to consumers; may be used synonymously with marketing.
Distributive Education	-A program of vocational instruction in marketing and distribution designed to qualify those enrolled for gainful employment in distributive occupations or in occupations in which a distributive function appears, according to their individual career goals; includes preparatory and supplementary programs.
Distributive Occupation	-An occupation that is followed by proprietors, managers, or employees engaged primarily in marketing or merchandising of goods or services. These occupations are commonly found in various business establishments, such as retailing, wholesaling, manufacturing, storing, transporting, financing, and risk bearing.
Marketing	-The performance of business activities directed toward and incident to the flow of goods and service from producer to consumer or user
Occupational Objective	-Distributive occupation selected by a student as his career goal, based on the Standard Industrial Classification and determined through vocational guidance counselling involving teacher-coordinator and guidance department: may be broadly tentative or specifically committed.
Participation Activities	-Learning experiences which focus on employment activities and decision-making situations typical of specific occupational objectives; they include cooperative training, project training, teaching techniques utilizing student participation, and activities of the Distributive Education Clubs of America.
Preparatory Instruction	-Vocational Education in marketing and distribution provided in preparatory programs on a full-time basis to prepare youth and adults over fourteen years of age for a distributive occupation which has been selected by the student as his occupational objective; curriculums for preparatory instruction include basic job curriculums, career development, job curriculums, and specialist job curriculums; may be organized following a cooperative plan, a project plan, or a combination plan.

Preparatory Program	-A plan of instruction provided on a full-time basis to prepare youth and adults over fourteen years of age for a distributive occupation which has been selected by the student as his occupational objective
Project	-A significant practical unit of activity having educational value and aimed at one or more definite goals of understanding; used to describe any non-cooperative, organized learning activity that has a definite objective to be accomplished in a specified length of time.
Project method	-Coordination of classroom instruction with a series of individually selected activities or projects related to students' occupational objectives.
Project Plan	-Organizational pattern for preparatory instruction in which a series of individually selected activities gives students an opportunity to experience theory in practice while developing competencies through assignments related to their career goals
Project Plan	-Organizational pattern for preparatory instruction in which a series of individually selected activities gives students an opportunity to experience theory in practice while developing competencies through assignments related to their career goals
Project Training	-Learning experiences involved in carrying out individually selected assignments or projects.
Specialist Job Curriculums	-Types of preparatory curriculums which emphasize specific functions, product areas or service fields at mid-levels of employment responsibility; available to prepare students for distributive specializations in functions, product areas, or service fields.
Supplementary Instruction	-Vocational education in marketing and distribution provided in supplementary programs on a part-time basis for adults wishing to refresh and update competencies needed in their employment and for those seeking new and specialized competencies necessary to continue employment or advancement in responsibility; includes the curriculums of updating adult training and specialized adult programs; offered in short-term units and in certificate curriculums for employed adults who attend day or evening classes on a part-time schedule.

Supplementary Program	-A plan of instruction available on a part-time basis to adults wishing to refresh and update competencies needed in their employment and for those seeking new and specialized competencies necessary to continuing employment or advancement in responsibility
Teacher-Coordinator	-Distributive education teacher who is responsible for the operation of a preparatory program, involving vocational guidance and counselling; public relations; curriculum planning and organization; classroom instruction; and application of instruction to employment requirements through the cooperative method or the project method.
Teaching Techniques Utilizing Student Participation	-Teaching techniques focusing student involvement which supplement the cooperative method and the project method in providing vocational application; they include directed observation; the incident process or case studies; discussion techniques such as conference discussion, panel discussion, buzz sessions, and brainstorming; practice techniques, such as role playing; and independent study, such as programmed instruction.

BIBLIOGRAPHY

OF

D. E. MATERIALS

BIBLIOGRAPHY

The following list of materials are utilized in Vocational Distributive Education training. This list is not complete and the teacher-coordinator should make an effort to seek additional sources of training materials.

A. GENERAL RELATED TEXTS

1. Wingate, John W. and Carroll A. Nolan, Fundamentals of Selling, Cincinnati: South-Western Publishing Co., 1964.

2. Ernest, John W. and George M Davall, Salesmanship Fundamentals, Chicago: Gregg Division, McGraw-Hill Book Company, 1965.

3. Robinson, O. Preston, William R. Blacker, and William B. Logan, Store Salesmanship, Englewood Cliffs, N.J.: Prentice-Hall, Inc.,1959.

4. Haas, Kenneth Brooks and Enos C. Perry, Sales Horizons, Englewood Cliffs, N.J.,: Prentice-Hall, Inc., 1963.

5. Wingate, John W. and J. Dana Weiner, Retail Merchandising, Cincinnati: South-Western Publishing Co., 1963.

6. Richert, G. Henry, Warren G. Meyer, and Peter G. Haines, Retailing Principles and Practices, Chicago: Gregg Division, McGraw Hill Book Co., 1962.

7. Shilt and Wilson, Business Principles and Management, Cincinnati: South-Western Publishing Company.

8. Tonne, Herbert A. Sidney I. Simon, and Esly C. McGill, Business Principles, Organization and Management, Gregg Division, McGraw Hill Book Co., 1963

B. SPECIFIC RELATED TEXTS AND MANUALS

1. Self-Study Program in Retail Food Store Operations, The Quaker Oats Company, Chicago 1965

2. Advanced Retail Training Extension Course, The Shell Oil Co., Tulsa, Oklahoma

3. Dealer Management Series, The Sunray DX Oil Co., Tulsa, Oklahoma, 1962

4. Checklist for Service Station Operation , American Petroleum Institute, Marketing Division, New York

5. Mason, Ralph E., and Rath, Patricia Mink, Distributive Education Notebook, Danville, Ill.: The Interstate Printers and Publishers

6. Service Station Selling Development Guide for Distributive Education, The Marathon Oil Company, Findlay, Ohio

7. Haines, Peter G., and Herbert H. Tedder, Distributive Education Training Guides, Cincinnati: South-Western Publishing Co., 1963

8. The Instructional Materials Laboratory
Distributive Education Department
Division of Extension
The University of Texas
Austin, Texas

publishes the following
Basic and Specific Related
Manuals

Basic Instruction Series

Preparatory - Personal Qualities for Success in Distribution
Distribution in Our Economy
Arithmetic for Distribution
Communications - Oral and Written

First-year School and Business Relationships
Communications in Distribution
Mathematics of Distribution
Basic Selling
Basic Organization of Distribution

Second Year - Advanced Selling
Merchandising
Sales Promotion
Retail Credit
Marketing in Our Economy

Specific Instruction

Advertising
Arithmetic for Distribution Drills
Auto Parts Counterman Kit
Banking
Drug Manuals
Feed and Farm Supplies
54 Basic Lessons in Fabrics
Floristry
Food Store Training Kits
Hardware Kit
Home Furnishings Kit
Let's Analyze and Sell
Let's Sell Ready to Wear
Lumber and Bldg. Materials Kit
Men's Furnishings
Men's Wear
Merchandising-Jr. College Series
Paint and Wallpaper
Principles of Management
Principles of Merchandise Display
Public Relations
Receiving, Checking, Marking
Retail Credit Fundamentals
Service Station Training Kit
Shoe Manual
Sporting Goods
Stockkeeping
Tell it Well (To Sell it Well)
Toiletries Manual

INDIANA STATE DEPARTMENT OF PUBLIC INSTRUCTION
VOCATIONAL EDUCATION DIVISION
600 OLD TRAILS BUILDING
309 WEST WASHINGTON STREET
INDIANAPOLIS, INDIANA

_____
(DATE)

A LOCAL PLAN IN VOCATIONAL DISTRIBUTIVE EDUCATION FOR:

_____
Legal Name of School

_____
County

_____
Street, Rural Route, P.O. Box

_____
City State Zip Code

This Plan Developed for:
(One only per proposal)

REGULAR HIGH SCHOOL ☐

POST HIGH SCHOOL ☐

ADULT EVENING SCHOOL ☐

AREA VOCATIONAL SCHOOL ☐

PERSONS WITH SPECIAL NEEDS ☐

PLEASE CHECK ONE:

☐ Co-operative program ☐ Projects method program

ESTIMATED NUMBER OF STUDENTS _____

EXPECTED BEGINNING DATE OF PROGRAM _____

RESPECTFULLY SUBMITTED:

_____
SUPERINTENDENT

_____
PRINCIPAL, VOCATIONAL DIRECTOR, OR
DISTRIBUTIVE EDUCATION COORDINATOR

ACTION: _____

SIGNED: _____
STATE SUPERVISOR OF VOCATIONAL DISTRIBUTIVE EDUCATION

INDIANA STATE DIVISION of
VOCATIONAL AND TECHNICAL EDUCATION

OUTLINE FOR A LOCAL PLAN
in
VOCATIONAL DISTRIBUTIVE EDUCATION

Each school desiring to participate in a Vocational Distributive Education program approved for reimbursement by the Division of Vocational and Technical Education shall submit a local plan for its program

The local plan is to be a written plan, developed cooperatively as a working agreement between the local school corporation and the Division of Vocational and Technical Education. The local plan, when approved, becomes a contractual agreement and an instrument to be used in evaluating the program and should be signed by responsible officials.

> Note To Developer Of Local Plan: Not all of the items in the following outline are applicable to every plan for instructional programs. Disregard those that may not be applicable and be sure to include all that are applicable.

The LOCAL PLAN shall include:

I. CHARACTERISTICS OF PROGRAM

1. Type of program

   Designate type of program -- i.e., regular high school, post high school (junior or community college, one-and two-year terminal programs in colleges and universities, 13th and 14th year of high school) adult evening school, area vocational school, or persons with special needs.

2. Purposes and objectives

   Describe the general purposes and objectives of the proposed curriculum or offering

3. Identify the types or categories of students who will be accomodated by the proposed program of study such as:
   a. Youth in high school-Grade level
   b. Persons who have completed or left high school and who are available for full-time study
   c. Persons who have already entered the labor market and who need training or retraining
   d. Persons who have academic, socioeconomic, or other handicaps that prevent them from succeeding in regular vocational education programs

II. EVIDENCES OF NEED FOR THE PROPOSED PROGRAM

1. State and explain justification of proposed program, based on local community survey or documented report from local office of the Indiana Employment Security Division.

III. PROVISIONS FOR SUPERVISION AND ADMINISTRATION OF THE PROGRAM

1. Personnel involved
2. Line and staff responsibilities of personnel shown by an organizational chart
3. Duties and responsibilities applicable to personnel. Indicate provisions for extended contract time prior to and subsequent to the regular school year.
   a. Preparatory teachers
   b. Teacher-Coordinators
4. Qualifications of Personnel-Academic and Occupational
   a. Preparatory Teachers
   b. Teacher-Coordinators
   c. Adult Programs
5. Provisions for attendance of Teacher-Coordinator at state-called workshops and other professional meetings
6. Reimbursement for travel expenses of Teacher-Coordinator
   a. In city
   b. Out-of-town

IV. PROGRAM OF INSTRUCTION

1. On-the-job Training
   a. Plan A,B, or C as outlined by the State Plan
   b. Content of general related instruction
   c. Provisions for individual instruction
   d. Instruction based on occupational needs
   e. Criteria for selection of training stations
   f. Recommended employment schedule of trainees
   g. The training station agreement
   h. Procedure for a well-rounded program

2. Project-Methods Training
   a. Plan D, E, or F as outlined by the State Plan
   b. Course description
   c. A description of the classroom laboratory, including equipment, facilities, and supplies
   d. The time allotment or schedule
   e. The projects and experiences to be used for occupational preparation
   f. The provision for instructional materials

3. The adult program
   a. Provisions for supervision and coordination
   b. Provisions for instruction
   c. Provisions for courses or other educational experiences

4. Programs for youth and adults with special needs
   a. Groups to be served
   b. Types of programs
   c. Provisions for instruction
   d. Provisions for courses or other educational experiences

V. ENROLLMENT IN THE PROGRAM
1. Who may enroll
2. Selection procedures
3. Prerequisites

VI. PROVISIONS FOR LOCAL CLUB PROGRAM
1. Sponsor
2. Participation at regional, state, and national level

VII. PROVISIONS FOR LOCAL ADVISORY COMMITTEE
1. Members
2. Selection and appointment
3. Duties and responsibilities

VIII. PROVISIONS FOR SURVEYS AND FOLLOW UP STUDIES
1. Who conducts the survey
2. Purpose

IX. PROCEDURES FOR LOCAL EVALUATION
1. Classroom instruction
2. On-the-job performance
3. Services available through local guidance department

X. REPORTS AND FORMS
1. Describe provisions for periodic statistical and descriptive reports of activities by the coordinator to the administration and the state supervisors
2. Submit one copy each of the various forms used by the local school for the operation of the program such as student application form for admittance to the program, evaluation forms, training agreement, schedule of on-the-job training experiences, and survey forms.

Submit the Local Plan for a Vocational Distributive Education program together with exhibits, to:

Mr. James W. Biddle
State Supervisor of Vocational Distributive Education
Old Trails Building - 6th Floor
309 West Washington Street
Indianapolis, Indiana 46204

C. REFERENCE TEXTS AND TEACHER MATERIALS

1. Logan, William B. and Helen M. Moon, Facts About Merchandise, Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1962

2. Wingate, Iabel B., Karen R. Gillespie, and Betty G. Addison, Know Your Merchandise, Chicago: Gregg Division, McGraw-Hill Book Co., 1964

3. Russon, Allien R., Business Behavior, Cincinnati: South-Western Publishing Co., 1964

4. Nolan, Carroll A. and Roman F. Warmke, Marketing, Sales-Promotion, and Advertising, Cincinnati: South-Western Publishing Co., 1965

5. Reich, Edward, Robert Q. Feldman, and Leon Levy, Basic Retailing, New York: Pitman Publishing Co., 1960

6. Johnson, H. Webster, Creative Selling, Cincinnati: South-Western Publishing Co., 1966

7. Rowse, Edward J. and Carroll A. Nolan, Fundamentals of Advertising Cincinnati: South-Western Publishing Co., 1957

8. Price, Ray G., Vernon A. Musselman, J. Curtis Hall, and Edwin E. Weeks, Jr General Business for Everyday Living, Chicago: Gregg Division, McGraw-Hill Book Co., 1966

9. Kirkpatrick, Charles A., Salesmanship, Cincinnati: South-Western Publishing Co., 1966

10. Managing a Retail Hardware Store, The National Retail Hardware Association, Indianapolis, 1961

11. Hailes, William D. Jr., and Raymond T. Hubbard, Small Business Management, Albany, N.Y.,: Delmar Publishers, Inc., 1965

12. Collins, Kenneth, Successful Store Advertising, New York: Fairchild Publications, Inc., 1959

13. Manger, Emily M. Modern Display Techniques , New York: Fairchild Publications, Inc., 1959

14. Reference File for Food Service Training Programs, National Restaurant Association, 1530 N. Lake Shore Drive, Chicago

15. Business Simulation Games 1 and 2, Arizona DECA, Dept. of Voc. Education, 412 Arizona State Building, Phoenix, 1966

16. Ernest, John W., Our System of Distribution , The Div. of Voc. Education, University of California, Berkeley

17. Mason, Ralph E. and Haines, Peter G., Cooperative Occupational Education, Danville, Ill., The Interstate Printers and Publishers, Inc. 1965

18. Mason, Ralph E., Methods in Distributive Education, Danville, Ill.: The Interstate Printer and Publishers, Inc. 1964

19. How to Supervise Employees, Texas: Distributive Education Department University of Texas

20. How to Train an Employee, Texas: Distributive Education Department University of Texas

21. Congratulations on Becoming a Training Sponsor, Texas : Distributive Education Department, University of Texas

A very complete Distributive Education Bibliography of 709 periodical articles compiled by Calvin D. Lowe, D.E. Teacher-Educator at Utah State University, may be secured by writing to the Division of Vocational Education Utah State Department of Public Instruction, Salt Lake City, Utah.

The Administrative Management Course Program developed by the Small Business Administration has valuable and pertinent information for the D.E. Coordinator in separate manuals on the following topics:

TOPIC 1 - Success and Failure Factors in Small Business
TOPIC 2 - Records and Credit in Profitable Management
TOPIC 3 - Managing to Sell
TOPIC 4 - Business Working Capital Management
TOPIC 5 - Financing Short and Long Term Needs
TOPIC 6 - Personnel Management - Developing Good Employees
TOPIC 7 - Business Continuence and Estate Planning
TOPIC 8 - What the Future Holds for Small Business
TOPIC 9 - Communication and Control
TOPIC 10 Human Factors in Small Business
TOPIC 11 Choosing a Form of Business Organization
TOPIC 12 Safeguarding Your Business and Management Succession
TOPIC 13 Small Business Location and Layout
TOPIC 14 Effective Advertising
TOPIC 15 Sources of Assistance and Information

Separate Topic Manuals are available from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C., 20402 - Price $1.25 each.

Additional information may be obtained from:

Small Business Administration
Regional Office
430 Bankers Building
105 West Adams St.
Chicago, Illinois 60603

or

Small Business Administration
Branch Office
721 Farm Bureau Insurance Bldg.
130 East Washington Street
Indianapolis, Indiana 46204

VT 001 689
Vocational Agriculture in the Next Five Years, 1963-1968.

Ohio State Univ., Columbus. Dept. of Agricultural Education
Ohio State Dept. of Education, Columbus. Vocational Agriculture Service
MF AVAILABLE IN VT-ERIC SET.
Pub Date - Jul63 13p.

*VOCATIONAL AGRICULTURE; *PROGRAM PLANNING; *EDUCATIONAL OBJECTIVES; *GUIDELINES; *STATE PROGRAMS
OHIO

After completion of a 5-year program plan, the state's vocational agriculture teachers and state staff members agreed that another 5-year program plan should be developed. Teachers submitted suggestions compiled and reviewed by the state staff, for revision of guiding statements and goals. This publication lists guiding statements and objectives under the following broad headings: (1) planning and developing local programs, (2) local school relationships, (3) high school teaching and curriculum, (4) supervising occupational experience in agriculture, (5) advising the Future Farmers of America, (6) guidance, (7) young and adult farmer program, (8) physical facilities, (9) public relations, and (10) professional improvements. State goals were established for each objective and space provided for the establishment of local district goals. (JM)

VT001 689

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ED0 31587

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

AGdex $\frac{.10}{30}$

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VOCATIONAL AGRICULTURE IN THE NEXT FIVE YEARS

1963—1968

Issued by

The Department of Agricultural Education
The Ohio State University

and

The Vocational Agriculture Service
The Ohio Department of Education

July, 1963

VT 004 550

VOCATIONAL AGRICULTURE IN THE NEXT FIVE YEARS

Ohio Vocational Agriculture teachers and staff members cooperatively planned their first state five year program in 1958. At the conclusion of the first five years in 1963, it was felt by the staff and the Executive Committee of The Ohio Vocational Agriculture Teachers Association that many benefits had been derived from the direction provided through this plan and that another for the ensuing five years should be developed. In preparation for this new program teachers were asked, during district meetings in the fall of 1962, to revise guiding statements and goals for the program for the coming five years. By January 1, 1963, the suggestions from all districts had been compiled and reviewed by members of joint staff of teacher education and supervision.

This publication contains a list of these goals for each area of the vocational agriculture program.

This statement of goals should be regarded as only one of several desirable instruments in planning local programs in vocational agriculture. It should supplement rather than supplant evaluation of local programs, long time plans, appraisal of community resources, and involvement of lay people in program planning and development.

Our Opportunity

We have a strong force for the improvement of agriculture in Ohio in the energies of 350 teachers, supervisors, and teacher educators wholeheartedly directed to the achievement of these goals. Vocational agriculture has a history of meeting the needs of the times and adapting to changes in Ohio and the Nation. The accomplishments of this can help us to meet our responsibility for providing for every community in which we serve the best possible program of agricultural education.

We have had many well planned vocational agriculture programs through the years. The recent intensive work in this area has been done because we recognize

that sound planning must precede sound programs. During the past year we have identified the major components of a complete program of vocational agriculture as including relationships of school, faculty; program planning; classroom teaching and curriculum; providing occupational experience; adivising the FFA chapter; guidance and counselling; teaching adults and young farmers; providing physical facilities; developing public relations; and planning for professional improvements. For each of these major components we have identified certain goals for which we believe can be met during the next five years. These goals based upon the judgement of teachers and staff are reproduced in this publication.

The goals contained herein should serve as a guide for teachers in planning local programs and also serve as a guide for district chairman and officers of the Ohio Vocational Agriculture Teachers Association in planning professional activities on a district or state basis. For the state supervisory staff and the teacher education staff these goals should serve a similar purpose. The major purpose for all groups is that of giving a sense of direction to those who need to know the direction which we as a profession are taking.

R. J. W. 1/7/63/500

PLANNING AND DEVELOPING LOCAL PROGRAMS

Guiding Statement: The local program of vocational agriculture should meet educational needs in agriculture and should be based upon, and evaluated in terms of, clearly stated objectives. Continuing community study and involvement of those affected by the programs, under the leadership of the teacher, are essential and should result in a written long term department program.

Objectives:	Goals for 1968 % of Teachers of Depts. State Goals	District Goals
1. Conduct annual systematic evaluation of the departmental program. Involve a state staff member at least once every five years.	100	____
2. Utilize lay committees in planning and carrying out the program.	75	____
3. Study and analyze "Facts on Farming" supplemented by local surveys and other similar information as a means of identifying agricultural education needs.	100	____
4. Maintain an up-to-date written long-time departmental program.	100	____
5. Coordinate the local program with those of other departments and agricultural and educational agencies in the area.	100	____

Additional Objectives and Goals:

_____	____	____
_____	____	____
_____	____	____
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_____	____	____
_____	____	____
_____	____	____

LOCAL SCHOOL RELATIONSHIPS

Guiding Statement: Teachers of vocational agriculture should be effective members of their faculties in developing local school programs which offer maximum educational opportunities for the community.

Objectives:	Goals for 1968 % of Teachers of Depts. State Goals	District Goals
1. Assume appropriate responsibilities which contribute to the development of the total school program.	100	____
2. Share in the development of written school policies including those for the vocational agriculture department.	100	____
3. Participate actively in professional organizations.	100	____
4. Contribute to effective relationships among the faculty, school administration and state staff.	100	____
5. Involve specialized professional personnel such as county supervisors, guidance personnel, and curriculum specialists in local programs.	100	____

Additional Objectives and Goals:

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HIGH SCHOOL TEACHING AND CURRICULUM

Guiding Statement: The department should provide high quality teaching and a curriculum which offers maximum educational opportunity for each student to develop competincies in farming and other agricultural occupations. The agricultural curriculum refers to the total educational experience under the direction of the teacher including classroom and shop work, FFA activities, and supervised occupational experiences.

Objectives:	Goals for 1968 % of Teachers or Depts. State Goals	District Goals
1. Teach in a challenging and enthusiastic manner and make practical application of the information taught.	100	____
2. Prepare appropriate written daily lesson plans for each class.	100	____
3. Have students use class notebooks to record important information and plans of practice not included in the record book.	100	____
4. Develop and maintain an adequate and comprehensive departmental library including current books, bulletins, reports, sample specimens, and other teaching aids.	100	____
5. Provide opportunity for students to become self-directing individuals.	100	____
6. Use a formal testing procedure following each unit of instruction.	90	____
7. Plan and continually revise a course of study for each class on the form, "Curriculum for Vocational Agriculture."	100	____
8. Segment the planned course of study for each class on the form, "Daily Teaching Schedule for Vocational Agriculture."	85	____
9. Teach a unit on career opportunities in agriculture.	____	____
Additional Objectives and Goals:		
_____	____	____
_____	____	____

SUPERVISING OCCUPATIONAL EXPERIENCE IN AGRICULTURE

Guiding Statement: Supervised occupational experience for students in vocational agriculture should provide purposeful individualized and group experience in farming and in other agricultural occupations. The nature and extent of experience should progress with the ability of the student, providing for both occupational exploration and proficiency. Effective experience necessitates continuous, cooperative effort on the part of students, parents, employees, and teacher.

Objectives:	Goals for 1968 % of Teachers or Depts. State Goals	District Goals
1. Guide students with farming programs to have an average of at least two production projects per year with a minimum of 20 man work units.	80	____
2. Have students broaden their occupational experience by including appropriate improvement projects and supplementary practices.	100	____
3. Encourage students to conduct continuation projects when desirable.	100	____
4. Visit each high school student at least six times per year.	95	____
5. Arrange for an average of at least 25 on-farm instructional visits per month.	100	____
6. Assist students on placement to secure at least 400 hours of actual supervised work experience. The total hours of experience should extend over at least a 6 month period.	75	____
7. Utilize records of supervised occupational experience in classroom teaching and individual counseling.	85	____
8. Have all students complete the occupational experience selected.	90	____

Additional Objectives and Goals:

_____	____	____
_____	____	____
_____	____	____

ADVISING THE FFA

Guiding Statement: The teacher should advise and guide an active FFA Chapter which provides members with experience necessary for effective leadership and citizenship and develops interest and pride in agriculture.

Objectives:	Goals for 1968 % of Teachers or Depts. State Goals	District Goals
1. Provide opportunity for every member to participate in at least one FFA leadership activity.	100	____
2. Have a written program of activities, including a budget.	100	____
3. Participate in the State Chapter Contest.	100	____
4. Conduct programs which receive Superior ratings in the State Chapter Contest.	75	____
5. Provide a continuous training program for chapter officers and members.	100	____
6. Have chapter officer participation in a county, district, or state officer training program.	100	____
7. Secure a minimum of one donor per chapter to the Ohio FFA Foundation.	70	____
8. Have a State Officer visit each chapter once every three years.	100	____
9. Secure attendance of all FFA members and their parents at the parent and son meeting or banquet each year.	90	____
10. Have the chapter represented and participating in the FFA Camp program each year.	100	____
11. Cooperate with other chapters in at least one altruistic activity each year.	90	____
12. Have delegates at State FFA Convention each year.	100	____
13. Have each chapter participate in three awards activities.	100	____
14. Chapter complet all applications for National Chapter Contest.	50	____

GUIDANCE

Guiding Statement: The teacher should actively participate in the school guidance program. This includes counseling with students individually to help them define problems and secure information needed to make wise decisions.

Objectives:	Goals for 1968 % of Teachers or Depts. State Goals	District Goals
1. Work closely with local and county guidance counselors in developing an effective program of guidance in agriculture.	100	____
2. Hold at least two planned individual conferences sessions in the classroom with each vocational agriculture student.	100	____
3. Conduct an effective counseling program with students, parents, and others concerned.	100	____
4. Attend at least one workshop or class on guidance and counseling techniques over this five year period.	100	____
5. Assist students in locating appropriate jobs and further training opportunities in the field of agriculture.	100	____
6. Provide continuing assistance to former students through the development and use of follow-up records.	75	____
7. Provide prospective students with information concerning vocational agriculture and career opportunities in the field.	100	____
8. Collect an adequate library of occupational information to aid in serving students.	100	____
9. Have an average of 15% of graduates attend the College of Agriculture.	75	____
10. Develop a pre-vo-ag counseling system with 8th grade.	100	____
11. Check cumulative records of all students.	100	____
12. Provide a folder on courses in agriculture for guidance counselors.	100	____
13. Arrange for parents and/or cooperative farmers to attend an agricultural occupation experience meeting.	60	____
14. Develop a file of information on agricultural occupations.	100	____

YOUNG AND ADULT FARMER PROGRAM

Guiding Statement: Every vocational agriculture teacher should provide programs of education in agriculture for post high school persons, and should encourage rural people to further their education by participating in existing agricultural education programs at the local, county or state level. The instruction be based upon the needs of the enrollees, and should contribute to their efficiency in agriculture or provide a better understanding and appreciation of rural life.

Objectives:	Goals for 1968 % of Teachers or Depts. State Goals	District Goals
1. Provide both adult and young farmer programs in departments of vocational agriculture		
a. single teacher departments	50	____
b. multiple teacher departments	80	____
2. Have a chartered young farmer association in every department which offers a young farmer instructional program.	100	____
3. Conduct an organized, coordinated series of instructional meetings dealing with the agricultural education needs of those enrolled.	100	____
4. Provide individual, special interest group, and class instruction on a year-round basis.	100	____
5. Visit all young and adult enrollees at least once each three months.	100	____
6. Identify scholarships and promote attendance in continuing educational programs in agriculture in Ohio.	100	____

Additional Objectives and Goals:

_____	____	____
_____	____	____
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_____	____	____

PHYSICAL FACILITIES

Guiding Statement: Facilities for vocational agriculture should be carefully planned, maintained, and properly utilized to adequately provide the needed instruction in agriculture.

Objectives:	Goals for 1968 % of Teachers or Depts. State Goals	District Goals
1. Provide in every school adequate classroom and shop facilities in accordance with the bulletin "Facilities for Vocational Agriculture."	100	____
2. Have a planned procedure for maintaining classroom and shop facilities.	100	____
3. Provide an adequate annual budget for supplies, books, equipment, tools, visual aids, etc., as suggested on the recommended lists.	100	____
4. Maintain the standard Agdex filing system.	100	____
5. Develop land laboratories (including greenhouses and related adjuncts) in departments as needed.	100	____
6. Use the safety color code on shop facilities and equipment.	100	____
7. Develop in students and teachers pride in their school facilities and a desire to improve them.	100	____

Additional Objectives and Goals:

_____	____	____
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PUBLIC RELATIONS

Guiding Statement: Public understanding and desirable attitudes toward the program of vocational agriculture should be achieved through cooperative efforts of teachers, administrators and the state staff.

Objectives:	Goals for 1968 % of Teachers or Depts. State Goals	District Goals
1. Provide farm and civic organizations with programs which explain vocational agriculture purpose and programs.	60	___
2. Exhibit at local and county fairs.	100	___
3. Exhibit at Ohio State Fair.	65	___
4. Present six or more radio programs of public interest.	80	___
5. Publish 36 or more news articles each year.	60	___
6. Present at least four television programs annually.	25	___

Additional Objectives and Goals:

_____	___	___
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_____	___	___

PROFESSIONAL IMPROVEMENT

Guiding Statement: Teachers of vocational agriculture should continue to grow professionally through participation in individual and group programs of professional improvement, exemplification of high ethical standards and leadership in professional organizations.

Objectives:	Goals for 1968 % of Teachers or Depts. State Goals	District Goals
1. Assume appropriate responsibilities for the improvement of co-workers and the profession.	100	____
2. Develop a personal program for professional improvement.	100	____
3. Participate regularly in selected non-credit technical and professional offerings.	100	____
4. Attain a Master's Degree or its equivalent with ten years of service.	60	____
5. Enroll in college credit courses at least once in five years.	90	____
6. Recruit an adequate supply of high caliber prospective teachers by having each department enroll an average of one student in Agricultural Education.	100	____

Additional Objectives and Goals:

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_____	____	____
_____	____	____
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_____	____	____
_____	____	____

VT 001 692
Handbook for Home Economics Teachers.

Milwaukee Public Schools, Wis.
MF AVAILABLE IN VT-ERIC SET.
Pub Date - 65 45p.

MANAGEMENT; SCHOOL SAFETY; *HOME ECONOMICS EDUCATION; *HIGH SCHOOLS; *PROGRAM ADMINISTRATION; *ADMINISTRATIVE POLICIES; *MANUALS

This handbook was written for teachers and personnel involved in management of a home economics department. It wasfounded on the belief that effective management contributes to the basic purpose of the home economics education--the achievement of well-being in personal and family life. The handbook contains basic information on policies and procedures as well as general guidelines for effective department management. Hopefully the information will facilitate and strengthen communications among teachers and administrative personnel. The document contains a chart and philosophy of management for the teacher and department chairman. The chapters emphasize: (1) safety in the classroom, (2) opening and closing the department, (3) maintaining department facilities, and (4) managing department business. The appendixes contain sample requisition forms, etc. (MS)

VT001 692

ED0 31587

HANDBOOK

FOR

HOME ECONOMICS

TEACHERS

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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VT 001 ...

Milwaukee Public Schools

1965

Acknowledgment

Appreciation is hereby expressed to the teachers of home economics and the central office staff members who helped in the preparation of this handbook.

Irene Miller, Coordinator
Home Economics

Frisby D. Smith, Executive Director
Secondary Curriculum and Instruction

Dwight Teel, Assistant Superintendent
Division of Curriculum and Instruction

Harold S. Vincent, Superintendent of Schools

TABLE OF CONTENTS

	Page
PREFACE.	iii
PHILOSOPHY OF MANAGEMENT	1
The Role of the Teacher	2
The Role of the Department Chairman	3
SAFETY IN THE CLASSROOM.	5
OPENING AND CLOSING THE DEPARTMENT	6
MAINTAINING DEPARTMENT FACILITIES	7
School Replacement Plan for Appliances.	8
MANAGING DEPARTMENT BUSINESS	10
Annual Budget	10
General Procedures	11
Budget Divisions	11
Requisitions Used for Ordering Instructional Materials and Services	13
Stock Requisitions	13
Purchase Requisitions.	14
Locally Purchased Items	15
Dry-cleaning and Special Laundry Service.	15
Government Surplus Commodities	15
Book Requisitions.	16
Repair Requisitions	17
Processing Requisitions	18
Instructional Materials and Services Not Requiring Requisitions	19
Perishable Foods	19
Dairy Products	19
Eggs	20
Regular Laundry Service	20
Films and Filmstrips	21
Processing Delivery Slips.	22
BIBLIOGRAPHY	23
APPENDIXES	24
A. Stock Order	25
B. Stock Requisition	26
C. Stock Requisition -- Pick-Up	27

APPENDIXES (con't.)

		Page
D.	Book Requisition.	28
E.	Purchase Requisition -- General	29
F.	Purchase Requisition -- Local Store	30
G.	Purchase Requisition -- Dry Cleaning.	31
H.	Paying and Receiving Copy - Purchase Order . . .	32
I.	Repair Requisition -- Sewing Machines	33
J.	Repair Requisition -- Emergency Repair	34
K.	Repair Requisition -- Scissors and Knife Sharpening .	35
L.	Vendor's Delivery Slip	36
M.	Vendor's Invoice.	37
N.	Exchange Dates	38
O.	Home Economics Section - Stock Catalog	39

PREFACE

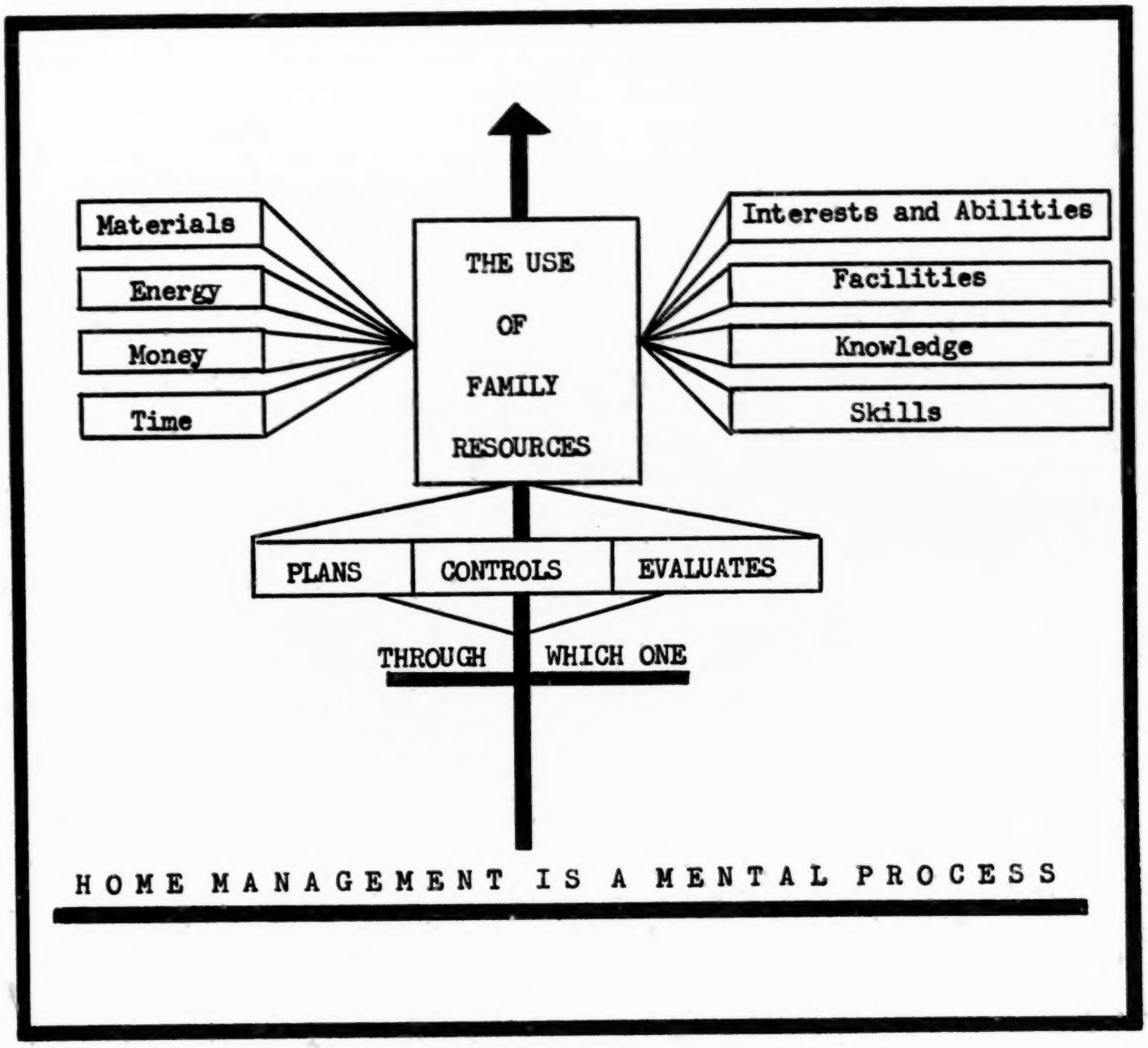
This handbook, as originally written and now revised, is addressed to teachers and administrative personnel involved in the management of a home economics department.

The information in the handbook has been compiled and organized in the belief that effective management contributes to the basic purpose of home economics education -- the achievement of well-being in personal and family life. In addition to the general guidelines for effective department management, the handbook contains basic information on policies and procedures which are used to obtain instructional materials and services necessary to the home economics educational program in the Milwaukee Public Schools. Since situations vary, teachers are encouraged to adapt and supplement this information to best meet the needs represented in the local school.

It is hoped that the information in the handbook will facilitate and strengthen the communication among teachers and administrative personnel. Every teacher, whether new or experienced, may use the handbook as an aid for improving and enriching the home economics program.

PHILOSOPHY OF MANAGEMENT

Management is a process whereby one plans, controls, and evaluates the use of resources to achieve goals. Success in achieving goals is more rapid if the functions of each step in the management process are recognized. Gross and Crandall illustrate what management is through the use of the following diagram.*



This same concept of management can be applied to the home economics department when resources are used to attain educational objectives. The teacher assumes the managerial role as she creates an environment that promotes effective learning. The application of the managerial process puts into effect one of the major concepts included in home economics education.

---

* Gross & Crandall. MANAGEMENT FOR MODERN FAMILIES, page 6. New York: Appleton-Century-Crofts, Inc., 1963.

THE ROLE OF THE TEACHER

The role of the teacher in home economics cannot be overemphasized. The professional qualities as well as personal attributes, habits, and appearance of the home economics teacher reflect her own feelings and influence the attitudes of others toward home economics.

Every teacher needs to accept the responsibilities and obligations identified with being a professional person in the field of teaching. A brief description is given of some of the general competencies which may be considered fundamental in the role of an effective home economics teacher.

- Shows a genuine interest in people and their welfare.
- Recognizes and understands the implications which social and technological changes have for family living.
- Interprets the home economics program with an approach based upon a sound philosophy of education.
- Builds curricula and helps to establish conditions under which students can develop their potentialities.
- Presents a poised, well-groomed appearance.
- Displays maturity in thought and action.
- Exemplifies high ideals in personal actions and habits.
- Believes in and practices good human relations with students, other teachers, school administrators, and with other people in the community.
- Manages resources in order to achieve a balance between her professional and personal life.
- Continues to self-evaluate her professional efforts.

THE ROLE OF THE DEPARTMENT CHAIRMAN

In each secondary school, one home economics teacher is appointed by the principal to serve as the department chairman, subject to approval by the Superintendent. Such appointments are to be reviewed annually. The chairman has the direct responsibility to the principal and the home economics coordinator in professional and instructional matters related to home economics within the individual school. While the department chairman is directly responsible for effective management of administrative and instructional aspects of the department, these responsibilities will be shared with the other home economics teachers. Good relationships among teachers are enhanced when there is the sharing and extending of mutual help so that each teacher is able to perform to her greatest potential.

The following general functions of a department chairman may serve as guidelines for home economics teachers and chairmen.*

- Through planning conferences and meetings and such other ways as developed with the principal, aids the principal in orienting teachers into the instructional program of the department; gives such assistance to the new teacher as may be possible.

- Plans with the department staff for the use of city-wide curriculum materials such as teaching guides, resource units, content outline, audio-visual listings.

- Works with the department staff in the study and selection of textbooks and supplementary instructional materials consistent with established procedures.

- Works with the department staff in planning the budget and initiating requisitions for instructional supplies and equipment; submits departmental recommendations to the principal.

- Coordinates the use of community resources in the subject area.

- Plans with the department staff, in cooperation with the Director of Guidance, to stimulate student interest in the subject.

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* Milwaukee Public Schools, "The Role of the Department Chairman in Milwaukee Secondary Schools." Mimeographed Bulletin, Division of Curriculum and Instruction, March 3, 1959.

- Encourages systematic research for appraising the subjects offered in the department with the view of improving the instructional program.

- Participates in meetings

    1. Departmental staff meetings
    2. Interdepartmental meetings of chairmen as scheduled by the principal.
    3. City-wide meetings of subject area department chairmen.

- Studies trends and plans with other chairmen of the subject area for city-wide curriculum improvement under the leadership of the Superintendency; works under the principal's guidance in implementing plans and procedures developed through the Superintendency.

Additional functions may be identified which are unique to the goals of home economics education and to a particular school.

SAFETY IN THE CLASSROOM

The following suggestions may be helpful to the home economics teacher who is responsible for the safety of students working under her leadership and guidance:

- Remain in the classroom while students are present.
- Allow students access to rooms and equipment only when there is adequate adult supervision.
- Anticipate and correct situations which may cause accidents.
- Locate the fire extinguisher and fire blanket and explain the use of these items to the students.
- Guide students in the correct use of all equipment.
- Understand the code covering teacher liability.
- Know simple first-aid treatment and the procedures to follow in emergency situations.
- Report completely and accurately any accident, using the form which is available in the local school office.

Lessons in safety can be integrated into opportune learning situations. Taking responsibility for self <u>and</u> <u>others</u> indicates a growing maturity.

OPENING AND CLOSING THE DEPARTMENT

Opening and closing the department are important aspects of management. Proper attention to general management responsibilities establishes desirable standards throughout the entire year.

The preservation of materials and good sanitation practices determine the type of responsibilities to be assumed within the department. Department chairmen and teachers may wish to develop a check list of responsibilities which are necessary and appropriate for the opening and closing of the home economics department in their school. Learning experiences can be planned around the tasks to be done so that students can assist in organizing the department. This provides the students with opportunities in properly caring for equipment and applying management techniques that can be transferred to the home.

In closing the department the responsibilities are very similar, but in reverse of those necessary for the opening of the department. The teachers and students are responsible for leaving the facilities in a clean and sanitary condition. Particular attention needs to be given to the appropriate care and storage of food supplies and equipment as a precaution against household pests.

The summer school program requires the use of facilities, books, supplies, and equipment. The chairman of the department during the regular school year is responsible for seeing that the instructional materials and equipment are available for summer use. Summer school teachers and students are then responsible for the proper use and care of the department.

MAINTAINING DEPARTMENT FACILITIES

The appearance of the rooms in the home economics department reflects the educational program being carried out in the school. Acceptable standards need to be recognized and maintained for their contribution to an effective teaching-learning environment.

Department maintenance is a detailed responsibility that faces every teacher. Through the management of time and money, and most of all through the cooperative use of energy and ideas, the job becomes not only possible, but can also provide valuable learning experiences for the students. Students who are encouraged to recognize the jobs involved in department maintenance are willing to share in the work and assume responsibility in keeping the department clean, usable, and attractive. The teacher and her classes can do much to save time and energy through the use of preventive housekeeping. Equipment, supplies, and management methods can be utilized to protect the department facilities so that future cleaning is simplified.

Just as students and teachers must cooperate to manage the department, so must the teacher and school engineer cooperate if department maintenance is to be well done. The teacher needs to be familiar with the regular janitorial services provided in the local school. However, the basic responsibility for the overall appearance of the rooms must be assumed by the home economics teachers.

SCHOOL REPLACEMENT PLAN FOR APPLIANCES

An agreement exists between the Board of School Directors and the public utility companies of Milwaukee concerning the purchase and replacement of appliances. Significant factors in this agreement are:

- Original purchases of major appliances and small appliances are made from the gas company and the electric company.

- At regular intervals the appliances are replaced with new models. Electrical appliances are exchanged on a biennial basis. (Appendix N) Replacement of gas appliances usually occurs every third year.

- Specifications for the appliances are handled at the Administration Building. No requisitions are necessary for the exchange, however, teachers may submit a written request for changes in the size of appliances, additional items, or the elimination of certain appliances. Upon administrative approval, the requests are forwarded to the Purchasing Division.

- No charge is made for service which does not involve the replacement of parts. A telephone call to the Purchasing Division requesting service is sufficient. The Home Service Department, Milwaukee Gas Light Company may be contacted directly regarding service to gas appliances.

- Requests for repair which include damage to appliances or replacement of parts must be written on a repair requisition. The cost of this service is charged to the repair fund of the school requesting service.

The home economics teachers share the responsibility for wise use and care of appliances which are in the schools. The condition of the equipment when it is exchanged reflects the management practices within each of the schools. The department chairman should assume the following responsibilities concerning appliances on the school replacement plan:

- Examine each piece of equipment when it is delivered and promptly report any damage to the Purchasing Division.

- Retain delivery slips for use when appliances are checked for future exchange.

- See that all home economics teachers and students have the opportunity to read and understand the manufacturer's instructions regarding the use and care of the various appliances.

- Check all appliances which are to be returned for cleanliness and/or damage. A school will be notified two or three days prior to the exchange.

- Collect all small appliances in one place and check them against the original delivery slips at the time of exchange. This facilitates the work of the driver who delivers and picks up the appliances.

MANAGING DEPARTMENT BUSINESS

The management of department business is a cooperative enterprise shared by the chairman and teachers. The use of good business management contributes directly to the achievement of class goals. The material in this section offers special information on business procedures which contribute to the effective management of a home economics department.

ANNUAL BUDGET

A well-planned budget is essential to the management of an effective home economics department. Each department is financed by an allotment from the school board based on a yearly budget submitted by the department chairman. The budget year extends from January 1 through December 31. Items requested in the budget for a given calendar year may be ordered after January 1. Therefore, needs must be anticipated almost a year in advance since only those items which have been requested in the budget may be purchased. All budget requests are subject to the approval of the principal of the school and the staff of the Division of Curriculum and Instruction.

Budget requests are completed by department chairmen in March and April for the following year. The following guidelines should be considered when determining the annual budget:

- The number of students now enrolled in home economics courses and anticipated enrollments.
- Expenditures of the previous year or years.
- The focus and goals of each course.
- Expendable equipment and supplies required for all areas of the home economics program.
- Current upkeep of the department including needs for maintenance, repair, and replacement.

General Procedures

- Confer with the accountant or the secretary to determine the adequacy of the previous budget. Each school accountant keeps a record of expenditures and the balance for each division of the departmental budget.

- Discuss and determine the budget needs with all home economics teachers in the department.

- Consult the principal regarding variations in the budget requests. The total instructional budget of the individual school is under the administration of the principal.

- Discuss anticipated needs and budget requests with the home economics supervisors in a conference at the school or at the Administration Building.

Junior and senior high schools submit departmental budget requests to the school accountant using the form supplied by the school. Elementary schools submit budget requests to the Home Economics Office, Secondary Curriculum, on a form supplied by that office.

Budget Divisions

- Supplies usually refers to items which are consumable or breakable. The items usually cost $15.00 or less. Some examples are:

  food
  silverware
  child study play materials
  fabric samples
  china and glassware

- General Service includes professional cleaning of rugs, furniture, curtains, etc. Although this division is indicated in the departmental budget, the request becomes part of the general service budget for the individual school.

- Equipment refers to durable, lasting pieces. Some examples are:

  furniture
  electrical equipment
  book cart
  movable chalk board

- Replacement equipment includes the items which replace worn or outdated equipment.

- Additional equipment includes an increase in the equipment already on hand and new items which are needed for effective teaching-learning situations. The cost of the equipment must include any special installation service which might be required.

- Major repairs to the physical structure of the department and remodeling of any portion of the department are initiated by the department chairman and the principal of the individual school.

- Book requests in the secondary schools are submitted to the school librarian; in the elementary schools, the requests are submitted to the Home Economics Office. Funds must be requested for the purchase of:

    1. Books, pamphlets, and other printed materials to be used as references for home economics classes.

    2. Supplementary sets of textbooks for classroom use.

    3. Professional books for teacher advancement.

The book budget does not include funds for adopted textbooks. The adopted texts are provided to the students in the seventh and eighth grades. These books are ordered from the supply catalog. Adopted texts for grades 9-12 are purchased by the students.

Periodicals are provided under two-year contracts, 1965-1967, 1967-1969, etc., - for all departments and for the school library. Periodicals are processed by the librarian prior to the general budget requests on the alternate-year basis. Elementary schools make requests for periodicals on a purchase requisition and send the request to the Home Economics Office, Secondary Curriculum.

REQUISITIONS USED FOR ORDERING INSTRUCTIONAL MATERIALS AND SERVICES

Most instructional materials and services are supplied to home economics departments only upon the presentation of a written request. The request which is submitted on a requisition is reviewed by the principal of the school and by the staff of the Division of Curriculum and Instruction. There are four types of requisitions, - stock, purchase, book, and repair.

Stock Requisitions

Stock requisitions are used for merchandise which has been purchased in quantity and is stored at the School Board warehouses. Each school office has a catalog which lists all of the items available from the warehouses. Copies of the Home Economics section of the catalog are furnished to the home economics teachers. (Appendix O) Additional copies of the Home Economics section as well as copies of other sections in the catalog may be ordered on a stock requisition.

The following guidelines may facilitate efficient ordering of stock items:

- Check the anticipated delivery dates in the school office each September. The dates may vary from year to year.
- Establish procedures of ordering which meet the needs of all home economics teachers within the department.
- Develop a schedule for ordering to facilitate the routine office procedures.
- Allow from two to four weeks for the processing of stock requisitions.
- Check the department inventory to avoid duplication and overstocking of items. Merchandise must be ordered in appropriate quantities to provide for effective use.
- Examine all sections of the stock catalog for items which could be used by the home economics department. Several instructional supplies can be found in sections labeled General, Art, Industrial Arts, Lunchroom, etc. Items ordered from other sections of the catalog are coded and charged to the home economics budget.

- Indicate number, quantity, and the complete description of each item. (Appendix A)

- Submit the order to the school secretary who types the information on the stock requisition. (Appendix B)

- If items are marked "out" when the stock order is received, the items may be purchased in small quantities from the grocer. The following month reorder from the stock catalog.

Stock requisitions may also be used to pick-up items from the local school. This may include items such as the following:

- Incorrect items which have been sent from the warehouse on a previous stock order.

- Supplies and equipment which are worn and no longer usable.

- Obsolete books.

The list of items to be picked up should be given to the school secretary with instructions to place a checkmark in the box indicated "pick-up" on the requisition. (Appendix C)

Purchase Requisitions

Purchase requisitions are used to obtain supplies and equipment which are not carried in stock. Examine the catalog thoroughly for the availability of an item before making out a purchase requisition. The following procedures should be used for all general purchase requisitions:

- Give a concise description of the desired equipment or supplies indicating size, color, model number, approximate cost, and any additional distinguishing features. If possible suggest the company furnishing the supplies or equipment. (Appendix E.)

- Follow routine procedures for the processing of requisitions.

The department chairman must sign the paying and receiving copy of each purchase order and send it to the Purchasing Division. (Appendix H.)

Locally Purchased Items -

Occasionally, a teacher may need to purchase certain items from a local store where she may select specific merchandise. The procedures followed are:

- Visit the store and select the desired merchandise.

- Record the description of the article, the local store name, and the name or number of the salesperson. The Milwaukee stores are usually willing to hold merchandise until a purchase order is received from the Purchasing Division.

- Prepare the purchase requisition at the local school for routine processing. (Appendix F)

Delivery of the merchandise is made by the store if they have that service; otherwise, the teacher would need to pick up the merchandise.

Distilled water may be ordered on a purchase requisition. The minimum order which will be delivered is two cases. There are six half-gallons in one case. The number of empty bottles being returned to the company should be indicated on the paying and receiving copy of the purchase order as an allowance is given for the empty bottles. The Purchasing Division is not aware of the credit which should be allowed unless the number of empty bottles is indicated. (Appendix H)

Dry-Cleaning and Special Laundry Service -

Requests for dry-cleaning service are written on a purchase requisition. The pick-up date and the service required must be indicated on the requisition. (Appendix G) Special laundry service would also be written on a purchase requisition giving the same information as for dry-cleaning. See page 20 for information regarding regular laundry service.

Government Surplus Commodities -

Purchase requisitions may be used to order certain government surplus commodities for the home economics department. The commodity items must be ordered in full package lots and will be delivered with the lunchroom order.

The complete inventory of government commodities changes each month. Certain items are usually available every month. Departments with adequate storage may wish to order the following commodities:

Butter	32 - 1# cartons
Cheese (Processed)	6 - 5# cartons
Flour (All-Purpose)	5 - 10# cartons

Many of the commodities are packaged and distributed in lots which are too large for effective use in the home economics classroom. The list of available commodities appropriate for classroom use is sent to the department chairmen for the following month. The regular procedures are used to prepare the purchase requisition.

Book Requisitions

Book requisitions are used for books, pamphlets, and other printed materials. (Exception - coupons for government publications may be ordered from stock or obtained from the librarian.) The following guidelines may facilitate the departmental requests:

- In January the librarian of each secondary school notifies each department of the book fund allocation.
- Information regarding desired books or pamphlets is given to the department chairman.
- The chairman submits the order to the librarian using the form supplied by the librarian.
- Elementary teachers give their orders to the school secretary indicating the title, author, publisher, number of copies, and approximate price.
- The librarian and secretary prepare the requests on the book requisitions which follow the regular procedure for processing of requisitions. (Appendix D)
- Book requisitions are used for orders of more than $2.50. Orders for pamphlets which total an amount less than $2.50 may be ordered through a special library fund.
- Book fund allocations must be used prior to November 1.
- The department chairman should check with the librarian at periodic intervals during the year regarding the amount of money remaining in the department book fund.
- Additional information on books and periodicals is contained in the Budget section.

Repair Requisitions

All items for which repair is needed require a written repair requisition with the exception of electrical and gas equipment purchased on the replacement plan. (See School Replacement Plan.)

Because the quality of instruction in specific cases is directly dependent upon equipment which operates effectively, a concerted and cooperative effort must be made by teachers, secretaries, school engineers, and repair men to keep such equipment operating efficiently.

The signature of the teacher in charge, an engineer or secretary is essential before any piece of equipment may be removed for repair. Likewise, a signature is essential when equipment or parts of equipment are received.

Emergency repair requests may be initiated by the teacher through a repair requisition and a telephone call to the Purchasing Department requesting and confirming a repair order.

The Purchasing Department will make the confirmation after receiving the number of the requisition. They will also expect the written request naming the person at the Purchasing Department who confirmed the emergency request. ("Confirmed by_____.")

Sewing machines, garbage disposals, and miscellaneous pieces of equipment needed daily will require this type of attention. (Appendix J)

Routine repair requests for items which require periodic upkeep may be made by department chairmen. Vacation periods or certain periods throughout the day when equipment is not in use may be specified as a convenient time for routine repair. Sewing machines, some electrical equipment, knives and scissors, etc., may be considered for routine repair. (Appendix I)

A request for sharpening scissors and knives may be made during the summer. (Appendix K) Pinking shears are not included because the cost is greater than the purchasing of new ones. Pack scissors and knives separately, mark box with number and name of items, and send to the school office for museum pick-up.

Processing Requisitions

A minimum of two weeks is usually necessary for the processing of all requisitions. The following routine procedures apply to the processing of requisitions:

- Requisitions are coded and typed on proper forms by the school secretary.

- Requisitions are reviewed and signed by the school principal or accountant.

- Requisitions are included in the mail for the Administration Building which is collected by the Museum Delivery twice a week.

- Requisitions are checked for proper coding by Budget Control.

- Requisitions are reviewed and signed in the Home Economics Office, Secondary Curriculum.

- Stock requisitions are sent to the warehouse to be filled and delivered to the school.

- Repair requisitions are handled by the Repair Division.

- Purchase requisitions are forwarded to the Purchasing Division and a purchase order is made out for the merchandise. The paying and receiving copy of the purchase order is signed by the department chairman after the merchandise has been received. (Appendix H) The paying and receiving copy must be returned to the Purchasing Division so the vendor may be reimbursed.

INSTRUCTIONAL MATERIALS AND SERVICES NOT REQUIRING REQUISITIONS

Written requisitions are not required for some instructional materials and services. However, certain procedures must be followed for satisfactory and efficient service. Guidelines are given for the following major items used by the home economics department.

Perishable Foods

- Only perishables and items not carried in stock may be purchased from the grocery. Staples are more economically ordered from stock on a stock requisition.

- Each home economics department is responsible for the selection of a grocery.

- The grocery which has served a school in previous years should be retained by the school. Securing a neighborhood grocery which gives credit and delivers supplies to the school is not an easy task. However, if food or service is unsatisfactory, a change in grocers may be made. The suggested change must be approved by the Home Economics Office.

- The home economics teachers need to cooperate with the local grocer by planning weekly or semi-weekly orders.

Dairy Products

- The Purchasing Division receives bids and makes selections of dairies for schools with lunchrooms.

- Announcements of the dairy servicing a given school will be sent by the Purchasing Division to the school office or department chairman prior to the opening of school in September. The lunchroom and home economics department order from the same dairy. Orders can be telephoned directly to the dairy.

- All dairy products must be ordered from the selected dairy. Only elementary schools not having a lunchroom may order dairy products from the grocery.

Eggs

- Information is sent to the secondary schools specifying the company which will supply eggs for the following month.

- A notice is sent to department chairmen when a different company receives the contract to supply eggs.

- Orders are telephoned directly to the company and must be for at least ½ case which is fifteen dozen eggs. If a department cannot use or store the above amount of eggs, the orders for eggs would need to be placed with the grocery.

Regular Laundry Service

- Only the schools which have no washer and dryer in the home economics department should use professional laundry service.

- Check in the school office for the laundry which has been designated by the Purchasing Division.

- Telephone the laundry directly with the request for laundry service. No requisition is needed for the regular laundry requests. (See page 15 for special laundry requests.)

- A delivery ticket must accompany the finished laundry when it is returned to the school.

- Check the completed order, sign the delivery ticket and send it to the Purchasing Division via Museum Delivery.

Films and Filmstrips

The titles and descriptions of available films and filmstrips may be found in catalogs from the Milwaukee Public Schools, Milwaukee Public Museum, University of Wisconsin, and various commercial suppliers.

- The person in charge of instructional resources in each school should be consulted for the procedures to use when ordering films and filmstrips.

- Check with the building director before ordering a film or filmstrip for which there is a charge.

- Order films and filmstrips well in advance of the date for showing.

- Secondary schools may purchase current educational filmstrips. Filmstrips are ordered on a purchase requisition from department funds and retained in the department.

- Because of the expense, films are not to be purchased by individual departments. If a valuable film comes to the attention of a teacher, she can notify the Home Economics Office. A request will be sent to the Instructional Resources personnel for ordering and previewing the designated film. If approved, the film will be purchased for the Museum Film Library.

- Requests may also be made to have sets of filmstrips placed in the Museum Film Library.

Processing Delivery Slips

- All delivery slips should be checked for accuracy. This should be the responsibility of one person in the department.

- Every delivery slip must be signed by the teacher. The teacher must sign her full name. Using a stamp or initials is not sufficient. (Appendix L)

- Delivery slips from each of the vendors should be grouped separately and sent via Museum Delivery each week to the Home Economics Office, Administration Building. This procedure avoids the possible loss of delivery slips and unnecessary delays.

- Only the delivery slips which the home economics department has the responsibility for payment should be sent to the Home Economics Office. This includes all the bills which are for supplies used for educational purposes in the classroom.

- The teacher should keep a record of the purchased supplies and their cost to answer questions that arise occasionally at the Administration Building.

- At the end of every month, each vendor sends a monthly invoice of all purchases to the Home Economics Office. (Appendix M) The invoices are checked against the delivery slips and processed for payment.

- Promptness is imperative! Home economics teachers and vendors must have all delivery slips and statements sent to the Home Economics Office at the end of each month. The secretary must have the delivery slips checked by the tenth of the following month so the vendors may receive prompt payment.

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A P P E N D I X

APPENDIX A

SAMPLE OF STOCK ORDER

To Be Presented To School Secretary For Typing

Item Number	Quantity	Description
1190	6 bottles	Sewing Machine Oil
5223	3 rolls	Drafting Tape, 1"
6324-03	12 pkgs.	Napkins, 1/4" fold x 13-1/2"
6327-01	24 rolls	Wax paper, roll, 12" x 125'
7400	2 bottles	Almond Extract
7463-01	6 pkgs.	Gelatin dessert, orange
7511-01	6 cans	Pineapple, sliced
7550-01	5 cans	Shortening

APPENDIX B

SAMPLE STOCK REQUISITION

Stock Items

Stores Division

STOCK REQUISITION

18839

Date March 28, 1965

Budget Code	1	0,2,1,7	2,0,3	-,-,-
	Fund	Activity	Object	Location

Department or School Name _____ For Pick-up ☐ Sale Item ☐

NOTE: Order by name and number in supply catalog. Use a separate line for each separate item. All item numbers on this req. must be in only one of these groups: 1 to 1999; 2000 to 2999; 3000 to 3999; 4000 to 4999; 5000 to 6999; 7000 up.

Ref. o.	Item No.	Filled ✓	Quantity	Description	Reorder ✓
1.	7400		2 bottles	Almond extract	
2.	7463-01		6 pkgs.	Gelatin dessert, orange	
3.	7511-01		6 cans	Pineapple, sliced	
4.	7550-01		5 cans	Shortening	
5.					
6.					
7.					
8.					

Date _____ 19____

Approved Supervisor _____ Signature _____

505 4-64 Stores Division BOARD OF SCHOOL DIRECTORS Milwaukee, Wis.

APPENDIX C

SAMPLE STOCK PICK-UP REQUISITION

Stores Division

STOCK REQUISITION

18840

Date April 15, 19 65

Budget Code				
	1	0,2,1,7	2,0,3	-,-,-
	Fund	Activity	Object	Location

Department or School Name _____ For Pick-up [X] Sale Item [ ]

NOTE: Order by name and number in supply catalog. Use a separate line for each separate item. All item numbers on this req. must be in only one of these groups: 1 to 1999; 2000 to 2999; 3000 to 3999; 4000 to 4999; 5000 to 6999; 7000 up.

Ref. No.	Item No.	Filled ✓	Quantity	Description	Reorder ✓
1.	7573-01		6 cans	Tomatoes (spoiled)	
2.	5416		4 pr.	Scissors (incorrect size)	
3.			18	Books, outdated (to be disposed) (Pick up in Room 302)	
4.					
5.					
6.					
7.					
8.					

Approved _____ Supervisor Date _____ 19____ _____ Signature

505 4-64 Stores Division BOARD OF SCHOOL DIRECTORS Milwaukee, Wisc.

APPENDIX D

SAMPLE BOOK REQUISITION

Purchasing

No. 11130

BOOK REQUISITION

PUBLISHER Chas. A. Bennett Co.

NOTE: Issue Separate Requisition for Each Publisher

Budget Code	Fund	Activity	Object	Location
	1	-,-,-,-	2,4,5	-,-,-

Department or School Name _____ Date March 2, 1965

Quantity	Book Title (not series title)	Author	Grade	Vol.	Net Price	Amount
6	The Developing Child	Brisbane & Riker			4.59	27.54
2	Foods In Homemaking	Cronan & Atwood			5.00*	10.00
	(* estimated price)					

Approved _____ Supervisor

DATE _____ 19____

Signature - Principal or Dept. Head

508 4-64 BOARD OF SCHOOL DIRECTORS Milwaukee, Wisc.

APPENDIX E

SAMPLE PURCHASE REQUISITION (GENERAL)

(Separate Requisition Required for Each Company)

Purchase Division

46161

PURCHASE REQUISITION

Date February 19 19 65

Budget Code	1	0,2,1,7	2,0,3	-,-,-
	Fund	Activity	Object	Location

Department or School Name _____ Shop No. _____ Repair Req. No. _____

Vendor, Order, Date *Leave Blank	Quantity	Description and Remarks	Unit Price	Total Charge
			$	*Leave Blank *
1.	1	Stainless Steel Cart for		
2.		room 131 (Model 311)		
3.				
4.				
5.				
6.		Order From: Lakeside Mfg., Inc. Milwaukee, Wisconsin		

Deliver To _____

_____ 19____ _____

Approved Supervisor Signature Principal or Dept. Head

504-4-64 Purchase Division BOARD OF SCHOOL DIRECTORS Milwaukee, Wis.

APPENDIX F

SAMPLE PURCHASE REQUISITION

(For Purchases at Local Stores)

Purchase Division

PURCHASE REQUISITION

4 6 1 6 2

Date March 10, 19 65

Budget Code	1	0,2,1,7	2,0,3	-,-,-
	Fund	Activity	Object	Location

Department or School Name _____ Shop No. _____ Repair Req.No. _____

Vendor, Order, Date *Leave Blank	Quantity	Description and Remarks	Unit Price $	Total Charge *Leave Blank *
1.	1	Tablecloth and 8 matching napkins		
2.		$8.00 set - 100% cotton, white		
3.		72" x 108"		
4.		Salesperson # 2772 Miss Susan Krueger, holding merchandise for purchase order		
5.				
6.		From: Gimbels-Schusters Downtown Store		

Deliver To _____ _____ 19____ _____

Approved Supervisor Signature Principal or Dept.Head

504-4-64 Purchase Division BOARD OF SCHOOL DIRECTORS Milwaukee, Wisconsin

APPENDIX G

SAMPLE PURCHASE REQUISITION

Dry-Cleaning Service

Purchase Division

46163

PURCHASE REQUISITION

Date April 23, 19 65

Budget Code	Fund	Activity	Object	Location
	1	-,-,-,-	2,7,7	-,-,-

Department or School Name _____ Shop No. _____ Repair Req. No. _____

Vendor, Order, Date	Quantity	Description and Remarks	Unit Price	Total Charge
* Leave Blank			$ *Leave Blank	*
1.	3 pair	Curtains (to be dry-cleaned)		
2.		(Pick up in Room 204 by May 12)		
3.				
4.				
5.				
6.				

Deliver To _____

_____ 19____ _____

Approved Supervisor Signature Principal or Dept. Head

504-4-64 Purchase Division BOARD OF SCHOOL DIRECTORS Milwaukee, Wisconsin

APPENDIX H

SAMPLE PAYING AND RECEIVING COPY OF PURCHASE ORDER
(yellow copy)

GReenfield 6-3670
RECEIVING AND PAYING

Purchase Order

BOARD OF SCHOOL DIRECTORS
5225 West Vliet Street
Milwaukee, Wis. 53208

Mark Every Package
& Bill With This No.

Purchase Order No. G 25013

TO Roxo Beverage Company
223 East Detroit Street
Milwaukee, Wisconsin

Date 5/26/65 Fund 1-0217-203- ___

F.O.B ~~Milwaukee~~ Shipping point

Less Cash Discount _____ % _____ Days

(name of school)	Req.	Passed for Payment		Original Amt.
		Date	No.	
Fill This Out as Soon as Delivered MILWAUKEE, WIS.	11429			$3.00

Date	Quantity	Quantity	Unit	Description	Price Per Unit	Amount	
		2 cases		Distilled Water (9 empty bottles returned)			

Sign and Return to Purchasing Office Immediately
on Receipt of Good.

Postage Paid _____ Freight Paid _____

Recd. as indicated above Signed Sue Smith

APPENDIX I

SAMPLE REPAIR REQUISITION

Sewing Machine Repair

Director of Repairs — REPAIR REQUISITION — 1 4 2 2 2

Req. Date May 13, 19 65

Budget Code				
	Fund	Activity	Object	Location

Department or School Name

Use Separate Requisition for each different division of work

School Engineer	Location in Buildings or Grounds: Room 122 -- 12 Singer Sewing Machines #201 Room 131 -- 3 Singer #604 Sewing Machines
Sec.-Bus. Mgr.	Nature of Work: Check and make necessary repairs (machines will be labeled)
Education Dept.	Reasons: Annual servicing -- to be done during summer vacation. From: Singer Sewing Machine Company

Est. Start Date	Est. Complete Date	Est. Cost $	Est. Labor Hours	Actual Cost $	Foreman

Shop No. _____ Workman _____ Date Completed _____ 19____

REPAIR DIVISION AUTHORIZATION — Signature — Principal or Dept. Head

605 4-64 — BOARD OF SCHOOL DIRECTORS — Repair Division — Milwaukee, Wis.

APPENDIX J

SAMPLE REPAIR REQUISITION

Emergency Sewing Machine Repair

Director of Repairs

REPAIR REQUISITION 1 4 2 2 3

Req. Date February 7, 19 65

Budget Code				
	Fund	Activity	Object	Location

Department or School Name

Use Separate Requisition for each different division of work

School Engineer

Location in Buildings or Grounds

Room 131 -- one Singer sewing machine #404

Room 132 -- one Singer sewing machine # 604

Sec.-Bus. Mgr.

Nature of Work

Room 131 -- Motor trouble (machines will be labeled)

Room 132 -- broken upper tension

Education Dept.

Reasons

Repair needed immediately for classroom use.

Telephoned by Miss Jones; confirmed by Dorothy Connelly,

Purchasing Department

Est. Start Date	Est. Complete Date	Est. Cost $	Est. Labor Hours	Actual Cost $	Foreman

Shop No._____ Workman_____ Date Completed_____ 19____

REPAIR DIVISION AUTHORIZATION Signature Principal or Dept. Head

605 4-64 BOARD OF SCHOOL DIRECTORS

Repair Division Milwaukee, Wisc.

APPENDIX K

SAMPLE REPAIR REQUISITION

Scissor and Knife Sharpening

Director of Repairs

REPAIR REQUISITION

14224

Req.
Date May 20, 19 65

Budget Code				
	Fund	Activity	Object	Location

Department or School Name

Use Separate Requisition for each different division of work

School Engineer

Location in Buildings or Grounds Room 214

Sec.-Bus. Mgr.

Nature of Work
36 Scissors to be sharpened.

Education Dept.

Reasons
Sharpening to be done during summer vacation.

Est. Start Date	Est. Complete Date	Est. Cost $	Est. Labor Hours	Actual Cost $	Foreman

Shop No._____ Workman _____ Date Completed_____ 19____

REPAIR DIVISION AUTHORIZATION

Signature Principal or Dept. Head

605 4-64

BOARD OF SCHOOL DIRECTORS

Repair Division

Milwaukee, Wisc.

APPENDIX L

SAMPLE VENDOR'S DELIVERY SLIP

BILL'S FOOD MARKET
2209 North 17th Street
Milwaukee 12, Wisconsin

Date May 12, 1965

Sold To Auer Avenue School
Home Economics Dept.

Address 2319 West Auer Avenue

Account Forwarded		
1. 2 heads lettuce @ .29	.	58
2. 2# ground beef @ .49	.	98
3. 2 pkg. carrots	.	35
4. 1 qt. Mayonnaise	.	65
5.		
6.		
7. ok.		
8. Sue Smith		
TOTAL	2.	56

APPENDIX M

SAMPLE VENDOR'S INVOICE
(made in duplicate)

BILL'S FOOD MARKET
2209 North 17th Street
Milwaukee 12, Wisconsin

Date April 1, 1965

Sold To Auer Avenue School
Home Economics Dept.

Address 2319 West Auer Avenue

Account Forwarded		
1. Groceries supplied		
2. to Auer Avenue		
3. Home Economics		
4. Dept. for month		
5. of March, 1965.		
6.		
7.		
8.		
TOTAL	$13.	58

APPENDIX N

EXCHANGE DATES

Replacement of electrical equipment by the

Wisconsin Electric Power Company

1966 Replacement

HIGH SCHOOLS

Bay View
Custer
Juneau
King
Riverside
South
West

JUNIOR HIGH SCHOOLS

Fulton
Roosevelt
Sholes
Steuben
Walker
Wells

ELEMENTARY

Berger
Burdick
Eighth
Fernwood
Forest Home
Gaenslen
Green Bay Avenue
Hartford
Hi-Mount
Lincoln Avenue
Twenty-First

1967 Replacement

HIGH SCHOOLS

Lincoln High
Marshall
North
Pulaski
Washington

JUNIOR HIGH SCHOOLS

Audubon
Bell
Edison
Fritsche
Kosciuszko
Morse
Muir
Peckham
Wright

ELEMENTARY

Brown Street
Dover
Franklin
Garden Homes
Keefe Avenue
Morgandale
Oklahoma Avenue
Philipp
Story
Thirty-First
Vieau

HOME ECONOMICS CATALOG

(Extracted from large school catalog containing stock items for all departments. Home Economics section begins on p. 63 in regular stock catalog as illustrated on following page.)

VT 001 693
Boortz, Nathan H.
The Dental Assisting Curriculum--Content and Scope (A Position Paper Prepared for the Workshop on Dental Assisting Education, Chicago, Illinois, September 28-30, 1967).

American Dental Association, Chicago, Ill. Council on Dental Education
American Association of Dental Schools, Chicago, Ill.
MF AVAILABLE IN VT-ERIC SET.
Pub Date - 67 17p.

*DENTAL ASSISTANTS; *PROGRAM DEVELOPMENT; CURRICULUM; STUDENT TEACHER RATIO; CERTIFICATION; ACCREDITATION (INSTITUTIONS); CLINICAL EXPERIENCE; *HEALTH OCCUPATIONS EDUCATION; *STANDARDS

Offered in a collegiate institution and leading to an Associate in Arts degree, the curriculum should include about 32 units of instruction in the dental assisting major, 14-20 units of related courses, and 10-19 units of general education. Early in the program, the student should receive an orientation clinical experience and later advanced clinical experience. The instructor-student ratio in these experiences should not exceed one to 16 in dental clinics or one to 12 in private dental offices. A planned orientation of dental students, practicing dentists, and employed dental assistants in advance of the student experience is important. An advisory committee including dentists and dental assistants should assist with planning, inaugurating, and implementing the program which should be evaluated continuously by the staff and the advisory committee in terms of current dental practices. The Council on Dental Education's accrediting program should be continued and students should be encouraged to seek certification by the American Dental Assistants Association. Included are an outline of recommended courses, a sample curriculum, and suggested course descriptions. (JK)

VT001 693

ED0 31587

NOV 17 1967

THE DENTAL ASSISTING CURRICULUM: CONTENT AND SCOPE

A POSITION PAPER

prepared for the
Workshop on Dental Assisting Education

Sponsored by
Council on Dental Education
American Dental Assistant Association Education Committee
American Association of Dental Schools

American Dental Association

Chicago, Illinois
September 28 - 30, 1967

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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by

Dr. Nathan H. Boortz
Director of Technical Education
Foothill Junior College District
Los Altos Hills, California

VT001693

CONTENTS

- Purpose
- Background Information
- Length of Program
- Articulation with Council on Dental Education Requirements
- Major, Related and Other Courses
- Sample Dental Assisting Curriculum
- Summary and Recommendations

PURPOSE

The purpose of this paper is to present a junior college administrator's point of view on dental assisting education that is based primarily upon (1) the results of a curriculum survey of 22 California junior colleges having dental assisting programs and (2) a subsequent series of state conferences and meetings on dental assisting education. The paper is limited to curriculum considerations and, therefore, excludes such topics as finance, equipment and facilities.

BACKGROUND INFORMATION

Expansion rates in dental assisting education programs in California junior colleges are somewhat parallel to the unprecedented development of the junior college movement throughout the state. Junior colleges, appropriately, reflect local needs, educational philosophies and demands. It is natural then, that dental assisting programs grew, under local control, to meet the needs perceived in each dental community. "It is not surprising, therefore, that a wide variety of curricula, facilities, and amounts of financial support appeared over a twenty-year period."[1]

Such a statewide diversity created a situation where norms were difficult to establish or recognize. Problems were encountered by college administrators and advisory committee as they attempted to determine the trends of their programs in relation to other programs in the state. Still other problems were encountered in transferring students or teaching personnel from one program to another.[1]

It was apparent that custom and the economic pattern of the various geographical areas determined the extent to which local dentists made use of assistants; what tasks the assistants were required to perform; what knowledges they needed. The equipment and techniques used by local dentists had their effect on the equipment used in the school; the amount and types of administrative duties assigned to the assistant in the dental office was reflected in

junior college dental assisting education programs[1]; and, of course, the influence of the Council on Dental Education of the American Dental Association's "Requirements for Approval of Educational Programs for Dental Assistants"[2] made its mark.

A pilot survey revealed that most of the colleges conducted four-semester programs leading to the Associate in Arts (A. A.) degree. However, as requirements for these degrees differed, time alloted to dental assisting courses also differed. A wide variety and proliferation of courses, units, and topic titles was also revealed.

In view of the above divergencies and of the need for a source of information and assistance that dental assisting advisory committees and college personnel needed in order to make curriculum decisions, a state Survey was made.[3]

The purpose of the Survey was to provide data that would assist in constructing a "model" of an adequate dental assisting program.[1] "Blocks" of curriculum content for such a "model" were constructed and edited by an ad hoc committee of dental assisting instructors, dentists and selected college administrators from throughout California. Further refinements and recommendations were made by the State Advisory Committee on Dental Assisting Education.[4] This official body was appointed jointly by the California Department of Education's Bureau of Industrial Education and the Education Committee of the California Junior College Association in 1966.

LENGTH OF PROGRAM

ADA- approved institutions for training dental assisting students in California are predominantly found in the junior colleges. Although there are a few two- and three-semester programs, the majority (15 of the 22 schools in the Survey) are four semesters in length. In addition, several proprietory (non-ADA approved) schools offer training of a few weeks' duration.

ARTICULATION WITH COUNCIL ON DENTAL EDUCATION REQUIREMENTS

On the matter of articulation of the forthcoming California recommendations[4] and the Council on Dental Education requirements[2], it appears that three broad areas are involved: (1) subject matter per se, (2) scope and sequence of that subject matter and (3) the degree of student competence to be expected.

A study of the two sets of recommendations reveals that the California plan not only meets all of the Council's[2] requirements but is even more extensive in several areas. The California recommendations spell out the curriculum content in greater detail and provide a pattern of courses that is more definitive and more adaptable to a collegiate setting.

If it can be assumed that there will be a need for greater competencies in the dental assistant of the '70's (both in performance skills and background from which to profit from continuing education), the Council on Dental Education, in terms of subject matter alone, may want to consider re-wording or adding a series of statements to its present requirements[2] so that it will include or place more emphasis on the following:

A. "Pre-clinical Sciences"

Terminology, dental assistant employment opportunities and job demands, introductory human anatomy and a more extensive delineation and treatment of "tooth form, function and relationships".

B. "Clinical Sciences"

Dental Specialties, solo and group practices ("knowledge and ability to assist the dentist in any routine or office procedure" appears to be concerned with only the solo, general practioner); basic physical and chemical properties of dental materials; systems of measurements; safe practices in the care and use of both supplies and equipment; more extensive treatment on the kinds and uses of dental laboratory models; biological effects of radiation and radiography and film evaluation rather than mere "ability to use x-rays"; insurance; credit and collections; correspondence; human relations, applied psychology, receptionists' duties and techniques; jurisprudence, including implications for auxiliary personnel, for patients and for dental records; legislation, including the state's labor code (if any), Workmen's Compensation, Social Security and unemployment insurance.

As to scope and sequence, any set of guidelines that are written may leave this matter wholly to the training institution. The State Advisory Committee[4], however, made some value judgments based on a pragmatic combination of both logical and psychological approaches to learning, on their personal experiences and on the opinions of various dental assisting instructors. If we are to be at all concerned with what might be termed "education economics", then the Committee's attempt to create a series of well-planned, orderly, efficient and effective learning experiences appears to be in order. These will take the form of a recommended series of courses with classroom, laboratory and clinical experiences and presented later in the paper.

One of the problems constantly facing me as an educator and technical education administrator is the general lack of preciseness which I find in attempts to express levels of expected achievement. A common weakness in trying to guarantee certain minimum competencies in trainees is to design a curriculum that is based solely on topics to be covered in a given period of time. Inherent in such practice is a series of hidden and oftentimes unrecognized assumptions. These include common backgrounds, motivations and learning capacities of students; common instructional abilities on the part of our teachers; common availability and utilization of various instructional media. Yet in spite of the obvious errors in such assumptions, we continue to ignore the matter. For all practical purposes we are then saying that time equals competence and use time as the fundamental criterion in expressing our desired educational goals, accomplishments and behaviors.

Evidence of this kind of practice includes such familiar "standards" as "the 104-hour course", "the course of study should be one academic year in length", "12 hours of chemistry", etc. Time, like teachers' materials or like educational facilities, is one performance resource but is not in itself a measure of accomplishment.

The alternative is to think in terms of performance criteria rather than in terms of time criteria. In a performance curriculum we define precisely what we want to happen and organize a curriculum in such a manner that each task to be learned is defined in terms of specific levels of achievement. As a student

progresses toward the ultimate aims of a unit, a course and a curriculum, his achievement is readily determined against the achievements that were defined for that unit, that course and that curriculum. The student continues to study the theory and to practice the skills until he can master the concepts and the tasks involved. Only such a curriculum design will prevent teachers from retreating to the rationalizations and platitudes that plague contemporary education. Only the implementation of such a curriculum design will guarantee a reliable educational product.

An attempt to develop performance criteria (also referred to as "behavioral objectives") was made in August, 1967 at a conference at Lake Arrowhead, California. Groups of dentist, dental assisting instructors and educators were assigned dental assisting curriculum "blocks" and challenged to develop instructional objectives similar, in essence, to those formulated by Robert Mager[5]: (1) identify the nature of the expected student performance; (2) define the conditions under which the performance is to take place and; (3) state the standards of competence that are to be expected.

Thus, such a vague instructional criterion as "knowledge of dental insurance" might be revised to read:

> "The student will identify and demonstrate her ability to complete pre-paid dental care forms according to the specifications of the organization involved."

Another example might be the replacement of the phrase "knowledge and ability to take x-rays" with:

> "The student will be able to demonstrate current techniques of patient positioning, film placement, angulation and exposure to obtain desired density according to dental practice standards".

Although admittedly there are many objectives that are not now readily defineable, reason dictates that we should identify and define those which we can. The final recommendations and guidelines of the State Advisory Committee[4] will include generous samples of performance criteria statements and, in addition, it is anticipated that knowledgeable dental assisting instructors will use, refine, and expand on those statements.

MAJOR, RELATED AND OTHER COURSES

In arriving at a recommended pattern of dental assisting, related science, related business and general education courses, the State Advisory Committee[4] utilized a number of sources of information. The primary source, however, was a statistical analysis of the tabulation of Survey responses[3].

After studying the data, analyzing the competencies desired in a dental assistant and working out a series of courses and course content, it was the considered judgment of the Committee that the resulting curriculum should be two academic years in length and lead either to an Associate in Arts (A. A.) or to an Associate in Science (A. S.) degree.

The method used in constructing the curriculum was as follows. First, the topics in the Survey[1] were re-arranged to correspond with the "Blocks" of subject matter developed by the various groups referred to in the "Background Information" section above. An elementary statistical treatment involving the range, mean and median was then determined for hours of lecture, laboratory, and total hours of lecture and laboratory for each "Block."

Figure 1 shows the recommended courses and units in the major together with the number of hours per week devoted to lecture, lab and the total. It also shows the total hours recommended for each course in the major.

The Committee based its recommendations on a semester of 18-weeks' duration. The number of hours recommended for lecture and laboratory experiences, therefore, are multiples of 18. Semester units of credit follow the typical collegiate practice of granting one unit of credit for each hour of lecture per week or 3 hours of laboratory work per week. In some courses the weekly hours of laboratory resulted in a number greater or less than 3 or a multiple thereof, but the over-all total for the major is a multiple of 3.

Figure 1 also indicates areas of instruction considered important to the training of competent dental assistants; namely, business, oral and written communication skills, natural sciences and psychology. Recommendations for exact courses and units in these areas were avoided. It was greed that local institutions and their dental assisting advisory committees were in a

better position to make such decisions. The same rationale was extended to general education and to state and local requirements.

In summary, the recommendation consists of 32 units (1011 hours) of classroom, laboratory and clinical instruction in the dental assisting major, from 14 to 20 units of related courses and from 10 to 19 units of general education including state and local requirements. The recommended associate degree curriculum contains 60 to 65 semester units of credit.

SAMPLE DENTAL ASSISTING CURRICULUM

Figure 2 shows a possible combination of the various courses in a four semester sequence including prerequisites for admission to the program. It is followed by suggested catalog descriptions of the dental assisting course.

[Note: The "Preliminary Draft" of the Survey[1] and the final document (to be published January, 1968) includes recommended outlines for these courses.]

Figure 1

STATE ADVISORY COMMITTEE ON DENTAL ASSISTING EDUCATION
CALIFORNIA STATE DEPARTMENT OF EDUCATION
SACRAMENTO, CALIFORNIA

RECOMMENDED COURSES AND UNITS

		Sem Units	Hours/Week Lect	Lab	Total	Total Hours
Major Courses:						
D. A. 50	Intro to Dental Assisting	2	2	0	2	36
D. A. 52A, B	Bio-dental Sciences	6	- 8 -		8	144
D. A. 54	Dental Materials	2	1	3	4	72
D. A. 56A, B	Practice Administration	15	- 8 -		8	144
D. A. 60A, B	Dental Radiography	4	2	5	7	126
D. A. 62A, B	Dental Operatory Procedures	5	3	6	9	165
D. A. 64A, B	Dental Laboratory Procedures	4	2	5	7	126
D. A. 70A, B	Supervised Clinical Experience	4	1	10	11	198
		32				1011

Related Courses:	Semester Units
Business (e.g., typing, bookkeeping, business correspondence personal development)	2 - 5
Communication, oral and written	6
Natural Science (e.g., biology, chemistry fundamentals of biochemistry)	3 - 6
Applied Psychology	3
Total, Related	14 - 20

General Education including State and Local Requirements:

E.g.: Fine Arts, Health, Literature, Physical Education, Political Science, Sociology

Total, Gen. Educa. 10 - 19

Curriculum Total = 60-65 Units

Figure 2

STATE ADVISORY COMMITTEE ON DENTAL ASSISTING EDUCATION

CALIFORNIA STATE DEPARTMENT OF EDUCATION

SACRAMENTO, CALIFORNIA

Sample Dental Assisting Curriculum-A. A. or A. S. Degree

Prerequisites: Admission to the Dental Assisting program is based upon completion of high school courses in biology and typing or equivalent, satisfactory performance on college abilities tests and a personal interview. Deviation from course prerequisites subject to individual evaluation.

SEMESTER I

	Units
DA 50-Intro. to Dental Assisting	2
DA 52A-Bio-dental Sciences	3
Business	3
Communication I	3
Natural Science	4
P. E.	1/2
Totals	15 1/2

SEMESTER II

	Units
DA 52B-Bio-dental Sciences	3
DA 54-Dental Materials	2
DA 56-A-Practice Adminis.	2
Communication II	3
Elective	3
P. E.	1/2
Totals	16 1/2

SEMESTER III

	Units
DA 60A-Dental Radiography	2
DA 62A-Dental Operatory Procedures	3
DA 64A-Dental Laboratory Procedures	2
DA 70A-Supervised Clinical Experience	2
Psychology	3
Social Science	3
P. E.	1/2
Totals	15 1/2

SEMESTER IV

	Units
DA 56B-Practice Adminis.	3
DA 60B-Dental Radiography	2
DA 62-B-Dental Operatory Procedures	2
DA 64B-Dental Laboratory Procedures	2
DA 70B-Supervised Clinical Experience	2
Fine Arts/Literature Elec.	3
P. E.	1/2
Totals	14 1/2

Curriculum Total = 62 Units

STATE ADVISORY COMMITTEE FOR DENTAL ASSISTING
CALIFORNIA STATE DEPARTMENT OF EDUCATION
SACRAMENTO, CALIFORNIA

SUGGESTED DENTAL ASSISTING COURSE DESCRIPTIONS

DA 50 INTRODUCTION TO DENTAL ASSISTING 2 Units

Prerequisites: Admission to Dental Assisting Program.

History of dentistry, professional organization, ethics, terminology, health and grooming, employment and job demands.

Lecture 2 hours

DA 52A BIO-DENTAL SCIENCES 3 Units

Prerequisites: Admission to Dental Assisting Program.

Introduction to general anatomy, head and neck, teeth and supporting structures, pathology of hard and soft tissues.

Lecture-Laboratory 4 hours

DA 52B BIO-DENTAL SCIENCES 3 Units

Prerequisites: DA 50, 52A.

Introduction to microbiology, sterilization and disinfection, diet and nutrition related to dental health, pharmacology.

Lecture-Laboratory 4 hours

DA 54 DENTAL MATERIALS 2 Units

Prerequisites: DA 50, 52B(may be taken concurrently)

Basic physical and chemical properties of dental materials, classification of materials--gypsum products, impression materials, cements, metals, porcelains, abrasives, chemicals.

Lecture 1 hour Laboratory 3 hours

DA 56A PRACTICE ADMINISTRATION 2 Units

Prerequisites: DA 50, 52A

Jurisprudence; human relations; psychology; office procedures including reception

duties, bookkeeping, correspondence and filing. Visits to private dental offices with participation in selected office activities.

Lecture-Laboratory 4 hours

DA 56B PRACTICE ADMINISTRATION 3 Units

Prerequisites: DA 56A

Continuation of DA 56A. Emphasizes forms, credit and collections, insurance, supplies and inventory.

Lecture-Laboratory 4 hours

DA 60A DENTAL RADIOGRAPHY 2 Units

Prerequisites: DA 52A, 52B

History, principles, biological effects of radiation, films, exposure and processing techniques, evaluation, mounting.

Lecture 1 hour Laboratory 3 hours

DA 60B DENTAL RADIOGRAPHY 2 Units

Prerequisites: DA 60A

Continuation of DA 60A. Emphasizes films, exposure and processing techniques and evaluation.

Lecture 1 hour Laboratory 2 hours

DA 62A DENTAL OPERATORY PROCEDURES 3 Units

Prerequisites: DA 52B, 54

Pre-operative procedures; instruments; function, care and maintenance of equipment; patient care; introduction to operative and post-operative procedures.

Lecture 2 hours Laboratory 3 hours

DA 62B DENTAL OPERATORY PROCEDURES 2 Units

Prerequisites: DA 62A

Continuation of DA 62A. Anesthetics, restorative dentistry, prosthetics, endodontics, oral surgery, periodontics, pedodontics, orthodontics, dental health education, emergency and first-aid, operative and post-operative procedures.

DA 64A DENTAL LABORATORY PROCEDURES 2 Units

Prerequisites: DA 52B, 54

Principles of safety, care and maintenance of equipment, types and uses of impression trays.

Lecture 1 hour Laboratory 3 hours

DA 64B DENTAL LABORATORY PROCEDURES 2 Units

Prerequisites: DA 64A

Preparation and uses of dental waxes and impression materials, models, removable protheses, dental laboratory functions and dental laboratory case preparation.

Lecture 1 hour Laboratory 2 hours

DA 70A SUPERVISED CLINICAL EXPERIENCE 2 Units

Prerequisites: Concurrent registration in DA 60A, 62A, 64A

Practical dental assisting experience with instructor supervision in such locations as dental schools, clinics, hospitals, and selected private practices.

Lecture 1 hour Laboratory 3 hours

DA 70B SUPERVISED CLINICAL EXPERIENCE 2 Units

Prerequisites: DA 70A

Continuation of DA 70A with emphasis on practical experience in private dental practices.

Laboratory 7 hours

SUMMARY AND RECOMMENDATIONS

We have reviewed the efforts of a cross-section of persons interested in dental assisting education as they worked in a variety of settings and with a variety of resources over a period of time. We have also seen how the results of these efforts were used by the California State Advisory Committee on Dental Assisting Education to arrive at a plan for the education and training of future dental assistants that is consonant with the demands of modern dental and ecucational practices. Built into the plan are the ingredients necessary for effecting a smooth, easy transition to the acquisition of new competencies as the art and science of dentistry and education advance and as legislation permits.

In order to implement effectively the plan that is outlined in this paper, it is recommended that:

1. The program of instruction should be offered in a collegiate institution and lead to an Associate in Arts (A. A.) or Associate in Science (A. S.) degree.

2. Curriculum prerequisites should be of a nature that will assure high school graduates a reasonable chance for success both in the program and on the job.

3. Performance criteria, courses and course content should follow the patterns outlined in this paper.

4. The curriculum should provide for about equal amounts of (a) general education and related "pre-clinical" subjects and (b) specialized dental assisting courses.

5. Early in the program, and prior to advanced clinical experience, the student should receive orientation experience in a dental school, clinic or private office.

6. Advanced clinical experience should involve a variety of educational experiences in both dental clinics and selected private offices.

7. Supervision of students in clinical experiences should not exceed a supervisor/instructor-student ratio of more than 1:16 in dental clinics or 1:12 in private dental offices.

8. A planned program of orientation for dental students, practicing dentists and their dental assistants should precede the clinical experience of dental assisting students.

9. A knowledgeable and competent advisory committee with dentist and dental assistant representatives should be appointed to assist with the planning, inauguration and implementation of each program. (See statement, pp. 20-21, on "Function and Composition of Advisory Committees".)

10. The Council on Dental Education's practice of accrediting dental assistant training programs should be continued for it represents a distinct service to dental assisting education.

11. The educators in accredited dental assisting institutions encourage and provide the opportunity for each student to apply for the certification examination provided by the Certifying Board of the American Dental Assistants Association.

12. The program should be evaluated continuously by staff and local advisory committees in terms of current dental practices.

REFERENCES

1. " A Survey of Dental Assisting Curricula in the California Junior Colleges", PRELIMINARY DRAFT, Bureau of Industrial Education, State Department of Education, Sacramento, California 1966.
2. "Requirements for the Approval of Educational Programs for Dental Assistants", Council on Dental Education, American Dental Association, 1960.
3. "Survey of Dental Assisting Curricula in the California Junior Colleges, A Supplementary Tabulation of Survey Responses by Schools", Bureau of Industrial Education, State Department of Education, Sacramento, California, 1966.
4. "Dental Assisting Curricula in California Junior Colleges", State Advisory Committee on Dental Assisting Education, Bureau of Industrial Education, State Department of Education, Sacramento, California. To be published in January, 1968.
5. Mager, Robert F., Preparing Instructional Objectives, Fearon Publishers, Inc., Palo Alto, California, 1962.
6. "Policies and Guidelines for the Training of Dental Auxiliaries", Council on Dental Education, American Dental Association, Third Edition, August, 1966.

VT 001 698
Weltzheimer, O.C., And Others
The Advisory Committee, Organization and Function in Vocational Education.

Kansas State Board for Vocational Education, Topeka
MF AVAILABLE IN VT-ERIC SET.
Pub Date - 66 9p.

*ADVISORY COMMITTEES; *EDUCATIONAL IMPROVEMENT; *VOCATIONAL EDUCATION

The place of the advisory committee is discussed in this booklet. The committee is defined and its functions listed with suggestions for selecting the members. The operation of the advisory committee is set forth as essentially that of a consultant role as well as a communication link between the community and the school. The advisory committee and its relation to the school should be outlined by the director of vocational education or the school representative. Committee members should visit the school to observe training and facilities. The school administration should evaluate the advice of the committee, and use it for upgrading or developing new vocational programs. (MS)

VT001 698

EDO 31587

C1
9

THE ADVISORY COMMITTEE

ORGANIZATION AND FUNCTION in VOCATIONAL EDUCATION

KANSAS STATE BOARD
FOR VOCATIONAL EDUCATION

VT 01698

THE ADVISORY COMMITTEE

ORGANIZATION AND FUNCTION in VOCATIONAL EDUCATION

KANSAS STATE BOARD FOR VOCATIONAL EDUCATION

JOHN E. SNYDER, *Director*

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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BY

O. C. WELTZHEIMER .... Trade and Industrial Education
LEROY CORNELSEN ..... Trade and Industrial Education
H. D. SHOTWELL ..... Distributive Education

REV. 1966

Contents

PAGE

Foreword 3

Advisory Committee 4

Types of Advisory Committees 4

Function of the Advisory Committee 5

Selection of Advisory Committee Members 6

Operation of Advisory Committees 6

The Advisory Committee and the School 8

Conclusion 8

THE ADVISORY COMMITTEE

Organization and Function in Vocational Education

Foreword

The advisory committee is a communication link between the community and the school. The school should know the community's wants and needs. The advisory committee is in a position to supply this information.

Vocational education needs close cooperation with the community. It trains students for specific jobs and productive lives. It needs the experienced evaluation of workers in the field to be sure that its training courses and equipment are up to date and that its preparation for life work is useful.

Vocational education personnel feel that the advisory committee is a very important part of the program and its activities. A strong advisory committee can do much in helping the school build strong, responsible citizens.

Advisory Committee

An advisory committee is a group of representative laymen, recognized and respected experts in their own fields of work, who assist educational personnel in building sound programs based on the real needs of a community.

Types of Advisory Committees

General Advisory Committee

A general advisory committee, serving a local board of education, provides advisory services in determining objectives and broad policies in connection with types of vocational services that are needed in the area served by the local school. The number of members may vary according to the crafts represented in the program.

Craft Advisory Committee

A craft advisory committee is organized to advise local school administrators regarding instructional programs for a specific craft or occupation. A craft committee, representing only one trade or vocational subject, may have four to six or more members.

Area vocational schools may have larger committees as it is especially necessary for them to have adequate geographical representation from various sections of their service areas.

In order to promote free discussion by the committee, no more than one or two noncommittee members should be invited to attend any given session.

Function of the Advisory Committee

The advisory committee should become completely familiar with the aims and objectives of vocational education and the field of training they are to advise.

- Members of the committee may profitably study and discuss regulations relating to various types of training, including: cooperative part-time, evening school, part-time extension, day trade, and apprentice training.
- The school administration needs the advice of the committee as to the types of courses needed to satisfy day and evening training needs of a community.
- Advisory committees need to check existing vocational training to see that it fits life situations.
- They can assist public schools in maintaining up-to-date, effective programs of vocational education that meet student and community needs.
- Advisory committees may assist in preparation of courses of study, setting up standards, securing proper equipment, taking community surveys, and publicizing school programs.
- They should determine when additional equipment or instructional material is needed to keep training up to date.
- Standards for entrance into vocational courses should be established by advisory committees.
- Advisory committees should assist in determining the number of students to train for a particular field of work.
- They should support school administrators in appropriation requests by influencing state and federal legislation.
- Graduates who have successfully completed their training should be aided in employment placement by the advisory committee.

Selection of Advisory Committee Members

A regular system of appointing advisory committee members should be planned. Members who are appointed for a definite term of office generally serve from one to three years. Terms should be staggered to assure experienced personnel on committees.

The advisory committee should be made up of equal representation from employer and employee groups. The school may be represented by the director of vocational education, the administrator, or an instructor in a particular trade.

Operation of Advisory Committees

The school board (the group in which local authority is vested) retains full responsibility for its vocational program. The advisory committee acts in a consultant capacity, responsible for making recommendations and suggestions to school authorities who are empowered to act upon the advice offered. The advisory committee has no authority to delegate or to legislate.

The chairman may be elected from the group of laymen, or the school representative may act as chairman. The chief duty of the chairman is to preside at all meetings. He usually appoints subcommittees and represents the committee in other groups.

The school representative may serve in three capacities. He may act as secretary; he may serve as

general consultant; he may be chairman. One of the most important duties of the school representative, in cooperation with the committee chairman, is the preparation of an agenda for every meeting. He must state the exact problems of the vocational program and present them clearly to the committee for discussion and advice.

Common practice is to send copies of minutes of meetings to individuals and agencies involved and to all interested persons.

Recommendations of the advisory committee should be in writing to avoid any misunderstanding or loss of memory. A record of all recommendations should be kept on file.

The number of meetings each year and time of meetings should be established by the group as a committee. Meetings may be called at regular intervals or as needed. A regular once-a-month meeting may be in order for craft advisory committees. The initial meeting of the committee should lead to the adoption of a program of work for the current school year. Meetings should be called only to determine or implement programs of work.

The advisory committee should be governed by a constitution and by-laws to create an atmosphere of permanence and purpose in the group. A constitution should include only provisions necessary for efficient committee operation. Each member should have definite duties and responsibilities. Advisory committees should be informal and flexible, changing procedure according to circumstances, and working in an atmosphere of friendly cooperation.

The Advisory Committee and the School

The director of vocational education or the school representative should instruct committee members in functions and objectives of vocational education. General operating policies of the State Plan and Federal Acts dealing with vocational education should be explained.

Committee members should be kept fully informed as to progress of the training in which they are interested.

Committee members should visit the school to observe training, facilities, special assemblies, and social gatherings.

Function of lay persons on the committee is to assemble and interpret first-hand information concerning community needs and function of the school officials to recognize these needs as being definite, then proceed in organizing materials and proper teaching methods.

Conclusion

School administration should listen to the advice of the committee, evaluate it, and use it to up-grade existing programs and to develop new ones. Advice of the committee should be sought frequently about problems familiar to them. If the suggestions of the committee members are sensible and sound, they should be adopted whenever possible.

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VT 001 699
Sketches of Some Recent Laws Affecting Vocational Home Economics Programs.

Kentucky State Dept. of Education, Frankfort. Vocational Home Economics Div.
MF AVAILABLE IN VT-ERIC SET.
Pub Date - 65 5p.

*EDUCATIONAL LEGISLATION; *FEDERAL LAWS; *EDUCATIONAL FINANCE; *OCCUPATIONAL HOME ECONOMICS; *VOCATIONAL EDUCATION; MANPOWER DEVELOPMENT; ECONOMIC OPPORTUNITIES

A brief analysis of recent laws affecting vocational education includes: the Vocational Education Act of 1963 (VEA), the Manpower Development and Training Act (MDTA), the Economic Opportunity Act (EOA), and the Elementary and Secondary Education Act 1965 (ESEA). Several points are brought out concerning each act including purposes, provisions, and specific titles. (MS)

VT001 699

ED0 31587

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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Public Law 88-210 Voc. Ed. Act 1963

Public Law 88-214 Amended 89-15 MDTA

Public Law 88-452 EOA

Public Law 89-10 El. and Sec. Act-1965

SKETCHES OF SOME RECENT LAWS
affecting
VOCATIONAL HOME ECONOMICS PROGRAMS

Vocational Home Economics Division
State Department of Education
Frankfort, Kentucky

Fall, 1965

VT01699

Vocational Education Act of 1963 (cont.)	Manpower Development and Training Act (cont.)
5. At least 3% of a state's allotment must be used for ancillary services including: - Teacher Education, Supervision - Vocational Guidance - Curriculum Materials - State Administration and Leadership - Program Evaluation - Research	d. Youth (17-21) if completely separated from the public school and in separate classes from adults. These programs are provided for: - youth centers in urban areas - youth who are socio-economically handicapped.
6. Ten per cent of the Federal funds appropriated are reserved for the United States Commissioner of Education to make special grants for research, experimental and pilot programs.	3. Training allowances, administered by the Employment Service, are paid to eligible trainees meeting certain qualifications. If training is away from the place of residence, subsistence and travel allowances are paid in addition to training allowance.
7. The Act provides a work study program for full-time students (15-21) who meet certain requirements, to help them stay in school through part-time employment either by the local educational agency or some other public agency or institution.	4. Costs of these programs are financed with 100% Federal funds through June 30, 1966. After that date, the vocational training phase must be matched - 10% State or local funds (in cash or kind) with 90% Federal funds. Training and subsistence allowances will remain at 100% reimbursement.
8. The Act calls for an evaluation of the total vocational program by January 1968 and every five years thereafter.	5. Training program is on a full-time basis for length of time needed, up to 104 weeks. 6. This program has been extended to June 30, 1969.

GENERAL PROVISIONS OF SOME RECENT

Public Law 88 - 210
Part A
Vocational Education Act of 1963

Purpose: To maintain, extend and improve existing Vocational Education programs; to develop new programs; and to provide part-time employment for youth who need it to continue their vocational training on a full-time basis.

Some Provisions

1. All new money from the Act and 10% of money for Home Economics under the Smith-Hughes and George-Barden Acts must be used for occupational training.

2. Funds are appropriated for Vocational Education rather than for specific areas.

3. Persons eligible to receive vocational training are:

   - High school students
   - Persons who have completed or left high school (including those in 13th-14th year program)
   - Persons in labor market who need training or retraining
   - Handicapped persons (academic, socio-economic, or other).

4. The Act provides funds for area school facilities, including construction and equipment.

Public Law 88 - 214
Amended by Public Law 89 - 15
Manpower Development and Training Act

Purpose: To provide occupational training or retraining to unemployed and underemployed persons.

Major Provisions

1. This is a cooperative program administered jointly by the Employment Service and Vocational Education.

   - Employment Service determines occupational training needed, selects the trainees, takes care of placement and follow-up of trainees, and administers all allowances paid to trainees.

   - Vocational Education is responsible for the training program and assists with the follow-up and evaluation of trainees.

2. Trainees include:
   a. Adults who are
      - unemployed
      - have been wage earners at least two years
      - are heads of households
   b. Women who are not heads of households, but are supplementary wage earners
   c. Single members of family without dependents where head of household is unemployed

LAWS AFFECTING VOCATIONAL EDUCATION

Public Law 88 - 452 Economic Opportunity Act	Public Law 89 - 10 Elementary and Secondary Education Act - 1965
Purpose: To create new opportunities and expand existing ones for young people to obtain work, education, and training.	Purpose: To strengthen and improve educational quality and opportunities in the nation's elementary and secondary schools.
Title I YOUTH PROGRAMS	Title I EDUCATION OF CHILDREN OF LOW-INCOME FAMILIES
Part A: Job Corps to provide education, work experience, and vocational training in conservation camps and residential training centers for youth (16-21) from low-income families.	Provides financial assistance to local educational agencies to provide educational programs for children of low-income families.
Part B: Work-training programs to help youth (16-21) stay in school and gain work experience.	Title II SCHOOL LIBRARY TEXTBOOKS, AND OTHER INSTRUCTIONAL MATERIALS
Part C: Work study program to provide employment opportunities to enable low-income youth to enter or continue college-level education.	Provides money for such items as books, periodicals, magnetic tapes, records, and other printed and published materials. Each state develops own plans for use of these funds considering state laws and needs of children and teachers for such materials.
Title II COMMUNITY ACTION PROGRAMS	Title III SUPPLEMENTARY EDUCATIONAL CENTERS AND SERVICES
Part A: Provides grants for financing anti-poverty programs carried out on a community level.	This is a five-year program to provide special personnel, equipment, and other costly educational services not normally available, such as guidance and counseling, remedial instruction, school health services, language and science labs, etc.
Part B: Provides grants to states for basic education and literacy training to adults (18 and over).	
Part C: Provides for a clearing house to help place needy children in foster homes.	

Economic Opportunity Act (cont.)

Title III SPECIAL PROGRAMS TO COMBAT POVERTY IN RURAL AREAS

Part A: Grants and loans to low-income rural families

Part B: Assistance to migrant workers and families

Part C: None

Part D: Indemnity payments to dairy farmers who have suffered loss in the use of government chemicals

Title IV LOANS TO ASSIST SMALL BUSINESSES

Title V WORK EXPERIENCE PROGRAM FOR UNEMPLOYED FATHERS

Title VI ADMINISTRATION AND COORDINATION

Includes V I S T A program

Administration of Act

Title II, Part B, is administered through the Adult Education Division of the State Department of Education. All other parts of the Act are administered by other agencies or groups.

Elementary and Secondary Education Act - 1965 (cont.)

Title IV EDUCATIONAL RESEARCH AND TRAINING

Authorizes the establishment of a series of national and regional educational laboratories, providing support of educational research, development, dissemination and training.

Title V STRENGTHENING STATE DEPARTMENTS OF EDUCATION

Provides funds for the development, improvement, or expansion of programs and projects to improve the effectiveness of State departments in such ways as educational planning on a state-wide basis, the identification of educational problems and needs, and the evaluation of educational programs.

VT 001 703

Criteria, Standards and Policies for Vocational Business and Office Education. Today's Preparation for Tomorrow's Jobs. Working Draft.

West Virginia State Dept. of Education, Charleston. Business Education Service
MF AVAILABLE IN VT-ERIC SET.
Pub Date - 65 16p.

*OFFICE OCCUPATIONS EDUCATION; *STATE STANDARDS; *ADMINISTRATIVE POLICY; SECONDARY EDUCATION; POST SECONDARY EDUCATION; ADULT VOCATIONAL EDUCATION; *STATE FEDERAL SUPPORT; *PROGRAM GUIDES; EDUCATIONAL FACILITIES
WEST VIRGINIA

Criteria, standards, and policies for the organization and operation of business education programs to qualify as vocational units in West Virginia are provided. Types of programs include high school, post-secondary, adult and those for persons with socioeconomic or other handicaps. Each high school or post-secondary student receiving instruction in vocational classes must have declared in writing an occupational objective. Each high school program shall provide a minimum experience of six units of credit in vocational business and office education courses. High school classes shall consist of a minimum of 15 and a maximum of 25 students. Post-secondary and adult classes shall consist of a minimum of 12 and a maximum of 30 students. Suggested specimen curriculums are outlined. The cooperative work-training program, recommended physical facilities, teacher's qualifications, and allocation of federal and state funds are included. (PS)

VT001 703

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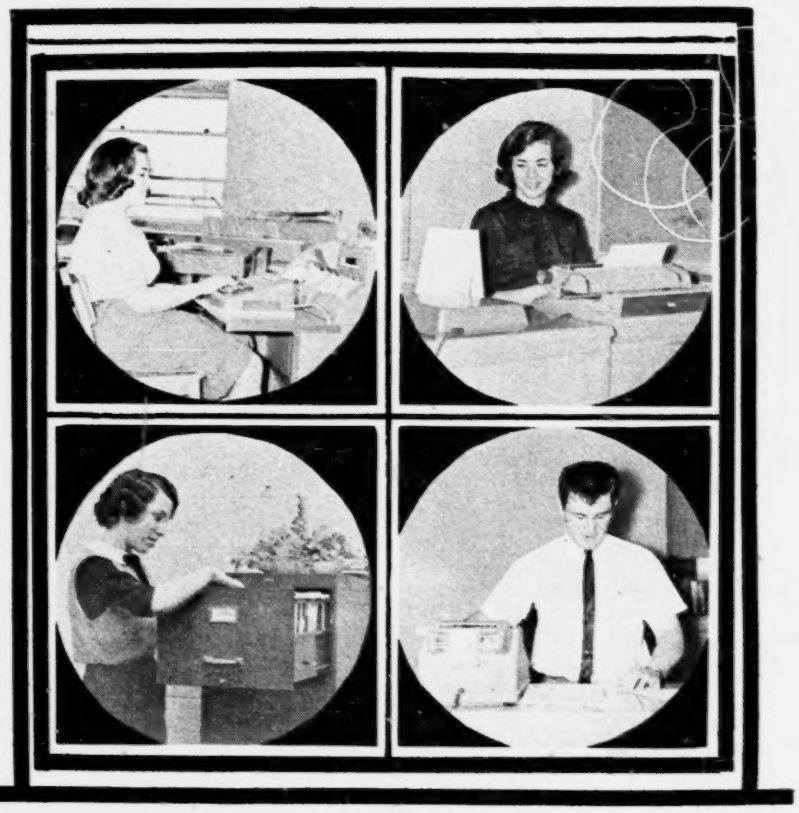
CRITERIA, STANDARDS AND POLICIES

West Virginia



Business Education

Vocational Business and Office Education

VT 0703

CRITERIA, STANDARDS AND POLICIES
FOR
VOCATIONAL BUSINESS AND OFFICE EDUCATION

TODAY'S PREPARATION FOR TOMORROW'S JOBS

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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West Virginia Department of Education
Bureau of Vocational Education
Business Education Service

1965

W O R K I N G D R A F T

West Virginia Department of Education
Bureau of Vocational Education
Business Education Service

CRITERIA, STANDARDS AND POLICIES FOR VOCATIONAL BUSINESS AND OFFICE EDUCATION

I. Purpose

The purpose of vocational business and office education programs is to provide persons over 14 years of age, who have the ability to profit from the instruction, with marketable skills, knowledge and attitudes to enter a business occupation. The program is also designed to provide for refresher courses and courses for upgrading skills which may lead to promotion or advance positions. The instruction must be of such quality that persons completing the program are employable and capable of succeeding in the occupation for which they have prepared.

II. Occupations to be Served

Vocational business and office education shall be defined as those programs preparing individuals for occupations which are related to the facilitating functions of the office in either public or private enterprises. Many office occupations may be classified under one of the following types:

A. Stenographic, typing, filing and related occupations
B. Computing and accounting occupations
C. Material and production recording occupations
D. Information and message distribution occupations
E. Accounting, auditing, budget and management analysis
F. Data processing occupations

III. Types of Programs for Students That May be Offered

A. HIGH SCHOOL STUDENTS who spend the full day in school. (This includes students who work part-time in supervised cooperative work-training programs.) Each student receiving instruction in vocational classes shall have declared in writing an occupational objective.

B. POST-SECONDARY STUDENTS who enroll on a full-time basis in preparation for entering the labor market. An occupational objective, in writing, shall have been declared by each student.

C. ADULTS who are already employed but who wish to take refresher courses, prepare for new positions, or advance to higher level positions.

D. PERSONS WHO HAVE SOCIO-ECONOMIC OR OTHER HANDICAPS that prevent them from succeeding in regular vocational business and office education programs.

IV. Class Size, Time and Schedules

A. High School Classes

1. Class Size - A minimum of 15 students is required to start a vocational business or office education class or program. An enrollment of at least 10 students must be maintained in such classes. Enrollment in vocational business and office education classes should not exceed 25 students.

2. Time - Vocational business and office education classes shall meet on a regular 55-minute class period basis or for double periods where course content is integrated--cutting across two subject-matter areas.

NOTE: No program in vocational business and office education shall be approved that is not at least one year in length. It is recommended that courses in the 11th and 12th grades be offered in combinations or in blocks or time, consisting of two or three class periods.

3. Schedules - Each program shall arrange course offerings in a logical sequence and shall provide a minimum experience of six units of credit in vocational business and office education courses.

NOTE: Students should normally be enrolled in vocational business and office education classes during both the 11th and 12th grades. However, in exceptional cases it may be possible to have vocational classes during the 12th grade only or to start vocational study earlier than the 11th grade.

B. Post-Secondary and Adult Education Classes

1. Class Size - A minimum of 12 students will be required to organize and maintain a vocational business and office education class on the post-secondary or adult level.

The maximum enrollment shall be determined by the course taught and the physical facilities available, but in no case shall a class exceed 30 students.

2. Time - Post-Secondary classes in vocational business and office education classes should be on the same time basis as those on the high school level.

Classes organized for upgrading persons for higher level positions should be three hours in length per class meeting.

V. Curricula and Programs

A. High School

1. Curricula - An individual school may choose to provide a vocational business and office education program designed to prepare workers for a single cluster of closely related

occupations such as typist, clerk or clerk-typist only; or a school may choose to provide vocational preparation in several business or office occupational areas. The program would vary with school size and number of teachers employed.

For each area in which a school wishes to offer a vocational program of studies, a list of those courses students would pursue should be specified. There may be certain subjects that would be a part of more than one specialized curriculum.

Each student shall earn a minimum of six credits in business education subjects. This includes credit earned in cooperative work-training programs.

The curriculum proposed to be taught must be submitted to the State Supervisor of Vocational Business Education for approval. The curriculum shall list the courses to be taught and an outline showing the principal content areas (or subject-matter units) to be included in the course.

Should a teacher decide that any particular student is unable to master the program of study which he is pursuing, the teacher should recommend that the student transfer to a different program--one that is aimed toward a different occupational objective. When such a transfer is made, the record of the student's declared objective should be changed accordingly.

NOTE: It is quite possible that a change in the student's program within the vocational business and office education curricula may fulfill the needs for student success.

2. Programs - Outlined below are suggested specimen programs. The content areas are those that seem pertinent to vocational competency in a specified area of preparation.

   It is recommended that course work be integrated and that a time block of two or three class periods be used during grade 12.

   During grade 12 a significant amount of time should be spent in office-type assignments or in a supervised work-training program. Work-training programs may be cooperative work-and-study programs in business, government, non-profit institutions or in school offices.

   Where the supervised cooperative work-training program is not utilized, the school should provide a classroom laboratory with a simulated office environment and office-type assignments.

a. Clerical

10th Grade	11th Grade	12th Grade
General Business Typewriting I	Bookkeeping I Typewriting II Elective	Clerical Office Practice or Vocational Office Training Office Machines Elective

Electives: Business Law, Salesmanship, Retailing, Business Math, Advertising, Bookkeeping II, Business English

b. Stenographic - Secretarial

10th Grade	11th Grade	12th Grade
General Business Typewriting I	Shorthand I Typewriting II Elective	Shorthand II Sec. Office Practice or Vocational Office Training Office Machines

Electives: Bookkeeping I, Bookkeeping II, Business English, Business Law, Advertising, Retailing, Salesmanship, Business Math

c. Bookkeeping

10th Grade	11th Grade	12th Grade
General Business Typewriting I	Bookkeeping I Business Math Elective	Bookkeeping II Clerical Office Practice or Vocational Office Training Office Machines

Electives: Data Processing, Business Law, Salesmanship, Retailing, Advertising, Business English, Typewriting II

d. Data Processing

NOTE: Highly specialized instruction for data processing skills cannot be offered at every high school. However, this could be done in regional or area vocational centers serving the high school, the post-secondary school and the adult program.

10th Grade	11th Grade	12th Grade
General Business Typewriting I	Bookkeeping I Data Processing I	Data Processing II Office Machines

Electives: Business Law, Clerical Office Practice or Vocational Office Training, Advertising, Business English, Typewriting II, Business Math, Bookkeeping II

B. Cooperative Work-Training Program

VOCATIONAL OFFICE TRAINING

Supervised work-training programs may be provided for students who are at least 16 years of age and who are enrolled in vocational business education classes. This type of program may be offered on both the high school and post-secondary level.

Such classes shall be organized through cooperative agreements (preferably in writing) between the school and employers who provide the on-the-job learning experiences. Such arrangements shall provide for:

1. The legal employment of student-learners in conformity with Federal, State and local laws and regulations in a manner not resulting in exploitation of such student-learners for private gain.

2. An organized program of training on the job for each student-learner.

3. Supplemental related vocational instruction in the school.

Cooperative work-training programs in vocational business and office education programs shall:

1. Be appropriate to the students' vocational objectives.

2. Be of sufficient duration to develop competencies necessary to fit students for employment in their declared occupational fields.

3. Be supervised by a member of the school staff who is qualified under the State Plan for Vocational Education.

Students who are participating in supervised cooperative work-training programs may be grouped together in the same classes, even though they have varying occupational objectives, provided each student follows a carefully developed study plan. These study programs should state clearly course objectives, subject-matter content and probable student experiences. They should also specify which knowledge and skills are to be taught in the classroom and which are to be taught on the job.

When students engage in cooperative work-training programs, they must work an average of 15 clock hours per week. They must also enroll in at least one vocational business subject that meets at least one class period per day. (It may meet for two or three class periods per day.)

When high school students participate in a supervised work-training program along with at least one vocational business subject, they may earn 2 units of credit per year for successful completion of this combined training.

The supervisor of a cooperative work-training program in vocational business and office education shall be referred to as a

"teacher-coordinator", and the class shall be referred to as "Vocational Office Training."

C. Post-Secondary

Post-Secondary programs in vocational business and office occupations are essentially of two basic types:

1. Preparatory programs for persons who wish to qualify for initial positions.

2. Upgrading programs for employed personnel who wish to qualify for higher level positions.

Curricular programs at the post-secondary level shall be planned to meet the recorded career objectives of the students who are enrolled in those classes. A definite program of study shall be developed for each class group designed to move them forward toward qualifying for their declared occupational objectives.

The curricula offered in the post-secondary program will follow the same general pattern as those suggested for the high school and shall extend into such areas as management, small business organization, administrative specializations and other allied fields in related occupations.

For each occupational area of vocational business and office education in which a school wishes to offer a vocational program of studies, the courses or subject-matter areas that students may pursue shall be listed, outlined and described. The proposed curriculum must be submitted to the State Supervisor of Vocational Business Education for approval.

D. Advisory Committee and Community Survey

There shall be a local advisory committee for vocational business and office education program to consist of at least three business men and at least one member of the vocational business education staff. This committee shall consult with and advise the vocational business education teachers and administrative officers of the school regarding the study and work-training program in vocational business and office education for their community.

A business occupations survey should be made of the business community for indications as to where the graduates are most likely to find employment.

VI. Physical Facilities

A. Classrooms and Laboratories

The dimensions of classrooms and laboratories may vary considerably according to the different types of instruction to be offered. The space provided will determine the maximum number of students that may be accommodated. Table A indicates the recommended number of students and square feet of floor space per student for most vocational business and office education classes.

TABLE A

Subject	No. Students	Square Feet Per Student
General Classroom	24 - 30	25
Typewriting Laboratory	24 - 30	30
Stenographic Laboratory	20 - 24	30
Bookkeeping Laboratory	20 - 24	30
Multi-Purpose Classroom	20 - 24	40
Retailing Laboratory	20 - 24	45
Office Machines Laboratory	20 - 24	45

NOTE: Typewriting, multi-purpose and office machine rooms should be equipped with an electrical outlet for each work station with a master switch operated by a key and lavatory facilities in the classroom or laboratory.

At least 25 running feet of chalkboard should be available in the bookkeeping, business mathematics and shorthand laboratories. In the office machines and typewriting laboratories 15 running feet of chalkboard will be adequate. Bulletin boards should be located in a prominent place in the classroom so that they may be seen and examined by the students.

B. Offices and Storage

1. Faculty Office - The Vocational Business Education Department should contain adequate office space for the head of the department. It is recommended that a small conference room be located adjacent to this office space for guidance and counseling and advisory committee work.

2. Storage - Adequate storage for supplies, spare equipment and audio-visual materials should be provided.

VII. Equipment, Furniture and Supplies

Up-to-date teaching materials such as records or tapes correlated with the textbook being used and materials for preparing posters, bulletin boards and transparencies should be provided. The following is a recommended pattern for a well-equipped vocational office machines laboratory, electronic shorthand laboratory, bookkeeping-accounting classroom, typewriting laboratory and a data processing laboratory.

VOCATIONAL OFFICE MACHINES LABORATORY

NOTE: The equipment listed below serves twenty-one students simultaneously on a rotating plan.

Office-Style Typewriting Problems

3 Elite type electric typewriters
3 Clerical desks - 24" x 40" x 28"
3 Adjustable posture chairs, with casters

Machine Transcription

3 Manual or electric typewriters
3 Secretarial desks - 30" x 55" x 30", with typewriter well or side pull out
3 Adjustable posture chairs, with casters
1 Dictating-transcribing machine
2 Transcribing machines

Ten-Key Adding-Listing Machine

2 Electric 10-key adding-listing machines
1 Electric 10-key printing calculator
3 Machine tables - 20" x 38" x 28"
3 Side or swivel chairs - 16" or 17", with casters

Full-Keyboard Adding Machine

3 Electric full-keyboard adding machines
3 Machine tables - 20" x 38" x 28"
3 Side or swivel chairs - 16" or 17", with casters

Key-Driven Calculator

3 Electric key-driven calculators
3 Machine tables - 20" x 38" x 28"
3 Side or swivel chairs - 16" or 17", with casters

Rotary Calculator

3 Electric 8-column automatic rotary calculators
3 Machine tables - 20" x 38" x 28"
3 Side or swivel chairs - 16" or 17", with casters

Duplicating Machines and Accessories

1 Stencil duplicator, electric, with storage cabinet
1 Illuminated drawing board, with stylus guides and shading plates
1 Fluid duplicator, manual or electric, with storage cabinet
1 Photo-copying machine, with storage cabinet
1 Elite type electric typewriter, long carriage - 18" to 20"
1 Selectric typewriter, 16" carriage, with several different type elements
1 Manual typewriter
3 Tables - 24" x 40" x 28"
3 Adjustable posture chairs - 16" or 17", with casters
1 Collating table - 24" x 70" x 30"
1 Collator (optional)

Other Equipment, Furniture, Appliances and Supplies

1 Interval timer
1 Stop watch
2 Desk trays
2 Pencil sharpeners
1 Paper cutter
2 Four-drawer file cabinets (one with lock)

1 Receptionist - secretarial desk and chair, with casters--class assistant station
1 Teacher's desk and chair, with casters
1 Projection screen
2 Wastebaskets
1 Paper punch
2 Staplers
1 Long-arm stapler
1 Hanging file cabinet (for used stencils)
1 Filmstrip and slide projector combination (with films and suitable slides)
1 Opaque projector
1 City Directory
1 Postal Guide
1 Postage scales
3 Dictionaries

Miscellaneous Supplies

Paper clips, rubberbands, thumbtacks, rulers, correction fluid, correction tape, carbon paper, master units, stencils, erasers, colored pencils, mimeograph ink, ink pads for mimeograph machine, protective covers for machines, adding machine tape, type cleaner, etc.

VOCATIONAL SHORTHAND LABORATORY

NOTE: Advanced vocational shorthand should have a typewriting laboratory available for machine transcription.

24 Student stations with straight-back chairs
24 Electronic multiple listening stations with individual controls
1 Console for transmitting dictation material
1 Portable overhead projector
1 Projection screen
1 Controlled reader and complete set of teaching aids
2 Pencil sharpeners
1 Stop watch
1 Four-drawer file cabinet with lock
2 Staplers
2 Desk trays
2 Wastebaskets
1 Unabridged dictionary and stand
1 Teacher's desk - 32" x 54" x 30" and chair, with casters
Records and/or tapes (to correlate with textbook)
Specialized tapes and records for legal, medical and scientific dictation
Grease pencils for use with overhead projector
6-8 Legal, medical, scientific and technical shorthand dictionaries
6-8 Student dictionaries
6-8 Shorthand dictionaries
6-8 Secretarial handbooks

VOCATIONAL BOOKKEEPING AND ACCOUNTING LABORATORY

24 Bookkeeping stations with straight-back chairs, desks should be 20" x 36" x 28"
4 Electric 10-key adding-listing machines

2 Tables for adding-listing machines - 20" x 72" x 28"
1 Portable overhead projector
1 Projection screen
1 Set of bookkeeping slides (to correlate with textbook)
1 Set of bookkeeping charts (to correlate with textbook)
1 Four-drawer file cabinet with lock
2 Desk trays
2 Pencil sharpeners
2 Staplers
2 Wastebaskets
1 Teacher's desk - 32" x 54" x 30" and chair, with casters
1 Opaque projector

VOCATIONAL TYPEWRITING LABORATORY

35 Electric typewriters (30 for class use, 1 demonstration machine, 4 replacement machines)
30 Typewriting tables - 32" x 40" x 28" and adjustable posture chair
30 Copyholders
1 Demonstration stand
1 Teacher's desk - 32" x 54" x 30" and chair, with casters
1 Paper cutter
1 Unabridged dictionary with stand
3 Staplers
1 Long-arm stapler
2 Pencil sharpeners
1 Interval timer
1 Stop watch
2 Four-drawer file cabinets (one with lock)
1 Projection screen (roll-up, spring type)
1 Record player
1 Tape recorder
2 Wastebaskets
Records, discs, belts and/or tapes to correlate with textbook
6-8 Student dictionaries
6-8 Secretarial handbooks

In typewriting rooms a variety of heights of tables should be provided. The distribution of tables among the various heights should approximate the following:

Typewriting Tables

20% of the tables 27 inches high
60% of the tables 28 inches high
20% of the tables 29 inches high

Chairs for Typewriting

20% of the chairs 16 inches high, with casters
60% of the chairs 17 inches high, with casters
20% of the chairs 18 inches high, with casters

VOCATIONAL DATA PROCESSING LABORATORY

12 Student stations (wiring tables or work tables) with straight-back chairs
9 Printing keypunches

3 Verifiers
1 Accounting machine
1 Sorter
1 Collator
1 Reproducing punch
1 Interpreter
1 Teacher's desk - 32" x 54" x 30" and chair, with casters
Air conditioning for data processing laboratory

NOTE: Sufficient control panels for the various machines, movable wires and control panel cabinets must be supplied for the teaching of functional wiring principles.

VIII. Teacher's Qualifications and Governing Policies

A. High School

1. A teacher of vocational business and office education classes must meet the following qualifications.

   a. A bachelor's degree with a minimum of 45 hours in business and office education.

   b. A valid West Virginia teacher's certificate.

   c. One year (2,000 hours) of occupational experience in office work.

2. No vocational business and office education teacher may teach more than 5 one-hour class periods. When a vocational business and office education teacher's schedule requires more than three different preparations, four class periods shall constitute a maximum load.

3. Each teacher of vocational business and office education classes shall keep up to date by participating in summer school courses, in-service training programs, state conferences, and special workshops or seminars which are under the sponsorship of the Vocational Business Education Service.

4. Each teacher-coordinator of a cooperative work-training program must have taught two years in a business education department using a valid certificate.

5. Each teacher-coordinator engaged in a cooperative work-training program shall be scheduled for at least two class periods of each school day for performing program development, placement, supervision and coordinating activities. These shall be the last two periods in the daily schedule.

6. No teacher-coordinator should supervise more than 25 students who are working an average of 15 hours per week.

7. For a teacher-coordinator who supervises 20 or more students who are working, three class periods (in addition to his supervision) shall constitute a full teaching load.

8. The teacher-coordinator shall be employed for three weeks beyond the regular school term; one week shall be for the purpose of attending summer workshops, conferences, etc. The teacher-coordinator must devote full time to the program during the period of extended service.

9. The local board of education shall provide approved mileage reimbursement for transportation expenses for each teacher who supervises students working in the cooperative work-training program.

B. Post-Secondary

1. In general, the same qualifications and governing policies for high school teachers of vocational business and office education classes apply to teachers of post-secondary classes with the following additional requirement:

A teacher of any vocational business or office education class at the post-secondary level must have a master's degree in business education or have entered a master's degree program.

C. Adult

1. In general, the same qualifications for high school teachers of vocational business and office education classes apply to teachers of adult classes in the field of vocational business education.

NOTE: Teachers to be used for special assignments must be qualified through occupational experience, teaching or training to conduct the special instructional assignments. The above requirements for very specialized adult classes may be waived as long as qualified instructors are employed for these special classes.

IX. Youth Organizations

A member of the state advisory staff assigned to vocational business education shall act as the state adviser for the business education youth group which will compliment the vocational instruction offered for business and office occupations in a manner similar to that found in other vocational programs.

This youth organization - Future Business Leaders of America - shall be sponsored locally by a qualified and certified vocational business education teacher.

Membership in the Future Business Leaders of America local chapter shall be restricted to bona fide vocational students enrolled in vocational business and office education courses.

X Allocation of Federal and State Funds

Vocational business education funds may be used only to reimburse on vocational business education programs for students who have recorded vocational objectives in vocational business and office education.

It is recommended that vocational business education classes be organized to qualify as vocational units as soon as possible.

Classes - The following classes may be classified as vocational business education and related subjects: Advertising, Bookkeeping, Business Math, Business English, Data Processing, Office Practice, Office Machines, Retailing, Salesmanship, Shorthand and Transcription, Advanced typewriting and Vocational Office Training.

NOTE: Elementary Typewriting may qualify as a vocational class only when all of the students enrolled have declared office occupational objectives.

Salaries - Salaries for qualified and certified teachers of vocational business and office education classes may be reimbursed at the rate of 50 percent matching funds or less. Combined fractions of different teacher's time in vocational business education classes may also qualify for reimbursement.

Equipment - Federal and State monies may be used to buy additional equipment in order to upgrade present programs and/or to institute new programs.

Reimbursement to County Boards of Education will be based upon criteria derived from data obtained from each requesting educational agency. Definite ratio for reimbursement is determined annually and depends upon several factors--demand, amount of money available, proration of program types, etc.

Funds for equipment will be prorated on a reimbursement basis of 50 percent matching or less to be used for the purchase, repair and maintenance of approved instructional equipment, and specialized furniture and office equipment. Examples are as follows:

1. Electric adding and calculating machines
2. Duplicating equipment
3. Transcribing machines
4. Electronic shorthand and typewriting systems
5. Audio-visual equipment
6. Teaching materials and supplies

Reimbursement may also be made where local school boards enter into lease-rental agreements on office equipment rather than purchasing equipment.

Travel - Reimbursement for travel of teacher-coordinators of work-training programs shall be made up to 100 percent of approved local travel at a rate not to exceed that established for state employees.

Workshop and Conferences - Full travel and subsistence (100 percent reimbursement) will be paid for actual expenses to qualified supervisors, coordinators and teachers of vocational business and office education classes, in accordance with state reimbursement schedules, for attendance at in-service workshops, institutes and conferences planned for personnel improvement and upgrading that are called by area supervisors or the State Supervisor of Vocational Business Education.

XI. Memorandum of Understanding

A memorandum of understanding for a vocational program operation will be submitted by each educational agency desiring to participate in a vocational business and office education program. The intent of the Memorandum of Understanding is to provide a quality vocational education program.

The local educational agency agrees that the instructional program, selection of teachers, required records and reports shall be in accordance with the West Virginia State Plan for Vocational Education. The local educational agency will provide sufficient funds to operate the classes in a manner that provides for adequate vocational instruction.

The state educational agency will assist in providing supervision and in-service education activities designed to improve the quality of instruction.

It is understood that reimbursement on any program will be discontinued whenever that program fails to meet the requirements of the State Plan or when instruction is inadequate. This Memorandum is subject to revision upon agreement between local and state educational agencies involved.

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Long Range Plans, Wisconsin State Board of Vocational, Technical and Adult Education. A Report Submitted to the Coordinating Committee on Higher Education.

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WISCONSIN

This report describes the history, philosophy, types of schools, programs, and projected plans of the Wisconsin State Board of Vocational, Technical and Adult Education with emphasis on the full-time 1- and 2-year non-degree and 2-year associate degree programs. The topics discussed are: (1) historical development, (2) philosophy and objectives, (3) program and program development, (4) status and projections of labor force in Wisconsin, (5) enrollment potentials, (6) staff personnel needs, (7) space needs, and (8) future plans for program development including facilities, districts, and staffing. (SL)

VT001 704

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WISCONSIN STATE BOARD OF VOCATIONAL, TECHNICAL AND ADULT EDUCATION
Madison, Wisconsin 53702

C. L. Greiber, Director

A Report

"Long Range Plans

Wisconsin State Board of Vocational,

Technical and Adult Education"

Submitted to

The Coordinating Committee on Higher Education

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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November 1966

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TABLE OF CONTENTS

	Page
FOREWORD	
INTRODUCTION, HISTORY, PHILOSOPHY	1
Introduction	1
Statement of History	1-3
Philosophy and Objectives	3-4
PROGRAMS AND PROGRAM DEVELOPMENT	5
Programs	5
Program Development	5-6
PROJECTIONS	7
Future Labor Force Needs for Wisconsin	7-14
Enrollment Potentials	14-17
Staff Personnel Needs	17-18
Space Needs	18-22
FUTURE PLANS	23
Plans for Vocational and Technical Districts	23-24
Plans for Meeting Staff Needs	24-26
Plans for Expansion of Facilities	26-28
Plans for Future Program Development	28-31

ATTACHMENTS:

1. "Opportunities Through Education in Wisconsin Schools of Vocational, Technical and Adult Education", Oct., 1966
2. "Plan for Area Development of Vocational and Technical Education in Wisconsin"
3. Chapter 292, Laws of 1965, State of Wisconsin
4. Organization Charts, State Board of Vocational, Technical and Adult Education
5. Enrollment Statistics, 1964-65

FOREWORD

This report was prepared by staff of the Wisconsin State Board of Vocational, Technical and Adult Education. Contributions are acknowledged from the Wisconsin Department of Resource Development, and the Wisconsin State Employment Service.

Wisconsin Schools of Vocational, Technical and Adult Education have made tremendous strides since the days of the 1909 Interim Committee which recommended the establishment of the system to the 1911 legislature.

Important legislation passed into law by the 1965 Wisconsin Legislature has created new challenges to the citizens of Wisconsin to "Broaden the educational opportunities for the youths and adults of Wisconsin."

The years immediately ahead will see, because of changes in Wisconsin law, the most radical change and improvement in the administration of vocational, technical and adult education in our state's history. Such sweeping change will mean greatly increased demands upon the administration and staff of the State Board of Vocational, Technical and Adult Education. In addition to already substantial efforts to expand programs as needed by our citizens and the employment market, to maintain balance between the traditional craft training and the requirements of modern technology, and to extend service to disadvantaged, unemployed and underemployed, and other special need groups; we can see clearly that thousands of hours of time must go into the planning, interpretation, and implementation of the new state law.

C. L. GREIBER

INTRODUCTION, HISTORY AND PHILOSOPHY

This report describes the history, philosophy, types of schools, programs, and projected plans of the Wisconsin State Board of Vocational, Technical and Adult Education with emphasis on the full-time one and two year non-degree and two-year associate degree programs.

Introduction

Vocational education is as old as man himself. In a broad sense, all education contributes to vocational competency, but vocational education in this report refers to that part of a student's instruction intended specifically to fit the student for work and does not refer to instruction leading directly to a baccalaureate or professional degree.

This report uses the term "Vocational Education" broadly to refer to all formal instruction for both youth and adults, at the post high school level, and out-of-school levels, which prepares individuals for initial entrance into, and advancement within, an occupation or group of related occupations. References to technical education are used to focus attention upon a phase of vocational education having certain unique characteristics usually requiring more rigorous science and mathematics background and more exacting skills. "Adult Education" refers to that education designed for adults who are not enrolled in elementary or secondary schools. Adult Education may be either general, vocational or technical. General education may be part of a vocational or technical curriculum, terminal for self enrichment, or preparatory for transfer toward a baccalaureate degree.

Statement of History

An Interim Committee under Dr. Charles M. McCarthy, a native of Massachusetts, was established in 1909 to study the problems of young workers. The recommendations of this committee became law in the legislature of 1911, creating the state system of vocational schools.

Section 41.13 of the Wisconsin Statutes as amended relates to the State Board of Vocational, Technical and Adult Education, and directs it to "have control over all state aid given to schools of vocational, technical and adult education.....determine the organization, plans, scope, and development of vocational education." This chapter also designates the State Board as the agency to administer federal legislation aiding and affecting vocational education in the state. The statute provides that the Board shall have 11 members; three to be farmers, three employees, three employers, plus the State Superintendent of Public Instruction and a member of the Industrial Commission. The board establishes policies and selects a State Director, who directs the state staff required to carry out the policy directives of the Board.

The state staff supervise programs operated by local vocational, technical and adult schools. Currently there are 64 local boards, 23 of them operating vocational evening schools, 41 of them operating vocational, technical and adult schools offering a fuller range of both day and evening programs. In addition the state staff supervises work in vocational agriculture in 270 high schools and vocational homemaking in 140 high schools.

Programs supervised by the State Board include only those which train for employment or for useful occupations in the home. Local programs of an avocational, recreational, or craft nature are entirely locally supported, and receive no state support. In the period 1950-1964 enrollments in the State Board supervised programs in vocational, technical and adult schools more than doubled, increasing from 70,000 in 1950 to nearly 148,000 (aided), in 1964-65. Additionally, over 31,000 young people and adults were enrolled in the high school agriculture and homemaking programs supervised by the State Board staff. This totals nearly 180,000 students, ranging from part-time instruction at beginning vocational levels to full time students in advanced industrial and business technologies.

In the year's since the establishment of the vocational system in Wisconsin in 1911, federal acts administered by the Board include the basic Smith-Hughes Act (1917) which marks the first effort of the federal government to support vocational education. This work was extended by Title I of the George-Barden Act, in 1946, which provided more funds and broadened the areas of study. In 1956 Title II of the George-Barden Act was passed, providing funds for vocational training in the health occupations. In 1958, the National Defense Education Act, providing federal funds for educating highly skilled technicians needed in defense industries, substantially affected the programs and equipment of Wisconsin Vocational Schools on a continuing basis.

The Area Redevelopment Act of 1961, and the Manpower Development and Training Act of 1962 placed more responsibility on the system for training and retraining unemployed or underemployed workers in depressed areas or victims of technological change. Nearly 80% of the workers who completed these programs in our state are now gainfully employed in the field for which they were trained.

In 1962, responsibility was given the Board for administration of programs under the Civil Defense Education Act. Passage of the Vocational Education Act of 1963 made substantial changes in the groups who could be served and permitted flexibility in the use of federal funds. This Act permits use of funds for the following purposes:

(1) Vocational education for persons attending high school;

(2) Vocational education for persons who have completed or left high school and who are available for full time study in preparation for entering the labor market;

(3) Vocational education for persons who have already entered the labor market and who need training or retraining to achieve stability or advancement in employment;

(4) Vocational education for persons who have academic, socioeconomic or other handicaps that prevent them from succeeding in the regular vocational education program;

(5) Construction of area vocational education school facilities;

(6) Ancillary services and activities to assure quality in all vocational education programs, such as teacher training and

supervision, program evaluation, special demonstration and experimental programs, development of instructional materials, and State administration and leadership, including periodic evaluation of State and local vocational education programs and services in light of information regarding current and projected manpower needs and job opportunities.

The Economic Opportunity Act of 1962 places a responsibility on the State Board in providing Adult Basic Education under Title II-B and such other education and training required under other titles of the Act.

Philosophy and Objectives

The Wisconsin Schools of Vocational, Technical and Adult Education are organized and operated for the purpose of developing and maintaining such educational opportunities and services for young people and adults as to enable them to become occupationally competent, to better understand their responsibilities of citizenship, home and family life, to improve their health, and to help them appreciate those things which will enrich their lives.

Following are the basic concepts underlying Wisconsin vocational, technical and adult education:

1. Educational opportunity shall be provided for all the people:
   The people in a democracy, regardless of social or economic level, should have equal educational opportunities available to them.

2. Educational needs of people, as they continue throughout life, change and vary:
   As each person matures and meets the actual problems of his life, he acquires new needs and interests. As individual economic problems differ and as conditions and practices in industry change, the problems and responsibilities of intelligent citizenship also become increasingly difficult and involved.

3. Not all educational needs are met today by traditional school organization:
   Many of the basic educational needs of Wisconsin's citizens are being well met by the elementary and high schools, the colleges and the university of the state. There still remains the need for education to make a more skilled, confident and purposeful citizenry. This need can and should be met by the Wisconsin Vocational, Technical and Adult Schools.

4. Education for productive work is one of the greatest needs:
   Education for life work, training that enables the individual to earn a living in a socially useful manner, is important to all people in Wisconsin. It is also basic to the total prosperity of the state. The good things in our lives today

have been made possible by the work of men. Further productivity will depend upon wider knowledge and improved skills. The Wisconsin Vocational, Technical and Adult Schools stand ready to develop those skills, knowledges and attitudes necessary in a rapidly changing society.

5. National strength and national defense are dependent upon the productive capacity of all the people:
Nations today are not dependent for their protection upon military force alone. They are strong only to the extent that their people have resourcefulness, productive skill and the common understandings that undergird their unity. The Wisconsin Vocational, Technical and Adult Schools can and do contribute to the productivity of the people and to the strength of the nation.

Although the basic philosophy remains about the same as time marches on, the programs and curriculums change to meet changing needs of people and business and industry.

PROGRAMS AND PROGRAM DEVELOPMENT

Comprehensive programs in depth and unique techniques in the development of these programs are characteristic of the Wisconsin system of vocational, technical and adult education.

Programs

The primary purpose of the Wisconsin Schools of Vocational, Technical and Adult Education is to provide educational opportunities for individuals throughout their lifetime. Since these needs vary and change, the vocational, technical and adult schools are called upon to provide a wide range of educational programs and services.

These schools attempt to meet the varied needs of people through the following types of programs:

1. The junior college
2. The technical institute
3. One and two-year vocational programs
4. Special vocational programs
5. A variety of special educational services

Through advisory committees, vocational, technical and adult education is made responsive to the needs of all the people. The basic pattern of these educational services made generally available include:

a. General continuation
b. Occupational preparation
c. Occupational extension
d. Home Economics and Family Living
e. Related instruction for apprentices
f. Adult education of a civic, cultural and avocational nature
g. Vocational-technical programs
h. Education for the retired adult
i. Adult high school
j. Adult counseling and guidance
k. Special rehabilitation and homebound educational service.

Please refer to the attached State Board's publication "Opportunities Through Education in Wisconsin Schoolsoof Vocational, Technical and Adult Education" for further details on descriptions of programs and locations of schools.

Program Development

To develop and conduct the various types of programs needed to meet the needs of people, agriculture, business and industry various methods, techniques, and procedures are used.

A local school which desires to develop a new program submits a proposal to the State Board where it is reviewed with the State Advisory Committee.

X – Two Year Associate Degree Program

E – Two Year Program, To Be Evaluated for Associate Degree in 1966-67 Year

	Accounting	Air Conditioning	Architectural	Automotive	Business Administration	Chemical & Metallurgical	Commercial Art	Computer Technology	Conservation	Construction Technology	Consumer Credit	Data Processing	Dental Laboratory	Diesel Technology	Electronics	Fashion Merchandising	Finance	Fire Technology	Fluid Power	Highway Technology	Land Surveying	Marketing	Mechanical Design	Mechanical Production	Medical Assistant	Numerical Programming	Office Mid-Management	Petroleum Marketing	Photography	Photo-Instrumentation	Police Technology	Power Technology	Printing & Publishing	Real Estate	Restaurant-Hotel Cookery	Secretarial Science	Structural Drafting	Technical Engineering	Telecasting	General Education
Appleton	X											X			X							X	X											X					
Eau Claire	X	X										E			X							X	X											X					
Fond du Lac	X																					E		X		E					E			X					
Green Bay	X									X		X								X		X	X											X					
Kenosha	X											X				X			X			X	X											X					
La Crosse	X			E											X							E	X											X					
Madison	X			X	E	E	X					X			X	X				X	E	X	X				E	E						X	E				E
Manitowoc	X																						E											X					
Milwaukee	X	X	X	X	X	X	X	X		X		X	X	X	X		X	X	X	X		X	X		X				X	X	X		X	X	X	X	X	X	X	X
Oshkosh	X			E	E				X													X	X														X			
Racine	X									E					X							X	X	X														E		
Sheboygan	X														X							E	E											X					
Superior	X														X								X											X					
Waukesha															X							X	E												E					
Wausau	X		X								E	X			X							X	X											X					

Many other schools, other than those shown on the chart, offer one and two year programs in these fields of study. Please refer to the following pages for schools offering these, and other programs. Information on special types of programs will be found on the last pages of this bulletin.

Programs, courses, classes and curriculums are planned on the basis of local, statewide, regional, and national needs with each school, program unit, and curriculum offering planned to meet an appropriate part of the overall needs. In addition to public relations efforts, programs maintain effective functional relationships with employers, employee groups, agricultural groups, and other agencies, through appropriate utilization of approximately 300 occupational advisory committees and Joint Apprenticeship Committees composed of employers and employees. These committees function on both the State and local levels. Names and records of activities of these committees are on file at the State Board and local school offices.

Ad Hoc Committees are also used during developmental phases of programs. A liaison committee composed of representatives from the State Board of Vocational, Technical and Adult Education and the Wisconsin State Employment Service facilitates the responsiveness of training programs to business and industrial needs.

The employment service provides labor force and occupational information; conducts area and statewide occupational surveys, skill surveys and studies of individual occupations or clusters of occupations on a statewide or area basis.

The State Board and local schools also conduct local occupational need and occupational content studies. Follow-up studies are conducted on a local level to assist in curriculum planning. Many studies are conducted cooperatively.

The initiation of these studies may be suggested or requested from various sources, including instructors, administrators, curriculum personnel, employers, employees, labor unions, and various governmental, public or private business and industrial associations and organizations at all levels.

Various teacher workshops, seminars and other professional improvement activities are conducted on local and state levels to facilitate the development and improvement of instructional programs.

The Wisconsin Schools of Vocational, Technical and Adult Education do not create job opportunities; they attempt to provide appropriate education and training for jobs that exist or are likely to emerge in a rapidly changing technological society.

PROJECTIONS

Plans for the future should be based on realistic projections of factors affecting that future whenever possible.

This section pertains to projections of future labor force needs for Wisconsin, enrollment potentials, staff personnel needs, and the need for additional space and facilities. Much of the information has been developed by other state agencies.

I. The Future Labor Force Needs for Wisconsin

Proper planning of future vocational education programs requires consideration of a forecast of the state's future manpower needs. The following information was developed by the Area Vocational School District Planning Committee in 1966 based on data from the Department of Resource Development and the U.S. Bureau of Census, and Consultation with the Wisconsin State Employment Service.

A. General Considerations

Any labor force projection which projects 10 to 15 years in the future, as this one does, must necessarily be viewed somewhat cautiously because it is impossible to project what economic, social and political circumstances will be affecting the job market in later years. This forecast, made after consultation with personnel of the Wisconsin State Employment Service, gives rough indications of future occupational growth and indicates trends that are likely to occur in the job market. It is accurate to the extent that any forecast, based on recent evidence (1950 to 1960) and judgments regarding present and the future economic situations, can be accurate.

B. The Significance of Rapidly Advancing Technology

Wisconsin's economy is responsive to trends and circumstances at work throughout the nation. Thus, large segments of Wisconsin industry, including lumber and wood products, paper and pulp manufacture and machinery manufacturing are all affected by the adoption of new manufacturing processes developed in other states, the desire to locate near growing centers of population and many other factors.

Nationally, the last 15 years has witnessed very rapid changes occuring in the agriculture industry. Throughout the nation, small acreage and low income farms decreased while average farm size and the degree of product specialization increased. These same agriculture industry trends have exhibited themselves throughout Wisconsin's agricultural industry.

The most significant factor that has led to the growth and extinction of jobs in Wisconsin and the nation is the emergence of a rapidly advancing technology.

The rapidly advancing technology is characterized by the introduction of automation and computers into industry and commerce. Automation, in turn, is characterized by a class of devices that automatically perform both the sensing and motor tasks formerly performed by human labor. Computers are those devices which rapidly perform traditional human tasks involving experience, memory, analysis. logic and elementary decision-making.

The design of more sophisticated tools and processes to produce better products in quantity has always characterized man's development. Thus, the invention of better methods of accomplishing work tasks may be a satisfactory definition of technology. But the significant aspect of today's technology is the rapidity with which better methods are invented to complete work tasks.

Rapidly advancing technology is largely responsible for creating the greatly expanded need for technicians. It has, on the other hand, greatly reduced the need for unskilled labor and farm workers. Within the next 14 years, it will reduce the need for semi-skilled operatives, such as machine operators.

Today, only a small portion of our entire labor force performs hard, physical labor. And, some autorities believe, better machines can - and are - being constructed to lift the remaining physical labors from the backs of our unskilled labor force. Increasingly, work demands the utilization of cognitive skills to the exclusion of the manipulative abilities.

C. The Wisconsin Work Force Projection

The following section analysis and discusses statistical data contained in Tables A & B.

Table A, shown on page 9, shows the actual occupational percentage distribution of the Wisconsin civilian employed labor force in 1960 and projects occupational percentage distributions for 1970, 1975 and 1980. This Table indicates what percentage of the total employed civilian labor force, in selected years, is projected to be employed in various occupations.

Table B, gives the projected numerical and percentage change in employment for all the selected occupations from 1960 to 1970, 1975 and 1980.

D. Analysis of Statistical Tables

1. General Table A indicates that in 1960, Wisconsin had fewer White Collar Workers than Blue Collar Workers. By 1970, however, Wisconsin will have more White Collar Workers than Blue Collar for the first time in its employment history. From 1970 to 1980, the percentage distribution of White Collar jobs compared to total work force will increase by 3.4% compared to a decline of 4.0% in Blue Collar distribution. This indicates that more of the increased job opportunities of the 1970's will be White Collar than Blue Collar in nature.

Despite the increase in the percentage distribution of White Collar jobs, over 30% of the state's entire labor force will be engaged in Blue Collar occupations by the end of the 1970's. Large numbers of job opportunities will exist in these occupations for the next 15 years and the V.T.A. schools will be required to train these workers and retain large numbers of other Blue-Collar workers.

2. Occupation-by-Occupation Analysis

a. Professional Workers (include persons who have at least a four year college degree or specialized talents, such as engineers, doctors, school teachers, lawyers, clergymen, musicians, and medical and health workers.)

Occupational Growth from 1960 to 1980 = 97,300

Professional workers are projected to show the largest numerical gain of any occupational group from 1960 to 1980. With a few exceptions, such as accountants, pre-professional employment training is conducted by the state's colleges and universities. The large growth in professional employment will be due to technological and population growth in the next 14 years.

b. Electrical, Mechanical, Engineering & Related Physical Science Technicians

Occupational Growth from 1960 to 1980 = 25,500

These technical workers, who do not represent the total number of technicians employed in the labor force, are projected to show the largest percentage growth of any occupational group in Wisconsin (1960 to 1980). Growth in electrical, mechanical, and engineering technician employment is projected at 255% from 1960 to 1980. This increase is directly attributable to industry's increased reliance on automated devices and other mechanical means for the production of goods. Consequently, technicians are needed to design, conduct and test these devices.

c. Managers, Officials and Proprietors, Except Farm (includes store buyers, building managers and superintendents, union officials, inspectors and government officials, managers of retail and trade establishments, such as grocery stores, service stations, etc.)

Occupational Growth from 1960 to 1980 = 28,800

Moderate growth in managerial occupations is anticipated for the next 14 years if the current trend toward consolidation of retail trade outlets continues in Wisconsin. The growth of chain stores and shopping centers or plazas has reduced the number of smaller, independent retail outlets throughout the state. The total percentage of the Wisconsin labor force engaged in managerial occupations is projected to increase from 1970 to 1975 and then return to its 1970 percentage in 1980.

d. Clerical Workers (includes secretaries, stenographers, typists, bank tellers, cashiers, file clerks, business machine operators, receptionists, etc.)

Occupational Growth from 1960 to 1980 = 87,300

This occupational group is projected to experience the second highest numerical growth rate during the 1960 to 1980 period. Large numbers of technically trained workers will be needed in the clerical area.

e. Sales Workers (includes advertising agents and salesmen, demonstrators, insurance agents, retail salesmen and saleswomen, stock and bond salesman, merchandizing agents.)

Occupational Growth from 1960 to 1980 = 31,700

Moderate growth is anticipated in the sales occupations for the next 14 years. This projection is based on the assumption that consolidated retail outlets will employ most of the sales personnel that otherwise would be employed by small outlets and, in addition, moderate numbers of sales personnel will be needed to fill additional jobs. Graduates of vocational school Associate Degree Business programs are expected to find ample job opportunities in this occupational area.

f. Craftsmen and Foremen, (exclusive of farm foremen) (includes brickmasons, carpenters, electricians, painters, plumbers, roofers, machinists, bakers, tailors, shoemakers, watchmakers, compositors and typesetters, auto mechanics, construction and manufacturing foremen, etc.)

Occupational Growth from 1960 to 1980 = 53,000

Craftsmen and foremen are projected to show substantial numerical growth throughout the 1970's. This occupational category will employ approximately the same percentage of the total employed civilian labor force in 1980 as it did in 1960, indicating that the complex skills practiced by this occupational group, as yet, cannot be duplicated by machinery. There are exceptions to this (e.g. the printing trades), and the growth of this occupational group will be affected by the introduction of new, sophisticated machinery. V.T.A. schools will be required to offer opportunities for upgrading the skills and job knowledge of skilled workers.

g. Semi-skilled Operatives (Examples include assemblyline workers, laundry and dry cleaning operatives, oilers, greasers, mine operatives, stationary engineers, etc. In general, semi-skilled operatives are individuals who perform repetitive, manipulative functions with machinery).

Occupational Growth from 1960 to 1980 = (-) 12,300

Although semi-skilled employment is projected to increase from 1960 to 1970, very small growth is projected to 1975 and a rapid

decline is projected for 1975-1980. Technological advances in industry make the semi-skilled occupations highly susceptible to job reduction. The rapidity with which Wisconsin industry desires to introduce automated devices will largely determine when decreases in the semi-skilled work force will appear. Young workers entering the semi-skilled occupations in the 1960's may be faced with lay-offs after 1975. Relatively few new job opportunities in the semi-skilled occupations will be available in 1970 to 1975 period and these persons hired in the early 70's may be faced with lay-offs in the 1975 to 1980 period.

In 1960, more Wisconsin workers were employed in the semi-skilled occupation area than any other occupational area (20.4% of the total employed labor force). By 1980, the percentage of semi-skilled workers to total employed is projected to decline to 15.4% of the total employed labor force.

h. Laborers (exclusive of farm and mine) (examples include car washers, gardners, dock workers, lumbermen, teamsters, warehousemen, etc. No skill or job knowledge is required for entry into these occupations.)

Occupational Growth from 1960 to 1980 = (-) 12,300

In 1960, unskilled laborers in Wisconsin occupied the smallest numerical and percentage porportion of our employed labor force. This indicates that technological advances in Wisconsin industry had reduced the need for laborers to low numbers prior to 1960. This projection forecasts a continued decline in the need for laborers. Although the decline in laborers, as a percentage of the total work force is considerable from 1960 to 1980, the numerical decline is less than might be expected because the 1960 numerical unskilled labor employment was low. (See Table B)

With periods of severe labor shortage, such as Wisconsin is experiencing now, unskilled laborers find employment opportunities are good. However, with a return to "normal" economic growth patterns and a surplus labor supply, unskilled laborers frequently find job opportunities are scarce. Moreover, without skill training, laborers frequently find themselves tied to "low status", low-paying jobs with very insecure job futures.

i. Agricultural Occupations

As mentioned previously, Wisconsin farming has been greatly affected by national trends, including product specialization and the introduction of labor saving farm machinery. Although Department of Labor statistics indicate a decline in numbers of farmers and farm laborers, the area of agricultural occupations is one of the most dynamic and extensive occupational fields in existence in Wisconsin. While the harsh realities of the highly competitive business of farming are reducing the number of farms and farm operators, the size of farm operations is constantly increasing

and the number of persons employed in providing essential supplies and services which make the miracle of modern farming possible remains large and apparently is expanding. The various services necessary in marketing agricultural production employ additional substantial numbers of persons needing agricultural knowledge and skills.

The following statistics taken from the "Midwest Agribusiness" report of October 1966 which was prepared by the Midwest Association of Departments of Agriculture, reflects the scope of agricultural occupations in Wisconsin.

Total Employment in Agricultural Occupations in Wisconsin in 1965

Occupational Areas	Totals
Farm Employment	
Family farm workers	208,000
Hired farm workers	23,000
Total farm workers	231,000
Non-Farm Agribusiness workers	369,000
Total Agribusiness workers	600,000
Total Labor Force in Wisconsin	1,587,000

j. Service Related (includes private household workers such as baby sitters, housekeepers, laundresses, and other service workers such as policemen, watchmen, firemen, guards, waiters, cooks, bartenders, barbers, hairdressers and janitors.)

Occupational Growth from 1960 to 1980 = 80,400

The numerical growth in this occupational group is only surpassed by professional and clerical employment growth. Population growth throughout the 1970's will increase the need for housekeepers, laundresses and child care personnel, it is doubtful whether an adequate supply can be furnished, since many of these occupations are considered "low status" jobs. The state's vocational schools currently have training programs for entry into service related occupations. For example, Associate Degree programs in Restaurant and Hotel Cookery are available.

The State's Need for Skilled Workers - An analysis of a Wisconsin State Employment Service report on manpower needs (1962-1967) showed that in 1962, approximately 51,500 of 106,300 selected skilled workers were required to have completed an apprenticeship program before entering their occupations. Total need for this kind of skilled worker was projected to increase to 136,200 workers in 1967. If the same percentage of these workers

were required to have apprenticeship as was required in 1962, 65,376 apprenticed workers would be required in 1967, or an increase of 13,926 over 1962. Approximately 6,100 additional apprentices will be added to the labor force from 1962 to 1967, or roughly 44% of the 13,926 additional apprenticed skilled workmen needed by 1967. In 1970, the labor force forecast projects that the state will need approximately 21,000 new skilled workers (over 1960); in 1975, the need will be approximately 11,400 (over 1970); in 1980, the need will be approximately 9,900 (over 1975). At the 1966 projected level of apprenticeship completions (1,150), the State's Apprenticeship program may be expected to produce 5,570 of the total new skilled workers needed from 1970 to 1975 (or 50% of the total need) and 58% of the total new skilled workers needed from 1975 to 1980.

Projecting the Need for Technicians - The shortages of technically trained individuals indicated below do not portray the full need for this type of trained worker.

The total need cannot be accurately projected because technical job titles now in existence were completely unknown or unidentified 10 to 15 years ago. Scores of technician jobs will be created in the next 10 to 15 years which are unheard of at this time. For these reasons, the material below is confined to commenting on technical occupation growth in areas where job titles will remain relatively the same from 1960 to 1970.

Technician Manpower Needs - Employment growth in electrical, engineering and other physical science technical occupations is projected at 8,300 between 1960 and 1970. At least another 17,200 of these technicians will be needed between 1970 and 1980.

Based on the evidence at hand, it appears that the vocational-technical schools will be unable to provide the needed number of these technicians unless facilities are expanded during the remainder of the 1960's.

In the Fall of 1964, the Vocational-Technical Schools were forced to turn away 2,000 students who applied for entrance into Associate Degree Programs. In the same year, approximately 530 second year Associate Degree candidates were expected to get degrees in the physical science technician fields. Approximately 800 persons were anticipated to enroll in physical science Associate Degree programs in 1964-65, the last year which had space to accommodate them. Assuming that the program enrollment must remain relatively at 1964-65 level throughout the 1960's, (because limited space is available) we may expect approximately 730 graduates in the physical science area for each year from 1965-66 through 1970. (Total graduates, 1964-70, 4,190)

If the State Board approves all two-year, full time non-degree physical science technical programs in existence in 1963-64, and 1964-65 as Degree programs, this added source of manpower will

TABLE A

ESTIMATED PERCENTAGE DISTRIBUTION OF THE EMPLOYED CIVILIAN LABOR FORCE IN WISCONSIN, BY OCCUPATION 1970, 1975, and 1980

	YEARS			
	1960 (Actual)	1970	1975	1980
otal Employed Civilian Labor Force	(1,468,631) = 100%	(1,670,200) = 100%	(1,775,200) = 100%	(1,865,500) = 100%
ccupational Distribution:				
White Collar Workers):	(37.0)	(40.3)	(42.0)	(43.7)
rofessional	9.3	11.0	11.8	12.6
echnical (1)	.7	1.1	1.3	1.9
anagers, Officials & Proprietors (2)	7.2	7.2	7.4	7.2
lerical Workers	12.8	13.9	14.3	14.8
ales Workers	7.0	7.1	7.2	7.2
lue Collar Workers	(38.2)	(35.6)	(34.3)	(31.6)
raftsmen and foremen (3)	13.7	13.6	13.6	13.6
emi-skilled Operatives	20.4	18.8	17.9	15.4
aborers (4)	4.1	3.2	2.8	2.6
arm Related*	(11.1)	(8.2)	(6.7)	(6.2)
ervice Related	(10.0)	(11.2)	(11.8)	(12.2)
ccupation Not Reported or Unknown (See Table B)	(3.7)	(4.7)	(5.2)	(6.3)

1) Electrical, mechanical and engineering technicians only
2) Exclusive of farm proprietors
3) Exclusive of farm foremen
4) Exclusive of farm and mine

Sources: Estimate of Total Civilian Employed Labor Force in 1970, 1975 and 1980 - Department of Resource Development; 1960 employed civilian labor force from U.S. Bureau of Census

See Wisconsin figures under Item I.

TABLE B

ESTIMATED CHANGE IN JOBS, WISCONSIN CIVILIAN LABOR FORCE, 1960-1970, 1970-1975, and 1975-1980 and 1960-1980

Occupation	1960 Actual Employment	No. Growth 1960-70 Col 8-Col 1	% Growth 1960-70 Col 2-Col 1	No. Growth 1970-75 Col 9-Col 8	% Growth 1970-75 Col 4-Col 8	No. Growth 1975-80 Col 10-Col 9	% Growth 1975-80 Col 6-Col 9	Total No. in 1970 Col 1+Col 2	Total No. in 1975 Col 8+Col 4	Total No. in 1980 Col 9+Col 6	Total Growth 1960-80 Col 10-Col 1
White Collar Workers	(543,557)	(+130,043)	(24)	(+72,300)	(11)	(+68,400)	(9)	(673,600)	(745,900)	(814,300)	(270,743)
Professional	136,787	+46,413	34	+26,500	14	+24,400	11	183,200	209,700	234,100	97,313
Technical (1)	9,999	+8,301	83	+4,800	26	+12,400	57	18,300	23,100	35,500	25,501
Managers, Officials & Proprietors (2)	105,463	+15,037	14	+10,900	9	+2,900	2	120,500	131,400	134,300	28,837
Clerical Workers	188,780	+43,520	23	+21,600	9	+22,200	9	232,300	253,900	276,100	87,320
Sales Workers	102,528	+16,772	16	+8,500	14	+6,500	5	119,300	127,800	134,300	31,772
Blue Collar Workers	(561,029)	(+33,571)	(6)	(+14,300)	(2)	(-19,400)	(-3)	(594,600)	(608,900)	(589,500)	(28,471)
Craftsmen & Foremen (3)	200,600	+26,540	13	+14,200	6	+12,300	5	227,200	241,400	253,700	53,040
Semi-skilled Operatives	299,610	+14,290	5	+3,900	1	-30,500	-10	313,900	317,800	287,300	(-)12,310
Laborers (4)	60,759	-7,259	-12	-3,800	-7	-1,200	-2	53,500	49,700	48,500	(-)12,259
Farm Related*	(162,454)	(-24,554)	(-15)	(-19,700)	(-1)	(-2,600)	(-2)	(137,900)	(118,200)	(115,600)	(-46,854)
Service Related	(147,217)	(+39,883)	(27)	(+22,400)	(12)	(+18,100)	9	(187,100)	(209,500)	(227,600)	(+80,383)
Occupation Not Reported or Unknown (5)	(54,374)	(+22,626)	N.A.	(+15,700)	N.A.	(+25,800)	--	(77,000)	(92,700)	(118,500)	(+64,126)
Total Employed	1,468,631	+201,569	14	+105,000	6	+90,300	5	1,670,200	1,775,200	1,865,500	+396,869

(1) electrical, mechanical, and engineering technicians only
(2) exclusive of farm proprietors
(3) exclusive of farm foremen
(4) exclusive of farm and mine
(5) Unable to forecast the occupations of these workers because 1960 U.S. Census Report had incomplete tabulation of all employed workers. To maintain accuracy in projection the "occupation unknown" factor had to be retained.

* See Wisconsin figures under Item I.

OCCUPATIONAL GROUPS

Employed Women in Wisconsin
U.S. Census, 1960, 1950

	1960		1950	
Occupational Groups	Number Women	% of Total Employment	Number Women	% of Total Employment
Total	457,307	31.1	359,429	26.5
Prof., Tech.	57,755	39.3	44,007	40.8
Mgr., Inc. Farm	20,410	9.5	17,846	6.8
Mgr., Non-Farm	13,786	13.1	13,466	12.6
Clerical	129,817	68.8	91,061	62.5
Sales	39,949	39.0	34,106	38.0
Cler. & Sales	169,766	38.3	125,167	53.2
Craft., Fore.	5,862	2.9	5,722	3.1
Operators	67,338	22.5	62,296	23.0
Service, Incl. H.H.	96,738	65.7	65,328	57.2
Service, Non H.H.	72,944	59.5	46,530	49.4
Labor, Incl. Farm	19,982	17.6	32,302	19.9
Other	19,456	--	6,761	--

FEDERAL WOMEN'S BUREAU, SEPTEMBER 1964

A release indicated that in August 1964 approximately 26 million women were in the labor force. This was 37 per cent of all women 14 years and over, and was 34.7 per cent of all workers. The average age of employed women was 41 years. The major occupational groups in which women were employed (April 1964) were:

31 per cent clerical
15 per cent service workers (exclusive of domestic work)
15 per cent operatives
13 per cent professional and technical, including 1 1/2 million teachers (6%)
10 per cent household workers

produce approximately 1,600 additional physical science technicians from 1963-64 to 1970. (Because limited space is available, program enrollments in non-degree courses beyond above 1964-65 levels will be limited.)

Approximately 25% of the 1964-65 part-time enrollment in Associate Degree physical science technician courses will earn their degrees by 1970, or 360 individuals.

In total, the Committee believes that 6,400 electrical, engineering and other physical science technicians should graduate from vocational, technical and adult schools in the 1960's. (Approximately 250 of these had earned their degrees and entered the labor force from 1960 to 1963-64.) Our shortage in this area, by 1970, will be approximately 1,700.

The 1960-70 employment growth in clerical occupationals, such as secretaries, key punch operators, court reporters, etc., is projected at 43,500. At least 30% of this total will need advanced training of the Associate Degree caliber to gain entrance into clerical occupations throughout the 1960's. At 1964-65 enrollment levels, the Office and Distributive Full and Part-Time Associate Degree Programs, such as Secretarial Science, etc., should produce 11,000 to 11,500 of the required 13,000 needed workers, leaving a shortage of 1,500 to 2,000 properly trained persons.

The State's 1960-70 growth and replacement rate for Practical Nurses and Medical Assistants is expected to require approximately 3,500 additional personnel trained in these medical specialities. If the 1964-65 enrollment in vocational school one-year Practical Nurse and Medical Assistant programs is continued throughout the 1960's, it is anticipated that the State will have a shortage of 400 to 500 practical nurses and medical assistants by the close of the 1960's.

II. Enrollment Potentials*

Two projections of potential full-time enrollments have been prepared. The low projection is based upon state-wide enrollment trends since 1953-54 and rests upon the following assumptions:

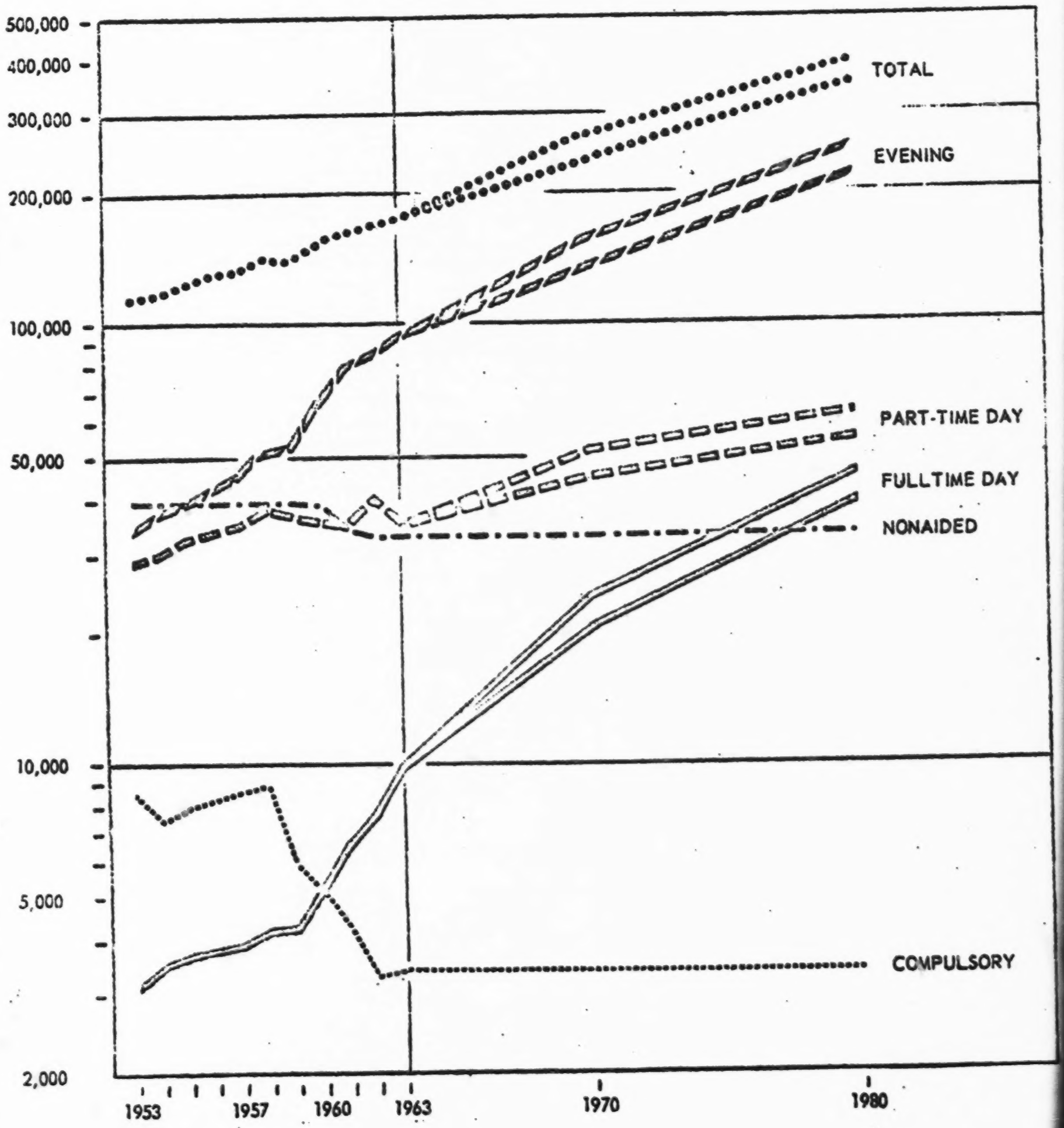
1. Evening and part-time day class enrollments will continue to increase in the future at about the same rate as they did between 1953-54 and 1963-64. The trend in enrollments in such classes was fairly consistent during that period, and there are no foreseeable events that would tend to alter that trend.

2. Full-time day class enrollments are increasing and will continue to increase in the future at about the same rate as they did between 1960-61 and 1963-64. This assumption reflects the tendency for these classes to grow more rapidly in recent years as a result of the increased demands by industry for more highly skilled labor, and the increased aids for the establishment of these programs.

* Source: Wisconsin Department of Resource Development

TOTAL STUDENT ENROLLMENTS
1953-1980

HIGH AND LOW PROJECTIONS



Full-time post high school opportunities were made available in nearly 40 of the schools last year, covering nearly every field which can be most effectively taught at the 13th and 14th year levels.#

3. Non-aided and compulsory enrollments will remain at about their current levels in the future. This assumption reflects the declining emphasis on these classes during the past decade. (Recent legislation will probably cause a decrease in compulsory enrollments).#

The high projection is based upon regional enrollment potential projections and it rests upon the following assumptions:

1. Evening, part-time day and full-time day enrollments in areas that have had relatively high enrollment rates will increase at about the same rate in the future as they have in the past, while enrollments in areas that have had relatively low enrollment rates will rise more rapidly in the future than they have in the past. This assumption reflects an anticipated strengthening and diversification of programs in those areas that now have relatively weak programs. Because the strengthening of these weak programs rests upon a number of factors including staff competence, public interest and acceptance of vocational-technical education, and community willingness to finance a strong program, these potentials may not be realized, in many cases, by 1970. They could, however, be more representative of longer range (1980) enrollments.

2. Non-aided enrollments will remain at about their current levels, although there will be some year to year fluctuations.

The accompanying graph (prepared early in 1966 and based upon enrollment trends to 1963-64 and population projections) visually portrays past trends and projected potentials. Both projections indicate a substantial potential for increased enrollments in the future. Under the low projection total enrollment could grow from its 1963-64 level of 176,318 to 237,000 in 1970 (a 34 per cent increase), and to 348,500 in 1980 (a 98 per cent increase). (See Table) Under the high projection total enrollment could grow to 266,800 in 1970 (a 51 per cent increase) and to 394,500 in 1980 (a 124 per cent increase). Since neither of these projections take into account the potential enrollments represented by those turned away from classes in recent years because of a lack of both space and qualified instructors, they may be regarded as relatively conservative estimates.

Associate Degree Students

The traditional forms of vocational education have developed manipulative skills which are needed to perform particular jobs or operations. Advancing industrial, business and home economics technology, however, has produced

State Board of Vocational, Technical and Adult Education

a growing need for persons who can perform certain manipulative tasks and, in addition, have a grasp of theoretical subject matter. Simply stated, these persons occupy a "middleground" between productive workers and the persons who plan and manage plant or industry operations. Equally important, these "middlemen", or technicians, have the ability to assist research personnel in developing, designing or testing new devices which lead to dramatic increases in industrial productivity.

Since technicians perform so many varied tasks, and technician responsibilities vary greatly between industries and organizations, it is nearly impossible to formulate an all encompassing definition of the technician's job. Moreover, the technician's job role may change rapidly from one year to another, depending on the supply of highly skilled and professional manpower. The scarcity of professionally trained or highly skilled manpower in a particular industry means the technician's role is a broad one. At plants or organizations with sufficient skilled and professional workers, the technician's role may be more restricted.

The State's vocational education institutions have been training technicians on a full-time basis since 1959. Our present technician training program is designed to provide the student with basic manipulative skills with the addition of courses in mathematics, science, psychology, social science, human relations and communications skills. Upon completion of a full-time, two-year curriculum, the student is awarded the Associate Degree and is prepared for employment. Presently, there are 102 Associate Degree programs approved in the system.

Non-Degree Students

In 1964-65, 4,668 persons were enrolled full-time in skill upgrading courses less than two years in length. These persons may be distinguished from Associate Degree candidates by: (1) the length of their training periods and (2) the emphasis of their training upon manipulative skill development rather than cognitive skill training.

Although trainees in this category may be exposed to some of the general education training given technicians (such as human relations), the comprehensiveness of general education is not as great as that given Associate Degree students. In many courses, such as Practical Nursing, certificates are awarded to enrollees who successfully complete their studies.

About 22% of the total 1964-65 enrollment in this student category were engaged in learning new clerical skills; another 20% were preparing for jobs in the skilled industrial occupations; 6% were studying barbering and hairdressing (service trades) and 23% were studying practical nursing and medical or dental specialties. The remaining 19% were engaged in skill training for business, graphic and applied arts and other occupations.

Collegiate Transfer Students (Liberal Arts)

Chapter 292 states that the State's Vocational, Technical and Adult Schools may offer liberal arts' collegiate transfer programs at locations

where there are: (1) no existing institutions of higher education, or (2) in cities of 150,000 or more population, even though these cities have existing institutions of higher education. At present, one liberal arts transfer program is in operation throughout the vocational school system. This is located at the Milwaukqe Institute of Technology. The program had full and part-time enrollment of 5,360 in 1964-65. In addition, the Madison Vocational, Technical and Adult School has been provisionally accredited by the North Central Association of Universities and Colleges to offer college transfer courses.

Liberal arts transfer opportunities offered in the future will depend largely on the student groups served at vocational education facilities. These programs could serve only high school graduates who can meet the admission standards of the state supported universities, or they could serve all high school students who apply for admission.

Other Students

In addition to the students pursuing full-time associate degree, non-degree and collegiate transfer programs there were approximately 2,000 students enrolled full time in Manpower Development and Training Programs in January, 1966.

In 1963-64 there were over 61,000 persons enrolled part time in day or evening courses to upgrade present skills and knowledges. There were approximately 36,000 persons enrolled in avocational education opportunities and approximately 22,000 were enrolled in federally and state aided home-making courses on a part-time basis during the 1963-64 school year. No state aid is paid for arts and crafts avocational courses.

Over 19,400 persons were served by the Division of Vocational Rehabilitation in 1965-66. Other students also are enrolled in Civil Defense education, Driver Education, and Adult Basic Education. Demands for avocational courses are likely to increase in the years ahead because of shorter weeks and an increase in population over 65 years of age.

III. Staff Personnel Needs

As vocational education programs expand and as other programs are initiated, the need for personnel in supervisory, research, teacher training and subject matter positions expands concomitantly. Many are predicting that the supply of trained personnel at all levels may be the most critical limiting factor in meeting the new demands now facing vocational education. If this phase of our educational program is to meet the needs of the future, we must have men and women with the education and background in occupational training so essential to successful teaching.

The need for personnel will be critical at all levels, from teachers through supervisory personnel on local, district and state levels.

In a study of "Personnel Needs and Supply in Vocational, Technical Education above Local Teacher Level" conducted by Bill W. Stevenson at Oklahoma

GRAPH SHOWING NUMBER OF PROVISIONAL TEACHING CERTIFICATES ISSUED

Wisconsin State Board of Vocational, Technical and Adult Education

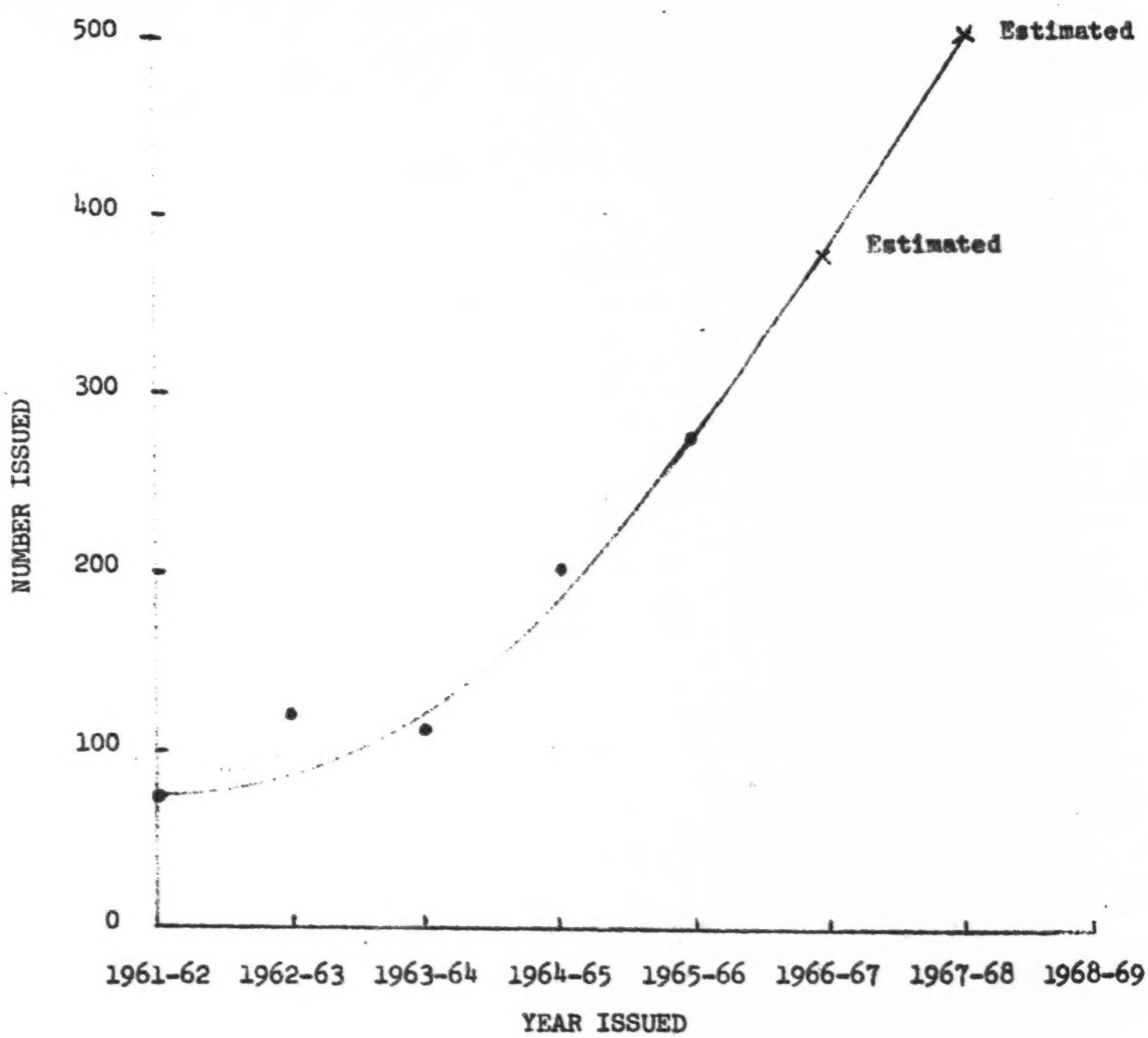


TABLE SHOWING NUMBER OF
PROVISIONAL CERTIFICATES ISSUED

DATES	NUMBER
9-1-61 to 8-31-62	72
9-1-62 to 8-31-63	121
9-1-63 to 8-31-64	106
9-1-64 to 8-31-65	202
9-1-65 to 8-31-66	275
9-1-66 to 8-31-67 (Estimated)	375
9-1-67 to 8-31-68 (Estimated)	500

State University in 1966, conclusions were:

1. There is presently an extreme shortage of qualified personnel for positions of leadership in vocational education.

2. This shortage will become more severe as present programs are expanded and new programs are added.

3. Some program of leadership development and training must be initiated if vocational education is to fulfill the commitment of the Vocational Education Act of 1963.

The study shows that in general the supply of graduates above the baccalaureate level would fill 50 per cent of the demand for vocational education personnel at the state and district levels, if all were available for these vacancies. When we consider that many of those receiving Masters Degrees will go back into or remain in teaching, the situation becomes even more acute.

In Wisconsin, the issuance of the Provisional Teachers Certificate is a strong indication of the number of new teachers employed. This would include replacement of teachers as well as additional teachers needed due to expansion. See the accompanying graph and table indicating number of provisional certificates issued annually from 1961-65 and the projected number needed for 1966-67 and 1967-68. The projections show that for 1966-67 we would employ 375 new teachers requiring provisional certificates and approximately 500 would be needed for 1967-68 school year. In a telephone survey of four schools it was ascertained that for every new teacher needed for replacement due to retirement and other reasons a new teacher is also needed due to expansion of programs and other reasons. This ratio of 1:1 compares favorable with National projections from U.S.O.E.

For the school year 1965-66 we employed 886 full-time teachers and had a total full time enrollment of 15,612. This is a ratio of one full-time teacher to nearly 18 full time students. On the basis of high and low projected enrollments and on the basis of an 18:1 ratio of full time teacher to full time enrollments we would be employing approximately 1139-1411 full time teachers in 1970 and 2433-3000 full time teachers in 1980.

The above projections refer to teachers only. No projections have been made regarding additional guidance and supervisory and administrative personnel needed in Wisconsin. As vocational, technical districts are developed there will be a need for supervisory and administrative personnel on the district level.

IV. Space Needs*

Two space needs estimates are presented here. One is an estimate of the total space necessary in vocational-technical school facilities to

* Source: Wisconsin Department of Resource Development

accommodate the current enrollments and to correct the glaring space deficiencies such as those in library, office and non-assignable space. The other estimate is of the long range need for additional space to meet anticipated increases in the total number of student hours of instruction that vocational, technical and adult schools will be called upon to provide in the years ahead.

Hours of Instruction

The projections of student enrollments tend to understate the extent of the demand for vocational-technical education facilities because the full-time student who may attend classes 20 or more hours a week and the part-time or evening student who may attend classes as little as an hour a week are often each counted as one enrollment. These projections have, therefore, been converted to projections of hours of instruction per week.

Since full-time enrollments are expected to comprise an increasing proportion of all enrollments the number of class hours of instruction per week will increase more rapidly than the number of students enrolled. Student hours of instruction are expected to increase between 163 and 198 per cent by 1980 compared to an anticipated increase of only 98 to 124 per cent in students enrolled.

PROJECTED ENROLLMENTS AND HOURS OF INSTRUCTION,
VOCATIONAL-TECHNICAL SCHOOLS

	Students Enrolled		Hours of Instruction Per Week	
Year	Number	% Change	Number	% Change
1963-64	176,318	--	520,500	--
1970 High Projection	266,800	51	944,100	81
Low Projection	237,000	34	800,200	54
1980 High Projection	394,500	124	1,548,600	198
Low Projection	348,500	98	1,367,000	163

ESTIMATED CURRENT FLOOR SPACE DEFICIENCIES,
VOCATIONAL-TECHNICAL SCHOOLS

	Existing Space (Sq. Ft.)	Additional Space Needed (Sq. Ft.)
Assigned Active Instructional		
Classroom	289,330 Sq. Ft.	-119,600 Sq. Ft.
Labs	807,130	0
Libraries	24,850	258,000
Officies	108,590	80,000
Other	130,870	0

	Existing Space (Sq. Ft.)	Additional Space Needed (Sq. Ft.)
Assigned Active Non-Instructional	327,140	26,400
Non-Assignable and Inactive	548,120	126,000
Total	2,236,030 Sq. Ft.	370,800 Sq. Ft.

Source: Wisconsin Department of Resource Development

Long Range Needs

Accommodation of potential enrollments may require the addition of 1,500,000 to 2,200,000 square feet of vocational-technical school floor space between 1965 and 1970. (See Table). This amounts to an 88-122 per cent increase in existing space. An additional 3,200,000 square feet of floor space may be required to accommodate enrollments estimated for 1980. Over the next 15 years, therefore, vocational-technical school space may have to be increased 222-264 per cent in order to meet potential demands.

These estimates are for the 35 vocational-technical school facilities now owned and/or operated by vocational school boards that replied to the 1964 space survey. Additional space, not estimated here, may also be required to meet enrollment increases in the form of schools that did not reply and in those classes which are conducted in other kinds of buildings such as high schools and elementary schools.

ESTIMATED FLOOR SPACE NEEDS, VOCATIONAL-TECHNICAL-ADULT EDUCATION SCHOOLS, 1964, 1970, 1980

	Additional Space Needed (Sq. Ft.)			
	1964	1965-70	1970-80	Total
To Correct Current Deficiencies:	370,800	---	---	370,800
To Meet Long-Range Needs:				
1965-1970				
High Projection	--	2,229,000	---	2,229,000
Low Projection	--	1,474,000	---	1,474,000
1970-1980				
High Projection	--	---	3,176,000	3,176,000
Low Projection	--	---	2,991,000	2,991,000
1965-1980				
High Projection	--	2,229,000	3,176,000	5,405,000
Low Projection	--	1,474,000	2,991,000	4,465,000

Construction Costs

Assuming an average cost of $22 per square foot of space, an estimated $32,400,000 - $49,000,000 may need to be expended to meet 1970 space needs. (See Table) Between 1970 and 1980 an additional $65,900,000 - $69,900,000 may need to be expended for new vocational-technical school construction in order to meet growing needs. This amounts to an average annual construction expenditure of $7,300,000 - $8,700,000 per year in the period 1965-1980. If expenditures to correct current deficiencies are also included and spread over the 15 year period, average annual expenditures would have to amount to $8,300,000 - 9,400,000 per year. See Table below.

ESTIMATED NEEDED CONSTRUCTION EXPENDITURES, VOCATIONAL-TECHNICAL-ADULT SCHOOLS, 1970, 1980

Year	CONSTRUCTION EXPENDITURES Total	Average Annual
To correct current deficiencies:	$10,788,800	--
To meet long-range needs:		
1965-1970		
High Projection	49,042,400	$9,808,500
Low Projection	32,434,600	6,486,900
1970-1980		
High Projection	69,869,800	6,987,000
Low Projection	65,795,400	6,579,500
1965-1980		
High Projection	129,701,000	8,646,700
Low Projection	109,018,800	7,267,900

Note: Estimated expenditures are for the 35 schools responding to the 1964 survey which are operated primarily for vocational, technical and adult education purposes. Four small schools did not respond to the survey.

Source: Department of Resource Development

Operating Costs

Expenditures at local schools for operating purposes amounted to $19,837,000 in 1963-64. This included all revenues except those expended for the construction of new floor space. It is estimated that operating expenditures could increase to $30,500,000 to $36,000,000 in 1970 and $52,100,000 to $59,000,000 in 1980 if all the potential enrollments were to be accommodated. See Table on following page.

ESTIMATED OPERATING COSTS, SCHOOLS OF VOCATIONAL-TECHNICAL-ADULT EDUCATION, 1963-64, 1970, 1980

	1963-64	1970		1980	
		Low	High	Low	High
Annual Operating Costs	$19,837,000	$30,496,000	$35,980,000	$52,096,000	$59,017,000
Annual Operating Costs Per Weekly Hour of Instruction	$38.11	$38.11		$38.11	

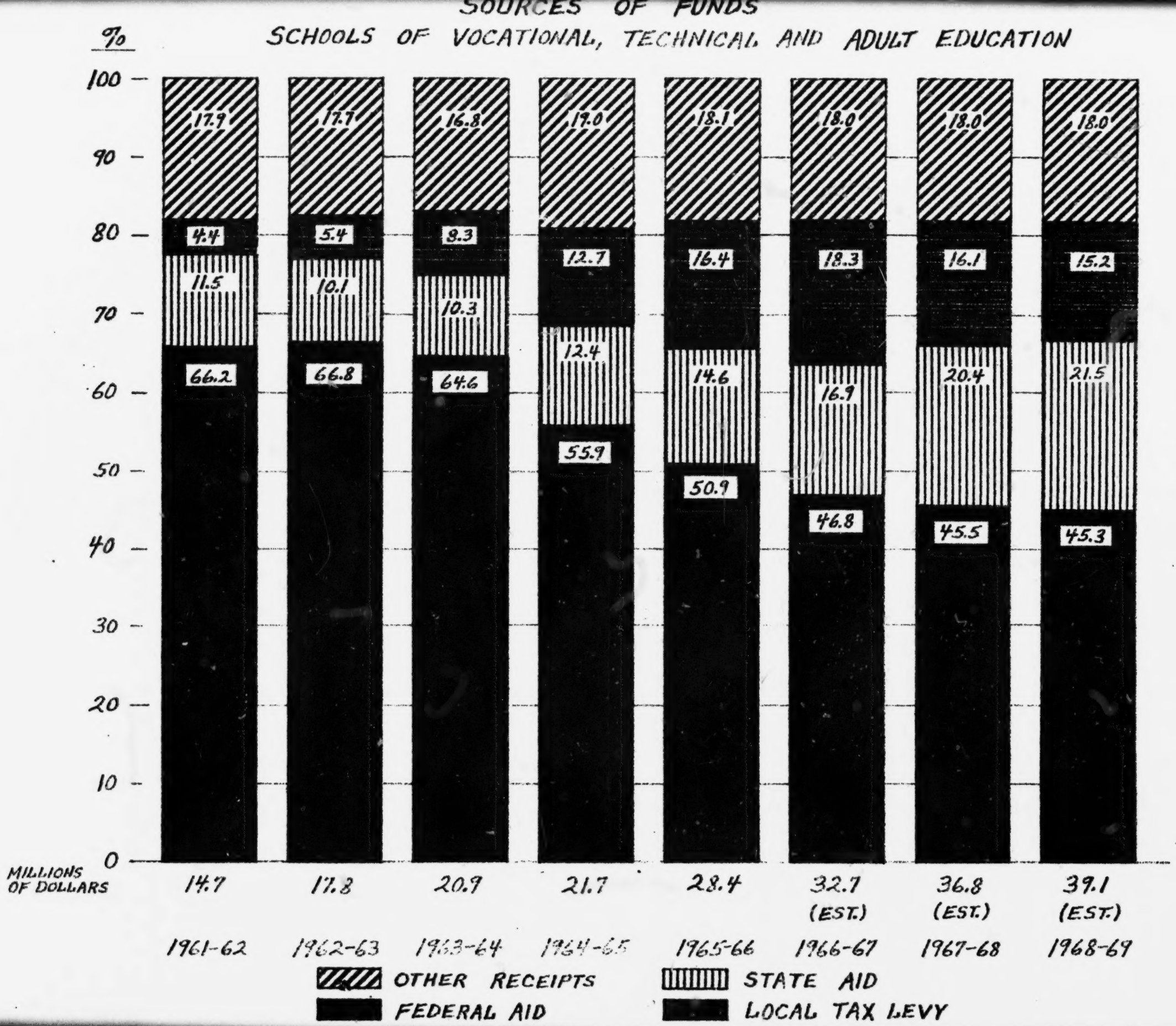
Note: All figures in 1963 dollars.

The accompanying bar graph shows the sources of funds for schools of vocational, technical and adult education from the fiscal years of 1961-62 through 1965-66 and the estimated amounts through 1968-69.

The graph indicates a decreasing percentage of total expenditures being supplied from local sources while increasing annual percentages are being supplied from state and federal sources.

About one-half of the "other receipts" comes from tuition.

In summary, it can be said that both operating and construction costs will continue to rise in the years ahead as the vocational, technical and adult schools in the state respond to mounting demands for services. It must also be remembered that the operating and construction costs presented here are in terms of 1963 dollars. Continued normal inflation will increase real costs above the projected levels. Further detailed information on floor space is available at the State Board.


SOURCES OF FUNDS
SCHOOLS OF VOCATIONAL, TECHNICAL AND ADULT EDUCATION
%
100
90
80
70
60
50
40
30
20
10
0
MILLIONS OF DOLLARS
17.9
17.7
16.8
19.0
18.1
18.0
18.0
18.0
4.4
5.4
8.3
12.7
16.4
18.3
16.1
15.2
11.5
10.1
10.3
12.4
14.6
16.9
20.4
21.5
66.2
66.8
64.6
55.9
50.9
46.8
45.5
45.3
14.7
17.8
20.9
21.7
28.4
32.7 (EST.)
36.8 (EST.)
39.1 (EST.)
1961-62
1962-63
1963-64
1964-65
1965-66
1966-67
1967-68
1968-69
OTHER RECEIPTS
STATE AID
FEDERAL AID
LOCAL TAX LEVY

FUTURE PLANS

The plans of the future for the Wisconsin System of Vocational, Technical and Adult Education stem from two important phenomena:

1. Increasing population
2. The rapidity of technological change

The increasing population will cause increasing enrollments; consequently more instructors, supervisory and administrative staff and facilities will be needed.

The rapidly changing technological society results in changing skills and knowledges required in the labor force; consequently, new and improved vocational, technical and adult programs will be needed.

To meet the above challenges, improvements in organization, and administration are also needed.

A plan for the location and function of vocational, technical and adult schools was adopted by the State Board of Vocational, Technical and Adult Education in November of 1963. Please see attachment. However, this plan was never legally adopted, but it has been used as a guide in evaluating area schools in preparation for offering associate degree programs.

I. Plans for Vocational and Technical Districts:

The passage of Chapter 292, Laws of 1965, requires development of an orderly plan through which all of the area of the state will become a part of a district capable of providing comprehensive vocational, technical and adult education opportunities. The law requires that the districting will be accomplished before July 1, 1970. Districting plans must be approved by both the State Board and the Coordinating Committee for Higher Education.

Section 1 of the Law states the purpose as: "In order to broaden the educational opportunities for the youths and adults of Wisconsin, the state board of technical and adult education shall establish a program of instruction at institutions throughout this state which will equip all of this state's people to find their place in the competitive labor market of today. This act shall be construed as an enactment of state-wide concern for the purpose of establishing a state-wide system of vocational, technical and adult education districts throughout the state."

The legislature directed the State Board of Vocational, Technical and Adult Education and the Coordinating Committee for Higher Education to create a proposed master plan.

No standards have definitely been adopted. However, the State Board and the Coordinating Committee have tentatively developed the following criteria for districts organized in 1970:

A. Each district should generate 760-780 full-time students throughout the 1970's and 1980's.

B. Each district should generate 3000 high school graduates annually throughout the 1970's and 1980's.

C. Each district should contain a minimum population of 187,500 throughout the 1970's and 1980's.

D. Each district should contain a minimum equalized valuation of $450 million throughout the 1970's and 1980's.

E. Districts for areas with sparse population shall be considered on individual merits.

Each district will have at least one vocational-technical institute capable of conducting all types of programs, including two-year, full-time associate degree programs, one and two-year non degree programs, part-time occupationally oriented programs and related instruction for apprentices. Secondly, each district will have vocational and technical schools offering part-time instruction in day and evening classes. Some of these schools may also offer the traditional one or two-year programs for youth preparing for skilled occupations. Thirdly, districts may wish to provide vocational schools operating classes in the evening only. These schools will offer courses keyed to local needs for skill upgrading, or increase the social or civic competency as well as improving the home and family life of the student. The district's network of vocational, technical and adult education facilities will continue to provide special extended services such as Manpower training, etc.

Chapter 292 stipulates that the district will be governed by a seven-member board composed of two employers, two employees, and two public members. These six persons will choose a seventh member of the board, a district school administrator.

Appointers are county board chairmen if the district is composed entirely of counties or a combination of counties, high school districts and municipalities; chairmen of high school districts if the district is composed entirely of municipalities.

II. Plans for Meeting Staff Needs:

In recent years, with the rapid expansion of post high school programs, the teacher shortage has looked almost unsolvable in the spring; but with strong recruitment efforts, teachers have been found although their qualifications in many cases are minimal. It becomes increasingly difficult each year to find fully qualified teachers. This is especially true as new and different programs develop and as existing programs expand.

Included in the plans for acquiring sufficient qualified staff are determining areas of shortages, seeking new sources for potential teachers, and cooperating with teacher education institutions in developing teacher education programs.

Presently a study is being developed to document teachers needed by subject areas. Results of this study will be used as a basis for developing teacher training programs in Wisconsin teacher education institutions.

Thought is being given toward preparing graduates of associate degree programs to enter the teaching profession.

Constant and continuing efforts in working with the state universities to expand teacher training opportunities must take high priority in this period of great teacher demand.

Salaries of several teacher educators at Stout State University and the University of Wisconsin are reimbursed up to fifty (50) per cent from the State Board of Vocational, Technical and Adult Education.

Arrangements have been made with several State Universities, including those at Eau Claire, Platteville, Stevens Point, Stout, Superior and Whitewater which now offer approved courses in Principles, Philosophy and Methodology of Vocational and Technical Education acceptable toward certification of our teachers.

Similar courses are also offered at the University of Wisconsin-Madison, and University of Wisconsin Extension at various centers throughout the State.

In addition to pre-service and in-service teacher education programs conducted at institutions of higher education, many professional improvement activities are conducted by the State Board and local vocational, technical and adult schools. Approximately ten 2-day subject area workshops and ten special workshops are conducted annually by the State Board to upgrade teachers and other personnel. Most local schools also conduct training sessions either on a local or regional basis. A Professional Growth Week has been conducted annually for the last two years to upgrade coordinators and supervisory personnel. Three-day conferences for local directors are held three times annually to relate recent pertinent developments in the field. Other conferences and seminars are also conducted. Local and state staff are authorized to attend national conferences and seminars pertinent to their fields. All of the above activities will be continued and expanded.

For the coming year, there is considerable difficulty in office and distributive education fields in finding teachers with work experience backgrounds. The increasing specialization required for programs in advanced accounting, data processing, petroleum marketing, florist, real estate, food merchandising, and fashion merchandising are special areas of concern at this time. Some twenty distributive education and forty office education openings at the post high school level were vacant during the summer of 1966. Many of these have been filled by provisionally certifying teachers recruited from among qualified people in business. Some of these positions were not filled. Two new teacher training programs have been approved for development, one at Whitewater University and one at Stout University.

In the trade and industrial field, great emphasis is being placed on urging instructors to attend the various summer workshops in specialized technical areas. Expansion of this type of opportunity seems necessary if teacher qualifications are to keep abreast of technological change.

Most critical needs at the moment seem to be in areas such as: metallurgy, instrumentation, practical nursing, medical assistants, dental assistant, and civil engineering aides.

In home economics, many teachers have had wage earning experience, and meet certification requirements and are being urged to gain additional occupational experience as well as attend specialized workshops and institutes. These teachers will be used in developing occupational classes where feasible, using local community resource people to supplement their efforts. Local part-time home economics teachers are available to fill in program spots vacated by shifting regular teachers into occupational training programs.

Agriculture related programs are still in their infancy in the state post high school program. Many agricultural programs are becoming allied with other subject areas, such as business, distributive and trade and industrial education. Additional teachers are needed to relieve some overloads. As replacement needs in the high school program continue to absorb most of the available and newly trained teachers, the teacher shortage may become an inhibiting factor in the high school program. At the same time, developments now in the planning stages for a number of post high school programs, may be slowed if qualified teaching staffs cannot be located. However, it is anticipated that these positions may well attract some of the best teachers currently in high school programs, solving the post high school needs, but compounding the problems at lower levels.

The teacher shortages in the vocational, technical and adult system are compounded by the fact that teachers are required in over 100 speciality fields. At present no teacher institutions are preparing teachers for many of these fields.

Recent State Legislation has increased financial support for reimbursement of instructional costs of full-time programs. This should facilitate adjustment of salary schedules to attract more qualified staff.

III. Plans for Expansion of Facilities:

Generally, vocational and technical education facilities have been adequate in Wisconsin. There has been a constant upgrading of facilities, and in the new atmosphere of support, entirely new facilities are becoming a reality. According to projections indicated in the previous section the average annual expenditure needed for construction 1965-1980 is about 7-8 million dollars.

During the fiscal year ending June 30, 1965 a total of $1,840,000 was spent on construction where federal money was involved. Of this $876,000 were federal funds.

During fiscal year ending June 30, 1966, a total of $3,690,000 was spent of which $1,744,000 were federal funds.

During fiscal year ending June 30, 1967, a total of $3,012,000 is under contract of which $1,400,000 are federal funds.

Current policies, which may be expected to continue until the area district plans are implemented, grant up to 50% aid to schools with 50% or more non-resident students; and up to 40% aid to schools with fewer than 50% non-resident students.

Major projects for which federal funds have been spent or are being considered include the following:

Eau Claire: A major school, with an extensive post high school program in addition to the traditional vocational and adult programs, and a school which serves a very large area in the northwestern part of the state is at the second stage of a $3,450,000 expenditure for a complete new facility. In the current year, the school is receiving $1,728,000 in federal aid. The new plant, one building of which has been in use for two years, will provide some 285,000 square feet of space.

Kenosha: Another leading school, which draws students from all parts of the state despite its location in the very southeast corner, is now in the final phase of a complete new facility. The new school will cost a total of $3,700,000. A total of $1,492,000 in federal aid funds was allocated to this project. The entire facility will be occupied during February of 1967.

Milwaukee: During fiscal year ending June 30, 1065, $81,975 in federal aid was allocated for remodeling data processing, T and I and health laboratories. In fiscal year ending June 30, 1966, $20,250 was allocated for a dental laboratory. During fiscal year ending June 30, 1967, $234,570 in federal funds will be allocated for remodeling of classrooms and offices.

At Madison, a major heating plant revision of the current school is being designed, and the whole question of needed future facilities at this major school is undergoing study.

At Wausau, a complete new facility is under study. This school serves a large area of the central north, offering a wide range of vocational and technical programs, and is considering a facility in $3,900,000 range.

At La Crosse, additional land is being acquired for expansion of this already large school, which is moving steadily into technical education in addition to its sizeable and high quality vocational programs.

Wisconsin Rapids, in the central part of the state, is discussing new facilities. Final planning here will depend in part on districting plans, and the nature of programs to be offered.

Beaver Dam, a small school with inadequate facilities has a building in the planning stage which will be cooperative with the high school as well as operating some post high school and part time education.

At West Bend a study is being made to determine building needs.

The Southwestern part of the State is without adequate vocational facilities.

Waukesha will be considering new facilities if Waukesha County is designated a vocational district.

The Fox Cities area around Appleton is studying possibility of constructing new facilities as soon as a vocational district is defined.

At Green Bay a study is in the developmental stage to determine whether to expand in the present location or to move to a new location within the city limits.

At Fond du Lac 50 acres of adjacent land has been promised for expansion in the next few years.

At Oshkosh 48 acres has been purchased for expansion.

There are possibilities of a new facility between Beloit and Janesville areas.

Present facilities at Ashland and Antigo are inadequate.

In South Milwaukee County a study is being made to determine feasibility of developing into a complex for this area.

Racine contracted with School Survey Service which recommended purchase of 50 acres of land to build vocational, technical and adult education facilities.

Plans for replacement or purchase of new equipment rank relatively high on the priority list in present Federal aid policies. In the present climate favoring vocational-technical education, new equipment purchases while still difficult, certainly receive more favorable consideration than was the case a few years ago. Here again, the close liaison with business and industry through the advisory committee plays a major role. Even if school administrators wished to minimize purchases of new equipment (which is certainly not the case), they would be unable to do so in opposition to the desires of industry and business to see to it that training is provided on suitable equipment. Local school expenditures in this area are currently running at the rate of $2,500,000 to $3,000,000 annually. Equipment costs for new programs are, of course, anticipated and provided for in the planning stage, so that these programs start properly equipped. The State Board allocated $600,000 of federal funds for equipment purchases in the current year, and current assumptions are that this approximate level of aid will continue, assuming federal funds are available in approximately the same total amount as in the past year. The high schools as well, have purchased new equipment, tooling up for next year.

IV. Plans for Future Program Development:

Additions of curriculum and research supervisors on the state level will facilitate program development in the future.

Excerpts from the "Officers Report to the Fourth Biennial Convention", Wisconsin State AFL-CIO, 1966 indicate recommendations that two-year post secondary programs in the schools of vocational, technical and adult education should be expanded, and that vocational-technical districts should be developed as quickly as possible.

New program development is keyed closely to local needs, and in the technical fields, to state-wide and even nation-wide needs and opportunities. The advisory committees, mentioned elsewhere in this report, and the liaison

committees with the employment service, provide accurate, continuing analysis of need. Additionally, close contact is maintained in all fields for which the system provides training, with the trade and professional associations, and state-wide labor and management organizations. These day-by-day contacts make it possible not only to anticipate new program needs, but also to constantly upgrade or revise curriculums as necessary.

In the office and distributive education fields during the coming years we will see planning and implementation of more occupational-mix-curriculums which involve several vocational education areas. Examples of these curriculums are in banking, insurance, florist, petroleum marketing, and real estate. The florist curriculum which enrolled its first students this fall provides a good example of the occupational-mix curriculum. With a first year common core, students in the second year move into one of two possible tracks. One of these will be a concentration in plant propagation, soils, turf growing, and landscape work. The other second year track will concentrate on business management and sales. Additional schools are introducing established curriculums in fashion merchandising, court and conference reporting, medical secretarial, office mid-management, food merchandising and credit management. Credit management will be expanded. In business administration as programs grow, specializations develop. New curriculums being developed include banking, insurance, traffic and transportation, food merchandising, institutional accounting (hospitals, etc.) and government accounting.

In trade and industry, twelve new technical programs were approved for the associate degree in the past year. Twenty-five schools have been designated to offer full-time programs in instrumentation, civil technology, architectural aides, industrial architectural model making, automotive aides, computronics, quantity food service, chemical technology, dental laboratory assistants, dental assistants, metallurgy, diesel, power mechanics, and numerical control for the metal working industries. Many more one year vocational preparatory programs have been approved by the State Board on the recommendation of local and state advisory groups. New fields being explored, include: rural and urban planning, solar energy, hygiene radiology, sanatorium work, optics, two-year registered nursing, electromedical, two year programs in printing technology, chemical and photo-instrumentation, automated drafting, nucleonics, and others.

The Vocational Education Act of 1963 authorizes utilization of funds in home economics for training in gainful occupations utilizing home economics knowledge and skills. The traditional skills of the home economics field are expanding into service areas outside of the home; presently in institutional foods, child development, management, clothing and textiles, interior decoration, and some health service occupations. Exploration continues to move into areas of job oriented post high school work. A survey is under way to identify needs which can be best served through the home economics area. One area being studied is the training of assistants for professional home economists employed by business and industry. Training programs are of an extension-type as well as one and two-year post high school offerings.

In agriculture, training is expanding to areas other than production. A new post high school program started this fall in horticulture. Advisory committees are meeting to consider several other programs, including farm credit, agricultural mechanics, dairy plant technicians, conservation and forestry, agricultural business management and marketing, dairy and food

processing, fertilizers, and other training involving processing and distribution. High school programs in agriculture provide students for post high school programs who have developed an interest and an understanding of occupational opportunities in the various fields of agriculture.

Continued efforts will be made to develop a master plan for state-wide vocational, technical and adult education. Many factors will be considered in preparing this plan. They are as follows:

1. The present and potential occupational needs in the labor market area to be served, including trends in the growth or decline of specific occupational fields, the types of expanding industries, the in-migration or out-migration of industry in the state.

2. Demographic data including population densities, transportation, population movements interstate and intrastate, and ethnic changes.

3. School population trends with respect to numbers, retention rates, continuance into higher education institutions, with projections for a target date.

4. Present organizational patterns for technician education (comprehensive high schools, area vocational-technical schools, technical institutes, community colleges); administrative control of these institutions by local boards, state education departments, or other patterns; relative importance of each type within the state; areas of overlapping or of conflict.

5. Present programs of technician education (numbers and types of institutions, curriculum offerings, enrollments, placement of graduates of pre-employment programs, extent of evening and other part-time offerings); trends with respect to growth of the institutions.

6. Present and potential state legislation affecting technician education.

7. Cost data on construction and operation, from within present institutions from other sources.

8. Methods of financial capital outlay and operation, present and projected, with respect to share of total carried by the local community, by state and federal funds, and by student tuition.

9. Recruitment of teachers and other staff members (available supply, qualifications of present personnel, present and proposed teacher education programs).

10. Present and proposed curriculum development services.

Research must be done in the areas of:

1. Program Planning - in terms of occupational surveys, rise and fall of occupations, change in job descriptions, worker mobility, etc. We need to know the quantitative and qualitative supply of trained

workers and the demand for them now and in the future.

2. Program Operations - in terms of operating effectiveness, student costs, teacher qualifications, transferability of skills from classroom to job, student achievement, teaching methodology, instructional equipment, facilities, student and teacher selection, classroom organization, etc.

3. Evaluation - in terms of follow up of graduates to determine placement and success.

This report has presented brief descriptions of long range plans which are in accordance with the philosophy and objectives of the Wisconsin State Board of Vocational, Technical and Adult Education. The plans are contingent upon happenings in the labor force, enrollment potentials, and availability of staff, facilities and funds. Further information is available at the state office as well as at local schools of vocational, technical and adult education.

VT 001 706
Twenty Years of Progress, 1945-1965. History of the Ohio Association of Future Homemakers of America.

Ohio State Dept. of Education, Columbus. Div. of Vocational Home Economics
MF AVAILABLE IN VT-ERIC SET.
Pub Date - 65 51p.

*YOUTH CLUBS; *YOUTH PROGRAMS; *YOUTH LEADERS; LEADERSHIP; *HOMEMAKING EDUCATION; TEENAGERS; *HISTORICAL REVIEWS; LEADERSHIP TRAINING; HOME ECONOMICS TEACHERS
FUTURE HOMEMAKERS OF AMERICA; OHIO HOME ECONOMICS ASSOCIATION; OHIO

Since affiliating with the national organization of the Future Homemakers of America (FHA), Ohio membership has grown from 189 chapters and 6,867 members to 403 chapters and 18,336 members in 20 years. Some special honors which the state has enjoyed are the three Ohio girls who have served as national officers in FHA and the two national Honorary members from Ohio--Hazel Price and Ival Spafford. Each year is described through its State Program of work, major events of the year, and the national and state theme. Pictures are included with names of state officer, special awards, projects carried out throughout the years. State mothers and names of honorary members are listed as well as annual FHA scholarship recipients. The first state camp in Ohio for FHA members was held in August, 1949, with leadership training given to 140 girls. Publications which are available through the Ohio FHA are listed. The purposes of the state meeting, held annually in Columbus, to promote the program of work, to transact business, and to provide inspiration and fellowship among chapters are described. The degree program is explained and a breakdown of the number of State Homemaker degrees is given. A summary chart is included for the twenty years. (MS)

VT001 706

EDO 31587

AUG 2 1966

Twenty Years of Progress

1945 - 1965

History of the

OHIO ASSOCIATION OF FUTURE HOMEMAKERS OF AMERICA

E. E. Holt
Superintendent of Instruction
State Department of Education
Division of Vocational Home Economics
Columbus, Ohio
1965

Purposes of the Future Homemakers of America

The over-all goal of the organization is to help individuals improve personal, family, and community living, now and in the future.

To emphasize specific parts of this over-all goal, Future Homemakers of America have eight purposes. They are:

1. To promote a growing appreciation of the joys and satisfaction of homemaking.
2. To emphasize the importance of worthy home membership.
3. To encourage democracy in home and community life.
4. To work for good home and family life for all.
5. To promote international good will.
6. To foster the development of creative leadership in home and community life.
7. To provide wholesome individual and group recreation.
8. To further interest in home economics.

Future Homemakers of America is the national organization of students studying homemaking in junior and senior high schools. It is a non-profit youth organization co-sponsored by the Home Economics Education Branch of the U.S. Office of Education and the American Home Economics Association.

Homemaking teachers serve as chapter advisers of this organization, which extends and enriches homemaking education.

The Ohio Association of Future Homemakers of America is sponsored by the State Department of Education, Division of Vocational Education, Home Economics Section.

Dr. E. E. Holt, State Superintendent of Public Instruction
Dr. Byrl Shoemaker, State Director of Vocational Education
Miss Margaret McEniry, State Supervisor of Vocational Home Economics

OHIO ASSOCIATION OF FUTURE HOMEMAKERS OF AMERICA

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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1945-1965 HISTORY

Printed, 1965

ADDITIONAL COPIES

Order from State Adviser

Future Homemakers of America

State Office Building, Columbus, Ohio 43215

Price $1.00

TABLE OF CONTENTS

Dedication 5

Foreword 6

Twenty Years of Progress—A Brief Summary ..7-8

What Happened Prior to the Official Founding? 9-10

Ohio's Charter 10

1945-46; National and Assistant National Advisers 11

1946-47 12
1947-48 12
1948-49 13
1949-50 14
1950-51 15
1951-52 16
1952-53 17
1953-54 19
1954-55 19
1955-56 20
1956-57 21
1957-58 22
1958-59 22
1959-60 25
1960-61 26
1961-62 27
1962-63 29
1963-64 31
1964-65 33

State Presidents and State Mothers 37

Honorary Members 38

OAFHA Scholarship Fund and Recipients; Constitution and Dues 39

Our Program of Work 40

OAFHA Publications: Numbers of Ohio and National Members and Chapters 41

Subregional Meetings 42

State Leadership Training Camp 43

State Meetings 45

National Meetings; National Officers from Ohio 46, 47

Award of Merit Program; Public Relations 48

Degrees of Achievement Program 49

Summary Chart—Twenty Years of Progress 50

LIST OF PHOTOGRAPHS

First FHA Campers—1949 13

Delegates To The 1950 National Meeting 14

Sesquicentennial Celebration—1953 State Meeting 16

State Homemakers—Central High School, 1953 State Meeting 16

Entire Delegation—1953 National Meeting—Columbus 18

Ohio Delegation—1953 National Meeting—Columbus 18

State Homemakers at West High School—1955 State Meeting 18

Luncheon at Ohio Union—1955 State Meeting ..18

Ohio Delegates to 1956 National Meeting 20

Scenes from 1957 State Meeting 21

1958 State Meeting Banquet 23

Ohio Delegates to 1958 National Meeting 23

Pageant and Chorus—1959 State Meeting 23

Pageant and State Officers—1960 State Meeting 24

Ohio Delegates to 1960 National Meeting 24

1961 State Meeting 26

Flag Ceremony, State Homemakers, and Award of Merit—1962 State Meeting 28

Chorus—1963 State Meeting 28

1962 National Meeting 30

Audience at the 1964 State Meeting 32

1965 State Meeting 34, 35, 36

Map of Subregions 42

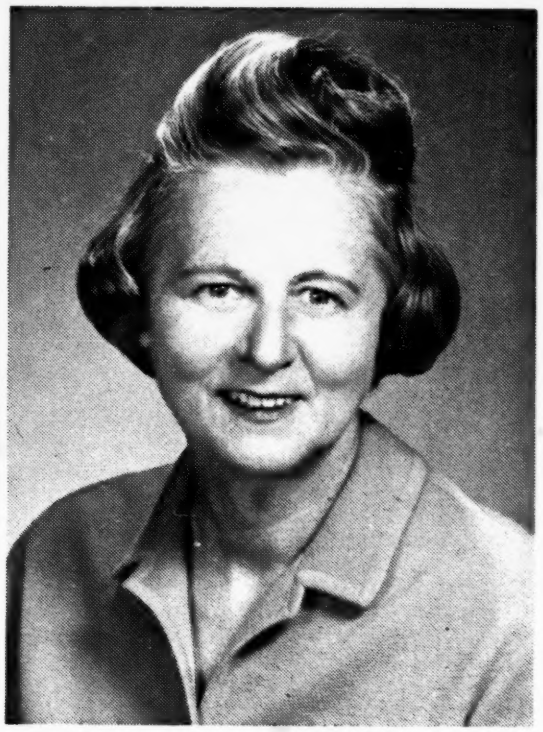
1964 State FHA Camp Delegation 43, 44

Dedication

This history is dedicated with deep appreciation to the three state advisers who have served the Ohio Association of Future Homemakers of America.

DR. HAZEL PRICE
1945-48

MISS ENID W. LUNN
1948-58



MISS MARGARET MCENIRY
1958-

Dr. Hazel H. Price, home economics educator, served as Ohio's representative on the national committee which laid the groundwork for the national formation of the Future Homemakers of America. She served as chairman of the first National Degree Committee and was made a national honorary member for her services on this committee. She worked tirelessly in developing the degree program and other aspects of FHA in Ohio.

Miss Enid Lunn, State Supervisor of Vocational Home Economics in Ohio from 1917 to 1958, gave her full interest and support to the program of the Future Homemakers of America. Everyone working with her appreciated her sincere interest in teachers and students, her sense of humor, and her wisdom in working with the organization.

Miss Margaret McEniry became State Supervisor of Vocational Home Economics in Ohio and State Adviser of the Ohio Association of Future Homemakers of America in July 1958. Miss McEniry came to Ohio with a fine background for this position, having served in a similar capacity in South Dakota for ten years. She also served on the National Advisory Board of the Future Homemakers of America.

Recognition and appreciation is also expressed to the following assistants who have been in charge of directing the activities and total program of the Ohio Association of Future Homemakers of America.

Mrs. Marian Woodward Lamb
Mrs. Elizabeth Irwin Seabright
Mrs. Catherine Cochran Vaughn
Mrs. Elaine Marten
Miss Margaret Liggett, Assistant State Adviser, 1956-59
Miss Wanda Montgomery, Assistant State Adviser, 1959-61
Mrs. Genevieve Schroeder, Assistant State Adviser, 1961-62
Miss Dorothy Foster, Assistant State Adviser, 1962-

FOREWORD

Dorothy Foster

The history of an organization has great value. It records noteworthy facts about past accomplishments and points the way to future achievements. A knowledge of what has already happened gives guidance and inspiration for what is yet to happen. The past is, indeed, an important teacher for the future. Therefore, the compilation of the history of the Ohio Association of Future Homemakers of America was undertaken to preserve past records and to inspire our continued efforts.

The twenty years of the Future Homemakers of America give us a rich heritage of growth and progress. Ours is a young organization which has matured quickly into one of beauty and strength. We have built a firm foundation by focusing on our program of work and by working diligently toward the fulfillment of our eight national purposes. We have enjoyed great satisfactions in seeing our members develop leadership abilities and lovely qualities of womanhood. We have had many rewards in being a part of a national organization which strives toward improving persons, homes, schools, communities, the state and nation, and the world.

It is impossible to give individual recognition to all of the people who have worked so hard for the growth and progress of the organization. State officers and advisory boards; state staff members and teacher educators; state degree and award of merit committees; local advisers, members, and chapter parents; and other interested persons have made incalcuable contributions through their support and encouragement. Honor is due to every person who has believed in the worth of the organization and who has worked with dedication and perseverance. The strength of the organization today is a tribute to their efforts.

Painstaking efforts have been taken to assure accuracy in this publication. It is regretted that in a few cases desired information was unavailable. If by chance any error has been made, apologies are extended.

The material for the years from the beginning to July 1959 was compiled and written by Dr. Hazel Price and Miss Margaret Liggett. Miss Dorothy Foster did the remaining writing and also did the final compilation and editing of the publication.

This history is presented in the hope that it will be read with pride and that it will renew our efforts to work together "Toward New Horizons".

Dorothy Foster
Assistant State Adviser
Ohio Association Future Homemakers of America

Twenty Years of Progress

A BRIEF SUMMARY OF THE HISTORY OF THE OHIO ASSOCIATION OF FUTURE HOMEMAKERS OF AMERICA

Date of National Founding—June 11, 1945
Date of Ohio's Charter—January 14, 1946

Exactly a score of years ago,
In the year 1945
Ohioans got together and
The OAFHA became alive.

The Ohio Association of F.H.A.
Was formed with loving care.
There is no measure of the work
Represented by the pin you wear.

For twenty years now our advisors and girls
Have strived to make our state the best.
It's up to us to look back on those years,
And thank them for their interest.

So in this year of '65,
We've compiled a history of our past.
With our ambition and skill, we hope,
The next twenty years will be as good as the last.

—Jane Williams
1964-65 State Historian

As early as 1921 high school home economics clubs were being formed in Ohio. During the 1920's the number of these clubs grew, with many of them affiliating with the American Home Economics Association and taking the name of Betty Lampers from the AHEA symbol.

In the meantime schools in several areas of the state where Vocational Home Economics programs were offered were organizing high school clubs under the name of Future Homemakers. A state organization of these clubs was started in 1935, and the constitution of the Future Homemakers Association of Ohio was officially adopted in May 1937, when the first state meeting was held in Columbus.

Both the home economics clubs sponsored by the OHEA and the Future Homemakers organizations sponsored by the state supervisory staff continued to grow until in 1944 there were 181 chapters of the FHA, 92 of these being affiliated with the OHEA and AHEA.

Other states had comparable organizations to those in Ohio, but there was no unified program among states. In 1943 the American Home Economics Association appointed a committee to study high

school homemaking club programs. This committee believed that all existing programs could be strengthened by uniting efforts.

In March 1944 home economics leaders from 29 states, including Ohio, met in Chicago and started plans for developing the national organization. In June 1944 the American Home Economics Association and the Home Economics Education Branch of the U.S. Office of Education became co-sponsors of the organization. The National Education Association through its department of home economics and the American Vocational Association through its home economics section became cooperating groups.

In the fall of 1944 the first national adviser was employed for the national organization, with headquarters in Washington D.C. States were grouped into four regions and each region into three subregions, Ohio being in Central C of the national organization.

In the spring of 1945 twelve national subregional meetings were held, followed by a meeting in Chicago in June. At that time national officer candidates from the subregions and an advisory group met. A provisional constitution was set up and the name Future Homemakers of America was adopted, with June 11, 1945 being celebrated as the date of founding.

Ohio's official charter was granted January 14, 1946.

The history of the Ohio Association of Future Homemakers of America is one of growth and progress. During the twenty years of its existence the number of chapters in the Ohio Association has more than doubled and the total membership has almost tripled. The Award of Merit program, which recognizes outstanding work done by chapters, and the State Degree program, which recognizes outstanding work done by individuals, had roots before the official founding of the organization, and have steadily grown in size and strength.

The Ohio Association has always followed a program of work based on a firm foundation of educational worth. Through the years chapters have done much outstanding work on many projects. The national organization has provided leadership in planning a program of work of excellence. As the years have progressed, the programs of work have become stronger, being based on current needs of youth and always focusing on the over-all goal of homemaking education—to improve personal, family, and community living. During the more recent years the national officers have planned for a program of work to extend over several years.

Ohio has been represented by delegates at every national meeting. The first one was held in Kansas City, Missouri, in July 1948, at which time the national constitution was ratified. The National Regional Meeting of Central Region was held in Columbus, Ohio, in July 1949. Columbus was also the host city for the national meeting held in July 1953.

Ohio has had three national officers and two national honorary members. Three Ohio girls earned the American Homemaker degree before it was discontinued in 1951 by the national organization.

State meetings have been held in Columbus every year beginning with the first one in 1946. State leadership training camp and subregional meetings in Ohio have made important contributions to the growth and progress of the organization. Throughout the years publications have been prepared and distributed to all Ohio chapters. Ohio Future Homemakers have also been active in State Fair participation.

State officers have participated in a variety of activities involving other youth organizations. During various years we have had delegates at the State Traffic Safety Conference, the National Convention of the American Institute of Cooperation, and the National Youth Power Congress. In 1962, 1963, 1964, and 1965 the state FHA officers had a cooperative dinner with the state officers of Future Farmers of America, the Vocational Industrial Club, and the Distributive Education Club of America. The purpose of these dinners has been to acquaint the state officers with the purposes and programs of other youth organizations which are sponsored by the Vocational Education Division of the State Department of Education.

The number of persons who have worked tirelessly in Ohio to further the twenty years of growth and progress, though they could never be counted, nevertheless run into many thousands. State officers and advisory boards; state staff members and teacher educators; state degree and award of merit committees; local advisers, members, and chapter parents; and other interested persons have made incalcuable contributions.

The Ohio Association of Future Homemakers of America looks forward to a bright future of continued growth and progress. May the next twenty years bring even greater achievements.

WHAT HAPPENED PRIOR TO THE OFFICIAL FOUNDING?

The Ohio Association of the Future Homemakers of America received its official charter from the national organization on January 14, 1946. During the 1944-45 school year one hundred eighty-nine clubs with an enrollment of 6,867 members paid state and national dues. These clubs had been former members of the two state high school home economics club organizations.

The earliest home economics club in the state, according to reports, was formed in the Greenville High School in 1921. Other clubs were no doubt functioning soon after this time. The Bedford High School Club, along with four or five other clubs in the United States, applied to the American Home Economics Association for membership in 1924; and since there was no other place for them, they were accepted as members of the adult group. The number of clubs, both high school and college, continued to grow. Many of these clubs took the name of Betty Lampers from the national symbol of AHEA. Boys first became a part of these clubs in 1927. Miss Daisy Stackhouse of Bedford took three male members of her club to the national AHEA convention held in New York City in 1934.

Schools in several areas of the state where programs of Vocational Home Economics were offered had in the meantime organized high school clubs under the name of Future Homemakers. Such a group was organized at The Plains by Beryl Cone in the early 1930's and at Hillsboro by Eva Fels in 1932-33. A state organization of these clubs was started in 1935, but the constitution of the Future Homemakers Association of Ohio was not officially adopted until May of 1937, when the first state meeting was held in Columbus. By the time the constitution was adopted, degree work had been started and three local degrees were being given. Plans were made in 1937 for the awarding of a state degree, nine chapters submitting the name of one candidate they considered eligible. State dues were set at 5c per member. Beryl Cone, teacher at The Plains, served as the first state adviser with Marion Woodward (Lamb), from the state supervisory staff, acting as Chairman of the Executive Board. The slate of officers elected, included: Verneita Stein, Monroeville, President; Betty Chester, Centralia, Vice President; Lillian Reed, Coolville, Secretary; Della Jane Dickerson, Coshocton, Treasurer; and Ruth Wood, Sebring, Reporter. Committees were appointed at this meeting to decide on banner and pin designs.

Helen Henderson of Bowling Green State University, serving the Ohio Home Economics Association as chairman of the Student Club Committee, reported 70 clubs enrolled in the state in 1935. She suggested then that the college and high school clubs be separated. Mrs. Ethel Patterson of North Ridgeville was given the responsibility of the high school clubs, serving as the first state adviser of high school home economics clubs. Daisy Stackhouse served as state adviser in 1938-39. Clubs belonging to the Future Homemakers organization were encouraged to join the Home Economics Club Section of the Ohio Home Economics Association.

Both the home economics clubs sponsored by the OHEA and the Future Homemakers organizations sponsored by the state supervisory staff continued to grow until in 1944 there were 181 chapters of the FHA, 92 of these being affiliated with the OHEA and the AHEA.

Since many other states had comparable organizations to those in Ohio, the American Home Economics Association appointed a committee in 1943 to study the high school home economics club problem. This committee felt that both programs could be strengthened by uniting the efforts of all who were working with home economics clubs on the high school level. Invitations to attend a national meeting to consider the development of this type of organization were sent by the American Home Economics Association to all states. Home economics education workers from 29 states met in Chicago in March 1944 and initiated plans for developing a combined national organization. Mrs. Hazel H. Price of the state supervisory staff, at that time the adviser of the Ohio Future Homemakers Association, served as state representative at this meeting.

As a result of this meeting, the AHEA and the Home Economics Service of the U. S. Office of Education became sponsors of the new organization, with the department of Home Economics of the National Education Association and the Home Economics Section of the American Vocational Association cooperating and supporting it at national level. To get the organization underway, Dr. Hazel Frost, assistant supervisor of home economics education and state adviser of the Future Homemakers Association of Oklahoma, was chosen October 1, 1944 as national adviser.

In anticipation of this merger, during the 1943-44 school year joint meetings of the two high school home economics club organizations were held in Ohio; the first being a fall FHA meeting to which Home Economics Clubs were invited. Two joint newsletters were issued and joint regional meetings were held in seven sections of the state during the year. Pauline Fierce, adviser of the state Home Economics Clubs and Mrs. Price, adviser of the state FHA, worked together to perfect the merger of these organizations. Home Economics Clubs chose the President, Marian Och of Bridgeport and the

Treasurer of the new state organization while the FHA groups chose the President Elect, Carolyn Ray of Elizabeth Township, and the Secretary, Arlene Ullery, of St. Paris.

On the national level states were grouped into regions. Sub-regional meetings of pupil delegates were held during the spring of 1945. Four official delegates: President, Marian Och; President Elect, Carolyn Ray; Secretary, Arlene Ullery; and Secretary Elect, Jocele Thut of West Liberty, attended the Central C regional meeting of the new organization held at Ball State Teachers' College at Muncie, Indiana May 4 and 5, 1945. Two adults accompanied the delegates, Miss Helen Mettler and Mrs. Hazel Price. The delegates made recommendations as to the name of the new national organization and made suggestions as to first, the purposes of the organization; second, what the program of work might be; and third, how many and what kind of degrees might be given.

Student delegates and advisers from the various regions met in Chicago in June when the new national organization, officially named the Future Homemakers of America, was officially founded on June 11, 1945.

One hundred eighty-nine Ohio chapters, with a total of 6,867 members, joined the state and national organization during 1944-45. No state meeting was held in the spring of 1945 since there was a national curb on all conferences with over fifty people in attendance. Regional meetings were held throughout the state with each school sending two delegates and its adviser. Mrs. Hazel H. Price was appointed as state adviser, representing the state supervisory staff, and Helen Mettler became chairman of the advisory board of the Ohio Association of the Future Homemakers of America. Miss Mettler prepared that summer a new Ohio Manual for the use of the chapters. Mrs. L. G. Ray of Troy was made the first state mother.

FUTURE HOMEMAKERS OF AMERICA

STATE ASSOCIATION NO. 15

This is to certify that the Ohio Association of Future Homemakers of America, Inc., having satisfied all the requirements for affiliation with the National Organization of

FUTURE HOMEMAKERS OF AMERICA, INC.

is hereby chartered as a State Association of the National Organization, and is entitled to all the rights and privileges pertaining thereto.

In witness whereof this Charter is signed and sealed this 14th day of January 1946

NATIONAL PRESIDENT

Hazel Frost
NATIONAL ADVISER

CHAIRMAN NATIONAL ADVISORY BOARD

1945-1946

NATIONAL AND STATE PROGRAM OF WORK:

NATIONAL THEME: Service to Ourselves and Others

PROGRAM:

I Improving ourselves by developing physical, social, and moral qualities

II Helping to secure unity among family members

III (Our associates - school) Sharing with others for the good of all

IV (Our neighbors - community) Helping with community problems

V (Our countrymen) Learning to be better citizens

MAJOR EVENTS OF THE YEAR:

Regional state FHA meetings were held in the fall of 1945 at Toledo, Castalia, Alliance, Celina, Elizabeth Twp. (Troy), West Liberty, Coshocton, Barnesville, Mt. Gilead, Lancaster, Pataskala, Waverly, Ashland and Arcadia.

The Ohio Association of FHA applied for and received its charter of national membership in January, 1946. Two hundred seventy-eight chapters paid state and national dues for the year, a gain of 90 chapters over the previous year. The total membership was 10,348.

The first annual meeting of the Ohio Association of FHA was held on April 13, 1946 on the Ohio State University campus. Individual state awards were given to seniors who had accumulated 600 points based on club work. The Award of Merit was granted to 63 chapters for their outstanding achievements of the year. Contributors to the World Wide Christmas Festival, the first national project, were recognized.

The Central C national regional meeting was held on the Ohio Wesleyan campus at Delaware on April 26 and 27, 1946. Ohio was represented by four student delegates: Carolyn Ray, State President; Jean Wilkins, Publicity Chairman; Ruth Henline, President Elect, and Margaret Ann Robertson, Vice President Elect from the Eastern Region.

During the summer of 1946, a panel of Ohio and Michigan FHA members presented, at the American Home Economics Association meeting in Cleveland, the advantages of the national organization. At this meeting, Vida Nesbitt of Cleveland gave $25 to the Ohio Association. This money was used to start the Scholarship Fund of the organization.

National Advisers

Hazel Frost (Oklahoma), June 1945—July 10, 1948

Pauline Stout (West Virginia), July 11, 1948—Aug. 31, 1949

Mary Lee Hurt (Michigan), Sept. 1, 1949—July 15, 1950

Lela Smartt (Tennessee) (deceased), June 15, 1950—July 31, 1952

Marguerite Scruggs (Oklahoma), July 14, 1952—Aug. 31, 1956

Mrs. Lois Oliver Sigler (Virginia), Aug. 15, 1956—Dec. 31, 1962

Mildred Reel, (Illinois), Dec. 31, 1962—

Assistant National Advisers

Frances Champion (Florida), June, 1945—Aug. 20, 1948

Jerline Kennedy (Texas), June 1, 1950—Oct. 19, 1951

Catherine Dicks Myers (New Mexico), Jan. 5, 1953—Jan. 4, 1954

Mildred Huber (California), Feb. 1, 1954—Jan. 31, 1955

Mrs. Lois Oliver Sigler (Virginia), Sept. 1, 1954—Aug. 14, 1956

Mildred Reel (Illinois), May 1, 1956—Dec. 31, 1962

Betty Ruth Joyce (Arkansas), Dec. 31, 1962—

1946-1947

NATIONAL AND STATE PROGRAM OF WORK:

(Same as 1945-46. See page 11.)

MAJOR EVENTS OF THE YEAR:

At the July meeting of the Executive Committee it was decided to start both an FHA Camp Fund and a Scholarship Fund as state projects. Contributions to these two funds were added as Award of Merit requirements.

During this year 279 chapters with a total of 10,854 members paid dues to the state and national organization, a gain of 536 members.

Ohio had four student delegates at the National Central C Regional meeting held in Murray, Kentucky on April 8 and 9, 1947. The delegates were Mary Lou Miller, Stewart; Joy Linn, Holmes-Liberty; Lois West, Waverly; and Beverly Higgins, Shadyside. The girls were accompanied by three advisers: Wanda Montgomery of Liberty Twp. (Findlay); Valerie Dragliec, Alliance; and Elizabeth Irvine, State Department.

Fifty-two chapters received Award of Merit Certificates at the state meeting, held on the Ohio State University campus April 25 and 26, 1947. The general topic for this meeting was "Homes and Home Economics in Other Lands." The speakers at the meeting were Paddy Ridley, exchange teacher from England; Marlissa Fritschi from Zurich, Switzerland; and Mrs. Susy Kosby from Thurwalla, India. Two seniors, Mary Lou Miller of Stewart and Margaret Harsh from Radnor were granted scholarships of $100 each from the Vida Nesbitt FHA Scholarship Fund.

The first state homemakers degrees were given in the spring of 1947. The four girls who received the degree were Mary Lou Miller, Athens County; Joy Linn, Crawford County; Jean Wilkins, Highland County; and June Price, Hancock County. Four teachers, one from each section of the state, Niva Giauque of Coshocton, Mrs. Orpha Palmer of Greenville, Eva Fels of Hillsboro, and Valerie Dragliec of Alliance served on the State Degrees Committee and worked out the first state manual on this subject.

Mrs. Hazel H. Price served as chairman of the first National Degrees Committee. Mary Kohler of Hilliard was a member of this committee. Mrs. Price was made a national honorary member for her services on this committee.

1947-1948

NATIONAL AND STATE PROGRAM OF WORK:

NATIONAL THEME: Building Today for Tomorrow

PROGRAM:

I Developing our organization
II Improving ourselves
III Training for leadership
IV Promoting international good will
V Cooperating for school betterment
VI Improving home and family life
VII Serving community, state, and nation
VIII Preparing for careers
IX Promoting recreational activities

MAJOR EVENTS OF THE YEAR:

A special FHA state meeting was held on September 20, 1947 to confer State Homemaker Degrees on the following girls: Ruth Hammond, Margaret Fisher and Arlene Elder from Alexandria; Donna Mellisor from Pleasant Twp.; Martha Davis from Van Wert and Glenna Reed from St. Paris. The student members of the state degree team were Dorothy Locher, Alliance; Pat Hufnagle, Greenville; Ann Miller, Coshocton; and Bernice Igo of Hillsboro.

The annual state meeting was held on the Ohio State University campus, May 7 and 8, 1948. The theme was "Careers in Home Economics". A symposium of college seniors presented the possibilities of the various areas for careers in Home Economics. Fifty-four chapters completed the requirements for the Award of Merit. Honorary membership was awarded to Miss Enid W. Lunn, State Supervisor of Home Economics. Two hundred eighty three chapters with a total membership of 11,173 paid dues to the state and national organizations.

A special coach was provided for the 33 delegates and local advisers attending the first national convention in Kansas City in July 1948. The high spot of the meeting was the awarding of the National Homemaker Degree; the first ever given went to one of the Ohio delegation, Joy Linn (Taylor) of Holmes-Liberty High School.

Lois West (Williams) of Waverly won the distinction of being the first Ohio FHA member to be elected to a national office, that of Central Regional Vice President.

Mrs. Hazel Price, State Adviser and Mrs. Pearson Linn, State Mother accompanied the delegates and advisers to this national meeting.

The State Advisory Board suggested that district camps or meetings be held during the summer of 1948, with the persons eligible to attend being county officers. These meetings were to provide leadership training for the students in attendance.

The State Camp Fund had grown to $196.75 in the two year period, and the Scholarship Fund to $212. At the March meeting of the Executive Council it was proposed that the $200 available in the Scholarship Fund be given to the one best applicant for the scholarship instead of two persons sharing the money as was done previously.

1948-1949

NATIONAL AND STATE PROGRAM OF WORK:

NATIONAL THEME: Building Today for Tomorrow
PROGRAM:

I Developing a Growing Appreciation for Homemaking
II Emphasizing Worthy Home Membership
III Encouraging Democracy in Home and Community Life
IV Working for Good Home and Family Life for All
V Promoting International Good Will
VI Working for Creative Leadership in Home and Community Life
VII Providing Wholesome Individual and Group Recreation
VIII Furthering Interest in Home Economics

MAJOR EVENTS OF THE YEAR:

In the fall of 1948, Miss Enid W. Lunn, State Supervisor of Home Economics, became the State FHA Adviser. Miss Catherine Cochran served as her assistant.

The state theme for the 1948-49 Program of Work was *Happier Homes for Better Living.* The annual state meeting was held on the Ohio State University campus, April 22 and 23, 1949. A panel discussion on the theme for the year was the special interest feature. Fifty-two received Award of Merit certificates at this meeting. Honorary state memberships were awarded to Mrs. Orpha Palmer, Greenville; Niva Giauque, Coshocton; Valerie Dragliec, Alliance; and Eva Fels, Hillsboro.

Total membership for the year was 10,778 members in 278 chapters.

The Central Regional National Meeting was held in Columbus on July 12, 13, and 14, 1949. The registration totaled 1290 from the 13 states included in the region. Lois West (Williams), Central Regional Vice President from Waverly, presided at the business session.

During the program following the formal banquet, the American Homemaker Degree was conferred on two candidates: Lois West (Williams), Waverly, Ohio, and Dolores Marie Rauch from Alma, Michigan.

Mrs. Rajanimal Devadas, graduate student at the Ohio State University, gave an interesting talk on home life in India.

The first State Camp for FHA members was held August 14-20, 1949, at Camp Muskingum, located near Carrollton, Ohio. One hundred forty girls enjoyed the leadership training afforded them in addition to nature study hikes and craft classes.

The First State FHA Campers—August 1949

1949-1950

NATIONAL AND STATE PROGRAM OF WORK:

Purpose I: To promote a growing appreciation of the joys and satisfactions of homemaking

Goal: Learning to enjoy the everyday tasks of homemaking

Purpose II: To emphasize the importance of worthy home membership

Goal: Learning to understand and enjoy our families

Purpose III: To encourage democracy in the home and community life

Goal: Understanding what democracy means and practicing democracy in our chapters and in our homes

Purpose IV: To work for good home and family life for all

Goal: Helping families in our communities or neighborhoods to do things together for fun and service

Purpose V: To promote international good will

Goal: Interpreting our way of living to people in other countries and in turn learning more about them

Purpose VI. To foster the development of creative leadership in home and community life

Goal: Encouraging members to take part in activities for betterment of home, school, and community

Purpose VII: To provide wholesome individual and group recreation

Goal: Encouraging every member to take part in some recreation

Purpose VIII: To further interest in home economics

Goal: Emphasizing the importance of homemaking as a career

MAJOR EVENTS OF THE YEAR:

The theme chosen for the year's work was "A Better World through Happier Homes". The new national project for the year was "The Families Together" project.

Two hundred eighty three chapters paid state and national dues for 1949-50. There were 130 girls as candidates for the State Homemaker Degree, having met the requirements of the two previous degrees, Junior and Chapter Homemaker.

Mrs. Rose Nagy of Trotwood was named State Club Mother. Mrs. Pearson Linn was awarded a silver tray for her three years service in this capacity.

Sixty-four chapters participated in the World Christmas Festival. Two hundred nine individual gifts were sent. Twenty-six chapters adopted foreign homemaking classes; 33 packages were sent to these schools. Twenty chapters participated in "The Families Together" project while 102 chapters observed National FHA Week.

"By train, by plane and by car" the Ohio delegation of 59 members and 17 advisers set out for Kansas City, Missouri for the second National FHA Convention in July 1950. The group stayed at the Hotel Robert E. Lee, directly across the street from the Auditorium.

Virginia Heimberger, President from Clyde; Mary Howard, Public Relations Chairman from Marysville; and Phyllis McInturf, Historian from Stewart served as Ohio's three voting delegates. Lorraine Blankenship of Hanover Twp. and Jeannette Henderson of Carthage-Troy sang in the all-national chorus.

Delegates to the 1950 National Meeting—Kansas City, Missouri

1950-1951

NATIONAL AND STATE PROGRAM OF WORK:

Purpose I: To promote a growing appreciation of the joys and satisfactions of homemaking
Goal: Accepting and enjoying our responsibilities in our homes

Purpose II: To emphasize the importance of worthy home membership
Goal: Practicing harmonious living with our families

Purpose III: To encourage democracy in home and community life
Goal: Learning new ways of practicing democracy in our homes and communities

Purpose IV: To work for good home and family life for all
Goal: Creating better understanding among family members and families of the community

Purpose V: To promote international good will
Goal: Overcoming prejudices by increasing knowledge of people in other countries

Purpose VI: To foster the development of creative leadership in home and community life
Goal: Learning to be a leader by doing every job to the best of one's ability

Purpose VII: To provide wholesome individual and group recreation
Goal: Planning recreation for personal and group needs

Purpose VIII: To further interest in home economics
Goal: Exploring careers in home economics

MAJOR EVENTS OF THE YEAR:

A revision of the Constitution of the Ohio Association of the Future Homemakers of America was prepared by the State Executive Council and sent to the chapters for their approval prior to its being voted in at the state meeting. A major change in the selection of the state president was made in this revision.

New certificates of membership were issued by the national organization to last for ten years. Date stickers are to be added to the certificate as each year's dues are paid.

The annual state meeting was held in Columbus on April 13-14, 1951. On Friday evening, the conferring of State Homemaker Degrees took place in the Deshler-Wallick Hotel. The Saturday all-day session was held in Central High School. The principal speaker was Dr. William Warner. His topic was "How FHA Chapters Can Aid in Civilian Defense".

The number of chapters participating in national projects were: World Christmas Festival 64, with about 259 individual gifts sent; adoption of Foreign Homemaking Classes, 26, packages sent, 33; Families Together Project, 20; Observance of National FHA Week, 102.

Rural Life Sunday was officially observed by Ohio FHA chapters on April 29, 1951.

Two National Leadership Training Conferences were held in the summer of 1951. Ohio delegates attended the Eastern Conferences held on the campus of Michigan State College, East Lansing, Michigan, July 2-6, 1951. Jeannette Henderson of Coolville was awarded the American Homemaker Degree, the third Ohio FHA member to have this honor. Catherine Cochran accompanied the delegates to the national meeting.

State FHA Camp was held at Camp Muskingum August 12-19, 1951 with 170 members and advisers in attendance. Fifteen of the nineteen girls who attended the National Leadership Training Conference gave a skit on the circular response method and the 6-6 method of discussion which were used at the national conference.

THE FAMILY TREE

There's one thing in God's nature world
That means a lot to me:
It symbolizes much of life—
It is a lovely tree!
With roots so deep in God's rich earth
It's not disturbed by weather—
Like families with faith in God
Who lives in peace together.
Its trunk, the body strong and firm,
Like parents anywhere—
To guide, control, direct, sustain
The offspring which they bear.
The branches, which like children spread
In every known direction,
Until the fruitage of their growth
Has reached its full perfection.
And so a tree appears to me
The gem of God's creation
As it portrays our families
Which constitute a nation.

1951-1952

NATIONAL AND STATE PROGRAM OF WORK:

Purpose I: To promote a growing appreciation of the joys and satisfactions of homemaking
Goal: Accepting and enjoying responsibilities in our homes

Purpose II: To emphasize the importance of worthy home membership
Goal: Getting along with the family

Purpose III: To encourage democracy in home and community life
Goal: Learning new ways of practicing democracy

Purpose IV: To work for good home and family life for all
Goal: Stressing the importance of spiritual values in the home

Purpose V: To promote international good will
Goal: Overcoming prejudices by increasing knowledge of people of other countries

Purpose VI: To foster the development of creative leadership in home and community life
Goal: Learning to be a leader

Purpose VII: To provide wholesome individual and group recreation
Goal: Planning recreation to meet the needs of all

Purpose VIII: To further interest in home economics
Goal: Encouraging homemaking students to join FHA

MAJOR EVENTS OF THE YEAR:

FHA members attending the Leadership Training Conference during the summer added a fifth National Project: Observance of United Nations Day, October 24. The conference was held at Green Lakes, Wisconsin.

Barbara Dickerson, Jefferson High School, Dresden, as State Projects Chairman, attended the National Leadership Training Conference at East Lansing, Michigan July 2-6, 1952. She also attended State FHA Camp and served as an FHA Junior State Fair Board member.

Forty-nine chapters sent a total of 1138 gifts as their share in the World Christmas Festival. Thirty chapters observed United Nations Day (the newest national project); 39 chapters participated as Pen Pals. The Annual Meeting was held on April 25-26, 1952.

The fourth annual FHA Camp was held August 10-16, 1952, at the FFA Camp Muskingum.

Four state sub-regional meetings were held at the call of the state officers. Each officer met with local presidents and officers in her district to discuss business transacted in the June Executive Council meeting, and to help to coordinate local programs with the state and national ones.

"Chapter Activities to Help in Program Planning" was a bulletin prepared from the Annual FHA reports from Ohio chapters of 1951-52.

1952-1953

NATIONAL AND STATE PROGRAM OF WORK:

Purpose I: To promote a growing appreciation of the joys and satisfactions of homemaking
Goal: Sharing and enjoying responsibilities in our homes

Purpose II: To emphasize the importance of worthy home membership
Goal: Getting along with the family

Purpose III: To encourage democracy in home and community life
Goal: Learning new ways of practicing democracy

Purpose IV: To work for good home and family life for all
Goal: Growing in appreciation of each family member as an individual

Purpose V: To promote international good will
Goal: Overcoming prejudices in our community, state, nation, and world

Purpose VI: To foster the development of creative leadership in home and community life
Goal: Assuming leadership in the home and community

Purpose VII: To provide wholesome individual and group recreation
Goal: Helping individuals and families learn how to play

Purpose VIII: To further interest in home economics
Goal: Interpreting what a good homemaking program can do for home, school, and community

MAJOR EVENTS OF THE YEAR:

A meeting of the applicants for the State Homemaker Degree was held in Hearing Room 2 of the State Office Building on October 18, 1952.

Ohio chapters for the year numbered 286 with a total membership of 12,377 girls. Approximately 1300 girls received the Junior Homemaker Degree, 600 earned the Chapter Homemaker Degree, and 206 members were honored with the State Homemaker Degree.

The annual state meeting was held in Central High School, Columbus, May 1-2, 1953. Miss Beulah Sellers, Chairman of the State Degrees Committee, conferred State Homemaker Degrees. The four ranking Vice Presidents presented a program comparing aspects of Ohio homemaking today and 150 years ago, in recognition of Ohio's Sesquicentennial celebration. Mrs. Howard Irwin of Hanover Twp. (Hamilton) served as State Mother.

An amendment to the Constitution was proposed by the Executive Council and was voted on at the Annual Meeting. This amendment stated that all candidates seeking the office of state president must hold the Junior and Chapter degrees, must hold or be working on the State Homemaker degree; and that candidates for other state officers must hold the Junior degree and be working on the Chapter or State Degrees.

Award of Merit Certificates were presented to 97 chapters. Annual state dues were increased to 15c per member. Approximately $40 was paid on a one hundred dollar pledge to the Ohio Christian Rural Fellowship.

The third national meeting of FHA was held in Columbus July 2-6, 1953. Ohio had a total of 80 persons attending the convention; 62 members, 15 adults and three voting delegates. Two thousand girls from 45 states and several outlying possessions attended meetings held in Memorial Hall.

Zoelouise Bauman, Ohio FHA President, welcomed the delegates. The high point of the convention was the pageant given on Saturday evening. Ohio, as did all states, shared in revealing our United States history. Joyce Falor, Wauseon, was elected National Parliamentarian.

A new national project was adopted for the year—UNESCO.

Zoelouise Bauman, State FHA President, attended the banquet of the Ohio Vocational Association and spoke briefly. She also was a guest at the annual banquet of the Future Farmers of America when their Twenty-fifth Anniversary was celebrated.

The annual FHA State Camp was held August 16-22, 1953. Attendance was limited to the number of accommodations available. Two hundred members participated in lively discussions and group activities. Leadership training was a main concern of the group. Many experiences were provided, such as conducting discussion groups, conservation study, devotional services, flag ceremonies, and evening programs.

Left, Page 16 *Sesquicentennial Celebration at the 1953 State Meeting*
Right, Page 16 *State Homemakers—Central High School—1953 State Meeting*

1953-1954

NATIONAL AND STATE PROGRAM OF WORK:

Goal I: Developing greater understanding among the homes of the world. To give emphasis to better understanding of cultures and homes of other countries and of the different cultural groups within the community.

Goal II: Training and improving ourselves to be more democratic in all phases of life. To give emphasis to leadership ability by using democratic principles at home, at school, in chapters, in our community and nation.

MAJOR EVENTS OF THE YEAR:

Both state and national dues were increased bringing the total to 30c per member.

Five national projects were supported: The World Christmas Festival; UNESCO; Families Together; National FHA Week; Civil Defense and Safety.

Twenty-seven representatives were sent to the Leadership Training Conference held at East Lansing, Michigan in July 1954. They were accompanied by eight chapter advisers and a representative from the State Department. Judy Williston, Delta, served as a discussion leader. Virginia Fleming of Germantown served as a member of the national finance committee.

1954-1955

NATIONAL AND STATE PROGRAM OF WORK:

Goal I: Developing greater understanding among the homes of the world. (To create better understanding of cultures and homes of other countries and of the different cultural groups within our own communities as well.)

Goal II: Training ourselves to be more democratic in all phases of life. (To emphasize leadership ability by using democratic principles at home, at school, in chapters, in our community and nation.)

Goal III: Teaching ourselves to realize and accept our responsibilities in our homes. (To emphasize need for family planning in use of family income, work, and time, and our part in harmonious family living.)

Goal IV: Understanding what homemaking can contribute to our future lives at home and in business. (To emphasize ways to use what you've learned in homemaking regardless of kind of work you do.)

MAJOR EVENTS OF THE YEAR:

Forty-four new chapters were added, making a total of 338 chapters and 14,667 members in the Ohio Association.

The State Homemaker degree was granted to 145 girls at the evening session of the state convention held on April 29, 30, 1955. The Award of Merit certificate was given to 109 chapters for outstanding work for the year.

The speaker for the evening meeting was Ruth Ann Benefiel of Muncie, Indiana, National Vice President of the Central Region. Mrs. Anne Grimes of Columbus presented a program, "Ohio Folk Songs and Ballads".

The luncheon was held on April 30 at the Ohio Union. Miss Phyllis McInturf, a former state officer, told of some of her experiences as an International Exchange student in Sweden.

Six delegates, a chapter adviser and Miss Margaret Liggett, representing the state office, attended the National Convention held at Iowa State University at Ames, Iowa, in July 1955.

1955-1956

NATIONAL AND STATE PROGRAM OF WORK:

National Projects: Families Together; Home, School, and Community Beautification; Civil Defense; UNESCO Gift Coupon Project, World Christmas Festival

Goals: (Same as 1954-55, see page 19)

RECIPE FOR A HAPPY FAMILY....

½ cup of politeness
2 cups good disposition
3 cups love
1 cup happiness
4 T. of willingness to work together
1 T. thoughtfulness
½ T. encouragement
Big dash of unselfishness

Season this liberally with good humor, and bake in oven of warm contentment for the rest of your life. Serve big helpings with a smile.

MAJOR EVENTS OF THE YEAR:

This year marked the tenth anniversary of the affiliation of the Ohio Association of Future Homemakers with the national organization. The Annual State Meeting was planned in celebration of this tenth anniversary. The state association also initiated participation in the Home Safety Program sponsored by the Nationwide Insurance Co. Elm Valley Chapter, Ashley, Ohio, was the first chapter to gain possession of the safety trophy given in recognition of their work done in this program.

In 1956, Barbara Berger, Talawanda Chapter, was chosen as Ohio's candidate for National President. She, along with a delegation of 66 others, attended the National Convention in Chicago in July 1956.

Below: Delegates to the 1956 National Meeting in Chicago

1956-1957

NATIONAL AND STATE PROGRAM OF WORK:

National Projects: Families Together· Teenage Consumer; UNESCO Gift Coupon Plan; Home School and Community Beautification; and Civil Defense

Goal I: To promote better family living

Goal II: To help members understand the opportunities open to them in the field of home economics

Goal III: To understand our neighbors both at home and abroad

Goal IV: To provide training for each chapter member for participation in home, school, and community activities

MAJOR EVENTS OF THE YEAR:

The Constitution and By-Laws of the Ohio Association were edited and printed for distribution to all chapters over the state. Miss Margaret Liggett was appointed Assistant State Adviser with Miss Enid Lunn as State Adviser.

The state meeting held at the Youth Center on the Ohio State Fairgrounds on April 26 and 27, 1957, had the theme: "What Kind of Light Does FHA Cast on Your Community?"

The Ohio delegation attended the National Meeting at Purdue University. Lafayette, Indiana held July 1-5, 1957.

1957 State Meeting Banquet

1957 State Meeting

Delegates in Youth Center Dormitory

1957-1958

NATIONAL AND STATE PROGRAM OF WORK:

(Same as for 1956-57. See page 21.)

MAJOR EVENTS OF THE YEAR:

The Award of Merit Committee together with the Advisory Board met to review the Award of Merit Requirements. The requirements were revised extensively in order that they might better serve as means of chapter program evaluation. It was decided that the newly prepared requirements would be used for a two-year period. At the end of this time, the requirements would be reviewed by advisers and chapter members attending the Annual State Meeting in 1959. Further recommendations and changes would be considered at that time.

In the spring of 1958 the State Degree Committee met for the purpose of planning reorganization of the committee. The reorganization made it possible for each subregion to have a chapter adviser represented on the committee.

Miss Enid W. Lunn, State Supervisor of Vocational Home Economics and State Adviser for the Ohio Association of the Future Homemakers of America retired from her position in July 1958. Miss Margaret McEniry was appointed as her successor and assumed her new position on July 1, 1958. Miss McEniry became the State Adviser for the Ohio Future Homemakers with Miss Margaret Liggett as her assistant.

The Annual State Meeting this year was planned to include the first all-state FHA Chorus in its program. Seventy chapters were represented in this choral group. The Executive Council recommended that this chorus be formed each year and that it be included in each annual state meeting in the future.

Kansas City was the scene of the national meeting in 1958. Ohio had a delegation of 15 present.

1958-1959

NATIONAL AND STATE PROGRAM OF WORK:

(Same as 1956-57. See page 21.)

MAJOR EVENTS OF THE YEAR:

Within this year the applications for state officer candidacy were changed to include more emphasis on chapter participation and individual development of the candidate. Recommendation check sheets prepared by persons acquainted with the candidate and her capabilities were also required. It was agreed that this plan would be tried for a two year period, at the end of which time the plan would be reviewed once more and necessary changes would be made.

The Annual State Meeting was planned as a special tribute to the State of Ohio and its history. The Executive Council planned and prepared a pageant depicting highlights in the life of the state and its people. The all-state chorus, now including 90 voices, provided important background music for the pageant. In the subregional meetings the Award of Merit Requirements were reviewed and recommendations made to the Award of Merit Committee. The requirements, in revised form, were used for the 1959-60 applications for the Award of Merit.

STATE OFFICERS AND ADVISORY BOARD

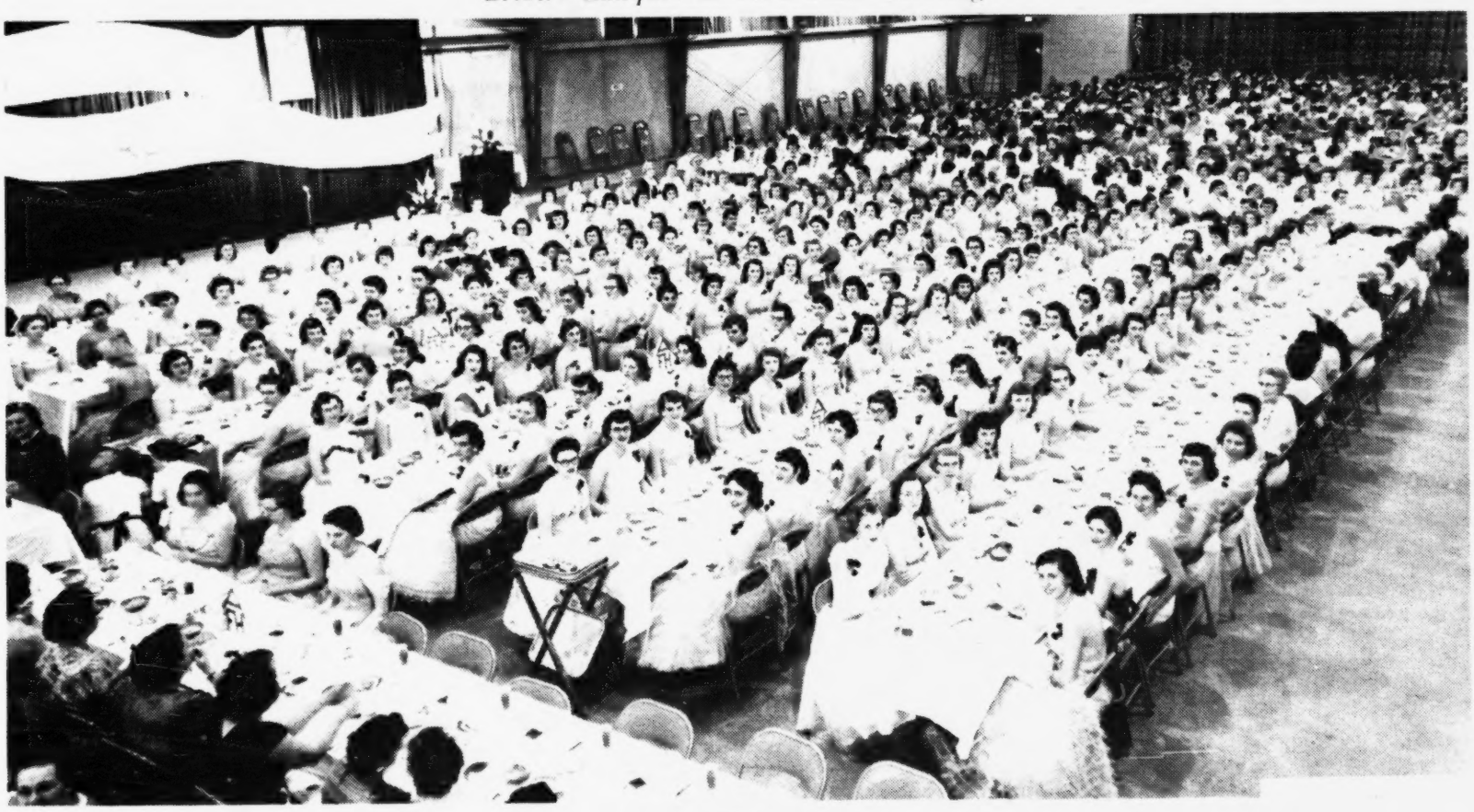
OFFICE	*OFFICER*	*ADVISER*	*CHAPTER*
President	Mary Ellen Daugherty	Mrs. Florence Tackett	Glenford
Ranking V.P.—South	Judy MacFadden	Mrs. Barbara Brake	Waterloo
Ranking V.P.—Central	Sally Vorys	Mrs. Nadine Elder	Union, Warsaw
Ranking V.P.—East	Jacqueline Furlan	Miss Ida Chadwick	West Geauga
Ranking V.P.—West	Suzanne Grieves	Miss Dorothy Foster	Anna
Secretary	Betsy Graham	Miss Mary Gibson	Barnesville
Treasurer	Katherine Onweller	Mrs. Mildred Burris	Delta
Parliamentarian	Rebecca Lynn Warner	Mrs. Dorothy Share	Frankfort
Historian	Judy Eubank	Mrs. Marie Reynolds	West Alexandria
V.P. of Program Planning	Marcena Snyder	Mrs. Phyllis Leppert	Scioto Valley
V.P. of Public Relations	Karen Spearman	Mrs. Virginia Wykoff	Arcadia
V.P. of State Projects	Rosemary Burson	Mrs. Mildred Lutz	Glenford
V.P. of Recreation	Willene Shoup	Miss Betty Ruehle	Attica

Delegates to 1958 National Meeting

Above: 1959 State Meeting Pageant

1959 State Chorus

Below: Banquet at 1958 State Meeting



1960 State Meeting Pageant

1960 State Meeting, Installation of Officers

Right: Ohio Delegates to 1960 National Meeting in Washington D.C.

Blessed is she whose daily tasks are a labor of love, for her willing hands and happy heart translate duty into privilege, and her labor becomes a *service* to God and all mankind.

Blessed is she who opens the door to welcome both stranger and well-loved friend; for gracious *hospitality* is a test of brotherly love.

Blessed is she who mends stockings and toys and broken hearts for her *understanding* is a balm to humanity.

Blessed is she who scours and scrubs; for well she knows that cleanliness is one expression of *Godliness.*

Blessed is she whom children love; for the *love* of a child is more to be valued than fortune or fame.

Blessed is she who sings at her work; for *music* lightens the heaviest load and brightens the dullest chore.

1959-1960

1959-62 NATIONAL AND STATE PROGRAM OF WORK

OBJECTIVE I: To develop our potential abilities

Projects: Youth Can Do
Teenage Consumer

OBJECTIVE II: To develop a better understanding of our family members and to contribute to their well-being

Projects: Family Unity
Family Fitness

OBJECTIVE III: To interpret the value of home economics as a basic part of our total education

Project: Your Future with Home Economics

OBJECTIVE IV: To promote good will through getting to know our neighbors at home and abroad

Project: Getting to Know You

STATE THEME: "Blueprint for Better Living"

NATIONAL MEETING: The 1959 National Meeting was held July 13-17 in Chicago at the Conrad Hilton Hotel and was attended by 73 Ohio delegates. The theme of the meeting was "Blueprint for Action" and its purpose was to introduce the 1959-1962 Program of Work. About 2500 delegates worked together to learn about and share suggestions for using the new program of work.

STATE CAMP: The new 1959-62 National and State Program of Work was introduced at camp in August 1959. In the group work sessions this program of work was studied and additional ideas and interpretations were developed for the Ohio chapters. Following camp each Ohio chapter received a copy of the new National and State Program of Work as well as a copy of the additional suggestions for Ohio's program.

SUBREGIONAL MEETINGS: Twelve subregional meetings were presented in the fall of 1959 to present the new Program of Work, to explain Award of Merit and State Degree requirements, and to further fellowship among chapters.

STATE MEETING: The 15th Annual State Meeting was held at the Youth Center in Columbus on April 22 and 23, 1960. In honor of the fifteenth anniversary a pageant entitled "The Vision of FHA: Toward New Horizons" was presented. This pageant traced the development of the history of the Ohio Association through the fifteen years. Many persons participated, including several who had active roles in the earlier years. On Saturday morning the delegates were inspired by an excellent talk by Rev. Don Gilmore on the subject "Youth Can Do".

OTHER INFORMATION: On Sept. 1, 1959 Miss Margaret Liggett, who had served as Assistant State Adviser since 1956, flew to Nigeria, Africa for a year's assignment in working with the International Cooperation Administration. Miss Wanda Montgomery was named Assistant State Adviser in the fall of 1959.

STATE OFFICERS AND ADVISORY BOARD

OFFICE	*OFFICER*	*ADVISOR*	*CHAPTER*
President	Nancy Powers	Mrs. Viletta Bretthauer	Fayette
Ranking V.P. — South	Karen Irwin	Mrs. Helen Clough	Talawanda
Ranking V.P. — Central	Evelyn Hansen	Mrs. Ethelyn Harger	Thompson-Bellevue
Ranking V.P. — East	No Officer		
Ranking V.P. — West	Audie Lee Laver	Mrs. Marguerite Craig	Fulton
Secretary	Grace Dean	Mrs. Shirley Irwin	Elm Valley
Treasurer	Sherry Reeder	Miss Mildred Young	Marlington
Parliamentarian	Karen Baertsche	Mrs. Ladonna Stewart	Hardin-Northern
Historian	Lydia E. Schaurer	Mrs. Alice Frantom	Franklin-Monroe
V.P. of Program Planning	Gail Harrison	Mrs. Grace Schindler	Wheelersburg
V.P. of Public Relations	Jackie Furlan	Mrs. Helen VanDyke	West Geauga
V.P. of State Projects	Patti Watkins	Mrs. Florence Tackett	Glenford
V.P. of Recreation	Carol Seipel	Mrs. Jean Downey	Shade

1960-1961

NATIONAL AND STATE PROGRAM OF WORK:

(Same as 1959-60. See Page 25)

STATE THEME: "Homes—Our Nation's Lifeline"

NATIONAL MEETING: The 1960 National Meeting was held July 11-15 in Washington, D.C. Sixteen members and six advisers from Ohio went by train to Washington. The theme of the meeting was "HOME—The Hub of Good Citizenship". Six Ohio state officers presented a relaxer at a general session. About 1100 delegates were in attendance.

STATE CAMP: One of the highlights at the 1960 camp, held August 15-20, was the introduction of the "Friends in Lebanon through FHA" state project. Miss Margaret Brugler, Co-Director of CROP in Ohio, and Samir Maamary, a native of Lebanon who graduated from the College of Agriculture at Ohio State University, were present to speak to the camp delegates. Samir later returned to Lebanon as a key person in the Akhar Area "Self-help" project, and was an important link between Ohio FHA'ers and Lebanon. (At the January 1961 Ohio Pastor's Convention, state officers and advisers were presented a special CROP Award.)

SUBREGIONAL MEETINGS: Twelve subregional meetings were presented in the fall of 1960.

STATE MEETING: The 16th Annual State Meeting was held April 21-22, 1961 at the Youth Center in Columbus. At the banquet program on Friday night Mr. William Martin, author of children's books, spoke on "Reading for Living".

OTHER INFORMATION: D'uan Van Meter, State President from Arcadia, attended the National Youth Power Congress in Chicago in March 1961. Both the State Degree and Award of Merit Committees had meetings in the summer of 1960. Voting delegates at the 1961 state meeting voted in a constitution revision and a dues increase, making the total state dues 25 cents per member.

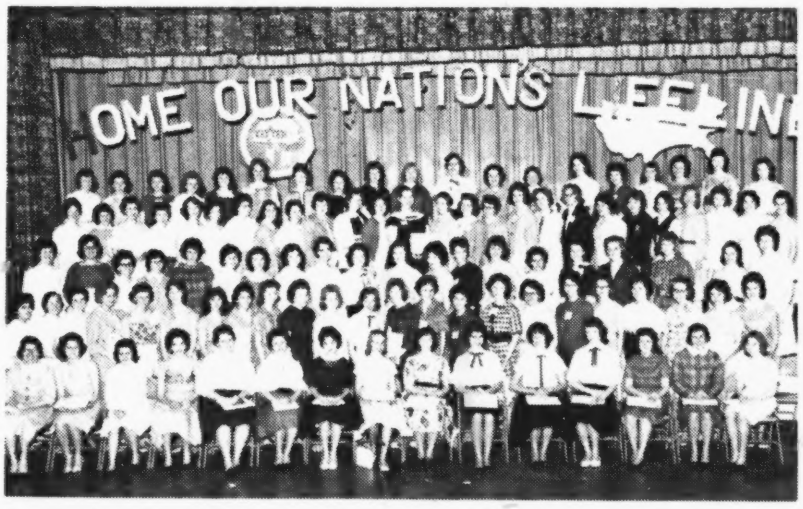
STATE OFFICERS AND ADVISORY BOARD

OFFICE	*OFFICER*	*ADVISER*	*CHAPTER*
President	D'aun Van Meter	Mrs. Virginia Wykoff	Arcadia
Ranking V.P.—South	Wanda Acton	Miss Hazel Core	Paint Valley, Bainbridge
Ranking V.P.—Central	Dawn Reinhard	Mrs. Joyce Matthews	Holmes Liberty
Ranking V.P.—East	Jeanne Mansfield	Mrs. Vivian McDonald	Chardon
Ranking V.P.—West	Nila Money	Mrs. Jean F. Spencer	Fort Recovery
Secretary	Anne Miller	Mrs. Marie S. Reynolds	West Alexandria
Treasurer	Joan Shane	Miss Joan Parks	Hopewell-Loudon
Parliamentarian	Helen Lauer	Mrs. Juanita B. Ullman	Salem-Liberty
Historian	Sandra Ehlers	Mrs. Mildred Lutz	Glenwood
V.P. of Program Planning	Karen Fizer	Mrs. Margaret Wiles	Clay, Oregon
V.P. of Public Relations	Ruth Ann Hanes	Mrs. Nadine Elder	Union, Warsaw
V.P. of State Projects	Diane Tripp	Mrs. Louise Leach	Brown-Zaleski
V.P. of Recreation	Kay Layton	Mrs. Edna Dix	Stokes
National Committee Woman	Joan Kay Elliot	Mrs. Elizabeth Mackey	Mt. Victory

TOTAL CONTRIBUTIONS FOR LEBANON

Ohio FHA chapters were generous in their response to our "Friends in Lebanon Through FHA" project. In addition to learning about the people, the country, and the customs of Lebanon, FHA'ers made contributions to the salary of a Lebanese home economics teacher as follows:

1960-61	$1797.75
1961-62	1744.01
1962-63	1679.90
Total	$5221.66



Award of Merit Group at 1961 State Meeting

1961-1962

NATIONAL AND STATE PROGRAM OF WORK:
(Same as 1959-60. See Page 25)

STATE THEME: "FHA — Learn It, Love It, Launch It"

STATE GOAL: To make FHA more popular.

NATIONAL MEETING: The 28 members and 9 advisers who were delegates to the 1961 National Meeting in St. Louis traveled by train from Cincinnati. The theme of the meeting, which was held July 3-6, was "Youth—Measure Your Values". The most exciting highlight of the week for Ohio girls was the election of Dawn Reinhard to the office of National Historian. Dawn had served as 1960-61 State Ranking Vice President for Central Region in Ohio.

STATE CAMP: State Camp was held August 7-12, 1961. One of the new features of camp this year was having college girls present for the week. The six college girls were all preparing to be homemaking teachers and represented six of the Ohio universities that offer training in vocational home economics. These girls made fine contributions at camp and had very worthwhile experiences in helping them prepare for their chosen profession. They recommended that the practice of having college girls at camp be continued.

SUBREGIONAL MEETINGS: Twelve subregional meetings were presented in the fall of 1961.

STATE MEETING: The 17th Annual State Meeting was held on April 13 and 14, 1962. This was the first year that a banquet was not held. The Friday night session was at Mershon Auditorium on the campus of Ohio State University and the Saturday session was at the Youth Center on the fairgrounds. One of the outstanding features of the Friday night program was the pageant of the flags of our fifty states. This year for the first time we also had both the State Degree and the Award of Merit ceremonies on Friday night. These were very beautiful, with the State Degree girls in pastel formals and the Award of Merit girls in white dresses with red roses at the necklines.

OTHER INFORMATION: Miss Wanda Montgomery resigned as Assistant State Adviser, effective October 1, 1961. Mrs. Genevieve Schroeder was appointed to serve in this capacity on a temporary assignment.

Joan Mericle, state officer from Pandora, attended the National Youth Power Congress in Chicago during March 1962.

The State Degree and Award of Merit Committees met in the summer of 1961.

During the 1961-62 school year Ohio FHA chapters contributed to our various projects as follows:

STATE PROJECTS:	
Friends in Lebanon through FHA	$1744.01
FHA Scholarship	470.30
Leadership Training Fund	250.00
OTHER PROJECTS:	
UNESCO	244.20
Ohio Christian Rural Fellowship	171.00
	$2879.51

STATE OFFICERS AND ADVISORY BOARD

OFFICE	*OFFICER*	*ADVISER*	*CHAPTER*
President	Karen Stanley	Mrs. Clara Belle Willock	Albany
Ranking V.P.—South	Juanita Brooks	Mrs. Louise Leach	Brown-Zaleski
Ranking V.P.—Central	Doris Phillips	Mrs. Marguerite Cook	Carroll
Ranking V.P.—East	Karen Licklider	Mrs. Mildred Lutz	Glenwood
Ranking V.P.—West	Joan Mericle	Mrs. Agnes Strouse	Pandora-Gilboa
Secretary	Christine Holaday	Miss Jacqualine Shepherd	Gettysburg
Treasurer	Tillie Compher	Miss Hazel Core	Paint Valley
Parliamentarian	Marilyn Duffy	Mrs. Ruth Hulbert	Delaware-Willis
Historian	Dorothy Arters	Mrs. Betty Hastings	Cloverleaf, Lodi
V.P. of Program Planning	Linda Nagy	Miss Margaret Moulder	Thompson
V.P. of Public Relations	Joyce Menchhofer	Mrs. Marie S. Reynolds	West Alexandria
V.P. of State Projects	Pat Schultz	Mrs. Margaret Wiles	Clay, Oregon
V.P. of Recreation	Jane Bailey	Miss Mary Gibson	Barnesville
National Committee Woman	Jean White	Mrs. Elizabeth Mackey	Mt. Victory

1962-1963

1962-1965 NATIONAL AND STATE PROGRAM OF WORK

OBJECTIVE I: Discovering myself and my worth to others
Project: You and Your Values

OBJECTIVE II: Contributing to the joys and satisfactions of family living
Projects: Focus on Family Friendship
Marriage Calls for Preparation

STATE THEME: "Values—A Measure of What We Treasure"

STATE GOAL: To introduce and interpret the new National Program of Work for 1962-65 and motivate members to use it.

NATIONAL MEETING: The 1962 National Meeting was held in Salt Lake City, Utah and was attended by 15 members and 5 advisers from Ohio. The theme of the meeting was "Guideposts for Progress." The four objectives and five projects of the 1962-65 Program of Work were introduced. Ohio was very proud of Dawn Reinhard, National Historian from Ohio, who presided at the banquet and fulfilled many other duties as a national officer. Ohio delegates also presented a devotional at the meeting.

SUBREGIONAL MEETINGS: Twelve subregional meetings were presented in the fall of 1962 to present the new Program of Work, to explain Award of Merit and State Degree requirements, and to further fellowship among chapters.

STATE MEETING: The 18th annual state meeting was held at Mershon Auditorium on the campus of the Ohio State University on March 15 and 16, 1963. This was the first year that the entire state meeting was held at Mershon. The purposes of the Friday night session were to recognize individuals and chapters that had made outstanding contributions to the organization and to promote the Program of Work.

On Saturday morning, in addition to the business of the association, we had an excellent speaker, Mr. Gordon Ward, TV Newscaster from Toledo, Ohio. His topic was "Roadmap for Living." The state meeting was attended by about 3000 persons on Friday night and by more than 2100 persons at the Saturday session. This represented a considerably larger delegation than had ever before been in attendance at a state meeting of the Ohio Association.

OTHER INFORMATION: Mrs. Genevieve Schroeder resigned effective July 1, 1962. Miss Dorothy Foster officially became Assistant State Adviser on September 1, 1962, although Miss Foster performed several necessary duties for the organization throughout July and August.

OBJECTIVE III: Strengthening my education for future roles
Project: Stay in School

OBJECTIVE IV: Launching good citizenship through homemaking
Project: Action for Citizenship

A Program of Work Calendar was printed in September 1963 and distributed to all chapters. State Newsletters were published in December 1962 and February 1963.

There was no state camp held in the summer of 1962.

This was the final year of the "Friends in Lebanon Through FHA" project, so during this year the 1962-63 State Projects Chairman and the Executive Council began to assemble ideas for a new state project. This material was presented to the 1963-64 Executive Council, who made the final decisions regarding the 1963-66 state project.

In the summer of 1962 the State Award of Merit Committee met to make final decisions regarding the revision of the Award of Merit Handbook. The revised Handbook was sent to all chapters in the fall of 1962 as was also the booklet, "Favorite Songs and Relaxers," compiled by the 1961-62 State Recreation Committee.

The State Degree Committee met in June 1962 and Executive Council meetings were held in June and August 1962 and in January and March 1963.

Jeri Zoller attended the State Traffic Safety Conference held in the fall of 1962. Betty Brooks attended the National Youth Power Congress in Chicago in March 1963. Nevora Fridenmaker attended the national convention of the American Institute of Cooperation held at Ohio State University in August 1962.

During the 1962-63 school year FHA chapters contributed to our various projects as follows:

STATE PROJECTS:	
Friends in Lebanon through FHA	$1679.90
FHA Scholarship	559.79
Leadership Development Fund	297.50
OTHER PROJECTS:	
UNESCO	332.75
Ohio Christian Rural Fellowship	224.05
	$3093.99

1963-1964

NATIONAL AND STATE PROGRAM OF WORK: (Same as 1962-63. See Page 29.)

STATE THEME: "Stepping Stones to Happy Homes"

STATE GOAL: To introduce the 1963-66 State Project, "Know, Serve, and Appreciate Ohio," and motivate members and chapters to work on it.

STATE CAMP: State camp was held from June 24-28, 1963 with approximately 250 members and advisers in attendance. The 1962-63 state officers were present to help the 1963-64 state officers get started with their responsibilities. The state theme was chosen and emphasized throughout the week's program. The program was focused upon the national and state objectives and projects. Mr. Calvin Young, State Director of Mental Health, spoke to us regarding the mental health aspect of our "Know, Serve, and Appreciate Ohio" project. The campers were divided into chapters, with each chapter preparing a year's Program of Work Book. (The best material from each book was compiled by the Program of Work Chairman into the state Program of Work Calendar, which was sent to all chapters in August 1963.) A beautiful campfire ceremony climaxed the week.

NATIONAL MEETING: The 1963 National Meeting was held in Municipal Auditorium in Kansas City, Missouri. The Ohio delegation, consisting of 26 members and 6 advisers, traveled by TWA jet air service to the meeting. The theme of the meeting was "Your Home—A Key to the Future." The Ohio girls served as ushers at a general session.

STATE MEETING: The 19th annual State Meeting was held on April 10 and 11, 1964 at Mershon Auditorium on the campus of Ohio State University. We had a very effective backdrop to portray our theme, "Stepping Stones to Happy Homes." The Friday evening program was again a recognition program, recognizing the outstanding achievements and contributions of individuals and chapters. We also had several program features which emphasized our objectives and projects. On Saturday morning we had an outstanding speaker, Dr. Otis A. Maxfield, senior minister at the First Community Church in Columbus. His topic was "Marriage Calls for Preparation."

OTHER INFORMATION: The "Know, Serve, and Appreciate Ohio" project was designed as a broad and flexible project, with unlimited possibilities for individual and chapter experiences. A comprehensive list of suggested activities was compiled by the State Projects Chairman and sent to every chapter. It was planned that every chapter would "serve" through an emphasis on mental health. The first year of this project was very successful.

In May 1963 the State Degree Manual was published in printed form for the first time. This was necessary because of the great demand for these manuals. Two State Newsletters, dated November 1963 and February 1964, were published during the year.

Kathleen Jelley, State President, attended the national convention of the American Institute of Cooperation held at Lincoln, Nebraska in August 1963.

Subregional meetings were not held in the fall of 1963.

The State Advisory Board and Executive Committee met in October and in February to work on plans for the State Meeting. They also met April 9th, 1964.

The twelve State Award of Merit Committee members met in Columbus in March to evaluate chapter applications for the Award of Merit and to take care of other committee business.

The twelve State Degree Committee members conducted interviews throughout the state for those girls applying for the State Homemaker Degree. This committee also met in June 1964 to take care of the business of the committee.

During the 1963-64 school year FHA chapters contributed to our various projects as follows:

STATE PROJECTS:	
Mental Health Research Fund	$1502.65
FHA Scholarship	534.00
Leadership Development Fund	377.45
OTHER PROJECTS:	
UNESCO	331.35
Ohio Christian Rural Fellowship	289.60
	$3035.05

1964-1965

NATIONAL AND STATE PROGRAM OF WORK:
(Same as 1962-63. See Page 29.)

STATE THEME: "Education Builds A Nation"

STATE GOAL: To emphasize throughout the state the importance of education and of mental health.

STATE CAMP: State camp was held from June 21-26, 1964. Approximately 228 members and advisors were in attendance. Both the 1963-64 and 1964-65 state officers were present. The new officers chose the state theme, which was emphasized throughout the activities of the week. State Senator Oliver Ocasek gave an inspirational keynote address on the importance of education. Mr. Calvin Young was present to give help with the second phase of the mental health aspect of our "Know, Serve, and Appreciate Ohio" project. He gave guidelines for the chapters that wish to do volunteer work in mental hospitals.

This year the campers were again grouped into chapters, with each chapter preparing a Program of Work Book for the year. The best material from each book was compiled into the State Program of Work Calendar which was sent to all chapters in August 1964.

A highlight of the banquet program was the style show of fashions from various periods of Ohio history. Later that night a beautiful campfire and impressive candlelighting ceremony were held.

NATIONAL MEETING: The Ohio delegation to the 1964 National Meeting held in Chicago at the Conrad Hilton Hotel consisted of 18 advisers and 60 members. The delegation traveled in two chartered busses, leaving on July 12 and returning on July 17. The theme of this national meeting, which was attended by 2300 delegates, was "Education—An Endless Challenge." Three of Ohio's state officers led relaxers at a general session. These were written by Beth Todd, 1963-64 State Recreation Leader, and were enthusiastically received by the national delegates. Voting delegates voted to increase national dues to 25c per member, thus making the state and national dues in Ohio 50c per member.

STATE MEETING: The 20th Annual State Meeting was held at Mershon Auditorium on April 2 and 3, 1965. The value of education was emphasized in various ways throughout the meeting, the theme of which was "Education Builds a Nation." State Senator Tennyson Guyer was the keynote speaker, using as his topic "The Educated Heart." During the two days the 20th anniversary year was recognized and celebrated in special presentations.

OTHER INFORMATION: Glee Alison, State President, attended the national convention of the American Institute of Cooperation held at Michigan State University in East Lansing in August 1964.

The second printing of the State Degree Manual was necessitated in September 1964 because of the great demand for this publication. Two state newsletters were also printed.

Twelve subregional meetings were held in the fall of 1964.

State Executive Council Meetings were held in June, July, and August 1964 and in January and April 1965.

The twelve State Award of Merit Committee members met in Columbus in March 1965 to evaluate chapter applications for the Award of Merit and to take care of other committee business.

The twelve State Degree Committee members conducted interviews throughout the state for those girls applying for the State Homemaker Degree.

The twenty-year history of the OAFHA was compiled by Miss Dorothy Foster during the year. This history was printed and made available to all chapters in the state.

During the 1964-65 school year FHA chapters contributed to our various projects as follows:

STATE PROJECTS:	
Mental Health Research Fund	$2010.95
FHA Scholarship	649.00
Leadership Development Fund	352.00
OTHER PROJECTS:	
UNESCO	343.00
Ohio Christian Rural Fellowship	274.50
	$3629.45

"The home is the foundation of a nation, and when that home is managed by a well-informed homemaker who cooks well-balanced meals, clothes her family with well-fitted garments, and furnishes her home with harmonious colors and furniture, we have a strong home foundation. If within this home the rights of each are respected and we teach and live love of home, country, fellow men, and God, we have the homemaker's ultimate goal. A nation with these homes will be prosperous, respected by other nations, and a blessing to the world."

PRESIDENTS OF THE OHIO ASSOCIATION FUTURE HOMEMAKERS OF AMERICA

YEAR	NAME	SCHOOL	ADVISER
1945-46	Carolyn Ray Myers	Elizabeth Twp. (Troy)	Miss Pauline Stone
1946-47	Ruth Henline	Fostoria	Miss Helen Mettler
1947-48	Joan Hanby	Buckskin Twp.	Mrs. Lena Pommert
1948-49	Bonnie Miller Riedel	Sycamore	Mrs. Evelyn Pollock
1949-50	Nancy Monastra	Greensburg	Mrs. Ruth Baker
1950-51	Virginia Heimberger	Clyde	Mrs. Ruby Engle
1951-52	Rita Ford	Kings Mills	Mrs. Mary Buchanan
1952-53	Sally Draa	Marlboro	Miss Mildred Young
1953-54	Zoelouise Bauman Ring	Rising Sun	Mrs. Leona Smith
1954-55	Judy Williston	Delta	Mrs. Mildred Burris
1955-56	Rita Hesselbrock	Ross Twp., Hamilton	Miss Joyce Garrod
1956-57	Jerri Siler	Troy	Miss Thelma Birt
1957-58	Gloria Sollie Turner	Middlebranch	Mrs. Mildred Lutz
1958-59	Mary Ellen Daugherty	Glenford	Mrs. Florence Tackett
1959-60	Nancy Powers Cooley	Fayette	Mrs. Viletta Bretthauer
1960-61	D'aun Van Meter	Arcadia	Mrs. Virginia Wykoff
1961-62	Karen Stanley	Albany	Mrs. Clara Belle Willock
1962-63	Nevora Fridenmaker	West Liberty	Mrs. Jeanette List
1963-64	Kathleen Jelley	Hardin-Houston	Miss Carol Kovacs
1964-65	Glee Alison	Libery-Union, Baltimore	Mrs. Hermalee Dunkel

STATE MOTHERS

Year	Name and School
1945-46	Mrs. L. G. Ray, Elizabeth Twp. (Troy)
1946-47	Mrs. Henline, Fostoria
1947-50	Mrs. Pearson Linn, Holmes-Liberty
1950-51	Mrs. Rose Nagy, Trotwood
1951-53	Mrs. Howard Irwin, Hanover Twp. (Hamilton)
1953-54	Mrs. John Searfoss, Harrod
1954-56	Mrs. Ralph Lecklider, Gettysburg
1956-58	Mrs. Walter J. Hansen, Bellville
1958-60	Mrs. Theodore Leininger, Fayette
1960-62	Mrs. Gladys Bailey, Barnesville
1962-64	Mrs. Clayton Compher, Paint Valley, Bainbridge
1964-66	Mrs. Vivian Weidenhamer, Paulding

HONORARY MEMBERS OF THE OHIO ASSOCIATION OF FUTURE HOMEMAKERS OF AMERICA

At each state meeting, beginning with the one held in 1948, honorary memberships have been presented to three or four persons who have rendered outstanding service to the Ohio Association of Future Homemakers of America. The following is a summary of the positions and contributions of persons who have received honorary membership in the Ohio Association:

State Superintendent of Public Instruction
State Director of Vocational Education
State Advisers and Assistant State Advisers and Supervisors
State Advisory Board Member
State FHA Mother
Adviser to State President or National Officer
State Degree and Award of Merit Committee Chairman
Contributor to State Leadership Camp
Writer of publication used by State Association
FHA Secretary in the State Office

1948 Enid Lunn
Eva Fels
Helen Mettler
Wanda Montgomery

1949 Niva Giauque
Mrs. Orpha Palmer
Mrs. Pearson Linn
Mrs. Mabel Scott

1950 Mrs. Ruth Peer
Mrs. Helen Clough
Agnes Dinsmore
Lucile Reuthinger

1951 Mrs. Catherine Vaughn
Mrs. Alice Kuester
Mrs. Ruby Engle

1952 Mary Kohler
Mrs. Mildred Lutz
Theodora Stocksdale Hall
Mrs. Jessie Wines

1953 Thelma Birt
Mrs. Lena Pommert
Beulah Sellers
Beryl Cone

1954 Mrs. Howard Irwin
Mrs. Elaine Marten
Rev. Clyde Rogers
Mrs. Kay Baker

1955 Mrs. Hazel Price
Margaret Liggett
Margaret Rothermel
Mary A. Milliken Edie

1956 Mr. Walter Theiss (Deceased)
Mrs. Walter Theiss
Mrs. Joyce Garrod Brehm

1957 Mrs. Alice Frantom
Mrs. Anna Tharp
Marjorie Hanline
Mrs. Mary Jay

1958 Grace Beckwith
Esther McCormick
Mr. Ralph Howard
Mrs. Viletta Bretthauer

1959 Mrs. Joyce Jackson
Mrs. Genevieve Schroeder
Mrs. Mildred Burris
Ida Chadwick

1960 Mrs. Theodore Leininger
Mrs. Mable Little
Mrs. Dorothy Cooperrider
Miss Margaret McEniry

1961 Mrs. Virginia Wykoff
Mrs. Nadine Elder
Mrs. Juanita Ullmann

1962 Hazel Core
Barbara Reed
Dorothy Foster
Gladys Bailey

1963 Mrs. Elizabeth Seabright
Ida Patterson
Mrs. Joyce Matthews
Shirley Boggs

1964 Dr. E. E. Holt
Mrs. Louise Leach
Miss Marlene Wilkins
Mrs. Olive Woodyard

1965 Dr. Harold Bowers
Mrs. Hermalee Dunkel
Mrs. Marjorie McKibben (Deceased)
Dr. Bryl Shoemaker

National Honorary Members from Ohio

Dr. Hazel Price, State Adviser, 1945-1948, Columbus, Ohio (1946-1947)

Dr. Ivol Spafford, Author and Curriculum Consultant, Rock Creek, Ohio (1953-1954)

It is regretted that it was impossible to print the married names of all of those who have married during the interval of years. Throughout this publication married names are used when they are known; otherwise maiden names are used.

OAFHA SCHOLARSHIP FUND

The Scholarship Fund of the Ohio Association of Future Homemakers of America was started with a contribution of $25 made by Vida Nesbitt at the AHEA meeting in Cleveland in June 1946. At their Executive Council meeting in July of that year the state officers decided to make the Scholarship Fund a state project, with the requirement that Award of Merit chapters contribute to the fund.

In the spring of 1947 two seniors were granted scholarships of $100 each. In 1948 it was decided that one scholarship of $200 be presented to the best qualified applicant. This practice was followed until the amount of the scholarship was increased to $400 in June 1960.

Chapters have been generous in their contributions to the Scholarship Fund, making it possible in 1964 for two scholarships of $400 each to be presented.

The purpose of this fund is to award a scholarship to an outstanding Ohio FHA member who plans to major in home economics in a university or college in Ohio. Selection of the applicant is based upon attainment of the State Homemaker Degree, a high academic record, leadership ability, and financial need.

CONSTITUTION AND DUES

The first constitution of the Ohio Future Homemakers of America was adopted in May 1937. This was revised when the Ohio Association became an official part of the national organization. Subsequent revisions were made in 1951 and 1953. In 1957 the Constitution and By-laws of the Ohio Association were edited and printed for distribution to all chapters in the state. A new revision was printed in 1961.

The Constitution is a very basic and important part of the organization. Each revision has been made to meet better the needs of the organization. Every chapter should have a copy of the state constitution and be very familiar with its contents. Each chapter should also be certain that the local FHA constitution is up-to-date.

Through the years dues have been increased to meet the demands of rising costs. At the 1961 state meeting it was voted to increase state dues to 25c per member. At the 1964 national meeting it was voted to increase national dues to 25c per member. Thus the total state and national dues became 50c per member starting with the 1964-65 school year.

SCHOLARSHIPS AWARDED BY OAFHA

	RECIPIENT	UNIVERSITY ATTENDED
1950 —	Mary Belle Kinney Waverly Chapter	Ohio State U.
1951 —	Marjorie Smith Canal Winchester Chapter	Ohio State U.
1952 —	Nancy J. Hartman Cory-Rawson Chapter	Bowling Green
1953 —	Charlotte Finley Malta-McConnelsville Chapter	Ohio State U.
1954 —	Jo Ann Benner Greenfield Chapter	Ohio State U.
1955 —	Janet L. Mercer Union Local Chapter	Ohio State U.
1955 —	Judith C. Williston Delta Chapter	Ohio State U.
1956 —	Judith A. Pfeifer	Ohio State U.
1957 —	Doris Patterson Waverly Chapter	Ohio State U.
1958 —	Mary Margaret Simmons Barnesville Chapter	Ohio State U.
1959 —	Joy Miller Franklin-Monroe Chapter	Ohio State U.
1960 —	Suzanne Grieves Anna Chapter	Ohio State U.
1961 —	Grace Dean Elm Valley Chapter	Ohio State U.
1962 —	Karen Stanley Albany Chapter	Ohio University
1963 —	Judy Akey Ridgeway Chapter	Ohio State U.
1964 —	Kathleen Jelley Hardin-Houston Chapter	Ohio State U.
1964 —	Cathy Sherck Bellevue Thompson Chapter	Ohio State U.
1965 —	Karen Keene Hilliard Chapter	Ohio State U.
1965 —	Glee Alison Baltimore Chapter	Ohio State U.
1965 —	Marlene Steyer Arcadia Chapter	Bowling Green State U.

OUR PROGRAM OF WORK

OUR PROGRAM OF WORK

The National and State Program of Work is printed at the beginning of the section for each of the years of this history.

The Program of Work of the Future Homemakers of America has been planned on a sound educational basis throughout the years. Since the beginning, the national organization has provided a firm foundation for state associations and local chapters with the suggested National Program of Work. As the years have progressed, the Programs of Work have become stronger, being based on current needs of youth and always focusing on the over-all goal of homemaking education—to improve personal, family, and community living.

National Projects have included:

- World Christmas Festival
- Adoption of Foreign Homemaking Classes
- Families Together
- Observance of National FHA Week*
- Observance of United Nations Day, Oct. 24
- UNESCO
- Civil Defense and Safety
- Home, School, and Community Beautification

In the 1959-62 and 1962-65 Programs of Work objectives have been stated with the following projects:

Youth Can Do	You and Your Values
Teenage Consumer	Focus on Family Friendship
Family Unity	Marriage Calls for Preparation
Family Fitness	Stay in School
Your Future with Home Economics	Action for Citizenship
Getting to Know You	

*Note: This is a continuing project. National FHA Week is celebrated each year during the first week in April.

In 1948-49 FHA Week was first included in the national projects; the celebration took place during the first week in November of each year. In 1952, at a meeting of the Executive Council, the members decided that FHA Week had become a tradition and recommended that it be celebrated as such and not considered as a national project.

In 1956, at a meeting of the Executive Council, it was decided that FHA Week be celebrated the first full week of April unless it conflicts with Easter or Holy Week. If this occurs, the week is changed to the last week in March.

Mr. Dan Firestone of Firestone Photographs in Columbus was helpful in supplying the photographs from past years. Pictures were not, however, available for every year of the organization's existence.

State Projects:

The State Projects, *Scholarship Fund* (see page 39) and *Leadership Training Fund* (formerly Camp Fund) have been in existence throughout the organization's history. In July 1946 the Executive Council established the FHA Camp Fund as a state project, with the requirement that Award of Merit chapters contribute to the fund. The purpose of this fund was to provide money for the leadership training camp program. In 1961 this fund became known as the Leadership Training Fund, with the funds being made available wherever extra money was needed for leadership training, including state and national meetings as well as camp.

Our *1960-63 State Project* was *"Friends in Lebanon through FHA."* We helped to sponsor a self-help project in the Akkar Area of Lebanon by paying the salary of a Lebanese home economics teacher for three years. During the three year period a total of $5,221.66 was contributed by Ohio chapters for this purpose. In addition, we reached the other goals of this project which were to learn to understand the people of Lebanon better by studying the country and its people; to help as many FHA chapters as possible to have a personal contact with the Lebanese people; and to help the people of Lebanon to know and understand Ohio's Future Homemakers.

Our *1963-66 State Project* was *"Know, Serve, and Appreciate Ohio."* We served through our emphasis on mental health. During the 1963-64 school year chapters learned facts about mental health and mental illness. During the 1964-65 school year some chapters did voluntary work in mental hospitals and during the 1965-66 school year chapters learned about career possibilities in the mental health field. Throughout the three years of the project chapters contributed to the "OAFHA Fund for Mental Health Research," with $3513.60 being contributed in the first two years of the project. Chapters also carried out many other activities and projects to know and appreciate Ohio.

We have also contributed to the Ohio Christian Rural Fellowship Fund through the years. The money in this fund is used to help in reaching out into rural areas on an inter-faith basis. It is a way to help more Ohio people in their total approach to life.

Another project we have continued to support throughout the years is UNESCO. Ohio chapters have contributed substantial sums of money that have been sent to other countries to help meet various needs. Working on this project helps us to achieve our purpose of promoting international good will.

PUBLICATIONS OF THE OHIO ASSOCIATION OF FUTURE HOMEMAKERS OF AMERICA

Ohio Manual For FHA Organization Use
October 1945

Steps in Organizing a Chapter (including Ohio FHA Constitution and By-Laws)
1950

State Constitution
Printed 1957, Revised and Printed 1961

Helps for Starting an FHA Chapter
1960

Directory of Chapters
Issued Annually

Program of Work Calendar
Issued Annually

Newsletters
1945-48—There were three newsletters each year. The first two were mimeographed, and the third was printed and included pictures.
Printed Newsletters with pictures:
1956-57—2 issues
1957-58—3 issues
1958-59—3 issues
1959-60—3 issues
During each of the succeeding years, beginning with 1960-61, there have been two printed Newsletters with pictures.

Award of Merit Handbook
Requirements Revised 1956
Tentative Handbook—1961
Revised Handbook—1962

State Degree Manual
Mimeographed, Fall 1948
Revised 1955
Revised 1960
State Degree only—Printed 1963, Cost 50c
Second Printing 1964

FHA Program Planning Ideas Booklet
1961

Favorite Songs and Relaxers
1962

A History of the Ohio Association
1965, Cost $1.00

Appreciation is expressed to Mrs. Helen Clough, Talawanda Chapter, who has taken many colored slides through the years to show FHA activities at our camps, state meetings, and national meetings. These slides have been made available to chapters throughout the state for use in their various meetings.

NUMBER OF CHAPTERS AFFILIATED WITH THE OHIO ASSOCIATION and TOTAL MEMBERSHIPS

YEAR	NUMBER OF CHAPTERS	TOTAL MEMBERSHIPS
1944-45	189	6,867
1945-46	278	10,348
1946-47	279	10,854
1947-48	283	11,173
1948-49	278	10,778
1949-50	283	11,231
1950-51	264	11,000
1951-52	293	12,530
1952-53	286	12,377
1953-54	312	13,455
1954-55	338	14,667
1955-56	326	14,251
1956-57	351	15,740
1957-58	351	15,795
1958-59	364	15,763
1959-60	372	15,848
1960-61	366	16,038
1961-62	363	16,339
1962-63	374	17,231
1963-64	390	18,224
1964-65	403	18,336

NUMBER OF CHAPTERS AFFILIATED WITH THE NATIONAL ASSOCIATION and TOTAL MEMBERSHIPS

Year	Number Of State Associations	Number Of Chapters	Number Of Members
1944-45	42	2,487	92,516
1945-46	47	4,340	168,259
1946-47	47	5,527	216,871
1947-48	47	6,108	237,133
1948-49	47	6,772	260,556
1949-50	47	7,341	287,612
1950-51	47	7,612	313,301
1951-52	47	8,267	344,852
1952-53	47	8,542	367,460
1953-54	48	8,876	388,750
1954-55	49	9,168	408,568
1955-56	49	9,460	427,404
1956-57	50	9,541	447,292
1957-58	51	9,984	475,564
1958-59	51	10,081	482,367
1959-60	51	10,208	485,070
1960-61	51	10,348	500,926
1961-62	51	10,466	521,126
1962-63	51	10,715	540,872
1963-64	51	10,869	554,603

Note: The District of Columbia, since 1954-55, and Guam, Rhode Island, and American Army Post Schools abroad during certain years, have had individual chapter affiliations although they are not chartered associations. Therefore, they are counted in the number of chapters and members, but not in the number of associations.

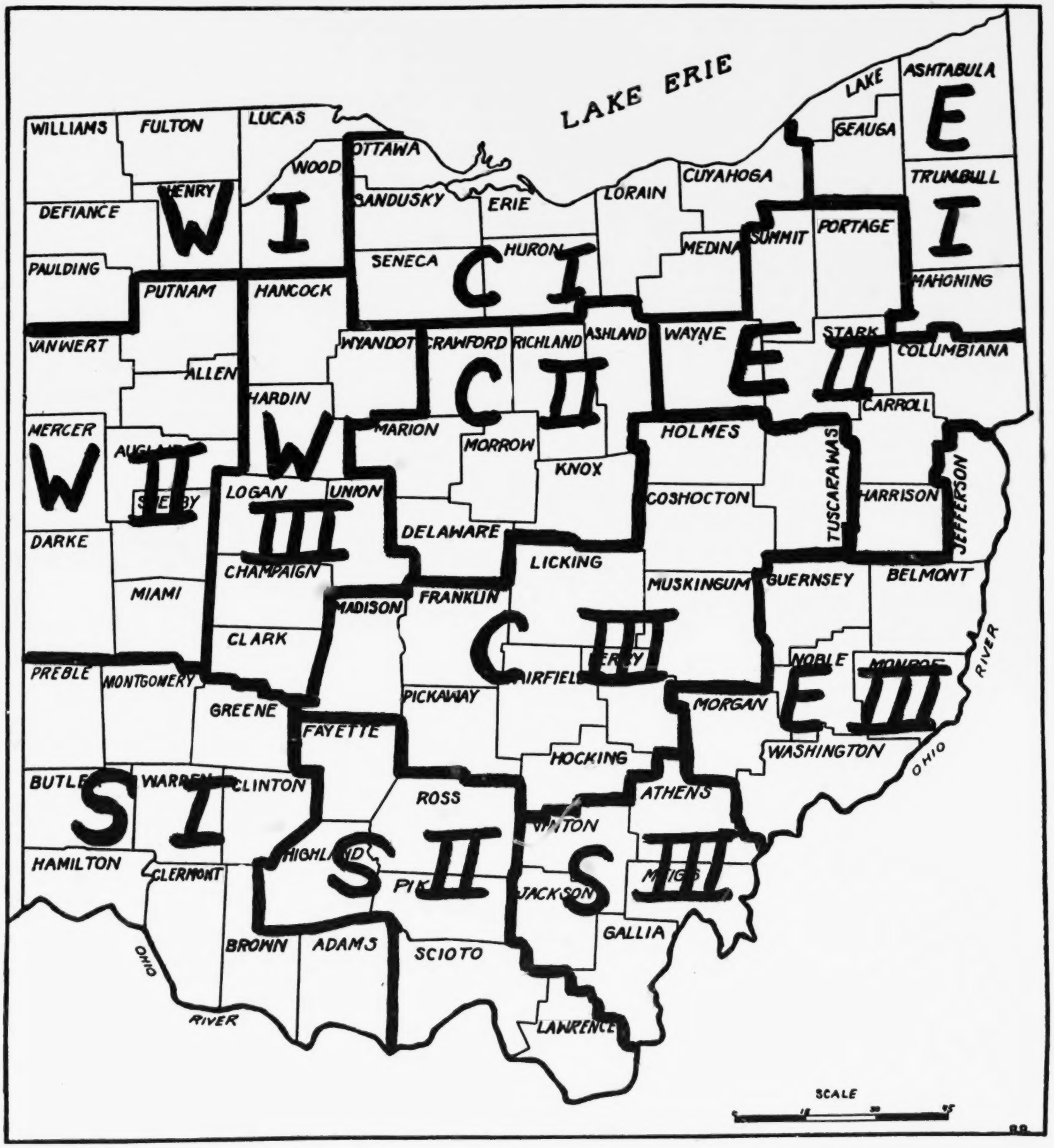
SUBREGIONAL MEETINGS

Twelve FHA subregions are designated throughout the state, with a state officer being elected from each subregion. The state president may come from any subregion.

Fall subregional meetings have been held throughout the state during many of the years of the existence of the Ohio Association of Future Homemakers of America. The state officer from the subregion plans and presides over the subregional meeting. Active participation from every chapter in the subregion is encouraged.

The purposes of subregional meetings are to strengthen local chapters, give officer training, emphasize the Program of Work, review requirements for the Award of Merit and State Degree, and promote fellowship and friendship among chapters.

The State is organized into West, Central, South, and East subregions according to this map.



LEADERSHIP CAMP

The first Leadership Training Camp was held in 1949, with FHA camps being held in each of the following years except 1962 and 1965. Each of these camps has been held at the State FFA Camp, Camp Muskingum, located on Leesville Lake in Carroll County in the eastern part of the state. About 140 FHA'ers, advisers, and state advisers attended the first camp. This number grew through the years so that in the more recent years 250 persons have been in attendance.

The goals of the camp have been to provide training for officers and members of chapters and to further the FHA Program of Work. General sessions, group discussions, and special interest classes have focused on using the Program of Work for planning chapter programs, on stressing good parliamentary procedure, and on reviewing Award of Merit and State Degree requirements.

The camp program provides arts and crafts, nature study, and recreation, in addition to work. The camp chorus, talent night show, and campfire ceremony have also added interesting highlights to the camp week. A camp newspaper, the Muskingum Echoes, was published at the camps held from 1954-61.

The state executive council together with the advisory board and state adviser, plans the camp program. Each succeeding year the camp program has been developed with careful consideration to the evaluation given by the campers. Increased effort has been made to provide more and more opportunities for individual participation as well as group responsibility. The camp is an important part of the state program and has contributed much strength to local chapters.

1964 State Campers

STATE MEETINGS

The first state meeting of the Ohio Association of Future Homemakers of America was held on April 13-14, 1946, and subsequent annual meetings have been held every year. The state meetings have always been held in Columbus, but the growth of the organization has made it necessary to change meeting locations within the city several times.

The earliest meetings were held on the campus of the Ohio State University. In 1951 the Friday night meeting was at the Deshler-Wallick Hotel and the Saturday meeting was at Central High School. In 1955 the meeting was held in West High School, with a Saturday luncheon being held at the Ohio Union. Starting in 1956 the meetings were held at the Youth Center on the Ohio State Fairgrounds.

In 1962 and the years following a banquet was not held. That year the Friday night meeting was at Mershon Auditorium on the Ohio State campus and the Saturday meeting was held at the Youth Center. The entire state meeting was held at Mershon in 1963, 1964, and 1965. The meetings at Mershon have been attended by more than 3000 persons on Friday night and by more than 2600 on Saturday morning.

Dr. E. E. Holt, State Superintendent of Public Instruction, has given greetings to the delegates at each of the state meetings held in Mershon Auditorium.

The first state chorus, composed of 70 members, sang at the 1958 state meeting. A state chorus has been a part of all subsequent meetings. This group has steadily grown in size, with 200 members (representing 200 chapters) singing at the 1965 state meeting. The girls are sent the music to be memorized about a month prior to the meeting. After a two hour rehearsal the girls are ready to sing beautifully for the audience.

Directors of the state chorus have included Mrs. J. S. West, 1958-59; Mrs. Eugene Good, 1960; Mrs. Helen Swank, 1961; and Mr. Raymond Lilly, 1962-65.

The state meetings have been held to promote the Program of Work, transact the business of the organization, and provide inspiration and fellowship among chapters. Each year special program features have been presented to carry out the state theme for the year. The awarding of state degrees and the Award of Merit has been a highlight every year, with the installation of new officers climaxing each meeting.

A list of special program features from some of the state meetings follows:

1947 — Speakers from England, Switzerland, India

1948 — Symposium of college seniors speaking on careers in home economics

1949 — Panel discussion on "Happier Homes for Better Living"

1952 — Civil Defense speaker

1953 — Pageant: 150 Years Ago and Now (Ohio's sesquicentenial year)

1955 — Program on Ohio's Folk Songs and Ballads

1956 — Ten Year Celebration

1959 — Pageant—Tribute to Ohio's History

1960 — Pageant—15 Years of FHA

1961 — Talk by Mr. William Martin, author of children's books

1962 — Pageant of Flags of our 50 states

1963 — Talk by Mr. Gordon Ward, TV Newscaster, on "Roadmap for Living"

1964 — Talk by Dr. Otis Maxfield, Columbus minister, on "Marriage Calls for Preparation"

1965 — Talk by State Senator Tennyson Guyer, on "The Educated Heart"

DATES AND THEMES OF THE OAFHA STATE MEETINGS

DATES	THEMES
1. April 13-14, 1946	No theme indicated
2. April 25-26, 1947	"Homes and Home Economics in Other Lands"
3. May 7-8, 1948	"Careers in Home Economics"
4. April 22-23, 1949	"Happier Homes for Better Living"
5. April 28-29, 1950	"A Better World through Happier Homes"
6. April 13-14, 1951	No theme
7. April 25-26, 1952	"The Foundations for Peace Begin in The Home"
8. May 1-2, 1953	"Homemaking Training Today Brings Happier Homes Tomorrow"
9. April 23-24, 1954	No theme
10. April 29-30, 1955	"Future, the Destiny of the Homemakers"
11. April 27-28, 1956	"Ten Years of Progress Equals FHA"
12. April 26-27, 1957	"What Kind of Light Does FHA Cast on Your Community?"
13. April 25-26, 1958	"Today's Teenagers—Tomorrow's Homemakers"
14. April 24-25, 1959	"Citizenship—The Teenager's Challenge"
15. April 22-23, 1960	"Blueprint for Better Living"
16. April 21-22, 1961	"Homes—Our Nation's Lifeline"
17. April 6-7, 1962	"FHA—Learn It, Love It, Launch It"
18. March 15-16, 1963	"Values—A Measure of What We Treasure"
19. April 10-11, 1964	"Stepping Stones to Happy Homes"
20. April 2-3, 1965	"Education Builds A Nation"

NATIONAL MEETINGS

Throughout the years National FHA Meetings have been an important source of guidance and inspiration for state associations. Meeting FHAers from all over the United States is an enriching experience. Exchanging ideas and gaining Program of Work information are very valuable in strengthening local chapters and state associations.

The National FHA Regions are Central, Southern, North Atlantic, and Pacific, with each of these being subdivided into three areas. Ohio is Central C Region. Before the first national meeting was held in Kansas City, Missouri in 1948, regional meetings were held.

The Central C National Regional Meeting was held on the Ohio Wesleyan campus at Delaware on April 26 and 27, 1946, with four Ohio delegates in attendance. Four student delegates and three adults attended the National Central C Regional Meeting held in Murray, Kentucky on April 8 and 9, 1947.

Some of the national meetings have been large conventions with two or three thousand delegates in attendance. Others have been regional meetings or national meetings with a more limited number of delegates.

The Central Regional Meeting was held in Columbus, Ohio, July 12-14, 1949. The National Meeting was held in Columbus July 2-7, 1953.

Three national officers from Ohio have been elected during the first twenty years of the organization's history.

In accordance with the policy of each state having an assignment for the national meeting, each year the Ohio delegates have had special duties and responsibilities. A few examples of these follow. In 1960 the Ohio girls presented a relaxer, in 1961 they served as hostesses at the banquet, in 1962 they presented a "Thought for the Day", in 1963 they served as ushers for a general session, and in 1964 they again presented relaxers.

The All-States Chorus is a very popular feature at the national meeting. Each state provides two or three members for this chorus. In 1950, 1953, 1956 and then each year from 1959 through 1964 an All-States Chorus has been a part of our national meetings. Through the years Ohio girls have enjoyed being a part of the All-States Chorus.

Each year Ohio, along with every member state, has been represented by a national committeewoman to work closely with one of the national officers on a committee or special project. This work is begun at the national meeting.

During the various years Ohio delegates have traveled by car, bus, train, or plane to the national meetings.

NATIONAL OFFICERS FROM OHIO

Lois West Williams, Waverly Chapter—Vice President, Central Region—1948-49

Joyce Falor Tavtigian, Wauseon Chapter—Parliamentarian—1953-54

Dawn Reinhard Heikkila, Holmes-Liberty, Bucyrus Chapter—Historian—1962-63

Lois

Joyce

Dawn

Many of us love a garden, yet most gardens are seasonal. Here is a garden each of us can plant and reap our harvest at all times, in all seasons.

Plant five words of P's—presence, promptness, preparation, preseverance, and purity.

Plant three rows of squash—squash gossip, squash criticism, and squash indifference.

Then sow five rows of lettuce—
let us be faithful to duty,
let us be unselfish and loyal,
let us be true to our obligations,
let us obey rules and regulations,
let us love one another.

No garden is complete without turnips—
turn up for all meetings,
turn up with a smile,
turn up with new ideas,
turn up with a determination to make everything count for something good and worthwhile.

—Irene Worley
Bedford, Indiana

A FRIEND

What is a friend? I'll tell you. It is a person with whom you dare to be yourself. Your soul can go naked with him. He seems to ask you to put on nothing, only to be what you really are. When you are with him you do not have to be on your guard. You can say what you think so long as it is genuinely you. He understands those contradictions in your nature that cause others to misjudge you. With him you breathe freely—you can avow your little vanities and envies and absurdities and in opening them up to him, they are dissolved in the white ocean of his loyalty. He understands—you can weep with him, laugh with him, pray with him—through and underneath it all he sees, knows and loves you.

A Friend, I repeat, is one with whom YOU DARE TO BE YOURSELF.

—Nebraska
Newsletter

Themes, Locations, Dates of National Meetings

Toward New Horizons
Kansas City, Mo. July 6-9, 1948

FOUR REGIONAL MEETINGS

For We Are The Builders of Homes
Memphis, Tennessee, June 14, 15, 16, 1949
Santa Barbara, Cal. June 21, 22, 23, 1949
Columbus, Ohio, July 12, 13, 14, 1949
Washington, D.C. July 19, 20, 21, 1949

Today's Youth, Tomorrow's Homemaker
Kansas City, Mo. June 28-July 1, 1950

LEADERSHIP TRAINING CONFERENCE

Leadership Training Today Brings Happier Homes Tomorrow
Estes Park, Colo. June 18-22, 1951
Michigan State College, E. Lansing July 2-6, 1951

DELEGATES' CONFERENCE

(No theme indicated)
Green Lake, Wisconsin, July 14-17, 1952

Homes for America's Future
Columbus, Ohio, July 3-6, 1953

REGIONAL MEETINGS

Are You A Leader For Better Homes?
Durham, N.H., June 28-July 1, 1954
Logan, Utah, July 20-23, 1964
Daytona Beach, Florida, June 22-25, 1954
East Lansing, June 22-25, 1954

Ten and Then
Ames, Iowa, July 18-22, 1955

YOU in Home, Chapter, School, Community
Chicago, Illinois (Convention), July 2-6, 1956

Today's Teenagers — Tomorrow's Homemakers
Lafayette, Indiana, July 1-5, 1957

Teens With A Purpose
Kansas City, Mo. July 7-11, 1958

Blueprint for Action
Chicago, Illinois (Convention), July 13-17, 1959

HOME—The Hub of Good Citizenship
Washington, D.C., July 11-15, 1960

Youth—Measure Your Values
St. Louis, Missouri, July 3-6, 1961

Guideposts for Progress
Salt Lake City, Utah, July 9-12, 1962

Your Home—A Key to the Future
Kansas City, Missouri, July 7-12, 1963

Education—An Endless Challenge
Chicago, Illinois (Convention), July 12-17, 1964

Building Blocks For The Future
Philadelphia, Pennsylvania, July 12-16, 1965

The total attendance of delegates and the Ohio State quota at the various national meetings were:

Year	Total Delegates	Ohio Quotas	Transportation
1948	1325	179	
1949	Regional Meetings		
1950	2218	80	
1951	Leadership Training Conf.		
1952	Delegates' Meeting (Voting Delegates only)		
1953	2350	76	
1954	Regional Meetings		
1955	327	8	
1956	2319	67	
1957	320	7	
1958	537	15	
1959	2639	79	Train
1960	1043	25	Train
1961	1135	37	Train
1962	962	25	Plane
1963	1529	32	Plane
1964	2394	78	Bus

AWARD OF MERIT

The Award of Merit is a special recognition given annually at the state meeting to chapters that have carried out a well-rounded program based upon national and state objectives and projects. A well-rounded program includes educational, service, and social activities; activities in which class, home, and FHA experiences work together; and cooperative activities with other groups.

The members of the State Award of Merit committee give valuable service in evaluating chapter applications for the Award of Merit, in revising Award of Merit materials, and in taking care of the other details of the committee.

The Award of Merit was developed very early to guide chapters in developing a well-rounded program. The first state newsletter, dated September, 1938, includes a page entitled "List of Requirements for the Award of Merit".

Through the years the requirements have been revised and improved so that they might better serve as a means of chapter program evaluation. A revision was prepared in 1957 by the Advisory Board and Award of Merit Committee. The newly prepared requirements were used for a two-year period, following which they were reviewed in the subregional meetings at the 1959 state meeting. On the basis of recommendations made, the Award of Merit Committee devised an Award of Merit Handbook which was presented in tentative form to all chapters in the fall of 1961. In the summer of 1962 the committee made further changes, after which the 1962-65 Award of Merit Handbook was distributed to all chapters in the fall of 1962.

A NOTE ABOUT NATIONAL FHA PUBLICATIONS

The Ohio Association encourages local chapters to read and contribute to TEEN TIMES, the national FHA magazine. Every chapter that has paid dues receives this magazine automatically. The other publications which may be ordered from the national office are listed each year in the Program of Work Calendar of the Ohio Association. Order blanks for these are made available to chapters each fall.

The national headquarters address is:

Future Homemakers of America
Office of Education
U. S. Department of Health, Education, and Welfare
Washington, D. C. 20202

NUMBER OF CHAPTERS RECEIVING THE AWARD OF MERIT CERTIFICATES

Year	Number
1944-45	26
1945-46	52
1946-47	52
1947-48	54
1948-49	52
1949-50	72
1950-51	71
1951-52	88
1952-53	97
1953-54	98
1954-55	109
1955-56	74
1956-57	97
1957-58	112
1958-59	133
1959-60	156
1960-61	162
1961-62	168
1962-63	196
1963-64	215
1964-65	237

PUBLIC RELATIONS

Public relations activities are recognized as essential to the Future Homemakers organization. It is important to inform as many people as possible about our purposes and program. Local chapters are encouraged to write articles for magazines and newspapers. Many chapters have arrangements with the local county and town newspapers for releasing FHA News regularly or as feature items for interpreting the home economics program. It is hoped that chapters will write about state and national FHA events (such as state and national meetings and National FHA Week) in addition to telling about local activities.

Appearances on radio and television programs, participation in state and county fairs, and person to person contacts are other excellent opportunities for promoting good public relations.

Through the years FHA chapters have held meetings for school, home, and community members to acquaint them with the broad scope of the home economics program and to show how FHA fits into the program. The meetings have included Mother-Daughter Banquets, Luncheons, or Dinners; Parties for Parents and Friends; Daddy-Date Nights; Home Economics Open House; Faculty Dinners; School Assemblies; PTA Programs; Fashion Shows; and other special appearances for civic groups and organizations.

DEGREES OF ACHIEVEMENT PROGRAM

The National FHA Organization established the plan for Future Homemakers to earn four degrees—the Junior, Chapter, State, and American Homemaker degrees. Work on these degrees is optional with each chapter.

The degrees give special recognition to individuals who have successfully completed activities leading to the attainment of the following goals: gaining a better understanding of the FHA organization: growing as an INDIVIDUAL, a member of a HOME, a member of a CHAPTER, and a member of a SCHOOL and COMMUNITY: and showing how the work done has contributed to the purposes of the National FHA organization.

Each degree must show evidence of the candidate's growth beyond the previous degree. The primary purpose of the Junior Degree program is to help the candidate to learn about the FHA organization and to become an intelligent member. The primary purpose of the Chapter Degree program is for the candidate to continue growing as an FHA member and to help others to have a better understanding of FHA. The primary purpose of the State Homemaker Degree program is to provide opportunities for the candidate to develop greater maturity in personal growth, in creative leadership, in management, and in decision making.

The Junior and Chapter Degrees may be conferred by local chapters. The State Degree is conferred by the State Association at state meetings. A state degree committee serves to evaluate the applicant's work and to determine whether or not she has earned the degree. The State Degree Committee also takes care of the other business and details of the degree program, including revising the manuals.

The state degree program in Ohio had its first roots in the years that preceeded the official national founding in 1945. The first state homemaker degrees were presented in Ohio to four girls in the spring of 1947. The number of girls earning the degree has grown through the years, with 328 degrees being presented at the 1965 meeting. The total number of Ohio girls who have received the degree during the first twenty years of the association's history is 3202. Many more thousands of Ohio girls have received the junior and chapter degrees.

Three Ohio girls received the American Homemaker degree before it was discontinued by the national organization in 1951. They are:

Joy Linn Taylor (Mrs. Kenneth) Holmes-Liberty Chapter	1948
Lois West Williams (Mrs. Gordon) Waverly Chapter	1949
Jeannette Henderson Coolville Chapter	1951

NUMBER OF STATE HOMEMAKER DEGREES CONFERRED

Year	Number
1946-47	4
1947 (in fall)	6
1947-48	66
1948-49	48
1949-50	74
1950-51	133
1951-52	162
1952-53	206
1953-54	170
1954-55	145
1955-56	137
1956-57	189
1957-58	195
1958-59	193
1959-60	199
1960-61	213
1961-62	228
1962-63	232
1963-64	274
1964-65	328

Appreciation is expressed to Miss Mildred Reel, National Adviser, for her help in supplying certain information for this history.

Local Chapters Should Keep Their History

This 20-year history focuses attention on the great importance of keeping accurate records and well-organized files. Local chapters are urged to keep an accurate history of their own activities. A well-kept scrapbook, which includes photographs and newsclippings, is a great asset to every chapter. It is helpful, if funds are available and if there is an amateur photographer in the group (member, adviser, or chapter mother), to designate someone to be responsible for taking pictures of local chapter activities.

In addition, each chapter should have a well-organized FHA file which includes records of local history as well as:

- Directories of Ohio Chapters
- State Program of Work Calendars
- Mailings from the State Office
- Printed programs from subregional meetings, camps, and state and national meetings
- State Newsletters
- TEEN TIMES Magazines
- Award of Merit Materials
- Degree Materials
- Official Guide, Chapter Handbook, and State Constitution

TWENTY YEARS OF PROGRESS — A SUMMARY CHART

1945–1965

Date	*No. of Chapters*	*No. of Members*	*State President*	*State Mother*	*No. of A of M Chapters*	*No. of State Homemakers*	*Scholarship Recipient*	*State Adviser*
1944-45	189	6,867			26	—	—	Mrs. Hazel Price
1945-46	278	10,348	Carolyn Ray Myers	Mrs. L. C. Ray	52	—	—	"
1946-47	279	10,854	Ruth Henline	Mrs. Henline	52	4	—	"
1947-48	283	11,173	Joan Hanby	Mrs. Pearson Linn	54	66	—	"
1948-49	278	10,778	Bonnie Miller	"	52	48	—	Miss Enid Lunn
1949-50	283	11,231	Nancy Monastra	"	72	74	Mary Belle Kinney	"
1950-51	264	11,000	Virginia Heimberger	Mrs. Rose Nagy	71	133	Marjorie Smith	"
1951-52	293	12,350	Rita Ford	Mrs. Howard Irwin	88	162	Nancy Hartman	"
1952-53	286	12,377	Sally Draa	"	97	206	Charlotte Finley	"
1953-54	312	13,455	Zoelouise Bauman Ring	Mrs. Don Searfoss	98	170	Jo Ann Benner	"
1954-55	338	14,667	Judy Williston	Mrs. Ralph Lecklider	109	145	Janet Mercer Judith Williston	"
1955-56	326	14,251	Rita Hasselbrock	Mrs. Ralph Lecklider	74	137	Judith Pfeifer	"
1956-57	351	15,740	Jerry Siler Bodenmiller	Mrs. Walter J. Hansen	97	189	Doris Patterson	"
1957-58	351	15,795	Gloria Sollie Turner	"	112	195	Mary Margaret Simmons	"
1958-59	364	15,763	Mary Ellen Daugherty	Mrs. Theodore Leininger	133	193	Joy Miller	Miss Margaret McEniry
1959-60	372	15,848	Nancy Powers Cooley	"	162	199	Suzanne Grieves	"
1960-61	366	16,038	D'aun Van Meter	Mrs. Gladys Bailey		213	Grace Dean	"
1961-62	363	16,339	Karen Stanley	"	168	228	Karen Stanley	"
1962-63	374	17,231	Nevora Fridenmaker	Mrs. Clayton Compher	196	232	Judy Akey	"
1963-64	390	18,224	Kathleen Jelley	"	215	274	Kathleen Jelley Cathy Sherck	"
1964-65	403	18,336	Glee Alison	Mrs. Vivian Weidenhamer	236	328	G. Alison, Karen Keene, Mariene Steyer	"

NATIONAL OFFICERS FROM OHIO — Lois West Williams, Waverly Chapter, Vice President, Central Region, 1948-49; Joyce Falor Tavtigian, Wauseon Chapter, Parliamentarian, 1953-54; Dawn Reinhard Heikkila, Holmes-Liberty, Bucyrus Chapter, Historian, 1962-63.

NATIONAL HONORARY MEMBERS FROM OHIO — Dr. Hazel Price and Dr. Ivol Spafford.

(Married names are used when known.)

CREED

We are the Future Homemakers of America
We face the future with warm courage
And high hope.

For we have the clear consciousness of seeking
Old and precious values.
For we are the builders of homes,
Homes for America's future.
Homes where living will be the expression of everything
That is good and fair.
Homes where truth and love and security and faith
Will be realities, not dreams.

We are the Future Homemakers of America
We face the future with warm courage
And high hope.

CENTER FOR VOCATIONAL
AND TECHNICAL EDUCATION
980 KINNEAR ROAD
COLUMBUS, OHIO, 43212

VT 001 707
Area Vocational Technical Schools and Programs, A Summary of Development by States.

Office of Education, Washington, D.C. Technical Education Branch
MF AVAILABLE IN VT-ERIC SET.
Pub Date - Aug64 37p.

*AREA VOCATIONAL SCHOOLS; *FEDERAL AID; *STATE LEGISLATION; *FACILITY EXPANSION; *PROGRAM DEVELOPMENT

Over 400 area vocational schools were in operation and 132 were in construction or planning stages in 1964. There were Federal Funds and pending or enabling state legislation in 31 states to increase support for facility expansion. This report provides a state-by-state summary of current progress on area vocational school development. (JM)

VT 001 707

ED031587

FOR DISCUSSION PURPOSES ONLY

AREA VOCATIONAL TECHNICAL SCHOOLS AND PROGRAMS

A SUMMARY OF DEVELOPMENTS BY STATES

NEW CONSTRUCTION
EXPANDED SERVICES
LEGISLATIVE ACTION
APPROPRIATIONS
LOCAL ACTION
PLANS AND PROPOSALS
SURVEYS AND STUDIES

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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Technical Education Branch
Division of Vocational and Technical Education
Bureau of Educational Assistance Programs
August 1964

VT 000 [illegible]

SUMMARY OF STATE DEVELOPMENTS

Providing occupational training for youth and adults on an area basis is now a well-established concept of the educational system in the various States. Over 400 area vocational and technical schools are now in operation throughout the nation, and 132 such schools are under construction or in the planning stages.

Lack of funds in the States has hindered construction of new schools. Now, for the first time, Federal matching funds are available to the States for the construction of area vocational and technical education school facilities under the provisions of the Vocational Education Act of 1963 (P.L. 88-210).

Some indications of the progress in fiscal 1964 in the development of area vocational and technical schools are:

- .. 52 new area schools began operation
- .. 31 area schools are under construction
- .. 101 new area schools are in the planning stages
- .. 63 established area schools have added new facilities
- .. 30 established area schools are planning new facilities
- .. 83 established area schools are offering or planning to offer new programs, or to expand present programs
- .. 31 States reported new pending or enabling legislation to increase the number of area schools within the State, to expand existing facilities, or to establish systems of area vocational and technical schools
- .. 10 States reported studies in progress to explore needs for new area schools, additional facilities, or needs for new or expanded programs

The efforts being made by the various States toward promoting area vocational and technical education schools and programs are summarized in the following pages.

ALABAMA

The 1963 State Legislature passed legislation which provided for construction of 15 additional State vocational and technical schools, 4 technical junior colleges, and 10 State junior colleges. Construction costs were limited to not more than $350,000 annually for operation and maintenance.

Post secondary preparatory technical education programs were offered at State vocational and technical schools located in Decatur, Dothan, Huntsville, Mobile, Montgomery, and Tuscaloosa. Alabama A&M College, Normal, offered these programs for the first time in fiscal 1963.

Supplementary programs for adults were operated by local boards of education and State vocational and technical schools to serve the needs for adult training in the Mobile, Birmingham, Gadsden, and Huntsville areas.

ALASKA

The Nome Area Vocational School is very near completion and preparation is being made to use it for Manpower and ARA projects in the fall of 1964. The Bureau of Indian Affairs has agreed to provide dormitory facilities by late 1966.

The Nome Area Vocational School will serve people north of the Yukon, and legislation was passed for a future area vocational school in Kodiak.

Alaska feels that there should be an area vocational school where the center of population is, and it has been the affirmative thinking of school educators of the public schools as well as the community college in the Anchorage area that there is need for an area vocational school in or about Anchorage. The vocational programs presently operating in the Anchorage public schools are under the supervision of the Anchorage Community College; therefore, this community college is serving area vocational needs.

ARIZONA

The State Legislature recently authorized a Statewide system of junior colleges, and made provision for students to transfer from one district to another to avail themselves of training commensurate with their abilities and interests.

The Governor's Committee on Vocational and Technical Education, made some specific recommendations which were incorporated into a bill that was passed by the last session of the legislature. This new Act authorizes two or more high school districts to cooperate with the junior college district in offering vocational and technical education. It also increases the State appropriations for vocational and technical education approximately $300,000 for fiscal year 1965.

Eighty of the 104 high schools in Arizona offered vocational programs in fiscal 1964. Post-secondary preparatory technical education programs were offered at Phoenix College, Phoenix; Arizona State College at Flagstaff; and Arizona Western College in Yuma. Curriculums were approved for technical education in two new junior colleges; i.e., Graham County Junior College at Thatcher and Cochise College at Douglas. Phoenix College has increased its curriculum offerings from 5 to 12 in technical education for fiscal 1965.

Two more junior colleges are planning to offer technical education.

ARKANSAS

Appropriations for the regular program of vocational education were increased by the 1963 State Legislature by $104,000 annually for the 1964-65 biennium. Funds were also appropriated for construction of a minimum of two vocational-technical schools. A new vocational-technical school opened in September 1963 at Morrilton, and a similar school is now under construction at A.M.&N. College, Pine Bluff. For a number of years the Arkansas Vocational-Technical School in Pine Bluff has offered supplementary courses for adults on an area basis.

CALIFORNIA

Among new statues passed by the 1962-63 Legislature were:

> Creation of the California Commission on Manpower, Automation, and Technology, which, among other things, will study and analyze the extent, character, and capacity of vocational education.
>
> Authorization for high schools and junior colleges to share use of vocational education facilities, programs, and personnel.
>
> Authorization for the creation of specialized high school facilities for vocational education, usually on a county or area basis.

It appears there will be increasing pressure at the 1965 session for a stepped-up vocational program for students not destined for college.

In 1963-64, 53 of the junior colleges in the State offered programs and/or courses in technical education. More than 180 curriculums are offered in 20 fields of specialization, ranging from a Statewide uniform electronics program to highly individual and vital curriculums in aircraft and missile construction and design.

COLORADO

The legislation enacted during fiscal 1962-63 affecting vocational programs for fiscal 1964 related only to appropriations, which remained unchanged.

The area designated center concept has been well defined. Five junior colleges, two 4-year colleges, and three secondary school districts have been designated and are serving adequately to meet the present needs within the State. One district, the Boulder RE-2 system, has developed definite plans for a vocational high school which is designated to serve the needs of all in-school youth who might want and can profit from vocational offerings.

COLORADO (cont'd)

Colorado's five junior colleges are committed to the conduct of programs of vocational and technical education.

Investigation is being made of the possibility of developing area centers in the less populated portions of the State through the use of portable, packaged training facilities.

CONNECTICUT

The State Board of Education has approved plans for the expansion of facilities in the Regional Vocational-Technical Schools in six areas - Sanbury, Norwich, Willimantic, Waterbury, Bridgeport, and Torrington - at a cost of $4,345,071 for the 1965-67 biennium. These now await action by the 1965 Legislature. The site has been purchased for the lower Naugatuck Valley School and construction should start soon.

There has been an expansion of post high school trade programs, and Torrington and Manchester Schools will open electronics courses in September 1964.

In September, 1964, the new Waterbury State Technical Institute located in Waterbury, will be opened with an expected freshman enrollment of 200 students, making a total of four technical institutes in operation within the State. The State Board of Education has approved plans for the expansion of facilities in three areas - Hartford, Norwich, and Waterbury - at a cost of $3,487,576 for the 1965-67 biennium. These now await action by the 1965 Legislature. The expansion of facilities will provide additional classrooms and laboratories for new programs to be developed under the Vocational Education Act of 1963.

In the Evening Technical Institute Division, beginning in September 1964, special unit courses in Distributive Education and Office and Business Education will be offered for the first time. It is planned to develop this program by September 1965 into 2-year day and 5-year evening programs offering an Associate Degree. Also, starting in September 1964, there will be a 2-year non-degree program in Industrial Drafting and Industrial Electronics to train industrial type technicians (not engineering technicians). Plans are also being formulated to offer post secondary apprenticeship courses to advance apprentices beginning in September 1964.

DELAWARE

The appropriations made in fiscal 1964 provided additional funds for the expansion of area vocational-technical facilities in Sussex County in the amount of $791,700 for the Sussex County Vocational-Technical Center serving 14 schools; an appropriation of $2,576,450 for the construction of a new area vocational-technical facility in Kent County serving 6 schools ($100,000 of private funds were also made available for the Kent County facility); with an additional appropriation of $3,225,000 for new vocational-technical facilities in New Castle County.

For the first time, legislative authorization involved budget items in all schools having vocational-technical programs that would provide more adequately for the actual costs of vocational-technical programs of high standards. In addition to this enactment the State Board was given the authority through this legislation to analyze programs and certify each year specific areas of vocational-technical education to which the legislation should apply. This should guarantee a continued up-dating and expansion of programs.

Because of the additional administrative needs due to expansion, the State Board for Vocational-Technical Education recommended and received legislative approval for new positions - Occupational Information and Career Service and State and Federal Fiscal Relations. Direct relationship was noted between expanded activities of the Manpower Program and its need for facilities which may be made available under the regular State legislation.

A study of needs in New Castle County, financed by the Delaware School Auxiliary recommended that there be 3 areas where additional facilities should be provided including a post high school technical program. The facility and the area to be served in New Castle County are being planned by the State Board for Vocational-Technical Education.

DISTRICT OF COLUMBIA

All vocational and technical schools in the District of Columbia are area schools in that they serve the entire jurisdiction of the District. The total enrollment in the vocational high schools continues to increase and now exceeds the total capacity of the schools. Recent staff conferences have resulted in the opinion that the D.C. Public Schools can best serve the community and the world of work, under the provisions of this new Act, in part, through the construction and development of a single (consolidated) vocational-technical school center or complex. This replacement for the present five vocational high schools would have a capacity of about 3,000.

FLORIDA

The Florida Legislature granted an increase in Minimum Foundation Program Units sufficient to care for anticipated expansion in high school, junior college, and adult vocational programs. Unit requests for the Distributive, Cooperative, and Business Education Section were granted for 1964, but were frozen at that level for the second year of the biennium.

Voters of the State approved a bond issue in November 1963 to provide construction funds for several types of educational institutions. Most of the funds are intended for the construction of university and junior college facilities, but a portion will also be used for area vocational and technical centers. Plans are currently in progress for a new area vocational and technical school to be located in Leon County. The site has been purchased and construction will be financed in part from the bond issue.

The Technical Education Section was established as a separate section as of July 1, 1963.

Fourteen junior colleges, 10 high schools, and 5 post secondary institutions, including adult vocational education centers and technical institutes, in Florida offer vocational-technical programs. The State Legislature authorized the establishment of vocational centers in any county; however, no funds were appropriated for construction of these facilities.

New technical education centers were completed in 1963 in Orange and Pinellas Counties to provide training growing out of the industrial needs of those areas.

Currently in progress is a comprehensive study of vocational education in Florida. The study will attempt to achieve the following purposes.

1. To review the current Statewide program of vocational, technical, and adult education in light of present and potential needs.

2. To explore the role of area vocational schools (comprehensive high schools, vocational-technical high schools, vocational schools and, under certain circumstances, junior colleges and universities in meeting current and potential training needs and, if found significant, to develop criteria for establishing construction priorities.

3. To review current operational emphases and the potential for extending service.

4. To review current training articulation and recommend appropriate structural modification.

The findings, conclusions, and recommendations of the study are to be available for use by members of the 1965 Legislature in drafting appropriate legislation to meet the educational needs in the areas of vocational, technical, and adult education.

GEORGIA

The building program in Georgia, involving State and local funds, will cost approximately $25 million and will result in 28 area vocational and technical schools throughout the State.

Fifteen new area vocational and technical schools located in Albany (2), Augusta (2), Columbus (2), Rome (1), Marietta (1), Thomasville (2), DeKalb County (1), Moultrie (1), Swainsboro (1), Valdosta (1), and Thomaston (1) are in operation. Construction has been started on new schools at Griffin (2), Waycross (2), and Athens (1). Plans are in the final stages and construction should begin soon on schools at Macon (2), Atlanta (1), and Savannah (2). Three additional schools were recently approved by the State Board of Education. These will be located in LaGrange, Gainesville, and Walker County.

In addition to the system of area vocational and technical schools, Georgia owns and operates two State vocational and technical schools: The North Georgia Technical and Vocational School at Clarkesville, and the South Georgia Technical and Vocational School at Americus. These schools are equipped with modern, new dormitory facilities for boarding students. These State schools, as well as the area schools, offer training in industrial, technical, business, and health occupations.

HAWAII

The 1963 State Legislature authorized funds for the construction of a new welding shop, electricity shop, and administration, library and classroom building for the Honolulu Technical School. Plans are moving ahead for the construction of a new classroom building at the Hawaii Technical School in Hilo, and for additional buildings for the Maui Technical School.

Hawaii's system of area technical schools has been developed over almost 40 years to provide pre-employment and upgrading programs in trade, technical, business, and service occupations. There are presently 5 technical schools in operation and additional State funds are needed to establish 2 additional schools on the island of Oahu and to increase the offerings in the existing programs.

Approximately only 8 per cent of the high school graduates are enrolled annually in trade and technical training programs and a substantial number of students are denied entrance because of insufficient programs and inadequate facilities.

IDAHO

Vocational-technical training facilities are inadequate in all areas of the State. Idaho State University School of Trade and Technical Education has a maximum capacity of 500 students. Current enrollment exceeds this and many students are turned away each year. Idaho State University has included a request for a new building in the budget for the next biennium.

A new building to house electronics and drafting technology has been completed at Boise Junior College. This new building merely replaces rented facilities and the completion of the building will not increase the number of students that can be accommodated.

North Idaho Junior College has just recently completed a new vocational-technical facility; however, after the first year of operation (1962-63) this building was filled to capacity and the school has a waiting list of students.

The Magic Valley area has requested consideration of an area school which would probably be located in or near the city of Twin Falls. A survey of community needs is currently under way. Tentative plans for an area school located in the North Central region of the State are being made. The school will probably be located near Lewiston and could be associated

with the Lewis and Clark Normal School. Generally, new facilities would need to be constructed; however, a portion of the existing buildings at the Lewis and Clark Normal School could be remodeled for a limited program.

Two junior colleges and Idaho State University conducted post secondary preparatory programs in technical education in fiscal 1963. Three secondary schools and one State college offered supplementary technical education training programs for adults in fiscal 1963.

ILLINOIS

H.B. 1326 (73rd General Assembly, 1963) appropriated $643,781 to be used as matching funds for Title VIII programs. This will allow 3 to 1 reimbursement for technical education programs. (25% local, 25% State, 50% Federal) In effect, Illinois schools can double their technical education programs at no greater expense to the local school.

Enrollments in technical education programs increased 20% in 1963. Post secondary preparatory programs were offered in 18 school centers, and supplementary courses were offered in 8 school centers.

Technical education enrollments, September 1963: Preparatory classes - 60% in 10 junior colleges, 16% in 2 State technical institutes, and 24% in high schools supporting post high school technical education programs; supplemental courses - 15% in 3 junior colleges and 85% in high school adult education programs.

INDIANA

The 1963 State Legislature increased the general appropriation for vocational and technical education by almost 100%.

The Commission on General Education is presently considering a regulation which in a sweeping revision would increase the requirements for vocational education courses in almost all first-class and special first-class high schools in Indiana. The regulation will provide that in order to qualify for a first-class commission, all secondary schools shall provide facilities for and offer at least one approved vocational education major, approved under the State Plan, in at least three vocational areas or combinations thereof. The regulation will add requirements for special first-class high schools, and first-class high schools with enrollments of over 1,200.

INDIANA (Cont'd)

Plans have been developed for an area vocational and technical school to serve the needs of the southeastern section of the State. Area schools are presently in operation at Bloomington, Evansville, Marion, Terre Haute, Vincennes University, South Bend, Bedford, Fort Wayne, and Indianapolis. New data processing programs have been established at Purdue University Extension Centers at Hammond, Indianapolis, and Fort Wayne, and at Vincennes University. Electronics programs have also been established at the Purdue Center in Indianapolis and also Fort Wayne.

IOWA

Technical education programs and schools are being added as fast as possible. Several pilot schools started in the fall of 1963. These schools offered trade and industrial courses as well as technical courses.

Iowa has 16 public community or junior colleges. Since the passage of NDEA, 5 of these colleges have been declared area schools and are offering practical nurse and preparatory technical education programs. In the fall of 1963, one college started a program in auto mechanics; and another at Iowa Falls (Ellsworth Junior College) started a 2-year course in Mid-Management (distributive education).

Two area schools for vocational and technical education are in the process of development. One of these is a 4-county area in the northwest corner of the State, and the second is a 10-county area in the south-central part of the State. It is planned that these two developments will be well underway within a 2-year period.

Plans are underway to expand the above programs under the new Vocational Education Act of 1963:

1. Plan to approve several other community colleges as area schools. One of these plans to start work in five occupational areas.

2. Additional programs are underway in the two pilot area schools.

3. Additional programs are passed the planning stage in the other area schools.

4. New programs are developing in existing comprehensive high schools, that will add greatly to the training being offered.

5. Lay people, educators and legislators are showing tremendous interest and enthusiasm to serve all the people in all communities with realistic vocational training.

KANSAS

Kansas permissive legislation for the establishment of area vocational and technical schools was passed by the Kansas Legislature in 1963. Extensive local and State planning during the months which followed resulted in the State Board approving 8 applications to establish vocational and technical schools in 1964 and 1965. The establishment of these 8 schools will represent the first phase of the development of a Statewide system of 15 to 20 schools so located as to make the training readily available to all Kansas youth and adults.

Local bond issues have been voted in 3 communities and others are being planned which will provide the funds to construct new, modern buildings to house these schools. The 1964 Legislature appropriated $700,000.00 as a State share in financing the establishment and operation of the approved schools during fiscal year 1965. The appropriation bill provided that no State funds be used in the construction of area vocational schools and that State funds may be used to pay 20 percent of the cost of equipment and 25 percent of operational and instructional costs involved. It is planned that local and Federal funds will be used to pay the remaining costs of operating the program.

Curriculums are being planned to train workers of less than professional level in farm and farm-related occupations, industrial and health occupations, home and community service occupations, and business occupations included in the distributive and office fields.

A goal has been established to have the Statewide system completely organized and operational by 1975 as an integral part of a coordinated Statewide effort to promote State economy.

KENTUCKY

The 1964 legislature passed legislation making it possible for the State Board of Education to establish area vocational schools in any city or county which, in its discretion, would best meet the vocational needs of the Commonwealth. The State Board is now operating 10 area vocational schools and new legislation would make it possible to operate additional schools as needed.

During 1963, a $1 million building was completed in Covington to serve the northern Kentucky area. Additions costing $500,000 each were added at Mayo State Vocational School, Paintsville; and West Kentucky Vocational School, Paducah. In January, 1964, a new area vocational school costing $500,000 was completed at Madisonville. New buildings are under construction at Ashland, Harlan, Hazard, Somerset, and in Jefferson County. The buildings at Somerset, Harlan, and Jefferson County will be ready for occupancy at the beginning of the school term in September 1964.

In addition to the area vocational schools operated by the State, extension centers and buildings are planned at Elizabethtown, Bardstown, and Hopkinsville.

LOUISIANA

Louisiana operates an extensive system of 27 area vocational and technical schools which provide training for all sections of the State. State legislation provides that students residing anywhere in the State may receive training in any of these area schools which provide vocational training in the program they have selected. All of these schools offer training for trade and industrial occupations and most of them offer one or more technical training programs.

New area vocational schools have been completed in St. Martinville and Opelousas. A branch school is being planned and will be operated by the Sullivan Memorial Trade School, Bogalusa, to serve the Hammond area. A new branch of the Jefferson Parish Trades School has been completed in Metairie. New area vocational schools are being planned in Morgan City, Alexandria and Plaquemine. New facilities for the Shreveport Trade School are now under construction. New facilities will be provided for the Ouachita Valley Vocational-Technical School in Monroe.

MAINE

In 1963 the State Legislature appropriated $640,000 for a building and equipment and $139,722 for one year's operating expense for a new school in Androscoggin County. Two pieces of legislation were passed appropriating $366,000 for building renovation and purchase of equipment, and $520,500 for two years' operating expense for the school at Presque Isle. The Legislature also authorized $25,000 to make a survey of the need for a vocational and technical school in Bangor.

In Pennobscot County a site for a vocational and technical school is authorized by a legislative appropriation of $25,000.

The Maine Vocational Technical Institute has served as an area vocational school at the post high school level since 1946. Started at Augusta on a limited scale, it was moved to the site of Old Fort Preble, South Portland, in 1952. It now offers 8 courses and enrolls approximately 350.

Northeastern Maine Vocational Institute, Presque Isle, enrolled its first class of about 100 in September 1963.

MARYLAND

Two-year vocational and technical education programs are offered at the Catonsville Community College, Hartford Community College, Allegany Community College, and Montgomery Junior College. These institutions serve the needs of the communities in which they are located and, in this respect, are area vocational schools.

Training opportunities at the Merganthaler Vocational-Technical High School, Carver Vocational-Technical High School, Baltimore Polytechnic Institute, and Baltimore Junior College are available only to students whose parents reside in Baltimore City.

Five comprehensive high schools in Montgomery County, two in Washington County, and one in Wicomico County offer vocational and technical programs on an area basis.

MASSACHUSETTS

The 1963 State Legislature authorized certain industrial, technical, agricultural, and vocational schools to establish courses beyond the secondary level and to grant certain degrees to persons completing such courses of instruction. If pending legislation becomes law, it is supposed that financial assistance will be provided for additional teacher-training equipment.

All vocational schools in Massachusetts are, in effect, area or regional schools and are operated under local authority. If the town of residence does not offer the type of vocational and technical education desired by the student, the town of residence pays the tuition of the student at the nearest facility offering the type of training desired.

Eight new area or regional vocational-technical schools are under construction at an estimated cost of $153,500,000. Additions costing an estimated $18.5 million are under construction at the Beverly, Holyoke and Provincetown Trade Schools. A $1 million addition to the Springfield Trade School was opened in January 1964.

MICHIGAN

Interest in area programs at the local level is at an all-time high. Amendments to the Intermediate School District Act now permit the financing of area programs by the intermediate district, such programs to be operated by constituent school districts and/or community colleges. Amendments to the Community College District Act permit one or more counties or two or more K-12 school districts to form a district for the sole purpose of operating an area vocational and technical education program. Both of these Acts require approval and designation by the State Board of Education of area program service areas.

Perhaps a dozen or more areas in the State are presently involved in some stage of planning for the development of area vocational and technical education programs. The most promising of these involve cooperative planning between local school districts, community colleges, and intermediate school districts.

MICHIGAN (cont'd)

Several school districts are now cooperatively operating limited vocational education programs on an area basis. These involve sharing the services of a director of vocational education, exchanging students, or operating cooperative training programs on an area basis.

Area vocational and technical education programs are offered at the post secondary level by 15 of the 18 community colleges presently operating in the State: Alpena, Benton Harbor, University Center, Flint, Grand Rapids, Dearborn, Highland Park, Jackson, Battle Creek, Lansing, Muskegon, Petoskey, Traverse City, Port Huron, and Warren. An additional 10 community colleges are in various stages of development.

Eight institutions of higher education offer terminal 2-year programs on an area basis. The Michigan Rehabilitation Institute provides vocational education programs for handicapped persons. These nine institutions serve students throughout the State.

MINNESOTA

The 1963 legislature increased funds for vocational education to $3,800,000 for fiscal year 1963 and $4,500,000 for fiscal year 1964.

The Legislature passed a bill providing for the establishment of a State Board for Junior Colleges. All 11 public junior colleges will become State administered on July 1, 1964, under the new State Board for Junior Colleges. The law also permits the establishment of three additional junior colleges when funds become available.

The Legislature also made provision for the construction of a new State college in the southwestern part of the State. The location of this new institution will be in Marshall and will provide curriculums in the liberal arts and certain technical areas yet to be decided.

The area vocational and technical schools in Minnesota now number 15 with 4 additional schools scheduled to start operation on or before September, 1965. The new schools will be located in Canby, Jackson, Granite Falls and Brainerd. Minnesota now has area schools located in all geographic areas except the southwestern part of the State where at least one school will be started at an early date.

MINNESOTA (Cont'd)

A study is now in progress to determine further needs for additional area vocational and technical schools and for the expansion of existing schools. The study report will be made to the State Board in July, 1964. All area schools are administered by local school districts and provide vocational and technical education programs at both the high school and post high school levels.

Nearly all programs offered in the area vocational and technical schools have waiting lists of students desiring training. This has resulted in many schools operating more than one session each day. A few programs operate 20 out of 24 hours; several operate three 6-hour sessions a day and nearly all operate some programs beyond the regular day and evening hours. More schools are operating 12 months rather than the conventional 9.

The St. Paul area school, which presently has a poor physical plant, is being constructed on a new site at a cost of over $7 million.

Several smaller schools have voted bond issues for additions to overcrowded area vocational facilities. Some of these are new schools in operation less than two years and are already in need of more space.

MISSISSIPPI

With expected new appropriations from both the National Congress and State Legislature, Mississippi should be able to greatly expand its technical education program during the next two years. If these appropriations are made, Mississippi should be able to meet the needs for technical education in the near future.

Two new buildings have been completed at a cost of $25,000 at Northwest Mississippi Junior College, and it is anticipated that another building costing approximately $240,000 will be added soon to house vocational and technical programs.

Two new buildings, costing $165,000, have been completed at Copiah-Lincoln Junior College to expand the vocational and technical program; and a new building has been constructed at Hinds Junior College, costing $400,000, to accommodate vocational-technical programs.

Perkinston Junior College has plans to build two more buildings - approximate cost $280,000 - to expand their vocational-technical offerings.

MISSOURI

Junior college legislation passed by the 1961 General Assembly, together with amendments of the 1963 General Assembly, is making possible expansion of vocational and technical education at the junior college level. Four junior college districts have been formed and all have initiated new programs for the 1964-65 school year. The largest of these districts, The Junior College District of St. Louis, St. Louis County, has an assessed valuation of nearly $4 billion and is proceeding rapidly toward the building of 3 new facilities for technical education. Two additional districts are in the process of development. An additional appropriation of $140,000 in State funds will provide additional matching funds for programs in all services and will provide for expansion of practical nurse training programs and technical education programs. Additional State funds provided under the Foundation Program, approximately $28-1/2 million, will provide local schools additional funds of a general nature and, therefore, free them to expand vocational programs during the next biennium.

The increased need for vocational and technical education programs in Kansas City has stimulated the creation of 6 new vocational and technical centers in operation at the beginning of the 1964 fall term. The three new centers at Central, Van Horn and Westport High Schools are entirely new facilities, fully equipped and built at an approximate cost of $1.75 million. The other centers are at Lincoln, Manual, and Northeast High Schools.

Three secondary school districts in the State serve for vocational and technical training on an area basis by providing such services by contract to surrounding school districts. Programs in these schools are expanding rapidly and at least three additional ones are expected to start programs in the 1964-65 school year.

Since the passage of NDEA, Title VIII in 1958, technical education programs in Missouri are now in operation in 21 communities.

MONTANA

The 1963 State Legislative Assembly granted a 25 percent increase in funds for vocational and technical education. Also, changes were made in area vocational school statues that enable a more realistic tuition figure to be charged to those counties sending students to area vocational schools.

MONTANA (Cont'd)

Studies are underway to devise proposed legislation for the 1964 legislative assembly that will enable area vocational schools to be more adequately financed and to establish a base upon which the financial structure may be founded.

Preparatory technical education programs were offered in 1963-64 at Northern Montana College and at three high schools - Great Falls, Custer County and Helena. Extension courses were offered in 2 junior colleges and 8 high schools.

At present, the State Board for Vocational Education is re-examining the policies and criteria in light of the Vocational Education Act of 1963. It is hoped that this will lead to the development of more area vocational schools and the expansion of programs in those schools which are currently operating.

NEBRASKA

The 1963 State Legislature considered the establishment of several State-operated post high school technical schools. This matter was referred to an interim study committee which has held a number of meetings during the past year preparatory to their report to the State Legislature in January 1965.

The State Board of Vocational Education directed that a study be made of the needs for vocational education in the State. In addition, a community-wide study is being conducted in Omaha.

Presently, we have in Nebraska, two area vocational schools in addition to three area schools for Practical Nursing. Our Omaha Technical High School serves both Douglas and Sarpy Counties, and offers three programs in technical education.

New school facilities were completed in 1963 at the Nebraska Vocational Technical School at Milford. Currently, an additional 180 student dormitory is being rushed to completion for occupancy in September 1964. This school serves the entire State and offers preparatory technical education in 11 areas including a rather new program in electronic data processing.

Recently, the Lincoln Public Schools were approved as an area school, for only technical education, to serve Lancaster County. It is anticipated that such programs will be in operation during 1964-65.

NEVADA

The State Legislature appropriated $216,599 for the 1963-64 year, and approximately the same amount for 1964-65 for vocational education. The Assembly Ways and Means Committee requested the State Director to present a recommendation for the establishment of area vocational and technical schools at the next special or general session of the Legislature, whichever comes first.

Technical education, since its inception in 1958, has had the most rapid growth of all of the vocational education services. Eight secondary schools have developed area programs, whereby students from surrounding schools are admitted to such programs.

Centers where extension training programs are established include the University of Nevada at Reno, Las Vegas; Nye County School District, Tonopah; Mineral County School District, Hawthorn; Churchill County School District; one center each in the White Pine County School District, Ely, and the Ormsby County School District, Carson City; and a cooperative program whereby technical extension courses can be offered anywhere in the State through the auspices of the Statewide Services Division, University of Nevada, in cooperation with the State Vocational and Technical Education Division.

In Clark County, one of the fastest growing sections of the entire region, a survey has been completed to determine the feasibility of constructing an area vocational and technical center. The site is available -- 385 acres of Federal land between Henderson and Las Vegas. A study commission found that the defense oriented industries in the area felt such a center would have a "profound effect on the economy and society." A $19,000 Ford Foundation grant for a facilities laboratory helped to generate public support of a proposed bond issue.

A technical advisory committee was established to plan for a Southern Nevada Vocational-Technical Center. Two county-wide conferences were conducted to explain the purpose and need for a center. The Stanford University Schoolhouse Planning Laboratory was contracted to assist in the planning. Visits were made to numerous vocational-technical schools throughout the United States. The Clark County School District proposed a $37 million bond issue for overall school construction for the next three years which included $3 million for the initial construction of the Southern Nevada Vocational-Technical Center. The Center is planned to accommodate 5,000 students eventually. On May 5, 1964, the bond issue received overwhelming support. Construction is planned to start in the near future.

NEVADA (Cont'd)

The State Board for Vocational Education adopted a proposal to ask the Legislature to construct two area vocational and technical schools within the State.

This proposal was presented to the 1964 Special Session of the Legislature for study. The State Director met with the State Planning Board and received concurrence of the need. The State Planning Board is developing plans to ask the forthcoming session of the Legislature to finance or assist in financing the proposed facilities.

It has not been possible for the State Board to meet all of the requests for vocational and technical education programs. Lack of funds necessitated refusal of participation in preparatory and extension programs beginning in January 1964, since reallotted funds were not made available to the State during the current fiscal year.

NEW HAMPSHIRE

The 1963 Legislature provided $1,005,000 for the purchase of land and construction of a new vocational and technical school to serve the northern section of the State; $1,005,000 to replace the present facility at Portsmouth, to serve the southeastern section of the State; and $1,272,000 to replace the present facility at Manchester, to serve the south-central part of the State.

The 1961 Legislature provided $1,650,000 for a centrally located Technical Institute which is presently under construction and will be completed for occupancy not later than September 1, 1965.

Fiscal year 1964 will result in completion of the four post secondary schools and the further development of all areas of vocational education on the secondary school level in grades 11 and 12 where the school is of sufficient size to support an adequate program.

NEW JERSEY

Vocational-technical education and training is being offered in four city, one regional and 13 county-wide high schools or centers at either the secondary or post secondary levels. Eight of the latter institutions are utilizing rented facilities and are operating as area-wide pilot, technical institutes.

A notable step was achieved through the enactment of the New Jersey County College Law in 1962 but which became effective July 1, 1963. The law stipulates that "technical institute type" curricula may be offered as well as many new area-wide vocational-technical curricula, in extension.

Bergen County - with its secondary emphasis, has been voted the sum of $3,750,000 for the construction of a new wing to the existing structure and $500,000 for the purchase of new equipment. These added facilities will permit a substantial increase in enrollment and in the number of programs offered.

Burlington County – a new participant, initiated its post secondary, preparatory technical programs as well as adult courses, on an evening basis, this past January in rented facilities. At this writing, the County Board has been authorized to utilize the sum of $500,000 for the purchase of a permanent and suitable site, the development of a "master-plan" and for the initial construction phases. Additional funds have been assured for the completion of the proposed project.

Camden County - with both secondary and post secondary objectives has completed the construction of a new wing which involved the expenditure of $625,000 for building and for needed equipment. A second wing has been planned and the sum of $435,000 appropriated for alterations, new construction, and appropriate equipment. This project will be completed by September 1965.

Currently, a County Study Committee is finalizing its plans to re-survey the entire county to ascertain its latest vocational-technical needs at both levels of training and its report is due this November 1st.

Present projections indicate that as many as 3 new area-wide, vocational-technical centers may be constructed within the next 10 years to satisfy the growing needs.

Essex County - has expended approximately $1 million in altering and modernizing one of its Newark schools. In addition, the sum of $1,125,000 has been approved for the construction this summer of an addition to the Vocational and Technical High School for Girls. The establishment of a County Technical Institute or College to meet the county's post high school technical education needs is being considered with preliminary estimates running at about $6 million.

Middlesex County- has acquired a 50-acre site, which is appraised at about $200,000 on which to build its fourth county-wide vocational and technical high school. Plans are now being devised for a facility estimated to run at $2,500,000 for actual construction and about $500,000 for needed equipment.

The County has recently applied for and received permission to establish a 2-year County College. This required nearly 165 acres of land which comprised part of the Raritan Arsenal site and which was granted the County by the Department of Health, Education, and Welfare. There are 23 buildings on the acquired site which are adaptable for educational purposes. A master-plan will be developed for the permanent county-wide facilities and designed for an initial enrollment of 500 to 1500 students.

Monmouth County - has authorized the County Board to construct a $500,000 building for area-wide vocational training with programs initiated at the secondary and post secondary levels. Completion of the project is expected by September 1965.

Ocean County - is operating day and evening programs on a county-wide basis in rented facilities. Both post secondary technical education and health education programs are offered.

The County Vocational Board has 150 acres of land available for an educational center and specific plans for future vocational and technical needs are being weighed in conjunction with those of a proposed County College.

Passaic County - recently leased the Paterson City vocational-technical facilities for a period of three years. A master-plan for a new county-wide vocational-technical educational center is being developed.

NEW JERSEY (Cont'd)

Warren County- will initiate its third 2-year post high school technology this September. A fourth is planned for the following year.

The County Vocational Board is making plans for the purchase of a suitably large parcel of land on which to build a sizable permanent vocational and technical institute to replace the present one.

NEW MEXICO

Legislation passed during 1963 provides for the further development of technical and vocational institutes and junior colleges.

An act passed in 1963, relating to junior colleges, provides for the creation, financing, supervision and dissolution of junior college districts; and prescribes the power and functions of such institutions.

Another act (1963) authorizes creation of technical and vocational institutes in any county; provides for formation, financing, supervision and dissolution of technical and vocational institute districts; and prescribes the powers and functions of such districts.

Area vocational schools are in the formation stage in five local communities, but further State legislation is needed.

NEW YORK

The future direction in technical education will be determined in part by the completion of area vocational education studies and the implementation of the recommendations of 21 multi-county vocational education studies.

A new Lewis A. Wilson Technological Center was established in Suffolk County, District III, by a Board of Cooperative Educational Services. The Nassau County Board for Vocational and Extension Education leased two additional buildings for technical education programs, and instituted a program of computer technology. During 1964, 7 new programs were started in the State in electronics, instrumentation, and computer programing. Lawrence began a program in electronics. Levittown started an instrumentation program. Buffalo, Syracuse, and New York City developed programs

for computer technology. Extension and improvement curriculum projects were conducted in 11 schools involving 24 technical programs. Of these schools, 6 introduced programs of numerical control; three, metallurgy technology.

In the summer of 1963 workshop institutes for preparing teachers for business data processing and computer programing were held at the State University of New York at Albany, Columbia University, New York University, and Syracuse University.

NORTH CAROLINA

The General Assembly in 1963 increased appropriations for vocational and technical education for the 1963-65 biennium by $7,079,716. In addition, the 1962 Assembly appropriated $1,500,000 for the 1963-65 biennium for experimental programs in vocational education in the secondary schools.

The State Legislature also passed a bill in 1963 revamping the entire higher education system in the State. It places the community college system under control of the State Board of Education and provides machinery for the conversion of Industrial Education Centers into comprehensive community colleges.

New technical education programs were offered in 1963 at the Centers in Asheville, Charlotte, Asheboro, and Kinston. Twenty Industrial Education Centers are in operation in the State, 14 of which offered preparatory programs in technical education 1963.

NORTH DAKOTA

The North Dakota State School of Science at Wahpeton is the only centralized vocational and technical school in the State. Students are enrolled from all of the 53 counties each year. This institution offers a wide variety of trade and technical training in addition to liberal arts, business, and pre-professional programs. The State has not as yet felt the impact of extensive industrial development.

NORTH DAKOTA (Cont'd)

Increasing numbers of employers are visiting the campus of the State School of Science interviewing students, especially graduates of Title VIII programs. We are pleased to report that with the exception of five 1964 graduates the school has placed all students on jobs in their respective fields. The placement director reports that these five are working but not necessarily in their field of training, some have gone back to the farm and others to their parents' business establishments.

Presently, the North Dakota State School of Science offers preparatory technical education in 8 areas, including new programs in Electronic Drafting Technology and Electronic Data Processing. The board has approved the School starting a course for dental technicians.

OHIO

The Legislature continued the present level of State financial support for vocational education for 1964. The Legislature also passed an improved joint vocational school district bill that makes provisions for including sections of two or more counties in the joint vocational school district; provides for options in the organization of the Board of Education; and identifies clearly the State funds to be made available under the additional vocational unit allocated to the joint vocational school.

In 1963 two-year post high school technical education programs were established in cooperation with the local boards in Ashtabula, Hamilton, Willoughby, and Springfield, bringing to 10 the total number of schools operating such programs in Ohio. In 1964, an additional technical education center was established in cooperation with the Columbus Board of Education making a total of eleven (11) such centers.

One area vocational center was established in 1963 and an additional one was approved under the new joint vocational school district law in Ohio. Four additional joint vocational school districts have been approved by the State Board of Education. Three of these districts have established their boards of education and have begun planning toward the organization of broad vocational programs.

OKLAHOMA

Area vocational-technical schools provide training for students in all parts of the State. Presently 8 State junior colleges, 2 technical institutes, and one trade school offer vocational and technical programs on an area basis in Oklahoma.

Two new buildings to house vocational programs are under construction at Northeastern A&M College, Miami, and a new building is in the planning stage at Eastern Oklahoma A&M College, Wilburton. The Oklahoma State University Technical Institute at Oklahoma City is planning a completely new campus near the Industrial Park. The University Branch at Okmulgee has moved the electronics program into a new modern building completed in early 1963. Eastern A&M College has completed a new Technology building, and many of the area schools have building plans in the drawing-board stage.

Oklahoma City has technical training programs in 11 high schools, and new technical programs are planned for selected high schools at Tulsa.

OREGON

The 1963 State Legislature appropriated sufficient State funds to provide for planned programs for the next 2-year period. Funds were also appropriated for community college buildings.

Oregon has 5 separate area community colleges and 4 community colleges operated by local school districts, all of which offer vocational and technical programs. In addition, one other area education district has been established and will start vocational programs in the fall of 1964. Another area education district is in the process of organizing.

A new plant was built for the Salem Technical-Vocational School, and a new building is scheduled for completion in 1964 at South Western Oregon College. Plans are underway for construction of new laboratories and classrooms at Blue Mountain College and Central Oregon College.

As a result of studies in the areas of wood products and forestry, programs in these areas have been organized.

Preparatory and in-service programs for law enforcement occupations have been developed on a Statewide basis and will be initiated in the fall of 1965. State and regional advisory committees have been established.

PENNSYLVANIA

Act 463, passed by the 1963 Legislature modifies the procedures for establishing area vocational and technical schools, increases subsidies to participating districts, provides for designation of attendance areas for area vocational and technical schools and technical institutes, and provides reimbursement for operation.

Presently, there are 8 area vocational-technical schools in operation. Two new schools are under construction, and 9 others have filed applications for construction of buildings. Twenty-three attendance areas have been approved by the State Board.

Since January, these approved attendance areas are rapidly moving toward actual school establishment via educational program development, agreements, building plans, and employment of personnel.

Seven approved attendance areas have drawn up agreements; and six have employed or are planning to employ administrators for work in the developmental stages. One of the six hopes to begin conducting classes in September of this year.

Active interest has been shown in more than two dozen other attendance areas throughout the State. It is likely that nearly all will receive approval at a later date. It is anticipated that several of these will proceed into the official establishment of schools, upon receipt of approval for the respective attendance areas.

Act 484, also passed by the 1963 Legislature, permits establishment of Community Colleges or Technical Institutes. Two have received approval for establishment and several other areas are showing interest.

PUERTO RICO

The demand for admission to both the regular preparatory and extension programs far exceeds the facilities available at the Institute. Twenty-three graduates received diplomas. Over 80 percent of them are employed as technicians at various levels which include production management, production control, product development, and supervisory management.

497 students applied for admission to the Institute. Of these, 378 reported for entrance examination. Of those who completed the examination, 194 were found to be acceptable. Due to lack facilities, only 78 new students were admitted to the two-year program.

PUERTO RICO (Cont'd)

The Evening Technical Institute of the College of Agriculture and Mechanics Arts in Mayaguez graduated 25.

For the school year 1964-65 consideration is being given to the expansion of the present physical facilities at the Technological Institute and the establishment of three additional courses in Industrial Chemistry, Electrical Technology and Electronic Data Processing.

RHODE ISLAND

The 1963 Legislature approved an $8 million bond issue for the construction of four regional vocational schools. This bond issue will be on the special election ballot for approval by the electorate on June 2, 1964, and $325,000 additional for the Vocational Technical School of Rhode Island.

$700,000 was appropriated during 1963 for the expansion of the Vocational-Technical School of Rhode Island.

Rhode Island Junior College was established March 4, 1964, and a President appointed. He is Dr. William F. Flanagan. Classes will begin in September, 1964 - appropriation $98,500. A study was completed to determine how vocational education in the State could best meet total community needs.

SOUTH CAROLINA

South Carolina is moving forward rapidly with a program designed to make vocational and technical education facilities available throughout the State. Nine Technical Education Centers have been approved by the State Committee for Technical Education and seven of these are in operation.

The State Legislature increased funds for technical education approximately 50 percent. The General Assembly passed an Act permitting the State Board of Education to borrow $150,000 to erect a new 50-room dormitory at the Columbia Branch of the Area Trade School. This building will be occupied in September 1964.

A similar building was completed at the Denmark Branch and was occupied in September 1963.

An area vocational school to serve high school students in four cooperating schools was organized and began operating in September 1963.

SOUTH DAKOTA

The recommendations resulting from a study, conducted by the South Dakota Employment Service and the Division of Vocational Education, are being reviewed by the Legislative Appropriations Committee. These recommendations provide additional funds for such area technical training schools as may be needed.

The State Advisory Committee under the State Board of Vocational Education is working to further develop the area school with the idea that its operation and development can be extended under the Vocational Education Act of 1963.

Presently technical programs are offered only in high schools in the State. Arrangements have been made for the establishment of a 13th year on a technical level in one high school.

The problem of establishing courses under Title VIII has been the lack of matching funds. Some industries have provided the necessary funds for such technical courses as have been offered.

TENNESSEE

The 1963 General Assembly enacted legislation and appropriated funds to establish area vocational and technical schools and regional technical schools in Tennessee. The General Assembly expressed its intent that a Statewide system of area vocational and technical schools be established so that ultimately one would be within commuting distance of all citizens of the State.

Eight area vocational and technical schools are under construction with two additional ones planned immediately. These ten schools are scheduled to be placed into operation by the end of fiscal 1965. One technical institute is being planned with construction to begin in August 1964.

Projected plans call for the establishment of 20 such schools and possibly three technical institutes.

TEXAS

Secondary schools in the larger cities are showing a growing interest in technical education programs. Several programs have been approved to begin in September, 1964.

Twenty-one junior colleges offered Title VIII technical programs during fiscal year 1963-64 with from 1 to 7 courses offered in each junior college. Most popular courses are data processing, technical drafting, and electronics. Twenty junior college instructors of data processing were approved to attend the 1964 summer institute in Fort Collins, Colorado.

A new junior college, Grayson County Junior College, Sherman-Denison area, is under construction. The first building to be completed is the technical wing to house the vocational and technical program. An extensive occupational survey was made of the area to guide the college in determining course offerings. Three other occupational surveys have been made for junior colleges and several others are scheduled. Del Mar College, Corpus Christi; Lee College, Baytown; San Antonio College, San Antonio; Panola Junior College, Carthage; and Henderson County Junior College, Athens; are planning to expand their physical facilities. Hill County Junior College at Hillsboro moved into a new plant in January of 1964.

Four senior colleges are presently offering technical programs. The electronics technology program at Texas A&M University was very successful and expansion of the program is being considered.

UTAH

Legislation passed for the 1963-65 biennium included $1,450,000 for buildings and equipment at Salt Lake Trade Technical Institute and $970,000 for maintenance and operation; and $855,000 for maintenance and operation at Utah Trade Technical Institute, Provo.

Salt Lake Trade Technical Institute will now have a new home about 5 miles from the business district of Salt Lake City. These improved facilities should add to the stature and improve the image of vocational education in the minds of young people with a resulting increase of enrollments in preparatory programs in trade, technical, and business training at this school.

UTAH (Cont'd)

Plans are now in the preliminary developmental stage to have an overall evaluation of Utah's vocational education program made in 1964. The details will be worked out during the 1963-64 school year, after which the State Board will be asked to approve the personnel of the committee.

Utah has two vocational and technical institutes: Salt Lake Trade Technical Institute in Salt Lake City and the Utah Trade Technical Institute in Provo. In addition, Weber College, Ogden, has an extensive vocational and technical program. Eighty percent of the State's population is within commuting distance to these three schools.

A data processing program has been initiated at Weber College in Ogden. This is the first such program in the State conducted at the vocational education level.

VERMONT

Vermont is in the process of building a number of new additions to present vocational education facilities. A new laboratory building has been completed at Vermont Technical College which has broadened the curriculum.

Burlington and Rutland have both enlarged the areas they will serve - Rutland as of September 1963 and Burlington as of September 1964. Hartford School District has also enlarged their area and are now building a new school.

VIRGINIA

The State Commission on Vocational Education appointed by Governor Harrison made recommendations to the Governor and the General Assembly. The recommendations included additional appropriations for Vocational Education and the establishment of a State Board of Technical Education.

The General Assembly of 1964 authorized a nine member State Board of Technical Education.

This Board has the responsibility of developing standards, curricula, establishment and operation of area vocational-technical schools and/or technical programs. Also, the Board of Technical Education will have the responsibility of establishing the number of graduates needed from full-time vocational and technical programs.

VIRGINIA (Cont'd)

The General Assembly appropriated $1 million for the next biennium to the State Board of Education for expansion of vocational education for high school youth, for clinics for guidance counselors, and for expanding and upgrading the present area vocational schools.

Two million dollars was appropriated for the next biennium to the Board of Technical Education for administrative expenses, teacher training, and curriculum development, needed surveys etc., and for establishing new schools or technical programs.

Two of the present area vocational-technical schools have employed architects to plan new buildings, and two other schools are hoping to start on a building program as soon as local funds can be secured.

Several centers in the State are making surveys or are developing plans for new area vocational schools. There is a possibility that three or four new area vocational technical schools will be open by September 1966.

Richmond Professional Institute has announced one new technology program to start in September of 1964.

State clinics for high school guidance counselors are planned by the State Board of Education for the summers of 1964 and 1965. The clinics are designed to acquaint the counselors with job qualifications, information needed in the selection of vocational objectives, the use of tests to develop the needed student profiles, description of vocational and technical program offerings in the State, and job opportunities to those completing the vocational and technical courses available.

WASHINGTON

Currently 25 schools that qualify as area vocational and technical schools offer post secondary vocational and technical education programs in Washington. Of this number, 10 are vocational and technical institutes or schools and 15 are community colleges. By action of the 1963 State Legislature, 2 new community colleges were authorized to begin operation in the present biennium and 2 others have been designated and will open in the 1965-66 fiscal year.

WASHINGTON (Cont'd)

Plans are in process for new plants or for major additions to present facilities which should be completed in 2 years at Green River Community College, Auburn; Bellevue School District No. 405, Bellevue; Olympic College, Bremerton; Everett Junior College, Everett; Columbia Basin College, Pasco; Bellingham Vocational-Technical School, Bellingham; Renton Vocational School, Renton; Edison Technical School, Seattle; Highline College, Seattle; Spokane Community College, Spokane; Clark College, Vancouver; Yakima Valley College, Yakima; and Tacoma Vocational-Technical Institute, Tacoma. The total value of these additional buildings will approximate $12 million.

Previous figures showed that the vocational-technical programs have doubled in the State in the past 10 years and they are expected to double again in the next 5 years. However, with the increased incentive and stimulation resulting from the Vocational Education Act of 1963, it is anticipated that growth of the programs will be accelerated.

WEST VIRGINIA

The 1963 State Legislature increased the State appropriation $60,000 over the previous year 1961-62 making a total of $410,000. The 1964 Session of the Legislature will deal primarily with budgets. No other legislation is contemplated.

During 1964, several counties will vote on bond issues to provide new vocational education facilities in their proposed building program.

On the basis of a survey of need for trained personnel in data processing in the industries in the Ohio Valley, a pilot program in data processing was started in the fall of 1963 at Magnolia High School, New Martinsville.

Three new preparatory programs were established: St. Albans High School, Chemical Technology; Parkersburg High School, Electronics Technology; and Huntington High School, Electronics Technology. Supplementary courses in Electronics Technology were offered in Beckley, Charleston, Huntington, Parkersburg, and Wheeling.

WISCONSIN

Because of Wisconsin's unique system of separate local schools of Vocational, Technical and Adult Education, the development of educational facilities is satisfactory. In local situations where facilities have become out-dated or over-crowded, local communities have responded to the need for up-dating laboratories and classrooms or have authorized building expansions. During the past year, several local schools have completed additions to their physical plants.

Improved program financing has resulted from increased State appropriations for Vocational-Technical Education.

Four additional schools have been approved to develop programs of an area post high school nature bringing the total of approved schools to twelve. Future expansion calls for a total of 20 area Vocational and Adult Schools. These schools offer all traditional vocational education programs, and in addition, grant an associate degree in various technologies.

Legislation has been enacted which gives the State Board of Vocational and Adult Education representation on the State coordinating Committee for Higher Education. This committee reviews the budgets and programs of all higher education including the associate degree programs in the vocational and adult schools.

The State Board approved the establishment of Business Data Processing programs at Appleton, Green Bay, Kenosha, Madison, Milwaukee and Wausau. Three of the centers have purchased equipment with Title VIII assistance and will be in full operation during fiscal year 1964.

WYOMING

The Wyoming Foundation Law and sections thereto concerning vocational education have been virtually unchanged since inception in 1955; however, the 1963 Legislature increased reimbursement for the Vocational Unit from $6,200 to $6,500. It is anticipated that State legislation will be proposed to the 1964 Legislature which will affect the cause of vocational education in Wyoming.

At the present there are no area or technical schools in the State; however, there has been encouraging talk and considerable interest shown.

Presently Casper College conducts reimbursable programs in distributive education, home economics education, trade and industrial education, practical nurse education and technical education.

Western Wyoming Junior College, a relatively new institution, has a distributive education program and a few adult programs in trade and industrial education.

On the whole the climate in Wyoming seems favorable toward new and greater expansion of vocational education.

VT 001 720
Vocational-Technical Education Study of Dickinson and Iron Counties of Michigan.

Dickinson-Iron Area Vocational Education Study Committee, Mich.
Michigan State Dept. of Education, Lansing. Div. of Vocational Education
MF AVAILABLE IN VT-ERIC SET.
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*VOCATIONAL EDUCATION; *TECHNICAL EDUCATION; AREA VOCATIONAL SCHOOLS; SENIOR HIGH SCHOOLS; ADVISORY COMMITTEES; QUESTIONNAIRES; *EDUCATIONAL NEEDS; *COMMUNITY SURVEYS; GRADUATE SURVEYS; ENROLLMENT TRENDS; LABOR FORCE; OCCUPATIONAL ASPIRATION; EDUCATIONAL PLANNING; PROGRAM IMPROVEMENT
DICKINSON COUNTY; IRON COUNTY; MICHIGAN

The emphasis on area vocational schools was culminated in this study of the vocational needs in Dickinson-Iron Area, Michigan. Advisory committees were appointed in the following occupations: agricultural, clerical, sales, services, health care, manufacturing, mechanics and repairs, building trades, graphic arts and printing, transportation, and utilities. Some objectives of the study were: (1) to study the feasibility of a cooperative twin-county vocational education program, (2) to find the most efficient use of existing facilities and personnel, (3) to learn basic educational needs for students at different levels and for entry level employment, (4) to establish a transfer program with post-secondary institutions offering approved technical education. Procedure included questionnaires and personal interview instruments for a population of grades 7 through 12, dropouts and graduates of secondary schools in 1961-1965, and currently employed and unemployed residents of the counties. Recommendations were: (1) the establishment of a position of vocational administrator, (2) vocational offerings be coordinated under one administrator, (3) an improved system of vocational guidance be established, (4) a cooperative work experience program be established, (5) post-high training offerings be utilized, and (6) duplication be eliminated in the various service areas. Some specific suggestions are included. (MS)

VT001 720

EDO 31587

C1

VOCATIONAL STUDY

IRON AREA

DICKINSON

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VOCATIONAL-TECHNICAL EDUCATION STUDY

OF

DICKINSON AND IRON

COUNTIES

OF

MICHIGAN

AUTHORIZED BY

DIVISION OF VOCATIONAL EDUCATION

DEPARTMENT OF EDUCATION

LANSING

JUNE 1966

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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Legend
Dickinson County
Iron County

TABLE OF CONTENTS

DICKINSON - IRON AREA VOCATIONAL
EDUCATION STUDY

I. Introduction

Advisory Committee
Consultants and Coordinators
Objectives

II. Background Information

Area Labor Statistics
Maps of Area
Historical Information
Population Trends
Numbers of High School Graduates
Enrollment Trends
Current Offerings in Practical Arts and Vocational Education
Industrial Occupational Sample

III. Student Information

Grades 7-8-9
Grades 10-11-12
Graduates 1961-65
Dropouts 1961-65

IV. Recommendations and Conclusions

Citizens Advisory Committee
High School Program
Technical Education Transfer
Summary
General Recommendations
Conclusion

INTRODUCTION

Man, from the dawn of time, has been concerned with providing the necessities of life, for himself and his family. The ancient pyramids of Egypt give mute testimony of highly developed skills and of master craftsmen in that ancient age. From that time, until the present, people the world over have been concerned with occupational training. Fathers passed their craft on to their sons, and trade secrets were jealously guarded by those who knew 'the tricks of the trade.'

In more modern times, however, the methods of occupational training that were adequate a century or longer ago will no longer suffice. Our modern economic society demands trained manpower in all walks of life and this demand will continue to grow at an ever increasing rate. If the United States, with only a small fraction of the world's population, is to continue in a position of world leadership, we simply cannot afford to have thousands of young persons out of school, and out of work, while thousands of jobs across the country go unfilled because persons lack the skills to meet the requirements of the job.

Advisors to former President Eisenhower and the late President Kennedy recognized the need and urged action on a broad front to meet the manpower challenge. As a result, the Congress passed several bills which called for vastly expanded training measures, hopefully, enough to meet the future needs.

The appointment of a distinguished panel of consultants, by the late President Kennedy, to study the needs of vocational education in the United States brought about the passage of the Vocational Education Act of 1963.

This much heralded piece of legislation has already brought about many changes in vocational and technical education, but its impact on the long range economic development of our country can only be forecast at the present. However, we feel, that this new law will help generate new thinking, and new programs in vocational and technical education and will also modernize some of the programs that have been in existence for many years.

If this society is to continue to function, and to expand, and to progress, we must find better ways of preparing the citizens, both young and old, to do the jobs this society demands. Former Secretary Mitchell stated;

> 'The jobs that will be available, then, are jobs requiring more extensive educational background; over all the educational requirements of jobs will be rising all across the board. Thus,

1. Mitchell, J.P. 'Educational Excellence: A new source of strength.' American Vocational Journal. 35: 24-26. January, 1960.

the successful operation of the economy will demand that the educational system produce qualified workers--that is, young men and women with some useful training in some field of knowledge or skill.'1

While great numbers of our high school students now enter college, the records indicate in the nation as a whole, that just 20 per cent of the youths entering grade school complete four years of college. This, of course, leaves millions that must earn a living without the benefits of a college education.

Thus, it seems apparent, that the educational system in the United States, while doing an excellent job in preparing students for higher education has not kept pace with the rapid technological changes in the vast areas of occupational training of less than college level.

A policy release by the National Association of Manufacturers states:

'First, and most apparent, is that Industry must look to Education for its supply of trained personnel. . . It is profitable from the standpoint of both Industry and society to equip them (young people) with education and training consistent with their desires. aptitudes, and abilities before they leave the full-time school and enter employment. Young people should have the kind of education which will prepare them adequately for their careers and their civic responsibilities. Industrialists and businessmen can help keep them in school longer, or keep many of them in school at least part-time, by cooperating with education in practical arts courses and vocational and technical courses which are given in the regular school program or as work-study programs.

Education and Industry must go farther than merely preparing individuals to enter employment. After people are employed it must be possible for them to work for promotion and advancement. Educators and industrialists, working together, should provide opportunities for continuing education...'2

---

2. Educational Advisory Committee and the Educational Advisory Council. This We Believe About Education. New York, N.Y., National Association of Manufacturers. 1958.

Organized labor also is concerned about the relationship between education and economic opportunity in the United States:

'Nations in the world today which are rich in natural resources but low in educational attainment are poor nations. On the other hand, nations such as Switzerland and Sweden, which are relatively low in the amount of their natural resources but high in their educational attainment, enjoy relatively high standards of living. A dramatic illustration is that of Israel and its neighbors. Israel, arid and poor in resources, but with less than 5% illiteracy, has an annual gross national product of $1,070 per capita. Many of its neighbors are much more richly endowed with resources, but Egypt, with 70% illiteracy, has a percapita gross national product of only $139; Jordan, 70% illiterate, $118; Saudi Arabia, 85% illiterate, $167; and Syria, 40% illiterate, $158; Lebanon, better off than most of its neighbors, produces $391 per capita and has an illiteracy rate of only 25%. There is, of course, no one single factor which accounts for economic growth but the conclusion is inescapable that Israel and Lebanon are more prosperous than their neighbors in considerable part because their populations are better educated.'

'A conspicuous case of our nation's schools failing to measure up to the needs of the times is vocational education. Our rapidly changing technology has created an increasing demand for a trained labor force. The need for unskilled workers is rapidly shrinking and the job opportunities of the future will be in occupations which require more education and better training. In addition, old skills often become obsolete and new skills must undergo constant training and retraining during their whole working life.'

'Schools must be sufficiently flexible institutions to prepare a variety of students with a variety of needs and interest for their future role in society. Young people looking forward to higher education must be able to study those subjects which will prepare them adequately for their future work in the colleges and universities. Those young people who do not look forward to higher education must be able to learn in their schools vocational skills which are realistically related to the needs of modern industry. Schools must treat skilled workmanship as something as worthy of our best young people as is pre-professional training. During their school years all students should explore the meaning of citizenship in democratic society.'3

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3. Policy Resolution, 1963 convention A.F.L.-C.I.O. Publication No. 127. Labor Looks At Education.

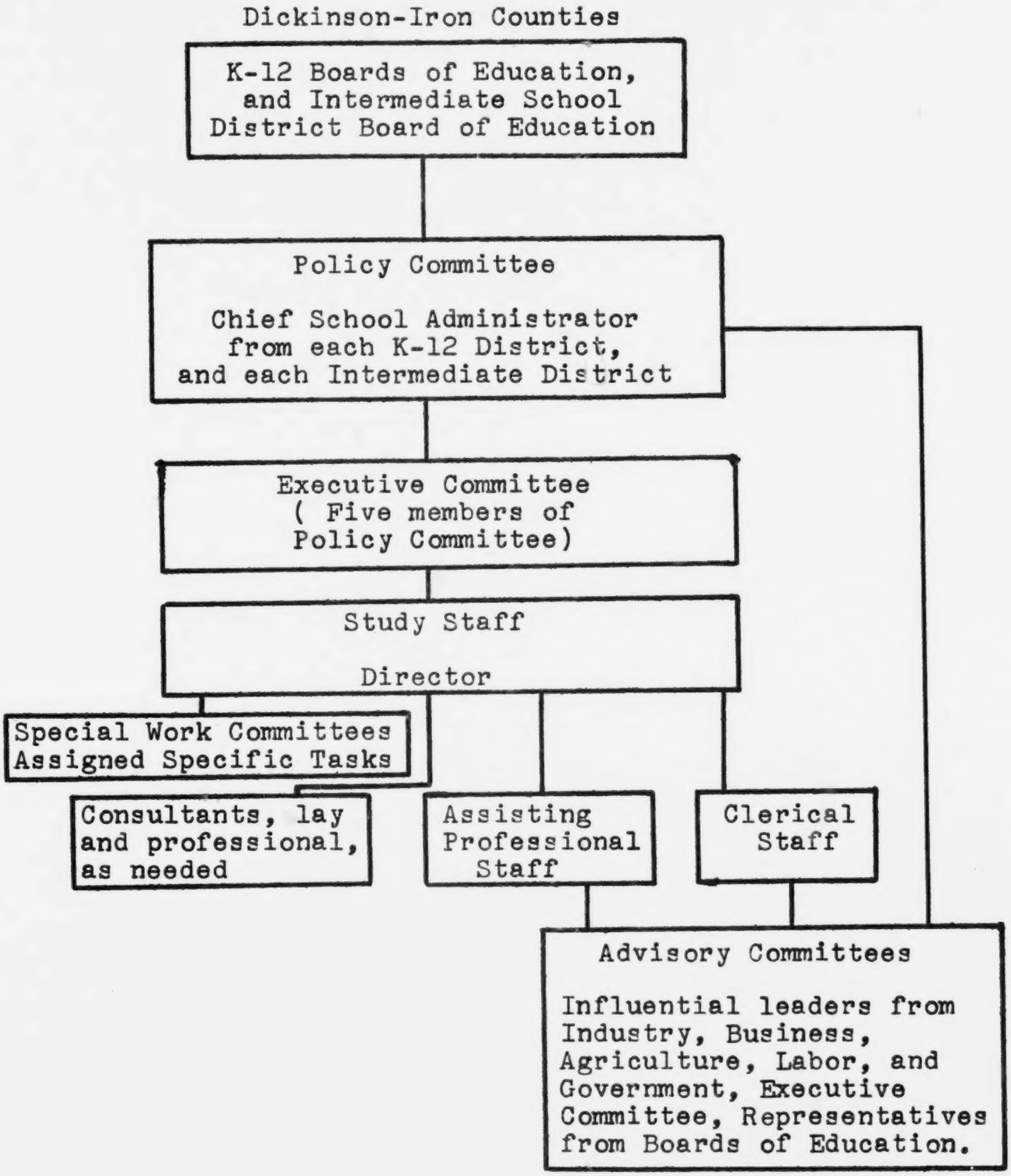
Training for occupational competency has had many champions in years gone by. Men of vision such as Former Governor Ferris and William H. Dunwoody realized the value of a trained, competent work force around the turn of the century, and they established the outstanding institutions that bear their names today. Men of vision in Government also recognized the need, and many of the Land Grant Colleges were established as 'Agricultural and Mechanical' institutions and some still have this as their official name: Texas A and M for example. The passage of the Smith - Hughes Vocational Act of 1917 did much to establish occupational training as a vital part of American education and it paved the way for some of the early 'Area' schools in the United States. Since 1917, education has undergone many changes. Students have more and more knowledge to grasp and institutions have increased the curriculum drastically. But most of us agree, that changes and improvements are now coming at an ever increasing rate. At the present time, we are in the beginning of what some experts call the 'Knowledge Explosion' or, in other words, a snow balling effect of educational and scientific data. The effect of the new knowledge will be to change the lives of all Americans no matter how remote they may be from the big city life. It is the duty of all Public Institutions, to help the citizens acquire the knowledge and skills necessary to lead a good life in this fast changing world.

The possibilities of a coordinated plan for vocational education in this area of Michigan began with the passage of the Vocational Education Act of 1963. One of the important features of this new law was the emphasis on the 'Area' Vocational School. Sponsors of the legislation realized that high costs and small enrollments would prevent broad vocational programs in many areas of the country without cooperation between various schools and districts. Mr. Edward 'Ted' Sell, formerly of the Public Services Division, Northern Michigan University, in cooperation with the five superintendents of schools in Dickinson County, was instrumental in preparing and sending a proposal for an area vocational study to the Division of Vocational Education, in Lansing. After due consideration of present student and adult population, and student population trends in the future, plus the finances necessary for vocational programs, and other factors, the Division of Vocational Education rejected the original proposal, and requested that the original study be enlarged in scope to include Dickinson and Iron Counties. Several months later another meeting was held and included superintendents from all of the ten high schools in the two counties. (Channing and Felch have since consolidated). It was agreed to submit another proposal for a vocational study that would include Dickinson and Iron Counties. The new proposal was accepted by the Division of Vocational Education and the Area Study Coordinators began meeting in October, 1965.

The funding of the study was quickly agreed upon by all ten high school districts and the Division of Vocational Education, and the coordinators began the task of assembling the citizens advisory committee.

We feel that since the first meeting, many excellent ideas have been voiced by various advisory committee members. The study coordinators hope that many of the recommendations can be put into effect in the future, this, of course, will be determined by the various boards of education and the Division of Vocational Education.

Organization Chart for The Dickinson-Iron Area Vocational-Technical Education Study



CITIZENS ADVISORY COMMITTEE

AGRICULTURAL OCCUPATIONS

Frank Molinare	Court House	Iron Mountain, Mich.
Orville Hattle	Norway, Michigan	
Duaine Wenzel	Crystal Falls, Michigan	
Quentin Peterson	Court House	Iron Mountain, Mich.
Cecile Rostagno	Vulcan, Michigan	
Leonard Moore	110 Iron Street	Norway, Michigan
Robert Danielson	Norway, Michigan	
Denton Pollard	Norway, Michigan	
George DeVine	Crystal Falls, Mich.	
Melvin Cousineau	Hardwood, Michigan	

CLERICAL OCCUPATIONS

William Tonkin	621 Marquette	Crystal Falls, Mich.
Art Chartier	904 Norway	Norway, Michigan
Dan Stanchina	325 Main	Norway, Michigan
Viola Lange	Hematite Twp.	Amasa, Michigan
Marilyn Rossi	Amasa, Michigan	
Gladys Doucette	Doucettes Accounting	Iron Mountain, Mich.
C.Lowell Lindstrom	Stambaugh, Michigan	
Halvar Person	Cass Avenue	Kingsford, Michigan
Walter Holmberg	Norway, Michigan	
Mavis Goodman	Ice Lake Road	Iron River, Michigan
Art Noel		Iron Mountain, Mich.
Dorothy Occhietti		Iron Mountain, Mich.
Ben Occhietti	Occhietti's Jewelry	Iron Mountain, Mich.

SALES OCCUPATIONS

Laurence Baril	328 Iron	Norway, Michigan
Jerry Van Goethem	510 Oak	Norway, Michigan
Tom Williams	R. R. I	Crystal Falls, Mich.
R. C. DeMary	Woodward Avenue	Kingsford, Michigan
Jim McGregor	McGregor Insurance	Kingsford, Michigan
Bill Lawrence	Quinnesec, Michigan	
Leo Christensen	Hamilton Avenue	Kingsford, Michigan
Howard Hassell	Iron Mountain, Mich.	

SERVICES OCCUPATIONS

Glen Anderson	Dickinson Hotel	Iron Mountain, Mich.
Louis Bigari	4 7th.	Iron River, Michigan
George Sanford	44 So. Park	Kingsford, Michigan
Ed Polomaki	Iron Mountain, Mich.	

HEALTH CARE OCCUPATIONS

Dr. Charles Steinke	600 Hamilton Avenue	Kingsford, Michigan
Marlene Langenberg	602 Michigan	Crystal Falls, Mich.
Mrs. E. LaChappelle	200 So. 5th.	Crystal Falls, Mich.
Mrs. Lorena Newell	Crystal Falls, Mich.	
Dr. Alfred Miller	1510 W. 'A' Street	Iron Mountain, Mich.

MANUFACTURING OCCUPATIONS

Ralph Huhtala	Lake Shore, Inc.	Kingsford, Michigan
Walter Brisson	LoDal, Inc.	Kingsford, Michigan
Alger Gustafson	1221 Crystal Lake	Iron Mountain, Mich.
Jim Grosso	Stephenson Loc.	Norway, Michigan
Thor Hansen	Amer. Can Corp.	Amasa, Michigan
Walter Svennson		Gaastra, Michigan
Phil Person	Moon Lake	Iron Mountain, Mich.
Ivan Brown	632 Woodward Ave.	Kingsford, Michigan
Jim Finn	Grede Foundry	Kingsford, Michigan

MECHANICS AND REPAIRMEN OCCUPATIONS

Ted Kregeski	604 Stephenson	Norway, Michigan
Henry Goulette	912 Carpenter	Iron Mountain, Mich.
Ken Doucette	Cummins Diesel Eng.	Iron Mountain, Mich.
Orville Bauman	311 No. 6th.	Crystal Falls, Mich.
Larry Gill	Hematite Twp. Sch.Dist.	Amasa, Michigan
Jerry Scott	Standard Ser. & Supply	Iron Mountain, Mich.
Bob Johnson	Town & Country Motors	Iron Mountain, Mich.
Howard Case	15 So. Park Street	Kingsford, Michigan
Lawrence Peterson	616 Stephenson St.	Norway, Michigan
Dave Mac Pherson	32-4th. Avenue	Iron River, Michigan
Robert Jacobs	P. O. Box 818	Iron Mountain, Mich.

BUILDING TRADES OCCUPATIONS

Evo Santoni	Eisele Lbr. & Fuel	Kingsford, Michigan
Dick Wallner	404 4th.	Kingsford, Michigan
Frank Sikora	1109 W. Fairbanks	Iron Mountain, Mich.
Melvin Rouse	850 E. 'F'	Iron Mountain, Mich.
Richard Windberg	317 East C	Iron Mountain, Mich.
Ben Curran	416 Roseland	Kingsford, Michigan
Joseph Novara	420 Dickinson	Kingsford, Michigan
Ward Alquist	Markell Co.	Kingsford, Michigan
Rueben Erickson	Laing Lbr. Co.	Iron Mountain, Mich.

GRAPHIC ARTS & PRINTING OCCUPATIONS

Charles Kennedy	212 4th.	Crystal Falls, Mich.
Angelo Palluconi	1304 Grand Blvd.	Iron Mountain, Mich.
Walter Sliwa	Woodward Avenue	Kingsford, Michigan
Jack Gingrass	627 East B Street	Iron Mountain, Mich.
Ray Hansen	821 West B Street	Iron Mountain, Mich.

TRANSPORTATION OCCUPATIONS

Jack Koski	Fortune Lake/C.F.Truck	Crystal Falls, Mich.
Chris Broderson	Quinnesec, Michigan	
Gene Patrick	605 West B Street	Iron Mountain, Mich.

UTILITIES OCCUPATIONS

Gerald Goodman	Basswood Road	Iron River, Mich.
Willard Miller	616 Harding/Wis.-Mich. Power Co.	Kingsford, Michigan
Louis Nickolas	714 East I	Iron Mountain, Mich.
Harold Peskey	612 East Sagola	Kingsford, Michigan
Peter Paravanti		Iron River, Mich.
James Jauquet		Sagola, Michigan
Ron Sherwood	Route 2	Crystal Falls, Mich.
Merrel Tackmier	Route 3	Iron River, Michigan

CONSULTANTS SERVING

THE DICKINSON - IRON

AREA VOCATIONAL EDUCATION

STUDY

Prof. Edward Sell, Formerly Northern Michigan University

Dr. Claud Bosworth, Northern Michigan University

Prof. Kenneth Light, Michigan Technological University

Mr. Carl Johnson, Menominee High School

AREA STUDY COORDINATORS

Lawrence Varda, (Chairman), Breitung Township Schools, Kingsford

Douglas Villa, Iron Mountain Schools, Iron Mountain

Emil Leppiaho, Norway-Vulcan Area Schools, Norway

Don Boulanger, Crystal Falls High School, Crystal Falls

Tom Karjala, Iron River High School, Iron River

DICKINSON-IRON AREA
VOCATIONAL EDUCATION STUDY

January 15, 1966

Dear Sir:

The ten high schools of Dickinson and Iron Counties have joined together to study the occupational training needs of high school students, school drop outs and adults who need training or retraining for an occupation.

As you know many of the high school graduates of today do not have a skill with which to earn a living. As a result, many young persons and unskilled adults are unemployed, even though many industries are seeking persons with skills.

The Congress of the United States has studied this problem and as a result The Vocational Education Act of 1963 was passed.

This law allocates funds to the states who in turn pass these funds on to schools who develop programs.

The Department of Education, Vocational Education Division, Lansing is busy making plans for a statewide system of Vocational and Technical Education, (training for any job of less than college degree requirements).

The ten high schools in Dickinson and Iron Counties have been designated as one area for the study.

Persons from these two counties are to be chosen to serve on a Citizens Advisory Committee to study the problem, and to make recommendations for improvement of Vocational Education in the two county area.

The following general areas will be examined and we hope to have a sub committee for each:

A. Clerical occupations
B. Sales occupations
C. Graphic arts and printing occupations
D. Service occupations
E. Manufacturing occupations
F. Mechanics and repairmen occupations
G. Building trades occupations
H. Agricultural occupations
I. Utilities occupations
J. Transportation occupations
K. Health care occupations

The recommendations by these committees will help to determine Vocational and Technical Education in this part of Michigan for many years to come, therefore it is important that well qualified persons be on the Citizens Committee.

You have been nominated to the committee, and we hope you will want to help plan a good Vocational and Technical Program for students and adults who want occupational training.

The first meeting will be held on February 2, 1966 at seven o'clock C.S.T. in the new Kingsford High School lunch room.

Dr. Claud Bosworth of Northern Michigan University will be the main speaker for the first meeting, later meetings will be held in other high schools throughout the two county area.

Dr. Bosworth has had wide experience and is well qualified to serve as a consultant to the study group.

Please return the enclosed card indicating whether you are willing to serve on the committee.

If you have any questions please call any of the study committee advisors listed below:

Mr. Laurence Varda, Chairman-Kingsford High School
Mr. Don Boulanger, Crystal Falls High School
Mr. Douglas Villa, Iron Mountain High School
Mr. Tom Karjala, Iron River High School
Mr.Emil Leppiaho, Norway-Vulcan High School

Sincerely,

Dickinson-Iron Area
Vocational Education Study Committee

TITLE OF PROJECT

Cooperative Research Study of the Vocational Education Needs of the Dickinson-Iron County Area. (Kingsford, Iron Mountain, Norway-Vulcan, Felch, Channing, Iron River, Stambaugh, Crystal Falls, Alpha, and Amasa High Schools.)

THE PROBLEM

The basic problem is the inability of any one of the smaller high schools to provide a sufficiently adequate comprehensive vocational education program to meet the needs of in-school youth and out-of-school youth and adults because of the following special circumstances:

1. Insufficient enrollment to justify a variety of course offerings in any one school.

2. Fiscal inability of any one school district to support a total program.

3. Inadequate utilization of existing facilities and staff.

4. The twin county study area has a population of 41,000 people dispersed over approximately 1682 square miles. The school population of 10,681 students includes 1,085 parochial and 493 enrolled in K-8 districts. The combined taxable state equalized evaluation of the area is $118,646,322.00. Services of a community college are not available to the area. State equalized evaluation and student membership by district are:

District	S. E. V.	Membership (1964)
Breitung	19,943,915	1994
Iron Mountain	20,188,470	1589
Iron River	25,851,864	1326
Norway-Vulcan	9,379,250	1266
Stambaugh	13,864,202	1258
Crystal Falls	13,323,299	935
Channing	1,830,161	269
Felch	1,974,121	181
Alpha	6,244,374	165
Amasa	1,110,076	120
*Bates	4,096,732	380
*Breen	739,918	113
Parochial Schools		1085
	118,646,322	10,681

* K-8 grade school system.

The purpose of the study, therefore, is to find an approach whereby a sufficiently broad vocational education program, realistic to the general and specific needs of the in-school and out-of-school youth and adults of the Dickinson-Iron County area can be made available.

OBJECTIVES

A. To determine the feasibility of a cooperative twin county vocational education program.

B. To determine how to make the most efficient use of existing facilities, equipment and personnel, and to determine additional needs for the same.

C. To determine the basic vocational education needs for: The job-entry needs of those in the local area, the job-entry needs of the great number leaving the area, the drop-out students, area trade extension needs, training and retraining of the unemployed and underemployed, the socio-economically handicapped, and those destined for post-high school vocational programs.

D. To establish a logical, well defined sequential transfer program with post-secondary institutions offering approved technical education programs.

E. Provided that a twin-county vocational program is found feasible, to determine the best administrative, supervisory, and financial structure by which the program can be made successful.

F. To make available, upon request, the results of this study to interested persons or organizations as a contribution to overall efforts of our state and nation to develop a program to better utilize our manpower potential and to raise the standard of living of all persons of all communities.

PROCEDURE

A. General Method or Design.

1. Population groups to be surveyed.
   a. In school - junior high 7 - 8 - 9.
      senior high 10 - 11 - 12.
   b. Drop-outs from secondary schools 1961-1965.
   c. Graduates 1961-1965.
   d. Currently employed residents of the county.
   e. Unemployed.

2. Types of data.

   Group (1) Junior high and high school.
   Occupational interests.
   Results of aptitude testing.
   Mental maturity - verbal and non-verbal.
   Occupational counseling available.

   Group (2) Drop-outs.
   Reason for dropping out.
   Attitude toward school.
   Present employment.
   Vocational guidance in school.
   Training needed (as they see it).

Group (3) Graduates 1961-1965.
Educational level attained.
Terminal program?
College drop-out?
Present employment.
Attitude toward school.
Vocational guidance in school.
Geographic distribution.
Problems encountered when seeking employment.
Training needed (as they see it).

Group (4) The currently employed.
Update the data of the Iron County area, school study.
Survey of Training Needs 1961-1966. M.E.S.C. to identify jobs available and the projected employment opportunities locally, so as to be better trained people to match jobs.

Group (5) The unemployed.
Survey of registrations of the unemployed with the M.E.S.C. to determine skills possessed by the unemployed.

2. Procedure, method, and organization.

Questionnaires, personal interviews, analysis of data collected by schools and local and state agencies. The in-school population will be polled by the individual local schools. Out-of-school population will be polled by the survey staff. Additionally, the survey staff will work jointly with local and state agencies in up-dating data contained in existing studies and surveys.

B. Methods of analysis.

1. Questionnaires and personal interview instruments will be developed such that they contain information in keeping with the objectives of the survey.

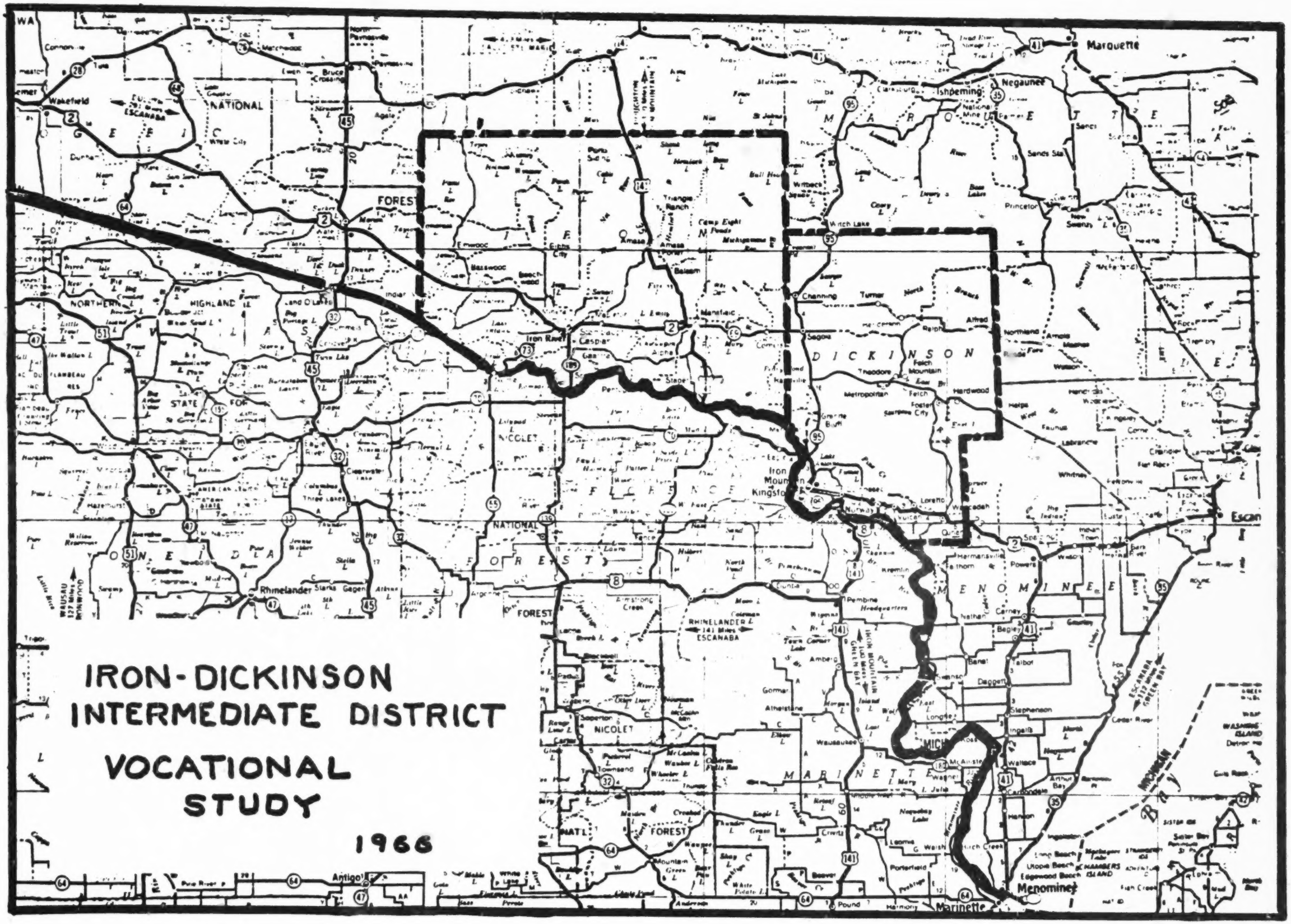
2. Information obtained by tabulation of results of instruments will be used as a basis for drawing conclusions from which recommendations can be made to the cooperating school districts.

C. Copies of the project outcomes will be distributed to superintendents, of the cooperating schools and boards of education, principals, vocational teachers and copies will be made available to teacher-training institutions, businesses and industries, local, state, and national agencies, and state departments of public instruction upon request.

PERSONNEL

Project Director (Consulting)

Dr. Claud A. Bosworth, Vice President, Public Services, Northern Michigan University.


IRON-DICKINSON
INTERMEDIATE DISTRICT
VOCATIONAL
STUDY
1966
Marquette
Negaunee
Ishpeming
Wakefield
Bruce Crossing
Iron River
Iron Mountain
Kingsford
Crystal Falls
Caspian
Florence
Mansfield
Channing
Sagola
Amasa
Witch Lake
Princeton
Rhinelander
Antigo
Menominee
Marinette
Escanaba
DICKINSON
MENOMINEE
MARINETTE
NICOLET
FOREST
NATIONAL
STATE
HIGHLAND
NORTHERN
ESCANABA
RHINELANDER
WAUSAU
MICHIGAN
WISCONSIN
Green Bay

Area Study Coordinators

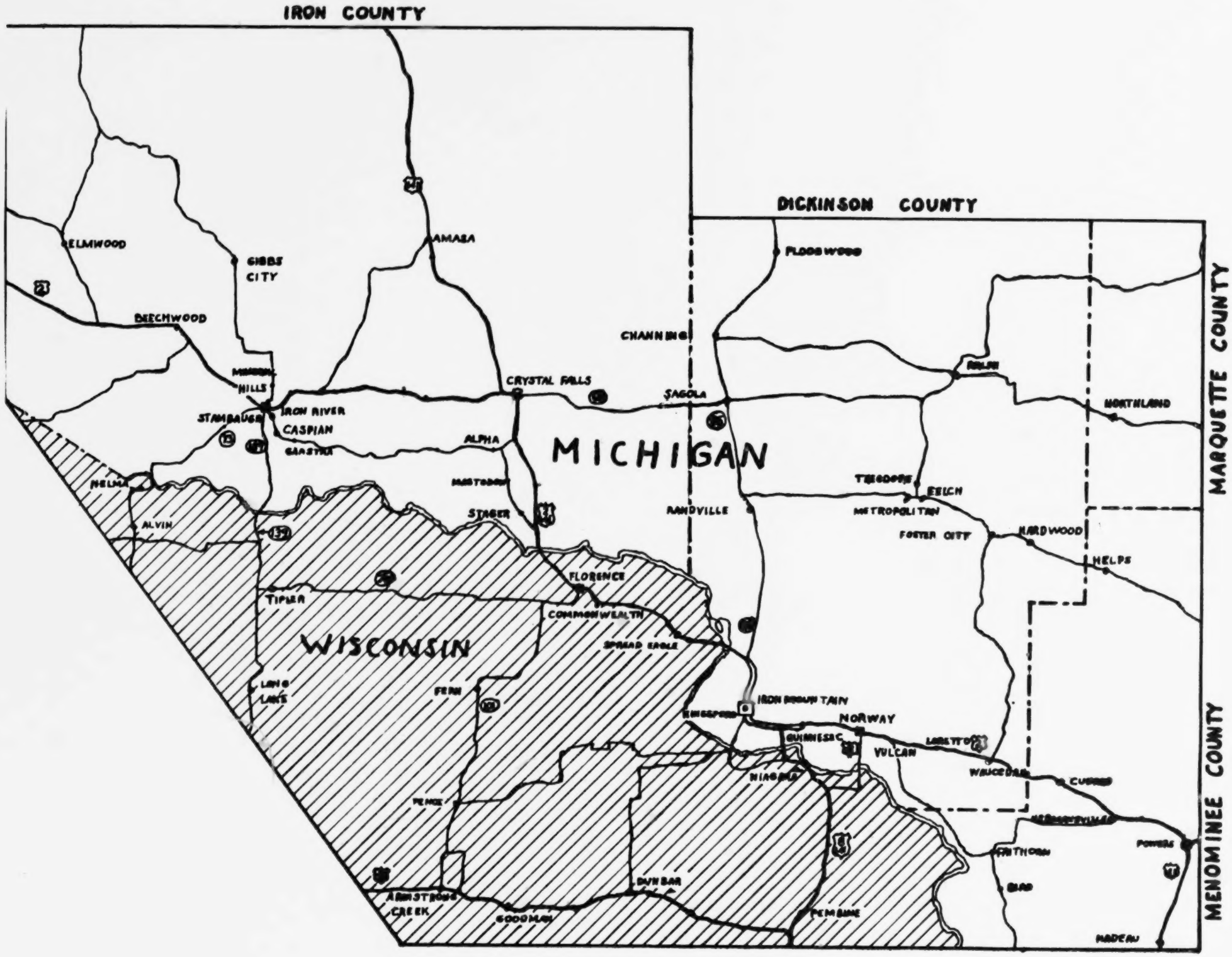
Lawrence Varda, (Chairman), Breitung Township Schools, Kingsford

Douglas Villa, Iron Mountain Schools

Emil Leppiaho, Norway-Vulcan Area Schools

Don Boulanger, Crystal Falls High School

Tom Karjala, Iron River High School


IRON COUNTY
DICKINSON COUNTY
MARQUETTE COUNTY
MENOMINEE COUNTY
MICHIGAN
WISCONSIN
ELMWOOD
GIBBS CITY
AMASA
BEECHWOOD
HILLS
STAMBAUGH
IRON RIVER
CASPIAN
GARDNER
ALPHA
CRYSTAL FALLS
CHAMPION
SAGOLA
FLOODWOOD
NORTHLAND
NELMA
ALVIN
STAGER
RANDVILLE
TRIGONIA
EELCH
METROPOLITAN
FOSTER CITY
HARDWOOD
HELPS
FLORENCE
TIPLER
COMMONWEALTH
SPREAD EAGLE
LAKE LAKE
FERN
IRON MOUNTAIN
NORWAY
QUINNESEC
VULCAN
LORETTO
WAUCEDAH
CURRIE
NIAGARA
FENCE
FORTHORN
POWERS
BIRD
DUNBAR
ARMSTRONG CREEK
GOODMAN
FEMBINE
NADEAU

LABOR STATISTICS

DICKINSON-IRON COUNTIES, MICHIGAN Current Month and Year - February, 1966	DICKINSON	IRON
Population-1960 Census	23,917	17,184
I. TOTAL LABOR FORCE	7,625	4,425
II. AGRICULTURAL EMPLOYMENT	140	150
III. NON-FARM LABOR FORCE	7,485	4,275
IV. UNEMPLOYMENT	650	350
A. Unemployment as % of total labor force	8.5	
V. TOTAL NON-FARM EMPLOYMENT	6,835	3,925
A. Self-employment (including domestics)	1,100	575
B. WAGE AND SALARY WORKERS	5,735	3,350
1. MANUFACTURING INDUSTRIES	1,300	470
a. Durable goods industries	1,050	
(1) Lumber and wood products	175	85
(2) Furniture and fixtures	200	
(3) Metal industries & Machinery Mfg.	635	15
(4) Other durable goods	40	
b. Non-durable goods indust.	250	
(1) Food and kindred prod.	10	25
(2) Paper and allied prod.	85	50
(3) Printing, pub. & related	140	
(4) Chemicals, petro., & related	15	
(5) Other non-durable goods	0	295
2. NON-MANUFACTURING INDUSTRIES	3,030	2,325
a. Construction	400	100
b. Trans., commun., & utilities	440	75
c. Wholesale trade	300	75
d. Retail trade	900	650
e. Finance, real estate & insurance	120	75
f. Service	485	300
g. Mining	385	1,050
h. Other non-manufacturing	0	0
3. GOVERNMENT	1,405	555
a. Federal	410	70
1. Services	325	
a. Medical	320	
2. All other	85	
b. State	85	80
1. All other	85	
c. Local	910	405
1. Trans., Commun., & utilities	30	
2. Services	580	
a. Medical	220	
b. Educational	360	
3. All others	300	

SOURCE -- M.E.S.C. April, 1966

DICKINSON COUNTY

The population growth or loss, is watched with concern in the many areas of the country that are undergoing drastic changes in population. The term 'population explosion' is widely used in describing the tremendous increases in population around the globe. Not only does an increase in population usually mean an increase in business and industry, but in the United States, it means an increase in Federal funds for those programs whose funds are allocated on the basis of population.

Interest in population reaches a high tide decimally with the federal census. From the census we find that there is a constant redistribution of people. For example, there has been increasing concentration in urban and suburban areas. Further in Michigan, there has been a gradual redistribution of population for many decades, and though there has been a gradual increase in the population of the state, each decade shows that many counties have actually shown decreases. The Upper Peninsula is a case in point.

Census data show that Menominee, Houghton, and Keweenaw reached their peak of population by 1910 while eight other U.P. counties reached their peak over the next four decades--Dickinson reached its peak in 1930. Eleven of the 15 counties in the U.P. and 15 of the 68 in Lower Michigan, mostly in the northern part, presently have fewer people than formerly.

1. <u>County Population</u>

The table below shows population changes in Dickinson County since 1900:

1900	17,890
1910	20,524
1920	19,456
1930	29,941
1940	28,731
1950	24,844
1960	23,917

One can readily see that the largest increase occurred in the decade 1920 to 1930 when the Ford Motor Company located in the county. This resulted in the immigration of thousands of people.

There are three cities and seven townships in the county. The tables below show their population characteristic from 1930 on:

Cities	1930	1940	1950	1960
Iron Mountain	11,652	11,080	9,679	9,299
Kingsford	5,526	5,771	5,038	5,084
Norway	4,016	3,778	3,258	3,171

Townships	1930	1940	1950	1960
Breen	461	825	584	492
Breitung	9,175	8,708	2,739	2,860
Felch	771	848	678	509
Norway	1,453	1,272	1,102	1,027
Sagola	1,604	1,562	1,184	952
Waucedah	670	583	497	475
West Branch	139	126	85	53

Population Increase (or Decrease) Dickinson County

	Number	Percent
1900-1910	2,634	14.7
1910-1920	-1,068	-5.2
1920-1930	10,485	53.9
1930-1940	-1,210	-4.0
1940-1950	-3,887	-13.5
1950-1960	- 927	-3.7

Components of Population Change in Dickinson County

1940-1950	Population Change	-3,711
	Natural Increase	2,920
	Net Migration	-6,631
1950-1960	Population Change	- 927
	Natural Increase	2,532
	Net Migration	-3,459

2. City Population

Iron Mountain, 1960: 9,299

In the year 1960, 9.4% of the residents were foreign born; 35.5% were native of foreign or mixed parentage. Of the persons 25 years old and over, the median school years completed was 11.3; the percentage who completed four years of high school or more was 45.7. The non-worker labor force was 1.59. (This is the ratio of persons not in the labor force, includes children under 14, to the labor force.) Females 14 years old or over percentage in labor force was 33.8; the percentage of the civilian labor force unemployed was 6.2. Of the employed persons, the percentage in manufacturing industries was 22.2. The families median income (dollars) was $4,966. The percentage of families having under $3,000 incomes was 23.2; 8 percent of the families received $10,000 annual incomes or over.

Kingsford, 1960: 5,084

In the year 1960, 5.7% of the residents were foreign born; 25.7% were native of foreign born or mixed parentage. Of the persons 25 years old or older the median school years completed was 10.8; the percentage who completed four years of high school or more was 41.2; the non-worker ratio was 1.91; females 14 years old or over percentage in labor force was 28.8. The percentage of civilian labor force unemployed was 9.7; the percentage employed in manufacturing industries was 30.7. The family median income (dollars) was $5,088. The percentage of families having under $3,000 incomes was 24.2. Six percent of the families received $10,000 or more annual income.

Norway, 1960: 3, 171

In the year 1960, 10% of the residents were foreign born; 36.5% native of foreign or mixed parentage; persons 25 years old or over had a median school years of 10.2; those who completed high school of four years or more was 40.3%. The non-worker ratio was 1.69%; females 14 years old and over percentage of labor force was 30.8%. The civilian labor force unemployed was 10.2%; employed persons in manufacturing industries was 38.9%; family median incomes (dollars) was $4,728; 26.4% of the families received less than $3,000; 4.8% over $10,000.

The following are three separate projections of the population of Dickinson County in 1970:

Projection A

The population projection to 1970 for this county based upon the natural increase and migration trends since 1940 follow:

Population, 1960	Natural Increase	Migration	Projected Population, 1970
23,917	2,437	-2,500	23,850

Projection B

This is the second projection of the population of Michigan in 1970. It is based on the ratio method and in the assumption that: 1) the total population of Michigan in 1970 will be 9.6 million. 2) the population of each county would be a certain percentage of the 9.6 million, the percentage to be based on a continuation of the ratio trend from 1940 to 1960. If a county had a smaller percentage of the state's population in 1960 than in 1940, it was assumed to be still smaller in 1970; if the population was larger, the percentage would be still larger in 1970.

Percentage of Michigan Population
in Dickinson County

1940	.5423
1950	.3899
1960	.3057
Projected 1970	.1874
Projected population, 1970	17,990

Should Michigan's population be less than 9.6 million in 1970, then the projected 1970 figures of each county produced by the ratio method, Projection B, will likewise be less. On the other hand, the figures will be higher for each county if the state population is more than 9.6 million.

Projection C
Rate of Growth Same As 1950-60

Population Projection C contains projections in population of the counties to 1970 and a recapitulation of the two projections already used. Projection C is based upon the assumption that the population of each county will continue to grow at the same rate as it did during the 1950-60 decade. On this basis, the fast-growing counties will continue to grow fast and slow-growing counties will continue to grow slowly. The declining counties will continue to decline.

Dickinson County

1960	A	B	C	% Range
23,917	23,850	17,990	23,030	33%

Population - 65 years old and over, Dickinson County

1940-1,719 1950-2,219 1960-3,235

Increase in Population 65 Years and Over

1940-50 - 500 1950-60 - 1,016

It is estimated that in 1970, 14.7 - 15.2% of all the people in Dickinson County will be age 65 or over.

Social and Economic Characteristics - 1960

Subject	Iron Mountain	Kings-ford	Norway	Rural Farm
Nativity - Foreign Born	8.4%	5.7%	10%	6%
Foreign or Mixed Parentage	35.5	25.7	36.5	36.7
Median School Yr. Completed	11.3	10.8	10.2	8.7
Completed High School	45.7	41.2	40.3	14.9
Non-Worker Labor Force	1.59	1.91	1.69	36.4
Females 14 & over in Labor Force	33.8	28.8	40.3	6
Percent of Labor Force Unemployed	6.2	9.7	10.2	30.3
Percent Employed in Manufacturing Industries	22.2	30.7	38.9	4.2
Family-Median Income	$4,966	$5,088	$4,728	$3,700
Percent Families Under $3,000 year	23.2	24.2	26.4	33
Families Over $10,000 Year	8	6	4.8	4.8

The estimated migration for Dickinson County from 1950-60 shows that there was a net out-migration in the earlier age groups up to 19 years of age. There was a net male in-migration in the 55 and over age groups. The female trend is the same as the male except that there is no in-migration in the older age groups except in the 55-59 age group.

B. Labor Force

	September, 1961	September, 1962	April, 1963
Total Labor Force	8,170	8,100	7,500
Agricultural Employment	400	200	200
Non-Farm	7,770	7,900	7,300
Unemployment	800	780	1,300
Totan Non-Farm Employment	6,970	7,110	6,000
Self Employment	700	700	700
Wage & Salary Workers	6,270	6,400	5,300
Manufacturing	1,810	1,860	1,120
Non-durable Goods Industry	600	520	310
Construction	400	560	380
Transport, Communications & Utilities	520	550	520
Wholesale Trade	240	260	220
Retail Trade	1,200	1,200	900
Finance, Real Estate and Insurance	130	110	120
Service	600	440	430
Mining	180	200	290
Government	1,200	1,220	1,320

SOURCE: MESC April, 1963

Total Number in Labor Force and Unemployment Expressed in Percent

	1940	1950	1961	1962	1963	1966
Labor Force	8,000	8,000	8,150	8,100	7,500	7,625
Unemployment	17%	14%	10%	9.6%	17.3%	8.5%

Factors Contributing to Economic Decline

Mining, lumber and automobile and station wagon manufacturing large segments of population. The closing of the General Controls Corporation is another factor for economic decline in the county.

Below is a table showing the change in the number of jobs.

	1940	1950	1962
Mining	400	70	200
Lumber	440	1,150	300
Auto & Station Wagon Manufacturing	320	900	0

Labor Force Projection - 1970

It is difficult to project labor force figures to 1970. There is no indication that there is going to be an increase in the total population. There are indications that there may be a decrease in the total population. If this is true, the labor force in 1970 might well be 7,000-8,000. 1960 - 8,444. It might be added, also, that the M.E.S.C. no longer considers the 400 workers who reside in this county but who are employed at the Kimberly Clark Mill at Niagara, Wisconsin, as a part of the County Labor Force.

Projection of Working Age Population - 1970

A projection of working-age population in 1970 using a survival rate and not taking into account in or out migration indicates that there will be a decrease of approximately 3,000 from 21,995 to 19,185. If out migration continues at its present rate, the total for 1970 would be considerably lower.

J. Statistical Summary

	Iron Mtn.	Kingsford	Norway	Remainder of County	Totals
Population	9,299	5,084	3,171	6,363	23,917
Area	7 Sq. Mi.	4.2 Sq.Mi.	9sq.Mi.	736.8	757
No. of Schools	6	6	4	6	22
Pupil Enrollment	1,423	1,864	802	967	5,056
Pupil Enrollment	1,671	2,059	1,274	1,361	6,365
No. of Teach.	62	82	30	43	217
Hotels	3	0	1	0	4
Motels	9	0	2	?	
Parks	1	3	1	4	9
Airports	0	1	0	0	1
Churches	11	8	5	8	32
Fire Departments	1	1	1	1	4
Police Depts.	1	1	1	0	3
Banks	2	0	1	0	3
Hospitals (County wide system)	2	0	1	0	3
Nursing Homes	4	0	1	2	7
Libraries (County wide system)	1	0	1	0	2
Types of Gov't.	Mayor-Coun.	Manag. Coun.	Township		
No. of Supervisors	5	4	3	7	19
Elected Head Off.	Mayor	Mayor	Mayor	Supervisors	
Courts	3	1	1	4	9
Newspapers	1	0	0	0	1
Radio Stations (WMIQ)	1	0	0	0	1
Theatres	1	0	0	0	1
Golf Courses	1	0	1	0	2
Railroads	2	2	2	3	3
Bus Lines	2	2	2	3	3
Highways	3	2	2	3	3
Utilities	Water and Filtration Sewage Treat.	Elect. Hydro Water Plant Sewage Water Treat. Meters			

Date: 1960 U.S. Census and Dickinson County Planning Commission

IRON COUNTY

1960 County Census 17,184

State Equalized Value - $64,590,487

This county was set off in 1885 from Marquette and Menominee Counties. Iron Ore deposits which gave the new county its name were the first on the Menominee Iron Range to be discovered. Shipping of ores began in 1882 when the railroad came in. Iron River was the first county seat, but in 1889, after a celebrated struggle, the government was shifted to Crystal Falls. Logging, which began in 1875, has been second only to mining in Iron County's economy.

Iron County has approximately 2,105 natural lakes covering more than 15,240 acres. In addition to this, there are seven hydroelectric water reservoirs covering 9,166 acres and 902 miles of streams.

CRYSTAL FALLS TOWNSHIP
Acres 149,014.00
Population 1,443
Local Assessed - - $1,430,184
State Equalized - - $5,945,626

IRON RIVER TOWNSHIP
Acres 131,095.00
Population 2,336
Local Assessed - $6,209,190
State Equalized - $16,345,285

HEMATITE TOWNSHIP
Acres 99,111.00
Population 523
Local Assessed - - $373,405
State Equalized - - $1,110,076

MANSFIELD TOWNSHIP

Acres 68,393.00
Population 302
Local Assessed - - $963,870
State Equalized - - $2,354,156

MASTODON TOWNSHIP
Acres 83,764.00
Population 663
Local Assessed - - $2,451,720
State Equalized - - $6,244,374

STAMBAUGH TOWNSHIP
Acres 112,002.00
Population 1,092
Local Assessed - - $1,530,725
State Equalized - - $5,072,906

CITY OF IRON RIVER
Acres 2,280.00
Population 3,754
Local Assessed - - $4,074,605
State Equalized - - $9,506,619

CITY OF STAMBAUGH
Acres 1,040.00
Population 1,876.
Local Assessed - - $2,497,556
State Equalized - - $6,192,726

CITY OF CASPIAN

Acres 802.70 - Population 1,493

Local Assessed - - $ 618,105

State Equalized - - $2,014,929

CITY OF CRYSTAL FALLS

Acres 1,920.00 Population 2,203

Local Assessed - - $1,319,860

State Equalized - - $5,123,517

CITY OF GAASTRA

Acres 1,040.00 Population 582

Local Assessed - - $232,062

State Equalized - - $583,641

Iron County Employment Outlook

Employment in most all industries in Iron County remained constant during the winter period ending February 15, according to a report by the Michigan Security Commission.

The only exception was for piece-cutters who were laid off to enable the skidding crews to get all pulp and logs out of the woods before the spring breakup. Unemployment totaled 575 for the period.

In comparison, other areas of the Upper Peninsula had an increase in unemployment as a whole, mostly due to unfavorable weather conditions.

Total claims for unemployment compensation in the Upper Peninsula fluctuated sharply during the January 6, to March 10, period. After reaching a peak of 5,837 during the week ending February 3, claims subsequently declined to 5,013 in the reporting week ending March 10. By early March the claims totals were down to an average of around 5,200. During the corresponding period last year, a high of 6,041 was registered and in early March there were still over 5,800 claims.

The average hourly earnings in the various fields of industry during February were food, $2.35; basic lumber products, $1.95; paper, $2.93; printing and publishing, $2.23; non-electrical machinery, $2.65; and metal mining, $3.23.

1965-1966

DICKINSON COUNTY

IRON MOUNTAIN PUBLIC SCHOOLS
Iron Mountain, Michigan

School Census-2,411 Membership-1,671 Equalized Valuation-$20,458,945

BREITUNG TOWNSHIP SCHOOLS - KINGSFORD
Fourth Class District No. 1

School Census-2,562 Membership-2,059 Equalized Valuation-$20,008,358

FELCH PUBLIC SCHOOLS
Now Consolidated with Sagola Township
Fourth Class No. 4
Felch, Michigan

School Census-171 Membership-176 Equalized Valuation-$1,886,410

SAGOLA TOWNSHIP SCHOOLS
Now Consolidated with Felch Public Schools
Fourth Class District No. 3
Channing, Michigan

School Census-299 Membership-251 Equalized Valuation-$1,695,682

NORWAY-VULCAN AREA SCHOOLS
Norway, Michigan

School Census-1,433 Membership-1,274 Equalized Valuation-$9,211,366

MATER DEI PAROCHIAL SCHOOL - To Eighth Grade
Kingsford, Michigan
Membership - 203

IMMACULATE CONCEPTION SCHOOL - To Eighth Grade
Iron Mountain, Michigan
Membership - 264

ST. MARY AND ST. JOSEPH SCHOOL - To Eighth Grade
Iron Mountain, Michigan
Membership - 355

TOTAL SCHOOL GRADUATES
DICKINSON AND IRON COUNTIES

Iron Mountain	1961	126
	1962	89
	1963	108
	1964	115
	1965	157
Kingsford	1961	100
	1962	93
	1963	93
	1964	109
	1965	131
Norway	1961	57
	1962	59
	1963	43
	1964	44
Consolidated-Norway-Vulcan Area Sch.	1965	91
Felch	1961	12
	1962	19
	1963	23
	1964	19
	1965	21
Channing	1961	13
	1962	17
	1963	14
	1964	18
	1965	16
Vulcan	1961	26
	1962	25
	1963	23
	1964	32
Joined Norway	1965	--

IRON COUNTY

Iron River	1961	110
	1962	88
	1963	91
	1964	107
	1965	135
Stambaugh	1961	81
	1962	64
	1963	75
	1964	86
	1965	117

(Iron County Continued)

Crystal Falls	1961	49
	1962	51
	1963	50
	1964	60
	1965	72
Alpha	1961	4
	1962	6
	1963	7
	1964	10
	1965	15
Amasa	1961	6
	1962	12
	1963	8
	1964	10
	1965	10

Graduates in Iron County 1961-1965		1,324
Graduates in Dickinson County 1961-1965		1,693
	Total	3,017
Total number of questionnaires sent out		3,017
Total number returned		946
Total number that attended college 4 or more years		90
Total number attending college at present		286
Total number that attended Technical or Apprenticeship School		180

Dickinson County Enrollment Projection

Projected enrollment of 9-12 students for 1970

Breitung Township	735
Iron Mountain Schools	699
Norway-Vulcan	379
North Dickinson (Channing & Felch)	166
Total 9 - 12	1,979

Estimated projection of total public school enrollment for Dickinson County.

	Census - Actual Enrollment - Projected					
	1965	1966	1967	1968	1969	1970
Breitung	2562	2059	2097	2110	2131	2123
Iron Mountain	2411	1672	1641	1685	1702	1730
Norway-Vulcan	1433	1274	1224	1232	1242	1250
North Dickinson	626	539	567	554	552	548

Actual Parochial enrollment in County. Grade 1 - 8.

	1960	1962	1965	1966
Mater Dei	245	220	222	204
Immaculate Conception	297	280	272	263
St. Mary and St. Joseph	414	403	363	353
	956	903	857	820

Projected Public School Enrollments

Grade 9-12 by School District

Iron County, Michigan

Year	Bates	Cry.Falls	Hematite	Iron River	Mastadon	Stambo.	Total
1963-64	--	281	45	549	47	415	1337
1964-65	--	298	44	525	54	417	1338
1965-66	--	294	40	481	58	401	1274
1966-67	--	296	37	430	61	388	1212
1967-68	--	299	38	377	69	391	1174
1968-69	--	296	43	378	69	392	1178
1969-70	--	293	43	362	60	393	1151
1970-71	--	286	43	343	58	377	1107
1971-72	--	295	41	335	52	372	1095
1972-73	--	277	33	350	45	371	1076
1973-74	--	282	34	355	44	352	1067
1974-75	--	286	29	352	41	366	1074
1975-76	--	264	26	350	33	362	1035
1976-77	--	268	28	328	36	350	1010
1977-78	--	244	20	288	34	312	898

CURRENT OFFERINGS

IN PRACTICAL ARTS

AND

VOCATIONAL EDUCATION

IN

DICKINSON AND IRON

COUNTIES

Practical Arts Classes
Breitung Township School District, Michigan
Junior High School
1965-1966

Grade		Teachers
7	Home Economics	Shiverski
	Industrial Arts (General Shop ½ yr.)	Hill
8	Home Economics	Shiverski
	Industrial Arts (General Shop ½ yr.)	Hill
9	General Business (full year)	Johnson
	Industrial Arts (full year)	Hill, Vittone
	Home Economics (full year)	Cummings, Shiverski

Vocational and Practical Arts Classes
Breitung Township School District, Kingsford
Senior High School 10-11-12
1965-1966

All trade and industrial classes are two hours; all others are one hour.

Business and Office Occupations	Grades 10-11-12	Teachers
Personal Typing		Anderla
Notehand		Berutti
Typing I, II		Person
Shorthand I, II		
Office Machines I, II		
Bookkeeping I		
Retailing		
Business Economics		
Steno-Typing		

Trade and Industrial Subjects	Teachers
360 HOURS A YEAR FOR 3 YEARS	
Carpentry I, II, III	Justus-Channing
Drafting I, II, III	Channing
Electricity and Appliance Repair I, II, III	Vittone
Machine Shop I, II, III	Varda
Power Mechanics I, II, III	Vittone
Welding I, II, III	Justus
Industrial Math (one hr. per day)	Wilcheck

Blueprint Reading and Shop Theory will be required of all Trade and Industrial students in the fall of 1966. (½ credit each.)

Home Economics and related wage earning occupations	Teachers
Home Economics I, II, III	Cummings
Family Living	
Job Pre Training (Salespersons)	

Total number Vocational and Practical Arts teachers, (Jr. & Sr.) 11.

Vocational Evening Adult Classes
Breitung Township Schools, Kingsford
1965-1966

		Teachers	No.Stud.
Blueprint Reading	For Grede Foundry	Hill	12
Arc Welding	3 Groups during yr.	Justus	46
Typing	Upgrading	Strand	16
Office Machines		Noel	18
Electricity	Job Upgrading	Capra	30
(Power Plant Technology)	3 Sem. scheduled		

Total number evening adult vocational teachers - 5

Stambaugh Township Public Schools
Stambaugh, Michigan
Practical Arts

Home Economics I, II, III (2 classes)		Teachers--Senical
Industrial Arts:	Arch. Drawing	Hakkinen
	Advanced Drawing	
	General Math.	
	Mech. Drawing	
Commercial:	Personal Typing	Monson
	Shorthand I, II	Swanson
	Typing	Swanson

Iron River High School
Practical Arts Classes

Industrial Arts Department	Teacher
Mechanical Drawing (3 classes)	Gasparini
Architectural Drawing (1 class)	Gasparini
Metal Shop I, II (2 classes)	Carnitz
Wood Shop I, II (3 classes)	Chiesa

Business Education Department	Teacher
Bookkeeping I (2 classes)	
Bookkeeping II (1 class)	
Typing I (1 class)	
Personal Typing (½ year) (1 class)	Karjala
Office Practice (1 class)	
Shorthand I (1 class)	
Shorthand II (1 class)	Zyskowski
Home Economics Department	
Home Economics I (2 classes)	
Home Economics II (2 classes)	
Home Economics III (1 class)	Larson

Norway High School
Vocational and Practical Arts
1965-1966

Subject	No. Students	Teacher
Bookkeeping	45	Demske, Maule
Office Machines	50	Demske
Secretarial Skills	14	Alsteens
Shorthand I	35	Alsteens
Shorthand II	12	Alsteens
Personal Typing	32	Demske
Typing I	67	Demske
Typing II	12	Alsteens
Drafting	44	Rigotti
Industrial Arts I	14	Rigotti
Industrial Arts II	23	Rigotti
Industrial Arts III	6	Rigotti
Welding I, II	28	Leppiaho
Home Economics I	29	Lindeborg
Home Economics II and III	26	Lindeborg

Occupational Courses available at Norway High School

High School Level:

The Norway High School offers two occupational courses in the high school, made possible under the 1963 Vocational Act.

The courses are offered on a two-hour block time during the regular school day. The courses are Stenography and Combination Welder. These courses are offered at the eleventh and twelveth grade level. They also comply with the state recommendation.

Evening Adult Level Program in Norway

Norway High School provides an occupational training course in the occupation of combination welder. The course has been designed to provide the individual with job-entry skills, retraining and for up-grading his skill as a welder.

The total length of this course consists of 180 hours of training in Shielded Metal Arc Welding and Oxy-Acetylene Welding.

Iron Mountain Public Schools
Industrial Arts and Vocational Education Offerings Grades 7 - 12.

Industrial Arts	Teachers:
Grade 7 Woodwork	
Grade 8 General Shop	
Grade 9 Technical Drawing I	Villa
Grade 10 Technical Drawing II	Hill
Grade 10 Woodwork I 180 hours	Zini
Grade 11 Industrial Technology I	Antonetti

Vocational - Trade and Industrial

Grade 11-12 Wood Technology 720 hours, 2 hours per day, 5 days per week, for 72 weeks.
Grade 11-12 Electronics 720 hours, 2 hours a day, 5 days per week for 72 weeks.
Grade 11-12 Auto Mechanics 720 hours, 2 hours a day, 5 days per week for 72 weeks.

Business and Office Occupations	Teacher
Bookkeeping I	Noel
Typing I	Occhietti
Basic Typing	Harvey
Business Law	
Secretarial Training	
Notehand	
Typing II	
Shorthand I	
Basic Business	

Home Economics	Davey
Home Economics I, II	

Vocational Adult Evening Classes

Welding	Upgrade	14 students
Auto Tuneup	Upgrade	14 students

Hematite Township School District
Amasa, Michigan
Vocational and Practical Arts Classes
1965-1966

Home Economics		Teacher
Grades 7-8 Clothing		Pfeiffer
Grade 9 Foods		
Grades 11-12 Foods and Clothing		
Industrial Arts		
General Shop	Grade 7	Odlund
Bench and Lathe Work	Grade 8	
Mechanical Drawing	Grade 9	
Architectural Drafting	Grades 11-12 1st. Sem.	
Carpentry	Grades 11-12 2nd. Sem.	
Furniture Making	Alternate Year	
Business Education		
Typing I (personal)	Grade 10	Bowman
General Business	Grade 10	
Typing II (Business)	Grades 11-12	
Bookkeeping	Grades 11-12 (Alternate year)	
Shorthand	Grades 11-12 (Alternate year)	

Crystal Falls High School
Practical Arts Classes
1965-1966

Grade 9	
Mechanical and Architectural Drawing	Boulanger
Metal Work	
Engineering Drawing	
General Shop	
Adv. Carpentry	Smith
Woodworking	
General Shop	
Homemaking for the Business Girl	Schulze
Clothing Construction	
Home Economics II	
Shorthand	Jacobs
Personal Typing	
Business Typing	
Office Practice	
Bookkeeping	
Home Economics I	Albarello

Mastodon Township School District
Alpha, Michigan
Practical Arts Classes
1965-1966

			Teacher
General Shop	Grade 7	1 Sem.	Gollakner
Woodwork Unit Electricity Unit Metal Unit Crafts Unit Sketching Plans, etc.			
General Shop	Grade 8	1 Sem.	Gollakner
Woodwork Unit Electricity Unit Metal Unit Crafts Unit Drafting Introduction			
Grades 9 & 10	Combined one class period		Gollakner
Mechanical Drawing		2 sem.	
Carpentry I		1 sem.	
Machine Woodwork		1 sem.	
Arts and Crafts I, II		Grade 9-12	Gollakner
Home Economics		Grade 7-10	Anderson
Typing - 3 sections			LaBocki
Bookkeeping - 1 section			LaBocki

NORTH DICKINSON COUNTY SCHOOL DIST. #3
(Channing-Felch)
TENTATIVE SCHEDULE FOR 1966-67
Practical Arts and Vocational Classes

9th. Grade
General Shop
Home Economics

10th. Grade
Home Economics
General Shop
Vocational Agriculture

11th. Grade
Shorthand
Typing
Beginning Drafting
Vocational Agriculture

12th. Grade
Typing
Adv. Drafting or Solid Geometry (depending on no. of students
Shorthand
Bookkeeping
Vocational Agriculture

Forms and Tabulation of Results from:

Grade 7-8-9

Grades 10-11-12

Graduates 1961-1965

Dropouts Random Sample

Business and Industry
Manpower Survey

(Random Sample Dickinson-Iron Area)

This space to be completed by guidance counselor or principal.

Aptitude_____

Mental Maturity_____

verbal _____ Non verbal_____

Extent that services of a counselor are available to above student.

_____ None _____ ½ day

_____ 1 hour _____ Full day

Grade 7-8-9

CONFIDENTIAL

Form # 1

Name_____

School District_____

A research study of the Vocational Education needs of the Dickinson-Iron County area is being conducted. The purpose of this questionnaire is to gather information and opinions to use in improving educational programs for employment-bound citizens of the area.

You can help by answering the following questions.

Grades 7-8-9

When I finish my education I plan to elect the following occupation: (check the one that is nearest your interest if not listed.)

Group I	Group II	Group III
_____1 Machine Tool	_____1 Drafting & Design	_____1 Farming
_____2 Welding	_____2 Appliance Repair	_____2 Police
_____3 Automotive	_____3 Electronics	_____3 Logging
_____4 Carpentry	_____4 Data Processing	_____4 Clerical
_____5 Plumbing	_____5 Graphic Arts	_____5 Factory
_____6 Electricity	_____6 Decorator	_____6 Housewife
_____7 Masonry	_____7 Beautician	_____7 Military Career
_____8 Other	_____8 Other	_____8 Other

Group IV	Group V
_____1 Business Machine	_____1 Engineer
_____2 Retail Sales	_____2 Teacher
_____3 Food Service	_____3 Clergy
_____4 Hospital Aid	_____4 Lawyer
_____5 Medical Technology	_____5 Scientist
_____6 Secretary	_____6 Doctor
_____7 Practical Nurse	_____7 Nurse (R. N.)
_____8 Tailor	_____8 Other
_____9 Meat Cutter	
____10 Floor Covering (Tile & Carpeting)	
____11 Other	

TABULATION OF GRADES 7-8-9
STUDENT OCCUPATIONAL INTEREST FORM

Group I	Group II	Group III
20 Machine Tool	36 Drafting and Design	24 Farming
27 Welding	3 Appliance Repair	41 Police
91 Automotive	33 Electronics	14 Logging
35 Carpentry	6 Data Processing	0 Clerical
2 Plumbing	6 Graphic Arts	5 Factory
19 Electricity	20 Decorator	31 Housewife
1 Masonry	137 Beautician	128 Military Career
9 Other	10 Other	19 Other

Group IV	Group V 754 - Professional
7 Business Machine	____ Engineer
8 Retail Sales	____ Teacher
9 Food Service	____ Clergy
9 Hospital Aid	____ Lawyer
17 Medical Technology	____ Scientist
118 Secretary	____ Doctor
40 Practical Nurse	____ Nurse (R. N.)
0 Tailor	____ Other
5 Meat Cutter	
1 Floor Covering (Tile & Carpeting)	
12 Other	

This space to be completed by guidance counselor or principal.

Aptitude_____

Mental Maturity_____

Extent that services of a counselor are available to above students:

____ None ____ ½ day

____ 1 Hour ____ Full Day

Grades 10-11-12

CONFIDENTIAL

Form # 2

Name_____

School District_____

A research study of the Vocational Education needs of the Dickinson-Iron County area is being conducted. The purpose of this questionnaire is to gather information and opinions to use in improving educational programs for employment-bound citizens of the area.

You can help by answering the following questions.

Grades 10-11-12

1. When I finish my education I plan to elect the following occupation: (Check the one that is nearest your interest if not listed.)

Group I

___1 Machine Tool
___2 Welding
___3 Automotive
___4 Carpentry
___5 Plumbing
___6 Electricity
___7 Masonry
___8 Other

Group II

___1 Drafting & Design
___2 Appliance Repair
___3 Electronics
___4 Data Processing
___5 Graphic Arts
___6 Decorator
___7 Beautician

Group III

___1 Farming
___2 Police
___3 Logging
___4 Clerical
___5 Factory
___6 Housewife
___7 Military Career
___8 Other

Group IV

___1 Business Machines
___2 Retail Sales
___3 Food Service
___4 Hospital Aid
___5 Medical Technology
___6 Secretary
___7 Practical Nurse
___8 Tailor
___9 Meat Cutter
___10 Floor Covering (Tile, Carpeting)

Group V

___1 Engineer
___2 Teacher
___3 Clergy
___4 Lawyer
___5 Scientist
___6 Doctor
___7 Nurse (R. N.)

2. What do you plan to do during the first year after you finish high school: (Check One)

___1. Attend a Junior College
___2. Attend a College or University
___3. Work
___4. Enter Military Service
___5. Attend Business College
___6 Become a housewife
___7 Attend a trade or technical school
___8 Don't know
___9 Other (Write in)_____

3. If the schools in this area (Dickinson-Iron Counties) were to cooperate and specialize in 2 or 3 occupations each, would you attend job preparatory classes? _____ Yes _____ No

4. Would you be willing to take these classes in 11 and 12 grade? _____Yes _____No

5. If a post high school vocational-technical school were established in Dickinson-Iron County would you attend? ____Yes ____No

TABULATION OF GRADES 10-11-12
STUDENT OCCUPATIONAL INTEREST FORM

Group I	Group II	Group III
27 Machine Tool	48 Drafting & Design	10 Farming
62 Welding	6 Appliance Repair	49 Police
72 Automotive	29 Electronics	14 Logging
14 Carpentry	16 Data Processing	22 Clerical
1 Plumbing	10 Graphic Arts	14 Factory
19 Electricity	16 Decorator	31 Housewife
3 Masonry	130 Beautician	63 Military Career
159 Other		0 Other

Group IV

26 Business Machines
7 Retail Sales
6 Food Service
7 Hospital Aid
35 Medical Technology
171 Secretary
29 Practical Nurse
0 Tailor
3 Meat Cutter
0 Floor Covering (Tile & Carpeting)

Group V 572 College
___Engineer
___Teacher
___Clergy
___Lawyer
___Scientist
___Doctor
96 Nurse (R. N.)

2. What do you plan to do during the first year after you finish high school? (Check One)

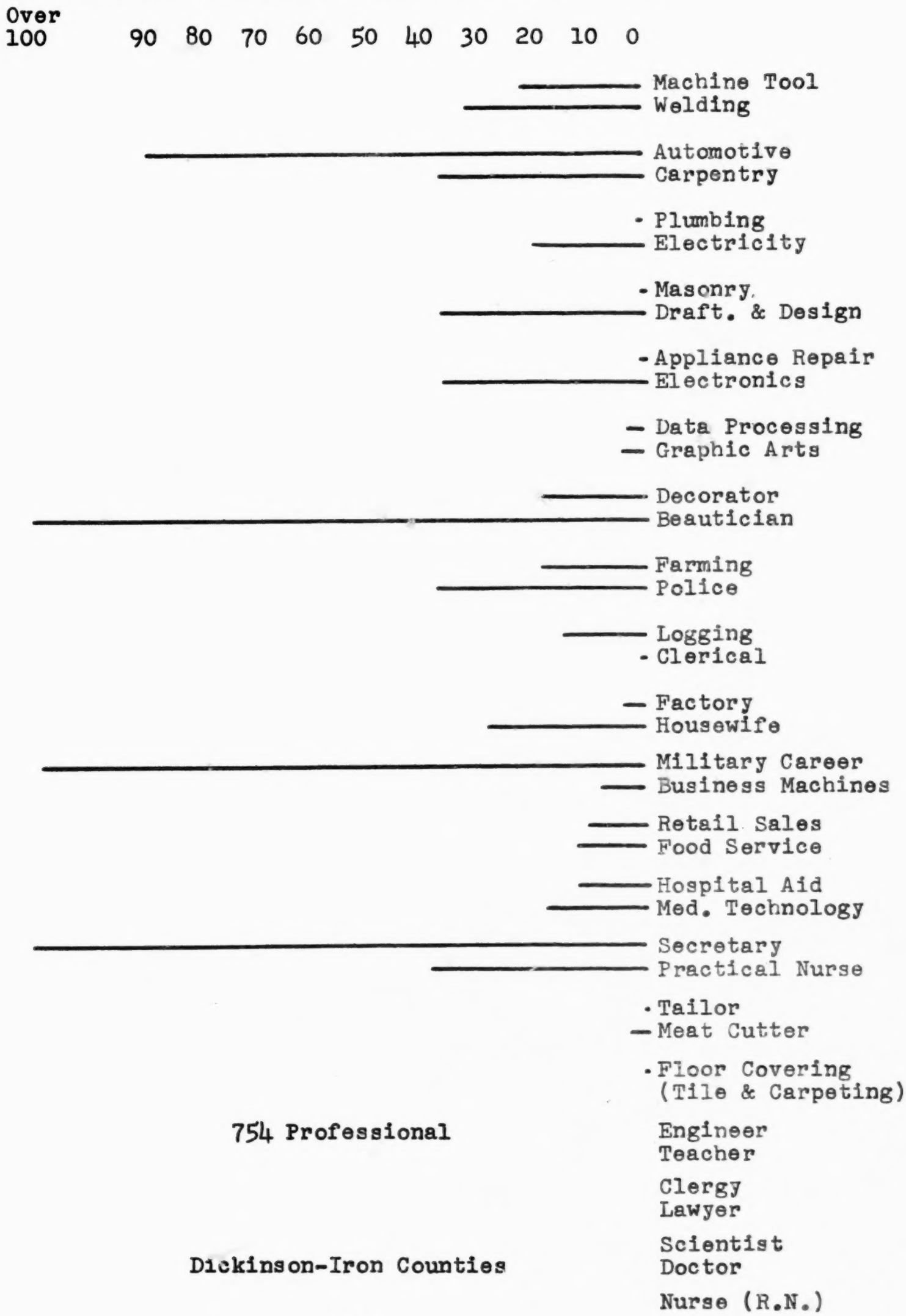
42 Attend a Junior College	14 Become a housewife
732 Attend a College Or Univ.	157 Attend a trade or technical school
280 Work	
146 Enter Military Service	128 Don't know
96 Attend Bus. College	78 Other (Write IN)_____

3. If the schools in this area (Dickinson-Iron Counties) were to cooperate and specialize in 2 or 3 occupations each, would you attend job preparatory classes? 1205 Yes 476 No

4. Would you be willing to take these classes in 11 and 12 grades?
1170 Yes 444 No

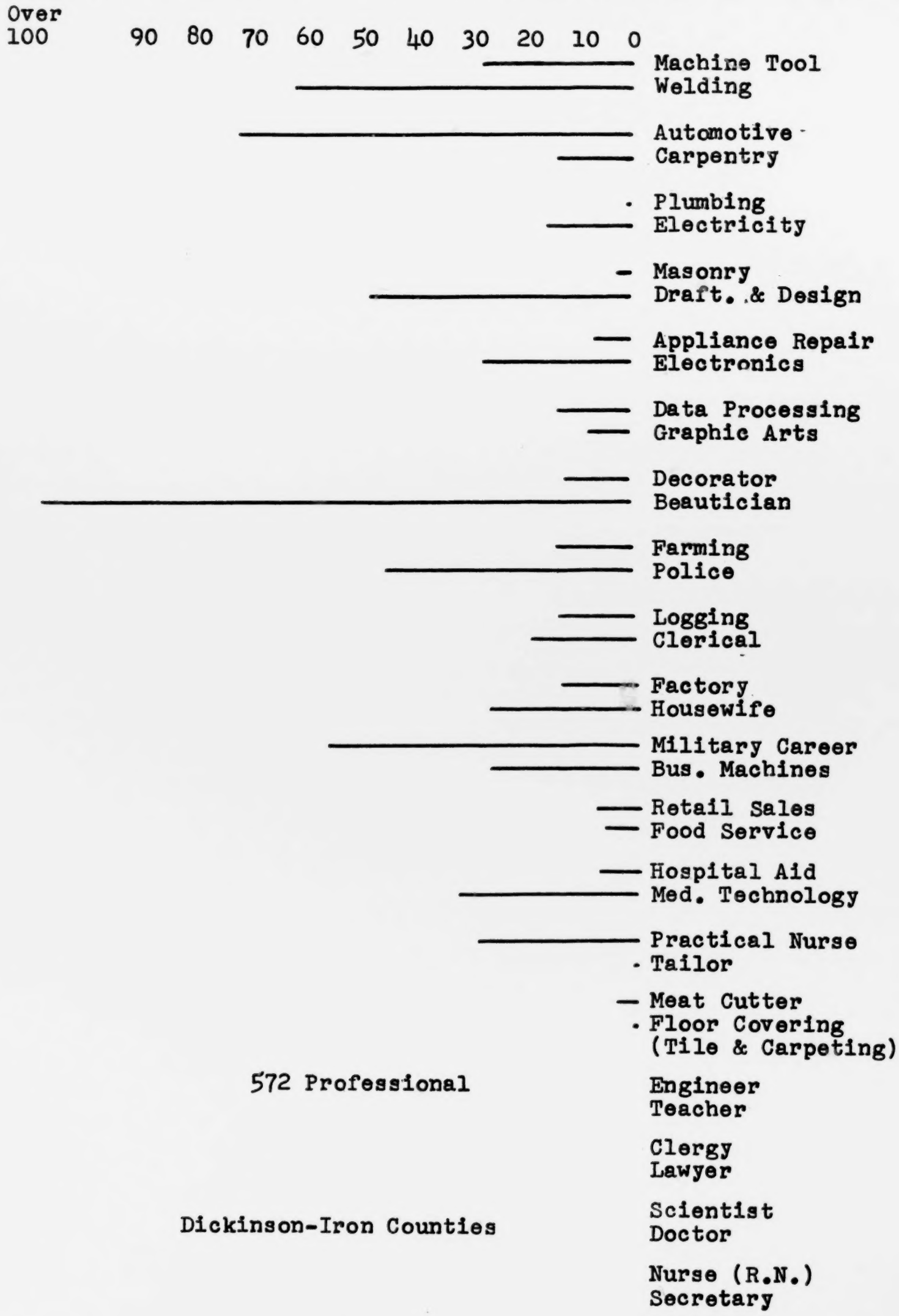
5. If a post high school vocational-technical school were established in Dickinson-Iron County, would you attend?
804 Yes 862 No

Occupation Choice of Students in Grades 7-8-9



Dickinson-Iron Counties

Occupation Choice of Students in Grades 10-11-12



Dickinson-Iron Area
Vocational Educational Study

January 6, 1966

Dear Former Student:

In 1961 the late President John F. Kennedy asked for a study of vocational and technical education in the United States. This study was completed in 1962 and it disclosed that vocation and technical education needed to be expanded greatly if our country wanted to keep its position of leadership in the world.

The Congress of the United States responded to the challenge and passed The Vocational Education Act of 1963.

Since that time, schools all over the United States have started making plans to improve all areas of vocational education for those persons who desire to enter employment after formal schooling ends. For some this may mean after the eighth or ninth grade. Many others however, will graduate from high school, and should have some job skill to offer a potential employer upon graduation. Adults also need retraining in new skills as automation displaces more persons from jobs.

The ten high schools in the counties of Iron and Dickinson have joined together to make a study of the vocational and technical education needs of the young people of this area.

Part of the study includes getting information about how recent graduates and those that left before graduation have fared in the world of work.

We hope you will assist us in determining what type of classes should be offered in the high schools. Please fill out the enclosed form and mail as soon as possible, we need your cooperation to make the study a success. Your answers will be strictly confidential so please be frank. Thank you.

The Dickinson-Iron Area
Vocational Education Study Committee
Laurence Varda, Chairman

Dickinson-Iron County
Area Vocational Study

FOLLOW UP STUDY OF FORMER STUDENTS

CONFIDENTIAL

We need your assistance in getting information about you and your job that would be helpful in developing better vocational program.

Name_____ (Present Address)_____ (City)_____

I attended_____ school in_____ (City)

Married_____ Single_____

1. Please check highest education level attained:

7th. Grade	___	Technical School (Civilian or Military)	
8th. "	___	6 Mo.	_____
9th. "	___	1 Yr.	_____
10th. "	___	2 Yr.	_____
11th. "	___	Apprenticeship	
12th. "	___	1 Yr.	_____
		2 Yr.	_____ More_____

COLLEGE

1 year	_____	3 years	_____	Military Service
		4 "	_____	Yes_____ NO_____
2 "	_____	More	_____	Branch_____
				Type work_____

2. Where do you work?_____ What do you do?_____

History of employment:

What was your first job?_____ (Were you trained for this job? Yes___ No___)

2nd._____ (Were you trained for this job? Yes___ No___)

3rd._____ (Were you trained for this job? Yes___ No___)

4th._____ (Were you trained for this job? Yes___ No___)

3. What subjects which you took in high school helped you get a job?

1. 3.

2.

4. Did anyone help you with plans for your future while you were still in school? Yes_____ No_____

5. a. Guidance Counselor_____ b. Principal _____

c. Instructor _____

6. Do you think schools should give more to students in planning for their future occupations? Yes_____ No_____

7. If your answer to # 6 was "yes" - tell us what kinds of help would have been needed:

_____ Job Information _____Other

_____ Selecting High School Subjects

8. Do you think the schools should do more and better training for occupations and skills? Yes_____ No_____ Comments:

9. What were some things that bothered you when you were applying for a job?

____a____Filling Applications ____d____No job in Home Town

____b____Inadequate Training ____e____Not enough pay

____c____Did not want to move ____f____Others_____

10. If you could go back to school, what subject would you take that would help you advance in your present occupation?

_____History _____Machine Shop

_____Business _____Welding

a. typing _____Auto Mechanics

b. shorthand _____Electronics

c. office machines _____Electricity

d. filings _____Carpentry

e. bookkeeping _____Graphic Arts (printing)

_____Mathematics _____Drafting

_____English _____Others

DICKINSON - IRON AREA
TABULATION OF ALL GRADUATES
Ten High Schools - 1961 - 1965

Total number of questionnaires sent out.....	3,017
Total number of completed returns.....	964
Unclaimed (Returned by Post Office).....	106
Total number that completed college (4 or more years)....	90
Total number that attended Tech. or Apprenticeship Sch...	184
Number still attending college.....	287

Personal Data
Single 682 Married 261 Divorced 1 No Response 20

2. Present Location

Live in immediate area, not counting college students..	229
Live in other parts of the U. P. (Non-students).....	28
Live in the Lower Peninsula (non-students).....	23
Serving in the Armed Forces.....	85
Work in Green Bay - Fox Valley, Wisconsin.....	35
Work in Milwaukee, Wisconsin area.....	111
Work in Chicago, Illinois area.....	60
Work in Minneapolis, Minnesota area.....	25
Work in Ark., Texas, Oregon, N. Dakota, Virginia, Florida, N. Y., Calif., N.J., Mass., Tenn., Ind., Mo., Ala., Wash. D.C., Hawaii, Washington, Alaska.....	27
Attending Federal-State Manpower Development and Training classes (nurses not included).....	6
Unemployed graduates living in area.....	44

2-b. What do you do?
Following are jobs held by a random sample of the high school graduates:

Sales Persons	17	Print Shop	2
Stenographers	34	Farming	2
Medical Occupations & Lab. Assistants	53	Sheet Metal Worker	1
Waitress	6	Butcher	3
Telephone Operators	8	Pulp Worker	1
Governess-Mothers helper	4	Fireman	1
Beautician	11	Custodian	1
Electrical Workers	5	Conservation Dept.	2
Mechanics	18	Soil Density Tester	1
Carpenters, Bricklayers Construction	8	Barber	1
Draftsmen	8	General Sales	4
Welders	8	Mortician	1
Machine Operators	29	Dry-wall Taper	2
		Truck Driver	3
		Railroad Worker (brakeman-switchman)	2

History of employment:

3. What subjects that you took in high school helped you get a job?
Classes that helped graduates get a job:

Business and Office		Industrial Arts	
Shorthand	104	Machine Shop	18
Typing	131	Metal Working-	9
Business	8	Industrial Arts	10
Bookkeeping	57	Woodworking	11
Office Practice	11	Drafting	40
Accounting	4	Welding	12
Home Economics	17		

Other High School Subjects:

Science	21	Geometry	4
Chemistry	20	Algebra & Math.	134
Speech	17	English	109
Biology	12	Physiology	3
Foreign Language	4	Physics	16
Band	4	Sociology	4
History & Gov't.	6		

4. Did anyone help you with plans for your future while you were still in high school?

Yes 598 No 311

5-a. Guidance Counselor 443
Principal 83
Instructor 80

5-b. Do you think schools should give more help to students in planning for their future occupations?

Yes 775 No 44

6. If your answer to # 5 was yes, tell us what kinds of help would have been needed:

243 Job Information
169 Selecting High School Subjects
398 Others

7. Do you think the schools should do more and better training for occupations and skills?

Yes 610 No 67 287 Did not respond

8. What were some things that bothered you when you were applying for a job?

84	Filling applications	326	No job in home town
242	Inadequate training	271	Not enough pay
82	Did not want to move		

Other things which bothered them:

1. Military obligation
2. Non-experienced
3. No college education
4. Job interview
5. Lack of confidence
6. No summer jobs available
7. Limited advancement
8. Expected to know salary

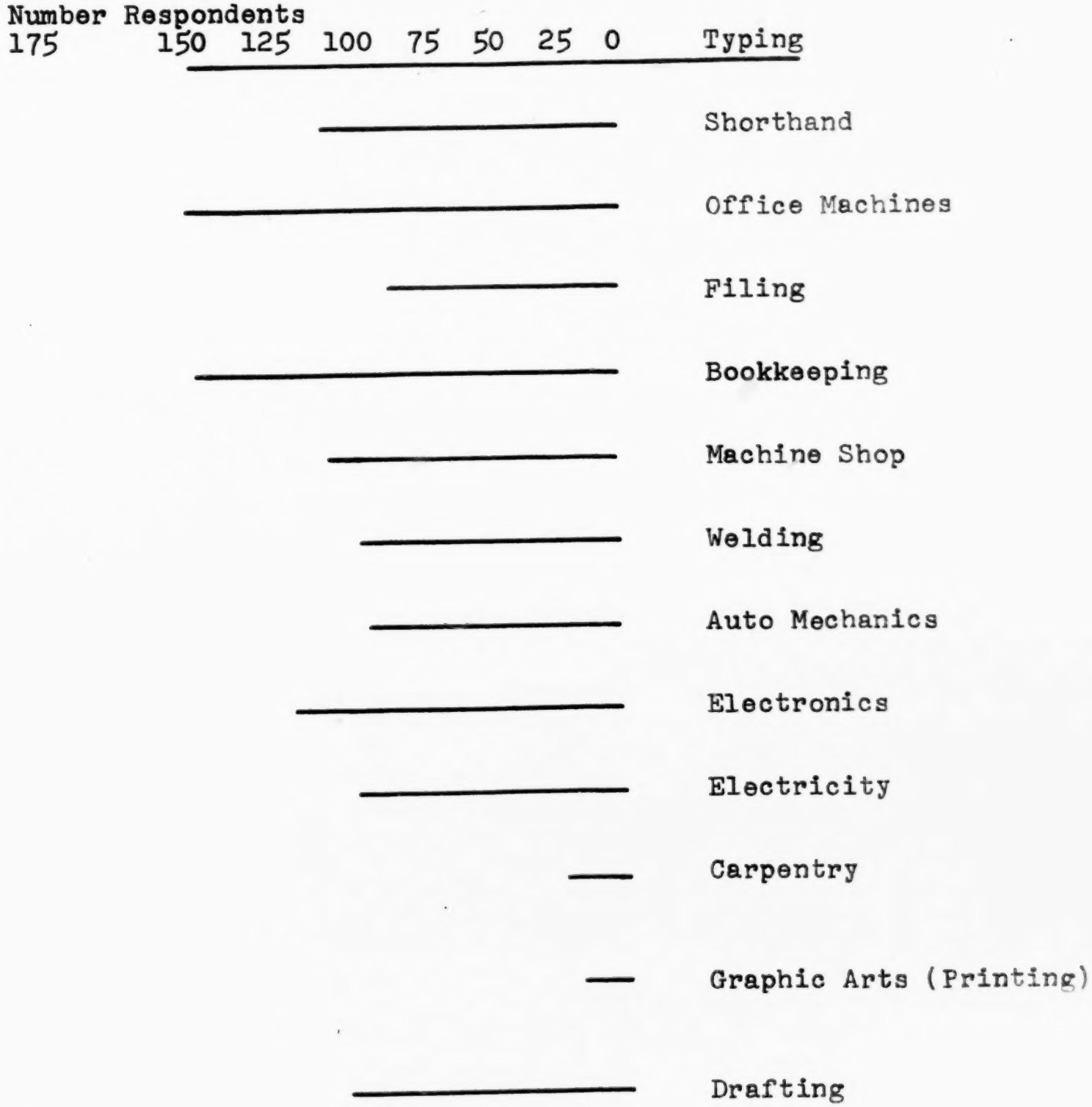
9. If you could go back to school, what subject would you take that would help you advance in your present occupation?

Business & Office		Trade & Industry	
149	Typing	114	Machine Shop
114	Shorthand	105	Welding
150	Office Machines	87	Auto Mechanics
93	Filing	129	Electronics
145	Bookkeeping	118	Electricity
313	Mathematics	34	Carpentry
245	English	32	Graphic Arts (Printing)
67	History	120	Drafting

Other suggested subjects:

1. More agricultural training
2. Woodworking
3. Handicrafts
4. Sciences
5. Basic drawing
6. Philosophy
7. Automobile repair
8. Accounting
9. Business Law
10. Blueprint Reading
11. Chemistry
12. More physics
13. Industrial Courses
14. Speech
15. Advanced Biology
16. Economics
17. Offer courses in I.B.M.

Courses Graduates Think Should be Offered



Graduates of High Schools in Dickinson and Iron Counties

Dickinson - Iron

School Dropout Tabulation

1961 - 1965

The number of students that left high school before graduation was 268 in the two county area between the years 1961-1965. The total number of graduates for the two counties for the same years was 3,017. While the dropout rate may not be as high as it is in the Metropolitan areas, we believe it still is much too high and represents a loss of manpower to this area and to the nation as a whole.

The reasons for leaving school vary, of course, with the individual but many indicated by their responses that they were interested in some trade or occupation that, for the most part, was not available to them. Since leaving school the majority of them have also left the area and have had to "pick up" a skill or work at an unskilled occupation. We recommend a further local study in depth of the dropout and we also recommend at least one experimental project in the two counties dealing with dropouts and potential dropouts (habitual truants and others.)

We fully realize that the chances of great success in such a project would probably be small by other standards, but we feel any success in this endeavour would make the effort worthwhile, and we may be able to contribute to the overall understanding of dropouts and how to prevent them. We suggest an Upper Peninsula wide study of school dropouts, with coordination of effort by Northern Michigan University's Public Services Division in order to better establish what early danger signs exist and to suggest methods of alleviating the causes.

Dickinson-Iron Area
Vocational Education Study

Dear Former Student:

Will you help us plan a high school program that will help boys and girls get a job? To do this, will you tell us what you would like to have taken in high school had it been offered?

Here are some jobs. Put a mark after any you would have selected.

CONSTRUCTION AND MECHANICAL TRADES

Welding

TV and Radio Repair

Electrical Repair (appliance)

Auto Mechanics

Auto Body Work

Plumbing

Office Machine Repair

Bricklayer

Machinist

Tool and Die Maker

Machine Tool Operator

Technical Drafting

Carpentry

Small Engine Repair

Sheet Metal Worker

Electrical Construction

Maintenance Mech. 11

OTHERS (List below)

BUSINESS TRAINING

Retail Selling

Sales (Manufacturers Rep.)

Cashier

Stenographer

Clerk-Typist

Small business management

Receptionist

Bookkeeping and Accounting

Key-punch operator

Office Machine Operator

PERSONAL SERVICES

Tailoring

Practical Nurse

Nurses Aide

Kitchen Helpers

Custodial Service

Food Preparation

Waitress

Yours truly,

Lawrence Varda, Chairman
Vocational Educ. Study Committee

Sign your name here.

_____

PLEASE RETURN IN ENCLOSED ENVELOPE.

A Random Sample of 166 High School Dropouts

DROP-OUT-FOLLOW UP

Occupations they feel they would like to have prepared for:

I. Construction and Mechanical Trades

1.	Welding	9
2.	T.V. and Radio Repair	7
3.	Electrical Repair (appliance)	2
4.	Auto Mechanics	10
5.	Auto Body Work	5
6.	Plumbing	1
7.	Office machine repair	2
8.	Bricklayer	3
9.	Machinist	7
10.	Tool and Die Maker	8
11.	Machine Tool operator	1
12.	Technical Drafting	9
13.	Carpentry	6
14.	Small engine repair	5
15.	Sheet metal worker	3
16.	Electrical construction	3
17.	Maintenance Mechanic	0
18.		

II. Business Training

1.	Retail selling	3
2.	Sales (Manufacturer's rep.)	1
3.	Cashier	6
4.	Stenographer	5
5.	Clerk-typist	4
6.	Small business management	6
7.	Receptionist	5
8.	Bookkeeping and Accounting	7
9.	Key-punch operator	9
10.	Office machine operator	9
11.		

III. Personal Services

1.	Tailoring	2
2.	Practical Nurse	9
3.	Nurse's aide	7
4.	Kitchen helpers	2
5.	Custodial Service	0
6.	Food preparation	6
7.	Waitress	4

Other Occupations mentioned:

1. Hair Styling
2. Switch board operator
3. Spray painting
4. Electronics

Recommendations

by

The Citizens

Advisory Committee

QUESTIONNAIRE
DICKINSON - IRON AREA
VOCATIONAL EDUCATION STUDY

1. Do you favor more and better occupational education in Iron and Dickinson Counties? Yes 74 No 1

2. Do you favor operation of basic introductory (Industrial Arts-General Business, etc.) programs in all schools and offering advanced programs on the area basis? Yes 70 No 2

3.a. Dickinson and Iron Counties are now combined for the following purposes: Mental Health, Intermediate School Districts, Administration of office of Economic Opportunity Programs;

3.b. Do you consider Dickinson and Iron as a logical solution to the problems of small school populations and valuations when considering vocational education in this area? Yes 57 No 9

4. Do you favor establishing vocational classes on an organized, two county wide system (same programs in each county, other more expensive classes in only one location)? Yes 57 No 9

5. If you are an employer, are there sufficient trained people in the area to meet your needs? Yes 5 No 51

6. Do the occupations you deal with require occupational training? Yes 65 No 6

7. What is the age level preferred in your trade or occupation? Please circle

18-25 18 25-35 41 35-50 23 50 over 4

8. In your occupational area are there shortages in trained persons? Yes 59 No 5

9. We have employed a number of young non-high-school graduates, but find they need a considerable amount of additional education and/or training before they can perform satisfactorily. Yes 35 No 14

10. Most young high school graduates who apply seem reasonably well prepared for entry employment, and we have employed them as openings have occurred. Yes 22 No 28

11. We have employed a number of young high school graduates but find they need a considerable amount of additional education and training before they can perform satisfactorily. Yes 38 No 12

12. We have found it inadvisable to employ young high school graduates, except for unskilled jobs. Yes 29 No 17

13. The nature of most of the entry jobs in our firm is such that young high school graduates are virtually unemployable, because of a lack of occupational training. Yes 27 No 20

14. To what extent do existing education facilities in the Dickinson-Iron Area meet the occupational and training needs of your company or firm?

2 (1) Very Well 29 (2) Fairly Well 27 (3) Poorly

15. If you think occupational education and training in the area need improvement, which of the following developments would you support?

19 (1) Substantial expansion of vocational education programs in the existing high schools.

51 (2) Creation of an area vocational school for secondary (High School) occupational training, and adult training and retraining.

16. Is there a formally organized training program in your company or firm? Yes 21 No 40

17. If "yes" check each type of program you now operate on a formal basis:

15 (1) Apprenticeship

11 (2) Supervision

12 (3) Technician

5 (4) Plant Management

4 (5) Executive development Other (Write in below)

___(6) Office Procedures

___(7) Produce Dept. Training

___(8) Butcher Training

___(9) Carpenter Helpers

___(10) Training at Ford Sch.

___(11) In service training sessions

Please add any comments below:

MECHANICS AND REPAIRMEN
RECOMMENDATIONS

1. The group believes that there are many opportunities for young people in occupations of this type, some locally, and many more outside the area.

   It was felt that the security of the occupation of Mechanics was good, his wages would depend upon his own ability.

Outlook for employment is good in Welding

1. Welders are needed for the more advanced machinery that is coming about.

2. There is a great need for skilled labor in all of the mechanics and repairmen occupations.

3. One advanced welding program on a post high school level should be offered in the area.

4. Better pre-occupational training should be done on a high school level.

5. An eight week pilot program should be set up on an area basis during this summer for welding.

6. There is great need for more mechanics
   a. Teach basic fundamentals in schools
   b. Employment wise--experience and good training is necessary.

7. Auto mechanics and Auto Repair should be offered if there is attentive enrollment.

Coordination between areas and schools is important.

2. In the area of mechanics, it was felt that all people entering the occupation should have the following:

   a. The ability to meet and greet the public.
   b. The ability to read and write effectively.
   c. Know standard fastening procedures.
   d. Be able to measure with rules and micrometers.
   e. Use drills, taps, and dies.
   f. Be able to make simple math calculations (fraction, decimals).
   g. Use basic hand tools correctly.
   h. Know simple operation of the lathe and its cutting tools.
   i. Be able to do basic arc and gas welding.
   j. Have basic knowledge on internal combustion engine operation.
   k. Have a basic knowledge of pumps and simple hydraulics.

3. In the area of repairmen, it was felt there were certain basics which pertain to all the many branches of this trade.
   1. They should all have a good course in basic electricity.
   2. They should know the basic symbols and use schematics.
   3. They should be very familiar in the use of voltmeters, ammeters, and ohmmeters in the area of trouble shooting.
   4. They should be neat and be able to meet the public.
   5. They should have a good practical math background.
   6. They should have a knowledge of basic refrigeration.

4. In the discussion, it was felt that Blueprint Reading and Mechanical Drawing are basic and should be required of all entering the technical world of work. It was suggested that a course in General Mechanics be also a basic prerequisite. This would cover such areas as:

   1. Basic Electricity
   2. Power Transmission
   3. Fluid Power
   4. Properties of materials
   5. Blueprint Reading
   6. General Math
   7. Principles of machine shop

Recommendations for Building Trades Occupations

Under the building trades occupation listing, the advisory group felt that the following occupations should be offered:

Brick Layer and Mason
Carpenter
Industrial Electrician
Plumber and Pipe Fitter
Sheet Metal Worker
Tile Setter

It seemed to be the consensus of all, that Blueprint Reading is very necessary, especially the use of symbols and use of scale. This is especially important in Foreman Training. The group seemed to feel that present union practices in periods of Apprenticeship which allow the Apprentice only a very narrow work experience, because of overlapping of trades, does the Apprentice an injustice because although he gets his Journeyman Card, his background is limited. They felt possibly some of this shortcoming could be overcome through a specialized period of schooling outside the job.

In most of the jobs listed above, the groups seemed to feel that one place of training within the two counties would be sufficient for the number of trainees they hope to get, from ten to fifteen in each. The length of training should be for ½ day periods over a two year time. It was felt that this was sufficient to allow job entrance, and in most cases, this training, possibly offered in the Junior and Senior years of high school, would upon mutual agreement of union and contractors, reduce the total apprenticeship time.

It was felt by the group that this vocational program should be offered not only to those in Dickinson and Iron County, but also to those in neighboring Wisconsin who desire training, this, because of the geographical factors.

It was pointed out by the group, that the jobs listed above are skill trades, and require intelligent people for job entry. They felt that something should be done to attract intelligent young people for these positions which in most cases, pay more than some college graduates receive.

It was recommended that civil and highway surveyers would best be trained on a regional basis at a higher education facility because of the needs and accreditation involved.

Forestry and Agricultural Occupations

Findings:

Thirty-eight students in grades 7, 8, and 9 indicated interest in agricultural and forestry occupations.

Twenty-four students in grades 10, 11, 12 indicated interest in agricultural and forestry occupations.

Of a total labor force in the two-county area of over 12,000, only 290 are employed in agriculture.

The Advisory Committee agreed that there was little need for vocational training programs in agriculture.

The Advisory Committee indicated a need for programs beneficial to the small, rural business people engaged in farming, logging and others. Specific interest was shown in: Business Practices, Welding, Electricity, Machinery Repair and Operation, Heavy Equipment Operation and General Repair.

Recommendations:

That no new agricultural programs be initiated in the vocational study area. (Felch has a Vo-AG class at present).

That people engaged in rural occupations be encouraged to enroll in courses to be offered in Business, Welding, Machinery Operation and Repair, and others. It is further recommended that these and other courses be, at least in part, designed to fit the needs of the small operator.

That a wide variety of short training programs be initiated to up-grade the skills of those now working and to give younger men needed experience in areas such as; soils, land surveying, wild life and water management, chain saw operation and repair, carpentry, masonry, etc.

FORESTRY AND AGRICULTURAL OCCUPATIONS

Sub Committee Recommendations - Continued

It was felt that all small operators, loggers, farmers, needed a basic type of program in book and record keeping. This is especially true if they employ people and must keep this type of record.

In the areas of training to be covered in this occupation, it was felt that in addition to basic welding and automotive electricty, that hydraulics should also be offered in view of hydraulically controlled equipment.

The groups seemed to feel that more need be done in the area of vocational guidance. At the present time we need less laborers, and more people directed to the skill occupations.

It was the feeling of the group that skilled craftsmen and technicians require an individual with a good educational background, and the person should be a reasonably intelligent person. This poses a problem from the standpoint of selection and what to do with those whose abilities lie below this skill level.

We need:

1. Training in business practices for small operators-loggers-farmer-etc.
2. We also need knowledge of:
   a. machinery operation and repair
   b. heavy equipment operation and general repair
   c. welding and electricity
   d. We have serious shortages of able persons to harvest pulpwood.

There is no need in our area for training for:

a. Farm owner
b. Laborer
c. Nurseryman
d. Packer
e. Poultryman

Specific Recommendations:

We recommend a series of short term courses be offered on the 11th., 12th., and post high school levels to include the following:

Soils	Wild Life
Forestry	Water Management
Land Surveying	Chain Saw Operation, Repair
Carpentry	Heavy Equipment Operation
	Masonry

It is also recommended that the Dickinson County Education Camp be improved to provide better facilities for educational and conference activities of this type. We propose this camp as a resident center to be used to house students during a six or eight week summer program during which students could be trained for jobs in the following occupations:

1. Forestry aides
2. Golf course maintenance
3. Park manager aides
4. Lumber and log scalers
5. Heavy equipment operators
6. Cemetary Workers
7. Farm Wood Lot Workers

Note:

A change in coming in the harvest of wood products. Great interest is being shown in use of heavy equipment and training will be needed. The Dickinson County Education Camp is located in the Sturgeon River State Forest and is used approximately one month each year. It is owned jointly by several school district in Dickinson County and is well equipped and consists of three large log buildings. Members of the committee suggested that the following business and governmental agencies be contacted regarding the curriculum of such a program and placement of graduates of such short courses: U.S. Forest Service, U.S. Soil Conservation Districts, Michigan Department of Conservation, Kimberly Clark Corporation, and other paper making companies in the Upper Peninsula.

UTILITIES OCCUPATIONS

Sub Committee Recommendations

1. The committee stated: There is a great demand for industrial and construction electricians.

2. A basic course in electricity should be offered in each county.

3. If power plant operation is going to be covered, we need arrangements for facilities in a power plant where generators and turbines are used.

4. The programs should be under one director with coordinators in each county.

5. Metering should be taught in the course. (Voltmeters, ampmeters oscilloscopes, multimeters)

6. Persons entering this program should have a good background in math.

7. It was recommended that basic electricity should be set up at the 11th. grade level with the first semester of Basic Electricity, Second semester as Advanced Electricity; and on the 12th grade level Basic Electronics Course and the second semester a more advanced course.

8. Recommended that the student have a course in Circuitry reading and schematic diagram reading.

9. The Telephone Company has its own training program but the area school could teach the basic types of training in cable splicing.

10. It is recommended that students from neighboring Wisconsin cities be included in any class they are interested in.

11. Great interest was shown in classes in electricity to upgrade workers presently employed. Adult upgrading classes should be offered.

GRAPHIC ARTS AND PRINTING OCCUPATIONS

Sub Committee Recommendations

There is a great demand for persons in all the listed occupations of printing and graphic arts. Almost all types of printing are done in our two counties. There are some job opportunities in our area, and a great number outside our area.

All-around Printer
Compositer
Linotype Operator
Lithographic Cameraman-new but growing
Phototype setting Operator
Pressman
Sterotyper
Ludlow
Offset Pressman

1. One good program to serve both counties is recommended.

2. Provision must be made for an adult program.

3. A general course covering the field, plus specialization in certain areas should be available.

4. Start the program by offering offset work, including camera work, plate making, stripping, and presswork.

5. Include letter press as soon as possible.

6. Three hours per day for two years will give a person a good basic job skill.

7. It would be beneficial if a one hour per day-one year course could be offered in the sophomore year, to prepare, explore, and screen time. This may be difficult because of scheduling.

8. Offset Areas that should be covered

   a. Camera

   b. Stripping

   c. Platemaking

   d. Presswork

   e. Cold composition

Manufacturing Occupations

There is a need for:

Machine Operators
Machine Tool Operators
Machinist
Patternmaker
Painter and Auto Body Repair
Welders
Draftsmen and Layout Man
Assembler
Core Maker

Many industries need workers in these occupations, some locally and in the area, and many more in the nation. A serious shortage exists among persons trained in these occupations.

The committee felt that students need more visitation of industry in order that they become more enlightened about these occupations.

The schools should do more to help train persons for these fields and appropriate related instruction in Blueprint Reading and Mathematics should be offered also.

There is a good deal of manufacturing in the area with Foundry and Metal manufacturing employing many workers. Replacements are needed for retiring workers and normal expansion plans. No large scale increases were indicated by manufacturers.

HEALTH CARE OCCUPATIONS

Recommendations

1. We should offer a medical, and dental terminology Secretarial program in the area. It should be incorporated at grades 11 and 12, and an advanced evening course should be set for adults.

2. We should offer an introductory course for nurse's aides, orderly, and dental assistants for 12th grade students and an evening course for adults.

3. We should offer a training course for food service supervisors. This could be introduced into the Home Economics Curriculum at the 12th grade level and an evening course should be offered for adults.

4. Electronic Technicians and maintenance men could be used in the hospital. With the high school basic electricity and electronics course, the individual may adapt to the hospital equipment. Offer a unit of familiarization to interested students.

5. The Dickinson Memorial Hospital is the only accredited hospital that is large enough in the Dickinson-Iron area; and we should use some of its facilities and personnel.

6. A qualified instructor should be hired to teach Medical terminology, nurse's aides, and dental office assistants.

7. It is recommended that training in Health Care Occupations be extended to nearby Wisconsin cities.

8. The Dickinson County Memorial Hospital is currently short of licensed Practical Nurses, Nurses Aides and orderlies.

9. Training is now provided for L.P. nurses at Memorial Hospital in cooperation with Northern Michigan University, but upon completion of training they do not seek employment here but go to other parts of the Upper Peninsula. This program is not meeting with the needs of the Dickinson-Iron Area.

Clerical and Sales Occupations

General Recommendations

It is recommended that each high school in the bi-county area maintain the basic business courses such as: typing, shorthand, and bookkeeping as exploratory and general education.

It is recommended that office machines, advanced training for secretaries, specialized secretarial classes in legal and medical services, advanced training for stenographers, and courses in stenographic machines be combined into a business training program and offered in one center in each county. These same classes to be offered as adult education whenever the need arises.

Adult programs for Typing, Shorthand, and Bookkeeping should be offered as needed and where needed.

One center should be established in each county.

The following is one course with specialized phases:

1. Advanced training for Secretaries should be offered at a center in each county.
2. Specialized Secretarial classes in Legal and Medical services should be offered at a center in each county for grades 11-12 and adults.
3. Advanced training for Stenographers should be offered at a center in each county.

A course in Stenographic Machines should be offered in each county--one semester course--when needed and where; the type used in court reporting.

Needed, but probably after a basic program is established, one data processing center for the two counties for grades 11 and 12 and adult level.

a. If the student demand warrants it, a second center should be established.
b. Equipment and possibly quarters can be rented.

Training for Retail Sales persons is needed in the area.

a. A waitress training program is needed--short course to train present waitresses, from time to time. (Trained or experienced help is difficult to find.)

A high school Distributive Education Program should be established in each county.

A full time Coordinator of Co-operative Training should be hired in each county, to work with Business Leaders and students in setting up training stations in various stores and shops.

If students are given part of the school day to work, it should be under an organized program set up by the combined efforts of a Vocational Director, two co-op coordinators and an Advisory Committee of Business Leaders in the two counties.

Clerical and Sales Occupations

General Recommendations (Con't.)

A Distributive Education Program for adults should also be available on a county basis, to retrain adults; adults would need the basic business background.

Other highly specialized occupations such as Real Estate Salesman, etc., could be covered on a larger geographic area, with perhaps one center for the entire Upper Peninsula.

Service Occupations

Advisors from the hotel, motel and food serving industry in the area are experiencing some difficulty in getting persons to fill some of the positions available. It is felt that some programs in food service and waitresses would be highly desirable especially in light of the area's attempt to attract large numbers of tourists to the area all through the year. In addition some of the managers told us that they prefer older persons for many of the jobs that they have open.

The committee feels that a program for older persons in addition to a co-op on the job training program for interested younger persons who are in school would meet the needs for many of the local establishments. The Co-op plan with additional in-school related instruction would provide the needed opportunity for high school youth.

Local Business and Industry

Many business and industrial establishments in the two-county area were contacted during the course of study. The pattern of needs by local business and industry that emerged is much the same as it is in many other small towns across the nation, that is, most of our high school graduates cannot find employment in the local area and they must therefore, leave the area to seek more education or employment.

The number of current vacancies listed by the business and industry contacted was a small number in most cases, and labor turnover is not great in this area. However, future expansion and replacement of workers will raise requirements. In addition, we know that a great many of our graduates leave the area and the committee feels that establishing programs is very necessary to prepare our young people for employment after graduation. We know for example, that many of our graduates and dropouts, go to the Milwaukee area to seek employment. We also know that Milwaukee has one of the best vocational schools in the United States, therefore, our graduates are at a serious disadvantage when it comes to getting and holding jobs. This would become much more apparent if the economy of the nation slowed down any appreciable amount, than it is now.

The following business and industrial establishments were surveyed to determine needs:

Montgomery Ward
Great Lakes Toys
LoDal Inc.
Dept. of Conservation
Norway Coop Canning Association
Fugere Brothers
Peterson Welding
Lake Shore Inc.
U.S. Post Office
Odgers Drilling
Norway Gravure
Inger - Teco Corp.
Ace Drugs
Ben Franklin
Dickinson Hotel
LaFreniere Motor Co.
Proksch Lumber
Iron Inn
Kimberly Clark Corp. Woodland Division
The General Agency
Hanna Mining Co.
M-J. Electric Co.
Dickinson County Memorial Hospital

OCCUPATIONAL INVENTORY

Employment in the United States by Major Occupation Group, 1960 to 1976

Major Occupational Group	Actual, 1960		Projected, 1970		Projected, 1976		Percent Change		
	Number (in millions)	Percent	Number (in millions)	Per cent	Number (in millions)	Per cent	1960-70	1970-75	1960-75
Total.....	66.7	100.0	80.5	100.0	87.6	100.0	21	9	31
***Prof., tech., and kindred workers...	7.5	11.2	10.7	13.3	12.4	14.2	43	16	65
**Managers, Officials, and proprietors, except farm.....	7.1	10.6	8.6	10.7	9.4	10.7	21	9	32
***Clerical & kindred workers.....	9.8	14.7	12.8	15.9	14.2	16.2	31	11	45
**Sales Workers.....	4.4	6.6	5.4	6.7	5.9	6.7	23	9	34
**Craftsmen, foremen, and kindred wkrs.	8.6	12.8	10.8	12.8	11.2	12.8	20	9	30
- -Operatives and kindred workers...	12.0	18.0	13.6	16.9	14.2	16.3	13	4	18
***Service workers...	8.3	12.5	11.1	13.8	12.5	14.3	34	13	51
- -Laborers, except farm & mine.....	3.7	5.5	3.7	4.6	3.7	4.3	---	---	---
- -Farmers, farm mgrs., laborers, & foremen.....	5.4	8.1	4.2	5.3	3.9	4.5	-22	-7	-28

SOURCE: Manpower Report of the President and A Report on Manpower Requirements, Resources, Utilization and Training, The United States Department of Labor, U.S. Gov't. Printing Office, Washington, D. C., 1963.

*** - More than average

** - Average

- - Less than average

COURSE RECOMMENDATIONS
for study area
PROGRAMS

Occupational Area	Dickinson	Iron	One Program Bi-County	Other
Service Occupations				
Food Service			x 1-2	
Beautician				8
Cook or Chef			x 2	
Hotel-Motel Housekeeper			x 2-3	
Meat Cutters			x 4	
Waitress			x 3-4	
Health Care Occupations				
Nurses Aides			x 2-4	
Practical Nurses				8
Orderly				8
Dental Assistants			x 2	
Food Service Supervisor			x 3	
Medical Secretary			x 3	
Medical Technicians			x 2	
Manufacturing Occupations				
Assembler				x 7
Coremaker				x 6
Draftsman, & Design	x 1,2,3	x1,2,3		
Machine Oper. (Machinist)	x 1,2,3	x1,2,3		
Molder				x6
Pattern Maker			x 1,3	
Welder	x 1,2,3	x1,2,3		
Mechanics & Repairman				
Auto Mechanic	x 1,2,3	x1,2,3		
General Mechanic			x 2,3	
Auto Body Repair & Paint.			1,3	
Appliance Repair				8
Building Trades				
Bricklayer & Mason			x 1,2,3	
Carpenter			x 1,2,3	
Industrial Electrician			x 1,2,3	
Plumber & Pipefitter				x 5
Sheetmetal Worker			x 1,2,3	
Tile Setter				x 5
Graphic Arts & Printing				
All-around Printer (offset)			x 1,2,3	

Code:
1-high school
2-Post high school
3-Evening Part Time
4-Co-op
5-Insufficient Enrollment
6-No Need
7-Covered by other classes
8-Not at this time

Suggested
Programs-continued-

Occupational Area	Dickinson	Iron	Bi-County	Other
Transportation				x 6
Utilities				
Industrial & Construction Electricians			x 2,3	
Basic Electricity	x 1,3	x 1,3		
Advanced Electricity	x 1,3	x 1,3		
Agricultural & Forestry				
Book & Record Keeping	x 3	x 3		
General Mechanics (basic Welding) (auto electricity) (hydraulics)	x 2,3	x 2,3		
* SHORT TERM COURSES (Summer)			x 1,2,3	
Soils				
Forestry				
Land Surveying				
Carpentry				
Wildlife				
Water Management				
Chain-Saw Operation * Repair				
Masonry				
Clerical and Sales Occupations				
Advanced Secretarial	1,2,3	1,2,3		
Legal & Medical Secretary	1,2,3	1,2,3		
Office Machines	1,2,3	1,2,3		
Data Processing				8
Stenographer	1,2,3	1,2,3		
Stenographic Machines (One center ea. Co.)	1,2,3	1,2,3		
Sales Occupations				
Retail Sales	1,3	1,3		

Code: 1-High School
2-Post High School
3-Evening Part Time
4-Co-op
5-Insufficient Enrollment
6-No Need
7-Covered by other classes
8-Not at this time

Suggested
Location Recommendations
for Study Area Programs

Occupational Area	Dickinson	Iron	One Program Bi-County	Other
Service Occupations			Rent and on job Co-op Trg.	
Food Service				
Beautician				
Cook or Chef				
Hotel-Motel Housekeeper				
Meat Cutters				
Waitress				
Health Care Occupations			Rent and Hospital	
Nurses Aides				
Practical Nurses				
Orderly				
Dental Assistants				
Food Service Supervisor				
Medical Secretary				
Medical Technicians				
Manufacturing Occupations				
Assembler	I.M.	Rent		
Coremaker				
Draftsman & Design	N.R.	Rent		
Machine Op. (Machinist)	K.	Rent		
Molder				
Pattern Maker			Rent	
Welder	Rent	Rent		
Mechanics & Repairman				
Auto Mechanic	I.M.	Rent		
General Mechanic	I.M.	Rent		
Auto Body Repair & Paint	Rent	Rent		
Appliance Repair			Rent	
Building Trades				
Bricklayer & Mason			Rent	
Carpenter			I.M.	
Industrial Electrician	K.	Rent		
Plumber & Pipefitter				
Sheetmetal Worker			Rent	
Tile Setter				
Graphic Arts & Printing				
All-around Printer (Offset)			Rent	

Location Code: Some equipment should be relocated and traded between schools for more efficient use.

- Rent - Rental of facilities for the present with construction at some future date.
- I.M - Iron Mountain High School facilities
- K. - Kingsford High School facilities
- N. - Norway High School facilities
- N.R. - No recommendations-several sites available
- Hosp.- Use of hospital facilities where possible.

Suggested
Location Recommendations
for Study Area Programs

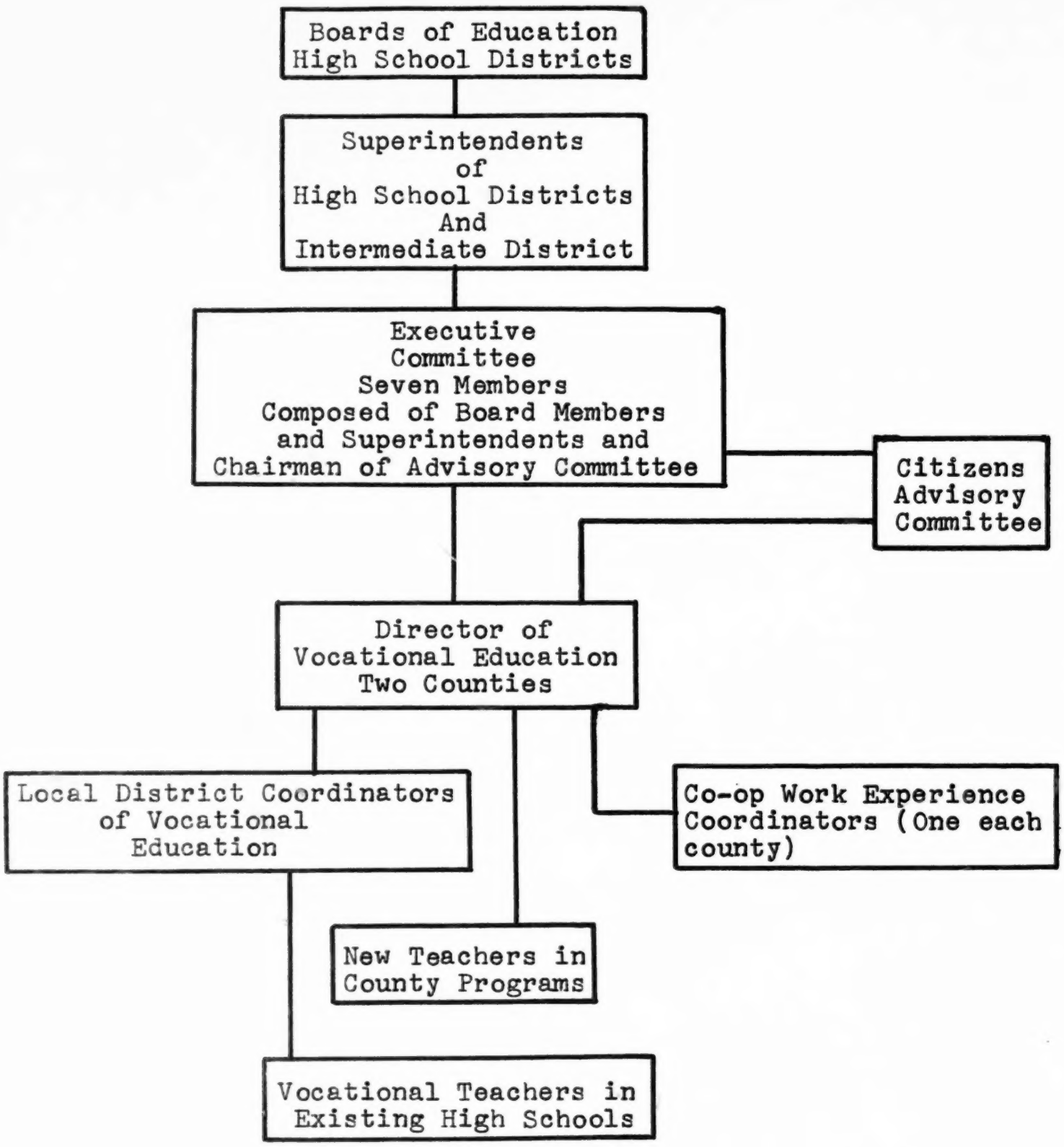
(Continued)

Occupational Area	Dickinson	Iron	Bi-County	Other
Transportation	----	----	-------	----
Utilities				
Industrial & Construction Electricians	K	Rent		
Basic Electricity	K	Rent		
Advanced Electricity	K	Rent		
Agricultural & Forestry				
Book & Record Keeping	Sec.Cen.	Use Sec. Center		
General Mechanics				
(Basic Welding)	Rent	Rent		
(Auto Elect.)	IM	T. & I		
(Hydraulics)	IM	center		
*SHORT TERM COURSES (Summer)				
Soils			Dick.	
Forestry			Ed.Camp	
Land Surveying				
Carpentry				
Wildlife				
Water Management				
Chain-saw Operation & Repair				
Masonry				
Clerical and Sales Occupations				
Advanced Secretarial	Rent	Rent		
Legal & Medical Sec.	Rent	Rent		
Office Machines	Rent	Rent		
Data Processing				
Stenographer	Rent	Rent		
Stenographic Machines	Rent	Rent		
(One center ea. Co.)	Rent	Rent		
Sales Occupations				
Retail Sales	Rent	Rent		

Location Code: Some equipment should be relocated and traded between schools for more efficient use.

Rent - Rental of facilities for the present with construction at some future date.
I.M. - Iron Mountain High School facilities
K. - Kingsford High School facilities
N. - Norway High School facilities
N.R. - No recommendations-several sites available
Hosp.- Use of hospital facilities where possible.

Suggested Administrative
Pattern for a Cooperative
Area Vocational Education Program



Post High School

Technical Education

Transfer Program

Post High School
Technical Education

It is recommended that the schools of the area join together in cooperation with the Soo Branch of Michigan Technological University to develop a first year transfer program in Mechanical and later in Electrical Technology.

Student selection, teacher selection, course of study, length of course, number of clock hours, etc., should conform to rigid standards as determined by Michigan Tech. officials in order to insure a quality program and full acceptance of credits in the two Technology Programs.

Upon successful completion of the first year program in the Dickinson-Iron Area Program, the student would then transfer into the second year courses at the Soo Branch of Michigan Tech. University and complete the technician requirements there; thus earning an associate degree (2 year) in Mechanical Technology or Electrical Technology.

Employer and Committee
Comments on

Post High School Technician Training

1. "There is a considerable need for Mechanical Technicians."

2. "Promote the wood products industry which is the greatest natural resource in terms of U.P. employment. A more highly generated interest will be needed by means of broad publicity to attract the participation of those employed in this field."

3. "Begin some action on the establishment of Machine Operator and Drafting courses."

4. "I am very pleased with the technical training program being considered in the field of engineering. This field appears to be the most logical "first" for several reasons but primarily because of need in this field, and its appeal to the young. It should be the easiest to attract response and participation, which of course is the most essential ingredient."

5. "I am very much in favor of any vocational programs we can set up and I am willing to work towards this goal."

6. "I am not too familiar with Electrical Technician needs but I am confident that there is a considerable need for Mechanical Technicians. I would be happy to assist in any way further."

MICHIGAN TECHNOLOGICAL UNIVERSITY
SAULT STE. MARIE BRANCH
SAULT STE. MARIE, MICHIGAN 49783
(Area Code 906) 632-3341

Office of the
Dean of Faculty

April 21, 1966

Mr. Larry Vardo, Chairman
Vocational Technical Education Study Committee
Kingsford High School
Kingsford, Michigan

Dear Larry:

We certainly would be happy to work with you regarding an integrated program that would allow for a maximum of transfer credits to our Mechanical Engineering Technology program. We are going to introduce a new program in Electronic Engineering Technology also, this coming fall and this might be an idea for us to explore as well

I would like to compliment you on your interest in Vocational Technical Education and feel that this will greatly assist many young men and women in your two county area. I will be off campus for the next two weeks but will be happy to meet with you after that time.

We appreciate your interest in Michigan Tech and look forward to working with you.

Very sincerely yours,

Kenneth F. Light (sc)

Kenneth F. Light
Associate Director/Dean of Faculty

KFL:sc

MICHIGAN TECHNOLOGICAL UNIVERSITY
SAULT STE. MARIE BRANCH
SAULT STE. MARIE, MICHIGAN 49783
(Area Code 906) 632-3341

Office of the
Dean of Faculty

May 16, 1966

Mr. Larry Varda, Chairman
Vocational Technical Education Study Committee
Kingsford High School
Kingsford, Michigan

Dear Larry:

We would be happy to cooperate with you and your community in establishing a transfer program in the Kingsford area to our Mechanical Technology program. I am certain that there are several courses that could be taught at post high school levels in your area that we could recognize as a part of our program.

I am enclosing a bulletin of this program and course outlines to give you some idea of the technical detail involved. The blue booklet is somewhat out of date but it does give you some idea of each individual course.

We would be very pleased to work in greater detail with you if you desire to explore this possibility further.

We look forward to hearing from you.

Very sincerely yours,

Ken

Kenneth F. Light
Associate Director/Dean

KFL:sc
Enc.

Associate Degree in Mechanical Engineering
Technology
A 2 Year Program for
Engineering Technicians
Sault Branch-Mich. Tech. University

I. A NEW OPPORTUNITY, ENGINEERING TECHNOLOGY

The engineering technician is emerging as the newest member on the engineering team. Educationally he is the graduate of a technical type of curriculum as accredited by the Engineers Council for Professional Development, or the equivalent. On the job, the technician performs semi-professional engineering and scientific functions largely on his own initiative and with only general supervision by an engineer.

THE ENGINEERING TEAM

As man has increased his technical knowledge through the activities of scientists and engineers, a need for specialization has developed. The engineering team is composed of three members: the engineer, the technician and the skilled craftsman. Because the technician works with the engineer, he must understand engineering language; the mathematics, the graphics, the specialized subject matter and the communications skills.

II.

The technician is the link between the engineer and the skilled craftsman. He receives from the engineer a creative idea and applies theory and principles he has learned to create a new tool or product. The technician must also know the capabilities of the skilled craftsman so that his designs will be practical and economically feasible. The technician, therefore, is an important member of the engineering team.

III. HOW DOES TECHNICIAN TRAINING DIFFER FROM THAT FOR AN ENGINEER?

Because of the need for advanced mathematics in research activities, the engineering student spends much time learning mathematics aimed at courses of a highly theoretical nature. The engineering technician, on the other hand, studies only mathematics which applies to work in which he will be involved. Since he is not concerned with deeply theoretical research, his math curriculum is tailored accordingly.

Another difference is in the amount of time spent in the laboratory. Since the emphasis in the technician program is on the application of basic scientific and engineering principles, the student will spend 40 to 50 percent of his time in graphics or laboratory type courses.

In terms of human activity, as compared to the engineer, the technician is more of a "doer" than a "thinker"! Since different personalities are suited best to different types of activity, this practically oriented technical program is of interest to those who like to obtain tangible results.

CURRENT OFFERINGS - May 16, 1966

CURRICULUM FOR MECHANICAL ENGINEERING

TECHNOLOGY

R. Curtis, Chairman Mechanical Engineering Dept. Soo Tech.

First Year - Fall Quarter			Cr.
MA	811	Algebra	5
CH	821	Chemistry	4
HS	811	English	3
TE	811	Technical Drawing I	3
TE	813	Materials Processing I	3
PE	131	Physical Education	1
		Total	19

Winter Quarter			
MA	823	Trig. and Analytical Geometry	5
PH	835	Physics	3
HS	822	Report Writing and Speech	3
TE	822	Technical Drawing II	3
TE	824	Materials Processing II	3
PE	132	Physical Education	1
		Total	18

Spring Quarter			
MA	834	Concepts of Calculus	5
PH	811	Statics	4
MY	841	Physical Metallurgy	3
TE	833	Technical Drawing III	3
TE	835	Materials Processing III	3
PE	101	First Aid	1
		Total	19

PLACEMENT SERVICE

MTU-SOO provides placement service for graduates of the ASSOCIATE DEGREE programs. This service provides numerous opportunities for prospective employers to interview graduating students.

ADMISSION REQUIREMENTS

To enter the program you must be a high school graduate or equivalent. One year of Algebra and three years of English are required. In addition, it is strongly recommended that you have credit in Plane Geometry and Physics. It is possible for students entering with deficiencies to take lighter loads and complete the program in three years instead of two.

Credit earned toward the Associate Degree does not automatically transfer into a four year baccalaureate degree program. Students seeking a higher degree at a later date must have each course evaluated by the accepting institution.

COST OF THE PROGRAM

The costs of technical education are moderate because you will complete your program of study in two academic years. Cost per year for tuition and books is about $375 for Michigan residents and about $675 for non-residents. Cost per year for room and board is about $765.

SUMMARY

It is readily apparent to even the most casual oberver that a genuine feeling of cooperation between the various school districts must exist before much of any importance will be accomplished in the field of occupational training. Even the largest of schools in this area does not have sufficient enrollment, or tax base, to justify offering classes in more than a few vocational choices. Barring unforeseen large industrial or mining developments the outlook for the future is only average. The valuation of school districts is not growing as rapidly as in some other districts in Michigan but rather is growing slowly and in some cases is declining in this area. The high school (9-12) population in Iron County will drop from 1338 students in 1964-65 to a projected 1035 in 1975-76 and will drop again to 898 in 1977-78. Projections for Dickinson County do not show a loss this great, but Dickinson County did have a net loss of 927 persons (all ages) or 3.7 per cent from 1950-60 and by using various projections the total population in Dickinson County is shown to be decreasing in all projections: Dickinson County 1960-23,917--1970 projection a 23,850; projection B 17,990; projection C 23,030. However, projections of the school population shows an increase in the next few years.

Thus it would seem that school districts in the two counties will face increasingly difficult years ahead unless factors not yet evident come into play on a large scale.

The great majority of the citizens advisory committee agreed that vocational and technical education in the Dickinson and Iron County Area needs a good deal of improvement. In general, it can be stated that we are not offering a sufficient variety of courses

at present, and that courses should be in greater depth. Many of the present offerings in this area of Michigan are practical Arts: (exploratory-general education) rather than vocational: (occupational-job entry level preparation).

It was also brought out by several groups that trade related subjects must be offered. (Blueprint Reading was frequently mentioned). Most people felt that there was no one solution to the problem of where classes should be established, but rather, that some programs should be offered at several schools, while other programs should be held at one location in each county and that still others, should be held at only one location for the two counties. The location of the vocational offerings would depend on the demand for the course by the students, and of course, the costs involved in establishing such a program. For example, the sub committee on the Graphic Arts and Printing felt that one good program that would serve both counties for Printing classes would be sufficient, while in Stenographic Training and Office Machines it was felt that a center in each county would be needed. The committee also felt that basic, general education courses, such as Industrial Arts exploratory subjects, General Business, Typing and Shorthand, should be offered in all schools and should be available in grades 7-8-9. It also was recommended that many adult classes be available to anyone in the area, including persons from nearby Wisconsin.

The majority of the citizens advisory committee agreed that the two counties are as good a sub division of an overall vocational plan for Michigan as can be devised for this area. The two counties are already combined for the following services: The Dickinson-Iron Mental Health District, Dickinson-Iron Intermediate School District, Services of the Office of Economic Opportunity Programs, and the Dickinson-Iron Health District. The Dickinson

County Library is also headquarters for the Mid-Peninsula Library Federation. Northern Michigan University also has established a resident center for students in Iron Mountain and Kingsford and this center serves anyone in the area. Hospital service in Dickinson County is also combined for administrative purposes under a Dickinson County Hospital system as is the Dickinson County Public Library system. The Veterans Administration Hospital in Iron Mountain serves all of the Upper Peninsula and Northern Wisconsin.

In addition, the following Business Firms seem to regard the area as one unit: Michigan Bell Telephone Company, Wisconsin-Michigan Power Company, North Central Airlines, Michigan Consolidated Gas Company, and Hanna Mining Company.

When asked about numbers of sufficiently trained people in the area to meet the needs, a vast majority of business and industry people said no, trained people are not available. This coincides with a statement by Mr. Richard Windberg, Michigan Employment Security Commission official, who stated that very few skilled workers are unemployed in this area at this time.

In the many specific occupational areas, persons on the advisory committee said their occupations required occupational training to perform the job satisfactorily, and the majority of persons stated further, that most high school graduates need a considerable amount of additional education and training before they can perform satisfactorily. Over 50% said they found it inadvisable to employ young high-school graduates, except for unskilled jobs, and this is borne out by their statements on the questionnaire that they prefer to hire more persons from 25 to 35 years and from 35 to 50 years than they do from 18 to 25 years. Most committee members agree that we should improve the quality

and quantity of practical arts, exploratory education as well as establish and improve the vocational job preparatory classes.

From the total of 1,681 student occupational interest forms in grades 10-11-12 and the student interest forms in grades 7-8-9 a surprising similarity in occupational choices is noted. For example, 14 boys in 7-8-9 and 14 boys in 10-11-12 expressed an interest in logging and wood pulp production. Nineteen boys in each group expressed a desire to work in the field of electricity. 130 girls in one group and 137 in the other expressed a desire to be Beauticians. 49 in one group and 41 in the other want to be Policemen. Thirty-six in group 7-8-9 and 48 in the other chose Drafting and Designing. Thirty-three in the 7-8-9 group and 29 in the 10-11-12 group chose the field of electronics. However, the occupation of farmer showed a significant change from 24 in grades 7-8-9 to 10 in grades 10-11-12. This corresponds with advice from the Advisory Committee that there is no need for new programs in agriculture in this area.

However, in the field of Forestry and Wood Production, classes are suggested by the Advisory Committee.

Final General Recommendations

1. It is recommended that the school districts in Dickinson and Iron Counties establish the position of Vocational Administrator to work with directors in each school district, thus utilizing all the facilities to maximum capacity.
2. It is recommended that all vocational offerings within the area be coordinated and offered through the intermediate school district office, under one administrator.
3. There should be an improved program in vocational guidance and testing. This program should be coordinated by the intermediate school district, and should begin at the Junior High level. This would allow the two-county area to have standardized procedures in all areas of occupational education. A review of present testing procedures indicate a lack of uniformity throughout the area.

   It is recommended that every student tested through the intermediate school district be given full interpretation of the results of such tests prior to the selection of his high school program.
4. It is recommended that a cooperative training program be set up in the two-county study area. This program would allow many students an opportunity to gain work experience on the job in the various occupational fields while also completing his high school academic subjects.
5. While the intermediate district is in the process of development in the area of vocational education, it is recommended that the individual schools make use of their present facilities by allowing enrollment of students from out of the district who seek training in a specific occupation. This should begin in the fall of 1966.

6. It is recommended that post-high school training programs offered by other presently established centers be utilized. This would include such programs of those offered by M.T.U. at the Sault, Bay de Noc Community College, N.M.U. terminal programs and M.D.T.A. programs.

7. It is recommended that the intermediate district give cooperation to UPCAP or other established responsible groups who may promote the establishment of an Upper Peninsula Post High School Occupational Training Center, for those occupations that are more specialized and costly than the ones listed in this report.

8. The intermediate district should seek to establish better relations with the business and industry of the area. It is felt that these local concerns can offer much in the way of technical, financial and advisory services to the schools, and in turn the schools will be in a better position to offer business and industry the type of retraining or upgrading programs they desire.

9. We recommend that members of the committee, employers and other skilled persons, be asked to serve on an advisory committee to serve the needs in each occupation speciality in the intermediate district.

10. It is recommended that the intermediate school district office maintain good working relations with the M.E.S.C. to aid the students completing programs in job placement. Also maintain relations with local unions. Apprenticeship committees should receive full cooperation of all school officials and districts.

11. It is recommended that all program offerings through the newly established intermediate school district office shall be of such a nature to allow the student a reasonable chance of job

placement. The student must have enough native ability to benefit from the instruction offered.

12. Local business and industry are in many cases reluctant to hire high school graduates even though their training may be adequate. It is recommended that some effort be made to improve this image.

13. It is recommended that every vocational student have supervised work-experience program as an integral part of his occupational preparation.

14. We recommend that needless duplication of effort in some areas of training be stopped and that the space and teachers thus released be used to offer new courses and courses in greater depth to all interested students.

15. Bus Transportation

In order for a system of area vocational education to work, we must depend on our transportation system. Of course, in this case, we refer to school buses, and the transportation of students to area programs and to area classes, whether in rented buildings or area vocational schools. We recommend Transportation Reimbursement for all students to attend area vocational programs. We feel that many small schools will not be able to finance the needed extra transportation, and many of the students that need occupational training will have it denied them. We urge the Legislature and the Department of Education, Lansing, to take action on the problem of transportation for vocational area classes and area schools.

16. Buildings It is recommended that any new buildings be designed to be extremely flexible. For example: in any future new construction all interior partitions should non-load bearing

to allow flexibility in the event of program changes. This will allow relocation of interior walls at will.

16-b. It is recommended that existing facilities be utilized in Dickinson County. These facilities should be available to students of both counties to allow maximum utilization.

c. There are no suitable facilities at present in Iron County for occupational education. It is therefore recommended that facilities be rented until such time as construction can take place.

d. As soon as possible there should be facilities constructed in the bi-county area (serving both counties) to allow training in those areas of specialization which do not warrant instruction in more than one location. In the interim, rental space should be secured for these programs also.

17. Scheduling It is recognized that scheduling in this type of program will present difficulties. If scheduling cannot be accomplished locally we suggest scheduling by computer at Northern Michigan University.

18. Because of the increasing complexities in the occupations studied, enrollment should be limited to those who can derive the maximum benefits. We can no longer depend upon the typical industrial arts student as a source of personnel to answer the need for technicians unless adequate screening and vocational guidance is conducted.

19. A special occupational program must be provided to take care of the needs of those whose abilities are limited.

20. It is recommended that a unit in Communications be offered for occupational students during the senior year. This course will allow the student an opportunity to learn to speak, write, make job applications, and do simple reading for meaning. Resource

people from all areas of business and industry should be utilized to give maximum meaning to this course. It should be taught on a work-shop basis.

21. It is recommended that post-high school and adult education programs be offered to train technicians. The college dropouts should not be overlooked as a potential source of student to fill the role of technicians.

22. In the area of <u>financing the program</u>, the following are some suggestions that could be followed:

    (a) direct payment of tuitions by participating districts to operating districts

    or

    (b) exchange of students within the intermediate school district on a no-charge basis

    or

    (c) the establishment of the area vocational school with the intermediate district operating on a separate tax levy for vocational education

    or

    (d) the establishment of the area vocational school by the intermediate district whereby each participating school contributes a set fee plus a set amount per pupil participating

    or

    (e) Some other mutually agreeable financial agreement.

23. Any program of finance proposed must guarantee a long term commitment by all the school districts.

    (a) Without long term agreements some schools may tool up

with expensive equipment for a tuition plan and then lose the tuition students after two or three years.

(b) To permit adequate planning and development of program, long range plans are needed.

24. Present Facilities

Some of the existing high schools have adequate Pre-vocational facilities. (Industrial Arts Shops, Typing Rooms, Home Ec. facilities) but very few, if any, really have both an adequate building and adequate equipment to teach several occupations. It is recommended that most present facilities be used for general education pre-vocational offerings and that space be rented to offer many of the consolidated and new vocational classes. The smaller high schools should take immediate steps to join other schools for the Pre-vocational classes and it is recommended that all of the high school districts join together to start an area vocational program for the present using available buildings and equipment, and renting other space, and in the future, building an area vocational school.

Recommendations for improvement of Guidance and Counseling Services

The study coordinators found great differences in the practice of guidance and counseling in the ten high schools. We found that the same Standardized tests are not used in all of the high schools. We urge an in-service training program for guidance counselors in the area with coordination from the intermediate district office and in cooperation with Northern Michigan University. We also urge that Field Trips to business and industry be increased by all schools in order to more fully acquaint students with the world of work. We further urge the establishment of Business Education and Vocational, Industrial Clubs on a County level beginning in the seventh grade and continuing through high school with meetings one evening each month. The main purpose of such clubs would be to acquaint youth with Business and Industry by the use of speakers from the employment service (M.E.S.C.) business, industry, and the professions. Field Trips should be taken and films used to further acquaint students with occupational information. We further urge that the Northern Michigan University Television channel be used on a regular basis to broadcast occupational information to students throughout the Upper Peninsula of Michigan.

We feel follow up studies of graduates and dropouts should be by all high schools on a regular basis and experiments in curriculum change should be carried on, and the information gained should be made available to all school districts in the area.

A student that attends any of the vocational programs offered in the Dickinson-Iron Intermediate District should have at his disposal a job placement service operated by the ten high schools in cooperation with the Michigan Employment Security Commission.

We recommend that a Vocational Certificate be issued to those persons that successfully complete a prescribed course of study for each occupation taught. This will enable employers to hire persons better suited to a job and it also will help the students obtain employment.

Low Achievers

We recommend a program of studies, on an area basis, for students who probably cannot succeed in the regular vocational program. This program should de-emphasize the verbal ability and mathematical computations necessary in many of the skilled trades and should emphasize the positive assets each student has instead. We feel a program of this type should be undertaken as an experiment to better meet the needs of those who cannot complete successfully in the higher skilled occupations.

Handicapped Persons

We recommend a further study of the needs of the physically handicapped persons in the Upper Peninsula. We applaud the efforts being made by the Michigan Rehabilitation Institute at Pine Lake, and feel that the need for such an institution in the Upper Peninsula should be investigated.

Dropouts

We have recommended many new classes be offered in addition to more adequate counseling. We feel the prevention is more important than trying to provide a program for them after they have left school. A recent survey disclosed that most dropouts leave the area, and seek employment in other cities, therefore we feel a special program for dropouts is not needed at this time.

Counseling and Guidance

"Counseling and guidance services presently available to vocational high school students are very inadequate--both in quantity and quality. Guidance personnel quite often lack sufficient knowledge about occupations, labor markets, and training problems. Actually, vocational counseling has become more or less a clerical and mere information function. Better relationship should be established between counselors and State employment services. Counseling and guidance for vocational students must be of the same quality as is available in many schools to college "material." [4]

4. Peter T. Schoemann, The Changing Needs of Vocational Education. A Report to the Panel of Consultants on Vocational Education. Washington: United Association of Journeymen and Apprentices of the Plumbing and Pipe Fitting Industry, Aug. 10, 1962, p.11.

CONCLUSION

In this study we have attempted to describe the ambitions of the boys and girls, the experience of our recent graduates, the aspirations of our dropouts, the needs of our local and area business industry and a plan of attack to improve the occupational offerings in this area.

We find that the conclusion of the report, Education For A Changing World of Work, states the problem very well:

> "We have examined vocational education against the backdrop of mobility, urbanization, technological advance, and the population explosion of the 1950's and 1960's. We conclude, as Margaret Mead has observed:
>
> The most vivid truth of our age is that no one will live all his life in the world into which he was born, and no one will die in the world in which he worked in his maturity.
>
> These conditions, which are without precedent in their intensity, produce very difficult social and economic problems and present a challenge to our ingenuity, intelligence, and statesmanship.
>
> Only a rising general educational level and an increasing skill competence of individuals will provide the power to meet this challenge. Education, which raises our personal and national levels of living and enhances our position of leadership in the world, is thus the key to the future.
>
> Americans hold that the manifold tasks of the world of work are all equally important and that the man dignifies the job, not the reverse. We believe that, in a democracy, everyone should have access throughout life to the education and training needed to develop to his highest potential. Education is a continuous process, not an injection that thereafter makes the individual immune to ignorance and the need for knowledge.
>
> General education--language and arithmetic skill, plus basic knowledge of the world about us--itself contributes indispensably to occupational competence.

Vocational education and general education are complementary and equally important to individual occupational competence.

The Panel concludes that expanded vocational education, apprenticeship, and technical training are especially needed now to prepare both new workers and the unemployed to fill the job openings available for skilled or specialized workers. These education programs should be administered with flexibility in order to adjust to the rapidly changing technology and to the varied social and economic needs of individuals." [5]

5. EDUCATION FOR A CHANGING WORLD OF WORK-Report of the Panel of Consultants on Vocational Education.

VT 001 723
Havener, Charles Paul
Part-Time Cooperative Industrial Education as Viewed by Cooperating Employers in Ames, Marshalltown and Newton. (Master of Education Theses).

Iowa State Univ. of Science and Technology, Ames
Iowa Dept. of Public Instruction, Des Moines. Div. of Vocational Education
MF AVAILABLE IN VT-ERIC SET.
Pub Date - 66 49p.

*COOPERATIVE EDUCATION; *TRADE AND INDUSTRIAL EDUCATION; *STUDENT EVALUATION; *EMPLOYER ATTITUDES; MASTERS THESES; QUESTIONNAIRES; STUDENT CHARACTERISTICS; *PROGRAM EVALUATION
IOWA

Data were collected during 64 personal interviews with cooperating employers for these purposes: (1) to identify characteristics displayed by student, (2) to identify skills demonstrated by students, (3) to identify significant strengths or weaknesses of the program, and (4) to reveal suggested procedures for increasing program effectiveness. The employers were asked to rate students, whom they had trained in the past five years, on a 6-point scale for 19 personal characteristics and 16 skill-related items. Highest ranking weighted scores for personal characteristics were given to: (1) loyalty, (2) choice of language, (3) other's safety, (4) other's feelings, and (5) cheerfulness. Highest ranking weighted scores for skills were given to: (1) familiarity with equipment at last of period, (2) composition of written reports, (3) vocabulary at last of period, (4) selection of tools and equipment, and (5) safety. These rankings indicate the personal characteristics and skills which received the best ratings by employers. This Masters Thesis was submitted to the Iowa State University of Science and Technology. (EM)

VT001 723

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PART-TIME COOPERATIVE INDUSTRIAL EDUCATION AS VIEWED BY COOPERATING EMPLOYERS IN AMES, MARSHALLTOWN AND NEWTON

by

CHARLES PAUL HAVENER

Under the direction of

Dr. Ray Bryan, Head, Department of Education
Prof. Lowell L. Carver, Chairman, Industrial Education Curriculum

Conducted
Under a grant from
Iowa Department of Public Instruction
Division of Vocational Education
(VEA-1963-4(a) Ancillary Funds)

IOWA STATE UNIVERSITY
of Science and Technology

Ames, Iowa 1966

VT 01723

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY

Enclosed is a reprint of a field study which relates the responses made by employers during sixty-four personal interviews. They rated the skills and personal characteristics of 191 student-learners. Employers also evaluated various aspects of Cooperative Industrial Education Programs in Ames, Marshalltown and Newton, Iowa. Their comments are considered to be an important part of this research and may help to stimulate a more rapid development of improved educational programs.

Portions of this report are expected to be of special interest to Coordinators of Cooperative Industrial Education Programs. This educator plans to use some of the material in related instruction class, and other portions to help plan improvements in the various aspects of program operation.

As a pilot study, this research may serve as a basis for planning additional needed research in Distributive Education and Office Occupations as well as in Industrial Education. Any communications relative to this report may be sent to the Industrial Education Department, Iowa State University.

Sincerely,

Charles Havener

Charles Havener

PART-TIME COOPERATIVE INDUSTRIAL EDUCATION AS VIEWED BY COOPERATING EMPLOYERS IN AMES, MARSHALLTOWN AND NEWTON,

by

Charles Paul Havener

A Field Study Submitted to the
Graduate Faculty in Partial Fulfillment of
The Requirements for the Degree of
MASTER OF EDUCATION

Major Subject: Industrial Education

Approved:

Lowell L. Carver
In Charge of Major Work

Ray Bryan
Head of Major Department

J B Page
Dean of Graduate College

Iowa State University
Of Science and Technology
Ames, Iowa

1966

TABLE OF CONTENTS

	Page
INTRODUCTION	1
Objectives	3
Definitions	3
Ames, Marshalltown and Newton	4
REVIEW OF LITERATURE	6
PROCEDURE	7
FINDINGS	11
Personal Characteristics	12
Skills	16
Evaluation of the Program	20
DISCUSSION	30
SUMMARY	33
BIBLIOGRAPHY	35
ACKNOWLEDGEMENTS	36
APPENDIX A	37
APPENDIX B	38
APPENDIX C	39
APPENDIX D	44
APPENDIX E	45

50

LIST OF TABLES

Table		Page
1.	Population from which sample was drawn	7
2.	Selected sample	8
3.	Completed interviews	10
4.	Numerical summary of personal characteristics	13 - 14
5.	Numerical summary of skills	17 - 18
6.	Effectiveness of selection and placement	21
7.	Quantity of communications from coordinator	21
8.	Importance of communications from coordinator	22
9.	Coordinator visits in relation to desired frequency	23
10.	Estimated frequency of coordinator visits	23
11.	Value of coordinator visits	23
12.	Evident value of related instruction	24
13.	Per cent of occupational processes experienced by student-learners	24
14.	Supervision of student-learners' performance of processes near end of training period	25
15.	Student-learner graduates suitable for full-time employment	26
16.	Number of months credit toward completion of apprenticeship at the end of nine months as student-learner	26
17.	Additional training time necessary to complete apprenticeship	27

INTRODUCTION

Maximum development of the whole person has been a goal of quality education. The part-time cooperative industrial education program has played a very significant role in helping many young people focus on and move toward that goal. It has been a program in which student, employer, parent and school enter into an agreement[1] for the purpose of training the student in a specific industrial occupation. The student-learner[1] (a high school senior, 16 years or older) participates in classes at school for half the day and gains practical, on-the-job experience in an industrial occupation during the other half-day. The industrial experience takes place under actual working conditions with well qualified, experienced craftsmen and technicians to provide the student-learner with instruction and supervision.

The part-time cooperative industrial education program[2] is a part of trade and industrial vocational education[1], one of five divisions of vocational education[1], and has long been recognized as a vital element in the education of this nation's youth. In a Report by the Panel of Consultants on Vocational Education (9-264):

> Vocational education and general education are complimentary and equally important to individual occupational competence.

Successful programs date back to 1918 nationally and to 1935 in Iowa (8). The first positive action in the development of vocational industrial education came in 1906 when a small group of men formed the National Society for the Promotion of Industrial Education (9). During the past half-century there have been continuous and accelerated increases in numbers of students, programs and invested dollars. Meanwhile, research on the program has experienced neglect.

> Much less research than is needed has been done in the field of operational efficiency, and some research findings which might improve instruction have not been implemented (9-124).

Had programs been less successful, more time, money and talent might have been expended on research in attempts toward increased effectiveness. The lack of research should, perhaps, be classified as a tribute to the hundreds of communities who through the years have developed and supported successful programs. Much of the success has likely been a result of continual "fragmentary research" conducted by the coordinator[1]. Collection and analysis of data (comments, facts, suggestions and observations) have been accomplished on a regular (usually daily) basis during coordination[1]. Answers provided by the results of "fragmentary research" have been essential to the solution of day-to-day problems. There are, however, some inherent limitations which make supplementary research a necessary part of a thorough program of evaluation.

> Very little research evidence or organized body of knowledge of the activities in vocational education is available to justify many of the practices in instruction or supervision (9-243).

Previous, limited research of the part-time cooperative industrial education program had been based almost exclusively on data from only two sources: (a) responses from graduates of the program, sometimes compared with responses from "non-coop" graduates and (b) high school records. An exception to this was research done by Shadle (7) in

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[1]Refer to definitions.

[2]Hereafter referred to as program.

which an employer rating scale was completed during personal visits with employers.

Research in which data are based on school records and graduate responses, has frequently been termed a "follow-up study." (Follow-up study should not be confused with follow-up record[1].) Follow-up studies, though few in number, have provided some sound answers to some vital questions.

A source of data virtually neglected except in "fragmentary research" activities, has been the cooperating employer[1]. The following was presented to help portray the cooperating employer's role in a student-learner's development. The cooperating employer (a) interviews the prospective student-learner[3], (b) helps provide orientation to an occupation, (c) may or may not hire the S-L, (d) provides on-the-job training and supervised work experience, (e) evaluates S-L performance, (f) may suggest that S-L is likely to be happier and more successful in some other occupation, (g) may suggest that S-L's prospects for success and happiness in the occupation are good, (h) may offer the graduate S-L a position as a full-time employee or offer a good recommendation, (i) may suggest and/or finance further specialized training. Thus, the cooperating employer has lived the roles of personnel manager, employer, instructor, supervisor, inspector, fellow worker and vocational advisor.

The S-L, a product of his interaction with home, community, and school, usually comes to the cooperating employer as a "raw recruit." By the end of the senior year, the S-L and cooperating employer have invested from 540 to over 1000 hours in joint working relationships for the purpose of helping the S-L develop marketable skills. There has been opportunity for the cooperating employer to get well acquainted with the S-L as a person and as a worker. The youth emerges from the role of S-L, a product of his interaction with home, community, school and cooperating employer. The cooperating employer has had the combined opportunity to (a) look at the youth as a new worker, (b)teach skills on the job where immediate and true-to-life application of the skill is experienced, (c) test and evaluate the S-L's performance under actual occupational conditions, (d) make a comparison between S-L's characteristics and characteristics of successful workers in the occupation, and (e) gain a potentially valuable employee.

The researcher concluded that cooperating employers were capable of supplying the research data required to answer the following questions which were considered to be the appropriate means of stating the problem.

(a) Do student-learners exhibit poorly developed personal characteristics which are necessary or desirable for success in the occupation? If so, which characteristics are affected and what is the level of development?
(b) Are student-learners handicapped as a result of inadequately developed skills? If so, which skills are affected and what is the level of development.
(c) What are the most evident strengths of the program?
(d) Are there areas of weakness in the program? If so, please describe each weakness.

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[3]Hereafter referred to as S-L.

(e) What are some changes that would likely improve the program?

The two-fold purpose of this research was (a) to describe various aspects of the program from the cooperating employer's point of view and (b) to determine the relative value of the cooperating employer as a source of research data.

The following assumptions were made on the basis of the researcher's observations and experiences.

(a) Many years of favorable results have proven the effectiveness of part-time cooperative industrial education programs.
(b) There has been much interest in making successful programs of education even more effective.
(c) Research of increased quality and quantity holds the best promise for acquiring answers which will be useful in planning more effective programs.
(d) Cooperating employers are one of the most important sources of data.
(e) Cooperating employers are willing to participate in research activities designed to evaluate program effectiveness.
(f) The completed research will serve as a pilot study which may help point the way to closer research relationships between industry and education.
(g) The completed research will be of interest to coordinators, employers, parents, school administrators, students and teachers. (The aforesaid groups have a significant influence upon the development of each youth prior to and during status as a student-learner.)

Objectives

The following specific objectives served to direct the research activity.

1. To design an instrument for the purpose of gathering research data (observations, opinions) from cooperating employers.
2. To enlist cooperating employers as evaluators of (a) student-learners and (b) part-time cooperative industrial education programs.
3. To identify personal characteristics displayed by student-learners.
4. To identify skills demonstrated by student-learners.
5. To identify the most significant strengths of the program.
6. To detect any observed weaknesses in the program.
7. To reveal suggested procedures which may be employed to increase program effectiveness.

Definitions

Advisory committee-

A group of persons (representing business, industry, labor and the community) who advise a coordinator in the overall operation of the program.

Agreement-

Entered into by each student-learner before he starts to work. Wages and terms of employment are stated. This agreement is approved by the employer, the school, the student-learner and parents or guardian.

Cooperating employer-

Any business, shop or industrial establishment which employs a student-learner for the purpose of giving on-the-job training in cooperation with the school. (For purposes of this research the definition is expanded to include supervisors and managers within the establishment.)

Coordination-

That phase of the coordinator's responsibility which involves visits to homes and cooperating employers for purposes of helping student-learners advance in the occupations for which they are training. Correlating the related study in school with job progress. The process of operating all phases of a part-time cooperative industrial education program.

Coordinator-

The individual who is responsible for the operation of a part-time cooperative industrial education program.

Follow-up record-

A record showing the employment status of former graduates who have participated in the part-time cooperative industrial education program.

Related instruction class-

The class at school where related study takes place under the coordinator's direction. Areas of study are (a) general information desirable for all workers and (b) specific information essential to performance of certain job operations.

Student-learner-

Any student having the proper qualifications who has been selected and enrolled in the part-time cooperative industrial education program.

Trade and industrial vocational education-

Training for skilled or semi-skilled crafts or occupations which involve functions of designing, producing, processing, assembling, maintaining, servicing or repairing which are not specifically covered under agriculture, distributive education, home economics or office occupations.

Vocational education-

Education and training of less than college grade for the specific purposes of (a) preparing persons of employable age for advantageous entrance into skilled trades and occupations and (b) enabling persons who have left school and entered employment to obtain instruction which will fit them to do better work and to take advantage of opportunities for advancement. The five divisions are agriculture, trade and industrial, home economics, distributive, and office occupations.

Ames, Marshalltown and Newton

All three cities are located almost in the center of the state of Iowa and are served by major federal highways. Populations (1960) ranged from Newton's 15,381 and Marshalltown's 22,529 to 27,003 for Ames.

Metal working has been the backbone of Marshalltown's industry. In 1963, 47 plants employed 4,800 persons. Marshalltown has been described as "Iowa's little Pittsburgh" (6).

Newton's fourteen industrial plants employed 4,349 persons according to figures available in March, 1966. Newton has been referred to as the "Home laundry appliance manufacturing center and advertising specialty center of the world" (3).

Ames' largest private enterprise employed 1,000 persons in 1966. State and federal institutions such as Iowa State University, Iowa State Highway Commission and National Animal Disease Laboratory were the larger employers. An account of all persons engaged in trade and industrial functions was not available (1).

At the most recent count, the public schools of the communities had similar enrollments at the elementary and secondary levels. Newton had 5,217, Ames totaled 5,308 and Marshalltown, 5,504. Other schools at the primary and secondary levels were a parochial elementary school in Newton and one in Ames. Marshalltown had three parochial schools; one high school and two elementary schools.

There was a close similarity between the curricula of the three schools. Industrial arts offerings were electricity-electronics, drafting, power or auto mechanics, metalworking and woodworking.

REVIEW OF LITERATURE

Efforts to find research which had been designed to evaluate part-time cooperative industrial education programs[1], revealed a rather small number of research reports. Most frequently found were follow-up studies on graduates of the programs.

By means of a comprehensive questionnaire to graduates, Ryerkerk (5) sought to determine (a) per cent working in general occupation where training was received, (b) per cent who felt training was of value in obtaining, holding or advancing in job, (c) per cent continuing their education, (d) kinds of vocational training which would be selected if graduates were in high school now, and (e) interest in post-high school training. Graduates were also asked to suggest ways of improving the program. Questionnaires were returned by 102 graduates. Over 80% reported the program useful in helping to obtain, hold and advance on the job. Responses made it evident that the program had been of definite value and suggestions for improvement were presented by the graduates.

In a follow-up study by Rowe (4), 80 graduates responded to a questionnaire and revealed that 65% were working in the same (or related) occupation for which they had trained as student-learners. Respondents were asked to suggest ways to improve the program. Many of them stated program strengths and made suggestions for an improved program. It was concluded by Rowe that the program was meeting current needs and that continued evaluation would be necessary to assure a well designed program.

In research conducted by Shadle (7), employers were contacted personally for the purpose of completing job adjustment rating scales on each of 168 employees. Half the employees were graduates of the program and half had not taken the program in high school. Half the employees were girls, the other half boys. Four sub-groups were established with controls on mental ability, high school achievement, and length of time since graduation. Data were treated with analysis of covariance with multiple classification. In comparing those who had taken the program with those who had not, it became evident that the program helps one to become a better student in school and to adjust more readily to a job. Of the program graduates, 79% were in the same job or in an occupation allied to the training received in high school.

Other studies have dealt with evaluations of industrial education programs of which part-time cooperative industrial education is a segment. Studies in this classification have had relatively less to reveal about the effectiveness of the program in question.

Throughout the search, there were no signs of research in which employers were asked to privide data, opinions or suggestions relating to the program.

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[1]Hereafter referred to as program.

PROCEDURE

After making the tentative decision to conduct the planned research in the cities of Ames, Marshalltown and Newton, the coordinator of the part-time cooperative industrial education program in each of the three school systems was visited personally. The general plan and the objectives were made known and each coordinator indicated a desire to have his community's program included in the research project.

Each coordinator was asked for copies of "Semester Report for Part-time Cooperative Industrial Occupations Class" (T.I.-13) for school years 1961-62 through 1965-66. Original copies of the reports were filed with the State Department of Public Instruction, Division of Vocational Education, Des Moines, Iowa. Included in the reports were three items of special interest; name of student-learner, name of employing firm and occupation for which student-learner had trained.

A letter requesting permission to conduct the research (see Appendix A) was sent to the superintendent of schools and the high school principal in each of the three cities. Permission was promptly granted in each case.

Table 1 shows the population from which the sample was drawn. The population was based on both first and second semester (T.I.-13) reports for the five-year period. It should be noted that potential interviews out-numbered cooperating employers. The reason for the difference was the fact that some cooperating employers helped train student-learners in more than one occupation. For example, an automobile dealer and his staff helped train auto mechanics, auto parts clerks and auto body repairmen. Thus it was appropriate to interview the service manager, the parts manager and the manager of the body shop.

The sample was selected using the following criteria:

(a) An employer must have been a cooperating employer for two or more of the school years, 1961-62 through 1965-66.

(b) The cooperating employer must have helped train two or more student-learners for a given occupation during the five-year period.

(c) At least one of the student-learners must have received training during the 1963-64 through 1965-66 school years. (This was specified in order to ensure recent experience in the program.)

Table 1. Population from which sample was drawn

Cities	Cooperating employers	Potential interviews	Student-learners
Ames	65	67	114
Marshalltown	40	46	88
Newton	52	59	108
Totals	157	172	310

Table 2. Selected sample

Cities	Cooperating employers	Potential interviews	Student-learners
Ames	23	24	59
Marshalltown	15	17	81
Newton	20	23	73
Totals	58	64	213

Table 2 shows the quantitative composition of the selected sample. There were 58 (37% of population) cooperating employers, 64 (37% of population) planned interviews and 213 (69% of population) student-learners in the sample. The most frequent reasons why cooperating employers did not qualify for inclusion in the research were: (a) no longer active in the industrial community, (b) participated only one year and then dropped out of the program, (c) had not participated since the 1962-63 school year, and (d) new to the program.

It was necessary to develop a list of cooperating employers who would be asked to participate in the research. Appropriate portions of the list were sent to each coordinator requesting the return of (a) firm address, (b) position and name of person to receive letter, and (c) supervisors and managers to be named in letter (persons other than the addressee who should be interviewed). The coordinator retained a copy of the list in order that letters of introduction could be sent from coordinator's office to appropriate employers. Each coordinator developed letters of introduction (see Appendix B) which were sent near the end of the 1965-66 school year.

The interview form was developed during a series of meetings with Professors of Industrial Education, Lowell L. Carver and Owen Shadle and during visits with each coordinator. The resulting form was typed and duplicated on 8½ inch by 11 inch sheets. It was pretested in a total of nine firms in Ames, Marshalltown and Newton. After minor changes, preparations were made to print the revised form (see Appendix C) on 8½ inch by 14 inch sheets. The larger sheets provided more space for recording comments made by the interviewee.

The letter from researcher to cooperating employer was developed during a series of meetings with Professor Owen Shadle. A form letter for each city was composed and then lithographed.

A schedule of interviews was developed. It was estimated that each interview would take 30 minutes; 75 minutes were allowed from the beginning of one to the beginning of the next interview.

The typist was supplied with form letters, carbon paper, copy paper, envelopes and appropriate instructions. Items of information supplied for inclusion in each individual letter were: (a) name and position of addressee, (b) name and adress of firm, (c) names of persons to be interviewed, (d) time and date of interview, and (e) names of student-learners whom firm had helped train during the past

five years. The completed letters (see Appendix D) were checked for proper entries and corrections were made. A partially completed confirmation form (see Appendix E) and stamped envelope (addressed to researcher) were enclosed with the letter.

Entered on the cover sheet of the interview form were: (a) name of cooperating employer, (b) city initial, (c) name of interviewee, (d) names of student-learners, (e) title of occupation for which they had trained, and (f) year that training had begun for each student-learner. Attached to the front of the interview form were the copy of the letter to the cooperating employer and the returned confirmation sheet. By following such a procedure, confirmed time of interview and cooperating employer's address were easily added to the interview form.

When reporting for an interview, it was standard procedure to meet first with the addressee if convenient for him. In some cases the addressee was the top administrator, general manager or a partner in the firm. The small amount of additional time necessary to meet the demands of such a policy was well invested. Time was undoubtedly saved in some cases and there was never an instance when anyone was placed in an embarrassing situation. In the majority of cases, addressee and interviewee were the same person.

The procedure followed during each interview was: (a) personal introductions, (b) a brief review of purpose for the interview, (c) check student-learners who were clearly remembered by the interviewee and record total number at bottom of sheet number 1, (d) request that interviewee keep in mind the age group and half-day status of student-learners, (e) briefly explain the terms, "outstanding", "good", "acceptable", "fair", "poor", and "NA/NO". (f) ask that each student-learner be designated for placement in the most appropriate column for each personal characteristic and each skill, (g) comments were welcomed and recorded at any time during the interview, (h) on the last two pages of the interview form, no necessity to identify differences in student-learners, (i) upon completion of the interview form, the invitation to express views of the current program and offer any suggestions for making improvements, and (j) when the interviewee seemed to have nothing additional to contribute, he was thanked for his time, observations and opinions and bid good-bye.

There were 191 student-learners evaluated in interviews. By a comparison between Table 2 and Table 3 it is evident that 22 student-learners in the sample were not evaluated. The most frequent reasons were (a) student-learner was not clearly remembered by interviewee, (b) student-learner had left school early in his senior year, (c) student-learner left firm early in school year because of unresolved problems, and (d) interviewee was employed by the firm since the training period of earlier student-learner.

A minimum of re-scheduling was required in efforts to reach the goal of completing all interviews in the sample. By a comparison between Table 2 and Table 3 it becomes evident that all planned interviews were completed.

Table 3. Completed interviews

Cities	Cooperating employers	Completed interviews	Student-learners
Ames	23	24	59
Marshalltown	15	17	68
Newton	20	23	64
Total	58	64	191

FINDINGS

The findings of this research were based on opinions and observations of cooperating employers[1]. Responses were recorded by the researcher during each of 64 personal interviews with 68 cooperating employers[2]. (Four interviews involved two Es in the firm, both having had experience with the same student-learners.) There were 191 former student-learners[3] evaluated during the interviews. There were from one to ten S-Ls per interview with an average of nearly three. The S-Ls were trained in 36 occupational classifications. A list of these classifications follows:

Building trades and related - 26 Carpenter, 2; civil engineering aide, 1; concrete production, 3; draftsman, 10; heating, air conditioning and refrigeration mechanic, 2; lumberman, 4; plumber, 2; and tile and carpet layer, 2.

Foods and beverages - 16 Beverage production, 7; cook, 2; and meat cutter, 7.

Health services - 18 Dental assistant, 2; hospital orderly, 1; laboratory technician, 4; nurses aide, 10; X-ray laboratory technician, 1.

Manufacturing and related - 31 Concrete products manufacture, 3; mail and stockroom clerk, 6; plastics fabricator, 6; shop clerk, 5; tool and die (die casting), 9; and tool grinder, 2.

Printing and publishing - 11 Printing and publication, circulation, 2; and printer, 9.

Services (not otherwise classified) - 21 Appliance repairman, 4; dry cleaner, 2; electric motor repair, 2; key punch machine operator, 6; radio and T.V. repairman, 4; and typewriter repairman, 3.

Transportation services - 68 Auto body and fender repairman, 16; auto maintenance mechanic, 7; automatic transmission mechanic, 2; auto mechanic, 29; auto parts clerk, 12; and radiator repairman, 2.

Findings have been divided into three major sections. The first two relate to evaluations of S-Ls' personal characteristics and skills. The third section relates to Es' evaluation of the program.

Es were encouraged to comment freely during interviews. Comments were recorded quite accurately and were considered to be an important part of the findings. To report each comment individually would have involved too much space and too much of the reader's time, so attempts were made to report only those remarks which were most noteworthy.

As reported herein, when two or more Es made virtually the same comment, the quote was followed by a dash (-) and a numeral denoting the number of Es making the comment. For the sake of brevity, phrases have frequently been used instead of complete sentences.

Each S-L was rated on 19 personal characteristics and 16 skill related items. There were six possible positions on each item. (See Appendix C) In treating the data, each of the positions was assigned a multiplier; outstanding x 4, good x 3, acceptable x 2, fair x 1, poor x 0 and NA/NO (not acceptable or not observed) x 1. The data for each item was treated with the formula:

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[1]Refer to definitions.
[2]Hereafter referred to as Es.
[3]Hereafter referred to as S-Ls.

$$\frac{o4 + g3 + a2 + f}{(191 - NA/NO)\ 4} \times 100 = \text{weighted score}$$

To illustrate the use of the formula, the data for the characteristic of judgement have been used (see Table 4).

$$\frac{12.4 + 58.3 + 40.2 + 38}{(191 - 33)\ 4} \times 100 = 53.8$$

Weighted score ranges for positions "poor" through "outstanding" were as follows: poor, 0 - 12.5; fair, 12.6 - 37.5; acceptable, 37.6 - 62.5; good, 62.6 - 87.5; and outstanding, 87.6 - 100.

For each of the 35 items in the first two sections, the item has been stated as shown on the interview form, then the interpretation (shown in parentheses) of the item as presented to Es during interviews, some reference to information in the table and then comments made by Es have been shown in quotes.

Personal Characteristics

Table 4 on the following two pages shows personal characteristics arranged by descending weighted scores. The higher the score, the more favorably ranked by Es. Other items shown in Table 4 are frequency totals for each of the six positions and the percentage of S-Ls on which the weighted score was based.

Loyalty to employer (absence of action which would tend to devaluate the firm in any manner) was placed at the top of the list with a weighted score of 73.4 based on all the S-Ls. Only four S-Ls received marks of fair or below. "Actually helped the business" and "patronized a competitors business".

Choice of language (absence of elements, such as profanity, which could cause embarrassment for the firm) was found to be fair or poor for only six per cent of all S-Ls. "Reflected in the home environment", "lacked control of temper", "obscene at times", "standards were made clear at beginning and there were no problems at any time" and "became progressively more profane:.

Concern for others' safety (absence of 'practical jokes', doesn't leave unnecessary hazards in work area) was measured on all but three per cent of the 191 S-Ls. There were 170 considered to be mid-range or above. "Get extensive orientation and close supervision; response very good" - 2, "a near miss; lesson learned", and "fail to handle motor vehicles in a sensible manner" - 4.

Concern for others' feelings (is tactful, compliments with sincerity, sensitive to needs of others) was not observed in the case of 13 S-Ls. "Overly tactful, very modest", "seemed to feel awkward", "immature, generally insensitive", "failure to think before talking", and "a habitual 'wise-cracker'".

Cheerfulness (seems to enjoy work and fellow workers) was in excess of five points below first place. "Very energetic" - 4, "enjoyed people", "very agreeable", "personality plus", "increased with maturity", "knows how to smile and practices", "moody" - 4, "somber" - 3, and "sense of responsibility seems imcompatible with joy of productivity".

Observance of rules, regulations, and policies (whether posted or verbally presented) was not applicable or not observed in eight cased. "Policy not dictated", "stressed at beginning and no problems", and "took three or four months to satisfactorily achieve".

Punctuality (arrives before actual starting time; willing to remain a few minutes to finish a job) was a source of difficulty for approximately 17 per cent of S-Ls. "Always early and would stay after

Table 4. Numerical summary of personal characteristics

Personal characteristics	Weighted score	NA/NO[1]	Per cent of S-Ls evaluated
Loyalty	73.4	0	100
Choice of language	72.6	0	100
Safety, others'	71.5	5	97
Feelings, others'	70.5	13	93
Cheerfulness	68.1	0	100
Observance of rules	67.8	8	96
Punctuality	67.8	4	98
Appreciation, costs	67.3	12	94
Clothing selection	66.4	29	85
Accepts criticism	66.3	1	99
Customer relations	66.3	76	60
Grooming	65.3	0	100
Pride of accomplishment	65.2	2	99
Dependability	64.3	0	100
Appreciation, time	60.9	0	100
Oral communications, clear	60.8	11	94
Confidence	56.9	5	97
Listener	56.4	0	100
Judgement	53.8	33	83

[1]Not applicable or not observed.

Table 4. (Continued)

Personal characteristics	Frequency totals				
	Outstanding	Good	Acceptable	Fair	Poor
Loyalty	20	147	20	1	3
Choice of language	29	131	20	6	5
Safety, others'	26	131	13	9	7
Feelings, others'	18	128	16	14	2
Cheerfulness	29	111	26	19	6
Observance of rules	18	119	28	11	7
Punctuality	46	89	18	20	14
Appreciation, costs	17	116	25	16	5
Clothing selection	14	101	30	11	6
Accepts criticism	25	115	21	17	12
Customer relations	14	72	13	7	9
Grooming	17	117	30	20	7
Pride of accomplishment	34	91	29	26	9
Dependability	29	102	20	29	11
Appreciation, time	27	93	27	24	20
Oral communication, clear	16	97	27	29	11
Confidence	14	83	40	38	11
Listener	24	86	25	27	29
Judgement	12	58	40	38	10

if needed", "continued work in summer and occasionally overslept", "seemed slow in returning from errands", "wouldn't notify employer of expected absence" - 2 and "slight illness and he'd stay home; adjustment problems" - 2.

Appreciation for costs other than time (effective use of materials, supplies, facilities; not wasteful) was considered by one E to be "management's responsibility". "Wanted to make up for losses due to errors", "good general concern" - 2, "developed an appreciation", "tool losses due to carelessness", "general lack of realization in this area", and "awkwardness resulted in some losses".

Clothing selection (appropriate to the work activity) did not apply in 15 per cent of the cases because of uniforms. "Neat", "had to be reminded occasionally", "had to be advised and then improved" - 5, "improved with time and finances" - 4, and "poor dresser".

Acceptance of constructive criticism (gratefully received and utilized to make improvements) was a source of difficulty for at least 15 per cent. "Never needed criticism", "prefer S-L ask again if in doubt", "took time to develop:, "okay except when it came to clothing and grooming", and "failed to apply after apparently getting the message" - 2.

Customer relations (is courteous, builds good will) applied to only 60 per cent of the situations in which S-Ls worked. "Offered extra service", "very important part of the job", "meets people and adjusts to environment", "responsibility given directly to boy; best way to learn", "okay when he felt like it", and "too backward and shy; a know family trait".

Grooming (clean body, haircut, shave, clothing satisfactorily maintained) placed twelfth. "Had to be advised and then improved" - 3, "not clean shaven", "acne problem", and "problem with hair and 'beetle' influence" - 4.

Pride of accomplishment (takes pleasure in doing a good job) was at least acceptable to Es in four out of five cases. "Liked to receive compliments", "progressive improvement" - 2, "being too much of a perfectionist slowed him down too much", "may take pride but didn't express pleasure" - 2, "somewhat sloppy", "seemed to deteriorate with time", "didn't care about being expert" - 2, and "a general lack of this in trades in general; poor examples set by workers on big jobs especially".

Dependability (trustworthy, reliable) was a source of some difficulty for at least 20 per cent. "S-Ls are honest", "steady", "good helpers but unable to function alone", "problem of honesty with company property by people who are above reproach on personal basis", "frequent absence without prior notice", "a boy dismissed on this matter", "trouble with the law" - 2, and "was caught lying on two or more occasions" - 2.

Appreciation for the value of time (involved in productive or learning activities; no 'goofing off') was considered by Es to be weak or lacking in at least 23 per cent of the S-Ls. "Seeks out something to do on his own" - 2, "okay with close supervision, poor without it", "worked too fast; quality suffered", "had certain duties to perform in a given time; no chance for 'buck-passing'", "somewhat slow", "a 60 per cent tendency to 'goof-off'", "a loafer", "couldn't find anything to do if not specifically assigned" - 2, "completely unacceptable in this respect" - 2, and "fail to understand that they have to make money for the firm".

Oral communications; clear, concise (makes point without wasted words; talks too much? too quiet?) were important enough to be observed in 94 per cent of the cases. Over 22 per cent were rated fair and poor. "Outstanding because he wanted to know 'why' when it was appropriate", "lacked nerve", "speech handicap; couldn't present himself" - 2, "tends to interrupt conversations", "failure to communicate to supervisor, any ideas for improvement in the work situation" - 2, "talk interferred with production of work" - 2, "too quiet" - 18, and "too talkative" - 11.

Confidence, poise (appropriate level) was considered to be a weakness in at least 26 per cent of S-Ls. "Reasonable about possessed knowledge and capacities", "improved with maturity" - 2, "bashful; reflected in work", "six months before an adequate level was reached", " a little backward and shy at beginning" - 3, "self-conscious as result of kidding by regular employees, but no problem", "self-conscious of an extreme sinus condition", "failed to try to know customers", "lacked confidence" - 14, and "over-confident" - 8.

Attentiveness; listener (gets message the first time when clearly presented; makes notes of more complex instructions) was considered by Es to be no better than fair for about 30 per cent of all S-Ls. "Show him once and he had it", "learns quickly, retains well", "developed better habits" - 2, "poor at remembering and taking notes" - 2, "wouldn't direct his attention" - 2, "slow to comprehend", "lack of nomenclature a handicap", "failed to make notes", "had to be told repeatedly", "lack of interest exhibited" - 2, "general lack of ability to receive and follow instructions.

Judgement (displays appropriate initiative and makes responsible decisions) placed last and was based on 83 per cent of the S-Ls. Even so 37 per cent were considered to be good and outstanding. "A draftsman needs a high degree of this", "not yet in a position to make decisions; only to carry them out", "six to nine months before this developed to a satisfactory level" - 3, "hesitant to venture out and make a decision" - 2, "immature; asks all the time" - 2, "lack of consideration for dollars and cents", "squelched by a domineering father", and "lacked home training and encouragement in the acceptance of responsibilities" - 2.

Skills

Table 5 shows 16 S-L skills arranged by descending weighted scores. Other items shown in the table on the following two pages are frequency totals for each of the six positions and the percentage of S-Ls on which the score was based. Four of the skills evaluations were based on 85 per cent or more of the S-Ls.

Familiarity with equipment; last of training period (knowledge about and evidence of experience with tools and machines) ranked at top position with a score of 72.2. Only 38 S-Ls were designated below 'good'. "Level depends on S-L" and "failed to apply himself".

Composition of written reports (organization and correctness of expression) was based on only seven S-Ls. This skill was little used by S-Ls. It was indicated, however, that a greater need for composition skills would accompany advancement in most of the occupations. "Exhibited some creative ability" and "one S-L recorded telephone messages very effectively, another experienced almost complete failure in the task".

Vocabulary as applied to trade or job; last of training period (correct terms used when referring to objects or processes) was con-

Table 5. Numerical summary of skills

Skill	Weighted score	NA/NO[1]	Per cent of S-Ls evaluated
Familiarity with equipment; last of period	72.2	12	94
Composition of written reports	71.4	184	4
Vocabulary; last of period	70.1	4	98
Tools and equipment; selection	67.6	66	65
Safety	67.5	21	89
Familiarity with equipment; growth during year	67.2	12	94
Related math and science	64.8	59	69
Qualtiy of work	64.4	3	98
Ability to read blueprints, sketches, etc.	62.8	113	41
Budgeting of time	61.7	110	42
Ability to adjust to new techniques, etc.	59.3	27	86
Legibility	51.9	85	55
Tools and equipment; maintenance and care	51.8	28	85
Spelling	51.6	111	42
Vocabulary; first of period	29.3	5	97
Familiarity with equipment; first of period	21.9	12	94

[1]Not applicable or not observed.

Table 5. (Continued)

Skill	Frequency totals				
	Outstanding	Good	Acceptable	Fair	Poor
Familiarity with equipment; last of period	34	107	26	8	4
Composition of written reports	0	6	1	0	0
Vocabulary; last of period	24	120	27	14	2
Tools and equipment; selection	5	93	14	11	2
Safety	10	125	19	6	10
Familiarity with equipment; growth during year	25	103	28	16	7
Related math and science	7	86	24	8	7
Quality of work	24	93	43	23	5
Ability to read blueprints, sketches, etc.	5	42	21	8	2
Budgeting of time	9	43	15	5	9
Ability to adjust to new techniques, etc.	9	91	22	36	6
Legibility	6	52	16	8	24
Tools and equipment; maintenance and care	11	71	22	37	22
Spelling	4	36	17	7	16
Vocabulary; first of period	0	19	56	49	62
Familiarity with equipment; first of period	3	8	43	35	90

sidered to be good or outstanding for 144 S-Ls. "Didn't really care, very little gain".

Selection of tools and equipment (chosen appropriate to the task or job) was not applicable or was not observed in 35 per cent of the S-Ls. In those cases the E indicated that it would be difficult to select the wrong tool or machine for a given task. "Followed the good policy of asking questions when confronted with unfamiliar situations".

Tool and equipment safety (kept safety in mind during use and maintenance) was considered to be good or outstanding in 135 cases. "Made good use of what he learned in school", "was stressed and results were good" - 3, "careless in the proper use of electric power tools" - 2, "not enough concern about personal safety" - 2, "problems at the beginning, had to be cautioned" - 3, and "mishandled automotive equipment" - 4.

Familiarity with equipment; growth rate during year (rate of becoming proficient with tools and equipment) ranked sixth with a score of 67.2. "Depends on S-L's drive", "lack of interest hampered growth", "seemed to fade near end of training period", and "lacked aggressiveness".

Related mathematics and science (proficiency in handling money, measuring, computing; knowledge of chemical and physical properties of materials) was rated on 69 per cent of S-Ls. "Had good math and science background which helped him in his work", "developed accuracy in inventory control", "picked up what he needed and remembered it", "lacked practice in handling money and making change", "forgets through lack of practice", "weak in math and use of measuring devices" - 5, "can't read a common rule" - 2, and "lacked understanding of laws of motion, needed physics" - 2.

Quality of work (relationship to minimum standards) ranked eighth with 98 per cent being evaluated. "Applied what he learned", "demonstrated care", "two measures of skill are speed and accuracy", "had to be instructed repeatedly", "slow", "clumsy, awkward" - 2, and "failed to follow instructions; work suffered".

Ability to read blueprints and sketches was a factor in 41 per cent of the cases. The percentage would reportedly have risen as S-Ls progressed farther into the occupations. "Used parts manual effectively", "S-L's interest determines extent of involvement with plans" and "definitely need mechanical drawing and blueprint reading in this line of work" - 3.

Budgeting of time (efficiency in planning and using time) was experienced by 42 per cent of S-Ls. The majority had no occasion to personally plan and use blocks of time. "Gives a full day's work", "one of the more important things" - 2, "inefficiency seems to be intentional at times" - 2 and "finishes a task and then fails to move ahead unless specifically assigned" - 2.

Ability to adjust to new techniques, ideas and situations (adaptability; willingness to do a task in an unfamiliar manner; improvises when necessary and appropriate) was judged to be good or outstanding for 100 S-Ls. "Open-minded", "wisely seeks answers to difficult or unusual problems", "there are times when individual has to decide, right or wrong; earlier practice helpful", "lack of confidence", "tend to be impractical", "a production worker, not a designer or a problem-solver" - 5, "S-Ls fail to provide suggestions", "takes at least five months to begin changing from follower to problem-solver" - 3, and "S-Ls seem to feel nobody should be telling them what to do".

Legibility (readibility by others) was an observed factor in 55 per cent of the cases. There were over 20 points between the top ranked skill and legibility. "Doing drafting and is outstanding", "showing improvement", "wish every boy could take drafting", "draftsmen often

hired on basis of lettering only", "sad situation, terrible" - 4, "weak on use of guidelines", and "what happened to penmanship?"

Maintenance and care of tools and equipment (organized and cared for in the interest of efficiency) received a weighted score of 51.8 based on 85 per cent of the S-Ls. "Problems at the beginning only", "general problems in this area with most workers", "needed to be repeatedly reminded to clean up work area" - 3, "least cooperation in this area" - 2, and "tools were left where last used" - 3.

Spelling was based on 42 per cent and can be considered to be at the bottom of the list in view of Es' limited expectations of S-L's vocabulary at first of training period and familiarity with equipment at the first of training period, the lowest ranking items on the list of skills. "Showed good improvement" and "lousy" - 3. Several Es merely shook their heads in dismay.

Vocabulary as applied to trade or job; first of training period (correct terms used when referring to objects or processes) was good in 19 cases. Es were not particularly concerned with the status of terminology in the initial stages of experience. "Course in electricity during junior year had definitely helped", "still developing at the end of nine months", "automotive terms a pre-requisite; have to work from descriptions", "more chemistry and biology would help the medical lab technician", "graphic arts would be helpful", and "all new, much to learn at first" - 4.

Familiarity with equipment; first of training period (knowledge about and evidence of experience with tools and machines) was outstanding in three cases and poor in 90 cases. Predominance of low ratings aroused little concern on the part of Es. "Very good mechanical ability from the start", "equipment in industry frequently more sophisticated than in school", "acquainted with only a few tools of the trade" - 2, "would be helpful to have some prior training in foods, foods processing and meat cutting", and "too familiar with equipment at the beginning in some cases".

Evaluation of the Program

Cooperating employers[1] were asked to respond to this section of the interview on the basis of total experience with the program. No references were made to individual student-learners so N equalled 64. Comments made by Es have been divided into four categories and have been coded by a letter in parentheses; (0) observations, (s) strengths, (w) weaknesses and (r) recommendations.

Selection and placement of student-learners[2] was considered to be at least 'good' by over 68 per cent of the Es. Table 6 shows the responses. (0) "Takes two to four weeks to determine which S-Ls really want to learn the trade", "looked good but fizzled" and "money a matter of too much concern among S-Ls". (s) "Late fall of junior year, coordinator[3] brings interested S-Ls to us for orientation visit", "yearly improvement has been evident", "C has real insight and perception", "we find a boy and then if possible arrange with C to enter him as a S-L in the program" and "was a reject from another E but S-L worked out okay". (w) "C did best anyone could, considering S-Ls available to work with" - 2, "S-Ls either lacked goals or the drive to reach them" - 2 and "S-L just wanted out of the classroom". (r) "Would like to participate in orientation to the occupation", "early planning

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[1]Hereafter referred to as Es.
[2]Hereafter referred to as S-Ls.
[3]Hereafter referred to as C.

is helpful", "would like to have potential S-Ls come for interview in latter part of junior year", " desirable to have two or three S-Ls to choose from" - 2, "C needs to be sure S-L interested in the type of work before initial interview with E" and "would help to have more personal background on S-L before initial interview".

Table 6. Effectiveness of selection and placement

Response	N	Per cent
Outstanding	9	14.1
Good	35	54.7
Acceptable	8	12.5
Fair	5	7.8
Poor	2	3.1
NA/NO	5	7.8
Total	64	100.0

Quantity and importance of communications from C were considered by nearly all Es to be just right and restricted to "necessities only". See Tables 7 and 8. (s) "Was kept well informed about S-L's work in related class: and "appreciated prior notice of absences". (w) "Some communications were pointless".

Table 7. Quantity of communications from coordinator

Response	N	Per cent
Too many	0	0.0
Just right	62	96.9
Too few	2	3.1
Total	64	100.0

Table 8. Importance of communications from coordinator

Response	N	Per cent
Necessities only	62	96.9
Usually needed	2	3.1
Often not needed	0	0.0
Total	64	100.0

Coordinator visits in relation to desired frequency were considered by 84.4 per cent to be 'just right' (see Table 9). The estimated frequency of visits was one every nine to twelve weeks according to 39.1 per cent of Es. Table 10 shows 28.1 per cent estimating one or more C visits per month. Over 67 per cent of Es ranked C visits of at least 'high' value. (See Table 11). "Came only at end of grading periods" - 2 and "seem to boost C's moral" - 2. (s) "Helped S-Ls to know of C's interest in them" - 3, "instrumental in helping S-Ls with personal problems" - 7, "valuable visit about S-L prior to initial interview with S-L" and "C inquired about material appropriate for S-L to study in related class". (w) "S-L rating scale could have been completed by phone", "scheduling visits was somewhat of a problem", "S-L tensed up when C came" and "C made no particular contribution". (r) "Greater value could be derived if C would visit frankly with S-L prior to visiting with E".

Related instruction was not evaluated by 42.2 per cent of Es because they felt they had no real evidence on which to base an evaluation. Table 12 shows 34.4 per cent ranking the value of instruction as 'high' and 'very high'. (o) "Much depends on the individual S-L" - 12 and "S-L took correspondence course in electronics". (s) "S-L asked for literature and training helps" - 7, "E set up problems for S-L to work on during off-duty hours" and "flexible, versatile". (w) "Evidence is scarce". (r) "Favor close working relationship between C and E in planning instruction" - 3.

The per cent of processes (involved in the occupation) experienced by S-Ls has been shown in Table 13. This item was designed to measure the scope of S-Ls' experience in the occupation. Over half the Es indicated that S-Ls had experienced at least 70 per cent of the processes. (o) "Depends on S-L drive". (w) "Es either do not have or do not take enough time to teach S-Ls".

Supervision of S-L performance near the end of the training period was measured to determine proficiency levels developed in the various processes. For example, an E reports that S-Ls experienced 70 per cent of the processes. He indicates that his S-Ls performed 40 per cent of the processes with "little or no supervision" and another 30 per cent with "moderate to close supervision". He said in effect that S-Ls have experienced seven-tenths of the processes or jobs involved in the occupation. Four-tenths of the processes have been repeated enough times so that the S-L can do them with a

Table 9. Coordinator visits in relation to desired frequency

Response	N	Per cent
Too frequent	3	4.7
Just right	54	84.4
Too few	7	10.9
Total	64	100.0

Table 10. Estimated frequency of coordinator visits

Response	N	Per cent
One or more per month	18	28.1
Five to eight weeks	19	29.7
Nine to twelve weeks	25	39.1
Two times per year	2	3.1
Total	64	100.0

Table 11. Value of coordinator visits

Response	N	Per cent
Very high	10	15.6
High	33	51.6
Mediocre	16	25.0
Low	5	7.8
Very low	0	0.0
Total	64	100.0

Table 12. Evident value of related instruction

Response	N	Per cent
Very high	1	1.6
High	21	32.8
Mediocre	11	17.2
Low	2	3.1
Very low	2	3.1
Couldn't measure	27	42.2
Total	64	100.0

Table 13. Per cent of occupational processes experienced by student-learners

Response	N	Per cent
90%	11	17.2
80%	17	26.6
70%	5	7.8
60%	9	14.1
50%	3	4.7
40%	7	10.9
30%	4	6.2
20%	7	10.9
No estimate	1	1.6
Total	64	100.0

high level of competence. Three-tenths of the jobs have been done seldom and therefore demand a greater degree of supervision.

Due to the fact that Es could select percentages in any one or all levels of supervision, there was no way of controlling N which turned out to be 115. As seen in Table 14, based on medians, a typical S-L could perform 40 per cent of the processes with "little or no supervision"; the balance of the processes performed called for closer supervision. Whereas the previous item was designed to measure the scope of S-Ls' experience, this item has been designed to measure the depth of experience in the jobs or processes.

Es were asked what per cent of S-L graduates were sufficiently trained to be hired full-time by the firm if openings existed. Table 15 shows the results with 65 per cent of Es reporting 60 per cent to 100 per cent of S-Ls suitable for full-time positions at the time of graduation. Over twenty-three per cent indicated that all their S-Ls were suitable for full time employment.

Table 14. Supervision of student-learners' performance of processes near end of training period

Response	Level of supervision necessary							
	Little or no		Occasional		Moderate to close		Complete retraining	
% of processes	N	%	N	%	N	%	N	%
90%	5	4.3			1	0.9		
80%	4	3.5			1	0.9		
70%	4	3.5	1	0.9				
60%	4	3.5			1	0.9		
50%	7	6.1			1	0.9		
40%	m 11	9.6			7	6.1		
30%	5	4.3	3	2.6	5	4.3		
20%	13	11.3	m 5	4.3	m 15	13.0	1	0.9
10%	2	1.7	6	5.2	13	11.3		
Total	55	47.8	15	13.0	44	38.3	1	0.9

N = 115

m - median

Table 15. Student-learner graduates suitable for full-time employment

Response	N	Per cent
100%	15	23.4
60 - 90%	27	42.2
40 - 60%	14	21.9
20 - 40%	6	9.4
0%	0	0.0
No response	2	3.1
Total	64	100.0

When asked to establish the level of employment for which S-Ls were competent at the end of the nine months, most Es stated the apprenticeship status which they felt their typical S-L had attained. Table 16 shows the typical S-L to be placed in the six to nine month range. The actual work time of S-Ls averages nearly five months as a result of work during vacations and some week-end work. Over one-fourth of the Es who reported apprenticeship status felt that S-Ls had earned twelve months credit toward completion of apprenticeship.

Table 16. Number of months credit toward completion of apprenticeship at the end of nine months as student-learner

Response (months)	N	Per cent
Four	4	6.3
Six	15	23.4
Nine	13	20.3
Twelve	11	17.2
No response	21	32.8
Total	64	100.0

Forty-one Es stated the additional apprenticeship time which seemed appropriate for their typical S-L. The median number of months was 18 with a range of zero to 66. See Table 17.

Cooperating employers were asked to share any other thoughts on the program. The responses were classified as observations, strengths, weaknesses and recommendations.

Student-learners were observed "to enjoy E's personal interest", "to be frequently superior to graduates of commercial trade schools", "to succeed in direct proportion to their level of interest" - 2, "to bring their personal problems to work" - 4 and "to learn more through observation than through intensive instruction". "If S-L's long term goals could be made known, E could probably be of more help". "A S-L's home tends either to support or destroy him" - 10. "S-Ls are selected by E on basis of performance tests". "High schools are not geared to the needs of many youth; too much emphasis on college prepa-

Table 17. Additional training time necessary to complete apprenticeship

Response (months)	N	Per cent
0	4	6.3
3	1	1.6
6	2	3.1
12	6	9.4
15	2	3.1
18	7	10.9
24	8	12.5
30	1	1.6
36	3	4.7
42	3	4.7
66	4	6.2
No response	23	35.9
Total	64	100.0

ration" - 3. "Some parents feel Es provide a really significant service to S-Ls" - 2. "Factory schools are best for some phases of training" - 2. "Es are providing a service to the community; S-Ls are not needed". "A mechanic's incentive pay tends to cause him to ignore the S-L. If the mechanic could profit directly from the S-L's production, training would likely improve."

Nineteen Es stated that the program was 'very good'. "Excellent way to explore an occupatipn" - 8. "An effective means of becoming oriented to work" - 3. "Affords valuable experience in money management" - 2. "Helps keep students in school" - 2. "S-Ls seemed to learn more in nine months than in the other three years of high school combined" - 2. "The program provided E with the opportunity to help those who really wanted to help themselves" - 3.

Several weaknesses took the form of student-learner shortcomings. "Lack of appreciation for ethical standards" - 3, "fail to realize that there are rules to live by in all of life" - 2, "fail to organize thoughts and think things out for themselves" - 4, "seem to be unable to remember names and faces of regular customers" - 2, "lack understanding of the technology with which they're rather closely related" - 2 and "exhibited less interest near end of school year" - 2. "The program is not serving enough people; needs to be expanded". "The coordinator is not sufficiently critical of the training outline and is too hesitant to see that outline is followed by cooperating employer". "It became evident that S-Ls took the program just to get out of the classroom" - 10. "S-L can't gain much in nine months on a half-day basis" - 3. "Some parents seem to feel S-Ls are being exploited by Es" - 3. "Communications between parents and Es are inadequate to non-existent" - 2.

Recommendations were numerous and varied. "Public relations is a responsibility of the school" - 2. "Need more community support for vocational-technical education" - 4. "Communications between trade schools, industries and local schools are important."

Education prior to senior year was a concern. "Need industrial arts courses in plastics, auto mechanics, drafting and blueprint reading" - 7. "Need vocational auto mechanics" - 3. "Ability to type would be an asset to the draftsman trainee" - 4. "A good course in electronics should be taken prior to training as a radio and television repairman". "Woodworking course should precede carpentry training". "The auto body repairman needs practice in oxy-acetylene and arc welding". "Youth need practice in working for themselves, thinking for themselves and solving their own problems".

Student-learners could profit from certain additional knowledge and further understandings. "Need to be convinced of the importance of having a well developed skill". "Should know that they are expected to work and learn for the whole of each school day at least". "Should be well aware of the strict standards of the job prior to first day of duty". "Not worth their pay at the beginning of the training period". "Desire to learn should be primary; paycheck should be secondary" - 4.

"Employers should be advised on the wage-hour act" - 3. "Every employer should provide training for high school youth" - 3. "When applicable, E should check out a complete tool kit to S-L and make him personally and financially responsible for it" - 2.

Communications were of some concern. "Employer, student, parent and coordinator should each have a copy of the signed agreement[1]".

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[1]Refer to definitions.

"Need occasional three-way conversation between S-L, E and C" - 2. "Consider revision of the S-L evaluation form". "S-Ls should see evaluations of themselves". "S-L, E and C should critically evaluate the training outline near the end of the school year; then compare their findings".

Three employers felt that "Students should be permitted to enter the program as sophomores". "Extend the program to juniors, permitting an individual to take two years" - 2. "First semester should be considered a trial period to determine whether S-L continues or returns to school full-time during second semester" - 2. "In late spring, senior S-Ls should meet with juniors who are planning to be S-Ls".

Employers were asked for opinions concerning the feasibility of operating a program during summer months. Some were not prepared to advance an opinion; others were. "Favor operating a coordinated summer program between junior and senior year for trial and screening purposes, plus adding valuable training time" - 32. "Prefer operation during summer after senior year" - 4. "Would oppose operation of summer program" - 5. "During summer, coordinator should be 'employed' in positions held by S-Ls during the school year; he would then be better equipped to advise and instruct".

"Some S-Ls need to be training for positions as managers of produce (fresh fruits and vegetables) departments". Only one of the 68 Es objected to vocational education at the high school level; "Students should be restricted to general education with no vocational education until after high school". Thus the conclusion of cooperating employers' recommendations and comments pertaining to the part-time cooperative industrial education program.

DISCUSSION

The specific objectives of this research have served to guide the research activity and have been used as sub-headings in the following discussion.

An objective of this research activity was to design an instrument for the purpose of gathering research data (observations, opinions) from cooperating employers[1]. The types of instruments considered were questionnaire and interview form; the latter was selected. Two items on the first sheet of the form were not really utilized. The "year of (interviewee's) initial employment with firm" and his "position at that time" were left blank in the case of owners and firm managers, so nothing was done with that particular data collected during other interviews. Had the researcher wisely interviewed each E on the foregoing two items, the results would have surely been impressive. It was quite evident that S-Ls[2] had been trained and supervised by Es who were experienced and well qualified in their specific occupations.

Most of the personal characteristics and skills items on the second and third sheets were quite functional. In reference to skills, it may have been helpful to sub-divide "Related math and science" and to omit "Familiarity with equipment; growth rate during year". The term "acceptable", appearing on sheets two, three and four, was probably not as appropriate as the term "mediocre" would have been. In reference to the last item on sheet number four, the choice, "occasional supervision" was not effective and should have been deleted. Such a deletion would have improved Table 14 and probably would have helped the entire item.

The per cent of processes experienced by S-Ls and the proficiency with which S-Ls performed the processes, seemed to be measured adequately. These items were, however, most difficult for Es to respond to. Answers were given in the form of estimates after long, thoughtfilled pauses. The difficulty may have been caused by a weakness in the design of the interview form or by the fact that most Es were not prepared to respond to such an item. The interview form was functional; however, certain revisions would have likely increased its effectiveness.

A second objective was to enlist cooperating employers as evaluators of S-Ls and as evaluators of the program. Sixty-eight Es proved their courteous cooperation by freely providing observations, opinions, evaluations and recommendations. The term "cooperating employers" was found to be most descriptive. Thanks to Es, this objective was thoroughly fulfilled.

Another objective; to identify personal characteristics displayed by student-learners. In view of the time and efforts expended by Es in training and supervising S-Ls, no one else could have been in a better position to observe personal qualities or characteristics. The responses made it clear that Es observed with interest and were willing to share their observations. The findings made it clear that Es were generally satisfied with most S-Ls on most of the characteristics named. Among the weaker characteristics were a lack of appreciation for the value of time and difficulties with communications especially with listening. E's comments were of considerably greater interest to this researcher than were the numerical data pertaining

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[1]Hereafter referred to as Es.

[2]Student-learners.

to the nineteen separate items.

A fourth objective was to identify skills demonstrated by S-Ls. As with personal characteristics, Es were in a position to observe and they cooperated fully by sharing their evaluations of S-Ls' skill related activities. Comments were a valuable part of the responses.

Among the weaker skills were "legibility", "spelling" and "maintenance and care of tools and equipment".

A further objective of this research was to identify the most significant strengths of the program. Most aspects of the program were considered by Es to be quite satisfactory. There seemed to be no particular aspects of the program which could be construed as "the most significant strengths".

A sixth objective was to detect any observed weakness and the final objective was to reveal suggested procedures which may be employed to increase program effectiveness. Es were interested in the selection and placement of S-Ls and considered this phase of the program to be "good". They indicated a desire to help with orientation and encouraged the completion of most planning in the spring before the arrival of S-Ls in the fall.

Communications and visits by the coordinator[1] were satisfactory in nearly every instance; however, there was some indication that more frequent visits would be desirable.

After considerable hesitation, most Es responded to the items pertaining to the per cent of processes (involved in the occupation) experienced by S-Ls and proficiency of S-L performance. It was observed that Es seemed to have no clear-cut idea of the number of separate jobs or processes involved in the occupation, nor did they have a good basis for percentage estimates. Based on these observations and on comments made by Es, it would seem that several useful purposes could be served by E and C jointly developing a list of terms pertinent to the occupation, a tool and equipment list, and a list of jobs and processes performed in the E's establishment. The three lists could serve as aids in: the development or revision of an on-the-job training outline; developing an orientation to the occupation; planning specific related instruction; the development of checklists designed to help chart a S-L's progress in the occupation.

Nearly one-fourth of the Es indicated that all their S-Ls were suitable for full-time employment at the time of graduation. Over forty per cent indicated 60 to 90 per cent of their S-Ls to be suitable. In many cases, S-Ls had been offered a full time position in the occupation, but left for more money elsewhere. Es believed that S-Ls would do well to complete their apprenticeship, accept a lower income for a short time and consider the difference in earnings during that time to be a low-cost investment in a valuable and practical part of their education. Es seemed to feel that educators and parents could help S-Ls to make more realistic decisions in regard to employment and training.

On the basis of interviews with cooperating employers, the following conclusions have been drawn by the researcher.

1. Part-time cooperative industrial education programs have been providing a valuable service to the communities in which they serve.
2. There is opportunity to increase the effectiveness of the program.
3. Cooperating employers are interested in helping to make programs as effective as possible.

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[1]Hereafter referred to as C.

4. Cooperating employers are an excellent source of data. Such data will surely be a vital element in future research of the program.

On the basis of this research, the following recommendations were made.

1. Effective research of programs is the best means of providing information which will serve as an aid to planning even more effective programs. Since cooperating employers are interested in more effective programs and have chosen to be cooperative in research activity, more research should be planned with Es playing a major role.
2. The merits of a coordinated summer program should be studied carefully, in view of the fact that over 50 per cent of the Es felt there were benefits to be derived from such a program.
3. The advantages of placing a coordinator on an eleven or twelve month contract should be enumerated and given careful consideration. (To suggest just a few possibilities: planning and conducting research; coordinating a summer program; working jointly with employers to develop or revise training outlines; plan or revise specific related instruction; visit and study industries and assess the demands placed on workers in various industries and trades.
4. Educators, employers, students and parents have each been referred to in comments made by cooperating employers. Each group should be made aware of comments that are applicable, so that implications of strengths may serve to encourage further strengthening. Suggested weaknesses should serve to stimulate thought and actions designed to create strength where once it was lacking.

SUMMARY

Data were collected during 64 personal interviews with cooperating employers in the cities of Ames, Marshalltown and Newton, Iowa. Attention was first of all directed to 191 student-learners who were clearly remembered by the employers. Each employer was asked to evaluate each remembered student-learner on 19 personal characteristics and 16 skill related items. The employer was then asked to evaluate the part-time cooperative industrial education program on the basis of his total experience with it. Comments were welcomed at any point during the interview. As a result, comments became an important part of the findings.

For each student-learner[1], the cooperating employer[2] named one of six positions for each personal characteristic and each skill. Five of the positions were represented by numbers zero through four; zero denoted 'poor', four represented 'outstanding'. The sixth position was chosen when E had, for any reason, been unable to evaluate the S-L on a given item. Data were treated in order that a weighted score could be obtained for each item. The range of scores for the zero position, 0 - 12.5; for one, 12.5 - 37.5; for two, 37.5 - 62.5; for three, scores of 62.5 - 87.5 and for top position, 87.5 - 100.

Top ranking of the personal characteristics was "loyalty to employer" at 73.4, followed by "choice of language", "concern for others' feelings" and "cheerfulness". At the weighted score of 67.8 was "observance of rules, regulations and policies", then "punctuality". "Appreciation for costs other than time", "clothing selection", "acceptance of constructive criticism" and "customer relations" followed. "Grooming" placed at 65.3, then "pride of accomplishment" and "dependability". Falling into the middle range (37.5 to 62.5) was "appreciation for the value of time", followed by "oral (spoken) communications", "confidence, poise" and "attentiveness as a listener". "Judgement" came in last with a score of 53.8; still in the upper half of mid-range.

Sixteen skill related items ranged from 72.2 to 21.9. Topping the list was "familiarity with equipment; last of training period". Only four per cent of the S-Ls were involved in "composition of written reports". At 70.1 was "vocabulary, last of training period" followed by "selection of tools and equipment", "safety with tools and equipment", "rate of becoming familiar with equipment" and "related math and science". "Quality of work" scored at 64.4, then "ability to read blueprints, sketches", "budgeting of time" and "ability to adjust to new techniques, etc.". Ranking near the bottom with weighted scores of 51.9 to 51.6 were "legibility", "maintenance and care of tools and equipment" and "spelling". The last three items aroused considerable concern among many of the Es. At the very bottom of the skill related items were "vocabulary as applied to trade or job, first of training period" and "familiarity with equipment, first of training period". Lower ranks on the last two items caused little concern on the part of Es.

One of the aspects of program operation which Es were asked to evaluate was selection and placement of S-Ls. Most Es were pleased with that phase of operation and indicated a willingness to help; especially with orientation to a specific occupation.

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[1]Hereafter referred to as S-L.
[2]Hereafter referred to as E.

Communications and visits by coordinators were considered by most Es to be important and about right in frequency and number. Even so, some of the comments suggested means of improving this aspect of the program.

Over 42 per cent of the Es had difficulty evaluating related instruction, stating that they had little or no evidence on which to base an evaluation. A 'high' value was assigned by 32.8 per cent of Es. In several cases it was stated that much of the value of related instruction depends on the individual S-L. A close working relationship between coordinator and employer was favored.

An attempt was made to determine the scope of S-L experiences in the occupation for which training was being given. As stated by over half the Es, S-Ls experienced at least 70 per cent of the processes involved in an occupation. Es felt that the scope of experiences depends largely on S-L drive and E's time and interest. In an attempt to determine S-L proficiency in the various processes experienced, Es were asked to indicate the supervision necessary near the end of the training period. The typical S-L could, with little or no supervision, perform four-sevenths (57.1 per cent) of the processes he had experienced. The balance required supervision ranging from occasional to close.

Sixty-five per cent of the Es reported that 60 to 100 per cent of their S-Ls were suitable for full-time positions at the time of graduation. Nearly one-fourth of the Es indicated that all their S-Ls were employable on a full-time basis.

In establishing the level of employment for which S-Ls were competent, most Es stated an apprenticeship equivalency of six to nine months. The typical S-L would need eighteen months of additional training to complete his apprenticeship.

Comments relative to program strengths, weaknesses and recommendations for an improved program were varied and numerous. There was good support for a strong and comprehensive industrial education program in the secondary schools. Es recommended an effective program of orientation prior to entry into training on the job. Communications was one of the areas which received frequent attention in the recommendations.

Some of the Es were in favor of making the program available to students in an earlier grade and providing opportunity for more than one school year's participation per student. Over 50 per cent of the Es favored operation of a coordinator supervised summer program for purposes of screening S-Ls and gaining additional training time.

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ACKNOWLEDGEMENTS

Three coordinators of part-time cooperative industrial education programs provided elements which were essential to this research. Leonard Bengtson of Ames, Francis Burnham of Marshalltown and Clarence Beavers of Newton each expressed support of the planned research. They supplied encouragement and offered assistance in whatever measure it was requested. They assisted in the design of the interview form, provided copies of T.I.-13s and supplied other necessary information. They developed and sent letters of introduction to cooperating employers; thus, the researcher was courteously received at every turn. Clarence, Francis and Leonard helped make the summer of 1966 one of the most stimulating and informative ever experienced by the researcher.

Cooperating employers were not individually named in this report; however, they will long be remembered for their sincere interest in youth and for their desire to help plan programs which truly serve the needs of youth and the community.

Patience and cooperation were supplied by the researcher's wife and four daughters. Such contributions were certainly appreciated.

APPENDIX A

May 23, 1966

Donald D. Dunlavy, Superintendent
Newton Community Schools
807 South 6th Ave. West
Newton, Iowa 50208

Dear Mr. Dunlavy:

I seek your permission to conduct a study of part-time cooperative industrial education in Newton this summer.

Clarence Beavers is quite familiar with the work that has been done to date and has contributed some valuable ideas. Lowell Carver, Owen Shadle and others on the staff at Iowa State University have been serving in an advisory capacity.

The study is designed to describe the program from the employer's point of view; the "employers" being those who have participated in the program for a specified period of time. The views would be recorded during a personal interview with the most appropriate member of each firm. The study is expected to be of special value to the communities (tentative: Ames, Marshalltown and Newton) in which it is conducted and should be of considerable interest to other schools of Iowa who have or are initiating programs.

I would be pleased to provide further information on this study or Clarence would be able to answer almost any question.

You would have been contacted earlier on this matter, but it was deemed best to determine the feasibility of the study before taking any of your time.

I await your approval before proceeding with the study in Newton.

Sincerely,

Charles Havener
Central Jr. High
Ames, Iowa 50010

copy to:

Harold A. Lynn, Principal
Newton Senior High School
East 4th Street South
Newton, Iowa 50208

APPENDIX B

June 2, 1966

Mr. Pat Haberstitch
Iowa Step & Tank
802 Woodbury
Marshalltown, Iowa

Dear Mr. Haberstitch:

This letter is written to ask your cooperation with Mr. C. P. (Chuck) Havener of Ames Central Junior High. Mr. Havener is conducting a research project in cooperative part-time training and he would like to interview some of the employers of our vocational industrial students.

I feel this is a very important study and encourage you to assist Mr. Havener by granting him an interview. He will be contacting you by letter soon to make the arrangements.

We feel this study will be helpful to us as well as to Mr. Havener in evaluating our local program. Thank you for your consideration of his request for an interview.

Sincerely yours,

Francis H. Burnham, Director
Vocational-Technical and
Adult Education
Senior High School
1602 South Second Avenue
Marshalltown, Iowa 50158

LMB

SHEET #1

PART-TIME COOPERATIVE INDUSTRIAL EDUCATION AS VIEWED BY COOPERATING EMPLOYERS IN AMES, MARSHALLTOWN & NEWTON

Cooperating Employer (Firm):_____City:_____Date_____

Interviewee:_____Position:_____

Year of initial employment with firm:____

Position at that time:_____

Student-learners	Occupation	Year of training	Known by Interviewee

Number of student-learners

known by interviewee:_____

SHEET #2

PERSONAL CHARACTERISTICS	Outstanding	Good	Acceptable	Fair	Poor	NA/NO	Remarks
Cheerfulness							
Clothing selection							
Grooming							
Punctuality							
Dependability							
Confidence: Poise							
Judgement							
Observance of rules, regulations & policies							
Attentiveness (listener)							
Oral communications:							
Clear, concise							
Choice of language							
Appreciation for value of time							
Appreciation for costs other than time							
Concern for other':							
Feelings							
Safety							
Acceptance of constructive criticism							
Pride of accomplishment							
Customer relations							
Loyalty to employer (firm)							

SHEET #3

SKILLS	Outstanding	Good	Acceptable	Fair	Poor	NA/NO	Remarks
Related math and science							
Written reports, etc.:							
Composition							
Spelling							
Legibility							
Vocabulary (as applied to trade or job):							
First of training period							
Last of training period							
Ability to read blueprints, sketches, etc.							
Quality of work							
Budgeting of time							
Familiarity with equipment:							
First of training period							
Growth rate during year							
Last of training period							
Tools and equipment:							
Safety							
Selection							
Maintenance and care							
Ability to adjust to new techniques, ideas and situations							

SHEET #4

PROGRAM STRENGTHS

Suggestions for IMPROVEMENT:

Student selection and placement:

___outstanding, ___good, ___acceptable, ___fair, ___poor

Communications (letters, phone calls, etc.) from coordinator

Quantity: ___too many, ___just right, ___too few

Importance: ___Necessities only, ___usually needed, ___often not needed

---

Coordinator visits:

___too frequent, ___just right, ___too seldom

Frequency of visits: ___one or more per month, ___every 5 to 8 weeks

___every 9 to 12 weeks, ___two times per school year

Value of visits: very high (4) high (3) mediocre (2) low (1) very low (0)

Related instruction (given in school)

Evident value: very high (4) high (3) mediocre (2) low (1) very low (0)

SHEET #5

During training on the job, student-learners have experienced (?%) of the processes involved in the occupation for which they were training.

__90
__80
__70
__60
__50
__40
__30
__20
__less

Student-learners could (near end of training period) perform processes with:

___little or no supervision ___moderate to close supervision

___occasional supervision ___complete retraining and demonstration prior to performance

---

Have student-learner-graduates received sufficient training to be hired full-time by your firm if openings existed?

___all of them, ___60 to 90%, ___40 to 60%, ___20 to 40%, ___none of them

---

For what level of employment are student-learners competent at end of training period?

_____
(job title, job description, apprenticeship status)

_____

==========

Other thoughts on the Cooperative Part-time Industrial Education Program:

APPENDIX D

June 24, 1966

Mr. Larry Peterson
Larry Peterson Motor Co.
363 S. Duff
Ames, Iowa 50010

Dear Mr. Peterson:

Mr. Leonard Bengtson, Coordinator, Part-time Cooperative Industrial Education and I are working on a research project entitled "Part-time Cooperative Industrial Education as Viewed by Cooperating Employers in Ames, Marshalltown and Newton". We are confident that employer responses made during research interviews will provide information which should help Ames produce persons better suited to your employment needs.

This research project is based entirely on the realization that cooperating employers' observations and opinions must be carefully assembled before:

(1) attempting an accurate description of the present part-time cooperative industrial education program.
(2) any plans to improve the program can be realistically developed and placed into operation.

More specifically, interview responses will serve to identify:

a. personal characteristics possessed by student-learners.
b. skills possessed by student-learners.
c. value of graduate student-learners as prospective employees.
d. strengths of the cooperative part-time training program.
e. suggestions for strengthening the program.

Mr. Bengtson has suggested that I meet with Mr. Howard Grewell. I would like to meet with him for approximately 30 minutes, beginning at 3:00 P.M. on Tuesday, July 5, 1966. If this time will be satisfactory, please check the box marked, "TIME OKAY". If the indicated time will not fit your schedule, please suggest two or three more appropriate times on the enclosed form. In either case please use the enclosed envelope to return the completed form by July 1, 1966.

Thank you for your cooperation in this research project. Your efforts will be much appreciated by employers, future student-learners and, of course, by Mr. Bengtson and myself.

Sincerely,

C. (Chuck) Havener
1015 Harding Ave.
Ames, Iowa 50010

Students your firm has helped train during the past five years:

Larry Harstad
Robert Conklin

APPENDIX E

Please complete, sign and return promptly.

TO: C. Havener

( ) TIME OKAY! You will be expected to arrive at our firm as scheduled.

( ) Please re-schedule. (Please restrict choices to afternoons, July 6 through July 29).

1. _____P.M., July _____, 1966

2. _____P.M., July _____, 1966

3. _____P.M., July _____, 1966

Person(s) to be interviewed: Mr. Howard Grewell

FROM: Mr. Larry Peterson

_____
(signature)

Larry Peterson Motor Co.

Please complete, sign and return promptly.

VT 001 745
Code Book of Industries, Occupations and Course Titles.

Washington State Board for Vocational Education, Olympia. Trade and Industrial Education
MF AVAILABLE IN VT-ERIC SET.
Pub Date - Nov65 34p.

*OCCUPATIONS; *TRADE AND INDUSTRIAL EDUCATION; *COURSES; *INDUSTRY; *CODIFICATION; REFERENCE MATERIALS

The purpose of this code book is to furnish job titles and numbers from the "Dictionary of Occupational Titles" which are to be used in the reporting of educational data. Job titles and numbers are given for more than 600 vocational courses. Also indicated are two digit code numbers for each of the courses which indicate: (1) pre-employment, preparatory, or day course, (2) part-time cooperative course, (3) apprentice course, and (4) evening or extension course. Sections within the book are indicated by "Standard Industrial Classification" headings. (EM)

VT001 745

EDO 31587

STATE OF WASHINGTON

TRADE AND INDUSTRIAL EDUCATION

Code Book Of Industries, Occupations And Course Titles

STATE BOARD FOR VOCATIONAL EDUCATION

V 745

OLYMPIA WASHINGTON

State of Washington
State Board for Vocational Education
Olympia

CODE BOOK OF INDUSTRIES, OCCUPATIONS AND COURSE TITLES

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

Trade and Industrial Education
November, 1965

F O R E W O R D

The reporting of educational statistics and other information as required by the public and by various government agencies has become a task of major proportions. The use of electronic data processing equipment makes possible faster and more comprehensive and detailed reports than were possible with earlier methods. However, this requires the use of a system of coding of occupations such as found in the Dictionary of Occupational Titles. A slight variation of the system is reproduced in this manual of code numbers for trade and industrial occupations and courses offered in our state.

Over 160 occupations and over 600 courses are listed in this manual with their code numbers. A new section has been added in this edition listing industries according to the Standard Industrial Classification and the occupations within those industries for which we have training programs in our state.

This edition of code numbers, occupations and courses is a revision of a listing published by this office in August of 1964. New courses have been added and some corrections of codes and occupation titles have occurred since that listing was published. Previous editions should be discarded.

Frank H. Wimer, Director
Trade and Industrial Education

INSTRUCTIONS

The system of occupation titles and code numbers found in the Dictionary of Occupational Titles, which is used for reports from the States to the United States Office of Education, should be used for reports from local centers to the State office for trade and industrial courses. Codes shown in this book should be used in reporting all courses to the State office. Occupation titles and code numbers for local courses should be determined after a study of the training objective for each course and a study of occupation titles and numbers shown in this book.

To assist in finding the proper code number for an occupation, all occupations for which we have courses are listed in alphabetical order in a separate section. The codes are arranged in numerical order in the left column. Subjects and titles for courses are listed to the right of the occupations for which they are designed. Courses with their short code numbers are to the right of each occupation to which they pertain. Although a course may fit a cluster of similar occupations fairly well, each course should serve the workers in a specific occupation best and be coded under that occupation. Each course is identified by a short code of two figures:

Number 01 means the pre-employment, preparatory or day course for an occupation.
Number 02 means a part-time cooperative course.
Number 03 means an apprentice course related to the occupation.
Number 04 and above means an evening or extension course for an occupation.

This short code number should be added to the code number for the occupation to which it pertains. Example codes may be:

For a pre-employment course in Auto-Mechanics, 581.010-01
For a related course for auto mechanic apprentices, 581.010-03
For an up dating course for auto mechanics, 581.010-04

The State Board staff will assist in determining the proper codes for any new courses.

CODE NUMBERS FOR OCCUPATIONS AND COURSES
(Numerical Order)

Code (D.O.T.)	Occupation	Course Title
032.300	Teacher, Vocational-Technical	01 Pre-Service Teacher Training
		04 Elements of Teaching Trade and Industrial Courses-I
		05 Occupational Analysis-II
		06 Course Organization-III
		07 Observation of Teaching-IV
		08 Practice Teaching-V
		09 Instruction Sheets-VI
		10 Teaching Aids-VII
		11 Practical Psychology-VIII
		12 Testing and Rating-IX
		13 Shop Organization-X
		14 Oral Communications-XI
		15 History and Principles of Vocational Education-XII
		16 Practical Industrial Economics-XIII
		17 Occupational Guidance-XIV
		18 Coordination of Instruction-XV
		19 Supervision of Trade and Industrial Programs-XVI
		20 Organization and Administration of Vocational Education Programs-XVII
		21 Philosophy of Vocational Education-XVIII
		22 Conference Leading
		23 Curriculum Revision Workshop
		24 Public Relations
		25 Electronics Workshop
		26 Current Problems in Vocational Industrial Education
033.260	Nurse, Staff (RN)	01 Nursing
		04 Registered Nurse Refresher
039.840	Counselor, Vocational	
041.100	Aviator (Commercial Pilot)	01 Commercial Aviation
		04 Ground School for Pilots
		05 Air Navigation
		06 Instrument Pilot Ground School
		07 Helicopter Pilot Ground School

Code (D.O.T.)	Occupation	Course Title
044.260	Artist, Commercial	01 Commercial Art 04 Show Cards and Posters 05 Commercial Art 06 Hand Engrossing 07 Pictorial Illustration 08 Sculpture Welding
048.000	Draftsman, Engineering	01 Engineering Draftsman
048.040	Draftsman, Aeronautical	04 Drafting 05 Production Illustration 06 Algebra 07 Descriptive Geometry 08 Design Math I 09 Design Math II 10 Engineering Problems 11 Strength of Materials 12 Casting and Forging Familiarization 13 Written Communications 14 Electronics for Draftsmen 15 Physics
048.050	Draftsman, Architectural	01 Architectural Drafting 04 Architectural Drafting 05 Structural Steel Detailing 06 Estimating
048.110	Draftsman, Electrical	04 Electrical Drafting
048.160	Draftsman, Marine	05 Ship's Structures
048.180	Draftsman, Mechanical	01 Mechanical Drafting 04 Mechanical Drawing 05 Machine Drafting

Code (D.O.T.)	Occupation	Course Title
048.260	Draftsman, Topographical	01 Topographical Drafting 04 Topographical Drafting 05 Engineering Problems
048.320	Draftsman, Technical Illustrator	01 Technical Illustration 04 Technical Illustration
048.820	Draftsman, Design (Aides)	01 Engineering Drafting 04 Engineering Drafting 05 Structural Analysis
050.040	Technician, X-Ray (see o66.801)	01 X-Ray Technician 02 X-Ray Technician 04 Direct Current Circuits
050.120	Technician, Veterinary Lab	04 Veterinary Assisting
050.220	Technician, Chemistry	01 Industrial Chemistry 04 Industrial Chemistry
052.830	Nurse, Licensed Practical	02 Practical Nursing 04 Medications 05 Emergency Procedures 06 Mathematics 07 Anatomy and Physiology 08 Psychiatric Nursing 09 Medical Nursing 10 Practical Nursing Review 12 Orthopedic Nursing
056.110	Photographer	01 Commerical Photography
061.400	Technician, R & TV Studio	01 TV Studio Skills

Code (D.O.T.)	Occupation	Course Title
064.100	Technician, Surveying	01 Land Surveying 04 Land Surveying 05 Engineer's License Preparation 06 Pre-Surveying
064.110	Technician, Highway Engineering	01 Highway Engineering 04 Surveying 05 Topographical Drafting 06 Engineer's Exam Refresher 07 Math & Transit Operation
066.070	Technician, R & TV Transmission	01 R & TV Transmission 04 Basic Radio and TV
066.801	Radiographer, Industrial	04 Radiation Procedures
067.000	Technician, Engineering	01 Technician Engineering 04 Tech. Math. (Arith. & Algebra) 05 Tech. Math. (Boolean Algebra) 06 Tech. Math. (Alg., Geo. & Trig.) 07 Tech. Math. (Calculus, Anal. Geo.) 08 Tech. Math. (Compound Angles) 09 Tech. Math. (Slide Rule) 10 Tech. Math. (Improvement Curve) 11 Aircraft Hydraulics 12 Preflight-Aircraft 13 Stress Analysis 14 Aerodynamics 15 Basic Structural Dynamics 16 Aircraft Stability 17 Construction BPR 18 Flight Line Familiarization 19 Building Inspection 20 Physics 21 Drafting 22 Differential Equations 23 Thermodynamics 24 Preflight - Rocket 25 Programed Math 26 Machine Design

Code (D.O.T.)	Occupation	Course Title
067.110	Programer, Computer	01 Data Processing
		04 Data Processing
		05 Wiring - Unit Record
		06 Programing 1620
		07 Digital Computer
		08 Programing 1401
		09 Data Processing Math
		10 Disk Pack 1311
		11 Programing 7080
		12 Critical Path Method
		13 Stored Programing
		14 Automatic Program Tooling (Numerical Control)
067.120	Technician, Aircraft Electronics	01 Aircraft Electronics
		04 Electronics
		05 Electronics Math
		06 Radio Components
		07 Boolean Algebra
		08 Analog Computer
		09 Integrated Circuits
		10 Logic Circuits
		11 Microwave and Antenna
		12 Transistor Circuits
067.125	Technician, Flight Instrument	01 Aircraft Instruments
067.130	Technician, Nuclear Reactor	
		04 Technical Math
		05 Electronics
		06 Transistors
		07 Nuclear Power
		08 Programed Math
		09 Automatic Controls
		10 Analog Computers
		11 Radiation
		12 Industrial Physics
		13 Applied Mechanics
		14 Basic Electricity
		15 Applied Math
067.150	Technician, Airlines Electronics	01 Airline Electronics
		04 Airline Electronics

Code (D.O.T.)	Occupation	Course Title
067.160	Technician, Electrical	01 Electricity 04 Electricity 05 Electrical Math 06 Transistors 07 Slide Rule 08 Electrical Estimating
067.165	Technician, Electronics	01 Electronics 04 Electronics 05 Electronics Math 06 Transistors and Circuitry 07 Sound & Signal Systems 08 Semi-Conductor Circuits 09 Automatic Controls 10 Test Equipment 11 Electronic Tubes & Amplifiers 12 Pulse Techniques & Servo-Mechanisms 13 Computer Fundamentals
067.180	Technician, Industrial Instrument	01 Industrial Instrumentation 04 Industrial Instruments 05 Automatic Control Systems
067.181	Technician, Precision Instrument	01 Precision Instruments 04 Precision Instruments
067.410	Technician, Nuclear Submarine	04 Nuclear Submarines 05 Submarine Piping Systems 06 Design of Submarine Hull 07 Submarine Familiarization 08 Nuclear Reactor Plant 09 Hydraulic Fundamentals
067.431	Technician, Naval Ballistic Missile	04 Submarine Ballistic Missiles

Code (D.O.T.)	Occupation	Course Title
067.490	Technician, Metals Processing	01 Metals Processing 04 Metallurgy 05 Inert Gas Welding
067.500	Technician, Ship Electrical	04 Electronics 05 Transistors 06 Electronics Math 07 Noise and Vibration Control
067.800	Technician, Pulp and Paper	04 Industrial Chemistry 05 Industrial Physics 06 Technical Math 07 Pulping and Bleaching 08 Paper Making 09 Pulp and Paper Survey 10 Blueprint Reading
068.060	Technician Fisheries	01 Fishery 04 Anatomy Classifications 05 Parasites and Diseases 06 Fish Culture
068.240	Aide, Forester	01 Forestry 04 Forestry 05 Aerial Photo Interpretation
069.210	Announcer-Director, R & TV	01 Telecasting Studio Skills 04 FCC License Preparation 05 Radio Communications 06 Telecasting Photography 07 Telecasting Studio Skills 08 Scenics and Graphics 09 Radio & TV Speech
071.230	Manager, Restaurant	04 Restaurant Operation and Supervision

Code (D.O.T.)	Occupation	Course Title
087.100	Custodian, Building	01 Custodial Training
		04 Custodial Training
		05 Building Maintenance
		06 Custodial Engineering
		07 Boiler Maintenance and Operation
		08 Janitor Service - Housekeeping
		09 Heating Systems
		10 Refrigeration and Air Conditioning
		11 Basic Electricity
097.510	Supervisor, Foreman, Manager	
		04 Problems of Handling People
		05 Reading Improvement
		06 Communications and Staff Control
		07 Fire Department Administration
		08 Management Organization
		09 Human Relations Problems
		10 Listening and Word Meaning
		11 Self Expression (Oral)
		12 Industrial Purchasing
		13 Report Writing
		14 Foremanship
		15 Leadership Techniques
		16 Personnel Administration
		17 Methods Improvement
		18 Conference Leadership
		19 Probability and Statistics
		20 Parliamentary Law
		21 Industrial First Aid
		22 Fundamentals of Supervision
		23 Systems in Office Work
		24 Cost Control Workshop
		25 Decision Making
		26 Job Instruction (Instr. Train.)
		27 Reducing Turnover
		28 Performance Evaluation
		29 Idea Development (Creative)
		30 Industrial Psychology
		31 Reliability and Data
		32 Production Planning
		33 Classification Methods (Memory Dev.)
		34 Safety Supervision
		35 Specification Writing
		36 Inventory Management
		37 Industrial Economics
		38 Critical Path (PERT)
		39 Data Processing Orientation
		40 Public Relations
		41 Advertising Techniques
		42 Administration Fire Commisioners
		43 Industrial Engineering Techniques
		44 Value Engineering
		45 Memory Development
		46 Business Law and Contracts
		47 Quality Control
		48 NECA Management Fundamentals
		49 Industrial Property Taxes

Code (D.O.T.)	Occupation	Course Title
118.430	Clerk, Hospital Receiving	01 Hospital Receiving Records 04 Hospital Receiving Records
132.100	Assistant, Dental	01 Dental Assisting 04 Dental Assisting 05 Dental Secretarial
132.200	Assistant, Physician's	01 Physician Assisting 04 Medical Terminology 06 Lab Procedures
133.013	Secretary, Medical	01 Medical Secretarial 04 Medical Terminology 05 Medical Office Procedures
134.020	Expediter, Record Clerk	04 Schedule Planning 05 Tool and Production Planning 06 Expediting 07 Report Writing 08 Creative Thinking 09 Memory Development 10 Reading Improvement
136.010	Clerk, RR Rate and Division	04 Freight Rates and Classifications
136.140	Clerk, Medical Records	01 Medical Records 04 Medical Records
141.120	Operator, Telegraph	01 RR Telegraphy & Accounting
225.210	Housekeeper, Institutional	04 Institutional Housekeeping

Code (D.O.T.)	Occupation	Course Title
226.050	Cook, Combination	01 Commercial Cooking 04 Commercial Cooking 05 Pastries 06 Breads and Desserts 07 Stocks and Sauces 08 Salads 09 Meat Preparation
226.710	Cook, School Lunch	04 School Cafeteria Work 05 Cafeteria Operation 06 School Food Service 07 Baking
226.810	Cook, Institution and Plant	01 Institutional Cooking 04 Institutional Cooking 05 Sanitation and Safety Practices
227.120	Waitress (Waiter)	01 Waitress Training 04 Waitress Training
227.210	Food Service Worker	01 Food Service 04 Counter Service 05 Sanitation and Safety Practices
229.120	Pantryman (Salad Girl)	04 Buffet and Pantrywork
232.010	Barber	01 Barbering 03 Apprentice Related 04 Barbering 05 Hair Styling (Male)
232.150	Beauty Operator (Cosmetologist)	01 Beauty Culture 04 Hair Cutting and Styling 05 Theory of Color

Code (D.O.T.)	Occupation	Course Title
242.200	Aide, Nurse	01 Nurse Aide Training 04 Nurse Aide Training
263.100	Fire Fighter	01 Fire Service Training 04 Fire Service Training
263.200	Fire Officer	
266.010	Police Officer	04 Criminal Investigation 05 Juvenile Delinquency 06 Police Training 07 Motorcycle School 08 Firearms 09 Law Enforcement 10 Traffic Control 11 Police Administration 12 Operational Tactics 13 Typing
340.060	Gardener, Landscape	01 Plant and Grounds Maintenance 04 Landscaping and Nurserywork 05 Managing a Nursery
340.061	Aide, Landscaping	01 Grounds Maintenance
387.910	Captain, Fishing Vessel	04 Marine Navigation 05 Celestial Navigation
391.030	Helper, Forester	01 Forestry Operations
401.100	Baker	01 Baking 03 Apprentice Related 04 Baking and Pastry 05 Cake Decorating

Code (D.O.T.)	Occupation	Course Title
402.311	Decorator, Cake	04 Cake Decorating
425.020	Seamstress	01 Commercial Dressmaking
426.101	Tailor I	01 Tailoring 04 Tailoring
426.201	Tailor II	01 Commercial Sewing and Design
429.020	Scaler, Log Grading	04 Log Scaling and Grading
429.510	Grader, Lumber	04 Lumber Grading
432.100	Cabinetmaker and Millman	01 Cabinetmaking 03 Apprentice Related 04 Cabinetmaking 05 Furniture Making
433.914	Operator, Sawmill Machine	04 Lumber and Plywood Mfg.
435.720	Upholsterer	01 Furniture Upholstering 04 Upholstering 05 Furniture Making
444.010	Printer	01 Printing 04 Offset Printing Processes 05 Paste Make-Up 06 Offset Photography 07 Camera 08 Basic Offset Press 09 Typing for Printers 10 Electronics 11 Estimating

Code (D.O.T.)	Occupation	Course Title
447.100	Photoengraver	
		04 Camera
448.010	Pressman, Printing	
		04 Offset Presswork
		05 Camera
449.010	Bookbinder	
		04 Bookbinding
455.030	Operator, Refinery	
471.010	Jeweler	
		04 Stone Setting
471.510	Watchmaker	01 Watch and Instrument Repair
		04 Watch and Instrument Repair
		05 Electric Watches
475.010	Machinist, General	01 Machine Shop
		03 Apprentice Related
		04 Machine Shop
		05 Tool and Cutter Grinding
		06 Welding
		07 Metallurgy
		08 BPR & Sketching
475.015	Machinist, Aircraft	
		05 Optical Tooling
		06 Metallurgy
475.150	Machinist, Marine (Outside)	
		03 Apprentice Related
		04 Blueprint Reading
		05 Optical Tooling
		06 Shop Arithmetic

Code (D.O.T.)	Occupation	Course Title
476.010	Tool and Die Maker	04 Tool and Die Making
480.010	Sheet Metal Worker	01 Sheet Metal Work 03 Apprentice Related 04 Blueprint Reading 05 Sheet Metal Layout 06 Plastics 07 Gas Installation 08 Welding
480.080	Coppersmith	03 Apprentice Related
481.010	Molder	03 Apprentice Related
483.100	Boilermaker	03 Apprentice Related 04 Blueprint Reading 05 Layout and Lofting
484.010	Steel Worker, Structural	03 Apprentice Related 04 Layout and Fitting 05 Welding
484.012	Shipfitter	03 Apprentice Related 04 Blueprint Reading 05 Slide Rule 06 Math Review 07 Sketching 08 Written Communication 09 Descriptive Geometry 10 Physical Metallurgy 11 Layout and Assembly

Code (D.O.T.)	Occupation	Course Title
484.020	Iron Worker, Ornamental	03 Apprentice Related
485.020	Welder, Arc	01 Arc Welding 04 Arc Welding
485.030	Welder, Acetylene	01 Acetylene Welding 04 Acetylene Welding
485.040	Welder, Combination	01 Welding 03 Apprentice Related 04 Arc and Acetylene Welding 05 Blueprint Reading 06 Welding Theory 07 Electric Arc Welding 08 Pipe Welding 09 Inert Gas Shield 10 Acetylene Welding 11 Certified Preparation 12 Welding Metallurgy
488.622	Sheet Metal Man, Ship	03 Apprentice Related 04 Sheet Metal Layout
494.222	Layout Man, A/C Sheet Metal	04 Blueprint Reading 05 Industrial Math
497.010	Electrician, Wireman (Inside)	01 Electrical Wiring 03 Apprentice Related 04 Essentials of Electricity 05 Transformers 06 Electric Code - BPR 07 Electric Heating 08 Estimating 09 Industrial Electricity 10 Industrial Controls 11 NECA Electrical BPR 12 NECA Code Conference 13 NECA Control Circuits 14 Industrial Electronics 15 Welding 16 Transistors 17 Electrical Math 18 IBEW Blueprint Reading 19 Illumination

Code (D.O.T.)	Occupation	Course Title
497.210	Electrician, Ship	03 Apprentice Related 04 Magnetic Amplifier 05 Blueprint Reading 06 Refrigeration
497.220	Electrician, Marine Shop	03 Apprentice Related
497.230	Electrician, Shipyard	03 Apprentice Related 04 Practical Electricity 05 Electrician Math
497.421	Electrician, Fire Alarm	04 Fire Alarm Systems
497.921	Electrician, Railroad	03 Apprentice Related
503.000	Mechanic, Aircraft (Mfg.)	04 Flightline Familiarization 05 Blueprint Reading
503.562	Assembler, Aircraft	01 Aircraft Production 04 Production Techniques
505.530	Layout Man, Ship	04 Layout and Shipfitting
517.010	Patternmaker	03 Apprentice Related 04 Plastics and Plaster

Code (D.O.T.)	Occupation	Course Title
517.120	Modelmaker, Aircraft	
		03 Apprentice Related
517.210	Loftsman, Ship	
		04 Blueprint Reading
		05 Layout and Lofting
		06 Descriptive Geometry
		07 Mold Loft Body Plans
		08 Optical Lofting
517.220	Template Maker, Aircraft	
		04 Template Fabrication
517.245	Loftsman, Aircraft	
		04 Layout and Lofting
		05 Form Building
523.910	Engineer, Operating	
		03 Apprentice Related
		04 Grade Checking
524.010	Bricklayer	
		03 Apprentice Related
		04 Welding
525.110	Carpenter	01 Carpentry
		03 Apprentice Related
		04 Blueprint Reading
		05 Welding
		06 Optical Tooling
		07 Carpentry
		08 Estimating
		09 Transit and Level
		10 Drafting and BPR
		11 Steel Square
		12 Construction Math

Code (D.O.T.)	Occupation	Course Title
525.610	Boatbuilder (Shipwright)	01 Boatbuilding 03 Apprentice Related 04 Small Boat Construction
525.640	Carpenter, Ship	03 Apprentice Related
526.100	Cement Mason	03 Apprentice Related 04 Blueprint Reading
527.010	Painter and Decorator	01 Painting and Decorating 03 Apprentice Related 04 Trade Relations 05 Wood Finishing 06 Color Mixing
527.110	Painter, Boat	03 Apprentice Related
527.910	Painter, Sign	03 Apprentice Related
528.100	Paperhanger	03 Apprentice Related 04 Paperhanging
530.010	Pipe Fitter, Sprinkler	03 Apprentice Related
530.011	Pipe Fitter, Refrigeration	04 Refrigeration
530.015	Pipe Fitter, Ship	03 Apprentice Related 04 Piping Layout - BPR 05 Torch Brazing

Code (D.O.T.)	Occupation	Course Title
553.410	Electrician, Telephone Lineman	03 Apprentice Related
553.420	Electrician, Lineman (Construction)	03 Apprentice Related 04 Conductor Sagging 05 Operation of New Equipment 06 Cable Splicing 07 Industrial Electronics 08 Construction Lineman Work
557.110	Dry Cleaner	01 Dry Cleaning 04 Pressing 05 Spotting and Dry Cleaning 06 Fundamentals for Counterman and Driver
558.100	Meat Cutter	03 Apprentice Related
559.230	Layer, Carpet and Linoleum	03 Apprentice Related
572.010	Engineer, Stationary	04 Heating Equipment and Fuels 05 Refrigeration and Air Conditioning 06 Steam Engineering 07 Power Plant Operation
577.010	Glazier	03 Apprentice Related 04 Blueprint Reading
578.100	Millwright	04 Technical Math 05 Practical Physics 06 Optical Tooling 07 Welding 08 Blueprint Reading 09 Machine Shop

31

Code (D.O.T.)	Occupation	Course Title
579.025	Mechanic, Railroad	03 Apprentice Related
580.100	Mechanic, Airplane (A & P)	01 Airframe and Power Plant 04 Airframe and Power Plant 05 Blueprint Reading 06 Shop Math 07 Airframe 08 Power Plant
580.910	Technician, Aircraft Maintenance	01 Aviation Maintenance
581.010	Mechanic, Auto	01 Auto Mechanics 03 Apprentice Related 04 Tune Up 05 Hydramatic Transmissions (GM) 06 Mercomatic Transmissions (Ford) 07 Small Engine Repair 08 Carburetion 09 Automotive Electrical 10 Auto Mechanics 11 Automatic Transmissions 12 Transport Refrigeration 13 Wheel Alignment 14 Alternators
581.510	Repairman, Auto Body	01 Auto Body and Fender Repair 03 Apprentice Related 04 Auto Body Reconditioning
583.023	Serviceman, Heating	04 Heat Pump Service
583.024	Serviceman, Oil Burner	04 Oil Burner Service 05 Oil Burner Institute

Code (D.O.T.)	Occupation	Course Title
583.031	Electrician, Refrigeration	03 Apprentice Related 04 Refrigeration
583.041	Serviceman, Electrical Appliance	01 Electrical Appliances 03 Apprentice Related 04 Appliance Repair 05 Gas Control Unit Service
583.111	Serviceman, Office Machines	01 Office Machine Repair 04 Office Machine Repair
583.411	Electrician, Electronic Service	01 Electronics 03 Apprentice Related 04 Radio and TV Receivers 05 Transistors 06 Electronics 07 Circuits and Designs 08 Color Television 09 Electrical Machinery 10 Microwave
583.433	Electrician, Motor Repair	03 Apprentice Related 04 Motor Control and Rigging 05 DC Motors and Generators 06 AC Motors and Generators
583.445	Electrician, R & TV Transmission	01 Electronics Communications 04 Basic Radio
583.641	Mechanic, Maintenance	01 Industrial Mechanics 04 Drafting and Drawing 05 Shop Mathematics 06 Industrial Physics 07 Combustion Equipment Maintenance 08 Machinework, Wood & Metal 09 Blueprint Reading

Code (D.O.T.)	Occupation	Course Title
583.931	Mechanic, Diesel	01 Diesel and Heavy Duty Mechanics 03 Apprentice Related 04 Diesel Mechanics 05 Heavy Duty Mechanics
588.040	Rigger, Ship	03 Apprentice Related
627.530	Operator, Sewing Machine	01 Power Sewing 04 Power Machine Operation 05 Basic Design & Construction
703.542	Helper, Aircraft Assembler	01 Aircraft Assembling
760.500	Attendant, Auto Service Station	01 Service Station Work 04 Service Station Work
781.010	Assistant, Auto Mechanic	01 Auto Mechanics
783.641	Assistant, Maintenance Mechanic	01 Maintenance Mechanics

CODE NUMBERS FOR OCCUPATIONS
(Alphabetical Order)

Code	Occupation
068.240	Aide, Forester
340.061	Aide, Landscaping
242.200	Aide, Nurse
069.210	Announcer-Director, R&TV
044.260	Artist, Commerical
503.562	Assembler, Aircraft
781.010	Assistant, Auto Mechanic
132.100	Assistant, Dental
783.641	Assistant, Maintenance Mechanic
132.200	Assistant Physician's
760.500	Attendant, Auto Service Station
041.100	Aviator (Commercial Pilot)
401.100	Baker
232.010	Barber
232.150	Beauty Operator (Cosme.)
525.610	Boatbuilder (Shipwright)
483.100	Boilermaker
449.010	Bookbinder
524.010	Bricklayer
432.100	Cabinetmaker and Millman
387.910	Captain, Fishing Vessel
525.110	Carpenter
525.640	Carpenter, Ship
526.100	Cement Mason
118.430	Clerk, Hospital Receiving
136.140	Clerk, Medical Records
136.010	Clerk, RR Rate & Division
532.110	Concrete Man
226.050	Cook, Combination
226.810	Cook, Institution and Plant
226.710	Cook, School Lunch
480.080	Coppersmith
039.840	Counselor, Vocational
087.100	Custodian, Building
402.311	Decorator, Cake
048.040	Draftsman, Aeronautical
048.050	Draftsman, Architectural
048.820	Draftsman, Design (Aides)
048.110	Draftsman, Electrical
048.000	Draftsman, Engineering
048.160	Draftsman, Marine
048.180	Draftsman, Mechanical
048.320	Draftsman, Technical Illustrator
048.260	Draftsman, Topographical
536.010	Driver, Bus
557.110	Dry Cleaner

Code	Occupation
583.411	Electrician, Electronic Service
497.421	Electrician, Fire Alarm
553.420	Electrician, Lineman (Constr.)
497.220	Electrician, Marine Shop
583.433	Electrician, Motor Repair
583.445	Electrician, R & TV Transmission
497.921	Electrician, Railroad
583.031	Electrician, Refrigeration
497.210	Electrician, Ship
497.230	Electrician, Shipyard
553.410	Electrician, Telephone Lineman
497.010	Electrician, Wireman (Inside)
523.910	Engineer, Operating
572.010	Engineer, Stationary
134.020	Expediter, Record Clerk
263.100	Firefighter
263.200	Fire Officer
227.210	Food Service Worker
340.060	Gardener, Landscape
577.010	Glazier
429.510	Grader, Lumber
703.542	Helper, Aircraft Assembler
391.030	Helper, Forester
225.210	Housekeeper, Institutional
484.020	Iron Worker, Ornamental
471.010	Jeweler
532.761	Lather
559.230	Layer, Carpet and Linoleum
494.222	Layout Man, Aircraft Sheet Metal
505.530	Layout Man, Ship
517.245	Loftsman, Aircraft
517.210	Loftsman, Ship
475.015	Machinist, Aircraft
475.010	Machinist, General
475.150	Machinist, Marine (Outside)
071.230	Manager, Restaurant
558.100	Meat Cutter
503.000	Mechanic Aircraft (Mfg.)
580.100	Mechanic Airplane (A&P)
581.010	Mechanic, Auto
583.931	Mechanic, Diesel
583.641	Mechanic, Maintenance
579.025	Mechanic, Railroad
578.100	Millwright
517.120	Modelmaker, Aircraft
481.010	Molder
052.830	Nurse, Licensed Practical

Code	Occupation
033.260	Nurse, Staff (RN)
551.310	Operator, Electric Sub-Station
455.030	Operator, Refinery
433.914	Operator, Sawmill Machine
627.530	Operator, Sewing Machine
141.120	Operator, Telegraph
527.010	Painter and Decorator
527.110	Painter, Boat
527.910	Painter, Sign
229.120	Pantryman (Salad Girl)
528.100	Paperhanger
517.010	Patternmaker
447.100	Photoengraver
056.110	Photographer
533.110	Pipe Coverer
530.011	Pipe Fitter, Refrigeration
530.015	Pipe Fitter, Ship
530.010	Pipe Fitter, Sprinkler
530.210	Plumber
266.010	Police Officer
448.010	Pressman, Printing
444.010	Printer
067.110	Programer, Computer
066.801	Radiographer, Industrial
581.510	Repairman, Auto Body
588.040	Rigger, Ship
531.100	Roofer, Composition
429.020	Scaler, Log Grading
425.020	Seamstress
133.013	Secretary, Medical
583.041	Serviceman, Electrical Appliance
583.023	Serviceman, Heating
583.111	Serviceman, Office Machines
583.024	Serviceman, Oil Burner
488.622	Sheet Metal Man, Ship
480.010	Sheet Metal Worker
484.012	Shipfitter
530.410	Steam Fitter
484.010	Steel Worker, Structural
097.510	Supervisor, Foreman, Manager
426.101	Tailor I
426.201	Tailor II
032.300	Teacher, Vocational-Technical
067.120	Technician, Aircraft Electronics
580.910	Technician, Aircraft Maintenance
067.150	Technician, Airlines Electronics
050.220	Technician, Chemistry
067.160	Technician, Electrical
067.165	Technician, Electronics
067.000	Technician, Engineering
064.110	Technician, Highway Engineering
068.060	Technician, Fisheries
067.125	Technician, Flight Instrument
067.180	Technician, Industrial Instrument
067.490	Technician, Metals Processing
067.431	Technician, Naval Ballistic Missile
067.130	Technician, Nuclear Reactor
067.410	Technician, Nuclear Submarine
067.181	Technician, Precision Instrument
067.800	Technician, Pulp and Paper
061.400	Technician, R & TV Studio
066.070	Technician, R & TV Transmission
067.500	Technician, Ship Electrical
064.100	Technician, Surveying
050.120	Technician, Veterinary Lab
050.040	Technician, X-Ray (See 066.801)
517.220	Template Maker, Aircraft
476.010	Tool and Die Maker
435.720	Upholsterer
227.120	Waitress (Waiter)
471.510	Watchmaker
485.030	Welder, Acetylene
485.020	Welder, Arc
485.040	Welder, Combination

CODE NUMBERS FOR INDUSTRIES AND OCCUPATIONS
(Occupations Grouped by Industry)

INDUSTRIES AND SERVICES (Standard Industrial Classification Code)		OCCUPATIONS (Dictionary of Occupational Titles Code)	
Agriculture, Forestry & Fisheries			
072	Veterinary Hospital	050.120	Veterinary Lab Technician
08	Forestry	068.240	Forester Aide
		391.030	Forester Helper
09	Fisheries	068.060	Fisheries Technician
		387.910	Fishing Vessel Captain
Construction			
15	Building Construction	048.050	Architectural Draftsman
		340.060	Landscape Gardener
		340.061	Landscaping Aide
16	Highway & Heavy Construction	048.260	Topographical Draftsman
		064.100	Surveying Technician
		064.110	Highway Engineering Technician
		484.010	Structural Steel Worker
		484.020	Ornamental Iron Worker
		523.910	Operating Engineer
171	Plumbing and Heating	530.010	Sprinkler Pipe Fitter
		530.011	Refrigeration Pipe Fitter
		530.210	Plumber
		530.410	Steam Fitter
		533.110	Pipe Coverer
		583.023	Heating Serviceman
		583.024	Oil Burner Serviceman
172	Painting and Decorating	527.010	Painter and Decorator
		527.910	Sign Painter
		528.100	Paperhanger
173	Electrical Work	048.110	Electrical Draftsman
		497.010	Inside Wireman Electrician
		583.031	Refrigeration Electrician
174	Masonry and Plastering	524.010	Bricklayer
		532.761	Lather
175	Carpentering and Flooring	525.110	Carpenter
		559.230	Carpet and Linoleum Layer
		577.010	Glazier
		578.100	Millwright

176	Sheet Metal Work	480.010	Sheet Metal Worker
		531.100	Roofer
177	Concrete Work	526.100	Cement Mason
		532.110	Concrete Man
<u>Manufacturing</u>			
23	Apparel Products	425.020	Seamstress
		426.101	Tailor I
		426.201	Tailor II
		627.530	Sewing Machine Operator
24	Lumber and Wood Products	429.020	Log Grading Scaler
		429.510	Lumber Grader
		433.914	Sawmill Machine Operator
25	Furniture	432.100	Cabinetmaker and Millman
		435.720	Upholsterer
26	Paper and Allied Products	050.220	Chemistry Technician
		067.180	Industrial Instrument Technician
		067.800	Pulp and Paper Technician
		583.641	Maintenance Mechanic
		783.641	Maintenance Mechanic Assistant
27	Printing and Allied Products	444.010	Printer
		447.100	Photoengraver
		448.010	Pressman
		449.010	Bookbinder
2819	Industrial Inorganic Chemicals, N. E. C.	066.801	Industrial Radiographer
		067.130	Nuclear Reactor Technician
29	Petroleum Refining	455.030	Refinery Operator
355	Special Industry Machinery	048.180	Mechanical Draftsman
		048.320	Technical Illustrator Draftsman
		048.820	Design Draftsman (Aide)
		475.010	General Machinist
		476.010	Tool and Die Maker
372	Aircraft	048.000	Engineering Draftsman
		048.040	Aeronautical Draftsman
		067.000	Engineering Technician
		067.110	Computer Programer
		067.120	Aircraft Electronics Technician
		134.020	Record Clerk Expediter
		475.015	Aircraft Machinist
		494.222	Aircraft Layout Man
		503.000	Aircraft Mechanic
		503.562	Aircraft Assembler
		517.010	Patternmaker
		517.120	Aircraft Modelmaker
		517.220	Aircraft Template Maker
		517.245	Aircraft Loftsman
		703.542	Aircraft Assembler Helper

373	Ship and Boat Building	048.160	Marine Draftsman
		067.410	Nuclear Submarine Technician
		067.431	Naval Ballistic Missile Technician
		067.490	Metals Processing Technician
		067.500	Ship Electrical Technician
		475.150	Marine Machinist
		480.080	Coppersmith
		481.010	Molder
		483.100	Boilermaker
		484.012	Ship Fitter
		485.020	Arc Welder
		485.030	Acetylene Welder
		485.040	Combination Welder
		488.622	Ship Sheet Metal Man
		497.210	Ship Electrician
		497.220	Marine Shop Electrician
		497.230	Shipyard Electrician
		505.530	Ship Layout Man
		517.210	Ship Loftsman
		525.610	Boat Builder
		525.640	Ship Carpenter
		527.110	Boat Painter
		530.015	Ship Pipe Fitter
		588.040	Ship Rigger
382	Industrial Instruments	067.181	Precision Instrument Technician

<u>Transportation</u>

401	Railroads	136.010	RR Rate and Division Clerk
		497.921	Railroad Electrician
		579.025	Railroad Mechanic
413	Highway Passenger Transportation	536.010	Bus Driver
451	Air Transportation	041.100	Commercial Pilot (Aviator)
		067.125	Flight Instrument Technician
		067.150	Airlines Electronic Technician
		580.100	Airframe and Powerplant Mechanic
		580.910	Aircraft Maintenance Technician

<u>Communications and Utilities</u>

481	Telephone Communication	553.410	Telephone Lineman Electrician
482	Telegraph Communication	141.120	Telegraph Operator
483	Radio and TV Broadcasting	061.400	R & TV Studio Technician
		066.070	R & TV Transmission Technician
		067.165	Electronics Technician
		069.210	R & TV Announcer-Director
		583.445	R & TV Transmission Electrician

491	Electric Service	067.160	Electrical Technician
		551.310	Electric Sub. Station Operator
		553.420	Lineman Electrician

Retail Trade

542	Meat Market	558.100	Meat Cutter
546	Retail Bakeries	401.100	Baker
		402.311	Cake Decorator
544	Gasoline Service Stations	760.500	Auto Service Station Attendant
581	Eating and Drinking Places	071.230	Restaurant Manager
		226.050	Combination Cook
		227.120	Waitress(Waiter)
		229.120	Pantryman (Salad Girl)

Services

701	Hotels and Motels	225.210	Institutional Housekeeper
721	Dry Cleaning	557.110	Dry Cleaner
722	Commercial Photography	056.110	Photographer
723	Beauty Shops	232.150	Beauty Operator
724	Barber Shops	232.010	Barber
734	Building Service	087.100	Building Custodian
		572.010	Stationary Engineer
753	Automobile Repair	581.010	Auto Mechanic
		581.510	Auto Body Repairman
		583.931	Diesel Mechanic
		781.010	Auto Mechanic Assistant
762	Electrical Repair	583.041	Electrical Appliance Serviceman
		583.411	Electronic Service Electrician
		583.433	Motor Repair Electrician
763	Watch and Jewelry Repair	471.010	Jeweler
		471.510	Watchmaker
7699	Business Machine Repair	583.111	Office Machine Serviceman

Medical and Health Services

801	Offices of Physicians	132.200	Physician's Assistant
		133.013	Medical Secretary

802	Offices of Dentists	132.100	Dental Assistant
806	Hospitals	033.260	Staff Nurse (RN)
		050.040	X-Ray Technician
		052.830	Licensed Practical Nurse (LPN)
		118.430	Hospital Receiving Clerk
		136.140	Medical Records Clerk
		226.810	Institution Cook
		227.210	Food Service Worker
		242.200	Nurse Aide
Educational Services			
821	Elementary and Secondary Schools	032.300	Vocational-Technical Teacher
		039.840	Vocational Counselor
		226.710	School Lunch Cook
Miscellaneous Services			
8999	Commercial Art Work	044.260	Commercial Artist
Government			
9398	Police Protection	266.010	Police Officer
9399	Fire Protection	263.100	Firefighter
		263.200	Fire Officer
		497.421	Fire Alarm Electrician
Non-Classifiable Establishments			
99	All Industries and Services	097.510	Supervisor, Foreman, Manager

VT 001 798
The Vocational Education Act of 1963, A Summary of Part A of Public Law 88-210.

Office of Education (DHEW), Washington, D.C.
MF AVAILABLE IN VT-ERIC SET.
OE-80036
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*VOCATIONAL EDUCATION; *FEDERAL LAWS; *FEDERAL PROGRAMS; *PROGRAM DESCRIPTIONS; *EDUCATIONAL OBJECTIVES
*VOCATIONAL EDUCATION ACT OF 1963

Presenting a summary of part A of the Vocational Education Act of 1963 for general public consumption, this document states that the Act authorizes Federal Grants to the States to assist them to maintain, extend, and improve existing programs of vocational education, to provide new programs of vocational education, and to provide part-time employment for youths who need financial assistance to continue their vocational training on a full-time basis. Major objectives presented are: (1) To Develop Occupational Abilities of All Americans, (2) To Develop Occupational Abilities on a Broader Program, (3) To Develop Occupational Abilities through Two 4-Year Programs, (4) To Develop Occupational Abilities through Cooperation and Flexibility, and (5) To Develop Occupational Abilities through Modernization and Expansion. Additional information is available from State Boards for Vocational Education, local public schools, and the United States Office of Education. (WB)

VT001798

ED0 31587

OE-80036

THE Vocational Education Act OF 1963

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE • Office of Education

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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OE-80036

The Vocational Education Act of 1963

A SUMMARY OF PART A OF PUBLIC LAW 88-210

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
ANTHONY J. CELEBREZZE, Secretary
Office of Education
FRANCIS KEPPEL, Commissioner

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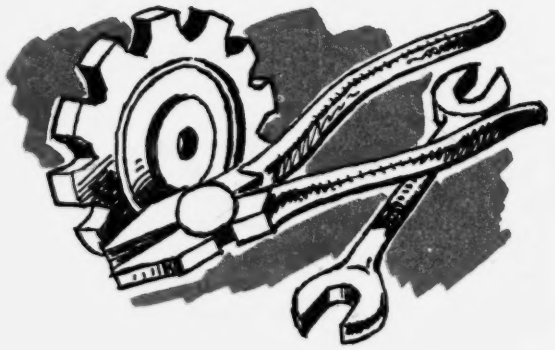
For the World of Work



No longer will a person be able to enter the world of work with a set of skills which will serve him through his working life. He must be in a position to continually upgrade his skills or learn new skills if he is to maintain economic security. The need for lifelong learning is now a fact of life.

—President's Panel of Consultants on Vocational Education

. . . New Programs

A DECLARATION OF PURPOSE

In the words of the Vocational Education Act, its purpose is:

"To authorize Federal grants to States to assist them to maintain, extend, and improve existing programs of vocational education, to develop new programs of vocational education, and to provide part-time employment for youths who need the earnings from such employment to continue their vocational training on a full-time basis, so that persons of all ages in all communities of the State—those in high school, those who have completed or discontinued their formal education and are preparing to enter the labor market, those who have already entered the labor market but need to upgrade their skills or learn new ones, and those with special educational handicaps—will have ready access to vocational training or retraining which is of high quality, which is realistic in the light of actual or anticipated opportunties for gainful employment, and which is suited to their needs, interests, and ability to benefit from such training."

To Develop Occupational Abilities

ALL TYPES OF TRAINING IN ALL TYPES OF EDUCATIONAL INSTITUTIONS

These programs will benefit students in high school; those who have dropped out of school and are unemployed; those who have completed high school but seek specialized training; those who suffer from cultural and economic handicaps; employed adults who want to upgrade their skills and technical knowledge; people of all ages who must learn new skills to earn their living.

They will be established in public school systems; nonprofit agencies and institutions; vocational education departments of high schools; specialized vocational high schools; vocational-technical schools, both secondary and post second-

. . . Of All Americans

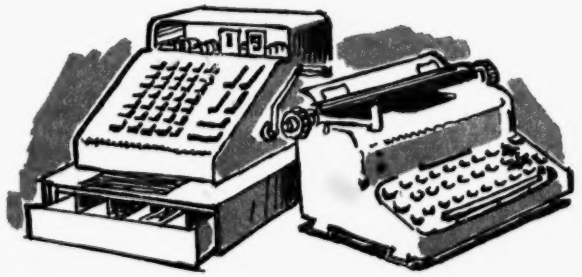
ary; junior and community colleges; and four-year colleges and universities, both public and private.

Training for any occupation short of the professions—skilled, semi-skilled, or technical—that is realistic in terms of present and future employment opportunities will be given.

There will be close cooperation with business management, labor, and public employment services, on State and local levels to make certain that training is geared to economic reality and to prevent unemployment by offering training ahead of demand and meeting immediate needs of those unemployed.

OVER THE WHOLE JOB SPECTRUM

FOR WORK TODAY AND TOMORROW



Authorized for Broader Programs

1965	1966	1967 and thereafter
$118.5 million	$177.5 million	$225 million

To Develop Occupational Abilities

The Act authorizes grants of Federal funds to help the States maintain, extend, and improve vocational education; to develop new programs; to promote research and experimentation; to provide teacher training and the development of up-to-date instructional materials and curriculums.

The Act authorizes pilot programs for experimentation with residential vocational schools and for work-study programs for youth who need money to stay in school full time.

IN ADDITION The Smith-Hughes and George-Barden Acts are continued and amended. Federal grants under these Acts are in addition to funds provided in the Vocational Education Act of 1963.

A Broader Program

Ninety percent of the basic appropriation is allotted to the States for:

- Vocational education for persons of all ages in any nonprofessional occupation
- Services to assure high quality vocational programs—teacher training and supervision, program evaluation, demonstration and experimental programs, and the development of instructional materials and equipment
- Vocational counseling and guidance services
- Construction of area vocational school facilities

90 PERCENT FOR REGULAR PROGRAMS

Ten percent of the basic appropriation is for grants to colleges and universities and other public or nonprofit private agencies and institutions; State Boards for Vocational Education; and local education agencies—with the approval of the appropriate State Board for:

- Research and training programs and experimental and developmental or pilot programs designed to meet the special vocational needs of youth who have academic, socioeconomic, or other handicaps that prevent them from succeeding in regular vocational education programs (Particular emphasis will be on programs in economically depressed communities or rural areas.)

10 PERCENT FOR EXPERIMENTATION

To Develop Occupational Abilities

A WORK-STUDY PROGRAM

FOR YOUNG PEOPLE AGED 15–20

IN COMMUNITIES WITH DROPOUT PROBLEMS

Grants to the States are for support of locally administered programs providing part-time employment to vocational education students employed by the local education agency or other public agency or institution. Students must be in good standing, in full-time attendance, and in need of earnings to start or continue full-time schooling.

Grants may be made for construction and operation of a small number of demonstration

. . . Two Four-Year Programs

AND RESIDENTIAL VOCATIONAL SCHOOLS

residential schools in metropolitan areas. The purpose is to help seriously disadvantaged youth make the transition from unfavorable home and neighborhood environments to successful entrance into the labor force. State Boards for Vocational Education, colleges or universities, or local public educational agencies, organizations, or institutions with the approval of State Boards, may apply for such grants. (Funds for this program were not appropriated for fiscal year 1965 by the 88th Congress.)

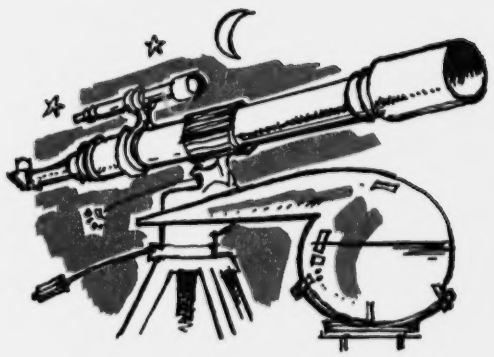
FOR DISADVANTAGED YOUTH

IN UNFAVORABLE HOME AND COMMUNITY ENVIRONMENTS

Authorized for *both* programs

1965	$30 million	1967	$35 million
1966	$50 million	1968	$35 million

To Develop Occupational Abilities



ADMINISTRATIVE COOPERATION

- Programs under the Act (with the exception of grants for research and training and grants for residential vocational education schools) are to be administered by State boards for vocational education or—with the approval of the appropriate State board for vocational education—by local public education agencies.
- State vocational education agencies will cooperate with public employment offices in an interchange of information regarding prospects of employment and qualifications of persons trained in vocational education courses.
- State allotments for programs conducted under authority of the Smith-Hughes and George-Barden

. . . Cooperation and Flexibility

Acts may be transferred within the provisions of these Acts or to the new programs.

• As further assurance that the training programs are geared as closely as possible to current needs and conditions, the Act contains special provisions for the following advisory and review bodies to be made up of persons who are familiar with the vocational education needs of management and labor or who have special knowledge and experience of vocational education:

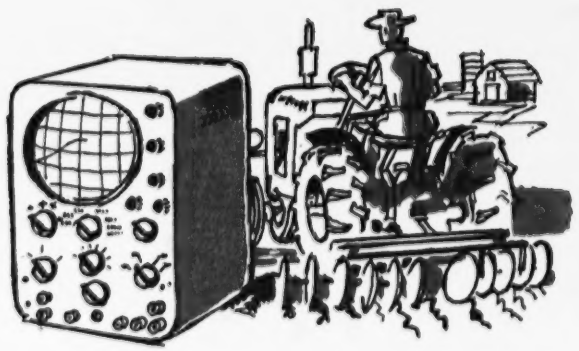
—State advisory councils, in States where State boards for vocational education do not have sufficiently broad representation.

—A 16-member National Advisory Committee (to include the U.S. Commissioner of Education, representatives of the Departments of Commerce, Agriculture, and Labor, and 12 nongovernmental members, not more than 6 of whom shall be educators) to advise on policy and administrative procedures under the Act.

—A 12-member National Advisory Council on Vocational Education, to review and evaluate all publicly supported programs of vocational education, starting in 1966 and reporting its findings by January 1, 1968. Similar reviews are to be made periodically thereafter.

BUILT-IN FLEXIBILITY

To Develop Occupational Abilities



BUILDING ON THE PAST

- The new Act provides the basis for the expansion and modernization of the local-State system of vocational education established by the Smith-Hughes and the George-Barden Acts.
- The Act makes permanent the annual Federal authorization for programs in practical nursing and other health occupations provided under the Health Amendments Act of 1956 and the authorization for technical education formerly provided under Title VIII of the National Defense Education Act of 1958.

U.S. GOVERNMENT PRINTING OFFICE : 1965 OF—758-957

. . . Modernization and Expansion

FOR FURTHER INFORMATION

• Further information may be obtained from your State Board for Vocational Education, your local public schools, or the U.S. Office of Education.

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Standard Industrial Classification for Use in Distributive Education.

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Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402 ($.10).
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*CLASSIFICATION; *DISTRIBUTIVE EDUCATION; MARKETING; *STUDENT ENROLLMENT; *REFERENCE MATERIALS; INDUSTRY

This booklet is used as a base in annual enrollment reports on education for distribution made by State Boards for Vocational Education to the Office of Education. The use of the classification in the enrollment report for education in distribution and marketing is limited to distributive occupations which occur in: (1) economic activities of manufacturing, (division D of SIC Manual), (2) transportation, communication, electric, gas, and sanitary services, (division E), (3) wholesale and retail trade, (division F), (4) finance, insurance, and real estate (division G), and (5) services (division H). The structure of the classification makes it possible to classify establishments by industry on a two-digit, a three-digit, or four-digit basis. (MM)

VT001 800

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OE-82013

STANDARD INDUSTRIAL CLASSIFICATION for USE in DISTRIBUTIVE EDUCATION

U.S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE
Office of Education

OE-82013

STANDARD INDUSTRIAL CLASSIFICATION for USE in DISTRIBUTIVE EDUCATION

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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U.S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE
ANTHONY J. CELEBREZZE, *Secretary*

Office of Education
FRANCIS KEPPEL, *Commissioner*

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Foreword

STANDARD INDUSTRIAL CLASSIFICATIONS [1] are used as a base in annual enrollment reports on education for distribution made by State Boards for Vocational Education to the Office of Education. The SIC gives standard definitions which are compatible with the Census of Business. The material in this publication, which has been taken from the SIC Manual, is organized for reference in completing the annual report on education for distribution (Form OE–VTED–4049).

The Standard Industrial Classification was developed for use in the classification of establishments by types of activity in which engaged; for purposes of facilitating the collection, tabulation, presentation, and analysis of data relating to establishments; and for promoting uniformity and comparability in the presentation of statistical data collected by various agencies of the United States Government, State agencies, trade associations, and private research organizations.

The Classification is intended to cover the entire field of economic activities. The use of the Classification in the enrollment report for education in distribution and marketing is *limited to distributive occupations* which occur in

[1] *Standard Industrial Classification Manual*, prepared by the Technical Committee on Industrial Classifications, Office of Statistical Standards, Bureau of the Budget.

economic activities of manufacturing (Division D of the SIC Manual); transportation; communication; electric, gas, and sanitary services (Division E); wholesale and retail trade (Division F); finance, insurance, and real estate (Division G); and services (Division H).

These divisions are included as specific items in the report as these economic areas represent the greatest concentration of distributive occupations.

The order of the material in this bulletin (Divisions F, H, E, G, D) follows the organization of the report form. This form of organization has been adopted because it reflects the order of the frequency of distributive occupations in the various economic activities.

The structure of the Classification makes it possible to classify establishments by industry on a two-digit, a three-digit, or a four-digit basis, according to the degree of detail in information which may be needed. It permits selection of the level of detail considered most appropriate for presentation of data. Also, it permits the use of additional subdivisions in adopting this Classification while still retaining comparability with the classifications used by other agencies.

W. M. ARNOLD,
Assistant Commissioner for Vocational and Technical Education.

Standard Industrial Classification For Use in Distributive Education

DIVISION F. WHOLESALE AND RETAIL TRADE

Retail Trade

* **52** **Lumber, Building Materials, Hardware, Farm Equipment**

5211—Lumber yards
5212—Building materials dealers
522 —Heating, plumbing equipment dealers
523 —Paint, glass, wallpaper stores
524 —Electrical supply stores
5251—Hardware stores
5252—Farm equipment dealers

53 **General Merchandise**

531 —Department stores

Establishments normally employing 25 or more people and engaged in selling some items in each of the following lines of merchandise:

1. Furniture, home furnishings, appliances, radio and TV sets
2. A general line of apparel for the family
3. Household linen and dry goods

An establishment with a total sales of less than $5 million, in which sales of any one of these groupings is greater than 80 percent of total sales, is not classified as a department store. An establishment with total sales of $5 million or more is classified as a department store even if sales of one

* Numbers boxed are those used in annual report form.

of the groups described above is more than 80 percent of total sales, provided that the combined sales of the other two groups is $500,000 or more.

533 —Limited price variety stores

5392—Dry goods and general merchandise stores

Establishments which meet the criteria for department stores, but have fewer than 25 employees.

5393—General stores

Establishments primarily selling a general line of merchandise of which the most important line is food, and the more important subsidiary lines are notions, apparel, farm supplies, and gasoline. (Usually known as a country general store.)

54 Food

541 —Supermarkets, grocery stores, delicatessen stores
5422—Meat markets
5423—Fish markets
543 —Fruit stores, vegetable markets
544 —Candy, nut, confectionery stores
545 —Dairy products stores
5462—Retail bakeries-manufacturing (some or all of products baked on premises)
5463—Retail bakeries-nonmanufacturing (do not bake any of products they sell)
5491—Egg and Poultry Dealers (limited line of groceries frequently carried)
5499—Other—specialized lines, e.g., coffee, spice, health foods

55 Automotive Dealers and Gasoline Service Stations

551—Passenger car dealers, franchised
552—Passenger car dealers, nonfranchised

553—Tire, battery, accessory dealers
559—Aircraft, boat, motorcycle dealers; other

554 Gasoline Service Stations

56 Apparel and Accessories

561 —Men's, boys' clothing stores
562 —Women's ready-to-wear stores
5631—Millinery stores
5632—Lingerie stores
5633—Hosiery stores
5634—Other specialty stores (women's)
564 —Children's, infants' wear stores
565 —Family clothing stores
5662—Men's shoe stores
5663—Women's shoe stores
5664—Children's shoe stores
5665—Family shoe stores
567 —Custom tailors
568 —Furriers, fur shops
569 —Miscellaneous apparel

57 Furniture, Home Furnishings, and Equipment

5712—Furniture stores
5713—Floor coverings stores
5714—Drapery, curtain, upholstery stores
5715—China, glassware, metalware stores
5719—Miscellaneous home furnishings stores (specialized lines—lamps, blinds and window shades, picture frames, etc.)
572 —Household appliance stores
5732—Radio and television stores
5733—Record shops, musical instrument stores

58 Eating and Drinking Places

Note: Unless food services are operated as leased departments, restaurants, and lunch counters operated by hotels, for

example, are classified in Group 70 and by department stores in Group 53.

5812—Restaurants, cafeterias, caterers, railroad dining-cars

5813—Drinking places

59 Other Retail Stores

591 Drugstores

592 —Liquor stores

593 —Secondhand stores, antique stores

5942—Book stores

5943—Stationery stores

5952—Sporting goods stores

5953—Bicycle shops

5962—Hay, grain, feed stores

5969—Other farm supply stores, garden supply stores

597 —Jewelry stores

5982—Coal and wood dealers

5983—Fuel oil dealers, liquified petroleum (LP) gas dealers

5984—Ice dealers

5992—Florists

5993—Cigar stores, stands

5994—News dealers, news stands

5996—Camera, photographic supply stores

5997—Gift, novelty, souvenir shops

5998—Optical goods stores

5999—Typewriter, luggage, hobby, toy, religious goods stores; pet shops; other

Nonstore Retailers

532 Mail-order houses

534 Merchandise vending machine operators

535 Direct selling (house-to-house) organizations

Wholesale Trade

501 Motor Vehicles, Automotive Equipment

5012—Automobiles, other motor vehicles

5013—Automotive equipment

5014—Tires and tubes

502 Drugs, Chemicals, Allied Products

5022—Drugs, drug proprietaries, druggists' sundries
5028—Paints, varnishes
5029—Other chemicals, allied products

503 Dry Goods, Apparel

5032—Dry goods, piece goods, notions
5035—Apparel and accessories, hosiery, lingerie
5039—Footwear

504 Groceries and Related Products

5042—Groceries, general line
5043—Dairy products
5044—Poultry, poultry products
5045—Confectionery
5046—Fish, sea foods
5047—Meat, meat products
5048—Fresh fruits, fresh vegetables
5049—Other groceries and related products

505 Farm Products—Raw Materials

Establishments primarily engaged in wholesale distribution of farm product raw materials, most of which are used in manufacturing industries.

506 Electrical Goods

5062—Electrical merchandise, general line
5063—Electrical apparatus and equipment, wiring supplies, construction materials
5064—Electrical appliances, television, radio sets
5065—Electronic parts, equipment

507 Hardware; Plumbing and Heating Equipment and Supplies

5072—Hardware

5074—Plumbing and heating equipment, supplies
5077—Air conditioning, refrigeration equipment, supplies

508 **Machinery, Equipment, Supplies**

5082—Commercial and industrial machinery, equipment, supplies
5083—Farm machinery and equipment
5086—Professional equipment, supplies
5087—Service-establishment equipment, supplies
5088—Transportation equipment, supplies (except motor vehicles)

509 **Miscellaneous Wholesale**

5091—Metals, minerals
5092—Petroleum bulk stations, terminals
5093—Scrap and waste materials
5094—Tobacco, tobacco products
5095—Beer, wine, alcoholic beverages
5096—Paper, paper products
5097—Furniture, home furnishings
5098—Lumber, construction materials
5099—Other, e.g., farm supplies, jewelry, flowers, and nursery stock

DIVISION H. SERVICES

70 ***Hotels, Camps, and Other Lodging Places***

7011—Hotels—year round
7012—Seasonal hotels
7013—Motels and tourist courts
702 —Rooming and boarding houses
7031—Trailer parks
7032—Sporting and recreational camps
704 —Other, e.g., lodging houses on membership basis

72 ***Personal Services***

7211—Power laundries, family and commercial
7212—Laundries, except power and self-services

7213—Industrial launderers, linen supply
7214—Diaper service
7215—Self-service laundries
7216—Cleaning, dyeing plants
7221—Photographic studios
7231—Beauty shops
7241—Barber shops
7251—Shoe repair shops, shoe shine parlors, hat cleaning shops
7261—Funeral services, crematories
7271—Cleaning, pressing shops (valet shops), garment repair
7272—Fur repair, storage
7299—Other miscellaneous personal services; e.g., porter service, clothing rental

73 ***Business Services***

7311—Advertising agencies
7312—Outdoor advertising services
7319—Miscellaneous advertising; e.g., shopping news service
7321—Mercantile and consumer credit reporting agencies; adjustment and collection agencies
7331—Duplicating, addressing, mailing, mailing list, stenographic services
7332—Blueprinting, photocopying services
7341—Window cleaning
7342—Disinfecting, exterminating services
7349—Miscellaneous services to dwellings, other buildings
7351—News syndicates
7361—Private employment agencies
7391—Research, development, testing laboratories
7392—Business and management consulting services
7399—Other miscellaneous business services; e.g., telephone answering, equipment rental, sign painting shops, interior decorating

75 Automobile Repair, Automobile Services, Garage

(Auto repair departments maintained by establishments engaged in the sale of new automobiles are classified in Retail Trade)

7511—Automobile, truck rentals without drivers
7521—Parking lots
7522—Parking structures
7531—Top, body repair shops
7532—Battery, ignition repair and service shops
7533—Radiator repair shops
7534—Tire repair shops
7535—Paint shops
7536—Glass replacement, repair shops
7538—General automobile repair
7539—Automobile repair shops, not elsewhere listed
7541—Automobile services, except repair; e.g., washing, towing

76 Miscellaneous Repair Services

Note: Repair departments in retail stores are not included in the repair classification unless operated as leased departments.

762—Electrical repair shops
763—Watch, clock, and jewelry repair
764—Reupholstery and furniture repair
769—Other repair services

78 Motion Pictures

781—Motion picture production and distribution
782—Motion picture service industries
783—Motion picture theaters, drive-in theaters

79 Amusement and Recreation Services (partial listing)

7911—Ballrooms, dance studios

7921—Theatrical producers, bands, entertainers
7931—Billiard, bowling alleys
7942—Public golf courses
7947—Golf clubs, country clubs
7949—Parks, tourist attractions, and other commercial sports, amusements and recreation services

DIVISION E. SPECIAL AREAS

Transportation

40 Railroad Transportation

41 Local and Suburban Transit and Interurban Passenger Transportation, including taxicabs

42 Motor Freight Transportation and Warehousing

421 Trucking, local and long distance

422 Public Warehousing

4221—Farm product warehousing and storage
4222—Refrigerated warehousing, except food lockers
4223—Food lockers, with or without food preparation facilities
4224—Household goods warehousing and storage
4225—General warehousing and storage
4226—Special warehousing and storage, not elsewhere classified

44 Water Transportation

45 Transportation by Air

46 **Pipe Line Transportation**

47 **Transportation Services**

471—Freight forwarding
472—Arrangement of transportation, including tour services
473—Stockyards
474—Rental of railroad cars
478—Miscellaneous

48 ***Communication***

481—Telephone communication
482—Telegraph communication
483—Radio broadcasting and television

49 ***Electric, Gas, and Sanitary Services***

491—Electric companies and systems
492—Gas companies and systems
493—Combination companies and systems
494—Water supply
495—Sanitary services
496—Steam companies and systems
497—Irrigation systems

DIVISION G.

Financing

60 **Banking**

601—Federal Reserve Banks
602—Commercial and stock savings banks
603—Mutual savings banks
604—Trust companies not engaged in deposit banking
605—Establishments performing functions closely related to banking

61 **Credit Agencies Other than Banks**

611—Rediscount and financing institutions for credit agencies other than banks

612—Savings and loan associations
613—Agricultural credit institutions
614—Personal credit institutions, including:

6145—Licensed small loan lenders
6146—Installment sales finance companies

615—Business credit institutions
616—Loan correspondents and brokers

62 Security and Commodity Brokers, Dealers, Exchanges, and Services

621—Security brokers, dealers, and flotation companies
622—Commodity contracts brokers and dealers
623—Security and commodity exchanges
628—Services allied with the exchange of securities or commodities

Insurance

63 Insurance Carriers

631—Life insurance
632—Accident and health insurance
633—Fire, marine, and casualty insurance
635—Surety insurance
636—Title insurance

64 Insurance Agency, Brokers, and Service

Real Estate

65 Real Estate

651—Real estate operators and lessors
653—Agents, brokers, and managers
654—Title abstract companies
655—Subdividers and developers
656—Operative builders

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Pollard, Forbes W.
A Summary of Preliminary Findings, Conclusions and Recommendations of a Study of Manpower Requirements and Education and Training Programs of Selected Health Occupations.

Indianapolis Hospital Development Association, Ind.
Office of Education (DHEW), Washington, D.C. Div. of Adult and Vocational Research
MF AVAILABLE IN VT-ERIC SET.
Pub Date - 7Dec66 17p.

*HEALTH OCCUPATIONS; *HEALTH OCCUPATION EDUCATION; MANPOWER UTILIZATION; PROGRAM DEVELOPMENT; *FEASIBILITY STUDIES; *RESEARCH PROJECTS; EDUCATIONAL PROGRAMS; MANPOWER NEEDS; *MANPOWER DEVELOPMENT

An association study of nursing resources pointed up the need to expand the study scope to include other health occupations. A feasibility study involving group meetings and individual interviews assured interest in the pursuit of a comprehensive study and elicited suggestions that the following be determined and evaluated: (1) the existing division of labor among the health occupations, (2) the knowledge and skill levels required, and (3) the training required to provide the needed knowledge and skill. Some of the major factors identified as affecting health personnel needs were: (1) increasing demand for health services, (2) gaps in availability of services, (3) advancements in technology and medical science, (4) the health services organizational structure, (5) limited vertical and horizontal mobility, (6) unimaginative recruitment efforts, (7) population growth, and (8) attractive alternative employment opportunities. The proposed 5-year comprehensive study, developing an orderly plan for meeting present and projected requirements, would include the following phases: (1) development of a detailed work plan, (2) development of a short-range plan of action, (3) study of personnel utilization, identification of new, restructured, or unchanged health occupations, and projection of needs over a 15-year period, and (4) development of a comprehensive long-range plan for education of occupation groups. (JK)

VT001801

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A SUMMARY OF PRELIMINARY FINDINGS, CONCLUSIONS AND RECOMMENDATIONS OF A STUDY OF MANPOWER REQUIREMENTS AND EDUCATION AND TRAINING PROGRAMS OF SELECTED HEALTH OCCUPATIONS

Forbes W. Polliard, Principal Investigator

Indianapolis Hospital Development Association, Inc.

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U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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A SUMMARY OF PRELIMINARY FINDINGS, CONCLUSIONS AND RECOMMENDATIONS OF A STUDY OF MANPOWER REQUIREMENTS AND EDUCATION AND TRAINING PROGRAMS OF SELECTED HEALTH OCCUPATIONS

This summary consists of a brief description of historical information related to the Indianapolis Hospital Development Association and its activities, a preliminary report on a health manpower project feasibility study, and presentation of a general plan of approach to a proposed comprehensive study of health manpower requirements, utilization, and education and training of selected health occupations in the Indianapolis metropolitan area.

GENERAL BACKGROUND INFORMATION

The Indianapolis Hospital Development Association is a non-profit organization composed of community leaders from business, industry, education, and selected health professions which was organized nearly 15 years ago. A brief summary of its objectives and recent activities is attached as Exhibit I.

The Association's primary purpose is to facilitate the development and/or improvement of health services in the Indianapolis area to the maximum possible extent. It has actively and successfully sought to interest and involve a wide array of community leaders in its work.

The Association devoted its early efforts to raising capital funds for hospitals. Subsequently, it developed broader interests in the organization and delivery of community health services. IHDA recognized the vital need for an adequate number

of well-trained personnel to staff the facilities to provide the required level of health services in the area. As evidence of its broader interests and responsibilities, about two years ago the Association sponsored a comprehensive nursing resources study to ascertain nursing resources needed in the community, and how they could be provided.

The firm of Booz, Allen & Hamilton Inc. was engaged to aid in the study of nursing resources. A special representative steering committee was appointed to work closely with the consultants. The consultants collected and analysed substantial amounts of data and scheduled numerous interviews with Indianapolis area and national nursing leaders. Other studies of nursing resources were reviewed and evaluated, and a nursing education cost study was conducted. Characteristics of employed nurses, schools of nursing, students admitted to and graduated from nursing schools were identified and analysed along with future career plans of a large number of high school seniors in the metropolitan area.

The findings and conclusions of the study resulted in the preparation of recommendations to meet nursing requirements to 1975. Specific recommendations were made to phase out several diploma programs, to initiate several associate degree programs, and to expand existing baccalaureate and licensed practical nursing programs. Suggestions were also made to shift the primary responsibility for nursing education costs from the providers of health services to the educational system.

Participants in the nursing study and IHDA recognized the need to expand the study scope to include other health occupations. They suggested that the availability

of and need for other allied health personnel be identified, that utilization of health personnel be studied critically, and that the possibility of developing bold new approaches to utilizing and educating health personnel be considered.

Before actually extending the scope of health manpower planning to include other health occupations, the Association decided to undertake a feasibility study of the proposed project because of its complexity and potentially controversial nature.

PRELIMINARY REPORT ON THE FEASIBILITY STUDY

The feasibility study began in August of 1966 and concluded November 30,1966. It was financed by the Office of Education of the U.S. Department of Health, Education and Welfare and was conducted by the Indianapolis Hospital Development Association in cooperation with the management consulting firm of Booz, Allen & Hamilton Inc. The purpose of the study was to ascertain the feasibility of a systematic study of health manpower requirements, utilization, and related education and training in the Indianapolis metropolitan area.

During the course of the study group meetings and individual interviews were scheduled in Indianapolis and elsewhere. In Indianapolis the goal was to determine the degree of interest and willingness of selected area health and education leaders to participate in the comprehensive study and to obtain their counsel on how to approach the proposed study. In addition, the advice of national health and education leaders was also sought.

Efforts were made to identify other health manpower research projects and to review their potential applicability to the proposed Indianapolis study. The

study team visited, Pittsburgh, Pennsylvania, to review the Health Research Project of the Pittsburgh Board of Education; Ann Arbor, Michigan to review the work of the Hospital Systems Research Group; and Battle Creek, Michigan, to talk with Robert Kinsinger, Director of Education for the Kellogg Foundation. The team also interviewed Peter Bing, M.D. and his staff assistant of the Presidential Health Manpower Commission, F.J.N. Blasingame, M.D., Executive Vice President of the American Medical Association, R.F. Manegold, Director, Division of Hospital and Medical Facilities of the American Medical Association, and Edward W. Weimer, Assistant Secretary of the American Hospital Association and Director of the Department of Labor-American Hospital Association Joint Manpower for Health Program.

In conducting the study, the team found that health services are receiving increasing attention at the national, state, and local levels. New and more demanding national health goals have evolved and broad and comprehensive new programs have been established which will significantly affect the future organization and delivery of health services, as well as demand for services. The percentage of the gross national product spent for health related services has increased from 3.5% in 1930 to about 6% in 1965 -- an indication of the increasing value ascribed to health in the nation. Approximately 40 billion dollars were spent for health related services in 1965.

As health programs have been developed and extended, there has been a concomitant increase in demand for and utilization of health services. Increased utilization of services and implementation of new programs have resulted in the

need for more health manpower. Furthermore, it appears that more highly skilled manpower is required in increasing proportions at almost all occupational levels.

The number of people employed in the health services is increasing dramatically. In 1950, there were 1.6 million health service workers; in 1965, the number had grown to approximately three million or 4% of the total labor force in the United States. A recent study of health manpower requirements conducted jointly by the American Hospital Association and the Public Health Service identified the current need for 275,000 additional professional and technical personnel to provide optimum patient care in the nation's hospitals.

In view of present and anticipated future requirements, the majority of those interviewed were enthusiastic about conducting a comprehensive study of health manpower requirements, utilization and related educational and training programs.

The need for careful and thorough study of the range of tasks performed by health workers in the provision of health services was suggested to determine and evaluate:

- The division of labor that exists between the various health occupations.
- The knowledge and skill levels required to perform the range of tasks.
- The training required to provide the needed knowledge and skill.

The following were often cited as the major factors affecting present and future health personnel needs.

- Increasing demand for health services
- Present gaps in availability of health services
- Expansion of physical facilities
- Impact of technology and advances in medical science
- Development of new programs and services
- Effect of health service organizational structure
- Little opportunity for vertical or horizontal mobility in the health occupations
- Unimaginative recruitment efforts
- Growth of the population
- Attractive alternative employment opportunities for both men and women, including second career opportunities

Additional suggestions for either attracting more people to the health field or for utilizing or training present workers more effectively were made. It was proposed that recruitment efforts be improved and that health worker salaries be increased significantly. Unrealistic accreditation and licensing requirements, and the constraints which result, were often cited as major problems facing employers and educators of health workers. Identification of undertraining and overtraining of health workers was also recommended as one of the first requirements in a long-term plan for meeting manpower needs. It was suggested that opportunities for "career ladder" advancements in the health field be developed to permit more effective use of available health manpower.

Findings of the feasibility study support several general conclusions.

1. There is a serious concern about meeting health manpower needs in the Indianapolis area.

2. Indianapolis leaders are interested, willing, and enthusiastic about taking whatever action is required to ensure the accessibility of adequate numbers of health personnel in the future.

3. The proposed comprehensive study is desirable, feasible, and the plan of approach can be executed successfully in the Indianapolis area.

4. Successful execution of the study should result in the development of a model approach to health manpower planning which could be applied in other cities of comparable size.

Efforts are currently underway in the Indianapolis area to assemble baseline information concerning health education and training costs, current and projected health manpower needs, and the current output and future plans of education and training programs.

PLAN OF APPROACH TO THE COMPREHENSIVE STUDY

The purpose of the comprehensive study is to develop an orderly plan for meeting present and projected health manpower requirements in the Indianapolis metropolitan area. To the extent possible, the study will relate health manpower planning to the volume of health services currently used, needed, or expected to be needed in the years ahead.

Short-range opportunities for increasing the supply of scarce health personnel will be identified and action-oriented plans developed to meet acute manpower needs. The study will also include the development of long-range plans to meet future health manpower requirements.

The general plan for the comprehensive study sets forth an approach for planning to meet changing health service and health manpower needs so that change will occur as directed rather than as the result of haphazard reaction. The study process is structured to ensure that planning and action can be linked effectively to achieve the best possible over-all results for the community.

The study as currently defined will consist of four phases which include eleven major tasks. Approximately 64 months will be required to complete the project. (See Exhibit II) A brief description of each major phase follows.

Phase I

The major participants in the study will devote a minimum of four months to the development of a detailed work plan for the comprehensive study before subsequent tasks are begun. The need for thorough planning of a five-year undertaking of the scope and magnitude proposed cannot be overemphasized. Completion of the study within the projected time schedule, achieving effective utilization of study staff and maintaining control of costs will require orderly scheduling of work assignments and identification of critical points in the over-all study process.

General methodology and data collection and analysis plans for the entire project will be developed by the study staff during Phase I. Time and cost estimates and the staffing plan will be reviewed and refined by major task.

Because of the empirical nature of the study, detailed planning for subsequent phases will usually follow completion of the preceeding phase. Therefore, while general plans for the entire study will be refined during Phase I, particular attention will be given to the required detailed planning

Phase II

A short-range plan of action for meeting acute health manpower needs in the Indianapolis area will be prepared during Phase II. The plan will be directly related to services either presently provided, needed or planned for delivery in the future.

The community's pattern of organization for the delivery of comprehensive health services will also be studied. In addition, specific programs and services, present staffing, available facilities and sources of financing will be described. The volume of inpatient, abulatory and public health services will be identified. Carefully designed sampling techniques utilizing refined data collection instruments will be employed where appropriate to secure the needed information.

The present and estimated future supply of health manpower will be determined, in part, by identifying the present and projected output of existing education or training programs for selected health personnel in the Indianapolis area. Specific information about selected programs such as student capacity, enrollment history, and number of students completing programs will be developed. Faculty staffing patterns, education or training facilities, and financial resources will also be described. Methods

used to collect and analyze data during the Indianapolis nursing resources study referred to previously will be refined and employed where feasible.

The final task of Phase II will involve a determination of manpower needs for selected existing health occupations. Providers of health services in the community will be requested to update current manpower need estimates and to project future requirements for five years. Concurrently, the study staff will develop other health manpower need estimates for selected health occupations. Estimates of the providers of service and the study staff will be compared and analysed and used to estimate present and future health manpower requirements for the area.

The estimated need for personnel in selected health occupations will be compared with the expected output of education and training programs. In-and-out migration of health personnel will be considered. An action-oriented plan to exploit short-range opportunities to increase the supply of health workers will be developed and implemented. Plans will give high priority to meeting acute manpower requirements.

Standing IHDA committees, such as the Staffing of Health Care Facilities Committee, will be actively involved in the study. Representative advisory groups of community leaders will also be selected to work closely with the study team as it proceeds with its work. Authorities outside the Indianapolis area will be requested to participate in the final analysis of information and in the development of conclusions and recommendations to improve the range and quality of health services in the

Indianapolis area.

Phase III

The development of a sound and imaginative long-range plan to meet expected future health personnel needs will require an intensive examination of how present personnel are being utilized and an evaluation of the appropriateness of their utilization. The tasks currently being performed by personnel providing direct health services to people will be identified and analysed systematically. Related tasks will be grouped according to the nature of the work or function to be performed. The level of knowledge and skill required to perform health service tasks will also influence the grouping of tasks. Where possible, expected new health service tasks will be considered in the task grouping process. This effort will be coordinated where feasible with the systems analysis work of the centralized computer system project.

Subsequently, new, restructured or unchanged selected health occupations will be identified. Based on the new, restructured, or unchanged occupations identified, manpower needs per population or service unit will be estimated for 15 years at five-year intervals. Quantitative estimates of comprehensive health service requirements will be made and related to health personnel needs where possible. New or expanded requirements for health services also will be considered.

Phase IV

A comprehensive long-range plan for the education and training of selected health occupational groups will be prepared for the Indianapolis area. The identification of new, restructured and unchanged health occupational categories will require a thorough analysis of the existing education or training programs to ensure that curricula are designed to provide the education or training selected health personnel need to perform assigned tasks at a quality level.

Pilot education and training programs for preparation of personnel for selected restructured or new health occupations will be established and conducted. Following identification of specific pilot programs, the curriculum content and the sequence of study required to prepare persons for selected restructured or new health occupations will be determined. Opportunities for developing core courses for more than one occupational classification will be studied. Pilot programs will be organized and students selected.

During this phase of the project efforts will be made to secure commitments from several groups. The cooperation of certification and licensing agencies will be solicited. Providers of health services who are willing to realign task assignments to accommodate persons prepared for new or restructured health occupations will be identified. Employers will be asked to permit "career ladder" advances within health occupational fields.

The pilot education and training programs will be evaluated and a mechanism for continuing evaluation developed. Plans will also be made to include traditional education and training programs in the evaluation process where possible.

Finally, an analysis of the comprehensive study will be prepared and disseminated. Other communities and regions across the nation will thus have access to the detailed results of the study.

Selection and recruitment of the study staff will be an extremely important undertaking. A general project staff will be needed to assure overall continuity and coordination of the work. Special skills of a variety of disciplines also will be needed intermittently. Consultants who can provide the required special skills will be used extensively. Selective use of this source of talent will permit the best possible application of existing financial and personnel resources. Consultant representatives of several special disciplines will be needed for the comprehensive study.

- Behavorial scientist
- Operations research specialist
- Industrial engineer
- Data processing specialist
- Statistician
- Educational specialist
- Allied health profession educators
- Curriculum analyst
- Others

* * * * *

The job to be done will be difficult, complex and time consuming. It will require the imaginative and creative efforts of a multi-disciplinary team, the continued cooperation and interest of Indianapolis area community leaders, and the commitment of substantial financial resources. A successful health manpower research and planning venture of the kind proposed will go a long way toward providing comprehensive personal health services of high quality for Indianapolis area citizens.

The approach to health manpower planning, the methodologies developed, and the finding, conclusions, and recommendations of the comprehensive study should benefit other comparable United States cities in solving their manpower problems.

Exhibit I
Indianapolis Hospital Development Association, Inc.

THE OBJECTIVES AND ACTIVITIES OF THE
INDIANAPOLIS HOSPITAL DEVELOPMENT ASSOCIATION

The Indianapolis Hospital Development Association, Inc., was organized nearly 15 years ago. Its basic objectives are to:

- Determine the need for expansion or construction of health care facilities.
- Assign equitable and reasonable priorities in allocating funds to existing or planned institutions.
- Aid in the development of health care facilities by raising capital funds on a community-wide basis.
- Sponsor or conduct studies related to the development or improvement of health care services and facilities in the Indianapolis area.
- Support special projects which are in the best interests of the health system in Indianapolis.

In carrying out its basic objectives, the Association through the years has:

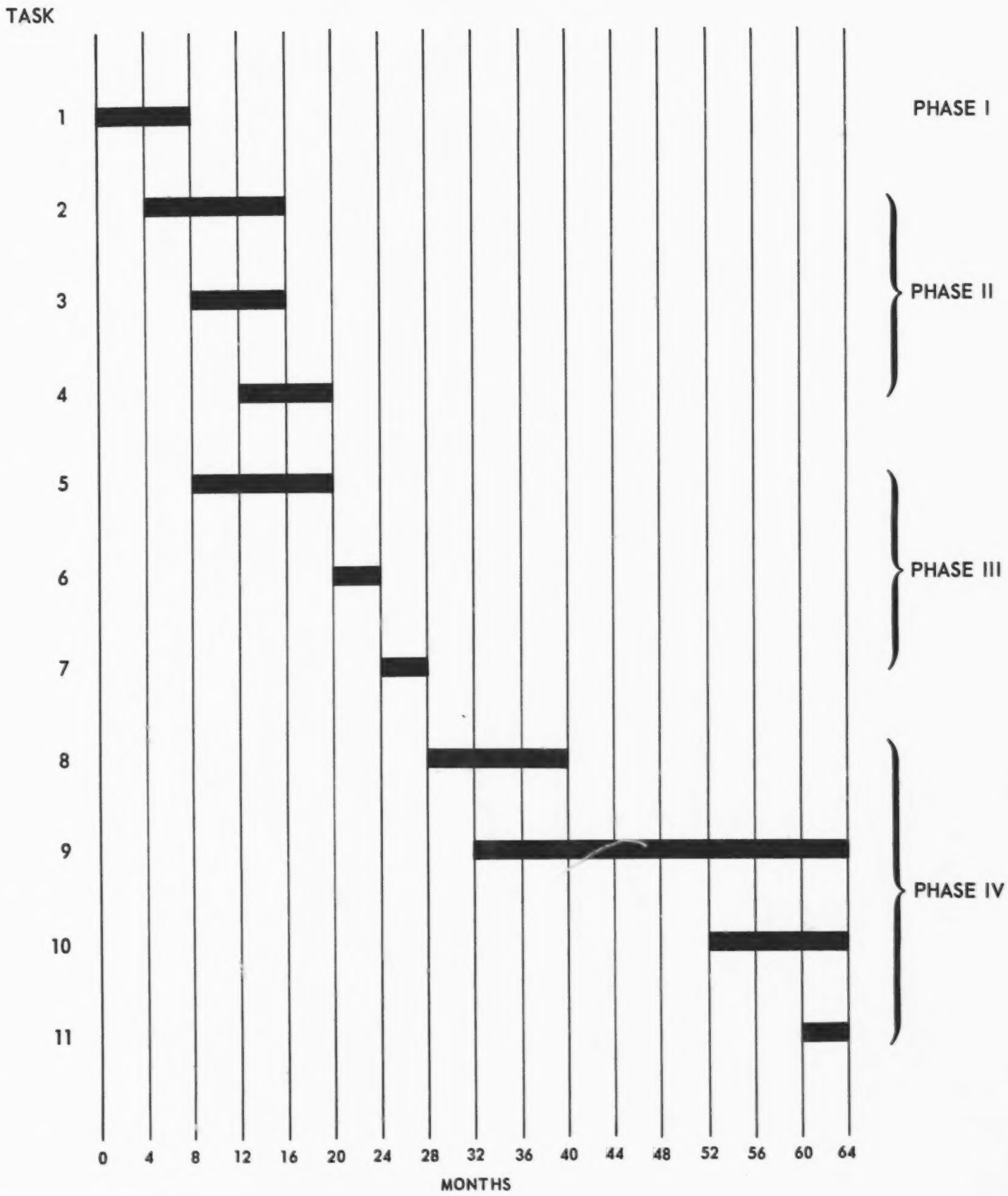
- Conducted a successful $12 million capital building fund drive in 1952-1953.
- Provided funds to assist in the initiation of the first two-year nursing program in the Indianapolis area in 1953.
- Conducted a study in 1962 to ascertain the needs of area hospitals for future additional beds and health service programs.
- Updated, in 1965, the 1962 study of the needs of area hospitals for additional hospital beds.
- Established, in 1965, a priority of needs by which community funds collected by IHDA could be distributed among hospitals for additional hospital beds.
- Sponsored the development of a $1.8 million centralized laundry facility to provide laundry services for area hospitals.

Currently, IDHA is successfully completing a $15.5 million community campaign to marshall funds to help provide needed hospital facilities. In addition, it is:

- Implementing a centralized computer system for area hospitals and health agencies. The project is financed by a Public Health Service grant.
- Beginning an area-wide planning project under another grant from the Public Health Service.

EXHIBIT II
INDIANAPOLIS HOSPITAL DEVELOPMENT ASSOCIATION, INC.

TIME PHASING BY MAJOR TASK FOR THE COMPREHENSIVE PROJECT



VT 001 815

Progress in Technical Vocational Education Programs Under Title III of the George-Barden Act, Fiscal Years 1959-1964.

Office of Education (DHEW), Washington, D.C. Div. of Vocational and Technical Education
MF AVAILABLE IN VT-ERIC SET.
Pub Date - Jun65 10p.

*VOCATIONAL EDUCATION; *STATE FEDERAL AID; EXPENDITURES; STUDENT ENROLLMENT; *STATISTICAL DATA; *TECHNICAL EDUCATION; *PROGRAM EVALUATION
NATIONAL DEFENSE EDUCATION ACT OF 1958 TITLE VIII; *VOCATIONAL EDUCATION ACT OF 1963; *GEORGE BARDEN ACT TITLE III

The need for educating highly skilled technicians was implemented with the passage of Title VIII of the National Defense Education Act of 1958. Federal funds are paid to the states on a matching dollar basis to help defray expenditures for surveys, salaries, equipment, supplies, teacher education, and certain other program costs. The training is conducted under the direction of the State Boards for Vocational Education in accordance with their respective state plans. The preparatory programs and extension courses are offered in public vocational and technical schools, technical institutes, community and junior colleges, state universities, and secondary schools. Some achievements of the program in 1964 were: (1) More than 221,000 adults and youth were enrolled in institutions offering technical education, (2) Training programs were offered in 11 specialized areas, (3) 881 schools offered technical training in 1964 compared to 262 in 1959, and (4) Of 1[illegible],292 graduates available for placement, 70 percent were placed in the technical field for which they were trained and 11 percent in fields related to their training. Data on federal and matching funds, enrollments, schools, program courses, graduates, placement, and salary of graduates are included. (WB)

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PROGRESS IN TECHNICAL VOCATIONAL EDUCATION PROGRAMS UNDER TITLE III OF THE GEORGE-BARDEN ACT FISCAL YEARS 1959 - 1964

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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Division of Vocational and Technical Education
Bureau of Educational Assistance Programs
U.S. Office of Education

June 1965

VT 01815

REPORT OF PROGRESS

The need for educating highly skilled technicians was first recognized and implemented by Federal legislation with the passage of Title VIII of the National Defense Education Act of 1958. Congress, through the Act, directed the Office of Education to administer grants of funds to the States to be matched dollar for dollar to train highly skilled technicians in occupations requiring scientific knowledge in fields necessary for national defense.

Federal funds paid to a State under this title are used to help defray expenditures for surveys, salaries, equipment, supplies, teacher education, and certain other program costs. The training is conducted under the direction of the State Boards for Vocational Education in accordance with their respective State plans. The preparatory programs and extension courses are offered in public vocational and technical schools, technical institutes, community and junior colleges, State universities, and secondary schools.

In terms of number of persons served, participating institutions, breadth of offerings, and quality of offerings, the program has grown rapidly since the implementation of the Act in fiscal 1959. The success of the program was recognized by Congress and Title VIII was made a permanent part of the Vocational Education Act in 1963 as Title III of the George-Barden Act.

Included in the achievements of the program in fiscal 1964 are the following highlights:

- More than 221,000 adults and youth were enrolled in institutions offering technical education, an increase of 236% since the program began in 1959.

- Programs were offered in electronic, electrical, mechanical design, chemical, metallurgical, civil and construction, mechanical production, instrumentation, nuclear, and plastics technology; and in electronic data processing, computer programming.

- In 1964 there were 881 schools offering technical training, compared to 262 in 1959.

- More than 128,000 persons enrolled in extension courses designed to upgrade the skills of adult technical workers.

- Nearly 72,000 students were enrolled in 2-year post secondary preparatory programs, and more than 20,000 students were enrolled in post secondary programs.

- Enrollments of women in preparatory technical education programs have increased from 473 in 1961 to 6,548 in 1964. Most of the women enrollees are in electronic and data processing programs.

- 49 States, the District of Columbia, and Puerto Rico, have reported graduates of vocational preparatory programs. A total of 16,347 completed preparatory curriculums. Of these graduates 3,427 (21%) continued their formal education and 1,028 (6%) joined the Armed Forces.

- Of the 11,292 graduates available for placement, 70% were placed in the technical field for which they were trained and 11% in a field related to their training. Only 2.5% were known to be unemployed.

- The average starting salary paid to graduates of 2-year post secondary preparatory programs was almost $5,000 a year and the graduates of high school programs, $3,700 a year.

I (a) ALLOTMENT OF FEDERAL FUNDS

Fiscal year	Allotment	Released from Allotment		Added to Allotment	
		Amount	No. of States	Amount	No. of States
1959	$ 3,570,000	$ 584,126	20	$ 584,126	21
1960	7,000,000	620,607	12	620,607	18
1961	9,000,000	1,487,166	22	1,487,166	22
1962	12,800,000	2,818,994	23	2,700,980	21
1963	15,000,000	2,996,731	24	2,996,731	23
1964	15,000,000	1,268,610	18	1,268,610	23
1965	15,000,000				

(b) EXPENDITURES FROM FEDERAL AND MATCHING FUNDS

Fiscal year	Federal	State	Local	Total
1959	$ 2,745,995	$ 1,593,475	$ 2,479,156	$ 6,818,626
1960	5,968,137	2,925,395	5,132,997	14,026,529
1961	7,913,197	4,148,321	6,344,528	18,406,046
1962	11,042,875	5,456,966	8,106,010	24,605,851
1963	13,457,598	7,588,994	11,509,548	32,556,140
1964	13,596,803	8,453,204	12,856,905	34,906,912
	$54,724,605	$30,166,355	$46,429,144	$131,320,104

II ENROLLMENT BY TYPE OF PROGRAM AND COURSE

	1959	1960	1961	1962	1963	1964
Preparatory Programs:						
Secondary	4,347*	8,467	11,778	13,028	19,662	20,755
Post Secondary	14,896*	24,470	27,446	40,043	56,226	71,824
Total Preparatory Programs	19,243	32,937	39,224	53,071	75,888	92,579
Extension Courses (total)	29,321	68,342	83,728	95,849	108,707	128,662
Totel Enrollment	48,564	101,279	122,952	148,920	184,595	221,241

III NUMBER AND KINDS OF SCHOOLS

	Number of Schools					
Kind of School	1959	1960	1961	1962	1963	1964
Comprehensive High School	73	153	168	193	210	273
Vocational-Technical School	-	44	66	125	185	152
Technical High School	14	17	49	43	30	69
Vocational or Trade School	86	126	106	74	56	74
Technical Institute	17	52	25	27	49	60
Community or Junior College	38	119	126	129	162	190
4-year College	10	16	17	26	29	45
State Board for Vocational Education	20	2	13	13	9	17
Other	4	8	-	-	-	1
Total	262	537	570	630	730	881

* Breakdown Estimated

IV ENROLLMENT BY KIND OF SCHOOL

Kind of School	Preparatory Enrollment 1959	1960	1961	1962	1963	1964	Extension Enrollment 1959	1960	1961	1962	1963	1964
Comp. H. S.	1,941	5,158	4,601	5,705	7,712	9,240	4,372	17,427	14,160	16,952	13,255	17,767
Voc-Tech School	-	837	4,467	7,832	14,147	12,229	-	4,471	9,404	12,172	21,681	20,902
Technical H. S.	1,224	2,634	5,968	5,568	6,781	8,722	3,735	6,970	8,494	11,567	10,418	9,154
Voc. or Trade	5,000	10,585	6,404	3,886	4,211	5,531	12,993	14,015	8,896	7,813	7,646	8,952
Technical Inst.	2,987	2,193	1,828	5,892	6,943	7,698	3,980	3,387	9,547	4,079	6,808	13,416
Com. or Jr. Coll.	5,841	8,987	13,743	22,258	32,589	42,112	3,306	19,914	28,844	37,356	42,030	49,606
4-Year College	1,029	2,019	1,830	1,476	2,654	6,229	106	1,135	3,692	5,447	5,960	8,035
State Board	1,093	47	383	454	851	818	829	41	691	463	909	752
Other	128	477	-	-	-	-	-	982	-	-	-	78
Total	19,243	32,937	39,224	53,071	75,888	92,579	29,321	68,342	83,728	95,849	108,707	128,662

Kind of School	Total Enrollment 1959	1960	1961	1962	1963	1964
Comp. H. S.	6,313	22,585	18,761	22,657	20,967	27,007
Voc-Tech School	-	5,308	13,871	20,004	35,828	33,131
Technical H.S.	4,949	9,604	14,462	17,135	17,199	18,953
Voc. or Trade	17,993	24,600	15,300	11,699	11,857	14,483
Technical Inst.	6,977	5,580	11,375	9,971	13,751	20,037
Com. or Jr. Coll.	9,147	28,901	42,587	59,614	74,619	91,718
4-Year College	1,135	3,154	5,522	6,923	8,614	14,264
State Board	1,922	88	1,074	917	1,760	1,570
Other	128	1,459	-	-	-	78
Total	48,564	101,279	122,952	148,920	184,595	221,241

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Technical H. S.	1,224	2,634	5,968	5,568	6,781	8,722	3,735	6,970	8,494	11,567	10,418	9,154
Voc. or Trade	5,000	10,585	6,404	3,886	4,211	5,531	12,993	14,015	8,896	7,813	7,646	8,952
Technical Inst.	2,987	2,193	1,828	5,892	6,943	7,698	3,980	3,387	9,547	4,079	6,808	13,416
Com. or Jr. Coll.	5,841	8,987	13,743	22,258	32,589	42,112	3,306	19,914	28,844	37,356	42,030	49,606
4-Year College	1,029	2,019	1,830	1,476	2,654	6,229	106	1,135	3,692	5,447	5,960	8,035
State Board	1,093	47	383	454	851	818	829	41	691	463	909	752
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Voc. or Trade	17,993	24,600	15,300	11,699	11,857	14,483
Technical Inst.	6,977	5,580	11,375	9,971	13,751	20,037
Com. or Jr. Coll.	9,147	28,901	42,587	59,614	74,619	91,718
4-Year College	1,135	3,154	5,522	6,923	8,614	14,264
State Board	1,922	88	1,074	917	1,760	1,570
Other	128	1,459	-	-	-	78
Total	48,564	101,279	122,952	148,920	184,595	221,241

V ENROLLMENT IN SECONDARY AND POST SECONDARY PREPARATORY PROGRAMS BY KIND OF SCHOOL, FISCAL YEARS 1962, 1963, and 1964

Kind of School	Secondary			Post Secondary			Total		
	1962	1963	1964	1962	1963	1964	1962	1963	1964
Comprehensive High School	4,478	6,140	7,209	1,227	1,572	2,031	5,705	7,712	9,240
Vocational-Technical School	2,828	5,976	4,505	5,004	8,171	7,724	7,832	14,147	12,229
Technical High School	4,236	4,349	5,959	1,332	2,432	2,763	5,568	6,781	8,722
Vocational or Trade School	959	1,644	2,414	2,927	2,567	3,117	3,886	4,211	5,531
Technical Institute	97	932	468	5,795	6,011	7,230	5,892	6,943	7,698
Community or Junior College	356	367	91	21,902	32,222	42,021	22,258	32,589	42,112
4-Year College	-	-	-	1,476	2,654	6,229	1,476	2,654	6,229
State Board for Voc. Educa.	74	254	109	380	597	709	454	851	818
Total	13,028	19,662	20,755	40,043	56,226	71,824	53,071	75,888	92,579

VI NUMBER OF PROGRAMS AND COURSES BY KIND OF SCHOOL

Kind of School	Preparatory Programs			Extension Courses		
	1962	1963	1964	1962	1963	1964
Comprehensive High School	159	197	234	329	242	375
Vocational-Technical School	234	294	358	248	489	547
Technical High School	129	98	161	179	110	157
Vocational or Trade School	107	69	93	145	85	136
Technical Institute	81	125	199	101	198	262
Community or Junior College	266	393	444	435	352	452
4-Year College	26	42	89	60	55	85
State Board for Voc. Education	15	8	29	14	24	29
Other	-	-	-	-	-	2
Total	1,017	1,226	1,607	1,511	1,555	2,045

VII PREPARATORY PROGRAMS AND ENROLLMENT BY TECHNOLOGIES

Technology	Number of Programs 1959	1960	1961	1962	1963	1964	Enrollment 1959	1960	1961	1962	1963	1964
Electronics	111	231	292	447	511	651	8,230	15,695	17,723	27,495	37,292	42,846
Mechanical	78	188	249	325	392	468 1/	5,223	9,447	11,959	14,202	18,778	21,199 3/
Electrical	30	68	73	81	65	82	1,697	3,410	4,043	4,918	4,143	4,674
Aeronautical	8	9	12	11	9	10	543	661	655	385	234	311
Chemical & Metallurgical	10	28	32	48	58	75 2/	578	1,110	1,577	1,406	2,175	2,500 4/
Civil & Construction	6	25	34	57	64	96	189	795	1,090	2,194	2,617	3,337
Instrumentation	3	17	13	20	26	20	44	992	829	808	750	776
Production	7	15	11	4	26	23	264	185	924	79	4,271	1,759
Data Processing	-	8	11	19	63	156	-	63	298	1,439	5,279	14,516
Plastics	-	-	1	2	4	2	-	-	7	61	161	47
N. E. C.	38	9	4	4	8	24	2,475	579	119	84	188	614
Total	291	598	732	1,018	1,226	1,607	19,243	32,937	39,224	53,071	75,888	92,579

VIII EXTENSION COURSES AND ENROLLMENT BY TECHNOLOGIES

Technology	Number of Courses 1959	1960	1961	1962	1963	1964	Enrollment 1959	1960	1961	1962	1963	1964
Electronics	106	317	431	587	615	787	9,622	27,739	42,243	50,451	54,621	53,349
Mechanical	31	259	278	358	407	486 5/	7,404	15,225	17,128	14,794	21,113	24,890 7/
Electrical	22	67	109	84	80	96	1,102	3,726	4,825	3,779	3,118	7,595
Aeronautical	11	15	12	26	19	18	478	1,659	831	1,972	2,734	1,991
Chemical & Metallurgical	11	56	73	86	54	88 6/	726	1,920	5,994	6,530	3,611	2,628 8/
Civil & Construction	12	33	32	70	56	105	407	945	995	2,059	2,193	6,134
Instrumentation	23	32	43	43	45	35	342	1,123	1,781	2,324	2,517	2,204
Production	11	53	61	64	84	84	527	2,147	3,310	5,402	4,240	6,737
Data Processing	-	61	141	174	176	294	--	12,626	5,693	7,656	13,444	21,249
Nucleonics	-	-	6	8	7	4	-	-	290	344	240	151
Plastics	-	-	3	6	3	5	-	-	201	338	316	403
Missiles	-	-	-	-	2	3	-	-	-	-	320	103
N.E.C.	89	12	12	5	7	40	8,713	1,232	437	200	240	1,228
Total	316	905	1,201	1,511	1,555	2,045	29,321	68,342	83,728	95,849	108,707	128,662

1/ Mechanical 191, Drafting & Design 277
2/ Chemical 58, Metallurgical 17
3/ Mechanical 9,001, Drafting & Design 12,198
4/ Chemical 1,603, Metallurgical 897
5/ Mechanical 310, Drafting & Design 176
6/ Chemcial 42, Metallurgical 46
7/ Mechanical 16,325, Drafting & Design 8,565
8/ Chemical 1,028, Metallurgical 1,600

IX FEMALE ENROLLMENT IN PREPARATORY PROGRAMS AND EXTENSION COURSES - FISCAL YEARS 1962, 1963, AND 1964

Technology	Preparatory			Extension			Total Enrollment		
	1962	1963	1964	1962	1963	1964	1962	1963	1964
Electronics	539	853	748	2,065	2,462	2,064	2,604	3,315	2,812
Mechanical	129	260	373	467	734	456	596	994	829
Electrical	11	16	32	35	80	46	46	96	78
Aeronautical	-	1	1	59	46	127	59	47	128
Chemical & Metallurgical	121	180	226	91	35	34	212	215	260
Civil & Construction	13	9	18	22	67	133	35	76	151
Production	-	13	15	221	260	582	221	273	597
Instrumentation	-	4	6	-	27	25	-	31	31
Data Processing	538	1,668	5,096	2,391	4,038	5,663	2,929	5,706	10,759
Nucleonics	-	-	-	3	5	10	3	5	10
Plastics	-	-	-	6	11	1	6	11	1
N. E. C.	4	5	33	105	51	11	109	56	44
Total	1,355	3,009	6,548	5,465	7,816	9,152	6,820	10,825	15,700

X GRADUATES FROM PREPARATORY CURRICULUMS

	Secondary School			Post Secondary School			Total		
	*1962	1963	1964	*1962	1963	1964	*1962	1963	1964
Number of Graduates	3,515	3,432	5,395	6,431	8,180	10,952	9,946	11,612	16,347
Number not available for placement	1,295	1,758	2,882	2,039	1,319	2,173	3,334	3,077	5,055
Number Continuing Their Education	920	1,303	2,260	1,327	794	1,169	2,247	2,097	3,429
Number Entering Armed Forces	245	377	540	433	381	488	678	758	1,028
Other Reasons	130	78	82	279	144	516	409	222	598
Number Available for Placement	2,220	1,674	2,513	4,392	6,861	8,779	6,612	8,535	11,292
Placed in Field of Training	1,682	996	1,507	3,397	5,394	6,322	5,079	6,390	7,829
Placed in Related Field	155	131	259	298	520	1,001	444	651	1,260
Placed in Non-Related Field	141	202	370	271	254	556	412	456	926
Number Unemployed	53	62	106	93	89	183	146	151	289
Status Unknown	189	261	244	342	546	588	531	807	832
Employed Part-time	-	22	27		58	129		80	156

*Breakdown Estimated
Graduates from secondary and post secondary schools were not separately reported by all States.

XI PLACEMENT OF GRADUATES AND SALARY RANGE

(a) Occupational Field	Number Placed 1962	Number Placed 1963	Number Placed 1964	Salary Range by Occupational Field: Average 1962	Average 1963	Average 1964	High 1962	High 1963	High 1964	Low 1962	Low 1963	Low 1964
Aeronautical	30	28	67	$5,870	$6,580	$5,786	$7,000	$7,000	$8,000	$3,205	$3,120	$3,800
Chemical & Metallurgical	158	136	203 1/	4,190	4,625	4,378	5,350	6,000	7,932	3,000	2,600	2,628
Civil & Construction	260	309	434	4,395	4,384	4,470	5,700	5,460	6,000	3,120	2,800	2,545
Data Processing	77	249	1,322	4,210	4,450	4,953	7,000	5,700	7,200	2,700	2,700	2,660
Electrical	244	464	665	3,840	4,490	4,555	7,300	6,000	5,572	2,400	2,400	3,225
Electronics	2,412	2,841	3,398	4,840	4,690	5,066	6,230	6,000	5,800	2,995	3,000	2,400
Instrumentation	73	77	275	4,530	5,672	4,939	5,500	6,300	5,900	3,500	4,160	3,300
Mechanical	1,542	1,278	2,319 2/	4,360	4,386	4,474	5,300	6,000	5,900	2,640	2,600	3,120
Production	208	833	371	4,275	5,245	4,341	5,790	6,475	7,200	2,815	2,600	2,600
N.E.C.	75	172	35	4,835	5,192	4,835	5,025	6,300	5,400	4,800	3,120	4,200

(b) Salary Range of Graduates Placed in Their Field of Training

Average 1962	Average 1963	Average 1964	High 1962	High 1963	High 1964	Low 1962	Low 1963	Low 1964
$4,645	$4,695	$4,786	$7,300	$7,000	$8,000	$2,400	$2,400	$2,400

(c) Salary Range of Graduates Placed in Their Field of Training by Type of School

	Average 1962	Average 1963	Average 1964	High 1962	High 1963	High 1964	Low 1962	Low 1963	Low 1964
Post Secondary	$4,935	$4,860	$4,996	$7,300	$7,000	$8,000	$2,700	$2,308	$2,545
Secondary	3,830	3,804	3,698	6,000	5,450	5,800	2,400	2,400	2,400

1/ Chemical 124, Metallurgical 79
2/ Mechanical 577, Drafting & Design 1742.

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Youth Employment Program of the United States Employment Service.

Employment Service (DOL), Washington, D.C.
MF AVAILABLE IN VT-ERIC SET.
Pub Date - Jan67 29p.

*EMPLOYMENT SERVICES; *YOUTH EMPLOYMENT; FEDERAL PROGRAMS; STATE PROGRAMS; *PROGRAM DESCRIPTIONS; *STATE AGENCIES; *YOUTH AGENCIES; EMPLOYMENT PROGRAMS; DROPOUTS; JOB TRAINING
*YOUTH OPPORTUNITY CENTERS; YOC

The federal-state employment service system has greatly intensified its services to youth--in counseling, testing, training, referral, and placement. By September, 1966, there were 157 Youth Opportunity Centers (Y.O.C.'s) and 706 youth units in local employment service (E.S.) offices, employing over 8,000 personnel who were devoted full-time to youth-serving activities. During the school year 1964-65, more than 633,000 school seniors in nearly 10,000 high schools were served, including 333,000 who received counseling services and 116,700 who were placed in permanent jobs. Services were provided graduating seniors on school premises as well as in local E.S. offices. Of 73,000 dropouts served, over 27,000 were placed in jobs during the 1964-65 school year. Greater attention has continually been directed toward dropouts. The E.S. also provides specialized services suited to the needs and abilities of college graduates and dropouts, handicapped youth, rural youth, Selective Service rejectees, and students seeking part-time or summer employment. The challenge facing the E.S. is suggested by the fact that in 1965, 39.2 percent of new job applications filed in E.S. offices were filed by youth under 22 years of age, yet youth accounted for only 27.7 percent of all nonfarm placements made by the E.S. and most youth were placed in clerical, sales, service, and unskilled occupations. (ET)

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JUN 20 1967

JANUARY 1967

YOUTH EMPLOYMENT PROGRAM

of the

UNITED STATES EMPLOYMENT SERVICE

U. S. DEPARTMENT OF LABOR

Bureau of Employment Security

Robert C. Goodwin, Administrator

Frank H. Cassell, Director

U. S. Employment Service

Washington, D. C. 20210

VT001828

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION
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CONTENTS

	Page
Introduction	1
The Role of the Employment Service	3
Resources for Serving Young Workers	7
Employment Services for Youth	10
Services to High School Graduates	10
Services to School Drop-Outs	12
Work-School Program	14
Services to College Graduates and Drop-Outs . . .	15
Services to Rural Youth	16
Services to Handicapped Youth	17
Selective Service Program	19
Job Promotion Campaign for Permanent Jobs	19
Job Promotion Campaign for Part-Time and Summer Jobs	20
Improving and Expanding Employment Services to Youth .	22
Improvement of Supervision at Administrative Levels	22
Local Office Personnel Devoted to Youth Services .	23
Youth Opportunity Centers	23
Program Developments	24
Information Program	25
Selection of Youth for Training Courses	25
Group Guidance	26
Research	27
ILLUSTRATIONS: A. Nonfarm Placements of Youth under 22 .	6
B. Resources for Serving Young Workers .	9
C. Service to H.S. Seniors Entering Labor Force from H.S. having Coop. Agreements with State ES Agencies, 1961-1965	13

YOUTH EMPLOYMENT PROGRAM OF THE

UNITED STATES EMPLOYMENT SERVICE

.....

INTRODUCTION

A great many young people today need help with their job problems -- in choosing a career in keeping with their interests and abilities, in becoming employable, in developing acceptable work habits, and in getting their first jobs. Such help is available to all youth in their public Employment Service offices.

Today, the youth unemployment problem looms large on the American scene, with joblessness among teenagers nearly triple the adult rate. Some of the problem stems from sheer numbers -- a result of the sharp birthrate rise in the postwar period. The strides made in science and technology and the subsequent vast industrial and agricultural transformations have diminished the demand for unskilled workers both in industry and on farms. This adds to the problem of those youth who lack the education, training and skills needed to qualify for many of the jobs in today's advanced and changing economy.

The American public has become keenly aware of the Nation's jobless youth, both from an economic and a social point of view. Joblessness among many especially in the congested city areas, has been marked by growing crime rates, an unprecedented rise in juvenile delinquency, and other symptoms of unrest. The national concern has brought forth legislative measures involving numerous programs for

constructive action to help combat the growing problems.

As an arm of the government devoted to people and jobs, the Federal-State employment service system has greatly intensified its services to youth -- in counseling, testing, training, referral and placement. It has set up special centers and units and selected specialized staff to provide all manner of services to help youth who need such help become employable. Through outreach activities, it seeks out disadvantaged young people to help give them the guidance and personal job help they need.

The nationwide network of public employment service offices has much to offer all youth, not only in individual services but in a wealth of job market information in keeping with the rapid changes in the economy.

THE ROLE OF THE EMPLOYMENT SERVICE

Since the inception of the Federal-State employment service system under the Wagner-Peyser Act of 1933, which specifically provided for special services to "men, women, and juniors," the U. S. Employment Service has been actively concerned with the employment problems of beginning workers. When the Employment Service counseling program was established on a nationwide basis in 1945, much of the work for youth was included as an integral part of that program. Beginning in 1948, the Employment Service has provided specialized assistance to increasing numbers of high school seniors entering the Nation's job market. In 1956, the Employment Service began to intensify its efforts for school dropouts.

The need for a stronger employment program to help resolve youth problems was made clear by the President in 1961, when he directed that "the Department of Labor and its nationwide network of affiliated State employment service offices attack vigorously the mounting problems of youth." The magnitude of these problems can be appreciated from the fact that the majority of the 2.7 million people who were new entrants to the labor force in 1965 were youth. It is estimated that about 3 million youth will be starting to work in the year 1970.

Major legislation enacted since 1963, including the Economic Opportunity Act, the Higher Education Act, and the Vocational Education Act, has done much to ease the transition from school to work for many young people. The Job Corps, under the Office of Economic Opportunity,

has absorbed 55,351 young men in work training camps as of September 30, 1966. Women's Job Corps has provided work and training for 4,132 young women as of the same date. Neighborhood Youth Corps, funded by the Office of Economic Opportunity and administered by the Department of Labor, provided work training experience for 460,000 boys and girls between July 1, 1965, and June 30, 1966. As of August 31, 1966, over 166,000 youth have received training under Manpower Development and Training Act programs. The Employment Service is the primary recruitment and screening agent for most of these programs, and also plays the major role in placing youth in appropriate jobs in business and industry as they complete their term of enrollment.

In carrying out its responsibilities, the Employment Service attempts to provide young people with the kind of help they need in choosing a field of work that is in keeping with their interests, abilities, and aspirations. Another objective is to provide youth, teachers, and parents with local, up-to-date information about the nature of jobs and the opportunities for employment in various occupations. The final objective is to see that an individual develops the attitudes and skills necessary to actively participate in the economy and to insure that he is placed in an appropriate job.

While all of the programs mentioned here have done much to increase the employability of many youth, much remains to be done. This is demonstrated in part by reports of State employment service operations which indicate that in 1965, 39.2 percent of new job applications filed in local offices were filed by youth under 22

years of age -- an increase of 14.8 percent over 1964; 61.4 percent of all persons counseled in local offices were youth -- an 11.2 percent increase over 1964; but youth accounted for only 27.7 percent of all nonfarm placements made by the Employment Service in 1965.

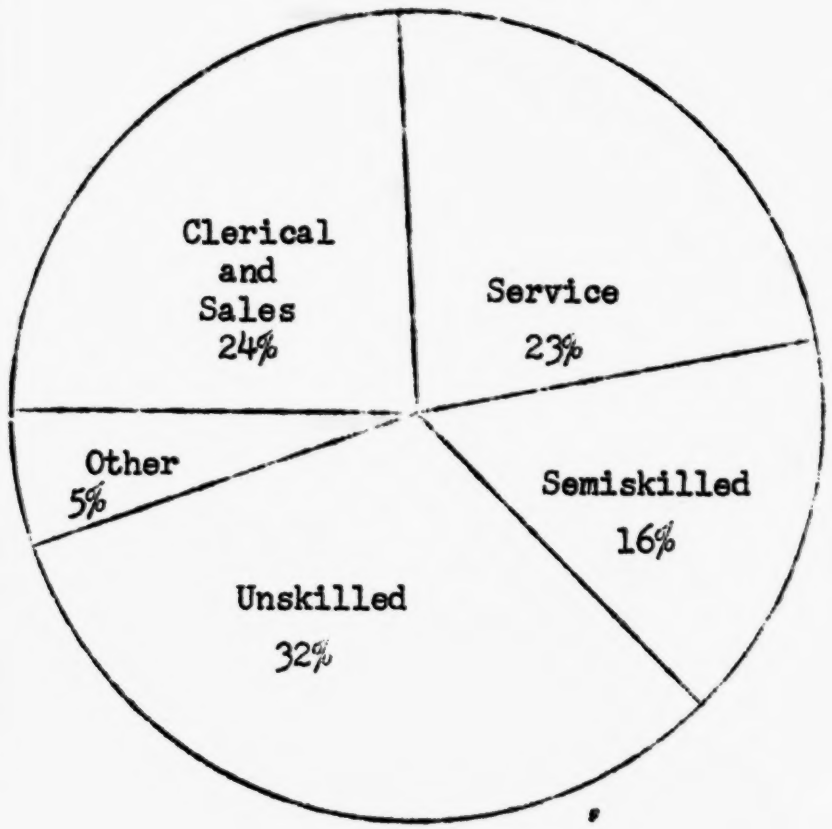
To accomplish its objective of increasing the employability of youth, the Employment Service works closely with schools, community organizations, and all those interested in a cooperative effort to help youth bridge the gap between school and work.

Most of the 1,793,200 placements of youth in 1965 were in clerical and sales, service, and unskilled occupations. When consideration is given to the declining number of unskilled jobs that are expected to be available in the future, the need for concerted action to overcome youth employment problems becomes even more apparent. Illustration "A" shows the distribution of youth placements in major occupational categories covering nonfarm jobs.

ILLUSTRATION "A"

NONFARM PLACEMENTS OF YOUTH UNDER 22 YEARS OF AGE

DURING 1965



OCCUPATION	VOLUME 1965	VOLUME 1964
Total	1,793,200	1,563,400
Clerical & Sales ...	428,000	403,000
Service	406,900	398,000
Semiskilled.....	295,900	240,200
Unskilled.....	579,500	453,100
Other*.....*	82,800	65,100

* Includes Professional, Managerial and Skilled.

RESOURCES FOR SERVING YOUNG WORKERS

In 1962, the U. S. Employment Service increased its staff serving youth and by 1964 had established a policy for implementing the concept of separate, identifiable youth employment services with specialized staff to serve youth throughout the entire Federal-State employment service system. While a few State employment services had long had separate youth units within local offices, this did not become a part of national policy until 1964. By September, 1966 (see chart) there were 157 identifiable youth employment offices known as Youth Opportunity Centers (YOC's). Of these, 129 were in locations physically separate from the local offices. In addition, there were 706 youth units in other local offices in areas not served by the YOC's. One or more trained counselors and other youth employment specialists are available in all Youth Opportunity Centers and in the local office youth units, to help youth in developing vocational plans and in finding suitable employment. In all, the equivalent of over 8,000 full-time positions have been allotted for youth activities in the Employment Service as of July 1966.

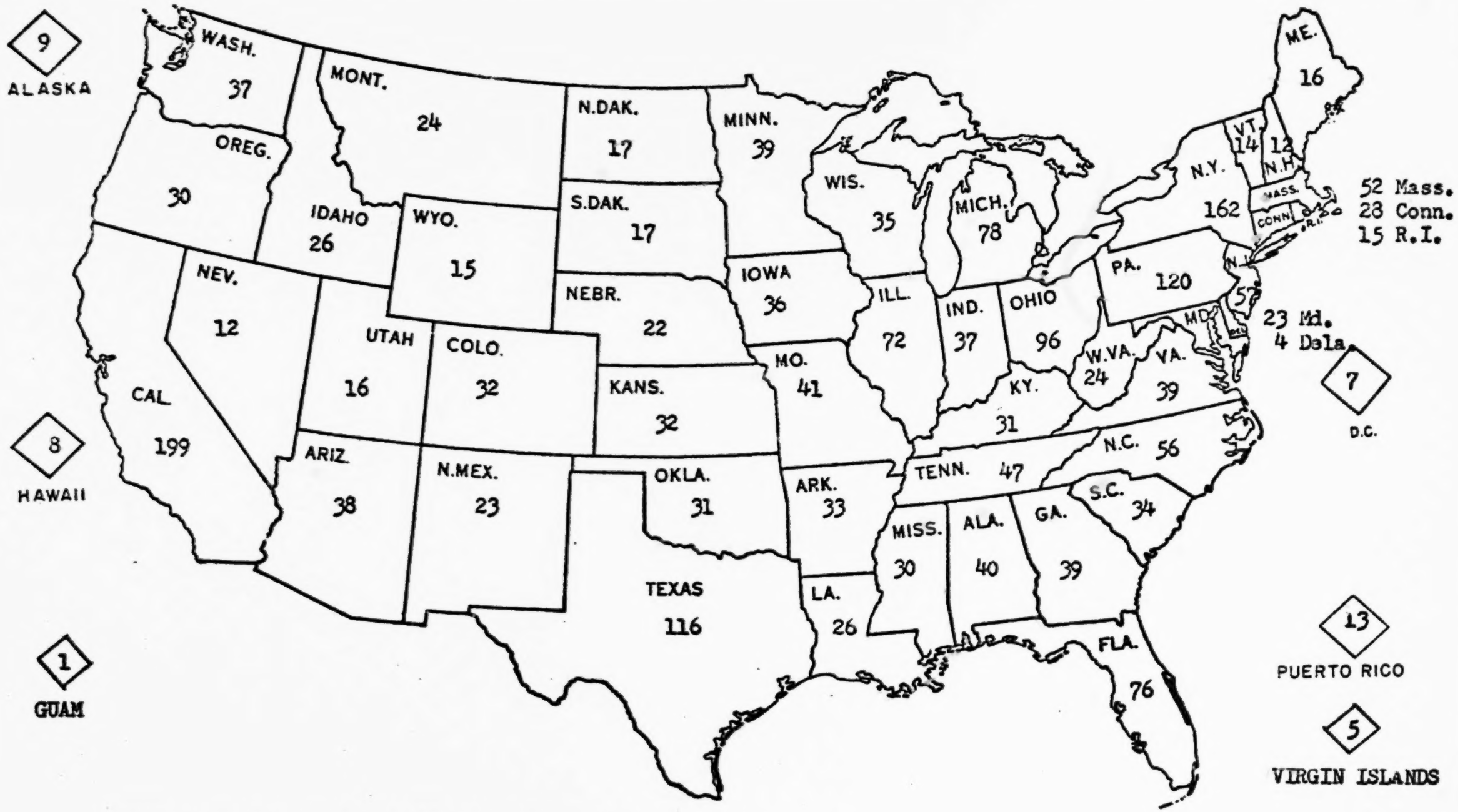
Vocational aptitude, proficiency, and interest testing services are available in practically all Employment Service offices to assist youth in selecting appropriate fields of work. The General Aptitude Test Battery, which was developed by the U. S. Employment Service, is recognized nationally as a valuable aid in vocational counseling. Other tools are being tried on an experimental basis for use with those having reading limitations. During 1965, 731,900 tests were administered by local offices of the Employment Service.

Extensive job market and occupational information has been developed by the Bureau of Employment Security and by the State agencies for use in local offices. This information is also useful to educators and guidance personnel in schools and colleges. Most of the Youth Opportunity Centers have libraries of occupational information and reference materials available for use by youth.

ILLUSTRATION "B"

RESOURCES FOR SERVING YOUNG WORKERS

Distribution of 2,142 Local Employment Service Offices by State, Including 149 Youth Opportunity Centers, July, 1966



NOTE: As of September 1966, there were 157 YOC's in operation.

EMPLOYMENT SERVICES FOR YOUTH

The Employment Service conducts a number of activities, both in the YOC's and in the local offices, for meeting the employment-related needs of youth. The brief summations that follow deal with some of the historical background and objectives of these programs.

Services to High School Graduates

During the school year 1964-65, more than 633,000 school seniors in nearly 10,000 high schools took advantage of the youth employment program provided by the Employment Service. About 333,000 of them received counseling services, and more than 116,700 were placed in permanent jobs. Many others who located jobs through their own efforts also benefited from the help they received as a result of this program.

Employment services to high school graduates gained nationwide impetus in 1950 when a formal agreement was developed between State directors of guidance in State departments of education and State supervisors of counseling in the Employment Service. As a result of this agreement, which was updated in 1964, cooperative arrangements have been made for the State employment service agencies to provide counseling, testing, and job placement services to graduating students on school premises as well as in local offices. All seniors who plan to enter the job market after graduation may take advantage of these services during school time. Actual and potential dropouts may be referred to the Employment Service by the schools at the same time for appropriate action to help them stay in school or enter the job market.

Some seniors know the type of work they want, have trained for it, and need assistance only in locating a job. Others have given little thought to the kind of work they want to do or for which they are best suited and, therefore, need help in determining the most appropriate field of work to enter before embarking on the job search. To meet this need, the Employment Service provides counseling and supportive services in addition to helping this group find employment. These services are coordinated with the guidance work of the school counselors.

Seniors from schools not included in the cooperative program receive similar services when they come to the YOC's or local offices in those areas where no YOC's have been selected. The Employment Service has been able to assist youth from rural areas to locate jobs in urban centers, oftentimes remote from their home community, through cooperative arrangements between local Employment Service offices in small towns and cities.

A comparison of the following anticipated numbers of high school graduates for the years 1967 to 1976 with the figures in Illustration "C" gives an estimate of the magnitude of the task facing the Employment Service during this decade:

1966-67	2,629,000
1967-68	2,693,000
1968-69	2,791,000
1969-70	2,906,000
1970-71	3,010,000
1971-72	3,096,000
1972-73	3,172,000
1973-74	3,251,000
1974-75	3,319,000
1975-76	3,356,000

Services to School Drop-Outs

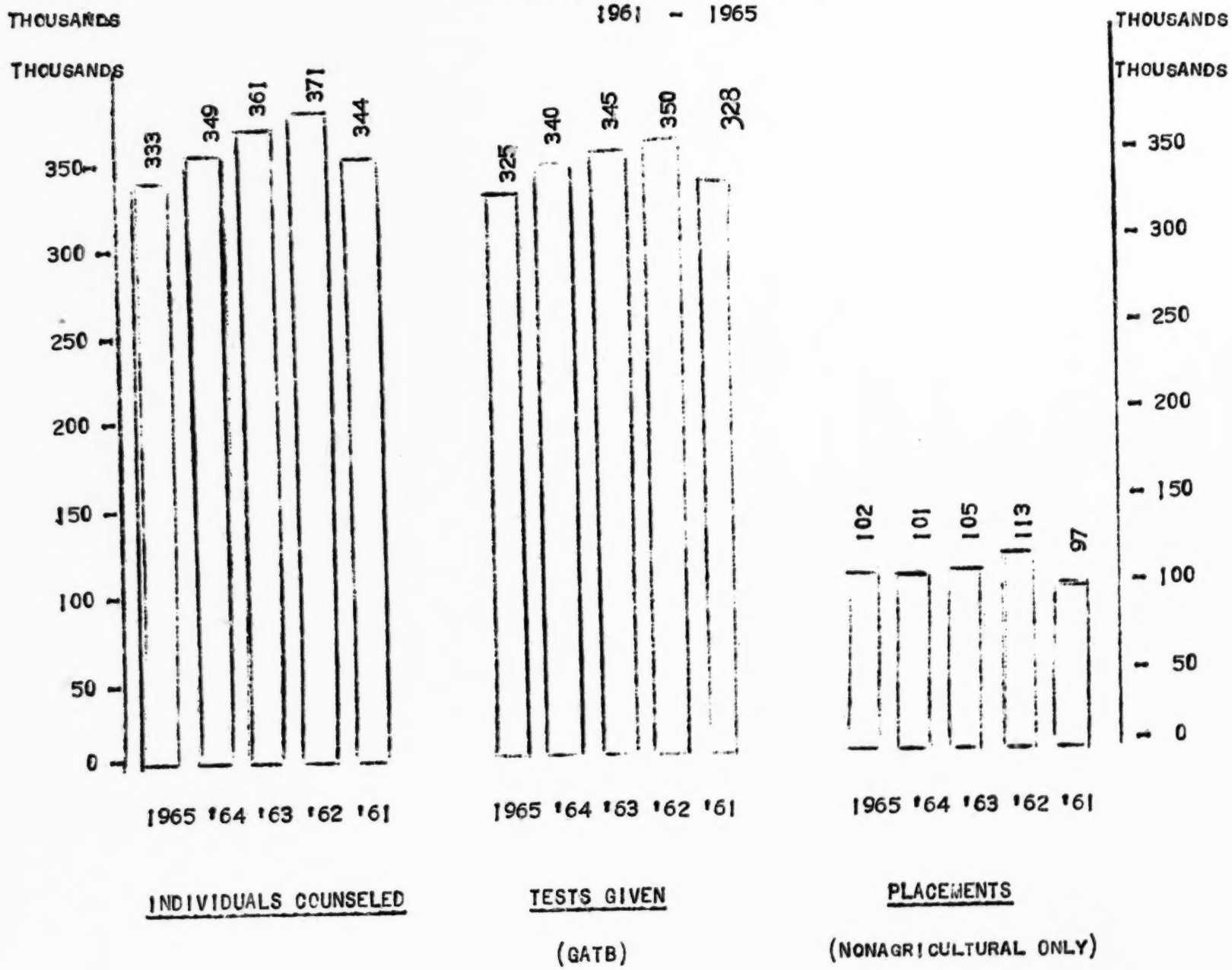
Reports from the 49 State Employment Services having formalized arrangements with schools showed that over 73,000 drop-outs were served in school year 1964-65. Over 27,000 placements were made for this group.

The cooperative school-employment service program to help drop-outs has not been as well developed as the program for serving graduates, since it has received national attention only since 1956 as compared with 1950 for the graduate program. It is estimated that the Employment Service serves only about 20 percent of the drop-outs through formal arrangements with the schools. More attention is being devoted to further developing the drop-out program in line with employment service emphasis on serving the disadvantaged. The Office of Education estimates a 25 percent drop-out rate in 1966. Most of these youth require services of the Employment Service.

In this program the school refers the potential drop-out to the YOC or local Employment Service office where he receives the attention of an employment counselor. The Employment Service counselor frequently consults with the school guidance counselor. The youth is encouraged to return to school if feasible; otherwise, efforts are made to assist him in his search for suitable work. If he will return to school, efforts are made to get him a part-time job. Frequently he needs group guidance, including instruction in the techniques of applying for work, as well as individual counseling.

ILLUSTRATION "C"

SERVICE TO H. S. SENIORS ENTERING THE LABOR FORCE
FROM HIGH SCHOOLS HAVING COOPERATIVE AGREEMENTS WITH
STATE EMPLOYMENT SECURITY AGENCIES
1961 - 1965



The employment counselor attempts to meet the needs of the drop-out in the most practical and effective manner available. Experience in serving drop-outs indicates that many of these youth require time-consuming service to a greater extent than school graduates. Some students leave school for financial reasons and need assistance in obtaining part-time work. Others are slow learners and must learn to master simple tasks before they can be placed in jobs. There are also large numbers who are hampered by language barriers, others by physical and mental handicaps. For some youth a delinquency problem is involved. To help individuals in all of these groups locate suitable employment and achieve satisfactory job adjustment often requires the combined efforts of many agencies. The recent work and training programs of Job Corps, Neighborhood Youth Corps, and MDTA have proven to be major resources for the Employment Service in increasing the employability of such youth.

Work-School Program

High schools conduct a variety of cooperative education programs in which the Employment Service has played an important role. In general, these programs provide for supervised work experience as a supplement to the school curriculum. The student may work one-half of each school day and attend school for the other half day, or attend school for a full week and then work for a full week. The objective is to better prepare youth for the vocations they will enter upon leaving school. Students usually work on a team basis with alternate assignments for each, which amounts to one full-time job being shared by two youths. The Employment Service cooperates with the schools by locating and developing work opportunities to which students may be assigned.

The particular emphasis in a work-study program depends upon the primary needs common to a particular group. One type of program may be designed for the potential drop-out, to aid him in gaining skills and work habits needed for entry into full-time employment. Another work experience program may be used to provide high school senior commercial students with practical experience to help them relate school training to the work situation. Some YOC's and other local offices recruit trainees for salesperson courses in vocational schools and, when the course is completed, place them with local firms. Similar cooperative arrangements exist for sewing-machine operators, machine-shop trainees, and gas station attendants, etc.

Services to College Graduates and Drop-Outs

Many college graduates utilize the placement services provided by the Employment Service network of professional offices located in principal cities throughout the country. Some colleges and universities provide campus facilities for the use of Employment Service staff to assist their graduating seniors in locating suitable jobs. Other college graduates are served by the local offices in their home towns. It is frequently more difficult for liberal arts graduates to find employment than for those trained in the professions. The Employment Service has developed a guide for relating major fields in the liberal arts and sciences to specific job families to help these college graduates in their job search.

College drop-outs often require the assistance of the Employment Service counselor in revising their vocational goals and in determining their future course of action. The nature of vocational goal changes varies as widely as the factors which cause people to drop out of college. Frequently, they are encouraged to enroll in technical courses which will enable them to function in a supportive professional setting without having full professional training. If the individuals are interested and their academic record indicates they possess the ability to complete their college training, temporary or part-time jobs may be secured for them until they are able to return to college.

Services to Rural Youth

The Employment Service program of services to high school graduates and drop-outs is as much concerned with rural as with urban youth, and thousands of rural high schools are served through this program. School and other guidance facilities are generally less adequate in rural areas, and Employment Service counseling and job placement services are, therefore, urgently needed. It is difficult, however, to provide adequate services to rural communities, because of their remoteness from local offices, without making special provisions. The Employment Service has developed a variety of techniques for reaching rural youth. In many States area counselors make weekly visits to small local offices to provide counseling service.

Staff members travel to rural schools and help youth decide whether to remain in the area or plan to go to an urban center. This necessitates guided migration of individuals to areas where jobs are available. Because of the wide distribution of local offices, the Employment Service is in a key position to expedite the movement of such youth from areas of labor surplus to areas where jobs are available.

The Employment Service has also organized mobile teams through its Smaller Communities Program for the registration of youth and other workers in remote areas. New training opportunities are thus made available to them, as well as referral to available jobs in urban and local areas.

The Public Works and Economic Development Act of 1965 and the Manpower Development and Training Act (MDTA) as amended, enable the Employment Service to evaluate the skills of job-seekers of all ages in rural areas of substantial unemployment, to recommend the establishment of training courses, and to take other action as needed to increase the employability of people and increase their opportunities for gainful employment. Rural youth benefit substantially by these laws.

Services to Handicapped Youth

The usual difficulties posed by lack of training and experience are compounded in the case of the young handicapped job-seeker. He often has had no opportunity to demonstrate his employability, and a

myriad of psychological and practical problems result. Also, handicaps occur more frequently in the lower income groups than in the general population.

Upon making application, the young handicapped applicant is referred to the selective placement specialist in the YOC or Employment Service office. The selective placement specialist is responsible for seeing that he receives all the special services necessary to cope with his employment problem. Counseling and testing are provided to establish a realistic vocational goal and a suitable plan for attaining this goal. Selective placement techniques match the physical and mental abilities of the applicant with the requirements of specific jobs.

Job development for the young handicapped person seeks to convince the employer that the unproven handicapped applicant is a good risk. The selective placement specialist may be able to suggest slight modifications in the work situation that will enable the applicant to do a certain job. Often the selective placement specialist needs to prepare both the applicant and the employer for the employment interview. After placement, followup determines how well the applicant has adjusted to the job as well as whether or not the employer is satisfied with his performance.

Some young handicapped individuals need services outside the scope of the Employment Service to help them compete in the job market -- such as training, education, and physical restoration. In such cases the selective placement specialist refers the applicant to appropriate community facilities and resources.

Selective Service Program

The Selective Service Rehabilitant program, begun in February 1964, is an outgrowth of the findings of the President's Task Force on Manpower Conservation, published in its report entitled One Third of a Nation. The Department of Labor's program offers counseling, referral to training and placement in jobs to those young men who have failed to pass the Armed Forces Eualification Tests. Through October 1966, over 661,500 rehabilitants had been contacted and some 130,171 interviewed by Employment Service staff. More than 149,621 of these were interviewed in the 73 examining centers across the nation since November 1965. About 95,377 have received counseling services.

Approximately 44,645 rehabilitants have been placed in jobs, enrolled in MDTA or referred to rehabilitation, health educational agencies, or to the Job Corps.

Job Promotion Campaign for Permanent Jobs

While services to youth is a year-round Employment Service activity, the annual campaign for permanent jobs in behalf of youth graduating from high school and college usually gets under way before March 1 and continues throughout the spring and summer. A concerted effort is made to find jobs for the new crop of young people entering the job market. In addition to individual job development, the following are examples of promotion activities in behalf of youth:

1. Intensive publicity campaigns through the press, radio, and television; direct mail appeals to employers; telephone calls and personal visits to employers; and speeches to citizen groups.

2. Cooperative job promotional efforts with local youth committees, civic organizations, labor and management groups, schools and apprenticeship committees, and the mayors' and governors' offices.

Job Promotion Campaign for Part-Time and Summer Jobs

Since 1965, the President of the United States has sponsored a summer job opportunity campaign among both governmental and private employers. An extensive information kit provides the guidelines for the yearly campaign launched by the Vice President and the Secretary of Labor. Cooperative arrangements for summer job programs are developed early in the spring with many high schools and colleges to find jobs for their students who want only summer or part-time work. Frequently the entire community lends its support to these job campaigns. Organizations such as the PTA or Junior Chamber of Commerce often sponsor such activities. Employment Service interviewers go to the schools to register youth for these jobs in offices, resorts, stores, and factories. Interested youth register with the Employment Service and employers are urged to list their needs with the Employment Service so that a maximum number of youth may obtain work.

The agricultural programs help thousands of young people each summer to obtain seasonal jobs in such activities as corn de-tasseling, hoeing, blocking, and thinning sugar beets, berry and fruit picking, and working in shade tobacco fields. There are three broad types of agricultural youth programs: The camp program, in which supervised camps are established where young people live when working on farm jobs; the live-in program, involving the careful matching of farm families and young people, since the youngsters live with the farm families who employ them; and the youth day-haul which provides for the daily transportation of young people from their homes to farm jobs.

IMPROVING AND EXPANDING EMPLOYMENT SERVICES TO YOUTH

The U. S. Employment Service is giving increased emphasis to providing more adequate services responsive to the needs of youth as they make the transition from school to work. More individualized attention is given the young job-seekers, particularly those experiencing the greatest difficulty in choosing, preparing for, and successfully entering suitable vocations.

Improvement of Supervision at Administrative Levels

A Division of Youth Employment and Guidance Services has been established in the U. S. Employment Service to provide improved technical assistance and more effective leadership to the State and local Employment Service offices.

A youth services representative has been appointed in each of the 11 regional offices of the U. S. Employment Service. He works with State agencies in developing their youth employment programs, and with the regional representatives responsible for counseling and for coordination of Employment Service recruitment of Job Corps enrollees. Each State has appointed a State supervisor of youth services and metropolitan area coordinators.

Local Office Personnel Devoted to Youth Services

The number of local office staff assigned to youth activities has more than tripled in the last few years. This staff has been selected on the basis of their training in vocational guidance, their interest in youth problems, and their knowledge of youth employment counseling and placement techniques. These employees are being provided intensive training in the unique problems of youth as part of the continuous effort to improve Employment Service capabilities for meeting the current and anticipated employment-related needs of youth. Local office representatives are stationed in schools, Community Action Program neighborhood centers and in settlement houses, among others, to provide counseling and placement services to youth who are reluctant to visit the local office or who live in remote areas. Some staff work in vocational schools to provide placement assistance.

Youth Opportunity Centers

Youth Opportunity Centers embody a new concept of employment services to urban youth. As separate youth employment offices, they give young job seekers a clearly designated place to go for services tailored to their individual needs, at a location convenient to them. By September 1966, there were 157 YOC's in 129 urban areas, serving nearly half the youth of the Nation.

The YOC's basic aim, once young people have been reached, is to help those who are ready to find jobs and to increase their employability through counseling and the use of available resources.

The YOC fosters a strong counselor-counselee relationship which assures continuity of service to each youth who needs intensive services. The counselor who initially establishes a relationship with the youth retains responsibility until vocational adjustment has been achieved.

Program Developments

Improved vocational and employment services are being provided for young people seeking full-time and part-time employment. Particular attention and efforts are being directed toward meeting the needs of the educationally disadvantaged youth and the hard-to-place youth who lack meaningful work-related experience. Experience has shown that through persistent individualized attention, personal appraisal, and with vocational preparation in work-training programs such as Job Corps and Neighborhood Youth Corps, most of these young people can be successfully placed in gainful employment.

More attention is being directed by the Employment Service toward school drop-outs. By working more closely with the school counselors, greater efforts are being made to help these youngsters remain in school. When this fails, employment counseling and placement services are provided.

Unemployment among youth is especially serious in the central and slum areas of large cities and in rural areas. For this reason, increased emphasis is being placed upon services to youth in these areas.

It has become increasingly important for the Employment Service to work closely with community organizations and youth employment advisory committees. The establishment of working relationships with existing local civic committees is encouraged and the Employment Service in many places has been instrumental in the establishment of new committees

Information Program

An information kit geared to youth employment problems has been developed by the U. S. Employment Service. This kit includes radio and television skits and announcements, suggested speeches, and sample letters to employers. In addition, visual and other guidance material is being prepared for this purpose. Most of these materials are intended for use by State and local employment services' offices. Guidance publications such as HOW TO GET AND HOLD THE RIGHT JOB, CHOOSING YOUR OCCUPATION, and JOB GUIDE FOR YOUNG WORKERS, have been widely used in youth services agencies and institutions and are continually in demand.

Selection of Youth for Training Courses

The Employment Service has referred thousands of youth for training in occupations offering entry opportunities. In addition to selecting and referring youth to training courses, the Employment Service also assists in placing individuals who have completed the training. This requires close cooperation between the local Employment Service offices and the training institutions. The Employment Service also has furnished information useful to training facilities

in the development of appropriate training programs. Over a quarter of those trained through the Manpower Development and Training Act have been youth, but referral of individual youth to regular vocational training, day or night as well as to on-the-job training has always been part of Employment Service activity.

Group Guidance

Staff in Youth Opportunity Centers and in youth units in other local offices conduct various types of group activities which utilize the cooperative, supportive, and economical values of group situations. Under the leadership of individuals who are trained and skilled in the use of group methods, such activities have been employed effectively to convey commonly needed information and to stimulate the exploration of common problems. While the participants are encouraged to interact and to learn from each other as well as from the group leader, group activities are used in youth employment services to complement but not supplant individual counseling by capitalizing upon the economic and psychological advantages of group methods in the achievement of individual goals.

Institutes on group counseling techniques have been held at various universities across the country to encourage similar programs and utilization of this valuable method throughout the Youth Opportunity Centers.

Research

Following are only a few of the areas in which additional knowledge would help the practitioner responsible for helping youth become occupationally adjusted.

Research is needed to assess the benefits of individual counseling for various groups of youth and the effectiveness of group methods in meeting the vocational adjustment needs of selected youth.

Research is needed to identify the developmental stages at which various groups of youth are responsive to various vocational guidance methods, including counseling.

Much more needs to be known about the role and function of employment (the job) in the development of youth.

Research could well be conducted on the place of occupational and related information in the vocational development of various groups of youth.

Generally, much more needs to be known as to what is crucial in vocational adjustment.

VT 001 838

Developing Human Resources, A Report of Progress in New Jersey Vocational-Technical Education Since January 1965.

New Jersey State Dept. of Education, Trenton. Div. of Vocational Education
MF AVAILABLE IN VT-ERIC SET.
Pub Date - Jan67 43p.

*VOCATIONAL EDUCATION; *TECHNICAL EDUCATION; *STATE ACTION; *STATE PROGRAMS; *STUDENT ENROLLMENT; PROGRAM DESCRIPTIONS
NEW JERSEY

This report records the progress in New Jersey in vocational education accomplished since January, 1965 when the new state plan for vocational education became effective. Cooperative office education programs have increased from 15 in 1964 to over 100 in 1966; cooperative industrial education programs, from 5 in 1963 to 150 in 1966. In 1964, there were 86 high school students enrolled in health occupations programs; in 1965-66, a total of 214 high school students were enrolled. Newer programs in industrial arts, after the first year of operation in 1965-66, increased from 1,966 to 3,150 students. Introduction to Vocations, a pilot program in 26 high schools, has been organized as part of the over-all education and training of ninth grade students to aid them in understanding their possible choices of a logical vocational career. In distributive education, 34 new pilot programs were established. (PS)

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A Report of Progress in New Jersey Vocational-Technical Education Since January 1965

MAR 10 1967

M. Harris

Developing Human Resources

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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VT 01838

The Division of Vocational Education

New Jersey Department of Education
Trenton, January 1967

Foreword

This is a report of the outstanding record of progress accomplished in New Jersey in vocational education since January 1965 when the new state plan for vocational education became effective.

The need for expanded vocational education was made clear in a report of a Blue Ribbon Committee of leading citizens to the State Board of Education in October 1964. The Committee made 20 specific recommendations and these became our guidelines for action. This report cites some highlights of progress made in the last two years in applying these guidelines and also indicates projections for future growth.

Increased awareness of the need for occupational training, State appropriations, new federal legislation and positive action by the State Board of Education are all part of the driving forces behind this achievement. In his fifth annual message to the New Jersey Legislature in January 1967, Governor Richard J. Hughes stated, "State and Federal appropriations have made possible the rapid expansion and improvement of vocational and technical education programs. Enrollments have more than tripled for secondary and post-secondary youth and adults in the past three years. Cooperative vocational education, which provides school and work experience for high school students, has been assisted by more than 4,000 New Jersey companies in providing training stations in more than 130 different job classifications. Six multi-occupational skill centers have come into operation. Over 15,000 students who were not enrolled in vocational education a year ago are now receiving education and training for employment in more than 350 pilot projects."

It should be pointed out that the accomplishments described herein represent only a beginning. There is much remaining to be done. More programs, more teachers, more facilities, and more funds (State, local and federal) are urgently needed. In the present school year, for example, an estimated 70,000 boys and girls in New Jersey schools who could have profited by vocational training were denied the opportunity due to a lack of facilities. In addition to meeting present needs, our findings indicate that the greatest increases in the New Jersey labor force, through 1970, will be in the age groups where vocational education can do the most good.

The support and effort of many individuals and groups have made possible the growth of vocational-technical education in New Jersey since the implementation of the Vocational Education Act of 1963. With this continued support and cooperative effort our record of progress in vocational education can continue to move ahead to the mutual benefit of all — our children, our communities, our State, and our Nation.

January 1967

Robert M. Worthington
Assistant Commissioner of Education
Division of Vocational Education

Business and Office Occupations

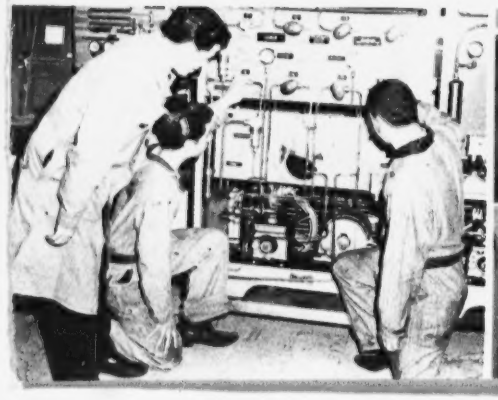
Business and Office Occupations Education is a vocational education program designed to prepare students for office work. The program includes all the required general education courses such as English, mathematics, the sciences, and their electives. In addition, each student follows an individual sequence in office education and related courses which leads to vocational competency and advancement in office careers.

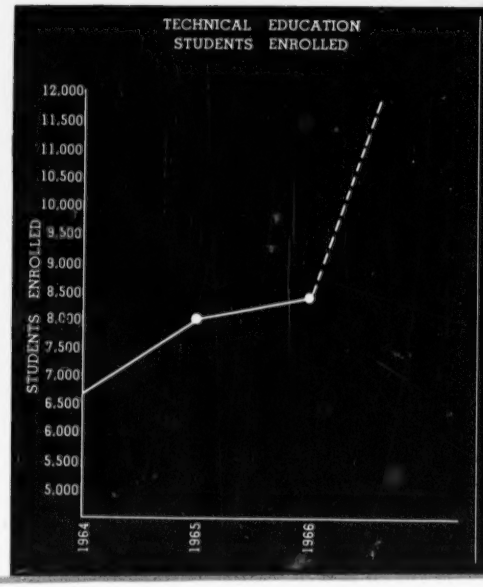
Prior to the passage of the federal Vocational Education Act of 1963, business education did not fall within the scope of federally subsidized vocational education programs. In fact, business education was not widely categorized as vocational—even by business educators. Educational interests were largely academic and only a small number of pupils were afforded skill development in vocational business education. In addition to the limited numbers trained, there existed a similar limitation on skill areas treated. Only 15 cooperative office education programs (provision of classroom instruction accented by simultaneously offered practical job experience) were in existence in New Jersey in 1964, a majority of which lacked vital teacher coordination and supervision.

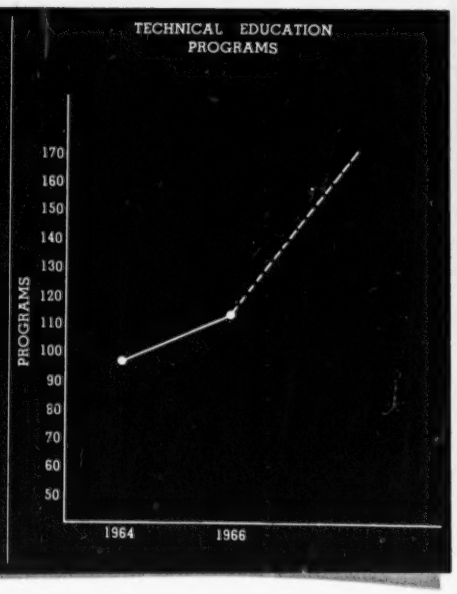
Through funds provided under the 1963 federal Act and matching State funds, business and office occupations education classes today serve nearly 150,000 students in all the secondary school districts. Over 100 cooperative office education programs are now in existence and the number of business teachers approximates 1,800. Pilot and model programs designed to strengthen entry level occupational skills of high school students have been initiated in New Jersey schools in the areas of stenography, bookkeeping, secretarial and clerical practice, business machines operation, modern duplicating methods and electronic data processing. Concurrently, experimental instructional approaches have been undertaken involving stenography, office practice, and electronic data processing.

Education

Rapid technological developments in research and production are causing widespread changes in technical occupations. Traditional occupations are being changed through the application of electronics, instrumentation, data processing and computers with the result that many new employment opportunities are emerging. It is the consensus of specialists in the field that technical education will continue to provide a significant source of vital manpower in the decade ahead and, further, that this area will occupy a most important place in the total national educational program.







Introduction to

Introduction to Vocations is a pilot program in 26 New Jersey high schools. It is organized as part of the over-all education and training of ninth grade students to aid them in understanding their possible choices of a logical vocational career. It is a regularly scheduled subject-course in the school curriculum.

Besides classroom instruction in the informational units by a counselor or an Introduction to Vocations teacher, students are scheduled for three to four week periods in industrial arts, home economics, business education, and the science laboratory facilities for manipulative, exploratory experiences. Job awareness is encouraged through field trips. speakers from business and industry and personal interviews.

It is anticipated that Introduction to Vocations will spread from the original 14 schools in 10 counties in 1965 to nearly 300 high schools in all 21 counties by 1975. During the next decade, student enrollment in this program is expected to increase from 800 to 12,000 and the number of local staff involved from 156 to 500.

As future Introduction to Vocations projects in pilot school districts are developed, it appears likely that the schools will combine current

Industrial Education

Under these programs, the following areas may be included:

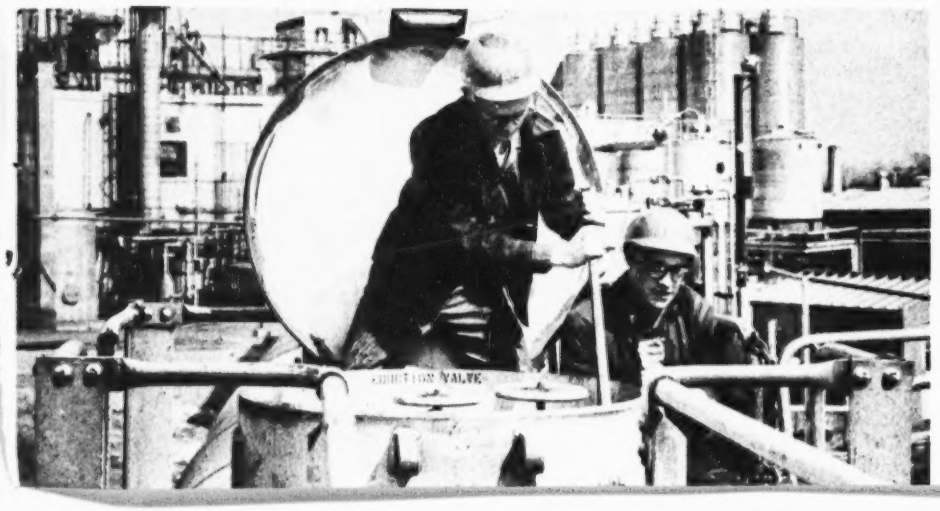
— Orientation to vocations, tailored to specific pupil needs.

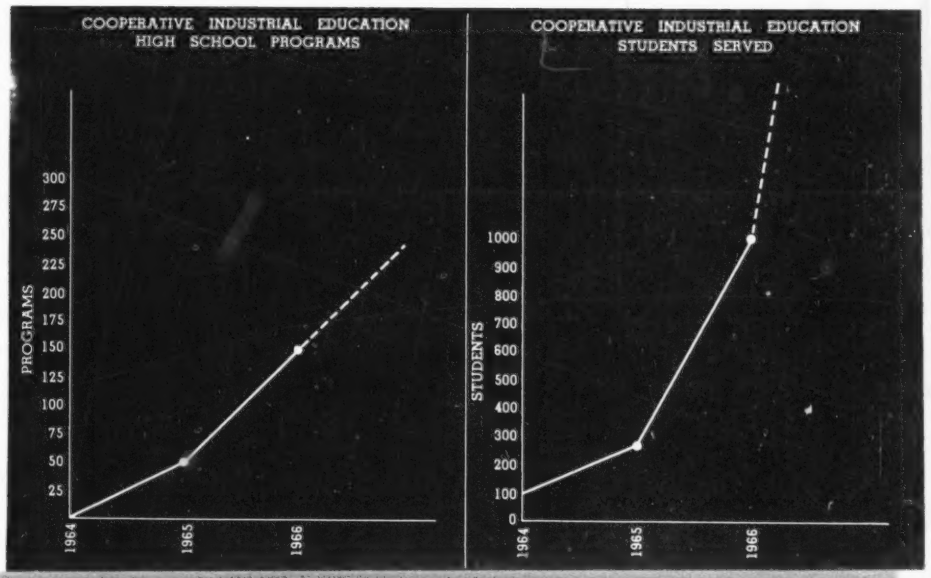
— Occupational conditioning in which students meet realistic job situations through in-school experiences.

— Training in a variety of simple and complex skills depending on individual pupil abilities.

— Placement in jobs in one of the three levels of Cooperative Industrial Education, cited above.

As these work experience programs continue to grow, it is anticipated that the need for better pre-vocational training will become apparent to both educators and personnel in industry. Efforts are already underway to expand vocational preparation — particularly for pupils with special needs, such as the handicapped or brain-damaged.





Health

Health Occupations education prepares high school students and adults for entry level employment in the health field. Occupational areas of training include practical nursing, nurse aide/orderly, dental and medical assistant, and hospital service worker. Whenever a health occupations program is offered, the student has, as a part of the educacational program, a clinical affiliation with local health agencies (hospitals, clinics, medical and dental offices). This experience is supervised by the school instructor to insure that the experiences in the clinical area are educationally oriented.

In 1964, there were 86 high school students enrolled in Health Occupations education programs in New Jersey. Previously, existing programs in Practical Nursing, Medical Assisting and Dental Assisting prepared adult students to enter these occupations. In 1965-66, a total of 214 high school students were enrolled in Health Occupations educational programs. There are several reasons for this increase:

1. Eight Practical Nursing programs now include high school students at the 12th grade level.
2. Demands for Practical Nurses have increased sharply due to Medicare legislation.
3. Additional programs in other areas of

and Training

technical schools and comprehensive high schools in order to provide more flexibility in occupational offerings and related services. The Division of Vocational Education has supervised the development and establishment of these centers.

In addition to the six independent centers, multi-skill programs have been developed in the Essex County Vocational-Technical Schools, Passaic County Vocational-Technical Schools, and the Newark Public Schools.

Currently under development are three rural multi-skill centers, in cooperation with the Office of Economic Opportunity, to serve disadvantaged persons in Monmouth, Cumberland and Warren Counties.

To supplement these centers, numerous single class-size occupational training programs have been introduced throughout the State — in vocational-technical and comprehensive high schools, private trade schools, private business colleges, correctional institutions, and public and private hospitals.

With the cooperation of the U. S. Bureau of Apprenticeship and Training, pre-vocational and basic education courses are being administered to trainees prior to their entry in on-the-job training or into selected apprenticeable trades. Other efforts include a refresher program for registered nurses, directed by the New Jersey Hospital Trust Association; the training of merchant marine engineers conducted by the Brotherhood of Marine Officers; basic education and occupational training in the New Jersey Reformatory at Annandale, with the cooperation of the Department of Institutions and Agencies; machine trades training programs for students prior to their entry into an apprentice training program, supervised by the National Tool, Die and Precision Machine Association, and the New Jersey Tool & Die Association; and a joint training program in basic education and occupational skills in Newark, with the cooperation of the United Community Corporation. The Division of Vocational Education is responsible for the approval, administration, and/or supervision of all the above programs.

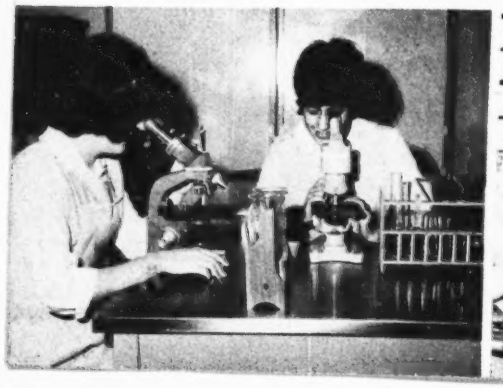
Subject to continued availability of Federal funds, further refinements in this program will continue to be made in basic education and pre-vocational education as well as in other areas to better meet the needs of unemployed and underemployed youths and adults in New Jersey.

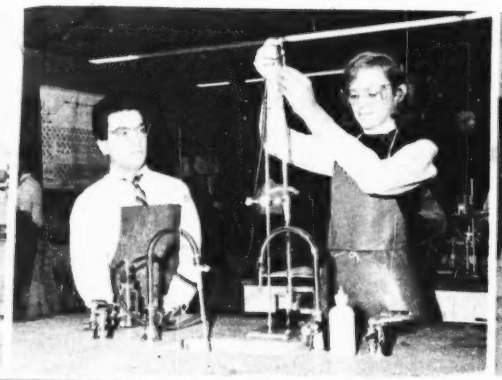
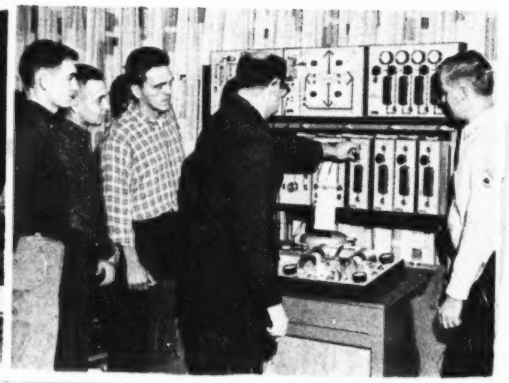
Technical

Technical education is offered chiefly at the post-high school level. It is designed to prepare students for various positions in technical or scientific enterprises, requiring the application of scientific and engineering knowledge. The graduates of such post-high school programs are usually referred to as technicians or semi-professionals. They work in support of engineers or scientists.

The accompanying chart indicating New Jersey students enrolled in technical education programs depicts the continuing growth and extent of participation in this area. Technical education is now offered in only a limited number of our public schools. As a result, the number of individuals presently enrolled in these programs represents but a small fraction of the great potential that can and should be accommodated.

Additional growth in this important field will depend largely on the broad acceptance of vocational-technical education, particularly at the local district level. Expansion of the needed, diverse, technical areas will also be determined by the readiness and ability of the schools to provide essential, updated, physical facilities, the recruitment of appropriately qualified administrators and teachers, and well-designed curriculums.

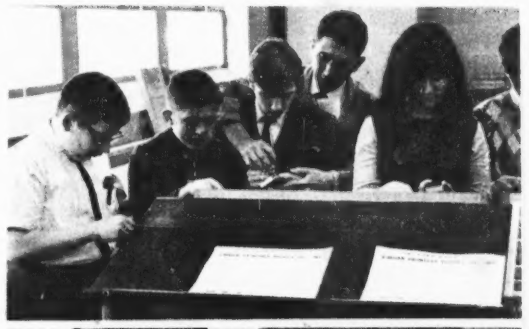


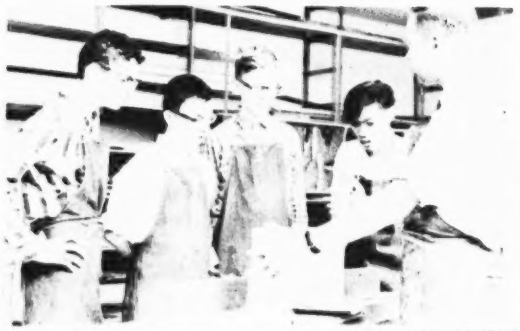



Vocations

ninth grade exploratory-orientation programs and guidance activities into this more comprehensive, direct experience approach. As more activities are introduced at the high school level to help children develop more realistic awareness of occupational opportunities, related curriculum offerings and instruction will also be benefited.

The enthusiasm with which school districts in New Jersey have endorsed the Introduction to Vocations program underscores its pertinence for preparing youth to enter the labor world while assisting the individual student in achieving an occupational objective.





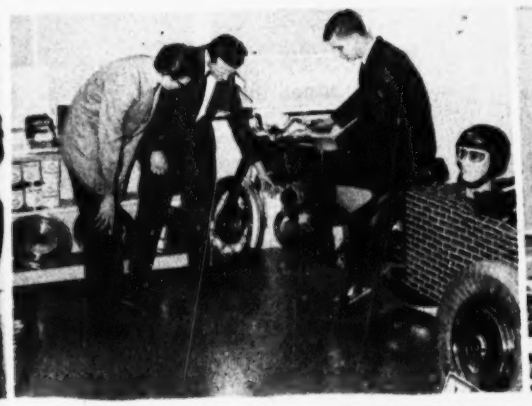
Distributive

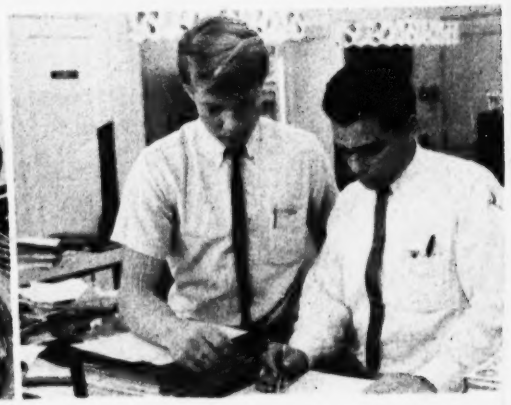
Distributive Education provides training in distributive, marketing and sales occupations. Training and experience are given under a cooperative agreement between the employer and school officials. This agreement insures that the training program is conducted in such a way that students will supplement their practical training with a program of related instruction. Students go to school part of the day and work for pay for local businesses, as a learning experience, the rest of the day.

Distributive Education occupations are found in such businesses as retailing, wholesaling, finance, insurance, real estate, transportation, utilities, and communications.

The program has been developed to serve the education and citizenship needs of students and adults within the framework of their career goals. Students may prepare themselves for entry into the labor market, for upgrading themselves in their occupational specialization, or for transfer to better salaried employment.

The population explosion will cause an increase in business services and therefore more qualified employees will be needed. Recognizing the increased need for more workers with distributive



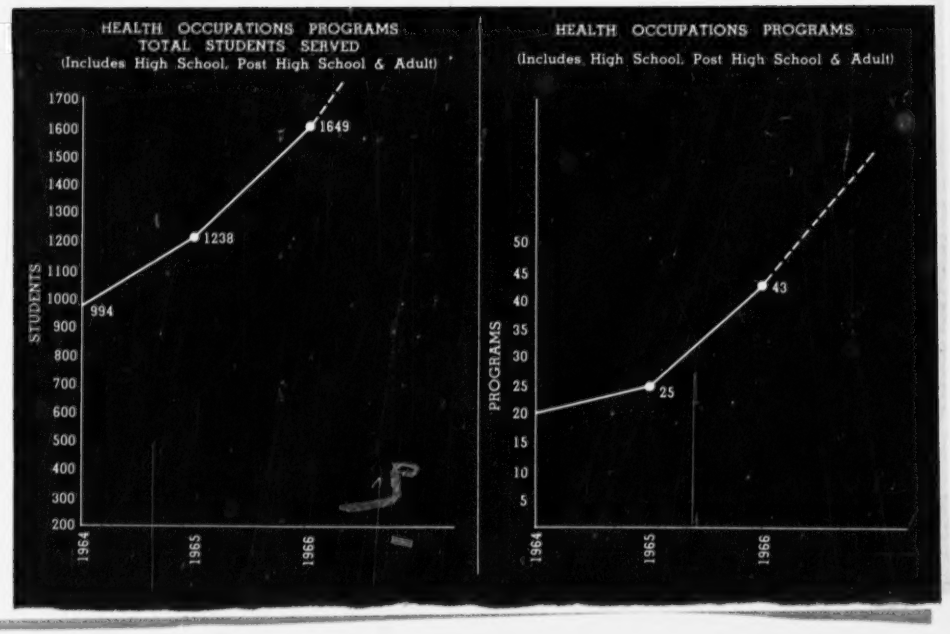


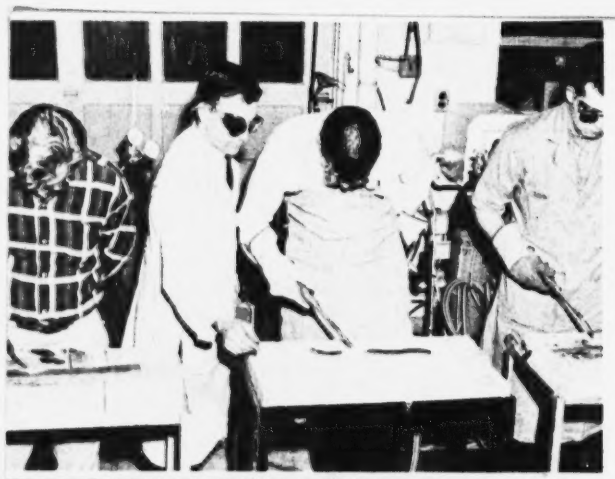
Occupations

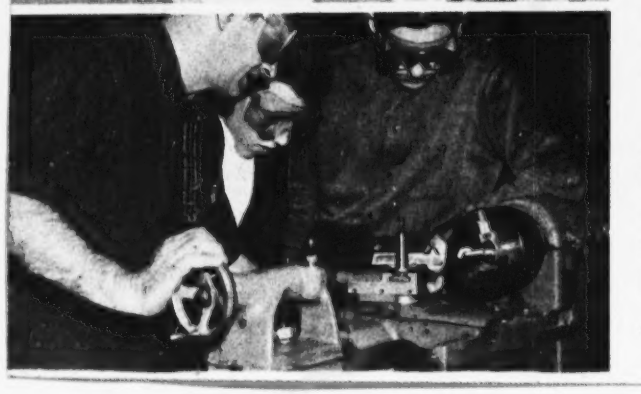
Health Occupations education have been offered to high school students.

Coincidentally, the number of adults enrolled in these programs has also continued to increase.

The need for workers in Health Occupations will continue to grow due to the lengthening life span, increasing population, Medicare legislation, extended care facilities and increased scientific and technical innovations in medicine and allied fields. New health occupations will appear and students will be prepared for entry into these areas. Many of these programs may be offered at Health Occupations Training Centers providing a diversity of courses and serving large geographic areas.







Industrial

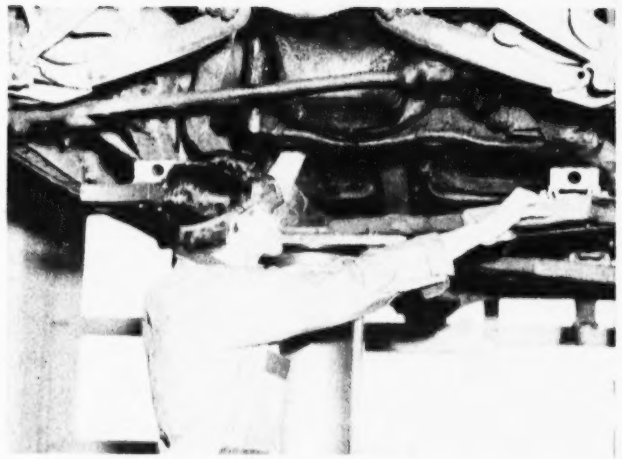
Industrial Arts education deals with exploration of industrial occupational opportunities. It provides experiences with a wide range of materials, tools, processes, products, and occupations typical of our industrial society. It orients students through study and experience in school shops and drafting rooms to the industrial aspects of our culture enabling them more intelligently to select consumer goods, to be more efficient producers, to use leisure time more wisely and to act more intelligently with regard to matters of health and safety in an industrial setting.

A trend in Industrial Arts education at the secondary level is the shift in emphasis from a broad general industrial concept to a program that offers depth in occupational families; for example, drafting, electronics, or metal working. Newer programs in Industrial Arts require shops with greater floor space, equipped with more industrial power and hand tools, and taught by personnel with greater depth of industrial experience and education.

Industrial Occupations

Industrial Occupations education is a program designed to provide employment-bound secondary school youth with basic skills, knowledge, training and adaptability necessary for entering a semi-skilled or operative industrial or service occupation. Successful entry into the world of work is the major goal. Most teachers in this area possess both advanced training and industrial experience. A combination of Federal and State funds has made these multi-track offerings possible on a pilot basis in about 100 schools through-

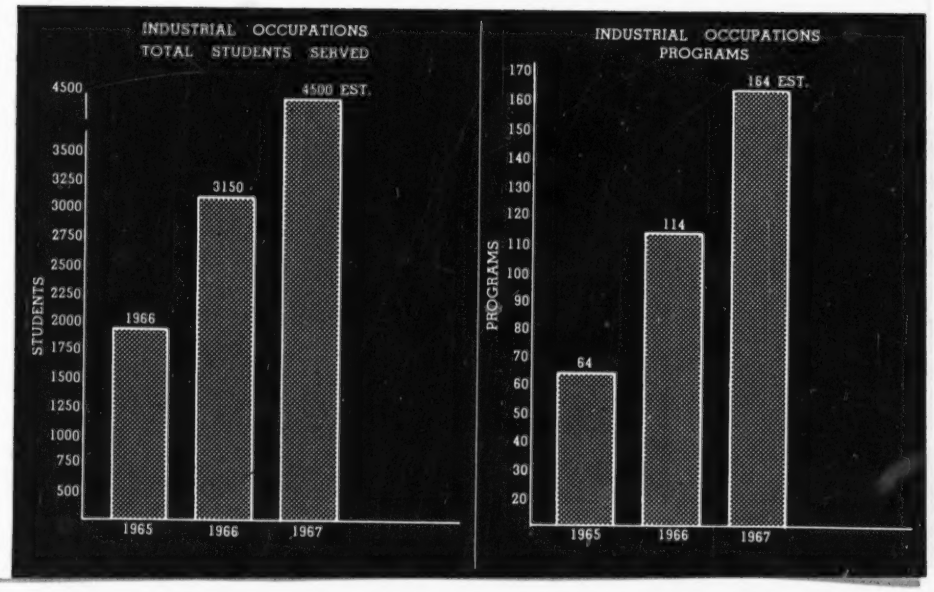
Arts



out New Jersey.

The number of students in Industrial Occupations education programs has nearly doubled after the first year of operation in 1965-66, with an increase from 1,966 to 3,150 students. A 50% enrollment increase is anticipated for 1967-68. Industrial Occupations programs are planned to serve students in grades 11 and 12.

In this program, existing comprehensive high school shop facilities and courses are up-graded and extended in order to provide practical learning experiences that are geared to current and anticipated labor market demands. Industrial Occupations courses also provide an effective foundation for those seniors who desire to participate in Cooperative Industrial Education programs (described in another section of this publication).



Manpower Development

The Manpower Development and Training Act of 1962, as amended, provides for occupational training and retraining of unemployed and underemployed youth and adults. Since 1962, MDT programs in New Jersey have served approximately 19,000 individuals. Some typical occupational areas provided include: oil burner installation, meat cutting, automobile mechanics, radio and television repair, machine operation, upholstering, commercial cooking, and key punch operation. Nearly $25 million in federal funds have been committed for the total MDT program in New Jersey in the last two years. Funds are used for staff, equipment, facilities, and other related items.

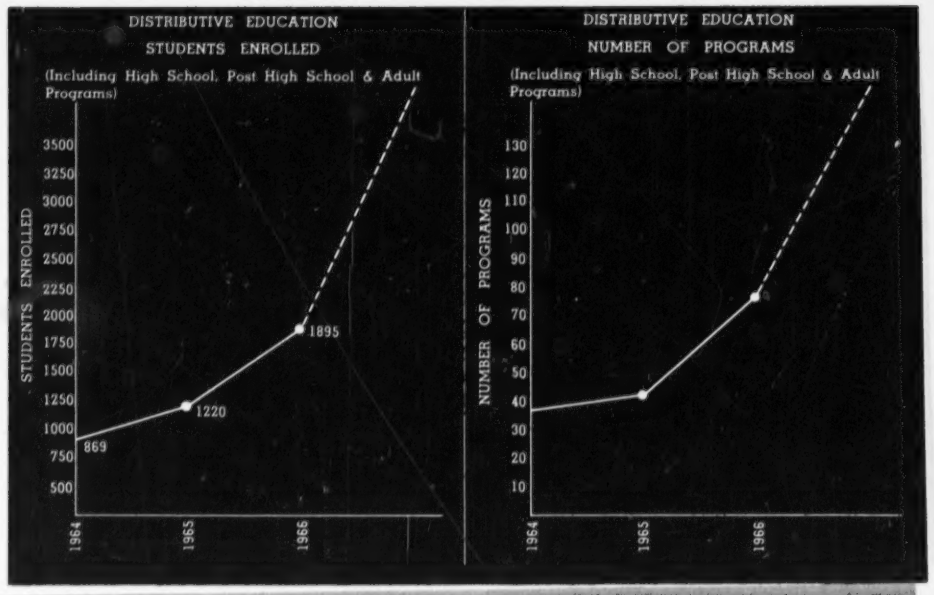
Because of the great number of disadvantaged persons to be served under the Act, recent amendments have authorized funds for supportive services in several additional areas: basic education as it relates to the trainees' selected occupation; personal and vocational counseling; psychological assistance; and limited health services.

Since 1965, six multi-occupational skill centers have been created in New Jersey: Tri-County in Salem County; Camden; Trenton; Newark; Jersey City; and Hackensack. These six training centers are conducted in facilities independent of existing county vocational-

Education

skills, an expanded Distributive Education program, which will serve grades 9-12, is anticipated by the Division of Vocational Education. With the assistance of federal funds, the Distributive Education program will continue to grow in New Jersey over the next decade.

Post-high school, junior college, college and adult distributive education training programs have also been developed in order to provide out-of-school youth and adults with opportunities to develop distributive skills. Distributive Education programs are also provided by parochial schools, MDT skill centers, and four New Jersey colleges: Montclair State College, Rider College, Rutgers - The State University, and Trenton State College.



Apprentice

Through apprentice training an employee and an employer join together for an educational relationship. Its objective is to help insure a continuing supply of skilled craftsmen needed to further the technical, social and economic standards of our democratic society. The program consists, basically, of specific training on the job and related instruction in the classroom.

There has been a significant increase in the number of programs, students and instructors involved in apprentice training in New Jersey since 1964. The number of trades and occupations for which related instruction is being offered has increased from 43 in 1964 to 49 in 1966. Currently, there are approximately 6,000 individuals registered for apprentice training in New Jersey.

Student enrollment is voluntary and apprentices must complete 144 hours of trade-related instruction.

In the future, the need for skilled craftsmen, especially in the machine, electro-electronic, and building trades, will lead to an expansion of the apprentice training program. The rate with which mechanics and technicians are trained will directly affect the growth of our industrial society.

Education

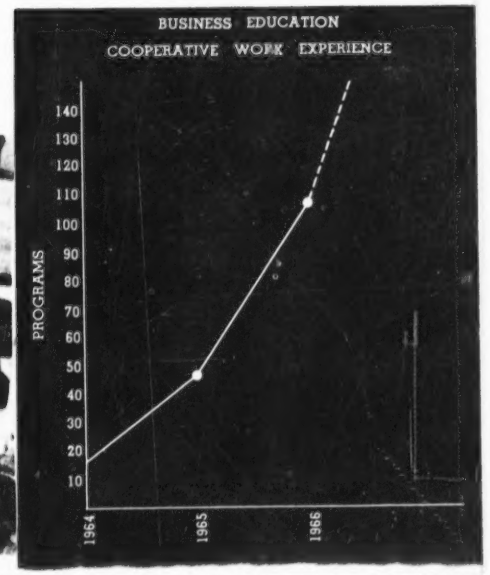
Business Education—Tomorrow

In the future, business education will concern itself with the provision of programs for a growing segment of the school population — the employment bound. Such programs will fit the changing demands and requirements of business, changing occupational patterns, and advanced business technologies. Curriculum patterns and instructional methodologies must necessarily be revamped.

Supplementing the traditional stenographic, bookkeeping and clerical needs, emerging occupational demands in-include:

. . . accounting and computing
. . . business data processing systems
. . . records management and retrieval
. . . personnel training
. . . supervisory and administrative management

These demands will be realized through:
. . . expanded vocational facilities and equipment provided by secondary schools, post - high schools, vocational schools, technical institutes, private business schools and colleges.
. . . expanded teacher preparation programs embracing the new technologies.
. . . expanded secondary school offerings.
. . . increased realistic learning experiences for high school students as provided through cooperative occupational programs. (At least 200 of New Jersey's secondary schools can support such a program.)
. . . increased involvement of business and industry in our educational programs.



Cooperative

New Jersey's Cooperative Industrial Education programs are designed to help the student make a transition from school to work. In this program the student goes to school part-time and works a specific number of hours in an approved industrial occupation, receiving school credit as well as valuable job experience and a financial return.

The Cooperative Industrial Education programs have grown very rapidly in New Jersey in the last three years. In September 1963, there were five approved programs with 108 students. In successive Septembers, the numbers of approved programs rose to 13 (with 260 students), 50 (with over 100 students) and in 1966, 150 programs (with about 1,900 students).

New Jersey was one of the first states to recognize the need for varying types of cooperative programs. Three distinct programs were developed as follows:

1. *Part-Time Cooperative Trade Occupations Program,* designed to prepare students for entrance into trade employment. This program has been structured for those students capable of becoming skilled craftsmen.
2. *Part-Time Cooperative Industrial Occupational Training* embracing similar objectives as the Trade program cited in 1, above. This program has as its emphasis, training in quickly learned skills; i.e., bagger, assembler, office messenger, packer.
3. *Part-Time Cooperative Employment Orientation Program* designed for educable (mentally retarded) students. This program, too, involves quickly learned skills and emphasizes adjustment from full-time school to full-time employment.

Vocational Guidance

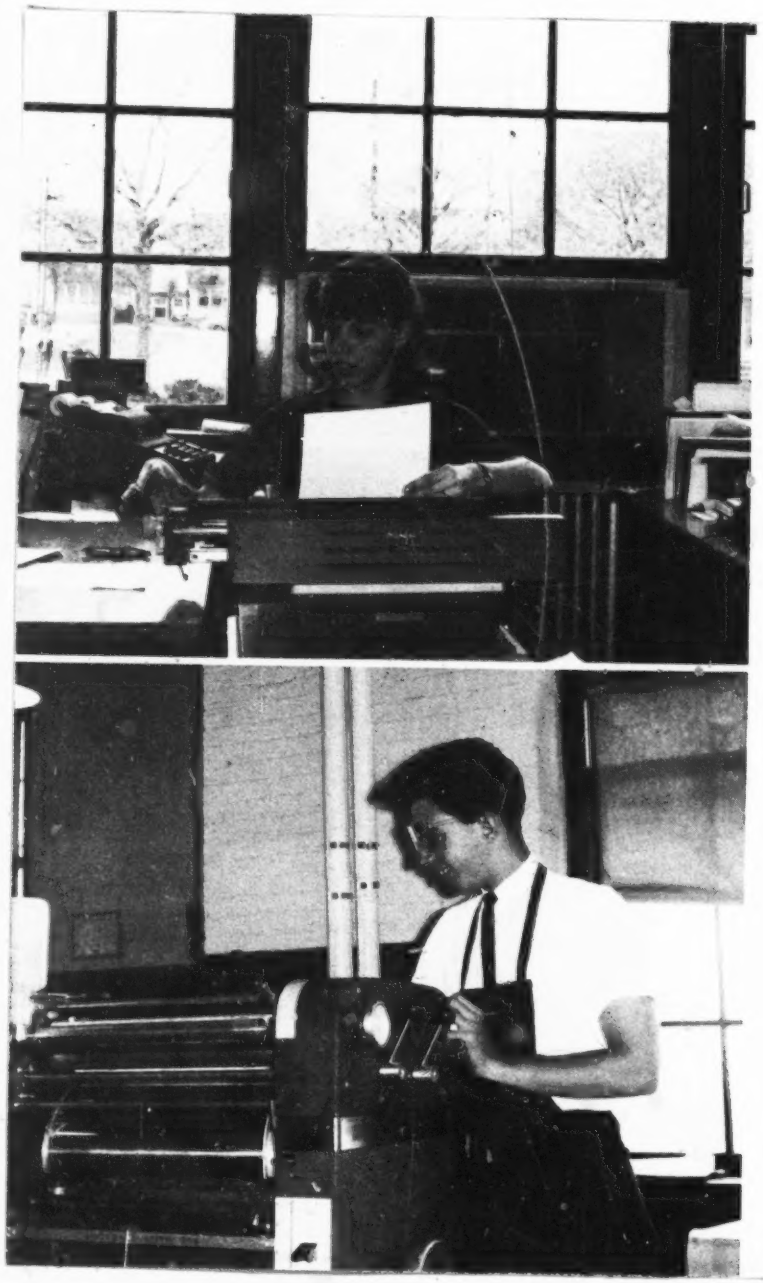
The aim of Vocational Guidance is to help the student explore, and successfully engage in, school experiences that will best serve him and his future career needs.

Through counseling, orientation programs, testing and other activities, the counselor provides the student with a background so he can develop future plans and make decisions concerning educational and occupational choices.

The counselor also assists the student to evaluate how well he progresses as he carries out his plans.

Counselors in New Jersey schools are starting to direct greater emphasis to vocational guidance for pupils through a variety of approaches and activities including:

- Visitations to business and industry.
- Assistance with the placement of students in part-time and full-time employment.
- Talks by people representing different trades and careers.
- Cooperation with other staff members so that vocational aspects of school subjects are highlighted.
- Meetings with parents and with community groups to review occupational opportunities for students.
- Orientation to vocational education programs.

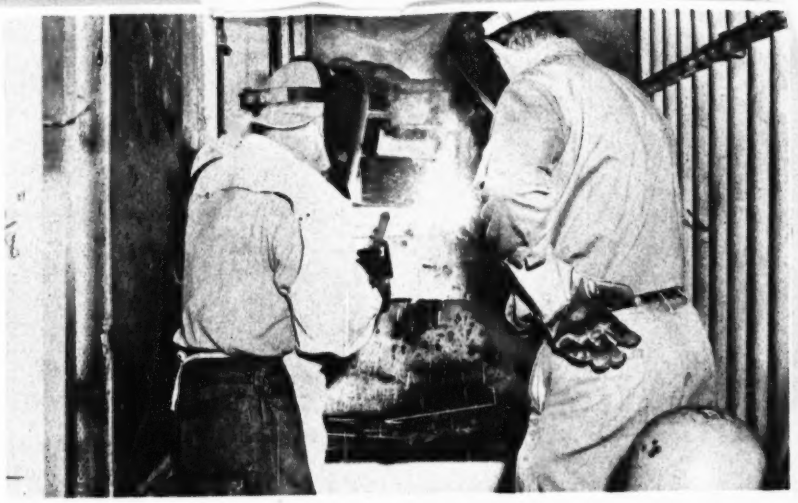


Vocational

The Work-Study Program is designed to reach vocational students, ages 15-20. This program was designed to give financial aid to needy students who perform work for local public agencies. In the performance of this work, the student receives valuable training by working with mature people. A frequently heard comment from districts participating in this program is that the students have also progressed academically and maintain a close relationship with the school.

The Work Study Program was first started in New Jersey in January 1965, at which time 44 schools participated with 576 students receiving wage benefits.

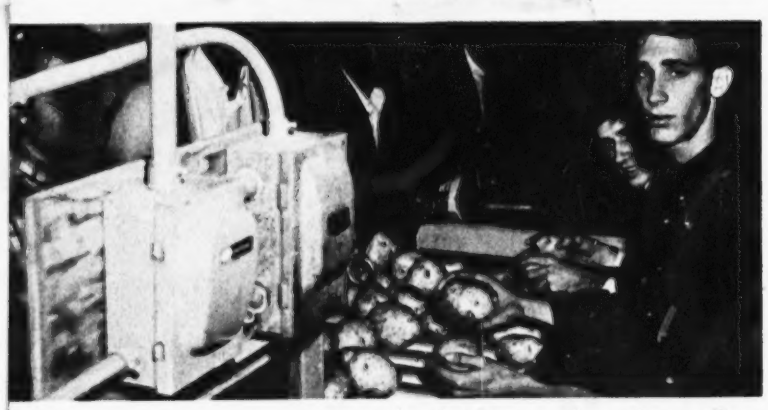
Veterans Training



The Division of Vocational Education is the approving agency for vocational schools and courses for veteran enrollment under the new and former G. I. Bills. The so-called Cold War G. I. Bill — P.L. 89-358, became effective on June 1, 1966. It gives educational entitlement to men who have served and will serve in the Armed Forces after 1955. The approval of schools, public and private, and their courses must be in conformity with the provisions of the Federal law and the Veterans Administration regulations. This requires consultation with school officials, visits to the schools and evaluations of facilities and courses. It also requires cooperation with the Veterans Administration on interpretation of regulations and violations of approval criteria.

Veteran training includes courses in public vocational schools, private trade and private business schools, as well as private beauty culture schools and hospital training programs.

The number of veterans currently taking advantage of their educational entitlement is impressive. It is expected that the number will double within the next few months. There is no doubt that the new G. I. Bill, which is expected to continue well into the future, will make an impact upon vocational and technical education in both the State and the Nation.



Agricultural

Agriculture education offers training to the future farmer, horticulturist, floriculturist, forester, conservationist and the person who will be employed in support of the farmer. Its training embraces preparation for employment in areas dealing with the conservation, production, processing and distribution of agriculture products, and related services. Fisheries occupations are also included in this field.

New Jersey, "the Garden State," still occupies a leading position in agricultural endeavors. Our farm lands return the highest income per acre in the nation; we rate third in gross income per farm, and sixth in net income. New Jersey boasts a $1.7 billion industry in food processing — sixth in the nation.

During 1961-62, supervised farming activities outside of school hours returned to high school students over $400,000, an amount nearly double the combined 1962-63 state and federal subsidy of $242,000.

Agricultural education, on both the secondary school and adult levels, has been offered in New Jersey, without interruption, for the past fifty years. Since 1928, an integral part of this educational program has been the rural leadership and citizenship training afforded through the Future Farmers of America organization.

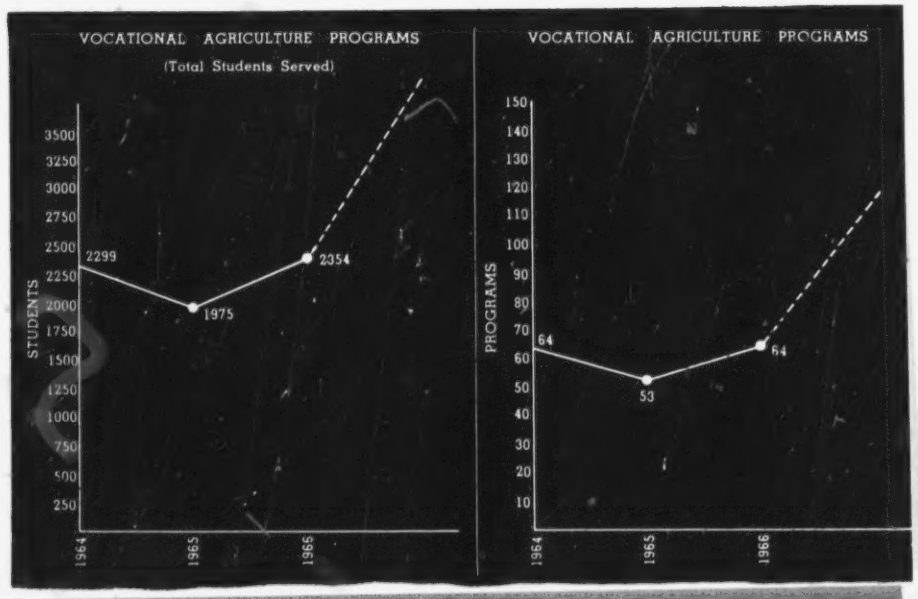
Less than ten percent of the secondary schools in the state now offer programs in agricultural education. Increased availability of this curriculum to more students interested in agriculture could easily double the enrollment within the next two years. A continuing need in agricultural education has been obtaining sufficient teaching staff and adequate facilities.

State and federal funds are being expended in a major effort to retain and strengthen the program in agricultural education. Training opportunities have been made available in agri-business and distribution, ornamental horticulture and floriculture,

Education

turf and golf course management, greenhouse and nursery management, and commercial fisheries. These programs first were funded as pilot projects in five school districts in 1965-66, and both the programs and number of participating school districts were expanded in 1966-67. In one vocational school, agricultural education is offered to students from four nearby local high schools on a coordinated basis.

The need for agricultural education in the future will continue. For example, New Jersey and many of its municipalities are sponsoring the Green Acres Program while the federal government is similarly engaged in developing and maintaining our national parks to provide recreation for our rapidly expanding population. Such investments require trained recreational conservationists to service these areas. The emergence of these and other new and expanded employment opportunities will necessitate related agricultural education programs in our schools.



Research

The Occupational Research and Development Branch was established in the Division of Vocational Education, New Jersey State Department of Education, on June 1, 1965, as a result of a grant from the United States Office of Education. Its purpose is to coordinate, stimulate and encourage occupational research and developmental activities within local school districts, colleges and universities, non-profit organizations, and the State Department of Education. A second and equally important function is to serve as a clearinghouse for information related to occupational research and development.

The Research Branch is currently participating in several projects of a national scope including the Vocational-Technical Education Evaluation Project, coordinated by Ohio State University, and the project on Research and Development in State Administration of Vocational-Technical Education, conducted by the University of California (Berkeley). Additional undertakings include: a cooperative project with the New Jersey Police Training Commission to develop new instructional techniques and media in police training; research in basic educational skills at the Newark Manpower Training Skills Center; and direction of the development of a master plan for vocational-technical education in New Jersey.

The Occupational Education Pilot Projects referred to in another section of this publication are part of the developmental function of this Branch. During the past two years, more than 350 pilot projects involving local high schools, vocational-technical schools and several colleges, both public and private, have been initiated.

Plans for the future include continued stimulation and coordination of occupational research, development of information acquisition and dissemination systems, and concurrently, the development of research and improved instructional materials relative to occupational curricula.

The Technology for Children Project

An experimental two-year project was started in 1966 in nine New Jersey elementary schools. It was financed in part by a $166,000 Ford Foundation grant to the State Department of Education. The Technology for Children Project, as it is called, is the first of its kind in the Nation. The project will help teachers to combine technical activities with regular academic lessons in an attempt to help children learn and understand their regular subjects better while developing an appreciation of the role of technology in our society.

Elementary pupils will be introduced to technical concepts such as design, instrumentation, the uses of tools, and properties of materials. They will be shown first-hand, from the time they enter school, how technology when applied to subjects they regularly study is used in the world around them. Using tools and materials, the children may build a sun dial, print their own stories, or construct small rockets. They may conduct experiments in electricity, refrigeration, or papermaking. Field trips to acquaint pupils with different occupational areas and related concepts are also included. Telephone repairmen, carpenters and others are asked to explain their work and give demonstrations; these experiences are then related to the children's other studies.

If successful, the program will be extended to other schools in the State.

Private

Private business schools, proprietary profit-making institutions, emphasize instruction in secretarial practice and accounting or the development of skills in the expanding area of business data processing. They have as their objective providing the labor market with skilled workers for office positions. In the 60 state-approved schools, instruction is provided year-round, day and/or evening, in the areas of accounting and bookkeeping, business administration, data processing, computer programming, general business, office machines, office practice, stenography and typewriting.

The schools are located throughout New Jersey but the majority are located in the Newark metropolitan area.

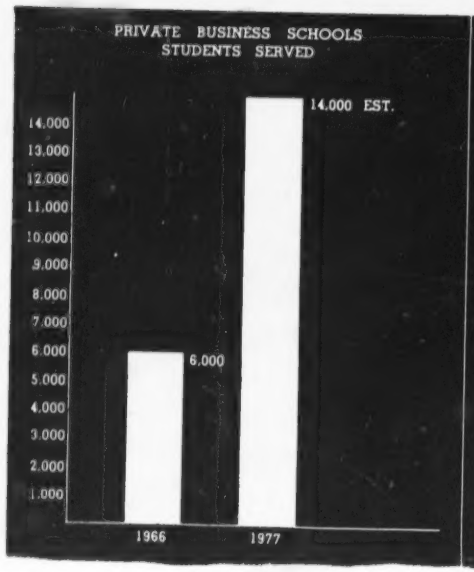
The most recent enrollment figures available, those reported in 1966, indicate an almost equal distribution of full-time and part-time as well as male and female students. These 6,000 students consist primarily of recent high school graduates, adults returning to school for retraining, and veterans eligible under the new G. I. Bill.

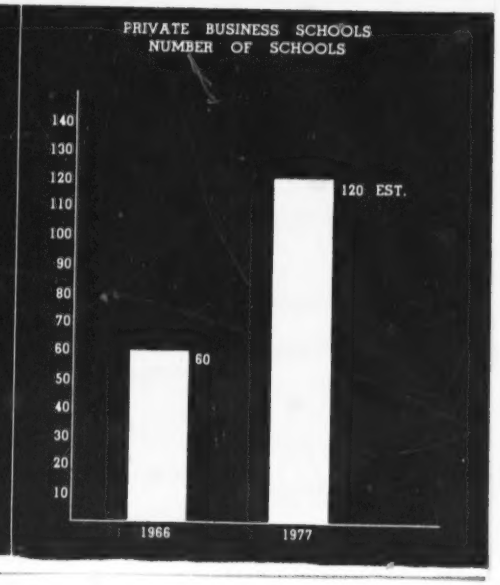
Business Schools

Situated in the center of the Washington-Boston megalopolis and serving such metropolitan centers as Philadelphia, Camden, Newark, and New York City, New Jersey is in a key geographic position to supply the labor market with office workers of all types.

Private business schools will continue to both grow in number and to expand their offerings. Related to this is the necessary constant up-grading of curricula and instructional equipment to meet the ever-changing demands of business and industry. The labor demand for more office workers is increasing and these demands cannot be met by the public schools alone. Further, the private schools assist in the development of additional essential skills and afford students with an opportunity to develop poise and personality as well as general maturity.

It is projected that within the next decade, there will be more than 120 institutions serving nearly 14,000 students and providing employment for approximately 850 teachers.





A First in the United States . . . .

The Marie H. Katzenbach School for the Deaf at West Trenton is the site of a particularly unique vocational program in Visual Communications Technology (the first such program in the United States for handicapped youth, grades 11-14).

Visual Communications Technology, in essence, is an enriched program approach to graphic arts education.

Previously, the Marie H. Katzenbach School had a graphic arts program characterized by moderate equipment, skilled instructors, and an effective but more limited program. Traditionally, its graduates enjoyed 100% employment upon graduation; however, many were underemployed considering their talents, interests and desires.

Through the new, enriched program, emphasis is on increased course offerings which give added depth to the vocational area. More boys are enrolled than previously and girls are also included in the program.

As a result of the new program:

. . . related academic instructional offerings have been increased.

. . . graphic arts facilities and media, including motion pictures, slides, film strips, and overhead transparency production, have been expanded.

. . . related vocational programs in basic mechanical drafting and electronic and architectural drafting have been strengthened.

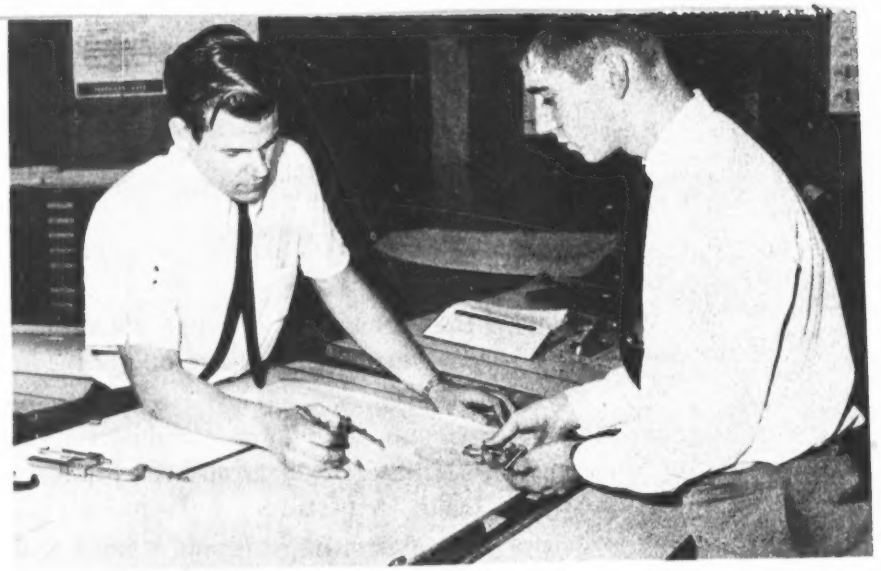
. . . the scope of Communicative Art and Design, featuring commercial and industrial displays as well as layout and design, and photographically executed silk screening, has been broadened.

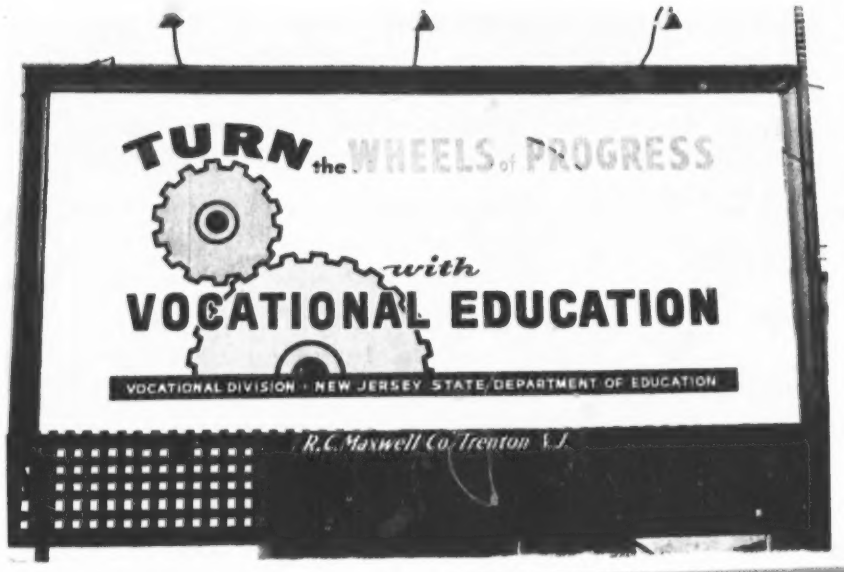
. . . the instructional staff has been expanded. Teaching assistants and student teachers through the Industrial Education and Technology Department of Trenton State College work with the project, and consultant services of the College's professional staff are made available.

. . . new processes of cold-type composition are being taught.

. . . the latest photographic equipment has been installed.

Training




TURN the WHEELS of PROGRESS
with
VOCATIONAL EDUCATION
VOCATIONAL DIVISION · NEW JERSEY STATE DEPARTMENT OF EDUCATION
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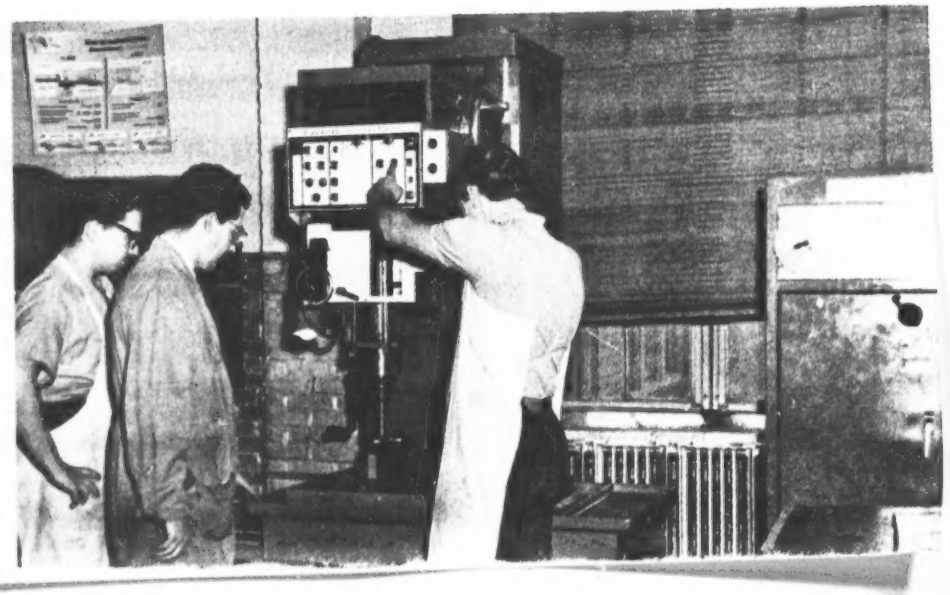


Vocational Education in

- Pilot programs in eight vocational areas have been developed and are operating in —

Agriculture	Home Economics
Business Education	Industrial Occupations
Distributive Education	Introduction to Vocations
Health Ocupations	Technical Education

- In Agriculture, present school programs were broadened to include training for agri-business and distribution, ornamental horticulture and floriculture, recreational conservation and forestry, and food processing.
- In Business Education, model business education centers were established in 15 counties, pilot studies in the use of electronic equipment for stenography classrooms were initiated, and 85 cooperative work experience programs were added.
- In Distributive Education, 34 new pilot programs were established and distributive education curriculums were initiated on the college level at Rider College and Trenton State College.
- In Health Occupations, 4 new practical nursing programs were initiated and guidelines were developed to assist schools establish programs for nurse aides, hospital workers, and medical and dental assistants.
- In Home Economics, diversified occupational training for students from low income levels was provided and programs were started to prepare students as child care center assistants and for food service occupations in commercial kitchens, hospital dietary kitchens and nursing homes.
- The Division was designated by the Governor as the State approval agency for appropriate educational provisions of the new G. I. Bill.
- The development of a Master Plan for Vocational-Technical Education in New Jersey was initiated.
- The Division actively participated and provided leadership in the 1966 Governor's Symposium on Education and Training for Employment.
- The continued expansion of county vocational schools was encouraged.
- Four completely new programs, serving a total of 25,000 students, were developed in:
  - Cooperative Industrial Education
  - Industrial Occupations
  - Introduction to Vocations
  - Vocational Work-Study

New Jersey Since 1964

- To date, 19,000 New Jersey citizens have been served through the Manpower Development and Training Program. Prior to 1965, there was only $3 million obtained for MDT training. In the last two years, nearly $25 million has been committed for new programs. Six new multi-occupational skill centers are in operation. Three multi-skill programs and three rural multi-skill centers have or are being developed.
- Teacher education, including industrial arts and vocational guidance, were strengthened and expanded in vocational-technical education at the college and university level, in both public and private institutions:

  Glassboro State College
  Jersey City State College
  Montclair State College
  Newark State College
  Rider College
  Rutgers - The State University
  Seton Hall University
  Trenton State College

Future Goals and Needs

More students and adults to be served.

Extension of current programs at all levels and types of schools.

More buildings, facilities, and equipment.

Introduction of new programs and pilot projects.

More college training programs and instructors.

Continuation of research, evaluation, and experimentation.

Strengthening and improvement of vocational guidance services.

Development of more programs for disadvantaged, unemployed and underemployed persons, and youth with special needs.

Establishment of more programs at the post-high school level.

Continue cooperation with business, industry and labor.

Development of orientation and pre-vocational programs at earlier levels.

Completion of State Master Plan for Vocational-Technical Education.

Maintain quality and high standards of current efforts.

Develop a placement system in high schools for employment bound students.

Pilot and Demonstration

The Occupational Education Pilot Program was established through funds made available by the State and under the Federal Vocational Education Act of 1963. This program is designed to initiate, strengthen, and expand vocational experience opportunities for high school youth by offering entry level job skills and information. Projects may involve occupational skill instruction, occupational curriculum development, and the development of innovative occupational teaching aids.

During the past two years, 352 action type research pilot projects involving local high schools, vocational technical schools, and several colleges (both public and private), have been initiated. The breadth of program areas covered by these pilot projects is graphically displayed on the opposite page. The majority of the programs seek to provide new experiences in saleable skills for students with special needs.

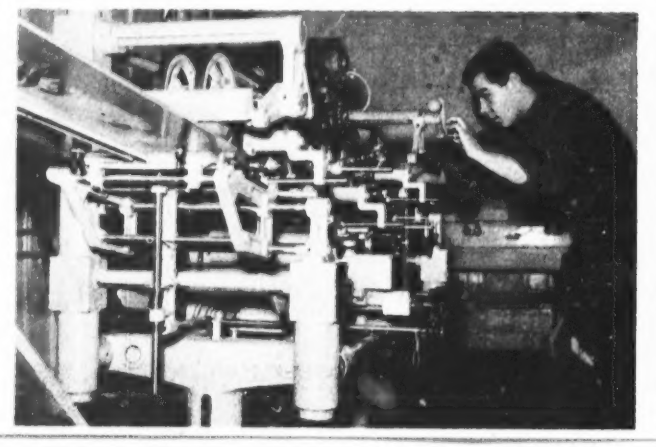
Other projects, including programs establishing Model Business Centers, Electronic Stenography Research, and a Distributive Education Leadership Training Program were implemented within the Division of Vocational Education and in some instances through cooperative efforts with several colleges.

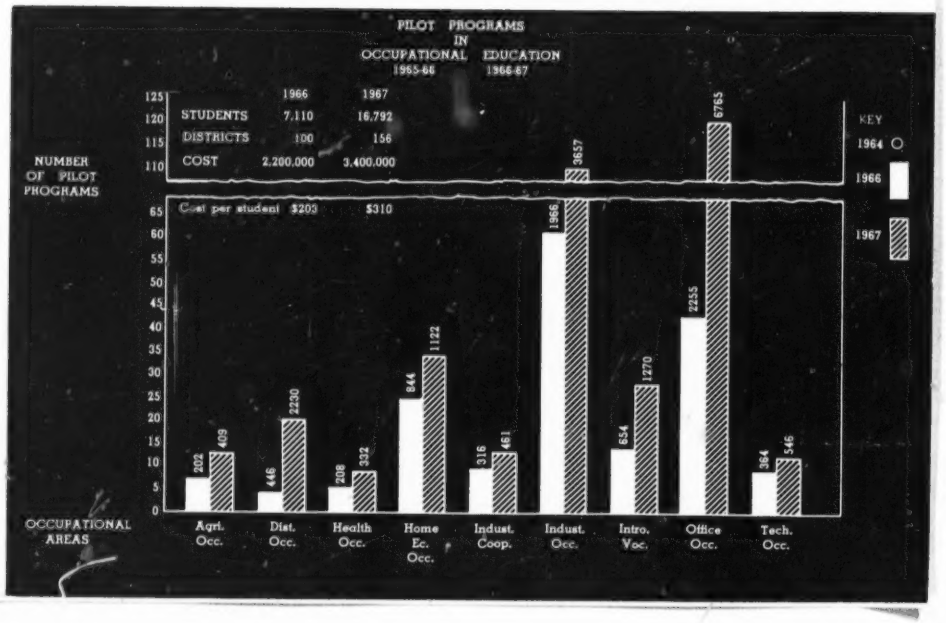
Unique programs are those in Package Line Mechanics and Visual Communications Technology. The first program seeks to train mechanics for the maintenance and repair of industrial packaging equipment. The second program involves students at the Marie H. Katzenbach School for the Deaf, West Trenton, in skill train-

Programs

ing in the technological aspects of advertising production, graphic design, commercial and industrial photography, drafting, and printing and offset duplication.

More than 150 New Jersey school districts have utilized State and Federal funds to initiate new concepts and innovative instructional procedures in occupational education. Many students in current and future projects who need programs of an occupational nature will, through these pilot and experimental programs, gain valuable preparation for assuming their place in the employment market. It is expected that many more unique and innovative programs will be proposed in the future by local school administrators and approved by the State Board of Education.





Home

Home Economics education has two major program aspects:

— the preparation of elementary, junior and senior high school students, and adults for successful and satisfying home and family living, and

— the preparation for occupations which utilize home economic skills, knowledge, and appreciations.

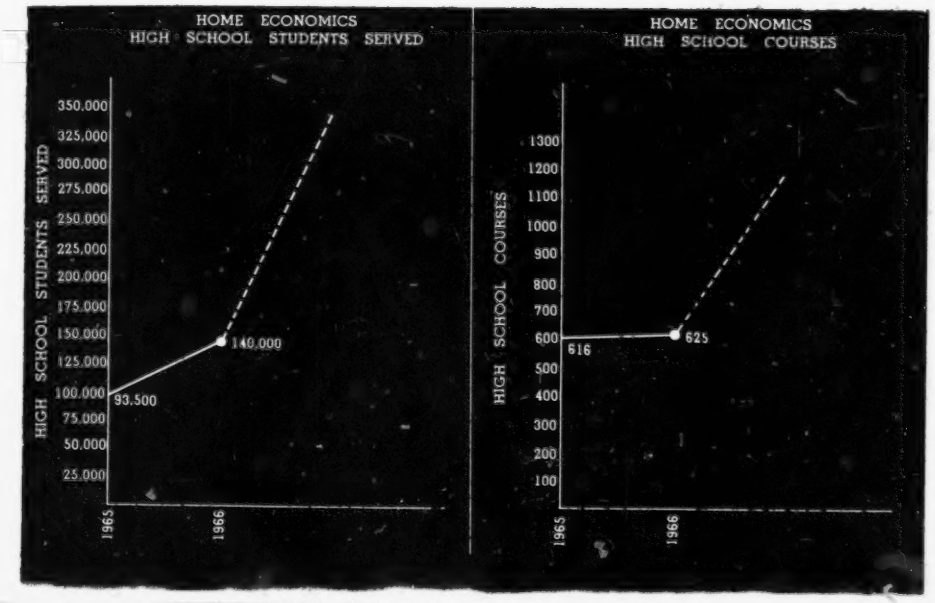
Home Economics programs in the schools may include:

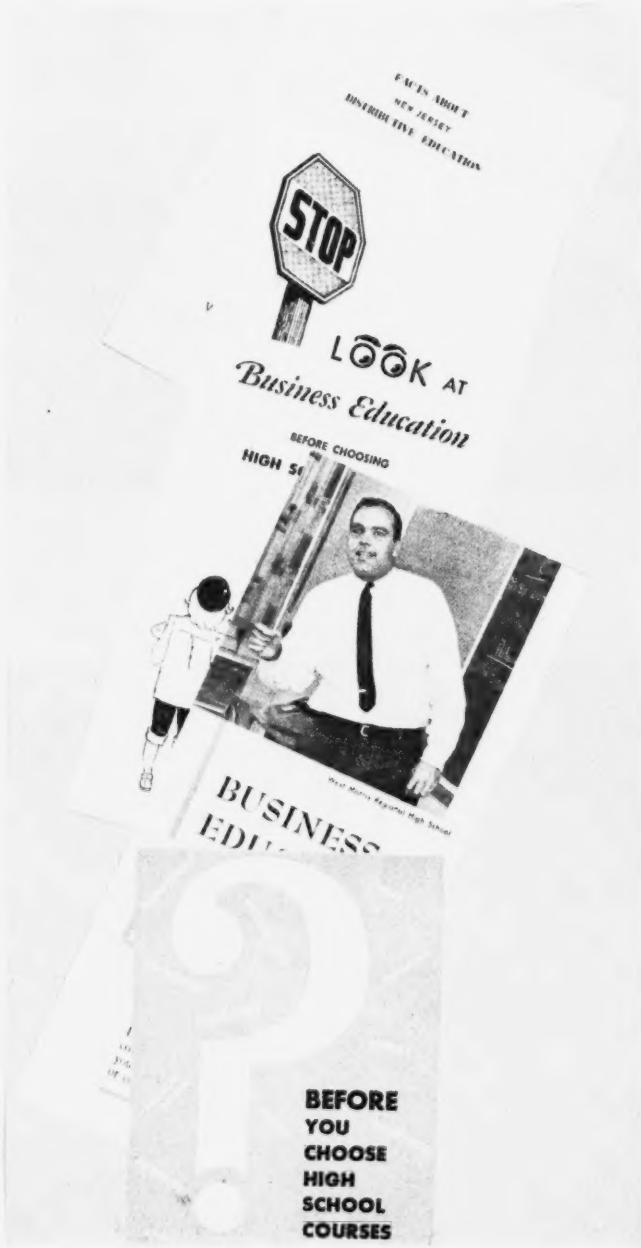
Child care and development
Textiles
Clotning and personal appearance
Foods and nutrition
Family health and home safety
Housing, equipment, and home furnishing
Personal, family and community relationships
Personal and family economics
Consumer education
Home management

Economics

In the past two years, increased emphasis on comprehensive home economics programs has stimulated the broadening of programs to meet the needs of more of our students.

Because of the growth of Home Economics programs at the elementary, junior high school, senior high school, and adult education levels, more professional personnel are needed. At present, Glassboro State College, Montclair State College, Douglass College, and the College of Saint Elizabeth are the colleges preparing home economics teachers in New Jersey.





Public Information Concerning Vocational Education

The Division of Vocational Education has attempted to inform the State's many "publics" about new programs, trends, approaches, and developments in Vocational Education in New Jersey. This information is presented through news releases, monthly and quarterly bulletins, brochures and pamphlets, and by means of correspondence, speaking engagements, and staff participation in conferences and workshops.

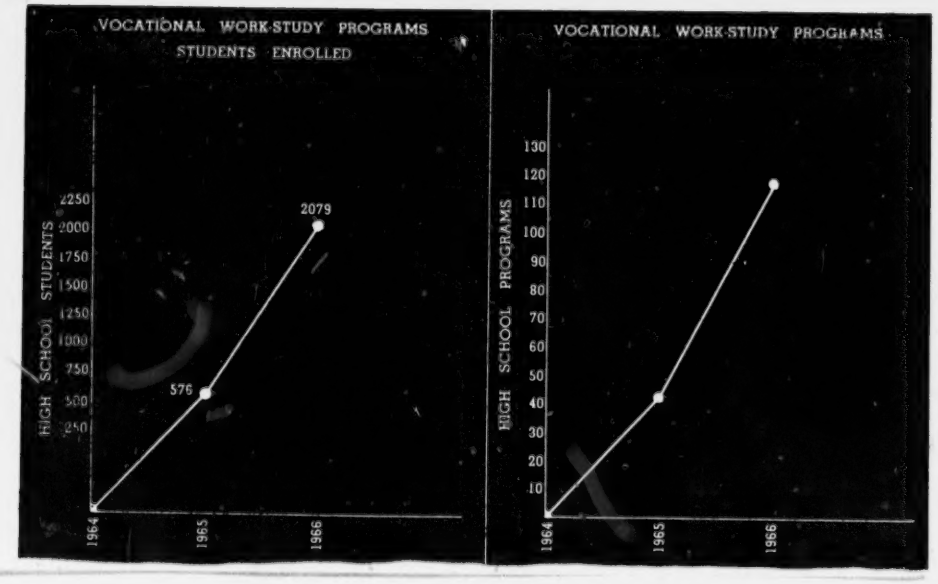
In 1966, the Division of Vocational Education and Rider College joined in a venture to create a Pilot Public Information Unit. The primary purpose of this unit is to promote and enhance the image of Business and Distributive Education. To accomplish this, students, parents, guidance personnel, and school administrators have been made more familiar with these educational programs through speakers, career days, and publications. The public schools in Mercer County have served as the primary experimental group with some information being distributed to schools throughout the state. Thus far, over 5,000 students, mainly at the junior high school level, have participated in career programs conducted by this unit.

Work-Study Programs

During the summer of 1965, the Work-Study Program was continued and the students worked a forty-hour week. This benefited a total of 1,250 additional needy vocational students.

In September of 1965 there were a total of 118 districts participating in the Work-Study Program with 1,915 students employed by public agencies.

In spite of a 60% cut in federal funds in September 1966, 92 of 118 participating New Jersey high schools elected to continue this program although they must now shoulder 25% of the students' wage costs.



Private Trade Schools

Private trade schools have been established in New Jersey for more than two decades and have developed into dependable educational institutions. Over the years these schools have trained many people presently serving in the trades and technologies and they have made a definite contribution to vocational education in this State. Currently, there are 39 private trade and technical schools in New Jersey with an approximate enrollment of 5,500 students in 40 trades. Vocational areas include mechanical dentistry, welding, musical instrument repair, automotive repair, diesel or oil burner servicing, drafting and design, electronic technology, and many others.

Each school is approved on an annual basis by the Division of Vocational Education, thus requiring a renewal each year.

A most significant development in the field of private trade schools is the formation of the National Association of Trade and Technical Schools two years ago. The owner of one of New Jersey's private trade schools was the moving force for the formation of this association. Within the past few months this association has established an Accrediting Commission, separate and distinct from the school association, with top level personnel to evaluate and rate those schools wishing to be accredited. It is expected that this Accrediting Commission will receive the recognition of the U. S. Department of Health, Education and Welfare. Among the first group of schools to apply for evaluation were four New Jersey private trade schools.

Some New Jersey Firsts in the Nation

There are many developments in the field of Vocational Education which were accomplished during the last two years that established a national record for the State. Among these achievements, are the following:

- The nation's packaging industry has helped to establish a facility for training packaging industry mechanics.
- State Workshop Conference for Master Planning in Vocational-Technical Education.
- Technology for Children Project (K through 6) funded by the Ford Foundation.
- Creation of a Center for Occupational Education at Jersey City State College in cooperation with the Western Electric Corp.
- First State in the United States to have parochial high school Distributive Education programs.
- First New Jersey student elected President to the National Future Homemakers Association.
- Establishment of Public Information Unit co-sponsored by a private college and a Department of Education.
- Registered Nurse Refresher Training Program (under MDT).
- A Governor's Symposium on Education and Training for Employment emphasizing coordination and cooperation among public and private agencies.

Acknowledgements

Our sincere thanks are extended to all who cooperated in making this publication possible, and especially —

- those schools who generously provided photographs of their programs
- students in the pilot program for Visual Communications Technology and their principal, Mr. Hollis W. Wyks, at the Marie H. Katzenbach School for the Deaf, for the printing
- the Public Information Committee of the Division: Mr. Ralph Bregman, Chairman; Mrs. Chrystine Shack; Mr. Rodney Jurist; and Mr. Donald Amiott, for preparation and development of the contents as provided by the Division staff; and final editing by Dr. Bernard A. Kaplan.

New Jersey Vocational Education Advisory Council

David Buck	John W. Helmstaedter	Charles H. Marciante	Mrs. Rosalie Risinger	Chester J. Tyson
Hayworth L. Farlow	Charles Hurford	Dr. Ralph Morgen	Jerome Sehulster	Forrest A. R. Wills
Howard E. Hebble	Leonard Johnson	Robert G. Pecka	James R. Tobin	Mrs. Barbara Wicklund

Finances and Statistics

The importance of vocational education to our country is evidenced by the fact that financial aid in substantially increasing amounts is being provided by national, state and local governments. Federal aid has furnished an impetus through a succession of Acts, probably the best known of which are the following:

ACT	*YEAR ADOPTED*
First Morrill Act	1862
Second Morrill Act	1890
Smith-Hughes Act	1917
George-Deen Act	1936
George-Barden Act	1946
The Vocational Education Act	1963

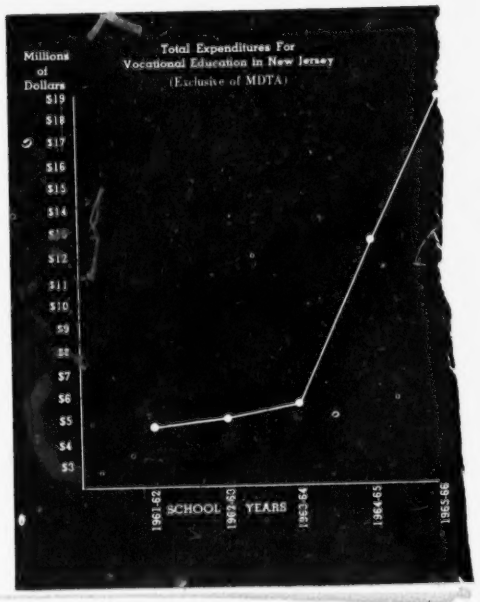
Through consolidation and amendments, Federal funds are now provided to the States through the Smith-Hughes Act, the George-Barden Act, and the Vocational Education Act of 1963. (Funds under MDTA, totaling nearly $25 million for the last two years. are alsc administered for the State by the Division of Vocational Education.) Funds currently (1966/67) allotted to New Jersey under these Acts are the following amounts:

ACT	
Smith-Hughes	$ 201,903
George-Barden	876,457
Vocational Education Act of 1963 (Includes Vocational Work-Study Funds)	5,658,707
	$6,737,067

These Federal funds must be matched with State and/or local funds at a minimum of a dollar-to-dollar ratio. The following table shows expenditures for vocational education in New Jersey over a period of five years:

	Federal	*State*	*Local*	*Total*
1961-62	$1,094,543	$1,450,970	$2,141,927	$ 4,687,440
1962-63	$1,185,865	$1,407,178	$2,436,013	$ 5,029,056
1963-64	$1,133,264	$1,593,200	$2,792,386	$ 5,518,850
1964-65	$4,229,140	$3,581,982	$4,821,319	$12,632,441
1965-66	$6,190,532	$5,731,221	$7,377,023	$19,298,776

The Finance and Statistics Branch of the Division of Vocational Education shares the responsibility for the proper accounting and State-wide distribution of all the Federal funds and a portion of the State funds. In addition, statistical records related to finances, programs and personnel are maintained.



Preparing New Jersey Workers

for Tomorrow's Society

Printed by the Marie H. Katzenbach School for the Deaf
West Trenton, New Jersey

VT 001 847
Stephenson, Don Ray
They Came to Contra Costa College, 1966-67.

Contra Costa Coll., San Pablo, Calif.
MF AVAILABLE IN VT-ERIC SET.
Pub Date - 66 46p.

*COMMUNITY COLLEGES; STUDENT RECORDS; *STUDENT CHARACTERISTICS; *STUDENT ENROLLMENT; SOCIOECONOMIC BACKGROUND
*CONTRA COSTA COLLEGE; CALIFORNIA

The purpose of this study was to give a basis for development of course offerings and curriculum to meet student needs. The study is divided into 3 parts: (1) the trends as indicated by the available data, (2) current data on the day-time students, and (3) the evening or special class students. The number of students has increased over the last 4 years. The question is asked as to what happens to the large freshman class who do not plan to complete college--some students extend their time in college, some transfer to another institution, and some are not high school graduates. Comparing the results of tests, the Contra Costa College students score as well as other junior college freshmen on the American College Test. Illustrations and tables are given for: numbers of students attending Contra Costa College, and various personal information such as place and date of birth, high school data, prior college experience, employment, income, marital status, plans upon graduation, etc. Of the 2,094 students in the day classes, 254 are work study students. The same information was tabulated for the 2,273 extended day students. (MS)

VT001847

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THEY CAME TO CONTRA COSTA COLLEGE

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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1966 – 1967

VT001847

TABLE OF CONTENTS

	PAGE
INTRODUCTION	1-5
HOW MANY ATTENDED CONTRA COSTA COLLEGE?	6
WHERE DID THEY LIVE?	6
DAY CLASSES	7
PLACE OF BIRTH	8
CITIZENSHIP	8
HOW MANY WERE HIGH SCHOOL GRADUATES?	9
YEAR OF HIGH SCHOOL GRADUATION	9
FROM WHAT HIGH SCHOOL DID THEY COME?	10
HIGH SCHOOL PROGRAM	11
HOW MANY ATTENDED COLLEGE PRIOR TO ENTERING C.C.C.?	12
WHAT YEAR OF EDUCATION HAD THEY COMPLETED UPON ENTERING C.C.C.?	12
HOW MANY WERE EMPLOYED?	13
OCCUPATION OF HEAD OF HOUSEHOLD	14
APPROXIMATE INCOME OF FAMILY	14
HOW OLD WERE THEY?	15
MARITAL STATUS	15
IN WHAT SEMESTER WERE THEY IN C.C.C.?	16
WHAT WAS THEIR YEAR IN COLLEGE?	16
HOW MANY PLANNED TO GRADUATE?	16
UNIT LOAD	17
MAJORS AT C.C.C.	18-19-20
TO WHAT SCHOOL DID THEY INTEND TO TRANSFER?	21
INTENDED OCCUPATION UPON COMPLETION OF EDUCATION	22
COMPARISON OF A.C.T. SCORES WITH OTHER JUNIOR COLLEGE STUDENTS	23
WORK STUDY STUDENTS	24

EXTENDED DAY

	PAGE
HOW MANY ATTENDED CONTRA COSTA COLLEGE?	25
WHERE DID THEY LIVE?	25
EXTENDED-DAY CLASSES	26
PLACE OF BIRTH	27
HOW MANY WERE HIGH SCHOOL GRADUATES?	28
FROM WHAT HIGH SCHOOL DID THEY COME?	29
HIGH SCHOOL PROGRAM	30
HOW MANY ATTENDED COLLEGE PRIOR TO ENTERING C.C.C.?	31
WHAT YEAR OF EDUCATION HAD THEY COMPLETED UPON ENTERING C.C.C.?	31
HOW MANY WERE EMPLOYED?	32
OCCUPATION OF HEAD OF HOUSEHOLD	33
APPROXIMATE INCOME OF FAMILY	34
HOW OLD WERE THEY?	35
MARITAL STATUS	35
IN WHAT SEMESTER WERE THEY IN C.C.C.?	36
WHAT WAS THEIR YEAR IN COLLEGE?	36
HOW MANY PLANNED TO GRADUATE?	36
UNIT LOAD	37
MAJORS AT CONTRA COSTA COLLEGE	38-39-40
TO WHAT SCHOOL DID THEY INTEND TO TRANSFER?	41
INTENDED OCCUPATION UPON COMPLETION OF EDUCATION	42

INTRODUCTION

This report has many implications for our course offerings and for development of the curriculum in terms of meeting student needs. The first section of this report is composed of a series of highlights that seem particularly significant to the author. The editorial comments and interpretations are my responsibility alone and undoubtedly reflect, to some extent, personal biases. If the reader will excuse this weakness and at the same time evaluate the data for himself, so he can draw his own conclusions, then the purposes of this report are at least partially fulfilled.

The 1966-67 Characteristics Study is divided into three parts. Part one is comprised of a discussion of the trends indicated by the data from this report and the report of 1964-65. Part two is the current data on our day time students. Part three is devoted to the students attending Contra Costa College during the evenings.

The information used in this study was obtained largely from questionnaires completed at the time of enrollment.

Don Ray Stephenson
Project Director

Credits:
Russell Stillwell - Dean of Student Services
Wayne Johnson - Registrar
Lee Moody - Data Processing
Clara Barrie - Coordination

TRENDS

Some of the most noticeable trends that need to be carefully examined are presented here in a descriptive form. The actual figures can be located through use of the Table of Contents.

Enrollment Results

There has been an interesting change in attendance patterns. There are ten percent fewer students attending during the day than there were two years ago. Most of this drop was among the men. There are several probable reasons for this: (1) increased draft calls; (2) consequent lower enrollment in state colleges and universities - who then accept more of our "eligible" students; and (3) low rate of unemployment.

The employment rate has been frequently demonstrated to be directly related to college attendance. This seems particularly true in light of a 25.6% increase in evening enrollments. The enrollments of men in the evening account for most of the increase during the evening. Another indication of the role of employment in enrollment is manifest by 60% of the day time men and 30% of the women working full or part time.

The number of students enrolled in both evening and day courses has sharply increased in the last four years. The change has been from 160 to 485 students - an increase of over 300%! The exact reasons for such an increase are not positively known, but one should not overlook the desire for draft deferment as being a critical factor.

With such a large freshman influx, a large portion of which do not plan to complete, it becomes necessary to ask what becomes of our large freshman class each year? An adequate way to follow these students has not yet been devised. Undoubtedly some transfer, some go to work and enter the evening program, some learn the skills they need for job placement, some are drafted, some are married and some don't feel the college is meeting their needs.

The "Stretched-out" student

Fifteen percent of the students are taking more than the regular four semesters to complete their work. This is a slight drop from two years ago and is probably a by-product of increased necessity to maintain a full load in order to be eligible for draft deferment.

The Transfer Student

Our day students still intend to transfer to San Francisco State College (18%) and to the University of California (12%). A total of 56% of our day students report themselves as intending to transfer to a four year school. 44% do not intend to transfer. The number of students not intending to transfer is high in comparison to several other national studies which usually indicate 65-75% intend to transfer and 25-35% do not plan to continue beyond the junior college.

The reasons for such a reversal of the usual anticipated trends are difficult to isolate. One might hypothesise that the students (hopefully) are more realistic since only about 20% to 30% of a student body usually do transfer.

High School Drop-outs

Our student body is composed of 4.36% (132) non-high school graduates. The grades at which they dropped out of high school are not recorded. The data for evening students show that 12.45% did not complete high school or its equivalent. It is possible that we are serving the "drop-out" who went to work and not teaching those who did not go to work.

The Richmond Unified Schools, who contribute 63% of our students, report that 696 students dropped out of high school last year. If we use these figures as a reference point we may assume that we are picking up a very small percentage of the "drop-outs.

This group of potential students demand a special approach if we are to reach them. The proposed project in which a mobile unit is extended into areas of the community in order to bring the College closer to groups that are underrepresented in the student body is a positive step toward meeting the special needs of these potential students.

Testing Results

A comparison of Contra Costa College student scores on the ACT against other junior college freshman reveals that our students closely match the scoring performance of other junior college students. The only exceptions in this comparison are the large group of students who score on the bottom of the test.

One must ask if the ACT test is adequate for use with our student body. Certainly the lower limits of the test are too high for over one-third of our students. The ceiling on the test seems more than adequate. It appears that the test is built to measure average or exceptional students but ignores the lower scoring students.

A very interesting change in performance of this test is indicated when compared to the College Qualification Test administered two years ago. The C.Q.T. showed that we have a large group scoring low - but that a large group also scored quite high. This pattern no longer appears. Perhaps the best explanation for this is that the CQT, like the ACT, has a fairly high floor, but unlike the ACT it also has a low ceiling so that many students were able to score near the top of the test.

The testing results indicate the possibility of re-evaluating the ACT for its appropriateness to our needs. At the same time it may be possible to look for more diagnostic tests to be used with those who score low on the ACT. The proposed program of use in the General Aptitude Test Battery for those in-

terested in vocational-technical programs might be expanded to those who initially do poorly on the ACT. The resultant scores would help define the areas of strength and be of benefit in planning an educational program closely aligned with individual student needs.

HOW MANY ATTEND CCC?

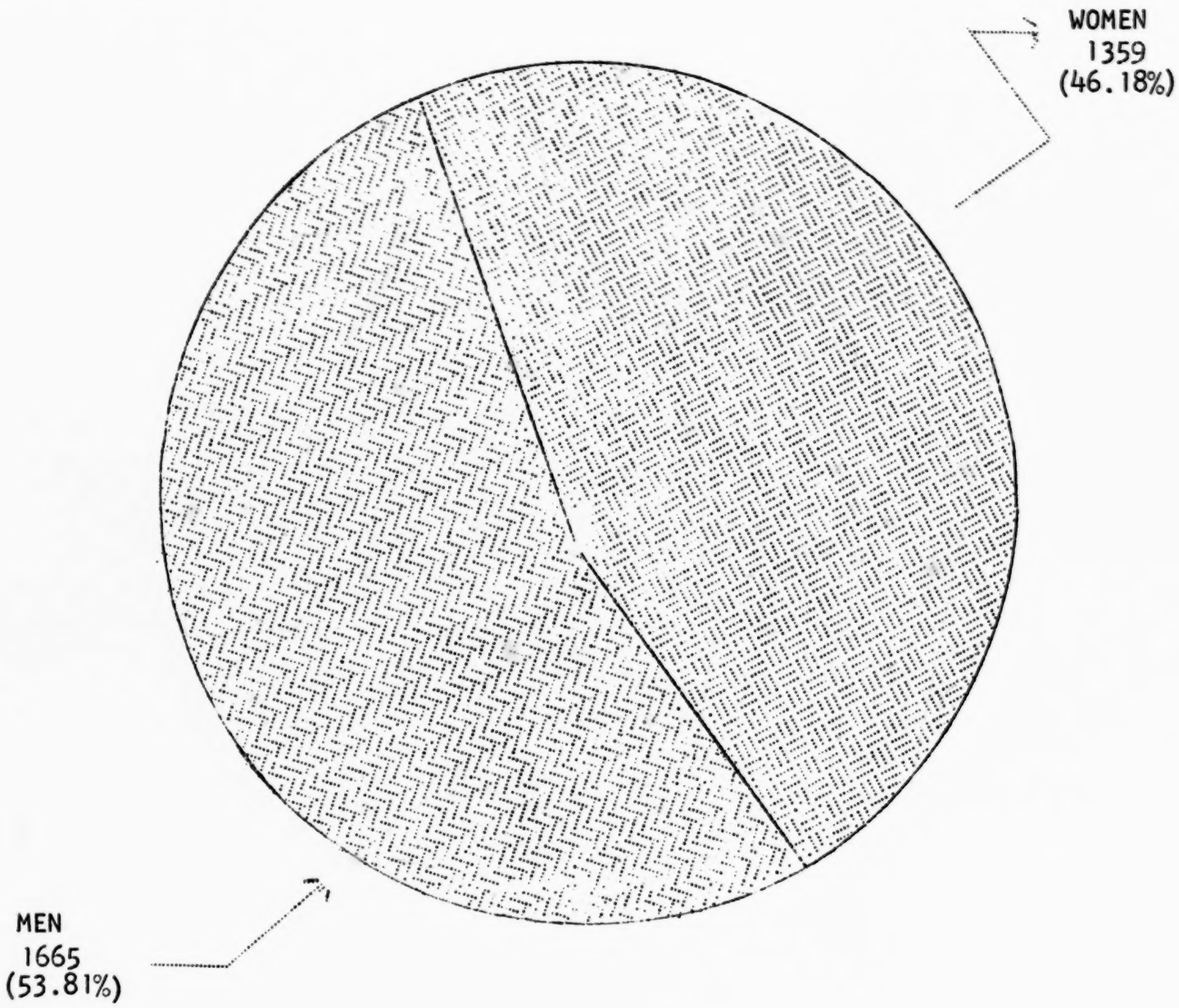
	Men	Women	Total
Day Classes	1367	1173	2539
Extended Day Classes	1543	730	2273
Total	2910	1903	4812
Concurrent Enrollment Day & Extended Day Classes, included in Day Characteristics	298	186	485

WHERE DID THEY LIVE?

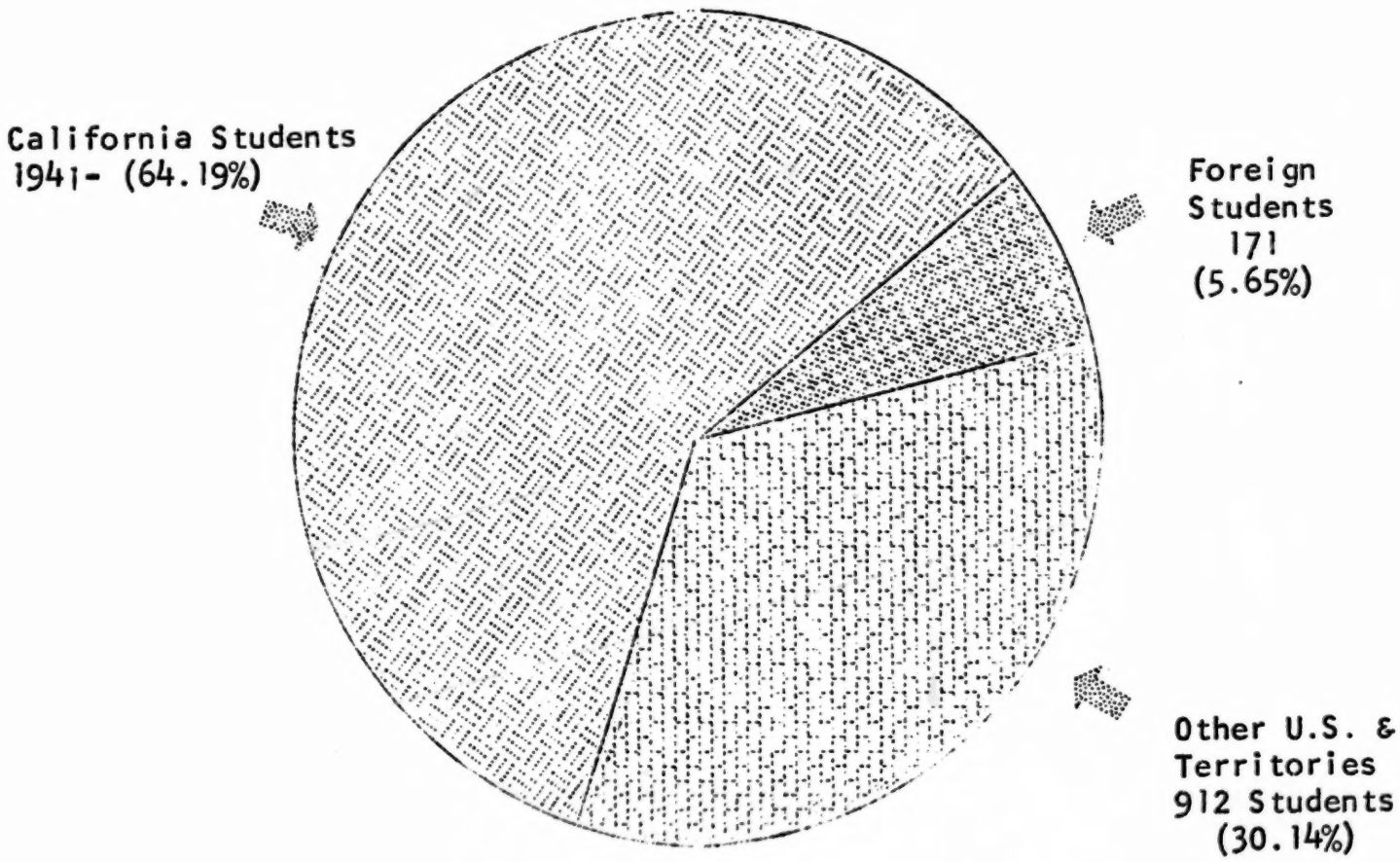
	Day	
	Number	%
Richmond	1320	43.65
El Cerrito	469	15.50
San Pablo	434	14.35
El Sobrante	226	7.47
Pinole	145	4.75
Rodeo	50	1.65
Crockett	38	1.25
Orinda	21	0.69
Other Contra Costa County	148	4.89
Albany	7	2.31
Berkeley	43	1.42
Oakland	78	2.58
Other Alameda County	3	0.09
Other California	42	1.38

DAY CLASSES

Information given on the next pages is based on data compiled concerning 3024 students in day and extended-day classes. Characteristics are reported for the 485 students currently enrolled in both Day and Extended-Day classes. An attempt has been made to present information about the students' backgrounds, particularly educational, about their present characteristics and academic status at Contra Costa College, and finally about the future plans of the students.

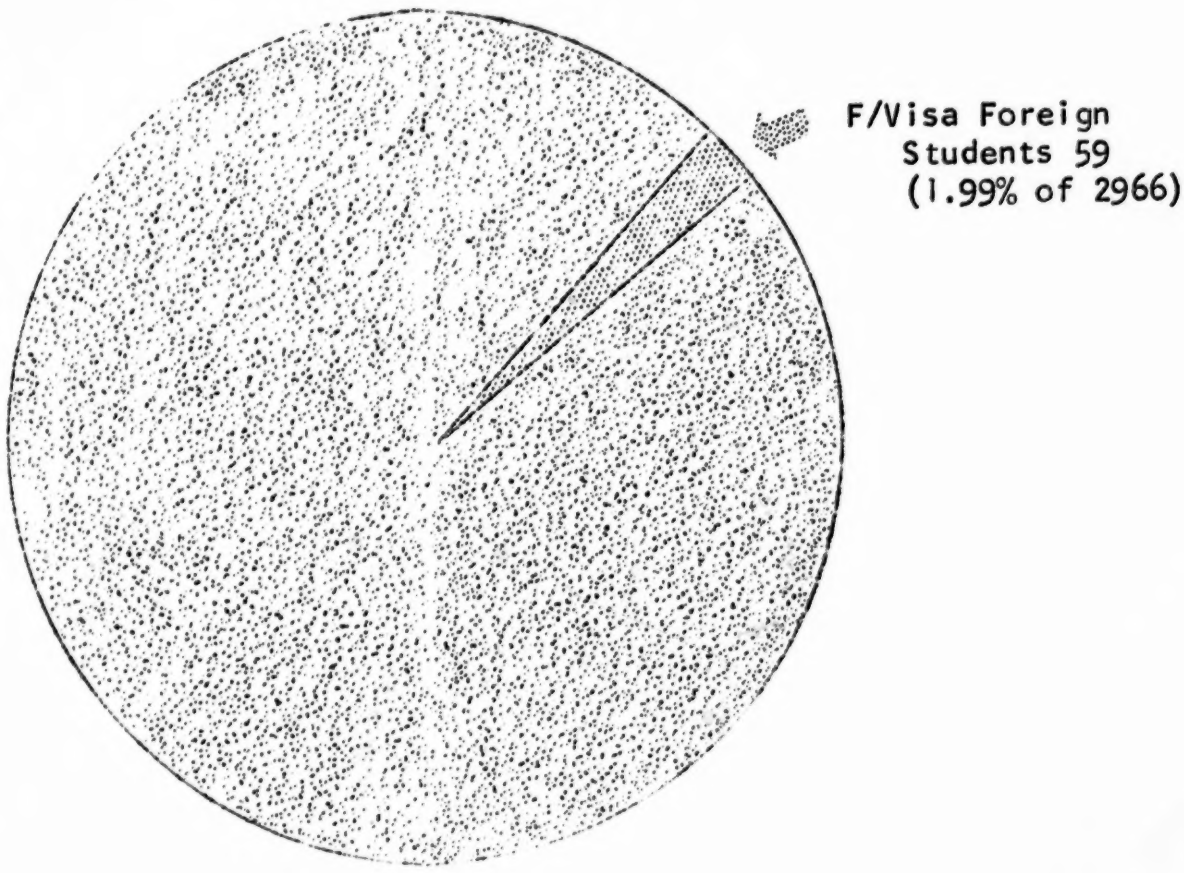


PLACE OF BIRTH

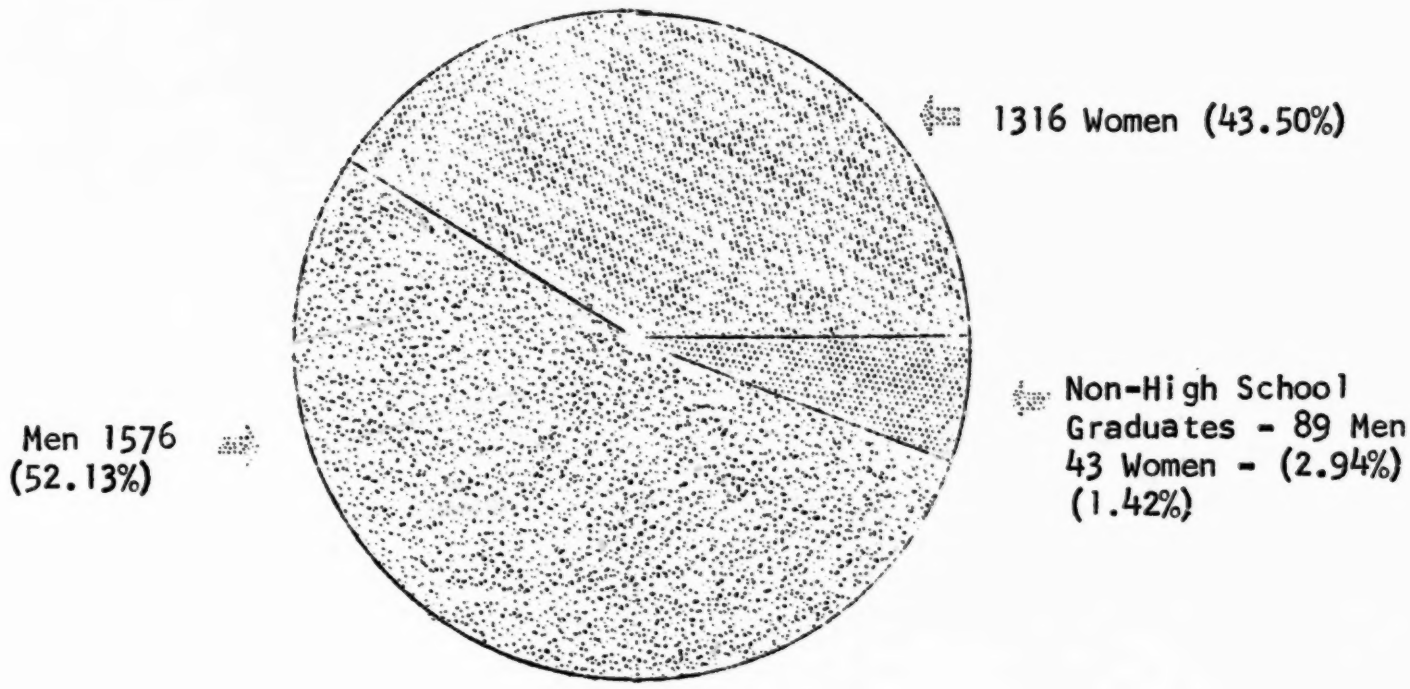


CITIZENSHIP

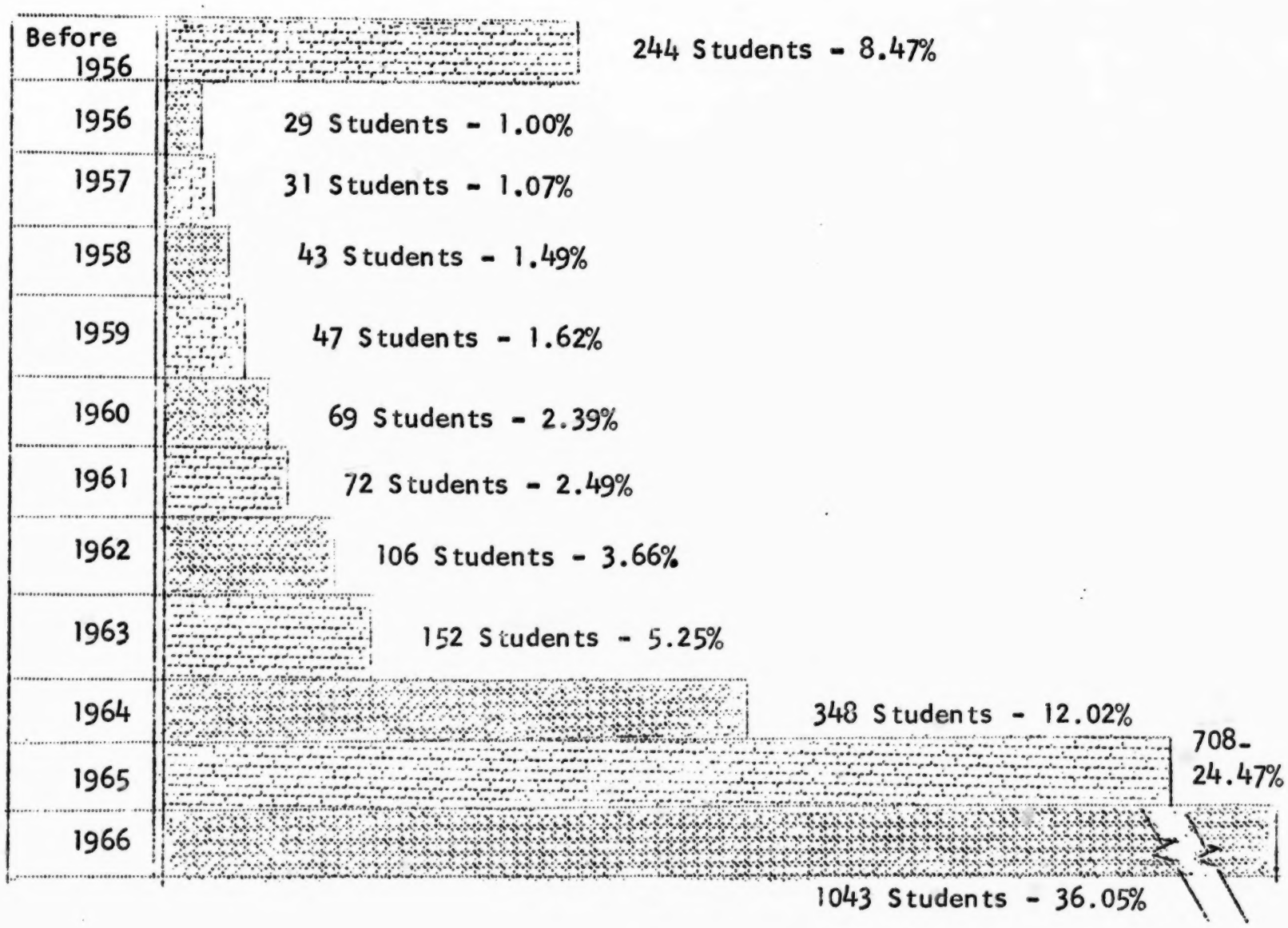
They Come From:
Canada
Chile
Hong Kong
India
Iran
Israel
Japan
Kenya
Korea
Mexico
Nigeria
Panama
North Vietnam
Philippines
Portugal
Saudi Arabia
Tahiti
Thailand
Turkey



HOW MANY WERE HIGH SCHOOL GRADUATES?



YEAR OF HIGH SCHOOL GRADUATION



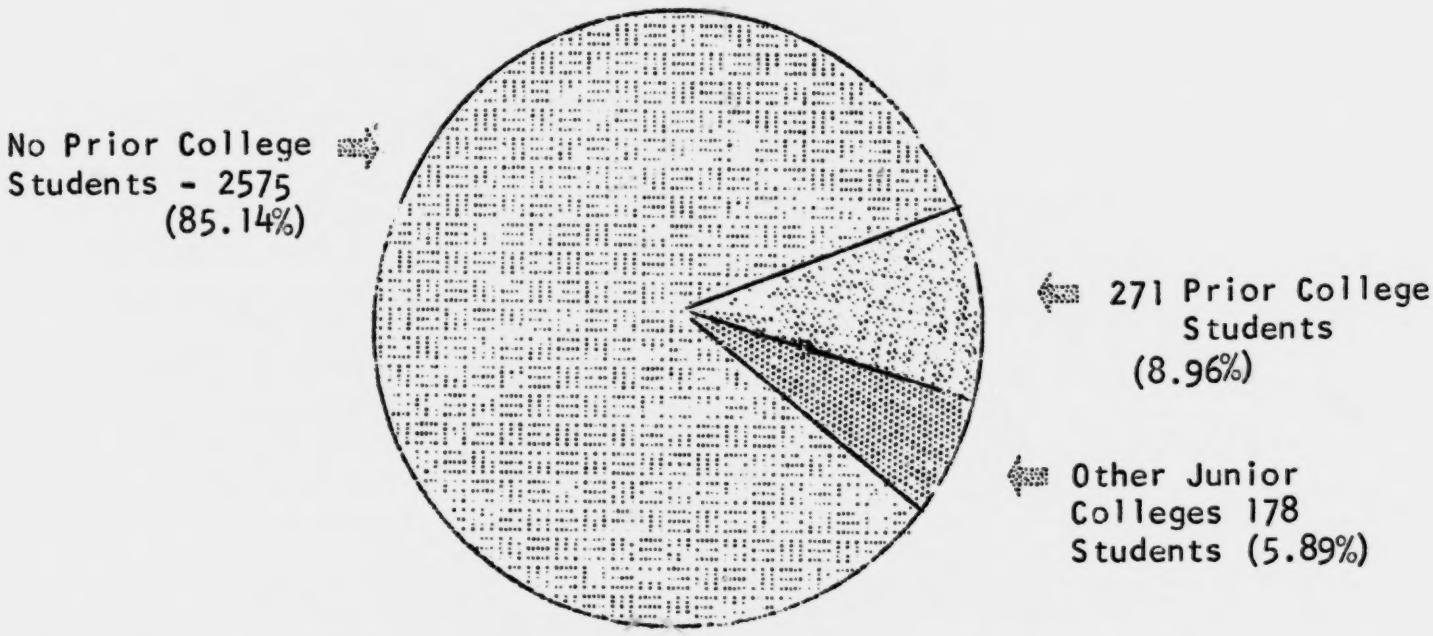
FROM WHAT HIGH SCHOOL DID THEY COME?

HIGH SCHOOL	MEN	WOMEN	TOTAL	%
Richmond	396	284	680	22.46
De Anza	196	129	325	10.75
El Cerrito	285	197	482	15.94
Harry Ells	243	179	422	13.95
John Swett	37	41	78	2.58
Other Contra Costa County	139	53	192	6.35
Albany	18	15	33	1.91
Berkeley	34	31	65	2.15
Oakland High Schools	20	29	49	.96
Other Alameda County	33	53	86	2.84
Other California	72	143	215	7.11
Other U.S.A.	114	158	272	9.00
Foreign & Territories	60	30	90	2.98
None or Not Reported	18	17	35	1.16

HIGH SCHOOL PROGRAM

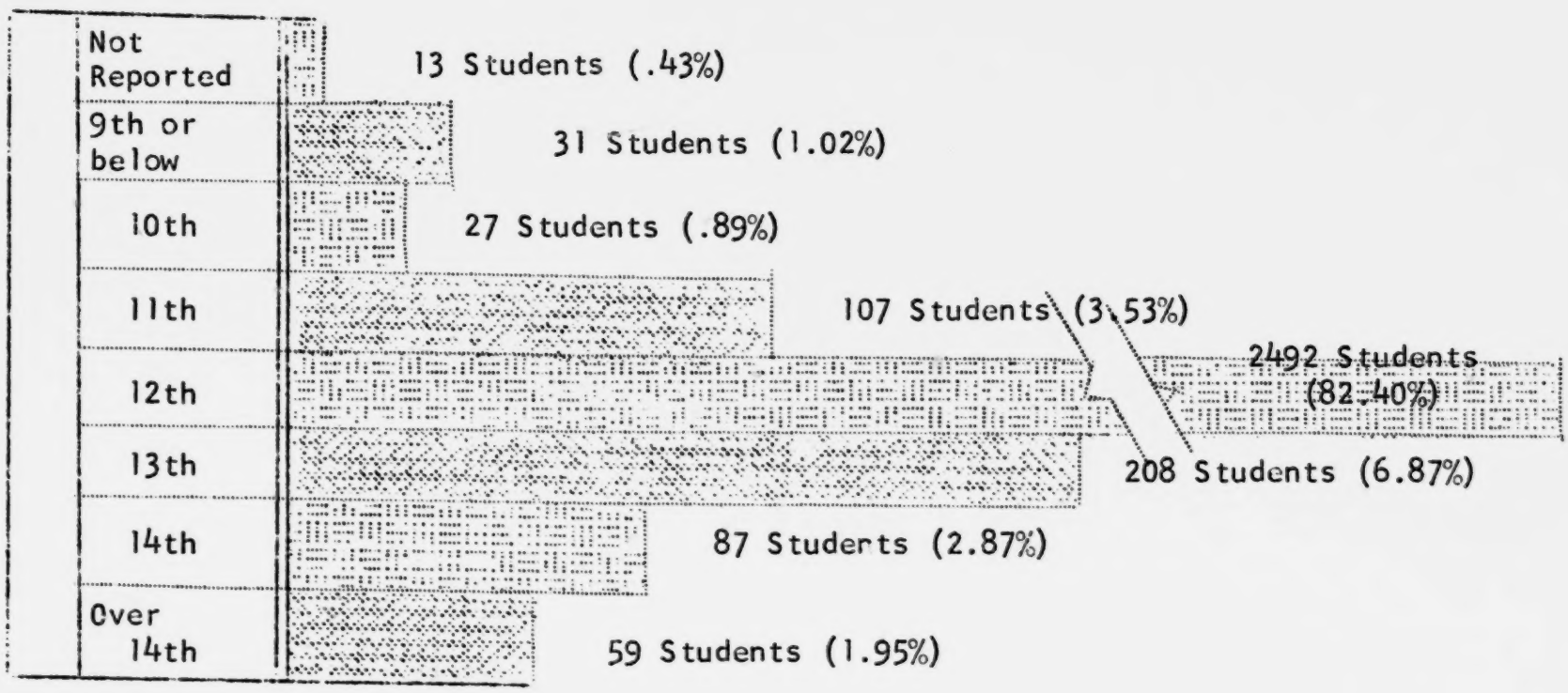
Program	Men	%	Women	%
College Preparatory	876	52.61	776	57.10
General	448	26.91	235	17.29
Pre-Technology	96	5.76	1	.07
Business	122	7.33	277	20.38
Vocational	78	4.68	16	1.18
Home Economics	1	.06	20	1.47
Other	44	2.64	34	2.50

HOW MANY ATTENDED COLLEGE PRIOR TO ENTERING CCC?



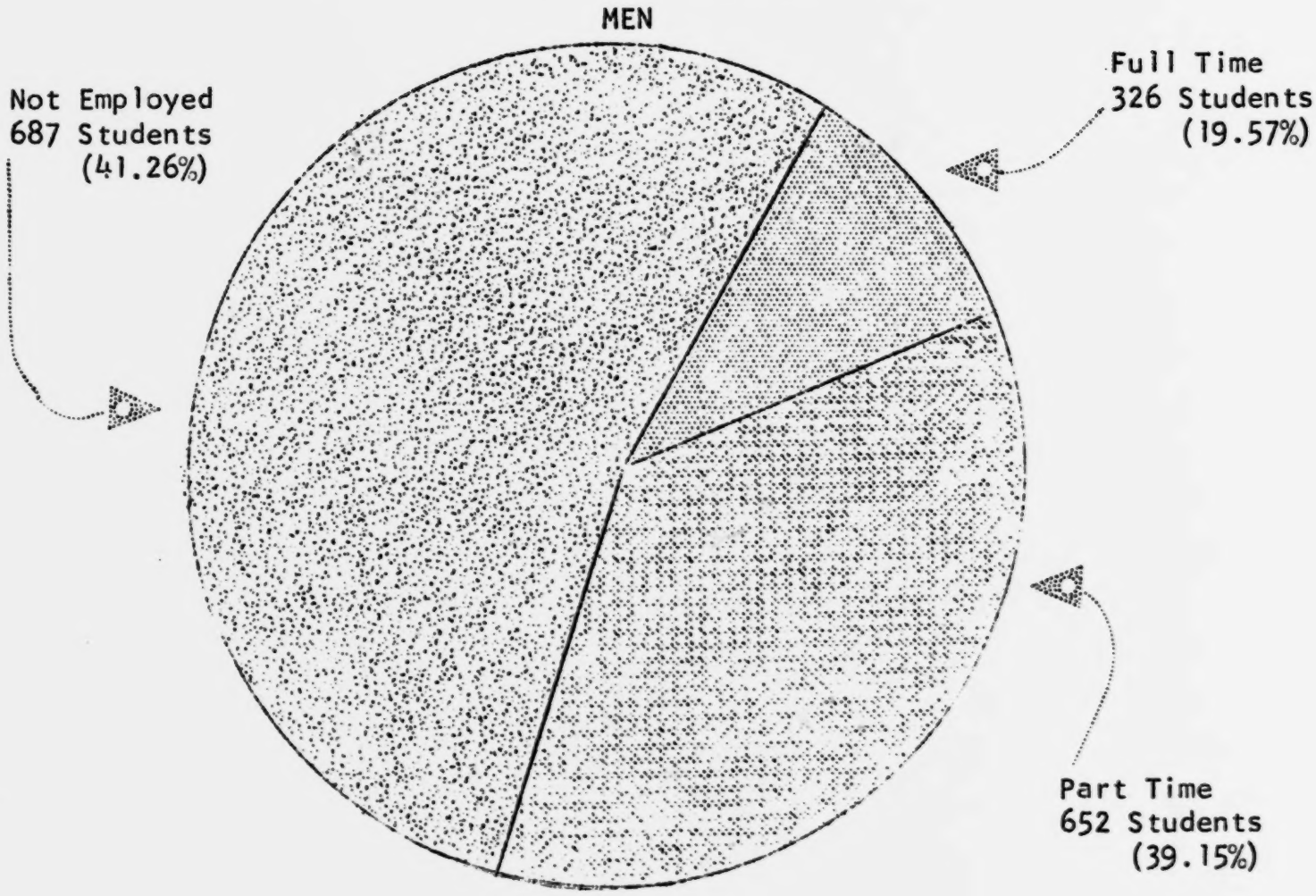
Other Junior Colleges	178
University of California (All campuses)	67
San Francisco State	18
San Jose State	14
Other State Colleges	34
Bay Area Private Colleges & Universities	10
Other California Private Colleges & Universities	15
Out-of-State Colleges & Universities	111
Other Institutions	2

WHAT YEAR OF EDUCATION HAD THEY COMPLETED UPON ENTERING CCC?

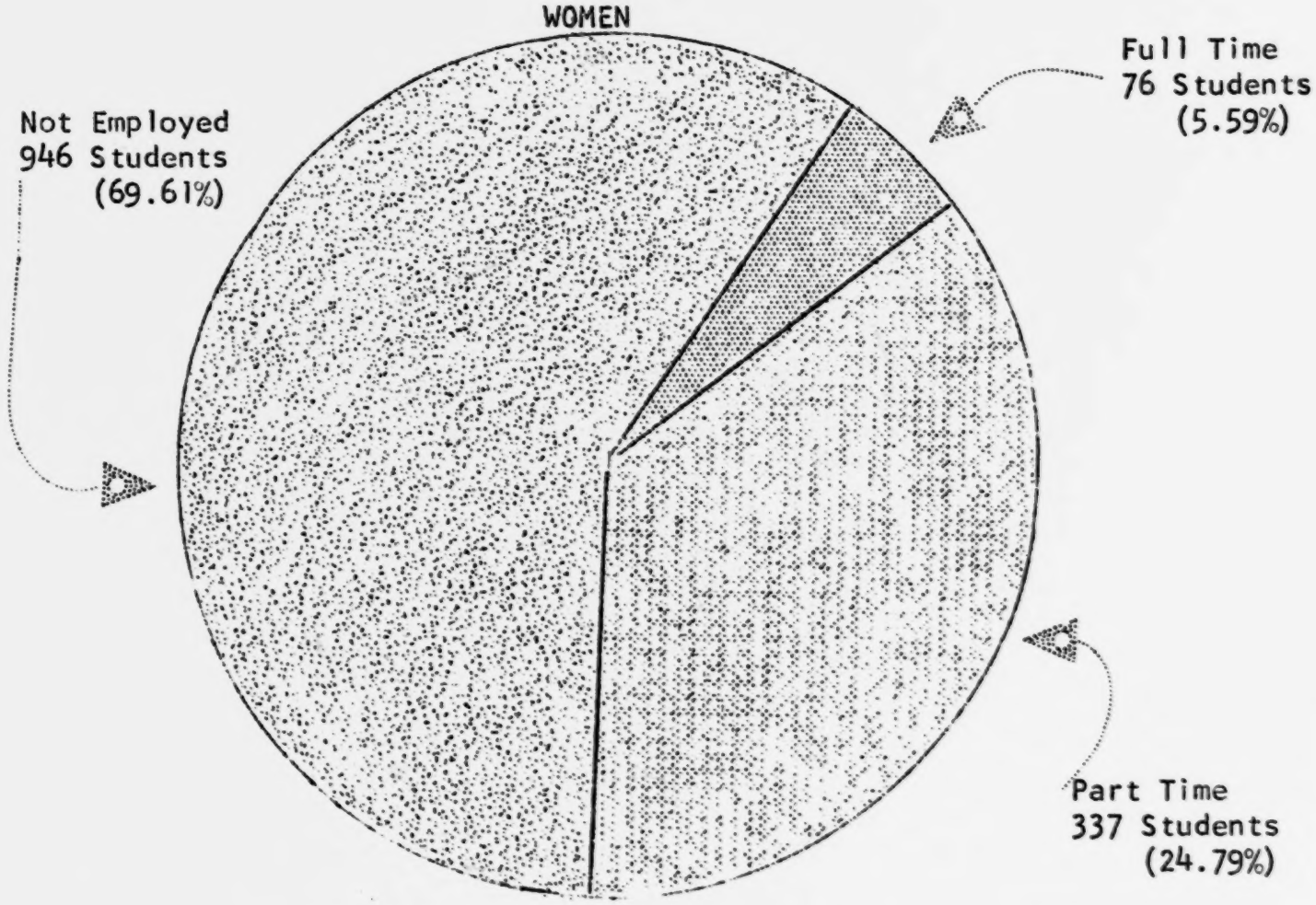


HOW MANY WERE EMPLOYED?*

MEN



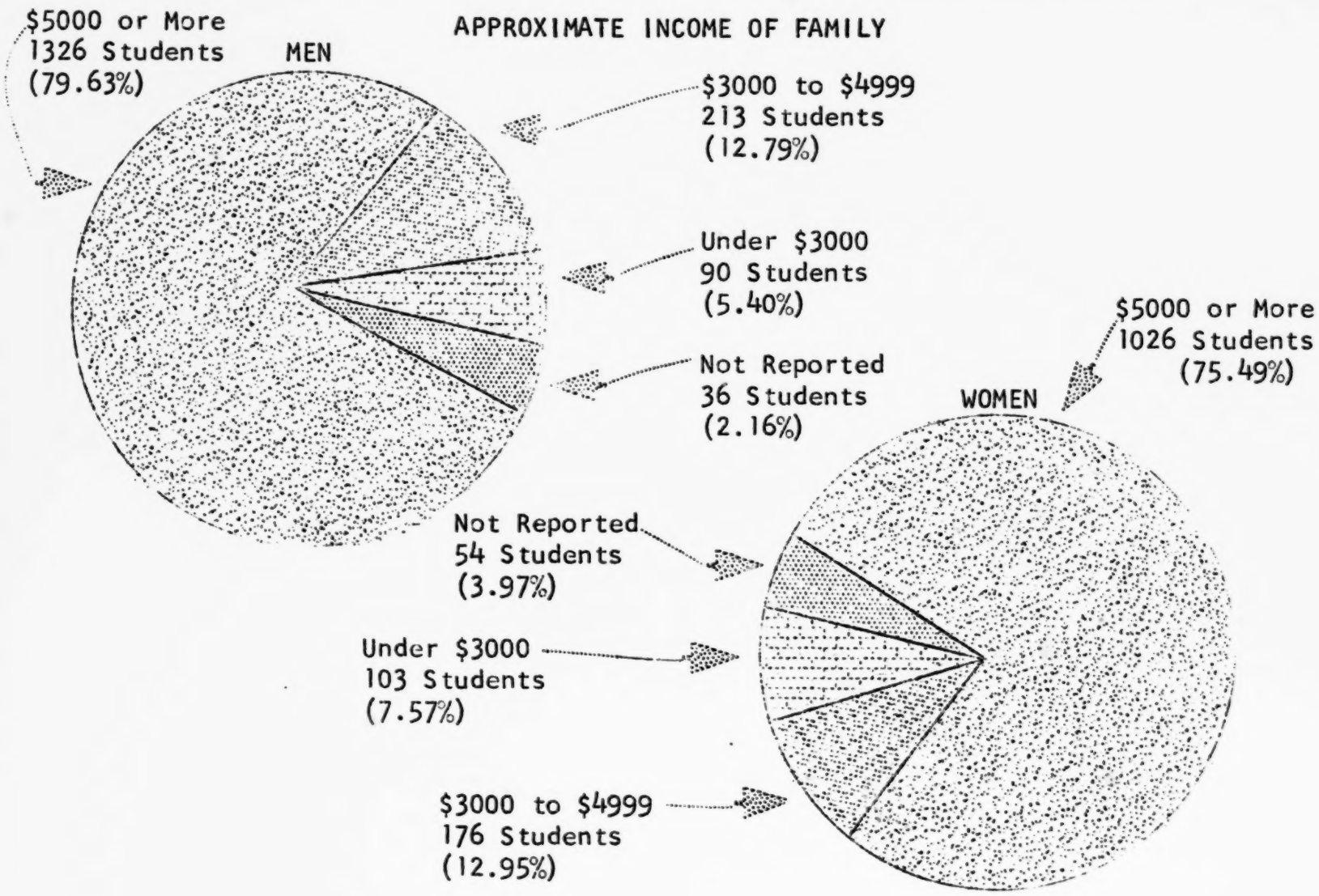
WOMEN



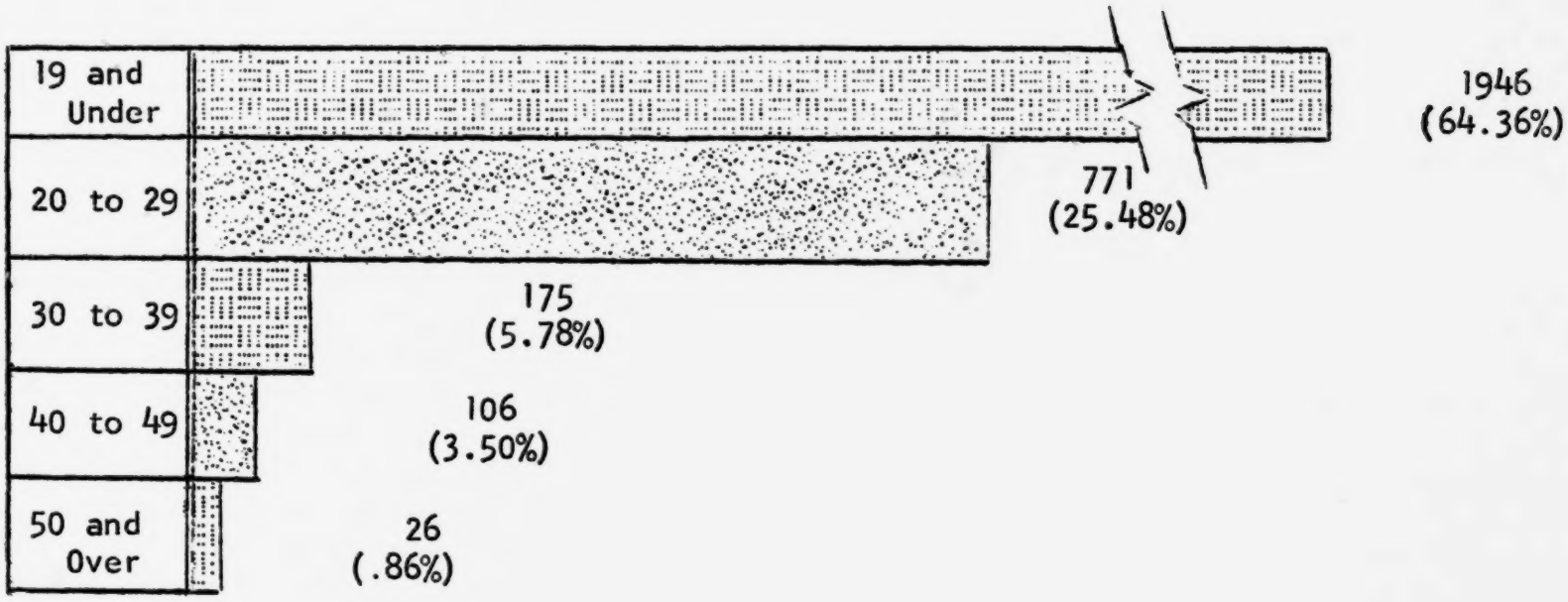
*These figures reflect the employment status of the student at the time they entered. Undoubtedly they have been modified.

OCCUPATION OF HEAD OF HOUSEHOLD

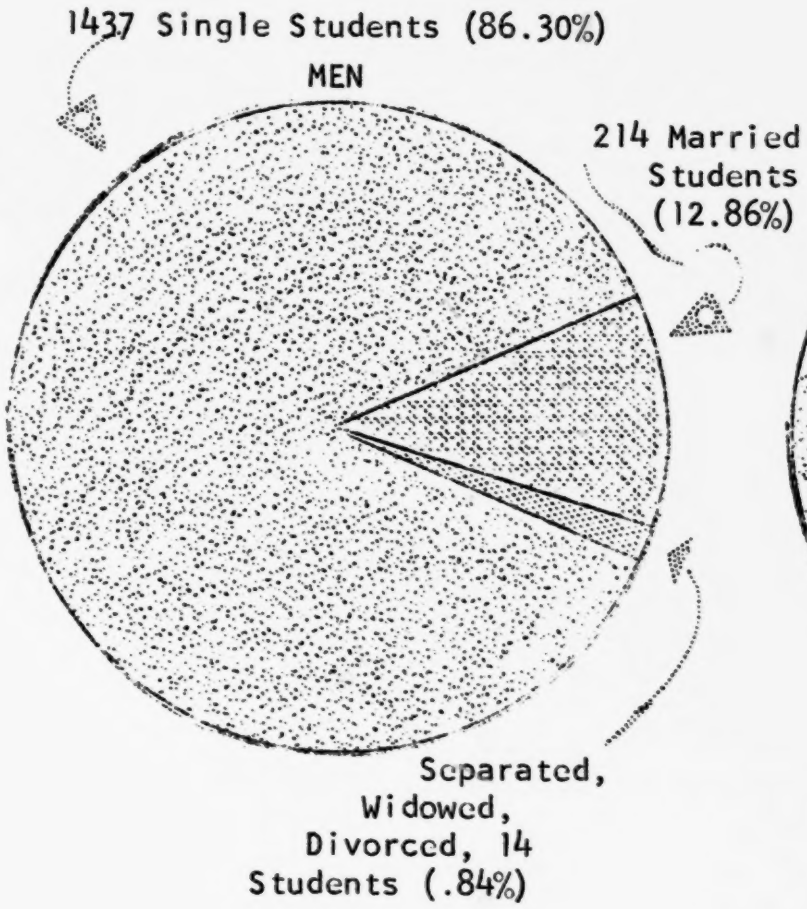
Occupation	Men	%	Women	%
Self Employed Professional	76	4.56	54	3.97
Salaried Professional	282	16.94	254	18.69
Semi-Professional or Technical	173	10.39	120	8.83
Self Employed Business	148	8.89	126	9.27
Manager or Official	147	8.83	136	10.00
Skilled Worker	479	28.76	397	29.21
Semi-skilled or Unskilled Worker	230	13.81	142	10.44
Self Employed Farmer	7	00.42	6	00.44
Other	123	7.39	124	9.12

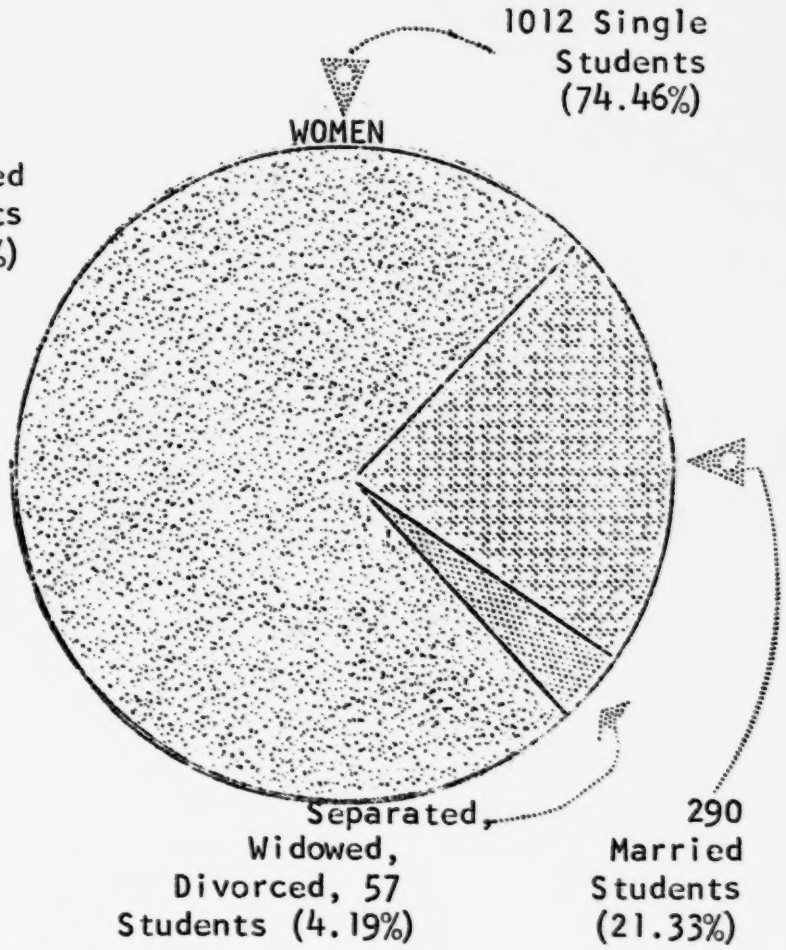


HOW OLD WERE THEY?

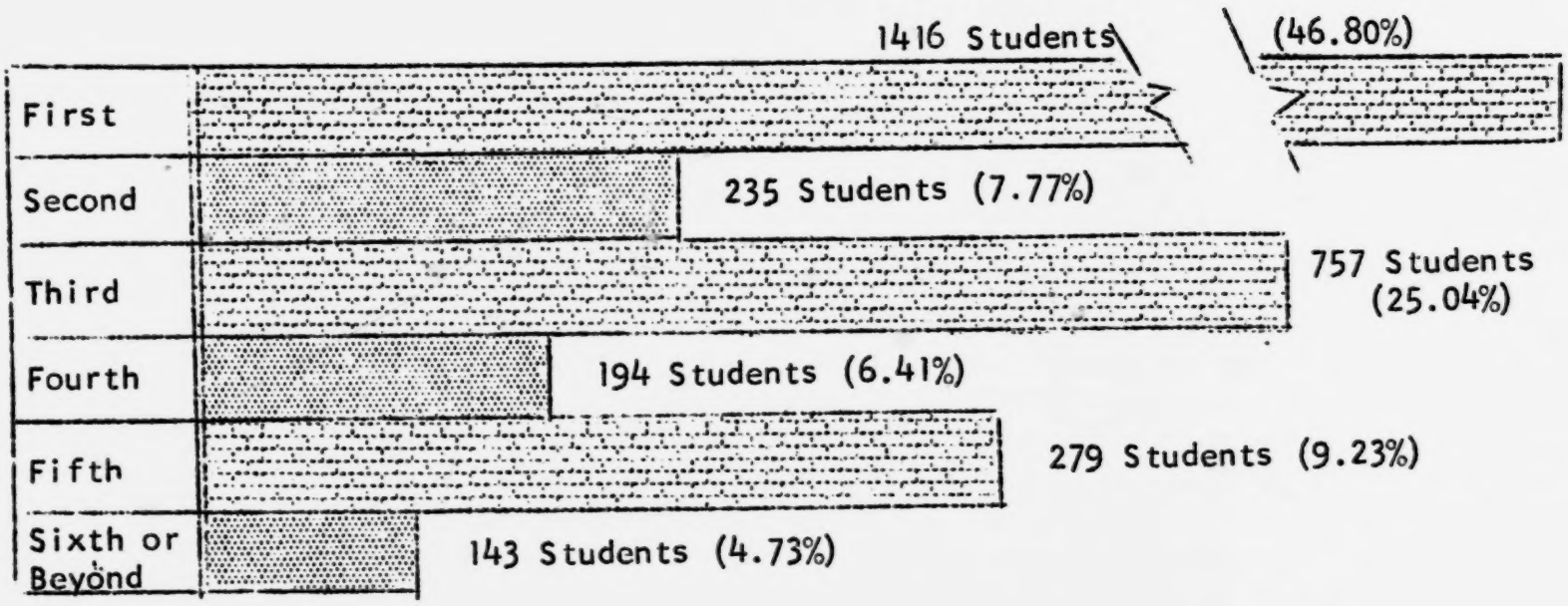


MARITAL STATUS

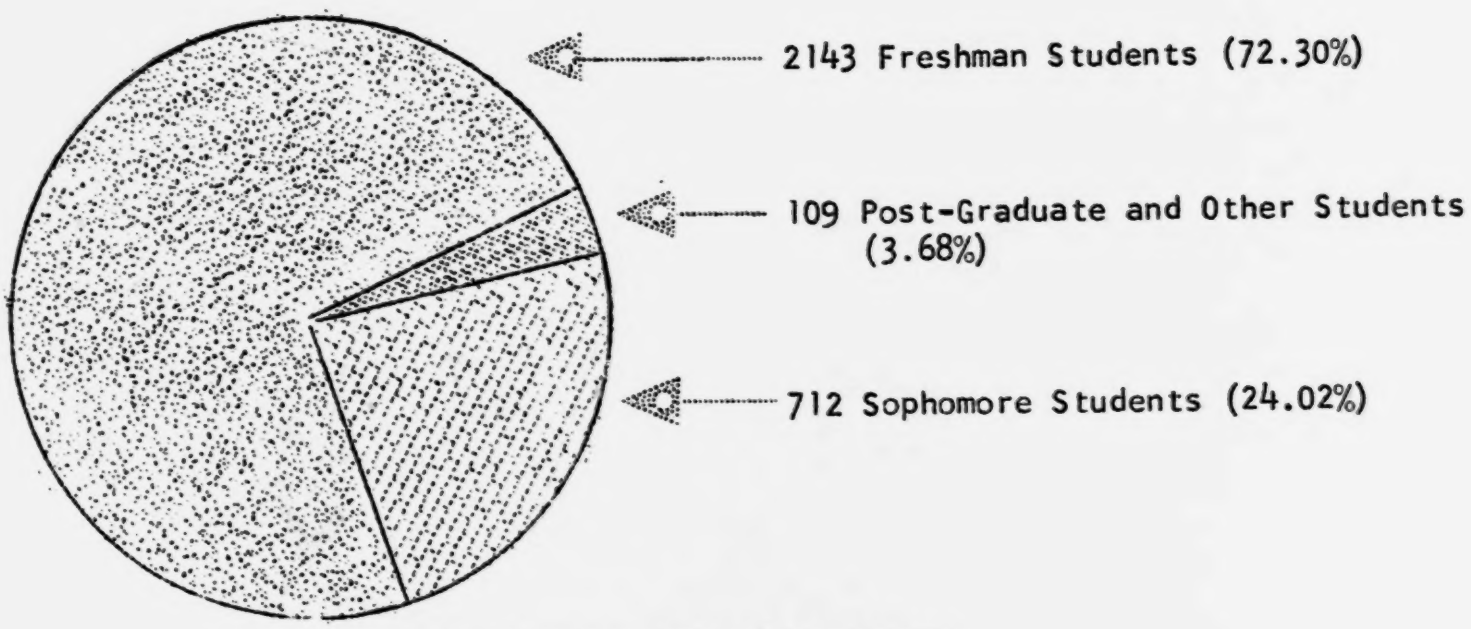




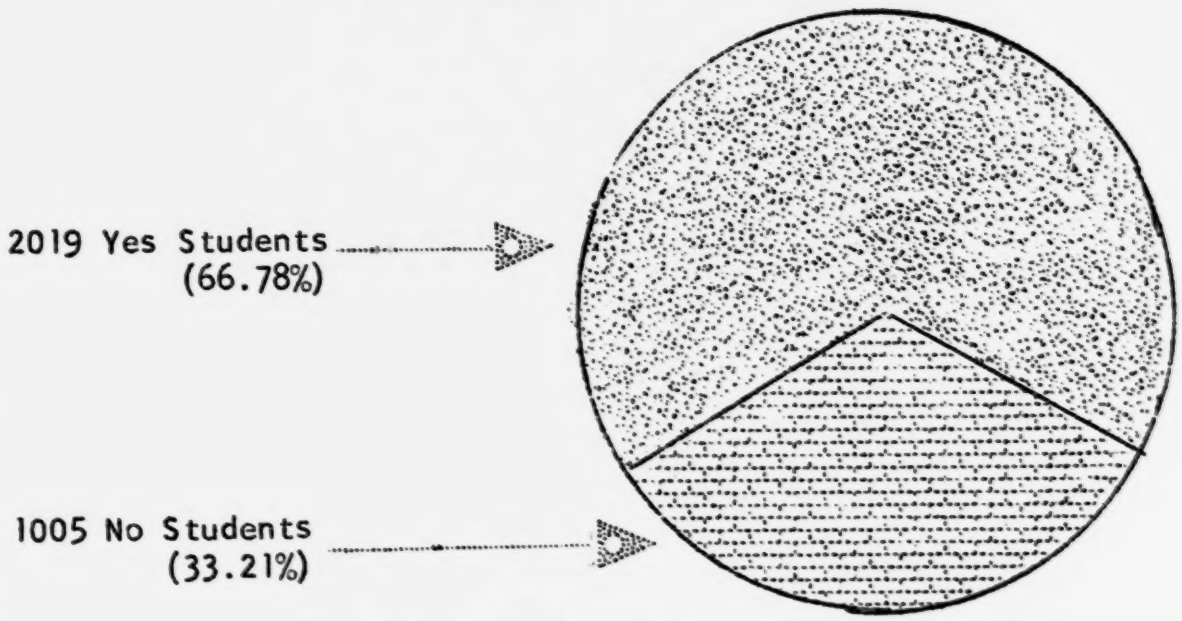
IN WHAT SEMESTER WERE THEY IN CCC?



WHAT WAS THEIR YEAR IN COLLEGE?



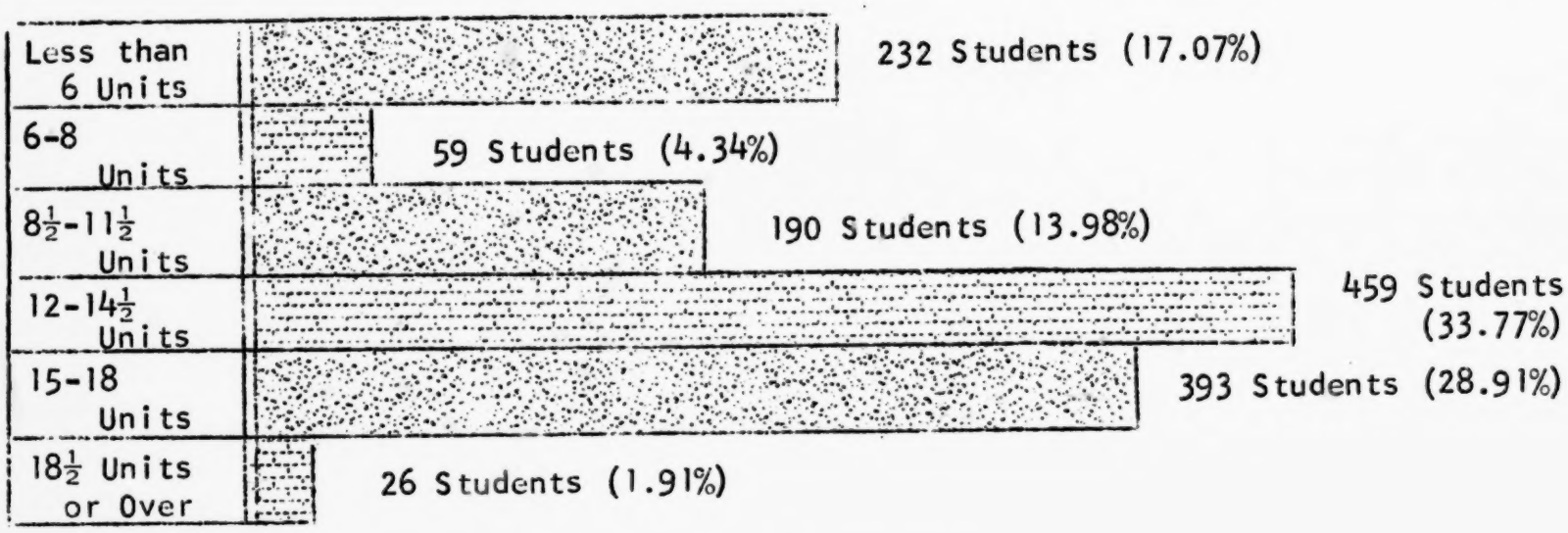
HOW MANY PLANNED TO GRADUATE?



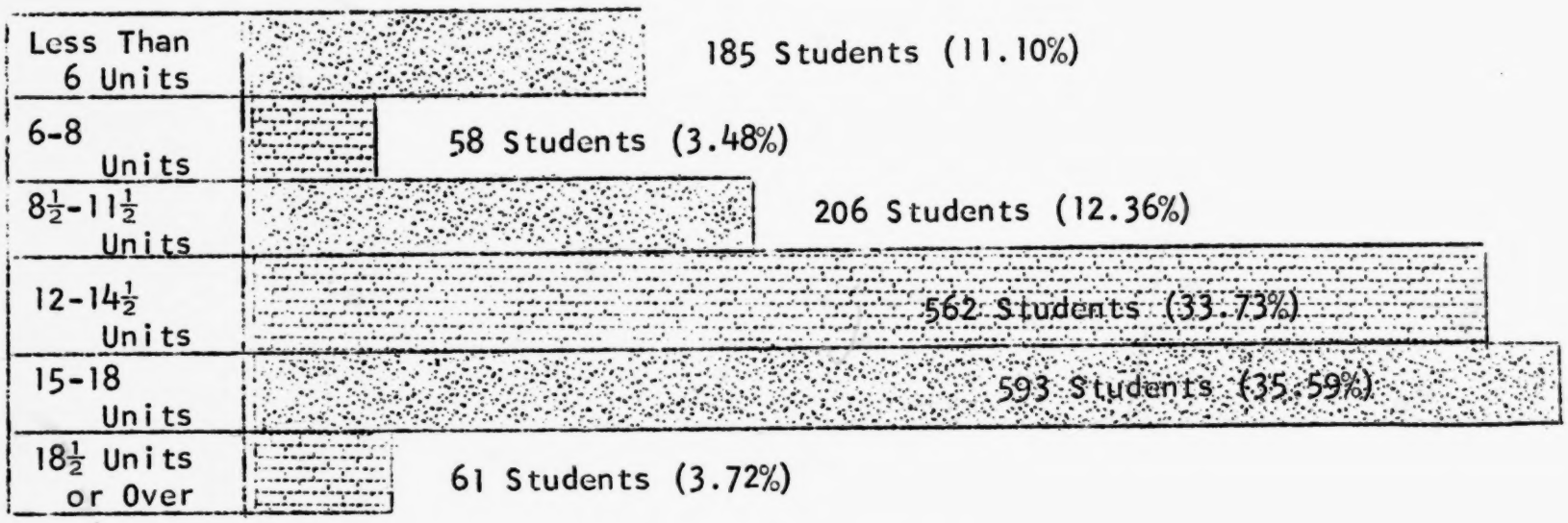
UNIT LOAD

Based on Enrollment at Registration

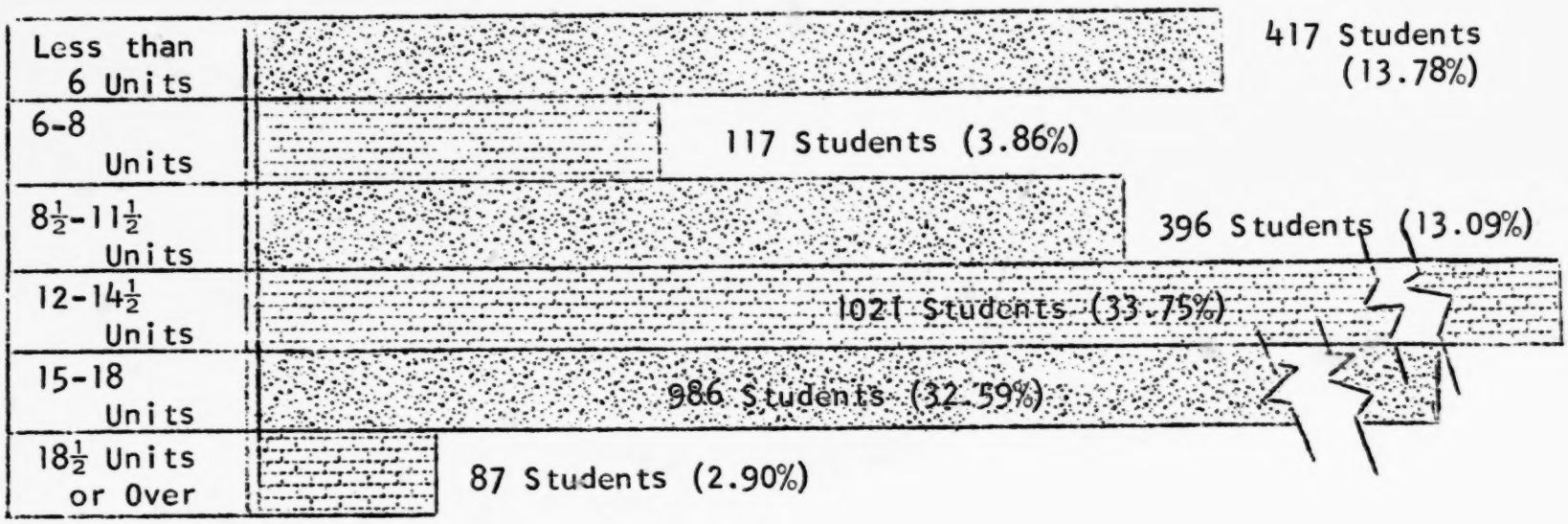
WOMEN - 1359 Students



MEN - 1666 Students



TOTAL - 3025 Students



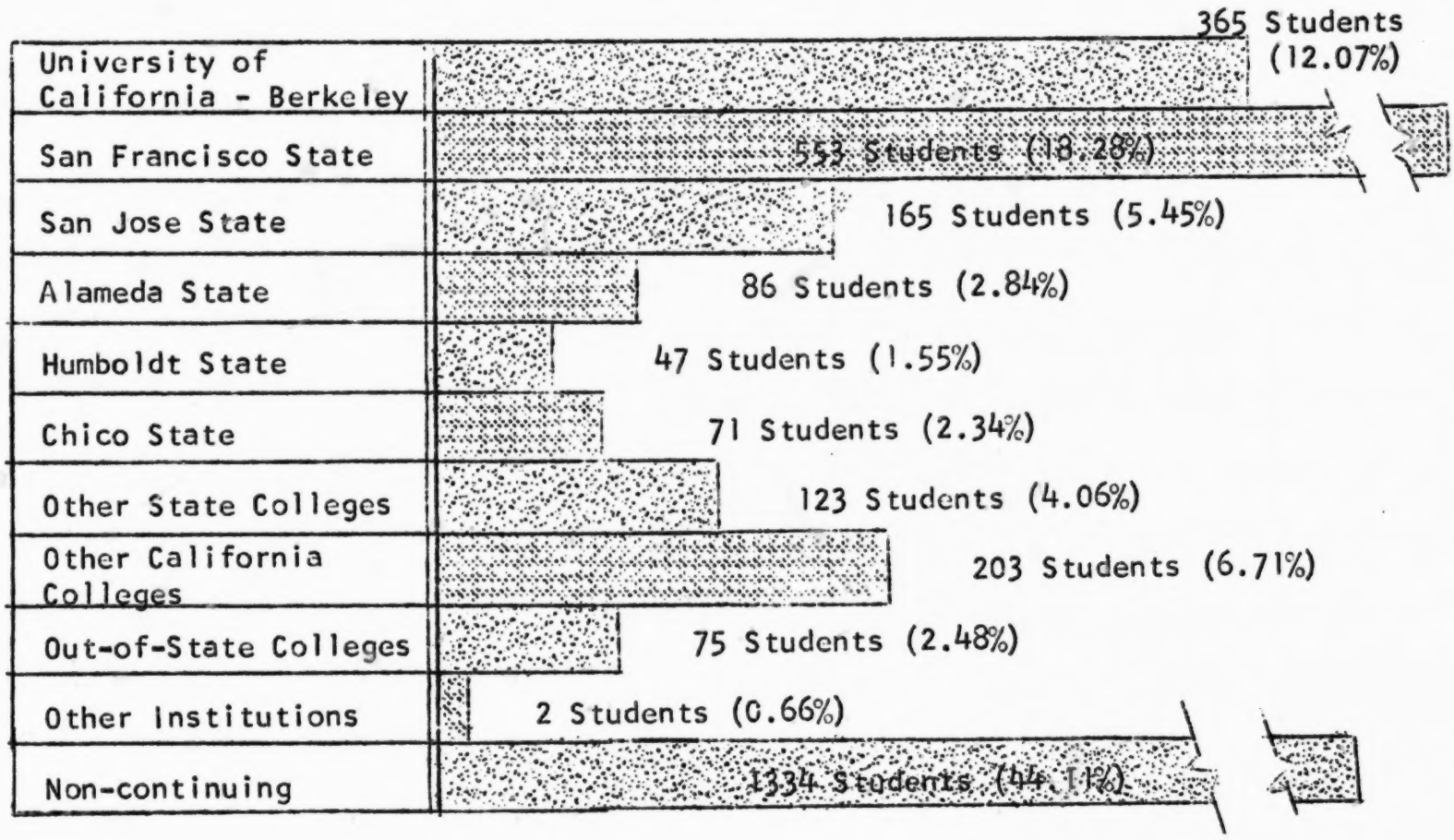
MAJORS AT CCC

MAJOR	MEN	WOMEN	TOTAL	%
AGRICULTURE	68	7	75	1.17
General	24	6	30	0.47
Forestry, Wildlife, Conservation	40	1	41	0.64
Veterinary	4	0	4	0.06
BUSINESS	258	224	482	7.56
General & Clerical	95	85	180	2.82
Secretarial	2	90	92	1.44
Sales & Merchandising	13	5	18	0.28
Administration	78	10	88	1.38
Accounting	36	14	50	0.78
Data Processing	34	20	54	0.84
ENGINEERING & TECHNOLOGY	320	10	330	5.18
Pre-professional	200	4	204	3.20
Engineering Aides	1	0	1	0.01
Technician	17	0	17	0.26
Architecture & Drafting	79	6	85	1.33
Other	23	0	23	0.36
HEALTH, PE, RECREATION & SAFETY	56	80	136	2.13
Health	0	0	0	0.00
Physical Education	39	17	56	0.87
Recreation	3	4	7	0.10
Safety	0	0	0	0.00
Other	14	59	73	1.14

MAJOR	MEN	WOMEN	TOTAL	%
LIBERAL & FINE ARTS	124	209	333	5.22
General Liberal Arts	58	81	139	2.18
Art	21	21	42	0.65
English, Journalism	17	21	38	0.59
Speech, Drama, Radio, TV	8	7	15	0.23
Foreign Language	8	21	29	0.45
Home Economics	0	40	40	0.62
Literature & Philosophy	2	4	6	0.09
Music	7	14	21	0.32
Other	3	0	3	0.04
NATURAL SCIENCE & MATHEMATICS	141	226	367	5.76
Life Sciences	17	8	25	0.39
Mathematics	22	4	26	0.39
Physical & Earth Sciences	26	5	31	0.48
Dentistry	13	0	13	0.20
Medicine & Veterinary	19	5	24	0.39
Optometry	0	0	0	0.00
Pharmacy	9	2	11	0.17
Nursing	11	189	200	3.14
Other	24	13	37	0.59

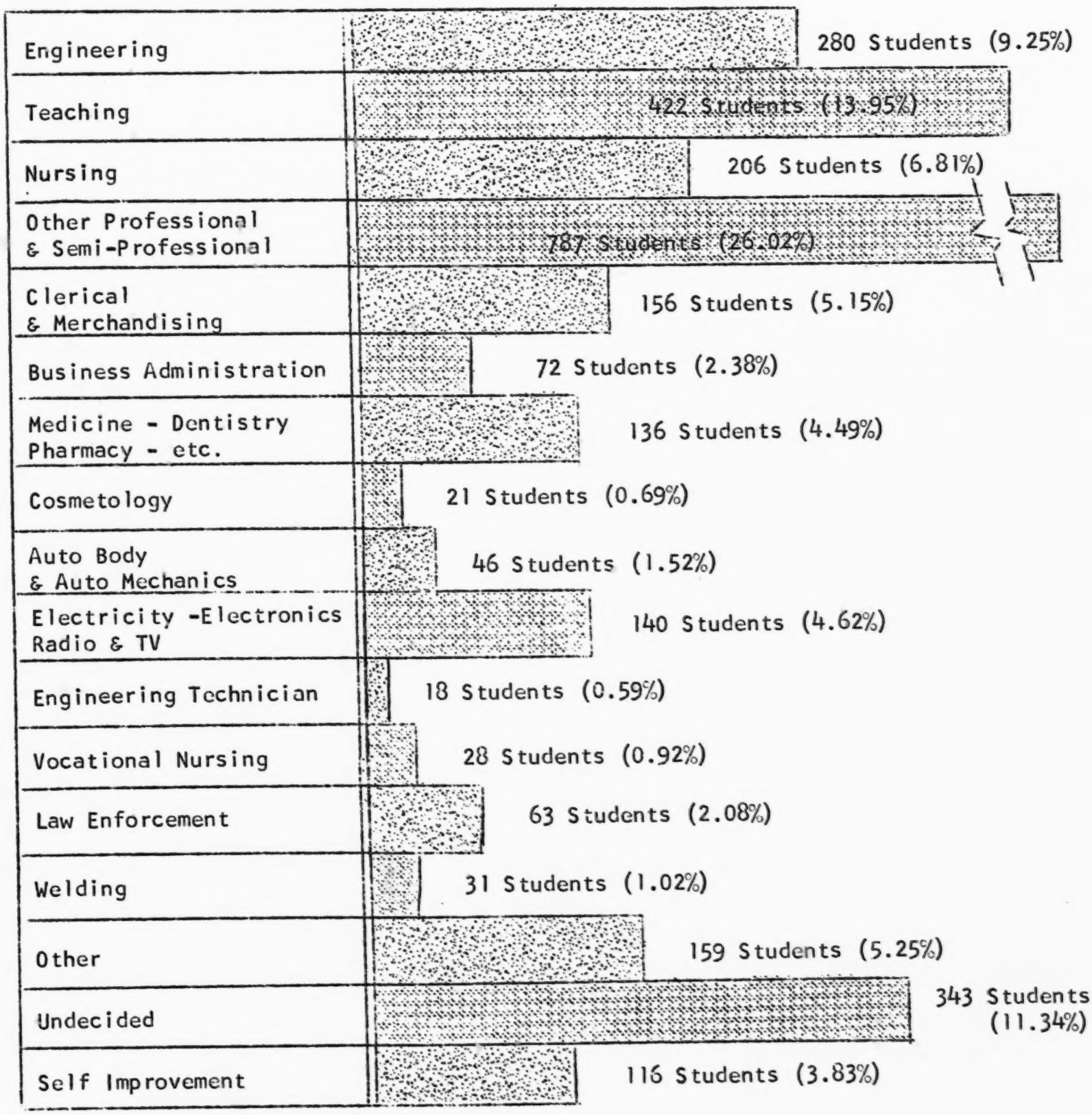
MAJOR	MEN	WOMEN	TOTAL	%
SOCIAL SCIENCE	333	325	658	10.33
Anthropology & Social Science	46	50	96	1.50
Economics & Geography	8	1	9	0.14
History & Political Science	27	16	43	0.67
Psychology & Guidance	27	21	48	0.75
Sociology & Social Welfare	28	68	96	1.50
Law, Criminology & Police	116	7	123	1.93
Theology	4	0	4	0.06
Teaching	77	162	239	3.75
TRADE & INDUSTRY	154	92	246	3.86
Electronics & Electricity	65	2	67	0.10
Radio-TV	10	0	10	0.17
Auto Body & Auto Mechanics	39	2	41	0.64
Welding	32	0	32	0.48
Licensed Vocational Nursing	0	28	28	0.45
Cosmetology	0	21	21	0.32
Dental Assisting & Technology	2	26	28	0.45
Food Trades	6	6	12	0.16
Other	10	7	17	0.26
APPRENTICES	332	0	332	5.21
Auto	13	0	13	0.20
Carpentry	10	0	10	0.17
Other	19	0	19	0.29
OTHERS-NOT OTHERWISE CLASSIFIED	179	186	365	5.73
Undecided	170	176	346	5.43
Air, Pilot & Steward-ess	9	10	19	0.29
Unclassified	0	0	0	0.00

TO WHAT SCHOOL DID THEY INTEND TO TRANSFER?



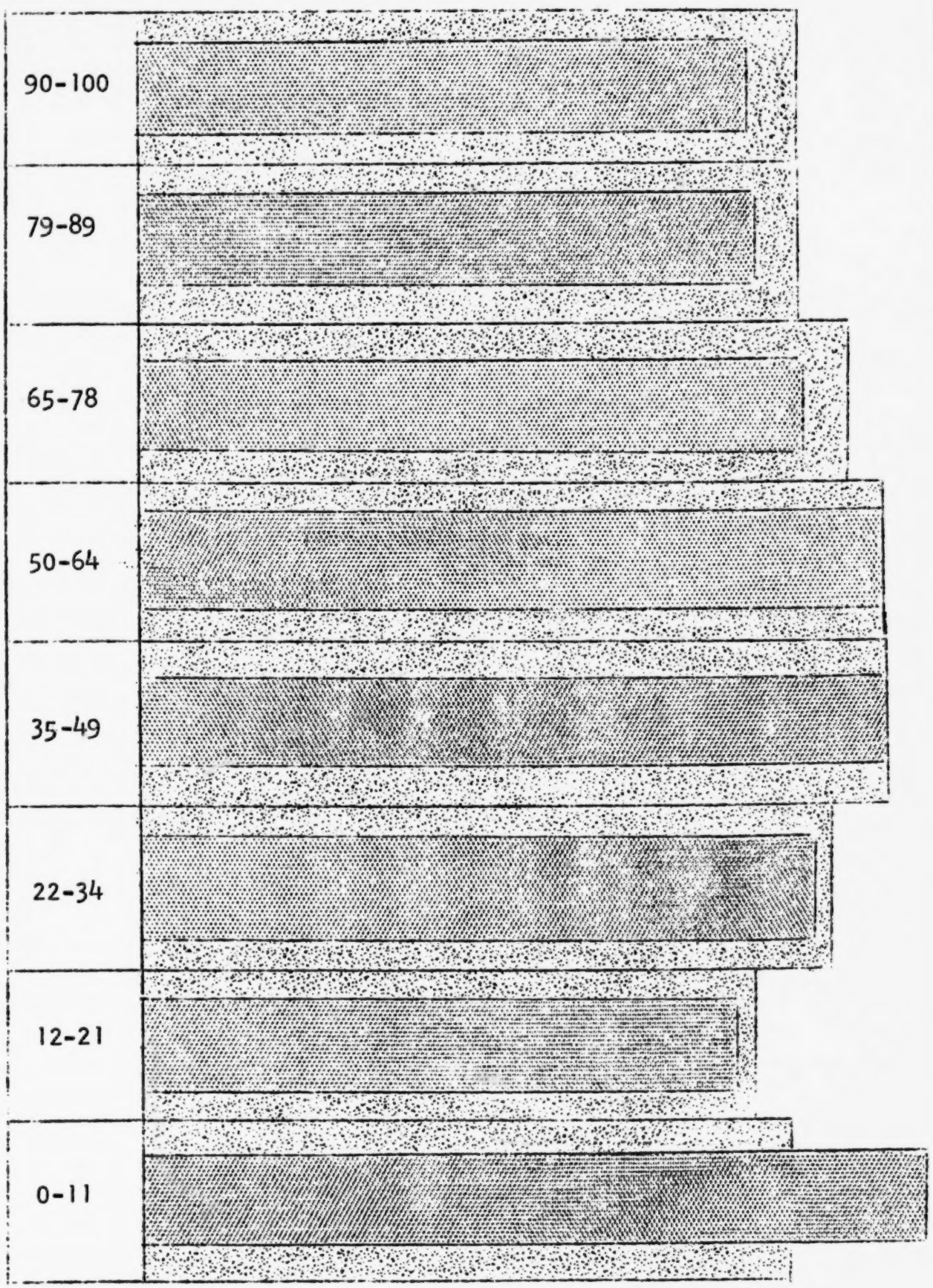
INTENDED OCCUPATION

UPON COMPLETION OF EDUCATION



COMPARISON OF A.C.T. SCORES WITH

OTHER JUNIOR COLLEGE STUDENTS*



	Number	Percent	Expected %
90-100	133	9.7	11
79-89	138	10.1	11
65-78	160	11.6	14
50-64	205	15.0	15
35-49	205	15.0	15
22-34	172	12.5	13
12-21	131	9.6	10
0-11	225	16.4	11

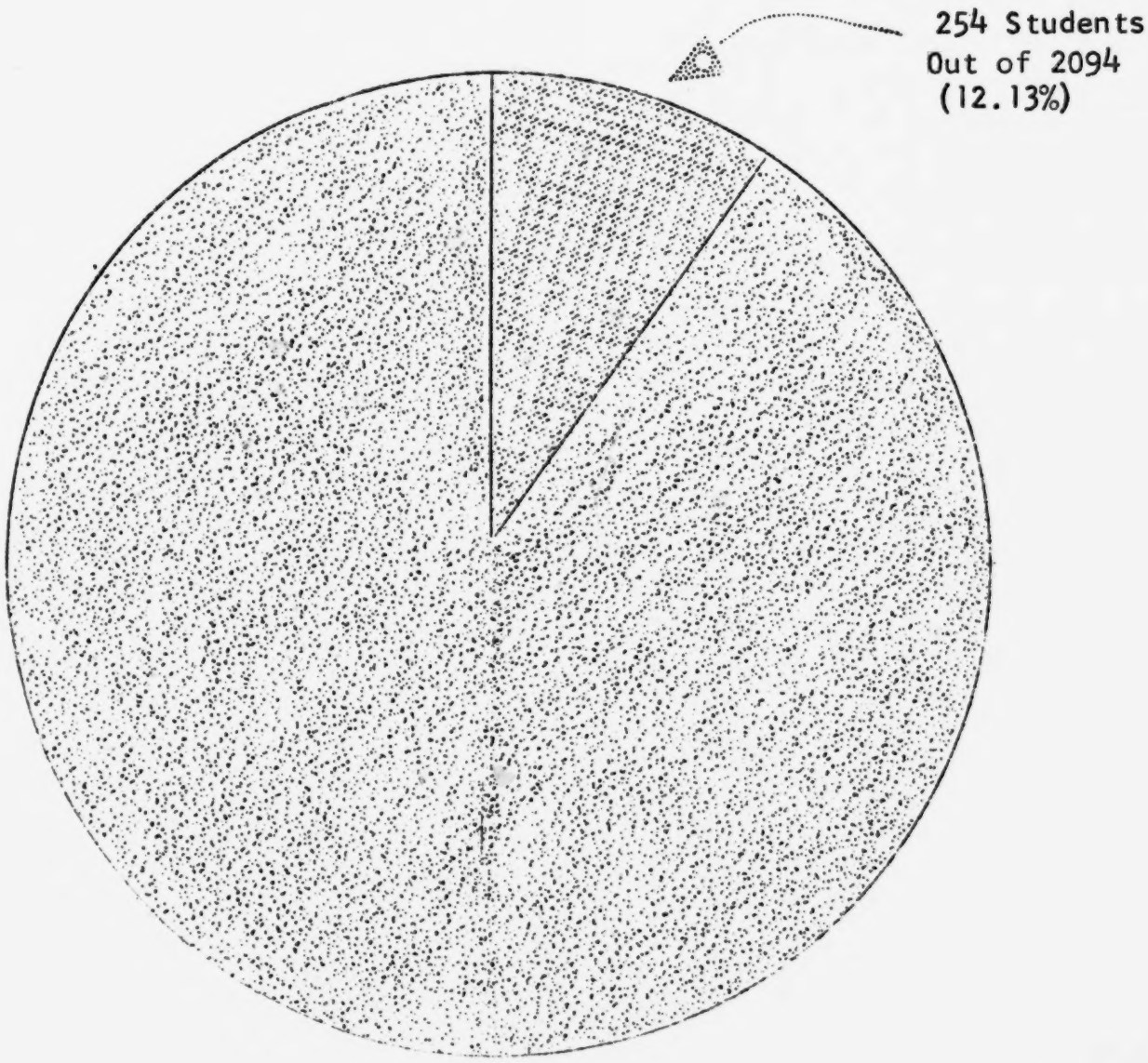
Actual % of students

Expected % that usually fall in this group

*Compared with 39,774 freshman at 106 junior colleges. There were 1369 Contra Costa College students tested.

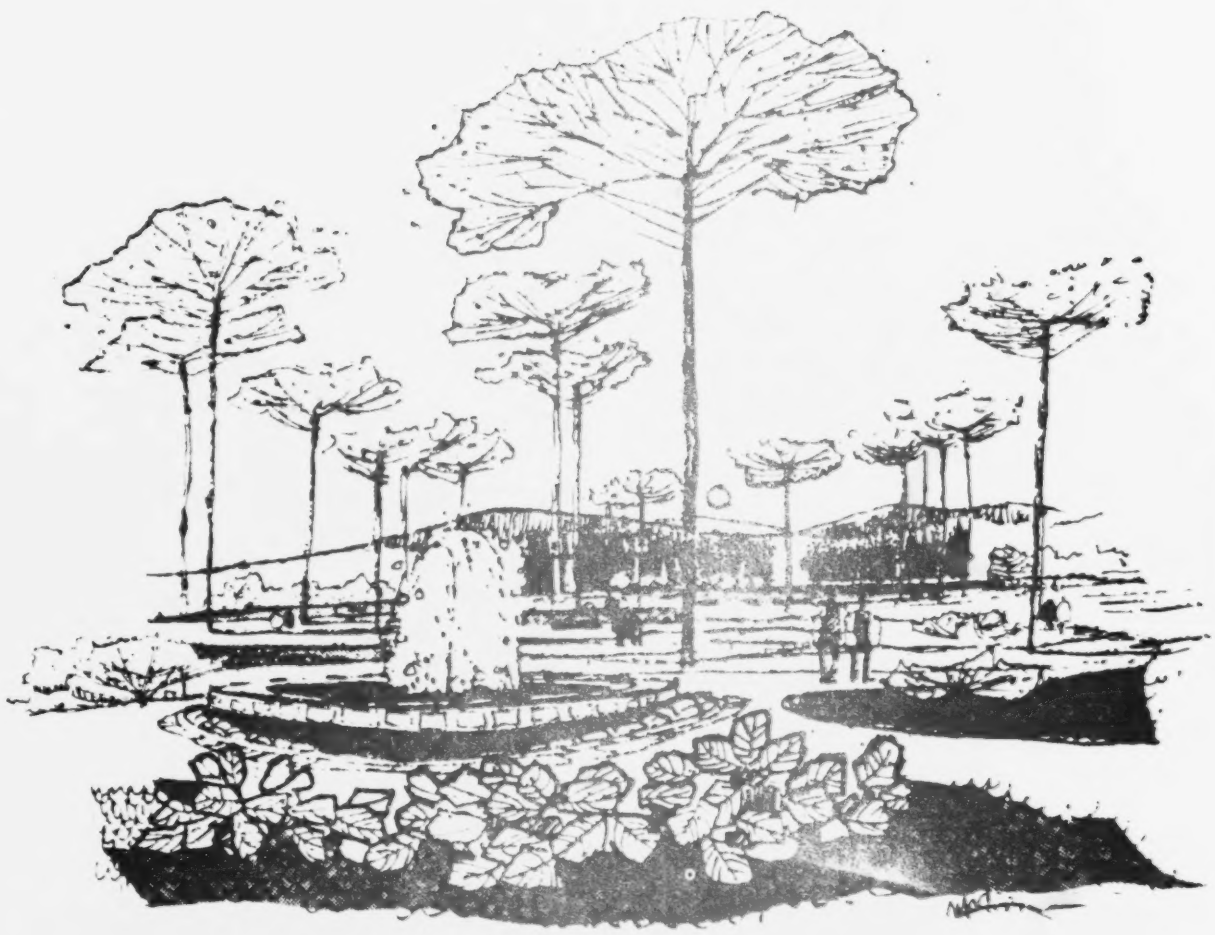
One half of the C.C.C. students scored at or below the 45.4 percentile.

WORK STUDY STUDENTS*



* These students are compared only with those who are carrying 12 or more units since this is one of the requirements for qualification for O.E.A. funds.

EXTENDED DAY



HOW MANY ATTENDED CCC?

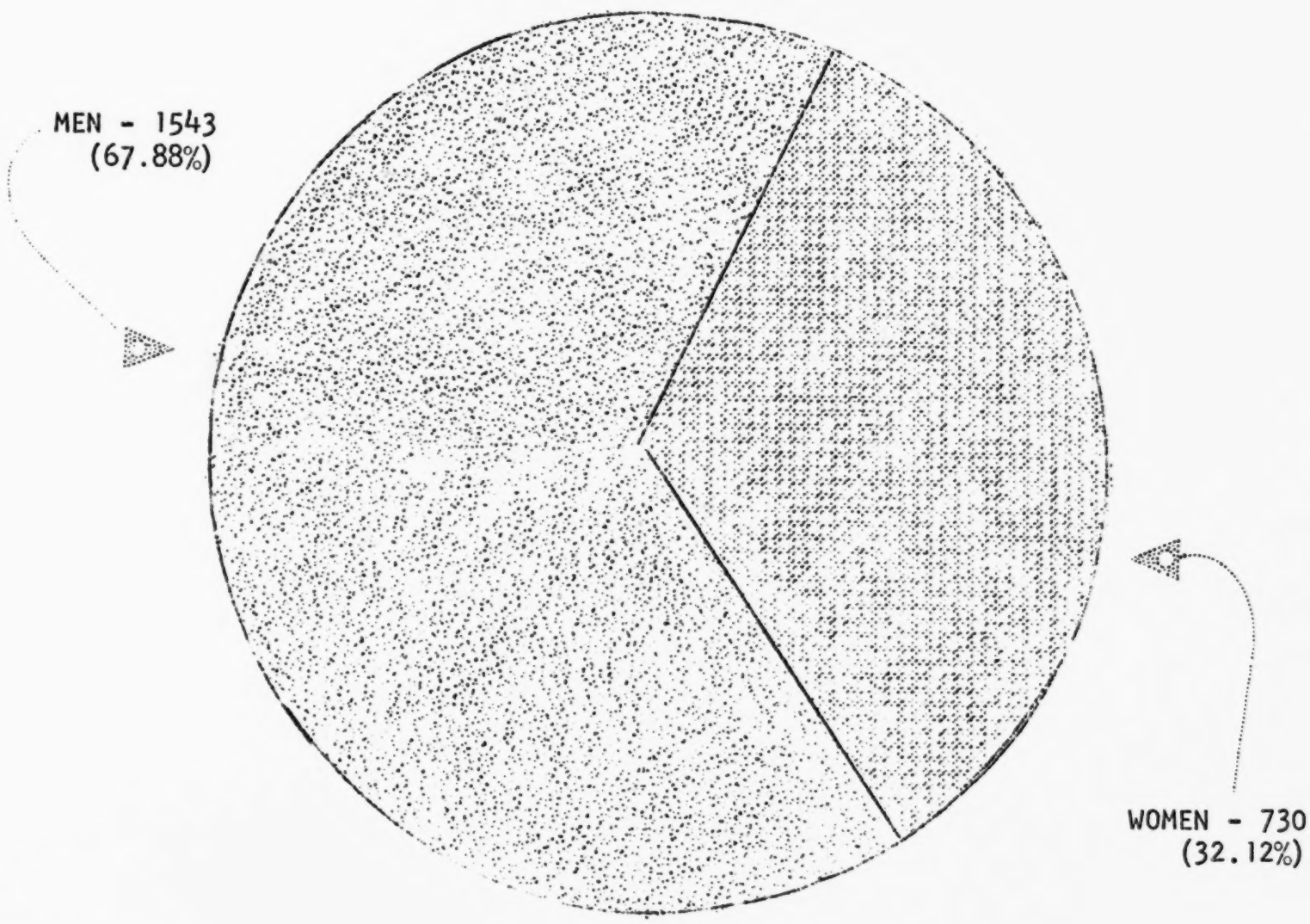
	Men	Women	Total
Extended Day	1543	730	2273

WHERE DID THEY LIVE?

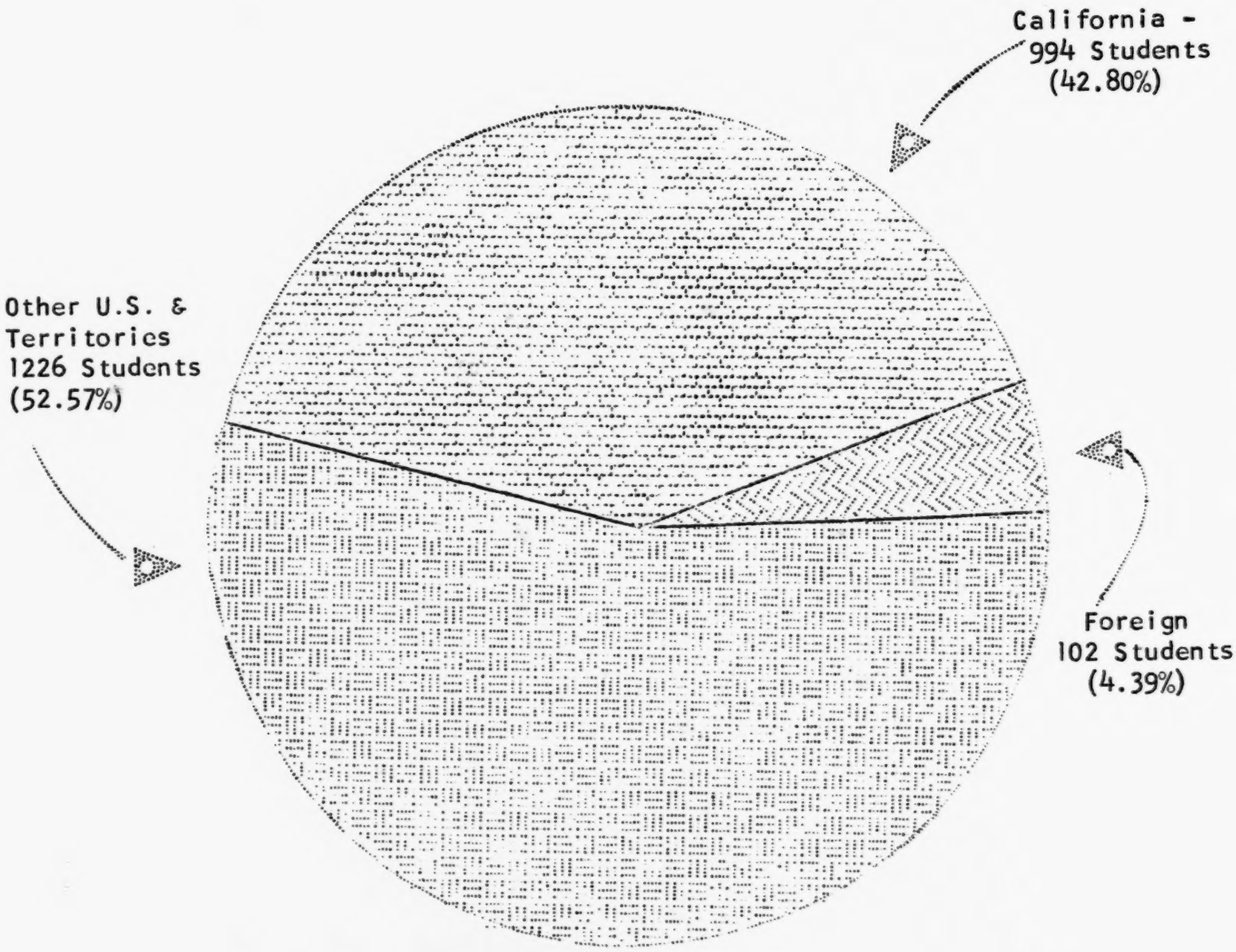
CITY	Number	%
Richmond	844	37.13
El Cerrito	221	9.72
San Pablo	471	20.72
El Sobrante	188	8.27
Pinole	180	7.91
Rodeo	39	1.71
Crockett	26	1.14
Orinda	14	0.61
Other Contra Costa County	156	6.86
Albany	14	0.61
Berkeley	24	1.05
Oakland	20	0.88
Other Alameda County	16	0.70
Other California	60	2.63

EXTENDED-DAY CLASSES

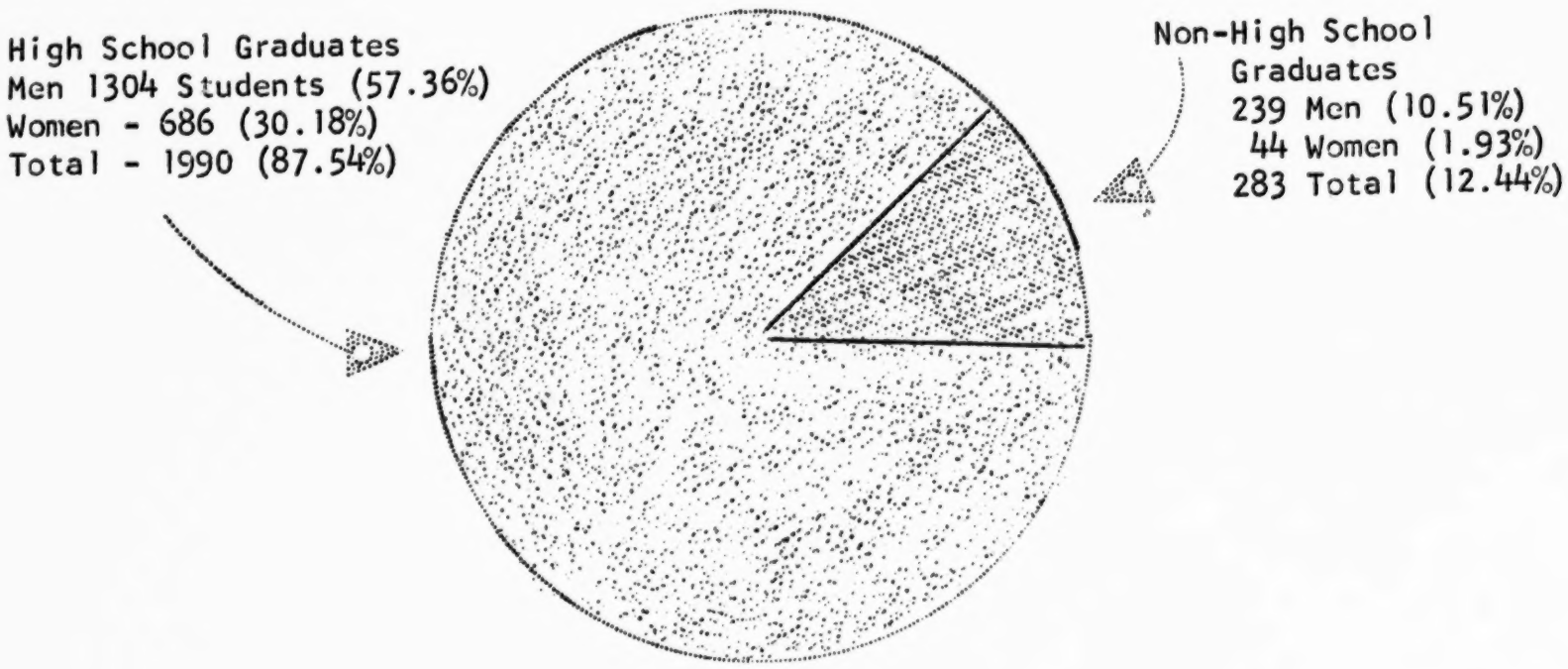
Information given on the next pages is based on data compiled concerning 2273 students in Extended-Day Classes unless otherwise indicated. An attempt has been made to present information about the students' backgrounds, particularly educational, about their present characteristics and academic status at Contra Costa College, and finally, about the future plans of the students.

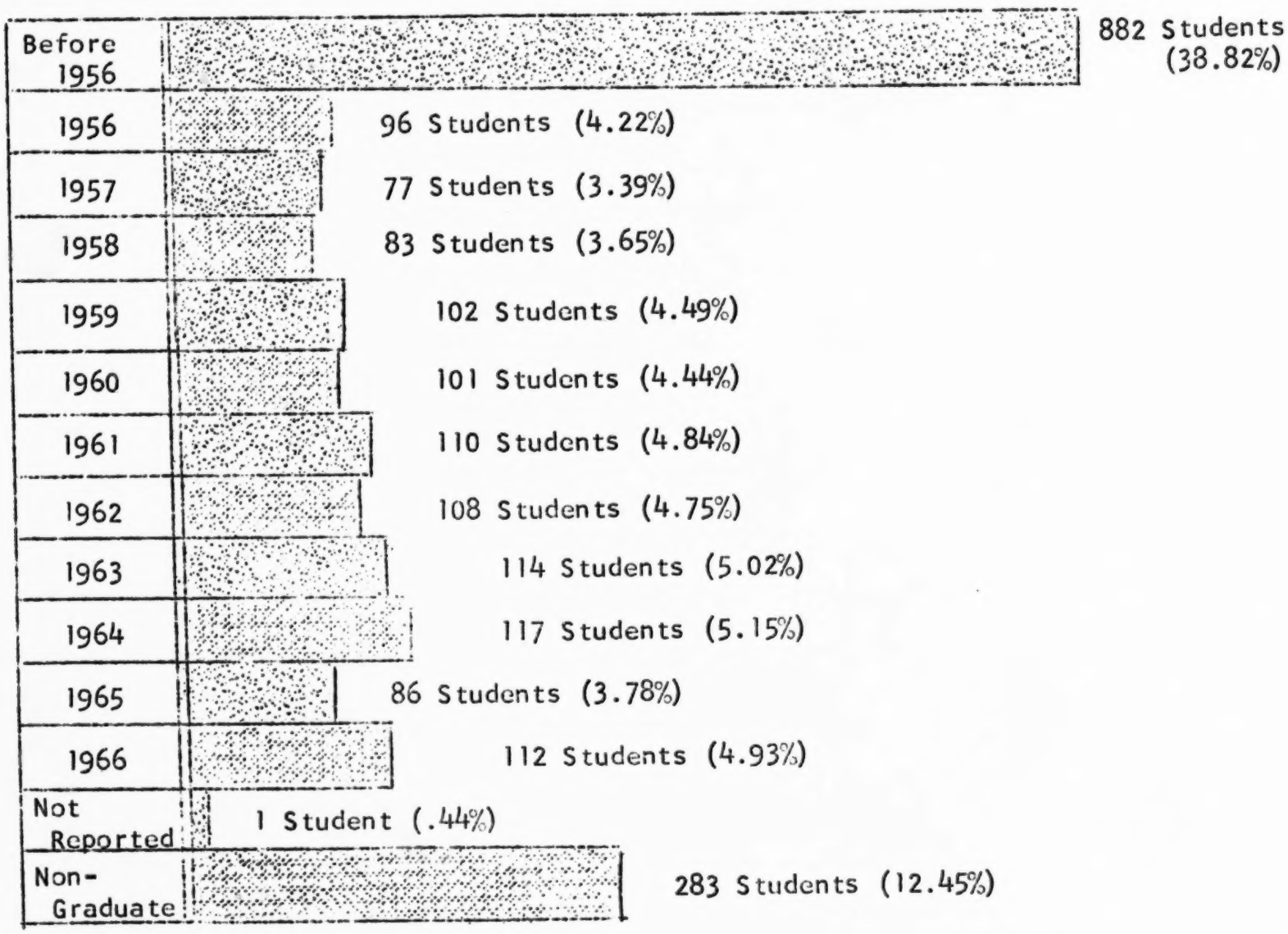


PLACE OF BIRTH



HOW MANY WERE HIGH SCHOOL GRADUATES?





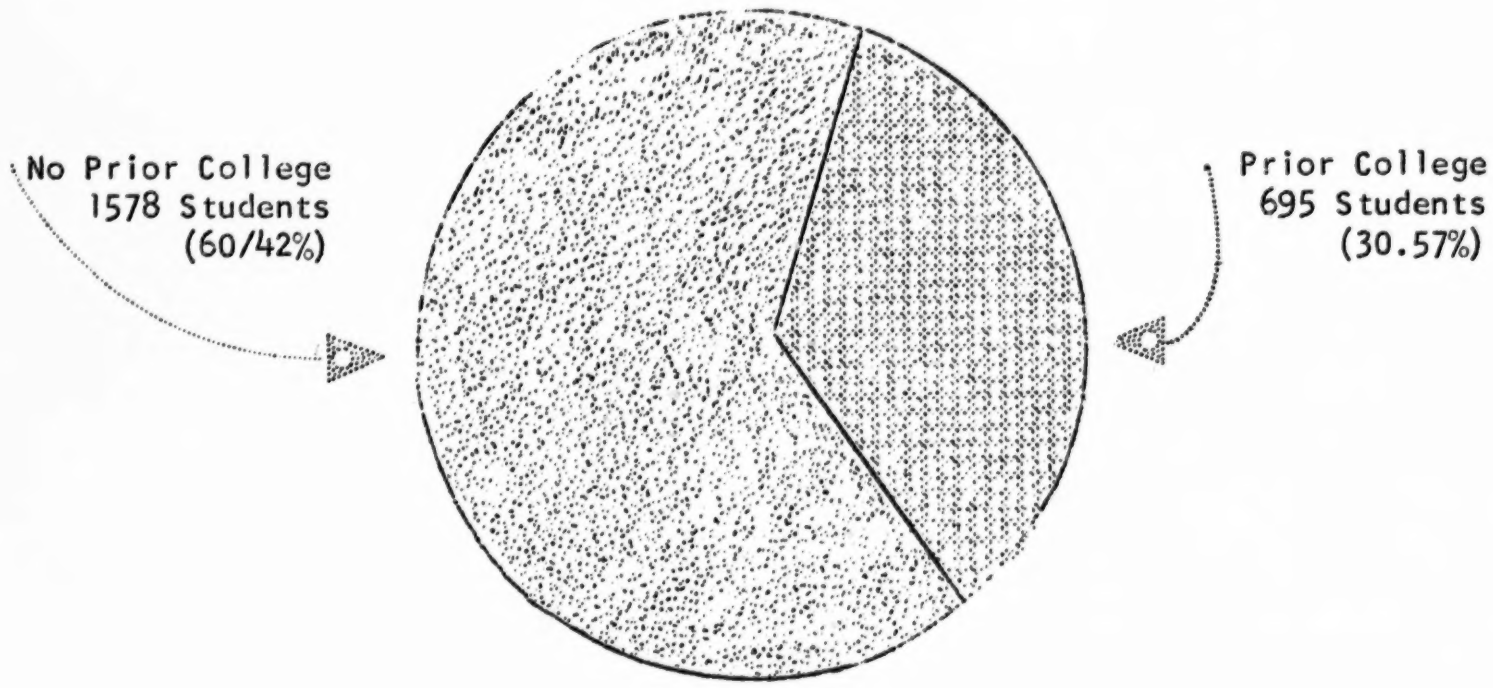
FROM WHAT HIGH SCHOOL DID THEY COME?

High School	Men	Women	Total	%
Richmond	290	128	418	18.38
De Anza	48	33	81	3.56
El Cerrito	95	45	140	6.16
Harry Ells	99	60	159	6.99
John Swett	32	10	42	1.85
Other Contra Costa County	92	34	126	5.54
Albany	24	14	38	1.67
Berkeley	40	30	70	3.08
Oakland High Schools	42	27	69	3.03
Other Alameda County	52	16	68	3.03
Other California	213	91	304	13.37
Other U.S.A.	438	206	644	28.33
Foreign & Territories	34	26	60	2.64
None or Not Reported	44	10	54	2.37

HIGH SCHOOL PROGRAM

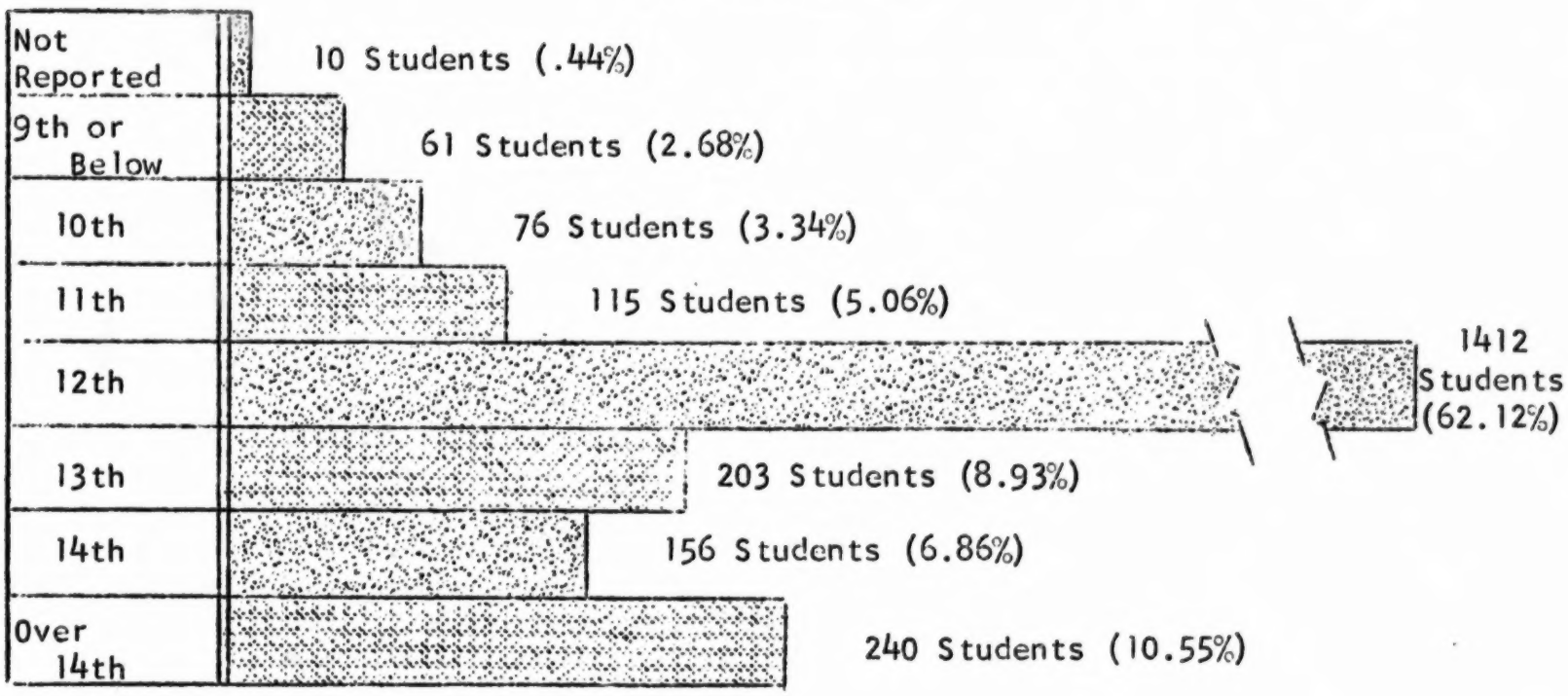
Program	Men	%	Women	%
College Preparatory	480	31.10	304	41.64
General	706	45.75	166	22.73
Pre-Technology	32	2.07	0	.00
Business	96	6.22	216	29.58
Vocational	155	10.04	8	1.09
Home Economics	1	.06	14	1.91
Other	73	4.73	22	3.01

HOW MANY ATTENDED COLLEGE PRIOR TO ENTERING CCC?



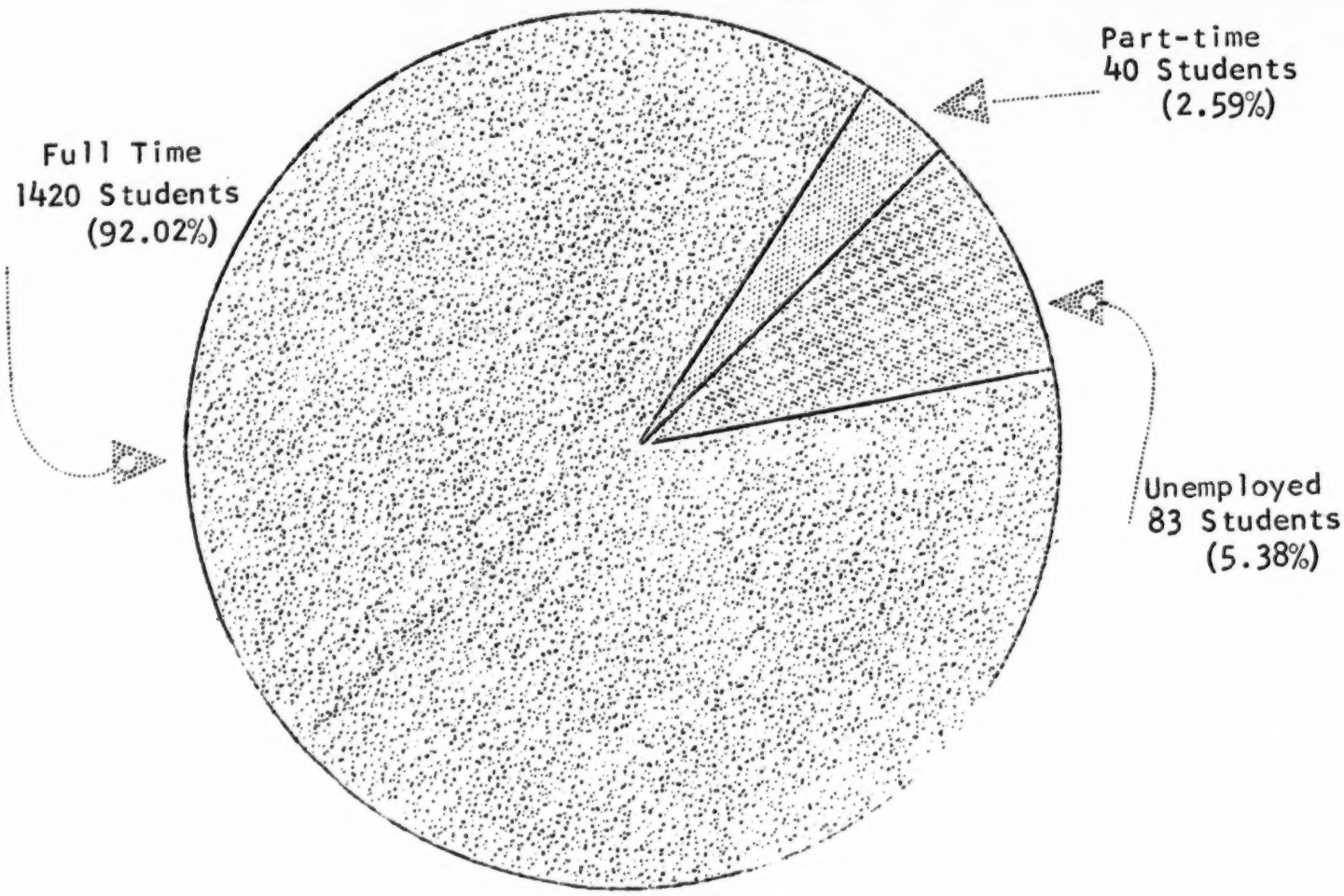
Other Junior Colleges	280
University of California - All Campuses	117
San Francisco State	45
San Jose State	7
Other State Colleges	29
Bay Area Private Colleges & Universities	22
Other California Private Colleges & Universities	18
Out-of-State Colleges & Universities	169
Other Institutions	8

WHAT YEAR OF EDUCATION HAD THEY COMPLETED UPON ENTERING CCC?

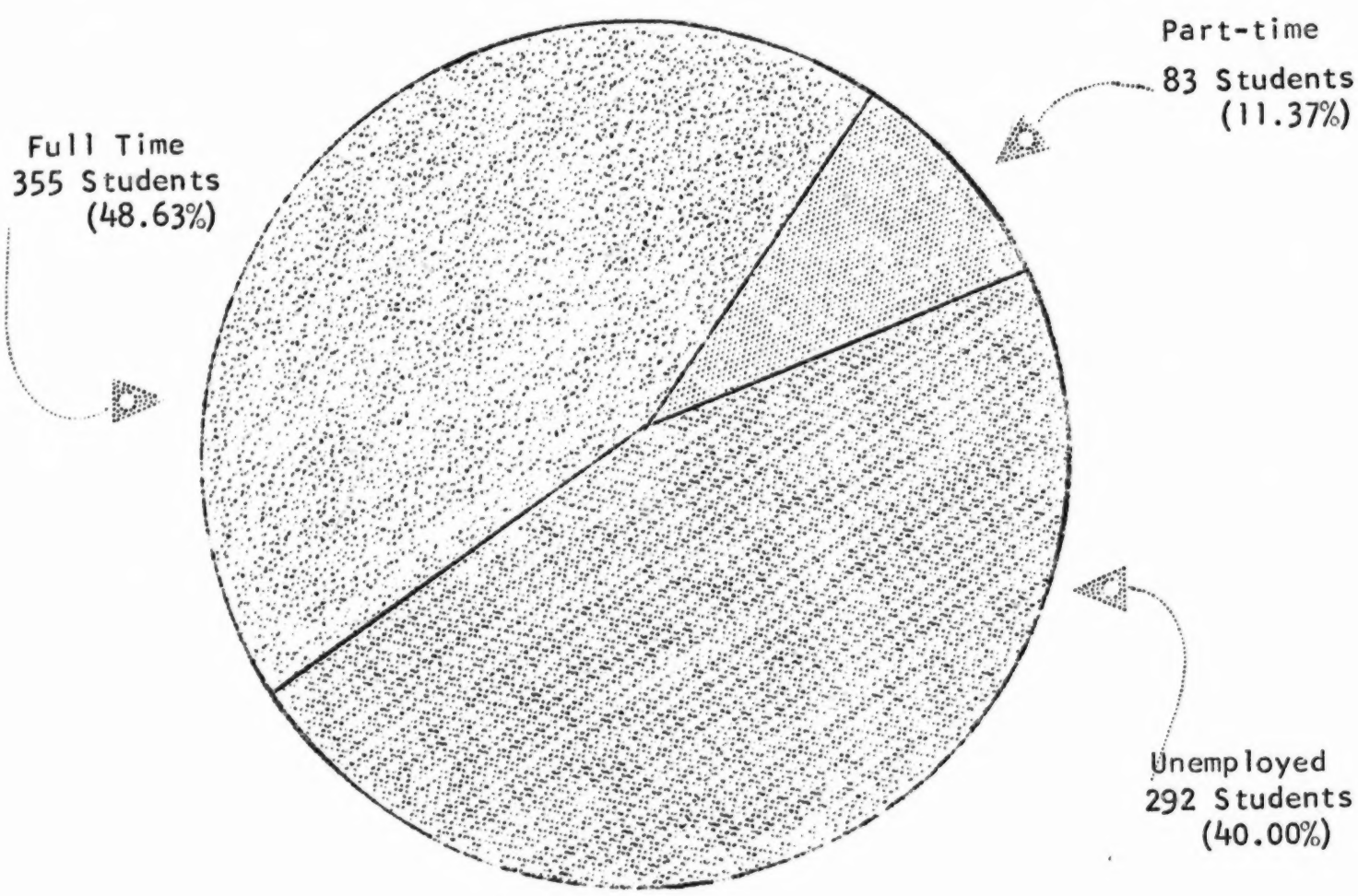


HOW MANY WERE EMPLOYED?

MEN



WOMEN

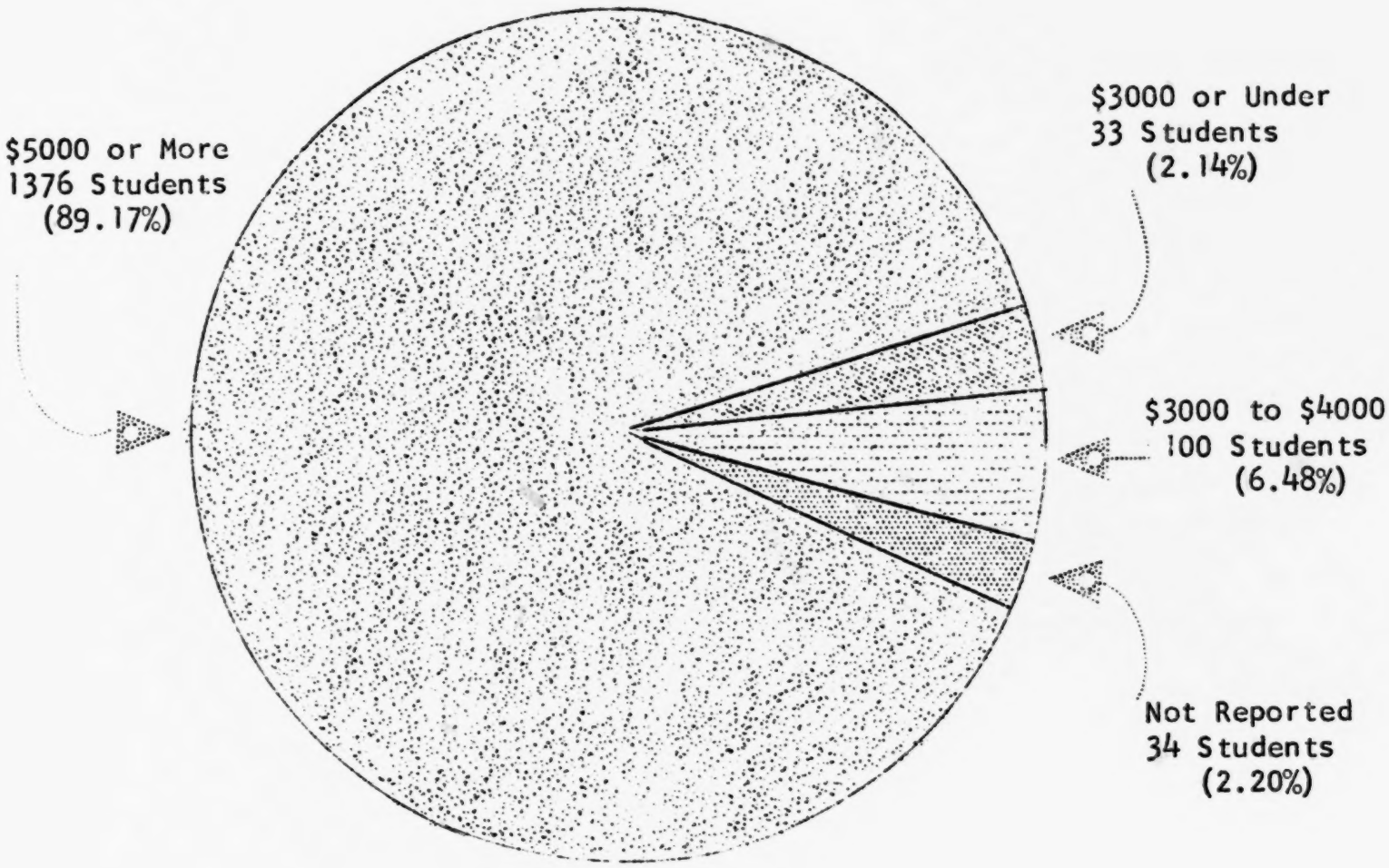


OCCUPATION OF HEAD OF HOUSEHOLD

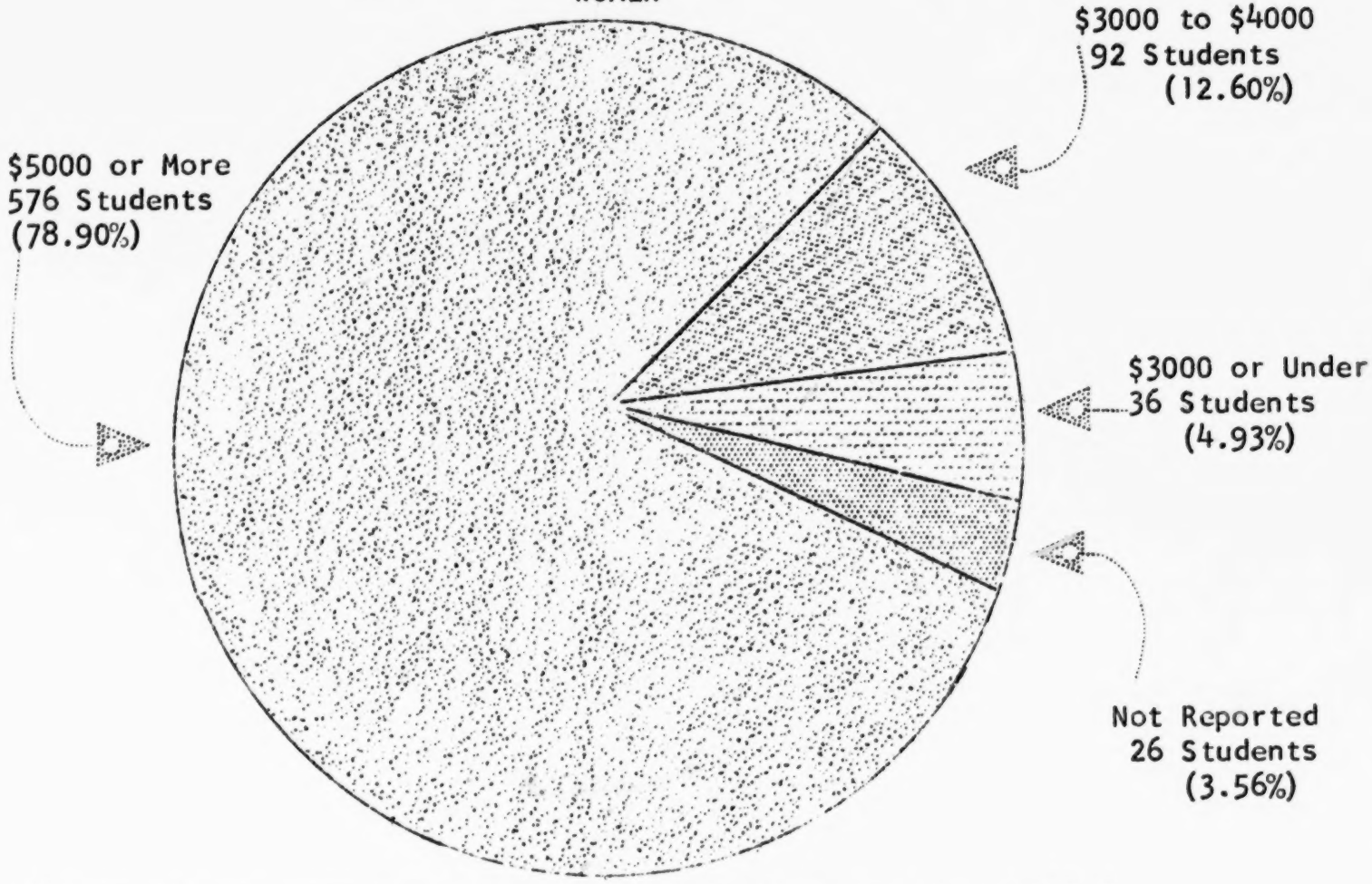
Occupation	Men	%	Women	%
Self Employed Professional	38	2.46	21	2.88
Salaried Professional	287	18.60	166	22.74
Semi-professional or Technical	214	13.87	77	10.55
Self Employed Business	52	3.37	40	5.48
Manager or Official	104	6.74	85	11.64
Skilled Worker	556	36.03	200	27.39
Semi-skilled or Unskilled Worker	210	13.60	82	11.23
Self Employed Farmer	2	.13	1	.14
Other	80	5.18	58	7.94

FAMILY INCOME*

MEN

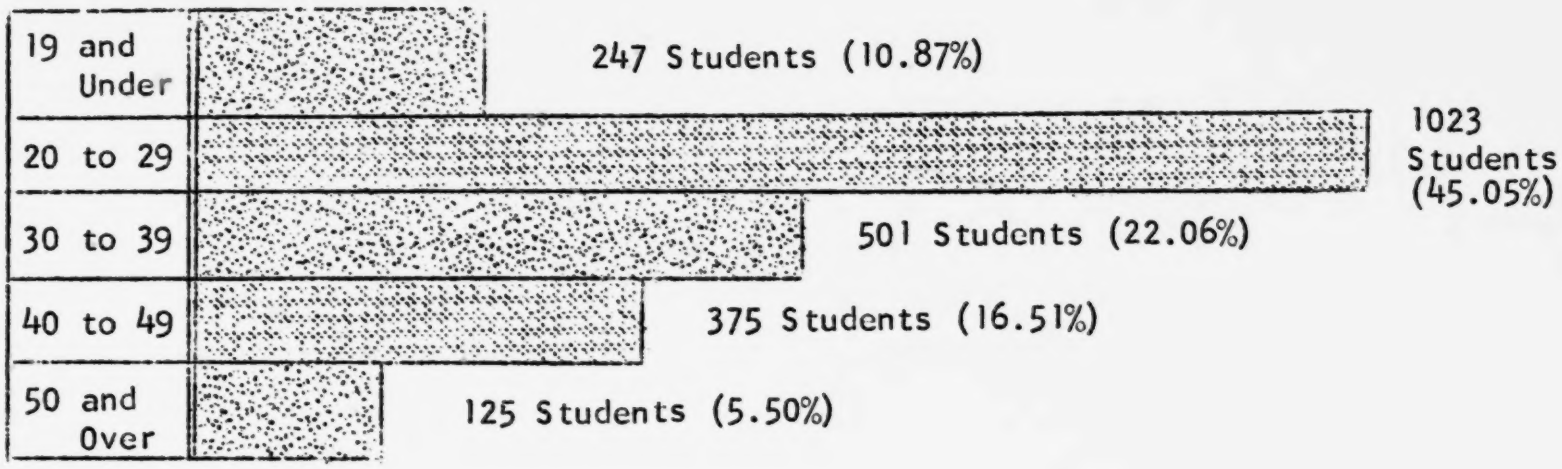


WOMEN

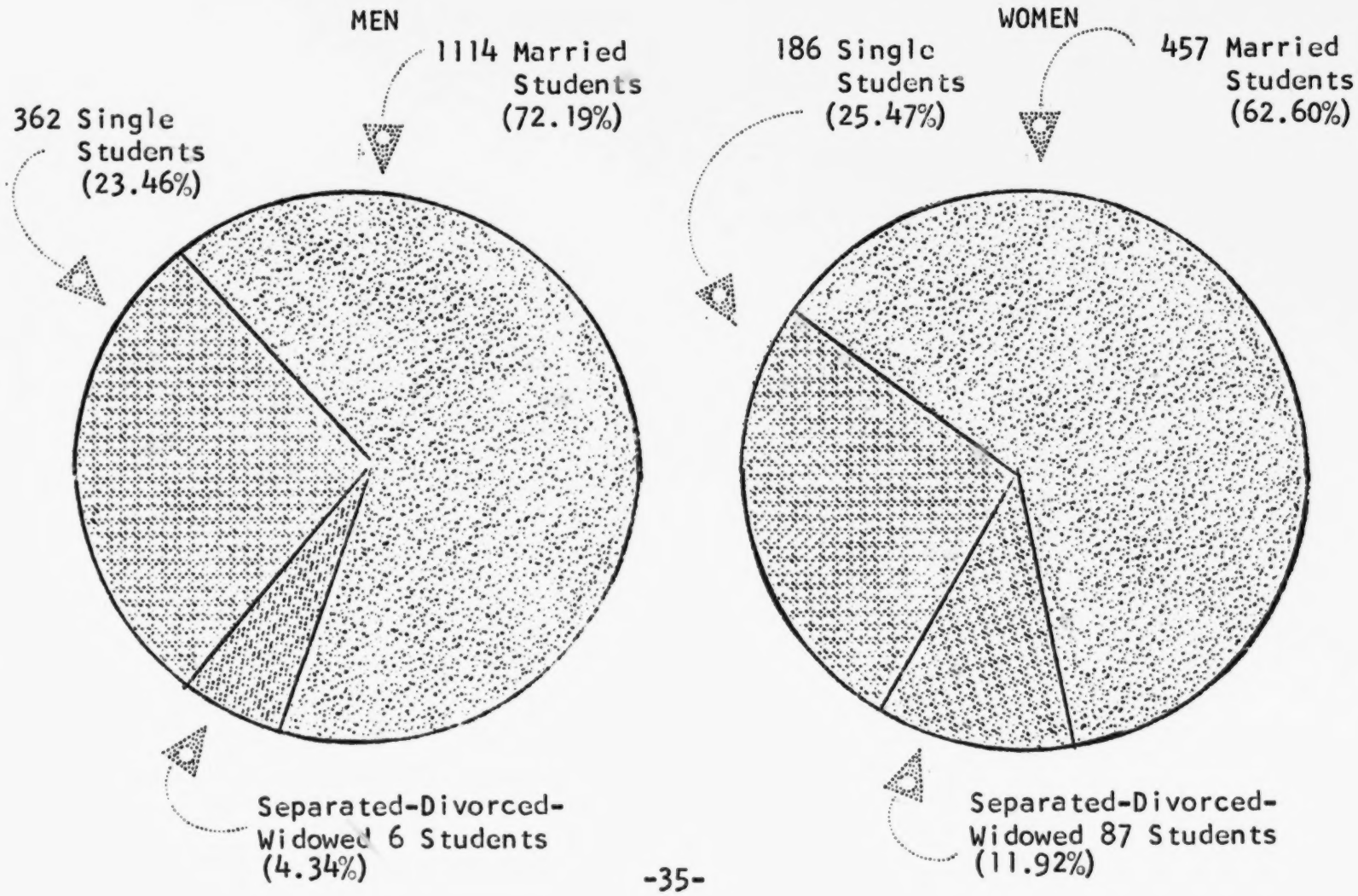


*These figures were supplied by the students when they enrolled.

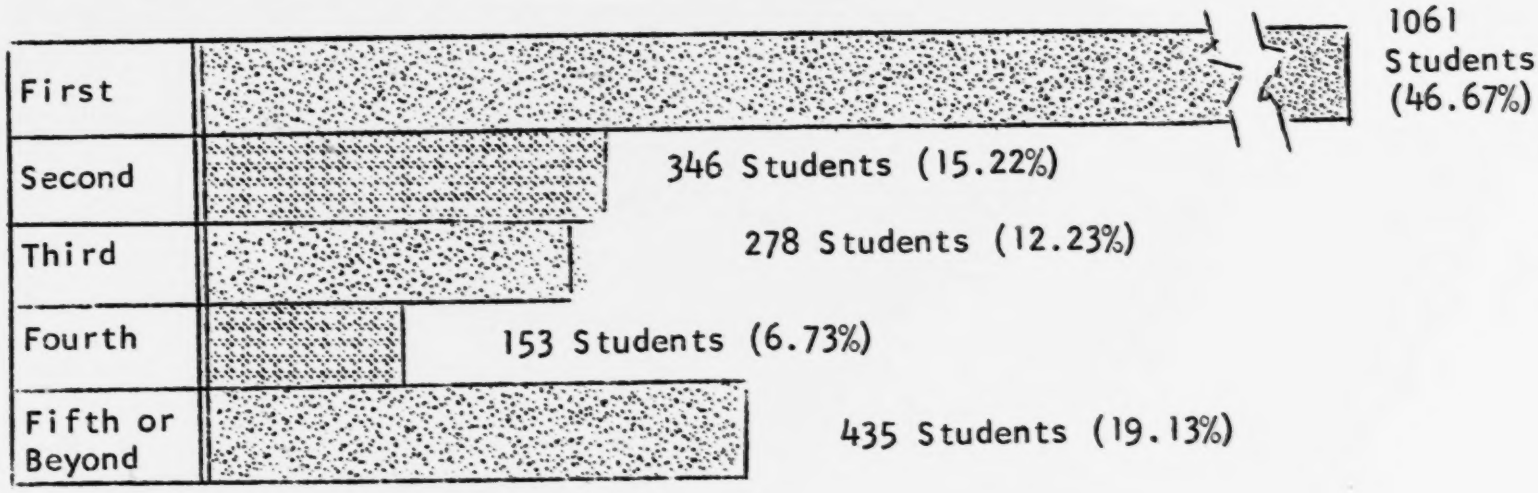
HOW OLD WERE THEY?



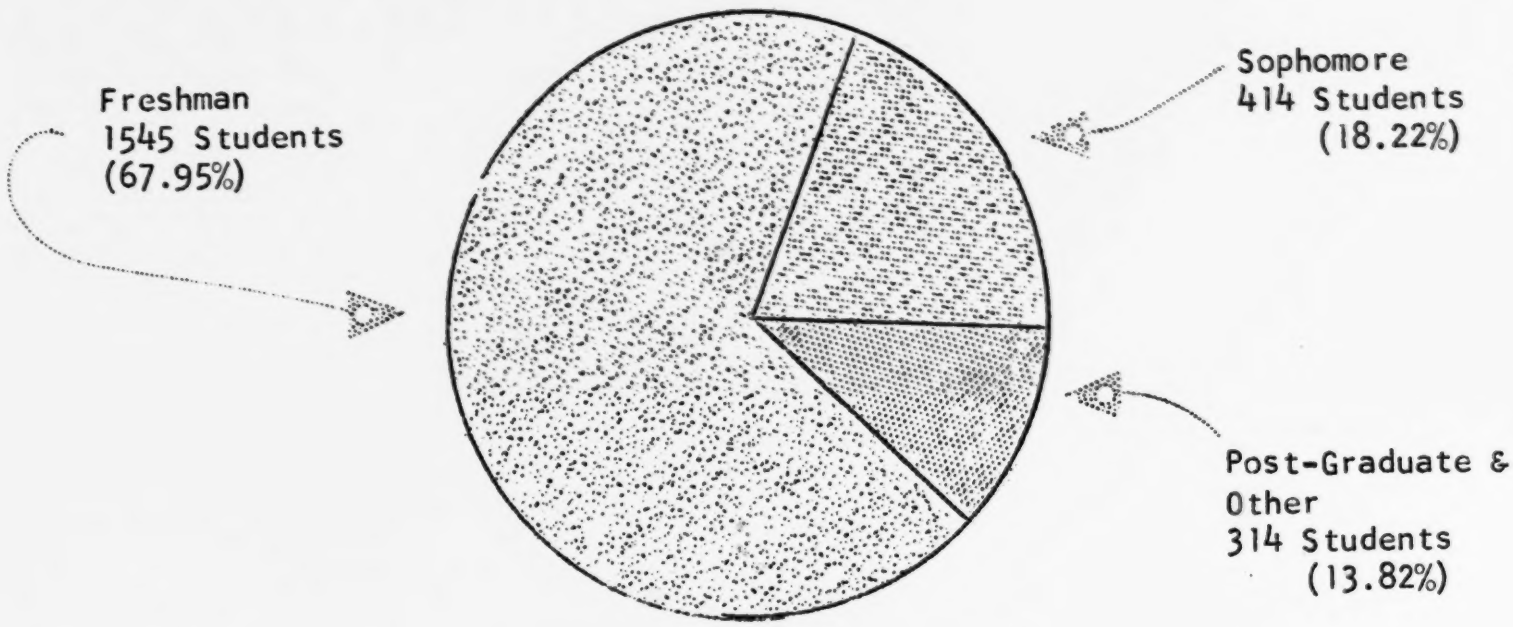
MARITAL STATUS



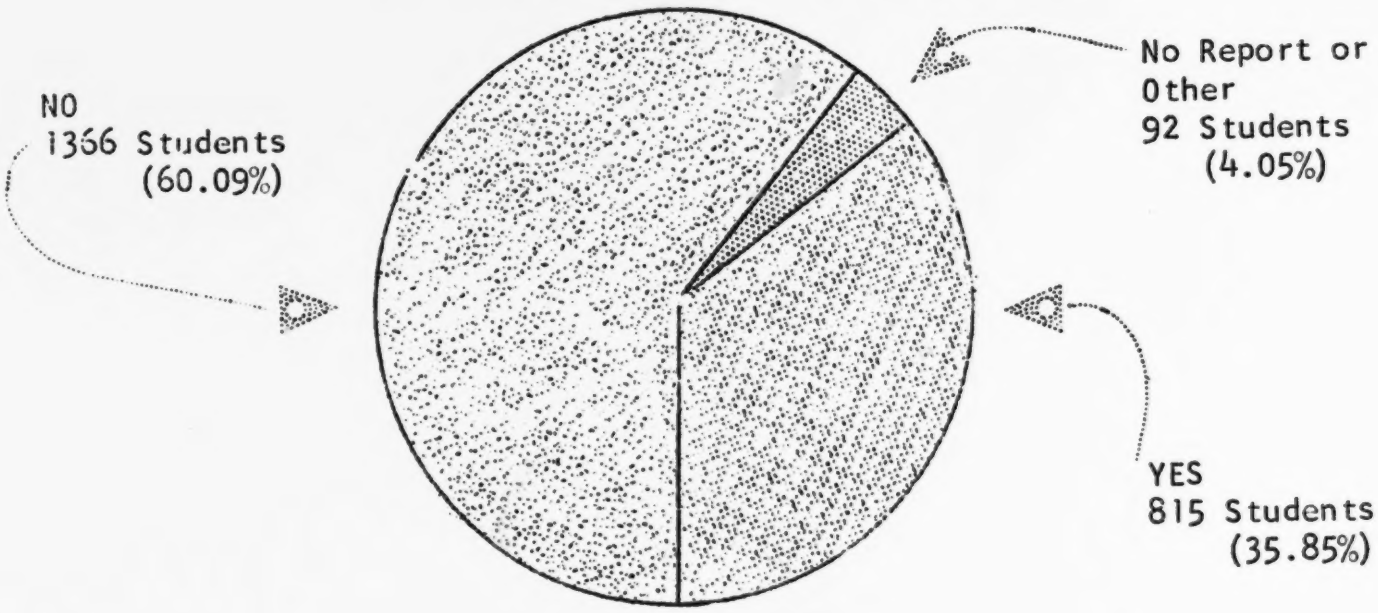
IN WHAT SEMESTER WERE THEY IN CCC?



WHAT WAS THEIR YEAR IN COLLEGE?



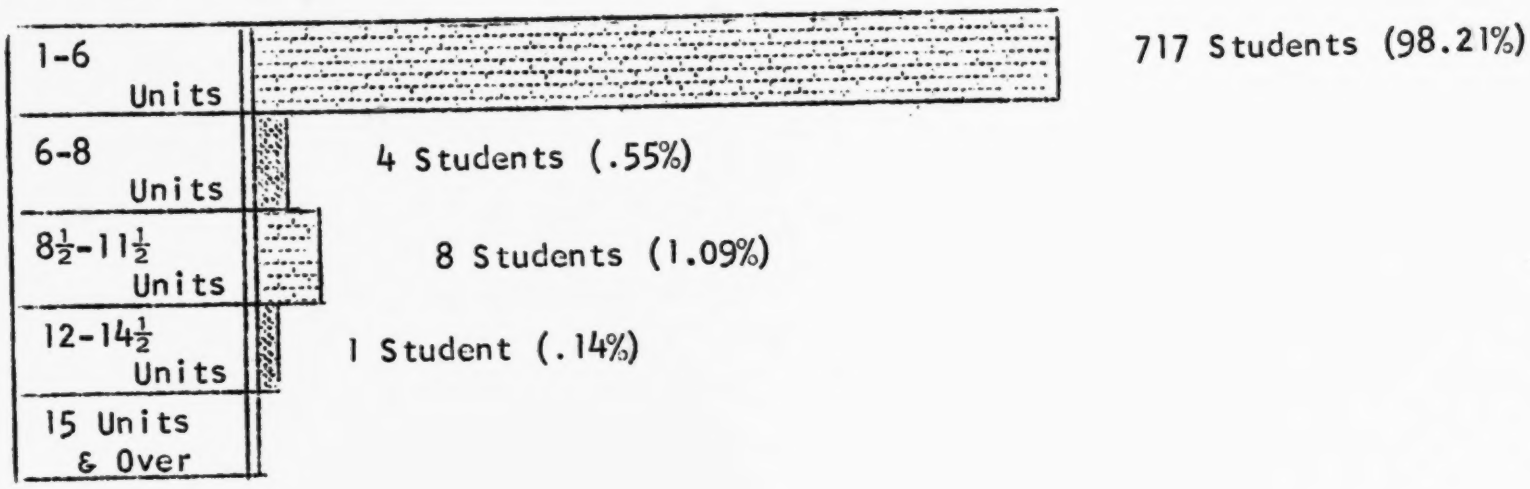
HOW MANY PLANNED TO GRADUATE?



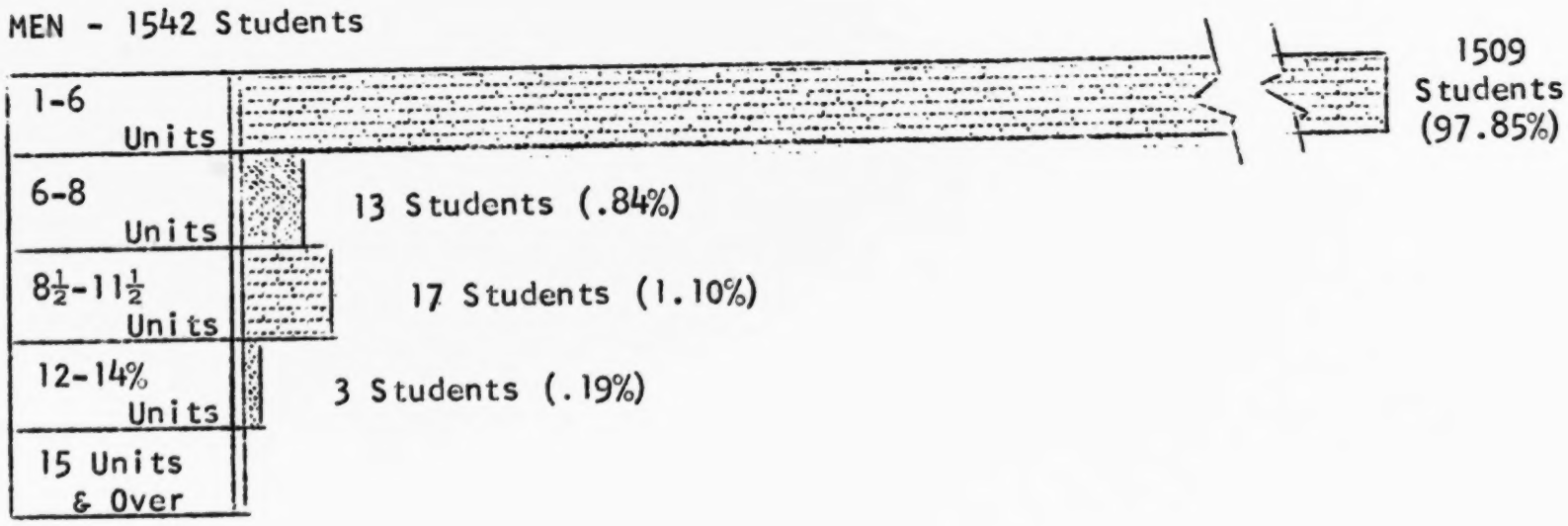
UNIT LOAD

Based on Enrollment at Registration

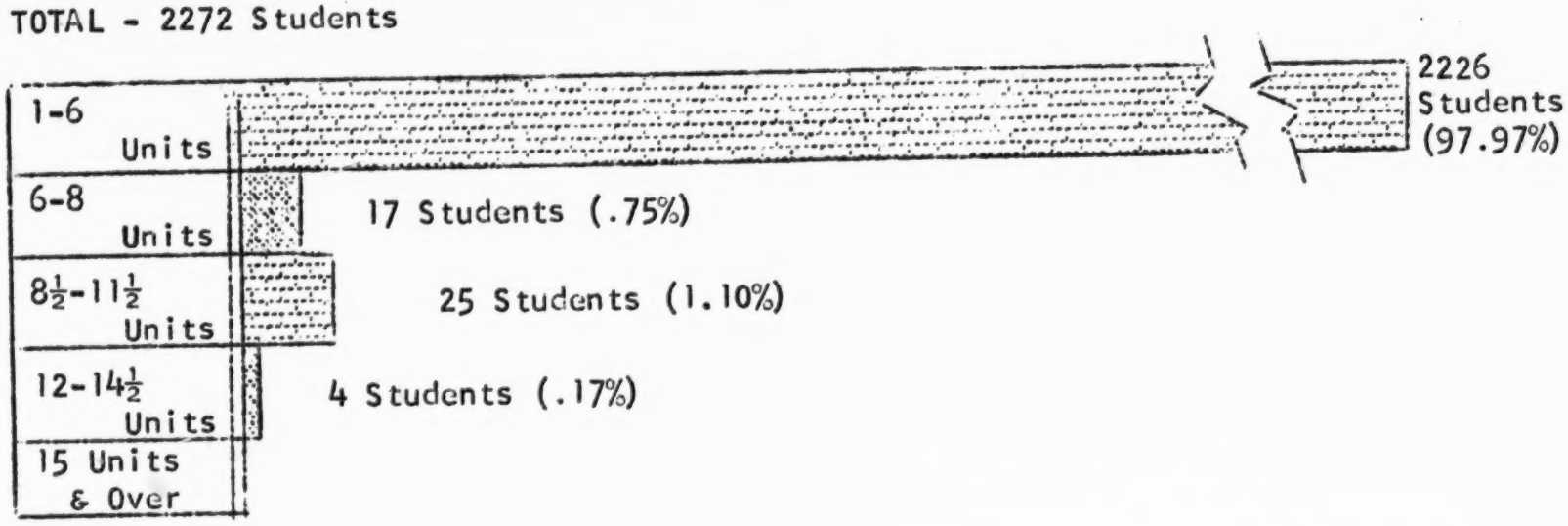
WOMEN - 730 Students



MEN - 1542 Students



TOTAL - 2272 Students



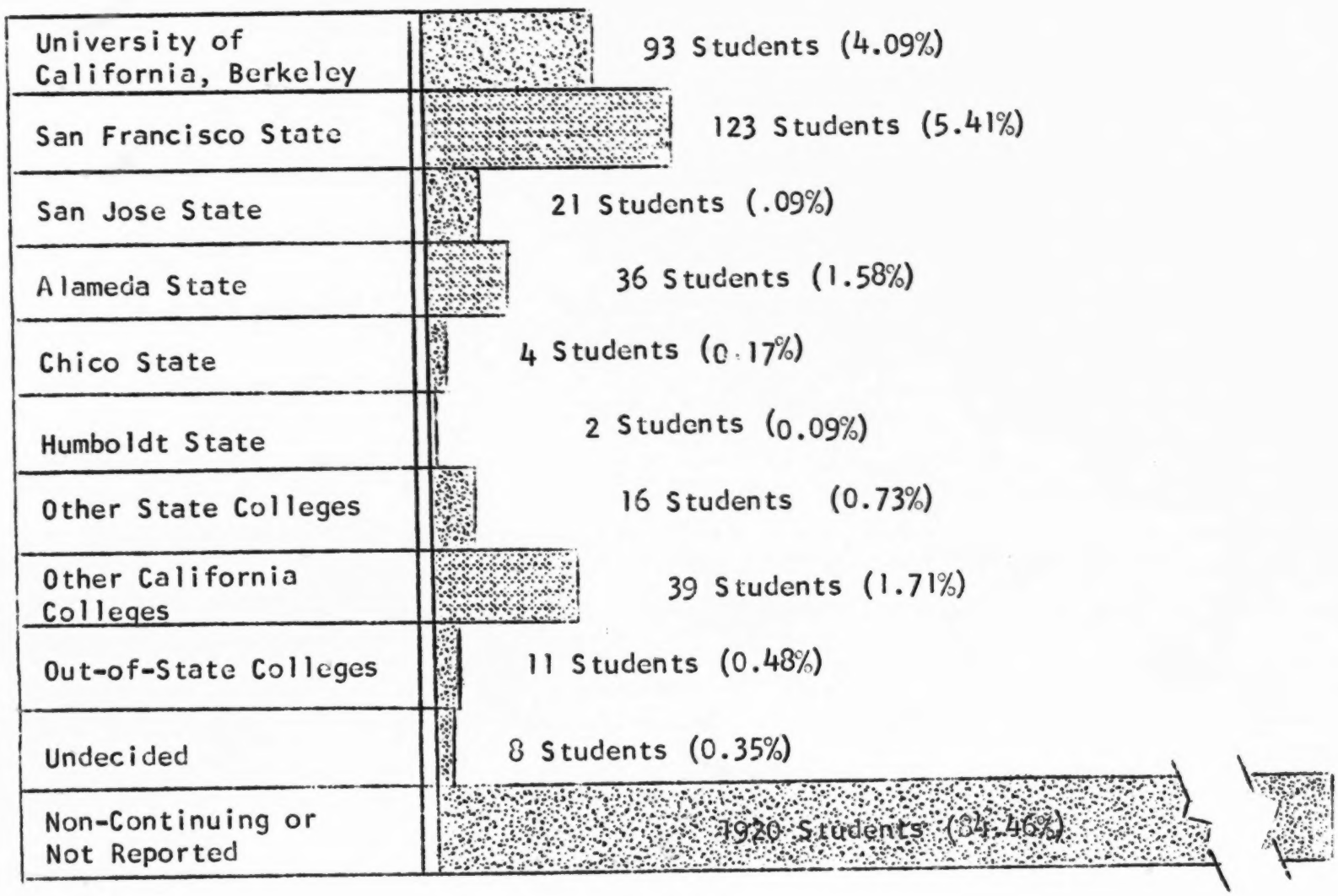
MAJORS AT C.C.C.

MAJOR	MEN	WOMEN	TOTAL	%
AGRICULTURE	47	8	55	2.45
General	37	8	45	
Forestry, Wildlife, Conservation	6	0	0	
Veterinary	4	0	0	
BUSINESS	254	150	404	18.05
General & Clerical	46	48	94	
Secretarial	0	23	23	
Sales & Merchandising	25	10	35	
Administration	116	10	126	
Data Processing	31	31	62	
Other	36	28	64	
ENGINEERING & TECHNOLOGY	122	7	129	5.76
Pre-professional	71	4	75	
Engineering Aides	1	0	1	
Technology	10	1	11	
Architecture & Drafting	15	2	17	
Other	25	0	25	
HEALTH, PE, RECREATION & SAFETY	8	25	33	1.47
Health	0	3	3	
Physical Education	2	2	4	
Recreation	0	2	2	
Safety	0	0	0	
Other	6	18	24	

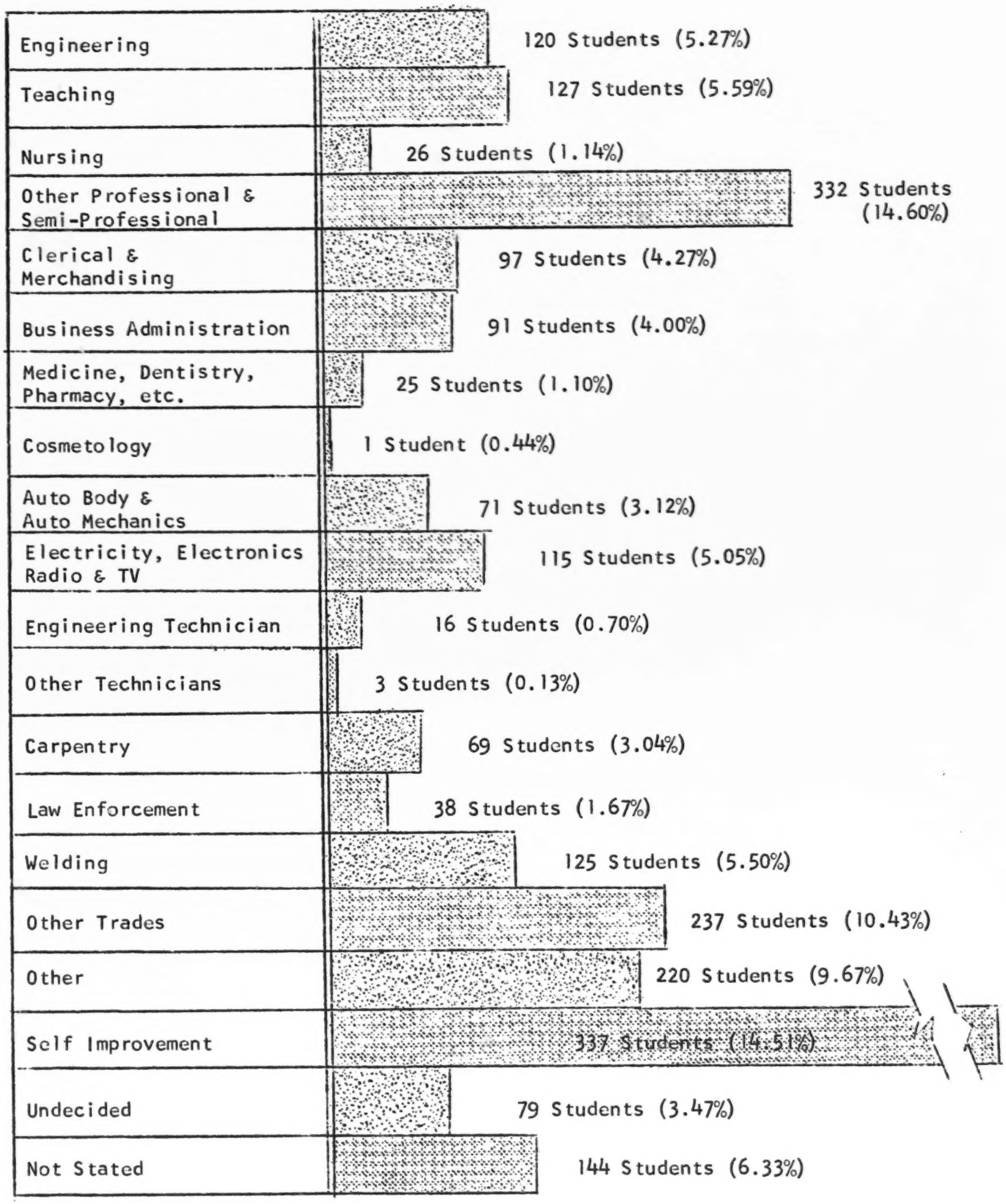
MAJOR	MEN	WOMEN	TOTAL	%
LIBERAL & FINE ARTS	65	92	157	7.01
General Liberal Arts	19	26	45	
Art	4	14	18	
English, Journalism	8	14	22	
Speech, Drama, Radio TV	2	0	2	
Foreign Language	26	7	13	
Home Economics	0	23	23	
Literature & Philosophy	0	1	1	
Music	6	7	13	
Other	0	0	0	
NATURAL SCIENCE & MATHEMATICS	50	9	59	2.63
Life Sciences	15	1	16	
Physical & Earth Sciences	9	2	11	
Dentistry	0	0	0	
Medicine & Veterinary	2	1	3	
Optometry	0	0	0	
Pharmacy	0	0	0	
Nursing	0	22	22	
Mathematics	16	4	20	
Other	8	1	9	

MAJOR	MEN	WOMEN	TOTAL	%
SOCIAL SCIENCE	117	98	215	9.60
Anthropology, Social Science	25	34	59	
Economics, Geography	3	0	3	
History, Political Science	6	3	9	
Psychology, Guidance	7	15	22	
Law, Criminology, Police	52	5	57	
Theology	2	0	2	
Teaching	22	41	63	
TRADE & INDUSTRY	305	15	320	14.29
Electronics & Electricity	69	0	69	
Radio-TV	0	0	0	
Auto Body & Auto Mechanics	19	0	19	
Welding	117	2	119	
Other	100	13	113	
APPRENTICES	205	0	205	9.15
Auto	49	0	49	
Carpentry	70	0	70	
Painting	8	0	8	
Electricity	29	0	29	
Plumbing	0	0	0	
Machine Shop	18	0	18	
Welding	31	0	31	
OTHERS-NOT OTHERWISE CLASSIFIED	390	304	694	31.00
Undecided	377	300	677	
Air, Pilot, Stewardess	13	4	17	

TO WHAT SCHOOL DID THEY INTEND TO TRANSFER?



INTENDED OCCUPATION UPON COMPLETION OF EDUCATION
OR OCCUPATION NOW PURSUED



VT 001 884
Kishwaukee Community College Study. Final Report.

Kishwaukee Community Coll. Committee, Illinois
Northern Illinois Univ., De Kalb
MF AVAILABLE IN VT-ERIC SET.
Pub Date - Jun66 91p.

*COMMUNITY COLLEGES; *COMMUNITY SURVEYS; SCHOOL LOCATION; *EDUCATIONAL NEEDS; *EDUCATIONAL PLANNING; COMMUNITY CHARACTERISTICS; COLLEGE PROGRAMS; ADMINISTRATIVE ORGANIZATION; OCCUPATIONAL SURVEYS
KISHWAUKEE COMMUNITY COLLEGE; ILLINOIS; DE KALB COUNTY; LEE COUNTY; OGLE COUNTY

Eight school districts participated in the study of community college needs for the three-county area of DeKalb, Lee, and Ogle counties. The population of the combined area proposed for the college was 60,030 in 1960. The projection for the population is 80,000 in 1975. The study concludes with a recommendation for the creation of a community college for the combined area. The study predicts an opening enrollment of about 400 full-time students, rising to 1,300 full-time students within the first nine years of existence. The report contains population and enrollment statistics, financial data, educational program suggestions, building and site recommendations, industrial and residential desires for the college, legal procedures, and related information necessary for the consideration of those empowered to establish a college district. (PS)

VT 001 884

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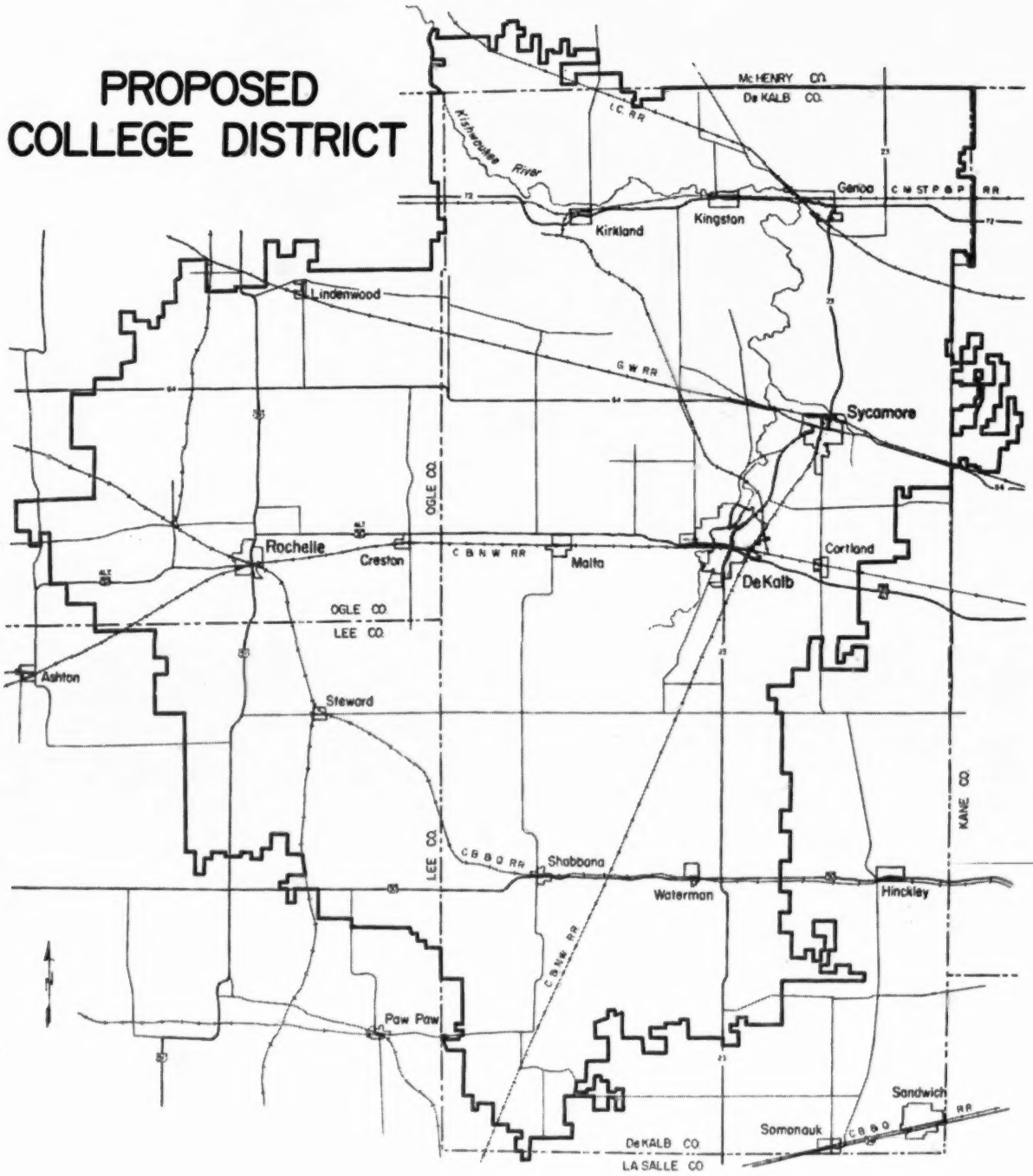
KISHWAUKEE COMMUNITY COLLEGE STUDY



VT01884

Final Report
of the
CITIZENS COMMITTEE
and
NORTHERN ILLINOIS UNIVERSITY

June 1966

KISHWAUKEE COMMUNITY COLLEGE

JOINT REPORT
OF
COMMUNITY COLLEGE COMMITTEE
AND
NORTHERN ILLINOIS UNIVERSITY

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

June, 1966

Letter of Transmittal

KISHWAUKEE COMMUNITY COLLEGE COMMITTEE

June 8, 1966

Illinois State Junior College Board
Mr. D. E. Stitzel, De Kalb County Superintendent
Mr. Wilbur Pickering, Ogle County Superintendent
Mr. John Torrens, Lee County Superintendent
Boards of Education of Participating Districts
Citizens and High School Students of the Area

Dear Friends:

The Citizens Committee appointed by local school boards has completed its feasibility study to determine the need for a junior college in this region. The report of the committee and the petition which was prepared at the conclusion of the study are being submitted to the State Junior College Board for review and subsequent action.

The report contains pertinent data on anticipated enrollment and course offerings, building recommendations, financial requirements, and occupational needs. Since the preparation of the report, further evidence has been noted which stresses the need for courses for industrial workers; and, with the lack of space in colleges, the need for the junior college becomes more apparent.

Included in the report are data on eight school districts. Nearby are other districts which plan to annex to the Kishwaukee College district if it is formed, and there is some evidence that other territory may be annexed later. None of the territory included in the petition will detach from the college--or, at least, this appears to be so at the moment.

Nowhere in the State is there more interest in a community college than in this region, and the institution formed will undoubtedly feature agricultural and technical programs to a greater degree than some would anticipate. Survey responses were quite definite in pointing out the areas which should be established, and commercial and technical offerings will be in demand as the institution grows.

It is the hope of the Committee that the report will be carefully studied by the residents in the area so that each will be aware of the project and the promises the college holds for the region. The committee further hopes that the State Board and the Board of Higher Education will approve the formation of the college and that the electorate will approve later in the year when the vote is submitted to them.

To all who assisted in the project, the Committee extends its appreciation.

Sincerely,

Robert Kenega
Chairman

KISHWAUKEE COMMUNITY COLLEGE STUDY COMMITTEE

Genoa-Kingston

Mr. Marvin Bridger
Mr. Robert Kenaga
Mr. Clarence Louderback
Mr. Paul Peterson
Mr. William Sherman
Mr. Joe Wilkinson

Rochelle

Mr. David Crawford
Mr. Paul J. Detig
Mr. John M. Eyster
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Mr. Harold C. Flanigan
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Mrs. Earl McNeal
Mr. Frederick Meyer
Mr. Wayne Paulson

Malta

Mr. Ronald Aska
Mr. Richard Gibbs
Mr. R. Hennegan
Mrs. Alvin Plapp
Mr. Perry L. Smith
Mr. Hardin Wright

Consultants

Ralph A. Belnap
Lee Brode
Harlan Cain
Dale McDowell
Leonard Pourchot
Kerby Tink
Carol M. Troescher

TABLE OF CONTENTS

Chapter		Page
I	PROPOSED: THE KISHWAUKEE COMMUNITY COLLEGE	1
	Recommends Immediate Action Projects Steady Growth Additional Important Areas School Organization to Grow Agreement on Financial Needs Supported by Report	
II	COMMUNITY HISTORY AND POPULATION	9
	Background Historical Data about the Area History of the Junior College Project Population and Enrollment	
III	THE COLLEGE PROGRAM	27
	General Curriculum Recommendations The College-parallel Program Occupational Programs Business Programs Technical Education Health Occupations Nursing Curriculum Other Occupational Areas General Education Adult Education Guidance Services Related Activities Library Instructional Staff Advisory Committees Meeting Special Needs Summary	
IV	ORGANIZATION	45
	1967-1968 1970-1971 1972-1973	

V BUILDING AND SITES 49

Factors to be Considered
Site Selection
Summary

VI FINANCIAL RESOURCES. 57

Legal Requirements as Related to Finance
Bonded Indebtedness
Assessed Valuation
Cost of Attending College
Building Costs
Annual Operating Budgets
Estimated Tax Levies
Summary

VII STATISTICAL SUPPLEMENT 67

Survey of High School Juniors and Seniors
Survey of Business and Industry

LIST OF TABLES

Table		Page
2- 1	Population of DeKalb County	14
2- 2	Population of Lee County	15
2- 3	Population of Ogle County	16
2- 4	School Enrollment (Elementary and Secondary) 1965-1966	17
2- 5	Distribution of Employment, DeKalb, Lee, and Ogle Counties	17
2- 6	Kishwaukee Community College Enrollment	22
2- 7	Kishwaukee College Enrollment Projections	24
3- 1	Transfer Possibilities at Selected Colleges	30, 31
5- 1	How to Choose a School Site	50, 51
6- 1	Bonded Indebtedness of School Districts within Proposed Kishwaukee Community College District	59
6- 2	Assessed Valuation and Projected Valuation of School Districts within Proposed Kishwaukee Community College District	61
6- 3	Annual Cost for Attending College	62
6- 4	Estimated Building Costs for Kishwaukee Community College	63
6- 5	Amortization Schedule (Phase I)	63
6- 6	Amortization Schedule (Phase II)	64
6- 7	Kishwaukee Community College Proposed Annual Estimated Operating Budgets	65
6- 8	Tax Levies on Individual Properties for Building and Operating Kishwaukee Community College	66
7- 1	Number and Percent of Juniors and Seniors at/in Each High School that Completed Questionnaire	67
7- 2	Residency in Present School District	68
7- 3	Seniors Enrolled in Various High School Curricula . . .	68
7- 4	Seniors' Plans for College Attendance	68

7- 5	Juniors' Plans for College Attendance	69
7- 6	Continued Education Comparison Graduates from Last Three Years with this Year's	69
7- 7	Seniors Enrolled in Various Curricula and their Plans for College	69
7- 8	Plans for First Year after Graduation of Juniors and Seniors	70
7- 9	Plans for First Year after Graduation and for College Attendance of Seniors	70
7-10	Parental Attitude Toward College Attendance	71
7-11	Parental Attitude Toward College Attendance and Seniors' Plans for College	71
7-12	Perceived Level of Family Income and Seniors' Plans for College	71
7-13	Seniors not Planning to Attend College but Would if Had More Money	71
7-14	Occupational Aspirations Expressed by Juniors and Seniors	72
7-15	Fields of Interest for Advanced Study	73
7-16	Specific Fields of Study Mentioned Most Often by Juniors and Seniors Indicating Interested in Advanced Technical Study	73
7-17	Plans for College and Interest in Advanced Business, Trade or Technical Training 15-20 Miles of Home	74
7-18	Education of Interest to Seniors not Planning to Attend College	74
7-19	Education or Training of Greatest Interest to Seniors	75
7-20	Most Important Reasons for not Going to College	75
7-21	Would Change Plans if They Had More Money?	75
7-22	Would Change Plans if They Could Meet Junior College Entrance Requirements?	75
7-23	Questionnaire Respondents by Size of Organization	76
7-24	Respondents and Employees by Type of Business	76
7-25	Employees Reported in Various Classifications	77

7-26	Estimated Number of New Employees Hired Annually in Each Classification	77
7-27	Employers with Training Program and Believe Junior College Could Supplement It	77
7-28	Employers' Need for Junior College Graduates in Specified Areas	78
7-29	Responses to Question: "To What Extent Do Existing Facilities in Area Meet Educational and Training Needs for Employees of your Company or Organization?"	78
7-30	Manufacturers Recommending Junior College Courses for their Personnel, their Estimate of Adequacy in Labor Supply and Preferred Training Level	79
7-31	Non-Manufacturing Firms Recommending Junior College Courses for their Personnel, their Estimate of Adequacy in Labor Supply and Preferred Training Level	80
7-32	Agricultural Firms Recommending Junior College Courses for their Personnel, their Estimate of Adequacy in Labor Supply and Preferred Training Level	81
7-33	Summary of Total Number of Respondents' Recommendations	81

CHAPTER 1

PROPOSED: THE KISHWAUKEE COMMUNITY COLLEGE

After fifteen months of study and consideration, representatives of eight school districts in DeKalb, Lee and Ogle counties agree that it is possible and desirable to create a community college district comprising their combined area. These districts are: DeKalb, Genoa-Kingston, Hiawatha, Malta, Rochelle, Shabbona, Sycamore, and Waterman. A map of the proposed college district appears herein as Figure 1.

The study made by the committee predicts an opening enrollment of about 400 full-time-equivalent students, rising to 1,300 full-time-equivalent students within the first nine years of existence. It is proposed that the campus, with two building phases, be located somewhere within a five-mile circle centered at Malta. There is available, in the proposed district, an assessed valuation of $277,400,000--nearly four times the legal minimum of $75,000,000.

Visionary leadership is needed for the creation and maintenance of a substantial community college program. The viewpoint that quality is limited to academic fields is a deterrent to developing effective occupational programs. A technical education lay advisory committee, composed of people from agriculture, business, management, trade unions, and education, is recommended to broaden the horizon of the professional staff of the college.

A multi-purpose educational program is proposed for the Kishwaukee Community College, including college parallel offerings, vocational and technical programs, adult education, high school opportunities for mature non-high school graduates, a broad general education curriculum, and special opportunities for gifted high school students.

Recommends Immediate Action

The study concludes with a firm recommendation that the legal steps be taken as soon as possible to provide the voters of the proposed district with an opportunity to vote on the proposition in the fall of this year. By such a vote a district will be created, tax resources of 12½¢ per $100 of assessed valuation providing a rate ample for the foreseeable future will be authorized, and an election for the community college board of education will be assured. The complete report contains population and enrollment statistics, financial data,

educational program suggestions, building and site recommendations, industrial and residential desires for the college, legal procedures, and related information necessary for the consideration of those empowered to establish a college district.

Since the first school in this area was established in 1847, the sustained interest in education has been evidenced by growth in school buildings, libraries, and improved educational programs. The variety of industries represented in this area, agriculture and its related businesses, and the well established lines of transportation and communication all tend to increase the emphasis on the educational facilities within this area. In spite of the efforts of the educational institutions and agencies in this immediate geographic area, further effort is needed to meet industry's, agriculture's, and society's needs--not only for today, but also for tomorrow. At present, only limited opportunities are available for those interested in vocational and technological educational programs. There is an increasingly greater demand in this area for personnel with this kind of training.

Projects Steady Growth

Enrollment. The feasibility study presents several methods of projecting the anticipated community college attendance for the next ten years. Based on the school population of the eight school districts participating in this community college study, it is evident there will be a steady growth of enrollment from at least 595 participating students the first year to 2,110 students within eight years. These students would be enrolled for full and part time study in technical, vocational, adult and pre-university courses.

The report of the population committee, given in detail in Chapter 2, makes clear the present need for the proposed Kishwaukee Community College and predicts critical needs in the near future.

Curriculum. A community college functions to serve the people in its area. Therefore, the program or curriculum offered by the Kishwaukee Community College should have suitable variety and flexibility to meet the educational needs of the people in the community. As a result of surveys made of interested students and personnel managers in the industries of the area, the following programs are recommended:

a. Vocational and technical programs
b. Two-year college parallel programs
c. An adult education program
d. A deficiency program for non-high school graduates
e. A broad general education program
f. A program for gifted students

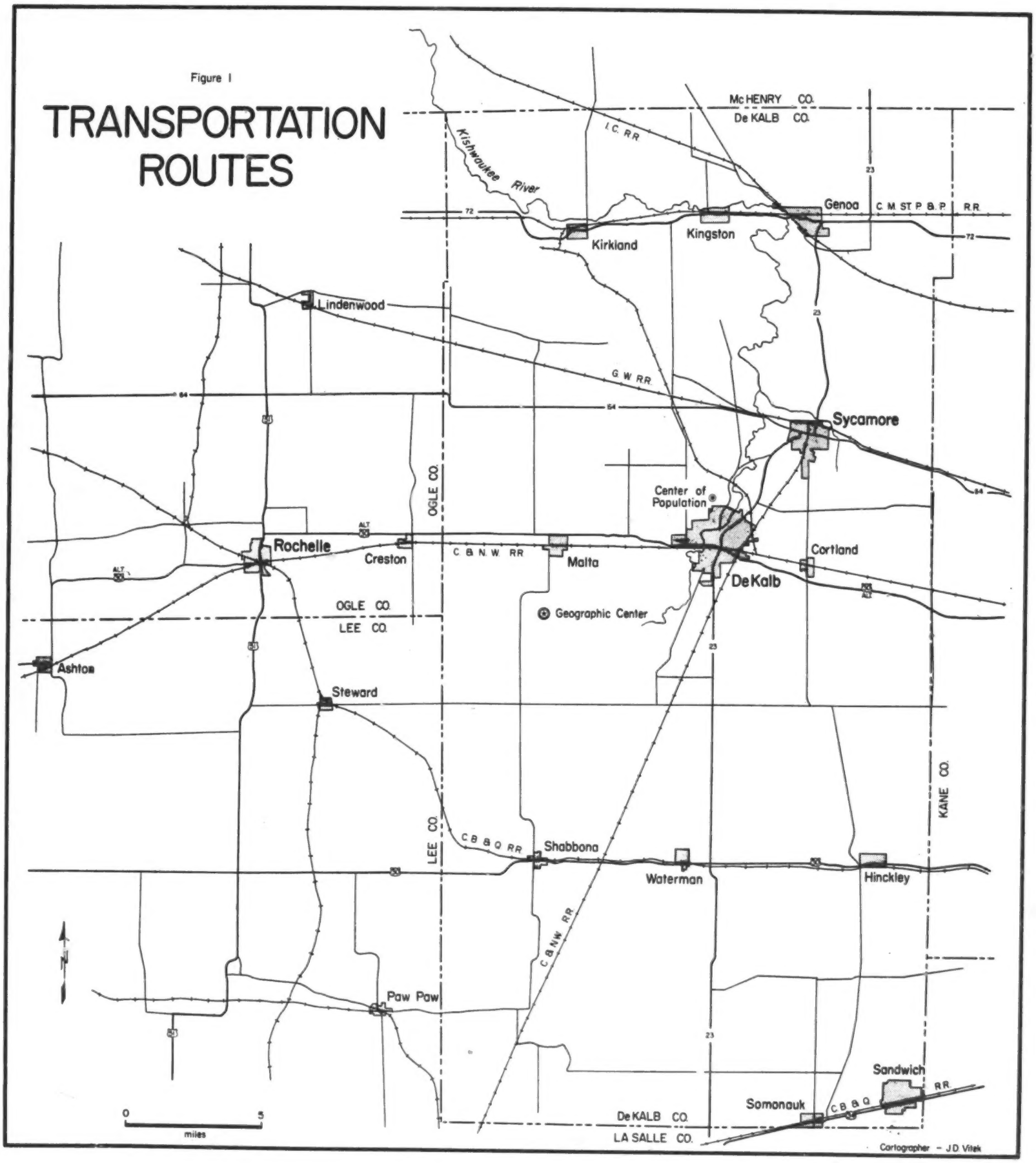


Figure I
TRANSPORTATION ROUTES
McHENRY CO.
DeKALB CO.
I.C. RR
Kishwaukee River
Genoa
C. M. ST. P. & P. RR.
Kirkland
Kingston
Lindenwood
G. W. RR.
Sycamore
OGLE CO.
Center of Population
Rochelle
Creston
C. & N. W. RR
Malta
Cortland
DeKalb
OGLE CO.
LEE CO.
Geographic Center
Ashton
Steward
KANE CO.
LEE CO.
C. B. & Q. RR
Shabbona
Waterman
Hinckley
C. & N. W. RR
Paw Paw
Sandwich
Somonauk
C. B. & Q. RR
DeKALB CO.
LA SALLE CO.
0
5
miles
Cartographer - J.D. Vitek

It is anticipated that more than half of the prospective student body will enroll in the college-parallel program. College guidance personnel will help these students to design an academic program to meet additional college requirements as well as to develop the capacities of individuals in terms of individual and societal needs. Diagnostic procedures will aid in determining immediate and long range individual goals in terms of abilities, aptitudes, and interests.

Additional Important Areas

Equally important will be the technical and semi-professional programs to meet manpower needs in business, technical, and health occupations.

Courses. Courses related to Business could include offerings in accounting, agri-business, secretarial, business management, merchandising, and sales. Included in the technical areas would be specialization in demands for skills in industry, electronics and automotive technologies, and industrial drafting. Pre-nursing, home-management, cosmetology and x-ray technician training might comprise the area of health occupations.

It is recommended that a two-year, general education course be made available to those individuals in the community who desire education beyond high school but are not interested in vocational courses or the college parallel courses. Graduates of this two-year program would qualify for the Associate Degree.

Adult or continuing education opportunities should be provided by the community college. Those eager to improve skills and learn new skills to increase job efficiency would have these opportunities through their community college programs. For those who did not graduate from high school, the adult education division should provide a program through which these individuals could make up their educational deficiencies.

The multi-purpose community college is designed to meet the needs of all individuals within the college district who wish to use the college to the maximum advantage. The community college is an educational institution designed to offer something to anyone or everyone who wishes to involve himself in increasing his skills, aptitudes and knowledge.

Activities. In addition to the regular curriculum program, the Community College should institute a program of student activities which will include clubs, drama, journalism, music, sports, and student councils. Support for social and creative activities and groups should be given.

Library. The heart of any educational institution is the library. Adequate materials are required to sustain the variety of educational programs recommended and to maintain the

effective flexibility of such an institution. It is recommended that the community college adhere to the standards established by the American Library Association.

Staff. The teaching personnel of the community college should be vitally interested in the students and the subject matter. The regular staff will be able to qualify for the Illinois Junior College Teachers Certificate. This regular staff will be supplemented by local, informed and skilled individuals who are willing to take part in community college instructional programs.

Site. No effort was made to determine availability and price for any particular site. But, it was discovered that the price of land in the area varies from $600 to $1,500 an acre, depending upon variables that are usually more agricultural than educational. It is possible, therefore, that land rejected for farm use may be attractive both in topography and price to a community college.

The Committee believes that, although the building program might be phased, this does not seem to be desirable procedure for land acquisition. In the normal expansion of the general economy, land can be expected to be more costly in the years ahead; this factor would be greatly multiplied by the knowledge that it needs the land. It is, therefore, recommended that a site of 120-160 acres be purchased at the earliest possible date by the duly constituted authorities.

Campus. Early in the planning of the college, attention will be given to the building program. Included in the buildings that have been advocated are the administration building, a general classroom and library structure, a vocational or technical classroom and shop building, a physical education center, and a student services building.

As the college gets underway and a definite pattern appears, a more precise schedule or long-range plan should be adopted.

School Organization To Grow

Only the broad outlines of college organization are sketched in the present report. The exact formation should be the creation of the governing board and its appointed college president. At the outset, personnel would be limited to four in administrative positions: President, Dean of the College, Dean of Students, and Business Manager. In addition, there will be a faculty of twenty to twenty-five instructors with some serving in counseling roles as well.

At the earliest possible moment, guidance should receive full consideration, and the expanding staff should include two counselors. Within six years, the growth should reach eight

administrators, five counselors, and between 85 and 90 teachers.

The Board of Education will consist of seven members as prescribed by state law. Representation will be balanced between incorporated and unincorporated areas; in addition, care should be taken to balance it among the several population centers. A lay advisory committee has already been mentioned and is discussed in detail in the chapter on curriculum.

Cost. One of the most important aspects of the Kishwaukee Community College feasibility study was to determine the cost of establishing and developing the kind of educational program needed by the district. The Finance committee based its projected figures on the reports of the Kishwaukee Community College Population Committee, the Curriculum Committee, the Buildings and Site Committee, and the results received from thirty-three similar institutions' responses to a questionnaire. This financial survey was primarily interested in tuition costs, tax levies, and capital improvement costs of community colleges.

Agreement on Financial Needs

After ascertaining that the proposed Kishwaukee Community College qualifies for legal requirements as prescribed by Illinois State Law, after noting the steady rate of growth reflected in the assessed valuation of the proposed district as well as anticipating the continued rapid growth of the area, after comparing costs of individuals attending different kinds of schools, after estimating building costs and interest payments for the proposed Kishwaukee Community College, and after examining the proposed operating budget for this college, the Finance Committee agreed that:

1. The assessed valuation of real estate at present and in the foreseeable future is and will be adequate to support a community junior college well within statutory limits.

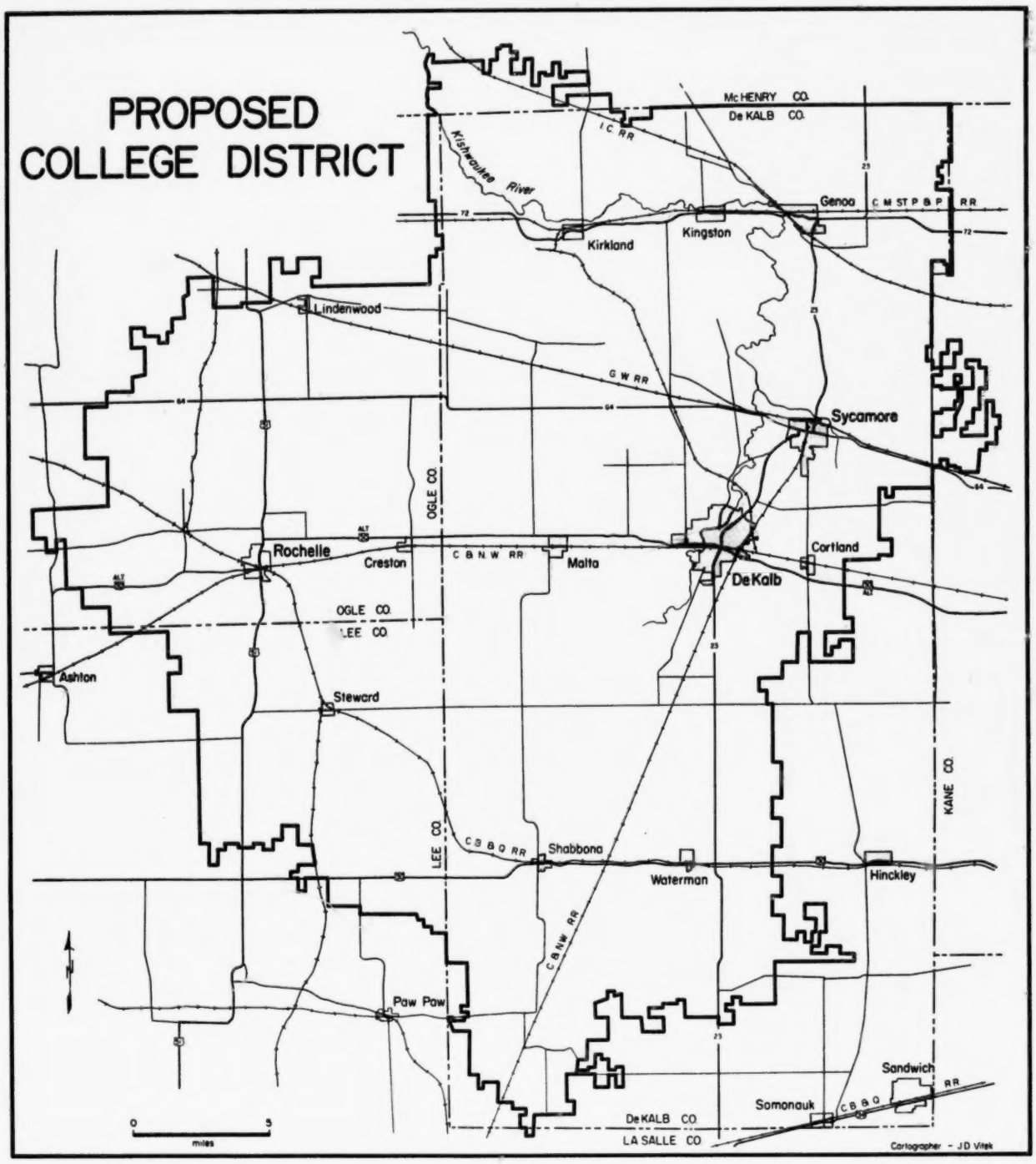
2. The total annual cost of a community junior college to the local taxpayer will range from approximately 12¢ to 19¢ per $100 of assessed valuation in its early years of operations. This is based on an estimated tax rate of 8¢ to 12¢ for education and 4¢ to 6½¢ for debt service requirements.

3. The maximum tax rates set forth in the election creating the college will be 10¢ for the Educational Fund and 2½¢ for the Building Fund. No amount has been stipulated initially for bonding purposes.

Supported by Report

This chapter has attempted to present in capsule form the gist of the feasibility study and emphasize the recommendations adopted by the Kishwaukee Community College Survey Committee. The succeeding chapters give, in greater detail, the findings and considerations of the entire group.

In fairness to the study group and in warning to those who fail to grasp the magnitude of this undertaking, it should be pointed out, in conclusion, that the findings of this report are, at best, preliminary and tentative. The actions and decisions of those finally charged with the actual creation of the college may be at variance with these early suggestions without in any way indicating deficiencies in the present study. In any event, the feasibility study will provide data and guidelines that should prove valuable to the Board and Staff of the new college.



CHAPTER 2

COMMUNITY HISTORY AND POPULATION

Background Historical Data about the Area

Peter Lamois, a French-Canadian, was the first white person to locate in Sycamore Township. He settled just north of the Kishwaukee River in 1834. In 1836, the Rufus Coltons established their roots west of Sycamore and soon had a store, post-office, and inn in that area. It is interesting to note that Squaw Grove and Somonauk preceded Sycamore as settlements. Sycamore was laid out north of the present site and across the river, and was called Orange until 1839. DeKalb, known originally as Buena Vista, had only 29 residents in 1850, but it grew rapidly and was incorporated as a city in 1877.

The Village of Malta was named Milton; later it was named Etna; and finally it became Malta. Other communities in the area had exciting beginnings, but detailed histories are not included for them.

The first court in this area was established in 1808 in the home of Rufus Colton; the following year the first courthouse was built. In 1815, a new courthouse was built in the square where the present courthouse in Sycamore now stands; the existing building was built in 1903.

The four-horse stage coach between Sycamore and St. Charles was owned by Timothy Wells and Charles Waterman. The stage line was used from 1840 until better transportation came to the area. In 1854, the Northwestern Railroad had been built as far west as Dixon, and Malta became a shipping point on that line. In 1876, with stations at Genoa, Kingston, and Kirkland, the Chicago, Milwaukee, and St. Paul built through the north end of the county. In 1887, the Chicago and Great Western and the Illinois Central Railroads came through the county.

A post-office was established in Malta in 1856, the same year that the county jail was built in Sycamore. The first newspaper in the area, The Republican Sentinel, was started in 1854; it has been published under different names but without interruption since. Thirty-seven newspapers have operated in the area at various times since 1854.

Lincoln Highway was paved in 1920, and in 1924 work started on the present Illinois State Highway 23; this north-south highway started a mile east of Leland, passed through Waterman,

DeKalb, Sycamore, Genoa, and extended on to the County Line. Highway 64 was built as far as Sycamore in 1931; later it was extended westward.

An early industry in the area was the flour mill for the milling of flour for cereals; this was established in Malta. In 1857, the mill burned to the ground, but it was rebuilt soon after. The elevators were established to store grain, and soon the grain business prospered so well that Malta was the best grain market in the county. The Village of Malta was incorporated in 1869, and that same year the City of Sycamore was incorporated.

The first church to be organized in the area was established in 1836. The first bank was established in Sycamore in 1867.

The first county Farm Bureau in the state was established in DeKalb County; and DeKalb Agricultural Association was founded in 1912, the first commercial production of DeKalb hybrid seed corn occurring in 1934. The company built large seed handling plants in several areas and increased the volume as rapidly as possible. The first two plants were built at Esmond and Waterman. At present, there are twenty plants in eight states and Canada.

The first school in the area was built in Somonauk Township in 1837. Between 1850 and 1861, four schools were built in DeKalb. Other schools were established in Shabbona (1876), Malta (1857), Squaw Grove (1842), Sycamore (1859), Genoa (1838), Waterman (1865), and Rochelle (1854).

Libraries in the area were established in Waterman in 1902, in Malta in 1920, in Shabbona in 1939, in DeKalb in 1893, in Sycamore in 1891, in Genoa in 1922, in Kirkland in 1908, and in Rochelle in 1890.

Several industries have established their roots and have developed in this area. Anaconda Wire and Cable moved from Chicago to Sycamore in 1890. Leich Electric, now Automatic Electric, started in Genoa in 1907. Argos Products was formed in 1949, and Falls Products moved into Genoa in 1946. Tuttle Electric Products and LaCroix Optical are industries located in Kirkland. Barber-Greene Company began in this area in 1957. American Steel and Wire started in DeKalb in 1930. The Joseph Brody Company has operated under present management since 1941. The C. W. Smith Company was established in Waterman in 1950. The Malta Screw Machine Products started in 1947. The Wurlitzer Company began in DeKalb in 1856. General Electric began operating in DeKalb in 1946. Ideal Industries and Diamond Wire came to Sycamore in 1924 and 1946, respectively. Nehring Electrical Works began in 1916. Kauffman turkeys have been raised in Waterman since 1933. Swift and Company recently

moved into Rochelle; and The Carron Spinning Company, Illinois Yarn Company, and Rochelle Asparagus Company have made significant contributions in the Rochelle area. Canning operations began with the establishment of California Packing plants in 1926 in Rochelle and DeKalb and the Sycamore Preserve Works in 1882.

Other industries in the area are the Richardson Company, Deco Porcelain, Leggett and Platt, Turner Corporation, Holub Industries, Newquist Foundry, DeKalb Forge, DeKalb Commercial Body, Greenlee Tool, and Univac. Many more basic industries operate within the proposed community college area. It is impossible to list all of them, so a summary of businesses appears, by category in the following paragraphs. Even then, not all businesses and industries have been listed, but these give some indication of the industrial wealth in the several participating communities. Serving the area are 9 newspapers, 13 banks and savings and loan associations, 58 beauty shops, 12 department stores, 19 appliance repair shops, 42 garages, 34 grocery stores, 10 floral shops, 13 laundries, 15 hotels and motels, 22 common carriers, 38 plumbing and heating dealers, 17 printing companies, 61 real estate firms, 77 insurance agents, 81 restaurants, 87 service stations, 8 dairies, 6 machine shops, 18 lumber yards, 4 cabinet makers, and 110 agricultural firms. In addition to these, there are 43 general contractors in the area, and several specialized firms are working in the construction business--electrical contractors, masonite contractors, remodeling contractors, steel-erection contractors, excavation firms, concrete pavers, roofers, painters, paper hangers, and sheet metal firms.

The agri-business companies represent farm equipment dealers, suppliers, feed stores, fertilizer companies, elevators, buyers, and feeding outlets.

Three hospitals are located in the area. In addition to these, seven medical clinics, a medical laboratory, a dental laboratory, and nine nursing homes are serving the several communities. Practicing physicians number 40; there are 12 optometrists, 28 dentists, and 10 veterinarians serving these communities. Thirty-eight attorneys practice in the area.

Many labor unions have offices in this area. The names of these unions have not been listed here.

There are 47 churches in the area, and six of these operate parochial schools. The eight public school districts contained in the survey operate 32 attendance centers or schools.

The Greyhound Bus Company provides bus service along with the Peoria-Rockford Bus Company, for the various communities, and five major railroads serve the area with freight and passenger service: Chicago Burlington and Quincy; Chicago Great

Western; Chicago, Milwaukee and St. Paul, and Pacific; Chicago and Northwestern; and Illinois Central.

A major university, Northern Illinois University, is located within the proposed college district; enrollment at that institution will exceed 15,000 students next year. Junior colleges surround the area; Rock Valley College, Elgin Community College, Sauk Valley College, LaSalle-Oglesby-Peru Community College, and the proposed Kane-Kendall County Community College, border the territory contained in the proposed college. Two small vocational schools--the Vocational Education School in DeKalb, and the Manpower Development Training in Sycamore--provide some vocational training for the area. Opportunity House in Sycamore provides vocational training for the handicapped. The DeKalb School of Beauty Culture is located within the district, and there are two beauty culture schools in Rockford, one in Elgin, and one in Aurora. There are no business or engineering schools within the proposed college district, but the International Business Machines course in Aurora and the Rockford School of Business and Engineering in Rockford are nearby.

Limited activities exist for those interested in vocational and technological training and in terminal educational programs, since there are few vocational schools in the area and since Northern Illinois University is geared along other lines; it should be noted that enrollment at Northern Illinois University is now limited to high school graduates in the upper 50 per cent of their graduating class, and other private and state universities are finding it increasingly necessary to limit enrollment.

For much of the history and factual information in the report, the committee is indebted to the DeKalb County Board of Supervisors for their excellent history, From Oxen to Jets.

Population. A majority of DeKalb county and portions of Lee and Ogle counties are included in the proposed Community College District. From 1,697 residents in 1840, DeKalb County grew to 51,247 in 1960. The population of the combined area proposed for the college was 60,030 in 1960. The growth of the three counties is shown in Tables 2-1, 2-2, and 2-3. It should be noted that the increase of population in DeKalb County from 1930 to 1960 was 58 per cent; in Lee County, the increase for the same period was 20 per cent; and in Ogle County, the increase for the thirty-year period was 35 per cent.

From the examination of population statistics and a study of industrial and residential growth in the areas to be served by the college, the Finance and Population committees (in a joint session) estimated that growth in the area would increase 35 per cent during the next ten years; with over 60,000 residents in the area now and the projection for the future, the

conjecture is that the population in this community college district should exceed 80,000 in 1975. School population in the participating districts is illustrated in Table 2-4.

Industrial Development. From the list of firms and businesses already presented, it is evident that a number of industries will continue to operate in this area, and the region should attract more industry in the future. A distribution of employment in the three counties is shown in Table 2-5 for 1940, 1950, and 1960; these composite figures were taken from the United States Census of Population.

From the survey that was made by the survey committee of agricultural, business, and industrial firms, it is apparent that considerable interest exists for industrial training programs--programs that certainly could be developed by a community college. As the new college gets underway, advisory councils should be formed to help the college pattern its technical and vocational programs. The potential in this area is difficult to determine at this point, but it is anticipated that many courses and many programs will be offered in technical education as the college programs unfold. It is also anticipated that the college will assume most of the adult education programs that are currently being conducted in high schools of the region.

Transportation. It has already been noted that public transportation is available in the area. A study of the map of the area indicates that there are several major highways serving the college district; and there are a number of well-maintained county roads that will also be available to commuters. The map also notes the geographic center of the district; if all districts included in the study participate in forming a community college, the geographic center will be located five miles west of DeKalb and three miles south of Alternate 30. If Shabbona and Waterman and other communities in the south are not included in the eventual formation of the college district, the geographic center will be three miles west and two miles north of DeKalb--approximately on Annie Glidden road at a point two miles north. Also shown on the map, is the population center of the district; this, it can be noted, is a point just north of DeKalb. It would seem that students commuting to a community junior college in this area would have little difficulty if the college is located near the geographic or population centers.

History of the Junior College Project

Organization for the Survey. The idea of having a junior college in this area came as a result of discussions by the Citizens Advisory Council of the DeKalb School District and other meetings within the county which were held early in 1965. The first meeting to explore the proposition was held at DeKalb

TABLE 2-1

POPULATION OF DEKALB COUNTY

Township	1930	1940	1950	1960
Afton	633	578	591	615
Clinton	1,179	1,222	1,378	1,508
Cortland	1,078	1,191	1,667	2,403
DeKalb	9,927	11,146	14,381	20,659
Franklin	1,210	1,266	1,418	1,673
Genoa	1,762	1,885	2,248	2,992
Kingston	868	872	993	1,186
Malta	966	1,031	1,074	1,383
Mayfield	655	682	648	682
Milan	593	553	494	522
Paw Paw	620	563	597	573
Pierce	636	599	578	633
Sandwich	2,913	2,898	3,404	4,287
Shabbona	1,325	1,291	1,372	1,345
Somonauk	966	939	1,077	1,273
South Grove	675	644	598	592
Squaw Grove	1,331	1,338	1,440	1,581
Sycamore	4,741	5,167	6,275	7,328
Victor	566	523	438	479
Totals	32,644	34,388	40,781	51,714

TABLE 2-2

POPULATION OF LEE COUNTY

Township	1930	1940	1950	1960
Alto	693	683	640	674
Amboy	2,681	2,697	2,770	2,784
Ashton	1,110	1,164	1,172	1,300
Bradford	543	531	521	485
Brooklyn	1,088	1,015	1,012	932
China	1,123	1,101	1,266	1,247
Dixon	14,920	17,285	19,280	21,380
East Grove	505	484	440	398
Hamilton	396	388	379	361
Harmon	814	771	724	690
Lee Center	753	834	736	681
Marion	625	609	411	419
May	481	500	416	410
Nachusa	691	638	660	573
Nelson	619	651	628	624
Palmyra	840	887	870	1,202
Reynolds	532	510	421	404
South Dixon	750	887	1,170	1,165
Sublette	868	834	763	802
Viola	473	445	459	401
Willow Creek	725	654	619	593
Wyoming	1,099	1,036	1,094	1,224
Totals	32,329	34,604	36,451	38,749

TABLE 2-3

POPULATION OF OGLE COUNTY

Township	1930	1940	1950	1960
Brookville	405	418	371	375
Buffalo	2,600	2,759	3,008	3,250
Bryon	1,566	1,723	1,948	2,415
Dement	852	792	813	887
Eagle Point	448	399	461	397
Flagg	4,523	4,856	6,342	8,193
Forreston	1,798	1,822	1,894	1,978
Grand Detour	338	390	540	606
Lafayette	286	306	281	277
Leaf River	1,060	1,132	1,187	1,315
Lincoln	726	764	737	706
Lynnville	600	583	562	628
Marion	994	1,024	1,122	1,442
Maryland	766	752	733	739
Monroe	787	761	863	1,028
Mt. Morris	2,669	3,094	3,512	3,941
Nashua	313	323	379	375
Oregon	2,900	3,510	4,211	4,728
Pine Creek	801	789	741	770
Pine Rock	804	817	824	860
Rockvale	586	608	601	903
Scott	889	846	865	931
Taylor	250	247	240	205
White Rock	742	744	821	781
Woosung	415	410	373	376
Totals	28,118	29,869	33,429	38,106

TABLE 2-4

SCHOOL ENROLLMENT (ELEMENTARY AND SECONDARY)
1965-1966

District	Number	Elementary	High School	Total
Waterman	431	409	172	581
Shabbona	425	524	202	726
Malta	185 & 419	360	104	464
Genoa-Kingston	424	938	364	1,302
Hiawatha	426	554	208	762
Rochelle	212 & 231	1,666	903	2,569
Sycamore	427	1,723	748	2,471
DeKalb	428	2,870	1,194	4,064
Totals		9,044	3,895	12,939

TABLE 2-5

DISTRIBUTION OF EMPLOYMENT, DEKALB,
LEE, AND OGLE COUNTIES*

Industry Group	Number of Persons Employed		
	1940	1950	1960
Agriculture	11,477	10,066	8,506
Construction	1,522	2,246	2,548
Manufacturing	5,246	10,743	14,306
Mining	103	75	122
Services	9,774	9,450	13,793
Transportation and Communication	1,760	1,796	1,716
Wholesale and Retail Trade	4,009	6,075	6,393
Other	567	817	1,046
Totals	34,458	41,268	48,430

*Source: U. S. Census of Population.

Junior High School in February 1965. There were more than fifty persons in attendance at the first meeting, and the basic components of the proposal were discussed. Since there was an indication of interest, it was agreed that the group should continue to meet, and subsequent meetings were held in Shabbona, Malta, and Kirkland before it was decided that a steering committee was to be formed.

On October 20, 1965, the steering committee met at Malta, and it was announced that the Kishwaukee Community College Steering Committee was duly incorporated by the State of Illinois with the following school districts indicating a desire to move ahead with the project: DeKalb, Sycamore, Genoa, Hiawatha, Malta, Rochelle, Shabbona, and Waterman. A map of the participating districts appears herein as Figure 2. The next meeting was held on November 3, 1965, and at that meeting various estimates were presented for operating and building a college. At that meeting, it was also decided to expand membership of the study committee, with additional representatives selected from each of the eight school districts. It was also learned that the State Office of Vocational Education would assist with the survey. On November 30, 1965, at Malta, Mr. Gerald Smith, Executive Director of the State Junior College Board, outlined the history of the junior college plan and informed the group of proper procedures to be followed in the establishment of the junior college in this area.

At a meeting of the entire committee on December 15, 1965, the study procedure was outlined and the project was underway. Plans for the creation of a foundation to assist with the operational cost of the new college were also formulated at that meeting. Since that time, committees have been at work studying the several possibilities for college instruction in the region, and the study conducted by the group has resulted in the publication of this report. The report contains population and enrollment statistics, financial data, educational program suggestions, building and site recommendations, industrial and residential desires for the college, legal procedures, and related information necessary for the consideration of those empowered to establish a college district. If the project becomes a reality instead of a dream, it is, anticipated that a public relations program to acquaint residents of the area with the proposal will be conducted during the summer and fall of 1966, with a vote of the citizenry being taken late in 1966 or early in 1967. If the citizens of the area mandate the organization of a college, the college board will be elected and plans undertaken for the opening of the institution in September, 1967.

Population and Enrollment

Projecting Enrollment. Several ways of projecting enrollments are available to the surveyor. Estimates of residential

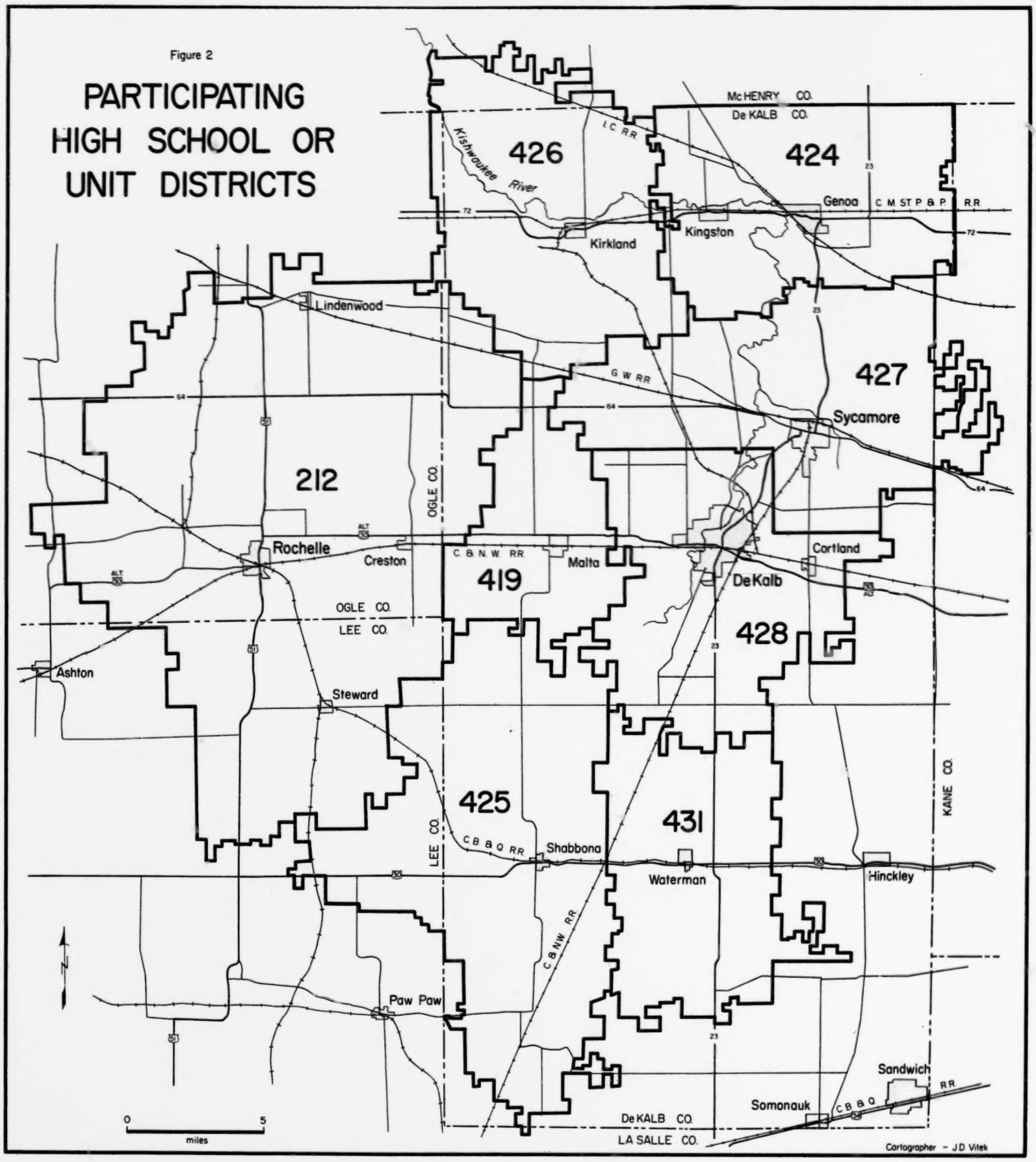


Figure 2
PARTICIPATING HIGH SCHOOL OR UNIT DISTRICTS
McHENRY CO.
De KALB CO.
426
424
427
212
419
428
425
431
Kishwaukee River
I C RR
Genoa
C M ST P & P RR
Kirkland
Kingston
Lindenwood
G W RR
Sycamore
OGLE CO.
Rochelle
Creston
C & N W RR
Malta
Cortland
De Kalb
OGLE CO.
LEE CO.
Ashton
Steward
LEE CO.
C B & Q RR
Shabbona
Waterman
Hinckley
KANE CO.
C & NW RR
Paw Paw
Sandwich
Somonauk
C B & Q
RR
De KALB CO.
LA SALLE CO.
0
5
miles
Cartographer - J D Vitek

and industrial development, retention ratios, or survival ratios of students, management development techniques used by industrial concerns--all are accepted techniques for estimating school enrollments of the future. Projections of two-year colleges are more difficult, since an established history of enrollments has not yet been determined because of the newness of the institution. However, there are formulas in existence which seem to be effective and reliable.

The formula developed in Florida indicates that there will be a ratio of one junior college student for every three high school students enrolled in grades ten, eleven, and twelve. In Washington and Illinois, it has also been noted that the ratio between junior college and high school students is 16.4 per cent; this means that the college enrollment will be approximately 16 per cent of the high school enrollment in grades 9-12 for any given year. With the increase in college attendance and the cut-offs that have resulted in the State of Illinois, this ratio should be increased to 20 or 25 per cent.

A Michigan formula notes relationship between high school graduates and college enrollment. That formula assumes that at least one-fifth to one-third of the high school graduates within a region will commute to a community college. Because of the current situation in Illinois, a 30 to 35 per cent ratio should probably be used if the Michigan formula is adopted.

A California formula indicates that junior colleges should enroll 43 per cent of the graduates from county high schools, figured on the two preceding years. Inasmuch as California and Illinois situations are quite different, this formula has not been used in the projections for the Kishwaukee Community College.

Another formula for projecting college enrollments is that of using the general population of the area to predict the student body. Under this plan, it is concluded that twenty students will enroll in the college for every 1,000 people in the area. This would mean that the college enrollment in the Kishwaukee Community College would exceed 1,000 students in 1968, with an enrollment of or in excess of 1,300 students in 1974.

It must be kept in mind that all projections of enrollment, in the final analysis, are "guestimates." While the projections are indicative and helpful, they should be checked each year to determine if actual enrollments are running ahead of or are falling behind projected figures. In this way, they can be quite helpful. Three methods have been used by the population committee for estimating future enrollments of the Kishwaukee College. These are described below:

Method 1: Using the last method illustrated, that of assuming a ratio between student enrollment and total population, it is estimated that, for the 1967-1968 school year, there would be 1,015 full-time equivalent students enrolled in the college. In 1975-1976, the full-time equivalent would be 1,370 students.

Method 2: Using the ratio between high school and college enrollments, and using 25 per cent rather than the 16.4 or 30 per cent figures discussed earlier, it has been estimated that in 1967-1968 the full-time equivalent enrollment for this college will be 495 students; this is the first year of operation, and in that year only the seniors of the year before will attend college. The following year, the college will be in full swing with two classes rather than one, and under this method it is anticipated that the enrollment in 1968-1969 will be 1,015 students. A few years later, during the 1971-1972 school year, the enrollment will reach 1,120 students if this method of calculation is correct. In 1975-1976, the projection is 1,200 students. The same projection would be reached under this method if the 20 per cent ratio were used for five years and the ratio increased to 25 or 30 per cent thereafter.

Method 3: This is the most complicated of the methods used to project college enrollments. Under this plan, the committee has assumed that 36 to 45 per cent of high school graduates will enter the community college. In 1967-1968, the full-time equivalent enrollment will be 400, with the full-time equivalent enrollment the second year (the year in which the college is in full operation) reaching 685. During the fifth year, 1971-1972, the full-time equivalent enrollment will be 840, and in 1975-1976 the college will enroll 1,315 full-time equivalent students.

Glancing rapidly at the enrollments obtained from the several methods described, it is apparent that full-time equivalent enrollment during the second year of the college will be approximately 700 students; five years later, enrollment will approximate 1,000 students, and in the ninth year of operation the full-time equivalent enrollment is shown to be over 1,300 students.

It should be mentioned too, that in projecting enrollments for the college, elementary and secondary school enrollments for the past ten years have been used. Past and present enrollments for each of the districts were computed and compared with the composite enrollment, by grades, for the area. The combined enrollment story, both past and future, is shown in Table 2-6; it

TABLE 2-6

KISHWAUKEE COMMUNITY COLLEGE ENROLLMENT
(Actual and Projected)

Year	Kinder-garten	Grades 1	2	3	4	5	6	7	8	9	10	11	12	Total 9-12
1956	691	979	943	911	948	816	729	767	751	791	634	605	479	2509
1957	699	1031	950	954	900	960	829	753	781	836	743	590	560	2729
1958	717	1057	979	946	927	906	942	793	702	775	785	724	538	2822
1959	767	1045	1005	948	920	945	893	904	786	735	791	756	652	2934
1960	835	1068	1000	992	923	919	909	880	881	834	792	739	680	3045
1961	*853	1164	1064	973	1033	934	933	916	872	962	879	741	794	3376
1962	**636	1137	1150	1035	978	1004	945	957	923	910	1041	834	660	3445
1963	885	1162	1104	1140	1041	981	1020	935	938	1005	961	970	765	3701
1964	846	1197	1138	1097	1117	1038	988	996	922	1006	1033	912	925	3876
	1.42	.97	.99	.99	1.00	1.01	.99	.99	1.06	1.03	.95	.93		
1965	870	1201	1161	1127	1086	1117	1048	978	986	977	1036	981	848	3842
1966	885	1235	1165	1149	1116	1086	1128	1038	968	1045	1006	984	912	3947
1967	900	1257	1198	1153	1138	1116	1097	1117	1028	1026	1076	956	915	3973
1968		1278	1219	1186	1141	1138	1127	1086	1106	1090	1057	1022	889	4058
1969				1207	1174	1141	1149	1116	1075	1172	1123	1004	950	4249
1970					1195	1174	1152	1138	1105	1140	1207	1067	934	4348
1971						1195	1186	1140	1127	1171	1174	1147	992	4484
1972							1207	1174	1129	1195	1206	1115	1067	4583
1973								1195	1162	1197	1231	1146	1037	4611
1974									1183	1232	1233	1169	1066	4700
1975										1264	1269	1171	1087	4791

*Estimate for District 427.
**No Kindergarten for District 427.

should be noted therein that present high school enrollment is 3,842 students; this is projected to increase to nearly 4,800 students in 1975-1976--a 25 per cent increase in ten years. Table 2-7 summarizes the committee's deliberations and presents the complete college enrollment summary. This table should be analyzed in considerable detail as it pulls together and summarizes all of the points and data that have been described in the chapter.

Kishwaukee College Enrollment. Table 2-7 is divided into four general categories, but enrollments basically are shown for full-time and part-time students. Full-time students are those who will be earning at least 12 hours of credit in the college, while part-time are those who will be taking one or two courses in daytime or evening programs at the school. The full-time projections have been divided into (1) college preparatory and (2) agricultural, business, vocational, and technical curricula; enrollments in the two programs are shown in columns 2 and 3 with a total full-time enrollment being indicated in column 8. The committee estimates that 335 full-time students, 36 per cent of the high school graduates of the previous year, will attend the college during its first year of operation. During the first year, it is assumed that vocational and technical offerings will be limited and that no adult education programs will be offered. During the second year, however, adult and vocational programs are expected to increase, and 60 per cent of the enrollees are expected to remain the second year. It has also been assumed that those enrolled in vocational and technical programs will constitute 25 per cent of the student body for the first two years, increasing to 30 per cent the next three years and 35 per cent thereafter. It may be that this ratio eventually will reach 50 per cent; this should be expected. From the table, it can be noted that the first year's enrollment of 335 is expected to increase to 590 during the fifth year and to 760 students in 1975-1976.

The figures just presented constitute only the full-time enrollments. Many students will attend Kishwaukee College on a part-time basis; some will be working on a college program, but most will be interested in adult education credit or vocational, business, technical, agricultural, or industrial retraining programs. If the college assumes the adult education chore for the area, this program will grow to a considerable extent. With the establishment of advisory committees and industrial retraining programs, vocational and technical programs should expand very rapidly during the ten-year period that lies ahead; it will expand even faster thereafter. Reference to Table 2-7 shows a slight annual increase for the college preparatory students who will be attending on a part-time basis, and other figures are increasing according to the following plan. During the first two years it is anticipated that the college students will take two courses each, while students enrolled in the adult, vocational, technical programs will enroll for one course. In 1970-1971, the vocational and technical programs

TABLE 2-7

KISHWAUKEE COLLEGE ENROLLMENT PROJECTIONS

Year	Full-Time		Part-Time				Total			Full-time Equivalent Enrollment
	College Prep	Other*	College Prep	Other*	Adult Credit	Adult Non-Credit	Full-time	Part-time	Grand Total	
1967-68	270	65	60	110	90		335	260	595	400
1968-69	405	135	125	200	175	100	540	600	1140	685
1969-70	385	165	125	200	175	100	550	600	1150	695
1970-71	400	170	150	300	200	150	570	800	1370	820
1971-72	410	180	150	300	200	150	590	800	1390	840
1972-73	415	225	175	375	225	300	640	1075	1715	975
1973-74	440	240	175	375	225	350	680	1125	1805	1050
1974-75	450	250	175	450	250	400	700	1275	1975	1205
1975-76	495	265	175	500	250	500	760	1425	2185	1315

*Agricultural, Business, Vocational, Technical, and Industrial Retraining.

should increase in intensity with students in those programs taking two courses; at that time, adults in the credit or non-credit programs will be taking one course and the college students two courses. In 1972, it is anticipated that college preparatory and vocational--technical students will be attending on a one-half time basis; this ratio will increase slightly in 1973, and it will also increase in 1974. If these assumptions are correct, part-time students will constitute 18 per cent of the college enrollment during its first three years of operation, 22 per cent of the enrollment the next two years, and 25 per cent of the total enrollment in 1972 and 1973. Beginning in 1974, it is anticipated that 27 per cent of the college enrollment will be from students attending on a part-time basis. Excluding students in adult education courses, the percentage of part-time students increases considerably. In 1970, 32 per cent of the students enrolled in these programs will be part-time students, and in 1975 the ratio will be 53 per cent.

This indicates that the college will open with 595 students, that enrollment the fifth year will be 1,390 students, and in 1975-1976, the college will have nearly 2,200 students in attendance. Since some of these are part-time students, the figures shown in column 11 must be noted. The full-time equivalent enrollment of the college at the outset is noted to be 400 students; the second year, it will be nearly 700. In 1971-1972 the enrollment is estimated to be 840 students, and in 1976-1976 the projected full-time-equivalent enrollment will reach 1,315 students. Again, it should be noted that enrollment projections shown in Table 2-7, the result of intensive study by the Population committee, are very close to those obtained in the other methods previously discussed. This might be expected since the various methods have been used in projecting full-time and part-time enrollment within the various categories.

Summary. Eight school districts participated in the study of junior college needs in the three-county area. These districts are DeKalb, Sycamore, Genoa, Hiawatha, Malta, Rochelle, Shabbona, and Waterman. As the study neared completion, Paw Paw became interested in the project, and while statistics for this district are not included in the study that community and neighboring territory may be included in the petition if a junior college district is formed. Later, other areas may annex to this district.

From the tabulations and statistics presented, it is evident that there will be considerable industrial growth in this region in the future. Even with the present industry, there is a sufficient need for training and retraining programs for business--programs that would be offered in a community college.

Enrollment projections show a need for establishment of a two-year college--one that will offer pre-university, technical,

vocational, terminal, and adult education offerings to students in the area. The need is further demonstrated in chapters dealing with citizen and industrial surveys and the curriculum.

While the area is surrounded by other community colleges (and some with greater enrollment potential), there is sufficient enrollment indicated to justify the establishment of the community college in this region. The estimates of the Population committee show that enrollment in the college will begin with 595 students (400 full-time equivalent students), and that enrollment will exceed 2,200 students (1,315 full-time equivalent students) within nine years.

CHAPTER 3

THE COLLEGE PROGRAM

The program of Kishwaukee Community College should have suitable variety and flexibility to meet the educational needs of the people in the community. The curricular program should be devised so as to meet local needs and interests as well as the interests and needs of local citizens which transcend the immediate geographical area. The curricula should be suitably adaptable so as to serve future populations and meet new industrial and service requirements.

Local citizens may learn skills, attain better understandings, acquire new knowledge, and build appreciations in a community college. Technicians with improved skills should be more valuable workmen. Increased knowledge, understanding, and appreciation should result in better informed citizens and more productive and well-adjusted human beings. The community college can do much to upgrade an area vocationally, technologically, and educationally. The industrial, agricultural, technical, medical, health, service, and educational activities of an entire area will be benefited by a community college. This should be the aim of Kishwaukee Community College.

A cooperative attitude toward other educational institutions--both secondary and higher education--should typify the community college. The program should work to augment, articulate with, and extend offerings of existing educational institutions. All programs should point toward the development of individuals, and each student should be helped toward his maximal potential achievement. A program designed to carry out these purposes is proposed by the Curriculum Committee of the Kishwaukee College Citizens Committee.

General Curriculum Recommendations

Programs should be initiated by the proposed community college in the following curricular areas:

a. A two-year college-parallel program
b. Vocational and technical programs
c. An adult education program
d. A deficiency program for non-high school graduates
e. A broad general education curriculum
f. A program for gifted high school students

While each curricular area will differ in content from others, there is expected to be much overlap in courses taken in various sequences. Some courses may be taken in the college-parallel program but may, for example, also be recommended or required for students in another area.

A "common core" of courses should be required for those two-year programs leading to an associate degree, whether the degree is in the arts, business, or the technical fields. The curriculum committee suggests the following minimum requirements in course content and credit hours for all the programs which lead to the associate degree:

Areas of Study	Credit Hours
Communications	6
American Institutions	6
Mathematics and Science . . .	6
Behavioral Science	3
Orientation to College	1
Health and Physical Education	4
Major Field of Study	20-30
Electives to Total	64

It is important that courses offered and the requirements for the courses in English, mathematics, science, and behavioral science vary according to the student's needs in his major area of study. The communications area should include English composition and speech. American History, American government (state and local) and/or American government (national) should be included in the American institutions area. In the vocational and technical programs, students should be able to take courses which would have the most practical value for meeting their needs.

The value of a guidance program for the junior college student is of such significance that it should be discussed in a separate section. A guidance-oriented teaching and administrative staff is of inestimable value at this educational level.

The College-parallel Program

It can be expected that more than half of the student body of the proposed community college will enroll in the college-parallel program. Students in this curricular area will anticipate transferring to a four-year institution at the completion of their work in this college. Preliminary surveys indicate that college-bound students from this geographic area go to all of the state universities in Illinois, numerous other Illinois colleges and universities as well as to dozens of out-of-state schools.

Since requirements at the various colleges and universities

are not uniform, it shall be necessary, through careful guidance, to insure that the transfer students will have the necessary courses which will enable them to meet the freshman and sophomore requirements at the institutions into which they transfer. Guidance personnel at the Kishwaukee Community College should acquaint themselves with freshman and sophomore requirements of the accepting colleges and universities so as to help the student in designing an academic program to fulfill these requirements. In addition to the "common core" of courses which constitute basic requirements for the associate of arts degree, there should be elective courses of suitable variety to satisfy the educational requirements of the accepting colleges.

Students transferring from community colleges to 4-year institutions will be numerous, and the sample programs based on individual 4-year institutions requirements are given. The 4-year institutions listed are those determined by the survey results as being the institutions that students indicated they would most likely attend.

It is suggested that a minimal college-parallel elective program should include:

American Government, National
American Government, State and Local
Art Survey
Biology
Botany
Business Law
Calculus
Child Psychology
College Algebra
Computor Programming
Creative Writing
English Composition (6 hrs.)
Foreign Lang. (Min. of 12-16 hrs. in 2 to 3 languages)
General Chemistry
Geography of Illinois
Geology
History of the Americas
Human Anatomy
Hygiene
Intermediate Algebra
Introduction to Philosophy
Introduction to Business
Introductory Psychology
Introductory Sociology
Journalism
Marriage and Family
Math Analysis
Music Survey
Pan-Pacific History
Physiology
Principles of Accounting
Principles of Conservation
Principles of Economics
Quantitative Analysis
Survey of Am. Literature
Survey of European Hist.
Survey of Phys. Geography
Survey of Phys. Science
Survey of World Lit.
Trigonometry
World Civilization
World Reg. Geography
Zoology

The proposed minimal elective program should be expanded or enriched if the needs of the community warrant it. It is suggested that, in this expansion and enrichment, the staff should not confine its interests solely to traditional courses; rather, they should examine recent approaches to subject matter and to new areas of study.

TABLE 3-1

TRANSFER POSSIBILITIES AT SELECTED COLLEGES

Subjects	Transfer Programs	Credit Hours
	Northern Illinois University	
College Orientation		1
Communications (Speech, composition, literature)		11
Humanities (Art, literature, philosophy, music, foreign language)		11
Science		9
Mathematics		3
American Institutions		6
Social Studies, elective		6
Physical Education		4
Electives		13
		64
	University of Illinois	
Because requirements differ from one college to another at the University of Illinois, a student should consult with a counselor in working out a program for the first two years. Ideally, a student should have a pretty good idea of the field of study he wishes to enter before embarking upon the transfer program.		
	Western Illinois University	
College Orientation		1
Speech		3
American History		3
Social Studies, elective		9
Laboratory Science, elective		8
Health		3
Introductory Psychology		3
Physical Education		4
Electives		30
		64
	Illinois State University	
College orientation		1
English Composition		6
Literature, elective		3
Art, Music, or Foreign Language		4
Speech		3
European History		4
American History		3
Economics, Political science, sociology or anthropology		6
Natural Science		9
Introductory Psychology		3
Health		2
Physical Education		4
Electives		16
		64

TABLE 3-1 (Cont'd)

TRANSFER POSSIBILITIES AT SELECTED COLLEGES

Subjects	Transfer Programs	Credit Hours
	Southern Illinois University	
College orientation		1
Science (physics, chemistry, biology, geology)		12
Social Studies (history, geography, anthropology, socioloty, economics, government, psychology)		12
Humanities (Music, art, philosophy, literature, poetry, speech)		12
English Composition		4
Speech		2
Math or foreign language		6
Physical Education and health		4
Electives		11
		64
	Eastern Illinois University	
English and Speech		12
Laboratory Science		8
Social Science		6
Health Education		3
Psychology		3
Electives		32
		64

Occupational Programs

Technical or vocational programs serve two purposes in the community: 1) The student is helped to pursue his personal goals and interests and to develop his capabilities, and 2) the manpower needs of local industry, business, and services are met by providing skilled workmen and other trained personnel.

Surveys conducted among citizens, employees, employers, and students indicate that Kishwaukee Community College should offer a broad program in technical and vocational areas. In this age of occupational change it is important to offer to students those training skills which will prepare them for economic independence as well as social maturity. This comprehensive college would do well to offer technical and semi-professional programs to meet the community's manpower needs in the following areas:

Business: Accounting, Secretarial, Secretarial (Medical and Dental), Business Management, Merchandising and Sales, Agri-business.

Technical: Industrial Technology, Electronics Technology, Automotive Technology, Industrial Drafting.

Health Occupations: Pre-nursing, Home Management, Cosmetology, Dental Assistant, and X-Ray Technician Training.

A distinction should be made between technical programs which educate specialists in a narrow sphere of training and programs which call for a broader training experience. Specific courses to meet the needs of persons employed in industry should be offered if a sufficient number of qualified students are available to make it feasible.

Business Programs

Both beginning and advanced courses in business areas should be offered, and the individual program should be tailored to fit the needs of the student. Previous high school courses taken and business experience may determine the level at which the student should begin. Counselors should give placement tests and otherwise assess the preparation level of the student. Two-year degree programs should be offered as well as courses of lesser duration for those who do not wish to pursue the degree program.

Types of business or commercial courses suggested for immediate consideration are:

Secretarial (General)

Subjects	Credit Hours
General Education	20
Typing	6
Shorthand	6
Introduction to Business	3
Accounting	3
Office Orientation	2
Transcription and Dictation	3
Business Machines	3
Cooperative Business Practice	3
Introduction to Psychology	3
Business Electives	4
Electives	8
	64

Accounting

Subjects	Credit Hours
General Education	20
Introduction to Psychology	3
Principles of Accounting	12
Business Law	3
Principles of Data Processing	3
Principles of Economics	3
Cost Accounting	3
Tax Accounting	3
Auditing	3
Account Machine Practices	3
Cooperative Business Practices	3
Physical Education	5
Electives	3
	64

Business Administration

Subjects	Credit Hours
General Education	20
Introduction to Psychology	3
Principles of Accounting	3
Physical Education	2
Typing	3
Introduction to Business	3
Principles of Finance	3
Principles of Marketing	3
Small Business Management	3
Personnel Management	3
Business Law	3

Principles of Economics	3
Electives	14
	64

Merchandising and Sales

Subjects	Credit Hours
General Education	20
Introduction to Psychology	3
Principles of Selling and Buying	3
Principles of Marketing	3
Introduction to Business	3
Fundamentals of Advertising	3
Retail Merchandising	3
Principles of Finance	3
Marketing Problems	2
Introductory Accounting	3
Small Business Management	3
Business Law	3
Cooperative Business Practice	3
Electives	9
	64

Agri-Business. Agriculture is an ever-changing industry. Because of tremendous advances in research, technology, machinery and equipment, farms now are larger, and less people are required in direct production. These changes however, have opened new fields in related agriculture and service areas. The demands for well-educated agricultural specialists in business, education, and government far exceed the supply. Schools must move rapidly to meet the expanded needs for trained experts with agricultural backgrounds. For those individuals who have a basic interest in agriculture but who are confronted with a declining job market in the field of agricultural production, it is suggested that a two-year program in agri-business be offered at the proposed college.

Agri-Business

Subjects	Credit Hours
General Education	20
Principles of Finance	3
Introduction to Psychology	3
Agricultural Chemistry	4
Field and Forage Crops	3
Agricultural Entomology	3
Soil Science	3
Principles of Accounting	6
Principles of Selling	3
Farm Management and Production	6
Agricultural Pest Control	3
Electives	7
	64

The foregoing programs in the business education area are sample programs. In much demand from employers in non-agricultural business and industry were these job classifications: accounting and bookkeeping, secretarial science, business machines, clerical practice, office management, data processing, advertising, small business management, and merchandising. This entire group of courses are seemingly in great demand since there appears to be a scarce supply of employees in these areas. The business-education curricula should be fully implemented and suitable stress given to these courses.

Technical Education

Job opportunities for graduates of industrial, professional, and technological programs far exceeds the supply. The preparation of middle-level specialized technical manpower realistically serves a wide range of students. Visionary leadership is needed for a substantial technical program. The viewpoint that quality is limited to academic fields is a deterrent to the development of effective occupational programs. A community college should accept the responsibility for introducing technical programs. The illustrated technical courses of study are of two-year duration; however, it should be emphasized that one-year (non-degree) programs in similar fields should be among the curricular offerings of the proposed community college.

Industrial Technology

Subjects	Credit Hours
General Education	20
Industrial Psychology	3
Elementary Mechanical Principles	3
Elementary Heat Engineering	3
AC-DC Theory	3
AC-DC Machines	3
Industrial Materials and Processes	6
Applied Mechanics	3
Blueprint Reading	2
Industrial Drafting and Design	9
Electives	9
	64

Electronics Technology

Subjects	Credit Hours
General Education	20
Industrial Psychology	2
Fundamentals of Electronics	3

Electronic Circuits	3
AC-DC Theory	3
Electronic Measurement and Testing	3
Communication Electronics	3
TV Fundamentals	3
Pulse Circuit Theory	3
Transistor Theory	3
Basic Computer Circuits or Radar Fundamentals	3
Electives	15
	64

Automotive Technology

Subjects	Credit Hours
General Education	20
Hand Tool Processes	3
Industrial Materials	3
Drafting	3
Internal Combustion Engines	3
Automotive Electricity	3
Carburetor, Fuel Systems	2
Auto-Ignition Systems	2
Auto-Transmissions	2
Engine Testing	3
Chassis Units	2
Cooperative Shop Practice	3
Electives	15
	64

Industrial Drafting

Subjects	Credit Hours
General Education	20
Graphic Measurements	2
Industrial Drafting and Design	9
Electrical Circuits and Machines	4
Industrial Materials	3
Elementary Mechanical Principles	3
Electronic Circuit Drafting	2
Structural Drafting	2
Architectural Geometry	3
Electives	16
	64

The curriculum committee strongly recommends that prior to the initiation of any broad technical-education curriculum, the administration of the proposed community college organize a technical-education advisory committee. The committee is to work with the administration in developing programs, and it should be composed of people from business, management, trade unions, and education. It also recommends the study of Technical Education in the Junior College-New Programs for New Jobs

by Norman C. Harris and the Los Angeles Trade-Technical College Catalog as source materials for this committee.

Health Occupations

Earlier in this chapter, it was suggested that the proposed community college institute a program for the preparation of dental and medical secretaries. As the government's medicare program will surely spark a demand for health-related workers--a field which already is experiencing a need for a great many more people than existing schools can supply--and in response to the indications of the survey, the committee recommends a one-year pre-nursing course along with these additional areas of health technology.

Dental Assistant

Subjects	Credit Hours
General Education	20
Human Anatomy	3
Dental Anatomy	3
Dental Materials	3
Dental Prosthetics	4
Roentgenology	4
Dental Office Practice	3
Dental Clinical Practice	5
Medical and Dental Terminology	2
Nutrition	3
Typing	3
Electives	11
	64

X-ray Technology

Subjects	Credit Hours
General Education	20
Biology	5
Elementary Chemistry	5
Typing	3
Human Anatomy and Physiology	6
General Physics	5
Beginning Photography	3
Roentgenology	4
X-ray practicum	6
Electives	7
	64

Nursing Curriculum. For the one-year pre-nursing curriculum the regular "core courses" in the college parallel studies could be pursued but with the inclusion of biology, chemistry, and any other required courses. The program of studies should

be carefully planned so as to articulate with the nursing school of the student's choice.

It is further recommended that the need for the training of practical nursing be scrutinized to see if a program for these students seems warranted. The advice of local medical authorities should be sought.

Other Occupational Areas

Home-management and cosmetology courses are recommended. The former would serve those who wish to prepare themselves in home economics or to fill the role of housewives. The latter courses can be expected to be in continuous demand.

Home Management

Subjects	Credit Hours
General Education	20
Child Psychology	3
Home Finance and Budget	4
Marriage and Family	3
Consumer Problems	3
American Public Education	3
Clothing Selection and Construction	6
Home Decoration	2
Food Preparation	6
Elementary Nutrition	3
Electives	11
	64

Cosmetology

Subjects	Credit Hours
General Education	20
Introduction to Psychology	3
Cosmetology Theory	6
New Materials and Processes	3
Manicuring, Facials, Waving, Hair Cutting, Styling	21
Typing	3
Electives	8
	64

General Education

A two-year general-education course should be made available to those persons in the community who desire education beyond the high school but who are not interested in special vocational courses or the college parallel course. For whatever reason--personal, social, cultural--these persons are interested in a two-year terminal program. The Curriculum

Committee recommends that such a program be initiated and that it be based upon the "common core" of courses previously listed in this chapter. In addition to the minimum required courses for all those persons working toward the associate degree, it is recommended that not fewer than twenty additional hours in the liberal arts and sciences and sufficient elective hours be required.

Adult Education

The curriculum committee recommends that Kishwaukee Community College should institute a broad adult-education program. Various high schools and other agencies presently conduct limited educational programs. The administration of the college should consult with the administration of the schools and other agencies to insure cooperation in conducting adult education programs. It is recommended that the college hire a director for this program.

This institution should be geared to filling the varied educational needs of the community, and there is great demand for adult or continuing education. Under-education is a prime cause of unemployment and under-employment in a rapidly advancing and shifting technical world. In addition to providing further education for the adult interested primarily in personal enrichment, the college should offer courses for persons eager to improve their skills in order to advance on the job.

For those individuals who were prevented from graduating from high school, the adult education division should be prepared to overcome their academic deficiencies. Opportunities to meet the educational needs of the adults of the community should be continually reviewed by the administration and interested community advisors.

Besides course offerings to adults, other educational activities are a part of the adult education program. Activities such as musical programs, lectures, plays, workshops, and extension services would be included as a cultural lift for students and community.

Guidance Services

It is recommended that the institution promote a guidance program which is adequate to meet the needs of the students served by the college. The Community College has special guidance needs because:

1. There are numerous kinds of courses and programs from which students may make choices.

2. Special counseling tasks arise from the need of students to transfer course work to various colleges and universities.

3. This type of institution is in the business of developing the capacities of individuals and special attention is paid to individual needs.

4. Admission policies are such that placement tests are required and other testing may be desirable.

5. The majority of students entering junior college plan on transferring; yet less than half of them actually do transfer. Some of the students find that they neither have the ability nor the interest nor the motivation required to follow a rigorous course of study. It is here that the guidance department of a junior college can perform a special service--by directing these students into occupational programs for which they are better suited. The guidance service must effectively provide for maximum talent development of each student.

In addition, all colleges need to maintain adequate personnel records and to obtain necessary facts about their students. Furthermore, student activities require coordination and supervision from staff personnel.

Related Activities

In addition to the regular curricular program, the community college should institute a program of student activities which would include sports, clubs, organizations, music, drama, journalism, and student government.

Intramural athletics should be stressed and some competitive sports such as basketball, gymnastics, wrestling, baseball, and track (but excluding football--at least initially) should be available. Strong support for social and creative activities and groups should be given, and new opportunities for additional activities should be extended as the college grows in size.

The curriculum committee urges caution in establishing these related activities, particularly at first when the size of staff, the size of the student body, and extent of facilities may be limited. It is not intended that unusual emphasis be given to the competitive athletic program.

Library

In establishing the Kishwaukee Community College, the planners should give serious attention to the heart of the academic community--the library. The various technical, business, cultural, and academic curricula of a community

college will require adequate materials from the day the college opens its doors, and the collection will need to be kept up-to-date and expanded continuously.

It is recommended that the standards for community college libraries set up by the American Library Association be used in designing this facility. An illustration of a suitable library is that shown in Figure 3--The Eshleman Library in Henry Ford Community College.

Instructional Staff

The staff of the proposed community college should be vitally interested in the students themselves and in their subject matter area. Work in research and writing is not as important in the community college as in 4-year institutions. Teachers will be sought from high schools and colleges who are top educators in their fields, and they must be able to qualify for the Illinois Junior College Teachers Certificate.

The full-time staff of the community college may be supplemented by local businessmen, technicians and professional staffs. The community is an excellent source of informed individuals who are willing to take part in community college instructional programs; the school should take advantage of this instructional source. Such individuals should be adequately prepared for their teaching assignments through in-service instruction both on the function of the community college and in teaching methods.

The curriculum committee feels that assurance should be given the faculty of the vocational and technical programs so that they do not lack status. Prestige is important in technical and occupational education, and it is of importance that this staff have the same voice in policy making as does the staff of the college parallel programs.

Advisory Committees

It is recommended that for the business and technical programs that the governing board and administration of the community college should set up advisory committees. These committees should be composed of lay persons who are well-informed practitioners in the business or technical areas involved and the teaching and administrative personnel of the college who are most directly concerned. These lay committees could serve in advisory capacities in matters concerning the curriculum in their special areas. Obvious advantages accrue from such a cooperative concern and approach. Employers, technicians, businessmen, and teachers may work to achieve harmonious and rewarding educational and vocational experiences for the students to insure their employability in jobs having rapidly-changing requirements.

Meeting Special Needs

A community college functions to serve the people of its area. Those individuals who have special education needs should have those needs satisfied. The curriculum committee recommends that the Kishwaukee Community College should be alert in fulfilling this function. Initially, the college should look to the needs of two such groups: 1) Those persons who have dropped out of school before graduation from grade twelve, and 2) those gifted youngsters, either in or out of school, who would profit from a more advanced, enriched, or rigorous program of studies than that available in their high schools.

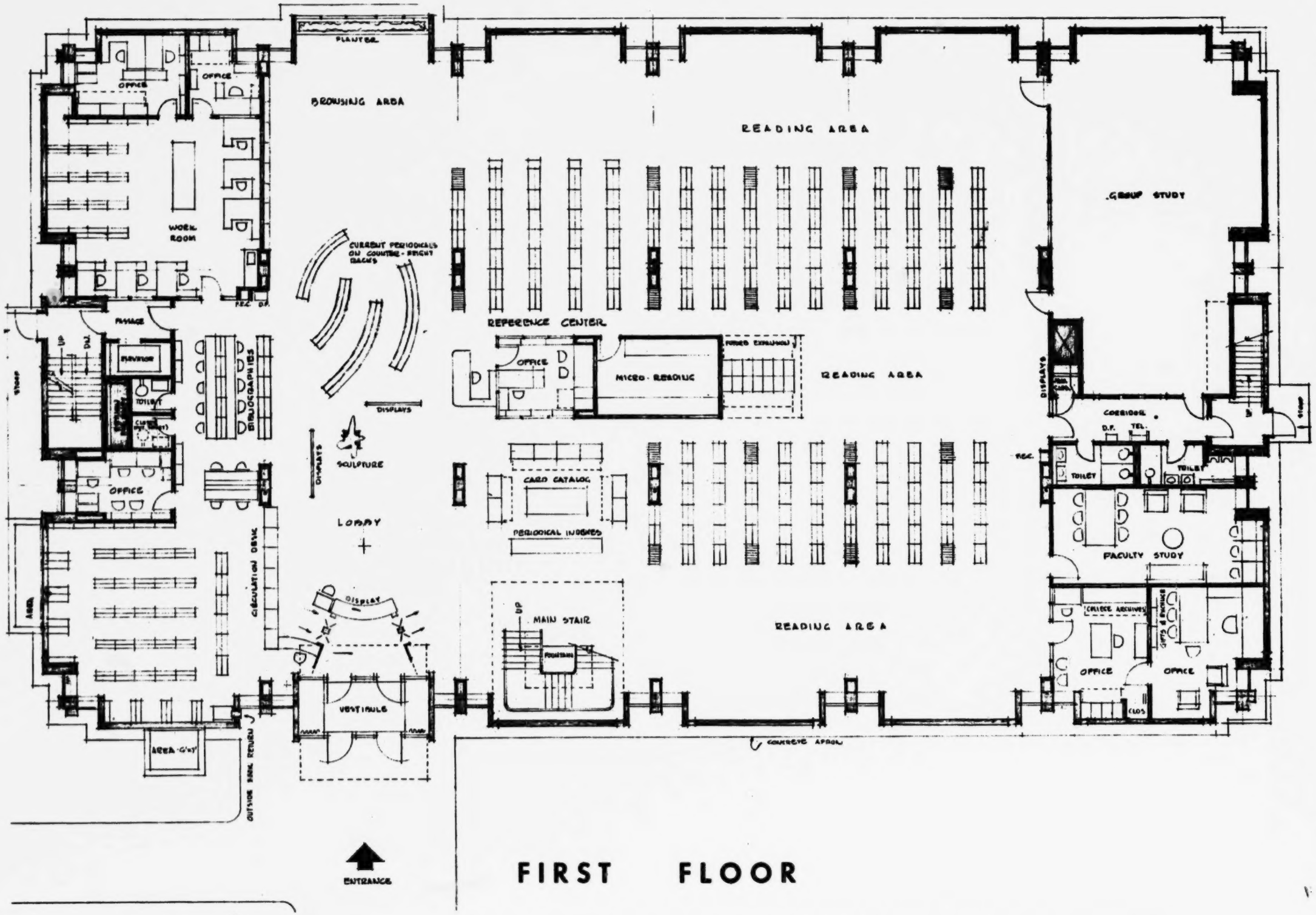
In these endeavors, as in any others, it should be the desire of the college administration to cooperate fully with other educational institutions in the areas served.

Summary

The needs of individuals in the community should be met through the educational program of the Kishwaukee Community College. Knowledge, skills, and appreciations should grow, and the industrial, agricultural, technical, medical, health, service, and educational activities of this area should benefit. In a general spirit of cooperation, the college should offer a broad range of opportunities to youth and adults to grow, and in the same spirit, extend to businesses, industries, and other interested groups the chance to train and up-grade their personnel and to create human resources capable of greater productivity.

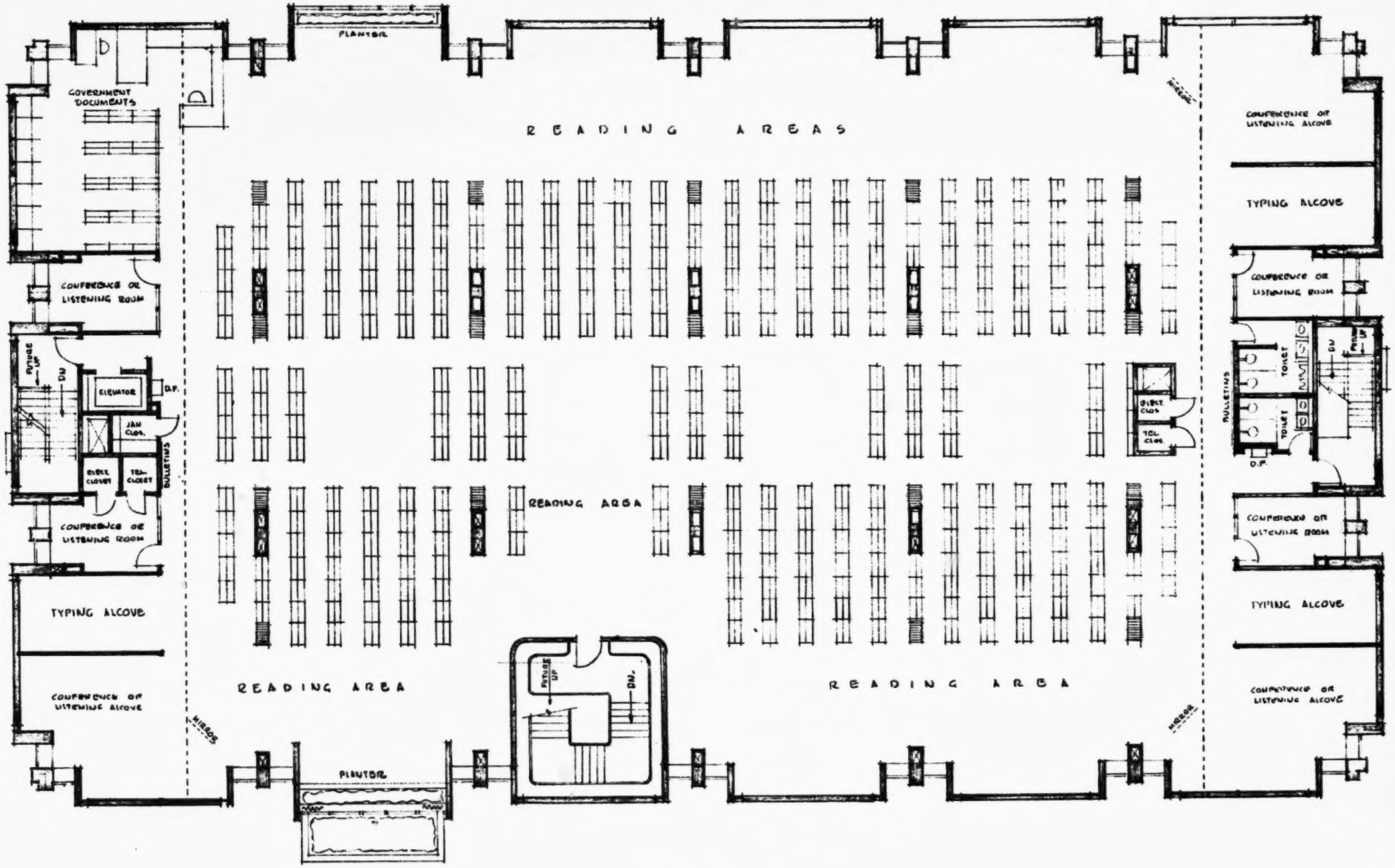
Average youth greatly outnumber superior youth. A free society operates best with a large, well-educated, economically self-sufficient middle class. This community college should offer its students education best suited to their individual needs. It could play a major role in occupational education--a role in which community colleges could be stronger. Education in an employable skill is especially meaningful to students of today who will be the citizens of tomorrow.

The curriculum committee hopes only to indicate the direction in which the community college will grow. In this proposal is envisioned the establishment of advisory committees to assist the board and the administration in furthering future plans.



FRED K. ESHLEMAN LIBRARY - Henry Ford Community College, Dearborn, Michigan

Figure 3-B



SECOND FLOOR

FRED K. ESHLEMAN LIBRARY - Henry Ford Community College, Dearborn, Michigan

CHAPTER 4

ORGANIZATION

At this stage of development, it is possible only to sketch the administrative organization of the college in broad outline. Its exact formation should be left to the governing board and the new president. The analysis presented here consists of the minimum staff which would probably be needed at the outset and an indication of the possible areas of expansion that might result as the enrollment increases.

1967-1968

Figure 4 shows the administrative organization needed at the beginning for a predicted enrollment of approximately 400 full-time-equivalent students. The staff would consist of twenty to twenty-five instructors and would consist of four administrators whose duties would be as follows:

> President. The President is the chief executive officer of the governing board. On him rests all the responsibility for every aspect of the college's operation.
>
> Dean of Instruction. The Dean of Instruction or Dean of the College is responsible for the entire academic program. This would include the planning of the curriculum as well as carrying out the actual instructional program.
>
> Dean of Students. The Dean of Students is responsible for all activities of students that are of a non-academic nature. He will be concerned especially with admission procedures, counseling, registration, etc.
>
> Business Manager. The Business Manager is responsible for directing all aspects of the physical operation of the college, taking care of the business office, physical plant, and maintenance. He will keep all accounts and, in cooperation with the President, prepare the annual budget.

1970-1971

With increased enrollment and expanded operations, a larger staff of perhaps fifty-five to sixty teachers will be

Figure 4

ADMINISTRATIVE ORGANIZATION (1967-68)

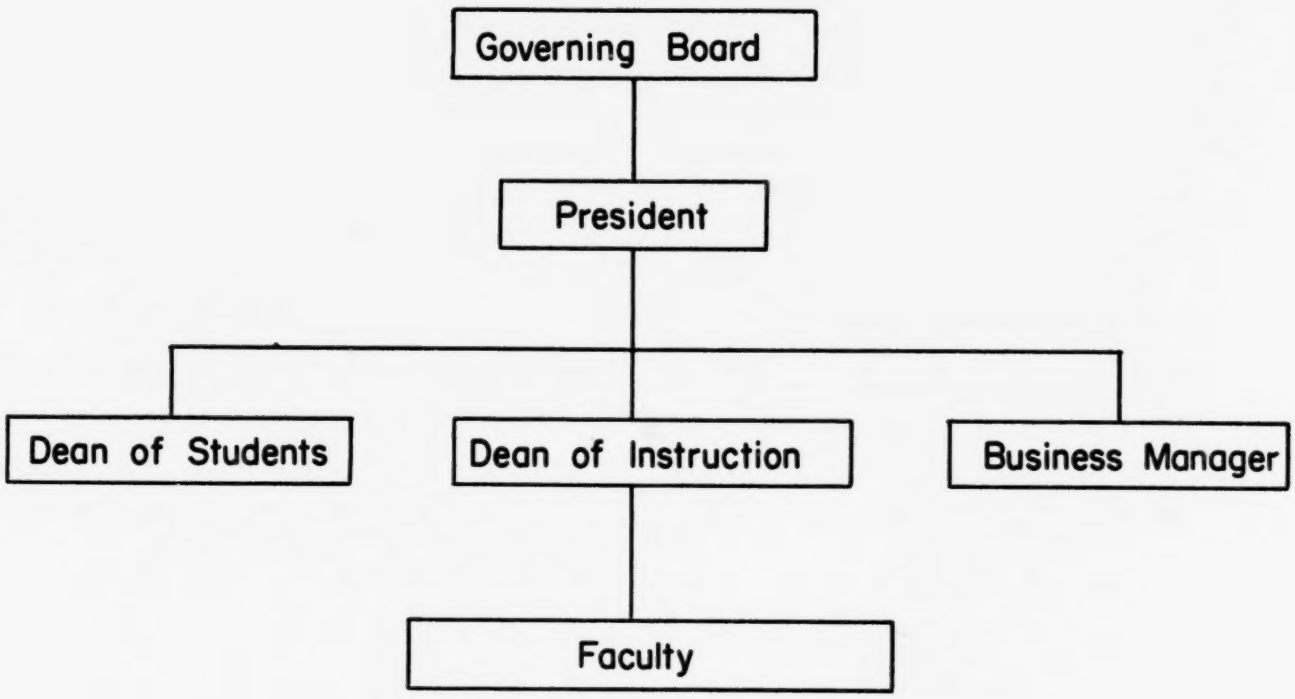
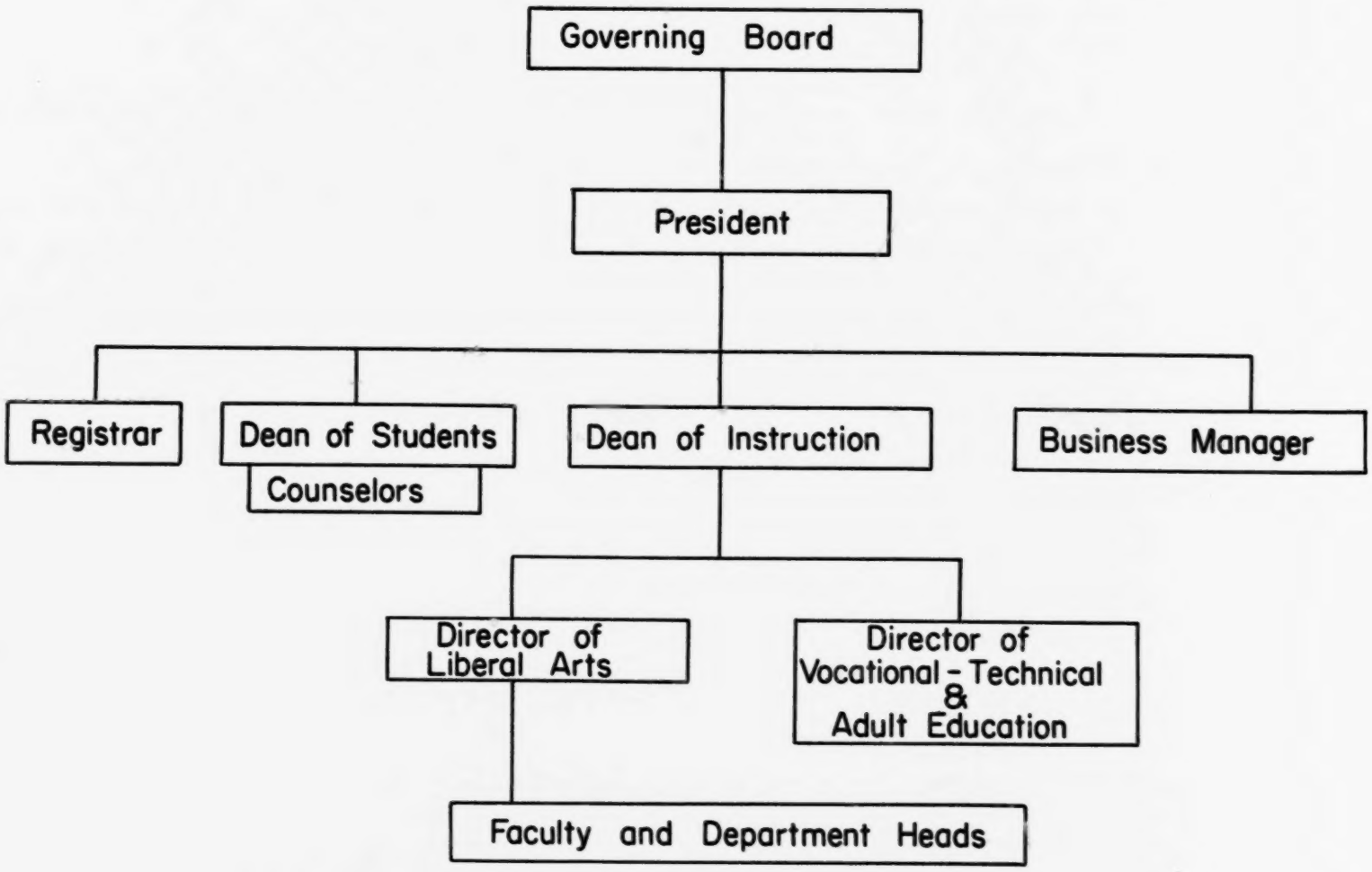


Figure 5

ADMINISTRATIVE ORGANIZATION (1970-71)



needed, and the administrative organization might then be expanded as shown in Figure 5 to include seven administrators and two counselors. The Dean of Instruction would have two division heads--one for the Liberal Arts Division and another for the Vocational, Technical, and Adult Education Division. This addition is advisable because of the increased numbers of students and faculty and also because of the diversified nature of the students and of the curriculum. Those who are planning the curriculum and directing the instruction for those taking pre-college programs will be concerned with quite different problems than will those who are concerned with the vocational-technical programs.

By this time, too, the faculty would probably be organized with department heads.

The Registrar would then assume the responsibility of admission procedures, registration, class scheduling, academic records from the Dean of Students.

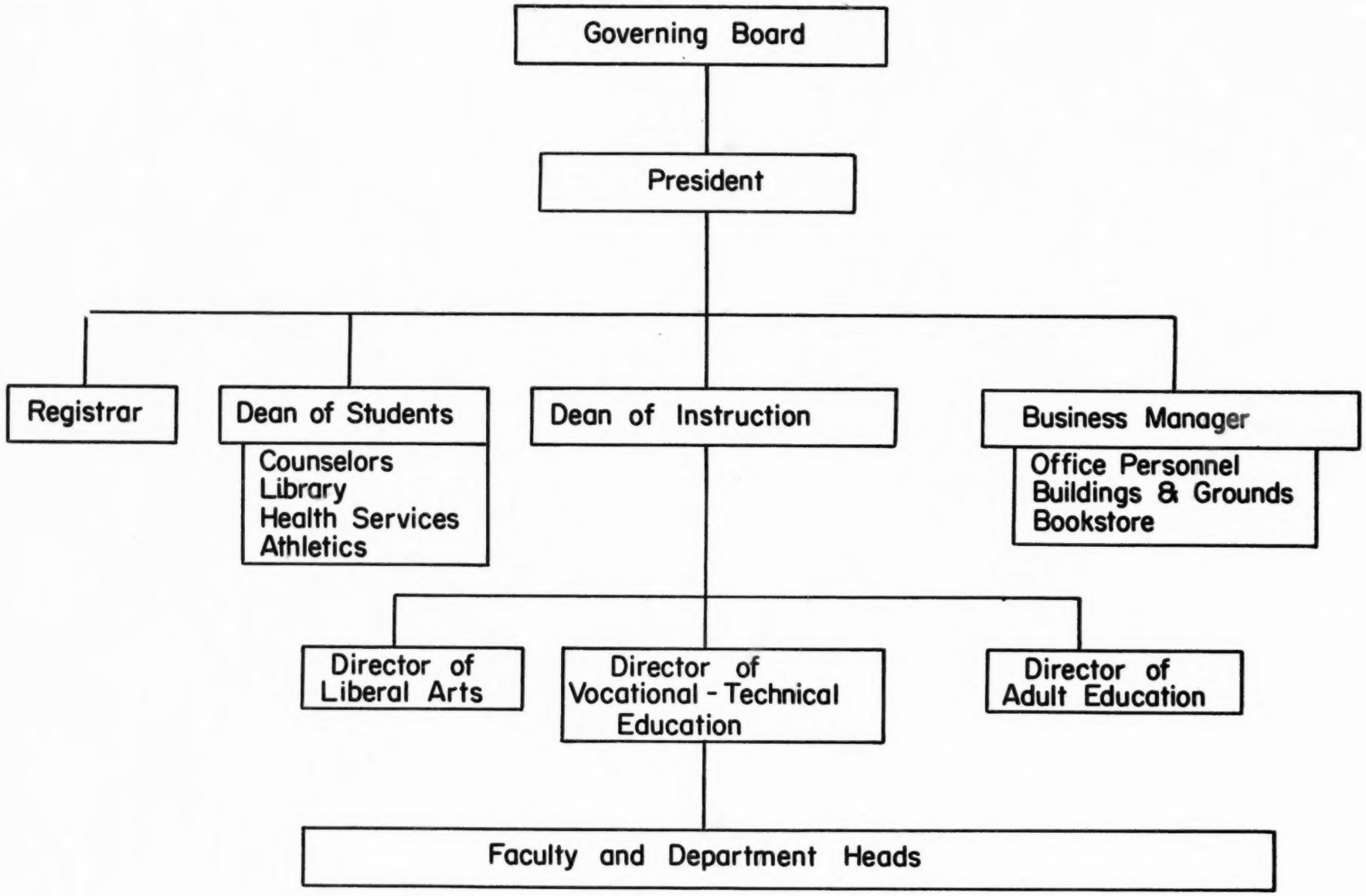
At least two counselors, one for men and one for women, would be added to the Dean of Students' staff to administer guidance tests, help students determine what courses of study to follow, and counsel with students who are having difficulty.

1972-1973

By this time, with a possible faculty of eighty-five to ninety teachers, the Adult Education Division might be separated from the Vocational-Technical Division, thus requiring another administrative position at this level. Also, additional counselors would be needed and other personnel to assist the Dean of Students with such areas as library, health services and athletics. The Business Manager, too, would need additional staff members. Figure 6 shows a possible organizational structure at this point--with eight administrators, five counselors, and eighty-five to ninety teachers.

Figure 6

ADMINISTRATIVE ORGANIZATION (1972-73)



CHAPTER 5

BUILDINGS AND SITES

There are at least two ways in which a community college can come into physical being: 1) to spring forth full blown from the will of the voter based on immediate availability of existing facilities, or 2) like Topsy, to just grow--usually from a junior college embedded in a secondary school setting. Examples of either of these ways can easily be found in the State of Illinois, and experience with each suggests difficulties that can be avoided by seeking other ways to create a community college.

Attractive though the Topsy Plan is--just let it grow--a little knowledge of the facts indicates that someone sometime planted a seed some place; hence, Topsy. Such anonymity is denied the founders of Kishwaukee Community College. The Survey Committee is well known and charged with the responsibility of planting the community college seed. If the community college is thought of in terms of a seed that will have to grow through a developmental pattern, it is clear that expecting Jack and the Beanstalk results is also denied to the Survey Committee.

Thus, unlike Jack's careless Mother who angrily threw the seed on the ground, or Topsy's unknown Father, the Building and Grounds Committee feels keenly the responsibility for planting the community college seed in the best possible seed bed.

Factors to be Considered

At this point, the Committee turned to experience of others for help and considered a check-list of important points regarding school sites devised by the New England School Development Council. Suggestions from that brochure appear in Table 5-1.

The Committee studied 10 Designs/Community Colleges, a publication of the Educational Facilities Laboratory. The Committee also noted the suggestions developed in a conference in California in 1964; these appear in the following paragraphs.

Site Selection Guidelines

"The selection of the site for a community junior college

TABLE 5-1

HOW TO CHOOSE A SCHOOL SITE

Factors	Considerations
Size	Must be determined in terms of needs of activities of desirable future program. Should make careful layout of all site facilities to scale in study of each available site area. Leeway for expansion should be allowed. Compromise on size must be resisted.
Shape	Preferably rectangular, or nearly so. Not over four times as long as wide. If more than ample in size, actual shape may vary but there should be no constrictions in boundaries or awkward angles hindering suitable layout of site facilities.
Location, Accessibility	Near center of attendance district. Centrality may be sacrificed in favor of other factors of suitability. Attendance district layout and school location should be such as will give maximum avoidance of hazards.
Environment	Residential or park area. Remote from taverns, cheap hangouts, and other less reputable centers. Remote from smoke, noise, or odors.
Topographical Characteristics	High, dry, and level land. Avoid low, swampy land, poor soil conditions, filled land, ledges too near surface, land without suitable sod-growing conditions.
Selection and Acquisition	Avoid compromise with inadequate sites. Plan a long time ahead. Develop public understanding of needs. Foster cooperative planning projects. Have opinion of experts from outside local community, especially in case of internal conflicts of opinion. School committee should be entrusted with final choice. Act in accord with advice of competent legal counsel. Pay lowest possible fair price for adequate site.
Development	Have advice of architects, or landscape architects, or both. Locate buildings to allow for their expansion without interference with areas to be developed for other purposes. Buildings should not be too close to street. Orient buildings properly for

TABLE 5-1 (Cont'd)

HOW TO CHOOSE A SCHOOL SITE

Factors	Considerations
	best natural light and accessibility by walks and driveways.
Financial Aspects	Compare costs of available adequate sites bearing in mind: 1) initial cost, 2) cost of development, and 3) capitalized cost of recurring expenditure items, such as transportation. Do not sacrifice adequacy for economy.
Zoning	Adjacent area should be zoned for residential or park.

is among the most important decisions to be made. The site chosen will characterize and flavor the institution and its student body for as long as it is used as a college campus. The architectural motif of the buildings will be influenced by the site; the layout of the campus--the master plan--will be determined by the topography of the site and its relation to streets and entrances and exits; even student policy will be influenced by opportunities for recreation on the campus and the kind of landscaping suitable to it. Thus, the wise selection of the place to establish a campus of a community college cannot be overemphasized.

"Size: The size of the site should be based on plans for the ultimate enrollment of the college. Although site selection may very well occur before enrollment projections can be made, general estimates can be made simply from a knowledge of the population and possible growth of the area to be served by the college. If the college is in a rural area of small towns and villages, we may assume a college enrollment of 400 to 1,000 students. The comprehensiveness of the program and the curriculum will affect the choice of campus. Obviously, the more activities, programs, and curricula, the more space the college will need. It is suggested that a minimum of 80 acres be secured for a small college campus. More acreage is desirable if available. If you wonder what the land will be used for, it should be remembered that for a campus of 1,000 students, at least ten acres will be needed for parking alone; on a campus of 5,000 students 30 acres will be needed for parking areas and traffic lines--even these figures may be conservative.

"Frankly, few community college administrators can ideally plan their campus. In a metropolitan area, a large acreage is almost impossible to obtain. Many city colleges

develop well-planned physical facilities and most effective programs on small acreage. Even community colleges in suburban or rural areas frequently cannot obtain the amount of land they would like to have. Careful planning, multiple-story buildings, careful layouts of athletic and recreation areas, and 'inner' campus planning all aid in overcoming restrictions on space.

"Topography: The topography of the land is important in site selection. The land obtained must be a place to put buildings, lay streets and sidewalks, and plan for attractive landscaping. A study of possible land utilization should be undertaken. There are beautiful campuses of ravines, streams, hills, and forests where actual land utilization is at a very low percentage. If this can be afforded the results are pleasing but most schools have to work toward 100% utilization.

"The relation of the site to the community, to streets and highways, to power lines and sewage lines is an important consideration. A site reached by streets through a semi-abandoned part of town, or through crowded industrial streets, or far from good access highways, or surrounded by unzoned, third-rate commercial property, is simply out of the question for a community college campus.

"Who are the 'ideal' neighbors for a college campus? Most ideal would be a state or city park, landscaped and protected. Next in desirability would be residential areas supporting $20,000 to $50,000 homes; then in order, residential areas of less expensive homes, garden apartments, high-rise apartments. Satisfactory, but much less ideal are large shopping centers, professional building areas, mixed commercial and office areas. Least satisfactory, and to be avoided if at all possible, are airports, railroad yards, filling stations, garages, factories, and drive-in restaurants and stands. Churches are very high on the list of desirable 'neighbors' for college campuses, but unfortunately, churches rank educational institutions very low as 'good neighbors.'

"Drainage: The matter of land drainage is an important factor. Sites should be carefully studied in terms of drainage after construction, for many tracts of land apparently in their natural state properly drain, but when developed, do not. Extensive study of the whole problem before construction starts may save many a headache later."*

A full afternoon was devoted by most members of the committee to roadside inspection of suggested sites. The

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*Adapted from Establishing Junior Colleges, Junior College Leadership Program, University of California. January, 1964.

rating scale shown in Figure 7 was devised and used for evaluating the sites.

Each member of the Committee was also furnished by the Malta First National Bank with a copy of A Three Year Atlas and Plat Book of DeKalb County. This proved most helpful in determining exact location of suggested sites.

Following are the general conclusions and recommendations of the Committee on ten sites checked by the Committee. A more detailed statement appears later in the chapter.

Authorities in the field agree that a community college site should contain at least 80 acres, and most have suggested that a site twice this large should be selected. It is difficult to secure additional land after the college is established, so sufficient land should be purchased at the outset to provide for later expansion.

An examination of population figures for the proposed district revealed that the growth and concentration are centered quite largely on opposite sides of the area, in Sycamore and DeKalb on the east and Rochelle on the west. The geographical center of the district was noted as being in the vicinity of Malta, which is accessible by good, all-weather roads.

The study of site requirements and available land indicated that the selection of a site for a community college in the area will present no problem. Sites of 100 to 200 acres were found, and these appear to be available for college use. Cost of land in these locations varies from $600 to $1500 per acre. Unless the college is to be located immediately adjacent to a population cluster, there will be problems of water supply and sanitation at all sites.

Site Selection

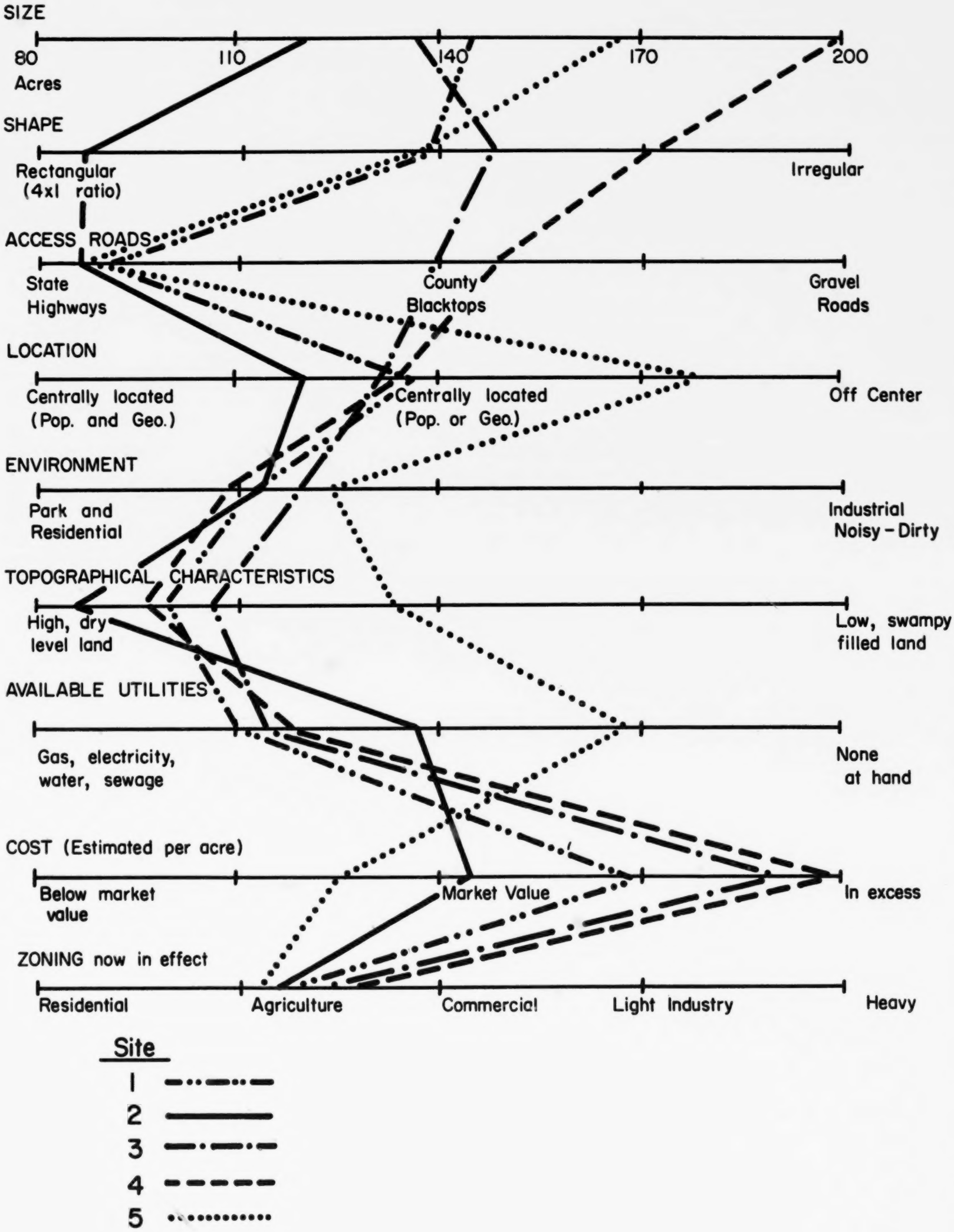
In evaluating sites, nine criteria were considered. They were: 1) size, 2) shape, 3) access roads, 4) location in district, 5) environment, 6) topographical characteristics, 7) available utilities, 8) cost (estimated), and 9) zoning.

Size ranged from 80 to 200 acres on the rating scale, but the ideal was felt to be about 160 acres rather than the extreme of 200. Only one of the five sites that were rated as being most suitable exceeded the 160 figure.

Authorities suggest the most ideal shape of the site as rectangular with a 4 to 1 ratio for the sides. Only one of the top five sites met the specification exactly, and the remaining four were more nearly square than rectangular. None of the sites was irregular in shape.

Figure 7

SITE COMPOSITE



State Highway Alternate 30 is the best access road. Three of the five sites were on this route, and the other two were on county blacktops. Several of the sites were bordered by the state highway and county blacktop roads.

Precise location of the geographic and population centers of the proposed district is not possible until precise district boundaries are established.

Choice of environment ranged from the ideal of park and residential to the undesirable neighborhood of heavy industry. Neither of these extremes was found in the area considered--all of it can be classified as agricultural, much closer to the ideal than the undesirable.

Topography is fairly uniform throughout the area, although some sites were a little more rolling than others--but not enough to make a significant difference.

Three of the five sites recommended have three utilities immediately available, gas, water, and electricity. A fourth site lacks water, and the fifth lacks gas and water. All five sites lack sewage disposal facilities. Utilities companies indicated a willingness to extend services to the college at no extra cost.

Cost figures were not available, and the estimates are at best educated guesses. However, it was felt that four of the five top sites would cost more than the average land value for the area with only one at a lower figure.

Agriculture is the zoning category for all sites at the present time, but some might be rezoned residential, commercial, or even light industry.

Summary

It is the consensus of the Building and Sites Committee that the major factors to be considered strongly indicate the location of the Kishwaukee Community College someplace in the vicinity of Malta. A check of the area reveals a number of feasible sites, and a choice could be made on any one of them by the community college board on the basis of: 1) availability and 2) price.

No effort was made to determine availability and price for any particular site. It was felt that this would lead only to the spread of rumors and possible difficulties for the group actually charged with site selection and acquisition. Land in the area is presently selling from $600 to $1500 an acre, depending on variables that are usually more agricultural than educational. It is possible, therefore, that land

rejected for farm use may be attractive both in topography and price to a community college.

Although the building program should be in phases, this does not seem a desirable procedure for land acquisition. In the normal expansion of the general economy, land can be expected to be more costly in the years ahead; this factor would be greatly multiplied by the knowledge that the college wants the land and even more so by the knowledge that it needs the land. It is, therefore, recommended that site of 120-160 acres be purchased at the earliest possible date by the duly constituted authorities.

Little consideration was given to the possibility of a community college in conjunction with an existing high school. The committee recommended continued disregard of such a plan. A college campus atmosphere should be developed.

Development is the key word in consideration of the building program. From study of the preliminary reports of the Population, Curriculum, and Finance committees it would appear that primary attention be devoted to these:

1. Administration building

2. College parallel classroom building (including library)

3. Agri-business Vocational Classroom and Shop Building

4. Auxiliary and Student Services:
   a. Physical Education facility
   b. Cafeteria
   c. Student Activity Center

As a more definite pattern of population and curriculum emerges, it would be possible to develop a more precise schedule. At this time it seems possible only to suggest that, as the community college comes into being, a Master Plan must be created by the board, faculty, administration, and architect in line with long-range goals and dreams.

Too much quick action with too little foresight could hamper the future growth of the college by providing rigid building limitations, inadequate service facilities (sewage, utilities, and parking), inadequate access roads, and poorly located buildings.

Probably the biggest advantage enjoyed by the Kishwaukee Community College at the moment is the freedom to move in almost any direction; but if built with low overhead, there may be future limits on growth.

CHAPTER 6

FINANCIAL RESOURCES

Quite frequently, established educational institutions are limited in the amount of funds available to support a good educational program. All too often, the maximum total dollar amount is determined first and then the curriculum and related educational programs are adjusted so that their costs fall within the funds available. In the current study, the Finance Committee has worked with the Population and Enrollment Committee, the Curriculum Committee, and the Building and Site Committee; and based on their projected needs, the Finance Committee has established the cost of the programs which should be offered by the proposed Kishwaukee Community College.

To further aid the Finance Committee in its work, questionnaires and/or letters were prepared and mailed to eleven private four-year colleges and twenty-two junior colleges in Illinois, Indiana, and Iowa. Responses in the form of college catalogs, financial statements, budgets, and other financial data were received from twenty of the thirty-three institutions surveyed. The committee was primarily interested in tuition costs, mill levies, and capital improvement costs.

The information essential to the Finance Committee was divided into eight specific areas, and the responsibility for obtaining information on each area was assigned to a committee member. The Chapter on Finance is therefore presented under the following general topics:

1. Legal Requirements
2. Bonded Indebtedness
3. Assessed Valuation
4. Costs of Attending College
5. Building Costs
6. Debt Service Requirements
7. Annual Operating Budgets
8. Estimated Tax Levies

Legal Requirements as Related to Finance

House Bill No. 1710, an act in relation to the establishment, operation and maintenance of public junior colleges, and making an appropriation in connection therewith--as approved by the 74th General Assembly, establishes the following financial requirements:

Sec. 2-16 Any Class I junior college district which has been recognized by the State Board shall be entitled to claim an apportionment for each school year ending on June 30 of $11.50 for each semester hour or equivalent in a course carried by a student through each mid-term by each student in attendance.

Sec. 3-1 Any contiguous and compact territory, no part of which is included within any common school district maintaining a junior college or any junior college school district, unless all of such district is included which has an equalized assessed valuation of not less than $75,000,000 and contains either a population of not less than 30,000 persons or at least 3 entire counties or that portion of 3 counties not included in an existing junior college district may be organized into a Class I college district within the state system.

The proposed district shall be authorized to levy rates which shall not exceed .75 per cent of full, fair cash value, or equalized or assessed by the Department of Revenue, for educational purposes, and .10 per cent for building purposes and the purchase of school grounds.

Sec. 3-12 Following election and organization of such Board, as soon as may be, the Board may draw upon the fund appropriated to the State Board for grants to new junior college districts an amount equal to the product of $300.00 multiplied by the projected full-time-equivalent enrollment in the first year of the junior college operation or determined by the State Board, but such amount shall not exceed $100,000.

Sec. 3-14 Subject to the limits imposed by this article, the rates may be increased at a regular or special election held subsequent to the approval of the voters of the establishment of a Class I junior college. At any single election the Board of the Class I junior college district may cause a proposition for an increase of the levy for educational purposes of an annual tax not to exceed .125 per cent.

A Class I junior college board may within the limits set for them in Sec. 3-1 of this Act and in the manner provided in this Article levy a maximum annual tax upon all the taxable property of the district upon full, fair cash value, or equalized or assessed by the Department of Revenue. Within the limits herein provided, the Class I junior college board may annually levy the tax for building purposes and the purchase of campuses so that funds may accumulate to not more than 5% of the equalized assessed valuation of the district. No such accumulation shall ever be transferred or used for any other purpose.

Sec. 5-8 If the State of Illinois makes funds available, the Class I junior college district which has had its project plan approved by the State Board shall be entitled to file a

claim with the State Board in a sum not exceeding 75% of the cost of the project.

Sec. 6-4 Any Class I junior college district may, when the Class I junior college board considers necessary, require a tuition of each student attending a Class I junior college within the district in an amount not to exceed 1/3 of the per capita costs of students in the college transfer and liberal arts programs, such cost being computed by dividing the total cost of such programs, excluding an amount of interest paid on bonded indebtedness, by the average number of full-time students enrolled in such program.

Bonded Indebtedness

The information in Table 6-1 indicates that the total present bonded indebtedness of the eight districts within the proposed Kishwaukee Community College area is $9.5 million. This represents sixty per cent of the permissible bonding power of the school districts. It is evident that where the population has increased that the residents have provided educational facilities for its children. These figures are furnished only as a guide, since the legal limitations on the bonding power of these districts have no effect on the legal bonding power of the proposed Community college; the new college district will have a bonding capacity of 5% of its assessed valuation.

TABLE 6-1

BONDED INDEBTEDNESS OF SCHOOL DISTRICTS
WITHIN PROPOSED KISHWAUKEE COMMUNITY COLLEGE DISTRICT

School Districts	1964 Assessed Valuation	Bonding Power Assessed Valuation 5 %	Bonded Indebtedness 7-1-65	Unused Bonding Power
		(In Millions)		
Waterman	$ 13.6	$ .68	$ .45	$ .23
Malta Community	9.4	.47	.16	.31
Malta Twp H S	9.4	.47	.39	.08
Genoa-Kingston	21.6	1.08	.32	.76
Shabbona	22.8	1.14	.40	.74
Hiawatha	15.8	.79	.47	.32
Sycamore	44.5	2.22	2.15	.07
DeKalb	79.0	3.95	3.60	.35
Rochelle Elementary	35.0	1.75	.93	.82
Rochelle Twp H S	65.3	3.27	.64	2.63
Totals	$ 316.4	$ 15.82	$ 9.51	$ 6.31

Assessed Valuation

The assessed valuation of the eight school districts within the proposed Kishwaukee Community College district is presented in Table 6-2 for the years 1957 through 1964. The projected assessed valuation for the years 1965 through 1970 and 1975 and 1980 are used in the section dealing with the annual operating budget and will be one of the bases for major sources of revenue for both the educational fund as well as for capital improvements.

Although there has been no steady rate of growth, the assessed valuation has increased 14.7% from 1957 to 1964. This same rate of increase, approximately 2%, when applied to the projected growth will increase the valuation 35.6% from 1964 to 1980 for a total assessed valuation of $368.9 million.

The growth potential is even greater with the possibility of: 1) the extention of the present East-West tollway to the Iowa border, 2) a North-South tollway parallel to Route 51, and 3) a projected enrollment increase for Northern Illinois University from its present student body of 14,688 students to 32,970 students in 1980, with related growth in faculty housing, off-campus student housing, and the many small enterprises which are needed to handle the needs of an expanding university community.

Any increase in assessed valuation over and above the projected valuation will have a positive effect on the tax rate; that is, the higher the valuation the lower the tax rate needs to be to produce the same total tax dollar.

Cost of Attending College

Charges for attending college are kept as low as they can be held in view of colleges' determination to maintain and advance their quality academic programs and high standards of teaching. Tuition and fees paid by the individual student generally cover less than two-thirds of the total cost to provide an educational program. The balance is composed of gifts to the colleges from alumni, friends, parents of students, foundations, corporations, endowment income, or taxes as in the case of state colleges.

The total cost of attending college must include tuition, board and room, books, supplies and travel. A survey of ten schools, both private and public (Table 6-3), shows costs ranging from $1,300 at Northern Illinois University to $3,000 for Monmouth College or an average cost of $2,160.

House Bill No. 1710 permits the junior colleges to assess students up to one-third of the per capita costs for expenses related to the educational budget. This is estimated to amount

TABLE 6-2

ASSESSED VALUATION AND PROJECTED VALUATION OF SCHOOL DISTRICTS WITHIN PROPOSED KISHWAUKEE COMMUNITY COLLEGE DISTRICT

Districts	Years							
	1957	1958	1959	1960	1961	1962	1963	1964
	(Millions of Dollars)							
Waterman	13.1	13.3	13.5	13.6	13.3	13.2	13.6	13.6
Malta	8.2	8.2	8.3	8.4	8.4	8.5	9.3	9.4
Genoa-Kingston	19.4	19.8	20.3	20.8	20.9	21.0	21.5	21.6
Shabbona	21.8	22.0	22.0	22.0	22.0	22.2	22.8	22.8
Hiawatha	17.4	17.1	17.5	16.1	16.1	16.1	15.8	15.8
Sycamore	37.6	38.6	39.3	40.0	40.7	41.3	42.8	44.5
DeKalb	61.1	64.2	67.6	70.5	72.3	74.2	76.7	79.0
Rochelle	58.5	59.8	58.7	58.3	59.0	61.6	65.1	65.3
Totals	237.1	243.0	247.2	249.7	252.7	258.1	267.6	272.0
Percentage Rates of Increase		2.5	1.7	1.0	1.2	2.1	3.7	1.6
Eight Districts' Projected Valuation	1965	1966	1967	1968	1969	1970	1975	1980
Totals	277.4	282.9	288.5	294.3	298.9	304.9	335.4	368.9

TABLE 6-3

ANNUAL COST FOR ATTENDING COLLEGE

Colleges and Universities	Tuition	Board,Room	Misc.	Total
		(Annual Dollar Cost)		
Northern Illinois University	230	850	220	1,300
Aurora College	900	710		1,610
Bradley University	1,100	870		1,970
Eureka College	1,080	820	100	2,000
Wheaton College	1,120	760	155	2,035
Augustana College	1,050	900	100	2,050
Rockford College	1,400	900		2,300
MacMurray College	1,550	850	115	2,515
Principia	1,701	1,119		2,820
Monmouth College	1,740	860	400	3,000

to $333 per student. In addition to this amount, there needs to be an amount calculated for travel, books, and clothing for a total of approximately $1,000. The annual savings, therefore, can range from $300 to $2,000 if the student elects to attend the proposed community college rather than one of the institutions listed in Table 6-3.

Building Costs

The Building and Site Committee and the Population Committee have recommended that the campus be developed in two phases. Estimated building costs for the first phase to be built in 1967-1968 for 1,000 students and for an additional 500 students in 1972-1973 are presented in Table 6-4. Because of the present unusual rise in building costs consideration should be given to completing the total building in one phase. It is very possible that interest costs for the second phase would be less than the amount of costs increase attributed to inflation. It is also quite possible that enrollment at the college will exceed the projections, necessitating additional building in the future.

Shown in Table 6-5 are the principal and interest requirements for a $1,080,000 bond issue Phase I at an assumed rate of 4% for 10 years. Debt service requirements for a $760,000 bond issue for Phase II at an assumed rate of 4% for 10 years are presented in Table 6-6.

Annual Operating Budgets

The Curriculum Committee study recommends a comprehensive community college program including college-preparatory education, vocational training and terminal programs. The operating

TABLE 6-4

ESTIMATED BUILDING COSTS FOR
KISHWAUKEE COMMUNITY COLLEGE

Cost Items	Phase I 1967-68	Phase II 1972-73
	(Number Amounts)	
Number of Students	1,000	500
Square Feet per Student	165	165
Total Square Feet Required	165,000	82,500
Cost per Square Foot	$ 20	$ 30
Capital Improvements	(Dollar Amounts)	
Site 140 acres @ $1,200	168,000	
Site Preparation	170,000	48,000
Building	3,300,000	2,475,000
Architect Fees	187,000	147,000
Equipment	330,000	250,000
Contingencies	165,000	120,000
Totals	4,320,000	3,040,000
Funds	(Dollar Amounts)	
State of Illinois (75%)	3,240,000	2,280,000
Community College (25%)	1,080,000	760,000

TABLE 6-5

AMORTIZATION SCHEDULE (PHASE I)

Year	Principal	Interest	Total
		(Dollar Amounts)	
1967-68	---	43,200	43,200
1968-69	85,000	43,200	128,200
1969-70	90,000	39,800	129,800
1970-71	95,000	36,200	131,200
1971-72	100,000	32,400	132,400
1972-73	105,000	28,400	133,400
1973-74	110,000	24,200	134,200
1974-75	115,000	19,800	134,800
1975-76	120,000	15,200	135,200
1976-77	130,000	10,400	140,400
1977-78	130,000	5,200	135,200
Totals	1,080,000	298,000	1,378,000

TABLE 6-6

AMORTIZATION SCHEDULE (PHASE II)

Year	Principal	Interest	Total
		(Dollar Amounts)	
1972-73	---	30,400	30,400
1973-74	50,000	30,400	80,400
1974-75	55,000	28,400	83,400
1975-76	60,000	26,200	86,200
1976-77	70,000	23,800	93,800
1977-78	75,000	21,000	96,000
1978-79	80,000	18,000	98,000
1979-80	85,000	14,800	99,800
1980-81	90,000	11,400	101,400
1981-82	95,000	7,800	102,800
1982-83	100,000	4,000	104,000
Totals	760,000	216,200	976,200

expenses for such a program includes cost of instruction, materials, and operation and maintenance of the building. The Finance Committee has estimated such a program to cost approximately $1,000 per full-time-equivalent student per year. Based upon the Population Committee report of anticipated enrollment for the proposed community college, the Finance Committee has estimated operating budgets for separate years as shown in Table 6-7. A graphic portrayal of revenue and expenditure is presented in Figure 9.

Estimated Tax Levies

Future demands on the Kishwaukee Community College will partially be determined by the willingness of the taxpayers in the proposed community college district to underwrite the college's educational and building programs.

The Finance Committee has prepared the financial aspects of the feasibility study taking into consideration an educational program as proposed by the Curriculum Committee for the number of students estimated by the Population Committee to study and learn trades and vocations in facilities planned by the Building and Site Committee. Table 6-8 represents quite clearly that it is financially feasible to petition for a community college for the area composed of the eight school districts.

Summary

The Finance Committee began their work on the financial section of their feasibility study with an inquisitive desire

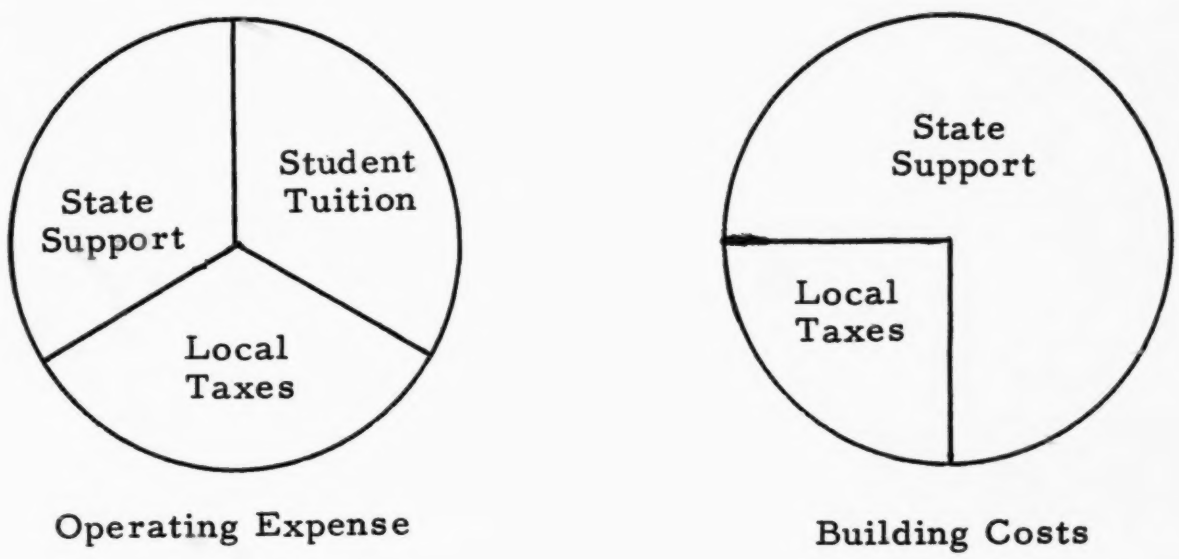
TABLE 6-7

KISHWAUKEE COMMUNITY COLLEGE PROPOSED ANNUAL ESTIMATED OPERATING BUDGETS

Years of Enrollment	No. of Students	Cost per Student	Budget Years 1967-68	1968-69	1972-73	1975-76
			(Dollar Amounts)			
1967-68	400	1,000	400,000			
1968-69	685	1,000		685,000		
1972-73	1,015	1,000			1,015,000	
1975-76	1,300	1,000				1,300,000
Less State Aid		345	138,000	236,325	350,175	448,500
Less Tuition		333	133,200	228,105	337,995	432,900
Net Amount to be had from Mill Levy			128,800	220,570	326,830	418,600
			(Millions of Dollars)			
Assessed Valuation			288.5	294.3	317.2	335.4
			(Dollar Amounts)			
Debt Service Requirements $1,080,000			43,200	128,200	133,400	135,200
760,000			0,000	0,000	30,400	86,200
Totals			43,200	128,200	163,800	221,400
			(Percentages)			
Tax Rates per $100						
Education			.0445	.0749	.1030	.1250
Bond			.00015	.0435	.0516	.0660
Total			.0446	.1134	.1546	.1910

Figure 9

Sources of Revenue



Operating Expense

Building Costs

TABLE 6-8

TAX LEVIES ON INDIVIDUAL PROPERTIES FOR BUILDING AND OPERATING KISHWAUKEE COMMUNITY COLLEGE

Dollar Valuation		Years			
Actual	Assessed	1967-68*	1968-69*	1972-73	1975-76
		(Levy in Dollars)			
Homes					
10,000	5,500	2,45	6.51	8.50	10.50
20,000	11,000	4.90	13.02	17.00	21.00
40,000	22,000	9.80	26.04	34.00	42.00
60,000	33,000	14.70	39.06	51.00	63.00
Typical Farm (240 acres)					
117,000	64,350	28.70	76.19	99.49	122.91

*During the first year of the college's operation, the college will not be in full operation and the bond levy will be minimal. Second-year operational costs and inclusion of a bond levy will require a higher total levy in 1968-69 than that made in 1967-68.

to learn all of the facts before they were willing to make any kind of a prediction on the financial soundness of the proposed Kishwaukee Community College. The information and facts now gathered and agreed upon are:

1. The assessed valuation of real estate at present and in the foreseeable future is and will be adequate to support a community junior college well within statutory limitations.

2. The total annual cost of a community junior college to the local taxpayer will range from approximately 12¢ to 19¢ per $100 of assessed valuation in its early years of operations. This is based on an initial estimated tax rate of 8¢ for education and 4¢ for debt service requirements. In seven years, the estimated educational rate could be 12½¢, and debt service at that time is estimated to be 6½¢.

3. The maximum tax rates set forth in the ballot for creating the college district will be 10¢ for the Educational Fund and 2½¢ for the Building Fund. No amount will be specified initially for bonding purposes.

CHAPTER 7

STATISTICAL SUPPLEMENT

Survey of High School Juniors and Seniors

A questionnaire designed to assess the present educational status and future plans of the high school youth in the area was administered to all of the juniors and seniors in the eight high schools included in the study. Local school personnel, using standardized procedures, administered the questionnaire to all juniors and seniors present on a specific day. Responses were anonymous. The responses were key-punched on IBM cards and analyzed by a computor. Some of the more pertinent results are shown in the following tables.

TABLE 7-1

NUMBER AND PERCENT OF JUNIORS AND SENIORS AT/IN EACH HIGH SCHOOL THAT COMPLETED QUESTIONNAIRE

High School	Juniors Enrolled	Juniors Returns	Per Cent	Seniors Enrolled	Seniors Returns	Per Cent
DeKalb	306	251	82	279	249	89
Genoa-Kingston	91	59	65	82	64	78
Kirkland	42	40	95	52	45	87
Malta	25	25	100	20	17	85
Rochelle	221	193	87	198	170	86
Shabbona	48	46	96	48	45	94
Sycamore	180	157	87	168	155	92
Waterman	39	36	92	44	37	84
Total	952	807	85	891	782	88
Boys = 399, Girls = 408				Boys = 418, Girls=364		

TABLE 7-2

RESIDENCY IN PRESENT SCHOOL DISTRICT

Residency In Years	School Districts DeK	G-K	Kirk	Malta	Roch	Shab	Syc	Watr	All
	(Percentages of Seniors)								
Less than 1	6	2	0	0	2	2	4	3	4
1 to 2	2	6	7	12	5	4	5	6	4
3 to 5	10	17	11	6	11	7	10	6	10
6 to 10	14	16	22	18	18	7	15	8	15
Over 10	67	59	60	65	63	80	67	78	66
	(Percentages of Juniors)								
Less than 1	6	5	5	0	2	7	4	0	4
1 to 2	8	2	5	4	6	7	4	3	6
3 to 5	12	10	18	8	12	7	17	8	13
6 to 10	16	32	20	8	17	24	12	19	17
Over 10	59	51	53	80	63	56	63	69	61

TABLE 7-3

SENIORS ENROLLED IN VARIOUS HIGH SCHOOL CURRICULA

Curricula	School Districts DeK	G-K	K	M	R	Sh	Sy	W	All Districts Boys	Girls	Both
	(Percentages of Seniors)										
Business	14	39	27	0	14	18	17	16	7	29	17
College Prep	45	44	38	53	35	42	53	51	47	41	44
Shop/Home Ec	5	3	2	6	9	2	8	14	10	3	6
General	33	8	31	35	39	29	19	14	30	27	29
Agriculture	0	3	2	6	2	9	2	3	4	0	2
Other	2	3	0	0	1	0	1	3	2	0	1

TABLE 7-4

SENIORS' PLANS FOR COLLEGE ATTENDANCE

Going to College?	School Districts DeK	G-K	K	M	R	Sh	Sy	W	All Districts Boys	Girls	Both
	(Percentages of Seniors)										
No	12	28	27	41	15	16	17	30	13	23	17
Probably not	10	5	4	0	11	13	10	3	8	10	9
Probably so	14	13	13	6	13	18	13	5	15	11	13
Yes	56	47	40	53	53	44	55	57	56	49	53
Don't know	8	6	16	0	8	9	6	5	8	7	8

TABLE 7-5

JUNIORS' PLANS FOR COLLEGE ATTENDANCE

Going to College?	School Districts								All Districts		
	DeK	G-K	K	M	R	Sh	Sy	W	Boys	Girls	Both
	(Percentages of Juniors)										
No	8	29	28	12	15	20	15	14	11	17	14
Probably not	10	15	13	16	9	24	10	6	10	12	11
Probably so	21	17	25	32	28	22	25	25	25	23	24
Yes	50	24	23	28	34	20	36	31	38	36	37
Don't know	12	15	13	12	13	15	13	25	15	12	13

TABLE 7-6

CONTINUED EDUCATION COMPARISON
GRADUATES FROM LAST THREE YEARS WITH THIS YEAR'S

Years	School Districts								
	DeK	G-K	Kirk	Malta	Roch	Shab	Syc	Watr	All
	(Percentages of Graduates)								
	(Attending Post-High School Institutions)*								
1963	76	44	45	53	71	49	50	39	61
1964	71	40	61	48	63	51	50	46	59
	(Attending Colleges, Universities, Junior Colleges)								
1965	59	37	38	51	51	35	47	45	50
	(Attending Business, Trade and Technical Schools)								
	10	20	14	14	14	22	5	5	12
1965 Total	69	57	52	65	65	57	52	50	62*
	(Percentages of Seniors)								
	(Having "definite" plans for college)								
1966	56	47	40	53	53	44	55	57	53
	(Having "probable" plans for college)								
	14	13	13	6	13	18	13	5	13
1966 Total	70	60	53	59	66	62	68	62	66

*Source: Principals' Reports

TABLE 7-7

SENIORS ENROLLED IN VARIOUS CURRICULA
AND THEIR PLANS FOR COLLEGE

High School Curricula	Going to college?				
	No	Probably not	Probably so	Yes	Do not know
	(Percentages of Seniors)				
Business	33	26	20	8	32
College Prep	7	4	26	73	8
Shop/Home Ec	16	12	8	1	10
General	41	49	42	15	46
Agriculture	1	6	3	2	0
Other	1	3	2	0	3

TABLE 7-8

PLANS FOR FIRST YEAR AFTER GRADUATION
OF JUNIORS AND SENIORS

Plans	Boys	Girls*	Boys	Girls*
	(Percentages)			
	(Seniors)		(Juniors)	
Work	19	43	14	32
Housewife	0	12	0	10
Military Service	10	1	12	1
Work at Home	2	1	2	1
College	56	49	48	46
Business College	3	10	3	12
Trade/Technical School	6	5	10	11
Nursing School	0	5	0	8
Other	3	2	3	2
Do not know	1	1	8	6

*Percentages for girls total more than 100 since they were permitted more than two choices.

TABLE 7-9

PLANS FOR FIRST YEAR AFTER GRADUATION
AND FOR COLLEGE ATTENDANCE OF SENIORS

	Going to college?					Going to college?				
Plans	No	Prob. not	Prob. so	Yes	Do not know	No	Prob. not	Prob. so	Yes	Do not know
	(Percentages of Boys)					(Percentages of Girls)				
Work	40	52	20	4	66	80	86	47	8	81
Housewife						38	28	3	0	11
Military Service	36	32	11	0	19	0	0	5	0	0
Work at Home	8	6	0	0	0	0	1	0	1	0
College	0	0	46	89	0	0	0	57	88	4
Business College	2	0	8	3	0	11	1	15	7	30
Trade/Technical Sch	10	10	11	3	13	9	4	3	1	15
Nursing Sch						9	1	7	3	4
Other	2	0	3	1	3	1	0	0	1	11

*Percentages for girls total more than 100 since they were permitted more than two choices.

TABLE 7-10

PARENTAL ATTITUDE TOWARD COLLEGE ATTENDANCE

Attitude	Boys	Girls	Both	Boys	Girls	Both
	(Percentages)					
	(Juniors)			(Seniors)		
Insist or expect that I go	39	26	32	39	23	32
Want me to, if I want to	51	60	56	50	59	54
Do not care	9	11	10	10	15	13
Do not want me to go	1	2	2	0	2	1

TABLE 7-11

PARENTAL ATTITUDE TOWARD COLLEGE ATTENDANCE
AND SENIORS' PLANS FOR COLLEGE

	Going to college?				
Attitude	No	Probably not	Probably so	Yes	Do not know
	(Percentages of Seniors)				
Expect me to go	3	0	27	51	7
Want me to go	54	71	67	45	75
Do not care	39	26	5	3	15
Do not want me to go	4	3	1	0	3

TABLE 7-12

PERCEIVED LEVEL OF FAMILY INCOME AND SENIORS'
PLANS FOR COLLEGE

	Going to college?					
Level of Income	No	Prob. not	Prob. so	Yes	Do not know	All
	(Percentages of Seniors)					
Financial difficulty	3	3	3	1	5	2
Sometimes have difficulty	4	1	4	1	3	3
Necessities but not luxuries	16	13	13	11	12	12
Comfortable, not well-to-do	63	69	58	68	64	65
Well-to-do	13	14	21	17	15	17
Wealthy	0	0	2	1	0	1

TABLE 7-13

SENIORS NOT PLANNING TO ATTEND COLLEGE
BUT WOULD IF HAD MORE MONEY

Would go if had more money?	Boys	Girls	Both
	(Percentages of Seniors)		
Yes	12	14	13
Maybe	28	28	28
No	59	59	59

Note: 73% of senior boys and 64% of senior girls indicated that they worked part time.

TABLE 7-14

OCCUPATIONAL ASPIRATIONS EXPRESSED BY JUNIORS AND SENIORS

Occupation	Boys	Girls	Both	Boys	Girls	Both
	(Percentages of Juniors)			(Percentages of Seniors)		
Professional (Other than nursing)	30	33	32	34	34	34
Nursing (including practical)		7	4		7	3
Military Service	1		0.5	3		2
Office-clerical-secretarial	2	21	11	3	22	12
Housewife		12	6		14	6
Electricity or electronics	7		3	4		2
Selling-salesman-waitress	2		0.5	1	1	1
Drafting or building trades	4		2	4		2
Mechanics or machine shop	4		2	5		3
Agriculture and related	10	0.5	5	9	1	5
Factory foreman or worker	2	1	2	3		2
Airline pilot or hostess	2	3	3	1	2	2
Art (including commercial)	1	3	2	0.5	3	2
Run own business	3		1	4		2
Laboratory technician	1	3	2	0.5	2	1
Beautician or barber		6	3	0.5	6	3
Religious worker	1	2	1	1		0.5
Dancer, model, entertainer	0.5	1	0.5	1	1	1
Miscellaneous	16	1	9	17	1	9
Do not know	3	2	2	2	2	2
No response	10	3	6	6	4	5

TABLE 7-15

FIELDS OF INTEREST FOR ADVANCED STUDY

Field of Study	Boys	Girls	Both	with plans for college
	(Percentages of Seniors)			
Liberal Arts	19	19	19	28
Engineering	8	0	4	6
Business Administration	5	1	3	4
Teaching	5	22	13	19
Medicine and related	3	3	3	4
Nursing	0	6	3	3
Agriculture and related	6	0	3	4
Architecture	2	0	1	1
Mortuary Science	1	0	0.5	0.5
Accounting	5	2	3	4
General Business	5	7	6	7
Retailing	0	1	1	0.5
Secretarial-Clerical	0	6	3	2
Laboratory Technician	0	1	0.5	0
Mechanical Technology	2	0	1	0.5
Drafting, Design Technology	1	0	1	0.5
Electronic Technology	4	0	2	2
Machine Shop-Tool & Die	1	0	0.5	0
Other Skilled Trades	2	0	1	0.5
Beautician/Barber	0.5	6	3	0.5
Miscellaneous	12	4	8	5
Do not know	2	1	2	2
No Response	18	22	20	6

TABLE 7-16

SPECIFIC FIELDS OF STUDY MENTIONED MOST OFTEN BY JUNIORS AND SENIORS INDICATING INTERESTED IN ADVANCED TECHNICAL STUDY

Field of Study	Students Interested in Advanced Study	
	(Percentages)	
	(Juniors)	(Seniors)
Liberal Arts	15	12
Engineering	4	2
Business Administration	1	3
Teaching	4	8
Medicine and related	4	4
Nursing	2	2
Agriculture	4	4
Accounting	0	4
General Business	7	6
Secretarial-Clerical	4	2
Electronic Technology	4	3
Beautician/Barber	4	3

Number of Juniors = 634, Number of Seniors = 563

TABLE 7-17

PLANS FOR COLLEGE AND INTEREST IN ADVANCED BUSINESS, TRADE OR TECHNICAL TRAINING 15-20 MILES OF HOME

Interested in Advanced Business, Trade or Tech Trng?	Going to college? No	Probably not	Probably so	Yes	Do not know	All
Boys--	(Percentages of Seniors)					
Yes	27	28	71	41	63	45
Maybe	35	44	24	31	31	32
No	37	18	5	38	6	23
Girls--						
Yes	27	54	53	34	48	37
Maybe	37	34	30	25	33	30
No	37	11	18	41	19	33
Juniors and Seniors-	Boys	Girls	Both	Boys	Girls	Both
	(Percentages)					
	(Juniors)			(Seniors)		
Yes	43	39	41	45	37	42
Maybe	43	33	38	32	30	31
No	13	29	21	23	33	28

Tables 7-18 through 7-22 present the responses of the seniors to a series of questions which were to be answered only by those who did not have "definite" or "probable" plans for attending college. These responses represent 265 seniors, or 34% of the total. (29% of the boys and 40% of the girls)

TABLE 7-18

EDUCATION OF INTEREST TO SENIORS NOT PLANNING TO ATTEND COLLEGE

Kind of Education or Training	Boys	Girls	Both
	(Percentages of Seniors)		
Technical, Business, or Trade	64	67	66
First 2 Years of College	10	4	7
None of the above	26	29	28

TABLE 7-19

EDUCATION OR TRAINING OF GREATEST INTEREST TO SENIORS

Kind of Education or Training	Boys	Girls	Both
	(Percentages of Seniors)		
Post-Graduate High School at night	1	2	2
Military Service	35	2	17
On-the-Job	27	43	36
Apprenticeship	18	12	15
Correspondence courses	2	1	2
Adult Education classes	2	2	2
None of the above	15	37	27

TABLE 7-20

MOST IMPORTANT REASONS FOR NOT GOING TO COLLEGE

Reasons for Non-Attendance	Boys	Girls	Both
	(Percentages of Seniors)		
Tired of School	6	6	6
Want to work	8	19	14
College too expensive	6	14	10
Want to get married	1	19	11
Parents object	1	1	1
Military Service	22	0	10
College is waste of time	2	1	1
Cannot make good grades	34	15	24
None of the above	18	25	22

TABLE 7-21

WOULD CHANGE PLANS IF THEY HAD MORE MONEY?

Would change plans?	Boys	Girls	Both
	(Percentages of Seniors)		
Yes	12	14	13
Maybe	28	28	28
No	59	59	59

TABLE 7-22

WOULD CHANGE PLANS IF THEY COULD MEET JUNIOR COLLEGE ENTRANCE REQUIREMENTS?

Would change plans?	Boys	Girls	Both
	(Percentages of Seniors)		
Yes	27	24	25
Maybe	40	34	37
No	33	43	38

Survey of Business and Industry

A questionnaire designed to provide information regarding: 1) employment opportunities, 2) types of training available and 3) types of training needed in the area was distributed to employers by the Survey Committee. The survey instrument was distributed personally by the committee members to 40 of the larger firms and mailed to an additional 850 employers. A total of 182 usuable questionnaires were returned. The number of employees reported by these totaled 12,158.

TABLE 7-23

QUESTIONNAIRE RESPONDENTS BY SIZE OF ORGANIZATION

Number of Employees	Number of Respondents
1-25	128
26-50	18
51-100	13
101-500	18
Over-500	5
	182

TABLE 7-24

RESPONDENTS AND EMPLOYEES BY TYPE OF BUSINESS

Type of Business	Number of Respondents	Total Employees	DeKalb Area Employees October, 1965** Number	Type
Manufacturing and Processing	32	9,168	22,300	Non-Agric
Non-Manufacturing	123	2,840	2,275	Agricul-
Agricultural	27	150*		tural
Totals	182	12,158	24,575	

*An additional 130 agricultural workers were reported by employers in the other categories.

**Source: Illinois Department of Labor, Bureau of Employment Security

TABLE 7-25

EMPLOYEES REPORTED IN VARIOUS CLASSIFICATIONS

Classification	Men	Women	Total
	(Percentage of Employees)		
Professional, Technical, Managerial	13	7	11
Clerical, Sales	9	29	15
Foremen, Leadmen, et cetera	8	1	6
Skilled and Semi-skilled Labor	37	20	32
Unskilled Labor	30	43	34
Agricultural	3	0	2
Total Percentages of Employees	100	100	100
Total Numbers of Employees	8,533	3,625	12,158

TABLE 7-26

ESTIMATED NUMBER OF NEW EMPLOYEES HIRED ANNUALLY IN EACH CLASSIFICATION

Classification	Men	Women	Total
	(Percentage of Employees)		
Professional, Technical, Managerial	7	5	6
Clerical, Sales	6	20	10
Foreman, et cetera	4	1	3
Skilled and Semi-skilled Labor	37	10	29
Unskilled	42	64	49
Agricultural	4	0	3
Total Percentages of Employees (New)	100	100	100
Total Numbers of Employees (New)	2,500	1,000	3,500

TABLE 7-27

EMPLOYERS WITH TRAINING PROGRAM AND BELIEVE JUNIOR COLLEGE COULD SUPPLEMENT IT

Type of Business	Training Program?			Could Supplement?		
	Yes	No	No Response	Yes	No	No Response
	(Percentages of Employers)					
Manufacturing	75	22	3	67	27	4
Non-Manufacturing	49	49	2	60	32	8
Agricultural	22	67	11	50	50	0

35

TABLE 7-28

EMPLOYERS' NEED FOR JUNIOR COLLEGE GRADUATES IN SPECIFIED AREAS

Type of Business	Areas of Employment					
	Engr	Admn	Sales	Office	Skilled	Semi-Skilled
	(Percentages of Employers' Need)					
Manufacturing	44	25	47	72	65	69
Non-Manufacturing	11	21	42	51	29	19
Agricultural	4	4	15	19	4	26

TABLE 7-29

RESPONSES TO QUESTION: "TO WHAT EXTENT DO EXISTING FACILITIES IN AREA MEET EDUCATIONAL AND TRAINING NEEDS FOR EMPLOYEES OF YOUR COMPANY OR ORGANIZATION?"

Type of Business	Extent that Facilities Meet Need			
	Excellent	Fair	Poor	No Response
Manufacturing	3	44	47	6
Non-Manufacturing	12	46	36	6
Agricultural	11	37	19	33
Total Group	10	45	35	10

TABLE 7-30

MANUFACTURERS RECOMMENDING JUNIOR COLLEGE COURSES FOR THEIR PERSONNEL, THEIR ESTIMATE OF ADEQUACY IN LABOR SUPPLY AND PREFERRED TRAINING LEVEL

Courses Manufacturers Recommended	Total	Labor Supply			Preferred Level			
		Sur-plus	Ade-quate	Scarce	H S or Less	Voc or Tech	2-Yr Jr College	4-Yr
Business:								
Acc't, Bkkpg	22	0	6	18	0	4	13	9
Clerical Prac	13	0	3	10	3	4	7	0
Data Process	10	0	1	9	0	4	6	2
Ofc Mgnt	8	0	2	6	0	0	5	3
Secretarial Sci	18	0	1	17	3	3	12	0
Business Machines	16	0	4	12	3	8	6	0
Trade, Industrial:								
Electric Machines	10	0	0	10	0	9	3	0
Metal Fabrication	12	0	0	12	1	10	2	0
Tool and Die	12	0	1	11	0	9	4	1
Welding	15	0	0	15	3	14	1	0
Factory Mgnt	14	0	3	11	0	1	10	5
Technical:								
Drafting	16	0	5	11	0	7	9	4
Electrical Power	6	1	0	5	2	4	5	0
Electronics	9	0	0	8	1	4	4	2
Industrial Engr	15	0	2	12	0	1	7	9
Mechanical Engr	14	0	2	12	0	4	3	8
Metallurgy	6	0	1	5	0	1	0	5

TABLE 7-31

NON-MANUFACTURING FIRMS RECOMMENDING JUNIOR COLLEGE COURSES FOR THEIR PERSONNEL, THEIR ESTIMATE OF ADEQUACY IN LABOR SUPPLY AND PREFERRED TRAINING LEVEL

Courses Non-Manufacturers Recommended	Total	Labor Supply			Preferred Level			
		Sur-plus	Ade-quate	Scarce	H S or Less	Voc or Tech	2-Yr Jr College	4-Yr
Agriculture:								
Agri Business	11	0	3	8	0	2	6	3
Crop Prod	7	0	2	5	0	3	5	1
Art:								
Graphic	7	0	1	6	0	3	3	1
Commercial	5	0	0	5	0	1	3	1
Business:								
Acc't, Bkkpg	66	1	20	44	5	15	40	5
Advertising	23	1	4	17	0	1	16	5
Clerical Prac	20	0	3	17	6	9	9	0
Data Process	10	0	1	9	0	3	5	4
Insurance	14	0	2	11	1	3	7	1
Ofc Mgnt	25	0	4	20	0	3	13	7
Store Mgnt	17	1	4	10	0	2	9	3
Small Bus Mgnt	28	1	5	19	0	2	18	6
Merchandising	24	1	2	17	0	6	15	3
Real Estate	9	0	5	3	0	1	4	2
Secretarial Sci	24	0	3	19	3	11	11	0
Business Machines	29	0	8	20	4	14	8	1
Trade, Industrial:								
Automotive Mech	19	0	0	17	0	12	4	0
Auto Body Repair	10	0	0	9	0	7	1	0
Carpentry	11	0	1	9	0	9	1	0
Farm Machines	9	0	0	9	1	6	4	0
Welding	12	0	0	12	0	9	3	0
Technical:								
Air Cond, Refrig	9	0	1	7	0	4	4	0
Drafting	12	1	3	7	0	4	7	2
Electrical Power	6	1	0	5	0	2	3	1
Electronics	7	1	1	4	0	2	3	2
Health:								
Nursing	5	0	2	3	0	2	2	3
Medical Tech	4	0	1	2	0	3	4	2

TABLE 7-32

AGRICULTURAL FIRMS RECOMMENDING JUNIOR COLLEGE COURSES FOR THEIR PERSONNEL, THEIR ESTIMATE OF ADEQUACY IN LABOR SUPPLY AND PREFERRED TRAINING LEVEL

Courses Firms Recommended	Total	Labor Supply			Preferred Level			
		Sur-plus	Ade-quate	Scarce	H S or Less	Voc or Tech	2-Yr Jr College	4-Yr
Agricultural:								
Agri Business	16	0	2	11	1	3	8	6
Animal Prod	14	0	0	11	1	7	6	1
Crop Prod	18	0	3	11	2	8	9	3
Business:								
Acc't, Bkkpg	9	0	2	3	1	2	6	2
Trade, Industrial:								
Welding	5	0	2	3	0	4	0	0

TABLE 7-33

SUMMARY OF TOTAL NUMBER OF RESPONDENTS' RECOMMENDATIONS

Types of Courses Recommended	Total Number of Respondents
Agriculture	83
Art	19
Business	403
Trade and Industrial	187
Health	22
Technical	134
Miscellaneous	57
Refresher	132

VT 001 888
Guide for Establishment and Conduct of Local Advisory Committees for Vocational Agricultural Departments.

California State Dept. of Education, Sacramento. Bureau of Agricultural Education
MF AVAILABLE IN VT-ERIC SET.
Pub Date - Feb67 31p.

*VOCATIONAL AGRICULTURE; *ADVISORY COMMITTEES; ORGANIZATION; *MEETINGS; *PROGRAM PLANNING; *GUIDELINES

In order to provide information for California school administrators, boards of trustees, vocational agriculture teachers, and advisory committee members, this bulletin was developed on the basis of studies and experiences on advisory committees. It provides a rationale for the use of advisory committees and outlines procedures for their formation and conduct. Specific sections outline steps in formation of an advisory committee, procedure of meetings, and annual program plan suggestions. (JM)

VT 001 888

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GUIDE

for establishment and conduct of

LOCAL ADVISORY COMMITTEES

for Vocational Agricultural Departments

VT001888

CALIFORNIA STATE
DEPARTMENT OF EDUCATION
BUREAU OF AGRICULTURAL EDUCATION
SACRAMENTO, CALIFORNIA

LOCAL ADVISORY COMMITTEES FOR CALIFORNIA VOCATIONAL AGRICULTURE DEPARTMENTS

FOREWORD

The use of advisory committees is increasing in our public school system. The experience of advisory committees for agriculture departments in other states and in California, are valuable for districts contemplating forming such lay groups. Suggestions for procedure are likewise valuable for newly-formed committees.

The purpose of this handbook is to provide information for school administrators, boards of trustees, teachers of vocational agriculture, and committee members themselves. The reasons for establishment of advisory committees are given. Procedures for establishing and conducting the meetings of advisory committees are suggested.

This handbook has been made possible by drawing upon experiences in this state and from studies and publications in states in which use of advisory committees for agriculture departments has had a long history. Of particular value have been the materials

developed by Dr. H. M. Hamlin of the teacher-training staff in agricultural education, University of Illinois. Other bulletins and texts have likewise supplied much valuable information.

The Vocational Education Act of 1963, points out the need for and use of advisory committees in maintaining, extending, improving and developing programs of vocational education.

Advisory committees will play a vital role in vocational education programs in the future. The ideas presented are guide lines that have been successfully used by schools and may be modified to fit local conditions.

BYRON J. McMAHON, Chief
State Bureau of Agricultural Education

INTRODUCTION

Advisory committees for education in various fields and on various levels are established devices for using lay resource people to assist professional education staffs. Agricultural education in the secondary schools has as great a need for such committees as any field of education, and in many states agricultural advisory committees have been an accepted and valued aid to all or most of the departments. In California, there is a growing appreciation of the need for and assistance which may be provided by, local agricultural councils or committees.

Changes in agriculture in California make extremely valuable the organized assistance of successful farmers and other leaders in agricultural business to the agriculture department. Agriculture today is a highly-scientific, mechanized and ordered procedure; yet new machines, materials and methods are appearing constantly. Employment opportunities in agriculture change, develop and expand almost overnight. It is

virtually impossible for an agriculture teacher to "keep up to date" on all agricultural changes, and still carry the heavy routine expected of him.

Many areas of California are changing from rural to semi-urban, yet even in the latter there is a demand and need for practical instruction in agriculture. Increased farm production per operation demands higher training in skills and techniques and more individuals gainfully employed in specialized occupations. To keep abreast of these conditions is one of the purposes of an advisory committee. The increasing number and complexity of school farm laboratories also heightens the need for advisory committees.

The need and encouragement for local advisory committees in agriculture has been further implemented by the establishment of a state advisory committee. This state group, which advises the Bureau of Agricultural Education on a statewide basis, consists of nine outstanding agricultural leaders, many of whom have had long experience as school board members and on local advisory committees. They have seen at

at firsthand the advantages of these local groups.

The Vocational Education Act of 1963 broadens the spectrum of vocational agriculture. While work experience is still a requirement, it may not necessarily be "on the farm." It may relate to work experience in any of the many agriculture-related fields in which California leads the nation. Special attention is given to the education for potential dropouts and for disadvantaged groups, for the out of school young farmer and for adults. Federal funds are available to assist local districts in developing programs for these needs. Advisory committees not only provide a valuable potential of assistance, but may be virtually a requirement for some of these programs.

The importance of advisory committees is emphasized in a quotation from "Administration of Vocational Educational Education at State and Local Levels", a publication for superintendents and board of trustees, prepared by the American Vocational Association:

"It would be difficult to over-emphasize the importance of advisory committees as a feature of all types of vocational education programs. Like many other effective techniques of instruction and coordination now used throughout the actual program, the use of lay advisory groups was first pioneered by vocational education.

"A vocational advisory committee is a practical device by which the school system keeps in contact with the groups in the community that it is trying to serve. Members of advisory committees are laymen from the various professions and occupations who have had broad experience in their fields, and have gained the confidence of their working associates, as well as the general public.

"...School authorities should not distrust advisory committees as potential usurpers of their functions. Lay advisory groups have no administrative or legislative authority and cannot establish policy or take the place of the administrator and the board of education. The purpose and function of advisory

committees is to provide a two-way system of understanding and communication between the school and the community...School administrators should respect and solicit the democratic assistance of representative advisory groups in building a vocational education program which is responsive to the changing needs of the American people and fundamental to the economic well-being and security of the nation."

The word "committee" is herewith used defining the lay group which is set up to assist the total program of agricultural education in a school district. Divisions of responsibility within this group are known as "subcommittees."

THE ADVANTAGES OF ADVISORY COMMITTEES

Advisory committees are not new in California. Many have been functioning for more than two decades. Approximately 150 secondary school centers which offered Veterans Institutional-on-Farm training programs in the World War II post war period, had advisory committees. Schools which have operated programs under the Manpower Development & Training Act have utilized such councils. But of the total number of advisory committees created, relatively few meet regularly. Many are looked on only as pressure groups, or a means to solve a problem. The use of an ongoing committee which meets several times during the year to consider current and vital problems can provide a valuable, organized contact with the agricultural economy and its related activities. It can give new ideas and make suggestions for improved programs of agricultural education.

Most agriculture teachers seek the advice of individuals in carrying on their programs. The advantage of an advisory committee over occasional visits

with leading agriculturists is that it makes possible more efficient use of time; it assures the teacher that he is obtaining opinions that represent the community; and it provides for thoughtful, considered opinion. A teacher who goes to individuals for advice tends to seek advice from his friends, who are probably his friends because they believe the same way he does. The result is that he often receives the type of advice he wants to receive. Individuals asked for advice are sometimes unwilling to give the time necessary to study the problems presented. In such cases the advice received is often based on snap judgment or prejudice rather than considered judgment.

In terms of what can be gained from using advisory committees, the following points are pertinent:

1. Improve public relations by providing two-way communication between an agriculture department and representative citizens of a community.

2. Help in developing a program of agricultural education tailor-made for a particular community based upon the crucial needs of a community and designed to meet the needs of those being educated.

3. Represent the laymen of a community in systematic evaluations of a department which result in better objectives, improved programs, and more adequate facilities.
4. Guide and support a teacher of agriculture, making it possible for him to be more effective, to gain more satisfaction from his work, and to advance more rapidly in his profession.
5. Provide a continuing program where teachers change, and prevent frequent changes of teachers.
6. Assist in adjusting a department program to emergencies and to gradual changes, thus keeping it more nearly up to date, and able to serve the future rather than the past.
7. Correlate the work of a department with that of other agencies (working with agriculturalists) with which committee members may have close relationships.
8. Assist a school administrator and a local governing board by making plans and suggested procedures, saving their time.

9. Assist an agriculture department in resisting inappropriate and unreasonable demands from outside the school system.

10. Develop committee members, particularly the younger ones, into valued community leaders.

11. Assist in disseminating new agricultural ideas, back into the community.

12. Assist school administrators in evaluating the agricultural education program.

STEPS IN FORMING AN ADVISORY COMMITTEE

Much of the success of an advisory committee is determined by the manner in which it is formed. Based upon the experience of many communities throughout the United States, the following steps are suggested:

Preliminary Investigation and Understanding. There must be a feeling of need and an understanding of opportunity, if an advisory committee can succeed. It is not enough that the agriculture department is "doing all right the way it is", if by the assistance of an advisory council it could better serve the district. It is also highly important to remember that teacher changes may take place at any time, and perhaps with little notice; the department which is "doing all right" today may badly need tomorrow the continuity which could be provided by a lay advisory group.

It is important that the school administration, including the professional agricultural education staff, as well as parents and other patrons of the school,

thoroughly understand the character and purpose of the committee. Such preliminary dissemination of information must be made without prejudice. Both sides of the problem should be presented and discussed. An advisory committee that is "crammed down the throats" of any school segment is bound to fail.

Understanding of Responsibility. Of greatest importance is the understanding that the committee is only advisory in character, and that its advice is to the board of trustees, to accept or reject. It has no administrative or policy-forming power. The good com-committee will make suggestions on policy and procedure, but the source of its authority is the local governing board. If this single fact is constantly kept in mind, many problems will be avoided.

Nomination of Committee Members. Several factors must be taken into consideration when the selection of committee members takes place. Among them is the fact that the advisory committee is responsible to the board of education. The policies of the board must be

carried out by the principal or superintendent. The committee must work closely with the teacher of agriculture or the department head in a multiple-man department

It is recommended that, upon the approval of the formation of an advisory committee by the trustees, the nominations should be made jointly by the principal or superintendent, the head of the agriculture department, and the chairman of the school board. Each should have an equal voice in the selections, even though the teacher may be most familiar with the agricultural people and may have most of the suggestions. The group should not be "the teacher's friends", for very often his closest friends will not honestly advise him. The true basis for nomination is discussed in the following paragraphs.

Who Should be Nominated. The advisory committee should be truly representative of the district. In general, its members should be successful farmers or individuals permanently engaged in a significant re-

lated occupation. A few examples might be a veterinarian, operator of an artificial breeding establishment, agricultural appraiser for a bank, operator of a greenhouse or nursery, operator of a livestock feed lot, operator of a poultry hatchery, brooding or fattening operation; farm machinery dealer or farm management service operator. The criteria should be whether the operation represented is one which employs young men with agricultural training, either directly out of high school or after post-high school education. Farmer members should be representative of different important agricultural commodities, different parts of the district, different age groups, different farm organizations and different nationalities and religions.

No committee member should accept his responsibility thinking of himself as the representative of any special group. Instead, he must be a public-spirited citizen who understands what is expected of him and must be willing to give his advice in a constructive manner, as a member of an organized group and under a plan of recognized procedure.

It seems sound policy in California to generally recommend that not more than one school board member should serve on an advisory committee. Care must be taken in the selection of non-farmer members who may have frequent dealings with the department or the school district. For example, if the department operates a school farm, there could be a "conflict of interest" if a farm machinery dealer is on the advisory committee. If an ornamental horticulture unit at a school provides a source of project income for students, meeting all of the legal requirements for sale of products, the inclusion of a nurseryman who might view this as "unfair competition" could be a source of irritation.

Even though related occupations are becoming increasingly important, the advice of practical and successful farmers must continue to be the core of the advisory committees in most communities. Most agriculture teachers find their greatest need in relating the work experience program to the classroom instruction and laboratory-field trip activity. The better farmers can advise on trends, land prices, improved practices.

and the scope and nature of agricultural education needed in various enterprises and farm operations. An advisory committee composed entirely of agri-service "professionals" will rarely meet the needs of most vocational agriculture departments.

How Many Committee Members. No fixed number is suggested. The group should be large enough to be truly representative of the district and to provide a working quorum if two or three are absent. However, it should not be so large as to be unwieldy or difficult to call together. 7 to 12 persons are suggested, with perhaps 9 as a desirable medium.

It is recommended that when the number is decided upon by the local governing board, only this number of names be presented to the board for confirmation. It has been found when more than enough names are submitted, personalities become involved and the results are not desirable.

Who Notifies Committee Members of Their Selection. Notification is usually done by the principal or super-

intendent, on behalf of the board of trustees. The letter should indicate clearly that the agriculture teacher cooperates in such a plan and that the committee serves merely in an advisory capacity to the board. A request should be made that the member indicate whether or not he will accept.

Experience has shown that where all of the steps up to the point have been properly taken, including publicity regarding the desirable features of, and responsibilities of, an advisory committee, a high percentage of acceptances may be expected. Often the nominee will ask for an opportunity to "talk it over" with the agriculture teacher or with his neighbors. Speed in acceptance should be urged because a committee whose selection is long drawn-out may start its work with a feeling of "frustration".

What Should Committees Do? Before an individual accepts responsibility on an agriculture advisory committee, he may want to know specifically the responsibilities of committee membership. Here is a suggested list of certain of these responsibilities:

(1) Advise any new teacher on the agriculture and problems in the community;

(2) Assist teachers in deciding on practicability of portions of program;

(3) Assist teachers in developing annual and long-term programs;

(4) Assist teachers in unifying activities of agricultural education program with other groups and agencies interested in agriculture;

(5) Study problems presented by board on which further information is needed, and make recommendations;

(6) Advise on supplies and equipment needed;

(7) Assist in determining agricultural education needs for the entire community within the framework of all new vocational education acts; and

(8) Visit the supervised practice programs of students, and visit agriculture classes and demonstrations.

PROCEDURE OF MEETINGS

Previous sections have indicated advantages of the advisory committee and suggested steps in forming such a body. The third important factor is that correct

rules of procedure be established, and clearly understood by the committee members, the school administrative staff, and board of trustees. The rules should be drawn up by the committee itself, with such assistance as it desires. Here are some items which should be considered.

How Often Should the Committee Meet? The best answer is "often enough to accomplish its purpose". Monthly or bi-monthly meetings, except perhaps during the summer are probably most desirable, although there is no reason for a committee to meet unless it has a constructive agenda. A minimum number of meetings is probably three, and a likely number somewhere between this minimum and eight. The kind of advice which is most valuable is often from busy people who may be serving on other committees.

It is better to have fewer meetings well attended, than too many meetings.

What Officers Should be Selected? Generally, a chairman, vice-chairman, and secretary are sufficient. As the committee gains in experience, sub-committees with chairman and/or other officers, may be found to be necessary.

How Long Should Committee Members Serve. A term of 3 years has been found most desirable. At the formation meeting, members may "draw" for one-year, two-year, and three-year terms, thus setting up the rotation method and providing for continuity of membership. Members may want to state a preference in length of service, and it may be found desirable to have an individual on the committee for the first "formative" year, even if he feels that this is all the time he can spare. Members may be re-appointed but there may be a desirable limit on re-appointments. The committee actually serves at the pleasure of the board of trustees, and may be dissolved at any time by board action.

Length and Place of Meeting. Meetings must be properly planned to prevent them from dragging out, as some committee members may have driven considerable distance to attend a committee meeting after a busy day. In general, a two-hour meeting should secure good results- generally starting at 8:00 and ending promptly at 10:00. Some success has been found with dinner meetings.

In general, the meeting should be held in the agriculture department of the school. In this way, members have an opportunity to become familiar with the facilities of the department and blackboards, paper for notes, and other necessary equipment for the meeting are readily available. Most effective participation by all members usually results when the group meets around a conference table.

How Are Vacancies Filled. Vacancies which occur on the committee, either because of completion of the term of office or for some other reason between terms, should be filled by nomination from the same three persons- teacher, principal or superintendent, and board of edu-

cation chairman. However, the committee itself should be asked for suggestions. A committee should not be permitted to choose its own replacements, for it then is self-perpetuating and may become unrepresentative and unduly independent of the school administration.

Probably the rules of procedure should indicate that if a committee member misses meetings repeatedly without cause, his position may be (or must) be declared vacant by the chairman of the committee, and the school board so notified. However, if the committee is performing a real function which its members understand, and if they can see that their advice will ultimately result in a better agriculture, they will probably be sincere in their attendance.

THE YEAR'S PROGRAM

The activities of an advisory committee are largely determined by the problems of the school and community, the character of agriculture, the facilities of the department and other determinable factors. Topics and problems which might be considered during the typical first year of committee operation, might come from this group:

1. The role of the vocational agriculture department in the community.

    a. What are the purposes of the vocational agriculture department

    b. To what extent is the department achieving these purposes. (use of evaluation material).

    c. How many in-school youth, Young Farmers and adult farmers are reached at present with organized, systematic instruction.

    d. How many persons in the school area should the department serve.

2. An evaluation of the agricultural situation in the community, including the needs and efficiency of the farmers. Each meeting should be ended with some definite suggestions and plans for the im-

provement of these situations.

3. The occupational placement and opportunities in agriculture available to young men in the community.

4. The supervised practice and programs of the all-day students. This could well be followed by a field trip to observe the agricultural programs of representative students.

5. The development of a chapter program of work for the Future Farmers of America. Meetings should be held with the executive committee of the chapter and with the entire chapter. This particular phase may be assigned to a sub-committee of the advisory committee.

6. The development of plans for cooperation and understanding with agricultural groups.

7. The development of plans for cooperation with governmental agencies dealing with agricultural problems.

8. The development of suggestions pertaining to the buildings and facilities needed in the local department.

9. The encouragement and development of essential com-

munity facilities such as an artificial breeding association, cow testing, fairs, contests and soil improvement.

10. The promotion of annual meetings for the following purposes:

    a. A social program for the advisory committee members and their families.

    b. Joint meeting with the board of trustees

    c. An evaluation of work done during the last year.

    d. Planning the program for the next year.

    e. Visitation of classes in the all-day, Young Farmer or adult levels to improve the program.

Who is Responsible for the Agenda. The agenda is the plan for the meeting-the device which saves time, prevents important items from being overlooked, and presents ideas in a logical manner. The man who is most familiar with the problems is the agriculture teacher. He should draw up a list of suggestions. It is generally desirable to check this list with the principal or superintendent, who in turn may ask the chairman of the school for his ideas. The chairman of the advisory committee should also be asked for items he may have.

The agenda as agreed upon by all concerned should be mailed by the school office to the committee members, preferably a few days ahead of the meeting. This permits time to investigate and become familiar with conditions surrounding some of the problems. It is important to have an agenda that is not a "cut and dried" limitation on topics which may properly be presented. More can be accomplished by preparing the right kind of an agenda and sticking to it.

A typical agenda for a meeting might be as follows:

a. Reading of minutes of the last previous meeting.

b. Progress report by the director of agriculture on suggestions made at the recent previous advisory committee meetings.

c. Consideration of recommendations for the purchase of instructional equipment and supplies.

d. Review of freshman course of study, with suggestions.

e. Recommendations on kinds of activities for the Future Farmers during the next quarter.

f. Consideration of crop rotation plan for the school farm.

g. Consideration of the advisability of a short course in dairy production for Young Farmers and adults.

h. Setting the date for the next meeting.

i. Adjournment

CONCLUSION

In many ways, farming communities are much alike, whether they are in the "corn belt" or in one of California's central valleys. Advisory committees have been found successful in many areas. Generally their failures have resulted from poor organization, poor selection, or faulty understanding of purposes and limitations, rather than from any inherent weakness in the area of an advisory committee.

Here are some interesting comments secured from representative people in one community where a committee had functioned as it should:

"It has developed in this area. I think it is essential."

"It develops interest on the part of the community."

"It keeps interest in their work, helps lead the community."

"If I were a board member, or a teacher of agriculture, I would want an advisory committee."

"Capable people represent the community."

"The committee backs the teacher's program and gives him confidence."

"The school has a better picture of the farmers' view-point."

"Farmers are more willing to send their children to high school."

In California a significant statement was made by the chairman of the state advisory committee who had served as a school board member for more than 20 years, and then served on the local advisory committee. He said that in his community, the school board welcomed the work of the advisory committee because board members could not possibly know all the needs and problems of the school; the advisory committee studied, summarized and brought to the attention of the board the specific needs of agricultural education.

Proper recognition for the work of the advisory committee should be given by publicity released by the board of education. This practice would encourage acceptance of membership on the committee and participation in meetings. It also keeps the public informed

of the services of laymen to the secondary school as a community operation.

California school administrators are recognized for their willingness to accept new ideas and methods. The advisory committee has become recognized throughout the nation as a valuable aid to education. A bulletin "Vocational Education in the Junior College", published by the California State Department of Education in February, 1949, says:

"....The educational authorities are responsible for encouraging representative persons...to serve the schools and the community on such (advisory) committees; the committee members, in turn, have definite responsibilities in carrying out their advisory functions. It is only when these practices actually become an integral part of the training program that vocational education can make its maximum contribution."

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NORTH CAROLINA

This manual for self-evaluation assists the institution not only in examining its purposes and educational activities, but also in determining the modifications that may be needed to serve its people more effectively. The institution desiring to meet accrediting agency requirements should contact the specific agency prior to initiating the study. The administrators and faculty members work cooperatively to learn more about their institution, whether it be an industrial education center, a technical institute, or a community college. This institutional self-study is a comprehensive study designed to determine how the institution may achieve its role more effectively through its resources, faculty, students, and program. An outline is given of procedures to be followed in completing the self-examination for which about one year is required. If striving to meet accrediting requirements, a visiting committee will be invited to spend time on the site to evaluate the institution. Suggestions in detail given for self study include these aspects: (1) The Purpose of the Organization, (2) Organization and Administration, (3) Financial Resources, (4) Educational Programs, (5) Faculty, (6) Library, (7) Student Personnel, and (8) Physical Plant. The appendix includes forms for enrollment information, academic preparation of the faculty, and library information. (MS)

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MANUAL FOR

INSTITUTIONAL SELF - STUDY

COMMUNITY COLLEGES

TECHNICAL INSTITUTES

INDUSTRIAL EDUCATION CENTERS

DEPARTMENT OF COMMUNITY COLLEGES
STATE BOARD OF EDUCATION
RALEIGH, NORTH CAROLINA
1965

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MANUAL FOR INSTITUTIONAL SELF-STUDY

COMMUNITY COLLEGES

TECHNICAL INSTITUTES

INDUSTRIAL EDUCATION CENTERS,

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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Department of Community Colleges
State Board of Education
Raleigh North Carolina

1965

TABLE OF CONTENTS

	Page
Introduction	1
Manual for Institutional Self-Study	2
Content of the Self-Study	6
I. Purpose	7
II. Organization and Administration	9
III. Educational Program	12
IV. Financial Resources	16
V. Faculty	19
VI. Library	22
VII. Student Personnel	24
VIII. Physical Plant -- Site, Buildings and Equipment	28
Introduction to Appendices I, II, and III	31
Appendix I. Form for Enrollment Information	i
Appendix II. Standard Five - Faculty	ii
Appendix III. Standard Six - Library	iii

I N T R O D U C T I O N

In a self-study, the institution begins by an examination of the purposes which it is seeking to accomplish and the educational activities which it has in operation to accomplish them. In an effective self-study the institution not only examines its purposes and educational activities, but tries to determine what modifications may be needed to more effectively serve its people and how these modifications may be brought about.

The Manual for Institutional Self-Study was developed by the Department of Community Colleges, in cooperation with the institutions in the Community College System and the Department of Industrial Education at North Carolina State University.

In developing this manual, the Manual for the Institutional Self-Study and Periodic Visitation Programs, Commission on Colleges, Southern Association of Colleges and Schools, Atlanta, Georgia, 1963 was used extensively.

It is anticipated that a self-study conducted by an institution using this manual will meet the requirements of other accrediting agencies; however, to avoid any misunderstanding, contact should be made with any accrediting agency by which the institution expects to be accredited prior to initiating the study.

MANUAL FOR INSTITUTIONAL SELF-STUDY

Purpose of the Manual

This manual is to be used as a guide for making institutional self-studies in industrial education centers, technical institutes, and community colleges. Extension units should be included with the parent institution in the self-study. The manual suggests to faculty members and administrators in the institutions the organization and procedures to be followed and the questions to be considered in the study.

What Is an Institutional Self-Study?

An institutional self-study is a method by which the administration and faculty members can examine and become better acquainted with their institution. As a part of the study, a report is prepared. At the conclusion of the self-study, a visiting committee reviews the report and visits the institution.

In conducting a self-study, there should be an extensive involvement of all faculty members and administrators.

The self-study is to be comprehensive. It should be an effort to examine the past and the present in resources, faculty, students, and programs in terms of stated purposes and objectives. This is far more penetrating than a self-study which merely gathers information. In this same searching way, it seeks to determine how the institution may achieve its role more effectively through its resources, faculty, students, and programs.

Why Make a Self-Study?

The essential purpose of the self-study is to improve the educational effectiveness of the institution. The very process of self-study, provided there is good involvement of faculty, administrators, and board members, is a type of professional and institutional improvement. The purpose of the institution and the most effective methods to be used to accomplish the purpose become clear to

all concerned. The self-study permits the people involved in the study to become sensitive to the strengths and weaknesses of the institution and to make plans for correcting the limitations.

Accrediting agencies require institutional self-studies. Thus, the process of self-study will help to prepare the institutions for possible accreditation.

Organization and Procedure for Conducting a Self-Study

The purpose in outlining the following procedures is to provide institutions with the steps to be followed in conducting self-studies. The implementation of these procedures will enable the institution to assess (measure) its educational programs to determine whether they fall below, conform to, or exceed approved standards. The Director and professional staff of the Department of Community Colleges stands ready to be of service to any institution as it conducts a self-study.

1. The institution should secure approval from its board of trustees to conduct a self-study.

2. The Director of the Department of Community Colleges should be notified of the beginning date.

3. The Director will appoint a professional staff member to make available to the institution the resources of the Department of Community Colleges while the institution is conducting the study. Prior to the completion of the self-study, the Director, in consultation with the president of the institution, will appoint the chairman of the visiting committee. The committee chairman and the Director will appoint other members of the visiting committee. The visiting committee should be appointed at least three months prior to the dates set for the visit.

4. Each institution should appoint a steering committee with representatives from the administration and faculty. This committee should have responsi-

bility of explaining the study, its purpose and procedures, to the faculty, administrative officers, and board of trustees. The committee should have over-all supervision of the study and responsibility for organizing the material into a coherent report. The steering committee will be a working committee, meeting frequently and making decisions; therefore, it should be small, consisting of three to five members.

a. The chairman of the steering committee should arrange for the appointment of appropriate committees to cover each aspect of the study as outlined in the "Content of the Self-Study." The chairman may also arrange for the appointment of necessary subcommittees in divisions so that all areas of the institution may be evaluated. Committee organization may include an editorial committee to prepare the final self-study report which should be a narrative, unified document.

b. The steering committee should set up a time schedule for:

   (a) Gathering preliminary information and material,

   (b) Regular meetings of the committees for the discussion of findings,

   (c) Reporting quarterly to the Director of the Department of Community Colleges on the progress of the self-study,

   (d) The final organizing, editing, and reproducing of the report which must be in its final form with sufficient copies for distribution to members of the visiting committee at least three weeks prior to the date set for the committee visit.

5. A working definition of the purpose of the institution should be developed at the beginning of the self-study, with full involvement of all personnel. The self-study report should follow the outline of the "Content of the Self-Study." The report can be supported by the necessary charts, graphs, and other illustrative material. Since the purpose of the self-study is a critical analysis of the institution itself, there should be frank recognition of weaknesses and problems, with recommendations for solutions to the problems. The report should stress the critical areas, unique programs, and facets of the institution which are of special interest or concern to the faculty, administration, and governing board. The report will be considered confidential by the members of the visiting committee.

6. It is expected that about one year will be required to complete the institutional self-study. Once the approximate completion date of the study and report is determined, the president of the institution should notify the Director of the Department of Community Colleges of suggested dates for the visiting committee to visit the institution. At least two days should be planned for the visit. The visiting committee will study the institutional study report. It will visit in the institution sufficiently to examine it and identify its strengths and weaknesses. It will prepare a constructive written report of its findings. A primary function of the visiting committee will be to evaluate the institution in terms of its purposes and encourage the institution in looking toward better ways of carrying on the educational process. The committee will also recommend whether or not the institution should make application for accreditation by the Southern Association.

CONTENT OF THE SELF-STUDY

Although in the suggested outline for the contents of the study the manual lists many questions, it is not suggested or expected that these can be answered "yes" or "no" or that the self-study be limited to the scope of these questions. They are intended to be provocative and should be answered where possible in essay form.

The report of the study should contain a brief introduction which will include a short historical sketch of the institution. The sketch should give the nature of the institution's origin and development. It may also show dates of significant changes in the history of the institution, as in curricula, type of control, type of student body, and scope of operation.

The introduction should describe the organizational pattern and the various committees that participated in and contributed to the institution's self-study.

The remainder of the report would include the following aspects of the institution:

The Purpose of the Institution

Organization and Administration

Financial Resources

Educational Program

Faculty

Library

Student Personnel

Physical Plant

I. PURPOSE

Describe the role that the institution fills in education. Give the official statement of purpose of the institution. Illustrate the extent to which the purpose is being fulfilled through its offerings and programs.

Describe the origin and modifications of the statement of purpose. Illustrate the relationship of the statement of purposes to acts of the State Legislature, policies of the State Board of Education, and other agencies and sources.

Does the present statement represent the views of the governing board, the administration, and the faculty and are these groups fully acquainted with and in sympathy with the statement? What action is taken to acquaint the governing board, staff members, and faculty with the purposes of the institution and to enlist their support of all of the purposes of the institution? What are the concepts of the faculty and of the governing board as to the distinctive features of the institution?

To what extent, before or during the self-study, has the statement of purpose been subject to critical review: to reveal over-all discrepancies between purpose and fulfillment? to analyze internal departmental functions in relation to purpose? to examine the adequacy of financial resources, physical plant, educational program, and other resources to meet the stated purpose? to determine the relationship between the services rendered and the needs of the surrounding area as well as the needs of the constituency? to study the role of the institution in relation to the roles of neighboring institutions from the standpoints of duplication, competition, and cooperation?

To what extent do the institutional publications, public relations media, and day-by-day approaches to prospective students and the general public present a fair and accurate picture of the role of the institution and its facilities for fulfilling this role?

In the study of the purpose of the institution, what weaknesses have been

revealed in the statement and what steps are being taken to bring about the necessary changes?

II. ORGANIZATION AND ADMINISTRATION

What is the legal authorization of the institution? Does the legal authorization or document define the organization of the governing board (board of trustees)?

What is the legal name of the institution? Does this name reflect the overall organization and scope of activities of the institution?

How is the board organized? Describe its structure, including its size, method of election, and length of terms. In what official document are the duties and responsibilities of the board defined? Are the powers of the governing board clarified with respect to powers vested in other agencies such as the Department of Community Colleges?

Indicate the name of each trustee, his background, the appointing agency, and his term of office.

List the committees of the board and indicate the function of each. Illustrate the contributions made by each committee since the board has been organized. Where are there weaknesses and where are there strengths in the committee organization and in the performance of functions? (The board of trustees should deal with these and other appropriate questions in this section.)

What major decisions have been made by the governing board since it has been organized? How recently has the board studied and defined its responsibilities and evaluated its contributions to the institution? Is there a tendency for the board to go beyond policy making and into administration of the institution? Who reports directly to the board? How actively has the board participated in the study?

Are there any lay or professional groups, such as advisory committees, which serve in advisory capacities to the governing board or the administration? If so, describe the organization and function of each and evaluate its services to the institution.

Chart in broad outline the institution's organization from the board of trustees through faculty committees. The following detailed charts should be drawn and cross reference made to them in other appropriate sections of the report:

a. Administrative Organization of the Faculty, giving details for each department and division and showing the line of responsibility to the president.

b. Administrative Organization for the Student Personnel Program, including recruitment, admissions, counseling, health, student government, extra-curricular activities, and housing.

c. The Administrative Organization for Finance, Business Management, and Plant Operations.

Are there any extension units which are not organized within one of the general patterns outlined above? If so, present and evaluate details of their administrative organizations.

Describe the duties and responsibilities of each administrative officer. Are these duties and responsibilities clearly defined, understood, and accepted by the institution personnel? Is the institutional organization properly planned, staffed, and directed for cooperative decisions and policy making and for expedient executing of decisions and policies. Through what channels can students and faculty express themselves to the administration and make known their suggestions as to procedures and policies?

Do budgetary allotments, staff allocations, and the over-all organization of the institution reflect emphasis on instructional, business, and student affairs consonant with the aims and objectives of the institution?

Have the nonprofessional personnel, services, and facilities received proper emphasis in the development of the total program of the institution? Are the clerical, maintenance, and other services properly organized, adequately financed, and efficiently operated? Is there a classification system for nonprofessional personnel in areas such as clerical services, plant operation and maintenance, and auxiliary enterprises? What qualifications are required for nonprofessional administrative and service personnel? What retirement provisions, insurance groups,

and other benefits are available to the nonprofessional group? How do these compare with those available to the professional personnel?

What changes in administrative organization, procedures, and policies are suggested to bring together the human and other resources and coordinate them more effectively to accomplish the aims and objectives of the institution?

III. EDUCATIONAL PROGRAM

Admission

Discuss the relationship of the educational program to the purpose of the institution. Are the scope and variety of the educational program in keeping with the mission to which the institution is committed? Are the admission policy, the degrees and diplomas offered, and the courses and methods of instruction designed to enable the institution to achieve the objectives of the purpose? Does the educational program coordinate the diverse programs, yet permit each program to operate in a manner suited to achieving its individual aims? Describe the procedure used in determining the inclusion of noncollegiate or "specialized education" curricula in the total program.

Describe the control and administration of admissions in each program of the institution. Do the admissions policies reflect the educational program? How are policies and procedures coordinated through the institution?

Is the admission policy clearly stated in published material? How was it established and how could it be changed? Describe briefly the underlying principles on which it is based. Has it proved to be effective in admitting students who can benefit from the educational program? Are revisions needed? What modifications, if any, are projected for the future?

Discuss in detail the procedure for admission. Is the same procedure required of all students? How are exceptions to policy made? In general, what exceptions have been made in recent years and how have the students fared who were admitted under these conditions? Describe in detail the procedure for admission into noncollegiate or "specialized education" programs. Describe any policies governing early admission or advanced standing for freshmen and evaluate the success or failure of these. If studies have been made to correlate secondary school grades and entrance test scores with college grades, how have the results of these been used? How are the secondary school record and test scores used in guidance and placement?

Describe and evaluate the academic orientation program for new students at all levels. What procedures are followed to provide continuing guidance and counseling--academic and vocational?

Do the enrollment statistics indicate any trend with which the institution is concerned? Is the enrollment stabilized or does the institution anticipate an increase or decrease in future years?

Describe the recruitment program. What personnel are used and what material is sent prospective students? Who administers the program of scholarships and financial aid for new students? What procedures are followed in determining the needs and merits of applicants? Does the institution anticipate a greater need for financial aid in the future and what plans have been developed to meet this need?

If the institution admits students from foreign countries, what process is followed in evaluating their previous educational experience? How does the institution determine whether or not the foreign student can communicate adequately in the English language? Are special guidance and counseling provided?

Curriculum

Describe the process by which the curricula are administered, indicating the areas of responsibility assumed by the governing board and by the faculty. Illustrate how changes are made.

Examine in detail the scope of the curriculum in connection with the purpose and the resources of the institution. Are the technical programs or noncollegiate vocational programs clearly identified as "specialized education" in all publications describing these programs? Are there degree or diploma curricula which should be eliminated or added? What studies have been made in recent years to evaluate the curricula in terms of the institutional purpose? What have been the conclusions of the studies and how have they been used? What changes have been made in the last five years and what future changes are anticipated? In making

changes and developing new programs, what studies are made to determine the need?

Describe all general education requirements and indicate how the present program evolved. Give any tangible evidence of the effectiveness of this program. Has the opinion of the faculty and students been sought and utilized? What continuing evaluation is planned?

Are curricula in "specialized education" designed and offered to fulfill the objectives of providing skills, knowledge, or understanding needed for employment in a particular occupation or cluster of occupations at a specific level? How are new curricula or offerings brought into the program of the institution?

Comment briefly on the major fields of concentration in each curriculum. In relation to the enrollment and resources of the institution, is there a need to expand or contract these? What efforts are made to avoid undue proliferation of course offerings? What limitations are placed upon the number of hours required in major areas? Is there room in each program for electives? Is the system of prerequisites for advanced courses clearly stated and consistently enforced?

Does the institution record and file class enrollments for all noncollegiate courses and programs? How are "specialized education" courses identified on student records or transcripts?

What provisions are made for especially gifted students? Describe the methods used to encourage students to undertake honors work or independent study. Indicate the number of students and faculty involved in these programs. If students of limited ability or with deficiencies are admitted, what programs are provided for them? How effective are these programs for the exceptionally gifted or the below average group? Does the institution anticipate a need to expand either or both?

Describe the policy of academic probation and dismissal. How and by whom is it administered? Describe the procedure for readmission. Does a study of the statistics in this area indicate a need for change in the admission or grading policies? Examine the grade distribution in all programs for several years. Are

there problems here that need attention?

Describe the efforts that have been made to evaluate the effectiveness of instruction at various levels. Have objective tests been used, and, if so, how have the results been used? What efforts have been made to focus faculty and student attention on this matter? What evidence is available to show how student achievement compares with that in similar institutions?

Comment on any studies that have been made to determine the relationship between class size and effectiveness of instruction. Do the results indicate any future pattern for the size of classes? What devices and procedures are used in very large classes to make instruction more effective? Evaluate the effectiveness of closed circuit television, recorded lectures, and other electronic devices where these have been used. What methods of instruction seem to hold promise for the future?

Has the institution come to any conclusion concerning the relationship between teaching loads and the effectiveness of instruction? What types of assistance are most helpful to instructors with unusually heavy loads? What methods are used to encourage the instructor to give a variety of types of examinations?

What tangible evidence is available to show that the institution is creating a learning atmosphere on the campus? What extracurricular activities are used to enhance the instructional program? Are books for recreational reading available in the library and bookstore and do students make use of these? What percentage of graduates go on to senior colleges or accept employment in their major field of study? What does a study of their records indicate? Comment on the number of students who have in recent years received fellowships or scholarships for continued study, and/or advancement in positions of employment.

What studies have been made of graduates and what do these studies indicate about the effectiveness of instruction in the institution?

IV. FINANCIAL RESOURCES

The institution should determine the relationship between its financial resources and the quality of its instructional and service programs. Chart the amount and the percentage of the total of the various items of income for the past three years.

Using the above chart as a basis for study, draw conclusions in regard to the stability of various sources of income and trends in appropriations from State or local governmental agencies.

Describe the nature and amount of the present indebtedness, if any, and describe provisions for its amortization.

Evaluate the organizational plan of the business office and for the administration of financial resources. Are all business and financial functions of the institution centralized under a business office responsible to the president?

Who has the responsibility for the following functions and why are the responsibilities so assigned?---preparation of the institutional budget; control of the budget; accounting and financial reporting; operation and maintenance of physical plant; purchasing, inventory control; financial management of auxiliary enterprises; receipt, custody, and disbursement of funds; internal auditing.

Is there a thorough understanding that the purpose of the business office is to serve the institution and assist in the furtherance of its educational program?

Balance sheets for at least the past three years should be available.

Chart the amount and the percentage of the total of the various classifications of instructional services for the past three years. Relate this to student contact hours taught.

Chart the number of employees for the past three years for such categories as principal administrative, teaching staff, other administrative and clerical, and custodial and maintenance.

On the basis of the above information, do the educational expenditure patterns

carry out the purpose and objectives of the institution? Do the educational expenditure patterns indicate the proper balance between the various functions? Are there curricula or programs which are inefficient?

Describe budget making procedures from the departmental level through the governing board. Consider particularly the role of the department heads, directors and/or deans, the business officer, and the president. Is the budget making accompanied by educational planning? Who is the chief advisor to the president in the financial determination of budgetary allocations? Is the budget review by the governing board limited to matters of broad policy and not details? Are the forms for budget preparation prepared in the business office? Are all members of the administrative and teaching staffs kept informed as to the financial status of the institution?

Describe in detail any control which a State or local governmental agency has over the financial affairs of the institution after the funds have been appropriated. Are the appropriations lump sum or line item? Do State or local government personnel policies apply to institutional personnel? Evaluate and point out any strengths as well as weaknesses concerning external control.

Does the accounting system follow the generally accepted principles of institutional accounting as specified by the Controller of the State Board of Education? Is there an annual financial report? Are periodic written financial reports presented to the president and to the governing board? Is an annual audit made by independent competent accountants or agencies? Is there a well organized program of internal audit and control?

Are there suitable organization and adequate procedures for the management of all funds belonging to or owed to the institution? Is there centralized cashiering? Is there a carefully worked out system for the receipt, deposit, and safeguarding of institutional funds? Are all persons handling institutional funds bonded?

Describe and evaluate the purchasing procedures. Describe and evaluate the

procedure for the control of storerooms such as those for physical plant supplies, library supplies and office supplies.

To assist other committees in the self-study, chart the growth in investment in physical plant for the past three years.

Describe plans which have been made for guided development of the financial resources. These plans should include specific projections of income from each source, projections of expenditures in the major categories, and plans for the increase of capital resources. Such plans and projections should be related to projections or recommendations made by other committees in the self-study.

V. FACULTY

Describe the procedure for recruitment and appointment of faculty. How and by whom are candidates sought and appointed? Discuss the qualifications required of instructors for trade, technical, and collegiate levels, emphasizing academic training, practical experience, and teaching experience. Are the qualifications and procedures for the appointment of full-time and part-time faculty members the same? Project the needs for faculty in the next five years and the necessary salaries to attract and hold a faculty that is competent to carry out the institutional objectives. Does the institution expect to have the resources in the years ahead to meet these needs?

Discuss the organization of the faculty. Is this organization adequate to conduct the business of the faculty and provide two-way channels of communication among the various faculty groups and between the faculty and administration? Are the responsibilities and jurisdiction of the faculty clearly defined and understood by the governing board, the administration, and the faculty? Is there evidence that the faculty accepts these areas of jursidiction and is actively discharging its responsibilities? Are changes in organization needed now and in the future as the institution develops?

Prepare an analysis of the faculty, including earned degrees and specialized training, experience, age, length of service at the institution, professional activity, and evidence of instructional effectiveness.

What encouragement and financial assistance is the institution giving to members of the faculty to continue their professional development and graduate study? What evidence is available to show continuing professional growth of the faculty? Are members of the faculty encouraged and assisted financially to attend the meetings of professional organizations? Are leaves of absence granted for study? Is faculty strength evenly distributed among departments or are there obvious weaknesses? What plans are there for remedying these? Are the training

and competence of the faculty adequate to achieve the purpose of the institution?

Discuss in detail faculty salaries. What fringe benefits such as insurance, retirement, local supplement, and housing are provided? A chronological history of faculty salaries and fringe benefits should be developed. What trends are revealed, and what does this indicate for the future? Describe the policies governing promotions and individual increases in salary. How does the total financial compensation of the faculty compare with that in the institutions with a similar purpose? Does this comparison give reasonable assurance that the institution can maintain a faculty of the quality it needs?

What is the policy governing tenure? Is this clearly understood by the faculty and the governing board? Is it published? Describe the procedure and the governing board? Is it published? Describe the procedure followed in dismissing faculty under tenure. How many such dismissals have been made in the last five years? What recourse does the faculty have? What statement or statements of academic freedom have been adopted by the governing board? What problems have arisen in this area? Does the faculty feel that the policy is satisfactory? What evidence is there that the faculty has studied and accepted the professional and ethical responsibilities that accompany academic freedom?

What is the normal teaching load and on what basis are exceptions made? Is the policy the same in all units of the institution? Are teaching loads calculated on the basis of the number of credit hours taught, the number of contact hours, the type and level of instruction, the number of students or a combination of two or more of these factors? Is the number of different preparations considered? Are laboratory or shop class preparations considered? Are the duties of department heads taken into consideration in assigning teaching loads? What weight is given to other assigned duties? How are night assignments and extra loads handled? What weight is given to committee assignments and the directing of independent study? What policies govern the outside employment of faculty as consultants, lecturers, etc? What goals has the institution set for teaching

loads in the future, and what steps are being taken to achieve these?

What recognition is given for competence in teaching? What steps are taken to acquaint new instructors with the institution and the nature of their assignment? What provisions are made for in-service training programs and/or workshops? What provisions are made for supervised internships of new instructors and guided supervision of all instructors?

In evaluating faculty members, what criteria are used? Are these understood and accepted by the faculty? How are these applied and by whom? What evidence is there to show that the institution is seriously and actively concerned with improving the over-all effectiveness of the faculty? Do faculty offices, classrooms, general working conditions, and faculty morale reflect this concern?

VI. LIBRARY

Describe the philosophy of the library and its role, function, and services in relation to the total school philosophy. To what extent do library policies reflect and implement the philosophies of the library and the school? By whom are these policies determined?

Describe the library staff, its organization, the training and experience of each member. Is each professional staff member accorded the status appropriate to his qualifications and positions? How does the library staff participate in curriculum development and faculty planning, so that anticipated instructional needs may be met? Does the faculty and administrative evaluation of the library staff show that it is efficient and effective? List and evaluate all responsibilities of the library beyond the receiving and distributing of library books and periodicals, such as audiovisual, television, programmed instruction or library orientation activities. Describe the library advisory committee and list its duties, organization, and membership. Does it represent all curricula, including trade, vocational-technical, academic and other "specialized education?"

How does the book, periodical, and non-book materials collection reflect, support, and stimulate the purpose and educational tasks of the institution? What is the faculty and student evaluation of the library, including its strengths, needs, services, and holding? Describe the procedure used by faculty for requesting materials. Describe the procedures used by the librarians for acquisitioning and updating materials and for discarding holdings.

How adequately does the library aid teachers, students, and administration in selecting, producing and using materials and associated equipment effectively? To what extent are faculty, students, and administration kept informed of materials and services of the library? How does the library cooperate with existing libraries to provide community-wide services?

Describe the basis on which funds are allocated for the basic book collection,

periodicals, general references, special collections, and non-book materials. Are all phases of instruction covered, including trade, technical and academic, and other "specialized education?" Chart library expenditures for the past several years. Project anticipated expenditures for the next ten years in terms of possible increases or decreases in the courses of study, changes in faculty, changes in enrollment, and changes in library service. What percentage of the educational and general budgets has been allocated to library expenditures in the last three years?

What is the evaluation of faculty, administration, and librarians of the faculty and student use of the library? What is the evaluation of members of the library staff of their effectiveness, their weaknesses, and the further contributions they may make to the educational program? Has any recent study been made of the circulation of materials in the library to show changes or trends in usage.

Describe the adequacy of all library facilities in terms of relationship between space and function. If the institution has library services or resource materials handled in other departments, comment on their control, their quality, and their services.

Describe plans for improvement and modification of existing services and expansion of services in the light of anticipated growth. What provisions are made for incorporating innovations in future library functions and expansion.

VII. STUDENT PERSONNEL

Discuss in detail the procedure for admission. Is the same procedure required of all students? How are exceptions to policy made? In general, what exceptions have been made in recent years, and how have the students fared who were admitted under these conditions? Describe any policies governing early admission or advanced standing for freshmen and evaluate the success or failure of these. If studies have been made to correlate secondary school grades and entrance test scores with institution grades, how have the results of these been used?

Describe and evaluate the orientation program for new students at all levels. What procedures are followed to provide continuing guidance and counseling---academic and vocational?

What are the objectives of the student personnel program, and how are these related to the purpose of the institution? Describe the organizational framework for the administration and coordination of the student personnel program. Is this staff adequate to provide the necessary services to each student? What emphasis does the institution place upon a continuing concern for the total welfare of each student? How is this emphasis reflected in the administrative organization for personnel work, the financial support for regular and special services, and physical facilities, special services and student activities? It is recognized, of course, that the organization and obligation of the student personnel program will vary according to the nature of the institution and the composition of the student body.

Describe in general terms the types of information available concerning each student at the time of entrance, such as scholastic records, medical reports, personal recommendations, test scores, educational background, job experience, physical characteristics, and desired program.

Describe the testing program of the institution and outline the types of

information, in addition to the academic records, which are assembled on each student at various stages in his career. Where are these various records kept? How are they collated or coordinated for use in counseling and guidance?

Review and evaluate the institution's method of keeping records, of protecting records, and coordinating the use of records between offices. What changes in record keeping and use of records are suggested as a result of this evaluation?

What is the purpose of the orientation program, and how effective is the current program in fulfilling this purpose? Have the students and faculty been consulted in this evaluation, and if so, what recommendations have they made for improvements?

Describe and evaluate the counseling system and guidance services. To what extent are counseling and guidance provided for educational, vocational, personal, social, religious needs, and student housing? Does the institution have an in-service training program for faculty members who are used in counseling and guidance? How is the over-all program coordinated?

Describe the provisions for health services, medical care, and safety. Are they adequate for present and future needs? Explain the coordination between this area and the counseling and guidance system.

What are the institution's policies with regard to employment of students while attending the institution? Are there regulations which control the time spent in such employment?

Describe the administrative organization in effect for extracurricular activities, showing in each area the extent of faculty supervision or sponsorship and specific personnel in charge of the total extracurricular program and of each phase of this program. Are students and faculty satisfied with this organization?

Are there academic restrictions or minimums of achievement required for participation in extracurricular activities? If so, describe.

What control does the institution or the faculty exercise over social organizations? Is it possible for student organizations and clubs to be organized and to function without the knowledge and approval of the institution?

Evaluate the existing social organizations and extracurricular activities in terms of satisfying the needs of the students.

Are there any student organizations which are not in accord with the purposes and objectives of the institution? What steps may be taken to eliminate unnecessary or undesirable organizations?

If student government exists, outline the organization, showing all representation held by groups on the campus and faculty and administrative supervision or sponsorship. Describe the powers of student government. How effective is it with the students? Is it accepted and supported by the faculty and administration?

Describe and evaluate the facilities for and the supervision of student housing and food services.

Describe the organization of and faculty participation in the scholarship and loan programs. Does the program satisfy the needs and purposes of the school? Chart the growth or changes in the scholarship and loan program and project the needs and changes in the program. Show the sources of scholarship funds, such as gifts, endowment.

Evaluate the student employment and graduate placement offices in cost, organization, effectiveness, and follow-up of graduates and how it reflects the purpose of the institution.

Describe any research projects undertaken by the institution or by individual faculty or staff members, concerning the student personnel program or using student personnel data in examining related problems. Have any studies been made to determine the characteristics of the student body?

Do students or student committees participate in the formulating of institutional policy decisions or in suggesting changes or modifications? If so, what are the procedures?

What plans have been developed to enable the student personnel program to meet anticipated changes in the nature and size of the student body and the educational program?

Is there an adequate budget for the alumni program and how is it financed? Are the headquarters and facilities for alumni work in keeping with the job to be done? Is there an adequate and competent staff, and is effective liaison maintained with the offices of public relations and fund raising? Is effective liaison maintained with the total college program and are the alumni kept informed of the total college program?

Are special seminars organized and maintained for alumni? What is the nature of the programs at these seminars? Describe any other special features of the alumni program.

Is there an annual giving program? To what extent have the alumni contributed to this or similar programs, or special fund drives, during the past few years?

What changes are indicated as appropriate for a more effective alumni program and for more effective participation of alumni in the constructive improvement of the institution?

Describe the procedures used in student procurement. Describe the procedures used in the registration of students.

To what extent does the student personnel office participate in the planning and execution of commencement activities?

VIII. PHYSICAL PLANT -- SITE, BUILDINGS AND EQUIPMENT

The physical facilities should be studied in relation to the total program of the institution. In what ways have the size of the student body, housing needs, scope of the educational program, and institutional and community services influenced the development of the master plan of the campus?

What appraisal has been made of the age, general condition, needed renovations, and adaptability for present use of the building(s)? What restrictions on the institution's present program are due to the lack of physical facilities? What efforts have been made to overcome or eliminate these restrictions? What space utilization studies have been made? Upon what studies were any present plans for the renovation, remodeling, or expansion of facilities determined? What provisions have been made for the prevention of fire and the elimination of safety hazards for plant and site? What provisions have been made for storage of volatile chemicals or other hazardous items? What provisions are provided for removal of hazardous fumes? Is adequate provision made for year-round, thermo-control of the plant? Is the physical plant adequate to facilitate the institution's purposes and programs?

Is there an adequate master campus development plan? Is the plan being implemented? Does the campus development plan provide for zoning of campus into quiet and noisy areas and zoning in such a way that the campus meets both useful and aesthetic criteria? Is there an adequate landscaping plan? How is the plan being implemented? Is the site easily accessible to the students of the area? Is there sufficient area available for expansion? Is there sufficient space for student and faculty parking? Is the parking space adequately paved and marked and well lighted? Is the traffic on the campus controlled? Are adequate provisions made for the safety of pedestrians on the campus? Are there safety hazards in entering or leaving main highways adjoining the campus? Are there recreational facilities available? Are utilities (such as water, sewage,

electricity, and heat) adequate for existing building or buildings? Did the initial plan provide for the expansion of utilities in terms of the projected needs of the institution?

Is existing equipment adequate to effectively carry on high quality instruction? If not, what inadequacies exist in equipment? How has the equipment been selected? What plan exists for maintenance and inventory of the equipment? What plan exists for requisition of new equipment? What plan exists for replacement of obsolete equipment? What plan exists for identification of hazardous equipment? What equipment is on hand which is not used effectively or economically? What provisions are provided for reporting of unneeded equipment? Is adequate storage for various types of equipment provided? What insurance coverage is provided on the plant and equipment?

Delineate the responsibilities for the maintenance and housekeeping program of building and grounds? What in-service programs are provided for this staff? Do studies of costs of labor, supplies and materials show efficiency of operation, or do they possibly show a disproportionate amount of the budget utilized for these purposes in comparison with the available data from other similar institutions? What are the future projections of costs and staff for this program? What is the opinion of the staff and student body as to the adequacy of the present program of maintenance and housekeeping?

APPENDICES I - II - III

INTRODUCTION

Appendices I, II, and III (pages i-iii) are forms for reporting enrollment, faculty, and library information. It is expected that all institutions completing a self-study will fill in these forms to be held for examination by the visiting committee. Immediately after the committee visit, the completed report forms should be forwarded to the Department of Community Colleges.

Institutions seeking accreditation by the Southern Association of Colleges and Schools will complete additional forms, dealing with Standard Four - Financial Resources, as found in Appendix II, Manual for the Institutional Self-Study and Periodic Visitation Program, Commission on Colleges, Southern Association of Colleges and Schools, Atlanta, Georgia, 1963.

ENROLLMENT INFORMATION FOR _____ (YEAR)

Name of Institution _____

I. The institution operates on the semester ____ quarter ____ system. (Check one.)

II. Computing Enrollment:

Give the equivalent full-time enrollment at the close of registration for the fall semester or quarter. In the case of extension students, give the FTE enrollment at the close of the fall quarter or first semester.

A. Full-Time Students:

Total the number of students carrying a load of twelve or more credit hours.

College Parallel _____

Technical _____

Vocational _____

B. Part-Time Students:

Total the loads of part-time students and divide this total by twelve credit hours.

College Parallel _____

Technical _____

Vocational _____

C. Extension Students:
(Include General Adult)

This is the sum total of all contact hour enrollments for the fall quarter divided by 176. This is based upon an average student contact hour load of 16 hours per week. _____

Standard Five - FACULTY

Academic Preparation of Faculty

Community Colleges, Technical Institutes, and Industrial Education Centers

(Faculty statistics should be reported for the fall semester or quarter.)

Name of Institution _____

I. Full-Time Teaching Faculty

A. What is considered to be a full teaching load in credit hours at the institution? _____

B. Total number of full-time teaching faculty. _____

C. Number with three or more years of graduate training. _____

D. Number with two but less than three years of graduate training. _____

E. Number with master's degree but less than two years of graduate training. _____

F. Number with less than a master's degree. (Attach for each case evidence of professional competency in the area of specialization.) _____

G. Number with less than the bachelor's degree. (Attach for each case evidence of professional competency in the area of specialization.) _____

II. Part-Time Faculty and Administrators Who Teach

	Years of Graduate or Specialized Training	No. Employed on Half-Time Basis	No. on Less than Half-Time
A.	Three or more years		
B.	Two but less than three years		
C.	Master's degree but less than two years		
D.	Less than master's degree		
E.	Less than bachelor's degree		

III. List by name all faculty members who are not teaching in their field of specialization.

Standard Six - LIBRARY

I. Personnel

A. Number of librarians holding graduate library degrees _____

B. Number of non-professional personnel _____

II. Operating Expenditures

A. Salaries _____

B. Wages _____

C. Books _____

D. Periodicals _____

E. Binding _____

F. Special services or materials such as audio-visual aids _____

G. Other (excluding capital outlay) _____

H. Total operating expenditures _____

III. Seating Capacity

A. Number of seating spaces in the library(ies) _____

B. Largest number of students on campus at one time during the class day _____

VT 001 899
Agricultural File Index.

South Carolina State Dept. of Education, Columbia. Vocational Agriculture
Clemson Univ., S.C. Dept. of Agricultural Education
MF AVAILABLE IN VT-ERIC SET.
Pub Date - 65 70p.

*VOCATIONAL AGRICULTURE; *INFORMATION STORAGE; *INDEXING; *GUIDES

The purpose of this document is to provide vocational agriculture teachers with an explanation of and material for a statewide system of departmental filing procedures. The ten basic index areas are: (1) Administration, (2) Future Farmers of America, (3) General Agriculture, (4) Animal Science and Production, (5) Plant Science and Soils, (6) Field Crops, (7) Horticulture, (8) Agricultural Economics, (9) Agricultural Engineering, and (10) Conservation. The system is basically numerical but area divisions also involve an alphabetical arrangement. Further subdivision and expansion are accomodated. Filing dividers and file-folder gummed labels are provided to supplement the document and illustrate the arrangement of files. (JM)

VT001 899

AGRICULTURAL FILE INDEX

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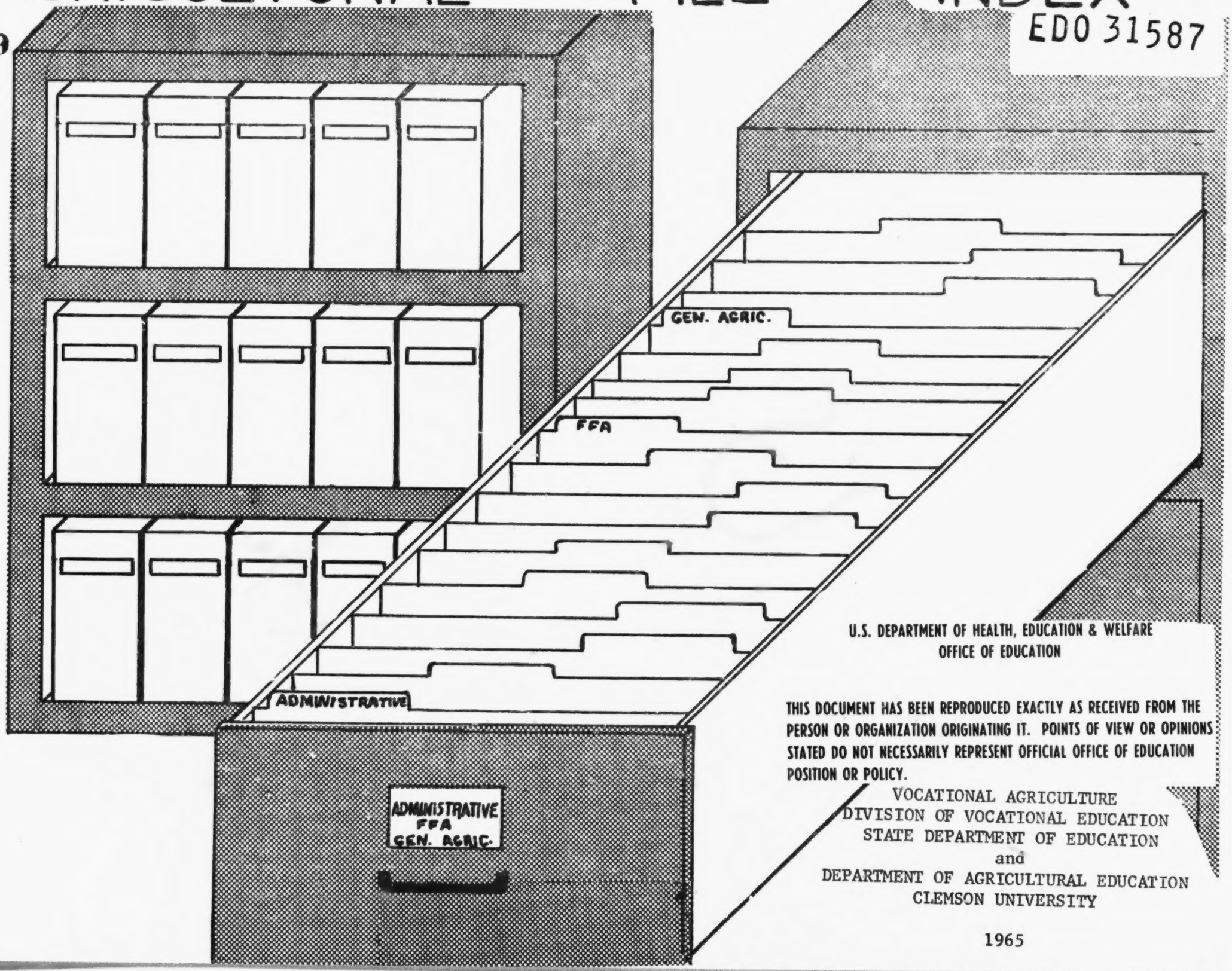

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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VOCATIONAL AGRICULTURE
DIVISION OF VOCATIONAL EDUCATION
STATE DEPARTMENT OF EDUCATION
and
DEPARTMENT OF AGRICULTURAL EDUCATION
CLEMSON UNIVERSITY

1965

USING THE AGRICULTURAL FILE INDEX

The index has ten basic areas. They are:

		Ten of our eleven teaching units in agriculture fit directly into this index as follows:
000	Administration	
100	FFA	Leadership Training
200	General Agriculture	Importance of Agriculture
300	Animal Science and Production	Animal Science, Animal Production
400	Plant Science and Soils	Plant Science and Soils
500	Field Crops	Crop Production
600	Horticulture	Farm Home and Family
700	Agricultural Economics	Farm Management
800	Agricultural Engineering	Farm Mechanics
900	Conservation	Conservation of our Natural Resources

The system is numerical. Within each area, an alphabetical arrangement is also applied. Thus it is possible to employ either the alphabetical or numerical principle to this filing system.

Each major area covers the range of 100 points. For example Field Crops falls in the 500 range, or everything from 500 to 599 is assigned to Field Crops. This 100 point system is divided into twenty sub-areas each carrying a number assigned on the five point basis. Thus 500 is Field Crops - General. (This is one of two violations to the alphabetical system within areas. General is always the first sub-area, Miscellaneous, when used, is the last sub-area defined.) In the case of Field Crops, 505 is open and may be used for future expansion. The number 510 is assigned to Corn, 515 to Cotton. The numbers between 510 and 515 have not been used. If future expansion were needed, these numbers could be used.

Within each sub-area there is room for a further breakdown based on divisions by multiples of ten. Thus 515 is Cotton - General, 515/10 is Cotton - Disease, Insect and Pest Control, 515/20 is Cotton - Growing, etc. Again the numbers between /10 and /20 could be used for future expansion. In many cases some of the numbers of this ten division unit are not assigned. This also allows you to develop the system along your local needs.

You need not develop the entire index at once. You might start with the ten areas, and the twenty sub-areas within each area. As you find your materials file increasing, you can add your third breakdown. This system can also be used for filing your bulletins. An extra set of printed labels is included for your bulletin boxes or bulletin file. These labels are identical to the area and sub-area labels. Thus your bulletins would be filed in a manner identical to your personal materials file. Bulletins can thus be numbered with this file code and thus easily returned to their proper filing place.

000 ADMINISTRATION

000 GENERAL

005 AUDIO-VISUAL

005/10
005/20
005/30
005/40
005/50
005/60
005/70
005/80
005/90

010 COMMUNITY INFORMATION

010/10 CANNERY OPERATION AND MANAGEMENT
010/20 COMMITTEES
010/30
010/40 LEADERS
010/50
010/60 ORGANIZATIONS
010/70 SERVICE ACTIVITIES IN COOPERATION WITH DEPARTMENT
010/80 SURVEYS
010/90

015 CORRESPONDENCE

015/ 0 Forwarded - GENERAL
015/10 Received - GENERAL
015/20 DISTRICT SUPERVISOR
015/30 EXECUTIVE SECRETARY FFA
015/40 LOCAL SCHOOL ADMINISTRATION
015/50 STATE DEPARTMENT
015/60
015/70
015/80
015/90

020 EVALUATION

020/10
020/20
020/30
020/40
020/50
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050 POLICY

050/10
050/20 FEDERAL
050/30
050/40
050/50 LOCAL
050/60
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050/80 STATE
050/90

055

055/10
055/20
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060 PROFESSIONAL

060/10 ASSOCIATIONS & ORGANIZATIONS
060/20 GROUP INSURANCE
060/30 IMPROVEMENT - GENERAL
060/40 LIABILITIES
060/50 MEMBERSHIPS
060/60 PERSONAL RECORDS
060/70 PUBLICATIONS
060/80 RESPONSIBILITIES
060/90

065 PUBLICITY

065/10
065/20 CLIPPINGS OF LOCAL DEPT. ACTIVITIES
065/30
065/40 NEWS ARTICLES SUBMITTED
065/50
065/60 PICTURES
065/70 RADIO PROGRAMS
065/80 WAYS AND MEANS OF MAKING IT WORK
065/90

070 RECORDS-IN SCHOOL

070/10 CUMMULATIVE RECORDS
070/20 FOLLOW-UP OF GRADUATES AND WITHDRAWALS
070/30
070/40
070/50 REPORT - ANNUAL
070/60 REPORT - MONTHLY
070/70
070/80
070/90

025

025/10
025/20
025/30
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025/70
025/80
025/90

030 FILE KEY

030/10
030/20
030/30
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030/70
030/80
030/90

035

035/10
035/20
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040 INVENTORIES

040/10
040/20
040/30
040/40
040/50
040/60
040/70
040/80
040/90

045 MATERIALS & SUPPLIES

045/10 BUDGETS
045/20 CATALOGS, SOURCES OF SUPPLY, ETC.
045/30 INVOICES
045/40
045/50 OPERATORS MANUALS, PARTS LISTS, ETC.
045/60 PURCHASE ORDERS - FORMS
045/70 PURCHASE ORDERS - INITIATED AND/OR RECEIVED
045/80
045/90

075 RECORDS-OUT OF SCHOOL

075/ 0 ANNUAL REPORT Adult Farmer
075/10 ENROLLMENT Adult Farmer
075/20 MAILING LISTS Adult Farmer
075/30 PROGRAM ACTIVITIES Adult Farmer
075/40
075/50 ANNUAL REPORT Young Farmer
075/60 ENROLLMENT Young Farmer
075/70 MAILING LISTS Young Farmer
075/80 PROGRAM ACTIVITIES Young Farmer
075/90

080 RECORDS - POST H.S.

080/10 APPLICATIONS
080/20 CUMMULATIVE RECORDS
080/30
080/40 INSTRUCTIONAL AIDS, SUPPLIES.ETC.
080/50
080/60
080/70 REPORTS
080/80 SURVEYS
080/90

085 RECORDS-SPECIAL COURSES

085/10 APPLICATIONS
085/20 CUMMULATIVE RECORDS
085/30
085/40 INSTRUCTIONAL AIDS, SUPPLIES.ETC.
085/50
085/60
085/70 REPORTS
085/80 SURVEYS
085/90

090 SUPERVISED PRACTICE

090/10
090/20
090/30 FARMING PROGRAMS
090/40
090/50
090/60
090/70
090/80 WORK EXPERIENCE - AG. OCCUPATIONS
090/90 WORK EXPERIENCE - FARMING

095 TEACHING PLANS

095/10 AGRICULTURE I
095/20 AGRICULTURE II
095/30 AGRICULTURE III
095/40 AGRICULTURE IV
095/50 AG. OCCUPATIONS - GENERAL
095/60 AG. OCCUPATIONS - FARM MECHANICS
095/70 AG. OCCUPATIONS - FARM SALES & SERVICES
095/80 AG. OCCUPATIONS - HORTICULTURE
095/90

100 FFA

100 GENERAL

105

105/10
105/20
105/30
105/40
105/50
105/60
105/70
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110 ACTIVITY FILE

110/10 CAMP (See 950)
110/20 CHAPTER FARMER CEREMONY
110/30 GREENHAND INITIATION
110/40
110/50 MONEY RAISING ACTIVITIES
110/60 PARENT-SON BANQUET
110/70
110/80 RECREATION
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120 AWARDS

120/10
120/20
120/30 HONORARY FARMER
120/40
120/50 LOCAL CHAPTER AWARDS
120/60 NATIONAL FFA FOUNDATION AWARDS
120/70 PRIVATE DONORS
120/80 STATE ASSOCIATION AWARDS
120/90

150

150/10
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155 MAGAZINES

155/10
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160 MANUALS

160/10
160/20
160/30
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165 OFFICERS SECTION

165/10 INDIVIDUAL FILE - ADVISOR
165/20 INDIVIDUAL FILE - PRESIDENT
165/30 INDIVIDUAL FILE - REPORTER
165/40 INDIVIDUAL FILE - SECRETARY
165/50 INDIVIDUAL FILE - SENTINAL
165/60 INDIVIDUAL FILE - TREASURER
165/70 INDIVIDUAL FILE - VICE PRESIDENT
165/80 ORIENTATION
165/90

170 PROGRAM OF WORK

170/10 CHAPTER
170/20 EXAMPLES OF
170/30 NATIONAL
170/40 STATE
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125/10
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130 CONTESTS (RULES, APPLICATION BLANKS, ETC.)

130/10
130/20
130/30 FORESTRY
130/40 LIVESTOCK JUDGING
130/50
130/60 PUBLIC SPEAKING
130/70 QUARTET
130/80 SOIL JUDGING
130/90

135 CONVENTIONS

135/10
135/20
135/30
135/40
135/50
135/60 NATIONAL
135/70
135/80 STATE
135/90

140 DEGREES

140/10 AMERICAN FARMER
140/20 CHAPTER FARMER
140/30 GREENHAND
140/40 STATE FARMER
140/50
140/60
140/70
140/80
140/90

145 LEADERSHIP TRAINING

145/10
145/20
145/30
145/40
145/50
145/60 PARLIAMENTARY PROCEDURE
145/70
145/80
145/90

175

175/10
175/20
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175/60
175/70
175/80
175/90

180 REPORTS

180/10 FEDERATION
180/20
180/30 NATIONAL REPORT FORMS
180/40 NATIONAL REPORTS OF PROCEEDINGS
180/50
180/60 STATE REPORT FORMS
180/70 STATE REPORTS OF PROCEEDINGS
180/80
180/90

185

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200 GENERAL AGRICULTURE

200 GENERAL

205 AGRI-BUSINESS

205/10
205/20
205/30
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210 CAREERS

210/10
210/20
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210/80 TRAINING NEEDS, REQUIREMENTS, ETC.
210/90 WORK ATTITUDES, ETC.

215 CHEMICALS - GENERAL

(SEE ALSO 440/20, 335/20, & 425)

215/10
215/20
215/30
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220 DIRECTORIES

220/10
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220/90 VOCATIONAL AG. TEACHER

250 PUBLICATIONS

250/10
250/20 EXTENSION SERVICE (SEE ALSO 770/90)
250/30
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250/80 USDA
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260 RESEARCH

260/10 CROPS
260/20 ECONOMIC
260/30 EDUCATION
260/40 ENGINEERING
260/50 FORESTRY
260/60 HORTICULTURE
260/70 LIVESTOCK
260/80 SOILS
260/90

265

265/10
265/20
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270 SAFETY (SEE ALSO 870/70)

270/10
270/20 CIVIL DEFENSE
270/30
270/40
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225 FOREIGN

225/10
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230 HISTORY of AGRICULTURE

230/10
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235 IMPORTANCE of AGRIC.

235/10
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240 ORGANIZATIONS

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290 WEATHER

290/10
290/20
290/30 FORECASTS - CURRENT
290/40
290/50
290/60
290/70 RAINFALL RECORDS
290/80
290/90

295

295/10
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300 ANIMAL SCIENCE & PRODUCTION

300 ANIMAL SCIENCE-GEN.

305

305/10
305/20
305/30
305/40
305/50
305/60
305/70
305/80
305/90

310 BREED IDENTIFICATION

(SEE ALSO KINDS OF LIVESTOCK)

310/10
310/20
310/30
310/40
310/50
310/60
310/70
310/80
310/90

315 BREEDING LIVESTOCK

(SEE ALSO 355,360,365,370,375 & 380)

315/10 ARTIFICIAL INSEMINATION
315/20 BREED REGISTRATION
315/30 MANAGEMENT AND CARE OF BREEDING ANIMALS
315/40 REPRODUCTION AND GENETICS IN FARM ANIMALS
315/50 SELECTION OF BREEDING ANIMALS
315/60 SYSTEMS OF BREEDING
315/70
315/80
315/90

320 FEEDS & FEEDING

(SEE ALSO SPECIFIC ANIMALS)

320/10 ANIMAL NUTRITIONAL REQUIREMENTS
320/20 DIGESTION ABSORPTION AND USE OF FOOD
320/30 FEED EFFICIENCY
320/40 FEEDS - KINDS
320/50 FEEDING METHODS
320/60 RATIONS - PROVEN
320/70 RATIONS - BALANCING AND DEVELOPING
320/80
320/90 WATER

350 PRODUCTION of livestock-GEN.

350/10
350/20
350/30
350/40
350/50
350/60
350/70
350/80 STATISTICS
350/90

355 BEEF

355/10 BREEDS (SEE ALSO 310)
355/20 DISEASE, INSECT AND PARASITE CONTROL
355/30 FEEDING
355/40 HOUSING AND EQUIPMENT (SEE 805/40)
355/50 MANAGEMENT
355/60 MARKETING
355/70 PERFORMANCE AND BREED IMPROVEMENT
355/80 REGISTRATION ASSOCIATIONS, PAPERS, ETC.
355/90

360 DAIRY

360/10 BREEDS (SEE ALSO 310)
360/20 DISEASE, INSECT AND PARASITE CONTROL
360/30 FEEDING, PASTURES, ETC.
360/40 HOUSING AND EQUIPMENT (SEE 805/40)
360/50 MANAGEMENT
360/60 MARKETING DAIRY PRODUCTS
360/70 PRODUCTION AND BREED IMPROVEMENT
360/80 REGISTRATION ASSOCIATIONS, PAPERS, ETC.
360/90

365 HORSES, MULES & PONIES

365/10 DISEASE, INSECT AND PARASITE CONTROL
365/20 DONKEYS AND BURROWS
365/30 DRAFT HORSES
365/40 FEEDING
365/50 MANAGEMENT
365/60 MULES
365/70 PONIES
365/80 PLEASURE AND RACE HORSES
365/90 SHOWS AND EXHIBITING

370 POULTRY

370/10 CHICKENS - BROILERS
370/20 CHICKENS - EGG PRODUCTION
370/30 DUCKS
370/40 GAME BIRDS (SEE ALSO 980)
370/50 GEESE
370/60 TURKEYS
370/70 SQUABS
370/80
370/90

325 HEALTH

(SEE ALSO SPECIFIC ANIMALS)

325/10

325/20 MANAGEMENT AND SANITATION

325/30 PREVENTION OF DISEASE

325/40 RESEARCH IN LIVESTOCK HEALTH

325/50 SYMPTOMS OF ILLNESS

325/60 TESTS FOR LIVESTOCK HEALTH

325/70 VACCINATION, IMMUNIZATION, ETC.

325/80 VACCINATION RECORDS

325/90

330 IMPROVING LIVESTOCK

(SEE ALSO SPECIFIC ANIMALS)

330/10 BREEDING PROGRAMS

330/20

330/30 FAIRS AND EXHIBITS

330/40 FITTING AND SHOWING

330/50 JUDGING LIVESTOCK - GENERAL

330/60 PRODUCTION AND PERFORMANCE TESTING

330/70 PRODUCTION RECORDS AND ANALYSIS

330/80

330/90

335 INSECTS & PARASITES

(SEE ALSO SPECIFIC ANIMALS, & 215)

335/10

335/20 CONTROL OF LIVESTOCK INSECTS

335/30

335/40 ECONOMICS OF INSECT AND PARASITE INFESTATIONS

335/50

335/60 IDENTIFICATION OF LIVESTOCK INSECTS AND PARASITES

335/70

335/80

335/90

340 MANAGEMENT- GENERAL

(SEE ALSO SPECIFIC ANIMALS)

340/10

340/20

340/30

340/40

340/50

340/60

340/70

340/80

340/90

345 MEATS

(SEE ALSO SPECIFIC ANIMALS)

345/10 CONSUMER BUYING RESEARCH

345/20 GRADING BEEF

345/30 GRADING MUTTON AND LAMB

345/40 GRADING PORK

345/50 GRADING POULTRY

345/60 HOME BUTCHERING, CUTTING AND CURING

345/70 MARKET INFORMATION

345/80 PROCESSING AND PACKING

345/90

375 SHEEP

375/10 BREEDS (SEE ALSO 310)

375/20 DISEASE, INSECT AND PARASITE CONTROL

375/30 FEEDING

375/40 HOUSING AND EQUIPMENT (SEE 805/40)

375/50 MANAGEMENT

375/60 MARKETING WOOL AND MEAT

375/70 PRODUCTION AND BREED IMPROVEMENT

375/80 REGISTRATION ASSOCIATIONS, PAPERS, ETC.

375/90

380 SWINE

380/10 BREEDS (SEE ALSO 310)

380/20 DISEASE, INSECT AND PARASITE CONTROL

380/30 FEEDING

380/40 HOUSING AND EQUIPMENT (SEE 805/40)

380/50 MANAGEMENT

380/60 MARKETING

380/70 PRODUCTION AND BREED IMPROVEMENT

380/80 REGISTRATION ASSOCIATION, PAPERS, ETC.

380/90

385

385/10

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390/40

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390/80

390/90

395

395/10

395/20

395/30

395/40

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395/80

395/90

400 PLANT SCIENCE & SOILS

400 PLANT SCIENCE-GENERAL

405

405/10
405/20
405/30
405/40
405/50
405/60
405/70
405/80
405/90

410 PLANT CLASSIFICATION

410/10
410/20
410/30
410/40
410/50
410/60
410/70
410/80
410/90

415 PLANT GROWTH

415/10 CELL DIVISION
415/20
415/30 NUTRITION, METABOLISM, TRANSPORT
415/40
415/50
415/60
415/70
415/80
415/90

420 PLANT IMPROVEMENT

420/10 ASSOCIATIONS FOR PLANT IMPROVEMENT
420/20 CLASSES OF SEED
420/30
420/40
420/50 METHODS OF PLANT IMPROVEMENT
420/60
420/70
420/80
420/90

450 SOILS- GENERAL

(SEE ALSO SOIL CONSERVATION - 960)

450/10
450/20
450/30
450/40
450/50
450/60
450/70
450/80
450/90

455 CLASSIFICATION, LAND-USE

455/10 CLASSIFICATION
455/20
455/30
455/40
455/50 LAND-USE CLASSIFICATION
455/60
455/70
455/80 SOIL SURVEY
455/90

460 COMP., FORM. & STRUCTURE

460/10
460/20 COMPOSITION
460/30
460/40 FORMATION
460/50
460/60
460/70 SOIL PROFILES
460/80 SOIL STRUCTURE
460/90

465 FERTILIZATION

(SEE ALSO 750/30)

465/10 ACIDITY AND LIMING
465/20 FERTILIZER - APPLICATION
465/30 FERTILIZER - KINDS
465/40 FERTILIZER - INSPECTION
465/50 FERTILIZER - RECOMMENDATIONS
465/60 FERTILIZER - USAGE
465/70 FERTILIZER - VALUE OF
465/80 SOIL TESTING
465/90

470 LAND JUDGING

470/10
470/20
470/30
470/40
470/50
470/60
470/70
470/80
470/90

425 PLANT PESTS (INSECTS, RODENTS & DISEASES)

(SEE ALSO SPECIFIC CROPS, 500-599, AND 215)

425/10 DISEASES OF PLANTS & THEIR CONTROL

425/20

425/30

425/40

425/50 INSECTS

425/60

425/70 NEMATODES

425/80 RODENTS, ANIMAL PESTS, ETC.

425/90

430 PLANT REPRODUCTION

430/10

430/20

430/30

430/40

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430/80

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435 PLANT STRUCTURES

435/10

435/20

435/30

435/40

435/50

435/60

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435/90

440 WEEDS

(SEE 215 & SPECIFIC CROPS 500-599)

440/10 CLASSIFICATION AND IDENTIFICATION

440/20 CONTROL - CHEMICAL

440/30 CONTROL - PRINCIPLES OF

440/40 ECONOMIC IMPORTANCE OF

440/50

440/60 NOXIOUS

440/70

440/80

440/90

445

445/10

445/20

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445/80

445/90

475 SOIL MANAGEMENT

(SEE ALSO 960 & 750/30)

475/10

475/20 CROPPING SYSTEMS

475/30

475/40 DRAINAGE

475/50

475/60 IRRIGATION (SEE 875/50)

475/70

475/80 TILLAGE PRACTICES

475/90

480 SOIL LIFE

480/10

480/20 ANIMAL LIFE

480/30

480/40 MICRO-ORGANISMS

480/50

480/60

480/70 PLANT LIFE

480/80

480/90

485 SOIL WATER

(SEE ALSO 970, 875)

485/10 AVAILABLE SOIL WATER

485/20 CLASSIFICATION OF SOIL WATER

485/30

485/40

485/50

485/60 CONSERVATION OF SOIL WATER

485/70

485/80 WATER HOLDING CAPACITY OF SOILS

485/90 WATER LOSSES FROM SOILS

490

490/10

490/20

490/30

490/40

490/50

490/60

490/70

490/80

490/90

495

495/10

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495/40

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495/90

500 FIELD CROPS

500 GENERAL (SEE ALSO PLANT SCIENCE 400-449, PLANT PESTS 425,& Weeds 440)

500/10

500/20

500/30 DRYING AND STORING (SEE ALSO 840/60, 500/30,& SPECIFIC CROPS)

500/40

500/50

500/60

500/70 SEED

500/80 STATISTICS

500/90 VARIETIES

505

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505/70

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505/90

510 CORN

510/10 DISEASE, INSECTS & WEEDS (SEE ALSO 425 & 440)

510/20 GROWING

510/30 HARVESTING & STORING (SEE ALSO 500/30,805/20,840/60)

510/40 MANAGEMENT

510/50 MARKETING

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510/80 VARIETY SELECTION

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515 COTTON

515/10 DISEASE, INSECTS & WEEDS (SEE ALSO 425 & 440)

515/20 GROWING

515/30 HARVESTING & STORING (SEE ALSO 500/30, 805/20, 840/60)

515/40 MANAGEMENT

515/50 MARKETING

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515/80 VARIETY SELECTION

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520 HAY, FORAGE

520/10 DISEASE, INSECTS & WEEDS (SEE ALSO 425 & 440)

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520/30 HARVESTING & STORING (SEE ALSO 500/30, 805/20, 840/60)

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520/50 HAY (SEE ALSO 805/20 & 855/20)

520/60

520/70 PASTURES

520/80 SILAGE (SEE ALSO 805/20 & 855/20)

520/90

550 POTATOES-IRISH

550/10 DISEASE, INSECTS & WEEDS (SEE ALSO 425 & 440)

550/20 GROWING

550/30 HARVESTING & STORING (SEE ALSO 500/30, 805/20, 840/60)

550/40 MANAGEMENT

550/50 MARKETING

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550/80 VARIETY SELECTION

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555 SMALL GRAINS

550/10 DISEASE, INSECTS & WEEDS (SEE ALSO 425 & 440)

550/20 GROWING

550/30 HARVESTING & STORING (SEE ALSO 500/30,805/20,840/60)

550/40 MANAGEMENT

550/50 MARKETING

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550/80 VARIETY SELECTION

550/90

560 SORGHUM

560/10 DISEASE, INSECTS & WEEDS (SEE ALSO 425 & 440)

560/20 GROWING

560/30 HARVESTING & STORING (SEE ALSO 500/30, 805/20, 840/60)

560/40 MANAGEMENT

560/50 MARKETING

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560/80 VARIETY SELECTION

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565 SOYBEANS

565/10 DISEASE, INSECTS & WEEDS (SEE ALSO 425 & 440)

565/20 GROWING

565/30 HARVESTING & STORING (SEE ALSO 500/30, 805/20, 840/60)

565/40 MANAGEMENT

565/50 MARKETING

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565/80 VARIETY SELECTION

565/90

570 SWEET POTATOES

570/10 DISEASE, INSECTS & WEEDS (SEE ALSO 425 & 440)

570/20 GROWING

570/30 HARVESTING & STORING (SEE ALSO 500/30, 805/20, 840/60)

570/40 MANAGEMENT

570/50 MARKETING

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570/80 VARIETY SELECTION

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540 PEANUTS

540/10 DISEASE, INSECTS & WEEDS (SEE ALSO 425 & 440)
540/20 GROWING
540/30 HARVESTING & STORING (SEE ALSO 500/30, 805/20 & 840/60)
540/40 MANAGEMENT
540/50 MARKETING
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540/80 VARIETY SELECTION
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580 TOBACCO

580/10 DISEASE, INSECTS & WEEDS (SEE ALSO 425/50 & 440)
580/20 GROWING
580/30 HARVESTING & STORING (SEE ALSO 500/30, 805/20 & 840/60)
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580/50 MARKETING
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580/80 VARIETY SELECTION
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590 MISCELLANEOUS CROPS

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600 HORTICULTURE

600 GENERAL

605 APICULTURE (BEES)

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605/20
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610 FLORICULTURE

(SEE ALSO 425 & 440)

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615 FOOD PRESERVATION

615/10 CANNING
615/20 DRYING
615/30 FREEZING
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620 GARDENING

(SEE ALSO 425 & 440)

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650 PLANT PROPAGATION

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660 SMALL FRUITS

(SEE ALSO 425 & 440)

660/10 BLACKBERRIES
660/20 BLUEBERRIES
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660/70 RASPBERRIES
660/80 STRAWBERRIES
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670 TREE FRUITS

(SEE ALSO 425 & 440)

670/10 APPLES
670/20
670/30 FIGS
670/40 GRAPES
670/50
670/60
670/70 PEARS
670/80 PEACHES
670/90

625 GREENHOUSES

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625/20 CONSTRUCTION, PLANS, ETC.

625/30 DISEASE, INSECTS & WEEDS (SEE ALSO 425 & 440)

625/40

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625/60 OPERATION

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630 LANDSCAPING

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635 LAWNS

(SEE ALSO 425 & 440)

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640 NUT TREES

(SEE ALSO 425 & 440)

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680 TRUCK CROPS

(SEE ALSO 425 & 440)

680/10 BEANS - POLE

680/20

680/30

680/40 PEPPER

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680/60 TOMATOES

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680/80 TRUCK CROP STATISTICS

680/90 WATERMELONS

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700 AGRICULTURAL ECONOMICS

700 GENERAL

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710 AGRICULTURAL POLICY

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710/20 FEDERAL PROGRAMS
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710/50 LOCAL MARKET REGULATIONS
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710/80 STATE MARKET REGULATIONS
710/90

715 COOPERATIVES

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715/50 MARKETING
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715/70 SERVICE
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720 FARM MGT. -GENERAL

720/10 BECOMING ESTABLISHED IN FARMING
720/20 ELECTRON PROGRAMMING
720/30 FARM & HOME DEVELOPMENT PROGRAM
720/40
720/50
720/60
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720/80 SELECTING A FARM
720/90

750 PRODUCTION ECONOMICS

750/10 CAPITAL - USE OF
750/20 INPUT - OUTPUT DATA
750/30 LAND ECONOMICS (SEE ALSO 465)
750/40 LABOR COSTS & EFFICIENCY
750/50
750/60 MECHANIZATION ECONOMICS
750/70
750/80
750/90

755 RECORD KEEPING

755/10 ACCOUNTING FOR AGRICULTURE
755/20 ANALYSIS
755/30 BUDGETS
755/40 ENTERPRISE RECORDS
755/50 INVENTORIES
755/60
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755/90 USE OF RECORDS

760 RURAL SOCIOLOGY

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770 STATISTICS (SEE ALSO INDIVIDUAL PRODUCTION ENTERPRISES)

770/10
770/20 CENSUS
770/30
770/40 COUNTY
770/50 INTERNATIONAL
770/60 LOCAL
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770/80 NATIONAL
770/90 STATE

725 FARM PLANNING

(SEE ALSO 855/20)
725/10 CROPPING SYSTEMS - LAND USE
725/20 FARMSTEAD PLANNING
725/30
725/40 LIVESTOCK SYSTEMS
725/50
725/60 PROFITABLE COMBINATIONS OF ENTERPRISES
725/70 RESOURCE USE
725/80 TYPES OF FARMING OPERATIONS
725/90

730 FINANCE

730/10 CREDIT - GENERAL
730/20 CREDIT - FEDERAL SOURCES
730/30 CREDIT - PRIVATE
730/40 INSURANCE
730/50 SOCIAL SECURITY
730/60 TAXATION - GENERAL
730/70 TAXATION - INCOME
730/80 TAXATION - INHERITANCE (SEE ALSO 735/90)
730/90 TAXATION - PROPERTY

735 LAW

735/10
735/20 BOUNDARIES, FENCES, RIGHT-A-WAYS, ETC.
735/30
735/40 LABOR
735/50 MARKETING OF AGRICULTURAL PRODUCTS
735/60
735/70 TRESPASS
735/80
735/90 WILLS & INHERITANCE (SEE ALSO 730/80)

740 MARKETING

(SEE ALSO INDIVIDUAL PRODUCTION ENTERPRISES)
740/10 AGENCIES
740/20 ASSEMBLING, SHIPPING & TRANSPORTING
740/30
740/40
740/50 MARKET PROMOTION, ADVERTISING, ETC.
740/60 NEWS & INFORMATION
740/70 STRUCTURE OF MARKETS
740/80 TRANSPORTATION & MARKETING
740/90

745 OUTLOOK

(SEE ALSO INDIVIDUAL PRODUCTION ENTERPRISES)
745/10
745/20 AGRICULTURAL
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745/40 FARM INCOME
745/50 FARM PRICES
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745/70 PRODUCTION
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780 TENURE

780/10 AGREEMENTS - GENERAL
780/20
780/30 AGREEMENTS - CORPORATE
780/40 AGREEMENTS - FATHER - SON
780/50 AGREEMENTS - MISCELLANEOUS LEASES, ETC.
780/60 AGREEMENTS - RENTAL
780/70
780/80 PART-TIME FARMING
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785 VERTICAL INTEGRATION

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800 AGRICULTURAL ENGINEERING

800 GENERAL

(SEE ALSO 750/60 PRODUCTION ECONOMICS, MACHINE ECONOMICS 725/30 FARMSTEAD PLANNING)

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800/50 MISCELLANEOUS PLANS

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805 BUILDINGS & STRUCTURES

805/10 CONSTRUCTION PRINCIPLES

805/20 CROP BUILDINGS (SEE ALSO FIELD CROPS 500, ETC., AND 555)

805/30 HOMES - RURAL HOUSING

805/40 LIVESTOCK BUILDINGS (SEE ALSO 355, 360, 365, 370, 375 & 380)

805/50 MACHINE STORAGE EQUIPMENT

805/60 MAINTENANCE OF BUILDINGS

805/70 MATERIALS FOR BUILDING CONSTRUCTION

805/80 PLANNING BUILDINGS AND FARMSTEADS

805/90 PROCESSING BUILDINGS

810 CARPENTRY & WOODWORKING

810/10 BASIC PRINCIPLES

810/20

810/30 FASTENERS

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810/50 MATERIALS - KINDS, GRADES, MEASURE, ETC.

810/60 PLANS FOR WOODWORKING PROJECTS (SEE 800/50)

810/70

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815 CONCRETE & MASONRY

815/10 BLOCK & BRICK LAYING

815/20 FORM CONSTRUCTION

815/30 FOUNDATION CONSTRUCTION

815/40

815/50 MIXTURES OF CONCRETE AND MORTAR

815/60 PLANS FOR CONCRETE & MASONRY CONSTRUCTION (SEE 800/50)

815/70 PRECAST CONCRETE

815/80 USES OF CONCRETE AND MASONRY

815/90

820 ELECTRIFICATION

820/10 BASIC CONCEPTS

820/20 CONTROLS

820/30 EQUIPMENT PLANS (SEE 800/50)

820/40

820/50 MOTORS

820/60 MAINTENANCE OF ELECTRICAL SYSTEMS

820/70 SUPPLY - PUBLIC AND PRIVATE

820/80

820/90 WIRING

850 MACHINERY-POWER

(SEE ALSO 750/60)

850/10 ENGINES - BASIC PRINCIPLES

850/20 ENGINES - DIESEL

850/30 ENGINES - GASOLINE

850/40 ENGINES - MAINTENANCE (SEE ALSO 830/50)

850/50 ENGINES - SMALL AIR COOLED

850/60 POWER TRANSMISSION

850/70 TRACTORS - GENERAL

850/80 TRACTORS, SPECIFICATIONS, ETC.

850/90

855 MATERIALS Handling, Processing

(SEE ALSO 725/20)

855/10 BASIC CONCEPTS, PLANNING, ETC.

855/20 FEED, GRAIN, ROUGHAGE, SILAGE (SEE ALSO 520/50, 520/80 & 805)

855/30 FRUIT & VEGETABLES

855/40

855/50 MILK

855/60 POULTRY PRODUCTS

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855/90 WASTE PRODUCTS - MANURE, ETC.

860 METAL WORK

860/10 COLD METAL WORK

860/20 FORGE WORK

860/30

860/40 PLANS FOR METAL PRODUCTS (SEE 800/50)

860/50 SOLDERING

860/60 SHEET METAL

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860/80 WELDING - ARC

860/90 WELDING - OXYACETYLENE

865 Painting, Glazing, Refinishing

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870 SHOPS, SHOPWORK

(SEE ALSO 800/50 FOR MISCELLANEOUS PLANS)

870/10

870/20 FARM SHOP - PLANS FOR ORGANIZATION, ETC.

870/30

870/40 INSTRUCTIONAL SHOPS - PLANS, ORGANIZATION, ETC.

870/50

870/60 POWER TOOLS - CARE, SELECTION, ETC.

870/70 SHOP SAFETY (SEE ALSO 270)

870/80 SMALL TOOLS - CARE, SELECTION, ETC.

870/90

825 FENCING

825/10 BASIC CONSTRUCTION CONCEPTS
825/20 BARBED WIRE CONSTRUCTION
825/30 BOARD FENCES
825/40 LEGAL REQUIREMENTS
825/50 MOVABLE FENCES
825/60 POST PRESERVATION
825/70 SPECIAL TYPES OF FENCES
825/80
825/90 WOVEN WIRE

830 MACHINERY-GENERAL

830/10 BEARINGS
830/20 FUELS
830/30 HYDRAULICS
830/40
830/50 LUBRICANTS (SEE ALSO 850/40)
830/60
830/70
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835 MACHINERY-FIELD PREPARATION, CULTIVATION AND SPRAYING

835/10 CULTIVATORS
835/20
835/30 HARROWS
835/40
835/50 PLOWS
835/60 ROTO-TILLERS
835/70 SPREADERS
835/80 SPRAYERS
835/90

840 MACHINERY-HARVESTING

840/10 BALERS
840/20 BLOWERS
840/30 CHOPPERS
840/40 COMBINES
840/50 CONDITIONERS, CRUSHERS, DRIERS, RAKES, ETC.
840/60 DRIERS (SEE ALSO 500/30)
840/70 MOWERS
840/80 PICKERS
840/90

845 MACHINERY-PLANTING

845/10 CORN, BEANS, PEAS, ETC.
845/20 COTTON
845/30 GRAIN
845/40 GRASS
845/50
845/60
845/70 TRANSPLANTING
845/80 TREE
845/90 VEGETABLE CROPS

875 SOIL, WATER & FOREST ENGR

875/10 CONTOUR ENGINEERING PROBLEMS, ETC. (SEE ALSO 960 & 970)
875/20 DIVERSION, TERRACES - ENGR. PROBLEMS, ETC. (SEE ALSO 800 & 970)
875/30 DRAINAGE - ENGR. ASPECTS (SEE ALSO 970)
875/40 FOREST ENGR. APPROACHES
875/50 IRRIGATION
875/60 LAND LEVELING
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880 SEWAGE DISPOSAL

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885 WATER SUPPLY, SYSTEMS, etc.

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900 CONSERVATION

900 CONSERVATION - GENERAL

(SEE ALSO SOILS - 450, 475, 485)

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905 FORESTRY-GENERAL

(SEE ALSO 875)

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910 FOREST CONSERVATION

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915 FOREST FIRES

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920 FOREST DEVELOPMENT

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950 RECREATION & CONSERVATION

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960 SOIL CONSERVATION

(SEE ALSO 450, 475 & 485)

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970 WATER CONSERVATION

(SEE ALSO 485 & 875)

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ADMINISTRATION

000 GENERAL

005 AUDIO-VISUAL

010 COMMUNITY
INFORMATION

015
CORRESPONDENCE

020 EVALUATION

025

030 FILE KEY

035

040 INVENTORIES

045 MATERIALS
& SUPPLIES

050 POLICY

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060
PROFESSIONAL

065 PUBLICITY

070 RECORDS-
IN SCHOOL

075 RECORDS-
OUT OF SCHOOL

080 RECORDS-
POST H.S.

085 RECORDS-
SPECIAL COURSES

090 SUPERVISED
PRACTICE

095 TEACHING
PLANS

010/10 Community Information
CANNERY OPERATION & MANAGEMENT

010/20 Community Information
COMMITTEES

010/40 Community Information
LEADERS

010/60 Community Information
ORGANIZATIONS

010/70 Community Information
SERVICE ACTIVITIES IN COOPERATION WITH DEPT.

010/80 Community Information
SURVEYS

015/ 0 Correspondence Forwarded
GENERAL

015/10 Correspondence Received
GENERAL

015/20 Correspondence With
DISTRICT SUPERVISOR

015/30 Correspondence With
EXECUTIVE SECRETARY FFA

015/40 Correspondence With
LOCAL SCHOOL ADMINISTRATION

015/50 Correspondence With
STATE DEPARTMENT

045/10 Materials and Supplies
BUDGETS

045/20 Materials and Supplies
CATALOGS, SOURCES OF SUPPLY, ETC.

045/30 Materials and Supplies
INVOICES

045/50 Materials and Supplies
OPERATORS MANUALS, PARTS LISTS, ETC.

045/60 Materials and Supplies
PURCHASE ORDERS - FORMS

045/70 Materials and Supplies
PURCHASE ORDERS - INITIATED AND/OR RECEIVED

050/20 Policy
FEDERAL

050/50 Policy
LOCAL

050/80 Policy
STATE

060/10 Professional
ASSOCIATIONS & ORGANIZATIONS

060/20 Professional
GROUP INSURANCE

060/30 Professional
IMPROVEMENT - GENERAL

060/40 Professional
LIABILITIES

060/50 Professional
MEMBERSHIP

060/60 Professional
PERSONAL RECORDS

060/70 Professional
PUBLICATIONS

060/80 Professional
RESPONSIBILITIES

065/20 Publicity
CLIPPINGS OF LOCAL DEPARTMENT ACTIVITIES

065/40 Publicity
NEWS ARTICLES SUBMITTED

065/60 Publicity
PICTURES

065/70 Publicity
RADIO PROGRAMS

065/80 Publicity
WAYS AND MEANS OF
MAKING IT WORK

070/10 Recds., Repts, In-School
CUMMULATIVE RECORDS

070/20 Recds., Repts., In-School
FOLLOW-UP OF GRADUATES &
WITHDRAWALS

070/50 Recds., Repts., In-School
REPORT - ANNUAL

070/60 Recds., Repts., In-School
REPORT - MONTHLY

075/ 0 Records - Adult Farmers
ANNUAL REPORT

075/10 Records - Adult Farmers
ENROLLMENT

075/20 Records - Adult Farmers
MAILING LISTS

075/30 Records - Adult Farmers
PROGRAM ACTIVITIES

075/50 Records - Young Farmer
ANNUAL REPORT

075/60 Records - Young Farmer
ENROLLMENT

075/70 Records - Young Farmer
MAILING LISTS

075/80 Records - Young Farmer
PROGRAM ACTIVITIES

080/10 Records, Post High School
APPLICATIONS

080/20 Records, Post High School
CUMMULATIVE RECORDS

080/40 Records, Post High School
INSTRUCTIONAL AIDS,
SUPPLIES, ETC.

080/70 Records, Post High School
REPORTS

080/80 Records, Post High School
SURVEYS

085/10 Records, Special Courses
APPLICATIONS

085/20 Records, Special Courses
CUMMULATIVE RECORDS

085/40 Records, Special Courses
INSTRUCTIONAL AIDS,
SUPPLIES, ETC.

085/70 Records, Special Courses
REPORTS

085/80 Records, Special Courses
SURVEYS

090/30 Supervised Practice
FARMING PROGRAMS

090/80 Supervised Practice
WORK EXPERIENCE -
AG. OCCUPATIONS

090/90 Supervised Practice
WORK EXPERIENCE -
FARMING

095/10 Teaching Plans
AGRICULTURE I

095/20 Teaching Plans
AGRICULTURE II

095/30 Teaching Plans
AGRICULTURE III

095/40 Teaching Plans
AGRICULTURE IV

095/50 Teaching Plans
AG. OCCUPATIONS -
GENERAL

095/60 Teaching Plans
AG. OCCUPATIONS -
FARM MECHANICS

095/70 Teaching Plans
AG. OCCUPATIONS -
FARM SALES & SERVICES

095/80 Teaching Plans
AG. OCCUPATIONS -
HORTICULTURE

100-199 FFA

100 GENERAL

105

110 ACTIVITY FILE

115

120 AWARDS

125

130 CONTESTS

135 CONVENTIONS

140 DEGREES

145 LEADERSHIP TRAINING

150

155 MAGAZINES

160 MANUALS

165 OFFICERS SECTION

170 PROGRAM OF WORK

175

180 REPORTS

185

190

195

100-199 FFA

100 GENERAL

105

110 ACTIVITY FILE

115

120 AWARDS

125

130 CONTESTS

135 CONVENTIONS

140 DEGREES

145 LEADERSHIP TRAINING

150

155 MAGAZINES

160 MANUALS

165 OFFICERS SECTION

170 PROGRAM OF WORK

175

180 REPORTS

185

190

195

110/10 Activity File
CAMP

110/20 Activity File
CHAPTER FARMER
CEREMONY

110/30 Activity File
GREENHAND INITIATION

110/50 Activity File
MONEY RAISING
ACTIVITIES

110/60 Activity File
PARENT-SON BANQUET

110/80 Activity File
RECREATION

120/30 Awards
HONONARY FARMER

120/50 Awards
LOCAL CHAPTER AWARDS

120/60 Awards
NATIONAL FFA
FOUNDATION AWARDS

120/70 Awards
PRIVATE DONORS

120/80 Awards
STATE ASSOCIATION AWARDS

130/30 Contests
FORESTRY

130/40 Contests
LIVESTOCK JUDGING

130/60 Contests
PUBLIC SPEAKING

130/70 Contests
QUARTET

130/80 Contests
SOIL JUDGING

135/60 Conventions
NATIONAL

135/80 Conventions
STATE

140/10 Degrees
AMERICAN FARMER

140/20 Degrees
CHAPTER FARMER

140/30 Degrees
GREENHAND

140/40 Degrees
STATE FARMER

145/60 Leadership Training
PARLIAMENTARY PROCEDURE

165/10 Officers Section
ADVISOR

165/20 Officers Section
PRESIDENT

165/30 Officers Section
REPORTER

165/40 Officers Section
SECRETARY

165/50 Officers Section
SENTINAL

165/60 Officers Section
TREASURER

165/70 Officers Section
VICE PRESIDENT

165/80 Officers Section
ORIENTATION

170/10 Program of Work
CHAPTER

170/20 Program of Work
EXAMPLES OF

170/30 Program of Work
NATIONAL

170/40 Program of Work
STATE

180/10 Reports
FEDERATION

180/30 Reports
NATIONAL REPORT FORMS

180/40 Reports
NATIONAL REPORTS
OF PROCEEDINGS

180/60 Reports
STATE REPORT FORMS

180/70 Reports
STATE REPORTS OF
PROCEEDINGS

200-299 GENERAL AGRICULTURE

200 GENERAL

205 AGRI-BUSINESS

210 CAREERS

215 CHEMICALS-GENERAL

220 DIRECTORIES

225 FOREIGN

230 HISTORY OF AGRICULTURE

235 IMPORTANCE OF AGRICULTURE

240 ORGANIZATIONS

245

250 PUBLICATIONS

255

260 RESEARCH

265

270 SAFETY

275

280

285

290 WEATHER

295

200-299 GENERAL AGRICULTURE

200 GENERAL

205 AGRI-BUSINESS

210 CAREERS

215 CHEMICALS-GENERAL

220 DIRECTORIES

225 FOREIGN

230 HISTORY OF AGRICULTURE

235 IMPORTANCE OF AGRICULTURE

240 ORGANIZATIONS

245

250 PUBLICATIONS

255

260 RESEARCH

265

270 SAFETY

275

280

285

290 WEATHER

295

210/80 Careers
TRAINING NEEDS,
REQUIREMENTS, ETC.

210/90 Careers
WORK ATTITUDES, ETC.

220/90 Directories
VOCATIONAL AGRICULTURE
TEACHER

250/20 Publications
EXTENSION SERVICE

250/80 Publications
USDA

260/10 Research
CROPS

260/20 Research
ECONOMIC

260/30 Research
EDUCATION

260/40 Research
ENGINEERING

260/50 Research
FORESTRY

260/60 Research
HORTICULTURE

260/70 Research
LIVESTOCK

260/80 Research
SOILS

270/20 Safety
CIVIL DEFENSE

290/30 Weather
FORECASTS - CURRENT

290/70 Weather
RAINFALL RECORDS

300-399 ANIMAL SCIENCE & PROD.

300 ANIMAL SCIENCE-GEN.

305

310 BREED IDENTIFICATION

315 BREEDING LIVESTOCK

320 FEEDS & FEEDING

325 HEALTH

330 IMPROVING LIVESTOCK

335 INSECTS & PARASITES

340 MANAGEMENT-GENERAL

345 MEATS

350 PRODUCTION of LIVESTOCK-GEN.

355 BEEF

360 DAIRY

365 HORSES, MULES & PONIES

370 POULTRY

375 SHEEP

380 SWINE

385

390

395

300-399 ANIMAL SCIENCE & PROD.

300 ANIMAL SCIENCE-GEN.

305

310 BREED IDENTIFICATION

315 BREEDING LIVESTOCK

320 FEEDS & FEEDING

325 HEALTH

330 IMPROVING LIVESTOCK

335 INSECTS & PARASITES

340 MANAGEMENT-GENERAL

345 MEATS

350 PRODUCTION of LIVESTOCK-GEN.

355 BEEF

360 DAIRY

365 HORSES, MULES & PONIES

370 POULTRY

375 SHEEP

380 SWINE

385

390

395

315/10 Breeding Livestock
ARTIFICIAL INSEMINATION

315/20 Breeding Livestock
BREED REGISTRATION

315/30 Breeding Livestock
MANAGEMENT AND CARE
OF BREEDING ANIMALS

315/40 Breeding Livestock
REPRODUCTION AND GENETICS
IN FARM ANIMALS

315/50 Breeding Livestock
SELECTION OF
BREEDING ANIMALS

315/60 Breeding Livestock
SYSTEMS OF BREEDING

320/10 Feeds & Feeding
ANIMAL NUTRITIONAL
REQUIREMENTS

320/20 Feeds & Feeding
DIGESTION ABSORPTION
AND USE OF FOOD

320/30 Feeds & Feeding
FEED EFFICIENCY

320/40 Feeds & Feeding
FEEDS - KINDS

320/50 Feeds & Feeding
FEEDING METHODS

320/60 Feeds & Feeding
RATIONS - PROVEN

320/70 Feeds & Feeding
RATIONS - BALANCING
AND DEVELOPING

320/90 Feeds & Feeding
WATER

325/20 Health
MANAGEMENT AND SANITATION

325/30 Health
PREVENTION OF DISEASE

325/40 Health
RESEARCH IN LIVESTOCK HEALTH

325/50 Health
SYMPTOMS OF ILLNESS

325/60 Health
TESTS FOR LIVESTOCK
HEALTH

325/70 Health
VACCINATION, IMMUNIZATION,
ETC.

325/80 Health
VACCINATION RECORDS

330/10 Improving Livestock
BREEDING PROGRAMS

330/30 Improving Livestock
FAIRS AND EXHIBITS

330/40 Improving Livestock
FITTING AND SHOWING

330/50 Improving Livestock
JUDGING LIVESTOCK -
GENERAL

330/60 Improving Livestock
PRODUCTION AND
PERFORMANCE TESTING

330/70 Improving Livestock
PRODUCTION RECORDS
AND ANALYSIS

335/20 Insects & Parasites
CONTROL OF LIVESTOCK INSECTS

335/40 Insects & Parasites
ECONOMICS OF INSECT
AND PARASITE INFESTATIONS

335/60 Insects & Parasites
IDENTIFICATION OF LIVESTOCK
INSECTS AND PARASITES

345/10 Meats
CONSUMER BUYING RESEARCH

345/20 Meats
GRADING BEEF

345/30 Meats
GRADING MUTTON AND LAMB

345/40 Meats
GRADING PORK

345/50 Meats
GRADING POULTRY

345/60 Meats
HOME BUTCHERING, CUTTING AND CURING

345/70 Meats
MARKET INFORMATION

345/80 Meats
PROCESSING AND PACKING

350/80 Production of Livestock - Gen.
STATISTICS

355/10 Beef
BREEDS

355/20 Beef
DISEASE, INSECT AND PARASITE CONTROL

355/30 Beef
FEEDING

355/40 Beef
HOUSING AND EQUIPMENT

355/50 Beef
MANAGEMENT

355/60 Beef
MARKETING

355/70 Beef
PERFORMANCE AND BREED IMPROVEMENT

355/80 Beef
REGISTRATION ASSOCIATIONS, PAPERS, ETC.

360/10 Dairy
BREEDS

360/20 Dairy
DISEASE, INSECT AND PARASITE CONTROL

360/30 Dairy
FEEDING, PASTURE, ETC.

360/40 Dairy
HOUSING AND EQUIPMENT

360/50 Diary
MANAGEMENT

360/60 Dairy
MARKETING DAIRY PRODUCTS

360/70 Dairy
PRODUCTION AND BREED IMPROVEMENT

360/80 Dairy
REGISTRATION ASSOCIATIONS, PAPERS, ETC.

365/10 Horses, Mules & Ponies
DISEASE, INSECT AND PARASITE CONTROL

365/20 Horses, Mules & Ponies
DONKEYS AND BURROWS

365/30 Horses, Mules & Ponies
DRAFT HORSES

365/40 Horses, Mules & Ponies
FEEDING

365/50 Horses, Mules & Ponies
MANAGEMENT

365/60 Horses, Mules & Ponies
MULES

365/70 Horses, Mules & Ponies
PONIES

365/80 Horses, Mules & Ponies
PLEASURE AND RACE HORSES

365/90 Horses, Mules & Ponies
SHOWS AND EXHIBITING

370/10 Poultry
CHICKENS - BROILERS

370/20 Poultry
CHICKENS - EGG PRODUCTION

370/30 Poultry
DUCKS

370/40 Poultry
GAME BIRDS

370/50 Poultry
GEESE

370/60 Poultry
TURKEYS

370/70 Poultry
SQUABS

375/10 Sheep
BREEDS

375/20 Sheep
DISEASE, INSECT AND
PARASITE CONTROL

375/30 Sheep
FEEDING

375/40 Sheep
HOUSING AND EQUIPMENT

375/50 Sheep
MANAGEMENT

375/60 Sheep
MARKETING WOOL AND MEAT

375/70 Sheep
PRODUCTION AND BREED
IMPROVEMENT

375/80 Sheep
REGISTRATION ASSOCIATIONS,
PAPERS, ETC.

380/10 Swine
BREEDS

380/20 Swine
DISEASE, INSECT AND
PARASITE CONTROL

380/30 Swine
FEEDING

380/40 Swine
HOUSING AND EQUIPMENT

380/50 Swine
MANAGEMENT

380/60 Swine
MARKETING

380/70 Swine
PRODUCTION AND BREED
IMPROVEMENT

380/80 Swine
REGISTRATION ASSOCIATION,
PAPERS, ETC.

400-499 PLANT SCIENCE & SOILS

400 PLANT SCIENCE - GENERAL

405

410 PLANT CLASSIFICATION

415 PLANT GROWTH

420 PLANT IMPROVEMENT

425 PLANT PESTS

430 PLANT REPRODUCTION

435 PLANT STRUCTURES

440 WEEDS

445

450 SOILS - GEN.

455 CLASSIFICATION, LAND USE

460 COMP., FORM. & STRUCTURE

465 FERTILIZATION

470 LAND JUDGING

475 SOIL MANAGEMENT

480 SOIL LIFE

485 SOIL WATER

490

495

400-499 PLANT SCIENCE & SOILS

400 PLANT SCIENCE - GENERAL

405

410 PLANT CLASSIFICATION

415 PLANT GROWTH

420 PLANT IMPROVEMENT

425 PLANT PESTS

430 PLANT REPRODUCTION

435 PLANT STRUCTURES

440 WEEDS

445

450 SOILS - GEN.

455 CLASSIFICATION, LAND USE

460 COMP., FORM. & STRUCTURE

465 FERTILIZATION

470 LAND JUDGING

475 SOIL MANAGEMENT

480 SOIL LIFE

485 SOIL WATER

490

495

415/10 Plant Growth
CELL DIVISION

415/30 Plant Growth
NUTRITION, METABOLISM, TRANSPORT

420/10 Plant Improvement
ASSOCIATIONS FOR PLANT IMPROVEMENT

420/20 Plant Improvement
CLASSES OF SEED

420/50 Plant Improvement
METHODS OF PLANT IMPROVEMENT

425/10 Plant Pests
DISEASES OF PLANTS AND THEIR CONTROL

425/50 Plant Pests
INSECTS

425/70 Plant Pests
NEMATODES

425/80 Plant Pests
RODENTS, ANIMAL PESTS, ETC.

440/10 Weeds
CLASSIFICATION AND IDENTIFICATION

440/20 Weeds
CONTROL - CHEMICAL

440/30 Weeds
CONTROL - PRINCIPLES OF

440/40 Weeds
ECONOMIC IMPORTANCE OF

440/60 Weeds
NOXIOUS

455/10 Classification, Land-Use
CLASSIFICATION

455/50 Classification, Land-Use
LAND-USE CLASSIFICATION

455/80 Classification, Land-Use
SOIL SURVEY

460/20 Comp., Form. & Structure
COMPOSITION

460/40 Comp., Form. & Structure
FORMATION

460/70 Comp., Form. & Structure
SOIL PROFILES

460/80 Comp., Form. & Structure
SOIL STRUCTURE

465/10 Fertilization
ACIDITY AND LIMING

465/20 Fertilization
FERTILIZER - APPLICATION

465/30 Fertilization
FERTILIZER - KINDS

465/40 Fertilization
FERTILIZER - INSPECTION

465/50 Fertilization
FERTILIZER - RECOMMENDATIONS

465/60 Fertilization
FERTILIZER - USAGE

465/70 Fertilization
FERTILIZER - VALUE OF

465/80 Fertilization
SOIL TESTING

475/20 Soil Management
CROPPING SYSTEMS

475/40 Soil Management
DRAINAGE

475/60 Soil Management
IRRIGATION

475/80 Soil Management
TILLAGE PRACTICES

480/20 Soil Life
ANIMAL LIFE

480/40 Soil Life
MICRO-ORGANISMS

480/70 Soil Life
PLANT LIFE

485/10 Soil Water
AVAILABLE SOIL WATER

485/20 Soil Water
CLASSIFICATION OF SOIL WATER

485/60 Soil Water
CONSERVATION OF SOIL WATER

485/80 Soil Water
WATER HOLDING CAPACITY
OF SOILS

485/90 Soil Water
WATER LOSSES FROM SOILS

500-599 FIELD CROPS

500 GENERAL

505

510 CORN

515 COTTON

520 HAY, FORAGE

525

530

535

540 PEANUTS

545

550 POTATOES-IRISH

555 SMALL GRAINS

560 SORGHUM

565 SOYBEANS

570 SWEET POTATOES

575

580 TOBACCO

590 MISC. CROPS

595

500-599 FIELD CROPS

500 GENERAL

505

510 CORN

515 COTTON

520 HAY, FORAGE

525

530

535

540 PEANUTS

545

550 POTATOES-IRISH

555 SMALL GRAINS

560 SORGHUM

565 SOYBEANS

570 SWEET POTATOES

575

580 TOBACCO

590 MISC. CROPS

595

510/10 Corn
DISEASE, INSECTS & WEEDS

510/20 Corn
GROWING

510/30 Corn
HARVESTING & STORING

510/40 Corn
MANAGEMENT

510/50 Corn
MARKETING

510/80 Corn
VARIETY SELECTION

515/10 Cotton
DISEASE, INSECTS & WEEDS

515/20 Cotton
GROWING

515/30 Cotton
HARVESTING & STORING

515/40 Cotton
MANAGEMENT

515/50 Cotton
MARKETING

515/80 Cotton
VARIETY SELECTION

520/10 Hay, Forage
DISEASE, INSECTS & WEEDS

520/30 Hay, Forage
HARVESTING & STORING

520/50 Hay, Forage
HAY

520/70 Hay, Forage
PASTURES

520/80 Hay, Forage
SILAGE

540/10 Peanuts
DISEASE, INSECTS & WEEDS

540/20 Peanuts
GROWING

540/30 Peanuts
HARVESTING & STORING

540/40 Peanuts
MANAGEMENT

540/50 Peanuts
MARKETING

540/80 Peanuts
VARIETY SELECTION

550/10 Potatoes
DISEASE, INSECTS & WEEDS

550/20 Potatoes
GROWING

550/30 Potatoes
HARVESTING & STORING

550/40 Potatoes
MANAGEMENT

550/50 Potatoes
MARKETING

550/80 Potatoes
VARIETY SELECTION

555/10 Small Grains
DISEASE, INSECTS & WEEDS

555/20 Small Grains
GROWING

555/30 Small Grains
HARVESTING & STORING

555/40 Small Grains
MANAGEMENT

555/50 Small Grains
MARKETING

555/80 Small Grains
VARIETY SELECTION

560/10 Sorghum
DISEASE, INSECTS & WEEDS

560/20 Sorghum
GROWING

560/30 Sorghum
HARVESTING & STORING

560/40 Sorghum
MANAGEMENT

560/50 Sorghum
MARKETING

560/80 Sorghum
VARIETY SELECTION

565/10 Soybeans
DISEASE, INSECTS & WEEDS

565/20 Soybeans
GROWING

565/30 Soybeans
HARVESTING & STORING

565/40 Soybeans
MANAGEMENT

565/50 Soybeans
MARKETING

565/80 Soybeans
VARIETY SELECTION

570/10 Sweet Potatoes
DISEASE, INSECTS &

570/20 Sweet Potatoes
GROWING

570/30 Sweet Potatoes
HARVESTING & STORING

570/40 Sweet Potatoes
MANAGEMENT

570/50 Sweet Potatoes
MARKETING

570/80 Sweet Potatoes
VARIETY SELECTION

580/10 Tobacco
DISEASE, INSECTS & WEEDS

570/20 Tobacco
GROWING

580/30 Tobacco
HARVESTING & STORING

580/50 Tobacco
MARKETING

580/80 Tobacco
VARIETY SELECTION

600-699
HORTICULTURE

600 GENERAL

605 APICULTURE
(BEES)

610
FLORICULTURE

615 FOOD
PRESERVATION

620 GARDENING

625 GREENHOUSES

630 LANDSCAPING

635 LAWNS

640 NUT TREES

645

650 PLANT
PROPAGATION

655

660 SMALL
FRUITS

665

670 TREE FRUITS

675

680 TRUCK
CROPS

685

690

695

600-699
HORTICULTURE

600 GENERAL

605 APICULTURE
(BEES)

610
FLORICULTURE

615 FOOD
PRESERVATION

620 GARDENING

625 GREENHOUSES

630 LANDSCAPING

635 LAWNS

640 NUT TREES

645

650 PLANT
PROPAGATION

655

660 SMALL
FRUITS

665

670 TREE FRUITS

675

680 TRUCK
CROPS

685

690

695

615/10 Food Preservation
CANNING

615/20 Food Preservation
DRYING

615/30 Food Preservation
FREEZING

625/20 Greenhouses
CONSTRUCTION, PLANS, ETC.

625/30 Greenhouses
DISEASE, INSECTS & WEEDS

625/60 Greenhouses
OPERATION

660/10 Small Fruits
BLACKBERRIES

560/20 Small Fruits
BLUEBERRIES

660/70 Small Fruits
RASPBERRIES

660/80 Small Fruits
STRAWBERRIES

670/10 Tree Fruits
APPLES

670/30 Tree Fruits
FIGS

670/40 Tree Fruits
GRAPES

670/70 Tree Fruits
PEARS

670/80 Tree Fruits
PEACHES

680/10 Truck Crops
BEANS - POLE

680/40 Truck Crops
PEPPER

680/60 Truck Crops
TOMATOES

680/80 Truck Crops
TRUCK CROP STATISTICS

680/90 Truck Crops
WATERMELONS

700-799 AGRIC. ECONOMICS

700 GENERAL

705

710 AGRICULTURAL POLICY

715 COOPERATIVES

720 FARM MGT.-GENERAL

725 FARM PLANNING

730 FINANCE

735 LAW

740 MARKETING

745 OUTLOOK

750 PRODUCTION ECONOMICS

755 RECORD KEEPING

760 RURAL SOCIOLOGY

765

770 STATISTICS

775

780 TENURE

785 VERTICAL INTEGRATION

790

795

700-799 AGRIC. ECONOMICS

700 GENERAL

705

710 AGRICULTURAL POLICY

715 COOPERATIVES

720 FARM MGT.-GENERAL

725 FARM PLANNING

730 FINANCE

735 LAW

740 MARKETING

745 OUTLOOK

750 PRODUCTION ECONOMICS

755 RECORD KEEPING

760 RURAL SOCIOLOGY

765

770 STATISTICS

775

780 TENURE

785 VERTICAL INTEGRATION

790

795

710/20 Agricultural Policy
FEDERAL PROGRAMS

710/50 Agricultural Policy
LOCAL MARKET REGULATIONS

710/80 Agricultural Policy
STATE MARKET REGULATIONS

715/50 Cooperatives
MARKETING

715/70 Cooperatives
SERVICE

720/10 Farm Management - General
BECOMING ESTABLISHED
IN FARMING

720/20 Farm Management - General
ELECTRON PROGRAMMING

720/30 Farm Management - General
FARM & HOME DEVELOPMENT
PROGRAM

720/80 Farm Management - General
SELECTING A FARM

725/10 Farm Planning
CROPPING SYSTEMS -
LAND USE

725/20 Farm Planning
FARMSTEAD PLANNING

725/40 Farm Planning
LIVESTOCK SYSTEMS

725/60 Farm Planning
PROFITABLE COMBINATIONS
OF ENTERPRISES

725/70 Farm Planning
RESOURCE USE

725/80 Farm Planning
TYPES OF FARMING OPERATIONS

730/10 Finance
CREDIT - GENERAL

730/20 Finance
CREDIT - FEDERAL SOURCES

730/30 Finance
CREDIT - PRIVATE

730/40 Finance
INSURANCE

730/50 Finance
SOCIAL SECURITY

730/60 Finance
TAXATION - GENERAL

730/70 Finance
TAXATION - INCOME

730/80 Finance
TAXATION - INHERITANCE

730/90 Finance
TAXATION - PROPERTY

735/20 Law
BOUNDARIES, FENCES,
RIGHT-A-WAYS, ETC.

735/40 Law
LABOR

735/50 Law
MARKETING OF
AGRICULTURAL PRODUCTS

735/70 Law
TRESPASS

735/90 Law
WILLS AND INHERITANCE

740/10 Marketing
AGENCIES

740/20 Marketing
ASSEMBLING, SHIPPING
AND TRANSPORTING

740/50 Marketing
MARKET PROMOTION,
ADVERTISING, ETC.

740/60 Marketing
NEWS AND INFORMATION

740/70 Marketing
STRUCTURE OF MARKETS

745/20 Outlook
AGRICULTURAL

745/40 Outlook
FARM INCOME

745/50 Outlook
FARM PRICES

745/70 Outlook
PRODUCTION

750/10 Production Economics
CAPITAL - USE OF

750/20 Production Economics
INPUT - OUTPUT DATA

750/30 Production Economics
LAND ECONOMICS

750/40 Production Economics
LABOR COSTS & EFFICIENCY

750/60 Production Economics
MECHANIZATION ECONOMICS

755/10 Records
ACCOUNTING FOR AGRICULTURE

755/20 Records
ANALYSIS

755/30 Records
BUDGETS

755/40 Records
ENTERPRISE RECORDS

755/50 Records
INVENTORIES

755/90 Records
USE OF RECORDS

770/20 Statistics
CENSUS

770/40 Statistics
COUNTY

770/50 Statistics
INTERNATIONAL

770/60 Statistics
LOCAL

770/80 Statistics
NATIONAL

770/90 Statistics
STATE

780/10 Tenure
AGREEMENTS - GENERAL

780/30 Tenure
AGREEMENTS - CORPORATE

780/40 Tenure
AGREEMENTS - FATHER - SON

780/50 Tenure
AGREEMENTS - MISCELLANEOUS
LEASES, ETC.

780/60 Tenure
AGREEMENTS - RENTAL

780/80 Tenure
PART-TIME FARMING

800-899 AGRIC. ENGINEERING

800 GENERAL

805 BUILDINGS & STRUCTURES

810 CARPENTRY & WOODWORKING

815 CONCRETE & MASONRY

820 ELECTRIFICATION

825 FENCING

830 MACHINERY-GENERAL

835 MACHINERY-FIELD

840 MACHINERY-HARVESTING

845 MACHINERY-PLANTING

850 MACHINERY-POWER

855 MATERIALS Handling, Processing

860 METAL WORK

865 PAINTING, Glazing, Refinishing

870 SHOPS, SHOPWORK

875 SOIL, WATER & FOREST ENGR.

880 SEWAGE DISPOSAL

885 WATER SUPPLY, SYSTEMS, etc.

890

895

800-899 AGRIC. ENGINEERING

800 GENERAL

805 BUILDINGS & STRUCTURES

810 CARPENTRY & WOODWORKING

815 CONCRETE & MASONRY

820 ELECTRIFICATION

825 FENCING

830 MACHINERY-GENERAL

835 MACHINERY-FIELD

840 MACHINERY-HARVESTING

845 MACHINERY-PLANTING

850 MACHINERY-POWER

855 MATERIALS Handling, Processing

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865 PAINTING, Glazing, Refinishing

870 SHOPS, SHOPWORK

875 SOIL, WATER & FOREST ENGR.

880 SEWAGE DISPOSAL

885 WATER SUPPLY, SYSTEMS, etc.

890

895

800/50 General
MISCELLANEOUS PLANS

805/10 Buildings & Structures
CONSTRUCTION PRINCIPLES

805/20 Buildings & Structures
CROP BUILDINGS

805/30 Buildings & Structures
HOMES - RURAL HOUSING

805/40 Buildings & Structure
LIVESTOCK BUILDINGS

805/50 Buildings & Structures
MACHINE STORAGE
EQUIPMENT

805/60 Buildings & Structures
MAINTENANCE OF
BUILDINGS

805/70 Buildings & Structures
MATERIALS FOR BUILD-
IND CONSTRUCTION

805/80 Buildings & Structures
PLANNING BUILDINGS
AND FARMSTEADS

805/90 Buildings & Structures
PROCESSING BUILDINGS

810/10 Carpentry & Woodworking
BASIC PRINCIPLES

810/30 Carpentry & Woodworking
FASTENERS

810/50 Carpentry & Woodworking
MATERIALS - KINDS,
GRADES, MEASURE, ETC.

810/60 Carpentry & Woodworking
PLANS FOR WOODWORKING
PROJECTS

815/10 Concrete & Masonry
BLOCK & BRICK LAYING

815/20 Concrete & Masonry
FORM CONSTRUCTION

815/30 Concrete & Masonry
FOUNDATION CONSTRUCTION

815/50 Concrete & Masonry
MIXTURES OF CONCRETE
AND MORTAR

815/60 Concrete & Masonry
PLANS FOR CONCRETE &
MASONRY CONSTRUCTION

815/70 Concrete & Masonry
PRECAST CONCRETE

815/80 Concrete & Masonry
USES OF CONCRETE
AND MASONRY

820/10 Electrification
BASIC CONCEPTS

820/20 Electrification
CONTROLS

820/30 Electrification
EQUIPMENT PLANS

820/50 Electrification
MOTORS

820/60 Electrification
MAINTENANCE OF
ELECTRICAL SYSTEMS

820/70 Electrification
SUPPLY - PUBLIC
AND PRIVATE

820/90 Electrification
WIRING

825/10 Fencing
BASIC CONSTRUCTION
CONCEPTS

825/20 Fencing
BARBED WIRE
CONSTRUCTION

825/30 Fencing
BOARD FENCES

825/40 Fencing
LEGAL REQUIREMENTS

825/50 Fencing
MOVABLE FENCES

825/60 Fencing
POST PRESERVATION

825/70 Fencing
SPECIAL TYPES OF FENCES

825/90 Fencing
WOVEN WIRE

830/10 Machinery-General
BEARINGS

830/20 Machinery-General
FUELS

830/30 Machinery-General
HYDRAULICS

830/50 Machinery-General
LUBRICANTS

835/10 Machinery-Field
CULTIVATORS

835/30 Machinery-Field
HARROWS

835/50 Machinery-Field
PLOWS

835/60 Machinery-Field
ROTO-TILLERS

835/70 Machinery-Field
SPREADERS

835/80 Machinery-Field
SPRAYERS

840/10 Machinery-Harvesting
BALERS

840/20 Machinery-Harvesting
BLOWERS

840/30 Machinery-Harvesting
CHOPPERS

840/40 Machinery-Harvesting
COMBINES

840/50 Machinery-Harvesting
CONDITIONERS, CRUSHERS, DRIERS, RAKES, ETC.

840/60 Machinery-Harvesting
DRIERS

840/70 Machinery-Harvesting
MOWERS

840/80 Machinery-Harvesting
PICKERS

845/10 Machinery-Planting
CORN, BEANS, PEAS, ETC.

845/20 Machinery-Planting
COTTON

845/30 Machinery-Planting
GRAIN

845/40 Machinery-Planting
GRASS

845/70 Machinery-Planting
TRANSPLANTING

845/80 Machinery-Planting
TREE

845/90 Machinery-Planting
VEGETABLE CROPS

850/10 Machinery-Power
ENGINES - Basic PRINCIPLES

850/20 Machinery-Power
ENGINES - DIESEL

850/30 Machinery-Power
ENGINES - GASOLINE

850/40 Machinery-Power
ENGINES - MAINTENANCE

850/50 Machinery-Power
ENGINES - SMALL AIR COOLED

850/60 Machinery-Power
POWER TRANSMISSION

850/70 Machinery-Power
TRACTORS - GENERAL

850/80 Machinery-Power
TRACTORS, SPECIFICATIONS, ETC.

855/10 Materials Handling, Processing
BASIC CONCEPTS, PLANNING, ETC.

855/20 Materials Handling, Processing
FEED, GRAIN, ROUGHAGE, SILAGE

855/30 Materials Handling, Processing
FRUITS AND VEGETABLES

855/50 Materials Handling, Processing
MILK

855/60 Materials Handling, Processing
POULTRY PRODUCTS

855/90 Materials Handling, Processing
WASTE PRODUCTS - MANURE, ETC.

860/10 Metal Work
COLD METAL WORK

860/20 Metal Work
FORGE WORK

860/40 Metal Work
PLANS FOR METAL PRODUCTS

860/50 Metal Work
SOLDERING

860/60 Metal Work
SHEET METAL

860/80 Metal Work
WELDING - ARC

860/90 Metal Work
WELDING - OXYACETYLENE

870/20 Shops, Shopwork
FARM SHOP - PLANS ORGANIZATION, ETC.

870/40 Shops, Shopwork
INSTRUCTIONAL SHOPS - PLANS, ORGANIZATION, ETC.

870/60 Shops, Shopwork
POWER TOOLS - CARE, SELECTION, ETC.

870/70 Shops, Shopwork
SHOP SAFETY

870/80 Shops, Shopwork
SMALL TOOLS - CARE, SELECTION, ETC.

875/10 Soil, Water & Forest Engr.
CONTOUR ENGINEERING PROBLEMS, ETC.

875/20 Soil, Water & Forest Engr.
DIVERSION, TERRACES - ENGR. PROBLEMS, ETC.

875/30 Soil, Water & Forest Engr.
DRAINAGE - ENGR. ASPECTS

875/40 Soil, Water & Forest Engr.
FOREST ENGR. APPROACHES

875/50 Soil, Water & Forest Engr.
IRRIGATION

875/60 Soil, Water & Forest Engr.
LAND LEVELING

900-999
CONSERVATION

900 GENERAL

905 FORESTRY-
GENERAL

910 FOREST
CONSERVATION

915 FOREST
FIRES

920 FOREST
DEVELOPMENT

925 FOREST
HARVESTING

930 FOREST
Insects, Diseases

935 FOREST
MANAGEMENT

940 FOREST
Products Marketing

945

950 RECREATION &
CONSERVATION

955

960 SOIL
CONSERVATION

965

970 WATER
CONVERVATION

975

980 WILDLIFE
CONSERVATION

985

990

995

900-999
CONSERVATION

900 GENERAL

905 FORESTRY-
GENERAL

910 FOREST
CONSERVATION

915 FOREST
FIRES

920 FOREST
DEVELOPMENT

925 FOREST
HARVESTING

930 FOREST
Insects, Diseases

935 FOREST
MANAGEMENT

940 FOREST
Products Marketing

945

950 RECREATION &
CONSERVATION

955

960 SOIL
CONSERVATION

965

970 WATER
CONVERVATION

975

980 WILDLIFE
CONSERVATION

985

990

995

000 ADMINISTRATIVE

100 FFA

200 GENERAL AGRICULTURE

300 ANIMAL SCIENCE & PROD.

400 PLANT SCIENCE & SOILS

500 FIELD CROPS

600 HORTICULTURE

700 AGRICULTURAL ECONOMICS

800 AGRICULTURAL ENGINEERING

900 CONSERVATION OF NATURAL RESOURCES

925 FOREST HARVESTING

925/50
925/10
925/60
925/20
925/70
925/30
925/80
925/40
925/90

930 FOR. INSECTS, DISEASES

(SEE ALSO 425)

930/50
930/10
930/60
930/20
930/70
930/30
930/80
930/40
930/90

935 FOREST MANAGEMENT

935/50
935/10
935/60
935/20
935/70
935/30
935/80
935/40
935/90

940 FOR. PRODS. MARKETING

940/50
940/10
940/60
940/20
940/70
940/30
940/80
940/40
940/90

945

945/50
945/10
945/60
945/20
945/70
945/30
945/80
945/40
945/90

975

975/50
975/10
975/60
975/20
975/70
975/30
975/80
975/40
975/90

980 WILDLIFE CONSERVATION

(SEE ALSO 370/40 & 900)

980/50
980/10
980/60
980/20
980/70
980/30
980/80
980/40
980/90

985

985/50
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995/40
995/90

VT 001 902

Evaluative Criteria for Vocational Agriculture Programs.

West Virginia State Dept. of Education, Charleston. Bureau of Vocational, Technical, and Adult Education
MF AVAILABLE IN VT-ERIC SET.
Pub Date - Apr65 12p.

*VOCATIONAL AGRICULTURE; *PROGRAM EVALUATION; *EVALUATION CRITERIA; *EDUCATIONAL OBJECTIVES; SELF EVALUATION; *RATING SCALES

Based upon vocational agriculture program objectives, this formal evaluative instrument is designed for use in self appraisal by teachers or for identification of strengths and weakness by administrators, advisory committees, and state staffs. The instrument includes separate pages for eight major program segments: (1) Organization, (2) Nature of Offerings, (3) Physical Facilities, (3) Instructional Staff, (5) Instructional Activities, (6) Instructional Materials, (7) Method of Evaluation, and (8) Outcomes. Space is provided for the recording of special characteristics and a summary of evaluation. Specific procedures for use of the instrument are described. (JM)

VT001 902

ED0 31587

EVALUATIVE CRITERIA

FOR

VOCATIONAL AGRICULTURE PROGRAMS

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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STATE DEPARTMENT OF EDUCATION
BUREAU OF VOCATIONAL, TECHNICAL AND ADULT EDUCATION
CHARLESTON, WEST VIRGINIA

APRIL 1965

VT01902

Using Evaluation to Improve Programs of Vocational Agriculture

Evaluation of vocational agriculture programs takes place continuously. Students, parents, school administrators, fellow teachers, young and adult farmer class members and many others in the community are continuously appraising various aspects of local programs. As long as the public schools belong to the public, we should welcome this informal evaluation. Too often informal evaluation is made with insufficient understanding of the program objectives.

This publication is a formal evaluative instrument based on program objectives. It can effectively be used for "self appraisal" of a program by the teacher or be used by administrators, advisory committees, state staff, or a combination of these, to determine program strengths and weaknesses for the purpose of program improvement. This evaluation should be used to help others understand your program and to help in planning the best possible program of vocational agriculture for your school and community.

Procedure to follow in using Evaluative Criteria

This instrument includes a separate page for the eight major segments of a vocational agriculture program. Each of the segments should be considered individually as follows:

1. Read carefully the "Guiding Principle" which states the general purpose and some desirable characteristics of this phase of the program.

2. Give a rating in the "Evaluation" for each of the items listed: (Place an X in the appropriate column)

   5. Excellent - the provisions or conditions are extensive and are functioning excellently.
   4. Very Good -
      a. the provisions or conditions are extensive and are functioning well, or
      b. the provisions or conditions are moderately extensive but are functioning excellently.
   3. Good - the provisions or conditions are moderately extensive and are functioning well.
   2. Fair -
      a. the provisions or conditions are moderately extensive but are functioning poorly, or
      b. the provisions or conditions are limited in extent but are functioning well.
   1. Poor - the provisions or conditions are limited in extent and functioning well.
   0. Does not apply.

3. List the information in the section "Supplementary Data".

4. Study the rating in the "Evaluation" and the information recorded as "Supplementary Data" and assign a rating by placing a dot (.) in the appropriate column of the eight segments in the "Summary of Evaluation" on page 11.

I ORGANIZATION

Guiding Principle: The local program of vocational agriculture should meet the educational needs in agriculture of the local community and should be based upon and evaluated in terms of clearly stated objectives. Continuing community study and involvement of those affected by the program under the leadership of the teacher, are essential and should result in a written long-term department program.

Evaluation

5	4	3	2	1	0	
						a. Instruction in vocational agriculture is available to the youth in the community who are interested in or concerned with agriculture and to adults now employed or desirous of entering an agricultural occupation.
						b. Opportunities are provided for prospective vocational agriculture students to receive a clear understanding of purposes and nature of the program before enrollment.
						c. The department offers an instructional program for young and adult farmers in the community.
						d. An advisory group assists the teacher in planning and developing the program.
						e. Classroom instruction and supervised experience programs are closely integrated and based on students' abilities, needs and opportunities.
						f. The teacher is allotted sufficient time to provide group and individual instruction for high school students, young farmers and adults, including their occupational experience programs.
						g. Future Farmers of America activities are available to extend learning in both the classroom and supervised experience phases of the high school program.
						h. Supervised experience programs are sufficient to provide the student with needed experiences leading toward employment in an agricultural occupation.

Supplementary Data

	Current	Two Years Ago	Five Years Ago
a. Enrollment: High School:	_____	_____	_____
Young Farmer:	_____	_____	_____
Adult Courses:	_____	_____	_____
b. Per cent high school Vo-Ag enrollment in FFA	_____	_____	_____
c. Amount of school time available for supervision	_____	_____	_____
d. Number non Vo-Ag classes taught	_____	_____	_____
e. Average number supervisory visits to students	_____	_____	_____
f. Average labor income per student	_____	_____	_____
g. Per cent of students having an occupational objective in agriculture	_____	_____	_____

(After this section has been completed, assign a rating of this section on page 11)

II NATURE OF OFFERINGS

Guiding Principle: The instructional program is such that a variety and quality of offerings and experiences are provided which are sufficient to prepare students for entrance into agricultural occupations in accordance with their occupational objective.

Evaluation

5	4	3	2	1	0	
						a. Curriculum is based upon an analysis of student needs and of the agricultural opportunities in the community.
						b. Experiences in both farm and non-farm agriculture are provided in accordance with students' objective.
						c. Program provides a solid base of skills, knowledge and competencies which contribute to success in agriculture.
						d. Curriculum provides a knowledge and understanding of animal science.
						e. Curriculum provides a knowledge and understanding of plant science.
						f. Curriculum provides a knowledge and understanding of soil science.
						g. Curriculum provides a knowledge and understanding of agricultural business management.
						h. Provides skills, knowledge, experiences and competencies in farm shop, farm electrification, farm structures, farm power and machinery, and soil and water management.
						i. Program provides those experiences necessary to develop effective leadership.
						j. Each student enrolled in a pre-employment course has an occupational experience program which is educational, challenging and profitable.

Supplementary Data

a. Per cent of instruction directly related to supervised experience programs _____
b. Total number field trips taken annually _____
c. Per cent members serving on FFA committees _____
d. Number FFA meetings held annually _____
e. Approximate percentage of time devoted to agricultural mechanics as compared to agricultural science _____

(After this section has been completed, assign a rating of this section on page 11)

III PHYSICAL FACILITIES

Guiding Principle: Adequate physical facilities for teaching vocational agriculture should be available and the teacher should efficiently and effectively utilize these facilities to provide for the needs of the students.

Evaluation

5	4	3	2	1	0	
						a. Instructional space is sufficient for the variety of classroom, library, laboratory and agricultural mechanics activities required by the program.
						b. The agricultural mechanics shop adjoins or is near the classroom.
						c. Office area and office equipment are provided for consultation and administration.
						d. Audio-visual equipment is available including room darkening devices.
						e. Duplicating equipment, computation machines and telephone are accessible.
						f. Classroom is adequately equipped to carry out a desirable instructional program.
						g. Shop is adequately equipped to carry out an instructional program in the five areas of agricultural mechanics.
						h. Adequate washing facilities are available.
						i. Adequate storage facilities are available for the classroom and shop.
						j. Safety equipment such as first-aid supplies, fire extinguishers and a fire blanket are available.
						k. There is adequate lighting in relation to work requirements.
						l. There is adequate ventilation with special provision for forging and welding areas.

Supplementary Data

a. Major improvements in classroom facilities during the preceding year:

_____

_____

b. Major improvements in agricultural mechanics facilities during the preceding year: _____

_____

c. Date of inventory of department facilities _____

d. Average annual departmental expenditures: expendable supplies _____

_____ tools and equipment _____

e. A written list of needed improvements in physical facilities is kept current: Date last submitted to administrator: _____

(After this section has been completed, assign a rating of this section on page 11)

IV INSTRUCTIONAL STAFF

Guiding Principle: Teachers of vocational agriculture should have an agricultural background and occupational experiences in their special field, hold a valid teaching certificate and have partaken of current in-service education to maintain and enhance competency.

Evaluation

5	4	3	2	1	0	
						The vocational agriculture teacher should have:
						a. had practical agricultural experience in his area of specialty.
						b. adequate preparation in biological, physical and earth sciences.
						c. adequate preparation in animal, plant and soil sciences.
						d. preparation and experiences in rural social sciences - agricultural economics, farm management and rural sociology.
						e. developed and demonstrated skills, knowledge and competencies sufficient to teach agricultural mechanics.
						f. extensive preparation in general and professional education.
						g. had experience in conducting Future Farmers of America activities and working with agricultural groups.
						h. active participation in in-service education through formal study and other professional activity.
						i. active interest in professional advancement, including participation in educational organizations.
						j. made a contribution to the profession by preparing articles for professional publications.

Supplementary Data

a. Educational attainment of Vo-Ag teacher: B.S. _____, number hours beyond B.S. _____, M.S. _____, Number hours beyond M.S. _____.

b. Credit courses taken last three years _____

_____ _____ _____

c. In-service, non credit workshops attended within last three years

_____ _____ _____

d. Professional organizations to which belong _____

_____ _____ _____

e. Articles published in professional publications: _____

_____

(After this section has been completed, assign a rating of this section on page 11)

V INSTRUCTIONAL ACTIVITIES

Guiding Principle: The instructional activities should bring about thinking and understanding, be based on sound objectives and planned on a long time basis to assure development of knowledge, skills and competencies necessary for agricultural occupations.

Evaluation

5	4	3	2	1	0	
						a. Instruction for the high school, young farmer and adult groups is directed toward clearly formulated objectives that are appropriate for the particular group.
						b. Evidence is available of careful planning and scheduling for both class instruction and applied activities.
						c. Instruction is provided during each month of the year.
						d. Students are provided an opportunity to participate in planning their activities within the framework of established activities.
						e. Instruction is related to agricultural experiences of students.
						f. Opportunities are provided for a variety of experimental and testing activities.
						g. Field trips, demonstrations and other instructional methods are used appropriately.
						h. Instruction is correlated with other subject matter areas in the students' educational program.
						i. Students are enhancing and making substantial change in their occupational experiences as a result of the instructional program.

Supplementary Data

a. Average number different teaching methods used each day _____

b. Hours of time each week spent in planning for teaching _____

c. Date of preparation of course of instruction _____

d. Are all classes following a written, posted course of instruction?

Yes _____ No _____

(After this section has been completed, assign a rating of this section on page 11)

VI INSTRUCTIONAL MATERIALS

Guiding Principle: Instructional materials should be available in sufficient quality and variety and used effectively and efficiently to assure a quality instructional program.

Evaluation

5	4	3	2	1	0	
						a. Current reference books are available in a wide range of agricultural areas.
						b. Current reference bulletins are available in sufficient quantity and variety.
						c. Periodicals and commercial literature are available to students.
						d. Teaching units, resource units and study guides are available and used by the teacher.
						e. Farm planning, budgeting, record keeping and analysis materials are available for instructional use.
						f. Adequate chalk and bulletin boards are available.
						g. A variety of suitable specimens and exhibit material is available.
						h. Instructional materials are organized efficiently and used effectively.
						i. There is a plan for replacing and supplementing instructional materials periodically.
						j. Audio and visual aids to instruction are available and effectively used.

Supplementary Data

a. Number of reference books less than ten years old _____

b. Additions to reference library past year: books _____ bulletins _____

c. Audio-visual equipment available and used in instructional program (check)

Motion picture projector	_____	Chart making equipment	_____
Slide & film strip projector	_____	Flannel boards	_____
Opaque projector	_____	Tape recorder	_____
Overhead projector	_____	Record player	_____
		Camera	_____

(After this section has been completed, assign a rating of this section on page 11)

VII METHOD OF EVALUATION

Guiding Principle: Evaluation should be a continuous process including all aspects of the program such as student progress and accomplishments, instructional program, facilities, students' supervised occupational programs, young farmer and adult programs and outcomes in terms of program objectives.

Evaluation

5	4	3	2	1	0	
						a. Evaluation is an integral part of instruction.
						b. Evaluation places emphasis upon the growth of the individual toward appropriate objectives.
						c. Agricultural mechanics activities are evaluated in terms of the nature of the job and standards of workmanship.
						d. Results of evaluation are used in determining the appropriateness of objectives and in planning further instruction.
						e. Class members participate in the evaluation of their own achievement.
						f. Records of supervised occupational experience programs are sufficient for evaluation.
						g. Follow-up data are used in planning and revising the curriculum.
						h. Examinations are used for both diagnosis and evaluation.
						i. An advisory group assists in evaluating total program.

Supplementary Data

a. Average number tests given each class during a year period _____

b. Follow-up records are organized and kept current Yes_____ No _____

c. List media used in evaluating effectiveness of total program:

_____ _____

_____ _____

(After this section has been completed, assign a rating of this section on page 11)

VIII OUTCOMES

Guiding Principle: Program outcomes should be identifiable in terms of fulfillment of program objectives.

Evaluation

5	4	3	2	1	0	
						a. A high percentage of graduates enter the occupation for which they were trained.
						b. Pre-employment students have a vocational objective in agriculture.
						c. Students are participating in supervised experience programs appropriate to their objective.
						d. Student farming programs are profitable, educational and challenging.
						e. Students have participated in experiences and activities that prepare for leadership.
						f. Students are adequately prepared for successful entrance in an agricultural occupation.
						g. The instructional program provides adequate information for career selection.
						h. Public has been well informed relative to the objectives, activities and accomplishments of vocational agriculture and the FFA.

Supplementary Data

a. Per cent of graduates entering an agricultural occupation:

Full-time farming _____ Non-farm agricultural occupation _____
Part-time farming _____ Agriculture college _____

b. Per cent attendance in young farmer and adult classes _____

c. Number radio programs presented past 12 months _____

d. Number TV programs presented past 12 months _____

e. Number newspaper articles published past 12 months _____

f. Number public programs presented which would acquaint public with vocational agriculture in past 12 months _____

(After this section has been completed, assign a rating of this section on page 11)

IX SPECIAL CHARACTERISTICS

A. List the most satisfactory and commendable phases of the program

B. List the phases of the program which are the least satisfactory and in greatest need of improvement

SUMMARY OF EVALUATION

Considering all the evidence listed in each of the eight major sections, evaluate the department in terms of fulfillment of the objectives inherent in the guiding principle listed at the beginning of each section. After recording rating on the scale, draw a heavy line connecting each point.

	Excellent	Very Good	Good	Fair	Poor
I Organization					
II Nature of Offerings					
III Physical Facilities					
IV Instructional Staff					
V Instructional Activities					
VI Instructional Materials					
VII Method of Evaluation					
VIII Outcomes					

VT 001 906
Industrial Arts in Education.

American Vocational Association, Washington, D.C.
MF AVAILABLE IN VT-ERIC SET.
Pub Date - 64 19p.

*INDUSTRIAL ARTS; *EDUCATIONAL OBJECTIVES; *PROGRAM DESCRIPTIONS; *EDUCATIONAL POLICY
*INDUSTRIAL ARTS POLICY AND PLANNING COMMITTEE

The unique contributions of industrial arts are to: (1) provide experiences in a variety of industrial activities for guidance and informational purposes, (2) discover and develop interests and capabilities of students in technical and industrial fields, (3) develop technical problem solving skills related to industrial materials and elements of fabrication, (4) develop skill in the safe use of handtools and machines common to industry, and (5) understand, make and use working drawings, the language of industry, as applied to industria arts activities. Industrial arts is found at all instructional levels from the kindergarten through college and adult education. The basic subject areas are: (1) ceramics, (2) drafting, (3) electricity and electronics, (4) graphic arts, (5) metal working, (6) plastics, (7) power mechanics, (8) textiles, and (9) woodworking. The editorial committee has attempted to report what is believed to represent the common denominator for industrial arts in American education. A list of The Industrial Arts Policy and Planning Committee of the American Vocational Association is given. (EM)

VT001 906

ED0 31587

Industrial Arts In Education

VT001906

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION
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VT001906

AMERICAN VOCATIONAL ASSOCIATION, INC.
1010 Vermont Avenue, N.W., Washington, D. C. 20005

A Statement by the Industrial Arts Policy and Planning Committee of the American Vocational Association, Inc.

VT01906

The Editorial Committee
of the
Industrial Arts Division
of the
American Vocational Association

Roy V. Orendorf, Chairman
The State Education Department of New York

Harold W. Crawford
South Carolina State College

Andrew F. Ford
Detroit Public Schools

Gordon Funk
Los Angeles City School Districts

Robert Hutchcroft
The University of Michigan

Clarence Johnson
Phoenix, Arizona Public Schools

Alexander J. Krenicki
Passaic, New Jersey Public Schools

Rutherford E. Lockette
Trenton State College

Raymond V. Nord
Minneapolis Public Schools

William T. Sargent
Ball State Teachers College

William P. Spence
Kansas State College of Pittsburg

Jacob Stern
University of Illinois

Definition and Purpose

Industrial Arts is the study of our technology, including industrial tools, materials, processes, products, occupations and related problems. It involves activities conducted in shops, laboratories, drafting rooms and elementary school classrooms.

The unique contributions of Industrial Arts are:

1. To provide experiences in a variety of industrial activities for guidance and informational purposes.
2. To discover and develop interests and capabilities of students in technical and industrial fields.
3. To develop technical problem-solving skills related to industrial materials and elements of fabrication.
4. To develop skill in the safe use of hand tools and machines common to industry.
5. To understand, make and use working drawings, the language of industry, as applied to industrial arts activities.

Industrial Arts helps children and adults understand the importance, place and purpose of industry in our culture. Properly organized, it can meet the needs of several types of students: those with an interest in science, who are able to do research and develop principles; those inclined towards engineering, who are able to translate principles into something useful; those with technical aptitude, who are able to perform techniques with excellence and finish work to high standards; those who are interested simply in learning something about our man-made physical world; those who will earn a living at some simple repetitive industrial or service job, and those who are likely to drop out of school before graduation.

In addition, it offers students a practical foundation for several curriculum areas including:

1. High school vocational and technical education.
2. College engineering and technical fields.
3. College social sciences as related to industry.
4. College industrial and architectural graphics.
5. College science and general studies.

Description

Industrial Arts provides an orientation to the industrial aspects of our culture. It is an instructional program designed to prepare the learner to understand and participate in a democratic industrial society. It contributes to the attainment of individual as well as social needs.

Students enrolled in industrial arts programs are involved directly in meaningful learning experiences through class, individual and group projects. These activities synthesize various aspects of industrial life. Students learn about the occupations of industry, types of activities engaged in by the workers, the preparation required for employment and future opportunities available to the employees. They learn facts, principles and procedures about industrial tools, materials, processes, mechanics and design. Experiences with tools and materials representing a wide range of industries such as ceramics, metals, paper, plastics, textiles and woods are included in the curriculum. Other items include a study of electricity and electronics, motors, engines, structures, and so forth, of concern to people at home, in industry, on the farm and in leisure time activities.

The program embraces such major activities as ceramics, drafting, electricity and electronics, graphic arts, metalworking, plastics, power mechanics, textiles and woodworking. Planning is included in all of these kinds of work. These major activities are all regarded as parts of a total program and not as separate areas of work unrelated to each other.

Industrial Arts is organized to facilitate meaningful and stimulating, problem-solving activities in shops and laboratories. These include experiences related to the functions of management, labor, research, development, planning, production and the servicing of industrial products. It also provides an educational climate for applied scientific knowledge, creative expression and the integration of other areas of education with Industrial Arts.

Where Found

Industrial Arts is found at all instructional levels from the kindergarten through college and adult

education. In Industrial Arts for the elementary grades pupils perform work with tools and materials closely integrated with their classroom studies. In the junior high school, Industrial Arts is concerned with surveying industrial materials, processes, organizations and problems in each of the basic areas mentioned below. In the senior high school depth is emphasized; also the development of technical skill and understanding and the application of problem-solving techniques in one or more of the basic subject areas. Industrial Arts usually is offered at the college level to prepare Industrial Arts teachers. Adult programs, built around industrial avocations and home maintenance and repair, are of value to the continuing education of citizens.

Basic Subject Areas

The basic subject areas of Industrial Arts are: ceramics, drafting, electricity and electronics, graphic arts, metalworking, plastics, power mechanics, textiles and woodworking. Work in one or several of these areas may be offered at the various levels mentioned before under the heading "Where Found." A realistic sampling of industrial materials, processes, organization, occupations and problems will require the presentation of each subject area on as broad a basis as possible.

Ceramics

Modern industrial practice has broadened the term "ceramics," generally associated with the raw material, clay, to include products made from nonmetallic, inorganic materials, usually requiring high temperatures in their manufacture. The production of such materials is the basis of a major industry receiving increased emphasis in the space age. Ceramic products are important in modern industry and for everyday living.

The industrial applications of ceramics should be emphasized in working with tools and materials in industrial arts shops, rather than creative expression stressed in fine art courses.

Typical activities in ceramics include work involving the following products: abrasives, cements, cermets, enamels, glass, refractories, structural clay products and white wares and materials for electrical components.

Drafting

Drafting, which consists of a system of signs and symbols, serves as a language or means of communication in industry. Through instruction in the manipulation of these signs and symbols students acquire the understanding and skills necessary to apply this language to Industrial Arts.

Drafting has three important functions. The first is to provide students with knowledge and drawing experience which will contribute to their general education. A knowledge of this important communication subject is necessary for all individuals living in our complex, industrialized society. The second function is to provide exploratory experience which will enable students to survey the field of drafting for a vocational choice. These exploratory experiences often include activities centered around such units as sketching, pictorial drawing, working drawing, electrical schematic drawing, architectural drawing, topographical drawing, graphs and charts and sheet metal pattern development. In addition, general and technical information is given appropriate consideration and application. The third function of drafting is to provide students with the skill necessary to plan, sketch, design and prepare working drawings for the projects they construct in Industrial Arts shops and laboratories.

Electricity and Electronics

Electricity and electronics are becoming increasingly important to our economy in national defense, industry, communications, medicine, space travel and in the home. It is desirable that all persons have some understanding of this important industry. This area of work can be divided into two major divisions, the first electricity and the second, electronics.

The first consists of a study of basic electrical principles with experiences involving the use of power sources, circuitry, load devices and switch gear. Emphasis is placed on an understanding of the technical principles involved in equipment operation, component construction and beginning servicing and maintenance skills. Learning activities include the development and use of: experimen-

tal panels, meaningful and challenging take-home projects, assembly-disassembly techniques, with emphasis on beginning maintenance and service skills and creative problem-solving jobs.

The second is concerned with the characteristics, properties and practical application of electrons in vacuum or gas filled tubes and in semiconductors. School experiences in electronics often are applied in the areas of communications including radio receivers and transmitters and television. Further work includes experiences and technical understanding in the areas of detection devices such as radar and sonar and in industrial applications including industrial controls (computers, motor controls and servo-mechanisms) and electronic measurement.

Graphic Arts

Printing is a basic means of communication in industry, agriculture, business, the professions and among individuals. Since the printing industry and its products are essential to our economy, it is important that pupils learn something about it.

The graphic arts are concerned with the use of tools, materials and processes related to printing and publishing. Major units of instruction embrace letterpress printing, lithography and gravure. Students participate in activities including: bookbinding, silk screen printing, linoleum block cutting, rubber stamp making, printing design, intaglio printing, papermaking, photography, plate making, stencil cutting and duplication.

Metalworking

Metals, as materials of construction, are vital to the development of our highly industrialized society. They are essential in industry, business, communications, transportation and national defense. An ever increasing demand for all types of metals, including new exotic alloys for our space and atomic technologies, underscores the importance of metalworking in Industrial Arts.

A wide range of basic processes are included in metalworking such as sheet metal forming, machining, welding, casting, forging, heat treating, fabricating and spinning. Opportunities for problem-solving are provided by a study of design, exact measurement, metallurgy and production techniques.

Plastics

Plastics, an important product of the chemical laboratory, is the basis of a rapidly expanding industry. It is manufactured in many different forms and chemical compositions applicable to numerous uses in national defense, industry, medicine and in the home.

Plastics includes a study and classifications of the major kinds of plastics—with work experience in the processes of fabricating, molding, casting, thermoforming, reinforcing and expanding. Also the design, construction and application of plastic forming dies and molds.

The study of plastics has its base in chemistry and provides an excellent media for research.

Power Mechanics

Power mechanics is the study of the sources of power such as atomic, solar, electrical, steam and combustible fuels and the machines that utilize the energy from these sources. Scientific principles underlying the development, control and use of power are emphasized in this subject—also the practical application of hydraulics and pneumatics.

Work experience is gained through operating, repairing and servicing the machines that use this power. These include diesel, gasoline, steam, jet and experimental engines—also electrical generators and motors. In addition devices used to transmit this power into work, such as transmissions and differentials, are studied.

The study of power mechanics involving principles, analysis, diagnosis and the application of these factors provides excellent opportunities for the development of problem-solving abilities.

Textiles

Fibers and fabrics are the basis for one of our largest industries producing goods used daily by almost everyone. In recent years the development of numerous man-made fibers has extended the use of textiles in science, in industry and in the home. Everyone should have some understanding of this important basic material.

Work in textiles involves activity in a number of processes including the following: fiber identification, processing fiber, dying fibers and fabrics,

printing and stenciling fabrics, designing, fabricating cloth, weaving, braiding, cable construction, rope making, knitting, rug manufacture, upholstering, caring for textile products and constructing textile equipment.

Textiles provides an excellent media for technical problem solving, designing and drafting for loom operation and clothing construction—also an opportunity for practical consumer education.

Woodworking

Wood, a universal, abundant and relatively inexhaustible raw material serves man in several ways: structurally; in the form of numerous byproducts, important to industry; and, esthetically, by the appeal of color, texture and grain markings. Since it is a material which may be used in its natural state, frequently it is one of the first materials used by young people in construction work at home or in the school.

Recent developments in woodworking and related technology make it a rich content area for studying industry today. Many adult activities are identified with the designing, shaping and fabrication of projects with parts constructed from wood.

This area in our nation's schools includes such typical activities as hand woodworking, machine woodworking, furniture construction, pattern making, boat building, home construction and wood finishing. Closely allied activities, such as model making, scenery construction and upholstery often are included in the program.

Courses emphasize creative design, forming and fabricating processes and an understanding of wood and the related technology.

Safety

Safety is an important phase of industrial arts education that should be taught continually throughout all courses. Each teacher should analyze the safety factors and hazards inherent in his program of instruction and develop a set of organized rules and lessons for presentation to the students throughout the course. Safety instructions related to specific tools, machines, equipment or materials should be presented as an integral part of a demonstration or lesson.

Levels

Elementary—Grades 1-6

Industrial Arts in the elementary grades consists of construction activities which are a part of the common learnings of elementary school children. The program helps children to become more creative, to understand abstract ideas and to appreciate their culture. The activities should be correlated closely with the basic units for elementary education, so that the results will be an integrated program of education. Usually the children work in the classroom under the direction of the elementary teacher using simple hand tools and common materials. Some schools provide a special room for work on individual or group projects which cannot be completed in the classroom. Specially trained consultants or resource teachers are employed to work with both the teachers and the pupils.

Junior High—Grades 7-9

Industrial Arts in the junior high school offers youth a variety of organized shop and laboratory experiences which help them identify and understand their interests, abilities, limitations and opportunities in our industrial society. It also helps them to understand our technology and the roles of the individual citizen as consumers and producers of industrial products and services. It provides practical experiences in using many tools, materials, processes and products of manufacturing as well as those of the crafts. Through such experiences students identify avocational and vocational interests and abilities. Consequently, they are better prepared to select special areas of study at the senior high school level.

The junior high school portion of the program should include opportunities for planning, experimenting and working in the major activities of ceramics, drafting, electricity, graphic arts, metalworking, plastics, power mechanics, textiles and woodworking. Industrial Arts at this level is essential to the basic education and guidance of all boys and girls.

Senior High—Grades 10-12

In the senior high school, Industrial Arts makes an important contribution to the total school edu-

cation program. In a modern industrial society, every student needs to develop an understanding of the functions, technology and occupational opportunities of industry. The Industrial Arts program provides this opportunity to study about industry, materials and fabrication procedures; methods of communication through drawing and graphic arts; and, the industrial and consumer use of finished products, such as electrical devices and how power is developed. Much of this knowledge and experience is unique to Industrial Arts and should be included in the education of all youth.

At the senior high school level, two approaches are possible. The first, a horizontal approach, enables a student to explore further additional kinds of work in which he may be interested. The second, a vertical approach, offers a student an opportunity to concentrate and specialize in a specific kind of work, such as metalworking, electricity, power mechanics or drafting. Thus, for some students, who do not attend college, Industrial Arts offers work of pre-vocational value.

Guidance is a most important function of Industrial Arts, especially in highlighting occupations for which students have a special interest and ability. Through a study of occupations the high school student may develop an understanding of the educational requirements and the roles of the scientist, designer, engineer, craftsman, technician, production worker and manager. The Industrial Arts teacher's professional background of education and practical experience qualifies him especially to offer guidance and counseling to industry-oriented students.

Finally, the senior high school program contributes to the educational objectives by helping the student understand the place and purpose of industry in society today—also his potential as a citizen and worker in this society.

College Level

Industrial Arts usually is offered in colleges to prepare Industrial Arts teachers. Programs to prepare teachers of Industrial Arts include three types of work—the basic academic courses required of college students, technical and shop courses in the

various areas and work in professional education. Graduates receive a bachelor's degree. Graduate study beyond the first degree leading to the master's and doctor's degrees usually consists of more professional courses, with emphasis on research.

Facilities and offerings are provided in many collegiate programs so students may elect courses or activities in Industrial Arts. College students derive creative expression from: constructing scenery and properties for dramatic productions, television and college activities; working in ceramics, jewelry and woodworking; developing and operating radio broadcasting equipment; and, in the construction of archery equipment, furniture, boats and the like.

Industrial arts courses also are offered as service courses to other departments such as occupational and manual arts therapy.

Adult Level

Increased industrialization and more leisure time have resulted in an expanding role for Indusrtial Arts at the adult level. Adult Industrial Arts classes often contribute to the development of pleasurable and worthwhile hobbies and supplementary income activities. As consumer products become more numerous and complex the program frequently contributes to the wise use and maintenance of these products. Adult Industrial Arts usually is maintained as an evening school program in secondary schools and colleges.

Acknowledgment

This is the third revision of an earlier statement, under a similar title, that was authorized by the Industrial Arts Policy and Planning Committee of the American Vocational Association, in 1956. The original manuscript was prepared by a sub-committee of the IAPPC consisting of G. Wesley Ketcham —Chairman, Kenneth Brown, Chris Groneman, James Hammond, John Hurley, Lynne Monroe and Walter R. Williams.

The statement was revised again in 1958 and 1960, under the auspices of the IAPPC, to bring it up to date. This third revision, requested by IAPPC, was made to update the statement to reflect changes in our technological society which have occurred

since the last revision—also to include the latest thinking of our national leaders in Industrial Arts Education.

The Editorial Committee has attempted to report what is believed to represent the common denominator for Industrial Arts in American education. It is recognized that the variations—from community to community and from state to state—in terminology, basic areas, emphasis and physical plants are inevitable, but desirable, in the democratic process. The goal was to report what would represent the collective thinking, to the greatest possible degree, of the Industrial Arts Policy and Planning Committee of the AVA. Special thanks are acknowledged to Arthur F. Ahr, Chief, Bureau of Industrial Arts Education, The State Education Department, Albany, New York, and also a member of IAPPC, for his kindness in serving as Chairman of the Revision Committee meeting at Milwaukee—also for his help in reviewing the manuscript.

The Industrial Arts Policy and Planning Committee
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OHIO

This booklet was prepared in order to assist boys and girls under eighteen years of age in understanding the Ohio Minor Labor Laws. Also included are two sections which discuss the Federal Child Labor Laws and careers in apprenticeships. The main portion of the booklet details the types of work teenagers are permitted to do under Ohio law, the hours they may work, and the steps to follow to help employers comply with the laws governing the employment of minors. A section for Ohio laws includes age and schooling certificates, wage agreements, prohibited occupations, minors 16 and 17, minors under 16, all minors under 14, miscellaneous laws, and a minimum wage law reference chart for hours of employment for minors. (SL)

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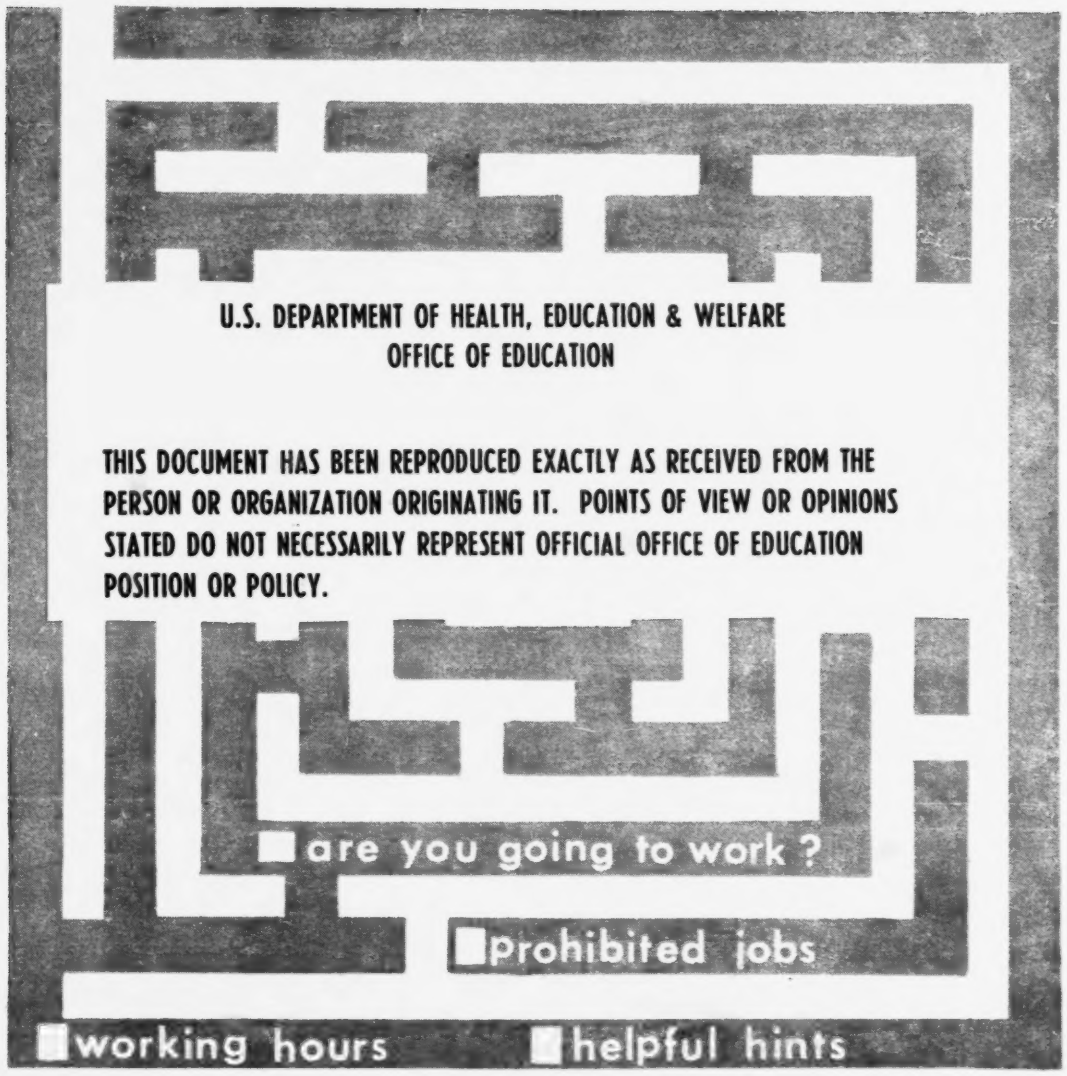
A TEENAGER'S GUIDE IN EMPLOYMENT



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DEPARTMENT OF INDUSTRIAL RELATIONS
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James A. Rhodes, *Governor*

DEPARTMENT OF INDUSTRIAL RELATIONS

William O. Walker, *Director*
Mrs. Helen W. Evans, *Assistant Director*

Division of Women and Minors and Minimum Wage

Ralph S. Forster, *Chief*
Mrs. Jeanne Funkhouser, *Assistant Chief*

50 S. Third Street
Columbus, Ohio 43215

April 1964

contents

INTRODUCTION 3

OHIO LAWS FOR MINORS UNDER 18 4
- Age and Schooling Certificates 4
- Wage Agreements 5
- Prohibited Occupations 5
- Minors 16 and 17 5
- Minors Under 16 8
- Other Restrictions for Minors Under 16 9
- General Hours 12
- Hours for Minors 16 and 17 12
- Hours for Minors 14 and 15 12
- All Minors Under 14 13
- Miscellaneous Laws 13
- Minimum Wage Law 14
- Posters Helpful 15
- Reference Chart – Hours of Employment for Minors ..... 10 and 11

FEDERAL CHILD LABOR LAWS 16
- 16–Year–Minimum for General Employment 16
- 18–Year–Minimum for Hazardous Occupations 16
- 14 is Minimum Age for Specified Occupations Outside School Hours 17
- Federal Minimum Wage and Overtime 18

CAREERS IN APPRENTICESHIP 19
- Qualified Applicants Chosen 19
- Specific Apprenticeship Information 20

introduction

This booklet has been prepared to help boys and girls under 18 years of age understand Ohio Minor Labor Laws. Two sections deal briefly with Federal Child Labor Laws and Careers in Apprenticeship.

The main portion of the book details the types of work you are permitted to do under Ohio law, the hours you may work, and the steps you should follow to help the employer comply with laws governing the employment of minors. These laws are written for the employer for the protection of the minor, but the employer needs your co-operation so that he will not be in violation.

Most of you teenagers realize the importance of advanced education today. You do not need to be told that specialized preparation is almost a must if you are to compete successfully in the job market. You know that persons who have not completed high school make up a far larger proportion of unemployment roles than do those who have graduated.

We would like to urge you to seek part-time or vacation jobs if you must work. Don't neglect your studies for any job, but learn all you can from the world of work. Character can be strengthened and a sense of responsibility increased by earning money regularly.

Whether you plan to work part-time – possibly to help insure a college education, are forced by circumstances to seek a full-time job, or wish to make a career of an apprenticeable trade, we hope this manual will prove to be a helpful guide. We trust it will give you a simplified look at Ohio and Federal Minor Labor Laws.

There are no conflicts between State and federal laws regulating the employment of minors. The federal law may have application to certain occupations that are not covered by Ohio law, or have a higher standard than the State law. In all cases, the law of the higher standard governs if you come under the federal law.

OHIO LAWS FOR MINORS UNDER 18

AGE AND SCHOOLING CERTIFICATES

All minors between the ages of 14 and 18 must have age and schooling certificates whether they are going to work during the summer vacation or have quit school for a full-time job. You must also have one even though you may be married and working and not attending classes.

After you have the promise of a job, the first thing to do is apply for an age and schooling certificate from your local Superintendent of Schools. You will receive pledge cards from his office. These are to be filled in by the employer and your parents, and must be returned to the Superintendent's office. They should be returned immediately because the Superintendent cannot issue the age and schooling certificate until these cards are on file in his office. The certificate is then issued to the employer and kept on file in the establishment where you are employed.

WAGE AGREEMENTS

The employer must give you a Wage Agreement when you start to work. This agreement states the amount to be paid, either hourly or weekly, and should be retained by you. If there is any question regarding the wages you receive, you will have it as proof of any claim you may have.

These wage agreements must be given to all minors under the age of 21.

PROHIBITED OCCUPATIONS

You are prohibited by law from engaging in certain occupations. These prohibited or hazardous occupations are divided into two age groups – for those under 16, and for minors 16 and 17. The occupations listed as forbidden for minors 16 and 17 are also prohibited for minors under that age. The occupations listed as forbidden for minors under 16 are not prohibited for minors 16 and 17.

MINORS 16 AND 17

No minor 16 or 17 shall be employed or permitted to work:

In, about, or in connection with blast furnaces, docks, or wharves;

In the outside erection and repair of electric wires;

In the running or management of elevators, lifts, or hoisting machines or dynamos;

In oiling or cleaning machinery in motion;

In the operation of emery wheels or any abrasive, polishing, or buffing wheel where articles of the baser metals or iridium are manufactured;

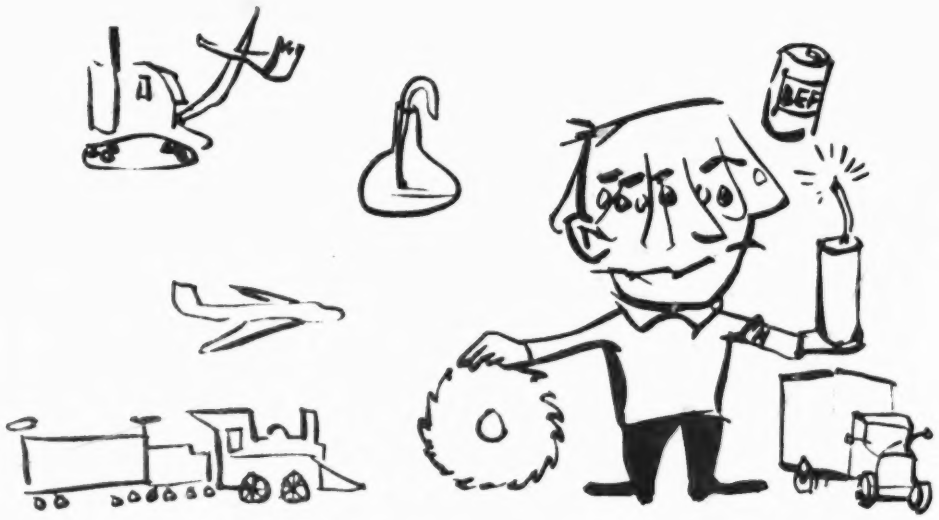
At switch tending;

At gate tending;

At track repairing;

As brakeman, fireman, engineer, motorman, or conductor upon railroads;

As railroad telegraph operator;



As pilot, fireman, or engineer upon boats and vessels;

In or about establishments wherein nitroglygerine, dynamite, dualin, guncotton, gunpowder, or other high or dangerous explosives are manufactured, compounded, or stored;

In the manufacture of white or yellow phosphorus or phosphorus matches;

In any distillery, brewery, or any other establishment where malt or alcoholic liquors are manufactured, packed, wrapped, or bottled;

In any hotel, theater, concert hall, place of amusement, or any other establishment where intoxicating liquors are sold, except that a person between the ages of 16 and 18 years enrolled in an accredited course in domestic science in a bona fide school may be permitted to supplement such course of study by practical training in a co-operative training program between any hotel or restaurant and such school. Such trainee, upon completion of said course of study, may continue as a full-time trainee in such hotel or restaurant so long as such trainee is under the supervision of the coordinator of vocational training for the public school district in which said trainee resides. Any contract involving the service of such trainee shall be approved by such coordinator.

In the operation of power-driven woodworking machines or of power-driven machines used for rolling, pressing, milling, punching, bending, hammering, or shearing metal, unless such employment is incidental to apprentice training, under the direction and supervision of an instructor as a necessary part of such apprentice training, and is carried on in accordance with a written apprenticeship agreement that has been approved by the Ohio State Apprenticeship Council or the Department of Education or unless such employment is incidental to a bona fide program of vocational co-operative training which meets the standards of the State Board of Education and which operates under the supervision of the public schools;

In the operation of power-driven guillotine paper-cutting machines;

In the operation or cleaning of any power-driven dough mixers or dough brakes, bread dividing, rounding or moulding machine, dough sheeter, bread slicing and wrapping machine, cake cutting band saw, or in setting up or adjusting a cookie or cracker machine;

In the operation or cleaning of power-driven meat grinders, saws, slicers, carvers, or circular, rotary, or disc cutting machines;

In the operation of washing machines, extractors, and flatwork ironers or mangles in laundries;

In the operation of motor vehicles and work as a helper thereon, except the following:

1 Farm tractors

2 Motor vehicles operated in connection with employment which is incidental to a bona fide program of vocational co-operative training which meets the standards of the State Board of Education and which operates under the supervision of the public schools;

In, about, or in connection with any mine or quarry, or in any coal breaker;

In the operation of steam boilers carrying over 15 pounds pressure;

In occupations involving exposure to radioactive substances;

In occupations involving exposure to toxic or noxious dust, gases, vapors, or fumes in injurious quantities;

In the manufacture or use of dangerous or poisonous dyes or chemicals, or lead and its compounds;

In logging or sawmill operations;

No child under 16 shall be employed or permitted to work in any theater or other place of amusement, except on the stage thereof when not otherwise prohibited by law or in or about any race track or race course, including the stables thereof. This section does not prohibit the employment of minors under 18 in retail drug stores or retail grocery stores.

No girl under 18 shall be employed or permitted to work at house to house selling, soliciting, or peddling of periodicals, merchandise, magazines, or photographical service, except newspapers or except under the auspices of bona fide local educational, fraternal, religious, charitable, or patriotic organizations.

MINORS UNDER 16

No minor under 16 shall be employed or permitted to work at any of the following occupations:

Adjusting any belt to any machinery;

Sewing or lacing machine belts in any workshop or factory;

Oiling, wiping, or cleaning machinery, or assisting therein;

Operating or assisting in operating any of the following machines:

- Circular or band saws;
- Wood shapers;
- Wood jointers;
- Planers;
- Sandpaper or woodpolishing machinery;
- Woodturning or boring machinery;
- Picker machines or machines used in picking wool, cotton, hair, or any other material;
- Carding machines;
- Paper-lace machines;
- Leather burnishing machines;
- Job or cylinder printing presses operated by power other than foot power;
- Boring or drill presses;
- Stamping machines used in sheet metal and tinware, or in paper and leather manufacturing, or in washer and nut factories;
- Metal or paper cutting machines;

Corner staying machines in paper box factories;
Corrugating rolls, such as are used in corrugated paper, roofing, or washboard factories;
Steam boilers;
Dough brakes or cracker machinery of any description;
Wire or iron straightening or drawing machinery;
Rolling mill machinery;
Power punches or shears;
Washing, grinding, or mixing machinery;
Calendar rolls in paper and rubber manufacturing;
Laundering machines;
Burring machinery;

In proximity to any hazardous or unguarded belts, machinery, or gearing;

Upon any railroad, whether steam, electric, or hydraulic;

Upon any vessel or boat engaged in navigation or commerce within the jurisdiction of this State.

OTHER RESTRICTIONS FOR MINORS UNDER 16

In addition to the prohibited occupations for minors under 16, there are certain types of establishments and certain types of work within industry where you are not permitted to be employed.

No minor under 16 shall be employed in any capacity:

In, about, or in connection with any processes in which dangerous or poisonous acids are used;

In the manufacture or packing of paints, colors, white or red lead;

In soldering;

In occupations causing dust in injurious quantities;

In the manufacture or use of dangerous or poisonous dyes;

In the manufacture or preparation of compositions with dangerous or poisonous gases;

In the manufacture or use of a composition of lye in which the quantity thereof is injurious to health;

In scaffolding;

In heavy work in the building trades;

In any tunnel or excavation;

In, about, or in connection with any mine, coal breaker, coke oven, or quarry;

HOURS OF EMPLOYMENT FOR MINORS

	Minors covered		Maximum hours		
Industry	Age	Item	Per day	Per week	Prohibited night hours
FACTORIES	14 and 15	Work and school combined	9	–	6 p.m. to 7 a.m.
	14 and 15	During vacations	8	48	6 p.m. to 7 a.m.
	16 and 17	Boys	8	48	10 p.m. to 6 a.m.
	16 and 17	Girls	8	48	9 p.m. to 7 a.m.
	18 and over	Girls	9	48	– –
RETAIL STORES	14 and 15	Work and school combined	9	–	6 p.m. to 7 a.m.
	14 and 15	During vacations	8	48	6 p.m. to 7 a.m.
	16 and 17	Boys	8	48	10 p.m. to 6 a.m.
	16 and 17	Girls	8	48	9 p.m. to 7 a.m.
	18 and over	Girls	8	48	– –
LAUNDRIES AND DRY CLEANING	14 and 15	Work and school combined	9	–	6 p.m. to 7 a.m.
	14 and 15	During vacations	8	48	6 p.m. to 7 a.m.
	16 and 17	Boys	8	48	10 p.m. to 6 a.m.
	16 and 17	Girls	8	48	9 p.m. to 7 a.m.
	18 and over	Girls	8	48	– –
RESTAURANTS, HOTELS, AND DRIVE-INS	14 and 15	Work and school combined	9	–	6 p.m. to 7 a.m.
	14 and 15	During vacations	8	48	6 p.m. to 7 a.m.
	16 and 17	Boys	8	48	10 p.m. to 6 a.m.
	16 and 17	Girls	8	48	9 p.m. to 7 a.m.
	18 and over	Girls	9	48	– –
MISCELLANEOUS	14 and 15	Work and school combined	9	–	6 p.m. to 7 a.m.
	14 and 15	During vacations	8	48	6 p.m. to 7 a.m.
	16 and 17	Boys	8	48	10 p.m. to 6 a.m.
	16 and 17	Girls	8	48	9 p.m. to 7 a.m.
	18 and over	Girls	9	48	– –
ALL INDUSTRIES Irregular Service	Under 14	Boys and girls at all times	4	24	6 p.m. to 7 a.m.

All minors must have at least one-half hour for lunch within 5 hours of starting time.

Boys and girls are not permitted to work over 6 days in any calendar week.

The execptions to these hours laws will be found in your age group section on other pages.

In assorting, manufacturing, or packing tobacco;
In operating any automobile, motor car, or truck;
In a pool or billiard room;
In any other occupation dangerous to the life and limb, or injurious to the health or morals of such child.

GENERAL HOURS

Any minor between the ages of 14 and 18 is permitted to work 6 days in a calendar week and 48 hours a week. (A few exceptions to this law will be explained in subsequent paragraphs.) You must be given at least a 30-minute break for lunch within 5 hours after you have started to work. The breakdown on the hours law for different age groups follows.

HOURS FOR MINORS 16 AND 17

Generally, girls 16 and 17 are not permitted to work before 7 a.m. nor after 9 p.m. In retail stores, girls are permitted to work until 9:30 p.m. two evenings a week.

Boys 16 and 17 cannot work before 6 a.m. and not after 10 p.m. The exception to this law is that you may work until 11 p.m. if you are employed in a bowling alley as a pinsetter.

The number of hours boys and girls are permitted to work each day is also regulated by law. You may not work over 8 hours in any day except in retail stores. In these stores you are permitted to work 10 hours on one day each week, and you are also permitted to work a 10–hour day before the following holidays: New Year's Day, Memorial Day, Fourth of July, Thanksgiving Day, and Christmas.

HOURS FOR MINORS 14 AND 15

Your school time and working time combined must not exceed 9 hours a day. You may not work before 7 a.m. nor after 6 p.m.

When school is not in session, boys and girls may work 8 hours a day and 48 hours a week within the hours stated.

Boys may work until 10 p.m. on nights when school is not in session the next day or during summer vacations, if you have the approval of your school Superintendent.

ALL MINORS UNDER 14

If you are under 14, you may work outside of school hours at casual odd jobs. Under the law, this type of work is called "Irregular Service," and for it you do not need an age and schooling certificate.

You are permitted to work 4 hours a day, 6 days a week, but your working time cannot exceed 24 hours a week.

You can work between the hours of 7 a.m. and 6 p.m. Your work must not be confining nor involve continuous physical strain. Rest or recreation periods must interrupt the 4-hour span.

All prohibited occupations listed in previous pages apply to this age group.

MISCELLANEOUS LAWS

If you are an entertainer – for example, playing in an orchestra, dancing, or singing – the hours for your particular age group must be observed.

If you are under 14 years of age, you are not permitted to participate in any entertainment for pay. You may, if you are donating your time and talent, participate in church, school, or academy activities or in concerts or entertainments given for charitable purposes.

Under the Minor Labor Laws, the following laws refer to minors until they reach the age of 21:

1. Females under 21 are not permitted to work at any employment which compels them to remain standing constantly while on duty.
2. No female under 21 shall be employed in the personal delivery of messages.

MINIMUM WAGE LAW

The Division of Women and Minors enforces the Minimum Wage Law, which does not apply to all industries. We have Minimum Wage Regulations covering the food and/or lodging industry in Ohio as well

as dry cleaning and laundry establishments in the State.

Your employer should have a copy of the Minimum Wage Order pertaining to his particular type of business posted in the establishment so that you may acquaint yourself with the wages to be paid for your type of work.

POSTERS HELPFUL

In each establishment where a minor is employed, the employer should have, in a conspicuous place, a poster covering all these laws. You can study the poster, which will explain in further detail the laws covering your particular age group and occupation.

FEDERAL CHILD LABOR LAWS

The Fair Labor Standards Act (Federal Wage Hour Law) establishes minimum wage, overtime pay, and child labor standards for employment subject to its provisions.

The child labor standards apply to employment in interstate commerce or in the production of goods for interstate commerce, and in any enterprise engaged in commerce or in the production of goods for commerce.

Inquiries concerning the Act and its application should be directed to the nearest office of the Wage and Hour and Public Contracts Divisions, U.S. Department of Labor:

901 Atlas Bank Building
Cincinnati, Ohio 45202

213 Engineers Building
Cleveland, Ohio 44114

700 Bryden Road
Columbus, Ohio 43215

16–YEAR–MINIMUM FOR GENERAL EMPLOYMENT

At 16 years of age, children may be employed in any occupation other than an occupation declared hazardous by the Secretary of Labor. There are no other restrictions.

18–YEAR–MINIMUM FOR HAZARDOUS OCCUPATIONS

Occupations that require a minimum age of 18 include:
Manufacture or storage of explosives;

Driving or helping on a motor vehicle;
Coal mining;
Logging and sawmilling;
Operation of power-driven woodworking machines;
Exposure to radioactive substances and to ionizing radiations;
Operation of elevators and other power-driven hoisting apparatus;
Operation of power-driven metal forming, punching, and shearing machines;
Mining, other than coal, such as sand and gravel quarries and clay pits;
Slaughtering and meat packing establishments and rendering plants;
Operation of certain power-driven machines;
Operation of certain power-driven paper products machines;
Manufacture of brick, tile, and kindred products;
Operation of power-driven circular saws, band saws, and guillotine shears;
Wrecking, demolition, and shipbreaking operations;
Roofing operations;
Excavation operations.

14 IS MINIMUM AGE FOR SPECIFIED OCCUPATIONS OUTSIDE SCHOOL HOURS

Employment of 14-and 15-year-old youths is restricted to certain occupations outside school hours only, with a limitation on hours of work.

No 14- and 15-year-old minor may be employed: During school hours; between 7 p.m. and 7 a.m. local time; more than 3 hours a day on school days; more than 18 hours weekly in school weeks; more than 8 hours a day on non-school days; and more than 40 hours a week in non-school weeks.

Minors 14 and 15 years old cannot work: In manufacturing occupations; in processing occupations (except certain retail, food service, and limited work in gasoline service establishments); in performance of any duties in workrooms or workplaces where goods are manufactured; in public messenger service; in the operation or tending of any power-driven machinery other than office machines; and in most occupations (except office or sales work) in connection with transportation, warehousing and storage, communications and public utilities, and construction.

Children under 14 years of age may not be employed in any occupation unless specifically exempt.

FEDERAL MINIMUM WAGE AND OVERTIME

If your work is covered by the federal law, you may be entitled to the minimum wage and overtime benefits of the Federal Wage Hour Law.

CAREERS IN APPRENTICESHIP

If you have mechanical ability and do not plan to attend a college or university, you may be looking ahead toward a career in a skilled craft. If so, your best opportunity, whether you are just preparing for a working life or have had some previous work experience and want to improve your prospect for the future, is by way of apprenticeship.

This is a system of learning by doing and earning while learning. It combines on-the-job training with related technical instructions by experienced individuals. Only through all-around training as provided by apprenticeship will you be able to master the skills of a particular trade. Once this mastery has been acquired, you will possess something that no one can ever take from you and something you can always market within industry.

QUALIFIED APPLICANTS CHOSEN

The demand for skilled workers persists continually – but on a limited basis. This is important to remember because the selection of potential apprentice candidates becomes highly competitive. Through testing and interviewing and with much consideration given to educational background, the best qualified applicants are chosen for entrance into apprenticeship training programs.

Today, in most of the skilled trades, the apprentice must be a high school graduate who has completed courses in mathematics and certain sciences and is able to pass the General Aptitude Test Batteries which are given by the State Employment Service.

If you are looking forward to a successful career through apprenticeship, your chance for success will be made greater by preparing yourself properly early in high school to meet the entrance qualifications of a particular skilled craft.

SPECIFIC APPRENTICESHIP INFORMATION

You may obtain specific information on the subject of apprenticeship from your local High School Guidance Counselor, the Director of Vocational Education, the Principal of your High School, or the Trade and Industry Representative serving your locality. The Ohio State Employment Service, employer associations, and trade unions are always glad to help young men make the right choice.

The Ohio State Apprenticeship Council of the State Department of Industrial Relations works with the Bureau of Apprenticeship and Training of the U.S. Department of Labor in the establishment of apprenticeship programs that will develop the types of skilled workers required to meet the demands of modern industry.

A Publication of The Ohio Department of Industrial Relations

VT 002 139

A Study of Practical Nurses Who Have Been Licensed in Iowa But Are Not Presently Employed in Iowa as Practical Nurses, Iowa Practical Nursing Sub-Study.

Iowa Univ., Iowa City. Div. of Medical Services
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Pub Date - 31Dec66 63p.

*PRACTICAL NURSES; *UNEMPLOYED; *OCCUPATIONAL SURVEYS; STATE SURVEYS; MANPOWER UTILIZATION; QUESTIONNAIRES; *INDIVIDUAL CHARACTERISTICS; EMPLOYMENT EXPERIENCE; CERTIFICATION; SOCIAL CHARACTERISTICS; EDUCATIONAL EXPERIENCE; *HEALTH OCCUPATIONS EDUCATION
IOWA

Recognizing the disparity between the number of practical nurses licensed and the number employed as practical nurses, the study attempts to discover the factors which influence this under-utilization in order to improve the situation. A questionnaire eliciting information about background, reasons for leaving the work force, and factors important in determining re-entry into the work force was mailed to 125 practical nurses licensed by education in the following three categories: (1) residing in Iowa and holding current licenses but unemployed or employed in non-health occupations, (2) holding current licenses but residing outside the state, and (3) residing in Iowa but having inactive licenses. The major conclusion was that there is little that outside forces can do to facilitate the return of this group to employment as practical nurses in Iowa but that most do plan to return as family responsibilities permit. Some recommendations were that: (1) nurses for all fields be prepared in larger numbers, (2) nurses be prepared in approved professional, technical, and practical nursing programs, (3) applicants be assisted to select the type of program for which their abilities best suit them, (4) quality nursing education programs be expanded. (JK)

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Iowa Practical Nursing Sub-Study

ELIZABETH E. KERR
DALE F. PETERSEN

THE UNIVERSITY OF IOWA
FOUNDED 1847

VT 02139

A STUDY OF PRACTICAL NURSES WHO HAVE BEEN LICENSED IN IOWA BUT ARE NOT PRESENTLY EMPLOYED IN IOWA AS PRACTICAL NURSES

Elizabeth E. Kerr

Dale F. Petersen

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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Program in Health Occupations Education
Division of Medical Services
The University of Iowa

in cooperation with

Research Coordinating Unit
Division of Vocational Education
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Elizabeth E. Kerr

Elizabeth E. Kerr, Director

Dale F. Petersen

Dale F. Petersen, Research Coordinator

Program in Health Occupations Education
Division of Medical Services
The University of Iowa

TABLE OF CONTENTS

Page

ACKNOWLEDGMENTS..... i

PREFACE.....iii

Definition of Terms Used.....iii

LIST OF TABLES.....vii

CHAPTER:

I. INTRODUCTION..... 1
Background of the Study..... 3
The Problem..... 15

II. THE STUDY..... 16
Purpose of the Study..... 16
Identification of Subjects..... 16
Procedure and Method of the Study..... 16

III. REPORT OF THE FINDINGS..... 18

IV. SUMMARY AND CONCLUSIONS..... 39

V. RECOMMENDATIONS..... 42

APPENDIX..... 43

A. PNS Prospectus..... 44

B. Cover Letter..... 48

C. Questionnaire..... 49

D. Follow-up Letter..... 53

PREFACE

Definition of Terms Used

For purpose of clarification from the outset, several special terms are defined preceeding the report of this study.

Nursing:--Nursing is defined

> "as one of the resources in a community for the care of the sick, the prevention of illness, and the promotion of health which is carried on under medical authority. Its distinctive function is the close and individualized service to the patient which may vary with his state of health from one of dependence, in which the nurse performs for him what he cannot do for himself, through supportive and rehabilitative care, physical and emotional, to self-direction of his own health. Nursing is primarily patient-centered. It gives service directly through treatment, general physical care, and health instruction to the patient and his family and through the coordination of nursing with other community services essential to the patient's health needs."[8]

Registered Nurse:

> Graduate of an educational program in nursing who has been licensed to practice professional nursing.

Professional nurse:

> Mildred L. Montag defines the professional nurse "as the nurse prepared to carry out a range of functions which are highly complex and dependent upon expertness and skill acquired through long periods of training. Her functions include:
>
> 1. the identification or diagnosis of the nursing problem and the recognition of its many related aspects.
> 2. the decision upon a course of action to be followed for the solution of the problem.
> 3. with assistance of the other members of the nursing and health team, both interprofessional and intraprofessional, the development of a satisfactory plan of nursing care, including therapeutic treatments for which the physician has delegated responsibility to the nurse.
> 4. the continued direction of the program of nursing toward its optimum accomplishment, and the performance of those aspects which demand the skill and judgement which she is best prepared to use.

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8. Joint Curriculum Conference, Report of the Proceedings of the Conference, November 13, 14, 15, 1960 National League for Nursing, New York, 1951), p. 21.

5. the evaluation of the process and the results of nursing for the continuous improvement of care of the patient and the practice of nursing."[9]

Licensed practical nurse:

"A person licensed as a practical nurse practitioner prepared for two roles:

1. Under the supervision of a registered professional nurse or physician, to give nursing care to patients in situations relatively free of scientific complexity.

2. In a close working relationship, to assist registered professional nurses in giving nursing care to patients in more complex situations."[10]

Practical nursing program:

"This program, usually one year in length, is self-contained, complete and satisfactory for its own purpose, preparing exclusively for practical nursing. Its objective is to prepare a worker who will share in giving direct care to patients. The practical nursing program is intended for individuals who will find satisfaction

1. in nursing functions consistent with short-term preparation, and
2. in practicing nursing within a limited range of situations for which patients require care.

A program leading to a certificate or diploma in practical nursing may be organized and operated under public education, hospitals, or other community agencies. Most are administered through the public school system. The next largest number are controlled by hospitals. A few are under universities, colleges, and community agencies."[11]

Licensed in good standing:

Once ever issued a license to practice the licensee holds this status unless his license is legally revoked for just cause.

Current licensure:

Licensed in good standing with license initially issued or renewed for the current year. The law provides for annual renewal and current licensure is required when engaged in nursing practice.

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9. Mildred L. Montag, The Education of Nursing Technicians (New York: G. P. Putnum's Sons, 1961), pp. 4-5.

10. Nursing Education Programs Today (National League for Nursing, New York, 1962), pp. 9-10

11. Ibid., p. 9.

Inactive licensure:

Licensed in good standing but licensee voluntarily does not renew license for current year. Licensee may not practice nursing while holding an inactive license.

Licensed by endorsement:

Licensed by the Iowa Board of Nursing to practice nursing in Iowa by virtue of holding a valid license in another state.

Board of Nursing out-of-state certification:

Act of the Iowa Board of Nursing sending credentials of an Iowa licensee to a Board of Nursing in another state for application for licensure in that other state.

State Board of Nursing (or Board of Nurse Examiners):

The regulatory board of each state which is responsible for the educational standards of professional and practical nursing programs. It approves schools of nursing in the state and renews licenses for professional and practical nurses. In Iowa, this official board is known as the Iowa Board of Nursing.

State Division of Vocational Education:

The division of a state department of education which cooperates with public education institutions as they administer practical nursing programs partially funded by state and federal funds appropriated for this purpose.

State-approved practical nursing programs:

Programs approved by the State Board of Nursing. Programs operated in cooperation with the State Division of Vocational Education must also be approved by this Division. Only graduates of programs approved by the State Board of Nursing are eligible for examination to become licensed as practical nurses. (In California and Texas graduates are licensed as vocational nurses.)

State board examination:

A written examination administered by the State Board of Nursing. Upon passing this examination graduates become eligible for licensure as practical nurses and may use the title "Licensed Practical Nurse." (The title "Licensed Vocational Nurse" is used in California and Texas.)

An Integrated Longitudinal Study of Practical Nursing (PNS):

A 39-month research project being conducted currently by the University of Illinois in cooperation with The University of Iowa and funded by the U.S. Office of Education. This project is commonly referred to as the "Practical Nursing Study". Reference to this research project is by the abbreviation PNS.

Iowa Practical Nursing Sub-Study (IPNSS):

is the common term used for the study reported on the following pages of this publication. It is a complete research study in itself but is supplemental to the PNS. In this report, this study is referred to by the abbreviation, IPNSS.

Sub-group classifications:

PNS and IPNSS subjects grouped by licensure status, place of residence, and preparatory basis for licensure.

1. CIED group: Currently licensed, In-state resident, licensed on the basis of EDucation.
2. COED group: Currently licensed, Out-of-state resident, licensed on the basis of EDucation.
3. IIED group: Inactive licensure, In-state resident, licensed on the basis of EDucation.
4. IOED group: Inactive licensure, Out-of-state resident, licensed on basis of EDucation.
5. CIX group: Currently licensed, In-state resident, licensed on the basis of eXperience.
6. COX group: Currently licensed, Out-of-state resident, licensed on the basis of eXperience.
7. IIX group: Inactive licensure, In-state resident, licensed on the basis of eXperience.
8. IOX group: Inactive licensure, Out-of-state resident, licensed on basis of eXperience.

LIST OF TABLES

Table		Page
1.	Number of Practical Nurse Licenses Issued in Iowa By Year (Estimated to nearest 10 with total corrected in 1965 figure)	5
2.	Geographic Distribution of Practical Nurses Licensed in Iowa (As of July, 1965)	6
3.	Sixteen Iowa Programs in Practical Nursing By Location, Type of Administration and Years in Operation (1965)	7
4.	Status of all Practical Nurses Ever Licensed By the State of Iowa as of December 31, 1965	10
5.	Age of Practical Nurses at Initial Licensure By Status (PNS 10% Sample)	11
6.	Age in 1965 By Licensure Status	12
7.	Educational Preparation for Practical Nursing	13
8.	Educational Preparation and Present Employment Status of the CIED Group	14
9.	Questionnaires Sent and Returned	18
10.	Size of Town in Which Born	19
11.	Father's Occupation	19
12.	Mother's Occupation	20
13.	Father's Educational Attainment	21
14.	Mother's Educational Attainment	21
15.	Number of Siblings	22
16.	Age in 1965 By Licensure Status	22
17.	Number of Jobs Held Before Licensure as a Practical Nurse	23
18.	Employment Before Licensure as a Practical Nurse	23
19.	Age When Decided to Become a Practical Nurse	24
20.	How Acquainted with Practical Nurse Program Attended	24
21.	Educational Achievement Prior to Admission to Practical Nursing Program	25

Table | Page

22. Worked While in Preparatory Program..... 26

23. Source of Support While in Preparatory Program..... 26

24. Educational Basis for Iowa Licensure..... 26

25. Age at Licensure..... 27

26. Year of Initial Licensure..... 27

27. Year First Employed as LPN..... 28

28. Present Marital Status..... 29

29. Number of Years Married..... 29

30. Number of Children..... 30

31. Ages of Children..... 30

32. Number of Addresses Since Initial Licensure (as of 1965)..... 31

33. Number of Jobs as L.P.N..... 31

34. Distance of Present Residence From Place of Birth..... 32

35. Distance Present Residence From Nursing Program Attended..... 32

36. Reason for Leaving Iowa..... 33

37. Present Employment Status..... 34

38. Employment Locations of Subjects Presently Employed..... 35

39. Primary and Secondary Reasons for Unemployment as a Practical Nurse 35

40. Family Responsibilities of all Presently Employed Part-Time as Practical Nurses..... 36

41. Primary and Secondary Reasons for Potential Return to Employment as a Practical Nurse..... 37

42. Presently Unemployed LPN's Plans for Future Employment..... 37

30

CHAPTER I

INTRODUCTION

Nursing is challenged to increase its complement of skilled practitioners in response to the ever-growing demands of modern society. Among factors influencing these demands are (1) increased population, (2) expanding medical knowledge, (3) greater public awareness of preventive and therapeutic health measures, (4) increasing number and use of available medical insurance plans, and (5) recent federal legislation which subsidizes health care for specific sub-groups of the population.

Demands for nursing service exceed the capacity of existing programs in nursing education to supply graduates in sufficient numbers to meet the needs. By 1970, it has been estimated, 270,000 additional nurses will be needed over and above the normally expected increase in nursing resources. This prediction was made even prior to the enactment of the Medicare provisions in the Social Security Amendments of 1965 (Public Law 89-97, Title XVIII). This legislation provides for hospital insurance for people age 65 and over, covering hospitalization and related services such as post-hospital extended care and home health services.

In an attempt to meet these ever-increasing needs for nursing service, qualified nursing personnel must be prepared in even greater numbers. This includes licensed practical nurses who are integral members of the nursing team.

Throughout the country there are relatively uniform practical nurse licensure provisions and educational programs to prepare practical nurses. All fifty states and the territories now provide for licensure of this

practitioner. Legislation and procedures for the approval of educational programs have been established. Presently there are approximately 1000 approved programs of practical nurse education from which new licensees have graduated.

The statutes of the State of Iowa have provided for licensure of practical nurses by the Iowa Board of Nursing since July 1, 1949 and require annual renewal for the practitioner of practical nursing to be currently licensed in good standing. During the first two years following initiation of licensure requirements the majority of persons were granted licensure under a "waiver" provided by a grandfather clause in the law which permitted licensure on the basis of experience and recommendation. During this same period of time, one-year educational programs to prepare practical nurses were improved and expanded and this growth continues. Since July 1, 1951 it is possible to be licensed by the Iowa Board of Nursing in one of two ways; graduation from an approved program in practical nursing or, completion of a specified portion of an approved program in professional nursing. In the latter case, permission to sit for the licensure examination is determined by the Iowa Board of Nursing only after its evaluation deems the educational experiences of the applicant to be sufficiently adequate to portend safe nursing care.

In Iowa there are 22 programs of practical nurse education, all approved by the Iowa Board of Nursing. Nineteen of these receive partial support from funds administered by the Division of Vocational Education, Iowa Department of Public Instruction. The remaining three are administered by private, parochial hospitals.

Requirements for admission to Iowa programs in practical nursing from July 1, 1949 through June 30, 1964 included: (1) a minimum age of 18 to

assure candidates would meet the required age of 19 to apply for licensure after satisfactorily completing the one-year program. The maximum age for admission was usually 55. (2) evidence of having had an educational background of a minimum of 10 grades of schooling satisfactorily completed. There was no provision for educational equivalency.

On July 1, 1964 the Iowa Nurse Practice Act was changed by statute to require: (1) a minimum licensure age of 18 which permitted admission to programs at age 17. The maximum age remains at usually 55. (2) a high school diploma or its equivalency determined by achievement at the 12th grade level on the General Education Development (GED) Test.

Background of the Study

On June 1, 1965 the United States Office of Education, under provisions of the Vocational Education Act of 1963, Section 4(c), approved Project Number 5-0126, Contract Number 5-85-038, entitled An Integrated, Longitudinal Study of Practical Nursing (hereafter referred to as the PNS). The University of Illinois is the prime contractor and The University of Iowa, under sub-contract, is cooperating throughout the entire 39-month period of the PNS which will continue through August 31, 1968.

Dr. Robert M. Tomlinson, Department of Vocational-Technical Education, College of Education, University of Illinois, is the Principal Investigator. Elizabeth E. Kerr, Director, Program in Health Occupations Education, Division of Medical Services, The University of Iowa, is the Associate Investigator. Miss Kerr also serves as Head State Consultant, Health Occupations Education Section, Division of Vocational Education, Iowa Department of Public Instruction and is Director of this study (Iowa Practical Nurse Sub-Study, hereafter referred to as IPNSS).

The long-range goal of the PNS is the improvement of nursing services through the improvement of student selection procedures in programs of practical nursing, the educational programs themselves (including curriculum and instructional staff) and the utilization of graduates. This study will not attempt to implement changes but will provide new knowledge and relationships in a meaningful manner that may be applied by those directly responsible for preparing practical nurses and utilizing their services.

The PNS is being conducted in three phases with the inclusive dates and objectives of each as follows:

PHASE I. - September 1965 to September 1966:

Objective: to identify the knowledges, functions, and occupational patterns of a selected sample of practical nurses who are licensed on the basis of having attended an approved nursing education program.

PHASE II. - January 1966 to February 1968:

Objectives: (1) to determine the characteristics of all applicants to, students in, and graduates of selected programs of practical nursing and to identify their relationships, and (2) to determine the characteristics of a selected sample of programs of practical nursing to identify those criteria related to student success and the occupational patterns of graduates.

PHASE III. - January 1968 to July 1968:

Objective: to do a follow-up of applicants, dropouts, and graduates of the selected programs to determine relationships between the characteristics of the individuals, the programs into which they sought admission or did attend, and their current employment situations.

The PNS is structured to operate concurrently in Illinois and Iowa with a research team working in each State. Throughout the three phases, The University of Iowa is responsible for those aspects related to Iowa.

Phase I was based on the identification of all persons ever licensed to practice practical nursing in Illinois and Iowa. In Iowa, information was obtained from the Iowa Board of Nursing to identify the number of licenses issued each year from the initial license in 1949 through December 31, 1965. See Table 1.

TABLE 1
NUMBER OF PRACTICAL NURSE LICENSES
ISSUED IN IOWA BY YEAR
(Estimated to nearest 10 with total corrected in 1965 figure)

YEAR	NUMBER	YEAR	NUMBER
1949	160	1958	160
1950	670	1959	190
1951	670	1960	220
1952	50	1961	280
1953	30	1962	280
1954	70	1963	330
1955	80	1964	430
1956	180	1965	436
1957	110		

Of the 4,346 practical nurses ever issued a license in Iowa, 80% (3,480) held a current license in Iowa in 1965. Of these 3,480, 3,020 also gave current addresses in Iowa.

With the exception of Dubuque, the geographic distribution of all practical nurses licensed in Iowa through July, 1965 is proportional to the existence of a practical nurse education program in a community and the length of time that program has been in existence. Size of community does not appear to be an important factor. See Tables 2 and 3.

TABLE 2
GEOGRAPHIC DISTRIBUTION OF PRACTICAL NURSES
LICENSED IN IOWA
(As of July, 1965)

LOCATION	NUMBER	%	10% SAMPLE IN PNS	1960 CENSUS (IN 1,000's)	% OF TOTAL IOWA POP. 1960 CENSUS
IOWA:					
DES MOINES	284	9.4	26	209	7.6
WATERLOO	159	5.3	12	72	2.6
CEDAR RAPIDS	93	3.1	9	92	3.3
IOWA CITY	90	3.0	7	33	1.2
SIOUX CITY	82	2.7	8	89	3.2
OTTUMWA	78	2.6	6	34	1.2
DUBUQUE	77	2.5	9	57	2.2
DAVENPORT	77	2.5	6	89	3.2
MARSHALLTOWN	72	2.4	8	23	.8
CLARINDA	53	1.8	5	6	.2
OTHERS IN IOWA	1,600	53.1	167	2,055	74.5
ILLINOIS	104	3.5	11	-	-
OUT-OF-STATE(not including Illinois)	244	8.1	23	-	-
	3,013	100.0	297	2,759	100.0

TABLE 3
SIXTEEN IOWA PROGRAMS IN PRACTICAL NURSING
BY LOCATION, TYPE OF ADMINISTRATION AND YEARS IN OPERATION (1965)

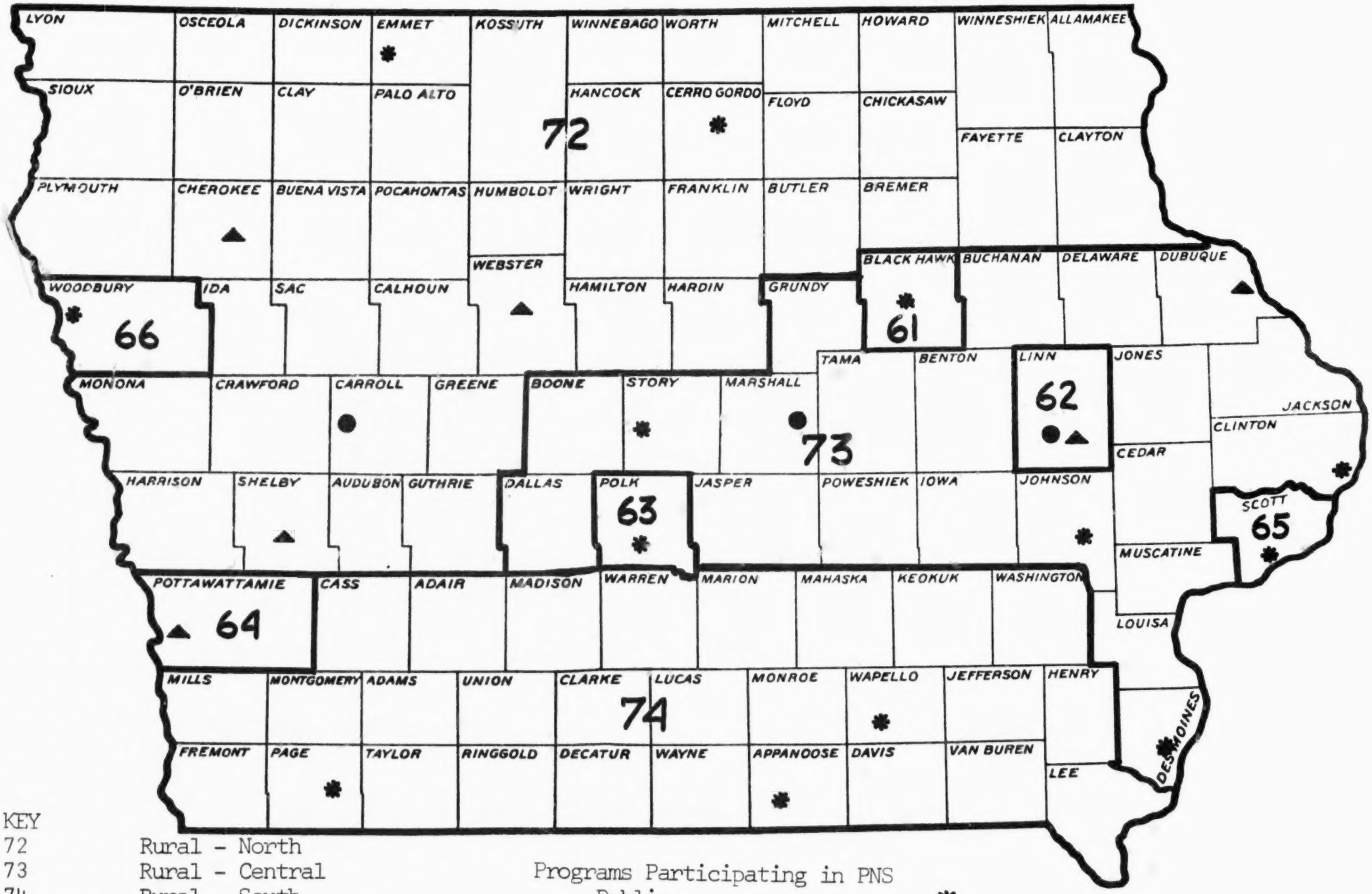
LOCATION	TYPE OF ADMINISTRATION		YEARS OF OPERATION THROUGH SEPT. 1, 1966
Marshalltown		Private Parochial	17
Iowa City	Public		14
Cedar Rapids		Private Parochial	13
Clarinda	Public		11
Waterloo	Public		9
Des Moines	Public		8
Carroll		Private Parochial	8
Davenport	Public		6
Clinton	Public		4
Mason City	Public		4
Ottumwa	Public		4
Ames	Public		3
Centerville	Public		3
Sioux City	Public		3
Burlington	Public		1
Estherville	Public		1
TOTALS 16	13	3	109

For Phase II of the PNS, all practical nurse education programs in Iowa, public and private, were contacted as possible participants. To qualify for participation, it was necessary that a program had graduated at least one class prior to September 1, 1965. All sixteen programs in operation in Iowa qualified, wished to participate and were accepted. Twenty nine of the 32 qualified programs in Illinois were included, making a total of 45 participating programs.

Phase III of the PNS is to start in 1967 and there will be no further reference to it in this report.

Since mobility of the subjects was to be studied in all three phases of the PNS, each of the two States was divided into geographic regions. A map indicating the geographic regions and the locations of the sixteen participating programs in Iowa is shown on the following page.

GEOGRAPHIC REGIONS AND LOCATIONS OF
SIXTEEN IOWA PRACTICAL NURSING PROGRAMS IN PNS



KEY

72	Rural - North
73	Rural - Central
74	Rural - South
61, 62, 64, 65, 66	Metropolitan - Not Including Des Moines
63	Des Moines

Programs Participating in PNS
- Public ✱
- Private - Parochial ●

Programs Established Since PNS ▲

To further carry out the objectives of Phase I it was necessary to reduce the total population of practical nurses ever licensed in Illinois and Iowa. Permission was obtained from the Iowa Board of Nursing to obtain more detailed information concerning a 10% sample of the 4,346 persons licensed in Iowa through 1965. Since licensure numbers had been issued in chronological sequence, a 10% random sample was readily obtained by selecting those practical nurses whose license number ended with number six.

Data collection on the 10% sample was completed at the close of the 1965 licensure renewal period. In July 1965 data were obtained concerning 398 subjects and in January 1966 comparable data were obtained concerning an additional 37 subjects granted initial licensure between the time of the July data collection and December 31, 1965. Therefore, the 10% sample consisted of 435 subjects. Because data for two subjects failed to be included for analysis, the N in the PNS is 433.

Each of these 433 subjects was placed in one of eight groups designated by a letter code according to licensure status, place of residence, and preparatory basis for licensure. See Table 4.

TABLE 4
STATUS OF ALL PRACTICAL NURSES EVER LICENSED BY
THE STATE OF IOWA AS OF DEC. 31, 1965

STATUS	LETTER CODE	NUMBER	PERCENT
CURRENT LICENSE			
In-State Residence, Licensed by Education	(CIED)	220	50.8
Out-of-State Residence, Licensed by Education	(COED)	34	7.9
In-State Residence, Licensed by Experience	(CIX)	82	18.9
Out-of-State Residence, Licensed by Experience	(COX)	12	2.8
SUB-TOTAL		348	80.4
INACTIVE LICENSE			
In-State Residence, Licensed by Education	(IIED)	26	6.0
Out-of-State Residence, Licensed by Education	(IOED)	17	3.9
In-State Residence, Licensed by Experience	(IIX)	34	7.9
Out-of-State Residence, Licensed by Experience	(IOX)	8	1.8
SUB-TOTAL		85	19.6
TOTAL		433	100.0

(NOTE: Official records report six known deceased and there are likely additional such cases not identified. All have been included in the appropriate group on the preceding page.)

For the remainder of this report, reference to these groups will be made by letter code as shown in Table 4 on the preceding page.

Table 5 shows the ages of the PNS sample at initial licensure.

TABLE 5
AGE OF PRACTICAL NURSES AT INITIAL LICENSURE BY STATUS
(PNS 10% SAMPLE)

LICENSED BY EDUCATION

AGE	CIED		COED		IIED		IOED		TOTAL	
	N	%	N	%	N	%	N	%	N	%
19 or under	38	17	5	15	4	15	1	6	48	16
20 - 24	83	38	11	32	17	65	9	53	120	41
25 - 29	10	5	3	9	2	8	3	17	18	6
30 - 34	18	8	2	6	2	8	-	-	22	7
35 - 39	13	6	1	3	-	-	-	-	14	5
40 - 44	24	11	8	23	-	-	-	-	32	11
45 - 49	15	7	2	6	1	4	2	12	20	7
50 - 54	14	6	2	6	-	-	-	-	16	5
55 - 59	5	2	-	-	-	-	2	12	7	2
60 and over	-	-	-	-	-	-	-	-	-	-
Total %		100		100		100		100		100
Sub-totals & %	220	74	34	11	26	9	17	6	297	100

LICENSED BY EXPERIENCE

AGE	CIX		COX		IIX		IOX		TOTAL	
	N	%	N	%	N	%	N	%	N	%
19 or under	-	-	-	-	1	3	-	-	1	1
20 - 24	3	4	1	8	2	6	1	12	7	5
25 - 29	4	5	1	8	1	3	-	-	6	4
30 - 34	8	10	3	26	-	-	1	13	12	9
35 - 39	5	6	1	8	3	8	-	-	9	7
40 - 44	10	12	1	8	-	-	2	25	13	10
45 - 49	13	16	3	26	1	3	-	-	17	12
50 - 54	17	21	1	8	6	18	4	50	28	21
55 - 59	16	19	1	8	5	15	-	-	22	16
60 and over	6	7	-	-	15	44	-	-	21	15
Total %		100		100		100		100		100
Sub-totals & %	82	60	12	9	34	25	8	6	136	100
GRAND TOTALS	302	70	46	10	60	14	25	6	433	100

Table 6 shows the age of the PNS sample as of 1965.

TABLE 6
AGE IN 1965 BY LICENSURE STATUS

LICENSED BY EDUCATION

AGE	CIED	%	COED	%	IIED	%	IOED	%	TOTAL EDUC.	%
19 or under	11	5	-	-	-	-	-	-	11	4
20 - 24	71	33	10	29	4	15	3	18	88	30
25 - 29	37	17	4	12	9	35	4	23	54	18
30 - 34	14	6	5	14	7	27	4	23	30	10
35 - 39	19	9	-	-	4	15	2	12	25	8
40 - 44	16	7	4	12	-	-	-	-	20	7
45 - 49	18	8	3	9	1	4	-	-	22	7
50 - 54	18	8	4	12	-	-	-	-	22	7
55 - 59	11	5	4	12	1	4	3	18	19	7
60 and over	5	2	-	-	-	-	1	6	6	2
Total %		100.0		100.0		100.0		100.0		100.0
Sub-totals & %	220	74.1	34	11.4	26	8.8	17	5.7	297	100.0

LICENSED BY EXPERIENCE

AGE	CIX	%	COX	%	IIX	%	IOX	%	TOTAL EDUC.	%
19 or under	-	-	-	-	-	-	-	-	-	-
20 - 24	-	-	-	-	-	-	-	-	-	-
25 - 29	-	-	-	-	-	-	-	-	-	-
30 - 34	1	1	-	-	1	3	1	12.5	3	2
35 - 39	3	3	1	8	2	6	-	-	6	4
40 - 44	4	5	-	-	2	6	-	-	6	4
45 - 49	8	10	4	34	-	-	1	12.5	13	10
50 - 54	4	5	1	8	4	12	-	-	9	7
55 - 59	13	16	1	8	-	-	2	25.0	16	12
60 and over	49	60	5	42	25	73	4	50.0	83	61
Total %		100.0		100.0		100.0		100.0		100.0
Sub-totals & %	82	60	12	9	34	25	8	6	136	100.0
GRAND TOTALS	302	70	46	10	60	14	25	6	433	100.0

The age trends in the above table reflect the two-year "waiver" period when licensure was permitted on the basis of experience through June 30, 1951. Sixty-one percent of the group licensed by experience are now 60 years of age or over. Only 15 of this group of 136 are under age 45.

Table 7 shows the educational preparation of those in the PNS who qualified for licensure on the basis of having attended an approved nursing education program.

TABLE 7
EDUCATIONAL PREPARATION FOR PRACTICAL NURSING

EDUCATIONAL PREPARATION	CIED		COED		IIED		IOED		TOTAL	
	N	%	N	%	N	%	N	%	N	%
Completed Iowa Prac. Nsg. Prog.	154	70	19	56	11	42	8	47	192	65
Completed Out-of-State Prac. Nsg. Prog.	25	11	1	3	6	23	4	24	36	12
Attended Professional Nsg. Prog.	41	19	14	41	9	35	5	29	69	23
TOTALS	220	100	34	100	26	100	17	100	297	100

To obtain more detailed information on the CIED group than was available from the records of the Iowa Board of Nursing, direct contact was made with 100% of its 220 subjects.

Of the 220 which includes six men, 154 (70%) received their practical nurse education in Iowa practical nursing programs and 25 (11%) in out-of-state practical nursing programs. Forty-one (19%) were issued licenses on the basis of having attended a program of professional nursing.

Additional information concerning each included whether or not he was presently employed as a practical nurse. Seventy percent (155) were so employed in Iowa, 58% (127) full-time and 13% (28) part-time.

There seem to be two significant factors contributing to the present unemployment of 47 (21%) of the CIED group: (1) Of the 41 (19%) licensed on the basis of having attended a professional nursing program, 15 (37%) of that group were unemployed. (2) Of the 51 (23%) who completed practical nursing programs in Iowa metropolitan areas other than Des Moines, 14 (27%) were unemployed. See Table 8 on the following page.

TABLE 8
EDUCATIONAL PREPARATION AND PRESENT EMPLOYMENT STATUS OF THE CIED GROUP
(PNS)

Educational Basis for Licensure	Unemployed		LPN Full-Time		LPN Part-time		Employed Non-Health		Moved Out of State-Employed		Moved Out of State-Unemp.		TOTAL	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Attended Prog. in Prof. Nsg.	15	32	18	14	7	25	-	-	-	-	1	8	41	19
Out-of-State Prac. Nsg. Prog.	4	8	12	10	5	18	-	-	2	67	2	17	25	11
Iowa Rural - South (Centerville, Clarinda, Ottumwa)	-	-	14	11	3	11	1	34	-	-	-	-	18	8
Iowa Rural-Central (Ames, Marshalltown, Iowa City, Burlington, Clinton)	7	15	27	21	5	18	1	33	-	-	2	17	42	19
Iowa Rural-North (Estherville, Mason City, Carroll)	5	11	10	8	1	3	-	-	1	33	1	8	19	9
Iowa Metropolitan (Davenport, Sioux City, Cedar Rapids, Waterloo)	14	30	28	22	5	18	1	33	-	-	4	33	51	23
Iowa - Des Moines	2	4	18	14	2	7	-	-	-	-	2	17	24	11
	47	100	127	100	28	100	3	100	3	100	12	100	220	100

The Problem

All areas of Iowa report a shortage of available nurses. Until such time as approved nursing education programs in our State prepare an adequate supply of practitioners to alleviate this shortage, it is imperative that all qualified nursing personnel be utilized to the fullest extent possible.

The number of practical nurses currently licensed in Iowa does not reflect a true picture of practical nurse employment in the State. The group of practical nurses licensed in Iowa but presently not employed as practical nurses in our State indicates there is under-utilization of prepared nursing personnel.

What factors influence this under-utilization and how can this situation be improved?

CHAPTER II

THE STUDY

Purpose of the Study

In view of the problem it seemed advisable to further study the practical nurses in the PNS who have been licensed in Iowa on the basis of educational preparation but are not presently employed as practical nurses in this State to:

1. describe the social, educational and occupational characteristics of this group,
2. determine factors which tend to influence the employment status of this group, and
3. to provide information about future employment plans of this group.

Identification of Subjects

As shown in Table 8, sixty-five (29%) of the CIED group (220) are unemployed, employed in non-health occupations, or moved out of Iowa. Also, according to Table 4 it can be assumed that the COED group (34) and the IIED group (26) are not contributing to nursing care in Iowa. These 125 practical nurses represent a potential source of additional nursing personnel in Iowa and are the subjects in this study.

Procedure and Method of the Study

Data from the PNS provided the basis for the conduct of this study, The Iowa Practical Nursing Sub-Study (IPNSS).

1. Data concerning subjects in the PNS who were licensed on the basis of educational preparation were reviewed.

2. An instrument to collect pertinent data was developed.
3. A format for coding collected data was designed.
4. The instrument and coding procedure were pilot-tested with a sample of unemployed licensed practical nurses in Illinois and revised as necessary.
5. The questionnaire (Appendix C) was mailed to the 125 subjects. It was covered by a letter (Appendix B) explaining the purpose of this study, seeking their cooperation, and assuring them of anonymity in the report of the study. A stamped return envelope was enclosed. two weeks later a duplicate questionnaire and follow-up letter (Appendix D) were sent to those who had not yet responded.
6. Areas investigated include:
   a. Background characteristics including age, sex, rural or urban residence, education, size of family, ages of children, employment pattern, and present employment status.
   b. Reasons for leaving the work force (i.e., marriage, family responsibilities, pregnancy, influence of husband, job dissatisfaction, low pay, etc.)
   c. Factors important in determining possible re-entry into the work force (i.e., financial need, desire for contacts outside the home, change in family responsibilities, increased salaries, better working conditions, etc.)
7. The data collected were coded and key-punched for analysis.
8. Data were analyzed by frequency counts and percentages. Because the N was low, percentages were rounded out to a whole number and cross comparisons for interrelationships were limited.
9. A final report was written for printing and dissemination.

CHAPTER III

REPORT OF THE FINDINGS

Ten of the 125 subjects were never contacted (3 of the CIED group, 4 of the COED group, and 3 of the IIED group). Their questionnaires were returned by mail stamped, "moved and left no forwarding address". Further follow-up with the Iowa Board of Nursing and attempted person-to-person telephone calls failed to locate them.

Ninety (72%) of the 125 questionnaires mailed were completed and returned. One respondent of the IIED group was eliminated from the study when she reported she was licensed on the basis of experience and had never attended a nursing education program. Two subjects returned questionnaires with neither name nor license number identification. As a result, they could not be classified into any sub-group and are not included in the study. Therefore, this report is based on an N of 87, representing 70% of the original 125. See Table 9.

TABLE 9
QUESTIONNAIRES SENT AND RETURNED

Status-Group	N in PNS	IPNSS Questionnaires		
		Sent	Ret'd & Valid	% Ret'd & Valid
CIED	220	65	52	80
COED	34	34	21	62
IIED	26	26	14	54
TOTALS	280	125	87	70

Characteristics of the Group

The group is predominately of rural background. Thirty-eight percent were born of farm families and 14% born of families living in communities with less than 2,500 population. Sixty-seven percent were born in communities of less than 5,000 population. See Table 10.

TABLE 10
SIZE OF TOWN IN WHICH BORN

POPULATION	CIED N	CIED %	COED N	COED %	IIED N	IIED %	TOTAL N	TOTAL %
Rural	16	31	7	34	10	72	33	38
Less than 2,500	10	19	1	5	1	7	12	14
2,500 5,000	8	15	3	14	2	14	13	15
5,000 10,000	4	8	3	14	-	-	7	8
10,000 20,000	3	6	1	5	-	-	4	4
20,000 50,000	3	6	3	14	-	-	6	7
50,000 100,000	8	15	3	14	1	7	12	14
	52	100	21	100	14	100	87	100

Fifteen of the fathers were reported deceased or retired with no past occupation identified. Of those identified, about one-half (49%) were farmers, 38% were skilled or semi-skilled workers in non-health occupations and nine percent were unskilled workers in non-health occupations. Four percent were professionals, one a physician. See Table 11.

TABLE 11
FATHER'S OCCUPATION

	CIED N	CIED %	COED N	COED %	IIED N	IIED %	TOTAL N	TOTAL %
Farmer	17	33	8	53	10	77	35	49
Skilled(Non-Health)	10	19	4	27	-	-	14	19
Semi-skilled(Non-Health)	8	15	3	20	3	23	14	19
Unskilled(Non-Health)	6	12	-	-	-	-	6	9
Professional(Non-Health)	2	4	-	-	-	-	2	3
Professional(Health, M.D. Etc.)	1	2	-	-	-	-	1	1
	44	100	15	100	13	100	72	100

The majority of mothers (74%) are non-employed housewives. Twenty-six percent are employed outside the home. Among these, the majority are in semi-skilled non-health related occupations. Six percent are unskilled workers and six percent are professionals in non-health occupations. See Table 12.

TABLE 12
MOTHER'S OCCUPATION

	CIED		COED		IIED		TOTAL	
	N	%	N	%	N	%	N	%
Housewife-Non-Employed	39	75	14	67	11	79	64	74
Professional(Non-Health)	3	6	1	5	1	7	5	6
Skilled(Health Related)	-	-	1	5	-	-	1	1
Skilled(Non-Health)	2	4	-	-	-	-	2	2
Semi-Skilled(Health Related)	1	2	-	-	-	-	1	1
Semi-Skilled(Non-Health)	4	7	2	9	2	14	8	9
Unskilled(Health Related)	1	2	-	-	-	-	1	1
Unskilled(Non-Health)	2	4	3	14	-	-	5	6
	52	100	21	100	14	100	87	100

Among parent's whose educational attainment was reported, the greatest percentage (34%) achieved only eight years of schooling and the next largest percentage (26%) achieved only 12 years. More mothers than fathers completed high school. Thirteen percent of the fathers and 10% of the mothers completed between 13 and 18 years of schoolings. See Tables 13 and 14.

TABLE 13
FATHER'S EDUCATIONAL ATTAINMENT

YEARS	CIED N	CIED %	COED N	COED %	IIED N	IIED %	TOTAL N	TOTAL %
Less than 8	5	10	6	30	3	21	14	17
8	17	34	5	25	5	36	27	32
9	1	2	2	10	-	-	3	4
10	3	6	2	10	1	7	6	7
11	3	6	2	10	-	-	5	6
12	13	26	2	10	3	22	18	21
13	1	2	1	5	1	7	3	4
14	4	8	-	-	-	-	4	5
15	1	2	-	-	-	-	1	1
16	1	2	-	-	1	7	2	2
18	1	2	-	-	-	-	1	1
	50	100	20	100	14	100	84	100

Note: Two in the CIED group and one in the IIED group were unable to identify the educational attainment of fathers.

TABLE 14
MOTHER'S EDUCATIONAL ATTAINMENT

YEARS OF SCHOOLING	CIED N	CIED %	COED N	COED %	IIED N	IIED %	TOTAL N	TOTAL %
Less than 8	3	6	2	10	-	-	5	6
8	17	33	8	38	6	43	31	36
9	2	4	1	5	1	7	4	5
10	3	6	2	9	1	7	6	7
11	3	6	1	5	-	-	4	5
12	15	29	6	28	5	36	26	31
13	2	4	1	5	-	-	3	3
14	1	2	-	-	1	7	2	2
15	2	4	-	-	-	-	2	2
16	3	6	-	-	-	-	3	3
	51	100	21	100	14	100	86	100

Note: One in the CIED group was unable to identify the educational attainment of mother.

Eight percent were the only child in the family. Thirty-nine percent had two-three siblings, 35% had four-five and 18% had more than five. See Table 15.

TABLE 15
NUMBER OF SIBLINGS

SIBLINGS	CIED N	CIED %	COED N	COED %	IIED N	IIED %	TOTAL N	TOTAL %
Only Child	3	6	2	10	2	15	7	8
2-3	23	44	8	38	3	21	34	39
4-5	19	37	8	38	3	21	30	35
More than 5	7	13	3	14	6	43	16	18
	52	100	21	100	14	100	87	100

In 1965, the youngest age among respondents was 20. Sixty-three percent were between the ages of 20 and 29, 20% were between 30 and 39, 10% between 40 and 49 and seven percent were over 50. Data from the PNS showed five subjects in its CIED group (220) currently licensed in 1965 were 60 or over. See Table 6 on page 12. Of these five, three indicated they were Iowa residents and unemployed. These three individuals are among the seven subjects in this study who are over 60. See Table 16.

TABLE 16
AGE IN 1965 BY LICENSURE STATUS

AGE	CIED N	CIED %	COED N	COED %	IIED N	IIED %	TOTAL N	TOTAL %
19 or less	-	-	-	-	-	-	-	-
20-24	17	33	9	42	2	14	28	33
25-29	18	34	2	10	6	43	26	30
30-34	3	6	3	14	3	22	9	11
35-39	5	9	1	5	2	14	8	9
40-44	3	6	3	14	-	-	6	7
45-49	1	2	2	10	-	-	3	3
50-54	2	4	1	5	-	-	3	3
55-59	-	-	-	-	1	7	1	1
60 and over	3	6	-	-	-	-	3	3
	52	100	21	100	14	100	87	100

There was a high degree of employment prior to becoming licensed as practical nurses. Of those responding, 59% held either one or two jobs and 86% held at least one. Fourteen percent were never employed. See Table 17.

TABLE 17
NUMBER OF JOBS HELD BEFORE LICENSURE AS A PRACTICAL NURSE

	CIED		COED		IIED		TOTAL	
NO. JOBS	N	%	N	%	N	%	N	%
0	4	8	3	15	5	36	12	14
1	24	46	4	20	5	36	33	39
2	10	19	6	30	1	7	17	20
3	7	13	1	5	2	14	10	12
4	2	4	1	5	1	7	4	5
5	2	4	1	5	-	-	3	3
6	1	2	2	10	-	-	3	3
7	1	2	-	-	-	-	1	1
8	1	2	2	10	-	-	3	3
	52	100	20	100	14	100	86	100

Note: One in the COED group did not respond to this item.

It appears that earlier employment experiences in health-related occupations tended to influence seeking educational preparation for practical nursing.

Eighty-seven percent indicated employment experience(s) prior to becoming a L.P.N. Of these, 88% had experience in health-related and 12% in only non-health-related occupations. Thirteen percent had not been employed prior to becoming a LPN. See Table 18.

TABLE 18
EMPLOYMENT BEFORE LICENSURE AS A PRACTICAL NURSE

	CIED		COED		IIED		TOTAL	
OCCUPATIONS	N	%	N	%	N	%	N	%
Never Employed	4	8	3	15	4	31	11	13
Only Health Related	28	54	9	45	6	46	43	51
Only Non-Health Related	5	9	3	15	1	8	9	10
Both Health and Non-Health Related	15	29	5	25	2	15	22	26
	52	100	20	100	13	100	85	100

Note: One in the COED group and one in the IIED group did not respond to this item.

Over one-half (55%) were between 15-19 years of age when they made the decision to become a practical nurse. Eight percent made the decision at ages less than 15 and four percent at ages over 50. See Table 19.

TABLE 19
AGE WHEN DECIDED TO BECOME A PRACTICAL NURSE

	CIED		COED		IIED		TOTAL	
AGE	N	%	N	%	N	%	N	%
Under 15	6	13	-	-	-	-	6	8
15-19	27	56	7	41	9	69	43	55
20-24	6	13	1	6	3	23	10	13
25-29	1	2	2	11	-	-	3	4
30-34	2	4	3	18	-	-	5	6
35-39	2	4	-	-	-	-	2	3
40-44	1	2	3	18	1	8	5	6
45-49	1	2	-	-	-	-	1	1
Over 50	2	4	1	6	-	-	3	4
	48	100	17	100	13	100	78	100

Note: Four in the CIED group, four in the COED group and one in the IIED group did not respond to this item.

Mass media (newspapers, radio, t.v., etc.) were the greatest sources of information through which respondents became acquainted with the preparatory nursing program they attended. Twenty-three percent learned of the program through these media. Following closely in comparatively equal frequencies as sources of information were friends, health occupations personnel, high-school counselors and relatives. See Table 20.

TABLE 20
HOW ACQUAINTED WITH PRACTICAL NURSE PROGRAM ATTENDED

	CIED		COED		IIED		TOTAL	
SOURCE OF INFORMATION	N	%	N	%	N	%	N	%
Mass Media	12	27	2	15	2	17	16	23
Someone In Health Occ.	9	20	2	15	1	8	12	17
Friends	6	14	4	31	2	17	12	17
Teacher-Counselor	7	16	1	8	2	17	10	15
Relative	5	11	2	15	3	25	10	15
Prac. Nse. Program Near Home	3	7	1	8	1	8	5	7
R.N. or M.D.	2	5	1	8	1	8	4	6
	44	100	13	100	12	100	69	100

Note: Eight each in the CIED and COED groups and two in the IIED group did not respond to this item.

Of the total group, seven percent achieved only through 11 grades and therefore were licensed prior to July 1, 1964. Ninety three percent completed a minimum of 12 grades. Fifty one percent achieved only to the level of high-school completion or its equivalency and 42 percent completed 1-3 additional years. None had achieved a baccalaureate degree. See Table 21.

TABLE 21
EDUCATIONAL ACHIEVEMENT PRIOR TO ADMISSION TO PRACTICAL NURSING PROGRAM

	CIED		COED		IIED		TOTAL	
YEARS	N	%	N	%	N	%	N	%
10	1	2	-	-	-	-	1	1
11	2	4	2	9	1	7	5	6
12	29	55	9	43	6	43	44	51
13	16	31	7	34	6	43	29	33
14	2	4	2	9	1	7	5	6
15	1	2	1	5	-	-	2	2
16	-	-	-	-	-	-	-	-
17	1	2	-	-	-	-	1	1
	52	100	21	100	14	100	87	100

Twenty-six percent were employed while enrolled in a preparatory nursing program and 74% were not employed during this time. The 82 responding to this item were the same 82 who identified sources of financial support while enrolled for their nursing education. The only financial source for 72% was parents or relatives and for 24% it was personal earnings. Only four percent were supported through governmental agencies. See Tables 22 and 23.

TABLE 22
WORKED WHILE IN PREPARATORY PROGRAM

RESPONSE	CIED N	CIED %	COED N	COED %	IIED N	IIED %	TOTAL N	TOTAL %
Yes	12	24	7	39	2	15	21	26
No	39	76	11	61	11	85	61	74
	51	100	18	100	13	100	82	100

Note: One each in the CIED and IIED group and three in the COED group did not respond to this item.

TABLE 23
SOURCE OF SUPPORT WHILE IN PREPARATORY PROGRAM

SOURCE	CIED N	CIED %	COED N	COED %	IIED N	IIED %	TOTAL N	TOTAL %
Parents or Relatives	35	70	13	68	11	84	59	72
Self Earnings	13	26	6	32	1	8	20	24
Government Agency	2	4	-	-	1	8	3	4
	50	100	19	100	13	100	82	100

Note: Two each in the CIED and COED group and one in the IIED group did not respond to this item.

Sixty-four percent were licensed on the basis of having completed a program in practical nursing, 54% in Iowa programs and 10% in programs out-of-state. Thirty-six percent were licensed on the basis of having attended a program in professional nursing. See Table 24.

TABLE 24
EDUCATIONAL BASIS FOR IOWA LICENSURE

NURSING PREPARATION	CIED N	CIED %	COED N	COED %	IIED N	IIED %	TOTAL N	TOTAL %
Compl. Iowa Prac. Nsg. Prog.	30	58	11	52	6	43	47	54
Compl. Out-of-State Prac. Nsg. Prog.	7	13	-	-	2	14	9	10
Attended Prof. Nsg. Prog.	15	29	10	48	6	43	31	36
	52	100	21	100	14	100	87	100

Age at initial licensure in Iowa shows sixty-six percent were under age 24, 14% were 25-34 and six percent were 45-54. One respondent was between 55 and 59 and none over 59. See Table 25.

TABLE 25
AGE AT LICENSURE

AGE	CIED N	CIED %	COED N	COED %	IIED N	IIED %	TOTAL N	TOTAL %
19 or less	9	17	3	14	4	29	16	18
20-24	27	52	6	29	9	64	42	48
25-29	2	4	2	9	-	-	4	5
30-34	5	9	3	14	-	-	8	9
35-39	2	4	1	5	-	-	3	4
40-44	3	6	5	24	-	-	8	9
45-49	-	-	-	-	1	7	1	1
50-54	3	6	1	5	-	-	4	5
55-59	1	2	-	-	-	-	1	1
60 and over	-	-	-	-	-	-	-	-
	52	100	21	100	14	100	87	100

The year in which respondents were initially licensed is shown in Table 26.

TABLE 26
YEAR OF INITIAL LICENSURE

YEAR	CIED N	CIED %	COED N	COED %	IIED N	IIED %	TOTAL N	TOTAL %
1950	1	2	-	-	-	-	1	1
1951	1	2	2	10	2	14	5	6
1952	1	2	1	5	-	-	2	2
1953	1	2	-	-	-	-	1	1
1954	-	-	1	5	1	7	2	2
1955	5	10	-	-	1	7	6	7
1956	2	3	1	5	4	30	7	8
1957	2	3	2	9	2	14	6	7
1958	3	6	3	14	1	7	7	8
1959	4	8	2	9	1	7	7	8
1960	5	10	-	-	-	-	5	6
1961	4	8	1	5	2	14	7	8
1962	7	13	1	5	-	-	8	9
1963	7	13	3	14	-	-	10	12
1964	4	8	1	5	-	-	5	6
1965	5	10	3	14	-	-	8	9
	52	100	21	100	14	100	87	100

Table 27 shows the year respondents were first employed as licensed practical nurses. Five percent have never been employed as a practical nurse. See Table 27.

TABLE 27
YEAR FIRST EMPLOYED AS LPN

	CIED		COED		IIED		TOTAL	
YEAR	N	%	N	%	N	%	N	%
Never as LPN	3	6	1	5	1	7	5	5
1950	1	2	1	5	-	-	2	2
1951	2	4	-	-	1	7	3	4
1952	2	4	-	-	1	7	3	4
1953	-	-	-	-	-	-	-	-
1954	-	-	2	11	1	7	3	4
1955	3	6	-	-	3	23	6	7
1956	1	2	1	5	2	14	4	5
1957	2	4	2	11	1	7	5	5
1958	3	6	2	11	1	7	6	7
1959	6	12	3	16	-	-	9	11
1960	1	2	-	-	2	14	3	4
1961	7	13	1	5	1	7	9	11
1962	6	11	1	5	-	-	7	8
1963	8	15	3	16	-	-	11	13
1964	4	7	1	5	-	-	5	5
1965	2	4	1	5	-	-	3	4
1966	1	2	-	-	-	-	1	1
	52	100	19	100	14	100	85	100

Note: Two in the COED group did not respond to this item.

Eighty five percent of the respondents are presently married. Of the ninety three percent either presently married or married at one time, 83% had been married three years or more. See Tables 28 and 29.

TABLE 28
PRESENT MARITAL STATUS

STATUS	CIED N	CIED %	COED N	COED %	IIED N	IIED %	TOTAL N	TOTAL %
Religious Order	2	4	-	-	-	-	2	2
Single	2	4	1	4	1	7	4	5
Married	47	90	14	66	13	93	74	85
Divorced	1	2	2	10	-	-	3	4
Separated	-	-	2	10	-	-	2	2
Widowed	-	-	2	10	-	-	2	2
	52	100	21	100	14	100	87	100

TABLE 29
NUMBER OF YEARS MARRIED

	CIED N	CIED %	COED N	COED %	IIED N	IIED %	TOTAL N	TOTAL %
1-3 Years	8	17	4	21	1	8	13	17
3-5 Years	13	28	5	26	2	17	20	26
66-10 Years	14	30	4	21	4	33	22	28
10 or More	6	13	3	16	5	42	14	18
20 or More	4	8	2	11	-	-	6	8
30 or More	2	4	1	5	-	-	3	3
	47	100	19	100	12	100	78	100

Note: One in each of the CIED, COED, and IIED groups did not respond to this item and six had never married.

Among the respondents there are a large number of children most of whom are young in age. Seventy-eight percent have one child or more. One has eight children all under age 10. Sixty-five percent have 1-3, 12% have 4-7, and 22% have none. The children of 52% are all under 6 years of age, of seven percent are all between 6-11, of seven percent are all between 12-17, and of nine percent are all 18 or over. An additional three percent have one child in each of these age ranges. See Tables 30 and 31.

TABLE 30
NUMBER OF CHILDREN

NUMBER	CIED N	CIED %	COED N	COED %	IIED N	IIED %	TOTAL N	TOTAL %
None	9	17	8	38	2	14.3	19	22
1	13	25	3	14	1	7.1	17	20
2	16	31	6	29	1	7.1	23	27
3	10	19	1	5	5	35.8	16	18
4	3	6	3	14	2	14.3	8	9
5	1	2	-	-	-	-	1	1
6	-	-	-	-	2	14.3	2	2
7	-	-	-	-	-	-	-	-
8 or More	-	-	-	-	1	7.1	1	1
	52	100	21	100	14	100.0	87	100

TABLE 31
AGES OF CHILDREN

AGES	CIED N	CIED %	COED N	COED %	IIED N	IIED %	TOTAL N	TOTAL %
No Children	9	17	8	38	2	14	19	22
Under 6	34	65	3	14	8	58	45	52
6-11	1	2	3	14	2	14	6	7
12-17	3	6	2	10	1	7	6	7
18 + Over	4	8	4	19	-	-	8	9
One In Each Above Range	1	2	1	5	1	7	3	3
	52	100	21	100	14	100	87	100

The mobility rates of individuals in the total group has been relatively low. Nearly one-half (46%) live at the same address as at the time they were initially licensed. Thirty percent have had only one address change since initial licensure and this could be a move ranging in distance from across the street to out-of-state. See Table 32.

TABLE 32
NUMBER OF ADDRESSES SINCE INITIAL LICENSURE (AS OF 1965)

	CIED		COED		IIED		TOTAL	
NUMBER	N	%	N	%	N	%	N	%
1	24	46	8	38	8	57	40	46
2	14	27	9	43	3	22	26	30
3	9	17	2	9	2	14	13	15
4	4	8	1	5	1	7	6	7
5	1	2	1	5	-	-	2	2
	52	100	21	100	14	100	87	100

Comparatively stable geographically, they have also been relatively stable in their employment as practical nurses since initial licensure. Of the 82 responding to this item, 94% have been employed in at least one position as a L.P.N. Thirty-seven percent have held only the one position, 24% have held only two, 15% have held three and 18% have held between four and eight positions. Six percent have never worked as a practical nurse. See Table 33.

TABLE 33
NUMBER OF JOBS AS L.P.N.

	CIED		COED		IIED		TOTAL	
NUMBER	N	%	N	%	N	%	N	%
0	2	4	1	5	2	15	5	6
1	17	35	7	36	6	43	30	37
2	15	31	2	11	3	21	20	24
3	4	8	5	26	3	21	12	15
4	6	12	2	11	-	-	8	10
5	3	6	2	11	-	-	5	6
6	1	2	-	-	-	-	1	1
7	-	-	-	-	-	-	-	-
8	1	2	-	-	-	-	1	1
	49	100	19	100	14	100	82	100

Note: Three in the CIED group and two in the COED group did not respond to this item.

The distance between place of birth and present residence shows thirty-one percent still reside in the same place or within a 25 mile distance, 29% live between 25 and 100 miles and 40% live over 100 miles from their places of birth.

TABLE 34
DISTANCE OF PRESENT RESIDENCE FROM PLACE OF BIRTH

	CIED		COED		IIED		TOTAL	
MILES	N	%	N	%	N	%	N	%
Same Place	5	10	-	-	3	21	8	9
25 or Less	10	19	4	19	5	36	19	22
25-50	9	18	3	14	-	-	12	14
50-100	7	13	3	14	3	21	13	15
100-200	7	13	2	10	1	7	10	11
200 or More	14	27	9	43	2	15	25	29
	52	100	21	100	14	100	87	100

Thirty-nine percent live 50 miles or less from the nursing program in which they were prepared, 24% live between 50-100 miles, 10% between 100-200 miles and 27% live 200 miles or over. Comparing these figures with the low number of addresses since licensure (See Table 32, page 31), it appears that when one does move, the move is a distant one. See Table 35.

TABLE 35
DISTANCE PRESENT RESIDENCE FROM NURSING PROGRAM ATTENDED

	CIED		COED		IIED		TOTAL	
MILES	N	%	N	%	N	%	N	%
This City	10	21	0	-	2	14	12	15
25-less	5	10	6	35	1	7	12	15
25-50	5	10	1	6	1	7	7	9
50-100	11	23	2	12	6	43	19	24
100-200	4	9	1	6	3	22	8	10
200 -	13	27	7	41	1	7	21	27
	48	100	17	100	14	100	79	100

Note: Four in each of the CIED and COED groups did not respond to this item.

The above two tables indicate a relatively low mobility from place of birth, through location of preparatory program, to present residence.

At the time data were collected for the PNS in 1965, these 87 subjects were unemployed or gave out-of-state addresses. Employment status and place of residence of some changed between then and July, 1966 when the data for this sub-study were collected.

Solicitation of the reason for leaving Iowa was primarily aimed at the COED group 24% of whom, in the interim, have returned to Iowa. All of the IIED group are still in Iowa but in this same interim, 15% of the CIED group have left Iowa. As a result, 73% of the total group are now in Iowa and 27% are out-of-state. Of those presently out-of-state, 67% gave "marriage" as the reason for leaving Iowa, 17% left because of influence of parents, relatives, or employer, 12% because of opportunity for experience and four percent because of salary increase. See Table 36.

TABLE 36
REASON FOR LEAVING IOWA

	CIED		COED		IIED		TOTAL	
	N	%	N	%	N	%	N	%
Now in Iowa	44	85	5	24	14	100	63	73
Marriage	6	11	10	48	-	-	16	18
Opportunity for Exper.	-	-	3	14	-	-	3	4
Influence of Relative	-	-	2	9	-	-	2	2
Influence of Parents	-	-	1	5	-	-	1	1
Influence of Employer	1	2	-	-	-	-	1	1
Oppor. for Salary Increase	1	2	-	-	-	-	1	1
	52	100	21	100	14	100	87	100

Factors Influencing Employment Status

This group's picture of employment as practical nurses has also changed since the time of the PNS data collection in 1965 when the subjects of this sub-study were shown to be either unemployed or out-of-state and not contributing to practical nursing in Iowa at that time.

Of the CIED group 29% have returned to practical nursing, 10% full-time and 19% part-time; 12% are employed in health-related and other kinds of occupations, and 59% remain unemployed.

Of the COED group, 33% are now practicing practical nursing full-time, five percent are employed full-time in a health-related and 14% full-time in non-health related occupations. Forty-eight percent remain unemployed.

Of the IIED group, 23% are now employed as practical nurses, eight percent full-time and 15% part-time. One of the subjects became educated in professional nursing and is practicing full-time as a registered professional nurse. Seventy-seven percent remain unemployed.

Since one is now a full-time professional nurse, there are 86 remaining practical nurse subjects in this sub-study. Of these 86, 30% have returned to practical nursing, 16% full-time and 14% part-time; three percent are employed full-time in other health related fields, eight percent in non-health related fields and 59% remain unemployed. Therefore, 70% are not employed as practical nurses. See Table 37.

TABLE 37
PRESENT EMPLOYMENT STATUS

PRESENT	CIED		COED		IIED		TOTAL	
EMPLOYMENT STATUS	N	%	N	%	N	%	N	%
LPN Full-Time	5	10	7	33	1	8	13	16
LPN Part-Time	10	19	-	-	2	15	12	14
Other Health Full-Time	2	4	1	5	-	-	3	3
Non-Health Full-Time	1	2	3	14	-	-	4	5
Non-Health Part-Time	3	6	-	-	-	-	3	3
Unemployed	31	59	10	48	10	77	51	59
	52	100	21	100	13	100	86	100

Of those presently employed, 49% are employed in general hospitals, three percent in psychiatric hospitals, nine percent in nursing homes and 11% in doctors' offices. Twenty-eight percent reported present employment in non-health institutions. See Table 38.

TABLE 38
EMPLOYMENT LOCATIONS OF SUBJECTS PRESENTLY EMPLOYED

	CIED		COED		IIED		TOTAL	
EMPLOYER	N	%	N	%	N	%	N	%
General Hospital	13	62	3	27	1	33	17	49
Psych. Hospital	1	5	-	-	-	-	1	3
Nursing Home	1	5	1	9	1	34	3	9
Doctors' Office	-	-	3	27	1	33	4	11
Other	6	28	4	37	-	-	10	28
	21	100	11	100	3	100	35	100

Note: Thirty-one in the CIED group, and 10 in each of the COED and IIED groups reported being presently unemployed (Table 37). Therefore, no present employment location was identified by these 51 respondents.

Of the 61 presently not employed as practical nurses, 69% reported family responsibilities as the primary reason for not working and 11% gave this as the secondary reason. Eight percent reported their primary reason is that their husbands do not wish them to work and 26% gave this as the secondary reason. Six percent gave low LPN salary as the primary reason and 20% gave this as the secondary reason. See Table 39.

TABLE 39
PRIMARY AND SECONDARY REASONS FOR UNEMPLOYMENT AS A PRACTICAL NURSE

	CIED				COED				IIED				TOTAL			
	Pri.		Sec.		Pri.		Sec.		Pri.		Sec.		Pri.		Sec.	
REASON	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Personal Heal.	1	3	-	-	1	7	-	-	1	10	1	10	3	5	1	2
Fam. Respon.	25	67	5	14	8	58	2	14	9	90	-	-	42	69	7	11
Husband Does-Not Want Me To Work	4	11	9	24	1	7	2	14	-	-	5	50	5	8	16	26
LPN Salary Not Adequate	3	8	9	24	1	7	3	22	-	-	-	-	4	6	12	20
Distance From Home	1	3	3	8	-	-	1	7	-	-	1	10	1	2	5	8
Feel Not Accepted As LPN	1	3	1	3	-	-	-	-	-	-	-	-	1	2	1	2
Unable To Work Shift Avail.	-	-	1	3	-	-	-	-	-	-	-	-	-	-	1	2
Other	-	-	2	5	2	14	-	-	-	-	-	-	2	3	2	3
No Response	2	5	7	19	1	7	6	43	-	-	3	30	3	5	16	26
	37	100	37	100	14	100	14	100	10	100	10	100	61	100	61	100

Of the two indicating "other" as the primary reason, they stated:

(1) "I would need to acquire licensure in Illinois so am now working full-time as a secretary", and

(2) "I recently returned to Iowa from Illinois and have not yet renewed my license".

The three "other" given as secondary reasons are:

(1) "Am self-employed. I own and operate a hotel",

(2) "Am a full-time airline stewardess", and

(3) "I am not working as a LPN because my employer will permit me to function only as a nurse aide".

All 14% who are now employed as part-time practical nurses and gave addresses in Iowa (See Table 37) indicate they plan this employment status to continue. See Table 40.

TABLE 40
FAMILY RESPONSIBILITIES OF ALL PRESENTLY EMPLOYED PART-TIME AS PRACTICAL NURSES

NUMBER	GROUP	
3	CIED	One Child, Under 6 Years of Age
2	CIED	Two Children Both Under 6 Years of Age
3	CIED	Three Children All Under 6 Years of Age
1	IIED	Eight Children, Ranging in Age From 2-10 Years
1	CIED	Part-Time Teaching in Addition to Part-Time as LPN
1	IIED	Pregnant
1	CIED	Impaired Health
12		

Future Employment Plans

Fifty-seven percent reported the primary reason they would consider returning to employment is a change in family responsibilities. Thirteen percent gave this as the secondary reason. Sixteen percent reported supplementing of family income to be their primary reason; and 26% gave this as the secondary reason. Seven percent gave increase in LPN salary as the primary reason and 24% gave it as the secondary reason. See Table 41.

TABLE 41
PRIMARY AND SECONDARY REASONS FOR POTENTIAL RETURN TO EMPLOYMENT AS A PRACTICAL NURSE

	CIED				COED				IIED				TOTAL			
	Pri.		Sec.		Pri.		Sec.		Pri.		Sec.		Pri		Sec.	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Enjoy Work or Contact Outside Home	4	11	7	18	1	7	1	7	1	10	3	30	6	10	11	18
Suppl. Fam. Income	8	21	9	24	2	14	4	29	-	-	3	30	10	16	16	26
Change in Family Respon.	18	49	8	22	9	65	-	-	8	80	-	-	35	57	8	13
Increase in LPN Salary	4	11	8	22	-	-	5	35	-	-	2	20	4	7	15	24
Improved Working Relations With Nsg. Person.	1	3	1	3	-	-	-	-	-	-	-	-	1	2	1	2
Other	-	-	1	3	-	-	-	-	-	-	-	-	-	-	1	2
No Resp.	2	5	3	8	2	14	4	29	1	10	2	20	5	8	9	15
	37	100	37	100	14	100	14	100	10	100	10	100	61	100	61	100

The one subject giving "other" as the primary reason is retired with two children over 30 years of age but reported she would return to practical nursing in an emergency such as a major disaster or war.

Of the number not employed as practical nurses, 73% plan to return to practical nursing and 23% plan no future employment. Two percent will return to work but not as practical nurses, two percent are undecided. See Table 42.

TABLE 42
PRESENTLY UNEMPLOYED LPNS' PLANS FOR FUTURE EMPLOYMENT

	CIED		COED		IIED		TOTAL	
	N	%	N	%	N	%	N	%
Do Not Plan to Work	6	19	3	25	3	33	12	23
Return to Prac. Nsg.	25	81	9	75	4	45	38	73
Return But Not to Prac. Nsg.	-	-	-	-	1	11	1	2
Undecided	-	-	-	-	1	11	1	2
	31	100	12	100	9	100	52	100

Note: Six in the CIED group, two in the COED group and one in the IIED group did not respond to this item.

This data shows that the group still unemployed as practical nurses should not be considered consistently and permanently out of the practical nurse work force.

CHAPTER IV

SUMMARY AND CONCLUSIONS

This study concerns practical nurses who have been licensed in Iowa but are not presently employed as practical nurses in Iowa. The purpose was to determine: social and educational characteristics, their reasons for present unemployment and their plans for future employment as practical nurses in this State.

All of the subjects are women and the majority came from a rural background. Predominately, their fathers were farmers, their mothers were not employed outside the home, and they had from two to five siblings.

On an average, they attained a higher level of education than their parents but none had completed a baccalaureate degree.

Over one-half made their decisions to become practical nurses between the ages of 15 and 19 and first became acquainted with their preparatory program through mass media, particularly newspapers.

A large percentage of the group held at least one job before becoming licensed practical nurses and these jobs were primarily in health-related occupations.

During enrollment in nursing programs, the majority were financially supported by parents and relatives and a minority worked part-time to help finance their nursing education.

Slightly over one-third of the subjects were licensed as practical nurses on the basis of having attended a program in professional nursing.

In 1965, one-fifth of the group were 19 years of age and by far the greatest number were between 20 and 29. Few were over 55.

Eigty-five percent have been married at least three years. Three-fourths of the subjects have children and nearly one-half of these others have children who are all under six years of age.

Geographic mobility of practical nurses from place of birth to the location of their nursing preparatory program and between jobs since licensure is relatively low. They tended to go to nursing education programs and to have been employed as nurses near their home communities.

For the majority, past employment has been in general hospitals. In decreasing order of frequency, the remainder were employed in doctors' offices, nursing homes and psychiatric hospitals.

The vast majority of practical nurses ever licensed in Iowa continue to live in Iowa. Among those who do move out-of-state, "marriage" is given as the predominant reason.

In late 1965 these subjects indicated they were not employed as practical nurses in Iowa. Six months later, when the data were collected for this study, about one-third of the group had returned to practical nursing in this State.

For those who continue not to be employed as practical nurses in Iowa, it appears there is little that outside sources can do to facilitate their return to employment at this time. Among reasons given for their present unemployment, "family responsibilities" far excels any other. The great majority also indicated their return to work hinges on this same factor but that as their children mature in age and family responsibilities lessen, they plan to return to employment as practical nurses. Salaries do not seem to be a major factor in their decision to return. Very few indicated they definitely do not plan to return to practical nursing in the future.

Marriage, with its accompanying potential mobility, and motherhood, with its accompanying responsibilities, will no doubt continue to influence the

number of unemployed practical nurses. Many, however, will eventually return to active practice in this field. This cycle will unquestionably continue among practical nurses in Iowa.

The great majority are neither consistently nor permanently out of the practical nurse work force. Rather, they have been a comparatively stable group of workers to date. Over time, however, the aging process will demand prepared nurses for necessary replacements. Added to the present need for more available nursing service personnel in Iowa, a need which will continue and grow in the future, it is evident that the educational preparation of nurses for Iowa must be augmented.

CHAPTER V

RECOMMENDATIONS

The conclusions result in the following recommendations for Iowa:

1. that nurses for all fields of nursing be prepared in larger numbers,
2. that these nurses be prepared in approved educational programs in professional nursing, technical nursing, and practical nursing,
3. that applicants to these programs be better informed of the available types of educational preparation for nursing so that each can more effectively select the type of program for which his abilities and motivation are best suited,
4. that nursing education programs in Iowa be expanded in size and/or increased in number to provide additional available nursing personnel, and
5. that these programs be expanded in size and increased in number <u>only</u> when and where quality educational programs are assured.

APPENDIX

Conducted by:

University of Illinois

College of Education
Department of Vocational and
Technical Education
51 East Armory Avenue
Champaign, Illinois
Phone: 217–333-2756
217–333-2757

In cooperation with:

University of Iowa

Program in Health Occupations
Education
135 Melrose Avenue
Iowa City, Iowa
Phone: 319–353-3536

Professional staff:

Mr. Clarence L. Ash
Research Associate

Mr. Larry J. Bailey
Research Associate

Mr. John Huck
Research Associate

Miss Lois A. Jarnagin, R.N.
Research Associate

Mr. David L. Joyce
Research Associate

Mrs. Lois M. Langdon, R.N.
Research Associate

Mr. Glen Martin
Research Associate

Mr. Warren N. Suzuki
Research Associate

Mr. Thomas L. Switzer
Research Associate

Mr. James S. Underwood
Research Associate

Professional staff:

Miss Elizabeth E. Kerr, R.N., M.A.
Associate Research Investigator

Mr. Dale F. Petersen
Research Coordinator

Miss Carole B. Hoadley
Research Associate

Mr. Ronald F. Czaja
Research Associate

ILLINOIS
IOWA

PRACTICAL NURSING STUDY

(A Prospectus)

The research and evaluation described herein is being performed pursuant to a contract with the United States Department of Health, Education, and Welfare, Office of Education

Supported by:
Division of Vocational and Technical Education
United States Office of Education
Department of Health, Education, and Welfare
Contract No. 5-85-038

FOREWORD

This is a Prospectus of a study supported by the United States Department of Health, Education, and Welfare, Office of Education. The research project is the responsibility of the University of Illinois, College of Education, with cooperation from the University of Iowa, Programs in Health Occupations Education. Some members of the research staff will have a background and experience in nursing education and nursing service.

An advisory committee representing professional associations and agencies will be utilized for guidance and consultation.

This study is concerned with determining the nature of the population of licensed practical nurses, their employment patterns and preferences, the recruitment and selection of students of practical nursing and the programs through which they are prepared, as well as the relationships among identifiable characteristics of individuals and their employment patterns as practitioners of practical nursing. It will include individuals, programs, and employment settings in the states of Illinois and Iowa.

All data collected will be held in strict confidence by the professional research staff. Upon completion of the study, the final report will be made available to all participating programs, agencies, and organizations. No individual or specific institution or agency will be identified by name in the reports.

Robert M. Tomlinson, Director

INTRODUCTION

The health occupations field is one of the most rapidly expanding areas in terms of demand for technical advancement and personnel. Despite the accelerated development of nursing programs and the attempts to augment the recruitment of personnel to meet past and present nursing needs, a critical shortage continues to exist in both quantity and quality at all levels of nursing. The increase in population and the growing need for services exceeds the increase in educational programs and student enrollment in programs. A restructuring of the knowledges, skills, and functions of traditional nursing patterns is also taking place.

One of the greatest single changes is the emerging role of the prepared, licensed practical nurse as a member of the nursing team. It is only in relatively recent times that programs of practical nurse education are reaching a level of maturity and stability of operation.

PURPOSES OF THE STUDY

The long-range goal of the study is the improvement of the nursing services through the improvement of the selection process, educational programs (including curriculum and the instructional staff) and better utilization of prepared personnel. This study will not attempt to implement changes, but will provide new knowledge and relationships in a meaningful manner that may be applied by those directly responsible for preparing practical nurses and utilizing their services.

The general hypothesis of the study is that there exist differential and identifiable characteristics among potential and actual students in approved programs of practical nursing, the programs themselves and the employment situations, and that meaningful relationships among these characteristics can be determined. Findings from an investigation of these characteristics and the relationships among them should serve to improve the quantity and quality of available nursing services.

DEFINITIONS

(1) ***The practice of practical nursing:*** The performance for

compensation of selected acts in the care of the ill, injured, or infirm under the direction of a registered professional nurse or a licensed physician or a licensed dentist; and not requiring the substantial specialized skill, judgment and knowledge required in professional nursing.[1]

(2) ***The Role of the Licensed Practical Nurse:*** The work of the LPN is an integral part of nursing. The licensed practical nurse gives nursing care under the supervision of the registered professional nurse or physician to patients in simple nursing situations. In more complex situations, the licensed practical nurse functions as an assistant to the registered professional nurse.[2]

(3) ***The Licensed Practical Nurse (LPN):*** The occupation of practical nursing has developed in recent years to the place where all states legally provide for practical nurse licensure. The procedures and requirements for obtaining a license to practice as a practical nurse were established by statutes in Iowa in 1949 and Illinois in 1951.

A total of 13,744 licenses had been issued to practical nurses in Illinois and 3,976 issued in Iowa at the end of July 1965.

Particular attention will be given to those LPN's who have attended an approved nursing education program and have met the licensure requirements of Illinois or Iowa.

CONDUCT OF THE STUDY

This study consists of three interrelated phases which are scheduled over a 39-month period. The research group will be structured to work concurrently in Illinois and Iowa during each phase of the study.

[1]National League for Nursing, *Licensed Practical Nurses In Nursing Services*, 10 Columbus Circle, New York, p. 39.

[2]Statement jointly approved by the American Nurses' Association and National Federation of Licensed Practical Nurses, 1964.

The universe of the possible employment locations for cooperation in the interviews will be established by contacting a sample of all currently licensed practical nurses in each of the two states. In addition all practical nurse education programs, public and private, will be contacted as possible participants.

Directories from the governmental agencies and professional associations will also be used to validate the sample.

PHASE I. – September 1965 to September 1966:

Objective – to identify the knowledges, functions, and occupational patterns of a selected sample of practical nurses who are licensed on the basis of having attended an approved nursing education program.

A random sample of approximately 550 practical nurses and 250 supervisors of practical nurses will be selected for a personal interview. Where possible, it is desirable to conduct the interviews at the employment locations. The study is designed to include representatives from all types of employment situations and assignments. The sample is structured to retain this representation without overburdening the cooperating employment agencies. To avoid prejudicing the study, the interviewees should be randomly selected from LPN's employed at the location.

PHASE II. – January 1966 to February 1968:

Objectives – (1) to determine the characteristics of all applicants, students, and graduates of selected programs of practical nursing and their relationships, and

(2) to determine the characteristics of a selected sample of programs of practical nursing, to identify those criteria related to student success, and occupational patterns of graduates.

The cooperation of at least thirty practical nurse education programs with a total enrollment of approximately 1,000 students will be solicited. The sample will include programs representing differences in size, administrative structure, educational personnel, curriculum organization, facilities, and community.

This phase will be concerned with all applicants for and students enrolled in the cooperating programs in the September 1966 and February 1967 classes.

The cooperating programs will be provided, from the National League for Nursing and other sources, with standardized tests and other special instruments for use in student selection and evaluation. Study personnel will visit the programs for additional data collection sessions, e.g., testing, interview, etc. All expenses for the tests and their scoring will be paid by the research project and the results made available to the program concerned.

The testing and visitation sessions will be cooperatively pre-scheduled and planned so as to require minimal alterations in schedules and activities. Three data collection sessions of less than one day each will be necessary during the enrollment of the class.

PHASE III. – January 1968 to July 1968:

Objective: to follow-up the applicants, dropouts, and graduates of the selected programs to determine relationships between the characteristics of the individuals, programs attended, and employment situations.

Starting about four months after graduation of the classes studied, a random sample of approximately 500 applicants, dropouts, and graduates will be contacted for a follow-up personal interview; the remainder will receive a mail questionnaire.

All data and previous findings will be applied to the follow-up of the new graduates in the employment situation to gain insights into the intercorrelations of personal characteristics, educational programs, employment situations, and occupational information and patterns.

This should result in the identification of discriminating selection criteria which tend to predict success in practical nurse programs and in employment.

NOTE: Not included in this research project but anticipated for possible future approval is a four-year follow-up study of the graduates and programs studied in Phases II and III. The instruments and findings of these earlier phases would be utilized to investigate relationships between characteristics of the individuals, programs, and employment situations over a time period.

THE DATA COLLECTION

The material to be collected from both the interviews and from the educational programs is dictated to a large degree by the factors that are assumed to have an influence on the individuals' educational and occupational choices and patterns and their responses. Consequently, a job history will be solicited from each interviewee which will then be assessed to determine if there are identifiable patterns such as: assignment of duties across or among employment locations, stability and mobility of assignment within and/or between employers and geographic locations, movement into and out of employment as a practical nurse.

A group of cards has been developed to represent a broad sampling of possible functions or activities that may be performed by a practical nurse. Each card has a single brief statement of an activity on it. The interviewee will be asked to indicate those activities she performs as a part of her duties.

The interview sheet was designed to identify (1) the formal educational background, (2) the nature of the education, (3) the place and persons involved in developing an interest in practical nursing, and (4) the occupational history.

THE DATA ANALYSIS

The use of standardized instruments whenever possible will facilitate interpretation and utilization of results by others. Computer programs and analyses have been developed by both the University of Illinois and the University of Iowa in conjunction with studies of technicians and Specialty Oriented Students. Many of these will be applied and/or adapted for use in this study.

The IBM 7094 computer facility at the University of Illinois will be utilized, wherever possible, in the analysis of the data.

THE UNIVERSITY OF IOWA
IOWA CITY, IOWA 52240

Program in Health Occupations Education
OFFICE OF:
Director
Program in Health Occupations Education
and
State Consultant
Health Occupations Education
Division of Vocational Education
Department of Public Instruction

July 8, 1966

Dear

The University of Iowa Program in Health Occupations Education, in cooperation with the Iowa Department of Public Instruction, is conducting a study of practical nurses who are, or have been, licensed to practice in Iowa.

The primary purpose is to determine work patterns of licensed practical nurses and we can only do this by obtaining accurate information directly from licensed practical nurses themselves. Because a study of all licensees would be prohibitive time-wise, a random sample method is being utilized.

You have been selected to represent a group of licensed practical nurses and we solicit your cooperation to help us complete this study. All information will be treated as strictly confidential and nowhere in the report of the study will you be identified either by name or license number.

We will be indeed appreciative if you will thoughtfully fill out the enclosed questionnaire and return it to us as early as possible but no later than August 8, 1966, so that the study may be completed on schedule. A stamped return envelope is provided.

Thank you for your time and cooperation. When individuals respond to such a request as this, they make a real contribution to the future progress of practical nursing.

Sincerely,

Elizabeth E. Kerr

(Miss) Elizabeth E. Kerr
Director
Program in Health Occupations Education
The University of Iowa
and
State Consultant
Health Occupations Education
Division of Vocational Education
Department of Public Instruction

EEK:lf
Encl.

Program in Health Occupations Education
Division of Medical Services
The University of Iowa

IMMEDIATE REPLY REQUESTED

IOWA PRACTICAL NURSE SUB-STUDY

Questionnaire

Name_____
Address_____
_____
License Number_____

PERSONAL AND FAMILY DATA

1. Size of town in which you were born.

__Rural
__Less than 2,500 people
__At least 2,500 but less than 5,000
__At least 5,000 but less than 10,000
__At least 10,000 but less than 20,000
__At least 20,000 but less than 50,000
__Larger than 50,000

2. Distance of town where you now live from town where born.

__It is the same town
__Less than 25 miles
__25-50 miles
__50-100 miles
__100-200 miles
__More than 200 miles

3. If you are living in a state other than Iowa or employed in another state, please give reason(s) for leaving Iowa.

4. Please list brothers and sisters and state whether they are older or younger than you.

5. Father's occupation._____

6. Circle the highest grade completed by father in education.

Elementary	Junior High	High School	College
1 2 3 4 5 6	7 8 9	10 11 12	1 2 3 4 more

7. Mother's occupation._____

8. Circle the highest grade completed by mother in education.

Elementary	Junior High	High School	College
1 2 3 4 5 6	7 8 9	10 11 12	1 2 3 4 more

9. What is your marital status? (Please check the one which applies to you and fill in the year that status was acquired.)

__single
__married 19__
__separated 19__
__widowed 19__
__divorced 19__
__married to church 19__

10. Give the ages of your children.

EDUCATIONAL EXPERIENCE

1. Circle the highest grade you completed.

Junior High	High School	Post High School
7 8 9	10 11 12	1 2 3 4 more

2. List the types of formal education you have had beyond high school.

3. Did you work while you were attending practical nursing school?__Yes__No

4. Who provided the money to pay for your practical nurse education?

_____

5. How did you first find out about the school of practical nursing that you attended?

6. At what age did you decide you wanted to be a licensed practical nurse?

7. Distance of town where you now live from where you went to practical nursing school.

__It is the same town
__Less than 25 miles
__25-50 miles
__50-100 miles
__100-200 miles
__More than 200 miles

EMPLOYMENT INFORMATION

1. Work done before being licensed as a practical nurse. (Check more than one if necessary to describe your situation.)
__Never worked before
__Aide, orderly or attendant in health setting
__Job in health setting other than aide, orderly or attendant
__Job unrelated to health field

2. Number of different jobs held before becoming a L.P.N._____.

3. Number of years you worked before you became a L.P.N._____.

4. Year first employed as L.P.N._____.

5. Number of years you have worked as a L.P.N._____.

6. Number of different jobs you have had as a L.P.N._____.

7. Total number of jobs held in your life time_____.

8. Are you now working? Yes__No__

   As a L.P.N.__ Full-time__ Part-time__
   Other kind of job (Please State)_____
   Full-time__ Part-time__

9. If you are working, how long do you plan to work as a L.P.N.?_____
   Or work at some other job?_____

10. Where do you work? (If you are not working please mark this question for your last job.)

    __Hospital
    __Doctor's Office
    __Other (Please State)_____
    __Nursing Home
    __Public Health

11. If you are not working -

    Do you plan to return to work? Yes__No__
    As a L.P.N.? Yes__No__
    Doing some other kind of work (Please state what)_____
    When do you plan to return to work?_____

12. Number 1, 2, 3 the reasons that best describe you and your situation. "I am not working as a Licensed Practical Nurse because:"

    __Distance to L.P.N. job too far.
    __Did not feel accepted by nursing personnel.
    __Personal health reasons.
    __Family and home responsibilities.
    __Low salary.
    __My husband does not want me to work.
    __Other reason (Please State)_____

13. Number 1, 2, 3 the reasons that would have the greatest influence on your decision to return to work as a L.P.N. (If you have returned to work or are working number 1, 2, 3 the reasons that best describe why you are working.)

    __L.P.N. salary increased.
    __Change in family responsibilities
    __Desire for contacts outside the home.
    __To supplement family income.

13. continued:

__Improved working relations with nursing personnel.
__Enjoy working.
__Other (Please State)_____

14. For the period of time from June 1, 1961 to date, please list the types of jobs you have held and the length of time you worked at each job.

NOTE:

IF YOU HAVE ANY QUESTIONS ABOUT THIS QUESTIONNAIRE OR THE STUDY, YOU MAY CALL THE STUDY OFFICE COLLECT BETWEEN 8:00 a.m. and 5:00 p.m. TELEPHONE AREA 319-353-3536.

MIF:llf
7:8:66

THE UNIVERSITY OF IOWA

IOWA CITY, IOWA 52240

Program in Health Occupations Education
OFFICE OF:
Director
Program in Health Occupations Education
and
State Consultant
Health Occupations Education
Division of Vocational Education
Department of Public Instruction

July 22, 1966

Dear

The study of practical nurses who are, or have been licensed to practice in Iowa conducted by The University of Iowa Program in Health Occupations Education in cooperation with the Iowa Department of Public Instruction is progressing well. We have heard from most of the group of practical nurses selected to represent the practical nurses of Iowa.

This study would be much more accurate and complete if we could hear from you. July 8, 1966 we mailed you a questionnaire, but just in case it got lost or mislayed we are mailing you a duplicate copy. It would be of great value to practical nursing if you will thoughtfully fill out the enclosed questionnaire and return it to us immediately. A stamped return envelope is provided.

Thank you for your time and cooperation. As our first letter indicated the purpose of this study is to find out work patterns of licensed practical nurses. We can do this only if you provide us with information.

Sincerely yours,

Elizabeth E. Kerr

(Miss) Elizabeth E. Kerr
Director
Program in Health Occupations Education
The University of Iowa
and
State Consultant
Health Occupations Education
Division of Vocational Education
Department of Public Instruction

EEK:llf

Enclosure

VT 002 379
Fuka, George J.
A Graphic Analysis for the Development of a Master Plan Concept.

Great Cities Program for School Improvement, Chicago, Ill. Research Council
MF AVAILABLE IN VT-ERIC SET.
Pub Date - 66 14p.

*MASTER PLANS; *GRAPHS; *VOCATIONAL DEVELOPMENT; *CAREER PLANNING; EDUCATIONAL PLANNING

The purpose of the Master Plan Concept for Career Development Education is to serve as a nation-wide guide which is systematically and cooperatively developed by a consortia of educational leaders. Its focus is to provide a sequential order for Career Development Education that emphasizes flexibility for content and articulation through grade level structure. It is an outgrowth of the followup conducted as part of the Vocational Education Project of the Great Cities Research Council. An organizational plan necessary to support the master plan concept in the three categories of developmental, functional, and operational is graphically illustrated. (PS)

VT002379

ED0 31587

A GRAPHIC ANALYSIS FOR THE DEVELOPMENT OF A MASTER PLAN CONCEPT.

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

The Research Council of the
Great Cities Program for School Improvement

George J. Fuka, Research Associate

V702379

TABLE OF CONTENTS

Page

i. Introduction

I. Developmental Procedure

II. Functional Organization

III. Steering Group Activities

IV. Program Planning Sub-Group Activities

V. Appendix A

INTRODUCTION

It is the purpose of the MASTER PLAN CONCEPT FOR CAREER DEVELOPMENT EDUCATION to serve as a nation-wide guide which is systematically and cooperatively developed by a consortia of educational leaders.

The focus of the MASTER PLAN shall be to provide a sequential order for CAREER DEVELOPMENT EDUCATION that emphasizes flexibility for content and articulation through grade level structure.

The plan is predicated on a continuous developmental process which accomodates present needs through a planned reorganization process and directs its long-range goal on coordinating all facets of the learning process for CAREER DEVELOPMENT EDUCATION as it affects the learner; namely:

CURRICULUM
PERSONNEL
GUIDANCE
FACILITIES
COMMUNICATIONS

The identification and organization for the MASTER PLAN CONCEPT is an outgrowth of the follow-up conducted as part of the Vocational Education Project of the Great Cities Research Council.

In addition to the individual city visitations made as a part of the follow-up procedure, a series of three regional follow-up conferences were held in the East, Midwest, and on the West Coast. A copy of the agenda to which each of these conferences were addressed may be found in APPENDIX A.

The graphic analysis illustrated on the following pages depicts an organizational plan necessary to support the MASTER PLAN CONCEPT in three categories:

DEVELOPMENTAL
FUNCTIONAL
OPERATIONAL

The cooperative efforts of the school administrators represented in the organizational plan as the Advisory Panel and the educators that function on the Steering Committee and the Program Planning Sub-Groups are supported by resource personnel who will foster a concise plan to be considered for implementation in each respective school system.

The Great Cities Research Council will continuously assist this undertaking through its project staff as needed for coordination and communication.

The MASTER PLAN CONCEPT is not proposed as a "cure-all" for education but merely as a rationale which may be applicable to our American educational system.

The outgrowth of this endeavor may serve as a vehicle for achieving the type of continuity and direction that coincides with the changes mandated by the influence of our cultural pattern and the educators' desire to accomodate all individuals and all ages in the learning process.

Finally, the MASTER PLAN CONCEPT may serve as a basis for bringing about the desirable goals and aspirations which educators commonly seek to implement in their educational programs that embrace career development for all students. Through a concerted effort of positive sharing in the program planning for CAREER DEVELOPMENT EDUCATION the total program may be enhanced.

DEVELOPMENTAL PROCEDURE

PHASE I

VOCATIONAL EDUCATION REGIONAL CONFERENCES
EASTERN - MIDWESTERN - WESTERN

IDENTIFICATION OF COMMON PROBLEMS,
PRIORITIES AND PROGRAM NEEDS

FOLLOW-UP ACTIVITIES
PROPOSED CITY PLANS OF ACTION
INDIVIDUAL CITY VISITS

PHASE II

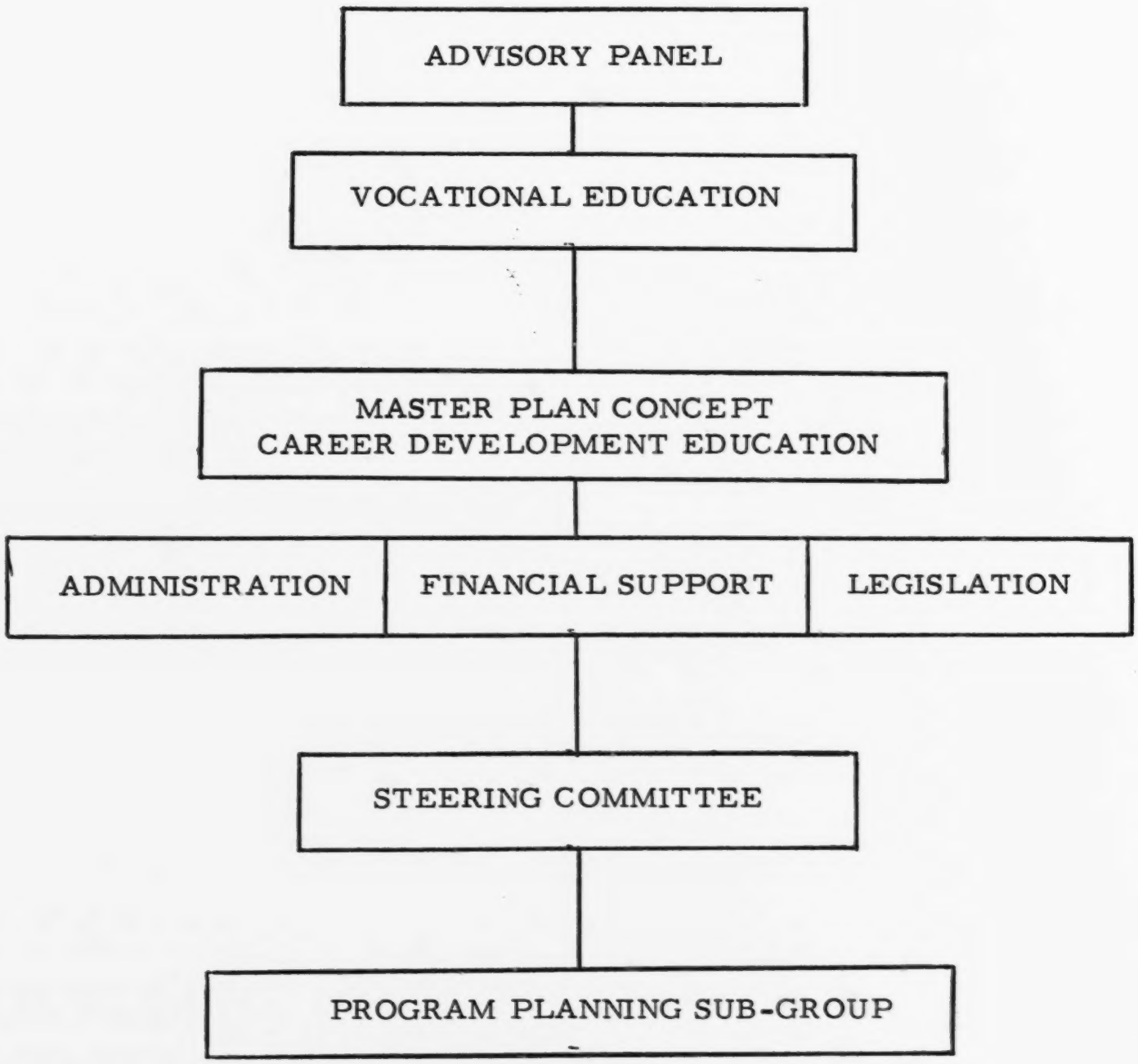
REGIONAL FOLLOW-UP CONFERENCES
PERSONNEL - CURRICULUM

MASTER PLAN CONCEPT
CAREER DEVELOPMENT EDUCATION

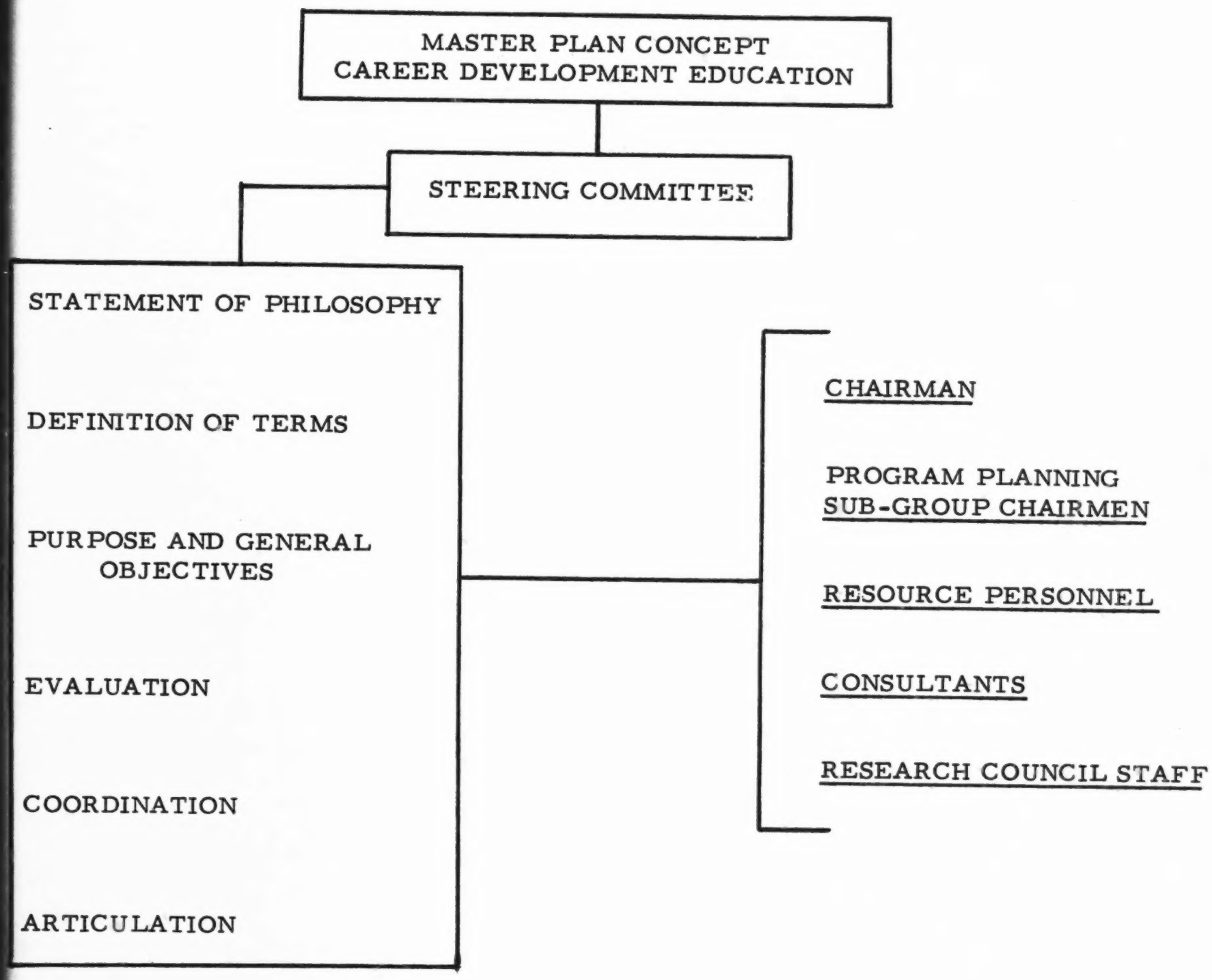
FUNCTIONAL ORGANIZATION
STEERING GROUP AND SUB-GROUP STRUCTURE

IDENTIFICATION OF GROUP ACTIVITIES
DELINEATION OF GROUP OBJECTIVES
PRIORITIES AND APPROACHES

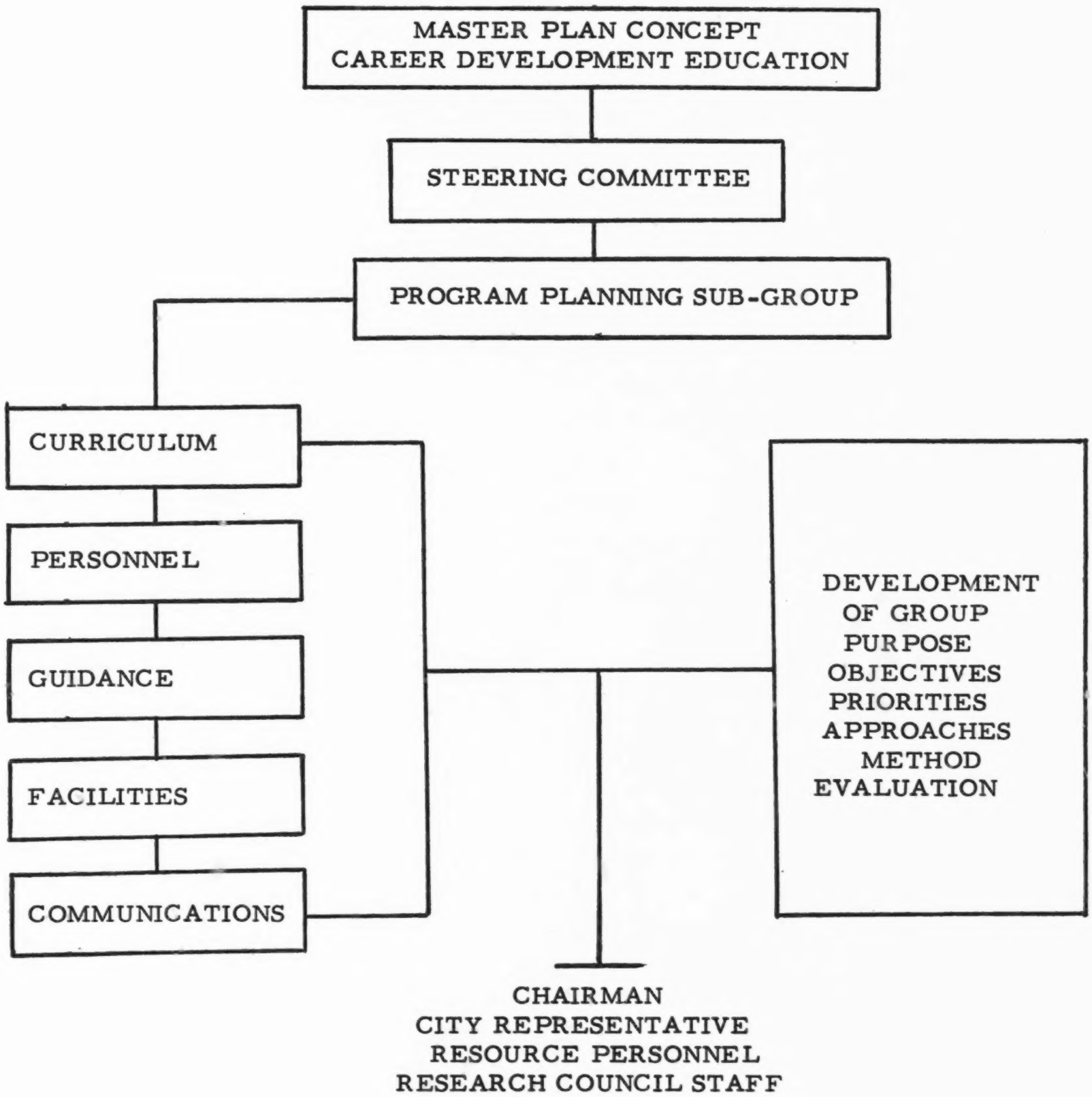
FUNCTIONAL ORGANIZATION



STEERING GROUP ACTIVITIES



PROGRAM PLANNING SUB-GROUP ACTIVITIES



APPENDIX A

AGENDA FOR REGIONAL FOLLOW-UP CONFERENCES

MIDWESTERN REGIONAL FOLLOW-UP CONFERENCE

AGENDA

DATE AND PLACE:

September 16 and 17, 1966

Great Cities Research Council Reference Room
5400 North St. Louis Avenue
Chicago, Illinois 60625

TOPIC

"Vocational Education Teacher Recruitment and Training Project"

GOAL

Development of Phase I - Proposal Format and Draft Copy

FRIDAY, SEPTEMBER 16, 1966

10:00 AM City representatives convene over coffee.
Welcome: Mr. Carl Thornblad
Introduction of participants and Council members: Mr. Donald Brill

10:30 AM Statement of session procedure and review of developments to date: Mr. George Fuka

11:00 AM Review of previously submitted teacher training proposals and statement of current vocational teacher needs. CITY REPRESENTATIVES (15 minutes each)

12:00 noon Lunch Break

1:30 PM Open discussion and suggestions relative to Phase I proposal development. Emphasis will be placed on enumerating details for incorporation into Phase I of the proposal and the identification of rationale to support each detail. This afternoon session will be tape recorded and ideas will be listed on a blackboard for group reaction.
Discussion Leader: Mr. George Fuka

4:00 PM Summary and closing

SATURDAY, SEPTEMBER 17, 1966

9:00 AM Phase I draft composition from group documents
11:00 AM Planning for project submission and follow-up
12:00 noon Luncheon and closing

EASTERN REGIONAL FOLLOW-UP CONFERENCE

AGENDA

DATE:	Wednesday, November 2, 1966
PLACE:	Room 514 131 Livingston Street Brooklyn, New York
TOPIC:	Feasibility of a cooperative action program compatible with a master plan concept.
GOAL:	An acceptable procedure for coordinate action
	SESSION CHAIRMAN: Donald M. Brill
10:00 AM	Background, setting and introductions
10:45 AM	Review of master plan concept: George J. Fuka
12:00 noon	Lunch Break
1:30 PM	Open discussion--DISCUSSION LEADER: George J. Fuka Identification of City Projects
4:00 PM	Adjourn

WESTERN REGIONAL FOLLOW-UP CONFERENCE

AGENDA

SUBJECT: Two-day Curriculum Project Follow-up Meeting

DATE AND PLACE: November 9 and 10, 1966
El Cortez Hotel
San Diego, California

TOPIC: Feasibility of undertaking a cooperative curriculum demonstration project that is compatible with a master plan for career development education.

GOAL: To develop a Curriculum Research Project compatible with the master plan concept.

WEDNESDAY, NOVEMBER 9, 1966

10:00 AM	City representatives convene over coffee. Welcome: Mr. Donald M. Brill, Vocational Coordinator, Research Council Introduction of participants
10:30 AM	Statement of session procedure and review of developments to date. Review of a master plan concept. Discussion Leader: Mr. George Fuka, Research Associate, Research Council
11:00 AM	Open discussion and suggestions relative to feasibility of proposal development. Emphasis will be placed on enumerating details for incorporation into the master plan concept, a curriculum proposal, and the identification of rationale to support it. Ideas will be listed on a blackboard for group discussion.
12:00 noon	Lunch Break
1:30 PM	Reconvene to identify possible approaches to a curriculum project. Suggested formats for above: Los Angeles San Francisco San Diego

THURSDAY, NOVEMBER 10, 1966

9:00 AM	Review and evaluate possible approaches for a cooperative curriculum project and identify individual city involvement. Recommendations by representatives of California's Industry-Education Council and agency representatives. Summary remarks
12:30 PM	Lunch and closing remarks

VT 002 943
Stiles, Philip G., And Others
Potential for Food Handling and Distribution Training in Conneticut.

Conneticut State Dept. of Education, Hartford. Div. of Vocational Education
MF AVAILABLE IN VT-ERIC SET. OEC-5-85-112
Pub Date - Jun67 29p.

*FOOD STORES; *EDUCATIONAL NEEDS; POST SECONDARY EDUCATION; PROGRAM DEVELOPMENT; CURRICULUM DEVELOPMENT; MARKETING; MERCHANDISING; CAREER OPPORTUNITIES; CURRICULUM; STATE SURVEYS; *DISTRIBUTIVE EDUCATION; HIGH SCHOOLS; EMPLOYER ATTITUDES; MANPOWER NEEDS; EMPLOYEE NEEDS; EMPLOYMENT OPPORTUNITIES
CONNECTICUT

"Curriculum in Food Handling and Distribution, A Guide for Experimentation in High School and Post High School Vocational Training" is summarized. See abstract of VT 004 118 (ARM Spring 1969) which is the complete study. (MM)

VT002943

EDO 31587

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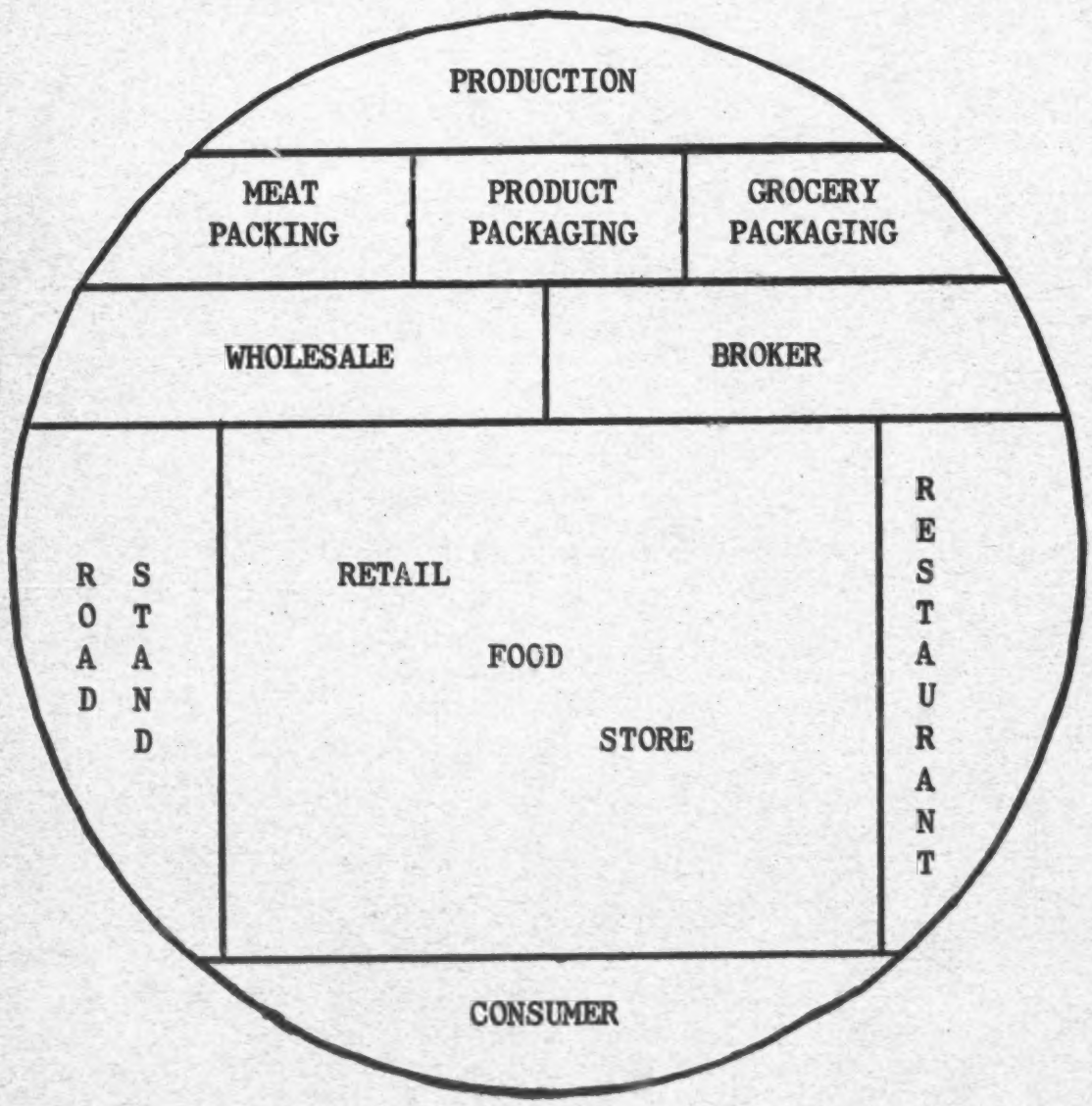
POTENTIAL FOR FOOD HANDLING AND DISTRIBUTION TRAINING IN CONNECTICUT



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POTENTIAL FOR FOOD HANDLING AND DISTRIBUTION TRAINING IN CONNECTICUT .

A Brief Guide for Curriculum Experimentation in Food Handling and Distribution in High School and Post High School Vocational Training

PREPARED BY

Dr. Philip G. Stiles, Associate Professor, College of Agriculture
Dr. W. Howard Martin, Professor, School of Education
Mr. Richard Lalley, Research Assistant, College of Agriculture
University of Connecticut
Storrs, Connecticut 06268

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Name	Representing
Mr. Philip Larkin	The Great Atlantic and Pacific Tea Company
Mr. Robert Collins	Stop & Shop, Incorporated
Mr. Joseph O'Connor	First National Stores, Incorporated
Mr. Peter Quinn	First National Stores, Incorporated
Mr. Fred Yeager	Mott's Supermarkets, Incorporated
Mr. Richard Bozzuto	Bozzuto's, Incorporated
Dr. Philip Masley	Connecticut State Department of Education
Mr. Llewellyn Turner	Connecticut State Department of Education
Mr. Jesse Taft	U.S. Office of Education Northeastern Regional Representative
Dr. Theodore Leed	University of Massachusetts
Prof. Robert L. Bull	University of Delaware
Dr. W. Howard Martin	University of Connecticut
Dr. Philip G. Stiles	University of Connecticut
Miss Ruth Cowles	Connecticut State Department of Education
Mrs. Helen O'Donnell	Connecticut State Department of Education
Mr. Daniel A. Digiulio	Glastonbury High School

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39

FOREWORD

Americans enjoy the most abundant and varied food supply at the lowest relative cost of any people in the world. This high standard of living has been made possible by the work of Land-Grant colleges and universities, vocational programs and other educational efforts.

A glance at the modern food store tells us that a wealth of planning, ingenuity, and skill are necessary to keep today's many food products flowing smoothly into consumer hands. However, little emphasis has been given to education aimed at more effective and efficient distribution of food.

Today, there is a shortage of well-trained people in the food handling and distribution industries. While automation and pre-packaged convenience foods have replaced some traditional skills, new and more demanding positions grow and grow. The industry especially will continue to face an acute shortage of managerial talent--people to fill positions as store managers, supervisors and other administrative jobs.

These people must be well-trained in order to cope with the many problems encountered in food handling and distribution. No longer is on-the-job training of noncareer-oriented high school graduates deemed adequate to carry out these responsibilities effectively.

The food industry is finding that vocational training at high school or post-high school levels is of value to youths entering their employ. It is also advantageous in youths' search for higher starting wages, more attractive positions and their understanding of the job he seeks.

Stability and security are the hallmarks of the food industry. Its opportunities for advancement and growth potential are equal or even superior to many other occupations. Numerous satisfying, well-paid jobs exist at all levels, and the opportunity is great for frequent advancement of well-trained individuals.

Young men and women with an interest in this field should begin to receive training at the high school level and then carry on continually with each new challenge. School and college faculties must meet this obligation with new and updated teacher programs oriented to needs. Improved career opportunities can be developed in this field through coordinated efforts by educational institutions, government agencies and commercial organizations.

E. J. Kersting
Dean
College of Agriculture
The University of Connecticut, Storrs

TABLE OF CONTENTS

	Page
Acknowledgement	iii
Foreword	iv
Introduction	1
Employees in Food Stores	2
Educational Needs of Food Store Personnel	4
Parameters for Vocational Training in Food Handling and Distribution	10
Teacher Requirements	12
School Facilities	14
Occupational Experience	15
Student Selection	16
Interrelationships of Programs	17
Summary of Findings	18
Implications and Recommendations	20

Introduction

Demands for more education, both specialized and general, characterize employment requirements in many industries.[1] Additional education is valued in terms of advancing efficiency. It is also recognized as a principal means by which individuals can attain their economic and social aspirations in a technological world.

The Food Industry including producers, processors, wholesalers, and retailers is the largest industry in America. The retail value of food consumed was $80 billion in 1964, representing 20 percent of personal consumption expenditures.[2]

Employment in food handling and distribution in 1965 included: (1) Food retailing, 1,419,900 and (2) Food wholesaling, 494,600. Approximately 23,600 persons are employed in food handling and distribution in Connecticut.

This study centers on education of employees in one phase of the food industry. It presents data on employment opportunities and educational requirements in food handling and distribution for Connecticut. These data are related to current programs of education in vocational, secondary, and post-secondary schools.

The major purpose of this study was to develop an experimental curriculum guide for training persons at the high school and post-high school levels in food handling and distribution. As a basis for the curriculum guide, secondary purposes of the study were established as follows:

1. To define the needs for vocational programs in food handling and distribution in reference to preemployment and in-service training.

2. To define the level and type of training needed by students and the special preparation needed by teachers and administrators in their programs.

3. To describe and analyze current programs and courses in food handling and distribution.

Data were gathered on a sample basis by personal interviews with food store managers and personnel under their supervision and others whose training and/or experience warranted inclusion. A total of 611 persons were interviewed.

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1 "Doing Their Homework," Barron's, January 2, 1967, page 11.

2 Monthly Labor Review, 1966, 89:6:703, Bureau of Labor Statistics, United States Department of Labor.

Data relative to present and future full-time and part-time employment opportunities in Connecticut were gathered from correspondence with food chain stores and review of research of off-farm agricultural occupations.

Employees in Food Stores

The age of food store personnel interviewed ranged from 19 to 72 with a mean age of 36.6 years. The mean age for managers was 39.5, 50.6 for owner-managers and 28.9 for assistant managers.

Years of formal schooling for all food store personnel averaged 11.5 years; somewhat less than a high school education. Managers and assistant managers averaged 12.1 years while owner-managers averaged 10.5 years formal schooling.

Table 1 -- Average Age and Years Formal Schooling of Food Store Personnel by Job Title

Job Title	Average Age: Years	Average Years Formal Schooling
Managers, Owner-Managers, Assistant Managers	39.6	11.8
Grocery Managers, Assistant Grocery Managers	29.7	12.1
Meat Managers, Assistant Meat Managers	41.5	11.4
Produce Managers, Assistant Produce Managers	37.7	11.3
Bakery, Delicatessan, Frozen Foods or Dairy Managers and Assistant Managers	34.0	11.6
Meat Cutters	36.8	10.4
Clerks, Stockboys, Checkers	31.0	11.4
Cashiers, Bookkeepers	31.2	12.0
Average	36.6	11.5

The two tables that follow deal with levels of education and work experiences of present food store managers. Approximately 80 percent of all managers interviewed in this survey were high school graduates; 27 percent of this same group having pursued higher levels of education.

Table 2 -- Formal Schooling Completed by Food Store Managers.

Job Title	Less Than High School	Some High School	High School Diploma	Some College	College Degree
			Percent of Total		
Food Store Managers	9.7	9.7	53.7	22.6	4.3

Over 88 percent of Connecticut's food store managers were employed on a part-time basis while attending high school. Ninety percent of this total were employed by food stores, the majority as clerks. In line with this finding, food store personnel and teachers voiced strong support in favor of some type of work experience whether it be placement for food training experience before graduation or on-the-job training after graduation.

Analysis of part-time employment characteristics for the 25 managers and owner-managers who continued their formal schooling beyond high school showed that only 26 percent of the total worked part-time while attending post-high school educational institutions, three worked for food stores.

Data presented in Table 3 show that of the managers and owner-managers who did not continue their formal education beyond high school, 52.5 percent followed a general curriculum. Of the managers and owner-managers who continued their education beyond high school, 44 percent followed a college preparatory curriculum.

Table 3 -- High School Curricula of Managers and Owner-Managers.

Curriculum	9 to 12 Years Formal Schooling Percent of Total	12 Years Formal Schooling Percent of Total
General	52.5	4.0
Commercial	16.9	24.0
College Preparatory	13.6	44.0
Business	11.9	20.0
Technical-Agriculture	5.1	8.0
Total	100.0	100.0

Educational Needs of Food Store Personnel

From the firm's viewpoint, volume of sales per worker is an important measure. Education before or after employment, which can improve this efficiency factor, merits consideration. Good wages and opportunities for advancement in employment make it worthwhile for prospective and current employees to make special efforts to attain education. The extent to which these propositions relative to the firm and individual are true for food handling and distribution are not well established. However, the efforts of the industry to develop training materials and programs support the beliefs. Also, both public and private institutions offer programs or materials designed to serve persons who have entered or who are preparing to enter food handling and distribution.

As in other significant enterprises, it seems evident that a variety of educational programs are needed. This variation is needed to serve persons having different levels of ability and aspirations. It is needed in terms of job specialization (i.e. meat cutters vs. cashiers).

The nature of these programs suggest three broad areas of educational needs: (1) knowledge of foods and food products (technical), (2) salesmanship, and (3) marketing and management. In traditional programs of vocational education these three areas generally are found in three or more instructional areas: (1) agricultural or home

economics (biological science) /knowledge/, (2) distributive education /salesmanship/, and (3) business and economics /marketing and management/. It is recognized by vocational educators that this compartmentalization of offerings requires a new look in terms of many new occupations which cut across them.

In lieu of the job analysis approach in developing occupational courses, that is, making an exhaustive list of manipulative and cognitive activities persons perform while working, food store personnel and others were asked to identify and rate subject matter areas functioning in food store management positions. This latter consideration is important with regard to the relative importance of subject matter. Meat handling and cutting for example, would vary, depending upon whether vocational preparation was for meat cutters or food store managers.

An explanation of Table 4 is necessary in order that one may accurately interpret the data. Respondents were asked to indicate what kind of courses or subjects they felt would have been most helpful in their work. Their responses were classified under five subject matter areas, namely, Interpersonal Relations and Communications (communicative skills and human relations); Business and Management (business, bookkeeping and accounting); Commodity Handling and Distribution (marketing, merchandising, and mathematics); Product Knowledge; and other areas.

Table 4 presents a summary of opinions of respondents to the desirability of the five previously defined subject matter areas in their own preparation for food store positions. Sixty-six percent of the total group indicated that courses in commodity handling and distribution would have been helpful. A frequency tally of the 14 percent registered under "other areas" found on-the-job or placement training occurring most often.

Possible course offerings are ranked according to their need in Table 5. The values assigned are averages as indicated by food store employees. The need for specific courses would vary for individuals training for food industry employment other than the retail food store. A graphic illustration of course needs is presented in Figure 1. Those listed on the left side are desirable and those on the right have less need.

Table 4 -- Response by Food Store Personnel Relative to Kinds of Vocational Training That Would Have Been Most Helpful in Their Work.

Job Title	Percent of Total				
	Interpersonal Relations & Communications	Business & Management	Commodity Handling & Distribution	Product Knowledge	Other Areas
Managers, Owner-Managers, Assistant Managers	64.0	56.1	69.3	15.8	12.3
Grocery Managers, Assistant Grocery Managers	61.9	66.7	81.0	9.5	14.3
Meat Managers, Assistant Meat Managers	44.6	42.5	72.3	34.0	23.4
Produce Managers, Assistant Produce Managers	55.0	45.0	60.0	35.0	22.4
Bakery, Delicatessan, Frozen Foods or Dairy Managers and Assistant Managers	33.3	53.3	60.0	13.3	6.7
Meat Cutters	41.3	38.3	58.8	38.5	23.5
Clerks, Stockboys, Checkers	44.6	35.7	58.9	8.9	3.6
Cashiers, Bookkeepers	68.3	45.4	72.9	9.1	4.5
Total	54.2	47.9	66.5	20.6	14.0

Table 5 -- Mean Ranks of Instructional Areas

Course or Work Experience Area	Ranking of Composite Mean Score[a]
Merchandising	4.67
Business Management	4.66
Sanitation	4.63
On-the-Job Training	4.59
Food Retailing	4.55
Food Quality	4.52
Food Identification	4.49
Mathematics	4.43
Marketing	4.37
Meat Handling and Cutting	4.23
Accounting and Bookkeeping	4.22
Salesmanship	4.21
Food Processing	4.12
Public Speaking	4.12
Placement for Food Training Experience	4.00
English	3.81
General Retailing (nonfood)	3.70
Economics	3.49
Psychology	3.34
Sociology	2.82
Secretarial Skills	2.23
Government	2.19
Chemistry	1.54
Physics	1.54

a. Scale: Large Need (5) (4) Moderate Need (3) (2) No Need (1)

Fifty-one food store managers were asked to identify vocational traits that enhance job advancement potential in food stores. One hundred ninety responses were elicited. These responses were classified under 7 major vocational trait headings. Data presented in Table 6 indicate that more managers (78.4 percent of total) chose the "Ability to get along with others" as a desired vocational trait more than any other single trait.

Figure 1: Relative Need for Courses in a Food Handling and Distribution Curriculum.

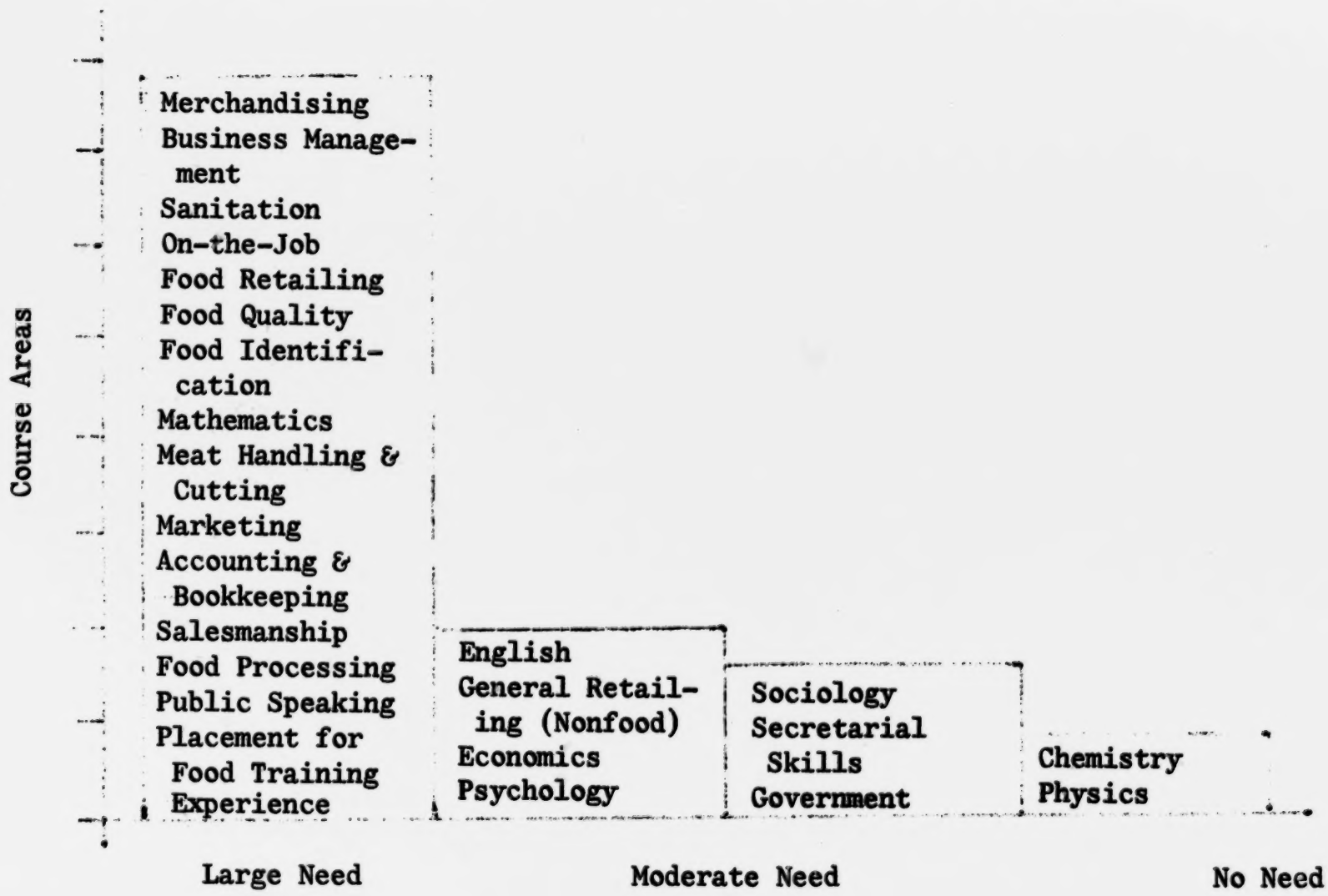

Table 6 -- Desirable Vocational Traits in Order of Importance as Indicated From Responses by Food Store Managers.

Vocational Traits	Number	Percent of Total[a].
Cooperative; able to get along with others; interest in work	40	78.4
Well informed about job	33	64.7
Responsible and Dependable	27	52.9
Does work well; makes few mistakes	25	49.0
Does work quickly and well; does extra work to keep busy	24	47.0
Personal Appearance	21	41.1
Adaptive; able to adjust quickly to new assignments	20	39.2
Total	190	

a. Total number of managers in sample equals 51.

All comments made by food store personnel and teachers were collected and analyzed for relative values. A summary of major opinions follow.

1. The possibility for Connecticut's food stores to serve as training stations where students could apply basic principles and updated techniques learned in the classroom to on-site food store operations problems was met with enthusiasm. Apropos of this finding, it was suggested that areas of training responsibility be defined as between food store and vocational schools in order to facilitate specialization in areas of greatest resourcefulness.

2. Also, astute observations were made regarding the relation between vocational and general education. While most supported the purpose of vocational education (to fit persons for gainful employment), they also indicated that in the final analysis we should be more interested in the <u>someone</u> students become rather than the <u>something</u> they become.[1]

[1] Hoyt, Kenneth. <u>The Challenge of Guidance to Vocational Education</u>. (Address during the 59th Annual Vocational Convention -- December 6 through 11, 1965, at Miami Beach, Florida.

Parameters for Vocational Training in Food Handling and Distribution

Broad parameters exist in vocational training in all the food related industries including food distribution. Job levels range from positions for handicapped and retarded persons to executives and research scientists. No single program can or should try to cover this entire range, but must necessarily limit itself to a specific segment of the whole. This curriculum guide presents the grocery store level positions and the curriculum necessary to train personnel for these positions. The fundamental nature of the program also qualifies students for many wholesale food positions and many staff food positions after experience on the job training are attained. Job experience is an integral part of the vocational training program.

The social aspects of a food store position are of paramount importance. The employee must cater to the customer's needs. Customers demand quality products, honest value, pleasant environment, and reputable personnel. The career employee in addition to constant customer contact, must also supervise other employees and accept supervision from higher company officials. Continual contact with other people thus is the rule for the food store positions.

The food trade demands certain skills that must be developed by employees. Meat cutters and bakers normally practice as apprentices before advancement to responsible positions. Produce, grocery, and frozen food managers must be knowledgeable of their products as well as able merchandisers. Accounting and inventory control skills are also requirements for advancement. Clerks and stock boys must be adept in pricing, shelf stocking, product control and sanitation. All store positions require some training.

Schools establish basic requirements for all of their students. These courses establish a core around which the applied and vocation related courses must build. Food and merchandising courses are dependent upon the background of the teacher and available facilities. New teaching programs may require teacher training. Facilities may be minimal if supplemented by close industry association. Facilities and teacher requirements are further developed in the full publication.

Student potential in a food distribution program must be developed. The tremendous opportunity exists for part-time food store employment at convenient hours during the students free time. However, interest must be nurtured to maintain student demand. This is enhanced by industry encouragement, job advancement, teacher enthusiasm, adequate counseling and parent acceptance. These must be integrated into the total program to insure a high percentage of satisfaction.

The data presented in the preceeding section point to opportunities for youth to enter the food industry, and indicate the preparation which would be helpful. Whether or not a particular school or

college should develop a program is a matter for decision by the governing board. However, many institutions offer some instruction in the areas indicated as important in this study. These institutions may find it desirable to experiment with curriculum which will strengthen their offerings designed specifically to prepare youth for careers in food handling and distribution.

In making a change in curriculum for a school or college it is well to approach the problem on an experimental or trial basis. This requires that the change be initiated in the nature of a pilot program with provisions for evaluating its effectiveness. Space does not permit a full discussion of all factors involved in operating a pilot or experimental program.

A pilot program in occupational education generally should provide the following:

1. Making a survey of local employment and/or training opportunities,

2. Organizing and meeting with an advisory committee which includes representatives from employers and employees,

3. Developing criteria which are to be used in selecting students,

4. Establishing courses of study and curriculum plans including work experience and practical laboratory experience,

5. Selecting teachers and/or coordinators,

6. Establishing policies and procedures for conducting and evaluating the program,

7. Involving faculty and parent to insure understanding of the proposed changes, and

8. Obtaining resources required.

Suggestions offered in the parent publication relate to (1) selection of teachers; (2) development of facilities; (3) selection of students; (4) use of work experience; and, (5) utilization of staff and physical resources. In addition, there is presented sample curriculum materials and an extensive bibliography. However, in this brief form only the more general recommendations of curriculum are presented.

Teacher Requirements

The primary purpose in vocational and post secondary or technical programs is development of occupational competency. To achieve this purpose, instruction is based upon practices and principles found in the occupational areas. Teachers require some knowledge of the occupation which may be gained through varying combinations of experience in the occupational field and formal schooling. Requirements are specified for teachers in public schools by the Connecticut State Board of Education. These regulations are published from time to time under the title of, "Regulations for Teachers Certificates."

Selected requirements for certification in vocational subjects are shown below:[1]

Subject Area/Level	Major Requirements
Vocational Technical	Eight years of experience and high school graduate
Vocational Agriculture	B.S. degree in agriculture and three years of experience
Vocational Home Making	B.S. in home economics
Distributive Education	B.S. degree and one year of experience

The certification regulations (current) apply to employment of teachers in designated instructional areas. As new courses and programs evolve, consideration is given to establishing specific regulations for teacher certification.

In the case of courses and programs in food handling and distribution, some anticipation of requirements is possible. Those courses which have a considerable body of abstract and technical content require a teacher who has mastered it. On the other hand, courses in which primary emphasis of content is on behaviors associated with work in food handling and distribution industries require some background or experience in the industry. Thus, programs of instruction might be expected to need teachers with different talents. The particular talents required will be conditioned, in part, by the courses to be taught or programs to be coordinated, which in turn reflect abilities and knowledge demanded in the occupational area. Regard is necessary also for developing instructors with sound orientation and intellectual base for maximum advancement of students in their careers.

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1 Regulations for Teachers Certificates, Eleventh Edition, 1963, pages 16-18, Connecticut State Department of Education, Hartford, Connecticut.

In selecting or designating coordinators or teachers for courses in food handling and distribution, special consideration should be given to these competencies:

1. Interest in and general knowledge of occupations in the industry.

2. Knowledge and experience in selling -- with emphasis on fundamental human relations.

3. Knowledge of foods; standard varieties, grades and quality control, uses and value.

4. Knowledge and experience in store organization, operation, management and record keeping.

5. Knowledge of economies of marketing with special reference to the industry.

6. Skill and knowledge in meat cutting.

It is obvious that no one teacher is likely to meet all requirements. In post secondary institutions, specialization in course offerings makes possible a high agreement of the instructor's competency and course offerings. In secondary schools it may also be feasible to draw on special competencies of existing staff. These would include business, home economics, and vocational agriculture teachers. The requirements for a coordinator of the program at either level should include special emphasis on areas of food knowledge, salesmanship and store operations.

Beyond the desired personal qualities the "ideal" coordinator for a food handling and distribution program might have the following educational and experience background:

1. The equivalent of two full years of employment in the food industry -- this could include part-time employment. Quality of experience should be considered as well.

2. A Bachelor's Degree, with a major in food science or marketing and professional preparation for teaching.

3. A Master's Degree with additional work in food science marketing economics and related areas and successful teaching experiences.

School Facilities

The physical facilities for teaching food handling and distribution will vary considerably according to local situations, level of training, available space, funding support by local industry and the background of the faculty. In nearly every case, however, needs will change from time to time particularly as the program gorws and develops maturity.

A high school having no facilities for teaching food distribution may do well in designating one classroom to the subject. Where this is the case, space must be considered at a high premium and be utilized to the fullest. Advantage of complementary areas and facilities should be noted and evaluated. The single classroom should not duplicate food facilities in the home economics area, merchandising equipment in distributive education, or chemical ware of the physics and chemistry groups. Rather a spirit of cooperation must exist to the mutual gain of all.

The single classroom facility priority should center around an information reference source. If a good central library exists, text type references may be kept there plus trade journals after they have initially been circulated to interested persons. One area of the room should avail itself to reference material consisting of food marketing books, trade journals and newspapers, company publications, promotional literature and general food trade communications. Students exposed to these daily will make use of them. A second area should consist of a model display window or merchandising case. If a freezer is available it should be included. Frequently the food distribution students can obtain valuable experience in food merchandising and management by operating a concession to other students and staff. Financial returns can be used to support further training aids, outings to local businesses, and training trips to distant urban terminals during vacation periods. The concession need not be physically located in the food distribution classroom, but should have storage there and have management headquarters and accounting there. A portable type cash register will augment this. The center front of the room should have a teacher demonstration table equipped with a sink with hot and cold running water, electrical outlet, gas outlet, stainless steel table, and burner plates. Seating space normal to the classroom should be provided. In addition work tables for student participation are desirable. Storage space must be available for foods and equipment. Promotional display areas can be made up and help stimulate student interest.

A separate demonstration and participation laboratory allows more active student involvement. Each student should have his own bench space of approximately 30 inches minimum width, access to an adjacent sink, and a storage drawer or cabinet. Separate supply areas, equipment areas and refrigeration space can be common to all

users. Frequently local food stores will freely cooperate with the food training program and provide food at a discount for teaching and demonstration purposes. When food is at hand a merchandising area can be real and useful. Sale periods can be established to give students selling experience. Food distribution students can serve as the merchandisers for home economics baked goods, faculty specials and as caterers to sporting events and other social activities. The basic equipment necessary for these activities are display cabinets, refrigeration unit, sales counter, cash unit, record file and supply storage. A heat unit and coffee urn are normal for social activities. Portable units are preferred where no centralized unit exists.

Occupational Experience

Opportunities are abundant in most communities for gaining occupational experience. Minimum age standards prevent the very young from direct store employment. Sixteen is the minimum for most food companies. Students younger than this can seek school activities where food service is a part. School clubs and 4-H projects provide learning experience. As soon as the working age is attained, part-time employment in the retail food store compliments food handling skills. Restaurant work and other food service employment also provides good practical experience. Students should in addition seek opportunities with farms, processing plants, or food delivery companies to broaden their background of food production and marketing. The necessity for financial resources and proximity to the home are major factors in job selection during the school year.

Summer employment for students should be meaningful and broadening. Living accomodations and nearness to the home are again frequently prime factors. They tend to become of less importance as the students mature. Persons over 18 years of age should put the learning experience ahead of other criteria when at all possible in selecting their summer employment. Travel to other areas, states and out of the country is encouraged. Reading and self improvement should also be a part of the summer program. Teachers and guidance counselors should aid students in their summer placement.

The key to providing maximum learning through occupational experience programs is cooperative planning between students, teachers, employers and parents. Through cooperation all viewpoints are respected and mutually adjusted to the satisfaction of all parties concerned.

Student Selection

Student selection and recruitment for a food handling and distribution program should be based upon the student's interest in the field. This interest can be both stimulated and nurtured through direct contact with food distribution organizations and leaders. Part-time job opportunities are abundant in the supermarket. This experience can be the primary interest building media as well as an encouragement to further one's knowledge. The practical knowledge gained from part-time work also builds a confidence base to the industry if the part-time employee is allowed to perform several functions and is encouraged in his work. Teenagers find themselves working with teenagers. Responsible positions are gained as rapidly as the person can handle them. They observe there is plenty of room for advancement with no ceilings other than ability and perserverance.

High schools desiring to build up student enrollment in a food distribution program should work closely with local food markets, brokers, processors and institutional representatives. Part-time work and summer placement with these groups may serve as the initial interest builder. Speakers brought in to discuss their respective fields and career opportunities have limited appeal. Field trips to directly observe many occupations in their actual environment serves a good purpose.

Post high school programs tend to serve larger areas than the local community. Therefore, program promotion and recruitment must be carried out on a higher scale. Career day programs where high school students are brought in to observe the facilities and meet the faculty are usually fairly successful if adequate planning and announcements are accomplished. Most selection and recruitment can be carried out through key contacts which are secondary school teachers, guidance counselors, and food company personnel directors. Scholarships and work incentive plans are a definite aid in recruitment.

The academic standards need not be narrow for either secondary or post secondary student selection. The opportunities are vast and at all levels. The highly intelligent youth can reap major rewards from this vocational program. He need not feel it is terminal nor need his course program be of a terminal nature. Openings for more education will continually exist for those who are qualified. Vocational training is not a deterrent to further formal training. The many employment opportunities tend to inspirit direct application of the training for immediate financial gain. Even when this takes place, formal training should still be sought for the brighter individuals to aid their advancement.

Students of median range intelligence generally are more numerous in the food distribution area than those from higher or lower ranges. This is satisfactory as the greatest number of employment opportunities exist for the middle intelligence group. The lower 25 percentile of students could find menial opportunities but would have difficulty understanding the complexities of food retailing and could not assume positions of responsibility.

In all cases students selected for the program should be of high moral character, honest and possess integrity of action.

Interrelationships of Programs

A food handling and distribution curriculum can function efficiently in coordination with other vocational programs. Some of the units of instruction needed for this program will in many cases be similar to those needed for distributive education, vocational agriculture, science, business and home economics. This interdisciplinary demand both strengthens and broadens all the curricula involved in that it provides greater numbers of students and greater student interest when course work is shared by several areas. In addition facilities can be used more fully and supplies frequently can be made to serve more than one objective.

Vocational agriculture curricula offer several areas basic to food distribution. These frequently include identification of fruit and vegetable varieties and their seasonal availability, meat cutting and grading, poultry and egg grading, quality control and sanitation. Vocational agriculture teachers cooperating in the food distribution program need to be well versed in these areas plus knowledge in bacteriology, food preservation and marketing. Discussions on food production, processing and wholesaling can fit into the agricultural area.

The distributive education area will include units in retailing, store operations, salesmanship, and general merchandising. These units offer the fundamentals needed for food distribution oriented students. Classroom examples and business experience should center around food retailing if food students are handled separately. Lessons in cash register operation, check out skills, record keeping and general management techniques are identical for both food and nonfood retailing.

The science and biology departments should be familiar to the food distribution students. General courses in chemistry, biology and in some cases physics are in demand by students interested in food processing, preservation, inspection and quality control. These

fundamental courses have many applications in understanding food flavor control, sanitation, and public health standards. Since food is subject to metabolic changes and can easily become a public health hazard through misuse or misunderstanding, basic knowledge in these areas is important.

The business department courses in marketing, accounting, and business management will coincide with the food distribution business needs. It is not necessary or even recommended that food students be taught separate courses in these areas. Teachers need not place special emphasis on food retailing but should provide some problems and examples relevant to the food industry and point out areas of uniqueness within the industry.

The home economics department can make a significant contribution in nutrition, food preservation and consumer reactions. Since catering to the consumer's food needs is the major objective in food retailing, the home economics group will have much in common with the food distribution group and should serve as a compliment to each other. Cooperative courses by these two groups also aid in the boy-girl ratio and stimulates more class interest.

Summary of Findings

What Are the Manpower Needs for Food Store Personnel?

1. Six major food chain stores employed 20% of the total Connecticut food store work force in 1966.

2. There were 889 full-time and 3780 part-time openings reported by 6 major Connecticut food store chains in 1966.

Who Are Presently Employed in Food Stores?

1. Personnel identified in this study represented approximately 5% of Connecticut's total full-time food store work force.

2. The age of food store personnel responding to the first interview guide sheet ranged from 19 to 72 with a mean age of 36.6 years.

3. Years of formal schooling for food store personnel responding to the first interview guide sheet averaged 11.5 years. Eighty percent of the managers and owner-managers had the benefit of <u>at least</u> a high school education.

4. Eighty-eight percent of present managers and owner-managers were employed part-time while in high school; the majority having worked in food stores as clerks. Approximately 27 percent of present managers and owner-managers were employed part-time while attending post high school education institutions.

5. The majority of food store managers who continued their education beyond high school followed a business and marketing curriculum.

6. Seventy-six percent of present managers and owner-managers started their career as food store clerks. A greater percentage of post high school graduates started as assistant managers than did high school or grammar school graduates.

What Are the Food Store Job Satisfaction and Career Findings?

1. Ninety-seven percent of the food store personnel voiced satisfaction and enjoyment with their work, and 85.7 percent planned to make careers in the food distribution and grocery field.

2. Approximately 60 percent of food store personnel saw advancement potential for themselves. The greatest single factor that seemed to limit job advancement opportunity was a lack of necessary occupational preparation.

3. Three major factors contributed to job dissatisfaction; namely, (1) long and inconvenient hours, (2) lack of qualified help, and (3) customer-co-worker-employer aggravations.

Educational Needs for Food Store Personnel

1. Food store personnel indicated that work performance was positively related to the level of education of persons under their supervision.

2. Food store managers, other store personnel and teachers associated with the food industry indicated that more than a moderate need existed for food related courses in vocational schools.

3. Persons preparing for entry and ultimate advancement into managerial positions needed a common core of competencies in areas of human relations, mathematics, merchandising, marketing, salesmanship, product knowledge, business management, accounting and bookkeeping.

4. A definite need was cited for placement training and/or on-the-job training for successful preparation entry and advancement in food store occupations.

5. Personnel presently employed in food stores indicated that further education in business management and marketing would be most helpful in their work.

6. Different emphases, both in terms of number and subject of courses, was noted as between courses food store personnel indicated would have been helpful in their work (entry phase primarily) and courses regarded as helpful now (advancement phase primarily). The former emphasized human relations and mathematics competencies. The latter emphasized business management, marketing and merchandising.

7. Relative to vocational traits that enhance job advancement potential, food store managers regarded the "Ability to get along and work with others" as most important. A person "Well informed about his work" was next in line of importance.

Implications and Recommendations

Secondary Education: Most persons entering employment in food stores in the immediate future are likely to have little education beyond the secondary school level. Further, many youth will be employed in food stores on a part-time basis during their high school years. In many large communities, the number of youth involved and numbers of opportunities are sufficient to merit special consideration to developing a curriculum for occupational education in food handling and distribution. Considerable variation in subject matter and organization of such curriculum is possible. Each school involved should seek to determine what may best be done within its situation. This curriculum may be used as a general guide.

Proposed Secondary Curriculum

1. General education experiences should comprise about 75 percent of the program.

2. Part-time employment should be utilized as a required learning experience for which the school would assume some responsibility.

3. Special attention should be given to learning experiences in human relations. This may be accomplished through:

   a. class sessions of students who are employed on a part-time basis;

   b. a unit of work incorporated in a "marketing course," or

   c. a special course of human relations.

4. Experiences should be provided which aid students to acquire a broad knowledge of food products. Teachers of agriculture and home economics may well be involved in giving this instruction.

5. An area of vital importance is distribution or selling. This includes emphasis upon mathematics, merchandising and marketing.

6. In summary a curriculum would include the approximate equivalent of one full year of occupational instruction. This could be spread over at least two school years.

Post Secondary Education: Most persons having education beyond high school are or aspire to be in a managerial capacity. They are likely to be persons with previous employment experience. It is anticipated that an increasing proportion of the supervisory and management positions will be filled by persons having post secondary education. A number of post secondary institutions should find this a worthwhile offering to be developed.

Proposed Post Secondary Curriculum

1. Provision should be made for substantial offerings of a general nature to insure maximum educational advancement of individuals.

2. From 6 - 12 semester hours should be offered in food marketing and merchandising.

3. From 3 - 9 semester hours should be offered in product knowledge, including quality control.

4. From 3 - 6 semester hours should be offered in human relations with special emphasis on supervision.

5. Occupational experience should be required either as a pre-requisite to enrollment or during the period covered.

Adult Education: Consideration should be given to developing offerings for employed store personnel. On the basis of this study first consideration should be given to offerings in management which may enable persons to advance.

Secondary Level
Suggested Curriculum for Experimentation in Food Handling and Distribution

11th Year	Units	12th Year	Units
English	(1)	English	(1)
Physical Education		American History & Government	(1)
Mathematics	(1)	Physical Education	
Electives (Science, bookkeeping, language, economics, business law)		Food Product Knowledge and Quality Standards	(1)
Marketing	(1)	Human Relations and Supervision	($\frac{1}{2}$)
Human Relations and Salesmanship	($\frac{1}{2}$)	Occupational Experience	($\frac{1}{2}$)
Occupational Experience	($\frac{1}{2}$)		

Suggested Post Secondary Curriculum for Experimentation in Food Handling and Distribution

First Semester	Credits	Second Semester	Credits
English	(3)	English	(3)
Mathematics	(3)	Bookkeeping & Accounting	(3)
Food Science (preservation and sanitation)	(4)	Food Science and Nutrition	(4)
Economics	(3)	Food Marketing	(3)
Elective	(3)	Elective	(3)
Physical Education	(0)	Physical Education	(0)
	16	Judging Team Participation	(0)
			16

Third Semester		Fourth Semester	
Oral and Written Communication	(2)	Merchandising	(3)
Human Relations & Salesmanship	(3)	Human Relations & Supervision	(3)
Accounting	(3)	Marketing Information and Research	(4)
Food Quality Standards and Control	(5)	Store Management	(3)
Legal Problems in Food Distribution	(3)	Elective	(3)
	16		16

VT 002 981
What the Employer Looks for in the High School Business Graduate.

Administrative Management Society, Battle Creek, Mich. Kalamazoo Chapter
MF AVAILABLE IN VT-ERIC SET.
Pub Date - 12Apr67 9p.

*EMPLOYMENT PRACTICES; *EMPLOYMENT QUALIFICATIONS; *EMPLOYER ATTITUDES; SURVEYS; *CLERICAL WORKERS; *HIGH SCHOOL GRADUATES

Thirty-six firms responded to a questionnaire concerning their employment practices of high school graduates for office occupations. The results are tabulated on the initial survey form. The questions included: (1) the number of employees normally employed and the frequency of employment of persons who have just graduated from high school as clerks, typists, stenographers, business machine operators, key punch operators, and switchboard operators, (2) minimum acceptable scores for employment tests in typing and shorthand and whether tests were given for dictaphone, arithmetic, manual dexterity, general intelligence, aptitude, spelling, and vocabulary, (3) degree of emphasis schools should place on certain subject matter (4) whether there was a position in business for the below average graduate, and (5) suggestions for preparing better qualified business graduates. Employers indicated that it was common practice to hire recent high school graduates. Opinion was evenly divided regarding a position in business for the below average graduate. Respondents indicated that the below average graduates must start at the lowest level with a generally poor chance for advancement. (PS)

VT002981

EDO 31587

ADMINISTRATIVE MANAGEMENT SOCIETY
BATTLE CREEK - KALAMAZOO CHAPTER

PRESIDENT, KENNETH C. BROWN 1ST VICE PRESIDENT, WILLIAM C. EUANS 2ND VICE PRESIDENT, VICTOR R. ASKEW
SECRETARY, CORLYS B. ELDRIDGE TREASURER, VERNE K. LIVINGSTON

April 12, 1967

APR 24 1967

Dear Participant:

Attached are the results of a survey conducted during the month of February. These results are tabulated on the initial survey forms so you may review the questions which were asked.

Thirty-six firms responded to the questionnaire. The figures in questions #1 and #2 represent the number of companies responding in each category and grouping, with totals to the right. The responses to question #2 from companies employing twenty-six or more people in each category were also reviewed separately. With the exception of one employer in one category only (keypunch operators) these companies indicated it was common practice to hire persons having just graduated from high school.

Since tests and minimum standards varied greatly, an analysis was made only of shorthand and typing tests. For the remaining tests, a notation is made only whether or not a test is given.

Thirty-four companies expressed their opinions in question #4. Two companies did not answer the question since their employee turnover had been nil during the past few years. As in questions #1 and #2, the numbers represent the number of companies responding under each category.

VT 02981

DIRECTORS, IN ADDITION TO THE OFFICERS
MANAGEMENT DEVELOPMENT, JAMES R. HOLLOWAY EDUCATION, DARRELL G. JONES CHAPTER SERVICES, JACK A. MEYER
PERSONNEL, JERRY W. DUKE ADMINISTRATIVE SERVICES, MARJORIE E. WHEATON, SYSTEMS, RAYMOND W. WEST

Opinion was quite evenly divided regarding a position in business for the below average graduate. The respondents were quite unanimous, however, in their opinion that these graduates must start in at the lowest level, with a generally poor chance for advancement.

We hope you find the information enclosed and above of interest to you. This material is being sent to the high school guidance counselors to whom we disseminated this information in a meeting with them last month.

Your comments on this survey would be appreciated. Please direct them to my attention.

Very truly yours,

K. C. Brown

K. C. Brown
President

KCB:lmu
Enclosure

A.M.S. SURVEY RESULTS

A.M.S. SALARY SURVEY

WHAT THE EMPLOYER LOOKS FOR IN THE HIGH SCHOOL BUSINESS GRADUATE

1. How many employees do you normally employ in the following categories?

	1-5	6-25	26-50	Over 50	TOTAL
Clerks	18	9	3	6	36
Typists	16	9	5	5	35
Stenographers	16	11	1	3	31
Business Machines	13	8	1	2	24
Key Punch	12	6	4	0	22
Switchboard	24	2	0	0	26
Other:	[illegible]	6	0	2	14

2. With respect to the requirements of your firm for entry employment, in what job categories do you employ young persons who have just graduated from high school? Please put check marks under the headings which best describe your firm's operating policy.

	Frequency of employment						TOTAL
		Common Practice (1)		Infre-quently (2)		Almost Never (3)	
Clerks	(72%)	26	(22%)	8	(6%)	2	36
Typists	(69%)	24	(20%)	7	(11%)	4	35
Stenographers	(23%)	7	(48%)	15	(29%)	9	31
Business Machines	(21%)	5	(46%)	11	(33%)	8	24
Key Punch	(18%)	4	(50%)	11	(32%)	7	22
Switchboard	(15%)	4	(35%)	9	(50%)	13	26
Other:	(7%)	1	(50%)	7	(43%)	6	14

3. If you test applicants in any of the following areas, please list specific tests, where applicable, and minimum acceptable scores. If you do not specifically employ tests in certain areas, but do have minimum established standards in the areas, please note the standards.

Typing: 40 WPM-8: 45 WPM-5; 50 WPM-7; 55 WPM-1; 60 WPM-1; 65 WPM-2;

No test - 11

Shorthand: Vrbl 70 to 110-5; 80 WPM-9; 100 WPM-1; 120 WPM-1

No test - 15

Dictaphone: No test - 30; Test - 1; No Ans. - 4

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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Arithmetical Reasoning: Test - 20 No test - 16

Manual Dexterity: Test - 6 No test - 30

General Intelligence: Test - 18 No test - 18

Aptitude: Test - 14 No test - 22

Spelling: Test - 15 No test - 21

Vocabulary: Test - 17 No test - 19

Other:

4. From your experience, please indicate by a check mark the degree of emphasis schools should presently place in each of the following areas.

	Sufficient emphasis at present (A)		Needs more emphasis (B)		Needs greatest emphasis (C)	
Reading Comprehension	12	(35%)	16	(47%)	6	(18%)
English grammar	4	(12%)	23	(68%)	7	(20%)
Written composition	11	(32%)	18	(53%)	5	(15%)
Oral expression	14	(41%)	14	(41%)	6	(18%)
Spelling	6	(18%)	12	(35%)	16	(47%)
Vocabulary	9	(26%)	19	(56%)	6	(18%)
Arithmetic-Accuracy	20	(59%)	11	(32%)	3	(9%)
Arithmetic-Speed	24	(71%)	7	(20%)	3	(9%)
Typing-Accuracy	17	(50%)	11	(32%)	6	(18%)
Typing-Speed	19	(56%)	13	(38%)	2	(6%)
Shorthand-Accuracy	20	(59%)	12	(35%)	2	(6%)
Shorthand-Speed	20	(59%)	11	(32%)	3	(9%)
Machine Transcription-Accuracy	27	(79%)	5	(15%)	2	(6%)
Machine Transcription-Speed	25	(73%)	6	(18%)	3	(9%)
Use of Library & Reference material	22	(65%)	9	(26%)	3	(9%)
Bookkeeping	20	(59%)	13	(38%)	1	(3%)
Filing practice	16	(47%)	15	(44%)	3	(9%)
Business machine operation	23	(68%)	8	(23%)	3	(9%)
Office etiquette	15	(44%)	12	(35%)	7	(21%)

YES - 16 NO - 15 No Ans - 5

5. With the emphasis in our schools today on the physical sciences, many businessmen and educators believe (rightly or wrongly) that in a great many cases, below average students are encouraged to take business courses only because they cannot qualify in the sciences. In your own business, do you believe there is a place for graduates who are below average intellectually? _____ If yes, what positions are available, and what are their chances for advancement? Positions available: Typing - 2, Clerks-16 Chances for advancement: Good - 4, Poor - 9, Depends on individual - 3

6. Please offer any suggestions which you believe would help our schools to prepare better qualified business graduates.

See attachment for suggestions

Would you please indicate the type of business you represent:

Advertisement Printing	1	Government	6
Banking	2	Public Utility	1
Insurance	3	Retail Sales	2
Educational	3	Transportation	0
Manufacturing	13	Other	5

#6

1. Place greatest emphasis on beginning skills.
2. Too few typists with shorthand ability.
3. Students need training in filling out job applications and in how to be interviewed.
4. More training in English Comp., grammar, spelling and math.
5. More emphasis on basics - english, math, etc.
6. Less business theory - more practical application.
7. Need greater motivation to give fair day's work, seek things to do, and expand knowledge. Taught value of neatness, accuracy, and honesty.
8. Greater emphasis on accuracy rather than speed.
9. Interest more young men in business field.
10. Schools should make greater use of business people to talk to students.
11. Encourage more bright people to stay with business courses.
12. More emphasis on job loyalty, self-confidence and pride of workmanship.
13. More emphasis in training students to work and communicate with others.
14. More communication between educators and employers.
15. Add key punch training to business courses.
16. Encourage more students to seek business training instead of college prep courses.
17. More participation in co-op programs prior to graduation.
18. More emphasis on english grammar.
19. More pride in work.
20. Better grooming.
21. More emphasis on quality of workmanship.
22. More training in basics of problem solving.

VT 003 392
Maley, Donald
Contemporary Methods of Teaching Industrial Arts. Bulletin Number 8.

American Industrial Arts Association, Washington, D.C.
MF AVAILABLE IN VT-ERIC SET.
American Industrial Arts Association, 1201 16th St., N.W., Washington D.C. 20036 ($.50).
Pub Date - Jan65 18p.

*EDUCATIONAL METHODS; *INDUSTRIAL ARTS; *EDUCATIONAL PHILOSOPHY; *EDUCATIONAL OBJECTIVES

Industrial arts as an integral part of American education must plan an important role in these individual and national goals: (1) to guard the rights of the individual, (2) to provide for his fullfillment, (3) to enable him to achieve the promise that is in him, (4) to help him be worthy of a free society, and (5) to develop his capacity for strengthening a free society. The industrial arts teacher must examine the nature of his methodology to see if it educates for autocracy or democracy. Educational experiences will define the kinds of graduates and the kind of society for tomorrow. Methodology, content, and purposes have too often been separated for the sake of ease, convenience, and lack of foresight into their relatedness. Emphasis has been on the elements of a strong content which deals with programs, products, processes, occupations, and contributions of industry. The primary interest should be on the development of people. This emphasis on people would neccessitate a closer look at qualities of future citizens as well as some understanding of the changing society. Industrial arts can educate for flexibility that is needed. Its methodology can emphasize the individual, inquiry, an organismic psychology, a zest for learning spiral reinforcement and teachings as a creative art with a scientific base. Industrial arts methodology must seek its roots in the psychology, the sociology, and the technology of the age in which it operates. It will be contemporary to the degree that the profession moves from the mechanistic teaching approach to an approach that puts teaching in the realm of challenge and inquiry for both teacher and student. (EM)

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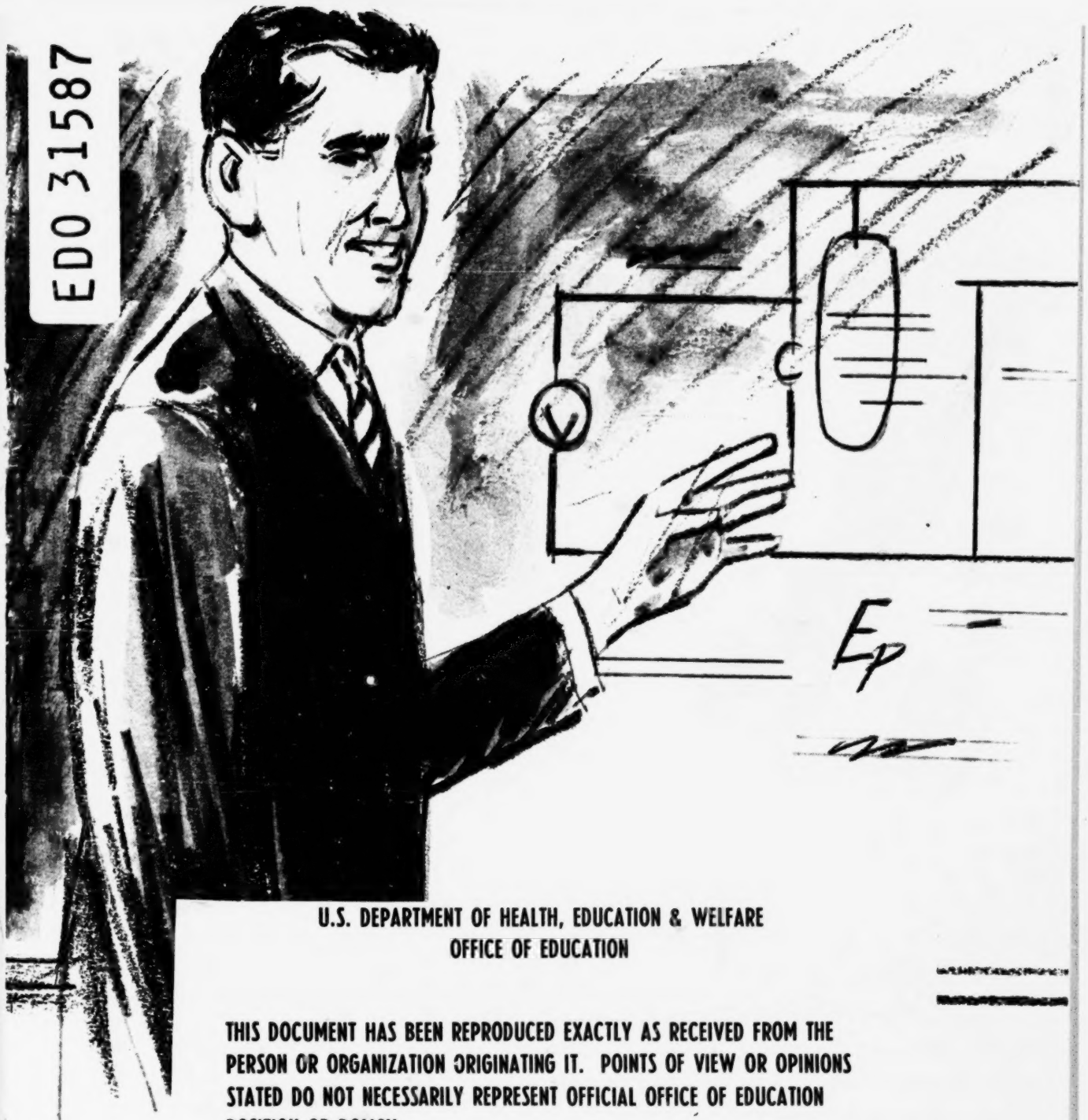

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CONTEMPORARY

METHODS OF TEACHING INDUSTRIAL ARTS

VT003392

Dr. Donald Maley,
author of this bulletin,
is head of the Department
of Industrial Arts Education
for the University of Maryland,
College Park, Md.

N CONSIDERING contemporary methods of teaching industrial arts, let us establish a series of guides that will in some cases appear rather elementary, while others might give rise to some serious thought. As a point of departure one might begin to examine the nature of "contemporary methods."

What is the meaning of the words "contemporary methods?" What do these words imply? Do they mean methods that have just been established, or methods that appear to be presently popular? Rather than debate the issue of what is new or what is not new, we would like to place the discussion of contemporary methods in the matrix of pupil-educational activities, the role of industrial arts in American education, and, further, the role of American education in the contemporary culture. If one is to develop a workable concept of contemporary methodology, there must be a deep understanding of the functions and purposes of the system or society in which it exists.

The publication *Goals for Americans* contains in its introduction the following statement: "The paramount goal of the United States was set forth long ago. It is to guard the rights of the individual, to ensure his development, and to enlarge his opportunity."[4]*

As contemporary as these ideals may seem, they may be found set forth in the Declaration of Independence as adopted by the Continental Congress on July 4, 1776.

* For references, see the last page of the bulletin.

John W. Gardner in his discussion of "National Goals in Education" has stated:

> . . . Our deepest convictions impel us to foster individual fulfillment. We wish each one to achieve the promise that is in him. We wish each one to be worthy of a free society, and capable of strengthening a free society.
>
> Education is essential not only to individual fulfillment but to the vitality of our national life.[4]

There again we see emphasized the words—individual fulfillment—to achieve the promise that is in him—to be worthy of a free society—and the individual's capability of strengthening a free society.

We are confident that there is no disputing the efficacy, the dignity, and the inherent appropriateness of these goals for the citizen of today or tomorrow. The great points of differences that may arise among us, however, will surely come in the interpretation of the meaning of these lofty ideals, and, secondly, in how we set about to achieve the objectives so stated.

You may be concerned by now as to when we are going to talk about "contemporary methods for industrial arts." Also, we are adventuresome enough to speculate that each of you has a firm conviction that industrial arts deserves a prominent place in American education.

It is for this very reason that we have introduced this topic as we have—in order that we might make our first and perhaps most important point. Industrial arts as an integral part of American education must play an important role in the above mentioned individual and national goals—

To guard the rights of the individual.
To provide for individual fulfillment.
To achieve the promise that is in him.
To be worthy of a free society.
To aid in the individual's capacity of
strengthening a free society.

Now, we are not certain as to how some will translate that into tie racks, bread boards, pump lamps, globe value sections, twisted letter openers, printed name cards, take-home projects, and display case filling. With tradition as it is, however, some will try, and some will be encouraged to try.

The real significance of our first point is to underline the need for the industrial arts teachers, supervisors, and teacher educators to provide a form of content and methodology that is capable of

providing for individual fulfillment and a strengthening of our free society.

A further elaboration of this point deals with the idea that an educational system with sufficient support can develop the kinds of people and the kinds of behavior it wants. This fact is quite obvious as one views the effects of education as revealed in the Japanese, Italian, and German people of the period leading up to World War II. This fact is obvious today in the influence of education in Russia and other similar countries.

But, what about the American educational product? It too can be, and certainly will be, largely affected by the methodology used in our schools. Democracy requires a people capable of making decisions, capable of exerting the individual franchise, capable of making selections, and capable of solving problems. Furthermore, it requires a citizenry capable of leadership, followership, initiative, and inquiry.

It is here where the industrial arts teacher must examine the nature of his methodology. Does it educate for autocracy or does it educate for democracy? What kind of a society does one educate for when the decisions are entirely in the hands of the teacher—the items to be made, the material and tools to use, the finishes to be applied, etc? Even the procedures are neatly prescribed for the student! What kind of a society does one educate for where choice and leadership are strictly teacher functions? Leading, choosing, inquiring, problem solving, initiating, creating, and following are outcomes of educational programs where the methodology has been established on the American ideal, and the outcomes are based upon the needs of a citizen in a democracy. Educational experiences that boys and girls have in these self-realizing activities will, in a large measure, define the kinds of products from our schools, and the kind of society we will have tomorrow.

Our second major point ties in closely with the previous statement that linked content and methodology in the common purposes above. **It is almost impossible to consider methodology without considering content as well as purposes.** Too often we have been guilty of isolating each of these items for the sake of ease, convenience, and lack of foresight into their relatedness.

Industrial arts as a phase of general education has a strong body of content rooted in one of the most obvious and dynamic characteristics of the age—**industry.** The elements of this strong

content deal with the **problems, products, processes, occupations, and contributions of industry.** These elements as found in the definition of industrial arts focus rather sharply on the content with which to be dealt. The big unanswered questions remain in the area of how narrow or how broad do we deal with these elements? Are they just words put together to enable the student with a fair memory to pass his industrial arts theory courses? Few other areas of the school have such an interesting and dynamic content. The teacher's and pupil's resources in this content area are limitless, and the range of pupil experiences likewise is limitless. However, narrow concepts and inadequate backgrounds have not permitted many teachers to move beyond a mere token of content development at any level.

Coupled with this strong area of content is a more subtle and more important obligation in **the development of people.** Here again is a case of misdirected emphasis. The profession has spent years of preparation and operation focusing an undue amount of attention on things with too little **emphasis on people.**

As another guide post to contemporary methods of teaching industrial arts we would like to suggest that industry—its products, processes, etc.—constitute the content, but that we should be primarily interested in the development of people.

Industrial Arts

Content and Purpose

The Development of the Individual in terms of:	*The Interpretation of Industry in terms of:*
Products	his rights
Processes	his fulfillment
Problems	his promise
Occupations	his worth to a free society
Contributions	his strengthening of a free society

The Individual
as a
maximum contributor to a free society

The industrial arts profession at all levels would do well to reexamine its direction and activities in order that there be a rebirth of thinking about this primary and often-neglected responsibility. If you seek to quarrel with this point, we merely ask you to make a quick survey of the literature in the journals associated with industrial arts. This literature is largely "thing" centered rather than "people" centered. The emphasis is in the wrong direction. Industrial arts is teaching—not constructing, not manufacturing, and not the embellishing the crafts.

This emphasis on people would necessitate a closer look at some of the qualities that will be needed in the future citizen as well as some understanding of the changing society for which we educate.

Margaret Mead, in an article appearing in the October, 1959, issue of the *NEA Journal*, summarized the pace of modern man as follows: "No one will live his life in the world into which he was born and no one will die in the world in which he worked in his maturity."

It is this challenge of change that educators must face in the development of content and methodology. Further indications of change in our immediate past should give grave concern for the nature of contemporary methodology in industrial arts. Manufacturing employed 1,000,000 fewer production workers last year than six years ago, although production has gone up 20 per cent. Nearly two thirds of the new jobs added to the economy in the past five years has been in the state and local government, with most of those in teaching.

> Employment of professional and technical workers increased by 47 percent between 1950 and 1960—a rate of growth more than three times the average of all occupational groups.
>
> . . . . In 1956, for the first time in our history, professional, managerial, clerical, and sales employees outnumbered employees in manual occupations.
>
> Eight million men and women—about one out of every ten who did any work in 1961-changed jobs during the year.
>
> Of the 159 million persons 5 years old and over in 1960, 75 million had changed residences since 1955. Fourteen million, or about one-fifth of the movers, were living in a different state than 5 years before.[5]

These are just a few of the societal factors of production

improvement, population mobility, job changes, and employment structure with which the individual in this society must be prepared to cope. In addition to the above, there is the tremendous explosion of knowledge that has been created by research, exploration, and an increased emphasis on scholarship. The facts of yesteryear are in many instances overruled by the improved findings and data of today.

What then is the nature of educational content and methodology in any area of the school in an era of such change and dynamics? Edgar Dale, in an article titled "Education for Flexibility," has offered some interesting and insightful comments on this matter.[1]

> . . . . The world of tomorrow needs the flexible man, the intelligently mobile man, the man who can land on his feet when his job becomes technologically obsolescent.
>
> To educate for flexibility we must distinguish between training and education. To train is to emphasize fixed responses, to stress immediate goals which often have a low ceiling of possible growth. To educate, however, is to foster limitless growth, life-long learning.

The preceding comments should indeed cause serious thought for the development of contemporary methods. Are the methods of teaching industrial arts instruments of training or education? Training or education is not just a matter of what is taught, but is more closely aligned with how the subject is taught. The facility in thinking, inquiring, investigating, analyzing, relating, and challenging have long-range potential and are a vast departure from the repetition of the teacher's demonstrations just to accomplish a job or the parroting of answers to pass a test. Teaching industrial arts can be either training or education and in many instances, methodology is the contributing factor. In addition to how industrial arts is taught is the ever-present problem of what is taught. Both of these facets of questions must be faced in a new dimension of thought if the time and energies of both teachers and students are not to be divested in the realm of educational and societal obsolescence. This point is highlighted and put into perspective by Gardner in a recent article appearing in *Think*.[2]

> If we indoctrinate young people in an elaborate set of fixed beliefs, we are ensuring their early obsolescence. The alternative is to develop skills and habits of mind

which will be the instruments of continuous change and growth on the part of the individual. Then we will have fashioned a system that provides for its own continuous renewal. (This suggests a standard in terms of which we may judge the effectiveness of all education—and so judged, much education today is monumentally ineffective!)

The implications for Gardner's comments are obvious. The emphasis is in the direction of the kinds of skills and habits of mind that can be useful in promoting the continuous change and growth on the part of the individual.

And now you may be concerned about the role of industrial arts in such a system. How can its methodology contribute to the future citizenry? What changes in procedures, programs, and teacher education must we learn to accept and to study with sincerity and fortitude?

Some excellent guide posts have been suggested by Sands in a speech entitled "Curriculum Decisions for the Sixties."[3]

"It is possible that in the next decade we should consider moving in the following directions:

From	*To*
1. The group	The individual
2. Memory	Inquiry
3. Stimulus-Response Psychology	Organismic psychology
	Zest for learning
4. Spiritless climate	Spiral reinforcement
6. Repetition	Teaching as a creative art with a scientific base"
14. Teaching as telling	

We would like to add a further item to this list and it would involve a movement from confined, limited, specified content and requirements to a concept of limitless content and requirement.

The above emphasis upon the individual, upon inquiry, an organismic psychology, a zest for learning and spiral reinforcement are all well within the sphere of activity and potential for the industrial arts teacher. The future of industrial arts may well depend upon the degree to which its methodology is able to contribute to the individual through inquiry, etc., as outlined above by Sands. No other teacher in the school has a richer and more natural environment for such procedures.

The item dealing with "teaching as a creative art" has special appeal to teacher educators, and we would like to emphasize that

the whole area of methodology must get a re-evaluation in terms of its psychological and sociological appropriateness.

The study of methodology can not be in terms of prescriptions, tested projects, fixed procedures, and a nostalgic anchoring to tradition. Teaching as an art and teaching as a profession must be reinforced in the minds of those who will teach tomorrow. It is here where teacher education and in-service education in industrial arts can make significant gains if there is the willingness to make the step.

One imperative need that appears to stand out in the preparation of teachers is to develop teachers with the inquisitiveness of a child, an unending imagination, and a resolve for perfection in teaching that would compare favorably with the desire for perfection exhibited by Van Cliburn, Jascha Heifetz, Michelangelo, and Cellini. Let us develop teachers with the pride of craftsmanship in teaching that one finds in the great stonecutters, sculptors, painters, and musicians.

But even beyond these, let us develop teachers capable of designing experiences to achieve the goals established for education. The industrial arts college classes that deal with the design of projects are numerous. The industrial arts teacher in particular is drilled in the rudiments of project design and the procedures involved.

But have you ever heard of a class specifically dedicated to the design of educational experiences? This is fundamentally the job the teacher will eventually perform.

The fulfillment of the greatness in teaching and the fullness of satisfaction from teaching can only be achieved as the teacher explores, experiments, tests, and evaluates the process of teaching as an art of high professional calling. This idea is contrasted by the teacher who wants a course of study given to him, and has learned a fixed set of techniques, procedures, and projects to apply in all situations.

By way of analogy let us depart from the task of teacher preparation and assume we are in the business of training or educating sculptors, painters, or pianists. Would it be proper to spend a greater part of our curriculum theory to the development of hammers, chisels, and gauges, or paint brushes, pallets, and easels? Or in the case of the pianist, would we devote a major share of the curriculum time to the making of pianos, metronomes, or benches?

No, these are simply the "tools" of the sculptor, the painter, or

the pianists. The objective has not been to develop tool makers; it has been to develop people capable of conceiving in marble, clay or metal, the dimensional configuration expressive of the artist's mind and will.

Have we not devoted a great deal of time in the curriculum, and an equal or greater time and space in the "professional" literature on the business of tool making? Just ask the average industrial arts teacher or supervisor whether he would like to have an inservice course devoted to "tested" projects ("tools"), or an inservice course devoted to the principles and factors influencing learning, or a series of meetings devoted to technological changes.

The immediate response is that we must have something "practical." This narrow concept of practicality has virtually led the profession into a position of impracticality in an age of lunar probes, exotic metals, laser light, computers, and the marvels of modern technology. Industrial arts no longer can depend upon the collector of projects ("tested" or otherwise) to deal with the contemporary needs of man.

Let us more clearly examine what is "practical" for the teacher of industrial arts, and let us again devote our efforts toward the development of teachers of mankind at all levels. In essence, we would again like to challenge you to find or to think in terms of teacher education classes or inservice development programs specifically dedicated to the design of educational experiences.

And now in closing, let us say that this presentation has not attempted to present a cookbook, a series of orderly procedures, a list of tested projects, or a compilation of canned experiences to be taken and followed with diligence or vigor. Instead, we have tried to indicate some contemporary societal factors that the developers or users of methodology must take into account. We have tried to point out some trends and directions educational thought is taking. And above all, we have tried to induce the profession to give greater concern for the progress, movements, and dynamics of the society in which its methodology must function.

The role of industrial arts is highly dependent upon its methodology. The outcomes of its work are surely dependent upon its procedures. The richness and vitality of the source of industrial arts content is a factor of great personal and national importance. What is really needed is a re-evaluation of our teaching processes, and a genuine commitment to the education of people. When this is accomplished, the prestige and contribution of industrial

arts will assume a position of significance in any modern society.

This last point is brought into focus for industrial arts by a statement made by Vernon Anderson, dean of the college of education at the University of Maryland:

> At times I hear a teacher of one of the specialized fields virtually apologize for the fact that his subject does not appeal to the intellect, in this day of stress on intellectual attainment. Scholarship does not reside in a subject. The study of a subject becomes alive, an adventure in research, and experience in discovery, a scholarly pursuit, if the teacher has the insight and understanding to make it so. Industries have elaborate research departments. Industrial processes become more complicated, more advanced, as technological and scientific advances are made. There is every reason why industrial arts, as well as any subject, should be made an adventure.
>
> I would hope that the time will come when there are no "lower" or "upper" class subjects in the minds of students and educators. I would hope, too, that none of us will ever apologize for what we teach or depend upon some artificial "status" that it holds in the world today to give it respectability. For we who teach these subjects—industrial arts, social studies, mathematics, education—can give them the respectability they deserve, the rigor inherent in any field of investigation, the exciting stimulation that comes from an experience in discovery.

The challenge to make industrial arts an experience in discovery, an experience in inquiry, an experience aimed at the maximum fulfillment of people, capable of assuming their duties and responsibilities in a free society, is in reality the challenge of thought and action for industrial arts in the years ahead. Industrial arts methodology must seek its roots in the psychology, the sociology, and the technology of the age in which it operates. Contemporary methodology in industrial arts will in a large measure be contemporary to the degree that the profession moves from a mechanistic teaching approach to an approach that puts teaching in the realm of challenge and inquiry for both teacher and student.

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BULLETIN Number 8

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VT 003 520
Arnold, Joseph P.
A Study of Recommendations for Technical Education Curricula.

Purdue Univ., Lafayette, Ind.
MF AVAILABLE IN VT-ERIC SET.
Pub Date - 65 15p.

*CURRICULUM RESEARCH; *TECHNICAL EDUCATION; *EDUCATIONAL NEEDS; SUBPROFESSIONALS; JOB SKILLS; *CORE CURRICULUM; ADMINISTRATIVE PERSONNEL; EMPLOYER ATTITUDES; EMPLOYEE ATTITUDES; MANUFACTURING INDUSTRY

"A Study of Recommendations for Technical Education Curricula" is summarized. See abstract VT 002 464 (ARM Summer 1969) which is the complete study. (HC)

VT003 520

EDO 31587

5-8371

FINAL REPORT
SUMMARY

Title: A STUDY OF RECOMMENDATIONS FOR TECHNICAL EDUCATION CURRICULA

Investigator: Joseph P. Arnold

Institution: Purdue University
Lafayette, Indiana

Project Number: S-196
OE-6-10-007

Duration: July 1, 1965 to December 31, 1965

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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VT003520

BACKGROUND

Established curricular guidelines in technical education are lacking, a situation which has occurred during a time of acknowledged shortages of qualified technical personnel, both in established and in emerging occupational areas. The correspondingly different philosophies, resources, and internal structures of diverse types of institutions are in many cases providing industry essentially with variations of the same product--the technician. Within this varied ideational and organizational framework lies a basic need for recognizing, identifying, and relating the technicians' functions in industry to the curricula which would best assure them of occupational competence.

A great deal of the significance of this study to education lies in the identification of attitudes of technically qualified management personnel toward post high school technical curricula. These respondents (a) have direct responsibility for job performance of the technical personnel, (b) have some technical background themselves, and (c) are assumed to have a higher degree of knowledge and concern for company objectives and policies in comparison with the technicians themselves.

OBJECTIVES

The purposes for which this study was conducted are:

(1) Compare assessments made by management toward technical curricula content with assessments made by technical personnel themselves.

(2) Isolate and analyze selected variables and measure their relationship to curricula recommendations.

(3) Establish and assess degree of relationship between level of authority of management and generality of recommendations for

curricula content.

(4) Identify a core of courses which management agrees is desirable for most post high school technical programs.

(5) Test hypotheses that management will include more kinds of course content in their recommendations compared with recommendations of technicians.

PROCEDURES

The numbered paragraphs in this section separate and describe the major definitions, instruments and procedures which were fundamental to the conduct of the study.

1. Technicians were used as the criterion group of respondents in this study; therefore, a definition was needed which would serve to distinguish them from skilled operators, craftsmen, and other workers, as well as from professional and other semiprofessional occupations. The definition selected appeared to include essentially all the desired types of workers in the manufacturing establishments in the sample. Technician was defined as follows:

> The engineering or scientific technician is usually employed in (1) research, design, or development; (2) production, operation, or control; (3) installation, maintenance, or sales. When serving in the first of these functional categories, he usually follows a course prescribed by a scientist or engineer but (may or) may not work closely under his direction. When active in the third category, he is frequently performing a task that would otherwise have to be done by an engineer.
>
> In executing his function, the scientific or engineering technician is required to use a high degree of rational thinking and to employ post-secondary-school mathematics and principles of physical and natural science. He thereby assumes the more routine engineering functions necessary in a growing technologically based economy. He must effectively communicate scientific

or engineering ideas mathematically, graphically, and linguistically.[1]

Persons who had attained the baccalaureate and who were employed as technicians were excluded from the study as technicians.

2. Management and/or supervisory personnel also were utilized as respondents. Management is defined as describing those employees in positions within three steps of authority above and responsible for the work of at least one technician. Formal company organizational structure was not used as the total pattern for this identification, but rather responsibility for the work of one or more technicians was the prime criterion. Levels of management refers merely to the number of steps of authority removed from a given technician's job.

3. The initial portion of the sample of firms was randomly selected from the universe of manufacturing establishments in Illinois, as listed by the Illinois State Employment Service. 500 firms were so identified for possible participation in Project 2048* (Cooperative Research Branch, U.S.O.E., completed December, 1964). 40 of the larger firms in the 2048 sample were utilized in furnishing respondents for the writer's doctoral dissertation, 39 of which were used in this study (S-196). 13 additional firms from the same universe were added in July, 1965 to produce a total of 52 establishments, each of which employed 200 or more persons, and each of which supplied two, three, or four respondents for this study.

Participation by level of respondent was as follows: 52 technicians, 52 Management one, 46 Management two, and 18 Management three. Of

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[1]Proposed by President's Committee on Scientists and Engineers

*The investigator was employed as a research associate on the Project 2048 staff, University of Illinois, Urbana.

the listed numbers, data from 39 of the technician respondents were used in both Projects 2048 and S-196, but the remaining 129 respondents were in no way connected to Project 2048.

The firms identified after July 1, 1965 were selected from product manufacturing classifications which would improve the sample's representativeness to manufacturing firms in Illinois as distributed in census manufacturing classifications.

4. An interview schedule and a curriculum deck were the two instruments utilized in this study. The interview form was closely structured and designed for numerically coded responses. Recorded were: age of respondent, manufacturing classification of employing firm, educational background, information on current job, time with present company, and data which identify each management respondent's working relationship to the technician respondent from the same firm.

Each technician and each management respondent were interviewed and all responses were recorded by the interviewer.

The curriculum deck was comprised of 99 3 x 5 cards which contained essentially all subjects, or course content, which might be considered related to technician job performance. The deck was designed for use in Project 2048 while the investigator of this project was employed on its staff.

Each technician (one from each firm) sorted the deck into three stacks in terms of relatedness to his own job; viz: related, somewhat related, and unrelated. Each management respondent sorted the cards similarly, i.e.: into three stacks of relatedness in terms of the job of the technician in the same firm. Hence, there were as many as

four sets of responses to each technician job; (1) those of the technician, (2) those of his direct supervisor, (3) those of a second level of supervision, and (4) those of his department head, chief engineer, or other person whose functions were three steps removed from the technician but who still maintained responsibility for the technician's work. Thus, one technician and one, two, or three management respondents (from each firm) participated. In the remainder of this summary the four levels of respondents will be referred to as T, M_1, M_2, and M_3.

5. Actually two types of data were procured. A rather limited body of descriptive data was obtained which was used primarily to validate the levels structure established for the study. Experimental data were comprised of responses to the curriculum deck; these data were utilized in analyses and/or comparisons of curricular recommendations and for establishment of the cores of recommendations as described in the objectives.

6. A system of job families was established for the classification of respondents in which 46 of the 52 technician jobs in the study had respondents (moving upward only through M_2). Classifications and number of technicians in each are: Electro-Mechanical, 8; Mechanical, 21; Chem-Mechanical, 7; Chemical, 5; and Chemical-Foods, 4. It must be remembered that three respondents (T, M_1 and M_2) contributed data to each job family classification. A total of 45 is indicated because no analysis was performed for the Electrical family; it had only one technician respondent.

7. A general core of curricular recommendations (as contained on the cards) was identified as agreed upon by respondents of all five job families. Individual cores by job family were then identified. Each individual core was intended to contain the more differentiated content for a given job family and was considered as above and in addition to the general core.

Selection of cards for the general core was based on a scoring system of three points for each related response, two for each somewhat related, and one for each unrelated. The mean score for each card was then calculated for each group of respondents (T, M_1, and M_2). If any one of the three groups (across all five job families) rated the card 2.0 or above, the card was included in the general core. A parallel procedure was used for selection of cards for each individual core, but it utilized only those respondents who were concerned with a technician in that job family for which the core was being established. These procedures essentially allowed any group of respondents, T, M_1, or M_2, to identify a card for placement in a core. M_3 respondents were omitted from the core selections because of their limitation to only 18 technician respondents.

8. The .05 significance level was considered as minimal in all portions of the analysis.

One-way analysis of variance was used for multiple comparisons of mean responses for the three levels of respondents (T, M_1 and M_2), the purpose of which was to compare their relative contributions to each of the cores. When significant differences were found, Newman-Keuls

procedures were used for establishing which means were significantly different.

Kruskal-Wallis one way analysis of variance was used in several portions of the analysis. Groups of respondents T, M_1, M_2, and M_3 were compared on age, salary, and other characteristics. It was also used for comparisons of management and technician responses to the card sort.

Rank difference correlation was used to assess for relationships between card sort ranks of Project 2048 technicians and each of the four groups of respondents in this study. The ranks assigned to the 99 cards were determined by the frequency of related response given the card by all respondents in each group.

RESULTS

The findings of the study are grouped into three divisions, i.e.: (1) differences between technicians and management, (2) identification of the core programs, and (3) comparisons with Project 2048. They are explained as follows:

(1) Age, educational attainment, salary, time on present job, and time with present company were analyzed for differences among the groups (levels). Application of Kruskal-Wallis one way analysis of variance produced significant values of H ($P < .02$) for the first three variables mentioned. The significant values of H and the consistency of the intervals among the means provide a basis for accepting the means of the groups as different from each other.

(2) Content of the general and individual cores was identified and summarized below:

A. General core (by card numbers)

1. Written and oral communication

17. Use of simple test equipment

52. Algebraic graphing, powers, roots, radicals

53. Metric system and square root, plane and solid geometry

66. ASA standards, use of handbooks, graphical treatment of empirical data

77. Use of measuring equipment to control a system

79. Calibration and use of typical industrial and laboratory instruments

98. Environmental testing of components, parts and products

B. The individual cores were identified and summarized as follows:

Electro-Mechanical - (by card numbers)

3. Numerical control, data processing, interpretation of engineering drawings

4. Thermosetting and thermoplastic materials; films, enamels, paints

8. Analysis and design of basic electromic circuits

12. Coulomb's Law, electrostatics, AC and DC theory

18. Principles of pulse and timing circuits

26. Basic psychology in planning, conducting, and evaluation of conferences and interviews

34. Composition and resolution of forces, Newton's Law, rotational motion, elasticity

35. Metal forming including machining, chemical milling, spinning, explosive forming

37. Metal forming including diecasting, casting, forming, extruding

38. Applied statics and strength of materials

44. (PERT) Selecting and sequencing of specific identifiable events necessary to successful completion of a project

46. Differential calculus

47. Graphical solution of problems involving points, lines, revolutions, intersections

51. Trigonometry

57. Vacuum tube and transistor theory

60. Analytic geometry

61. Sketching forms from observation

63. Machines elements and calculations

65. Preparation of block diagrams, schematics, layouts

67. Projection and graphic representation

70. Ferrous and non-ferrous metal heat treating, composition

71. Circuit theory, video amplifiers, tuned amplifiers

72. Pattern drafting and layout

73. Metal fabrication

75. Use of synchros and synchromechanisms, industrial control circuitry

80. Basic laws and theories of elements, compounds

89. Mechanics of fluids, temperature scales, thermal expansion

Mechanical -

For the sake of brevity cards in this core will be noted only by number if included in the previous core.

Cards 3,35,37,38,44,47,51,61,63,65,67,70,72,73 are listed accordingly (refer to pages eight and nine for content summary). One card of this core was not included previously; it is:

56. Linear, radical and quadratic equations, binomial theorems, complex numbers

Chem-Mechanical -

Cards numbers 3,34,35,37,38,47,51,61,63,67,70,72,80, previously summarized in the Electro-Mechanical core, were identified in this family. Cards included which have not been discussed previously were:

27. Time study and science of management

33. Tension and compression, Hooke's Law

83. Chemical testing of industrial materials and products

85. Carbon compounds, their structures

90. Atoms, single crystals and polycrystalline materials, nature and making of alloys

99. Equations of state, the first and second laws of thermodynamics

Chemical and Chemical-Foods -

Cores were identified for these two job families, but because of the small number of technician jobs to which were responded (n=4, n=5), no description is included in this summary.

(3) This third category of findings revealed that the responses of the technicians, Management one, Management two, and Management

three, all were closely related to the card ranks assigned by the technicians in Project 2048. High correlations ($P < .001$) were obtained between the technician responses of that project and each group in this study. The obtained value of r' was progressively lower for each higher level of management. Direct comparisons of card ranks for each group show isolated differences, but not large enough to affect a decision on the importance of each of the highly ranked cards. Card number one, oral and written communication, was ranked slightly lower by management, but still high in relation to the total deck.

CONCLUSIONS AND IMPLICATIONS

Implications for this study are considered as greatest in the Mechanical family of technician occupations. The analyses, findings and conclusions offered for the remaining four families are considered strongly suggestive of curricular concerns in their respective disciplines, but they may not be generalizeable to the universe of technicians in each of those occupational areas.

The results of the job classifications admittedly lie outside the objectives of this study. However, they are mentioned because of the surprising number of technician jobs which appeared as "hybrids" rather than as Electrical, Mechanical, or Chemical. All except one of the technicians interviewed from within the electrical manufacturing area were classified as Electro-Mechanical rather than as Electrical. If hybrid technical occupations are increasing or changing, the need for systematic identification of the extent and direction of that change is necessary. Programs of study which purport to prepare

competent technicians must provide subject matter and skill development in areas which are consistent with occupational requirements.

This study was based on an assumption which at this time is pertinent to mention. It was assumed that management and/or supervisory personnel employed in the participating firms would be both willing and capable of cooperating in supplying the desired judgments as necessary to complete the card sort. This assumption has been verified as correct. There were very few cases observed in which respondents did not willingly work the interviews into their already busy work schedules.

The notion that management and technician respondents would differ measurably in their curricular recommendations has been concluded as untenable. A very close similarity of recommendations among the groups was indicated by the tests, which led instead, to the conclusion that views of the two groups (as tested) were essentially the same. The core recommendations were concluded to represent the collective views of management and technician respondents. These cores are recommended for use as guidelines in the design and refinement of post high school technical programs.

BIBLIOGRAPHY

There are 91 references listed in the final report.

PUBLICATIONS

No publications have resulted from this project.

VT 003 780
Inventory of Manpower Research Projects in Indiana, Number 1.

Indiana Manpower Research Assn., Lafayette
MF AVAILABLE IN VT-ERIC SET.
Pub Date - Mar66 17p.

*BIBLIOGRAPHIES; *MANPOWER DEVELOPMENT; *MANPOWER UTILIZATION; EMPLOYMENT STATISTICS; RESEARCH PROJECTS; *RESEARCH REVIEWS (PUBLICATIONS); LABOR FORCE; *LABOR ECONOMICS
INDIANA

The research staff of the Indiana Employment Security Division compiled this listing of research reports, survey reports, descriptive reports, articles, books, and papers written in Indiana and related to manpower. For each publication, arranged alphabetically by author, complete bibliographic data is supplemented with brief statements of objectives and procedures. Included are research projects not yet completed and their expected dates of completion. Most documents were published later than 1963. The second Inventory, compiled in July 1967, is VT 003 781 (ARM Winter 1968) and the third Inventory, compiled in May 1968, is VT 007 279 (ARM Summer 1969). (ET)

VT003780

ED0 31587

INDIANA MANPOWER RESEARCH CONFERENCE

INVENTORY OF MANPOWER RESEARCH PROJECTS IN INDIANA

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March 1966 - Number 1

VT003780

Inventory of Manpower Research Projects in Indiana

At the Indiana Manpower Research Conference held in Indianapolis on December 7-8, 1965, the conferees agreed that it would be mutually beneficial to continue efforts to advance manpower research, create a repository of related studies and data, coordinate activities, and establish liaison among researchers and users. With knowledge of completed, on-going and planned manpower research, as well as knowledge of needs, it may be possible to discover research gaps and reduce any duplication.

The Research staff of the Indiana Employment Security Division was asked to serve as a "point of contact" among investigators, prepare a listing of manpower research projects and maintain a repository of a set of publications. To this end, the projects reported by conferees and others were compiled for the first inventory. Inquiries and requests for additional copies may be directed to Research and Statistics, Indiana Employment Security Division, 10 North Senate Ave., Indianapolis, Indiana 46204.

If you are conducting or know of research projects which have not been included in this inventory, please help to achieve a more complete listing by using the reporting form on the last page. We also ask you to send information about or copies of studies completed during the past two years so that the repository of manpower research can be actively realized. These projects will be included in supplements which will be distributed periodically.

Indiana Manpower Research Conference Coordinating Board

Dwight Kelley, Chairman (Indiana Employment Security Division)
J. P. Lisack, Secretary (Purdue University)
William Andrews (Indiana University)
Joseph Arnold (Purdue University)
Dale M. Brickner (Indiana University)
John Hannaford (Ball State University)
Martin Heller (Indiana Employment Security Division)
Edison Thuma (Indiana Department of Commerce)
Jack Wentworth (Indiana University)

ADAMS, R. F., see DREW, ALFRED S.

Arranged alphabetically by researcher's name.

ANDREWS, WILLIAM H. and MILLER, TAULMAN A.
Indiana University, Economics
IMPACT OF AUTOMATION AND TECHNOLOGICAL CHANGE ON EMPLOYMENT PATTERNS OF THE STEEL INDUSTRY IN INDIANA
(Mimeo Pamphlet, June 1, 1966)

1. To analyze employment trends for the Indiana steel industry in comparison with the total employment in this industry in the U. S.

2. To consider insofar as possible productivity trends in steel for Indiana and the United States.

3. To relate employment developments to changes in technology and other factors through discussions with representatives of the industry and other sources.

BAIN, R. K., see DREW, ALFRED S.

BLEDSOE, H. J., see DREW, ALFRED S.

BRICKNER, DALE G. and TAYLOR, BEN
Indiana University, Labor Education and Research Center
THE IMPACT OF INDIANA'S RIGHT-TO-WORK LAW
(Monograph, July - 1966)

The objective is to study the impact of Indiana's Right-To-Work Law and its subsequent repeal, on contracts, membership, collective bargaining relations, organizational activity, and union and employer attitudes. Information needed will be collected by questionnaires and personal interviews with Indiana Manufacturers' Association members, AFL-CIO and other union officers, employers, and political party committeemen.

CHRISTENSON, C. L., HONG, B. D. and HALL, DALE
Indiana University, Department of Economics
OPERATING CHANGES IN COAL MINING BETWEEN 1955 AND 1960 WITHIN FOURTEEN SUB-BASINS OF THE OHIO RIVER VALLEY
(Published in Vol. III of Ohio River Basin Comprehensive Survey, 1964)

This study traces the impact of productivity and employment changes in the area coal mines during the five years specified.

CHRISTENSON, C. L. and MYREN, RICHARD
Indiana University, Department of Economics
WAGE POLICY UNDER THE WALSH-HEALEY PUBLIC CONTRACTS ACT
(Book in press, Indiana University Press, Feb. 1966)

This book attempts an identification of the impact of Walsh-Healey prevailing--minimum wage determinations in four separate industries.

DREW, ALFRED S. (Project Director), ADAMS, R. F., BAIN, R. K., BLEDSOE, H. J., JOHNSON, P. V. and KING, D. C.
Purdue University, School of Technology
A STUDY OF THE NEED FOR EDUCATIONAL AND TRAINING ADJUSTMENTS IN APPRENTICESHIP PROGRAMS FOR SELECTED CRAFT OCCUPATIONS
(Special report to OMAT, Aug.-Sept. 1967)

The goals for this national project include attempts:

1. To develop procedures, or guidelines--perhaps, a pattern or framework--for an optimum apprenticeship training system(s);

2. To compare contemporary training systems with the optimum; and

3. To generate suggestions, if needed, for the improvement of ongoing programs.

The interdisciplinary team, composed of research scientists from Industrial Engineering, Sociology, Industrial Education, Labor relations and Economics, and Industrial Psychology, will analyze data obtained from individuals and organizations involved in the apprenticeship system by a variety of survey instruments. To determine a pattern for an optimum apprenticeship training system, consideration will be given to:

1. The basic criteria of accrediting agencies.

2. The factors basic to the development of superior workers who adapt to technological and other changes.

3. The discriminators between superior and other types of training programs.

4. The kinds of analyses and feedback systems which must be identified and used to keep workers in a state of operational readiness.

DUNBAR, J. O., see WADSWORTH, H. A.

ECKTMAN, JOSEPH
Indiana Employment Security Division, Research and Statistics
THE MANPOWER DEVELOPMENT AND TRAINING PROGRAM IN INDIANA
(Article, Indiana Business Review, February 1966)

Information on the characteristics of trainees in MDTA programs, during and following completion of training, is examined to review the overall program.

FAHEY, FRANK J.
University of Notre Dame, Sociology
FOLLOW-UP STUDY OF PROJECT ABLE
(Report to sponsoring agency, March 1, 1966)

This is an examination of services supplied to older workers left unemployed by the Studebaker shutdown. Research involves interviews with a random sample of such workers, those in MDTA, and survey of employer attitude and behavior in regard to the older worker employment.

FAHEY, FRANK J.
University of Notre Dame, Sociology
PLACEMENT OF YOUTHFUL OFFENDERS IN THE STEEL INDUSTRY
(Report to sponsoring agency, September 15, 1967)

The objective is to determine the ability of youthful parolees (18-21) to successfully adapt to community life when assured a job in the steel industry (Lake Co., Indiana). This will be a demonstration and research project.

GRIFFITH, W. D., LAMAR, MARGUERITE and HAWK, EMILY
Administrative Management Society; Northwest High School; Indiana Employment Security Division, Research and Statistics
BUSINESS - ITS PLACE IN EDUCATION
(Booklets, May 1965, April 1966, April 1967)

To encourage high school students to prepare for business careers, a 24 page brochure emphasizing the advantages of a business education, the business curriculum and training offered, and the local opportunities available to qualified graduates, has been prepared, with updating for each publication.

HALL, DALE see CHRISTENSON, C. L.

HAWK, EMILY see GRIFFITH, W. D.

HELLER, MARTIN
Indiana Employment Security Division, Research and Statistics
DATA PROCESSING SYSTEMS AND EMPLOYMENT EXPECTATIONS: INDIANAPOLIS
(Booklet, January 1964)

This study examined the scope, variety and magnitude of data processing systems and employment in the Indianapolis SMSA during March-April 1963. Estimates of the future status of data processing systems and employment expectations for the various occupations were made, based upon employer responses.

HONG, B. D., see CHRISTENSON, C. L.

HOROWITZ, IRA
Indiana University, Graduate School of Business
REGIONAL DISTRIBUTION OF SCIENTIFIC TALENT
(Article, Southern Economic Journal, Jan. 1965)

Analyzes and discusses the state-by-state distribution of scientists and technical personnel and how this is changing over time.

INDIANA EMPLOYMENT SECURITY DIVISION, RESEARCH AND STATISTICS
THE ADJUSTMENTS AND RESOURCES OF TEC CLAIMANTS
(Report to Department of Labor)

This study will examine the experience of TEC claimants in thirteen states. The nature of the adjustments which had to be made by the claimants, and the resources available to them are being analyzed.

INDIANA EMPLOYMENT SECURITY DIVISION, RESEARCH AND STATISTICS
AGE LIMITATIONS IN HIRING IN THE INDIANAPOLIS AREA
(Booklet, Sept. 1963)

This study examines the upper age limits specified by Indianapolis employers. A sample survey of employers was made to ascertain factors behind upper age limits on job openings. Local office job orders were examined for age restrictions. Data on the age distribution of applicants and placements were also used.

INDIANA EMPLOYMENT SECURITY DIVISION, RESEARCH AND STATISTICS
CHARACTERISTICS OF THE UNEMPLOYED IN THE INDIANAPOLIS AREA
(Booklet, September 1964)

This study analyzes data on education and race of the unemployed in Indianapolis in March 1964, in terms of age, occupational skill level and claimant status. Labor force and population data from the 1960 Census provides a frame of reference for the survey.

INDIANA EMPLOYMENT SECURITY DIVISION, RESEARCH AND STATISTICS
EVANSVILLE AREA SKILL SURVEY
(Booklet, July-1966)

This study will assess the supply and demand in occupations vital to the economy of the Evansville area. An employer survey is being conducted in Warrick, Vanderburgh and Henderson Counties to project needs for training in these occupations. A survey of local schools is being conducted to predict supply of trained people in these occupations. Local offices also made applicant file survey.

INDIANA EMPLOYMENT SECURITY DIVISION, RESEARCH AND STATISTICS
INDIANA JOB VACANCIES
(Booklet, Dec. 1964)

Job vacancy surveys were conducted in September and October 1964 in seven areas: Evansville, Ft. Wayne, Gary-Hammond-East Chicago, Indianapolis, Muncie, South Bend and Terre Haute.

The Indiana surveys followed closely, but not exactly, the pattern of a series of Federally-sponsored surveys in other selected areas across the country and were undertaken for the following specific purposes:

1. To obtain information about the number, location and kinds of unfilled jobs.

2. To determine the occupations for which there is a shortage of qualified workers so that training for these can be initiated or accelerated.

3. To determine whether or not the types of job orders in local offices of the Indiana State Employment Service are representative of the types of jobs which are unfilled in an area.

4. To find out whether or not the job vacancies existing in industry could be filled by the unemployed workers registered in local employment offices.

INDIANA EMPLOYMENT SECURITY DIVISION, RESEARCH AND STATISTICS
INDIANA'S LOW INCOME FAMILIES
(Booklet, March 1964)

This release presented data abstracted from the 1960 Census on the incidence and location of families with incomes under $ 3,000.

INDIANA EMPLOYMENT SECURITY DIVISION, RESEARCH AND STATISTICS
INDIANA MANPOWER REPORT 1964
(Booklet, Nov. 1964)

This report presents some of the economic factors which have affected employment. The manpower situation is depicted in terms of the changing age distribution of the population and the labor force, and employment changes in the industries. Areas of concern in manpower and development are indicated.

INDIANA EMPLOYMENT SECURITY DIVISION, RESEARCH AND STATISTICS
JOBS FOR YOUTH
(Four booklets, August 1964)

The study was designed to obtain additional information about the types of jobs that are available to youth between the ages of 16 and 24, and what requirements and educational achievement employers feel are necessary for people entering these jobs. About 1,800 employers in four southwestern counties (Gibson, Posey, Vanderburgh, and Warrick) were surveyed during October 1963.

Part I contains a summary of the findings, description of the survey, and a tabular arrangement of the employer responses regarding company training programs, need for additional training, and hiring practices, by industry and firm size.

Part II contains the inventory of occupations suitable for youth, by occupational group.

Part III has the skills or knowledge necessary for entry into occupations for youth, by occupation and industry.

Part IV contains the occupations for youth arranged by industry.

INDIANA EMPLOYMENT SECURITY DIVISION, RESEARCH AND STATISTICS
LABOR MOBILITY DEMONSTRATION PROJECT IN SOUTH BEND
(Administrative report, May 1966)

This pilot project is designed to assess or demonstrate the effectiveness in reducing unemployment by means of programs increasing the mobility of unemployed workers through the provision of assistance for relocation expenses. The South Bend study includes unemployed MDTA graduates only.

INDIANA EMPLOYMENT SECURITY DIVISION, RESEARCH AND STATISTICS
LAFAYETTE VOCATIONAL TRAINING SURVEY
(Booklet, April 1966)

This study was made to find out what jobs were suitable for inexperienced youth in the area and to assess the skills and knowledge needed by high school graduates to qualify them for these jobs. The results of this study are to be used in revising the vocational training facilities in the Lafayette area.

INDIANA EMPLOYMENT SECURITY DIVISION, RESEARCH AND STATISTICS
MANPOWER TRENDS TO 1975
(Booklet, May 1966)

This report will present projections of the population, labor force, employment by industry, and employment by occupation.

INDIANA EMPLOYMENT SECURITY DIVISION, RESEARCH AND STATISTICS
NEW PLANTS IN INDIANA SINCE JANUARY 1964
(Article in Labor Market Trends in Indiana, October 1965)

This article presents data on the industries represented, employment and location of new plants in the state between January 1964 and June 1965.

INDIANA EMPLOYMENT SECURITY DIVISION, RESEARCH AND STATISTICS
OCCUPATIONAL SHORTAGES IN INDIANA HOSPITALS
(Booklet, Nov. 1963)

This survey made in cooperation with the Indiana Hospital Association locates shortage occupations in hospitals in Indiana by local office area.

INDIANA EMPLOYMENT SECURITY DIVISION, RESEARCH AND STATISTICS
SURVEY TO DETERMINE REASONS FOR UNEMPLOYMENT
(Quarterly interim reports, booklet, Fall 1967)

This study will examine the reasons for unemployment during a time when the economy is booming. Data will be obtained from a survey of people who file for benefits during Fiscal Year 1967.

INDIANA EMPLOYMENT SECURITY DIVISION, RESEARCH AND STATISTICS
TEMPORARY EXTENDED UNEMPLOYMENT COMPENSATION RESEARCH SERIES
(Booklets: see below)

1. Employment and Family Characteristics of Indiana's Extended Benefit Claimants - (November 1961). This release covers some of the results obtained in the May 1961 survey.

2. Comparison of Backlog and Current Claimants - (February 1963). This also pertains to May 1961 survey claimants. It presents a comparison of characteristics and experience of claimants who exhausted their regular claim by April 1, 1961 with those who exhausted their regular claim sometime after April 1, 1961.

3. Personal Characteristics and Family Status of TEC Claimants - (April 1963). This release pertains to claimants interviewed in the four survey periods.

4. Work History and Benefit Experience of TEC Claimants - (May 1963). This release also pertains to claimants interviewed in the four survey periods.

5. Education and Vocational Training of TEC Claimants - (August 1963). This release pertains to claimants interviewed in the first three of the four survey periods.

6. Characteristics of Regular Claimants and Comparison with TEC Claimants - (Mar. 1964). This study examines the personal characteristics, family status, work history and benefit experience of claimants during three survey periods.

7. Post-Exhaustion Experience of TEC Claimants (in process). This study examines the labor force status of the claimants after they had exhausted their benefits, and characteristics of those who had left the labor force versus those who were working or looking for work.

INDIANA EMPLOYMENT SECURITY DIVISION, RESEARCH AND STATISTICS
WEEKS OF WORK AND WEEKLY WAGES
(Booklet)

In this study, an analysis will be made of the weeks of work and earnings for each week during the 52 weeks preceding the claim. A sample of people who filed new claims for unemployment benefits was selected, and their previous employers furnished the necessary data.

INDIANA EMPLOYMENT SECURITY DIVISION, RESEARCH AND STATISTICS
WHITEWATER VOCATIONAL SCHOOL TRAINING SURVEY
(Booklet, January 1966)

The objective of this project was to find out what skills and knowledge inexperienced youths need to learn in high school to qualify them for jobs in local industries after graduation. An employer survey was conducted by the local office and the results compiled, analyzed and published by the Research and Statistics Section.

JOHNSON, P. V., see DREW, ALFRED S.

KING, D. C., see DREW, ALFRED S.

KRAVIS, JOHN and THUMA, EDISON L.
Indiana Department of Commerce, Economic Research
COUNTY PERSONAL INCOME ESTIMATES FOR INDIANA
(Book, 4th Quarter 1966)

The objective is to compile and publish personal income estimates for individual counties of Indiana on an annual basis, beginning with 1960.

LAMAR, MARGUERITE, see GRIFFITH, W. D.

LeBOLD, WILLIAM K., PERRUCCI, CAROLYN CUMMINGS and PERRUCCI, ROBERT
Purdue University, Freshman Engineering
SURVEY OF PURDUE ENGINEERING AND SCIENCE GRADUATES 1947-1964
(Purdue Experiment Station Bulletin & Journal articles, December 1, 1966)

A 20 page questionnaire follow-up study of 5,700 Purdue B. S. (1947-64), M.S., and Ph.D. (1950-1964) engineering and science graduates giving information about post college experience, education, background and activities, and their opinions about education and work. Special samples were also being used of women engineering graduates, graduates in the engineering honors program, and engineering graduates who completed the Strong Vocational Interest Blank in the mid-thirties.

LeBOLD, WILLIAM K. and PERRUCCI, ROBERT
Purdue University, Freshman Engineering
A STUDY OF ENGINEERING GRADUATES IN INDUSTRY AND GOVERNMENT (A PART OF THE AMERICAN SOCIETY FOR ENGINEERING EDUCATION GOALS OF ENGINEERING EDUCATION PROJECT)
(Articles, and monograph - February 1, 1967)

A national study of approximately 4,000 engineering graduates in 12 major industrial and governmental classifications: Construction, Engineering and Architectural Services, Chemistry and Petroleum and Related Projects, Metals and Ordnance, Machinery, Electrical Equipment, Aero-Space, Miscellaneous Manufacturing, Utilities, Research and Development, Federal Government, and Local Government. A 28 page questionnaire consisting of four parts: Experience, Education, Background and Activities, and Opinions. This study also includes a survey of 150 engineering managers, 150 personnel representatives, and approximately 200 industrial representatives regarding engineering manpower needs and engineering education.

LISACK, J. P.
Purdue University, School of Technology, Office of Manpower Studies
ENGINEERING TECHNICIANS: PRODUCTION AND REQUIREMENTS
(Mimeo. report, June 1965)

This study examines pertinent elements bearing upon the current and future position of engineers and engineering technicians manpower production versus requirements.

LISACK, J. P.
Purdue University, School of Technology, Office of Manpower Studies
A MANPOWER REPORT FOR TECHNICIAN - LEVEL EDUCATIONAL PLANNING CONCERNING THE CHEMICAL TECHNOLOGY IN THE STATE OF INDIANA
(Mimeo. report, October 1965)

This study examines the industries related to the chemical technology in Indiana. It considers the National aspects briefly to provide bases for comparison and perspective. The needs are determined for chemical technicians and metallurgical engineering technicians by industries in major metropolitan areas.

Data are presented showing numbers of employees, trends, size and location of firms, occupations, and other pertinent information for the chemical, rubber and plastics, primary metals, food processing, and petroleum industries. Ratios of scientists and engineers, and of technicians to total employment are computed for each industry and selected industry subgroups. Parameters are found on one side by using actual (existing) ratios of technicians to total employment, and on the other by those ratios recommended by authorities as desirable. The 'new hires' portion of labor accessions are applied to determine an approximation of the numbers of technicians required annually for each industry by geographic area within Indiana.

Discussion of the orientation of these technician programs, curricula guidance matters and collateral items are also included.

LISACK, J. P.
Purdue University, School of Technology, Office of Manpower Studies
A MANPOWER STUDY FOR TECHNICIAN-LEVEL EDUCATIONAL PLANNING, IN THE GREATER LAFAYETTE AREA, CONCERNING THE ELECTRICAL/ELECTRONIC TECHNOLOGY
(Pamphlet, February 1, 1966)

The objective of this study was to determine the number of technicians required annually in selected industries related to this technology: e.g. Elec. Mach., Equip. & Supplies; Communication; and Elec. Util. Companies, with State and National trends and requirements.

Employment for past ten years in significant industries was examined and rates of growth projected. Percentage of engineers and technicians to total employment was determined. New hire rates were developed and applied to compute numbers of technicians needed.

Assumptions used to form low and high parameters of requirements.

Applicable occupations presented, suggested curricula for electrical and electronic technologies attached.

LOEFF, JOAN
Indiana Employment Security Division, Research and Statistics
INDIANA YOUTH CONSERVATION WORK CAMP: A TRAINING CAMP APPROACH TO THE PROBLEM OF YOUTH UNEMPLOYMENT
(M.S. thesis, Brooklyn College, Sept. 1965)

This thesis studies the operation of The Youth Conservation Work Camp in Harrison State Forest; evaluates the effectiveness of this type of camp in terms of its contributions to the improvement of employability of youth who participated in the project; and brings out some significant lessons that emerge for the employment of disadvantaged youth generally.

The thesis describes and evaluates the methods involved in assessing the applicants chosen; analyzes the composition of the trainee group; and evaluates the results of the program (a) six months and (b) one year after the completion of training, by comparing the employment experience of the trainees to that of a group of young men who did not receive training. The post-training employment experience includes comparisons of such economic characteristics as: proportions employed and unemployed; industries in which jobs are secured; types of occupations secured; number of different jobs secured in each six month period and the duration of employment for all jobs secured and for the longest held job.

MACK, LYNN
Indiana Employment Security Division, Research and Statistics
INDIANA PLASTICS INDUSTRY
(Booklet, August 1963)

This study examines the industry's growth and employment in the state, changes in the products and production methods, and the potential for the location of plastics manufacturers in Indiana.

MILLER, WILLIAM L., see WADSWORTH, H. A.

MONTGOMERY, RICHARD W.
DePauw University, Economics Department
ELASTICITY OF LABOR DEMAND AND TECHNOLOGICAL CHANGE
(Paper, Fall 1966)

Empirical verification of dynamic theory of technological change wherein the elasticity of labor demand and several other variables are treated as both determinants and consequences of the directions of technological change. Other variables include: change in firm capacity, expansion rates of industrial output, factor ratios - including the ratio of skilled to unskilled labor.

MYREN, RICHARD, see CHRISTENSON, C. L.

ONILA, JOHN
Purdue University, Sociology
IMPACT OF TECHNOLOGICAL CHANGE ON THE STEELWORKER CASE STUDY: INLAND STEEL CORPORATION
(Ph.D. Thesis, March 1, 1966)

The objective of this study is to obtain factual data to support or refute the many charges made as to the impact of technological change on the worker. It is also hoped that the data will support a change from the traditional way (the standard hourly wage) in which a worker's plight or well being is measured after a technological change.

The earnings record, hours worked, vacation pay, educational level, race, age, company service, marital status, number of dependents and recruitment area for the period 1950 through 1964 was obtained fo all employees involved in the 10 technological changes occurring a Inland Steel, Harbor Works, since 1953.

Before and after earnings curves for each employee will be calculated, and recovery period determined, if appropriate. It is hoped that the individual earnings curves will be sufficiently similar to allow the construction of an earnings curve or curves for each technological change. The individual technological change curves will be examined in an attempt to find a common pattern. If one should exist, then there exists a possibility for constructing a model in which future changes could be applied and results of outcome predicted.

PERRUCCI, CAROLYN CUMMINGS, see LeBOLD, WILLIAM K.

PERRUCCI, ROBERT, see LeBOLD, WILLIAM K.

POND, MARTIN T., see WADSWORTH, H. A.

REDEKOP, CALVIN and CRAIG, MARION
Earlham College, Sociology
EMPLOYMENT AND HOUSING STUDY
(several articles, May 1966)

This survey is attempting to get a complete picture of the housing and employment conditions in Wayne County. From this, plans for Economic Opportunity Act programs will result. Beyond this, some comparisons, correlations etc. will be constructed to give insight into the dynamics of poverty and minority relations. The basic theoretical orientation is that a medium-small size city has a unique set of problems and social relations based on social relations that derive from city size.

THUMA, EDISON L., see KRAVIS, JOHN

TURNER, H. HAINES
Indiana University, Labor Education and Research Center
ATTITUDES OF ALLEN COUNTY UNION MEMBERS
(Article, March 1, 1966)

A number of unions in Allen County volunteered to have an attitude survey of their membership. A random sample from membership files was selected. In personal interviews, questions about union membership and activities were asked.

WADSWORTH, H. A., (Leader), DUNBAR, J. O., POND, MARTIN T. and MILLER, WILLIAM L.
Purdue University, Dept. of Agricultural Economics
ANALYSIS OF THE FACTORS AFFECTING ECONOMIC AND SOCIAL DEVELOPMENT IN INDIANA
(Research and Extension Bulletins, June 30, 1969)

1. To identify the changes in the pattern of the types and location of industries in Indiana.

2. To determine major economic factors which influence the location of different types of industries in Indiana.

3. To determine the economic and social effects on the local community of changes in the industrial composition of the community.

WILLIAMS, C. GLYN
Indiana University, Economics
CHANGES IN THE COEFFICIENTS IN ECKSTEIN'S EQUATION OF UNEMPLOYMENT ON CHANGES IN THE GNP AND THEIR SIGNIFICANCE TO THE DISCUSSION OF STRUCTURAL CHANGES AS A FACTOR IN UNEMPLOYMENT.
(Article, June 1966)

WILLIAMS, C. GLYN
Indiana University, Economics
UPGRADING OF THE LABOR FORCE IN CERTAIN INDUSTRIES AND ITS SIGNIFICANCE AS A FACTOR IN CHANGES IN THE INTER-INDUSTRIAL WAGE STRUCTURE.
(Article, June 1966)

INVENTORY OF INDIANA MANPOWER RESEARCH PROJECTS

At the Manpower Research Conference held in Indianapolis on December 7 and 8, it was agreed that initially the Research staff of the Indiana Employment Security Division would serve as a "point of contact" among investigators, prepare a listing of manpower research studies and maintain a repository of a set of publications. Projects reported after the first inventory will be included in supplements which will be distributed periodically.

Please complete the form(s) for projects you have completed during the past two years and for projects you are now conducting. If possible, please send single copies of your publications to be included in the manpower research library. Send the forms and publications to The Indiana Manpower Research Conference at the address below.

Sincerely,

Dwight Kelley

Dwight Kelley, Chief of Research
Indiana Employment Security Division
10 N. Senate Avenue
Indianapolis, Indiana 46204

Your Name

College, Univ. or Organization

Date

School or Department

Names of Principal Investigator and Collaborators; Titles

Project Title

Brief Statement of Objectives and Procedures

Expected Final Form
e.g. Book, Article, Paper, etc.

Expected Date of Completion

Names of Investigators of Other Manpower Research Projects of Which You Are Aware.

VT 003 804
Guidelines for Preparatory Programs, Trade and Industrial Services.

Michigan State Dept. of Public Instruction, Lansing. Div. of Vocational Education
MF AVAILABLE IN VT-ERIC SET.
Pub Date - 65 39p.

*GUIDELINES; *TRADE AND INDUSTRIAL EDUCATION; *PROGRAM DEVELOPMENT; PROGRAM EVALUATION; *PROGRAM ADMINISTRATION; PROGRAM DESCRIPTIONS; OCCUPATIONAL CLUSTERS; TEACHER QUALIFICATIONS; TEACHER CERTIFICATION; TEACHER EDUCATION; *STATE STANDARDS
MICHIGAN

Trade and industrial education programs organized to prepare individuals with entry skills of an occupation may follow various patterns for manipulative and technical development. The purpose of this publication is to provide guidelines for persons who have responsibilities for developing and evaluating these programs. More than 80 occupational fields, identified by Dictionary of Occupational Titles code number, are charted to show the minimum number of clock hours required in manipulative skill development and related technical instruction to provide students with minimum occupational competencies. A variation of 10 percent in the length of these training programs is acceptable. A series of diagrams describes selected job clusters designed to show the relationship between certain job skills and a wide range of occupations in which these skills are essential. The appendix describes the characteristics of trade, industrial, technical, and health occupations, qualifications of program personnel, certification requirements, and the institutions of higher education in Michigan designated by the State Board of Education for the preparation of trade and industrial education teachers. (HC)

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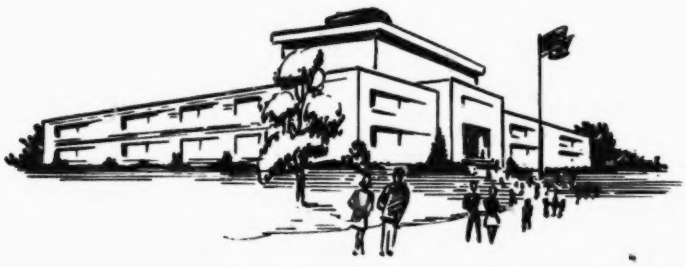
GUIDELINES FOR PREPARATORY PROGRAMS

TRADE AND INDUSTRIAL SERVICES



U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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DEPARTMENT OF EDUCATION, DIVISION OF VOCATIONAL EDUCATION, LANSING, MICHIGAN

VT003804

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TABLE OF CONTENT

	Page
Foreword	i
Introduction and Organization	1
Occupational Listing	3
Program Diagrams	11

APPENDIX

Characteristics of Trade and Industrial, Health, and Technical Program.	25
Qualifications of Program Personnel	28
Plan for Certification	30
Approved Teacher Education Institutions	33

FOREWORD

The constantly changing world of work brought about by technological developments in production industries has led to new concepts and patterns in preparing workers for employment. The resulting impact on vocational and technical education is nowhere more pronounced than in technical, industrial, trade, and health occupations fields.

This publication has been prepared to provide guidelines for persons who have responsibilities for evaluating present programs discussed in this bulletin, and for giving general direction to the development of new programs.

More than 80 occupational fields are charted to show the minimum number of clock hours considered necessary to provide students with minimum occupational competencies in each field. The instructional hours are listed for learning the manipulative skills of the occupational field and the clock hours of related training in technical subjects required. Each major field is identified by Dictionary of Occupational Titles code number to enable the reader to find the job description under each job title.

A series of diagrams describe selected job "clusters" designed to show the relationship between certain job skills and a wide range of occupations in which these skills are essential.

The Appendix describes the characteristics of trade, industrial, technical and health occupations, qualifications of program personnel, certification requirements, and the institutions of higher education in Michigan designated by the State Board of Education for the preparation of trade and industrial education teachers.

Ira Polley
State Superintendent of
Public Instruction

SUGGESTIONS FOR PROGRAM DEVELOPMENT IN TRADE & INDUSTRIAL OCCUPATIONS

Introduction

Concepts expressed in the Vocational Education Act of 1963 present a challenge which educators may wish to explore in developing a more comprehensive occupational education program.

This Act specifically states that the instructional program must be designed to prepare persons for gainful employment in recognized occupations. The instruction must be sufficiently extensive in duration and intensive within a scheduled unit of time to enable the student to develop essential competencies to enter and retain employment in an occupation or occupational field. The assistance of potential employers, and other individuals with substantial skills and knowledge in the occupation or occupational field, is a requisite in developing the instructional program.

Fortunately, in trade and industrial education previous experience in programming for many of the skilled trades has provided helpful information for this guide. Advice of trade associations has been sought and appears as the recommended length of program in such occupations as:- Automotive, Cosmetology, Dental Assistant, Electronic Technician, Practical Nurse, and Welding.

Although this bulletin stresses the development of preparatory programs at the secondary level, the information on this and the following pages will be found of value in preparing programs for people with special needs and upgrading workers for new industrial developments.

Organization

Philosophically a change in class organization and student involvement may be essential if vocational education is to serve the needs of a maximum number of students.

The Vocational Act of 1963 provides a potential for program development which may be structured to meet the needs, interest, and abilities of a great number of students provided the instructor recognizes the potential of each student. Counseling and guidance should be optimum if the student is to understand the occupational requirements and the goals that may be attained following completion of the various programs.

Instructors must understand that a student may have a potential for certain occupational accomplishments but other factors may limit the extent of participation. For example, in the metals area a program organized under the title of "Machine Tool Operator" could fulfil the occupational goals of students with varying ability in metal occupations. Those youth interested in building proficiencies as machine tool operators could gain the essential entry skills in a relatively short time, while others with more ability and interest may continue in training, gaining basic general entry skills for the machine trades.

Classes organized to prepare individuals with entry skills of an occupation may follow various patterns for manipulative and technical development.

Scheduling the classes may vary, but at all times consideration should be given to maximum benefits to the student. The length of the program will vary with the objective and may spread over a one-, two-, or three-year period. The student level at which a program begins is determined by age limits set forth in the Vocational Education Act. In the secondary school several factors may contribute to concentrating the occupational training program in the 11th and 12th grades, although the involvement of the 10th grade should not be overlooked. In determining when or at what level to initiate an occupational preparatory program, these factors are of prime consideration:-

a. Age requirement for entry into the occupation
b. Basic time needed to prepare for job entry
c. Maturity of learner
d. Availability for employment at termination of training
e. Value to the individual as a contributing citizen

When teaching of manipulative skills is an essential part of the program, consecutive periods spanning a minimum of two clock hours are important to the student's development. Schools having block time scheduling will likely find it convenient to schedule the longer periods so that the students may have adequate time for machine set-ups and other functions which consume considerable time. Such scheduling is important for classes regularly held at locations outside of the shop facility, as in the case of constructing a building.

In many cases at least half of the total instructional time will be devoted to the development of manipulative skills. The exact break between theory and practice will be determined by the job requirements.

Patterns for Providing Related Instruction

Related instruction, which is an essential part of each occupational preparatory program, may be taught in the shop by the trade instructor. It may also be taught in a separate room, thus freeing the shop for other classes. In the event the same related instruction is essential to students enrolled in other vocational classes, all such students may be included in a single related class provided the student-teacher ratio will permit.

Another method of providing related instruction would be by assignment to classes already in existence provided the subject matter is that needed by the student. If both vocational and non-vocational students are enrolled in the same class, the teacher's salary is not reimbursable from vocational funds.

The following chart is intended as a guide in providing minimum standards for determining the length of occupational preparatory programs. A variation in the length of a program of about ten percent is acceptable, if certain school organization problems form a block to the given recommendation.

OCCUPATION	MINIMUM TIME ALLOTMENT - PERCENTAGE OF TOTAL HOURS		MINIMUM LENGTH OF PROGRAM IN HOURS
	Manipulative	Related Technical Subjects	
Acetylene Welders 4-85.030	85	15	200
Arc Welders 4-85.020	75	25	300
Auto Body and Fender Mechanics and Repairmen 5-81.510	85	15	1,080
Metal Bumping and Finishing	85	15	464
Body and Frame Mechanic	90	10	108
Painter	85	15	173
Glass Mechanic	90	10	100
Automobile Mechanics 5-81.010	75	25	1,080
Automotive Tune-up Mechanics	75	25	421
" Transmission Mechanics	75	25	216
" Running Gear "	85	15	150
" Electrician "	75	25	324
" Alignment "	90	10	100
Automotive Partsman	50	50	600
" Service Manager	40	60	600
" Lubrication Specialist	80	20	100
" Brake Mechanic	85	15	100
Auto Upholsterer and Trim 4-35.610	85	15	1,000

OCCUPATION	MINIMUM TIME ALLOTMENT - PERCENTAGE OF TOTAL HOURS		MINIMUM LENGTH OF PROGRAM IN HOURS
	Manipulative	Related Technical Subjects	
Bakers 4-01	80	20	1,000
Buffers, Filers, Grinders and Polishers (Metal) 4-77	75	25	1,000
Building - Managers and Superintendents 0-87	75	25	1,000
Cabinet Makers 4-32	80	20	1,000
Carpenters 5-25	80	20	1,000
Chainmen, Axmen, and Rodmen Surveying 7-87	90	10	100
Chauffeurs and Drivers - Bus, Taxi Truck, and Tractor 5-36	85	15	170 +
Combination Welders 4-85.040	85	15	600
Composition - Floor Layers 5-32.752	85	15	800
Cooks, Commercial 2-26	75	25	1,000
Cosmetologist (Beauty Operator) 2-32.15	80	20	1,200
Manicurist	80	20	300
Custodian	75	25	800
Dentist's Assistants (Dental Assisting) 1-32.10	75	25	500

OCCUPATION	MINIMUM TIME ALLOTMENT - PERCENTAGE OF TOTAL HOURS		MINIMUM LENGTH OF PROGRAM IN HOURS
	Manipulative	Related Technical Subjects	
Diesel - Mechanics and Repairmen 5-83.931	75	25	1,000
Draftsmen (Any industry) 0-48	75	25	900
Detailer	75	25	500
Dressmakers and Seamstresses 4-25	75	25	800
Electrical Appliance Serviceman 5-83.041	75	25	1,000
Electric Motor Repairmen 5-83.433	75	25	1,000
Electricians, Maintenance and Repair 4-97.420	75	25	1,000
Electricians, Powerhouse 4-97.510	75	25	1,000
Engineers, Stationary 5-72	75	25	1,000
Farm Machinery Mechanics 3-35	85	15	1,000
Foremen and Supervisors 5-99	30	70	800
Foundry Workers - Molders 4-81	85	15	1,000
Garment Trades Worker, Tailors 4-26	80	20	1,000
Glaziers 5-77	85	15	800
Heat Treaters, Annealers, and Temperers 4-87	75	25	1,000

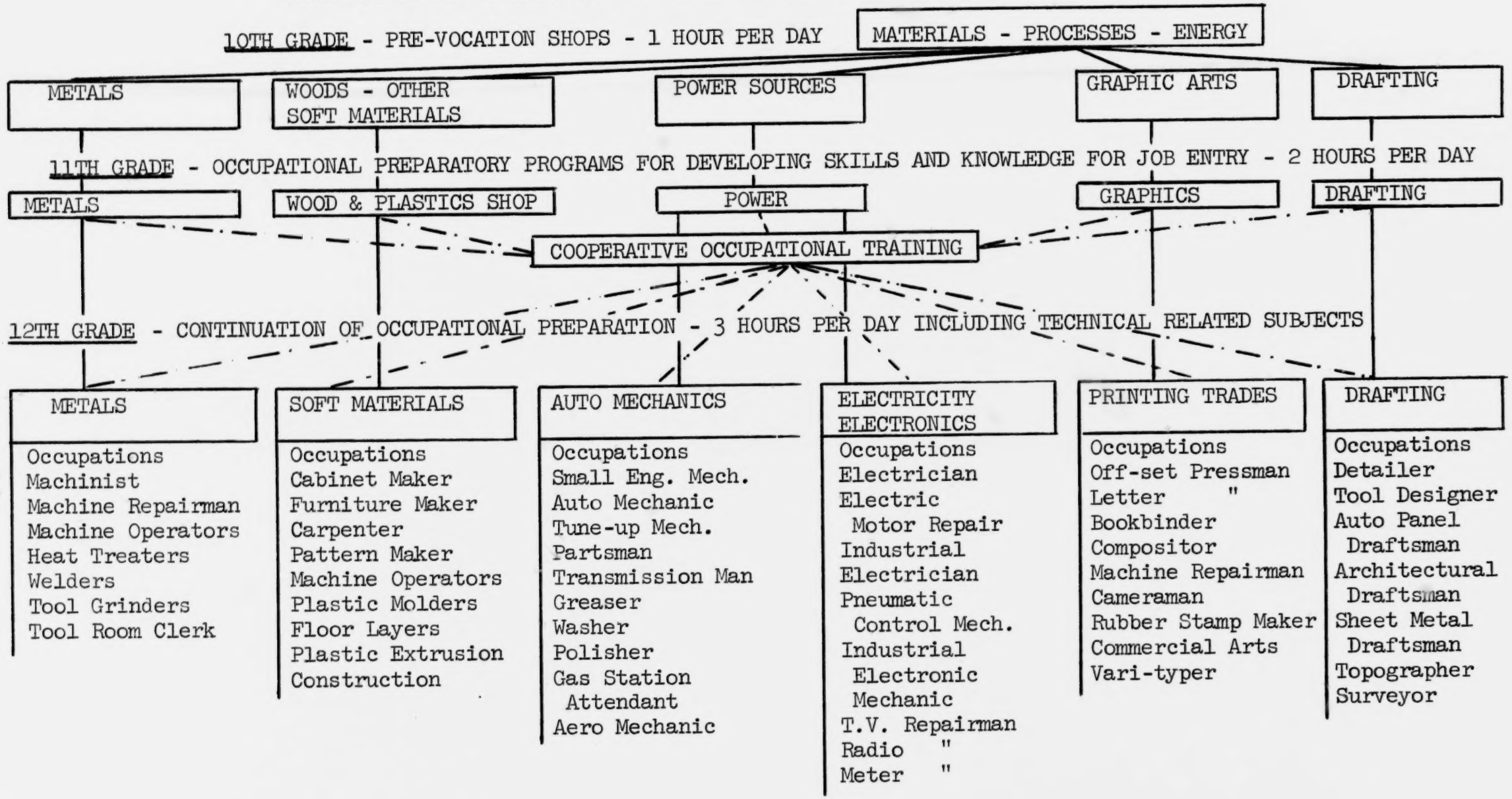
OCCUPATION	MINIMUM TIME ALLOTMENT - PERCENTAGE OF TOTAL HOURS		MINIMUM LENGTH OF PROGRAM IN HOURS
	Manipulative	Related Technical Subjects	
Hospital Attendants, N.E.C. Ward Clerk 2-42	60	40	200
Hostesses, Housekeepers, and Stewards 2-25	80	20	400
Laundering, Cleaning, Pressing and Dyeing Occupations (Apparel and other Articles) 5-57	80	20	800
Lens Grinders, Opticians, and Polishers 5-08	85	15	1,000
Machine Operators (Machine Shop) 6-78	80	20	25 - 400
Machinist 4-75	75	25	1,000
Maintenance and Service (Industrial) - Mechanics and Repairmen 5-83.621	75	25	1,000
Meat Cutters (Except in slaughtering and Packinghouses) 2-58	75	25	900
Medical Assistant (Assisting Physician in his office) 1-32.30	75	25	600
Millwrights 5-78	80	20	1,000
Neon Sign Servicemen 5-83.871	80	20	1,000
Nurse Aides (Hospital Attendants) 2-42	50	50	180

OCCUPATION	MINIMUM TIME ALLOTMENT - PERCENTAGE OF TOTAL HOURS		MINIMUM LENGTH OF PROGRAM IN HOURS
	Manipulative	Related Technical Subjects	
Nurses, Practical 2-38	75	25	1,440
Painters, Construction and Maintenance 5-27	80	20	900
Pattern and Model Makers (Except paper) 5-17	75	25	1,000
Photoengravers 4-47	80	20	1,000
Plumbers, Gas Fitters, and Steam Fitters 5-30	80	20	1,000
Power Sewing Machine Operators 6-27	90	10	400
Pressmen and Plate Printers 4-48	80	20	1,000
Printer 4-44	75	25	1,000
Typesetter	90	10	250
Printing - Lithographer 4-46	80	20	1,000
Production Control Clerk 1-18.68	50	50	400
Radio and T.V. Servicemen Mechanics and Repairmen 5-83.411	75	25	1,000
Refrigeration and Air Conditioning Mechanics 5-83.941	75	25	1,000

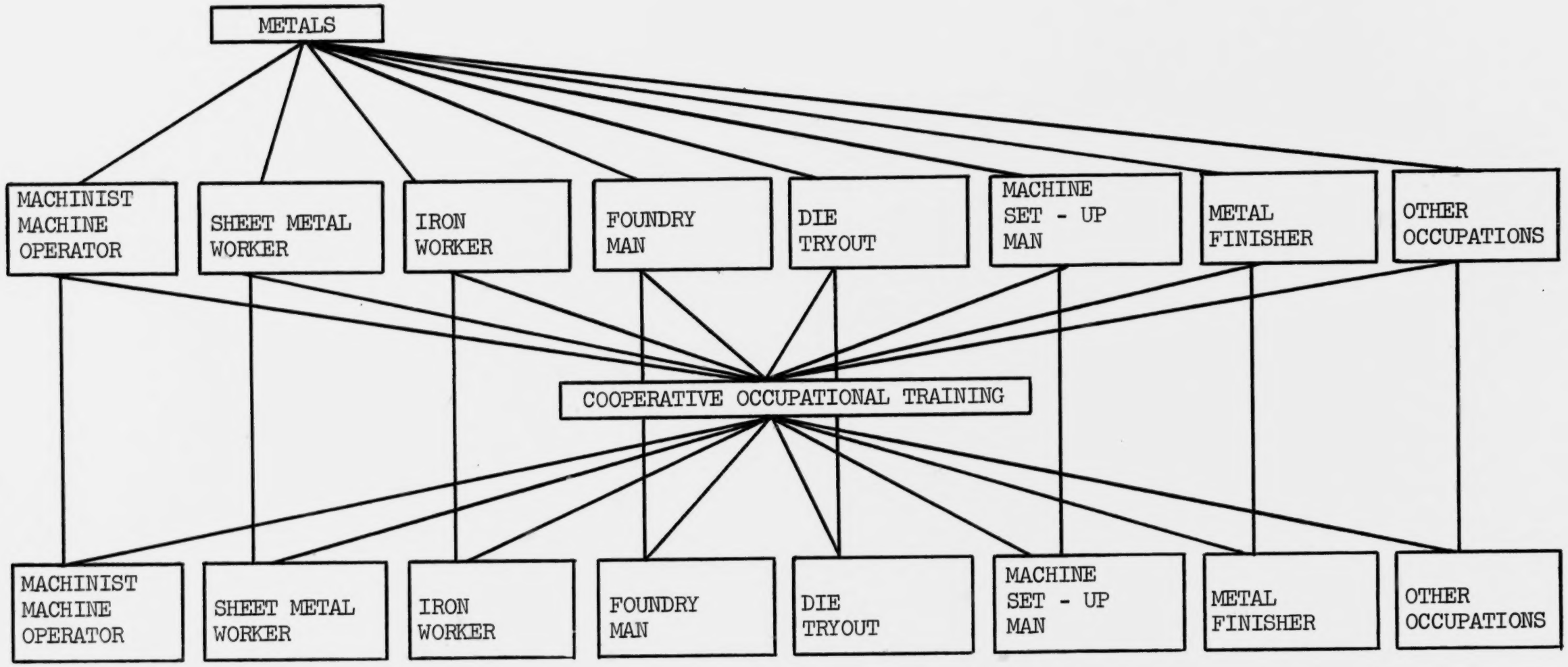
OCCUPATIONS	MINIMUM TIME ALLOTMENT - PERCENTAGE OF TOTAL HOURS		MINIMUM LENGTH OF PROGRAM IN HOURS
	Manipulative	Related Technical Subjects	
Restaurant, Hotel, and Cafeteria Kitchen - Managers and Supervisors 2-25.41	60	40	600
Roofer and Slaters 7-31	95	5	600
Sheet Metal Workers-Coppersmiths and Tinsmiths 4-80	75	25	1,000
Shoe Repairmen and Shoemakers (Not in factory) 4-60	80	20	800
Sign Painters 5-27.910	85	15	1,000
Stationary Engineer 5-72	75	25	1,000
Tailors, Garment Trade Workers 4-26	80	20	1,000
Toolmakers & Die Makers 4-76	75	25	1,000
Waiters and Waitresses 2-27	80	20	100
Water Treatment and Sewage Plant Workers 9-54	80	20	600
<u>Technician's List:</u>			
Automotive Technician (Auto Tester) 5-81.920	65	35	1,000
Cost Estimator 0-01.10	40	60	600
Dental Technician 0-50.06	65	35	1,000

OCCUPATIONS	MINIMUM TIME ALLOTMENT - PERCENTAGE OF TOTAL HOURS		MINIMUM LENGTH OF PROGRAM HOURS
	Manipulative	Related Technical Subjects	
Electronic Technician 5-83.444	65	35	1,000
Engineer Aide, Industrial 0-18	65	35	1,000
Highway Engineering Aide Technician 0-16.01	65	35	1,000
Instrument Technician 0-64.30	65	35	1,000
Metallurgist 0-14.20	65	35	1,000
Radio Broadcast Technician 0-66.01	65	35	1,000

SUGGESTIONS FOR CURRICULUM BUILDING LEADING TO OCCUPATIONAL PREPARATION



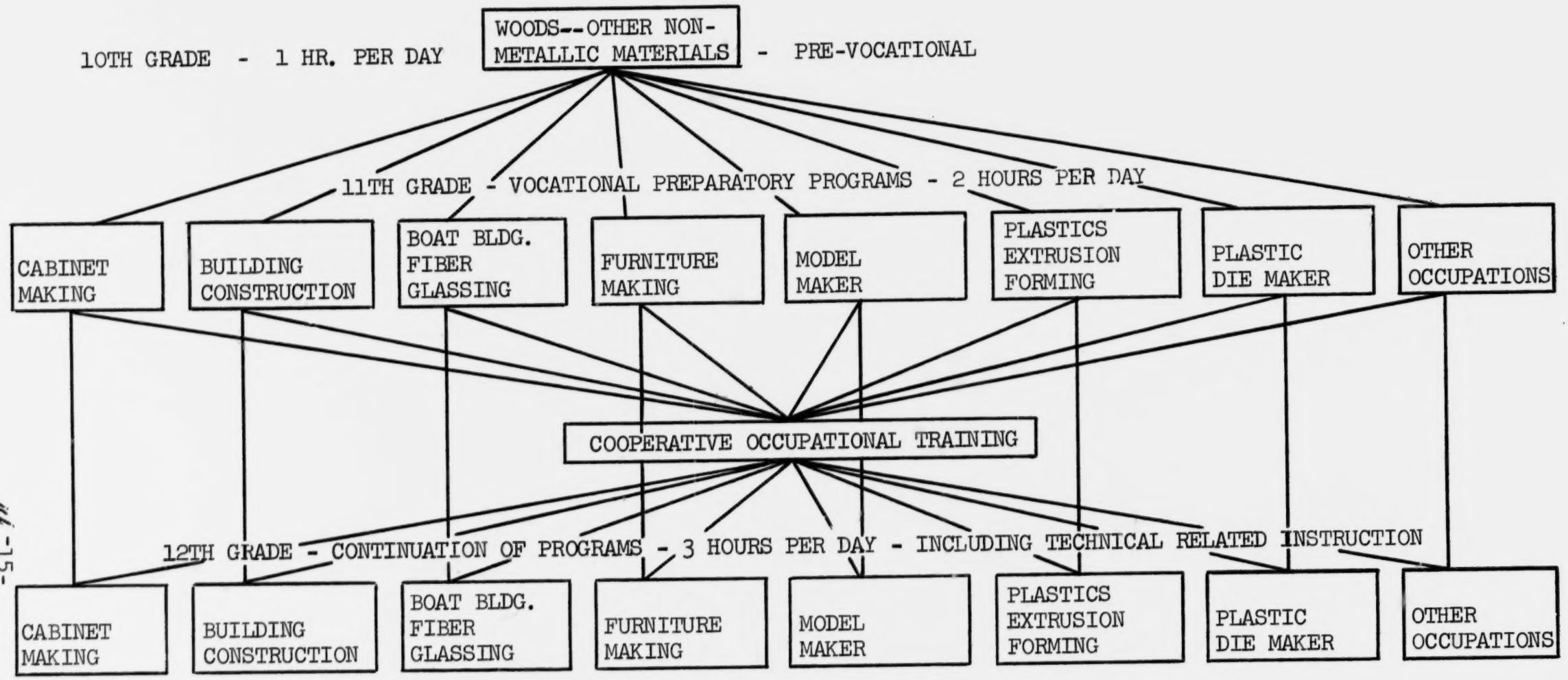
Completion of any one of the occupational areas in the 11th grade may provide adequate background for cooperative occupational training during the 12th grade. Completion of any one of the occupational areas designated will provide a minimum of 900 hours of occupation preparation exclusive of other essential related subjects. The program will provide opportunity for trainees to complete training for lesser job activities during the 2-year period.



Some occupations for which trainee will receive training are: operator of the various metal working machines, tinsmith, coremaker, foundryman, set-up man, metal finisher, heat treater, welder, machinist, wrought iron worker, job estimator.

Cooperative training could be a valuable part of the training.

Proper structuring of the above courses will provide for minimal job proficiencies and also make room for the over-all planning for entry into the major occupation.



Some occupations which the above outline of programs will assist students in obtaining the necessary skills are: cabinet maker, furniture maker, machine operator, rough carpenter, finish carpenter, injection molder, boat builder, model maker, fiber glasser, repairman, etc.

Cooperative occupational training may be a valuable part of the training program.

Occupations requiring lesser skills than the major occupations should be included in the program plans. Each of the above programs should provide a minimum of 900 hours of instruction.

SUGGESTIONS FOR CURRICULUM BUILDING LEADING TO OCCUPATIONAL PREPARATION

10TH GRADE PRE-VOCATION SHOPS - 1 HOUR PER DAY

POWER SOURCES

11TH GRADE OCCUPATIONAL PREPARATORY PROGRAMS FOR DEVELOPING SKILLS AND KNOWLEDGE FOR JOB ENTRY 2 HOURS PER DAY

- AERO MECHANIC
- INDUSTRIAL EQUIPMENT CONTROLS
- ELECTRICAL APPLIANCE SERVICEMAN
- ELECTRONICS
- ELECTRICITY
- AUTO MECHANICS
- SMALL ENG. & EQUIPMENT SERVICEMAN
- HEATING AIR CONDITION REFRIGERATION

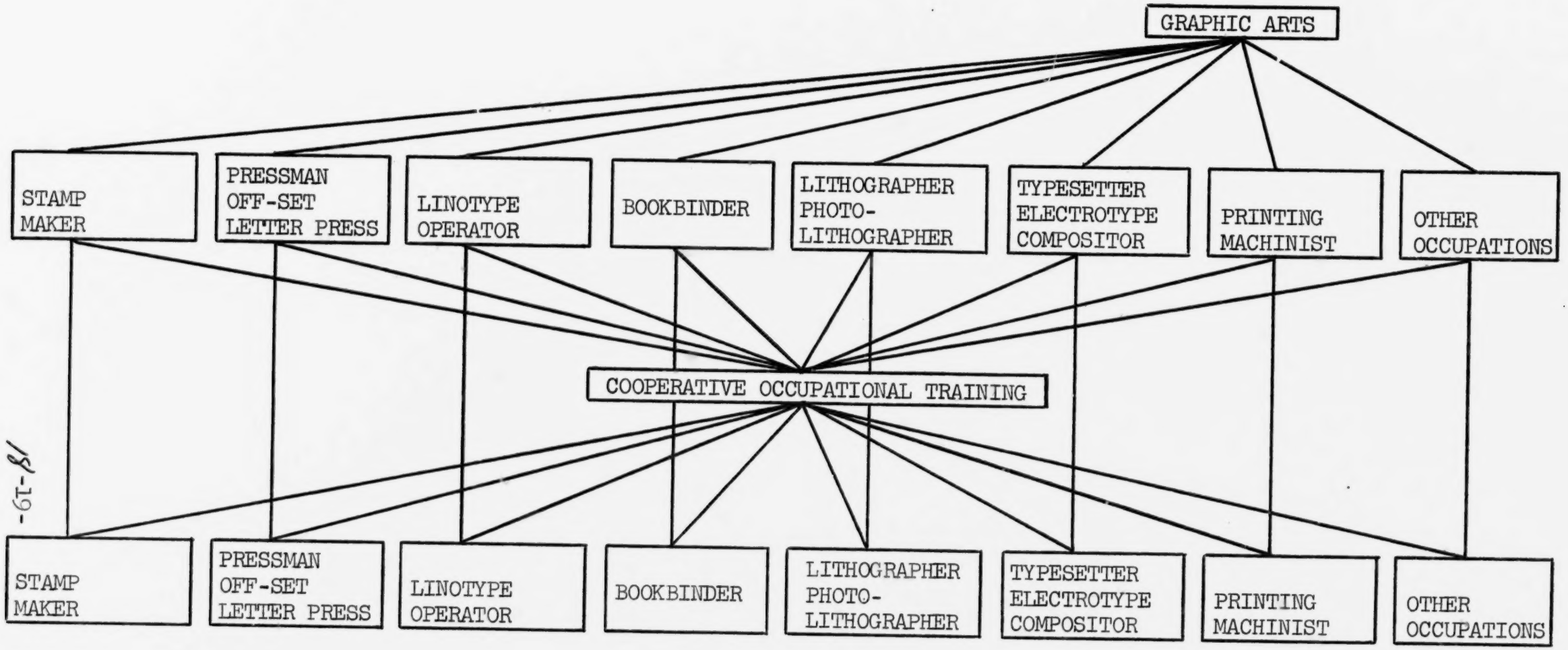
COOPERATIVE OCCUPATIONAL TRAINING

12TH GRADE CONTINUATION OF OCCUPATIONAL PREPARATION 3 HOURS PER DAY INCLUDING TECHNICAL RELATED SUBJECTS

Occupations

AERO MECHANIC	INDUSTRIAL EQUIPMENT CONTROLS	ELECTRICAL APPLIANCE SERVICEMAN	ELECTRONICS	ELECTRICITY	AUTO MECHANICS	SMALL ENG. & EQUIPMENT SERVICEMAN	HEATING AIR CONDITION REFRIGERATION
Frame	Pneumatic Control Mech	Washing Machine Repair	T.V. Repairman	Electrician	Auto Mechanic	Lawn Mower Repair	Furnace Installer
Body	Industrial Electronic Mechanic	Dryer Repair	Radio "	Electric Motor Repair	Tune-up Mech.	Outboard Motor Repair	Refrigerator Service
Engine		Household Electrical Equipment Repair		Industrial Electrician	Partsman		Air Condition Service
Mechanics				Meter "	Transmission Man		
				Wireman	Greaser		
				Lineman	Washer		
					Polisher		
					Gas Station Attendant		
					Aero Mechanic		

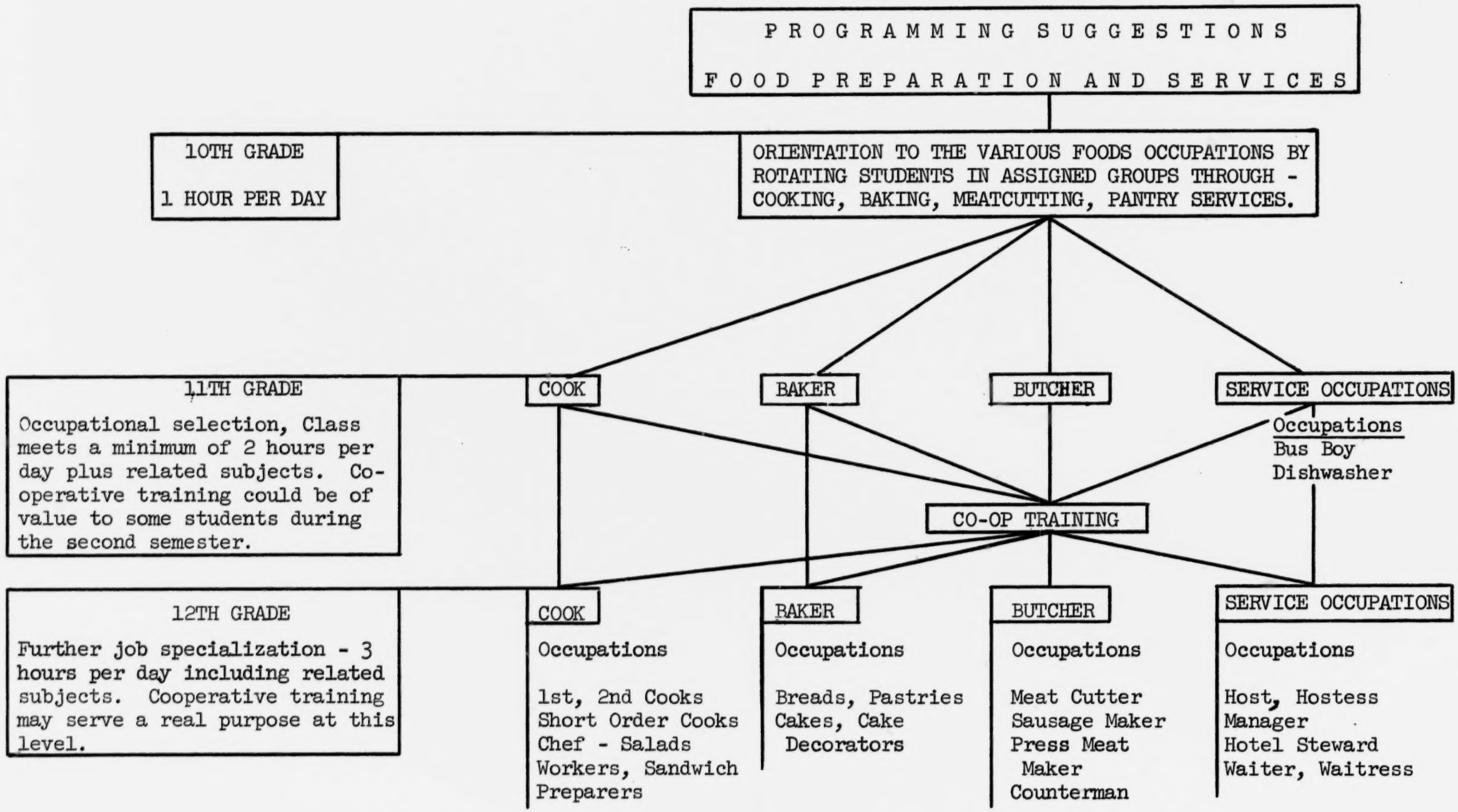
Completion of any one of the occupational areas in the 11th grade may provide adequate background for cooperative occupational training during the 12th grade. Completion of any one of the occupational areas designated will provide a minimum of 900 hours of occupational preparation exclusive of other essential related subjects. The programs outlined will also provide opportunity for individuals to complete training for jobs requiring lesser proficiencies.



Some occupations for which trainee will qualify: operator of the printing machines on which training took place, compositor, bookbinding, stamp making, machine repairman, camerman, plate making, typesetting.

Cooperative training may be a valuable part of training in any of the occupational areas.

Courses properly structured will provide for the student needing short-range preparation, as well as for those who desire to work toward competency in the major occupation. This will mean a possibility of at least 900 hours of instruction over a two-year period.



A student initiating a program in the 10th grade and continuing through 12th grade in the same occupation should complete a minimum of 900 to 1,080 hours of education and training. The first figure should be considered minimum instructional time to prepare in-school youth for entry into the major foods occupations. Youth attempting to qualify for food trades jobs requiring a lesser number of skills may terminate prior to completion of the 900 hours.

APPENDIX

CHARACTERISTICS OF TRADE AND INDUSTRIAL, HEALTH AND TECHNICAL COURSES OR PROGRAMS
VOCATIONAL EDUCATION ACT 1963

Type of Program	Basic Purpose of Training	Minimum Length of Program	Class Schedule	Class Size	Minimum Age of Students	Occupational Status of Students	Reimbursable Services
Preparatory High School Post- High School Socio-- Economic Disadvantage	To prepare individuals for employment in recognized occupations	The length of the program will be determined by an analysis of the skills and knowledge required to build entry skills for the occupation for which training is designed	Of sufficient duration to provide entry skills for the occupation. Time and length of individual class periods may vary	Should not exceed the number of available work stations	14 or over	Full time students who have recorded their occupational objective	Instruction Practical Shop Related Subjects Coordination Supervision Local Travel Placement - Counseling Equipment Construction of Area Schools
	To prepare youth and adults for employment as Practical Nurses	48 weeks of at least 30 hours per week of combined instruction and clinical experience	Any time of day or night	Clinical and classroom facilities available	18 yrs. or over or 14 years and left full-time school	May or may not be employed	Coordination Teachers Local Travel Equipment
Apprenticeship Craft and Industrial	To extend the trade knowledge and skill of apprentices employed in an apprenticeable occupation	144 clock hours of related instruction per year. Instruction as stated in the Standard for the trade or occupation	any time of day and in agreement with the apprentice Standards	Limited only by the available facilities and qualified instructors	16 yrs. of age or older	Actively employed in apprenticeable occupation	Coordination Teachers Local Travel Equipment

CHARACTERISTICS OF TRADE AND INDUSTRIAL, HEALTH AND TECHNICAL COURSES OR PROGRAMS
VOCATIONAL EDUCATION ACT 1963

Type of Program	Basic Purpose of Training	Minimum Length of Program	Class Schedule	Class Size	Minimum Age of Students	Occupational Status of Students	Reimbursable Services
Cooperative Occupational Training	To provide basic competencies in occupations which fit the trainees' needs, abilities and interests	Depends on the length of time required by trainee to acquire the basic competencies of the chosen occupation	At a time when the trainee is not on the job. An average of one class period per day	Vary according to the class facilities and students to be served	16 yrs. of age or older	Actively employed part time with a minimum of 15 hours per week over the length of the student's program	Coordination Teachers Local Travel Equipment
Technical	Designed to train persons for employment as highly skilled technicians in occupations requiring scientific knowledge in fields necessary to the national defense or those emerging from new and changing technologies	Content and length of program are based on an analysis of the job or cluster of jobs. Science, mathematics and advanced technical skills contribute greatly to the program content	Any time of day or night. Preparatory programs usually identified with day school curricula	According to facilities and equipment available	9th Grade or 16 yrs. of age or older	Preparatory, designed for full-time students. Supplemental for employed or temporarily unemployed	Coordination Teachers Local Travel Equipment Placement Counseling

CHARACTERISTICS OF TRADE AND INDUSTRIAL, HEALTH AND TECHNICAL COURSES OR PROGRAMS

VOCATIONAL EDUCATION ACT 1963

Type of Program	Basic Purpose of Training	Minumum Length of Program	Class Schedule	Class Size	Minumum Age of Students	Occupational Status of Students	Reimbursable Services
Supplementary	To train and retrain, improve and upgrade the occupational competency of the individual in recognized occupations	Instruction must be confined to that which is supplemental to the daily employment of those enrolled. To be considered supplemental to the daily employment, the instruction must be such as to increase the skill or knowledge of the worker in the trade or industrial occupation in which the person is employed	Of sufficient duration and intensity within a scheduled unit of time to enable the development of competencies necessary to fit the individual for employment in the occupation. Time and length of individual class periods may vary	Should not exceed the number of available work stations or exceed good instructional procedures and policies	16 or over	Employed or temporarily unemployed	Instruction Practical Shop Related Subjects Coordination Supervision Local Travel Placement - Counseling Equipment Construction of Area Schools

Note:- Funds will not be available for the preparation of individuals for occupations generally considered professional or as requiring a baccalaureate or higher degree. Needy students enrolled in an occupational preparatory program may receive financial aid providing they meet the qualifications set forth in the Work-Study program 5.0 of the State Plan.

MINIMUM QUALIFICATIONS FOR PERSONNEL OF
REIMBURSABLE TRADE AND INDUSTRIAL PROGRAMS
FOR INITIAL CERTIFICATION

Type of Service	Education	Work Experience Outside Teaching	Teaching Experience
Trade, Occupation, and Related Subjects Teacher	Baccalaureate degree in Industrial Arts, Industrial Education or Engineering	Three years during last 10 years in occupation to be taught	None
	- - - - - - - - or - - - - - - - - - - - - -		
	High School Completion	Qualified worker or journeyman in the occupation or trade	None
Related Subjects Teacher	Degree in subject area	One year in occupational area of subject to be taught	None
Health Occupations -Administrator	Michigan teaching certificate issued on the basis of education and knowledge of health occupations	Four years in fields of nursing education and/or administration in related health services	None
Nursing Arts Instructor	Registered or eligible to be registered as a nurse in Michigan	One year of experience in nursing occupation	None
Foods and Nutrition Instructor	Bachelor's degree in foods preparation or nutrition	None	One year foods preparation
Technical Occupations Supervisor Coordinator	Bachelor's degree from a college or university recognized by the State Board. One additional year in V.E. or completed 24 semester hours in the field to be supervised	Three years in a recognized technical occupation	One year Instruction Supervision or Administration

Type of Service	Education	Work Experience Outside Teaching	Teaching Experience
Technical Instructor	Hold or be eligible to hold a Michigan teaching certificate Teachers of trade practices may qualify	Three years in the occupational area in which instruction is to be given, or three years in a combination of technical occupations related to that to be taught	None
Related Subjects	Same as above	Demonstrate knowledge of subject in relation to technical occupational area	None
Coordinator Cooperative Training	Baccalaureate degree in major occupational area to be coordinated	Two years in occupational area to be coordinated	None
Health Occupations	Hold a recognized certificate or license in field of specialization	"	"
Supervisor	Bachelor's degree in Industrial Education	Three years of recent employment	Must qualify as a trades teacher or coordinator

Note:- Under certain circumstances an applicant who does not fully meet the qualifications as an instructor or coordinator may apply for the administration of a competency examination.

PLAN FOR THE CERTIFICATION OF TEACHERS AND COORDINATORS OF TRADE AND TECHNICAL EDUCATION

TYPES OF CERTIFICATES - Special, 1 year. First certificate issued
Secondary Provisional (Valid 5 years)
Secondary Permanent

SPECIAL CERTIFICATE

Conditions of Issuance

A person who meets the minimum requirements outlined in the Michigan State Plan for Vocational Education will be eligible for a special certificate valid for 1 year, upon the request of the administrative officer of the employing school.

Conditions of Renewal

A. A person who does not qualify for a secondary provisional may have the certificate renewed upon request from the administrative officer of the employing school. (Form 108)

B. A person who will devote 12 hours or less per week teaching approved trade and technical supplementary or part-time classes may have the certificate renewed for a period of (3) years upon application of the administrative officer of the employing school. (Form 108)

SECONDARY PROVISIONAL CERTIFICATE

Conditions of Issuance

A person who meets the minimum requirements outlined in the Michigan State Plan for Vocational Education may be granted a secondary provisional certificate valid for 5 years under the following conditions:

A. Has a bachelor's degree from an institution of higher learning recognized by the State Board of Education.

B. Has 12 or more semester hours, or equivalent term hours, of credit in professional vocational trade and technical courses approved by the State Board of Education, or

has completed one year of teaching experience acceptable to the State Board of Education.

Conditions of Renewal

The secondary provisional certificate shall be renewed for a person who has completed 12 semester hours, or equivalent term hours, of credit applying on requirements for a permanent certificate, but does not have the necessary 3 years of teaching experience required for a permanent certificate.

A person who does not qualify for a renewal of the secondary provisional certificate or for a secondary permanent certificate will be eligible only for a special 1-year certificate upon the recommendation of the administrative official of the employing school.

SECONDARY PERMANENT CERTIFICATE

Conditions of Issuance

At the termination of the 5-year period in which the secondary provisional certificate is valid, the teacher must have completed the following requirements in order to be eligible for a secondary permanent certificate:

A. Three years or more of teaching experience in the subject area specified on the certificate.

B. At least 12 semester hours, or equivalent term hours, of credit in trade and technical education courses acceptable to the State Board of Education.

PROCEDURE FOR PROCESSING APPLICATIONS FOR CERTIFICATION IN TRADE AND TECHNICAL EDUCATION

In all cases, first applicants for certification must complete Vocational Education Forms 151, 108 and Teacher Oath Certificates. These forms must be signed by the applicant and the local administrative officer who will forward the forms to the State Board of Education or to the vocational education institution of the candidate's choice as follows:

A. Special Certificates

1. Candidates may make application directly to the State Department of Education, Division of Vocational Teacher Certification, Bauch Building, P. O. Box 928, Lansing if the following conditions apply:

   a. Never previously applied for a certificate
   b. Education attained in another state
   c. Primarily teacher of adult vocational education

2. Eligible vocational education students enrolled in class at a designated teacher education institution may have the teacher educator make a recommendation for approval of certification if the educational and practical experience requirement stated in the Michigan State Plan for Vocational Education are fulfilled.

B. Secondary Provisional Certificate

1. Candidates who are graduates of designated Michigan Teacher Institutions may ask the designated institution to have the following forms completed and signed by a representative of the department or unit of the institution responsible for the candidate's program of vocational teacher education.

   a. Form 175 (in duplicate) Certified List of Recommended Candidates for Vocational Certificates
   b. Form 151 Statement of Qualifications for Teachers of Vocational Classes
   c. Form 108 Application for Vocational Certificate to Teach Vocational Classes
   d. Teacher's Oath Card and Sticker

2. The registrar or other official designated by the institution will process the forms and submit them to the Department of Education.

3. For candidates who are graduates of institutions not designated by the State Board of Education, application will be made by the candidate through his employing Michigan school official direct to the Department of Education. Use Vocational Education Forms 151, 108 and Teacher Oath Sticker.

C. Vocational Secondary Permanent Certificate

For eligible candidates who are recommended by a Michigan teacher education institution designated by the State Board of Education to prepare vocational trade and technical education teachers.

1. The institution upon request of a candidate for a vocational secondary permanent certificate, whose qualifications are on file with the Division of Vocational Education, will provide the candidate with the Form 108-A (in triplicate) to be completed and returned to the designated institution.

2. Upon receipt of the completed application (108-A), the institution responsible for the program will review the candidate's status (course credits and teaching experience), and recommend to the State Board of Education a vocational secondary permanent certificate, if requirements have been met.

3. Two copies of each application (108-A) will be forwarded to the registrar or other official designated by the institution.

4. The registrar or other official designated by the institution submits original copy of application (108-A) to the Department of Education. If the institution is recommending a dual secondary permanent certificate for the candidate, it will prepare a certificate as supplied by the Department of Education to accompany the application (108-A).

5. For those persons who have been on vocational contract three years or more with all required qualifying conditions for certification completed outside of Michigan teacher education institutions, Vocational Education Form 108 and Teacher Oath Sticker should be completed. Mail these forms together with a transcript of credit to the Department of Education.

NOTE: Applicants for positions in community colleges must meet the minimum qualifications for a teacher as stated in the Michigan State Plan for Vocational Education and make application to the Department of Education. Such applicants, if the conditions set forth in the State Plan are satisfied, will receive notification of approval and no further action will be required other than policy of the employing institution.

Address all correspondence regarding certification to the Department of Education, Division of Vocational Teacher Certification, Bauch Building, P. O. Box 928, Lansing, 48904.

APPROVED TRADE AND TECHNICAL
TEACHER TRAINING INSTITUTIONS

Raymond LaBounty, Head
Department of Industrial Education
and Applied Arts
EASTERN MICHIGAN UNIVERSITY
Ypsilanti, Michigan 48917

F. W. Van Trump
Teacher Educator
FERRIS STATE COLLEGE
Big Rapids, Michigan 49307

Lawrence Borosage, Professor
Industrial Education Service
College of Education
MICHIGAN STATE UNIVERSITY
East Lansing, Michigan 48823

Russell W. Adams, Director
Business and Industrial Services
NORTHERN MICHIGAN UNIVERSITY
Marquette, Michigan 49855

Ralph C. Wenrich
Vocational Teacher Education
School of Education
UNIVERSITY OF MICHIGAN
Ann Arbor, Michigan 48104

J. Frank Campbell
Associate Dean
College of Education
WAYNE STATE UNIVERSITY
Detroit, Michigan 48202

George Kohrman, Dean
School of Applied Arts and Sciences
WESTERN MICHIGAN UNIVERSITY
Kalamazoo, Michigan 49001

VT 004 002

Decker, John P.

A Functional Analysis of Paramedical Occupations as a Foundation for Curriculum Development. Condensation of the Final Report.

Arizona Health Services Education Association, Phoenix

Office of Education (DHEW), Washington, D.C. Div. of Adult and Vocational Research

MF AVAILABLE IN VT-ERIC SET. OEG-4-6-062193-2229 08

BR-6-2193

Pub Date - 31Aug67 9p.

*HEALTH OCCUPATIONS EDUCATION; *MEDICAL LABORATORY ASSISTANTS; *CURRICULUM DEVELOPMENT; TECHNICAL EDUCATION; *BEHAVIORAL SCIENCE RESEARCH; EDUCATIONAL RESEARCH; PROBLEM SOLVING

The study, "A Functional Analysis of Paramedical Occupations as a Foundation for Curriculum Development" (ED 012 790) is summarized. (JK)

VT004002

ED0 31587

Condensation of the Final Report

of

A FUNCTIONAL ANALYSIS OF PARAMEDICAL OCCUPATIONS AS A FOUNDATION FOR CURRICULUM DEVELOPMENT

by

John P. Decker, Ph.D.
Principal Investigator

Office of Education Grant Number OEG-4-6-062193-2229
under the Vocational Education Act of 1963, P.L. 88-210, section 4(c)

Arizona Health Services Education Association
Phoenix, Arizona

August 31, 1967

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Office of Education
Bureau of Research
Division of Adult and Vocational Research

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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VT004002

I. ABSTRACT

A practical procedure was developed for deriving the kind of concrete, accurate and specific goals needed for drastic improvement of instructional programs from medical laboratory technicians. The goals are in the form of detailed behavioral specifications of the technical skills, background knowledge and personal traits desired in technicians.

II. THE PROBLEM AND ITS BACKGROUND

All programs of higher education known to the principal investigator are aimed at goals stated in the liberal-arts tradition of high level abstractions. A survey of relevant literature revealed no procedure for deriving tangible goals, or even a suggestion of its need or potential importance. Development of such a procedure was a major objective of this project.

A survey of catalogs of liberal-arts colleges revealed a consistent practice of stating goals only in such terms as the liberation of men from the meagerness of mere existence, learning to understand and appreciate our cultural heritage, development of wisdom, development of mental maturity, etc. Further refinement of programs aimed at such goals can apparently happen only by happy accident. There is no way of determining within a usefully short time whether any given change of curriculum or didactic procedure has helped or hindered progress toward the goals, thus there can be no rational basis for planning changes. Faculty committees and educational conferences can provide at best only a consensus of intuitions or subjective evaluations by which an individual teacher may go safely with the crowd, but he cannot know in what direction he is moving with respect to the hazy goals. The situation is analogous to trying to improve marksmanship by altering gunsights and ammunition when the target is too remote for impact points to be observed directly.

A survey of catalogs of schools of law, medicine, engineering, nursing medical technology, etc. reveal close adherence to the liberal-arts tradition of goals and standards, and thus rational refinement of these programs is apparently impossible by traditional methods.

It should be emphasized that the preceding comments apply only to further refinements. Intangible goals have obviously not prevented development of an effective system of higher education. The millions of students who have passed through and emerged satisfactorily educated are direct evidence of its effectiveness. Hazy goals, intuition and subjective evaluation were good enough for this first rough pioneering stage of development, but further refinement will require a much higher order of specificity and accuracy of inquiry and observation.

III. PROCEDURES AND RESULTS

The procedure used was evental analysis, which consists essentially of describing a situation entirely in terms of real objects and real events, that is, describing it with childlike simplicity and directness. It is based on the realization that ones sensory input and therefore ones total awareness of the public world ~~is~~ are entirely as sensory impressions of tangible objects and their tangible changes. These are the basic irreducible elements of cognition, and all human knowledge and wisdom concerning the public world are reducible to them. Thus statements about that world must be reducible to these elements to be accurate and meaningful.

Evental analysis in educational research directs inquiry toward what a student can do rather than what he has been exposed to, toward what he does rather than what he is said to be. The key questioning is of the form, "What must I see a _____ do in order that I would say he is _____?" For example, how does a technician differ from a layman, that is, what must I see a person do in order that I would call him a technician and not a layman? What must I see a technician do in order that I would call him an experienced old pro rather than a competent novice?

Evental definition of a competent novice technician

A technician solves problems (where a problem is an undesired object or event and a solution consists of the events necessary to transform or replace it) that a layman does not. A particular list of problems would define his skill. The list could be derived by functional analysis of his job, and this approach was pursued until a simpler one became apparent. Simplification came

with the realization that a description of mechanical steps is not necessary in defining a skill. Instead, a skill can be defined in terms of performance of a practical test where the examinee is required to perform a complete procedure within specified limits of time and accuracy. These two measurables, time and accuracy, provide an overall test for competence on all steps of the procedure, and thus individual steps need not be considered. The competent novice level of technician can be defined in terms of certain groups of laboratory procedures he must perform satisfactorily under test conditions. Such testing is well within the state of the art and requires only routine development.

Elimination of routine functional analysis allowed earlier concentration on the task of deriving exact evental definitions of important characteristics usually described vaguely as experience, grasp of scientific principles, judgment, responsibility, motivation, etc.

Evental definition of experience

What must one see a technician do in order to call him an experienced old pro rather than merely a competent novice? The physician ordering the laboratory work is concerned mainly with reliability of results. From his viewpoint the main element of experience is a low probability of a plausible but seriously erroneous result. This statistic could be estimated directly from past errors, but frequency of occurrence is very low and thus gathering the necessary data appeared impractically difficult. A simplifying assumption permits a reasonable and useful indirect approximation.

A competent novice is trained to recognize and avoid common procedural mistakes leading to erroneous results. With time on the job (experience) comes opportunity to make unusual errors and to see them made by co-workers. As he becomes familiar with a longer and longer list of errors and remembers how to avoid them, the probability of his making a serious error can reasonably be expected to decrease, and this simplifying assumption is made here.

Evental specification of the primary component of that abstract quality called experience can thus be narrowed to a list of definitive errors and how to avoid them.

Derivation of errors definitive of the primary component of experience

Laboratory procedures selected for study were those listed in a standard guidebook to a curriculum for certified laboratory assistants. The routine for each procedure was as follows. Textbooks were searched for known errors, and the data were assembled as a list of problems (observations of erroneous results) along with explanations and corrective actions. The list was shown to a chief technologist in charge of a clinical laboratory, and he was asked to make additions and corrections from his own experience. The process was repeated with other chief technologists. The data were grouped and assembled as Appendix A (108 pages) of the final report of the project. Examination questions (both true-false and multiple choice) were derived from Appendix A and were assembled as Appendix B (103 pages) of the final report.

The problems of Appendixes A and B should define those primary skills of the experienced old pro distinguishing him from a competent novice, and they should thus define exactly the content material that in-service training should aim at for rapid upgrading of primary skills, but actual testing of the material for discrimination and consistency (and thus testing the validity of the simplifying assumption) was beyond the scope of this project.

Evental specification of scientific background

Revising the science requirements offers opportunity for a major increase in efficiency of educational programs for laboratory technicians. Science requirements, which constitute a large part of these programs, are now specified entirely in terms of credit hours of coursework the student is exposed to rather than in terms of actual intellectual skills acquired. The rationale for selection of information for inclusion in such courses, as stated in the prefaces of standard modern textbooks, is vague, intuitive and ambiguous with the underlying tacit assumptions apparently never identified or examined. Evental analysis avoids this traditional confusion and leads directly to rational specifications.

What must I see or hear a technician do in order that I would say he has a good scientific background? Directly observable evidence would be his handling routine laboratory equipment familiarly and well, his predicting correctly the behavior of unfamiliar equipment, and his giving explanations for many technical events in the laboratory that agree with mine or exceed my knowledge.

Learning the skills and knowledge represented by the first two categories of evidence probably comes mostly from firsthand experience and seems to offer little chance for drastic improvement.

The third category (ability to explain events) involves the main body of information in science textbooks, and it offers opportunity for drastic improvement. All of the many modern textbooks reviewed were patterned for the traditional teaching approach of background-first-application-later wherein depth and scope of background are determined intuitively by the individual professor according to his taste or customs of his group. A symbolic device for evental analysis, the plane of events, fixes a pattern for analytical explanation in which depth, scope and method of inquiry are rigorously rational rather than intuitive and whimsical.

Most physical, chemical and biological phenomena encountered in the laboratory are suitable for analytically explanatory sequences. Exploration of these would establish the worthwhile so-called basic principles of science, that is, the analytical explanations common to many observable phenomena. Restricting exploration to events encountered in the real world of the clinical laboratory would avoid burdening students with recitation based on conjectural models constructed by researchers to explain rare events encountered only under the highly improbable conditions of a research laboratory--the glamorous sounding trivia that is so often peddled enthusiastically in academia as the very latest in up-to-date "sophisticated" Science.

Clear, concrete and rational specification of the amount of scientific background required for good performance of laboratory technicians could be made in terms of the number and kinds of events to be explained and in terms of the number of size-orders of analytical resolutions to be completed in each explanation. Empirical data required as a basis for these specifications is, of course, lacking at present, but gathering it would be only a routine research task.

Evental definition of personal traits

This was a bonus phase of the project that was pursued for a short time. A rationale was developed for applying evental analysis to those personal traits that weigh heavily in supervisory decisions about hiring, firing and

promotion. The necessary pattern of inquiry became clear: don't be concerned with defining any intangible characteristic or personal trait, per se, but instead collect accurate evental descriptions of conspicuously desirable and undesirable actions of technicians that have actually been observed by a reliable witness.

Interview techniques were worked out. Preliminary data were collected in 26 categories (ability to get along with other people, attitude, compassion, confidence, conscientiousness, creativity, curiosity, etc.) but were too meager to be worth summarizing yet. Collecting, compiling and interpreting the needed data would be a project worthy of a doctoral dissertation in human engineering.

A similar brief exploratory study was done on motivational factors. Again, evental analysis proved appropriate. The patterns of what data are needed and how to go about gathering them are now clear. Collecting and compiling the data will be a project worthy of a master's thesis in human engineering.

Inquiries for further information may be addressed directly to:

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Dr. John P. Decker
Engineering College
Arizona State University
Tempe, Arizona 85281

Telephone (602) 961-3767 (private line)
961-3185 (secretary)

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Baines, Thomas E.
The Effectiveness of a Distributive Education Preparatory Course on Student Progress in Distributive Education II.

Newport News Public Schools, Va.
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*DISTRIBUTIVE EDUCATION; *COMPARATIVE ANALYSIS; *PREVOCATIONAL EDUCATION; *COURSE EVALUATION; PERFORMANCE; STUDENT CHARACTERISTICS; STUDENT EVALUATION; HIGH SCHOOLS

The purpose of this study was to determine the effects of a preparatory course, Distributive Education I, on student interest, achievement, job placement and job performance in a Distributive Education II course. Eight sections of students (171) enrolled in the Distributive Education II Cooperative Program, 11th grade, in the six high schools of Newport News, Virginia, during the 1966-1967 school year were involved in this study. The experimental group were those students who took Distributive Education I and the control group were those students who did not. Some of the findings were: (1) The percentage of students who withdrew in the experimental group was 7.5 percent less than for the control group, (2) The vocational interests of students were significantly alike for both male and female students, (3) The vocational interests of male students gave a negative correlation and a high positive correlation for female students in both groups, (4) There were no significant mean differences between experimental and control group in the Achievement Survey Test, teacher marks, the time the students were recommended for job placement, or ratings on the Student Progress Report, but significant mean differences were found within the two groups. (MM)

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THE EFFECTIVENESS OF A DISTRIBUTIVE EDUCATION PREPARATORY COURSE ON STUDENT PROGRESS IN DISTRIBUTIVE EDUCATION II

THOMAS E. BAINES
Director of Research

NEWPORT NEWS PUBLIC SCHOOLS
Newport News, Virginia
1966-1967

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THE EFFECTIVENESS OF A DISTRIBUTIVE EDUCATION PREPARATORY COURSE ON STUDENT PROGRESS IN DISTRIBUTIVE EDUCATION II

by

Thomas E. Baines

I. Purpose

The purpose of this study was to determine the effects of a preparatory course, Distributive Education I, on student interest, achievement, job placement and job performance in the Distributive Education II Course.

II. Procedure

A. Definition of Terms

1. Experimental Group means those students who took Distributive Education I prior to taking Distributive Education II.

2. Control Group means those students who did not take a Distributive Education I course prior to taking Distributive Education II.

3. Distributive Education I, hereinafter referred to as DE I, was a pattern of instruction involving a series of learning activities or projects in the field of marketing, merchandising and management which are related to the student's occupational interests. This was a tenth-grade course offering.

4. Significant Difference is set at the .05 level.

B. Sampling

Eight sections of students (171) enrolled in the Distributive Education II Cooperative Program, eleventh grade, in the six high schools of Newport News, Virginia, during the 1966-1967 school year were involved in this study. The criteria for formulating an experimental and a control group were the mental ability test scores and whether or not the students had taken DE I prior to enrolling in DE II. Of the original 171 students 109 remained in the study, 57 in the experimental group and 52 in the control group.

C. Collection of Data

All students in the study were given the Otis Mental Ability Tests at the beginning of school in September.

A Distributive Education Achievement Survey Test was administered to the students in the experimental group and in the control group both in the fall and again in the spring.

Reading, Listening and Mathematics achievement tests scores as determined by the Sequential Tests of Educational Progress were tabulated for each student.

Scores on the Kuder Preference Test and on Gordon's Occupational Check List were compiled for each student.

Teacher marks in DE II, first and second semester, were tabulated for students in both groups.

Progress Reports for students, State Form DE 12, were prepared by employers for those students who were working at the end of the first and at the end of the third rating periods.

Records showing dates that students in the two groups were recommended by the teacher for job placement were tabulated for analysis.

Reports showing the date, group and the reason for student withdrawal from the DE II course were collect d and tabulated for comparison.

Semester grades for students in DE II were compared to determine if there was a significant difference in student achievement in the experimental and in the control groups.

Comparisons were made to determine the correlation between rankings by employers and by teachers on the ten items on the Student Progress Report, State Form DE 12.

III. Findings

TABLE 1

REGISTER OF STUDENTS INVOLVED IN THE STUDY

	Experimental Group	Control Group	Total
Number enrolled	88	83	171
Number withdrew	22	27	49
Incomplete records	9	4	13
Number remaining in study	57	52	109

Table 1 shows that 22 of 88 students enrolled in the experimental group and 23 of 83 enrolled in the control group withdrew from the DE II coursse. There were 7½% less withdrawals from the experimental group than from the control group. This difference is significant.

TABLE 2

REASONS FOR WITHDRAWALS FROM THE DE II COURSE

Reasons	Experimental Group	Control Group	Total
Moved out of city	3	3	6
Changed career goals	2	7	9
Graduated first semester		3	3
Unemployed, disinterested	5	5	10
Schedule change	1	2	3
Needed more time for study	1	1	2
Academic failure		2	2
Released because of poor grooming	1		1
Suspended from school		1	1
Joined military service	1		1
Unsatisfactory	6	1	7
Prolonged illness	1		1
Personal problem		1	1
Quit school	1		1
Unknown reasons		1	1

Table 2 indicates that the reasons students in the experimental group and in the control group gave for withdrawing from the DE II course were similar. It is noted that "unsatisfactory" was the chief reason for withdrawals in the experimental group and "change of career goals" was the main reason for withdrawal in the control group.

TABLE 3

STANDARDIZED TEST SCORES

EXPERIMENTAL GROUP VS. CONTROL GROUP

Group	Mean	Median	S.D.	S.E.	Mean Difference
OTIS QUICK SCORING MENTAL ABILITY TESTS I. Q. Scores					
Experimental	98.32	96.06	8.85	1.17	Not significant
Control	98.63	99.57	9.75	1.35	

TABLE 3 (CONTINUED)

Subject & Group	Mean	Median	S.D.	S.E.	Mean Difference
SEQUENTIAL TEST OF EDUCATIONAL PROGRESS Converted Scores					
Reading:					
Experimental	270	277	16.15	2.14	Significant
Control	282	282	13.70	1.90	
Listening:					
Experimental	281	281	11.15	1.48	Not significant
Control	283	282	11.30	1.57	
Mathematics:					
Experimental	266	265	10.50	1.39	Not significant
Control	268	270	12.05	1.67	

Table 3 shows the initial mental ability scores and certain academic achievement scores computed for the experimental group and for the control group. Reading achievement is the only one of four tests on which the mean difference for the two groups is significant. Students in both groups were below the 50th percentile in reading, listening and math ability. The mean reading scores of the experimental group indicated a significant reading disability.

TABLE 4

KUDER PREFERENCE TEST

Interest Rankings at the Beginning of the Study

	MALE STUDENTS		FEMALE STUDENTS	
Area	Experimental Group	Control Group	Experimental Group	Control Group
Persuasive	1	1	1	2
Clerical	2	2	3	7
Social Service	3	8	2	1
Artistic	4	3	5	3
Computational	5.5	4	4	8
Literary	5.5	5.5	10	9
Musical	7	7	9	10
Mechanical	8	10	6	6
Scientific	9	5.5	7	4
Outdoor	10	9	8	5

Table 4 shows how the interests of students, both male and female, who took DE I compared with the interests of students who had not had DE I. Number 1 indicates the area of highest interest and Number 10 shows the area of least interest.

Spearman's rank order correlation formula gave a coefficient of .72 for male students and a coefficient of .67 for female students. These correlation factors indicate that the occupational interests of boys in the experimental group and in the control group as well as girls in the experimental group and in the control group were significant. It is noted that there was a difference of 3 or more points in interest ranking between male students in the experimental group and in the control group in the areas of "social service" and "scientific." The greatest difference of interest for female students is noted in the area of "clerical," "computation" and "scientific."

TABLE 5

GORDON'S OCCUPATIONAL CHECK LIST

Interest Rankings at the Beginning of the Study

	MALE STUDENTS		FEMALE STUDENTS	
Area	Experimental Group	Control Group	Experimental Group	Control Group
Business	1	5	1	1
Technical	2	1	4	5
Outdoor	3	3	3	3
Artistic	4	4	5	4
Service	5	2	2	2

Table 5 shows how students both male and female who had DE I and those who did not have DE I ranked their interest in five vocational areas. Number 1 indicates the area of highest interest and 5 indicates the area of least interest. An application of Spearman's formula to these rankings gave a coefficient of minus .30 for male students and a coefficient of .98 for girls. The coefficient for male students (minus .30) indicates a fair degree of disagreement while the coefficient for girls (.98) indicates a very high and significant agreement of interest on the part of girls in the two groups. There was a great difference of interest on the part of male students in "business" and in "service" while there was very little difference on the part of girls in any area.

TABLE 6

DISTRIBUTIVE EDUCATION ACHIEVEMENT SURVEY

EXPERIMENTAL GROUP VS. CONTROL GROUP

Group and Time	Mean	Median	S.D.	S.E.	Mean Difference
Experimental					
Fall	18.91	19.46	3.42	.45	Significant
Spring	20.21	20.35	3.13	.41	
Control					
Fall	18.28	18.72	2.84	.40	Significant
Spring	19.84	20.10	3.45	.48	
Time and Group					
Fall					
Experimental	18.91	19.46	3.42	.45	Not significant
Control	18.28	18.72	2.84	.40	
Spring					
Experimental	20.21	20.35	3.13	.41	Not significant
Control	19.84	20.10	3.45	.48	

Table 6 shows that students in both the experimental group and in the control group performed significantly better on the Distributive Education Achievement Survey after a year of instruction.

Additional comparisons indicate that there was no significant difference in the understanding of the experimental group and of the control group on the fall test and no significant difference between the achievement of the two groups on the spring test. Thus mean differences were significant within groups but were not significant between groups.

TABLE 7

TEACHER MARKS

EXPERIMENTAL GROUP VS. CONTROL GROUP

Group and Time	Mean	Median	S.D.	S.E.	Mean Difference
Experimental Group					
First Semester	2.26	2.29	.68	.09	Significant
Second Semester	2.54	2.65	.82	.11	
Control Group					
First Semester	2.20	2.20	.73	.10	Significant
Second Semester	2.58	2.59	.94	.12	

TABLE 7 (CONTINUED)
TEACHER MARKS
EXPERIMENTAL GROUP VS. CONTROL GROUP

Time and Group	Mean	Median	S.D.	S.E.	Mean Difference
First Semester					
Experimental	2.26	2.29	.68	.09	Not significant
Control	2.20	2.20	.73	.10	
Second Semester					
Experimental	2.54	2.65	.82	.11	Not significant
Control	2.58	2.59	.94	.12	

Table 7 shows that students in both the experimental group and in the control group performed significantly better according to teacher marks after a year of instruction. The average marks for students in the two groups were converted to a five-point scale to facilitate statistical computation.

Additional comparisons indicate that there was no significant difference in the performance of the experimental group and of the control group either during the first semester or the second semester. Thus mean differences were significant within groups but were not significant between groups.

TABLE 8
RECOMMENDATIONS FOR JOB PLACEMENT

Group	Mean	Median	S.D.	S.E.	Mean Difference
Experimental	1.58	1.76	1.01	.15	Not significant
Control	1.95	1.66	1.52	.23	

Table 8 shows that students in the experimental group, those who had taken DE I prior to enrolling in DE II, were not recommended for job placement at a time that was significantly earlier than those students who had not taken DE I. Numbers in this table represent months from the time school began in September until recommendation for job placement by the teacher.

TABLE 9

COMPARISON OF STUDENT PROGRESS REPORT, STATE FORM DE 12

EMPLOYER RATINGS FOR EXPERIMENTAL GROUP

Characteristics	Mean	Median	S.D.	S.E.	Mean Difference
Appearance					
First Rating	11.84	11.31	2.02	.36	Significant
Third Rating	12.65	12.86	1.73	.31	
Personality					
First Rating	10.74	10.39	1.93	.35	Not significant
Third Rating	11.58	11.45	1.54	.28	
Enthusiasm					
First Rating	10.55	10.69	2.81	.51	Not significant
Third Rating	10.97	11.28	2.63	.47	
Cooperation					
First Rating	11.26	11.12	2.39	.43	Not significant
Third Rating	11.84	11.62	2.17	.39	
Reliability					
First Rating	11.35	11.33	3.17	.57	Not significant
Third Rating	11.87	11.80	2.62	.47	
Initiative					
First Rating	10.31	10.00	3.23	.58	Not significant
Third Rating	10.81	11.12	2.67	.48	
Judgement					
First Rating	10.32	10.31	2.36	.42	Not significant
Third Rating	10.97	11.14	2.72	.49	
Attendance					
First Rating	13.35	14.53	2.44	.44	Not significant
Third Rating	13.06	13.60	2.09	.38	
Punctuality					
First Rating	13.32	14.00	1.87	.34	Not significant
Third Rating	13.61	14.06	1.54	.28	
Production					
First Rating	7.65	7.18	2.74	.49	Significant
Third Rating	9.90	10.20	2.19	.39	
COMPOSITE					
First Rating	11.05	10.89	2.99	.17	Significant
Third Rating	11.73	11.76	2.51	.14	

Table 9 shows mean ratings for the first and third rating periods given by employers to the experimental group on ten characteristics pertinent to job performance. Number 15 indicates the highest rating on student progress and Number 1 indicates the lowest. Mean differences on "appearance" and on "production" were significant. The mean difference on "production" was significant beyond the .01 level. This table also shows that the composite mean difference for the third rating period was significantly higher than for the first.

TABLE 10

COMPARISON OF STUDENT PROGRESS REPORT, STATE FORM DE 12
EMPLOYER RATINGS FOR CONTROL GROUP

Characteristics	Mean	Median	S.D.	S.E.	Mean Difference
Appearance					
First Rating	11.03	10.18	1.88	.33	Significant
Third Rating	12.03	11.70	1.84	.33	
Personality					
First Rating	10.41	10.20	1.37	.24	Significant
Third Rating	11.53	11.05	1.73	.31	
Enthusiasm					
First Rating	10.91	10.27	1.81	.32	Significant
Third Rating	12.06	11.50	2.06	.36	
Cooperation					
First Rating	11.41	11.00	2.46	.44	Not significant
Third Rating	12.22	12.05	1.94	.34	
Reliable					
First Rating	11.13	10.34	2.48	.44	Not significant
Third Rating	12.13	11.83	1.81	.32	
Initiative					
First Rating	10.13	10.05	2.66	.47	Not significant
Third Rating	11.16	11.00	2.30	.41	
Judgement					
First Rating	10.91	10.25	2.43	.43	Not significant
Third Rating	11.75	11.30	2.18	.39	
Attendance					
First Rating	12.69	14.00	2.90	.51	Not significant
Third Rating	13.19	14.00	1.98	.35	
Punctuality					
First Rating	12.94	14.00	2.25	.40	Not significant
Third Rating	12.91	13.75	2.23	.39	

TABLE 10 (CONTINUED)

COMPARISON OF STUDENT PROGRESS REPORT, STATE FORM DE 12

EMPLOYER RATINGS FOR CONTROL GROUP

Characteristics	Mean	Median	S.D.	S.E.	Mean Difference
Production					
First Rating	8.56	7.50	2.81	.50	Significant
Third Rating	9.97	10.17	2.45	.43	
COMPOSITE					
First Rating	11.01	10.34	2.59	.13	Significant
Third Rating	11.89	11.59	2.24	.13	

Table 10 shows mean ratings for the first and third periods given by employers to the control group on ten characteristics pertinent to job performance. Number 15 indicates the highest rating on student progress and Number 1 indicates the lowest. Mean differences were significant in four out of ten cases. The composite mean difference for the third period was significantly higher than for the first.

TABLE 11

COMPARISON OF STUDENT PROGRESS REPORT, STATE FORM DE 12

EXPERIMENTAL GROUP VS. CONTROL GROUP

COMPOSITE SCORES

Rating Period & Group	Mean	Median	S.D.	S.E.	Mean Difference
First Rating Period					
Experimental Group	11.05	10.89	2.99	.17	Not significant
Control Group	11.01	10.34	2.59	.13	
Third Rating Period					
Experimental Group	11.73	11.76	2.51	.14	Not significant
Control Group	11.89	11.59	2.24	.13	

Table 11 shows composite mean scores on student progress ratings on ten characteristics pertinent to job performance. Number 15 indicates the highest rating on student progress and Number 1 indicates the lowest. The composite mean difference between the experimental group and the control group was not significant either for the first or for the third period.

TABLE 12

STUDENT PROGRESS REPORT, STATE FORM DE 12

CORRELATION OF EMPLOYER RANKINGS AND TEACHER RANKINGS

Characteristic	Employer Ranking	Teacher Ranking
Enthusiasm	1	1
Initiative	2	4
Cooperation	3	6
Judgement	4.5	5
Reliability	4.5	3
Personality	6	7
Appearance	7	8
Production	8	2
Attendance	9	9
Punctuality	10	10

Table 12 shows employer ranking and teacher ranking on ten characteristics pertinent to job performance as listed on the Student Progress Report, State Form DE 12. Number 1 indicates the most important and Number 10 indicates the least important characteristic. Teacher rankings and employer rankings of characteristics are very similar in eight of ten areas. Spearman's formula for rank correlation applied to these rankings gave a coefficient of .68 which indicates a significant agreement in ranking. Fairly wide disagreements (3 to 6 points) are noted between the opinions of teachers and of employers as to the importance of "cooperation" and of "production."

IV. Conclusions

1. The percentage of students who withdrew from the experimental group (those who took DE I) was 7½% less than for the control group (those who did not take DE I). This is a significant indication that students who took DE I prior to enrolling in DE II had a better understanding of the program and its value in helping to prepare students for vocational opportunities.

2. The vocational interests of students who had taken DE I and of those who had not taken DE I were significantly alike for both male and female students according to the Kuder Preference Test.

3. The vocational interests of male students who had taken DE I and of those who had not taken DE I gave a negative correlation according to Gordon's Occupational Check List, but it gave a high positive correlation for female students who had taken DE I and for those who had not taken DE I.

4. The DE variable did not effect significant mean differences between the experimental group and the control group in the following: (a) DE Achievement Survey Tests, (b) teacher marks, (c) the time that students were recommended for job placement, or (d) ratings on the Student Progress Report.

5. The DE variable did effect significant mean differences within the experimental group and within the control group in the following: (a) DE Achievement Survey Tests, (b) teacher marks, (c) and ratings of student progress for on the job training.

6. There was a significant agreement between teachers and managers as to the priority of the ten characteristics on the Student Progress Report, State Form DE 12; however, there was a considerable difference of opinion as to the importance of "cooperation" and "production" necessary in job training.

V. Recommendations

1. That a DE I course be available to all students in the tenth grade in order that they might have a longer period of time to determine their true interest in the field of distributive education and a longer period of time for adjustment to another vocational choice in case of a change in career goals.

2. That the DE I course content be examined to determine what changes are needed to provide students with motivation and a better academic preparation in the area of distributive education.

3. That State Form, DE 12,be studied to determine if there are characteristics that should be deleted or added to make the form a better measure of student progress.

4. That classroom instructors and employers get together on the local level to determine the priority of characteristics on the Student Progress Report Form in order that both parties may emphasize the values of the same characteristics.

5. That the Kuder Preference Test be used to help identify a student's broad interest area and, therefore, serve as a screening instrument for class enrollment in DE I and a guide to job placement.

6. That DE instructors and guidance counsellors, working together, carefully screen and adequately inform students as to the true purposes of the Distributive Education Program prior to enrollment in DE I.

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Kelly, James D.
Michigan Technician Needs Study, Summary Report. The Present and Projected Demand for Technically Trained People and Their Training Opportunities in Michigan.

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"Michigan Technician Needs Study: The Present and Projected Demand for Technically Trained People in Michigan" is summarized. See abstract of VT 005 826 (ARM Summer 1969) which is the complete study. (EM)

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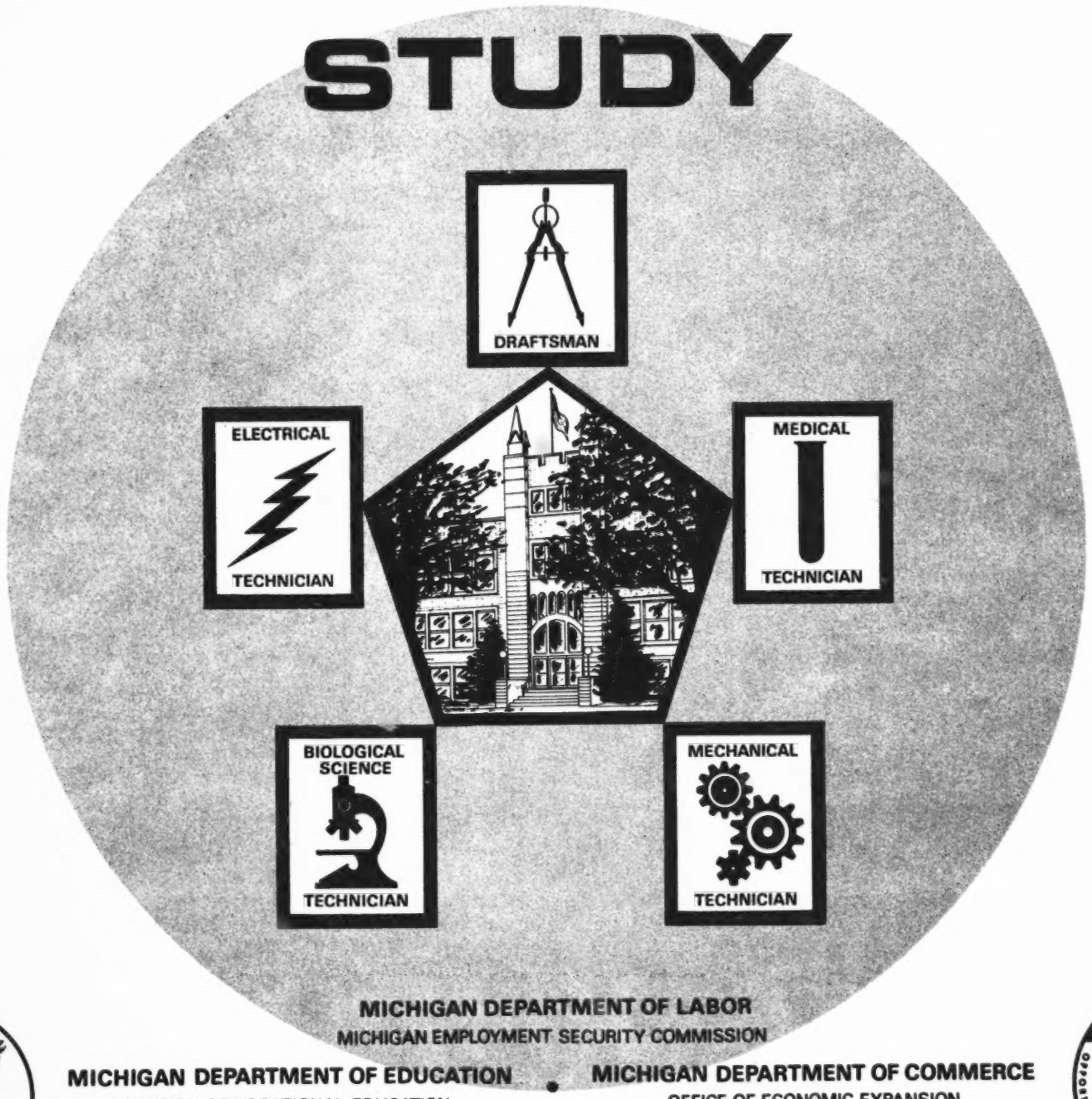
SUMMARY REPORT • • • NOVEMBER 1967

MICHIGAN Technician Needs STUDY



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MICHIGAN EMPLOYMENT SECURITY COMMISSION

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SUMMARY REPORT
ON
MICHIGAN TECHNICIAN NEED STUDY

The Present and Projected Demand
For Technically Trained People
and
Their Training Opportunities in Michigan

September, 1967

James D. Kelly
Project Director

Study Sponsored By:
Office of Economic Expansion - Michigan Department of Commerce
and
Division of Vocational Education - Michigan Department of Education

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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TABLE OF CONTENTS

Foreword and Acknowledgements ---------- i

I. Introduction ---------- 1

Scope of the Study ---------- 2
Criteria for Inclusion ---------- 3
Procedures ---------- 4
Assumptions ---------- 5
Methodology ---------- 5
Future Study Needs ---------- 6

II. Summary of Study Findings ---------- 8

Technician Need Findings ---------- 9
Estimates of Technician Need ---------- 9
Limitations ---------- 15
Utilization of Technicians ---------- 15
Present Need and Deficiencies ---------- 16
Inadequacies in the Education of Technicians ---------- 17
Training Opportunities ---------- 20
As Seen by Employer ---------- 21
As Seem by Educational Institutions ---------- 21
Recruitment ---------- 23
Residual Effects of Study ---------- 28
Recommendations on the Basis of this Study ---------- 29
Possible Courses of Action ---------- 29

FOREWORD AND ACKNOWLEDGEMENTS

The United States economy has moved from an agricultural emphasis, through a manufacturing era and into the present human resources era. Within the shadows of this latest development, a new occupational level is evolving in various types of industry -- technicians. The emphasis on the employment of technicians, who normally have post-secondary but sub-baccalaureate education, is recognition of a new occupational level in various types of industry. Technicians, as specialists, satisfy an important segment of manpower in the United States economy. They make significant contributions to research and development teams and they aid engineers in the design and production of various products. In addition, they are found in health-science and many other fields as key assistants to professional personnel.

To determine the need for such technicians in Michigan and their training opportunities, the Technician Need Study sought answers to basic questions. This was done through pre-planned and structured interview sessions with leaders in industry and education. There were many questions to which answers were desired. What is a technician? In what industry does he or she work? Where does a technician receive his or her training and is it adequate? How many technicians will be needed in the future?

The Technician Need Study was started in the fall of 1965 and completed in the early months of 1967. Representatives of various firms and industries were contacted and information was obtained through personal

interviews. Without the intense interest of these firms, and their cooperation in making effective interview arrangements, the Study would not have been possible.

Nothing is static including the demands of the labor market. These demands react to changing conditions and factors. The Technician Need Study itself became a factor in changing the concepts of many employers. In discussions of the needs for, and utilization of new technicians, interest and awareness of the occupations also were created. As a result, the present and projected needs of firms for technicians increased and expanded during the period the Study was in process.

The full report of the Technician Need Study has three broad goals: 1) to illuminate the present situation, 2) to describe anticipated increases in the needs for technicians, and 3) to report on educational programs which are available in the state. It is hoped that this summary report will stimulate the interest of counselors, educational planners, and manpower analysts to read the full report.

Acknowledgement is made in the full report of the significant contribution of the project staff members. However, their interest and involvement in the Study did not terminate when the Study was completed. Following the completion of their employment, they met occassionaly to review and to make suggestions regarding the summary. The professional staff members of the project were:

Barton W. LaBelle, Research Associate
James E. Cherry, Research Associate
Miss Vicki S. Waffle, Research Associate

Special acknowledgement is due the staff of the Office of Economic Expansion, Michigan Department of Commerce. They have not only maintained a keen interest in the Study itself, but also in the dissemination of information on study findings. The funding for this summary report and the Information Dissemination Seminars is due to the continuing and active interest of Mr. Bernard M. Conboy, Executive Director, Office of Economic Expansion.

James D. Kelly
Project Director

INTRODUCTION: STUDY EMPHASIS

Problems and Objectives

The Technician Need Study is an investigation of the present and future utilization of technicians in Michigan. As stated in the original project proposal the Study is concerned with obtaining answers to certain specific questions: 1) What is the extent of crucial manpower shortages in Michigan by technical area or skill, and the areas of occupation or industry, and to what extent will these shortages decrease or increase over the next few years in light of current trends? 2) What opportunities for technical training -- training beyond the high school level but less than the four year degree level -- are available now, and will be needed in the future to assure Michigan industry and business of an adequate supply of trained manpower?

In the Study, a technician is defined as an employee whose job required basic scientific and mathematical knowledge, or other specialized education or training in some aspect of technology, and who, as a rule, works directly with scientists, engineers, or other professional personnel. The technician is usually employed in job functions that require post-secondary education or its equivalent but below the baccalaureate level.

In accomplishing its objective, the Technician Need Study undertook to determine the present need for technically trained personnel in Michigan and to project this need relative to real or anticipated technological change so that such employment opportunities as exist, or may exist, can be filled by trained Michigan residents. Industrial growth and increased employment in Michigan will be determined in part by available resources, and

qualified technicians in sufficient number is an important resource.

The concern is not with the broad, general aspects of the problem, but rather with the particular and the specific. Counselors, curricumum developers, educational administrators, and manpower experts need the general perspective, but to deal with their everyday problems they must have detailed information. For example, there is need for specific information relating not only to the supply of and demand for the several types of technicians, but also to the educational requirements.

Scope of the Study

The Technician Need Study, through interviews and computed estimates includes a total of 1,218 firms from private industry with a total employment of 1,140,365. This is approximately 49 percent of Michigan wage and salary workers (excluding government and farm employment) as of January, 1966. In addition, the Study includes estimates for 94 hospitals; but both private and governmental units are included.

It is not possible to draw specific conclusions about the need for technicians in firms employing the remaining 51 percent of Michigan wage and salary workers. These firms are all of a different size, and primarily of a different type than those included in this study. On the basis of available information, the actual current and projected figures reported in this study represent minimum needs. Actual needs, in most classifications, are no doubt considerably higher.

The principal goal was to determine the needs in private industry. Therefore, except for hospitals, statistics were not obtained on technicians employed in governmental units -- federal, state, or local. Also, there would be more uniformity in the results obtained by excluding government, the largest service-type employer. However, in hospitals, the nature of the service provided is such that job functions for a particular occupational title would be similar in governmental and nongovernmental units. Hospitals were included irrespective of control -- federal, state, county, city voluntary non-profit, or proprietary.

Criteria for Inclusion. As used in the Study the term "firms" includes hospitals, industrial establishments, and service establishments organized on a profit or non-profit basis. They are classified by Standard Industrial Classification (SIC) code, as defined by the Executive Office of the President, Bureau of the Budget, and as used by the Bureau of Census. Although the level of manufacturing industry detail ranges from two-digit codes (major industry group) to seven-digit codes (products), most of the firms in this study are represented by four-digit Standard Industrial Classification (SIC) codes.

The selective, non-random sample of firms was based on number of employees and type of product. All firms employing 250 or more were included. However, it was assumed that producers and suppliers of certain products or services would have greater need for technicians. For these classifications the employment criteria for inclusion was below 250.

Several sources of data were used to determine the names of firms meeting the criteria. The major source of information on firms, other than hospitals and schools, was the Michigan Employment Security Commission which obtains information through reports from employers covered under the Michigan Employment Security Act. The information was made available under the provisions of Act No. 398 of the Public Acts of 1965. The data were arranged by Standard Industrial Classification and the number of employees of each employer unit.

Procedures

The procedures used in this study are discussed in detail in the full report. During a period of about 15 months, personnel in industrial and business firms throughout Michigan were interviewed regarding all aspects of technician need. The firms were selected on a non-random basis so as to obtain maximum coverage -- geographically, by type of industry, and as a percentage of the total labor force of the state. In some cases, firms with as few as 100, 50, 8, or even 3 employees were included. Hospitals, for several reasons, one of which relates to job functions, were treated somewhat as a special case.

Also, in the health occupation area, the needs emphasis was on actual current vacancies for which the employer was actively recruiting. The employer was requested to estimate future needs on the basis of an existing level of medical care and hospital facilities. This means that needs are stated on actual rather than desirable, standard of patient care to avoid obtaining information on shortages for a level of medical care and

hospital facilities that were not even in the planning stage at the time of the interview.

Assumptions. First, it was assumed that employers could answer best the questions relating to current employment, current vacancies, estimated needs for 1970, and other characteristics of technicians. The interview questionnaire therefore, was designed to aid the employer in pre-interview planning.

Secondly it was assumed that more valid information could be obtained from personal interviews than from other methods.

The third assumption was that a realistic picture of the present and future utilization of technicians in private industry and hospitals in Michigan could be constructed from interviews in a selective sample of from 700 to 1,000 firms.

Methodology. All firms meeting the criteria were sent a letter explaining the study and asking for their participation. These participation letters were directed to either the firm President or Personnel Director.

In addition to the individualized participation letter, medical and dental laboratories were sent a preliminary questionnaire which included definitions for the technical occupations associated with such laboratories. They were asked to complete and return the questionnaire to the study office. When this was received, a personal interview was scheduled at the laboratory.

Information sheets were enclosed with all participation letters. The information sheets presented essential data in an easy to read outline form.

The questionnaire and the definitions of job functions, condensed from the Dictionary of Occupational Titles, were included in participation letters.

The interview took place at the firms' offices. The length of interviews varied from one to five hours. On many occasions, the Study staff member talked with several persons. The firm representatives might include the personnel director, training director, research director, supervisory personnel, and/or technicians. During the interview, questions on the inadequacies of technical education were asked. Answers to these questions are an important part of the full report.

In large corporations, information was usually supplied at the corporate office. In addition, supplementary interviews were conducted at the divisional level to obtain information on educational requirements for technicians. It was believed that those closest to the work of technicians could best answer these questions. Interviews involved officials in a total of 688 firms. In addition, 31 supplementary information interviews were scheduled at the division level. The breakdown of interviews by SIC and employment is included in the Appendix of the full report.

Future Study Needs

No one study can provide definitive information on employment demands for technicians or the job functions they perform. With new technical occupations emerging, research must be continuous.

Community and other colleges should take the initiative for local interest studies. It is anticipated there will be increasing employer acceptance of technicians, and a corresponding expansion of training opportunities in the educational institutions and in the employers' educational facilities. Large firms will need to place additional emphasis on career planning.

The Technician Need Study delineates areas where additional research should be undertaken. One such area is the apprentice programs. The arbitrary elimination of journeymen in the manufacturing and machine trades from a technician classification is sometimes hard to justify when related instruction requirements of certain apprentice training programs and job functions of journeymen are examined.

SUMMARY OF STUDY FINDINGS

Table 1 sets forth by occupational group information furnished by employers interviewed. This tabulation shows, in percentage figures, present vacancies and projected increases in total employment of technicians.

TABLE 1

PRESENT AND PROJECTED NEED FOR TECHNICIANS EXPRESSED AS A PERCENTAGE OF CURRENT EMPLOYMENT[a]

Technician Classification Area	Need as a Percentage of Current Employment of Technicians		
	Vacancies 1966	Additional Need 1970	Total Need 1970
Chemical Related	8%	26%	34%
Mechanical Related	8	22	30
Drafting and Design	16	34	50
Electrical and Electronics	18	25	43
Health Related	19	8	27
Civil Related	11	28	39
Information Related	11	41	52
Production Related	10	17	27

a. For employers interviewed -- Does not include computed estimates of need listed in Table 2.

There is general agreement among employers that the need for technicians will increase substantially during the next few years; also, there is a present unmet need for technicians in virtually every classification. The extent of the current shortage, as well as projected need, is presented in detail in the full report.

Technician Need Findings

The full report sets forth estimates of needs for specific technician classifications and the types of firms (SIC code) in which they are employed. The primary emphasis is on job functions as to a basis for the determination of needs by occupational titles.

In general, technicians receive more training in related theory than do craftsmen. However, their training is not as extensive as that of professionals with a baccalaureate or higher degree. Technicians usually become qualified through formal technical training, on-the-job training, or a combination of both.

In some firms it was difficult to identify all technicians. Some employers, by their definitions, classify as technicians only those in salaried positions, they do not include as technicians the hourly-rated employees in the employee bargaining units, even though they perform technician functions. These employers resisted efforts to get an evaluation of positions based solely on job functions and educational requirements. In general, outstanding cooperation was obtained from most employers. In some firms, more detailed information could have been supplied through visits to plants of the various divisions.

Estimates of Technician Need. The estimated need for technicians in 1970 was obtained by summation of data from two sources. Employer representatives projected their estimated need for technicians at the time of the interview. The reliability of these estimates vary with a firm's ability and interest in manpower planning; and a number of firms were unable to provide statistics on future need.

Secondly, the future need of each type of technician for firms not interviewed, but which met the Study criteria, was computed. Firms were grouped by Standard Industrial Classification Code. The total employment of firms not interviewed in each SIC code was divided by the total employment of firms interviewed and meeting the criteria in each SIC code. The resulting rate was applied to present employment of technicians, present technician vacancies, and projected total technician employment for 1970 in firms interviewed, to arrive at an estimate of technician needs in firms not interviewed. The method of computation is described in Appendix A of the full report.

Neither the employer estimates nor the computed estimates include technicians needed for replacement caused by death, retirements, or other attrition. As a result, the future need for technicians, as presented in Table 2 of this report, is undoubtedly conservative.

Employer estimates on classifications not listed in the questionnaire have been included under the heading "unclassified." Estimates were not made of present and future need for technicians in the "unclassified" category for employers not interviewed; that is, estimates for this group were made only for the classifications listed under occupational title difinitions that had been predetermined as significant for inclusion in the Study.

TABLE 2

ESTIMATES OF TECHNICIAN EMPLOYMENT NEEDS IN FIRMS MEETING CRITERIA FOR INCLUSION IN STUDY.

Classification	Employers Interviewed[a]		Employers not Interviewed[b]		Total Requirements 1970
	1966 Employment and Vacancies	Additional Need 1970	1966 Requirements	Additional Need 1970	
A. CHEMICAL RELATED					
1. Analytical Research Technician (Resins and Adhesives)	182	37	14	3	236
2. Laboratory Asst. (Metallurgical)	548	147	43	25	763
3. Chemical Lab. Technician	2,646	712	267	83	3,708
4. Laboratory Tech. (Petrol. Refining)	79	7	3	1	90
5. Unclassified Chemical Technician	80	24	c	c	104
Total	3,535	927	327	112	4,901
Employed, 1966	3,271				
Vacancies, 1966	264				
B. MECHANICAL RELATED					
1. Optical Technician	13	7	8	4	32
2. Mechanical Engineering Technician	3,367	586	199	69	4.221
3. Mechanical Maintenance Man	1,742	425	1,135	321	3,623
4. Pneumatic Tester and Mechanic	86	36	4	5	131
5. Air-Conditioning (Domestic)	36	112	45	52	245
6. Air-Conditioning (Commercial)	117	70	248	95	530
7. Maintenance Technician	1,559	286	219	46	2,110
8. Unclassified Technical-Related Technician	536	155	c	c	691
Total	7,456	1,677	1,858	592	11,583
Employed, 1966	6,890				
Vacancies, 1966	566				

TABLE 2 (Cont'd)

Classification	Employers Interviewed[a]		Employers not Interviewed[b]		Total Requirements 1970
	1966 Employment and Vacancies	Additional Need 1970	1966 Requirements	Additional Need 1970	
C. DRAFTING AND DESIGN RELATED					
1. Architectural Draftsman	583	152	1,832	402	2,969
2. Aeronautical Draftsman	43	118	139	357	657
3. Electronic Draftsman	142	125	145	195	607
4. Electrical Draftsman	539	217	140	20	916
5. Structural Draftsman	243	83	121	16	463
6. Civil Draftsman	97	34	52	47	230
7. Product Draftsman (n. e. c.)	4,720	1,168	99	50	6,037
a. Die Designer	477	250	17	299	1.043
b. Lay-Out Draftsman	879	333	96	245	1,553
c. Industrial Designer	1,080	239	91	150	1,560
d. Tool Designer	1,271	1,001	84	266	2,622
8. Mechanical Draftsman	3,918	1,141	437	177	5,673
9. Mine Draftsman	56	52	2	2	112
10. Marine Draftsman	21	2	0	10	33
11. Oil & Gas Draftsman	75	31	4	49	159
12. Air-Conditioning, Plumbing and Heating Draftsman	172	75	53	47	347
13. Map Draftsman	43	9	30	2	84
14. Unclassified Draftsman	1,283	342	c	c	1,625
Total	15,642	5,372	3,342	2,334	26,690
Employed, 1966	13,464				
Vacancies, 1966	2,178				
D. ELECTRICAL AND ELECTRONIC RELATED					
1. Electrical Technician	676	225	269	25	1,195
2. Electronic Technician	749	455	332	163	1,699
3. Electro-Mechanical	858	87	87	68	1,100
4. Electronics Mechanic	225	142	50	36	453
5. Control-Room Technician	9	0	15	0	24
6. Audio Operator	26	5	19	9	59
7. Instrumentation Tech.	418	101	47	33	599
8. Automatic Equipment Technician	958	50	112	8	1,128

TABLE 2 (Cont'd)

Classification	Employers Interviewed[a]		Employers not Interviewed[b]		Total Requirements 1970
	1966 Employment and Vacancies	Additional Need 1970	1966 Requirements	Additional Need 1970	
9. Unclassified Electrical & Electronic Tech.	547	80	c	c	627
Total	4,466	1,145	931	342	6,884
Employed, 1966	3,768				
Vacancies, 1966	698				
E. HEALTH RELATED					
1. General Duty Nurse	14,467	626	3,968	1,465	20,526
2. Nurse, L. P.	9,036	650	2,599	1,136	13,421
3. Radiologic Technician	1,088	129	286	148	1,651
4. Electrocardiograph Tech.	263	32	78	39	412
5. Electroencephalograph Tech.	146	18	26	36	226
6. Medical-Laboratory Asst.	1,218	184	414	61	1,877
7. Nuclear Medical Tech.	38	12	13	17	83
8. Medical Assistant	12	4	3	0	19
9. Inhalation Therapist	248	49	85	53	435
10. Dental Hygienist	18	8	5	7	38
11. Dental Assistant	62	8	20	10	100
12. Surgical Technician	1,028	173	288	215	1,704
13. Food Service Supervisor	165	78	39	18	300
14. Attendant, Physical Therapy	185	69	56	54	364
15. Dental-Laboratory Tech.	408	24	8	1	441
16. Optician, Dispensing	12	0	6	0	18
17. Medical Tech. :MT-(ASCP)	796	48	353	90	1,287
18. Medical Secretary	339	93	162	44	638
19. Medical Rec's. Tech.	181	62	82	49	374
20. Medical-Clerical Tech.	489	21	159	7	676
21. Unclassified Health Tech.	81	20	c	c	101
Total	30,155	2,311	8,650	3,450	44,691
Employed, 1966	24,262				
Vacancies, 1966	5,893				
F. CIVIL RELATED					
1. Surveyor	141	41	98	43	323
2. Estimator	1,019	240	750	123	2,132
3. Unclassified Civil Technician	236	107	c	c	343
Total	1,396	388	848	166	2,798
Employed, 1966	1,258				
Vacancies, 1966	138				

TABLE 2 (Cont'd)

Classification	Employers Interviewed[a]		Employers not Interviewed		Total Requirements 1970
	1966 Employment and Vacancies	Additional Need 1970	1966 Requirements	Additional Need 1970	
G. INFORMATION RELATED					
1. Clerical Technician	299	76	154	66	595
2. Programmer, Detail Junior	943	472	513	292	2,220
3. Reproduction Technician	316	61	105	29	511
4. Technical Illustrator	777	345	44	38	1,204
5. Unclassified Information Technician	39	21	c	c	60
Total	2,374	975	816	425	4,590
Employed, 1966	2,132				
Vacancies, 1966	242				
H. PRODUCTION RELATED					
1. Industrial Engineering Tech.	951	304	161	31	1,447
2. Quality-Control Technician	1,486	135	778	140	2,539
3. Specification Writer	574	87	30	5	696
4. Unclassified Production Technician	120	21	c	c	141
Total	3,131	547	969	176	4,823
Employed, 1966	2,845				
Vacancies, 1966	286				

a. Data furnished by employers.

b. Computed. (See page 10 for brief description of method or Appendix A, Part 7, of full report for details on method of computation).

c. Estimates have not been made for the unclassified category of technicians.

Limitations. There are several factors limiting the Study findings. First, the Study does not attempt to estimate present and future needs for technicians in all Michigan firms. The Study is based on a non-random sample of firms; and technicians needs, as reported, are only for these and other firms which meet the level-of-employment criteria.

The statistics related to future needs for technicians are limited to the extent an employer was giving attention to the planning for manpower requirements. Individual firms vary in their emphasis on such planning. It has been assumed that the rate of adoption and implementation of automated processes will be such as to have only minimal influence on technician needs by 1970.

The Study elicited both objective information and subjective opinions from the interviewees. Characteristics of subjectivity should not conceal the value of such information. The employer places personnel in positions on the basis of abilities he believes are necessary for effective performance. Subjective though these opinions may be, they are real factors in the area of job placement.

Utilization of Technicians

The practice of employing trained technicians is relatively new to many firms of various sizes and types, and although many firms have been developing their own technicians, the programs are often informal and unsystematic. Therefore, the technician's education is frequently directed toward meeting the specific requirements of a particular firm rather than the broader scope of technical education per se.

An examination of recent manpower publications reveals an increasing emphasis in the whole area of technician manpower. Employers are becoming increasingly aware of the advantages of employing these trained specialists. If used wisely, the technician can serve to extend dramatically the productivity of the engineer, the scientist, or other professional. The concept of employing professionals and technicians to work as a team provides for maximum utilization of the talents and skills of both groups.

Present Needs and Deficiancies. The majority of presently employed technicians are young -- 20 to 30 years in age. Generally, they have had some form of post-secondary training prior to, or after employment. The scarcity of trained technicians is a barrier to more extensive use of these specialists. The overwhelming preference of employers is for specialized training prior to employment. Employers would like to see more post-secondary educational institutions develop good two-year occupational programs. However, educational planners, often find it difficult to plan a technical program that successfully avoids the extremes of excessive specialization of ambiguous generalization. The technician needs not only "tool" knowledge but also applicable general education.

Many small and medium-sized firms are unaware of the technician training programs available in post-secondary educational institutions. Furthermore, many employers are unaware of the extent of occupational readiness provided through "hands-on" skill development in the shops and laboratories of these schools and colleges. The emphasis on theory in

the classroom, together with simulated or actual experiences, provides those who complete these programs with the qualifications employers want. This type of training program is not generally appropriate for the "less able" student.

Inadequacies in the Education of Technicians

Many firms, because of the scarcity of trained technicians, are not in a position to evaluate present training programs. Instead they recommend what these programs should include. Interviewers encouraged responses to this question: "In what areas, if any, are available technicians inadequately trained?" The question includes the following subject-matter areas: English, writing, mathematics, science, industrial relations, technical skill, and other.

To obtain meaningful and usable responses, the interviewer supplemented the basic question with such items as:

1. If inadequate in English:
    a. Oral Communication or written?
    b. Difficulty in communication of ideas, direction, etc?
    c. Or the importance of impression they make?
2. If inadequate in writing: What kind of writing do they do (Examples)
    a. Technical reports?
    b. Fill out forms?
    c. Intra-firm communications?
    d. Creative-type writing?
    e. Persuasive writing?

3. If inadequate in mathematics:

   a. Is it a difficulty in applied or theoretical area?

   b. Do they need refresher courses in mathematics they already had? Or do they need to take advanced courses?

   c. What level of mathematics: algebra; geometry; trig; analytical geometry; Is advanced algebra necessary?

4. If inadequate in science:

   a. Difficulty in application of what they know? Or lack of theoretical knowledge?

   b. Physical or natural science?

   c. What area of science: biology; chemistry; physics?

   d. Is there difficulty with application of scientific method? Observation; analyzing; testing; etc?

5. If inadequate in industrial relations:

   a. Is there difficulty in relating to superiors or subordinates?

   b. Is there difficulty in communication: oral or written?

   c. Lack of knowledge of procedures to follow in supervising or carrying out directions?

   d. Lack of knowledge of company policies?

   e. What have been the two most significant reasons for failure to be selected for production supervisory positions?

6. If inadequate in technical skills:

   a. What do you believe educational institutions can do to correct this:

      (1) Relating to their courses?

      (2) Teaching methods (applied to theoretical)?

      (3) Relating to programs (reorganization)?

   b. Is the applied program and experience for the graduate of technical schools on the post-high school level relevant to the real job situation? Is more simulated experience needed?

   c. Is the technician unable to apply technical skill which he is assumed to possess? In relation to Ferris State College in particular--How many Ferris graduates within the firm?

For all technical occupations, employers agree that there are two areas of training which should receive added emphasis. These are English and writing. Although many employers emphasize the desirability of technical report writing in the technician's educational program, there was even greater emphasis on expository writing. In many cases, it would be desirable for the technician to have specific training in writing technical reports. Ability to communicate is of particular importance because the technician is frequently working with others as a member of a team and must be able to give, receive, and understand instructions. Other specific inadequacies, which relate to particular areas of specialization, are reported in the appropriate chapters of the full report.

In table 3, employer responses have been grouped and arranged by occupational area. The responses are indicated 1, 2, 3 in descending order of employer concern regarding the currently employed technicians' inadequacies.

TABLE 3

EMPLOYER EMPHASIS BY OCCUPATIONAL AREA ON EDUCATIONAL INADEQUACIES AND NEEDS OF TECHNICIANS

Occupational Area	English	Writing	Math	Science	Industrial Relations	Tech. Skill	Other
Chemical Related	2	3			1		
Mechanical Related		3	2	1			
Drafting and Design Related		1	2			3	
Electrical and Electronic Related		1	2	3			
Health Related		1	2	3			
Civil Related		1	2			3	
Information Related		1	3			2	
Production Related		2	3		1		

Training Opportunities

As indicated elsewhere in the report, one of the objectives of the Study was to determine what opportunities were available for technician training. The findings for this objective are the basis for most of the recommendations made in the full report and restated in this summary report. Satisfying present and future needs requires interested, potential students and the necessary training opportunity. The opportunities involve both the existence of employer sponsored in-service training programs and post-secondary educational facilities.

As Seen by Employer. Employers are faced with two problems in the search for trained technicians. First, there are not enough graduates of occupational programs to meet the demand. And second, for some specialized occupations, there are no training programs available. Firm representatives made frequent references to the lack of industrial technician programs at their local community colleges.

Cooperative programs are held in high regard by all types of firms, especially when the industry training is an extension of the classroom and laboratory education discipline. There is no substitute for the experience the student gains in a work situation. Although it might be classed as a secondary benefit, the values of increased communication between school and industry should be appraised.

The relationships between schools and industry are further enhanced through tuition-refund programs. Many firms provide the opportunity for their employees to take work-related courses with the firm reimbursing part or all of the tuition expense. These employee-students are enrolled in practically every private and public educational institution in Michigan. Some of the courses most frequently taken through truition-refund programs are: drafting and design, mechanical engineering, supervision, and industrial engineering.

As Seen by Educational Institutions. Post-secondary educational institutions in the metropolitan areas are being encouraged to set up a number of technician training programs to meet industry needs. In areas with less industrial density, education officials expressed various levels of

concern for employer needs. In some institutions, there was only superficial recognition. In other areas, the educational officials expressed concern and looked to opportunities for additional offerings of programs for industrial technicians when initial or additional dormitory facilities were completed for in-residence students.

There is a significant trend toward related instruction at the college level for apprentice training programs, especially in manufacturing and machine trades. The increased number of community colleges made such a trend feasible. Such related instruction also has an impact on the future supply of technicians, as many apprentices develop an interest in continuing their education, at least through the associate degree level.

During the course of this Study, no attempt was made to obtain information on enrolments in institutional training programs under the Manpower Development and Training Act. While such programs may develop a person's initial interest to attain technician status, especially in the drafting, mechanical, electrical and some health occupation fields, the decreasing emphasis on institutional type training, may limit the contribution of such programs to the future supply of technicians. In addition, many who have completed such training are already in the labor market and are presummed to be included in the information furnished by employers.

Recruitment

Employers use several sources and methods to recruit technicians. The major source of technicians is up-grading of existing employees. When firms go outside their organization to recruit technicians, they use newspaper ads, employment agencies (private and public), and/or educational institution placement offices. Employers have only recently begun to recognize community and other colleges and technical institutes as a source of technicians. Some community colleges deter employers in their recruitment efforts by not providing a placement service.

Table 4 summarizes information furnished during interviews on enrolments in existing programs and the number of programs planned in post-secondary educational institutions. The enrolments will not meet employer manpower needs set forth earlier in this summary report. However, the availability does indicate a source for recruitment. Also, the limited enrolments in certain programs may indicate that employer recruiting activities could be broadened to assist educational institutions with their program feasibility problems. Employers with needs for trained technical manpower could help their situation by actively recruiting students for the school or college.

TABLE 4

TECHNICAL OCCUPATION PROGRAMS AND ENROLMENT INFORMATION FURNISHED BY SCHOOLS AND COLLEGES INTERVIEWED.[a]

Program[b]	Number of Programs[c]	Number of Enrollees[c]	Number of Additional Programs Planned
A. CHEMICAL RELATED			
1. Analytical Research Technician (Resins and Adhesives)	—	—	—
2. Laboratory Assistant (Metallurgical)	3	124	6
3. Chemical Laboratory Technician	5	74	4
4. Laboratory Technician (Petrol. Refining)	—	—	—
5. Unclassified Chemical Technician[b]	—	—	2
Total	8	198	12
B. MECHANICAL RELATED			
1. Optical Tech.	—	—	—
2. Mechanical Engineering Technician	17	1,026	3
3. Mechanical Maintenance Man	12	889	7
4. Pneumatic Tester and Mechanic	1	4	—
5. Air-Conditioning (Domestic)	—	—	1
6. Air-Conditioning (Commercial)	1	75	1
7. Maintenance Technician	2	19	—
8. Unclassified Mechanical-Related Technician[b]	—	—	8
Total	33	2,013	20
C. DRAFTING AND DESIGN RELATED			
1. Architectural Draftsman	3	209	2
2. Aeronautical Draftsman	—	—	—
3. Electronic Draftsman	—	—	—
4. Electrical Draftsman	1	60	1
5. Structural Draftsman	—	—	—
6. Civil Draftsman	1	16	—

TABLE 4 (Cont'd)

Programs[b]	Number of Programs[c]	Number of Enrollees[c]	Number of Additional Programs Planned
7. Product Draftsman	8	675	—
a. Die Designer	1	265	—
b. Lay-Out Draftsman	—	—	—
c. Industrial Designer	—	—	1
d. Tool Designer	2	236	—
8. Mechanical Draftsman	12	825	6
9. Mine Draftsman	—	—	—
10. Marine Draftsman	—	—	—
11. Oil & Gas Draftsman	—	—	—
12. Air-Conditioning, Plumbing and Heating Draftsman	—	—	—
13. Map Draftsman	—	—	—
14. Unclassified Draftsman[b]	—	—	—
Total	28	2,286	10
D. ELECTRICAL AND ELECTRONIC RELATED			
1. Electrical Technician	4	165	—
2. Electronic Technician	19	1,236	2
3. Electro-Mechanical Technician	1	20	1
4. Electronics Mechanic	—	—	—
5. Control-Room Technician	—	—	—
6. Audio Operator	—	—	—
7. Instrumentation Technician	—	—	3
8. Automatic Equipment Technician	—	—	—
9. Unclassified Electrical & Electronic Technician	—	—	2
Total	24	1,421	8
E. HEALTH RELATED			
1. General Duty Nurse	10	984	8
2. Nurse, L. P.	9	589	5
3. Radiologic Technician	4	47	4
4. Electrocardiograph Tech.	—	—	—
5. Electroencephalograph Tech.	—	—	—
6. Medical-Laboratory Assistant	1	17	4
7. Nuclear Medical Technician	—	—	1
8. Medical Assistant	5	174	3
9. Inhalation Therapist	1	20	1

TABLE 4 (Cont'd)

Programs[b]	Number of Programs[c]	Number of Enrollees[c]	Number of Additional Programs Planned
10. Dental Hygienist	1	60	6
11. Dental Assistant	6	251	3
12. Surgical Technician	—	—	—
13. Food Service Supervisor	3	92	3
14. Attendant, Physical Therapy	—	—	2
15. Dental-Laboratory Tech.	1	24	4
16. Optician, Dispensing	1	33	—
17. Medical Technician	—	—	1
18. Medical Secretary	4	182	6
19. Medical Rec's Technician	—	—	2
20. Medical-Clerical Technician	—	—	—
21. Unclassified Health Tech.[b]	—	—	3
Total	46	2,473	56
F. CIVIL RELATED			
1. Surveyor	2	113	1
2. Estimator	3	49	—
3. Unclassified Civil Technician[b]	—	—	4
Total	5	162	5
G. INFORMATION RELATED			
1. Clerical Technician	1	8	2
2. Programmer, Detail Junior	4	223	3
3. Reproduction Technician	2	59	4
4. Technical Illustrator	3	113	2
5. Unclassified Information Technician[b]	—	—	—
Total	10	403	11
H. PRODUCTION RELATED			
1. Industrial Engineering Technician	3	128	4
2. Quality-Control Technician	1	10	1
3. Specification Writer	—	—	—
4. Unclassified Production Technician[b]	—	—	1
Total	4	138	6

TABLE 4 (Cont'd)

Programs[b]	Number of Programs[c]	Number of Enrollees[c]	Number of Additional Programs Planned
I. SUMMARY: TECHNICIAN NEED, OCCUPATIONAL PROGRAM AND ENROLMENT DATA			
1. Total Programs in all areas 1966-67 school year	158		
2. Total Enrolments all programs		9,094	
3. Total Additional Programs planned			128
4. Technician Need from Table 2			
a. Total Requirements 1970[d]		106,960	
b. Additional 1970 needs only		20,939	

a. Data furnished by 29 public and one private post-secondary educational institution in Michigan.

b. Unclassified technician category in each of the areas includes programs with curriculum content not easily identified with functional definitions for occupational titles used in study.

c. Programs and enrolment figures furnished at beginning of 1966-67 school year.

d. Requirements include current employment and vacancies plus projected additional need in 1970 excluding replacements for retirements, deaths, and other employment terminations.

Residual Effects of Study

While the Technician Need Study was in process, it became apparent that the Study itself was stimulating interest in, and an awareness of, technicians on the part of employers. The employer's awareness that there are occupational training programs for technicians affected his responses to several aspects of the Study. The continuation of this interest is hard to predict.

Many employers that currently utilize only a few technicians anticipate increasing needs by 1970. If these demands materialize, the gap between supply and needs will widen considerably. Educational institutions must make preparations now if severe shortages are to be avoided. An increased supply of trained technicians may cause an increased demand, at least over the short run, rather than a reduction of need. If this occurs, the projected needs presented in this report will fall far short of actual needs.

In many firms interviewed, an examination of job functions revealed to the employer that his educational requirements were not always realistic. In some cases, a baccalaureate degree was required for positions in which the job function could be performed by a technician. Although in some instances there was consideration for promotional opportunities, at other times the firm was expending money and time to train existing employees when recruitment of trained technicians would have been more profitable. In the long run, employers may examine the technician's place in their organization, and move toward more realistic educational requirements in terms of job functions to be performed.

Recommendations on the Basis of this Study

Industry's requirements for technicians can be met only through the availability of informed and interested young men and women who will take advantage of training opportunities. Some employers expressed difficulties in the recruitment and selection of qualified persons for their apprenticeship programs. Officials in educational institutions expressed a critical need for additional students in some occupational programs desired by employers. Educational officials, in areas with limited industrial employment opportunities, were optimistic regarding the possibility of increased enrolments in technician programs when initial or additional residence facilities were completed on their college compuses.

The summary of findings, points toward recommendations that emphasize the need for informed and interested young men and women able to meet the future demands for technicians. Opportunities for training must be provided by employers or post-secondary educational institutions.

Possible Courses of Action. Nine distinct but related recommendations are set forth for consideration by employers and educational institutions. The primary theme of meaningful and realistic communication practices transcend all the recommended courses of action.

1. More intensive and extensive channels of communications should be developed between the educational institutions and employers of their graduates. The inadequacy of present communications was evident from the employer's lack of awareness of available sources of needed personnel

and from the lack of programs in educational institutions to fulfill essential personnel needs of employers. The communication practices can be of many different types, among which could be:

a. Designated faculty representative to make continuing contacts on a scheduled basis.

b. The use of faculty members for vacation replacements.

c. An exchange program wherein both the college and employer needs are emphasized in selection criteria and job requirements that provide for employer representatives to serve as instructors and the college faculty members to serve as the replacement during a specified period corresponding to the school terms.

d. Area workshops for management employees and school faculty members that utilize employer and college representatives as discussion leaders.

2. Industry officials and school administrators should, together, provide opportunities for high school and post-secondary counselors to develop a more realistic concept of a "technician." Counselors should be more aware of what technician occupations exist and of the job functions associated with each occupation. The lack of interest some counselors may display for any post-high school education program which is less than a baccalaureate level should be avoided.

3. Counselors should understand that technician training programs are not generally appropriate for the "less able" student. This, plus the fact that most technician training programs require at least average ability along with particular aptitudes and interests, was emphasized by many of the employers interviewed. Not everyone is qualified by temperment and ability to be a technician. All characteristics of the student should be considered.

4. Employers, almost unanimously, recommended that administrators and faculty at post-secondary institutions should take the initiative for the development of additional cooperative educational programs for technicians. Employers generally agree that these types of training programs are invaluable. Certain aspects of the work situation are often beyond simulation in the classroom. Financial aid to the students and increasing contact between employers and educators are secondary benefits. In addition, employers emphasized the need for a coordinator of cooperative education on the college staff.

5. In those community colleges where such programs are not presently offered, the administration and faculty, with representatives of industry, should thoroughly study the opportunities and the feasibility of providing related instruction for apprenticeship programs in the manufacturing and machine trades. In addition to the college serving industry directly, the opportunities for post-secondary technical education becomes known to the apprentice. Employers emphasized the need for open-ended related instruction in apprenticeship programs as a method of meeting their future need for technicians.

6. Community colleges with resident (dormitory) facilities should examine the feasibility of additional programs for technical training. The regional nature of their student body would provide opportunity for a sufficient number of graduates that could meet not only local industry needs but also assist in meeting the technician needs elsewhere in Michigan.

7. Employers lack of information relating to on going technician training programs suggests community colleges with occupational programs should study the operations of their placement service. In those colleges where such a service has not been provided, the total range of benefits and costs should be examined to determine the feasibility of placement office functions.

8. Educators and employers alike urge that more technician training programs be developed around the core-curriculum concept. Many different meanings are attached to the "core" ideas which are currently used by employers and educational institutions. To the employer, it means a minimum of detailed specialization in any one particular classification in an occupational group, such as drafting and design related or electrical and electronic related. For the educational institution, the core idea involves curriculum planning wherein the first year of post-secondary has subject requirements common to many specialized occupational titles; for example, those found in the health related area. The training for many technical classifications is applicable to this approach. Core-curriculums reduce duplication during the first year and at the same time increase the occupations for which training is available.

9. Curriculum development personnel should determine the types of firms in which the greatest need exists for certain classifications of technicians. Thereafter, arrangements could be made for a detailed study of job functions in those firms located in the area served by the educational institutions. The full report of the Technician Need Study includes tables which present percentage breakdown for total technicians found in certain types of firms.

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Training employees in any company is primarily the responsibility of management. Company managements, however, need guidance from training specialists including training officers, training development officers, group training officers, and training instructors. The primary function of the training officer is to advise management on formulating training policy at all levels and to assist in carrying them out. His contribution to company training stems from his knowledge of the training problems in all departments and of training techniques and methods. The training development officer has similar advisory responsibilities but to the industrial organization. He advises the organization on planning training arrangements at the industry level and assists in their implementation at company level. The functions of the group training officer are similar to those of the training development officer. He has an advisory function to a group management committee as well as to the management of individual companies. He is responsible for operating the training schemes. The effectiveness of any training program depends ultimately on the quality of the instructors applying it. They are responsible for putting training courses into effect at the actual level of instruction. A description of the general responsibilities, functions, and qualifications of each training specialist is provided. (HC)

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MINISTRY OF LABOUR

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MINISTRY OF LABOUR
8 ST. JAMES'S SQUARE
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CONTENTS

		Page
Section I	**Introduction**	5
Section II	**The Training Function**	7
Section III	**The Training Officer**	10
	GENERAL RESPONSIBILITIES	10
	PARTICULAR FUNCTIONS:	11
	Analysis of Skills and Knowledge	12
	Preparation of Company Training Programmes:	12
	Internal Training in the Company	12
	Further Education	13
	Training for Instructors	14
	Administration of Company Training Programmes	14
	Recruitment and Selection	15
	Budgeting for Training	16
	Evaluation of Training Programmes	16
	SELECTING AND TRAINING THE TRAINING OFFICER:	16
	Job Requirements	16
	Qualifications and Experience	17
	Training	17
Section IV	**The Training Development Officer**	20
	GENERAL RESPONSIBILITIES	20
	PARTICULAR FUNCTIONS	20
	QUALIFICATIONS, EXPERIENCE AND TRAINING	23
Section V	**The Group Training Officer**	25
Section VI	**The Training Instructor**	26
	DUTIES	26
	QUALIFICATIONS, EXPERIENCE AND TRAINING	27
Appendix		29
	SOURCES OF INFORMATION	29
	BIBLIOGRAPHY	30

SECTION I

Introduction

THE prosperity of this country and of its industries and companies depends to a large extent upon the most economic and efficient employment of our manpower for production and distribution. No industry can, however, expect to achieve this degree of efficiency unless it is prepared to assess thoroughly its future requirements of different categories of workers with varying types and degrees of skill. This requires an assessment of the present pattern of employment: and of such other factors as current wastage; future trends in the industry, including technological developments which might affect the type or level of skill required; and the likely expansion or contraction of the industry. Upon this foundation, flexible training policies can in turn be formulated which are closely related to economic needs and technological developments, and which will ensure that the numbers of employees being trained are sufficient to meet the requirements for different categories of manpower in the industry.

The implementation of training policies must ensure that greater efficiency is achieved by increasing the skill and flexibility of all employees, and this can only be done through appropriate systematic training. Modern training methods can produce better results in shorter time and so reduce the overall cost of training as well as producing better quality of work, higher output, reduced labour turnover, easier recruitment, greater adaptibility of workers, more efficient use of machinery and methods, reduction of accidents, and a general improvement of industrial relations.

This is one of the keys to increased productivity. The full value of capital investment, new methods and new machines cannot be realised unless everyone is trained to do his job in the most efficient manner.

More and better arrangements are therefore needed for training and further educating young people in all industries; similarly, systematic training methods must be applied to the retraining of adult workers where this becomes necessary due to mechanisation and other technological changes in production methods.

Training is the direct responsibility of management in every company but it must follow clear-cut Board policy. This in turn must be based upon detailed assessments of future needs in the light of all relevant factors including a full understanding of the most modern approaches to efficient and appropriate training.

In the formulation, and, particularly, the execution of a training policy, company managements will need to seek detailed advice from training specialists of one kind or another. These may be employed as such in individual companies, or may be available from an industry or local body such as an employers' organisation, joint body or group training association. There is a growing need for such properly trained specialists—training officers, training development officers, group training officers and training instructors—particularly in view of statutory provisions for industrial training.

This booklet is mainly concerned with those people who will be called upon to provide specialist advice on training at all levels, and its aim is to highlight the need for more training specialists of every type and to examine the roles and functions of the different categories, and the qualifications and training which they will require to perform those functions in the most efficient manner.

This is an urgent problem calling for immediate thought and action by every industry and by each company. It is hoped that this booklet will be of value in indicating to employers' organisations, joint bodies and individual companies the considerations which should be borne in mind in planning the recruitment and training of these key personnel, who will be required in increasing numbers over the next few years.

SECTION II

The Training Function

TRAINING for all categories of employees in any company is primarily the responsibility of management. In whatever department—research, production, sales or administration—the line manager is responsible for planning for his future manpower requirements, and, in doing so, he must consider what training will be required and how it is to be given.

Company managements will, however, need guidance from the centre of their industries to assist them in discharging their training responsibilities. Some industries have established central training departments providing such guidance on education and training matters, even down to detailed syllabuses of training for categories of workpeople common to all companies in the industry, and these services have been of considerable help and encouragement to managements.

The ways in which training is planned and provided will vary according to the size and resources of the company concerned, but any training scheme which is to achieve the object of turning out properly trained and adaptable workers must be based upon sound fundamental principles which go to make up systematic training, including:

(a) **Planning,** to determine, for as far ahead as possible, the company's training needs and priorities in terms of the different jobs to be done and the numbers of people required to do them.

(b) **Analysis** of the skills and knowledge required to do each job in order to determine what has to be taught; to clarify the purpose of a training course and the standard of attainment to be achieved at the end of it; to estimate training requirements in terms of space ,machines, instructors and materials; and to indicate the necessary pre-training requirements of trainees.

(c) **Preparation of a recruitment and selection programme** to place applicants in the right jobs at an early stage by matching their qualifications to the requirements of the job.

(d) **Drawing up of a written training programme** based on the job analysis, setting out, for the information of managers, instructors and trainees, exactly what has to be taught and learned, when, how and in what time.

(e) **Designing of a suitable training course** based on the written programme and couched in the form best suited to the circumstances of the industry, the company and the jobs concerned. All such courses, whatever their content or length, should have four broad divisions:

(i) *Induction,* or a short period of introductory training about the industry, company and job the trainee is entering, which may be interwoven with

(ii) *Basic training,* or intensive tuition in the basic skills and knowledge of the job;

(iii) *Planned experience:* a period in which the basic training is either applied systematically to working conditions or leads on to further training in one or more specialised jobs;

(iv) *Further education* which, whether vocational or non-vocational, will complement and be integrated with the training carried on within the company.

(f) Selection and training of intructors, who determine to a large extent the success or failure of a training scheme, and who must be both skilled at the job to be taught and possess the techniques and personal qualities to impart the required knowledge and skills to others.

(g) Vesting the responsibility for training within a company in a senior executive and organising the necessary internal control and co-operation on training matters.

(h) Provision of administrative arrangements for reviewing the traning scheme and the detailed content of training courses, and for recording the progress of trainees.

To enable effective schemes of systematic training to be carried out along these lines, training specialists as described in this booklet will be required in increasing numbers.

Detailed advice on the formulation of training policy, and on the execution of that policy, may in some companies be provided

by their own training officer. In smaller companies, which may make training the part-time responsibility of a senior executive, this detailed advice may be provided by a training development officer employed at industry level, or by a group trainng officer employed by a local association of companies for the purpose of running a group training scheme for its members.

For the implementation of training programmes at the point of instruction full-time instructors may be employed, or alternatively, managers, supervisors or skilled workers, who have been specially selected and trained in instructional techniques, may be employed part-time on teaching duties.

The following sections of this booklet describe the ways in which training specialists can assist managements in carrying out their responsibility of designing and providing proper training arrangements for their workpeople, and suggest the qualifications, experience and training which the specialists themselves require.

SECTION III

The Training Officer

IN COMPANIES which are large enough to employ their own training officers, the responsibilities and functions of these officers will of course vary according to the size of the company and the extent of its business and training activities. The job of the training officer as described below, is set out in terms of the various recruitment and training functions which need to be undertaken by most companies.

GENERAL RESPONSIBILITIES

THE training officer may be required to deal with training problems at any level of a company, including those concerned with the training of operatives, apprentices, technicians, technologists, clerical staff, supervisors and managers. His primary function is to advise management on the formulation of training policy at all these levels and to assist them to carry it out.

However much the exercise of the training function may be delegated to a training officer, management must not evade responsibility for it. Its place in the company organisation and the nature of line managers' responsibility for training carried out in their own departments should be clearly defined, and the role of the training adviser conveyed to all managers in the company. Even though he may, in larger companies, undertake many executive functions such as the running of a training department, the training officer's advisory role remains extremely important, and his contribution towards the agreement, at board level, of company training policies stems from his knowledge of the training problems in all departments and of training techniques and methods.

In order to provide advice to management, the training officer should be directly responsible to a senior executive, and he must ensure that all the available facts are submitted for consideration in the formulation of these policies. These will cover such subjects as :

(a) The assessment of the company's training needs and the establishment of priorities. The statistics which have to be considered in such an assessment are the numbers employed

in the company in different categories, i.e. apprentices, learners, craftsmen, semi-skilled and unskilled workers, supervisors, etc.; the numbers required annually to provide replacements in different occupations due to such causes as death, disablement, retirement, promotion, transfer and dismissals; changes in numbers employed due to expected expansion or contraction of the company's activities; redundancies likely to be caused by technological changes in production methods, which may in their turn call for retraining; and internal training needs which may be revealed by such symptoms as high labour turn-over, inferior product quality, inefficient use of machinery and techniques, recruitment difficulties, etc.

(b) The ages, levels of attainment and qualifications of young people finishing their full-time education who are available to fill vacancies in the company.

(c) The availability of trained labour locally, from both short and long term points of view, which may have a bearing on the introduction of internal or external training courses.

Where an industry organisation is able to provide statistics and advice on training matters it will also be advisable to consider such facts as:

(a) National or local supply of skilled workers, technicians and technologists, which may throw more emphasis on the industry's need to train its own technical experts.

(b) The industry's training policy with particular reference to the various matters dealt with under existing training legislation.

(c) National training schemes in the industry for different categories of workers.

(d) The need for opportunities for systematic training according to the nature of the job to be provided for young people entering their first employment.

(e) The implications to the company of current developments in the field of industrial education and training both inside and outside the industry.

PARTICULAR FUNCTIONS

AFTER the company's training policy had been formulated, the training officer's responsibility is to see that this policy is effectively carried out, and the preparation of training programmes is a

central feature of his job. To do this successfully he must first make use of his assessment of the company's training needs, in the light of which he must then arrange for the skills and knowledge required in each main occupational category to be analysed to help him in the detailed work of programme planning.

Analysis of Skills and Knowledge :

BEFORE training programmes can be planned, at whatever level of training, comprehensive statements of the skills and knowledge required in each job should be prepared. A training officer does not have to be expert in the techniques of method study and job analysis, but, if he is to be able to convince others of its necessity in the work of designing training programmes, he should have a good working knowledge of the techniques involved. The actual analysis might be done in the department concerned, or it may be necessary to commission the work study department to perform it. In smaller companies where staff may not be available to carry out these analyses, it may be necessary to use outside agencies such as the industry's central training department or a group training officer.

In many operative jobs, manual skills will predominate and have to be studied in detail, while the knowledge required for the job may be small. In other types of jobs the reverse may be the case, and the emphasis will be almost entirely on studying the knowledge requirements. Job analyses of the more highly graded posts may have to be carried out on an individual basis, and performance on the job may not easily be measured in quantitative terms. For this purpose, the training officer should understand modern methods of personnel assessment.

Preparation of Company Training Programmes :

(a) *Internal Training in the Company:* A statement of the skills and knowledge required for a job is the essential basis upon which the training officer can start to prepare his training programme. Although programme planning is, in itself, a technique employed by the training specialist, this should be done in close co-operation with the managers directly concerned in each department.

A training programme should normally consist of a syllabus, a set of instruction plans, and a timetable. The syllabus will list the skills and knowledge to be taught in the correct sequence, laying down in broad terms the amount of time to be devoted to each part. This forms the main

outline of the training programme, and the training officer should then select and employ the training techniques most appropriate to each stage of the training. In large companies this may involve him in the design and lay-out of training centres, and the choice and ordering of equipment. His knowledge of the way in which people learn will enable him to determine the order in which information should be presented, the time required and the appropriate method of instruction. This will form the basis of the detailed instruction plans for each part of the syllabus. Finally, the timetable should be produced, setting out the teaching programme hour by hour and week by week.

(b) *Further education:* Further education should form an essential part of industrial training, providing complementary information and background knowledge to improve the performance of particular jobs. It is management's responsibility to ensure that appropriate further education courses are properly integrated with the company's internal training programmes. The Council has recommended that all young people at least up to the age of 18 should be given day release facilities, or their equivalent, for attendance at such courses.

The training officer must, therefore, keep in touch with the development of further education courses for different grades of staff with a view to advising management, and he may, in the case of larger companies, need to arrange for special courses to be run at local colleges to meet the particular needs of the company. He should also :

(i) decide how much external assistance the company will need and will be able to obtain;

(ii) ascertain the facilities which are available locally and assess the value to his company of available courses;

(iii) where suitable external assistance is unobtainable, organise internal courses, using, where possible, technical and commercial experts from within the company as teachers, instructing them as necessary in teaching techniques;

(iv) advise employees on the suitability of external courses in relation to their existing qualifications, experience and future prospects. In this he will need to be conversant with the entrance qualifications for the examination courses of different professional bodies;

(v) keep in close personal touch with principals and departmental heads of colleges with a view to the organisation of suitable courses for employees in the company and to keeping a check on the progress of those attending them.

Training for Instructors:

In putting a training programme into practice, it will be necessary for the training officer to see that those who will be required to instruct are properly qualified to do so, and trained in the techniques of instruction. This will entail:

(a) Determining the number of instructional staff needed, and whether they should be full-time or part-time.

(b) Assisting in establishing agreed specifications to be used in selecting instructors.

(c) Selecting instructors.

(d) Arranging for them to be trained, either externally or by training them himself.

(e) Where instructors have been trained externally, introducing them to the job and doing such follow-up training as may be necessary.

(f) Ensuring that instructors are kept up-to-date in training techniques and job knowledge.

Even where the training officer is able to arrange for all practical training to be done by part-time or full-time instructors, he must himself to be familiar with the practical side of industrial teaching so that he can evaluate the performance of instructors and ensure that the best standard of practical instructing is maintained.

The Administration of Company Training Programmes:

Having initiated a training scheme, the job of the training officer is to ensure that it is operating and running according to plan. These are some of the means by which he can do this:

(a) *Preparation of Training Manuals:* A manual of training for any job, consisting of a collection of all the documents required to describe the scheme and how it works, might include:

a job break-down;

fault analyses (where applicable);

statement on quality standards enforced;

syllabus;

set of instruction plans;

list of special devices and exercises;

record of targets used;

a timetable;

and a summary of selection procedure.

A list of equipment used in a training centre might also be included, together with copies of any record forms used in the control of training.

Normally manuals are developed over a period as a training scheme progresses, and they provide a permanent record of everything involved in organising training for a given job or range of jobs. They also provide a source of reference for junior training officers and instructors who may be directly concerned in the implementation of the training programme.

(b) *Record Systems:* The object of keeping training records is to provide information to management, the training officer and trainees themselves as to progress of individuals at any given time on the course. To this end, the training officer needs a simple system of records, which will ensure that essential information about trainees' progress is available when required. Advice may have to be given to supervisors and managers on assessing their trainees and completing assessment forms.

(c) *Practical Checks of Progess:* In addition to a record system, practical checks are necessary on the progress of trainees. Tests can be arranged at regular intervals throughout a training programme; regular visits should be made to trainees at their place of work in order to carry out spot checks on the training they are receiving; and trainees should be interviewed at regular intervals throughout the course to assess their progress and attitude.

Recruitment and Selection:

The ultimate success of any training course depends very largely on the selection of the right people to be trained in the first place. It is therefore important that the training officer should play his part in the setting of standards for selection and in the actual operation of the selection procedure. In some companies he combines the work of recruitment, selection and training.

The following are some of the ways in which the training officer may contribute to this process:

(a) Drawing up job specifications.

(b) Conducting or assisting at interviews.

(c) Advising on suitable ability and aptitude tests to be used, and administering them.

(d) Designing rating forms for use at interviews, and training others in their use.

(e) Determining the specialised training to be given to particular employees on completion of basic training.

(f) Liaison with the Youth Employment Service, schools, technical colleges and universities.

Budgeting for Training:

Training must be budgeted for in the same way as any other production or administrative activity in the company, and a calculation of the cost of the introduction and running of training programmes will also assist the training officer in keeping control of costs and checking the effectiveness of individual courses. Any financial estimate of this sort should, where circumstances make it possible, try to balance the costs of training against the returns obtained from improvements in productivity and other benefits brought about by that training.

Evaluation of Training Programmes :

The training officer will need to evaluate existing training programmes regularly so as to ensure that they are effective and up-to-date and that their objectives are being attained, and to take into account the attitudes to them of managers and learners.

SELECTING AND TRAINING THE TRAINING OFFICER

(i) Job Requirements :

The job requirements for training officers can be discerned from their responsibilities and functions described above.

A training officer should be knowledgeable about the structure and functioning of industrial organisations, and familiar with the management methods employed in the various departments of the company; e.g. production, sales, research and development, accounting and general administration. If he himself has held executive responsibility either in a line department or in some specialist department other than training, he will have a better

understanding of the problems confronting line management in training and allied fields. The training officer should also be able to exercise his communcation skills with just as much facility in the boardroom as on the shopfloor.

He should understand the techniques of the organisation and methods specialist in order to be able to study company and departmental training needs and to analyse jobs to determine the skills and knowledge in them.

He must have extensive knowledge of the theories of learning and of industrial training techniques and methods in order to be able to plan and design training courses and to select and train instructors to implement them. He must also have a thorough understanding of the country's educational system, with particular reference to further education.

The training officer should have a close insight into the human and industrial relations aspects of management to enable him to understand how training courses he may design can affect relationships in the company. He should be capable of taking part, if necessary, in any negotiations with trade unions which may arise over some aspect of training. He will require also a considerable knowledge of industrial psychology, especially in his activities in connection with the selection and placement of employees. In this, he will need to be familar with the use of selection tests and to be able to assess their practical value. He should also be experienced in the technique of interviewing, and should understand merit rating methods.

The control, administration and evaluation of training programmes are bound to involve the handling of a considerable amount of paperwork, and the training officer must therefore be an efficient administrator.

(ii) Qualifications and Experience :

IDEALLY a training officer should start from the basis of a university degree or professional qualification. This should ensure that he has sufficient breadth and depth of education and adequate mental flexibility to carry out his work. It would be an advantage if he had pursued some general course of management studies on completion of his technical or professional training.

An important additional quality required in a prospective training officer is that he should have a genuinely strong interest in the improvement of education and training methods, together

with the necessary personality, maturity and enthusiasm to carry this through.

(iii) Training:

PROSPECTIVE training officers might require a training course on the following lines to supplement their existing knowledge and experience:

(1) *Instruction in essential background subjects such as:*

Management Methods and Industrial Organisation;
Occupational Psychology;
Structure of the Educational System—Futher Education;
Industrial Sociology:
Personnel Management and Industrial Relations.

(2) *Instruction and practice in:*

Work Study and Skills Analysis;
Instructional Methods and Techniques;
Training Administration;
Interviewing and the use of Selection Tests.

(3) *Opportunities for project work, under suitably qualified industrial tutors, on such subjects as:*

Assessment of Training Needs;
Job Analysis;
Programme Planning.

Existing courses for training officers cover some of these matters, and sources of information about them are given in the Appendix.

In the future, longer and more formalised courses will be necessary, ranging from concentrated full-time courses of up to one year for training officers responsible for all aspects of training, to shorter *ad hoc* or sandwich courses.

It is important that courses for this purpose should be located at centres where close contacts with industry are possible, so that project work and practical experience in factories, shops or offices may be arranged as an integral part of the training. A substantial part of the course, which might be on a sandwich basis, should be devoted to this type of activity. Colleges of Advanced Technology, Regional Technical Colleges or Universities with close working relationships with industry would seem to be most appropriately equipped to provide courses matching these requirements.

The instruction on such a course should be given, as far as possible, by persons who have themselves had extensive experience of training in industry, and much of it by persons seconded from industry for that purpose.

For practising training officers, who may never have had any formal training for their job, shorter courses should be provided covering similar ground, but with shorter periods of practical experience. These courses should also be provided at Colleges of Advanced Technology, Regional Technical Colleges or Universities, and they might conveniently be run during periods when training officers on long courses are away from the college or university undertaking practical work.

All training officers should be encouraged to attend short supplementary or refresher courses from time to time dealing with particular aspects of industrial training such as methods of analysing semi-skilled jobs, planning of operative training, planning of apprentice training supervisory training techniques, etc. A number of courses of this kind already exist and sources of information about them are given in the Appendix. Training officers should also be encouraged to participate in professional and related association activities.

SECTION IV

The Training Development Officer

THE TRAINING DEVELOPMENT OFFICER, as distinct from the Training Officer, first made his appearance on the training scene in Britain after the war when plans were being formulated by some industries for the setting up of training arrangements and the provision of advisory services on an industry basis. A brief account of the services set up by various industries was given in the Council's booklet—*Training Services in Industry.*

This movement towards the appointment of such officers was further stimulated by the Carr Report and, particularly, by the Government grant-in-aid to the Council, which has enabled it to assist employers' organisations and joint bodies to appoint training development officers, and to establish a Training Advisory Service composed of such officers to assist industrial bodies and individual companies. Statutory provisions on industrial training will provide a further impetus towards the appointment of these officers.

GENERAL RESPONSIBILITIES

THE training development officer has similar advisory responsibilities towards the industrial organisation for which he works as the company training officer has to his Board of Directors. His functions are basically twofold:

(i) to advise these organisations on the planning of training arrangements at industry level:

(ii) to assist in their implementation at company level.

He is a consultant to companies in the industry and a specialist in training techniques and methods. From his central position, with the possibility of working in close association with many different companies in the industry, he is also able to bring about a wide exchange of ideas and experience on training matters.

The role of the training development officer has, of course, increased in importance with the development of industry training arrangements and with the growing provision of training services by employers' organisations and joint bodies, some of which have recognised that the effectiveness of their services is greaty enhanced

by the appointment of full-time officers who can devote their whole attention to the development of training in their industries. Such officers are an essential part of any co-ordinated effort to plan training from the centre of an industry.

PARTICULAR FUNCTIONS

During the "bulge" years, industry training organisations tended to be preoccupied with the drive to accelerate the expansion of apprenticeship and other industrial training for young people. The main job of the training development officer in that context was to stimulate and assist the setting up or extension of training schemes for young people by employers, either individually or through joint schemes. With the resulting increase in training activities, however, and particularly with the statutory provisions for training, the role and function of these officers have developed along broader lines.

Firstly, the training development officer assists industrial bodies to set up machinery for the regular assessment on a national basis of the training needs of the entire industry in terms of the skilled and lesser skilled workers required, with a view to ensuring that the numbers trained are sufficient to meet those needs. This necessitates taking into consideration, from the point of view of the industry as a whole, all the facts of which an individual company has to take account in formulating its training policy, as set out in Section III. In assessing future training needs in the light of these facts, account will need to be taken of future trends in the industry, including technological developments which might affect the type or level of skill required and the possible expansion or contraction of the industry.

Secondly, the training development officer advises industrial bodies on the possibility and means of analysing on an industry basis the various jobs and occupations common to most companies in the industry, in terms of the skills and knowledge required, as a basis for planning the appropriate training. Here full account has to be taken of the need for workpeople to become better fitted to meet technical changes in industry, which can be achieved by giving them a broader based training over a wider range of skills than at present.

This leads on to the third task of assisting in the establishment of industry training schemes for different categories of workers which set out standards of training on a national basis and appropriate syllabuses of training drawn up in conformity with those standards. To be effective such schemes should include guidance to companies

in the practical aspects, dealt with in Section III, of such matters as:

(a) The assessment of training needs of individual firms.

(b) The analysis of jobs and occupations.

(c) The planning of training programmes appropriate to the resources and facilities of particular firms.

(d) The establishment and application of training tests.

(e) The recruitment and selection of trainees.

(f) The selection and training of instructors.

(g) The administration and control of training programmes.

These are formidable tasks by any standard, but they are quite fundamental to any serious reappraisal of an industry's training arrangements and cannot be adequately undertaken without the advice and assistance of specialised staff.

However, the formulation of an industry's training policy and the preparation of national training schemes are not in themselves sufficient. It is essential that practical detailed guidance and technical and administrative help are made available to companies in the industry to enable them to put these schemes into practice.

The provision of this assistance at company level forms a major part of the training development officer's job, and he should make use of a variety of ways of doing this.

Firstly, general guidance on training problems can be issued in written form:

(a) *Booklets* dealing with one or more subjects, e.g. recruitment and selection methods, and principles of training relevant to the jobs and occupations found in the industry.

(b) *Job breakdowns,* where these are common enough to be generally useful, or as examples of how a breakdown should appear.

(c) *Detailed syllabuses,* showing subjects in which instruction or planned experience should be provided.

(d) *Sample programmes* of training for general guidance.

(e) *Training manuals* for particular jobs.

Secondly, such written guidance can be supplemented by conferences and courses:

(a) *Conferences* for management representatives or for training officers, supervisors, instructors, key workers and others

concerned with training, dealing with any of the above subjects.

(b) *Courses* for managers, training officers, supervisors and instructors dealing in more detail with any of the above subjects. Courses would be particularly relevant on such matters as instructional techniques and methods (for instructors) and job analysis for training purposes.

Thirdly, and perhaps the most effective method to be used by the training development officer, is the provision of consultancy/advisory services to companies at their own workplaces, to carry out for them some or all of the assessment, analysis, planning and other work connected with introducing or developing training.

Clearly for industries of any size, this work cannot be done by a single training development officer, but may need staff in proportion to the size of the industry, and may be organised on an area basis when convenient. Alternatively, some or all of the work may be done on a contract basis by specialist organisations such as the Training Advisory Service of the Industrial Training Council.

QUALIFICATIONS, EXPERIENCE AND TRAINING

While the training officer in a company normally works in an atmosphere where training has at least been accepted in principle, the training development officer is often required to move in an environment where lack of knowledge of the principles of sound training goes hand in hand with lack of appreciation of its economic and social advantages. His role therefore takes on a missionary character and has an element of salesmanship about it. As both a participant in the formulation of national training policy and one of its chief interpreters at the local level, he needs to be equally at home at the centre of his industry and with the management or on the shop floor of its various companies.

In addition to possessing the various technical qualifications, experience and know-how required of the training officer, the training development officer should have a clear insight into the background and general organisation of his industry, including its relations and agreements with the trade unions and its policies over the broad field of industrial relations, and be able to ensure as far as possible that, in the inner counsels of the industry, training considerations are given a fair hearing.

Ideally, a training development officer should also have worked for a period as a company training officer; have experience of

training work at all levels, and in more than one company; have a knowledge of the technology of the industry; be skilled at job-analysis and report writing; and be able to address audiences of all levels competently.

While part of the training necessary for a training development officer can be undertaken through the courses provided for training officers, much of it can best be carried out on the job in the atmosphere and at the different levels of the industry in which he is required to work.

The scope of the statutory provisions on industrial training will require the appointment of a number of training experts by the various industry Training Boards, and this will provide opportunities for the newly appointed training development officer to gain experience on the job by assisting and understudying those above him. There will also be a need for the organisation of special courses for training development officers.

SECTION V

The Group Training Officer

COMPANIES which are not large enough to justify economically obtain the advantages of having such a specialist in close and continuous contact with their problems by sharing the services of a Group Training Officer with a relatively small number of other companies in their neighbourhood through the medium of a Group Training Scheme. Such grouping might be from the same industry or from a number of different industries.

The responsibilities and functions of the group training officer are very similar to those of a company training officer. He may, however, have some additional tasks in connection with the administration of a group training scheme, and, in the formative stages of such a scheme, his role may be similar to that of a training development officer. In his preparatory work, his advisory function will be in relation to a group management committee as well as to the managements of each of the individual companies in the group. As the scheme develops, the group training officer will be responsible for operating its training schemes, and will therefore increasingly perform the duties of the company training officer.

The group training officer therefore requires a combination of the qualities and experience of the company training officer and some of those of the training development officer, and, in particular, he may require the ability to assess company training needs over a wide range of industries, together with communication and administrative skills of a high order.

As far as training is concerned, he should have undergone the formal training suggested for a company training officer, and have worked as such for a period. There will also be a need for further training covering the organisational and administrative problems involved in group training schemes, which may best be obtained by undergoing short courses and periods of planned experience with the training development service of one or more industries.

The organisation and administration of group training schemes and the work of the group training officer are dealt with fully in the booklet—*Group Training Schemes*—published by the Council's Training Advisory Service.

SECTION VI

The Training Instructor

THE effectiveness of any training programme depends ultimately on the quality of the instructors applying it. They are responsible for putting training courses into effect at the actual level of instruction, and are likely to be concerned with advisory work leading to policy making, although they may be required to provide information on various practical matters considered in the formulation of company training policy.

Where the volume of instructing to be done justifies the appointment of somebody engaged full-time on instructing, such a person is usually known by the title of Instructor or Instructress. The title of Training Officer or Training Supervisor is sometimes applied to these people, emphasising their full-time concern with this aspect of training. The full-time instructor may be responsible to the executive in charge of training in the company or directly to the management of the department in which he is working.

Where the volume of instructing is relatively small, or needs to be given only from time to time, persons normally employed as supervisors, skilled workers, senior operatives or possibly managers, may be used for a part of their time as instructors, and as such they will need the same qualifications, experience and training as those employed full-time on instructional duties.

DUTIES

THE scope and level of instructional duties vary in different companies, and, although the observations made on these duties in this section refers to the job of a full-time instructor working in a training centre for operatives or apprentices, they can equally well be applied, with modifications, to the part-time instructor on the shop floor.

An instructor is primarily concerned with the following:

(a) Direct instruction of learners, either individually or in groups, in the practical skills and knowledge they need in the performance of their jobs. He is the practitioner in instructional techniques and methods—telling, showing, illustrating, conducting practice, etc.

(b) Supervising practical work, correcting errors, stimulating interest and providing encouragement to individual trainees.

(c) Organising the hour-to-hour work of a training centre.

(d) Keeping detailed records of trainees' progress and presenting these to management in a comprehensive form.

(e) Maintaining custody of materials and equipment used for training.

In some cases, especially in smaller companies, the instructor may, in addition, be expected to undertake some of the duties of a training officer, such as:

(a) Preparing job breakdowns;

(b) Preparing instruction plans, visual aids and other materials to be used in training;

(c) Preparing timetables;

(d) Arranging for the transfer of trainees to production departments on completion of their training and following up their progress thereafter.

Ideally these functions should be carried out by a training development officer or group training officer.

QUALIFICATIONS, EXPERIENCE AND TRAINING

AMONG the many qualities which a good instructor should possess, the following are the most important:

(a) He should be skilled and knowledgeable in the job he is going to teach, including the safety aspects of it, though this does not necessarily mean that he should be up to the standard of the best or fastest operative.

(b) He must be competent and methodical in the application of instructional techniques and methods.

(c) He should have a sympathetic interest in people and their problems; this is particularly important where, as is usually the case, he is dealing with young people.

(d) He must have enthusiasm for his work.

These qualities and skills will help in the selection of the right people to be trained as instructors, but some of them cannot easily be taught to the mature adult worker who may be called upon to instruct.

Instructional techniques and methods are, however, skills which are capable of being taught and learned like any others. Training in these must be given, in relation to the subject which they are to

teach, to all who are selected to be either full-time or part-time instructors.

This training should include subjects under the following broad headings:—

(a) The role of the instructor;

(b) The nature of industrial skills;

(c) How and why people learn;

(d) The instructional techniques of telling, showing, illustration, question and answer, and discussion.

(e) The instructional methods of the practical lesson, the classroom lesson, the talk, the lecture, group discussion, role play, case study and project work.

(f) Choosing the right method of instruction and planning the lesson.

(g) Keeping training records.

Details of courses for instructors are given in the Council's booklet *Craft Apprenticeship—Training for a Skilled Craft or Trade*, and sources of information on these and other courses are set out in the Appendix to the present booklet.

Appendix

Sources of Information

BRITISH ASSOCIATION FOR COMMERCIAL AND INDUSTRIAL EDUCATION (B.A.C.I.E.)
26a, Buckingham Palace Road, London, S.W.1.
(Tel: TATe Gallery 4985)

BRITISH INSTITUTE OF MANAGEMENT (B.I.M.)
80, Fetter Lane, London, E.C.4.
(Tel: HOLborn 3456)

INDUSTRIAL TRAINING COUNCIL (I.T.C.)
36, Smith Square, London, S.W.1.
(Tel: ABBey 2861)

INDUSTRIAL WELFARE SOCIETY (I.W.S.)
Robert Hyde House, 48, Bryanston Square, London, W.1.
(Tel: AMBasador 2401-8)

INSTITUTE OF PERSONAL MANAGEMENT (I.P.M.)
80, Fetter Lane, London, E.C.4.
(Tel: HOLborn 3456)

NATIONAL INSTITUTE OF INDUSTRIAL PSYCHOLOGY (N.I.I.P.)
14, Welbeck Street, London, W.1.
(Tel: WELbeck 1144)

MINISTRY OF EDUCATION
Curzon Street, London, W.1.
(Tel: HYDe Park 7070)

MINISTRY OF LABOUR
St. James's Square, London, S.W.1.
(Tel: WHItehall 6200)
(or any Employment Exchange)

SCOTTISH EDUCATION DEPARTMENT
St. Andrew's House,
Edinburgh, 1.
(Tel: WAVerley 6591)

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Industrial Training—A. Tegla Davies—I.P.M.
Essentials of Industrial Education—A. B. Mays—McGraw-Hill.
Principles and Practices of Vocational Education—A. B. Mays—McGraw-Hill

Youth in a Technical Age—D. Gilbertson—Parrish.
The Training Revolution—J. Wellens—Evans.
Industrial Training: Government Proposals—Ministry of Labour—H.M.S.O. Cmnd. 1892.

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Job Analysis

Job Analysis—H. E. Roff and T. E. Watson—I.P.M.
Job Evaluation—British Institute of Management—B.I.M.

Operator Training

Training Boys in Industry—the Non-Apprentice—Industrial Training Council—I.T.C.

Training Girls in Industry—Industrial Training Council—I.T.C.
Training Made Easier—Dept. of Scientific and Industrial Research—H.M.S.O.

Industrial Training for Manual Operations.—W. D. Seymour—Pitman.
Operator Training in Industry—W. D. Seymour—I.P.M.

Apprentice Training

Craft Apprenticeship—Industrial Training Council—I.T.C.
New Patterns in Apprenticeships—Industrial Training Council—I.T.C.
Modern Apprenticeship—A. G. Beverstock—Classic.
The Smaller Firm and Technical Education—Venables and Williams—Parrish

Apprenticeship—K. Liepmann—Routledge and Kegan-Paul.
Recruitment to Skilled Trades—G. Williams—Routledge and Kegan-Paul.

Apprenticeship in Europe—G. Williams—Chapman & Hall.
Apprenticeship Now—A. Beveridge—Chapman & Hall.
Teaching for Trades—A. W. Hawkins—Pitman.

Group Training Schemes

Group Training Schemes—F. W. Greig—I.T.C.

Retail Staff Training

Retail and Staff Training—J. B. Marcham—I.W.S.

Office Staff Training

Office Staff—Selection—Supervision—Training—E. M. Pepperell—I.W.S.

Supervisory Training

Supervisory Training—J. R. Armstrong—I.P.M.

Selection and Training of Supervisors—Report by Ministry of Labour Committee—H.M.S.O.

Selection, Induction and Placement

Welcome Stranger—B.A.C.I.E.—B.A.C.I.E.

Selection and Placement—I.P.M.—I.P.M.

Use of Tests in Selection Procedure—B.I.M.—B.I.M.

Further Education

Co-operation between Industry and Education—I.T.C.—I.T.C.

Further Education for those in Industry and Commerce—Federation of British Industries—F.B.I.

The Technical Colleges and their Government—F.B.I.—F.B.I.

Technical Education—P. F. R. Venables—Bell

Technical Education and Social Change—S. F. Cotgrove—Allen and Unwin.

Better Opportunities in Technical Education—Ministry of Education—H.M.S.O. Cmnd. 1254

Technical Education in Scotland—The Pattern for the Future—Scottish Education Department—H.M.S.O. Cmnd. 1245

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Budgeting for Training

The Smaller Firm and Technical Education—Venables and Williams—Parrish.

Training Techniques and Methods

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The Principles of Teaching Method—A. Pinsent—Harrap.

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Training Aids

A Guide to the Use of Visual Aids—L. S. Powell—B.A.C.I.E.

Management Courses

Education and Training in the Field of Management (Conspectus of Courses—B.I.M.—B.I.M.

Printed for Her Majesty's Stationery Office by Courier Printing and Publishing Co. Ltd., Tunbridge Wells.

Dd 194803 1500 4/66 (724 Gp497)

Publications of

1. OF THE INDUSTRIAL TRAINING COUNCIL

(Available from Ministry of Labour :—8, St. James's Square, London, S.W.1 (personal callers); 32, St. James's Square, London, S.W.1 (postal

Craft Apprenticeship *(1962 : 2/6)*

Sets out principles covering the recruitment, selection and training of apprentices based on the best practices in both large and small companies.

Training Girls in Industry *(1962 : 3/6)*

Sets out the principles to be followed in arranging systematic training for girls, supported by examples of such training arrangements in a variety of companies and industries.

Final Report—January, 1963, to November, 1964 *(2/-)*

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Ernst, Howard E.
Profiles of Minnesota Day School Trade and Industrial Teachers in the Area Vocational Schools.

MF AVAILABLE IN VT-ERIC SET.
Pub Date - 65 96p.

TRADE AND INDUSTRIAL EDUCATION; *TRADE AND INDUSTRIAL TEACHERS; *TEACHER CHARACTERISTICS; TEACHER QUALIFICATIONS; *EDUCATIONAL BACKGROUND; *WORK EXPERIENCE; TEACHING LOAD; *AREA VOCATIONAL SCHOOLS; STATE SURVEYS; TEACHER EDUCATION; OCCUPATIONAL MOBILITY; EMPLOYMENT EXPERIENCE; CERTIFICATION
MINNESOTA

Questionnaires returned by 203 certified day-school trade and industrial instructors provided descriptive information for the State department of education and for planning instructor training programs. Findings included: (1) 46 instructors were female, (2) The median age was 43.3 years, (3) 11 had not completed high school, (4) 60 held a bachelor's degree, (5) 14 held a master's degree or its equivalent, (6) 158 had taken course work in the previous 3 years, (7) 75 had teacher education courses beyond certification requirements. (8) 141 had taken on-campus courses for off-campus credit, (9) 90 had participated in industrial workshops, (10) 50 had taken off-campus courses for credit, (11) 97 had been in some kind of apprentice program, (12) 84 were union members, (13) 22 belonged to an employers' or contractor's association, (14) The median trade experience before teaching was 12.45 years, (15) 8 had less than 2 years trade experience, (16) 161 were certified in only one area, (17) 150 taught both the shop and related information phases, (18) 129 indicated they had no free preparation time, and (19) Their median salary was $7,269. This is an independent paper submitted for Ind. 200 Research Problems at The University of Minnesota. (EM)

VT004678

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OFFICE OF EDUCATION

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PROFILES OF MINNESOTA DAY SCHOOL TRADE AND INDUSTRIAL TEACHERS IN THE AREA VOCATIONAL SCHOOLS

An Independent Paper
(Nine Quarter Credits)
Ind. 200 Research Problems
Dr. Howard F. Nelson, Adviser

Submitted
by

Howard E. Ernst

Candidate for the Degree of
Master of Arts
Plan B

University of Minnesota
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A special debt of gratitude is owed to my adviser, Howard F. Nelson, Professor and Chairman, Department of Industrial Education, University of Minnesota, for his patient, constructive criticisms, and valuable advice offered during the study. Special thanks also go the Mr. Harold T. Widdowson, Professor, Department of Industrial Education, University of Minnesota, for his help in the formulation of questions used in the questionnaire.

H.E.E.

TABLE OF CONTENTS

	PAGE
LIST OF TABLES	v
LIST OF ILLUSTRATIONS.	vii
CHAPTER	
I. INTRODUCTION.	1
Purpose of the Study.	1
Statement of the Problem.	4
Definitions of Terms.	5
Examination of Unpublished Materials.	9
Plan of the Study	11
Limitations of the Study.	15
Scope of the Study.	18
II. SURVEY RESULTS AND ANNOTATIONS.	21
General Information on the Vocational Day School Instructors.	21
Trade Experience of Vocational Day School Instructors	32
Vocational Certification and Teacher Training.	38
Mobility and Tenure of Instructors.	51
Vocational Programs and Teaching Combinations	56
Preparation Time and Extra Assignments. . . .	64

CHAPTER PAGE

III. SUMMARY AND CONCLUSIONS 65

Summary 66

Conclusions 72

BIBLIOGRAPHY 78

APPENDICES 80

LIST OF TABLES

TABLE		PAGE
I.	Percentage of Returned Questionnaires from Area Vocational Schools	19
II.	Ages of Respondents	22
III.	Annual Salaries for Respondents for 1964-64	24
IV.	Survey Results on Extent of Secondary Education	26
V.	College Degrees Held by Vocational Day School Instructors	28
VI.	Summer Schedule for 1963	31
VII.	Participation in Apprenticeship Programs	34
VIII.	Years of Trade Experience	35
IX.	Additional Years Trade Experience After Beginning to Teach	37
X.	Membership in Labor or Employers' Organization	39
XI.	Vocational Certification	41
XII.	Certification in More than One Area	43
XIII.	Types of Training Programs	45
XIV.	Credits Toward Certification Before Starting to Teach	47
XV.	Credits Earned Beyond the Required Minimum	49

TABLE PAGE

XVI. Years Since Last Enrolled for Additional Credits 50

XVII. Number of Schools Taught In. 52

XVIII. Number of Years in Present Teaching Position . . 53

XIX. Total Number of Years Teaching 55

XX. Teaching Combinations. 57

XXI. Shop and Related Information Teaching Combinations 59

XXII. Number of Actual Teaching Hours Per Day. 61

XXIII. Length in Months of Teaching Contract. 63

LIST OF ILLUSTRATIONS

FIGURE PAGE

1. Location of Area Vocational Schools in Minnesota. 17

CHAPTER I

INTRODUCTION

I. PURPOSE OF THE STUDY

The writer became interested in the profiles of Minnesota day school vocational instructors while pursuing Minnesota Department of Education publications. These publications indicated concern with the industrial arts programs, the vocational day school programs in the State of Minnesota, and the certification of the instructors. The requirements for certification in the day trade vocational program vary a great deal. The certificates for vocational teachers were divided into two broad catagories. The first of these covered the trade shop teacher and the second group the related trade teachers. A trade shop teacher concerns himself primarily with teaching shop skills and the necessary related information. The related trade teacher teaches related subject areas that help to broaden the knowledge and basic educational background of the trainees. These subject areas were not necessarily required to perform a specific shop skill. The various certificates were renewable for specified lengths of time after earning

additional credits in teacher training courses. The certifications are described in greater detail in the part of this chapter under Definition of Terms.

After discussions with various people in the Vocational Division of the Minnesota Department of Education and those concerned with the training of the day school instructors it was found that there was very little statistical information available on these instructors. Characterizations and generalizations were made on age, trade experience, teacher training, earnings, and teaching experience. These generalizations were based on very limited information and led to invalid conclusions regarding the day trade school instructors. It was hoped that this paper would give a more comprehensive picture of the personnel that make up our instructional staff in the day trade program.

The writer and other interested parties desired to obtain a profile of the Minnesota day school trade and industrial instructors and thereby characterize these instructors. This study was designed to give a visual delineation of the instructors, provide aid in future planning of training programs for vocational instructors,

and furnish descriptive information relative to the vocational day school instructors to the Minnesota Department of Education, Vocational Division.

It was assumed that the salaries of the various instructors would vary to a great degree. Some of this variation could be attributed to the geographic locations of the schools. The writer thought it would be of value to find the average salary of the instructors, and therefore, provide a basis of comparison to the salaries of the men in the trades.

The salaries of the instructors should be commensurate to or greater than the salaries they could earn in the trade. Hawkins, Prosser and Wright stated that "the loss of teacher can be attributed to failure of the public school authorities to take into account salaries paid by other agencies and commercial concerns."[1] These authors went on to state, "The purpose of the various vocational acts in

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[1]Hawkins, Prosser, and Wright, Development of Vocational Education (Chicago: American Technical Society, 1951), pp. 221.

reimbursement policy is to pay adequate salaries and thereby keep teachers."[2]

Another area the writer thought would be of interest was the use of training programs. A variety of training programs are available to the instructors to gain certification. It was hoped that by gathering information on the use of these training programs it would be possible to decide which programs were most frequently used by the instructors.

The use of the teaching day was of interest to the writer. Any shop teaching situation requires a certain amount of time for preparation of class materials, ordering, record keeping and maintenance of tools and equipment. It was decided to interrogate the instructors regarding a preparation period during the school day. Question relative to the number of hours per day an instructor spends with the students were asked.

II. STATEMENT OF PROBLEM

It was the purpose of this study of the day trade and industrial instructors in Minnesota to:

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[2] Ibid.

1. Compile statistical information about trade and industrial instructors in the State of Minnesota in the following areas:

a) Personal information

b) Professional teacher training

c) Type of certification

d) Teaching experience in day schools

e) Trade experience

f) Amount of general education

g) General information

2. Assemble the selected data about these instructors

3. Prepare tables which indicate the relationship between instructional personnel in the various area schools.

III. DEFINITION OF TERMS

In order to comprehend this paper, there are certain terms used which are common to the vocational education field. The definitions which follow were taken from the "Handbook for Supervisors, Trade and Industrial Education."[3]

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[3]"Handbook for Supervisors, Trade and Industrial Education," (Minnesota State Department of Education, Vocational Division, St. Paul, Minnesota), Pp. 7-30.

Area Vocational-Technical School. A school offering specialized training to students in a large territory, usually involving geographical area larger than a school district.

Related Subjects. Instruction designed to increase knowledge, understanding, and ability to solve technical and theoretical problems concerned with a particular occupation.

Teacher Certification. The approval action taken by legally authorized school authorities on the professional and technical qualifications of teachers based on minimum standards adopted in the state.

Initial Certificates and Renewals. First certificates are issued for two years and subsequent renewals for one year each until all requirements have been satisfied. At this time either a three or five year certificate will be issued. The five year certificates are issued for the Day Trade Program and three year certificates for the Evening Extension Programs.

Temporary Permits. In unusual situations in which a school has experienced an emergency, a temporary permit may be issued to an instructor. The permit expires on July 1 of the year for which it is issued and cannot be renewed.

Trade Experience for Day Trade Certificate. The instructor shall be considered a master workman in his trade and have had at least three years of journeyman experience as a wage earner in the trade in which he is to teach.

He shall have had sufficient technical training or experience so he can teach all the necessary phases of this instruction to the workers.

Professional Preparation and Teacher. A minimum of 192 hours of approved teacher training experience of which at least 96 hours shall be of a college level. No more than 24 hours of the remaining 96 hours shall be of the nature of skill or competency workshops. He shall qualify for a beginning vocational certificate under the policies established by the State Department of Education.

Training for Day Trade Certificate. Present policy for certification of day trade shop teachers is to require 24 clock hours of teacher training prior to the issuance of

the first certificate. Progress in teacher training must then be continued for each one year renewal. This is generally considered to be 24 clock hours or two quarter credits each year. These classes must be of approved vocational courses or teacher training sessions.

Certified industrial arts teachers who can qualify with respect to practical experience should have their credits evaluated as it might be possible to attain vocational certification without the total 192 clock hours.

College Degrees. A day trade shop teacher not having a degree should be encouraged to work toward this goal in vocational education.

Related Trade Teachers. Certification of related subjects trade teachers requires twenty-four clock hours of teacher training prior to the issuance of the first certificate. Progress in teacher training must then be continued for each one year renewal. This is generally considered to be twenty-four clock hours or two quarter credits each year. These classes must be approved vocational courses or teacher training sessions. Practical experience must consist of four thousand hours of recent

employment in the related area. The teacher must also have two thousand hours beyond high school in the area of the technical occupation as added experience or education.

If the person is a certified high school teacher and has twenty-four clock hours of vocational teacher training, he need have a minimum of two thousand hours of employment in related area and four years beyond high school in the field of technical occupation.

IV. EXAMINATION OF UNPUBLISHED MATERIALS

Among the Plan B papers on file at the University of Minnesota, some were found which dealt with investigation of the industrial arts instructors and evening extension school instructors. No paper was found which dealt with the area day school trade and industrial instructors in the vein that the writer planned to use.

Mr. George DeVries made a study of the industrial arts teachers in the State of Minnesota in 1961-62.[4] Part

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[4] George E. DeVries, "A Survey of Training, Experience, Salaries, Degrees Held, Tenure, Department Staff Size, Subject Areas Taught, Extra-Curricular Assignments and Class Loads with Limited Comparison of Previous Data," (unpublished Plan B Paper, University of Minnesota, Minneapolis, Minnesota, 1962).

of this study was concerned with areas similar to those in the writer's survey. These areas related to teacher training, experience, salaries, tenure, extra curricular assignments and subject areas. The study was used as a form for checking ideas possessed by the writer relative to similar situations in the area day trade schools. DeVries obtained his information from records on file in the Minnesota Department of Education, whereas, this writer gathered his information by a survey questionnaire.

In 1955, Mr. Raymond M. Davoli conducted a survey, using a questionnaire, of the trade and industrial evening school instructors in the State of Minnesota.[5] Information taken from this paper in the areas of trade experience, teaching experience, age, and general education was helpful to the writer in the formulation of questions. Davoli's paper was concerned primarily with the evening school teachers' problem areas rather than a profile or characterization of the instructors.

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[5]Raymond M. Davoli, "The Trade and Industrial Evening Instructor in Minnesota," (Unpublished Plan B paper, University of Minnesota, Minneapolis, Minnesota, 1955).

V. PLAN OF THE STUDY

The writer decided that a questionnaire would be the best method for gathering the required information. Preliminary investigation helped to decide on a closed-end type of question. This would facilitate tabulation of the results and limit the number of responses to the variou questions. It was decided that content and assistance in formulating the questionnaire could be gained from several individuals, as follows:

1. Howard F. Nelson, Professor and Chairman, Department of Industrial Education, University of Minnesota, Adviser.

2. Harold T. Widdowson, Professor, University of Minnesota.

3. Fred L. Gordon, Supervisor of Trade and Industrial Education, State Department of Education in Minnesota.

4. Robert Van Tries, Assistant State Director, Minnesota Vocational Education.

Several informal meetings were held with the above mentioned persons, and also, with other individuals associated with the vocational education program. The "Minnesota State Plan for Vocational Education" was discussed at these

meetings.[6] Various parts of this plan were considered relative to work experience, type of certificate, salaries, ages of instructors, degree of education and additional trade experience gained since certification. All of those persons involved in the discussions were asked which particular elements of the study they were interested in. These elements and ideas were then formulated into questions.

It was decided to group the questions into several broad categories. The questions were roughly drafted and put into their corresponding groups. These divisions in the questionnaire were as follows:

1. Personal information
2. Professional teacher training and certification
3. Trade experience
4. Teaching experience
5. General information

These broad categories of questions were then discussed with Professor Howard F. Nelson and Harold T. Widdowson, University of Minnesota, and Mr. Robert P. Van Tries and

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[6] "Minnesota State Plan for Vocational Education," (Minnesota State Department of Education, Vocational Division, St. Paul, Minnesota, Revised 1962).

Mr. Fred L. Gordon, of the Minnesota State Department of Education. The writer, with the help of the above named persons, formulated questions pertinent to each of the divisions in the questionnaire. After a group of questions was formulated they were shown to the other individuals interested in the study. Each question was discussed relative to understanding and interpretation by the respondents. It was the desire of the writer to word the questions in such a manner that they would be similarly interpreted by each respondent. Development of the questionnaire required several revisions and rewording of questions to eliminate as much chance for misunderstanding as possible.

After the final form was decided on, it was duplicated and a trial questionnaire was sent to Mr. Dale Davidson, Coordinator at Minneapolis Vocational School. Mr. Davidson was requested to give the trial questionnaires to various instructors in the Minneapolis Vocational Day School. Davidson made no attempt to choose any certain instructors, but made a random distribution of the trial questionnaires. These instructors were requested to complete the questionnaires, note time required for answering, and indicate by notes on the questionnaire any questions that were not clearly

understood. All of the trial questionnaires were returned and the required revisions were made by the writer. The final form of the questionnaire was duplicated and made ready for distribution. A sample questionnaire has been included in Appendix A, page 81.

In order to increase the percentage of respondents to the questionnaire, it was decided to mail them to the directors of the various area vocational schools. Mr. Van Tries of the Minnesota State Department of Education was contacted, whereupon a cover letter was drafted by him to the various directors. Appendix B, page 85, includes a copy of Mr. Van Tries' letter to the area school directors. This letter contained a request to the directors of the area day trade schools that they assume responsibility for distribution of the questionnaire to their day school instructors, and upon completion, return them to the writer. The writer enclosed a self-addressed, stamped envelope for the return of the questionnaires to the writer. A letter drafted by the writer explaining the purpose of the questionnaire to the area school directors was also enclosed. A copy of this letter appears in Appendix C, page 86.

The writer wished to obtain a return of about ninety percent of the questionnaires. This percentage would provide a high degree of accuracy in profiling the teacher personnel involved in the study. The original respondents totaled less than the desired amount; therefore it was decided to send out follow-up questionnaires to the non-respondents. This was accomplished by cross-checking the names on the returned questionnaires against the list of vocational teachers on file with the State Department of Education, Vocational Division. These people were sent another questionnaire and a cover letter requesting them to complete the questionnaire and return it to the writer in the enclosed addressed and stamped envelope. A copy of this letter has been included in Appendix D, page

These responses plus the original one hundred ninety responses provided a total return of two hundred nine, or 89.7 percent.

VI. LIMITATIONS OF THE STUDY

This survey was conducted in all the public area day trade and technical vocational schools in the State of Minnesota. This does not include part-time trade extension or evening trade extension educational programs.

There were fifteen area schools in operation at the time of the original survey questionnaire mailing on May 5, 1964. These schools were located in the cities of Alexandria, Austin, Duluth, St. Cloud, St. Paul, Staples, Thief River Falls, Wadena, Willmar, and Winona. A map showing the locations of the area vocational schools in Minnesota appears in Figure 1, page 17. According to the Directory, 1963-64 of the Vocational Division, Minnesota Department of Education, there were listed a total of two hundred thirty-three instructors.[7] The term "instructor" does not include personnel such as principals, coordinators, and directors.

It was not the purpose of the study to provide definite standards for the training and certification of the trade and industrial instructor in Minnesota, nor to compare the instructor with minimum teacher training with the instructor having extensive training. Neither was it the intent of the study to make any comparison between the various schools. It was the writer's intent to gather information by means of the questionnaire to provide only

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[7]"Directory, 1963-64, Minnesota Trade and Industrial Teachers," (Minnesota Department of Education, Vocational Division, St. Paul, Minnesota).

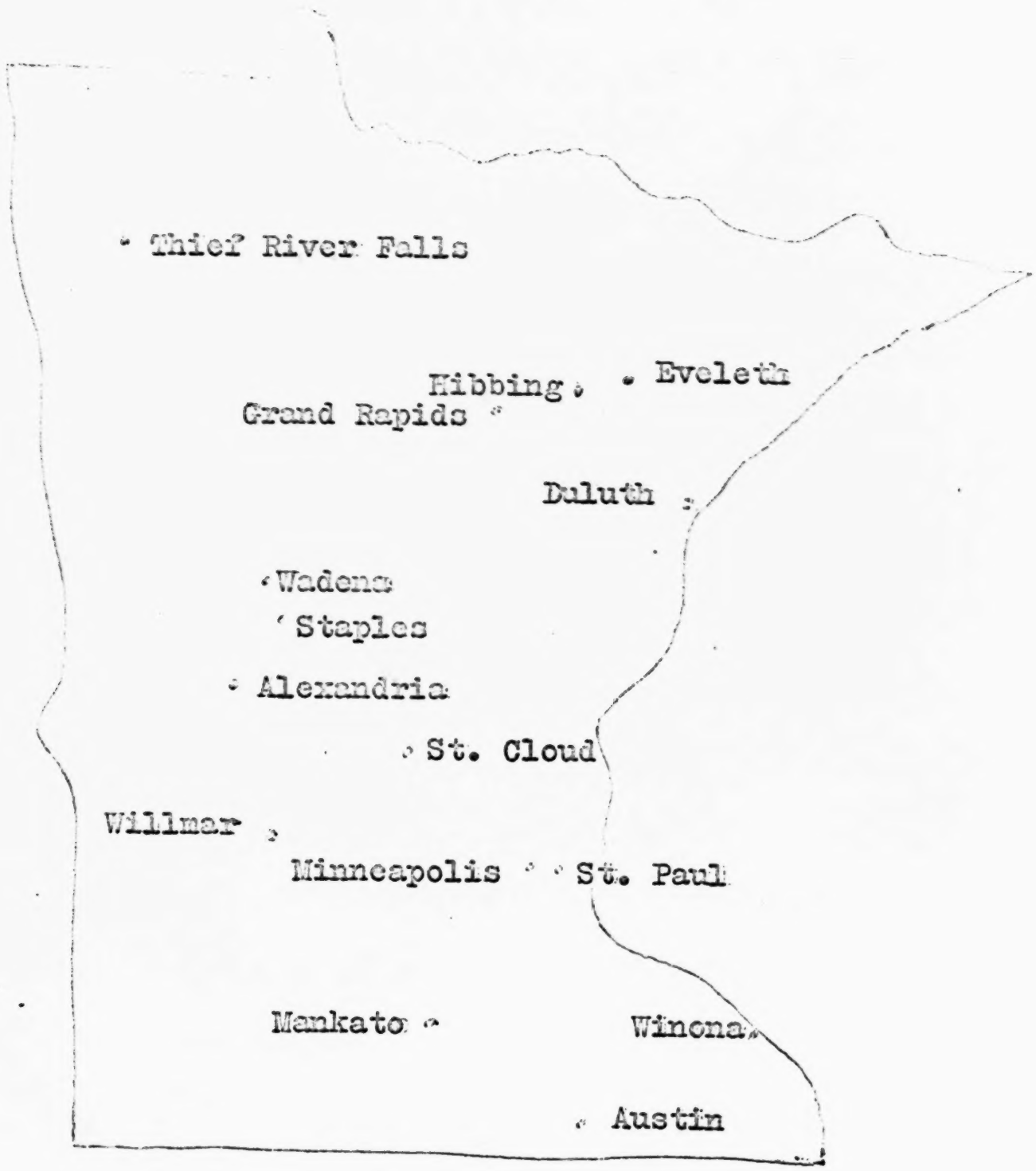

Figure 1. Location of Area Vocational Schools in Minnesota

a statistical profile of the day school trade and industrial teacher in Minnesota.

VII. SCOPE OF THE STUDY

To the fifteen area schools, two hundred thirty-three questionnaire were mailed. Of this total two hundred nine questionnaires were partially or fully completed and returned by the respondents. This gave a total average return on the survey of 89.7 percent. The high percentage of return indicated a great degree of cooperation and interest on the part of the area school directors and their instructors.

Analysis of the survey with reference to the questionnaires distributed and those returned may be made from Table 1, page 19. It was interesting to note that eight of the fifteen area schools studied had a 100 percent return of the questionnaires. The lowest percentage of return was 77.4 percent.

The total of two hundred nine returns shown in the table included a total of six returns, or 2.87 percent, which could not be tabulated. These people did not complete the questionnaires for the following reasons: one was

TABLE I

PERCENTAGE OF RETURNED QUESTIONNAIRES
FROM AREA VOCATIONAL SCHOOLS

Area Vocational School	Instructors Listed	Questionnaires Returned	Per Cent Return
Alexandria	11	9	81.8
Austin	16	15	93.8
Duluth	26	26	100.0
Eveleth	3	3	100.0
Grand Rapids	5	5	100.0
Hibbing	6	6	100.0
Mankato	11	9	81.8
Minneapolis	62	52	83.9
St. Cloud	9	9	100.0
St. Paul	31	24	77.4
Staples	12	12	100.0
Thief River Falls	15	14	93.3
Wadena	6	6	100.0
Willmar	13	12	92.3
Winona	7	7	100.0
TOTALS	233	209	
TOTAL PERCENTAGE RETURN			89.7

deceased; one had quit to teach industrial arts full time; two had left teaching; one only taught one specialized area of twenty-four hours per year; one taught one specialized area of forty hours per year. This would give a total of two hundred three returns that were tabulated or 87.1 per cent.

For purposes of analysis, a series of tabulation sheets were formulated. A copy of the tabulation sheet has been included in Appendix E, page 88. These sheets provided the basic statistics for the following discussion of the day school trade and industrial instructors in Minnesota.

In the subsequent chapters of this paper, the writer reviews the training, certification, trade and teaching experience, and personal and general information regarding the day school trade and industrial instructors in Minnesota, thereby providing a statistical profile of these persons.

CHAPTER II

SURVEY RESULTS AND ANNOTATIONS

I. GENERAL INFORMATION ON THE VOCATIONAL DAY SCHOOL INSTRUCTORS

Part of the questionnaire was designed to gather general information regarding the day school trade and industrial instructor. This information was concerned with: (1) sex and age of the respondents, (2) amount of general education, (3) salary, (4) how the past summer was spent (1963).

Table II, page 22, shows a summary of the ages of the respondents in intervals of five years. The table shows a range of twenty one to seventy years in the ages of the instructors. The median age of the instructors was forty-three years which would seem to indicate that the requirements in trade competence for certification tend to raise the age of the average trade and industrial instructor.

The writer would like to point out that the youngest instructor was twenty-three years old. There were only fifteen of the respondents in the age group of thirty years or under, representing 8.8 per cent of the total respondents.

TABLE II

AGES OF RESPONDENTS

Area Vocational School	21 to 25	26 to 30	31 to 35	36 to 40	41 to 45	46 to 50	51 to 55	56 to 60	61 to 65	66 to 70	No Answer
Alexandria		1		1	2		3				2
Austin			3	4		4	1	1	2		
Duluth			3	4	6	1	2	1	4	1	1
Eveleth					1		1	1			
Grand Rapids		1	1			2	1				
Hibbing		1		3	1	1					
Mankato					2		2	3	2		
Minneapolis		1	6	6	4	5	2	1		1	26
St. Cloud		1	1	3	1	1		1			1
St. Paul				3	6	6	5	2	1	1	
Staples		3		2	5	1					1
Thief River Falls		1	3	1	2	1	2		1		1
Wadena		2				3		1			
Willmar	1	2	3	2	2	1					1
Winona		1	2	1	1	1					
TOTALS	1	14	22	30	33	26	18	13	9	4	33
MEDIAN	43.3 years										

The tabulations in Table II indicated the instructor in a trade and industrial school was more likely to be an older, more mature type of person. Thirteen of the respondents were in the over sixty years of age group; this constituted 7.6 per cent of the total number of respondents. Of the total group of respondents, thirty-three or 16.2 per cent

failed to indicate their age on the questionnaire. It should be noted that twenty-six or 78.8 per cent of those that did not answer this question were from the largest area school.

The survey indicated that of the total of two hundred three respondents, one hundred fifty-seven were male and forty-six were female.

Salaries of the instructors are shown in Table III, page 24, for the various area schools. These were broken into groups having an interval of one thousand dollars. The question asked the respondent to indicate his annual contract salary for the year 1963-64. It also instructed the respondent to <u>not</u> include any other income than for day trade school. Of the two hundred three respondents, five neglected to indicate their salaries.

There were six responses in the under four thousand dollar group and two of these stated on the questionnaire that the contract was for part or one-half time teaching. Two persons indicated a salary of between four thousand, one dollars and five thousand dollars. This meant that of the one hundred ninety eight respondents only eight received salaries of less than five thousand dollars per school year;

TABLE III

ANNUAL SALARIES FOR RESPONDENTS FOR 1963-64

Area Vocational School	Less than $4000	$4001 to 5000	5001 to 6000	6001 to 7000	7001 to 8000	8001 to 9000	9001 to 10000
Alexandria		2	3	3	1		
Austin			1	7	7		
Duluth	1		10	4	8		
Eweleth				1	2		
Grand Rapids			2	2	1		
Hibbing	2 +		1		2		1
Mankato					2	5	2
Minneapolis			6	10	15	16	
St. Cloud			2	2	1	4	
St. Paul						8	16
Staples					7	4	1
Thief River Falls	2 ++		2	1	4	2	1
Wadena			4	2			
Willmar			4	6	1	1	
Winona	1 +			4	1		
TOTALS	6	2	35	42	52	40	21
MEDIAN	$7,269						

+ - part time ++ - half time

this was 4.4 per cent of the total. None of the instructors indicated that he had a contract for salary over ten thousand dollars for the school year.

The survey indicated the median salary of the one hundred ninety-eight respondents to be seven thousand, two hundred sixty-nine dollars. It was noteworthy that eighty-nine or 47.5 per cent received a salary of between six thousand, one dollars and eight thousand dollars per year.

Table IV, page 26, gives a summary picture of the amount of secondary education completed by the respondents.

The question of how much general education was necessary for a tradesman to be qualified as a day school instructor was a controversial one. The "Minnesota State Plan for Vocational Education"[1] stressed the need for additional education and trade training for the certified personnel.

Of the two hundred three respondents, four failed to answer the question relative to a high school education. One hundred eighty-eight or 92.6 per cent of those responding

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[1]"Minnesota State Plan for Vocational Education," (Minnesota State Department of Education, Vocational Division, St. Paul, Minnesota), Section V, 1.51.

TABLE IV

SURVEY RESULTS ON EXTENT OF SECONDARY EDUCATION

Area Vocational Schools	Completed High School	Did not Complete High School	Years Completed 8	9	10	11
Alexandria	9	0				
Austin	13	2			1	+
Duluth	22	1			1	
Eveleth	3	0				
Grand Rapids	5	0				
Hibbing	6	0				
Mankato	8	0				
Minneapolis	47	4		1		1++
St. Cloud	9	0				
St. Paul	22	2	1		1	
Staples	11	0				
Thief River Falls	11	1	1			
Wadena	5	1			1	
Willmar	11	0				
Winona	6	0				
TOTALS	188	11	2	1	4	1

\+ - One failed to indicate number of years of high school

++ - Two failed to indicate number of years of high school

had completed high school. Eleven indicated they had not completed a high school program, and of those, three did not show the number of years completed.

The "Minnesota State Plan for Vocational Education"[2] stressed the desire for the instructors to do advanced work in education and also to work toward a four year college degree. Prosser and Bass have stated that a tradesman-instructor should be educated in "the sense that the trade would use the term; not necessarily well educated from the academic standpoint."[3] Most writers on the subject of vocational teacher qualifications agree that the more general education possessed by an instructor who was also a master of the trade, the better qualified he would be as a teacher.

An attempt was made in the study to ascertain the number of instructors who held a college degree. No attempt was made to determine the field in which the degree was granted. A summary of the findings for the day school instructors appears in Table V, page 28.

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[2] Ibid., Section VII, 7.1.

[3] C. A. Prosser and R. Bass, Adult Education--The Evening Industrial School (New York: The Century Co., 1930), Pp. 147.

TABLE V

COLLEGE DEGREES HELD BY VOCATIONAL DAY SCHOOL INSTRUCTORS

Area Vocational School	No College Degree	B.S. or B.A.	M.A. or Equivalent
Alexandria	7	2	
Austin	13	2	
Duluth	13	9	1
Eveleth	2	1	
Grand Rapids	3	2	
Hibbing	2	3	1
Mankato	9	0	
Minneapolis	23	22	7
St. Cloud	2	5	1
St. Paul	18	2	3
Staples	6	2	
Thief River Falls	9	3	
Wadena	6	0	
Willmar	6	6	
Winona	4	1	1
TOTALS	123	60	14

Note: Of the 203 questionnaires returned 6 did not answer this question.

The survey disclosed that seventy-four or 37.6 per cent of the one hundred ninety-seven instructors who responded to the question had obtained four year college degrees or more. Minneapolis, the largest of the schools with fifty-two questionnaires returned, had twenty-nine or 55.8 per cent of the instructors possessing college degrees. The reader will

note that more than 50 per cent of the instructors at Winona, Willmar, St. Cloud and Hibbing have college degrees. It was of interest to observe that all of the above mentioned schools have relatively easy access to various state colleges and the University of Minnesota.

The survey also revealed that fourteen of the one hundred ninety-seven respondents held a Master's degree or the equivalent.

How teachers spend their summers was of interest to the writer and others concerned with vocational education. The general public seems to have the idea that teachers work only part of the year in their teaching positions and spend the summer in one long vacation. The writer set up the hypothesis that the average instructor would spend most of his non-teaching time in preparation for the next year or working in the trades to improve his instructional and trade competence. According to Keller, "The teacher of an occupation must know that trade and he must at all times keep up with new knowledge and new techniques."[4]

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[4]Franklin Keller, Principles of Vocational Education (Boston: Heath and Co., 1948), Pp. 330.

Mays also indicated in his book on vocational education the desirability of the vocational teacher to renew contact with actual working conditions and to renew his skills in the area in which he is teaching.[5]

Question number twenty-three of the survey was an attempt to find out how the average summer vacation was spent. Table VI, page 31, shows a summary of the findings. It was noted that five of the seven choices were concerned with improvement in teaching techniques (additional schooling), time spent in the school shop, or working in the trade in which they were certified. The total responses were more than the number of respondents because many of them indicated their summers were spent doing a combination of activities.

Tabulations showed that sixty-one or 30 per cent of the respondents worked in the trade in which they held a teaching certificate during the summer. Seventy-three or 36 per cent spent part or all of their summer teaching. It should be noted that only sixteen of the respondents used

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[5]Arthur Mays, Principles and Practices of Vocational Education (New York: McGraw-Hill, 1948), pp. 263.

TABLE VI

SUMMER SCHEDULE FOR 1963

Area Vocational School	Full Time School	Work in Trade of Certificate	Maintenance of Shop	Vacation and Travel	Other Summer Employment	Preparation of Class Material	Teaching	No Answer
Alexandria		4				1		+
Austin	1	3	1	5	2	2	7	
Duluth		12	1	3	3	4	3	
Eveleth		2		1				
Grand Rapids		1		1	1		1	1
Hibbing		3			1	1	3	
Mankato			4	3		4	6	
Minneapolis	5	10		13	3	4	22	2
St. Cloud	2	4		3	3	1		
St. Paul	2	10	5	4		3	4	
Staples		1	3			4	6	1
Thief River Falls	1	2		1		1	7	
Wadena	2	3		2		4	2	
Willmar	2	2	1	2	2	2	6	1
Winona	1		1		2	1	1	
TOTAL	16	61	17	40	20	33	73	5

+ - Two of the respondents indicated they were housewives.

the summer to gain additional schooling. This was only 8 per cent of the total number of respondents. Sixteen per cent spent some of their summer vacation time on preparation of class material.

II. TRADE EXPERIENCE OF VOCATIONAL DAY SCHOOL INSTRUCTORS

The questions in Group III of the questionnaire were related to trade experience of the various instructors. The "Minnesota State Plan for Vocational Education" sets forth the minimum standards which must be met for the certification of teachers. The requirements for trade shop instructors were: four years as a learner, and three years as a journeyman, or a total of seven years of practical experience. The requirements for related trade teachers to qualify for vocational certification specified four thousand hours of practical experience in the related area or two thousand hours of practical experience plus a high school teaching certificate and twenty-four hours of vocational teacher training. In special circumstances the requirements for

certification may be waived for a temporary permit but the practical experience requirements may not.[6]

Table VII, page 34, shows the summation of the type of training each teacher received as related to an apprenticeship program. The question was also asked whether an apprenticeship was served in a registered or non-registered program. The table showed ninety-seven or 47.8 per cent of the respondents took part in some type of an apprenticeship program, but only twenty-six of these ninety-seven were in a registered apprenticeship program. An almost equal number, ninety-six, did not complete an apprenticeship program of any type. The latter would indicate either a self-taught tradesman or someone learning the trade by working with others and picking up the skill as he progressed. Ten of the respondents failed to answer the question.

The number of years of trade experience possessed by the various teachers has been indicated in Table VIII. Only one of the respondents failed to answer this question. There

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[6]"Minnesota State Plan for Vocational Education," (Minnesota State Department of Education, Vocational Division, St. Paul, Minnesota), Section V, 2.42-2.43.

TABLE VII

PARTICIPATION IN APPRENTICESHIP PROGRAMS

Area Vocational Schools	Yes	Registered	Non-registered	No	No Answer
Alexandria	3		3	6	
Austin	9	1	8	6	
Duluth	11	7	4	11	1
Eveleth	1		1	2	
Grand Rapids	2	1		3	
Hibbing	3	1	2	3	
Mankato	5	2	3	3	
Minneapolis	18	3	14	28	6
St. Cloud	3	3		6	
St. Paul	17	3	14	7	
Staples	9		9	3	
Thief River Falls	6	2	4	6	
Wadena	2	1	1	4	
Willmar	4	2	2	6	2
Winona	4		3	2	
TOTALS	97	26	68	96	10

was a wide range of years represented in the returns. A total of fifty-three, or 26 per cent, indicated they had more than twenty years of trade experience. The other extreme were those who indicated less than five years. There were twenty-three in this group with less than the required minimum for vocational certification as a trade shop teacher. Table XXI, page 58, shows a total of eleven

TABLE VIII

YEARS OF TRADE EXPERIENCE

Area Vocational Schools	Years Experience 0 to 2	3 to 5	6 to 8	9 to 11	12 to 14	15 to 17	18 to 20	More than 20
Alexandria		1	2	1		1	1	3
Austin			1	4	2	1	2	5
Duluth	1	1	4	2	2	5	2	6
Eveleth		1			1			1
Grand Rapids			1	1		1		2
Hibbing	1	1		1		2		1
Mankato		1	2	1	1	1		3
Minneapolis	2	9	9	9	6	2	4	10
St. Cloud		2	2	1	1	1	1	1
St. Paul	2	1	2	4	4	1	2	8
Staples		2	2					8
Thief River Falls	1	1	3		1	1	2	3
Wadena		1	1	1			1	2
Willmar		5	1	2	2	2		
Winona		2	1	3				
TOTALS	8	27	32	30	20	18	15	53
MEDIAN	12.45 years							

Note: One respondent from Minneapolis did not answer the question.

instructors who teach related information only and therefor might not have practical trade experience in the field since this was not a requirement.

The returns also included people in the fields of commercial art, cosmetology, medical laboratory assistant, practical nursing and occupational therapy. It was possible that some of the instructors in these areas went directly into teaching in a vocational school after receiving a degree in higher education. The median number of years experience for all respondents was 12.45 years.

Table IX, page 37, shows the amount of experience gained since the respondents began teaching in the day trade program. This gave some indication of how well the instructors were keeping up with the current trade practices and new techniques being introduced into the trades.

Of the two hundred three respondents, on hundred twenty-three have gained two years or less of additional trade experience after starting to teach. This number, approximately sixty per cent, seemed quite high but there were several factors which limited the amount of time available for additional work in the trades. Many of the instructors were on a twelve month contract, others were encouraged to attend school during the summer, still others taught a summer course. Taking these factors into consideration, one can understand that time was a limiting factor in gaining additional trade experience.

TABLE IX

ADDITIONAL YEARS TRADE EXPERIENCE
AFTER BEGINNING TO TEACH

Area Vocational School	0	1	2	3	4	5	More Than 5	No Answer
Alexandria	3	6						
Austin	5	2	3	1			4	
Duluth	2	3	6	1	2		8	1
Eveleth	1	1					1	
Grand Rapids	2	2					1	
Hibbing	2	3		1				
Mankato	2						4	3
Minneapolis	7	14	5	4	4	1	9	8
St. Cloud		3			1		1	4
St. Paul	1	8	5	2	1	3	2	2
Staples	2	10						
Thief River Falls	3	6	1				1	1
Wadena	2	2					1	1
Willmar	2	4	1	1		1		3
Winona	1	3				1	1	
TOTALS	33	69	21	10	8	7	32	23

One of the ways in which a trade instructor could keep abreast of working conditions in the field would be to belong to various organizations in the trade area. This could be accomplished through labor organizations or employers' associations. The teacher could also become familiar with new trends in the area, such as materials, procedures,

and technical developments. Part of the questionnaire was an attempt to find out how many of the instructors belonged to these various organizations.

Table X, page 39, gives a summary of questions fifteen and sixteen on the survey questionnaire. Of the two hundred three tabulated responses eighty-four or 41.4 per cent indicated they were card holders or had membership in a labor organization. Only five of the respondents did not answer the question. The number of respondents who belonged to a contractors' or employers' association was much smaller. Twenty-two or 10.8 per cent were members of this type of organization. Seven failed to indicate an answer on the questionnaire.

III. VOCATIONAL CERTIFICATION AND TEACHER TRAINING

The four types of certification for trade and industrial instructors as authorized in the "Minnesota State Plan for Vocational Education" were listed as answers to question five on the questionnaire.[7] These were the one year renewal,

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[7]"Minnesota State Plan for Vocational Education," op. cit., Section V, 2.42-1 and 2.42-2.

TABLE X

MEMBERSHIP IN LABOR OR EMPLOYERS' ORGANIZATION

Area Vocational	Membership in Labor Organization			Membership in Contrators' or Employers' Organization		
	Yes	No	No Answer	Yes	No	No Answer
Alexandria	1	8			8	
Austin	4	11		3	12	
Duluth	11	12		2	21	
Eveleth		3			3	
Grand Rapids	1	4			5	
Hibbing	2	4			6	
Mankato	1	7	1		8	1
Minneapolis	32	17	3	6	43	3
St. Cloud	4	5		1	8	
St. Paul	17	6	1	2	20	2
Staples	5	7		3	8	1
Thief River Falls	1	11		1	11	
Wadena	1	5		1	5	
Willmar	2	10		2	10	
Winona	2	4		1	5	
TOTALS	84	114	5	22	174	7

first two year, three year and five year certificates. Two teachers indicated they held a one year temporary permit which could be issued in unusual situations in which a school had experienced an emergency. This temporary permit could not be reissued and expired on July first of the year in which it was issued. The first certificate issued was for two years, and the subsequent certificates were for one year

each until requirements for the five year certification were met. The three year certificate was one issued for evening trade extension teachers.

Table XI, page 41, provides a breakdown of the types of certificates held by the respondents. One hundred ten of the respondents, or 54.2 per cent, possessed a five year certificate. The number of holders of one year renewal and two year certificates were the same. Each had a total of thirty-eight or 18.7 per cent. This would correlate closely with question number three on the questionnaire. This question related to the number of years of teaching experience and showed that seventy-one of the respondents had three years or less of teaching experience at the time of the survey.

Only two of the respondents indicated that they held a one year provisional certificate. This wald be slightly less than one per cent of the respondents.

Eight of the respondents indicated they held a three year certificate. This certificate was issued for evening trade extension teachers. The requirements for this certificate are the same as for a two year certificate for a day trade shop teacher. It may be possible that a few instructors in the evening extension trade program are moving into

TABLE XI

VOCATIONAL CERTIFICATION

Area Vocation School	1 year Provisional	2 year Cert.	1 year Cert.	3 year Cert.	5 year Cert.	No Answer
Alexandria		5	2	1	1	
Austin		2	2		11	
Duluth		5	5	1	12	
Eveleth		1			2	
Grand Rapids	1	3				1
Hibbing		5			1	
Mankato					9	
Minneapolis	1	9	2	1	35	3+
St. Cloud			2	3	4	
St. Paul				1	22	+
Staples		4	5		3	
Thief River Falls			5		7	
Wadena		1	5			
Willmar		1	9		1	1
Winona		2	1	1	2	
TOTALS	2	38	38	8	110	5

+ - Life certificate - Two respondents indicated they held a life certificate as a day trade instructor but the "Minnesota State Plan for Vocational Education" does not mention this type of certification in their latest publication.

the day trade school program. These eight respondents would be approximately four per cent of the total respondents.

Five, or approximately two and one half per cent, of the respondents failed to answer this question.

Life certificate was written in on the questionnaire as an answer by two of the respondents. The writer did not include this answer in the choices of responses because the "Minnesota State Plan for Vocational Education" does not make a provision for this type of certificate.

Question number eight of the questionnaire asked if the respondent was certified in more than one area. The writer thought this might be possible because of close relationship between some of the trades. Table XII, page 43, gives a tabulation of this question. It shows one hundred sixty-one instructors, or 79.3 per cent, were holding one certificate. The balance of forty-two were certified in more than one area, and were asked to indicate their areas of certification. Twenty-eight of the forty two did so; these areas are listed following Table XII.

Those people who indicated they were certified in more than one area were asked to state their combination of trade areas. The combinations were wide and varied, but there seemed to be a close association between the areas. In only one instance was the same combination listed twice; this was in related science, mathmatics and drawing. The balance of the list were all singular responses. These teaching combinations are listed following Table XII.

TABLE XII

CERTIFICATION IN MORE THAN ONE AREA

Area Vocational School	Yes	No
Alexandria	1	8
Austin	1	14
Duluth	4	19
Eveleth	0	3
Grand Rapids	1	4
Hibbing	0	6
Mankato	0	9
Minneapolis	23	29
St. Cloud	1	8
St. Paul	5	19
Staples	2	11
Thief River Falls	3	8
Wadena	1	5
Willmar	0	12
Winona	0	6
TOTALS	42	161

1. Welding and farm mechanics
2. Electronics and auto mechanics
3. Related science, mathematics, drawing (two)
4. Mathematics, drawing and electricity
5. Wiring and basic electricity
6. Drafting and electronics
7. Radio, television, electronics
8. Radio, appliance repair and motors
9. Electricity and appliance repair
10. Drawing, machine shop, related subjects
11. English and science
12. Mathematics and science
13. Machine shop, tool and die, plastics mold making
14. Machine shop and related subjects

15. Auto mechanics and carpentry
16. Automotive, diesel, and heavy equipment
17. Carpentry and cabinet making
18. Cabinet making and millwork
19. Cabinet making and German
20. Engineering drafting and related mathematics
21. Barber science and related subjects
22. Art and business
23. Dress making, tailoring, power machine
24. Pattern drafting
25. Retailing and business
26. Business and distributive education
27. Industrial secretaries, related processes and materials

There were various types of training programs available for the trade teachers. These programs varied from the college type courses to the industrial workshops which were sponsored by various manufacturers. Table XIII gives a visual picture of the use of these teacher-training programs. The totals in the table did not correspond to the number of tabulated (203) returns. The respondents were requested to check the various types of training programs in which they had participated. Some of the instructors used only one of these training programs and others used all four of them.

The most used type of training program was the "on campus for college credit" program. One hundred forty-one, or 69.5 per cent, of the respondents used this type of training program. The least used program was the "off campus for college credit" program which 24.6 per cent of the respondents

TABLE XIII

TYPES OF TRAINING PROGRAMS

Area Vocational School	On Campus for College Credit	Off Campus for College Credit	Off Campus for Clock Hours	Industrial Workshops
Alexandria	3	3	4	1
Austin	10	8	10	11
Duluth	19	5	8	11
Eveleth	2	2	1	2
Grand Rapids	2	0	3	1
Hibbing	3	0	3	2
Mankato	1	3	6	6
Minneapolis	48	9	17	15
St. Cloud	6	3	6	5
St. Paul	19	6	9	7
Staples	4	1	8	8
Thief River Falls	6	1	10	8
Wadena	0	0	6	6
Willmar	7	8	6	2
Winona	3	1	3	5
TOTALS	141	50	100	90

Note: Three respondents failed to answer this question, one each from Austin, Staples and Winona.

used. Industrial workshops were used by 44.3 per cent of the teachers, and the "off campus for clock hours" programs were used by 49.2 per cent.

The "Minnesota State Plan for Vocational Education" requires the teachers to meet certain minimum standards for teacher certification as previously discussed in the paper. Issuance of the first certificate was contingent upon having twenty-four clock hours or two quarter credits of approved teacher training before beginning to teach. Progress toward full certification must have been continued for issuance of the one year renewal certificate. Question number ten on the survey questionnaire was an attempt to learn how much teacher training the various instructors had received prior to their first teaching assignment.

The tabulations in Table XIV, page 47, show 39.4 per cent of the present teachers as having no credits toward certification when beginning to teach in the day trade program. This indicated that these teachers started in the program with a temporary certificate. Sixty-four or 32.5 per cent had at least sixteen quarter credits when starting their first teaching assignment. Of the two hundred three tabulated returns, twenty-nine did not answer the question. Some of the instructors have been in the program for a long time and therefore probably did not remember just when they took their teacher preparation courses.

TABLE XIV

CREDITS TOWARD CERTIFICATION
BEFORE STARTING TO TEACH

AREA VOCATIONAL SCHOOL	0	2	4	6	8	10	12	14	16	24	Over 24	No Answer
Alexandria	2	1	2			2			1		1	
Austin	6	2		2						1	3	1
Duluth	4			6					1		9	3
Eveleth		1									2	
Grand Rapids	1										2	2
Hibbing	4										2	
Mankato	5				1		1				1	1
Minneapolis	22				1		1	1			20	7
St. Cloud	2		1				1			1	1	3
St. Paul	14	1				1					5	3
Staples	4									1	3	4
Thief River Falls	6		1							2	2	1
Wadena	4										1	1
Willmar	5	1									4	2
Winona	1					1					3	1
TOTALS	80	6	4	8	2	4	3	1	2	5	59	29

Note: One quarter credit equals twelve clock hours.

In conjunction with the question on number of credits for certification before teaching, an attempt was made to determine how many credits the instructor had acquired beyond the required sixteen quarter credits (192 clock hours). The State Department of Education, Vocational Division, encouraged the continuance of course work and working toward a four

year degree. Table XV, page 49, showed a tabulation of the replies regarding the number of credits beyond the required minimum. Two of the two hundred three respondents had no credits beyond the required minimum. Fifty-seven or 28 per cent had more than thirty credits beyond the required number of credits for certification. The number of respondents indicating from two to thirty credits totaled ninety-five or 46.8 per cent. The persons who failed to answer the question totaled forty-nine or 24.1 per cent of the respondents.

The tabulations in Table XV would indicate that the majority of the instructors in day trade and industrial schools have continued their education after receiving their vocational teaching certificates.

Question number eleven in the questionnaire was tabulated in Table XVI, page 50. Thirty-one instructors indicated they were currently enrolled in teacher training courses, and ninety instructors indicated they had taken a course, or course, within the past year. Combining the two gave us a total of one hundred twenty-one or 59.6 per cent of the teachers having taken courses very recently. The non-respondents on this question totaled eleven or 5.4 per cent.

TABLE XV

CREDITS EARNED BEYOND THE REQUIRED MINIMUM

Area Vocational	0	2-6	8-12	14-18	20-24	26-30	Over 30	No Answer
Alexandria		7	1		1			
Austin			3	1	2	2	4	3
Duluth		3	2	3		1	10	4
Eveleth		1					1	
Grand Rapids		3					1	1
Hibbing							3	3
Mankato			1		1	1	3	3
Minneapolis	1	5	9	8	1	1	16	11
St. Cloud				1	1		5	2
St. Paul		6	2	6		2	6	2
Staples	1		2				2	7
Thief River Falls		2		1	1	1	2	5
Wadena		2	1			1		2
Willmar		3			1		3	5
Winona		1	2	1			1	1
TOTALS	2	33	23	22	8	9	57	49

TABLE XVI

YEARS SINCE LAST ENROLLED FOR ADDITIONAL CREDITS

Area Vocational School	0	1	2	3	4	5	6	7	8	Ten or More	No Answer
Alexandria	1	8									
Austin	4	6	1	2	2						
Duluth	6	5	2	2	2		2			3	1
Eveleth		3									
Grand Rapids	3	1								1	
Hibbing	1	3								2	
Mankato		9									
Minneapolis	8	12	7	7	2	2	1	1	1	6	5
St. Cloud		4	2	2						1	
St. Paul	1	10	1	4	1		1			5	1
Staples		12									
Thief River Falls		7	2				1				2
Wadena	1	5									
Willmar	5	3	2								2
Winona	1	2	1	2							
TOTALS	31	90	18	19	7	2	5	1	1	18	11

The figures on Table XVI show that the majority of instructors are interested in their professional growth. The writer noted that one hundred fifty-eight or 77.8 per cent of the instructors had taken some training within the last three year period.

IV. MOBILITY AND TENURE OF INSTRUCTORS

The following portion of this paper deals with teaching experience, mobility of teachers, and the teaching situation. An attempt was made to determine: (1) how many schools the respondent had taught in, (2) how long he had been in his present teaching position, (3) total number of years of day trade teaching experience.

Table XVII, page 52, gives the tabulations for the number of different schools in which the respondents had taught. The writer found that one hundred twenty or 59.1 per cent of the respondents had taught in one school, forty-seven or 23.1 per cent had taught in two schools, and twenty-one or 10.6 per cent had taught in three schools. These figures indicated that the teachers have a tendency to remain in their first teaching assignment. The mobility of the instructors is relatively low. Out of the total of two hundred three tabulated responses one person from Minneapolis had taught in seven different schools; one respondent from St. Paul had taught in eight different schools. Three respondents failed to answer this question; this was 1.5 per cent of the tabulated responses.

TABLE XVII

NUMBER OF SCHOOLS TAUGHT IN

Area Vocational School	1	2	3	4	5	6	7	8	No Answer
Alexandria	7	1	1						
Austin	12	1	1		1				
Duluth	11	8	3	1					
Eveleth	3								
Grand Rapids	1	3			1				
Hibbing	4	1	1						
Mankato	6	3							
Minneapolis	27	11	7	4			1		2
St. Cloud	3	4	2						
St. Paul	14	3	3	2				1	1
Staples	10	1		1					
Thief River Falls	7	4	1						
Wadena	4	1	1						
Willmar	5	6	1						
Winona	6								
TOTALS	120	47	21	8	2	0	1	1	3

The total amount of teaching experience and the number of years the teacher had been in his present position were two areas of interest to the writer and persons in the Minnesota State Department of Education and the Department of Industrial Education, University of Minnesota.

Question number two, tabulated in Table XVIII, page 53, shows the number of years the instructors had spent in

TABLE XVIII

NUMBER OF YEARS IN PRESENT TEACHING POSITION

Area Vocational School	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25 or More	No Answer
Alexandria	1	6	1																1							
Austin	1	3	1			2	3	1	1	2		1														
Duluth	4	2	1		1	1	2		1		1	2			1		1	3	1		1				1	
Eveleth	1																		1						1	
Grand Rapids	4		1																							
Hibbing	4	1										1														
Mankato										1				1			2	1	2			1		1		
Minneapolis	9	2	7	2	2			4	2	4	4		3				2		1	1		1		1	6	1
St. Cloud	1		2	1	2				1								1			1						
St. Paul			1	3	1	3	5	1	3				1		1				1				2	1	1	
Staples	4	2	3	2														1								
Thief River Falls		1	2	3	1	2	1								2											
Wadena		3	3																							
Willmar	3	4	5																							
Winona		1		1	3	1																				
TOTALS	32	25	27	12	10	9	15	5	9	7	1	4	4	1	4	0	6	5	7	2	1	2	2	3	9	1

Median - 4.5 years

their present teaching position. The writer found that one hundred six of the respondents had been teaching for five years or less. This figure is 52.2 per cent of the tabulated responses. Ten of the respondents had been in their present position twenty to twenty-four years, and nine had been in their present position twenty-five years or more. The low median point of 4.5 year was probably influenced by the recent expansion of the trade and industrial program in existing schools, and also, the opening of new facilities in the past few years. Only one person of the two hundred three respondents failed to answer this question.

Question number three of the questionnaire requested the respondents to indicate the total number of year they had been teaching in the day trade program. Only three persons of the total returned questionnaires failed to answer the question. The writer found that one hundred ten of the respondents had been teaching for five years or less. The median point for length of time spent in teaching was 5.17 years. Twelve of the respondents had been in the day trade program from twenty to twenty-five years. Only four of the respondents had been teaching for twenty-five years or more. One respondent from St. Paul indicated by a note that he had

been teaching in the day trade program for thirty-seven years. In Table XIX, Total Number of Years Teaching, as in Table XVIII, Number of Years Teaching in Present Position, the median point of 5.17 years seems to be quite low. This low median point would be influenced again by the recent expansion of the trade and industrial program and the opening of new schools and facilities.

TABLE XIX

TOTAL NUMBER OF YEARS TEACHING

Area Vocational School	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	25 or more
Alexandria	1	5	2																1							
Austin	1	3	2			1	3			2		1	1							1						
Duluth	4	2	1		2	1	2		1	1		2			1		1	3	1					1		
Eveleth	3																									
Grand Rapids	3		1		1																					
Hibbing	4				1									1												
Mankato										1				1			2	1	2				1		1	
Minneapolis	9	1	3	6	2		1	3	5	6			3	1		1	1	1		1			1	1	1	1	3
St. Cloud			2	1	1		1				1						1	1								
St. Paul				3	1	2	4	2	4				1	1	1				1					2	1		1
Staples	4	2	3	2																						
Thief River Falls			2	3		4			1						1		1									
Wadena		1	3		2																					
Willmar	2	2	4			2	1					1														
Winona		1		2	2	1																				
TOTALS	37	17	23	17	12	11	12	5	11	10	1	4	5	4	3	1	6	6	5	2	0	2	4	3	1	4

Median - 5.17 years

Three respondents failed to answer the question.

V. VOCATIONAL PROGRAMS AND TEACHING COMBINATIONS

Question number seventeen on the survey questionnaire was an attempt to find out in which vocational program or types of programs the individual instructor was teaching. Basically, the vocational program concerns itself with the full time day trade school or the evening extension program. The lattter program for people learning a trade and conducted in the late afternoon and evening hours. Some of the vocational schools are operated in separate facilities while others use the industrial arts facilities in the public high schools.

A certified industrial arts instructor may qualify for a vocational certificate, but the holder of a vocational certificate cannot teach in the public school industrial arts program without a secondary school teaching certificate.

The writer thought it possible for a person to teach in almost any combination of situations. Therefore, question seventeen was stated in such a way as to give the respondent a possibility to indicate these combinations. The combinations are shown along with the tabulations in Table XX.

TABLE XX

TEACHING COMBINATIONS

Area Vocational School	Day Trade Only	Day Trade and Evening Extension	Day Trade & Jr. H. Arts	Day Trade & Sr. H. Ind. Arts	Other
Alexandria	5	3		1	
Austin	6	7			2
Duluth	9	9		5	+
Eveleth	1	2			
Grand Rapids	3	2			
Hibbing	4	2			
Mankato	2	5			
Minneapolis	28	12		4	5 ++
St. Cloud	2	6		1	
St. Paul	4	20			
Staples	10	2			
Thief River Falls	10	2			
Wadena	5	1			
Willmar	6	6			
Winona	1	3		1	1
TOTALS	96	82	0	14	8

\+ - One person taught at University of Minnesota, Duluth Branch, part time.

++ - One person taught in a day trade vocational school in the mornings and a post high school course in the late afternoon.

Note: Three individuals from Minneapolis failed to answer this question.

The tabulations in Table XX indicated ninety-six instructors were in the day trade program only. This would be 47.3 per cent of the respondents. Eighty-two or 40.4 per cent taught in the day trade program and also the evening extension vocational program. None of the respondents indicated they taught in the junior high school industrial arts and the day trade program, although fourteen individuals taught a combination of day trade and senior high school industrial arts. Eight respondents indicated they were in some other teaching combinations but did not indicate what these were.

Table XXI shows the tabulations for question number eighteen which was designed to determine the teaching combinations relative to shop work and the related classroom information. The "Minnesota Plan for Vocational Education" provides vocational certification for a person to teach related information only.[8] This type of certificate would not allow that individual to teach in the shop. He would be concerned primarily with instruction designed to increase

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[8]"Minnesota State Plan for Vocational Education," op. cit., Section V, 2.13-2B.

knowledge, understanding, and ability to solve technical and theoretical problems regarding a particular occupation.

TABLE XXI

SHOP AND RELATED INFORMATION TEACHING COMBINATIONS

Area Vocational School	Shop Only	Shop and Related	Related (Classroom) Only	Shop and part of Related
Alexandria		6	1	2
Austin		13		1
Duluth	3	15	1	4
Eveleth		3		
Grand Rapids		4		1
Hibbing	1	5		
Mankato		7		2
Minneapolis	5	35	4	6
St. Cloud		9		
St. Paul	1	14	3	6
Staples		8	1	2
Thief River Falls		9	1	2
Wadena		6		
Willmar		10		2
Winona		6		
TOTALS	10	150	11	28

Note: Four persons failed to answer this question, two from Minneapolis, one each from Austin and Staples.

The tabulations show that most of the vocational instructors taught both shop and the related information. One hundred fifty, 73.9 per cent, of the instructors taught this combination. Much of this related information was so closely interwoven with the actual shop work that it would have been very difficult to separate the two. Another indication of this tie-in would be the small number of instructors that teach only shop. Of the two hundred three tabulated responses only ten indicated they taught shop alone. Eleven of the respondents, 4.9 per cent, taught in the related, classroom only, situation. Twenty-eight, or 13.3 per cent, taught shop and only part of the related information.

Question number twenty was an attempt to find out how many hours per day the instructor spent with his students. Specifically, the question asked, "How many actual teaching hours per day do you have with the students?" The tabulations are shown in Table XXII. The greatest frequency was in the column for six hours per day. One hundred ten, 54.2 per cent, indicated that they spent this number of hours with the students. The frequencies for a five hour day and seven hour day with the students were almost equal. Thirty-two

respondents, 15.8 per cent, indicated a five hour teaching day; twenty-eight, 13.3 per cent, spent six hours per day with the students.

TABLE XXII

NUMBER OF ACTUAL TEACHING HOURS PER DAY

Area Vocational School	2	3	4	5	6	7	8	9	No Answer
Alexandria				3	6				
Austin				1	13				1
Duluth			1	6	15				1
Eveleth					3				
Grand Rapids	1		1		2				1
Hibbing			1	1	3				+
Mankato				1	8				
Minneapolis			1	17	29	2	1	2	
St. Cloug					9				
St. Paul						18	6		
Staples					1	7	4		
Thief River Falls			1		6		3		+
Wadena					4		2		
Willmar				2	8	1			1
Winona			1	1	3		1		
TOTALS	1	0	6	32	110	28	17	2	4

+ - One respondent for each school did not answer this question, instead noted that they were part time teachers.

One person indicated he spent one hour per day with the students, and six instructors spent four hours per day with the students. These seven respondents are probably on a part time basis. Referring back to Table III, page 24, regarding annual salaries, five instructors indicated a salary of five thousand dollars or less per year. Three of these stated on the questionnaire that they were part time instructors. In Table XX, page 57, of this paper, a number of the respondents indicated they taught part time in the vocational day school. Fourteen of the respondents indicated they taught in the day trade school and also senior high school industrial arts. Three others indicated they were teaching only part time in the day trade school.

Seventeen instructors spent eight hours per day with the students. It was possible that these people also taught in the evening extension program and figured these hours as part of the teaching day spent with the students. Four respondents failed to answer the question; two wrote a note on the questionnaire stating they were part time instructors.

Table XXIII shows the summations for question twenty-four on the questionnaires. This question was concerned with the length of the instructors' teaching contracts. The

choices for response were one month intervals from six through twelve months. None of the instructors polled indicated less than a nine month contract, therefore intervals for six, seven, and eight months were omitted from the table.

TABLE XXIII

LENGTH IN MONTHS OF TEACHING CONTRACT

Area Vocational School	9	10	11	12	No Answer
Alexandria	3	3		3	
Austin	11			3	1
Duluth	18			5	
Eveleth	3				
Grand Rapids			2	3	
Hibbing	3	1	1	1	
Mankato	7	2			
Minneapolis	19	29	1	2	1
St. Cloud	5	2		2	
St. Paul	2	22			
Staples				11	
Thief River Falls	3	1		8	1
Wadena	4	2			
Willmar	4	1	5		
Winona	4		1	2	1
TOTALS	86	63	10	40	4

Eighty-six or 42.4 per cent of the respondents were on a nine month contract; sixty-three or 31 per cent were on a ten month contract. A larger than expected number were on a twelve month contact. Forty of the respondents, 19.7 per cent, indicated the latter length contract. Referring to Table VI, Summer Schedules for 1963, on page 31, seventy-three of the respondents indicated that they were in a teaching position during the summer. This number of responses made the tabulations of forty instructors on a twelve month contract look more realistic. Ten respondents, 4.9 per cent, indicated they were on an eleven month contract.

It may be of interest to some to note that all of the instructors at the Staples school were on a twelve month contract. Grand Rapids instructors were on either an eleven or twelve month contract. The two largest schools, Minneapolis and St. Paul, had practically all instructors on nine or ten month contracts.

VI. PREPARATION TIME AND EXTRA ASSIGNMENTS

The quality of teaching in any situation would be influenced by factors which are beyond the control of the instructors. These could be assignments made by administrators

and directors of the particular school in which the teacher was assigned. One of these factors could be the availability of time during the school day for the preparation of class and shop materials. Another factor could be non-teaching duties such as, lunch room supervision, study hall and hall duty. These assignments take available preparation time away from the instructor. There were some preparations which could be done after school hours or at home, but various things must be done in the shop or class room.

Question nineteen asked if the instructor had a preparation period during the school day. One hundred twenty-nine, or 63.5 per cent, indicated they did not have a preparation period. Seventy-one, 35 per cent, do have a preparation period during the school day. Three people failed to answer the question.

Thirty-seven, 18.2 per cent, of the respondents had extra duties assigned such as lunch room supervision, hall duty or study hall. One hundred sixty-four, 80.3 per cent, do not have extra sssignments to interfere with their teaching responsibilities. Question twenty-one was not answered by two respondents.

CHAPTER III

SUMMARY AND CONCLUSIONS

I. SUMMARY

The writer felt that the questionnaire survey of area vocational trade and industrial instructors in Minnesota produced certain pertinent information of value to the interested parties. There were two hundred nine questionnaires returned to the writer from the total personnel in the area vocational day schools in Minnesota; two hundred three of these were tabulated. Six returns were not tabulated because the respondents had left the teaching profession or were specialists who taught a very short specialized subject. One hundred fifty-seven of the respondents were male, and forty-six were female. The median age of the respondents was 43.3 years.

The sections of the questionnaire concerned with the educational background of the instructors revealed eleven did not complete high school. Sixty of the respondents had a bachelor's degree and fourteen were holders of a master's degree or the equivalent. The survey showed the majority of the teachers continued their education after certification,

one hundred fifty-eight having taken additional courses in the past three years. Seventy-five per cent of the respondents have had additional teacher training courses and have had more than the necessary credits for certification.

Questions on the use of various teacher training programs available revealed that the "one campus courses for college credit" were the most used. One hundred forty-one instructors had used this type of program. Ninety respondents participated in industrial workshops. About 25 per cent or fifty respondents indicated they had taken "off campus courses for college credit."

The questionnaire tabulations indicated very few of the instructors had participated in a registered apprenticeship training program. Ninety-seven respondents had been in some type of apprenticeship program, but only twenty-six of these received their trade training in a registered apprenticeship program. Ninety-six respondents learned their trade without benefit of any apprenticeship training.

Eighty-four of the respondents disclosed they were members of a labor organization, and twenty-two were members of an employers' or contractors' association.

The median length of time spent in the trade before starting to teach in the day trade program was 12.45 years. Eight respondents had less than two years of trade experience, and another twenty-seven indicated they had from three to five years of experience. Thirty-two respondents had from six to eight years of work experience before starting to teach.

The amount of time spent working in the certified trade after beginning to teach was quite low. Thirty-three respondents had gained no additional experience, sixty-nine had gained one additional year, and twenty-one had acquired two more years of work experience. These figures represent approximately sixty per cent of the tabulated questionnaire.

Tabulations of the types of vocational certificates held by the respondents showed one hundred ten, or 54.2 per cent, having the five year certificate. Seventy-six held either a two year certificate or a one year renewal certificate. The latter certificates are issued until the teacher has completed the requirements for a five year certificate.

It was found in the return of the questionnaires that one hundred sixty-one instructors were certified in one area of teaching. The remaining instructors, forty-two, were

certified in more than one area. The responses indicated that where an instructor held a teaching certificate in more than one area, these were generally in very closely related trades.

The results of the questionnaire indicated the following factors regarding the surveyed instructors, ninety-six taught in the day trade program only, and eighty-two taught in the day trade and also the evening extension programs. A person holding a vocational certificate for the day trade school may use that certificate for teaching in the evening extension program. The majority, one hundred fifty respondents, taught both the shop phase of instruction and also the related information. Eleven instructors taught related subjects only and spent no time teaching in the shop. Fourteen instructors taught in the vocational program and also in a senior high school industrial arts program.

Mobility of the instructors was quite low; fifty-nine per cent taught in only one school, twenty-three per cent taught in two schools, and the balance of eighteen per cent taught in more than two schools. The median length of time teaching in their present school was 4.5 years, while the median for total years of teaching experience was 5.2

years. These figures would seem to indicate that most instructors who change teaching locations make this change during the first few years after beginning to teach.

The survey revealed that the majority of instructors spent a total of six hours per day with the students. Only 18.2 per cent of the instructors were given extra assignments such as hall duty, lunchroom or study hall supervision.

Of the group surveyed, 63.5 per cent indicated they did not have a special, free preparation period during the school day. The writer would assume these instructors must make their shop and class preparations on their own time.

The median salary of the respondents was $7,269 per school year. The length of the contract varied from nine to twelve months. Eighty-six instructors had a nine month contract, sixty-three had a ten month contract, and ten had an eleven month contract. Forty instructors were on a twelve month contract.

The survey indicated the instructors spent the summer months in a variety of pursuits. Sixty-one persons worked in the trade in which they were certified. Seventy-three spent the summer teaching, and thirty-three used the summer months for preparation of class material. Vacation and

travel was enjoyed by forty of the respondents. Although the vocational instructor was encouraged to improve his professional growth by additional schooling and to work toward a college degree, only sixteen of the respondents attended school during the summer of 1963.

A relatively small proportion of the instructors learned their trade in a registered apprenticeship program; the majority of them learned their trade through work experience.

Based on the tabulated survey the following thumb nail sketch of an average day trade and industrial instructor in the Minnesota area vocational schools was formulated. The typical instructor was forty-three years of age, had been in his present teaching position for four and one-half years, and had an annual contract of $7,269. He taught six hours per day for an average of ten months per year.

The average instructor had twelve and one-half years of trade experience before starting to teach. He had a minimum of a high school diploma and held a five year vocational teaching certificate. The typical instructor received his teacher training by taking courses on campus for college credits and was continuing his education for professional

advancement. The average instructor did not belong to a labor organization.

II. CONCLUSIONS

From a study of the information found in the survey, the writer drew certain conclusions which are discussed in the following paragraphs.

Although the Minnesota State Department of Education, Vocational Division, has stressed the importance of trade competency before certification, many of the instructors certified do not seem to meet this requirement. Very few of the instructors have participated in a registered apprenticeship program which would give them a systematic learning experience. The Minnesota State Department of Education requires a total of seven years trade experience. Approximately one-fourth of the instructors had less than this amount.

Another area of certification that appeared weak concerned the requirement that the instructor have a minimum of twenty-four clock hours (2 credits) of teacher training instruction before issuance of the first certificate. Almost forty per cent of the respondents indicated they had no

teacher training before beginning in the vocational trade program. The other extreme was the approximately thirty per cent which had all their credits toward certification before starting to teach. There seemed to be some confusion on the part of the respondents with regard to certification credits. The writer anticipated this problem; therefore a note was made on each pertinent question in the questionnaire that twelve clock hours was the equivalent of one quarter credit. Even though this was done, twenty-nine respondents failed to answer question number nine, and forty-nine did not answer question number ten. Both of these questions pertained to credits for certification.

The surveyed instructors indicated they had participated in most of the various teacher training programs available. The least used was the "off campus for college credit" program. This was used by approximately twenty-five per cent of those surveyed.

The general education achievement of the respondents was higher than the writer had anticipated. Almost all of the respondents had a minimum of a high school education. A four year college degree or more was held by 37 per cent of the respondents. This may have been the result of the

general higher educational achievement level of people, and also, the desire of the individual instructors to raise their educational level. This could be partially substantiated by the fact that over 80 per cent of the respondents had taken additional schooling in the past five years.

The above educational achievement would be an indication of the individuals desire to improve himself. This would seem to be a healthy attitude toward the upgrading of the program.

Opportunity for gaining additional trade competence by working in the trade seemed to be quite limited. Approximately 60 per cent of the teachers gained two years or less of trade experience after beginning to teach. The amount of time available to gain more experience was limited by several factors, such as; attending summer school, teaching in a summer program, the need to supplement regular salary by other work, and part time work in the certified trade was not available.

The majority of the instructors taught both shop and related information. The writer would assume this to be a logical method. The instructor could correlate the students' work in the shop to their work in the classroom, and thus correct problem areas very quickly.

The writer felt that some parts of the questionnaire did not give a true picture of the surveyed instructors. A portion of this was possibly due to the fact that some of the instructors were not totally familiar with terms used by the writer and also generally used by the personnel in the Vocational Division of the Minnesota State Department of Education.

There seemed to be a large amount of confusion on the part of the respondents with regard to certification. The State requirements are given in terms of clock hours of instruction, but many of the teacher training courses are listed as quarter credits. Unless the instructor was familiar with the relationship between clock hours and quarter credits it would be difficult to convert one to the other.

The validity of the responses to the question regarding the number of schools the respondent had taught in could also be questioned. This would be especially true in the responses from the metropolitan area schools. In this case the respondent could have served in several schools but still remained in the same district.

In a follow-up study any questions regarding yearly contracts should be correlated to the length of the contract. The salaries of the various instructors varied greatly. Some of this variance could be caused by the length of the teaching contracts which were from nine to twelve months. Another factor that would influence the salary would be the number of hours spent per day with the students. The tabulations in this study show the time as varying from four to nine hours per day. Another study of this type should be designed to give a relationship between these three factors: (1) hours per day with the students, (2) number of months of contract, (3) amount of contract.

The master list of instructors from which the writer worked was furnished by the Minnesota Department of Education, Vocational Division. This list included names of all certified vocational instructors in the area day trade schools. The list did not differenciate part time and full time teachers. Consequently, when the writer mailed out questionnaires they went to all instructors. Some of the questionnaires which were returned stated the respondent was a part time

instructor, and therefore did not answer the questionnaire. There was no way for the writer to know how many of the non-respondents were part time instructors.

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A P P E N D I C E S

APPENDIX A

SURVEY QUESTIONNAIRE PUBLIC VOCATIONAL T & I AND TECHNICAL DAY SCHOOL INSTRUCTORS IN MINNESOTA

SURVEY QUESTIONNAIRE
PUBLIC VOCATIONAL T & I AND TECHNICAL
DAY SCHOOL INSTRUCTORS IN MINNESOTA

NAME_____ SEX___ AGE_____

SCHOOL_____

GENERAL DIRECTIONS: Please check or circle the appropriate answer as indicated. Please answer each question as accurately as possible.

GROUP I Personal Information

1. In how many different schools have you held teaching positions?
   Circle one: 1 2 3 4 5 6 7 8 9 10

2. How many years have you been in your present teaching position?
   Circle one: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
   16 17 18 19 20 21 22 23 24 25 or more

3. How many years of day trade school teaching experience do you have: (Include 1963-64) _____

4. What is your annual contract salary for the year 1963-64?
   (This does not include any income other than day trade school.)
   Check one:
   ( ) less than $4,000
   ( ) $4,001-$5,000
   ( ) $5,001-$6,000
   ( ) $6,001-$7,000
   ( ) $7,001-$8,000
   ( ) $8,001-$9,000
   ( ) $9,001-$10,000
   ( ) over $10,000

GROUP II Professional Teacher Training and Certification

5. Under which vocational certification are you now teaching?
   Check one:
   ( ) First 2 years certificate
   ( ) 1 year renewal certificate
   ( ) 3 year certificate
   ( ) 5 year certificate

6. Do you have a college degree?
   Check one: ( ) no ( ) B. S. or B. A. ( ) M. A. or equivalent

7. How did you obtain your credits or clock hours for certification?
   Check one or more:
   ( ) On campus course for college credits
   ( ) Off campus courses for college credits
   ( ) Off campus courses for clock hours
   ( ) Industrial work shops (Clinics or institutes)

8. Are you certified for teaching more than one area in a day trade school?
   Check one: ( ) yes ( ) no If yes, indicate which areas:

_____

9. How many credits or equivalent do you have beyond the required minimum? (12 clock hours = 1 quarter credit)
Check one: ( ) 2-6 ( ) 14-18 ( ) 26-30
( ) 8-12 ( ) 20-24 ( ) More than 30 credits

10. How many college credits did you have toward certification when you strated teaching in the day trade program?
(12 clock hours = 1 quarter credit)
Circle one: 0 2 4 6 8 10 12 14 16 18 20 24
Over 24 credits

11. How long has it been since you have taken any additional teacher training courses for credit?
Circle one: 1 2 3 4 5 6 7 8 9 10 or more years

GROUP III Trade Experience

12. Did you complete an apprenticeship program?
Check one: ( ) yes ( ) no ( ) registered ( ) non-registered

13. How many years of trade experience have you had in the area in which you teach?
Circle nearest number of years: 1 2 3 4 5 6 7 8 9 10
11 12 13 14 15 16 17 18 19 20 more than 20 years

14. How much additional trade experience have you had in your area since you started teaching?
Circle nearest number of years: 1 2 3 4 5 More than 5 years

15. Do you hold a card (membership) in a labor organization?
Check one: ( ) yes ( ) no

16. Do you hold membership in a contractors or employers association?
Check one: ( ) yes ( ) no

GROUP IV Teaching Experience

17. What is your teaching combination?
Check one: ( ) Day trade only
( ) Day trade and evening extension classes
( ) Day trade and Junior High Industrial Arts
( ) Day trade and Senior High Industrial Arts
( ) Other

18. Indicate your teaching combination
Check one: ( ) Shop only (no classroom)
( ) Shop and related information
( ) Related information (classroom only)
( ) Shop and part of related information

19. Do you have a preparation period during the regular school day?
Check one: ( ) yes ( ) no

20. How many actual teaching hours do you have per day with the students?
Circle one: 2 3 4 5 6 7 8

84

21. Do you have any non-teaching duties assigned, such as lunch room, study hall, hall duty?
Check one: ( ) yes ( ) no

GROUP V General Information

22. Are you a high school graduate?
Check one: ( ) yes ( ) no
If no, circle grade completed: below 8 8 9 10 11 12

23. What was your summer schedule for the year 1963?
Check one:
( ) Full time school to get additional teacher training
( ) Work in trade in which certified
( ) Maintenance in shop
( ) Vacation, travel, etc.
( ) Other summer employment
( ) Preparation of class materials, course construction, etc.
( ) Teaching

24. How many months per year does your teaching contract cover?
Circle one: 6 7 8 9 10 11 12

Thank you for completing this questionnaire.
Please return to your school director.

APPENDIX B

May 5, 1965

Mr. Vernon R. Maack, Director
Vocational Education
Area Vocational-Technical School
Alexandria, Minnesota 56308

Dear Mr. Maack:

Mr. Howard Ernst is engaged in making a survey of the trade and industrial and technical day school instructors in the public vocational schools of the State of Minnesota. We are interested because it will give us a profile of the instructors as related to their training and certification, trade experience, and teaching experience.

Mr. Ernst will very shortly write to you and enclose sufficient forms for your day school trade and industrial and technical instructors.

Cordially,

Robert P. Van Tries
Assistant State Director
Vocational Education

RPVT/cak

APPENDIX C

10360 Wentworth Avenue South
Bloomington 20, Minnesota
May 5, 1964

Dear _____:

A statewide study is being made of the Minnesota T & I Day School instructors. It is hoped this study will provide the writer and other interested parties information that will give a clearer picture of the T & I teacher and his position in the vocational education program.

In order to accomplish this, I am asking for your help in the distribution and collection of the enclosed survey questionnaires. It would be greatly appreciated if each one of your day school instructors would complete one of the questionnaires. To expedite return of the questionnaires an addressed envelope is enclosed.

After the information has been tabulated I would be willing to send you a copy of the survey results, if you so desire.

Your immediate follow-through on this request would be appreciated in order that the study be completed as soon as possible, thereby giving us a current tabulation and summary.

Thanking you, I remain,

Cordially,

Howard E. Ernst

Howard E. Ernst

Number of T & I teachers employed_____

Number of questionnaires handed out_____

Number returned completed_____

APPENDIX D

10360 Wentworth Avenue South
Bloomington 20, Minnesota
September 28, 1964

Dear _____:

Last May a packet of survey questionnaires concerning day school trade and industrial instructors in Minnesota was sent to your school director with a request that he distribute the questionnaires, and upon completion, return them to the writer.

The percentage of questionnaires returned was good. However, the writer would like to increase the percentage of returns in order that the study be as accurate and complete as possible.

According to the writer's records you did not complete and return one of the original questionnaires. It would be greatly appreciated if you would take the few minutes required and complete the enclosed questionnaire, then return it in the envelope provided.

Thank you for your cooperation and prompt response.

Cordially yours,

Howard E. Ernst

Howard E. Ernst

APPENDIX E

Alexandria

Austin

Duluth

Eveleth

Grand Rapids

Hibbing

Mankato

Minneapolis

St. Cloud

St. Paul

Staples

Thief River
Falls

Wadena

Willmar

Winona

1-4-9-11-29-22-23-24

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL EDUCATION

(To be filled out, preferably by person making study, at time study is completed and checked by adviser; otherwise by adviser.)

Author ERNST, HOWARD, EMIL
(Last name) (First name) (Middle name)

Title PROFILES OF MINNESOTA DAY SCHOOL TRADE AND INDUSTRIAL TEACHERS IN THE AREA VOCATIONAL SCHOOLS
(Give exact title from title page -- also subtitle)

Degree granted M.A., Date 6-12-65, No. pages in report 88

Granted by University of Minnesota
(Name of institution)

Where available* Department of Industrial Education
(Source and address)

Purpose of study:

The purpose of the study was to compile statistical information about the trade and industrial instructors in the Minnesota Area Vocational Schools

Source of data and method of study:

Survey questionnaires were completed by the individual instructors of the Minnesota Area Vocational Schools. This information was tabulated and summarized.

Findings and conclusions:

At the time of the survey, May, 1964, the typical instructor was forty-three years of age and was in his present teaching position for four and one-half years. He taught six hours per day for ten months a year and had an annual income of $7,269. He did not participate in a registered apprenticeship program but had twelve and one-half years of trade experience. The typical respondent had a minimum of twelve years of formal education and held a five year vocational teaching certificate. He received his teacher training by taking on-campus courses for college credit and was continuing his education for professional advancement.

* Check here ( ) if available on microfilm.
(Use additional page if necessary and staple to this one; do not write on back of sheet.)

VT 004 781
Vocational Training Program for Childcare Aides, Report of Pilot Study.

Ferndale High School, Mich. Dept. of Home Economics
MF AVAILABLE IN VT-ERIC SET.
Pub Date - Jun67 131p.

*CHILD CARE WORKERS; *OCCUPATIONAL HOME ECONOMICS; PILOT PROJECTS; *PROGRAM DESCRIPTIONS; COOPERATIVE EDUCATION; HIGH SCHOOLS; LABORATORY TRAINING
FERNDALE HIGH SCHOOL; MICHIGAN

This document describes a 1-year pilot project for training high school girls for the occupation of child care aide. Of the 19 students enrolled in the program all but four had a 3-hour block. All students met for one class period 5 mornings a week for basic knowledge in child growth and development. Then, half remained in the child care laboratory school for two additional periods and the others reported to training stations, with attendance in laboratory or training alternated daily. Eight girls worked exclusively at their training stations, six of these worked in a hospital. Other training stations were day care centers, nursery groups, a Child Development Center (known elsewhere as "Headstart,") and health centers. The program and time schedule for the high school laboratory nursery as well as a sketch of the home economics facility are included in the document. The director reported that all of the trainees were employed upon completion of the course. Supplementary materials include samples of forms, descriptive materials (e.g. jobs, assignments, bibliographies), and student and administrative evaluation of the project. (FP)

VT004781

EDO 31587

VOCATIONAL TRAINING PROGRAM FOR CHILDCARE AIDES

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

Report of Pilot Study
Ferndale High School
Home Economics Department
881 Pinecrest Drive
Ferndale, Michigan, 48220
June 1967

VT004781

Corrections in Report

Section I

Page 13 Mr. Earl Halves, Consultant (Business Education)
State Board of Education (May 17)

Dale Flynn, Special Education Office (Ferndale School District)

Page 31 [1]Appendix IV, page xxxiv, xxxix, Student VIII and X

Page 35 [1]Appendix I, page xv, Coordinators Pitfalls

Appendix I

Page I-i Letter to Board of Education

Page I-viii Unit VI The Developing Child

A- Physical, Emotional, Intellectual and Social Growth

1. Infancy thru toddler
2. Pre-Schoolers
3. Six thru twelve

Appendix IV

Page IV-xxxxiv Evaluation of program by parent of the high school program.

Note: Be certain to read final evalution by the high school students, particulary No.II in appendix, pages IV-xxx and xxxi.

W O R D S

...of Wisdom

The Honorable Lieutenant Governor of Michigan
William G. Milliken

"To make the most of a man
Broaden his horizons
Strengthen his spiritual fibers
and help develop his understanding
of self and others"

"National average shows that 35% of our high school graduates go on to College, 65% do not. These 65% need vocational training. When job is well done, it benefits students, employers and communities. Skills are essential BUT other qualities are ever more important: 'ability to get along well with one's fellow workers' 'the most precious thing in life--a being's personality' "

...that Challenge

Doctor Gordon Sabine, Michigan State University

Exerpts from a speech given by Dr. Sabine "...in summarizing feelings toward school by surveys of high school students, it was found (not surprisingly) that they wanted to be seen, noticed, heard, needed, loved, to be wanted, to like school.
These students claimed that:

1. most teachers lack time for slower kids
2. most teachers are crabby, better to smile
3. many give little encouragement
4. little interest in their students
5. begrudge any extra time they do give students.

and indicated that 'younger teachers' seem to understand kids better, seem to know 'we're' here to learn."

...to Reflect Upon

Doctor Kenneth Hoyt
Professor of Education
University of Iowa

"Vocational Guidance means helping people choose wisely from among alternatives. It gets the students involved in thinking and choosing. Counselors do not decide which is best, but they help students to understand completely and fully what alternatives they have and then help them choose for themselves. Most kids choosing vocational education are more apt to enjoy success than if on an Academic program.

We should accept their lower scholastic ability (if this is the case) without apology! Recognize differences between individuals and realize that some kids are better potential than their teachers!

Vocational education is ONE kind of opportunity for students, and the counselor helps them to see the alternatives of others. The process of making a choice is as important as the choice itself in the maturation of the student."

...of Happiness

Mrs. Theda Connell
Home Economics Vocational Coordinator
Ferndale High School
Ferndale, Michigan

"When one reads the words of Lieutenant Governor Milliken above, Drs.' Sabine and Hoyt, and realizes these challenges have all been met in a single class in a single year its been worth all the blood, sweat, and tears. The task was not simple. If I had realized in the beginning all it would entail, without the knowledge of reward and inner satisfaction it contained, I might have turned it down! How much I would have missed!"

The report is lengthy and actually designed for two audiences. Neither may read the report in it's entirety, but the facts had to be recorded for all those comtemplating such a program. To see the work involved without being able to read employer and student comments, and the reward they bring might discourage some educators from attempting the task, It is an area of occupational training that is needed and the opportunities are limitless.

F O R E W O R D

In November 1965, at the Annual State Meeting of the American Home Economics Association, attention was called to the Vocational Act of 1963 and it's implications for Home Economics Educators.

Education for employment at the high school level was very much needed not only by the students, but by the community. "...the many social, economic and technical changes that pattern our world give convincing evidence that specific preparation for work has become an increasing prerequisite for securing employment in semi-skilled, skilled or technical occupations, as well as in the professions..."

As your author listened to the various speakers on the wage earning aspects of Home Economics, an idea began to form. The Home Economics Department within her own high school provided an excellent facility, and opportunity for developing such a class. Also her background qualified her for the position of teaching such a class.

With the stimulus from the conference, and the enthusiastic backing of the Principal and Vocational Coordinator (later named Director of Vocational Education), plus the challenge of a new and exciting task--ideas began to germinate.

The following June (1966), recommendation for the adoption of a Vocational Childcare Aide Training Program was presented to the Ferndale Board of Education. Readers should be aware of some of the obstacles that had to be faced, so as not to be discouraged in the light of similar obstacles, in their respective situations.

In 1958, when the new high school plans were on the "drawing board", a very well planned and complete Child Study Center was incorporated as part of the Home Economics Department. The plans were designed by Mrs. Minnie Berson, at that time an Early Education teacher in the Ferndale School System, today with the Department of Education in Washington, D. C.

The high school was completed, but the facility not utilized as intended, as many considered it a "frill" and there was a movement in the community at that time toward a more conservative or basic curriculum.

Adding a third staff member to the Home Economics Department in 1965, with considerable background in nursery school procedures and child development, made the feasibility of using the "Center" possible. It was felt however, that the Board of Education would accept the plan only if it involved vocational training.

The State Meeting of the AHEA in November 1965 indicated the manner in which it might be accomplished. We had the vocational aspect, the physical facility and staff member to handle the program, plus a program that we felt the "Board" would be interested in.

Plans were drawn for the program by the Home Economics staff person to be in charge of said program, using materials from the University of Kentucky, and the Manpower Training and Development Office. The background of experience the staff member had gained in previous associations with nursery schools and a summer workshop at Wayne State University on "Teaching Home Economics for Wage Earning" seemed to provide the necessary background to launch the program.

A small scale survey by this staff member revealed a need for a program such as anticipated. It was approved by the Ferndale Board of Education in June 1966, pending approval of application for federal funds as a "pilot program", as we were to be the first Home Economics Department in the Stateof Michigan to have such a program. It was approved officially a few months later, and inaugurated in September 1966.

The resultant program has grown to momentous and unbelievable proportions today, June 1967. This had been an area heretofore untapped. No one foresaw it's full potentiality when the program was first suggested and planned. It serves not only a need of the employer, but a need for vocational training for the high school student unable to attend College, who enjoys working with people, not machines or merchandise.

Surveying the employment possibilities and lack of training for people in the Detroit Metropolitan Area, we soon realized it's possibilities. We were not however, prepared for the employers' genuine interest and eagerness to have such a program. It's reception was overwhelming and we were unable to fill the demand created, as employers learned of our program.

Indeed, the only persons seeming to question the advisability of such a program were (not surprisingly) the University Educators, who the author feels have misinterpreted what we are attempting to do. We are not training Nursery School Assistants (though many of the trainees could function well in this capacity) but Childcare Aides[1]. There is a good deal of difference between. An aide enables the employer to hire additional staff to give a better child/staff ratio and is not expected to assume the role of an assistant. She aides the assistant.

As this report is to be distributed not only to the State Office of Education, but to other interested parties, it was felt that an appendix which included some of the forms we've used, as well as exerpts of evaluations would be of value.

It has been an exhilerating year for all those involved and most rewarding.

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[1]Appendix III, page i-iii, Job Description of Childcare Aide

C O N T E N T S

	Page
WORDS OF WISDOM	iii
FOREWORD	v
SURVEY	viii
PART I ---- GENERAL SECTION	
Project Title	1
Objectives	2
General Design	5
Time Schedule	5
Publication	7
Implementation	8
Personnel	9
Budget	9
Distribution of Report	10
Sources of Influence	
Visitors	12
Presentations Given	14
Administrator Comments	15
Projector Director Comments	16
PART II --- SERVICE AREA SECTION	
Section 1 - Day Care Centers	18
Section 2 - Nursery Programs	21
Section 3 - Child Development Centers	22
Section 4 - Health Centers	23
Section 5 - Ferndale High School Laboratory Nursery	28
PART III -- RECOMMENDATIONS	
Relating to Instructor-Coordinator	34
Operation of a Laboratory Nursery School	38

A P P E N D I X E S

page

APPENDIX I ---- BACKGROUND MATERIALS

Letter to Board of Education..... i
Course of Study..... vii
Sketch of Facility..... ix
Background of Instructor.... xi
Responsibilities of Instructor..... xiii
Training Stations and Student Placement..... xvi
Vocational Aspect Bibliography..... xix
Bibliography - Infants Thru Teens..... xx

APPENDIX II --- SAMPLES OF FORMS USED

Student Application for Program..... i
Counselor's Confidential Information Form..... iii
Criteria for Selection of Nursery Children..... iv
State Required Training Agreement..... v

APPENDIX III -- DESCRIPTIVE MATERIALS

Job Description of Childcare Aide for CoOp Work..... i
Job Description of Areas in our Laboratory Nursery..... iii
Assignment Sheet for Second Semester in Laboratory..... v
Job Description of Nurse Aide..... vi

APPENDIX IV --- EVALUATION MATERIALS

	Page
Evaluation Form for Child-care Aides.....	i
Know Thyself.....	iv
Employer Midterm.....	vii
Employer Letter (Providence)	x
Employer Final Evaluation...	xii
Drayton Comments.....	xvii
Drayton Letter.....	xix
Huntington Woods Letter.....	xx
Sampling of Employer Comments.....	xxi
Evaluation by Parents of Nursery Children.....	xxiii
Evaluation by Administrators (Transferred to Body)	
Evaluation by Students (Nursery Involved).....	xxx
Evaluation by Students (Hospital Involved).....	xxxx

COMMUNITY SURVEY

Mr. Luther Olson of the MESC (Royal Oak office) was very much interested in our program and was most helpful in suggesting people to contact. He indicated a need they could not fill for this type of trained worker. The Manpower Development Training Act (MDTA) provides funds for various programs, but none in this particular field in the state of Michigan.

Local babysitting agencies have indicated a great need for trained people to take over the later afternoon, dinner and evening hours. They have been unable to fill requests for any of these positions, as the women they normally employ are homemakers that wish to behome during the dinner hour with their own families. Local newspapers offer many positions for this type of work.

During the early promotion of the Headstart programs, the leaders deplored the lack of trained people to work in these programs.[1] The United Community Services (USC) of Metropolitan Detroit have indicated an interest in the program, and felt it was extremely important that we try to build a better image of the domestic worker, in order to attract more qualified people into this service. Pre-school education is advancing rapidly as the recognition of its' importance becomes more widely known, and adequately trained aides will be more and more in demand.

---

[1]Franklin Settlement, Oak Park OEO, Ferndale OEO.

PART I

VOCATIONAL TRAINING PROGRAM FOR CHILDCARE AIDES

Ferndale High School

In planning the new high school in 1958, a Child Study Center was included in the Home Economics Suite. This facility was designed[1] to accommodate both indoor and outdoor activity areas.

Large sunny rooms were equipped with sinks, etc., for art activities as well as the larger motor activities. A smaller room for quiet play, with one-way observation glass between these two areas, and an outdoor play area with drinking fountain and storage for equipment used outdoors. This outdoor area is a court, surrounded on all four sides by windows of various classrooms and hallways, and is directly across the hall from the Home Economics Suite. Plans also included a kitchenette for food preparation and toilet facilities for the pre-school children, in addition to same for teachers.

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[1]Appendix I, page ix, Floor plan of Home Economics Suite with sketch of Child Study Center included.

OBJECTIVES

The following objectives were outlined in the original application for approval of the program. Each is stated as in the original proposal and then evaluated.

1. To prepare trainees in all phases of childcare, including knowledge of not only the necessary skills, but also to develop an understanding of the physical, emotional, intellectual, and social growth and needs of the child at each stage of development; to better prepare them for employment in private homes, childcare institutions, group care centers, under the supervision of qualified childcare personnel.

Evaluation: This was accomplished very well with infant thru kindergarten age children. A great deal of knowledge was gained about adolescence, and early adulthood including the child-bearing years. The laboratory nursery was an ideal learning experience as the children, as well as their parents made fascinating subjects. They motivated the girls to read assigned materials and participate in class discussions in a meaningful way. EACH and EVERY girl participated in these discussions with a great deal of interest and knowledge. They literally "soaked up the materials available like a sponge!" It was a delightful experience for the instructor to have such an enthusiastic and interested group.
Time did not allow for real study of the six to twelve year old, which was part of the course.[1] It shall definitely be included this coming year, and is needed. One of our students is employed this summer as a Recreation Department "Storyteller" and had to do special study in this area.

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[1]Appendix I, page vii, Course of Study

2. Provide laboratory for training a wage-earning service occupation, as well as utilizing same for students in other disciplines, such as biology and social studies, as they study human growth and development.

Evaluation: The laboratory nursery served the first purpose handsomely. It was not utilized by other classes this past year, we hope it will be next.

3. To evaluate the present facility as a laboratory for vocational training in childcare.

Evaluation: It is a well designed facility.[1] The only criticisms are:

1. kitchenette lacks an oven for "baking projects"
2. children's entry is within two feet of the Food's Lab which created some "noise" problems. One teacher complained, the other did not.

Both of the above will be improved upon. Everything else was ideal.

4. To test the use of a given block of time schedule. (See General Design page 5.)

Evaluation: Three hour block is a necessity if a laboratory school is included in the course of study. Conducting a lab school definitely helps instructor to discover girl's needs, both skills and theory.

5. To determine the kind of experiences and activities necessary for job success.

Evaluation: This is best done by employer surveys and operating a lab school within the high school building. Very definitely the girls that participated in the lab school as well as CoOp received the better training, and were the easiest to place.

---

[1] Appendix I, page ix, Floor plan of Lab Nursery.

6. To try some pilot programs in CoOp where students will be working part time at training stations, such as nursery schools, hospitals, day care centers, while at the same time providing related instruction in the area of childcare and development.

Evaluation: We did. For descriptions of same, refer to Section II of this report.

The pilot program proved to be successful in each area tried. It would appear however, that training for hospital work should be a separate class. Giving students an experience in the nursery school along with their hospital training would be ideal, but proved impossible for us to accomplish. In attempting to please the hospital, we actually sacrificed some valuable experiences that the girls should have had at the high school. Our instructor suggests that the girls work after school at the hospital, and remain in the nursery lab mornings, if such a program is contemplated.

1. GENERAL DESIGN

Original Plan: Twenty students meeting for one class period five mornings a week for basic knowledge in child growth and development. They will divide into two groups. Group I remaining in the laboratory for two additional periods, while Group II report to their training stations. The students will alternate their schedule--

Group I -- 2 days in laboratory, 3 days at training station.

Group II -- 3 days in laboratory, 2 days at the training station.

These groups will reverse their schedules midway in the year-long program. Groups I and II will be selected and assigned at random. We will compare the performances of both groups as to which of the training experiences is superior, the training station or the nursery school lab experience. We will also determine if the extra day spent in the lab by Group II makes a significant difference in the performances at the training station.

Problem: Counselors had placed 19 students in program--only five in required 3 hour block--five in first and second hour, nine during second and third hours. In order to operate our laboratory class for minimum of 2 hours per day, and also class meet for one hour, it was necessary to have all students in our Child Development Theory class during third hour.

Solution: Girls agreed to give up study halls and arranged their schedules so that all but four were available during the entire 3 hour block. The remaining girls were placed in the second and third periods--so that a complete class could meet third period daily.

Evaluation: This worked perfectly, though we were sometimes short of help first hour of nursery school.

2. TIME SCHEDULE

Original Plan:	8:50 - 9:45	Class in Child Development
	9:50 - 11:45	Report to Nursery School Lab/ or Training Stations

Problem: Some employers wanted girls 7:30 a.m.--some as late as 9:30 a.m. Necessary to be back in school by 11:42 a.m., not allowing enough working time for girls starting later.

Solution: After several weeks of trying to operate effectively with above plan (unsuccessfully) we changed girls' schedules. They reported for Child Development Theory class only one day a week, (Friday) for three hour block (related instruction), thus alternating 2 full mornings at their training station and 2 mornings in our laboratory school... with nursery school laboratory in operation 4 mornings a week.

Problem: Arose when six of the girls entered the hospital training program and hospital required five days a week attendance.

Solution: During training period, which included written work at hospital, we excused them form all class work.

Problem: This proved to be an unwise decision, led to break in communications as teacher-coordinator lost all contact with girls, resulting in alienation of nursery school group and hospital group AND the hospital group with other teachers. Conflicts arose when girls reported to fourth hour class late, instructor refusing admittance on the grounds the girls were taking advantage, etc. and the girls complaining of this instructor to those in charge of the program at the hospital--leading the hospital administration to believe our high school staff were uncooperative.

Solution: After several weeks during which teacher-coordinator discovered mistake, an attempt was made to have girls report once a week for after school class.

Problem: Girls resented this, feeling they were working very hard at the hospital and desired freedom the nursery school girls enjoyed (whom they felt had the easiest job).

Solution: Contacted the hospital Administration and asked that girls be released on Friday a.m. to join the rest of the class (to which they all agreed) placing these girls with student teacher who arrived their first week back in class. They appeared to like her very much BUT never really participated in the nursery program. We lost them--as far as class participation went. They remained enthusiastic about their hospital work and all are continuing in this field. While our original objective was not completely realized, the consequences were still good.

Evaluation: Worked very well, though girls suggested that class meeting for two mornings rather than one would give them more time to complete assignments. They did have thirty minutes at end of nursery school on days they were in lab, but these times were used for evaluation and planning. Perhaps this time might have been utilized somewhat for written work, but instructor felt it was very valuable in the girl's training when used as it was.

3. PUBLICATION OF RESULTS

Suggested: Periodic evaluations were given orally to the superintendent, principal, Director of Vocational Education. Contact was frequent with the Home Economics and Family Life , State Office in Lansing.
Final summary report to be submitted to the Ferndale Board of Education, Division of Vocational Education in Lansing, and other interested school districts.

IMPLEMENTATION

Teacher-Coordinator was to implement the program with one assistant and also be responsible for coordinating training stations, and instructing students in the related childcare class. This was to be a one year program, commencing September 1966 thru June 1967.

All but four of the nineteen students enrolled in the Vocational Childcare Class were in the three hour block. Schedules were set up, with girls alternating their days in the laboratory with those on the training station. Eight of the girls worked exclusively on their training stations. Six of these were hospital girls.

It was decided by the Board of Education that funds would not be available for an assistant teacher in the nursery and the one instructor handled the entire program[1] alone. It was an enormous task for one person to handle, but extremely rewarding to that individual. It is recommended that unless a prospective teacher has a comparable background[2] of experience, that she not attempt the program without a trained assistant.

The program was started on schedule, with class meeting daily for three hours of orientation. This included many field trips and outside speakers. Middle October found the girls and the employers most anxious to get training stations started. Several of the girls started their CoOp experience at that time. By November 1st, all those going on CoOp were working.

The laboratory school opened November 10th. There were a total of fourteen children enrolled. The nominal tuition ($40 year) was used to purchase the snacks, craft materials and partially reimburse students for expenses involved in workshops.

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[1] Appendix I, page xiii, Responsibilities of Instructor.

[2] Appendix I, page xi, Background of Ferndale Instructor.

The nursery (lab) was closed on May 18th, after a very successful year,[1] and the girls returned to the high school, giving up their CoOp employment, or working outside of class hours.

As of June 10th, 1967, all girls had been placed[2] on jobs for the summer and/or Fall.

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[1]Appendix IV, page xxiii, Evaluation.

[2]Appendix I , page xvi, information within parenthese.

PERSONNEL:

1. Name of Project Director: Mrs. Theda Connell

2. Statement of previous experience:[1]

The laboratory assistant position was not filled due to budgetary reasons. This proved to be a mistake, for an assistant is quite definitely needed if the task is to be accomplished well. During the second semester as things became more organized, one of the nursery students assisted the project director (who was also the teacher of both the pre-school children and the high school students, as well as coordinator) for office practice credit every afternoon for one hour. She was of tremendous help, although the instructor still found it necessary to work an average of four hours a day in addition to her regular schedule, in order to keep things working smoothly. While the teachers are excused from the building at 3:35 p.m., this teacher found it necessary to stay usually until 6:00 p.m., and then take work home with her for the later evening hours. Hopefully during the coming year, a part time assistant might be possible.

BUDGET:

Salary of project director	6154.03
Clerical Salaries	362.00
Travel allowance 643.4 miles	51.47
Equipment and supplies for nursery	1126.20
Office supplies (including report)	402.00
Postage supplies (including report)	80.00
Phone	80.00
Printing and Duplicating	190.00
TOTAL	8445.70

[1] Appendix I, page xi, background of instructor

DISTRIBUTION OF REPORT

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Mr. Harry Blanchard, Cousultant for Research Coordinating unit (3 copies)
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Mrs. Elinor McCrimmon, Consultant on Wage Earning Programs in Home Economics
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Mrs. Lottie Watermann, Consultant of Health Care Service.

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Mr. Robert Christiana, Assistant Superintendent
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Mr. Irving Rosen, Director of Vocational Education, at Ferndale High School

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Mr. Ralph Wenrich, Program Director, Department of Vocational Education
School of Education
Ann Arbor, Mich. 48104

UNIVERSITY OF KENTUCKY

Home Economics Department Chairman

UNIVERSITY OF NEBRASKA

Home Economics Department Chairman

EMPLOYERS OF STUDENTS

Mrs. Margaret Ameriks, Drayton CoOp Nursery Teacher
Mrs. Marie Gormaine, Owner-Director of Huntington Woods Nursery
Mrs. Lois Middleditch, Owner-Director of Cherub Haven Nursery
Mrs. Anna Marie Roeper, Headmistress, Roeper's Country Day School
Mr. Hugh Peters, Coordinator of Federal Assisted Program

OTHERS:

Mrs. Minnie Berson, U.S. Office of Education
Washington, D.C. 20202
Miss Marjorie Trott, Detroit Public Schools
School Center Building
Woodward Avenue, Detroit, Mich.

Additional copies of this report may be purchased by contacting:

Mrs. Theda Connell
Vocational Coordinator
Home Economics Department
Ferndale High School
881 Pinecrest
Ferndale, Michigan 48220

SOURCE OF INFLUENCE

The school was open to visitors at any time, by prior appointment. The instructor giving up many lunch hours in order to speak with them, if they were unable to stay through for her conference hour. The following is a partial list of people visiting the program.

John Houghton, Superintendent of Ferndale Public Schools
John McGregor, Principal of Ferndale High School
Fred Wagner, Assistant Principal of Ferndale High
Irving Rosen, Director of Vocational Education

Ferndale PTA Council Tour)
Advisory Committe Tour) School not in session for thes

Mrs. Thelma Graper, Consulant in State Office of Home Economics
Mr. Charles Langdon, Administrative Assistant, State Board of Education and others from his office.
Visitors from Holly, Michigan...neglected to write down their names!
Vocational Director's Association of Oakland County (several appeared very interested in our program and asked many questions).
Miss Majorie Trott (Detroit Public Schools, Director of Voc Homemaking) Also an architect for the Detroit schools. They were seeking ideas on designing a Child Study Center.
Miss Virginia Conlon and a member of Oak Park Board of Education for same reason stated above.
Miss Ann Neely, Pontiac Northern High School Home Economics Teacher (looking for ideas for three week program she was going to have. Two of our girls went out to help her with it for three days at the start).
Miss Carol Irish, Pontiac Public Schools, Home Economics Coordinator.
Two visitors from Hazel Park system, operating a program a bit different to ours.
Miss Barbara Gaylor, Chairman of Home Economics and Family Life Education, State Board
Mrs. Eleanor McCrimmon, Consultant on Wage Earning Programs (above department).

Miss Gloria Patty, Mount Clemens High School
Mr. Earl Halvas, District Office of Education
Mr. Bomark and also the Assistant Superintendent of Farmington Public Schools.
Mrs. Sharon Petty, Diagnostician for Ferndale Schools
Dale Flynn, Economic Opportunity Office (Ferndale School District).
Consultant (Business Education) from State Board of Education (May 17).
David Soule, Consultant on Intermediate School Districts of Oakland County.

PRESENTATION MADE TO VARIOUS GROUPS
DURING THE SCHOOL YEAR

Five minute presentation to Ferndale PTA Council in September.

Five minute presentation to all students in the 9, 10, and 11th grades assembly.

Five to eight minute presentation to State Conference of Home Economics Teachers at Traverse City (perhaps 500 present in all) in November 1966.

Twenty minute presentation to Home Economics Teachers of Royal Oak, Michigan at their Curriculum Meeting in May

Weekend serving as a resource person at a Michigan Migrant Opportunity Office Workshop, for training those involved in working with Migrants. (May)

Ideas on what we're doing at the Oakland County Head-start Teacher's meeting in Pontiac in February.

Attended several Macomb, Oakland County Coordinator's Meetings and spread the word when seemed appropriate. (Never a formal presentation).

Article in Preschool Association of Metropolitan Detroit Newsletter (received several employment leads from this).

Article in Ferndale Gazette, School newspaper, Royal Oak Tribune and a wonderful write up in the Detroit Free Press on our program, which also netted us several calls. The latter was a concluding article to a week long series on Daycare Centers, their problems, shortages of staff, etc. Headline on our article was "What One School is Doing About It".

Pictures in the brochure developed to promote Vocational Education Area Schools in Oakland County.

Attendance at week long Vocational Coordinators Conference at Leland to spread the word. Only three representatives of Home Economics there, no opportunity for formal presentation, but several opportunities to explain to various groups a bit about our program.

Ben Hamilton, Consultant on Elementary and Secondary Education, Michigan Board of Education. (private consultant while in Lansing).

Mrs. Minnie Berson, U.S. Office of Education, Washington D.C. (chatted together in April).

ADMINISTRATORS COMMENTS AND EVALUATIONS

"...fine work you are doing for our students in the new vista opening before them--employment opportunities and a rewarding experience in the service of children; to name a couple of important outcomes--I feel that your assignment and your success in it are important factors in our endeavor to combat the drop-out problem."

John Houghton
Superintendent

"The Vocational Child-Care Program initiated by Ferndale High School during the summer of 1966, was the most outstanding initial cooperative education program I have seen. The program served the needs of those students who have been disenfranchised from other cooperative programs by reasons of ability and motivation. This program created a "spark" in the girls involved and motivated them toward achievement. I feel that these are the kinds of programs we should be looking toward in the future, as many of our students will be involved in service type occupations."

John D. McGregor
Principal

"Last year the school board approved a Vocational Childcare program on a one year pilot basis. At present the program has been very successful. All of the graduating students have been placed on jobs resulting from their training. Many neighboring schools have indicated they will emulate our program. Employers, students, as well as parents of the nursery school children have expressed in their evaluations that they regard this program very highly."

Irving Rosen
Director of Vocational Education

"The Childcare Vocational Program at Ferndale High School provided an opportunity for some students to find their only success in high school. The coordinator with her interest in her subject matter and her knowledge of her students was able to infect them with enthusiasm for their jobs and their class work. The students had the advantage or careful observation and guidance. Most found the work rewarding and their relationship with the coordinator and their employer will help them to be better parents even if they do not continue in childcare work. This program is an unlimited value both vocationally and socially.

Mary Smith, Counselor

E V A L U A T I O N
C O M M E N T S

Project Director

When this program was first proposed, we envisioned training girls to work in homes and childcare institutions. There is still a very great need for this type of worker. However, thanks to Miss Majorie Trott, of the Detroit Public Schools, we were made aware of another great need. There are dozens of nursery schools, nurseries and daycare centers in the Detroit Metropolitan Area. It was her suggestion that we explore the possibilities of training girls for work as aides in these situations that elevated our program to a higher level of achievement.

Of the dozen or more employers contacted, all but one expressed a great deal of interest and enthusiasm toward our program. When it was realized that we could train girls for these positions and they would be paid $1.25 an hour during their training and possibly $1.75 an hour upon completion of same, we changed our early objectives somewhat.

When Miss Trott remarked to me last October that this was a far more ambitious project than any of us appeared to realize at the time, she was certainly a prophet or foreteller of good fortune.

The really thrilling part of the whole project was the girls' enthusiasm and how very hard they worked. They had inner goals and certainly the inner drives are far better than outward pressure. The girls were told at the beginning of the year what would be expected. From time to time, reminders were made of work that was due. For the most part however, there were no deadlines for assignments due. The girls turned in their work when completed. Some turned in far more than others. Some of the poorer (?) students turned in far more than some of the brighter, and conversely. They were not graded so much on what they turned in (though this did of course count), as on the way they performed in the laboratory and their contributions to class discussion.

As each and every girl felt very free to speak up in the informal atmosphere of the nursery, it was felt by the instructor that this provided a most unique and accurate evaluation of girls' knowledge. Great changes took place with several of the girls, and certainly all grew in the areas of intellectual and social, as well as emotional understanding.

The majority of the class were motivated (inner motivation again) to attempt to continue their schooling in the area pursued. Certainly this points out a real need at the Community College level, for this type of training, along with additional liberal arts background. The aides should not replace assistant teachers, but supplement the nursery school staff.

I could not close without thanking all those responsible for the success of our program. The girls, their employers who were so very interested in our program and the personal interest they evidenced over and over again. My fellow coordinators, administratora and parents, I could ask no more, they were all so generous in their support. Certainly those in Lansing who had enough faith to extend financial aid also deserve to be thanked and last but not least, our Board of Education, who had the courage to try the program in view of earlier happenings.

Their continuous support has been most gratifying.

Theda T. Connell

(Mrs.) Theda T. Connell

PART II -- Section 1

DAY CARE CENTERS

There were four students involved in day-long[1] care for children of working mothers. Two of these students were employed in the mornings. They were there to greet the earliest arrivals at 7:30 a.m. The daily observations written by these students showed their compassion for these very young children who had to leave the comfort of their bed and "mama" so early in the morning.

One of these students wrote 123 observations! As student folders were organized toward the end of the school year, as to child and date, this student's papers revealed wonderful growth of not only herself but her charges. This student came from an ADC home--she was not afraid to work and always went beyond the call of duty. She lacked confidence at the beginning of the year to go on a job. After several weeks of orientation and observation and instructor's promise of being placed with a very understanding employer, anxious to help her succeed, she decided to try it. She did so well that she surprised everyone by announcing at the end of the year that she would like to go on for more schooling (two years of Community College) and someday open her own Day Care Center, with her mother's assistance. The Community College may be a difficult task, but her determination to succeed and willingness to work hard, will carry her thru.

Her partner on the job did not fare as well. She was a very disturbing girl, willing to work very hard if she was interested and really quite capable, but poor personality. The instructor faced a real challenge in accepting her in the program. It was felt that she might have a chance of success here where she had failed miserably in other areas. "This is our last resort, maybe you can help her." (Counselor's Comment!)

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[1]Appendix IV, page xii, Employers B and C.

The instructor gave this girl much more freedom than the rest of the class but set clearly defined limits. The student was a fairly frequent visitor to the instructor's home and enjoyed her special privileges. She worked so hard in her nursery job that she was given an "A" for the marking period. She couldn't believe it. It was probably the first "A" earned in years, if ever before. Problems arose when she failed to report for any class but the nursery school. When this was recognized and brought to her attention, she was very flippant about it. She could not be trusted to be where she was supposed to be--even in the nursery school. She caused so much dissension at her place of employment, it was suggested she be removed and have the opportunity for more closely supervised instruction at the high school. The relationship at home was not good and when the father remarried early in the spring, she quit school and joined the Women's Army Corp.

These students had both been involved in a very excellent Day Care Center. The other two students were less fortunate.

The second situation was also a daylong program and these girls reported after school. The pre-schoolers, (many having been there since 6:30 a.m.) were less easy to manage. The center was short-staffed and the girls were given too much responsibility for their level of maturity. One girl left after a few months and when conditions became intolerable for the remaining girl who remained "stoic" to the end, it was discovered that the center was violating many rules of their license. The student was withdrawn immediately and the center will no longer be used as a training station. This was an extremely unfortunate situation. The nursery had been in operation for several years and changed ownership at the time training stations were sought. It was fresh and sparkling in appearance, the director a former elementary teacher and close to the high school. It looked promising. The "office" to which the Coordinator was admitted on only a few occasions was at the entranceway and as the student always worked outside, it was not realized by the Coordinator the condition of the interior. The Coordinator regrets very much having neglected her responsibilities toward the situation sooner, and draws readers' attention to the fact that in our area of vocational training we MUST check the facility regularly or withdraw students if employers make this awkward to do. (Which was the problem with this employer).

There will be an increasing demand for people trained in this area, as new centers open. We could not accommodate the need of the employers in this area, due to the inadequate transportation and our half day CoOp program. Running two sections, one in the a.m. and one in the p.m. would have helped, but can only be done if a second instructor can be found.

PART II -- Section 2

NURSERY PROGRAMS

There were four students involved in two morning[1] nursery groups, both licensed as Day Care Centers. The one was privately owned, the other a Cooperative owned and operated by a parent group.

The former schools' owner-director was a wonderful stimulus to the program, being our champion promoter![2] She had many ideas and made her demands on the girls she employed so flexible that we could change their schedules whenever we felt the need without inconveniencing the employer. She is converting the nursery in which the girls worked to a daylong program, along with another nursery she operates. She will be opening a third facility in the Fall of '67, and has indicated a need for several of our girls--both fulltime and CoOp students.

The Cooperative Nursery was an excellent experience for two of our girls and it delighted the class when the Cooperative Nursery group reversed their earlier decision and decided to pay Patty after all.[3]

The second girl did not work out as well--she was a potential drop out and though everyone encouraged her, she was absent a good deal. Little cooperation from her family. She did gain a great deal from the class, however, and realized this. In her own way--she did try very hard.

Her counselor and instructor were most understanding and helpful and her employer very sweet, all made an impression. While she was the only girl not recommended for a nursery position at the end of the program, she would work very well in a private home (except for absentism) and was recommended for same. At last check (she had not reported to a very interested employer as she had indicated she would. Promises are easily made by this student and then forgotten).

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[1]Appendix IV, page xii, Employers A and E.

[2]Appendix IV, page xx, Letter from Employer.

[3]Appendix IV, page xvii, Comments from Cooperative Nursery.

PART II -- Section 3

CHILD DEVELOPMENT CENTER

One girl was employed by a Child Development Center[1] within the school's own district. These programs are commonly referred to as "Headstart", though technically "Headstart" is the summer program.

Politics entered into this placement to quite an extent. The Coordinator was referred to the person in charge of hiring personnel for this program. This man has the joint title "Director of Elementary and Secondary Education Act Programs" and "Coordinator of Federally Assisted Programs". The Principal in whose building the Economic Opportunity Offices are located, would have preferred the original contact be made through him. Any one contemplating such a program should check the protocol in their own district for handling matters such as these.

The Coordinator had more difficulty selling the program with these people than with any of the private employers. This was partly due to government restrictions on "who" can be hired for these positions, but also she felt lack of awareness of importance in having "trained people" working with young children. This, of course, has been one of the biggest criticisms of those involved with pre-school children. Many persons feeling training for work with these "little ones" is not that important, but can be gained on the job. As one director of such a program stated.[2]

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[1]Appendix IV, page xii, Employer D.

[2]Appendix IV, page xxi, Neighborhood Settlement House Comment

PART II -- Section 4

HEALTH CENTERS

As the literature suggests that Child-care Aides might work effectively in the health care area, we were anxious to include this experience in our pilot study.

We discovered that nine of the class were very much interested in this phase of the operation. Providence Hospital accepted eight students which was a very valuable part of our program.

Two of the girls had their first exposure to the health service area with the Oakland County Health Department's Well Child Conference. This was on a voluntary basis one morning a week and involved primarily clerical work, checking family records for immunizations, etc. Had this continued longer (girls were switched to the hospital after just a few weeks) it would have involved more of the actual health routine.

HOSPITAL PEDIATRICS

As the literature on the subject suggests that Childcare Aides might work in pediatrics, we were most anxious to try this in our program.

In July 1966, Mrs. Connell, High School Teacher-Coordinator, approached the nearest large hospital, which happened to be a "teaching hospital", and proposed our program to Mr. Lawrence Severin, Director of Nursing Care Services. He suggested we talk with the supervisor of the Pediatrics Division of the hospital. At first she seemed not too interested, but warmed up to the idea as we talked. She said we would have to convince not only Mr. Severin, but Sister Ambrose, the Head Administrator of the hospital.

Mr. Severin indicated that he would approach Sister Ambrose, and for several weeks we were in suspense about the matter. In October, the teacher-coordinator contacted Sister Ambrose and arranged for an appointment with both she, Mr. Severin, and Mrs. Mary Morris (Coordinator of the CoOp students). They indicated interest in the program, but suggested it would be too specialized. Also shared their problems in regard to budgeting. It was suggested the girls were so enthusiastic that they would accept whatever conditions the hospital outlined, including general hospital work, rather than strictly Pediatrics, and on a voluntary basis, rather than on a paid. The girls wanted so very badly to get into the hospital.

These suggestions were discussed very carefully, and a few days later, the hospital notified us they had decided to participate in our pilot program. They explained that their budget allowed only twelve CoOp students. They had committed themselves to taking Southfield High School students, as the hospital is located in Southfield. The decision was made to set up a separate training program for the Ferndale girls, and eight were accepted. A twelve week training program was to be developed for these girls in the hospital under the direction of Miss Helen Murphy, R.N., Instructor in Nursing. They were to be paid $1.25 an hour during training, $1.46 upon completion of same.

The Teacher-Coordinator suggested Mrs. Morris might like to interview and screen the girls before class started. Mrs. Morris suggested that all of the girls expressing interest in the program be assigned to the class. The girls ranged in ability from an Intelligence Quotient of 80 to 124. They volunteered that the lower ability students oftentimes function better as nurses aides than the higher ability student who might be inclined to make decisions and take action which they have not been trained to do. The teacher-coordinator was later to regret this decision.

Two of the lower ability girls were pregnant, unbeknownst to the high school staff at the time they entered the hospital for their training. One in her third month and the other in her fourth month of pregnancy.

The hospital discovered this before we did and would have continued the training of these girls with their doctor's permission. The girl's delay in doing so, caused them to be dropped from the training. The in-service coordinator and the instructor at the hospital both indicated that less than half of this group would have been retained as employees more than two weeks, had they been hired thru regular channels. These girls were definitely given help they very much needed, and it was unfortunate that the two above girls could not continue.

At the mid-term evaluation the girls were thoroughly evaluated by the in-service coordinator, Mrs. Morris, and Miss Murphy, their instructor. It was mutually agreed that all of the girls had made great gains and were operating at about the average level of effectiveness. A few were operating above.

In the final evaluation of these students, Miss Murphy had been replaced by Miss Judy Cox, who generally agreed with Mrs. Morris's oral report on the progress of the students. It was felt that the students were operating at an "average" to "good" level of effectiveness and that all of the students had shown tremendous growth, in their seven months at the hospital. In seeking their opinion as to which student had shown the greatest amount of growth (as a possible recipient of the Vocational Homemaking Award), one indicated Renata C., and the other Brend M.*

*Brenda, complete loss of vision in one eye and only partial in the other, was highly praised by hospital staff.

These two girls have both chosen to go on for additional schooling in nursing. It was indicated by Miss Cox that there was not a girl among them that would be satisfied with this low level of nursing, and predicted that all would eventually seek further training in patient care.

It was felt that specialization[1] at this level by childcare aides was not appropriate. Aides being better utilized in the general clincial areas of the hospital. Hospital needs fluctuate from day to day and hour to hour making it desirable to have a greater mobility of this level of worker. It was suggested that a hospital such as Children's and childcare institutions such as the Sarah Fisher Home or a facility for handicapped children might better utilize the services of a childcare aide than a general hospital.

The last point discussed was the apparently lower academic level of the Ferndale students as contrasted with those from Southfield. It was suggested by the high school coordinator that girls could have been selected from among the higher academic levels, and that perhaps the school had erred in sending the lower ability students. The hospital staff denied this, saying that "dedication to the task is more important to us than the academic level of the student."

Certainly there could not have been a more dedicated[2] group than these girls from Ferndale who embraced their responsibilities with a great deal of sincerity, human interest and dedication. We are pleased that they enjoyed such success at the hospital, albeit they didn't prove the hypothesis we had researched. But this afterall, is the purpose of research. Upon reflection, and in consultation with other teachers involved in Vocational Training for Health Services, the conclusion has been reached that the high school would do better perhaps to furnish their own nurses aide training program, and then send students out to convalescent homes and small hospitals that do not have their own "teaching" program.

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[1]Appendix IV, page ii, Letter from in-service coordinator.

[2]Appendix IV, page xxxx Girl's Evaluations.

For those interested, there are funds available apparently to pay an instructor at the hospital for this training. Check with the person in charge of Federally Assisted Programs in your school system.

We're pleased to report that the health service field was and will continue to be served by these students as the six completing the training all plan to continue.[1]

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[1]Appendix I, page xvii, Girl's plan for the Future.

PART II -- Section 5

FERNDALE HIGH SCHOOL LABORATORY NURSERY

Home Economics teacher with extensive background[1] in nursery school procedures and child development planned and executed the program. It must be emphasized that background[1] of experience in nursery school work is absolutely essential. The responsibilities[2] are four fold and very complex for one person to handle.

It was decided by the Board of Education (upon learning the program would not be 100% reimbursable) to eliminate the assistant that had been planned earlier. This meant that the Home Economics Instructor would be directing the nursery school program as well as supervising the students. She also assumed the role of Vocational Coordinator which added vocational counseling, locating of training stations (places of employment), placing students on these stations and following up with evaluations[3] of same.

This same person also interviewed and selected[4] the pre-school children and their parents, which would be participating in the program. Considerable time was devoted to this procedure. After the initial telephone contact, a personal interview with the child and one of his or her parents was arranged. The interviews lasting from thirty to sixty minutes.

This interview not only gave the instructor an opportunity to explain the program, but also to discover something of the parent-child relationship and the childs' adaptation to another adult in new surroundings. It also gave the child an opportunity to explore the nursery without the competition or possible threat of other children, and his parents an opportunity to become acquainted with the teacher and program. Notes were made after every interview and placed in the child's personal file where subsequent observations of the child were placed by students and teacher.

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[1]Appendix I, page xi, Background of Ferndale Instructor.

[2]Appendix I, page xiii, Responsibilities Assumed by Instructor.

[3]Appendix II, page i, iv, Samples of Forms Used.

[4]Appendix II, page iv, Criteria for Selection.

Twelve children were accepted--of these, six were girls (three 3 year olds and three 4 year olds) and six boys (three 3 year olds and three 4 year olds)...only one of the children had had an earlier nursery school experience. Later two additional boys (one 3 and one 4) were added to balance out the personalities of the group. Nine of the fourteen children came from families with four to twelve siblings, average family having six children.

The program was planned within the framework the instructor had worked with at the Wayne State University Home Economics Nursery. It was a very flexible and for the most part an unstructured program.

Time schedule was along the following lines, but flexible and modified to suit the occasion.

8:30 - 8:45	Instructor checked over plans for the day.
8:45 - 8:50	Students arrived and start working. Rooms set up for daily program by students assigned to various areas.[1] a. craft activity table b. paint easels prepared c. paints mixed (if necessary) d. playdough out (mixed-if necessary) e. gym equipment out f. housekeeping corner checked g. groceries put away (after shopping had been done) h. fresh fruits and vegetables washed and prepared for later serving i. quiet area set up--books, phonograph, puzzles, etc.
9:00 - 10:30	Flexible program with both indoor and outdoor activities. Children chose their own interest area. Snack was available from approximately 9:45 until 10:15, children choosing the time they wanted to eat, and friend or friends to eat with. Sociability was the keyword.

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[1]Appendix III, page iii, Area Descriptions.

10:30 - 10:45	Musical games, songs, finger plays to gather children together for a storytime. Different methods were used for story telling: reading, flannel board, "telling" puppets, etc. Sometimes older children told a familiar story. Next year will attempt to spontaneously dramatize stories.
10:45 - 11:00	Winding up the morning... might continue storytime, etc. or dress to go outside.
10:55 - 11:00	Mothers arrive to pick up the children. They have been very prompt on all but a very few occasions.
11:00 - 11:10	Complete cleanup of nursery.
11:10 - 11:30	Evaluate morning sessions.
11:30 - 11:42	Greet returning CoOp students (from training stations) and reviewed plans for next day in nursery.

The first semester the girls chose the area they felt most comfortable working in. This had been suggested during the survey[1] by the employers. However, we had a few girls with employers who felt the girls needed help in areas other than those chosen. There were also a few girls who felt they were doing all the work, and there were a few that had to be reminded what their duties were. We were over-staffed in some areas, short in others.

The plan that the girls embraced very enthusiastically was inaugurated at the beginning of second semester. Recognizing the problems described earlier and also feeling that the girls needed to develop skills in all areas, a new plan[2] was devised by the instructor.

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[1]Appendix III, page i, Employer's Job Description.

[2]Appendix III, page v, Assignment Sheet.

There were four areas and eight girls. There were four months remaining in the nursery school program. Two girls were assigned to each area, with jobs rotating every four weeks. This gave everyone an opportunity to develop in all areas, it also satisfied everyone for they soon realized that a person assigned to a particular area had definite responsibilities and did not leave an area without director's permission. The three hour block girl was considered the key person in the area, and the two hour block student her assistant. The teams were each composed of one two hour and one three hour block student.

There was a tendency for the two hour student (with this plan) to feel she was being used only for cleanup activities. When this was realized by the instructor, appropriate changes were made to the satisfaction of all concerned. The girls definitely preferred this more structured approach, as it appeared to be a fairer distribution of the work load.

Lest the reader reach the conclusion that the second method be the ideal, it should be pointed out that the girls gained a great deal of confidence in working with young children, during the first method used, as they worked in the area they felt most competent in. Perhaps a shorter length of time for the first method would be in order. It was considered valuable by the instructor. It must be remembered that many of these girls, in fact, all but two were quite uncertain of themselves when they started the course. They were not only uncertain as to what was expected of them, but many had very little self-confidence[1] in front of others.

The approach used in the classroom, as well as in the nursery school was one of informality, suggesting rather than demanding, stress being always on trying to understand the other "person's" problems and behavior, as well as one's own. Teacher always pointed out her own mistakes in the evaluation sessions and these were discussed by the class as thoroughly and completelyas those made by the students.

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[1]Appendix IV, page xxiv, xxix, Student X, and Student VIII.

An additional comment on the time required by parents, visitors, and student teachers.

During nursery school session, the children's needs and feelings always come first. The high school students recognized and accepted this very well. The parents, for the most part, did also. When parents or visitors were present, it was suggested they sit or stand behind the one way observations glass. A student was put in charge and the instructor joined the parent or visitor for as much time as appeared available and desirable.

Contacts were made by telephone, initiated by the teacher, sometimes by the parent. If the matter seemed rather urgent, evening calls were made. Two parent meetings a year seem advisable. Possibly an orientation meeting in the Fall and another meeting in the Spring. Ferndale had a "Parent Night Potluck" the third week in May and it proved to be extremely successful. Highlight of the evening were five rolls of movie film taken of the children during the school year. The students also gave short presentations on various aspects of the program. Each student choosing area in which they felt most confident. These were so well done (only two girls felt it necessary to "read" their presentation) that they delighted the parents of the nursery youngsters as they did the instructor.

As the parents' evaluations[1] show, they were as pleased with the growth of the high school students as the school personnel.

Visitors from other schools interested in the program were frequent and often these people stayed for the entire day, enabling instructor to explain the program to them and allow for questions, neither of which could be managed well during nursery session.

Student teachers should quite definitely not be part of the program during the first year. The instructor regardless of how strongly tempted, should not accept a student teacher. It is not fair to the high school student, the children, the teacher or the student teacher. There are enough complexities to be worked out, without this added one.

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[1]Appendix IV page xxiii, Evaluation by Nursery School Parents.

The second year, it might be considered, but better for all concerned if during the fall term so as to be there for orientation along with the rest of the class. Definitely inadvisable to accept any student teacher lacking University Laboratory Nursery experience.

The instructor in our program did so and found she was unable to turn the program over to the student teacher, due to lack in her background. Operating a nursery, even within a high school setting is a tremendous responsibility and the rights of the little ones must be respected. The philosphy of this particular student teacher toward little ones was not in keeping with child development theories and practice. It was partially due to this experience that the instructor became convinced this type of vocational training should not be attempted by anyone without the background recommended.

RECOMMENDATIONS
RELATING TO INSTRUCTOR COORDINATOR

Actual work experience in a nursery school is a necessity. In order to qualify for any vocational training certificate, one must have a minimum of two years work experience in the area in which they expect to teach occupational training. It is possible in our area of Home Economics to have this waived somewhat. DO NOT BE TEMPTED! One needs this experience to run a successful program if a laboratory nursery is involved. We must not exploit pre-school children. One must be aware of what a good nursery program is and have extensive background both in theory of children's behavior and actual work experience with groups of children, applying this theory! A minor in Nursery School Education would be excellent and is I believe a possibilty under existing state certification regulations. Check with the Certification Office or Department Chairman of your particular University.

Recommendation of courses that would help in setting up a program:

Early Childhood Classes (giving nursery school laboratory experiences)

"Wage Earning Workshop" in Home Economics.

"Coordination Techniques" such as:
"Principles and Practices of Coordinating" or
Industrial Education 6189 CoOp Occupational Education at Wayne State University

VERY VALUABLE to attend the Vocational Coordinator's Conference at Leland, Michigan held in June of each year.

OTHER RECOMMENDATIONS

1. Three hour block of time for class. Less short changes students, employers, and children.
2. Two hours for instructor for planning and coordinating. Three are now being recommended by Vocational Education people...and would be preferred. Definitely a minimum of two hours is needed, and they should come together at the end of the school day.
3. Make certain your program is well represented on the local Advisory Committee for Vocational Education. Check into possibility of having a subcommittee for just your program.
4. Avoid Coordinator's Pitfalls.[1]
5. Do not abdicate student's program needs to "win" a training station, regardless of how desirable that station may appear.
6. Exercise extreme caution in placing a student on a training station where the supervisor of said student is less than enthusiastic!
7. Do not place a student on a training station if you would hesitate to employ them yourself.
8. To help shy students by accepting them in the program is fine, do not accept students that appear to have deeply rooted emotional problems. We are not diagnosticians, nor psychotherapists. It is not fair to the pre-schoolers to have such people in the program.
9. Plan with the employer, the student's responsibilities, having a well organized and instructive related study program. If the employer disagrees, find another employer! By this, it is meant that if employer refuses to help plan the learning experiences, this will probably not be the type of training station that will best help the student.
10. Visit CoOp work stations periodically, every 4 to 6 weeks in person. Occasional phone calls when need arises, but do not substitute by phone the personal visits.
11. Be very careful in placing the low ability students. Some employers pay lip service toward willingness to take same, but in actuality (in our case at least), this became quite an issue. The supervisor of said sutdents making constant reference to their low abilities, and then refusing to accommodate a group the second year. These are the girls that may be able to function well in a home setting, rather than in a hospital or nursery situation. (The nursery people are actually among the more understanding employers, and may be willing to give these girls a real chance of success, by giving them very routine type jobs.

Appendix I, page xvi, Coordinator's Pitfalls.

Avoid placing the really low ability students in a hospital training program, unless the training all takes place at the high school.

12. An afternoon CoOp should work as satisfactorily as a morning CoOp. Our experience has shown that employers have a need at this time also.

13. Avoid having group with distinctly different goals in the same class; such as the hospital and nursery girls unless both groups are to have the same lab experience. The lab experience is a "must" for the optimum development of the students.

14. Plan six to eight weeks for orientation before nursery opens allowing an opportunity for many, many field trips to be planned. Devote some class session before school opens to (1) "role playing" (this accquaints students with behavior they might expect exhibited by children and their parents, also some of their own reactions to the same. (2) Make articles for the nursery school such as puppets, housekeeping items (they are fun, they are needed, they get the students interested and in a state of anticipation).

15. Daily oral evaluations of nursery program by class as a group. Frequent observations of nursery children written objectively and predictions of child's future growth patterns.

16. Have related class meetings regularly. Once a week minimum.

17. If in doubt over advisability of continuing a student on a training station which you suspect is violating their license to operate or violating legal employment practices, do not hesitate to investigate the matter quickly and thoroughly and seek advice of the Director of Vocational Education, the Principal, even the Superintendent if it seems warranted. (One student covered up her employer's violations, when they were discovered, they were serious enough that the high school coordinator felt they should be reported to the licensing agency. Realizing the consequences of such an act, she consulted the Superintendent who gave wise counsel as to how to handle the matter).

18. Parent-student (perhaps employers also) meeting in Fall of year to discuss program.

19. Accept as many invitations to speak on your program as you possibly can. Good public relations help expand your program.

44

20. Do not accept a student teacher from a University during the first year of operation, unless this person has had considerable nursery school experience. It is not fair to either the college student, the high school student or the children in the nursery.

21. The flexibility of the schedule is often times interpreted by the other personnel in the building as freedom from class assignments. They are not in the building when you return to the building at 5 p.m. after a conference with an employer!

22. Be prepared for conflicts with fellow teachers and counselors as they are inevitalbe. Do not be discouraged for as you apply your knowledge of human development and try to be understanding of the other fellow's problem--it will work out. Give your enthusiastic support to your fellow coordinators and your Vocational Director at the high school.
Participate in CoOp Banquet. (Your employers really enjoy this!)
Join Local and State Coordinators Organizations.

23. An assistant is most desirable. Someone to take over the nursery when necessary, but even more valuable for the clerical work required if one is doing a good job. Some teachers might prefer to turn the nursery program over to a nursery school teacher and work only with the high school students. Pros and cons both ways. Coordinating might sound difficult, but it adds "spice" and "diversity" to the job. It is fun, it's stimulating, and the employers appreciate the coordinator as a person very knowledgable of the requirements in their particular endeavor. The principal of the high school should be very much interested and enthusiastic about the class to give you support when you hit low periods.

24. Be prepared to have a wonderful, exhilerating, and rewarding year. The Vocational Education "kids" (really young adults) love what they are doing! They admire their instructor and some even "love" you! They do nice things for you and their classmates. THEY ARE JUST PLAIN WONDERFUL!!

RECOMMENDATIONS FOR OPERATING A NURSERY SCHOOL LAB

1. Allow ample time for parent-child interviews and student conferences. (This takes far more time than one realizes).

2. Attendance at professional meetings and workshops for Pre-School Educators and also the Cooperative Nursery School Council Workshops are very important. (Make a real effort to do this and always take a car load of students along. Make attendance of some of these required).

3. The instructor should plan and direct the Nursery School Program in the beginning gradually allowing students to assume more and more responsibility as time goes on.

4. Appoint a student "in charge" of the total program for specified length of time. (Obviously when they become well enough prepared to do so). This student should be capable of running the Nursery when a substitute teacher arrives in the event of the instructor's absence. Hopefully your program will include some girls of this caliber.

5. Prepare a list of qualified substitutes before you open the nursery. Know them personally.

6. Cancel the Nursery program when you must be absent and you can not secure a substitute from your list.

7. Do include male students in this program. Many employers have requested this, although we do not have any at this time.

8. Availability of transportation to CoOp jobs should be verified in advance. Give parent an opportunity to participate in some way. Conferences, carpools, help to plan parent meetings, help with field trips, and evaluation of the program.

9. Explore the high school building through the eyes of the young children. (This is a real eye opener for your high school students as well).

"Here's the woodshop where Scott's daddy works."...When taking a wagon for repair, "Let's see if the auto mechanics boys can fix the broken axle on the wagon."..."Let's tip toe into the auditorium and sit quitely while we listen to the orchestra practice. Do you see Annette's sister playing the violin?"..."This is where Miss Sandy comes after you go home for lunch. Would you like to type your name on this sheet of paper?"..."How many fish do you think are in this aquarium?"..."... and this is where the high school students eat their lunch."..."Curious George would love to be in our tropical jungle." (The green house)..."Linda and Nancy come here for their swimming lessons, but this is where we come when we are having a tornado drill."...(We also visited the print shop, bookstore, library, receiving dock, and watched high school band practice.

YOU DON'T HAVE TO LEAVE THE BUILDING FOR A YEARFUL OF FIELD TRIPS, ALTHOUGH YOU MAY OF COURSE!

Limit number of students in the nursery laboratory to eight at any one time (two to each area maximum), unless observation booths are available. High school youth like to be WITH the children, not just observing them.

Arrange with Principal "visiting days", and try to avoid more than two visitors on any one day. Visitors tend to over-stimulate the children, keep visitors in the background.

Parent Pot-Luck toward end of year for Nursery school parents and students for evaluations and fun!

Newsletter for parents, written by students.

Gentlemen

In November of 1965, with permission of Mr. Houghton and Mr. McGregor, I attended the Home Economics State Conference in Grand Rapids. The emphasis was on teaching Home Economics for Wage Earning. The possibilities are numerous, and are limited only by the facilities we have available! The conference left me with an enthusiasm that has not diminished with time. I believe we can embrace at least one of the programs suggested at this time, with facilities all ready provided in our lovely building. This program would be in the area of Childcare Training.

Since the Vocational Education Act became a law in 1963, home economics education has taken on a dual role. It has always had as its purpose, preparation for the vocation of homemaking. Now there is an added objective. This is not intended to replace the original goal, but to add another purpose. That is to prepare people for gainful occupations which use home economics knowledge and skills. The two programs will fit side by side and one will help the other. The success of these two programs depends upon the degree to which they are separated.

Home Economics Education to prepare youth and adults for employment has become a reality as a result of the passage of the Vocational Education Act of 1963. For the first time in its history home economics education has an additional emphasis to that of educating for homemaking.

Programs may be developed for training in occupations involving the subject matter fields of child development, clothing, textiles, food and nutrition, institutional and home management, interior decorating, furnishings and equipment. Employment opportunities are greatest in occupations which provide services to families in the home or to persons in the community as in institutions or similar group situations.

This kind of help is needed by many people, not only because of social or health diagnosis but also because of demands in carrying on a normal family life in a culture in which employment of women is an accepted ingredient. It is needed in homes at all income levels, both urban and rural, where children need care that parents cannot give and where aged and disabled persons need care that is difficult to obtain.

This broadening of homemaker services will not only serve families in need of such assistance; it will create part-time or full-time employment for women with low incomes and encourage better use of trained professional womanpower.

The same basic knowledge and skills are the foundations for both types of Home Economic Programs. With different information, methods, goals, and experiences, the curriculum becomes effective instruction for those preparing for homemaking or for those training for gainful employment in occupations using the knowledge and skills of Home Economics.

Preparing people for employment is a more specialized type of program than for homemaking. It is necessary to narrow the learnings taught and to be very specific in those skills considered important to successful employment. Instruction needs to be sufficiently broad but at the same time intensive enough to prepare students for satisfying and continuing employment.

Teachers selected to teach these courses should have the following qualifications:

1. Background experience with occupations other than teaching
2. Awareness of employment needs of the community
3. Understanding of workers and the working conditions and problems between them
4. Ability to establish contact and good working relations with employers.

Many variations will be found in the programs for gainful employment as they are developed. The needs, interests, and abilities of the persons to be trained will affect the program of instruction as well as the need for services to homes and families. So far, materials have been developed for nine home or community service occupations. A suggested procedure for the area of child care has been developed and we would like to use this as our guide. I am also planning on participating in a workshop at Wayne this summer in this particular area.

A small scale employment survey in this area, conducted by myself revealed a definite need for the type of program we are able to offer. Checking over the programs offered by the MDTA in this area, I find none listed. An interview with Mr. Luther Olson, of the MESC (Royal Oak office) revealed a great need for Domestic workers, which they are unable to fill. I do not like to think of the proposed program as "Domestic"...even though it might fall somewhat in that category. The ABC Nursery Agency tells me that it is impossible to find anyone willing to work during the dinner hour. The daily newspapers carry ads which indicate a great need. Last summer, the Headstart Program, deplored the lack of trained people in the area of Childcare. This was true in Oakland County, as well as elsewhere. The students themselves, when approached on the subject, are most enthused and hopeful that we might have such a course. At the present time, I'd guess that 25% of my students are engaged in after school jobs, requiring them to care for children and prepare the evening dinner meal, for families other than their own. Another 25% are presently carrying for the younger children in their own families and preparing the evening meal. Summer employment involving girls assuming the responsibilities for mothers who must be absent from their home, is definitely available.

Mrs. Betty Malos of the UCS of Metropolitan Detroit, has suggested some aids we might use, and again feels there is a real need for this type of program, and that perhaps adults should be receiving this as well.

Early marriages, more women working, more specialized occupations, mean that jobs for the unskilled are becoming less and less available. There will be a great need for more service occupations, as many women return to the field of work.

In the 1970's it is predicted that almost one half of the labor force will be women, and assuming or combining two roles--homemaking and wage-earning. Most will have children and a need for a stable home(for consolation in time of trouble, and stimulation at all time for their best growth and development). Those with young children and adolescents will find this very difficult. Preparation for this dual role is obvious. Employment opportunities are greatestin occupations which provide services to families in the home, etc.

These are only a few of the reasons why home economics educators are concerned about preparing women and girls for gainful employment.

Factors to be considered in setting up a program...

1. Is there a need for this type of service in the community?
2. An advisory committee should be set up, to include:
   a. representative from school guidance staff
   b. local employment office
   c. potential employers
   d. informed, imaginative and dedicated people who can truly represent the community...

   (this committee to work with the home economics staff to study the need of group to be served, and the resources available for the training program.)

Programs must be designed to:

1. Develop skills (manipulative, managerial, and relationship)
2. Attitudes essential for securing employment
3. Successful performance of work required for the occupation

Trained job analysts from the Employment Office, in addition to our people in the Trade and Industrial field might help in setting up the plans for training and selecting essential learning experiences.

The job analysis will not only determine the content and the learning experiences required for helping trainees become good workers, but will also be the means of making a reasonable estimate of the time needed for the training program.

It will be necessary to provide time in a teacher's schedule for investigation of needs, contact with employers, development of curricular and instructional materials, counseling of pupils and supervision of the work experience program.

Penta County Vocational School in Perrysberg, Ohio has an excellent program in Childcare. It has been suggested by Mrs. Thelma Graper (Family Life Division of State Board of Education) that I visit and look into their program. This school is located just south of Toledo. Hazel Park High School has a similar program in progress, and I would also like to visit there. I have talked by phone with the principal, Mr. Newberry, who is most enthusiastic about the program.

In addition to the equipment needed (separate list), I should like to use four textbooks. It is difficult to limit one's self to one. Each book has so much to offer. With eight copies of each text (less if necessary), we could cover all areas well. I've listed them in the sequence that I would choose them in, if limited.

$4.-- 1. The Nursery School by Katherine H. Read.... W. B. Saunders Co.
Charles A. Bennett Co.

$4.95 2. The Developing Child by Holly Brisbane (Same given me by David Cuff, 103 S. Lewis, Saline, Michigan)

$3.66 3. Family Nursing and Child Care by C. Luise Riehl, R. N., (Same source as above)

$2.40 4. The World of Children By Marcella H. Ellett...Burgess Publishing Co.

The last two would be particularly aimed at the needs of the slower learners in the class... and also would be used , especially the last named, for Homemaking classes, in units on Childcare.

I envision the laboratory being used to train for wage earning, and yet available for observation of childcare and human development for other classes, not only in our department, but also in the biology and social studies departments. The one way observation glass, makes this arrangement very possible.

I believe that we can accommodate eight students per section, and should be able to handle two sections a week. The students would be in the nursery school lab for two mornings a week, and at a training station 2 or 3 mornings. The fifth morning would be spent in contacts with either students or employers etc.

Possible Training Stations

Providence Hospital
Beaumont Hospital
New Grace — Pediatrics Ward
Ardmore
Sinai

Nursery Schools, Blue Bird, Drayton Ave. CoOp, Gateway Nursery, Huntington Woods Nursery School, Jack & Jill, Pleasant Ridge CoOp, Paul Best CoOp

Ferndale has several excellent programs in job training, I feel this would be a valuable addition. I have all the materials necessary to set up the program, and also the qualifications for the position as teacher as outlined previously, including experience in the Wayne State University Home Economics Laboratory Nursery School.

Submitted by

Theda T. Connell (signed)

Home Economics Department

Course of Study
VOCATIONAL TRAINING PROGRAM
FOR
CHILDCARE AIDES

Ferndale High School Home Economics Department

I Orientation to Employment as A Child Care Aide

A. Importance of Occupation
B. Responsibilities assumed by a person so employed (including health standards)
C. Desirable personal characteristics (qualities employers seek)
D. Health and Grooming
E. Getting that job
F. Agreements between employer, school & aide
G. Getting acquainted with the children and the job situation
H. Types of positions available - skills required for each
   a. group day care centers
   b. hospitals
   c. institutional agencies providing homes for children
   d. in the home
   e. differences and similarities in jobs in homes and centers
   f. advantages and disadvantages of each type work
   g. other occupations involving work with children

II Orientation to the Child Day Care Center and Nursery School Laboratory

A. Physical plant
B. Organization
C. Brief introducation of characteristics and needs of young children and their mothers
D. Health and sanitation in the Day Care Center
E. Nursery School routine
G. Food handling and first aid in our school laboratory
H. Learning thru observation of the child's play

I. Play activities
J. Discipline
K. Behavior
L. Field trips, films and speakers on above areas..

a. Merrill Palmer Institute
b. Wayne University Laboratory Nursery Schools (HOME EC & ED DEPT.)
c. Brewster Douglas Day Care Center (CIVIL SERVICE)
d. Lafayette Clinic
e. Franklin Settlement House
f. St. Vincent, Sarah Fisher Home for Children
g. Methodist Children's Village

III Envirnoment and Heredity

IV Pregnancy and Prenatal Development

V Childbirth

VI Health & Emergencies & Safety

A. Emergencies
B. First Aid
C. Prevention of illness
D. Caring for the ill child
E. The patient's room
F. Nutrition
G. Childhood Disease

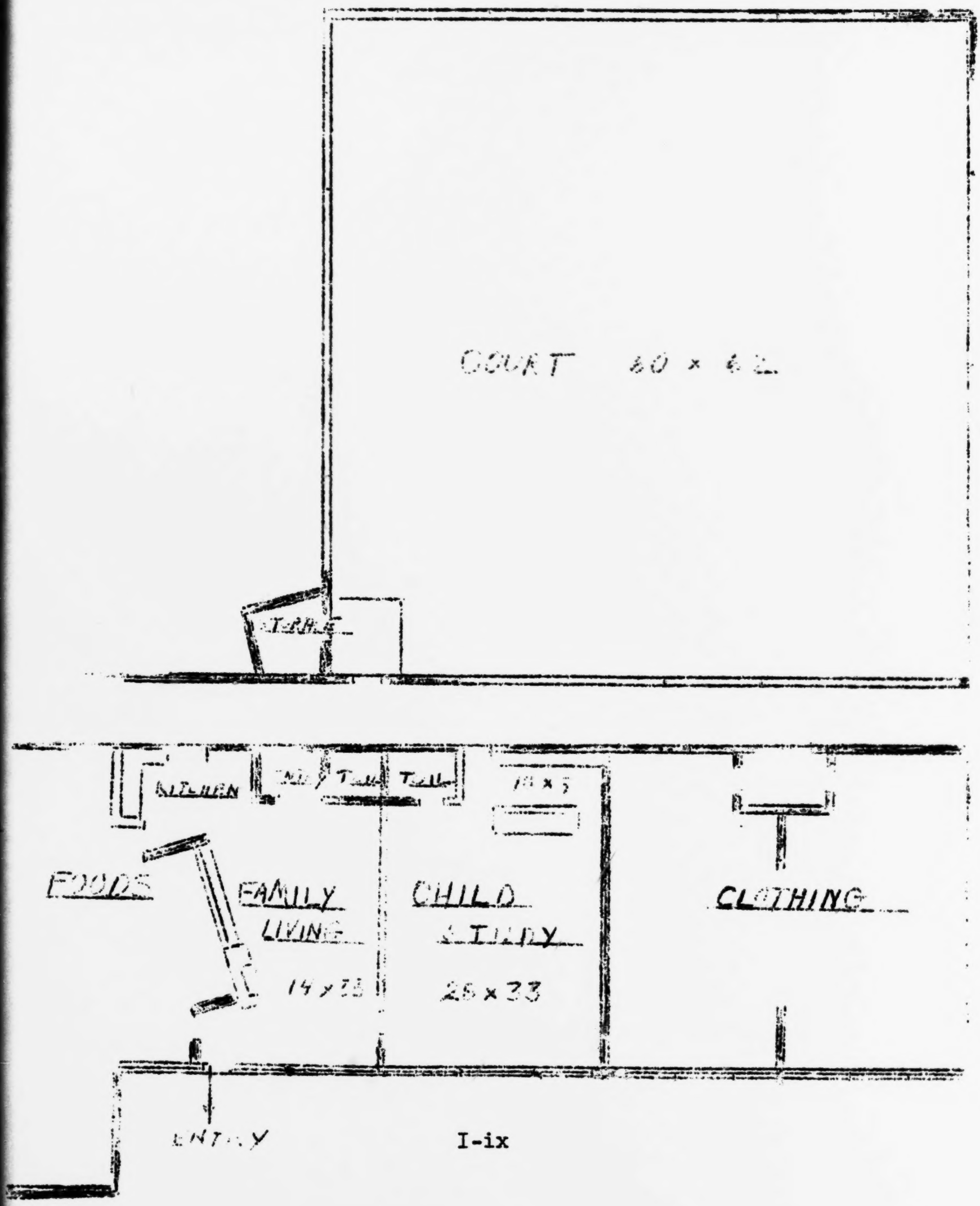
VIII Looking Toward Adulthood

A. Children and You
B. Values of good parenthood
C. Yesterday, today, and tomorrow

IX Summary and Evaluation

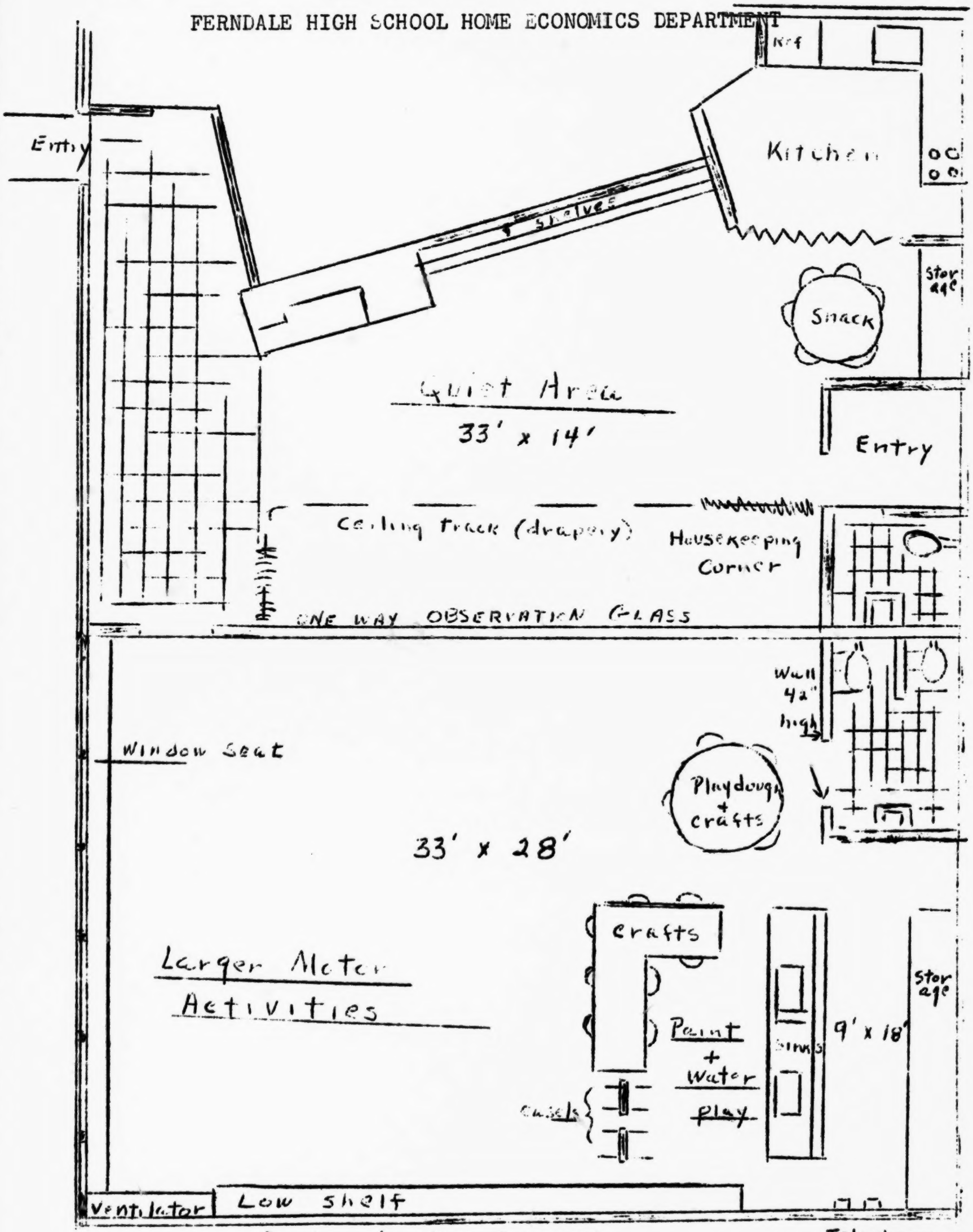
A. Overview and application of learnings
B. Employment procedures

SKETCH OF
FERNDALE HIGH SCHOOL
HOME ECONOMICS SUITE



CHILD STUDY CENTER

FERNDALE HIGH SCHOOL HOME ECONOMICS DEPARTMENT



Peg board wall covering

I-x

(Radiant heated floors)

Telephones
1. Outside
2. Intercom

1" = 6'

BACKGROUND EXPERIENCES HELPING ME TO DO THE TASK...

I INSTRUCTOR -- B.S. Degree in Education, Secondary and Vocational Certificates...

II DIRECTOR -- Very definitely previous work experience in nursery school prepared me for this role.

A. Berkley Area Nursery ...Service on Administrative Board (voluntary) 1953-1958
Paid salary as Assistant Teacher..taught for one semester (pregnancy forced retirement)

Experience gained:

1. Work with children in all areas of the program
2. Selection and purchase of equipment
3. Interviewed and hired teachers
4. Financial responsibilities of the school
5. Familiarizing self with licensing and other requirements of a good nursery school program
6. Planning and conducting parent meetings
7. Administrative Board Meetings and preparation of brief report for Berkley P.T.A. Council
8. EXPOSURE TO OTHERS IN NURSERY SCHOOL FIELD

B. Wayne State University Nursery School (Home Ec. Laboratory)
Paid salary as an Assistant Teacher (classified at WSU in pay schedule as a Laboratory Technician)

Experience gained:
1. Some of the above
2. Involvement in:
   a. individual interviews with prospective children and their mothers
   b. parent conferences
   c. planning and coordinating various aspects of the program delegating as much responsibility as possible to college students (College of Nursing, Education & Liberal Arts)
   d. parent meetings (of educational value)

III SUPERVISOR

A. Experiences at WSU Lab Nursery also include:

1. Supervision of college students and guiding them in the area under my jurisdiction.
2. Helping college students find their own strengths and weaknesses.
3. Evaluating student's work on a team composed of:
   a. Dr. Esther Callard-Supervisor
   b. Mrs. Luella Lutz-Director
   c. Mrs. Eileen Hartley -Co-assistant
4. Complete responsibility for part of program assigned me by the Director.

IV VOCATIONAL COORDINATOR

A. Contacts made thru the two above experiences opened many doors to me as I sought training stations. I knew what I was after and was able to make my point and sell them on the program. Earlier experiences helped me to see the problems and how to manage them. At this point I would discourage anyone without at least two years work experience in nursery schools and considerable study in the area of child growth and development.

V ADDITIONAL BACKGROUND AND ADDED EXPERIENCES OF GREAT HELP:

A. Graduate school-Wayne State University
B. Major in Human Development thru the Home Economics Department.

JOB DESCRIPTION OF INSTRUCTOR IN VOCATIONAL CHILDCARE AIDE PROGRAM

I INSTRUCTOR
- A. Homemaking IV
- B. Vocational Homemaking IV

II DIRECTOR OF THE LABORATORY NURSERY SCHOOL* involving:
- A. Individual interviews of prospective children and their mothers
- B. Conferences with parents throughout the year
- C. Selection of equipment and shopping for same
- D. Developing, planning, and coordination of the program
  - 1. delegating as much responsibility as possible to the high school students
- E. Supervision of the high school students on the program
- F. Developing good attitudes toward nutrition and hygiene in the program
- G. Meeting licensing requirements
- H. Planning and implementing parent meetings
- I. Interpretation of the Nursery School to parents, students, visitors, etc.

III SUPERVISOR - of the high school students
- A. Includes D, E, F above
- B. Guiding students in understanding the needs of children and their developmental processes
- C. Helping students to find their good points and those that need improvement
- D. Encouraging participation by student in all the Professional Meetings and Workshops for people in the field . . . my students have attended many, many outside functions this year on their own time and their own expense to improve themselves in this line of work. . including Cooperative Nursery School Workshops, Preschool Association of Metropolitan Detroit Workshops and meetings, plus private workshops in art, music and story telling.

IV VOCATIONAL COORDINATOR
- A. Locate training stations (minor in Distributive Ed. helped me on this one also!)
- B. Vocational Counseling
- C. Matching students and employers
- D. Evaluation of students on the job
- E. Luncheon for employers
- F. Participation in MOCA (Macomb-Oakland Coordinators Association)

G. Meetings and conferences with other Coordinators at Ferndale High School
H. CoOp banquet participation
I. Placement for summer and permanent positions

V. HOSTESS - Couldn't resist adding this one.. it has been the "bonus"... it has been fun and educational for both myself and the girls, as our visitors have come from far and near...

Form No. V.E. C24
Leland Vocational Education Conference
June, 1967

COORDINATORS' PITFALLS

1. Accepting students for "co-op" who have not had their present or prospective jobs evaluated.

2. Accepting students for "co-op" without adequate counseling.

3. Not knowing the prospective employer or job.

4. Not properly informing the employer of the total program.

   a. Not giving the employer an opportunity to help develop the written program.

   b. Not giving the employer an opportunity to participate with the instruction.

5. Not having a well organized and instructive related study program. (Related class should meet a minimum of 5 hours weekly.)

6. Not keeping all teachers informed as to the progress.

7. Not regularly giving the school administration a written progress report.

8. Not giving teachers an opportunity to participate - (selection, follow-up, and instruction).

9. Not visiting "co-op" work stations periodically. (Should visit every 4 to 6 weeks with variations).

10. Not contacting parents before starting their son or daughter on "co-op". (Possibly a parent, employer meeting in the Fall).

11. Not having an adequate selection process.

STUDENTS ENROLLED IN VOCATIONAL CHILDCARE
TRAINING PROGRAM 1966-67

I <u>Daycare Center</u>

A. Gateway

1. Sue Aubuchon (Roeper's Country Day School Fall of '67)*
2. Linda Gumro (Ferndale Recreation Dept. Summer Program "Storyteller")* (Roeper's Country Day School Fall of '67)*

B. Cherub Haven

1. Helen Norleen (Cherub Haven-summer '67)* (Must choose between Cherub Haven and Roeper's Country Day-Fall of '67)*
2. Mary Wilhite (U.S. Army-W.A.C.)*

II <u>Nursery Programs</u>

A. Huntington Woods

1. Suzy Chambers (Huntington Woods Nursery Summer of '67)* (Highland Park Junior College-Fall of '67 to prepare for Nursery School Education.)*
2. Kathy Young (Huntington Woods Nursery-Summer of '67)* (Huntington Woods Day Care Center-Fall of '67)*

B. Drayton Avenue Cooperative Nursery

1. Patricia Berndt (Helping her mother this summer--by assuming home-makers role while mother works.)* (Roeper's Country Day School Fall of '67)* (Oakland University--Nursery School Education, part-time student-Fall of '67)*

2. Betty Littlejjohn (Childcare in private home--Summer of '67)*
(Bible College or Beauty School--Fall '67)*

C. YWCA Ladies Day Out Nursery

1. Sue Weigandt (Left to enter Providence Hospital Training Program-Nov. '66--permanent position at Providence upon graduation June '67)*

III Child Development Center (Headstart)

A. Grant School

1. Johnnie Collins (Grant School--Summer of '67 and Fall '67)*

IV Health Centers

A. Providence Hospital

1. Doris Allgood (continuing--Summer '67)*
(Medical Technician School Fall of '67)*
2. Brenda Bozied (continuing--Summer '67)*
(Entering Macomb Community College for Associate Nursing Diploma--Fall '67)*
3. Renata Contesti (continuing--Summer '67)*
(Entering Providence School of Registered Nursing--Fall of '67)*
4. Linda Fair (continuing on permanent basis)*
5. Brenda McClelland (continuing--Summer '67)*
(Entering Shapero School for Practical Nursing--Fall of'67)*
6. Sue Weigant (continuing on permanent basis)*

B. Oakland County Health Dept.-Well child conference

1. Brenda McClelland (Left to enter Providence
2. Brenda Bozied Hospital Training Program in November '66)*

V Laboratory Nursery

A. Ferndale High School Home Ec Dept.

1. Lois Patton (Grant School--Summer '67)*
(possibly Roepers Country Day School--Fall of '67)*

2. *Sandy Bird (Huntington Woods Nursery in Fall of '67 as clerk-typist--filling in when needed as childcare aide-having received training in both areas.)*

* Sandy in addition to participation in Nursery School in the mornings worked as student assistant fifth period daily in the Nursery School assuming necessary clerical & typing responsibilities..Sandy received Honarary Award upon graduation for outstanding typing achievement.

* Information within parentheses refers to placement upon completion of the training program.

VOCATIONAL ASPECT BIBLIOGRAPHY

The Day Care Center Worker, M.D.T.A. Booklet

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How May Home Edonomics Teachers and Teacher Educators Contribute to the Total Occupational Education Emphasis, Peggy Dewar
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The Changing Roles of Women, Brown, Lemmon, Lippeatt
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Instructor Influence of Observations of a Child, Durrett and Schell
Journal of Home Economics, May 1967, Volume 59. No. 5

Supplement No. 1 to the Employment Aspect of Home Economics Education, A Selective Bibliography with Annotations, Ron Goodman
Illinois Teacher of Home Economics, Volume X, No. 6,
Spring 1966-67

Social Conditions and the Home Economics Curriculum, Mary Mather
Illinois Teacher of Home Economics, Volume X, No. 6,
Spring 1966-67

Young Children, The Journal of the National Association for the Education of Young Children (Well worth subscribing to).

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The Nursery School, Katherine H. Read (W.B. Saunders Co.) 1965, 4th Edition.

The Developing Child, Holly E. Brisbone (Chas Bennett Co. Inc.) 1966, 2nd Edition.

Child Development, Eley Hurlock, 1964, McGraw-Hill, 4th Edition.

Adolescent Development, Elizabeth Hurlock, McGraw-Hill, 1967, 3rd Edition.

Evaluation Materials for use in Technical Child Development, Marjorie Brown and Jane Plehal, (Burgess), 1966.

Family Nursing and Childcare, C. Luise Riehl, R.N,, 1966.

Understanding Human Development, Lane and Beauchamp, Prentice Hall 1962, 4th printing.

Adolescent Character and Personality, Haughurst Tabb, John Wiley Science Edition.

The Adolescent in Your Family, United States Department of Health, Educations and Welfare, Childrens Bureau.

Association for Childhood Educators International, 3615 Wisconsin Avenue North West, Washington, D.C. 20016 (Wealth of materials on every phase of childhood)

Human Development, Haimowitz and Haimowitz, Crowell, 1960 (Selected Readings)

Learning about Children, Shuey, Woods, and Young. Lippincott, 1958

The Birth Atlas, Maternity Health Center (Lovely life size photographs of models used to teach reproduction)

Gesell's books are excellent!

PAMPHLETS

A Healthy Personality for Your Child

Your Child from One to Six, Childrens Bureau Publication # 30, H.E.W.

Association for Childhood Education International, 3615 Washington Avenue North West, Washington D.C.

Young Children, (Magazine), National Association for Education of Young Children.

Science Re search Associates, Inc., 57 West Grand Avenue Chicago, Illinois.

Your Child from Six to Twelve, Childrens Bureau H.E.W.

Family Life Publications, Inc, Box 6725 Durham, North Carolina
(Excellent materials in this area)

An Introduction to Early Childhood Education, prepared for Teachers' Aides at Franklin Settlement Nursery

Nursery School Settings--Invitation to What?, National Association for Education of Young Children, 1958.

Blockbuilding, Esther Starks, (N.E.A.),1960

Creating with Materials for Work and Play, ACE 1, Bulletin #5.

What is Music for Young Children, National Association for Education of young Children, 1958.

Sand, Mud and Water Play, ACE 1

Discipline, ACE 1, 1957

Some Special Problems of Children, National Mental Health Foundation, Inc. 1947

Formula's for Fun, Nursery Training School of Boston (Tufts College)

Personal Data and Student Application Form

CONFIDENTIAL

Grade Level_____ Date _____

Name _____
Last First Middle

Homeroom No. ____ Counselor _____ Yr. in school __

Address _____ Phone _____

Social Security No. _____ Date of Birth _____

Home Address _____ Phone _____

Occupation _____ Business Address _____

Mother's name _____ Occupation _____

Health Condition: Please check one:
___ excellent ___ good ___ fair ___ poor

Physical Handicaps: ___ sight ___ hearing ___ limb
___ heart ___ specify other

You have ___ brothers and ___ sisters.

Are you now employed? ___ yes ___ no. If yes, state firm and address:

_____

_____

Date you began this job _____ Duties _____

Hours per week: ____ Hourly rate: ____ Weekly pay:____

Other work experience:
Employer _____ Duties _____ How long employed__

Employer _____Duties _____ How long employed__

Will you have a car available in the morning hours?

I am applying for acceptance in the HOME EC Employment Program. If I qualify for this program I shall assume the responsibilities and obligations that are required.

DATE_____ Students Signature_____
Parents Signature_____

Complete the following statements:

1. I am interested in this class because:

2. I hope that the class will help me to develop the following abilities and skills.

Health, Attendance and Disciplinary Record

CONFIDENTIAL

Student's Name _____ Date _____
Last First Middle

Home room _____ Counselor _____ Grade ____

Health Record:

Date of Birth: _____

Physical Disabliities:

Other Pertinent Factors:

_____
Signature of Health Offical

Attendance:

	Days Abs.	Days Tardy	Unexcused Abs.
Freshman	_____	_____	_____
Sophmore	_____	_____	_____
Junior	_____	_____	_____

Suspension for truancy: ____yes ____no indicate year(s)

_____
Signature of Attendance Offical

Disciplinary Actions:

Detentions: very often ____
often ____
seldom ____
never ____

Primary reason(s) for disciplinary action:

Suspension for disciplinary reason: How many? ____
Why?

Other comments:

_____
Signature of Counselor

Criteria for Selection
of
Children for Ferndale High School
Home Economics Laboratory Nursery School

1. Must be three years old by December 1st, 1966 and inelgible for 1966 kdg program.
2. Six boys - ages distributed broadly from 3 thru 5.
3. Six girls - ages distributed broadly from 3 thru 5.
4. Must enroll for five day week program.
5. Must furnish own transportation and delivery into the building, and exit from same.
6. Preference will be given to children enrolling for entire school year. No one will be accepted for less than one semester.
7. Tuition of $43.30 per year must be paid by personal check or money order and is due in two installments. First one due on September 25th, second one January 25. If this creates a hardship, we may be able to make some allowances.
8. Refunds will be given ONLY upon written request, and on a percentage basis. After eight weeks of semester have passed, no refund will be made for balance of that semester.
9. Some parental participation will be expected upon request. This might include transportation for a field trip, telephone calls in case of an emergency, a few meetings for parents during the school year.

Preference will be given to children living within the district, but we shall be happy to put other children's names on our waiting list, should we be unable to fill our quota (12 children) from our school district.

FERNDALE HIGH SCHOOL in cooperation with the State Board of Control for Vocational Education and_____ _____ join in this

COOPERATIVE TRAINING PROGRAM

Trainee_____ Telephone_____

Date of birth_____ Address_____

Work Permit No._____ Occupation _____

Job Approval No._____ Issued_____ Expires_____

Deviation issued_____Expires_____

JOB ACTIVITIES RELATED INSTRUCTION

The above trainee's program and conditions of employment are satisfactory to Ferndale High School and _____ _____, each of whom assumes responsibility for training under the following conditions:

1. Training begins on _____ and terminates on _____ or upon agreement of all parties involved.

2. The trainee shall diligently and faithfully perform the work duties of the job and abide by the plan of training as outlined above.

3. The employer agrees to provide bona fide training in the occupation and according to the terms stated above.

4. The trainee is subject to the rules and policies of the employer and may be transferred or dismissed when violations occur.

5. This training program agreed upon shall not be interrupted by either trainee or employer without consultation with the coordinator.

6. The employment of the trainee shall conform to all federal, state, and local laws and regulations.

APPROVED:

Employer	Date	Parent or Guardian	Date
Trainee	Date	Coordinator	Date

NOTE: The purpose of this training agreement is a memorandum for all parties concerned and is not to be considered a binding legal contract in any way.

JOB DESCRIPTION
(as given by employers)

I Daycare Centers:

A. Qualities sought in Childcare Aides

1. Loves children
2. Patience (don't threaten unless you follow through)
3. Be firm! Or kids take advantage (interpreted by class.. as "setting & maintaining limits")
4. Don't amuse them! Let them discover things on their own.
5. Don't be "too" sympathetic.
6. Happy countenance--to attract Children.
7. Alert-quick-eyes in back of head!!
8. Open-minded, not afraid to ask questions.
9. Being willing to accept responsibility.
10. Have Iniative.
11. Neatness & cleanliness (well groomed).
12. Warm personality.
13. Ready smile.
14. Interested in children--child development background desirable.

B. Skills

1. Selection of stories and songs, appropriate for a given age group.
2. Knowledge of various "story telling" techniques and acquaintance with
   a. reading technique
   b. "telling" a story
   c. finger play
   d. puppetry
   e. felt board
   f. chalk board
3. Lead singing time.
4. Make playdough, paints, etc.
5. Musical instrument ability good.
6. Science knowledge would be nice.

Suggestion: Have "aides" work in areas they feel most confident in. Let them do what they do best! Specialization is good in this area of employment.

II Childcare Institution

A. Qualities
   1. (See list for Daycare Center -- appeared the same.)

B. Skills

   1. Help kids get dressed.
   2. Supervise nursery.
   3. Help with baths.
   4. Bed making.
   5. Dishes!
   6. Children's meal preparations.

Responsibilities in Assigned Areas

I PAINT AREA

1. SET UP PAINTS AND/OR WATER PLAY. Remember to spread newspaper under easels and on tables when used for these purposes.

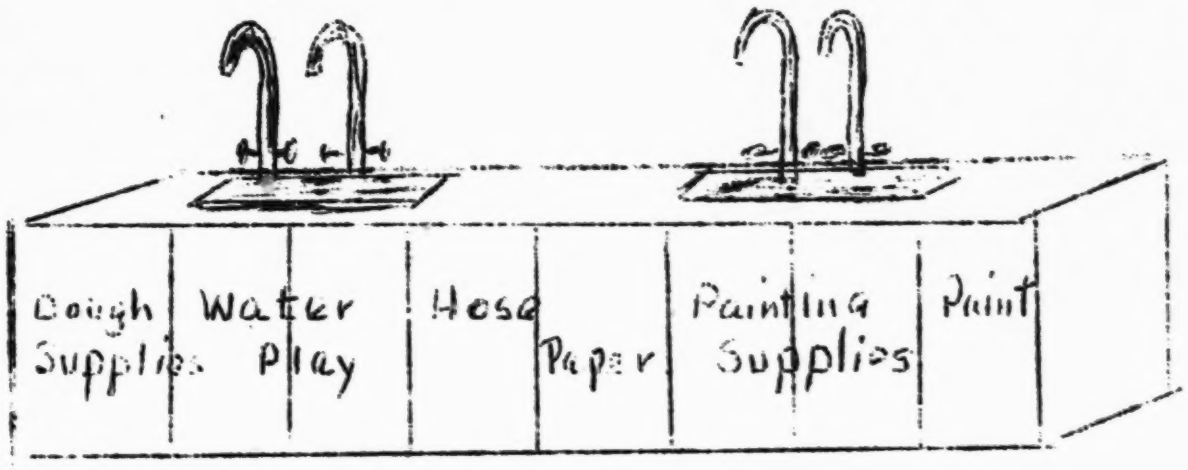
2. SET UP DOUGH TABLE (not necessary every day)

3. PLAN ON SOME SPECIAL ACTIVITY in this area every day - for instance, "sponge pain ting," or "blowing bubbles", "spatter paint", etc, be creative do not use the same thing every day. Look for new ideas in reading materials provided and workshops attended.

4. KEEP AN EYE ON SUPPLIES - turn in a shopping list to me for anticipated needs. . . (Paint running low? Which color, etc.)

5. CLEANUP INVOLVES COMPLETE CLEANING OF AREA, everything stored in proper place in cupboard and aprons tied to easel or on hooks (not thrown over boxes, counters, or on floor).

6. PAINT TRAYS ON EASELS TO BE SCRUBBED THROUGHLY, and tops screwed tightly on paints. Brushes washed (by children perhaps) tips shaped and left to dry.



II BLOCK & GYM AND/OR OUTDOOR AREA

1. SET UP SOME INVITING PLAY. . . . perhaps planks across two blocks, or a road for trucks or the beginning of a building etc.

2. CLIMBING GYM AND SLIDE arranged so as not to enter with traffic pattern of nursery school.

3. IF ROPES ARE USED, check the knots and condition of ropes frequently.

4. STORY FOR FOUR YEAR OLDS, take turns with the story for instance:

   1st and 3rd weeks-Girls in charge
   2nd and 4th weeks-Helper

III FAMILY LIVING AREA (QUIET ACTIVITIES)

1. SET UP INTERESTING DISPLAY OF BOOKS OR PUZZLES.
2. SCIENCE INTEREST
3. Other quiet activity.
4. Phonograph
5. Housekeeping, dramatic play (hospital, doctor, etc.)
6. Help greet children at the door in the morning.
7. STORY TIME
   1st and 3rd weeks-Girl in charge
   2nd and 4th weeks-Helper

IV KITCHEN AREA (SNACK TIME)

1. Plan menu's a week ahead.
2. PLAN GROCERY LIST a week in advance
3. SHOP FOR GROCERIES (see Mrs. Connell for money)
4. SNACK READY BY 9:45, involve the children, sit at the table with them in a small chair.
   Girl in charge 1st and 3rd weeks
   Helper in charge 2nd and 4th weeks
5. GOOD HYGIENE AND SAFETY HABITS. Dispose of all cups, napkins and paper plates each day. Only use metal pitchers when absolutely necessary. Scrub all work surfaces and tables thoroughly before and after food preparation and serving.

Snack should ALWAYS include three food groups:

1. Fruit or Vegetable
2. Cereal (includes crackers, breads, dry cereals, etc.
3. Milk (available thru cafeteria at 2¢ per carton, and also cheese is good).

TASKS OF VOCATIONAL CHILDCARE STUDENTS

Team	Name	Areas
A	Betty Littlejohn Linda Gumro	I Kitchen and Snack
B	Pat Berndt Sue Chambers Lois Patton	II Family Living Quiet Activities
C	Cathy Young Sandy Bird	III Blocks, Gym and Others
D	Mary Wilhite Sue Aubuchon	IV Paints, and Crafts

ASSIGNMENTS

February

Areas	Team
I	A
II	B
III	C
IV	D

April

Areas	Team
I	C
II	D
III	A
IV	B

March

Areas	Team
I	B
II	C
III	D
IV	A

May

Areas	Team
I	D
II	A
III	B
IV	C

Providence Hospital
Auxiliary Nursing Personnel
Nurse Aide Permitted Activities

- Addressograph, use of
- Admission of Patient
  - Belongings, care of
- Baths, giving of
  - Assist with
  - Complete
    - Care of hair, eyes, nails, skin
    - Oral care
    - Back care
    - Decubiti, prevention of
    - Decubiti, care of unopened redden areas
  - Others
    - Tub bath
    - Shower
    - Sitz baths
    - Alcohol sponge
  - Perineal care, draping
  - Shampoo
- Bedmaking
  - Closed bed
  - Open bed
  - Operation of beds
  - Fracture bed
  - Recovery bed
  - Occupied bed
  - Stripping bed
- Bedpan, urinal
  - Giving, removing, cleaning
  - Commode, use of
  - Fracture, bedpan, use of
- Body mechanics, use of
  - Nurse activities
    - Correct posture
    - Lifting, bending
  - Patient Activities (bed, chair, ambulation)
  - Body alignment
  - Range of motion
- Binders, application of (Abdominal, Breast, Scultetus)
- Cardiac patient (routine care, precautions, observations)
- Care of unit after discharge
  - Stripping unit
  - Utensils
  - Making up empty unit
- Cross infection, prevention of
  - Handwashing
  - Equipment, care of
  - Linen, care of
  - Patient's belongings, care of

Diabetic patient (routine care, precautions, observations)
    Clinitest
    Acetest
Diet-food trays, observation of
    Trays
    Feeding, patients
    Special diets
        Diabetic trays (serving, checking, reporting)
        Sippy diet (care of container, replacement of Sippy feeding, administration of Sippy feeding to patient)
    Nourishments, distribution of
Discharge of patient (routine, ambulance)
Drinking water
    Passing water to patient
    Glasses and pitchers, care of
Enemas, administration of
    Retention-oil
    Non Retention (soap, soda, fleet)
    Siphoning an enema
Flowers, care of
Heat and cold, application of
    Ice bag, collar
    Hot water bag
    Perineal lamp
    Heat cradle, care of patient with
Hospital routines on each tour of duty
Intake-Output
    Oral intake, measuring and recording of
    Output, measuring and recording of
    Special drainages, measuring and recording of
        Foley catheter drainage bag
        Levin tube drainage bag
        Incisional or rectal tube drainage bag
        Waganstein suction machine
    Residual urine
Isolation Technique
    Instituting Isolation Technique
    Daily care of patient (care of food trays, linen, utensils, excretions, special equipment)
    Gown technique
    Discontinuing Isolation Technique
Kardex-Nursing Care Plan
Observation
    Patient, symptoms of
    Nursing unit, safety and neatness of
Orthopedic patient (routine care, precautions, observations
Oxygen Therapy
    Precautions, use of
    Patient care (must be assisted by nurse)
    Oxygen tent, care of (exhaust, screens, defrost receptacle)

Patient activity
- Positions in bed (Fowlers, Semi Fowlers, Gatch moving, turning, edge of bed)
- Chair, getting patient up
- Porto life, use of
- Ambulation

Physical examination, assisting physician with
- General
- Vaginal
- Rectal
- Examining room, use of

Pneumatic tube
Post Mortem care
Post operative care, routine
Post-partum patient, care of
- Admission of patient
- Admission bath (breast care, perineal care, observations)
- Special routines

Pre-operative care, routine
Safety measures, use of
- Restraints (gauze, sheet, cufflets, anklets, harness, bethea)
- Side rails

Signal lights, answering of
Special devices, use of (rubber ring, bedboard, foot cradle, foot block, sandbags,
Specimens collection of
- Urine from bedpan, urinal, (catheter)
- Urine, 24 hour specimen
- Stool
- Sputum, routine
- Sputum, 24-hour
- Tissue

Spiritual care
- Communion, preparation of the patient for
- Sacrament of the sick, preparation of the patient for

Straining urine
Team Nursing, participation in
Temperature, pulse, respirations
- Temperature (oral, rectal, axillary)
- Recording of

Weighing patients

RESPONSIBILITIES WHILE ASSIGNED TO PEDIATRICS

1. orientation to care of the sick child
2. physical and emotional care of pre-school child
3. physical and emotional care of school age child
4. physical and emotional care of adolescent
5. feeding the infant
6. feeding the pre-schooler (assisting)
7. morning care
   a. bathing - complete and partial care
   b. brushing teeth
   c. combing hair
   d. making beds
      1. crib bed
      2. adult bed

ROUTINE NURSING CARE

1. bathing babies - dressing - making crib beds
2. weighing
3. taking temperatures
4. assisting a physical examination
5. feeding - holding - burping babies
6. taking babies to mother assisting them in feeding their baby, checking identification of baby and mother's wrist band
7. changing diapers
8. observations of newborns - charting
9. Hand washing - technique & gowning

MEETING EMOTIONAL CARE

1. safety factors
   a. safety pin
   b. side rails
   c. crib net restraints
   d. safe handling of infants
   e. safe handling of toddlers
   f. keeping dangerous objects out of reach
   g. careful handwashing
2. observation of:
   a. pre-schooler
   b. infant
   c. toddler
   d. school age
   e. adolescent
3. taking children to various departments for examinations - isotope
4. Play therapy - procedures
5. Oxygen therapy - crup ette - urine collectors

EVALUATION OF CHILDCARE AIDE

By Supervising Teacher _____
name

Training Station _____ Hours _____

In order to help us improve our program, we would like to have you give us you frank opinion of the student assigned to your station. Anything you have to share will be strictly confidential and will be kept in my personal file on each student.

	YES	NO	NOT SURE
1. Did she have a personality that appealed to you? (Did you like her as a person?)	___	___	_____
2. Was she pleasant at all times?	___	___	_____
3. Was she interested in her work?	___	___	_____
4. Did she take suggestions well?	___	___	_____
5. Did she keep the facilities in order?	___	___	_____
6. Did she practice good health and sanitation habits?	___	___	_____
7. Did she help prepare food?	___	___	_____
Did she help serve it?	___	___	_____
Did she function well in this capacity?	___	___	_____
8. Did she get along well with children?	___	___	_____
a. sensitive to needs of the individual child?	___	___	_____
b. Flexible in her handling of children?	___	___	_____
c. alert and quick to respond to emergencies?	___	___	_____
d. handle her feelings well when unpleasant or frustrating tasks were given her?	___	___	_____

	YES.	NO	NOTSURE
e. appear confident?	___	___	_____
F. help build confidence in children by her handling?	___	___	_____
g. did hostility in children upset her?	___	___	_____
h. Did she handle these situations well?	___	___	_____
i. did aggressive children appear to alarm her?	___	___	_____
j. was she able to maintain "limits?"	___	___	_____
k. did she contribute many of her own ideas?	___	___	_____
9. Did she go ahead with her work or wait to be told what to do?	___	___	_____
10. Did she get along well with other members of the staff?	___	___	_____

11. Would you say the skills acquired in the school classroom were:

Excellent ____ Good ____ Poor ____ Unsatisfactory___

12. Which additional skills would you suggest would be of further help?

_____

_____

_____

13. In which area of the nursery did this student appear most competent? _____

_____

_____

14. Which area was the most difficult for her to manage?

_____ _____

_____

Would you recommend her for employment as a childcare aide in the following positions?

	YES	NO	MAYBE
1. Day care center	___	___	___
2. Childcare Institution St. Vincent, Sarah Fisher Home for Children Methodist Children's Village	___	___	___
3. Child Development Center (year around nursery school for underprivileged)	___	___	___
4. Kindergarten Teacher's Aide	___	___	___
5. Pediatric Ward of Hospital	___	___	___
6. Private home			
a. limit to short hours only	___	___	___
b. Complete charge of children of working mothers, or motherless home	___	___	___

Any other comments you have on this student, or you own feelings about our program would be most appreicated. We can improve only if we know what our shortcomings are...

_____

_____

_____

_____

_____

Name _____ Date assigned _____

Training Firm _____ Date Due _____

"KNOW THYSELF"

To the trainee: As a student-learner you want to know "what's par for the course" and whether you are measuring up to the expectations of your employer. Not everyone is willing to admit it, but everyone wants to know how he is doing. Completion of this rating sheet will be assigned when your teacher decides on the rating period. Your teacher may want you to rate yourself or may ask your training station supervisor to do it. In either case, study the rating sheet carefully because it covers the essentials expected of every worker. Check carefully also the five subpoints under each category -- remember you can be strong overall but still need improvement in one or more phases of your development. You can use this rating sheet also as a guide to improving yourself from week to week.

<u>Directions to the person doing the rating -- the trainee or his superior</u>:

1. Note that each rating is defined in terms of several traits or characteristics that the trainee should exhibit.

2. Rate each trait in accordance with the standards that regular employees must meet.

3. Give an overall rating in each area by circling the word which best describes the employee's performance: Example - "Average". Then indicate the number of any particular subpoint in which the trainee needs improvement:
   Example: 1 <u>2</u> 3 4 <u>5</u>

.....

A. PUNCTUALITY ... to mean: (1) arriving at work on time, (2) completing work by the deadline, (3) returning from breaks and lunch on time, (4) arranging for lateness or time off in advance, and (5) giving the impression of alertness and "being all there."

.....

Superior Above Average Below Average Poor
Needs help in: 1 2 3 4 5

.....

B. HUMAN RELATIONS ... to mean: (1) cooperates with supervisors and accepts suggestions, (2) courteous and friendly manner, but not "too friendly," (3) controls his emotions for the best interest of all, (4) does not cause dissensions, and (5) responds to the best in others.

.....

Superior Above Average Below Average Poor
Needs help in: 1 2 3 4 5

.....

C. ATTITUDES TOWARD WORK ... to mean: (1) looks for ways to improve, (2) is a real "hustler," (3) does not have to be told what to do next, (4) is inquisitive, and (5) is enthusiastic, not cool about his work.

.....

Superior Above Average Below Average Poor
Needs help in: 1 2 3 4 5

.....

D. PERSONAL APPEARANCE ... to mean: (1) dresses according to the rules, (2) grooming is above reproach, (3) never gives the impression he needs more sleep, (4) speaks well and shows good choice of words, and (5) presents a businesslike appearance.

.....

Superior Above average Below Average Poor
Needs help in: 1 2 3 4 5

.....

E. WORKMANSHIP ... to mean: (1) budgets his time carefully, (2) shows thoroughness in his work, (3) feels that even routine jobs are important, (4) is accurate and careful, giving attention to details, and (5) gets the job done in a minimum amount of time.

.....

Superior Above Average Below Average Poor
Needs help in: 1 2 3 4 5

.....

F. IMPROVEMENT IN SKILL ... to mean: (1) is able to think for himself without excessive supervision, (2) does not have the attitude that he is perfect, (3) recognizes the value of the training opportunity offered him, (4) has gained satisfactory speed and accuracy on the job, and (5) has achieved businesslike habits.

.....

Superior Above Average Below Average Poor
Needs help in: 1 2 3 4 5
.....

If this student were available for full-time employment, would you on the basis of your experience with him: (check one)

____ 1. Try by all means to hire him?

____ 2. Hire him if he applied?

____ 3. Employ him if no one else were available?

____ 4. Refuse to employ him in the firm?

General comments concerning bright spots or deficiencies: _____
_____
_____
_____
_____

Firm name _____

Name of Rater _____

Date of Rating _____

Helen M. Murphy R.N.
Service Instructor

Midterm Evaluation
Providence Hospital
Nurse Aide Evaluation

Name: Brenda McClelland

Date of Employment: 10-31-66
Date of Evaluation: 12-22-66

APPEARANCE:

	Good	Average	Poor
a. Uniform		X	
b. Shoes	X		
c. Hair		X	
d. Personal Hygiene	X		

COMMENTS: Always clean and neat.

COMPETENCY OF PROCEDURES:

a. Knowledge of Principles	X		
b. Ability to carry out procedures			
1. Speed		X	
2. Considers the safety, economy, comfort of patient	X		
3. Organization of work		X	

COMMENTS: Good correlation of theory and practice. Usually knows the reasons for what she is doing. Carries out procedures as taught. Vision is poor, but this has not interfered with her work. Very conscientious of the safety and comfort of her patients. Improving in the planning of her work, but still needs to concentrate her efforts in this area.

ABILITY TO WORK WITH OTHERS:

	Good	Average	Poor
a. Attitude toward correction	~~X~~	~~X~~	
b. Attitude toward helping others	X		

COMMENTS: Very receptive - listens carefully to what she is being told. Eager to learn. Rarely have to repeat the same thing twice. Very willing to help others, but still pretty much involved with her own work.

INITATIVE AND RESPONSIBILITY:

a. Reports to Team Leader		X	
1. On and off duty		X	
2. Symptoms and changes in pt's condition		X	
3. Errors			
4. Accidents			
5. Unfinished assignment		X	
b. Responsibility to Patient			
1. Recognizes physical need of patients and the care of them and report to T.L.	X	X	
c. Responsibility to Self			
1. Has self-confidence		X	X
2. Completes assignments	X	X	
3. Asks when in doubt	X	X	
4. Usually is punctual		X	

COMMENTS: Improving here. A little less afraid and shy. Needs to speak louder to patients and personnel. Reports to team leader are more pertinent. Gives thorough basic nursing care.

COMMENTS: Becoming more aware of her patients physical needs and many of the more obvious emotional needs. Still a little ill at ease with team leaders. Hesitates asking her team leaders to repeat something she doesn't understand. Still lacks self-confidence but I feel with more experience will continue to improve in this area. Can be trusted to ask when in doubt!

PROFESSIONAL FITNESS:

	Good	Average	Poor
a. Approach to patient	X		
b. Poise		X	
c. Deportment on duty	X		

COMMENTS: Very sincere and interested in her patients as individuals. Goes out of her way to make them more comfortable. Is able to determine the atmosphere of the sick room, and act accordingly.

Providence Hospital
16001 Nine Mile Road
Southfield, Michigan
Telephone 353-3000

June 27, 1967

Theda T. Connell, Vocational Coordinator
Home Economics Department
Ferndale High School
881 Pinecrest
Ferndale, Michigan 48220

Dear Mrs. Connell:

I am sorry I did not answer your request sooner for an evaluation of our cooperative venture in Ferndale High School CoOp Program.

It was a very interesting and challenging experience working with the students from Ferndale High. They had many problems becoming adjusted to the hospital setting. Unfortunately in the group were two pregnant girls,* but the rest of the students were interested teenagers.

Because your program was geared to a Child Care Aide, the students worked only in Pediatrics and Nursery. This concept of a CoOp Nurse Aide program presents some problems in the utilization of the clinical facilities. We are a teaching hospital and have professional student nurses who rotate through the various clinical areas for experience. CoOp nurse aides who are for specific areas are not available for assistance in the clinical areas that may have the greatest need because of their restricted nature. In our previous experience with CoOp programs, we have been able to utilize the services of the CoOp nurse aide in the area that did not have students and was in need of more staff to assist in morning care. In our commitment for child care aides, when our census in these highly non-predictable areas of pediatrics and nursery was low, we were often overstaffed in these areas but could have utilized the staff other places.

*See PART II - Section 4, Health Centers.

This has been a very interesting and highly rewarding experience for our educational staff. Our patients have gained from the enthusiastic students who gave loving care. The students have matured and become more confident in their abilities and we think that in some way this experience with us has helped them to think more about their futures. This was a good program this year. But because Providence Hospital is a teaching institution with a commitment to the education of nursing students, we cannot take a specialized program on the nurse aide level for Child Care Aides.

Perhaps a hospital like Children's, or a nursery school setting, of facilities for the handicapped child may be able to utilize the services of a Child Care Aide to a greater advantage than we can at this time.

Sincerely yours,

Mary Morris/ne (Signed)

(Mrs.)Mary Morris, R.N.
Assistant Director
In-Service Coordinator

MM:nb

EMPLOYER EVALUATION
OF VOCATIONAL
CHILDCARE PROGRAM

A,B,C,D,E, (EMPLOYER) June 6, 1967 (DATE)

Recognizing that improvement can always be made... I would appreciate your honest evaluation of this past year's program. Do not be concerned about hurting my feelings, or the feelings of the girls. We can only improve if you can be very frank, and express what you truly feel.

1. How well have the girls performed in relation to your orginal expectation of high school students?

   A. Better than I expected.
   B. As I had a very good experience previously with high school, Sue performed as well as I had expected.
   C. Much better than I had expected.
   D. Johnnie has shown much initiative in her work, her ability to get along well with people has helped her along. Her attendance, punctuality were excellent.
   E. One did very well. One failed in attendance.

2. Which areas do you personally feel they excel in? In which areas do they need help? Would you feel you could turn any part of your program over to them completely? (If so, which area or areas?)

   A. Responsibility to the children.
      Some ways to handle "hard to handle children".
      Outdoor play, story time, free play time, painting.
   B. I thing Sue's best point is her preceptiviness her insight into their needs and the fact that she is very adaptable.
   C. I feel that Helen would work into any nursery situation well, but have never turned any part of program over to her.
   D. Didn't answer.
   E. They are good in the housekeeping area.
      They are able to have complete charge.

3. Would you recommend the program to other employers? Please state reasons for or against.

   A. Yes. These girls have proven to me that I did need young people to work with children. They have a new, fresh approach. They give the teachers a breathing spell. I have found good girls to stay and work permanently. (I save ads this way!)
   B. Yes.
   C. Yes.
   D. Yes. I feel this is a means of gaining valuable experience toward a specific skill as well as a possibility for future employment.
   E. Yes.

4. Did you feel your assistant or aide (our girls) functioned well in her capacity? How much actual responsibility did she have?

   A. Yes. As much as she could take and wanted.
   B. Yes. Sue had the complete responsibility (along with one other employer) of the after school program.
   C. Yes.
   D. Yes. She has taken complete charge of games at circle activity, initiated the art activity on occasion, hand washing and bathroom, and story reading and taking attendance.
   E. Yes. They helped set up the nursery, took complete charge of the housekeeping, one aide helped serve refreshments.

5. How often do you personally feel the girls should be rated? (4 times a year is the recommendation made by the high school) reasons?

   A. I'd like to rate them only 1 time each semester, but I'd like to communicate by phone with the school about 2 times a semester.
   B. 3 times--after the first 6 weeks--middle of year--end of year.
   C. More times than this year. To have closer contact with the girls and the school.
   D. Over a period of time, the girls begin to learn to work with more ease, and find more areas to move about and the rating should show growth.
   E. 4 times is agreeable.

6. Would you prefer that I came and observed them on the job on each of these occasions, or at a time when nursery is not in session? Would it help to have the girls in on the evaluation when I make my visits?

   A. This is not necessary. Everyone makes his own evaluation. I think too many get cumbersome--changes view points.
   B. Yes--I think a three person evaluation would work well.
   C. I don't think it would be necessary for you to observe the girls on the job each time. Perhaps once or twice the girls could be with the employers and you during the evaluation.
   D. Yes to both of these.
   E. I prefer the vocational coordinator and also the girl be present at the evaluation.

7. Did our time schedule suit you? If not, what recommendations would you make?

   A. Seemed fine.
   B. Yes, for after school. However, I feel that Sue was not able to use all of the things that she has learned in the after school situation--as this is primarly a free play time.
   C. Yes.
   D. Yes, but I feel it would be beneficial to let the girls go on experience trips with the children.
   E. Yes.

8. The girls have been paid $1.25 per hour during training period. What salary do you personally feel they may expect or be entitled to on their jobs upon graduation from high school?

   A. $1.50 per hour.
   B. $1.50 per hour.
   C. $1.50 per hour.
   D. $1.50 per hour.
   E. It depends on the girl.

9. If I'm not being too personal what salary do your adult aides earn per hour? (a rough figure please...do not answer, if you prefer not to)...

A. $1.50 in the starting salary.
B. No answer.
C. Between $2.00 and $3.00 per hour.
D. Between $2.00 and $2.25 per hour.
E. No answer.

10. Do you plan on retaining the girl you've helped train this year? If not, why not?

A. I plan to hire one.
B. I would definitely like to have Sue on my staff.
C. I would like very much to retain Helen, but I am not sure that she wants to remain.
D. ?
E. Depends on the girls.

11. Would you be interested in taking on another student next year? We have interviewed personally each and every girl and really have an outstanding group coming in. We've learned a good deal about girls this year and expect to have greater success with larger number of girls next year...

A. October in the half day school. I need girls in the p.m. maybe (1-6 or 2-6 or 3-6) in my all day school.
B. Yes--as soon as you feel they are ready to begin.
C. Yes.
D. Yes, I am not totally informed on opening date.
E. Yes. I would like to have the girl or girls attend our orientation before they start working. We plan to start the nursery Oct. 3, but orientation will be at the end of Sept.

12. Your opinion of the program.

A. Excellent!! The girls showed definite improvement as the weeks rolled on.
B. For starting from scratch I think you have done a wonderful job--naturally, you will find that you will want to change many things but its been a big help to me as an employer and most of all I think it has been a tremendous value to your girls.
C. Very fine--a very good job for a new program and a very good relationship between your department and the nurseries.

D. I feel the program is definitely an asset to the girls, as well as the communities from which they came. The experience gained will help them decide on definite areas of employment or can be applied in the future as a mother and fit into the business world.

E. I think it was a very good learning experience.

13. Please write a "job description" as you see it, at your nursery.

A. 1. Learn about children on the job--by asking questions.
   2. Station themselves in an activity spot, painting, puzzles, housekeeping, dough, water play and crafts.
   3. Assist children at the sink or toilet room.
   4. Take over stories--rhythms.

B. As far as job description goes, all I can say is its being a jack of all trades,

C. To work in the areas that we need people in. The program is not structured and the school is small so the program is not planned far ahead.

D. 1. Art Activity-(Make a stuffed fish).
   2. Pass materials--(scissors, staplers, newspaper, paint and brushes.
   3. Give each child a pre-cut fish (2 Pieces) ask him to put them together and staple one side. Cut paper and stuff fish, staple together. Instruct children to paint fish all over. Draw its eyes and mouth with a paint brush. Let them help you wash paint brushes, roll up newspaper and wash tables.

E. Help to set up the nursery, help the teacher during the session.

COMMENTS OF "COOPERATIVE NURSERY" GROUP

President (upon being approached as to using the nursery for a possible training station)

President:

August "CoOp Nurseries do not hire other than a head teacher--but I will suggest the possibility of a CoOp student to our board.

September "Our board feels having a student would be very nice. We do not feel we could pay her, unless you could also provide an afternoon girl. It wouldn't be fair to remove money from our treasury when only one of our groups would benefit."

High School Teacher-Coordinator:

November 1st Pat was placed in the nursery as a volunteer in November--The High School Instructor wanted someone in the class to have the experience of participating in a Parent Cooperative Nursery.

CoOp Nursery Teacher:

November 21st "Patty is wonderful, she's so much help and the children adore her. She catches on so fast."

December 15th "The board met last night and upon my recommendation decided to pay Patty. She is doing so very well and is such a help. She's familiar with routine and equipment and is able to help. We want to pay her whatever the other girls are receiving. Can you tell me what it is? Could you supply us with another student for the morning Pat is in your class?"

January "Have you found another girl for us yet?" (None were available)

February "You haven't forgotten we are hoping for another girl?"

March "It's so nice having Betty. I think she will work very well. (Unfortunately Betty had a poor school attendance record and although she worked at the CoOp Nursery only one day a week--she often failed to report for work or call in to explain her absence.)

Parent of a child in a CoOp Nursery comments:

"Patty is such a lovely girl and helped our program so much. I understand she's being considered for a position at _____ _____. I would like to write an unsolicited letter of recommendation in her behalf. Could you give me the correct spelling of her last name?"

Drayton Avenue
Co-operative Nursery
2441 Pinecrest Drive
Ferndale, Michigan 48220

May 29, 1967

Mrs. Theda Connell
Home Economics Department
881 Pinecrest Drive
Ferndale, Michigan 48220

Dear Mrs. Connell:

On the behalf of the entire nursery I want to tell you how pleased we have been with the pilot training program in which we participated this year.

Patty, especially, was a wonderful help and we really enjoyed having her with us.

We are looking forward to working with the program again next fall.

Sincerely,

Joan Schiffer (signed)
Mrs. Henry A, Schiffer
Secretary

Huntington Woods-Southfield
Children's Nursery
10495 W. 11 Mile
Huntington Woods, Mich. 48070

Mr. John McGregor, Principal
Ferndale High School
Ferndale, Mich.

Dear Sir;

I want to let you know that the Ferndale Co-operative Program is one of the best programs that I have ever experienced. I have cooperated with other high schools but have not found one to equal your set-up with Mrs. Connell in the Nursery School. The girls improve as time goes on and they show definite promises of becoming good workers with healthy attitudes toward their chosen occupations.

Mrs. Connell is very complete in detail, in description and in communication. Her girls are excellently prepared and have a very good attitude. I really benefited this year and wish to have more girls next semester. We plan to have three schools by Sept. I have also decided to cooperate only with Ferndale and not with the other high schools.

Very truly yours,

Mrs. Earl Gormaine,
Owner and Director

SAMPLING OF "EMPLOYER COMMENTS"

Owner-Director of three Daycare Centers

"It's a wonderful program. It's about time the Home Economics people woke up to their potential in this area....it not only prepares the girls for a vocation--but even more--will help them to be better mothers someday.

Private School in Oakland County

"This is a wonderful, wonderful thing you are doing," said with great sincerity and much warmth.

"You have a very unique program--thats very much needed. We've had professional people work with us and cleaning attendants, but never anyone in between, that had training in child development plus skills required for setting up materials. You are providing a real service to employers."

"I could use two graduates, full time in fall and would be interested in four CoOps. I like the idea of having some girls you've trained and also the opportunity to help train others. Would $1.75 an hour be acceptable?"

Neighborhood Settlement House

"Workers such as you are training are very badly needed. We're a Community Agency that cannot hire staff below the professional level--other than neighborhood women under OEO Program. But how nice it would be to have such a trained person. Hope the students can make enough money to encourage them to stay in the field. They are badly needed...

Headstart Program in Oakland County

"If we could only have the freedom to hire whom we choose. We would certainly prefer to hire trained persons such as your program offers."

Private Nursery in Warren

"I read about your program in the Free Press and would be very interested in hiring two of your girls for my nursery. What wages are you requesting for the girls?"

Warren Nursery

"Are their any schools in our area with a program like yours? I'd very much like to participate."

Private Nursery in Oakland County

"I'm expanding my program and could use 2 girls full time, 2 CoOps in morning and 2 CoOps after school hours.

Private Nursery In Wayne County

"While we are too far away for your CoOp program, I would be very interested in hiring your graduates."

Mothers seeking Childcare workers for private homes

"Your program sounds wonderful! I'm sorry you are unable to supply the homemakers needs for childcare workers."*

* Our program next year will have a separate division titled "Introduction to Childcare." We hope to supply community needs for "Childcare in the Home" by setting up a student operated "Agency" for same.

EVALUATION BY PARENTS OF HOME
ECONOMICS NURSERY SCHOOL LABORATORY

PARENTS A, B, C, D, E, F, G, H, I, J, K, L, M

1. What was your purpose in sending your child to our nursery school?

   A. Lack of playmates at home (other than mother)
   B. So she would have group experience before starting school.
   C. Tim was alone each morning with no companionship his age. He missed this since he is rather a social person?
   D. He was much to close to me and needed to learn to play with other children.
   E. Mostly someone to play with. The youngest of a large family needs lots of companionship besides Mom. Anyway, I love the two hours in the A.M.
   F. He was home alone so I decided to try and get him in a nursery.
   G. So she would learn how to share and play with other children.
   H. So he would be playing with other children his age. Also learn to get along with other children, and, he was lonesome when other children were in school.
   I. So she would have company.
   J. Very restless and no playmates his own age.
   K. He has no children his own age to play with in the neighborhood he had only older children to play with.
   L. Mrs. Friedman and Mrs. Peterson urged me to.
   M. We felt she needed development with other children. (People)

2. Has our school lived up to your expectations of it?

   A. Yes.
   B. Yes.
   C. This is my first experience with this type of class so I had no actual expectations, but I was certainly pleasantly surprised.

D. Yes, very much so.
E. Yes, and far more.
F. Yes.
G. Yes.
H. Yes, I think he has become more self reliant.
I. Yes.
J. Yes.
K. Yes.
L. Yes, in every aspect.
M. Yes.

3. What changes have you seen in your child's behavior as a possible result of the experience?

A. Can compete with other children he plays with.
B. More outgoing, with others rather than Mom.
C. A feeling of pride and not being left out of it when brothers and sisters talk about their school, Tim has just as much to say and it is just as important about his school.

D. He will visit others for a longer length of time and he is much better at picking up after himself. He ask a question which I know originated from here which is very good.
E. Seems more observant of everything. Notices things such as magazines books, etc. Wants to do creative things occasionally.
F. Sharing with others.
G. She has learned to play with children her age.
H. He has gained confidence.
I. She has learned to give and take more. She is also more aware of things going on around her.
J. Doesn't bite nails anymore, more cheerful and gets along better with other playmates.
K. Has more to contribute at the dinner table conversations. Has developed his vocabulary--good and bad.
L. Play with children his own age much better now.
M. More aggressive, not so shy.

4. What did you especially like about our nursery school program?

A. The equipment was excellent, and the excellent attitude of the students.
B. The opportunity the children had for expression in many activities.
C. The manner in which the girls worked so closely with the kids and making them think the projects they did were done much on their own.
D. Much more time was taken with him then I possibily could have given him with his work.
E. The fact that this young man had so much physical and mental stimulation--he learned new things to do, and those two hours!!
F. Everything.
G. It helped her to gain friends.
H. The children had plenty of individual attention.
I. The smiling faces on the girls, they see enough old grouches at home.
J. Large variety of things to do.
K. The freedom of activity--the variety of activities--personalities that students provided.
L. The wonderful way the girls had with the children.
M. Self-development--hardwork.

5. Was there anything you did not like? What was it? Why did you feel this way?

A. No.
B. No.
C. No.
D. No.
E. No--everything was grand, I found it flawless.
F. No.
G. No.
H. No.
I. No.
J. No.
K. No.
L. No.
M. No.

6. What changes would you suggest for next year?
A. I feel that the teacher needs an aide, or student teacher at the beginning because of many obligations to her students, to the'subjects! to the parents of the'subjects.'

B. Possibly 3 days a week, 4 days seemed too many times for the child.
C. Analyze the class to facilitate a group in the morning and another in the afternoon.
D. None.
E. Can't think of anything.
F. Another hour or so.
G. I don't have any.
H. None.
I. None.
J. None
K. For the orientation have some of the older ones and some of the younger ones together rather than all 4 years old first and then bringing in the 3 year olds.
L. None.
M. Expansion.

7. Would you recommend it to your friends? Why?

A. Yes.
B. Yes. A very good experience.
C. Very much so. The association with other children and particularly the girls, I believe did a great deal for Tim, widened by his pride in the class, teachers and his anxiousness to go to school each morning.
D. Yes, as long as you leave room for mine!
E. Yes, if they could be lucky enough to get in. Companionship, creative play, varied art materials to explain, etc. And those two hours again!
F. Yes, it is good for them when they enter kindergarten.
G. Yes, because it helps them to be away from their mothers a little.
H. Yes, I think it is ideal for children.
I. Yes.
J. Yes.
K. Yes.
L. Yes--good for the child, but more important good for the high school girls that are interested.
M. Yes.

8. Would you send a younger brother or sister of your child?
A. Yes.
B. Yes.

C. I sure would!
D. Yes.
E. Yes--but this answer doesn't indicate the hope of being able to do so in the future!
F. If I had one (SMILE!)
G. Yes.
H. Yes, if there were any younger ones.
I. Yes.
J. Yes.
K. Yes.
L. Interested, yes.
M. Yes.

9. Did you like our orientation process? (Private interview with parent and child before school opened..parent remaining with child first few days of school?)

A. I felt that by remaining the first day, a child expects one to remain succeeding days.
B. Yes.
C. Great! This would seem to break the gap of the child breaking away from mother, although I don't really believe it bothered Tim very much.
D. Yes.
E. Very good.
F. Yes.
G. Yes.
H. Yes.
I. Yes.
J. Didn't have any.
K. Private interview very good--but actual entering program may have to vary with differing children's response--a little flexibility here perhaps.
L. I personally would rather just have a few minutes stay with the child the first day.
M. Yes.

10. Have you been satisfied with the visiting arrangements and consulting with the teacher? How might they have been improved?

A. Yes.
B. A private interview half way through or end of year.
C. Yes
D. Yes.

E. Very satisfied, we always seemed to be able to talk if we wanted to.
F. Yes. None.
G. Yes.
H. Satisfied.
I. Yes.
J. Yes.
K. One scheduled private conference might be by telephone.
L. Yes.
M. Yes!

E V A L U A T I O N S

BY ADMINISTRATORS

(See Part I, page 15.)

PROJECT DIRECTOR'S COMMENTS

(See Part I, page 16-17.)

FINAL EVALUATION BY NURSERY SCHOOL STUDENTS

1. What has this course done for you? How did your parents feel about it in September? How do they feel now?

No. I "When I started childcare I had no idea what I was getting into, I just figured, oh well...it's a credit. I really didn't care at all. Later when I heard we were going to operate a nursery and go out on a job working with children, that sounded great because I've always liked children and now I would have a chance to see what I could do for them."

"Now that the year is over I can say I actually think I've learned more in this class than in my other classes. I know I don't know everything about children and why they do certain things, but I feel you just can't learn enough about a group of children or one specific child in one year."

"My parents in September really weren't to happy that I took this class because they wanted me to take other classes that would prepare me for college. After I started explaining to them what it was about and some of the things we were going to do, they thought it might be worthwhile because I like children. Now my parents feel that this class has helped me to find myself and that this probably helped keep me interested in school. They feel this has helped me to communicate better with adults as well as children, and they hope I continue this work in the future. They also think . that this course was a great opportunity."

No. II "This course has made it easier for me to meet and be with people. I had expected in the beginning to be a babysitter. This course did not meet up to my original expectations, and I'm very glad it didn't!

(Copy of parent letter)

May 16, 1967

Dear Mrs. C nnell.

Just a note to express my appreciation for your wonderful influence on Sue. Through this class Sue has been able to communicate with adults, children and most of all us (her parents). Sue and I have had many and varied, very personal conversations as a result of discussing chapters in the text, projects for the children and just plain listening to Sue relate her experiences in the nursery.

I would (as a parent) urge the school to continue the "childcare program." I am very proud as a parent that Sue has had this opportunity. It can be successful at the "Junior" level. A big "thanks to Mrs. Connell".

Sincerely,

Mary V. A.

45

VT 004 831
Projected Program Activities with Estimate of Total Expenditures for Vocational Education - Fiscal Year 1967.

Ohio State Dept. of Education, Columbus. Div. of Vocational Education
MF AVAILABLE IN VT-ERIC SET.
Pub Date - Jun66 201p.

*VOCATIONAL EDUCATION; *STATE PROGRAMS; *PROGRAM DESCRIPTIONS; *PROGRAM IMPROVEMENT; *STATE DEPARTMENTS OF EDUCATION
OHIO

This report of projected plans for vocational education in Ohio was prepared to give directions to leadership activities in assisting local schools with expansion and improvement of vocational education. The report is divided into two main sections. The first part concerns the current year and includes sections on employment opportunities, program offerings, work study programs, and the state committee for vocational education. The second part concerns the plan to extend and improve the state's program during the year. Sections are included on high school program priorities, post-high school program priorities, adult program priorities, disadvantaged program priorities, area school construction plans, and current plans for strengthening programs. Data are provided to support the plans and priorities. (JM)

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PROJECTED PROGRAM ACTIVITIES WITH ESTIMATE OF TOTAL EXPENDITURES FOR VOCATIONAL EDUCATION - FISCAL YEAR 1967

June, 1966

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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Ohio State Department of Education Division of Vocational Education
Columbus, Ohio 43215

VT
VTC04831

Ohio State Board of Education

E. E. Holt
State Superintendent of Public Education

Byrl R. Shoemaker
Director of Vocational Education

State Department of Education
Division of Vocational Education

June, 1966

PREFACE

Vocational Education is justified by the contribution it makes to the development of the individual to the fullest extent of his capacities for making a constructive, gainful livelihood. Some may think of this in terms of an efficiency measure of the individual to live with himself and to participate in our society, while others may think of it as a measure of conservation of the nation's greatest resource, manpower. Irrespective of how we wish to view Vocational Education in this many-sided socio-economic pattern of life, we know the pattern change to be quickening in pace at an increasing rate. If education is to keep its place in the development of man for living in these modern times, then it must also quicken its pace of change to adjust to this modern change.

The educational services for people should be provided at the local level, but unfortunately the schools at the local level many times lack the finances and the personnel necessary to bring about the change in education needed to keep it abreast of the changing times. The Federal Government through its educational acts in the last decade has provided a great impetus which should produce an immeasurable change in education in the United States. However, we are a long way from achieving the goals set forth in the acts. The State Department is in a particularly favorable position, with the help of the Federal Government and the proximity to the local community, to provide the kind of leadership which will assist the local schools and communities to provide the quality and quantity of vocational education programs which will meet the needs of all persons in all communities and keep it abreast of the changing world.

This report of the projected plans of the Department of Education, Division of Vocational Education was prepared to give direction, with the cooperation of the Federal Government, to leadership activities that will assist the local schools in achieving an expanded and improved program of Vocational Education throughout the State adequate to meet and keep abreast of the modern changing pattern of socio-economic life in Ohio. It should be understood, however, that at the present rate of funding we cannot achieve the educational goals set forth in this plan for many years. Our annual projected plan, therefore, cannot change radically from year to year if we are to achieve our goals.

B. R. Shoemaker, Director
Division of Vocational Education
State Department of Education

DIVISION OF VOCATIONAL EDUCATION STAFF

Byrl R. Shoemaker	Director of Vocational Education
Warren G. Weiler	Supervisor of Agricultural Education
R. D. Balthaser	Supervisor of Business Education
Bernard C. Nye	Supervisor of Distributive Education
Margaret W. McEniry	Supervisor of Home Economics Education
C. O. Tower	Supervisor of Research and Survey Service
D. R. Purkey	Supervisor of Technical Education
Harry F. Davis	Supervisor of Trade and Industrial Education
H. D. Brum	Supervisor of Disadvantaged Youths and Work-Study

TABLE OF CONTENT

PREFACE ii

DIVISION OF VOCATIONAL EDUCATION STAFF. iii

TABLES. v

MAPS AND EXHIBITS vi

PART A: Items Related to Ohio's Total Program of Vocational and Technical Education Which Will be Operated During the Current Year

1. Current and Projected Manpower and Employment Opportunities. . 1
2. Program Offering by Occupational Categories by Purpose of Counties 10
3. Program Offering in Area Vocational Schools. 10
4. The State's Plan for the Provisions of Work-Study Programs Under the 1963 Act 10
5. Members of the Ohio State Committee for Vocational Education . 26

PART B: Items Indicating Ohio's Plan to Extend and Improve the Vocational Education Program During the Current Year With the Place of Emphasis and Justification

1. Program Priorities to Expand Vocational and Technical Education for High School Students for the Current Year as Related to Manpower Needs and Employment Opportunities in Part A. 30
2. Program Priorities to Expand Vocational and Technical Education for Post High School Students for the Current Year as Related to Manpower Needs and Employment Opportunities in Part A. 32
3. Program Priorities to Expand Vocational and Technical Education for Persons Who Have Already Entered the Labor Market for the Current Year as Related to Manpower Needs and Employment Opportunities in Part A 32
4. Program Priorities to Expand Vocational and Technical Education for Persons With Special Needs for the Current Year as Related to Manpower Needs and Employment Opportunities in Part A. 35
5. Plans for the Construction of Area Vocational Education Schools for F. Y. 1967 35
6. State's Current Year Plans for Strengthening Programs. 37

TABLES

Table 1 - Employment and Reported Needs in Toledo (Lucas County) 3

Table 2 - Occupations Showing Greatest Demand in Toledo (Lucas County) . 3

Table 3 - Number and Location of Vocational Education Programs by County . . . . . .

Table 4 - Vocational Education Programs in Area Vocational Schools . . . 20

Table 5 - Status of Area Schools in Ohio Fiscal Year 1967. 25

Table 6 - Vocational High School Programs F. Y. 1967 31

Table 7 - Vocational Post High School Programs F. Y. 1967. 33

Table 8 - Vocational Programs to Upgrade and Improve Those Who Have Already Entered the Labor Force. 34

Table 9 - Vocational Programs for Those Persons with Special Needs F. Y. 1967 36

Table 10 - Information on Area Vocational Schools Under Construction F. Y. 1967. 38

MAPS AND EXHIBITS

Map 1 - Status of Area Vocational Schools in Ohio F Y 1967 24

Exhibit A - Unemployed Personnel Seeking Jobs Through Ohio State Employment Service April 1, 1966

Exhibit B_1 - Projected Manpower Needs and Employment Opportunities

Exhibit B_2 - Extracts from Medina County Joint Vocational School District Survey

Exhibit B_3 - Compilation of all Occupational Surveys

Exhibit C - State, County and Metropolitan Labor Force Areas

Exhibit D - Projected Proposal for Vocational Education Under Vocational Education Act of 1963

Exhibit E - Proposed Increases in Teacher Training and Supervision Budget Over 1965-66

PART A

Items Related to Ohio's Total Program of Vocational and Technical Education Which Will be Operated During the Current Year

1. Current and Projected Manpower and Employment Opportunities

a. Occupations or Occupational Fields or Levels
b. Educational Levels

Current and projected manpower needs and employment opportunities were studied from two directions for planning vocational and technical education programs. They were unemployment as an index of trained personnel and potential personnel to be upgraded and retrained, and manpower needs and employment opportunities reported in occupational surveys as an index of positions for which people should be trained.

Exhibit A, Unemployed Personnel Seeking Jobs Through Ohio State Employment Service April 1, 1967, presents manpower needs and employment opportunities indirectly by presenting unemployment in Ohio.

For men the report shows two general trends: Occupational Trend, as the occupational level decreases the number and the per cent of the unemployed increases; and Age Trend, as age approaches the 25 to 34 age group from either direction the number and the per cent of the unemployed increases. See page 1 of Exhibit A.

This combination of trends produces a scatter diagram of occupational levels and age groups with the greatest number and per cent of unemployed in entry occupational level under 19 age group which moves toward the higher occupational levels from entry under 19 through unskilled, semi-skilled, then skilled occupational level as age is increased. Those men in the concentrated portion of the scatter diagram make up that group in which sufficient numbers can be more satisfactorily recruited for establishing, retraining and upgrading programs. See page 1 of Exhibit A.

This points up the need for vocational and technical education for entry, unskilled and semi-skilled occupational levels for ages under 19 to 25 into higher occupational levels--skilled, service, clerical and sales--and continuous upgrading and retraining for ages 25 through 65 and over in unskilled, semi-skilled, skilled and service occupations.

For women, except for professional level occupations, the report shows two general trends: Occupational Trend, as the occupational level moves upward or downward from the skilled occupational level the number and the per cent of the unemployed increases; and Age Trend, as age approaches two

age groups 19 to 21 and 25 to 34 from either direction the number and the per cent of the unemployed increases. See page 2 of Exhibit A. In essence this is a bimodal curve at these two age groups.

This combination of trends produces a scatter diagram of occupational levels and age groups with the greatest number and per cent of unemployment under age 19 in the entry occupational level which moves into higher occupational levels of unskilled and semi-skilled as age increases from under 19 to 35 to 44 age group. There is also a corresponding high number and per cent of unemployed in clerical and sales occupations beginning at age 19 to 21 which moves downward into service occupations at about 25 to 34 age group. Both sets of frequencies continue through 35 to 44 and then taper off. The two concentrations of frequencies found in women are due to the fact that skilled level is in between them and few women are employed at this level. Those women in the two concentrated portions of the scatter diagram make up that group in which sufficient numbers can be more satisfactorily recruited for establishing, retraining and upgrading programs. See page 2 of Exhibit A.

This points up the need for vocational and technical education for unemployed in entry, unskilled and semi-skilled occupational levels for ages 19 to 44 into higher occupational levels, broadening the training in the clerical and service area from age group 19 to 21 to age 35 to 44 and the broadening of the areas of training for women to include appropriate skilled areas in which they will be able to work with increasing age.

Exhibit B_1 B_2 B_3, Projected Manpower Needs and Employment Opportunities, presents manpower needs and opportunities directly.

Occupational Surveys made by Manpower Advisory Committees in Cooperation with the Manpower Development Section, Ohio Bureau of Unemployment Compensation, presents future manpower needs for replacement and expansion for 24 month period as reported directly from employers for specific occupations surveyed. They are then grouped into occupational levels.

The Toledo (Lucas County) Occupational Survey, December 1965, is submitted as Exhibit B_1 and as an illustration. Table 1, Employment and Reported Needs in Toledo (Lucas County) Occupational Survey for 24 Months by Occupational Groups, April 1965, shows a gross need of 19,447, with greatest demands of 3,480 in skilled occupations and 3,224 in clerical. See page 33 of Exhibit B_1.

Table 2, Occupations Showing Greatest Demand in Toledo (Lucas County) Occupational Survey, April 1965, lists the occupations showing greatest demand from the 165 surveyed and the 24 month need. See pages 2 and 28 of Exhibit B_1.

Table 1:--Employment and Reported Needs in Toledo (Lucas County)
Occupational Survey for 24 Months
by Occupational Groups, April 1965

Occupational Levels	Current Employment		24 Month Needs		
	Total	Female	Replacement	Expansion	Gross
Total	134,482	41,038	9,413	10,034	19,447
Professional and Managerial	18,326	6,122	1,495	1,024	2,519
Clerical	23,989	15,884	1,752	1,472	3,224
Sales	12,894	4,558	854	1,269	2,123
Services	13,932	6,903	1,409	835	2,244
Skilled	25.645	789	1,401	2,079	3,480
Semi-skilled	23,247	4,928	1,098	1,831	2,929
Unskilled	16,449	1,854	1,404	1,524	2,928

Table 2:--Occupations Showing Greatest Demand in Toldeo (Lucas County)
Occupational Survey, April 1965

Occupation	Demand for 24 Months	Occupation	Demand for 24 Months
Assembler	730	Laboratory Technician	151
Auto Body Repairman	132	Laborer	2643
Auto Mechanic	240	Machine Operator	426
Auto Service Station Attendent	200	Machinist	259
Beauty Operator	95	Maintenance Man	106
Bookkeeper	150	Maintenance Mechanic	126
Cashier	297	Nurse LPN	203
Central Office Repairman	121	Power Press Operator	317
Checker	125	Pressman Printing	162
Clerk, General Office	1067	Salesman General	853
Clerk Typist	543	Salesperson Retail	817
Coil Assembler	107	Secretary	85
Cook	294	Sewing Machine Operator	339
Draftsman	233	Sheetmetal Worker	137
Electric Motor Repairman	101	Stock Clerk	310
Electrician	182	Telephone Operator	178
Foreman	136	Tool and Die Maker	162
Inspector	95	Upholsterer	128
Insurance Salesman	453	Waiter/Waitress	1024
Janitor/Maid	305	Warehouseman	285
		Welder	109

Key summary facts from the survey are:

The 165 occupations studied here represent 82 per cent of the total employment in Lucas County. Manufacturing provides the most jobs -- 36 per cent -- Wholesale and Retail Trade is next with 22 per cent.

Around 70 per cent of the jobs are held by men and 30 per cent by women. An increase in the proportion of females in recent years.

Of the 165 occupations 54 show significant need -- 39 will offer little or no chance for employment. Openings will develop in all fields but skilled and clerical workers will find the most opportunities.

Gross needs in nonmanufacturing are almost double those in manufacturing -- replacement needs are somewhat larger than expansion needs.

There is a significant amount of commuting in and out of Lucas County with a net gain of 9,324 to the total work force.

Recent technological developments will necessitate more scientific, engineering personnel, and supporting technicians and craftsmen. Future outlook is for rapid changes and steadily increasing complexity of the content of many professional, technical and skilled occupations.

Demand will exceed the supply. Many of those presently counted as unemployed are either job attached or are not trained for today's skills.

See pages 2 and 3 of Exhibit B_1.

By using these surveys in planning vocational programs, local community occupational needs are provided for.

If an occupational survey has not been made that is approximately the same as the community or the area under study for vocational programing, a composite of occupational surveys for surrounding areas have been compiled and the relationship of the region to surrounding areas studied.

Exhibit B_2 is material from the Medina County Joint Vocational School District Study which illustrates the technique of approximating local manpower needs and employment opportunities in such cases.

Forty-three and two-tenths per cent of Medina County labor force works in the surrounding counties and therefore their needs are at least an indication of Medina program needs. See page 23 of Exhibit B_2.

Table 16, Employment and Reported Needs in Clerical Occupations for Twenty-Four Months; Table 17, Employment and Reported Needs in Sales Occupations for Twenty-Four Months; Table 18, Employment and Reported Needs in Service Occupations for Twenty-Four Months; Table 19, Employment and Reported Needs in Skilled Occupations for Twenty-Four Months and Table 20, Employment and Reported Needs in Semi-Skilled Occupations for Twenty-Four Months, which are not listed here for sake of brevity, see page 24, 25 and 26 of

Exhibit B_2, show the occupational fields and the demand for 24 months while Table 21, Principal Occupational Needs for Twenty-Four Month Period from Occupational Survey Findings in Northeastern Ohio, shows the principal demand occupation and the extent of that demand for 24 months. See pages 27, 28, 29 and 30 of Exhibit B_2.

For Medina the composite showed first occupational group need to be clerical and second occupational group need to be skilled workers. In like fashion principal occupational demands were clerical, auto mechanics, cooks and bakers, machinists, maintenance mechanics, practical nurses, general salesmen, tool and die makers, etc. In selecting principal demand occupations only those consistantly found in surrounding area were included.

Another means of estimating the occupational needs and employment opportunities over the state has been the compilation of all the occupational surveys into one. Exhibit B_3 presents such information for that proportionate part of the state. Table 1, Current Employment and Reported Needs for Twenty-Four Months by Occupational Groups in Twenty-Four Counties, again indicates greatest demand for clerical and sales, then semi-skilled and skilled occupations with a total of 69,076 expansion and replacement needs. See page 7 of Exhibit B_3.

Table 15, Per Cent of Persons Working Outside County of Residence for Selected Counties in Ohio, 1960; Table 16, Employment and Reported Needs in Clerical Occupations for Twenty-Four Months; Table 17, Employment and Reported Needs in Sales Occupations for Twenty-Four Months; Table 18, Employment and Reported Needs in Service Occupations for Twenty-Four Months; Table 19, Employment and Reported Needs in Skilled Occupations for Twenty-Four Months; Table 20, Employment and Reported Needs in Semi-skilled Occupations for Twenty-Four Months, see pages 26-31 of Exhibit B_3, shows the occupational fields and the demands for 24 months and indicates clerical and sales and skilled in greatest demand. Table 21, Principal Occupational Needs for Twenty-Four Months, pages 32-36 of Exhibit B_3, list the occupations in greatest demand. For sake of brevity the listing is here omitted.

To further supplement this information on occupational needs "Ohio Labor Market" gives information on industries, jobseekers, labor market and labor force by counties. See pages 1-6 of Exhibit B_3.

c. Different Labor Market Areas or Communities of the State

The labor market areas are approached from two directions for planning vocational and technical education programs. They were unemployment as an index of trained personnel and potential personnel to be upgraded and retrained, and manpower needs and employment opportunities reported in occupational surveys. The manpower needs and employment by occupations or occupational field and by labor market areas or communities are so closely related that it is difficult at times to separate one from the other. In studying occupational group needs it should be defined as within a geographic area, and within a geographic area it should be defined concerning specific occupations. For that reason we shall refer to previous text on occasions to save repetition.

Manpower need and employment opportunities for the State of Ohio were discussed under Occupations or Occupational Fields or Levels. In this discussion various trends and resulting facts of importance were listed for occupation groups and ages for the state as the labor market area.

Exhibit A also presents men and women seeking jobs through employment service by occupational group and age group by counties. Now for counties as the area, the labor market takes on a slight variation from the state labor market area and each must be considered individually.

Shortage and surplus occupations first quarter 1966 for the state and counties were:

Shortage occupations for men

Machinist (44 counties) -- Allen, Athens, Auglaize, Belmont, Butler, Champaign, Clark, Columbiana, Coshocton, Crawford, Cuyahoga, Darke, Defiance, Erie, Franklin, Geauga, Hamilton, Hancock, Hardin, Hocking, Huron, Knox, Lake, Licking, Logan, Lorain, Lucas, Mahoning, Medina, Mercer, Miami, Montgomery, Muskingum, Ottawa, Portage, Sandusky, Scioto, Seneca, Stark, Summit, Trumbull, Tuscarawas, Warren, Wood.

Draftsmen (31 counties)

Engineers--chemical, civil, electrical, industrial, mechanical (28 counties)

Tool and die makers (27 counties)

Welders (25 counties)

Electricians (19 counties)

Automobile mechanics (18 counties)

Machine operators, miscellaneous (18 counties)

Engine and turret lathe operators (16 counties)

Salesworkers (16 counties)

Accountants (14 counties)

Milling machine operators (10 counties)

Social workers--case and group (10 counties)

Repairmen--electrical and electronic (8 counties)

Boring machine operators (7 counties)

Electronic technicians (7 counties)

Factory maintenance mechanics (7 counties)

Foremen (7 counties)

Managers, miscellaneous (7 counties)

Millwrights (7 counties)

Setup men (7 counties)

Tool and die designers (7 counties)

Chemists (6 counties)

Press operators--punch, drill, forming (6 counties)

Clerical workers (5 counties)

Grinders (5 counties)

Job setters (5 counties)

Machine tool operators (5 counties)

Patternmakers (5 counties)

Repairmen, television (5 counties)

Screw machine operators (5 counties)

Shortage occupations for women

Secretaries (35 counties) -- Ashtabula, Butler, Columbiana, Coshocton, Cuyahoga, Defiance, Fairfield, Franklin, Geauga, Greene, Hamilton, Hardin, Holmes, Huron, Jefferson, Knox, Lake, Logan, Lorain, Mahoning, Marion, Medina, Morgan, Muskingum, Ottawa, Portage, Sandusky, Stark, Summit, Trumbull, Tuscarawas, Warren, Washington, Wayne, Wood.

Nurses, practical (30 counties)

Stenographers (30 counties)

Nurses, registered (23 counties)

Waitresses (23 counties)

Bookkeepers (14 counties)

Clerk-typists (13 counties)

Cooks (13 counties)

Housekeepers (13 counties)

Domestics (12 counties)

Nurse aides (11 counties)

Child monitors (9 counties)

Social workers--case and group (9 counties)

Medical technicians (7 counties)

Salesworkers (6 counties)

Home care attendants (5 counties)

Maids (5 counties)

Pressers (5 counties)

Surplus occupations for men

Construction laborers (65 counties) -- Adams, Allen, Ashland, Ashtabula, Athens, Auglaize, Belmont, Brown, Butler, Champaign, Clark, Clermont, Clinton, Columbiana, Coshocton, Cuyahoga, Darke, Defiance, Delaware, Fairfield, Fayette, Franklin, Gallia, Geauga, Guernsey, Hamilton, Hancock, Hardin, Henry, Highland, Hocking, Huron, Jackson, Jefferson, Knox, Lake, Lawrence, Licking, Logan, Lorain, Madison, Meigs, Mercer, Miami, Monroe, Montgomery, Morgan, Muskingum, Ottawa, Pickaway, Pike, Portage, Richland, Ross, Sandusky, Scioto, Seneca, Shelby, Stark, Trumbull, Union, Van Wert, Vinton, Warren, Washington.

Truck drivers (65 counties)

Carpenters (40 counties)

Factory laborers (36 counties)

Painters (24 counties)

Operating engineers (20 counties)

Heavy equipment operators (19 counties)

Bricklayers (17 counties)

Finishers, cement (13 counties)

Press operators--punch, drill, forming (12 counties)

Assemblers (11 counties)

Janitors and porters (11 counties)

Bulldozer operators (10 counties)

Surplus occupations for women

General office clerks (38 counties) -- Brown, Butler, Carroll, Champaign, Clark, Clermont, Clinton, Columbiana, Darke, Fayette, Fulton, Greene, Hancock, Hardin, Harrison, Henry, Highland, Jackson, Jefferson, Knox, Lawrence, Lorain, Miami, Monroe, Montgomery, Morrow, Muskingum, Paulding, Pickaway, Pike, Richland, Ross, Scioto, Tuscarawas, Van Wert, Warren, Washington, Wood.

Salesworkers (35 counties)

Waitresses (31 counties)

Assemblers (29 counties)

Packers (25 counties)

Cashiers (18 counties)

Clerk-typists (13 counties)

Sewing machine operators (12 counties)

Press operators--punch, drill, forming (10 counties)

See pages 1-8 of Exhibit C.

By selecting and combining there are labor market areas for each of the eight largest counties, the eight large counties and all other counties. In these three labor force areas the trends are very similar to those of the state as a whole. See pages 3-10 of Exhibit A and pages 13-18 of Exhibit C.

The Occupational Surveys made by Manpower Advisory Committees establish a labor force area for each of the studies. In some cases they coincide with governmental county boundaries but in many cases they cross these boundaries to include industrial area effects. Likewise when the occupational surveys are combined into special arrangements for specific area studies or for a composite of the state, they set up labor market or force areas. These were discussed in the original discussion of occupational surveys for occupations and occupational fields and are a sum of the individual occupational survey areas.

To supplement the facts on the eight largest counties, the labor market information on eight metropolitan areas of Ohio gives supply and demand. Toledo metropolitan area includes Lucas and Wood Counties in Ohio and Monroe County in Michigan. See pages 9-12 of Exhibit C.

2. Program Offering by Occupational Categories by Purpose of Counties

Table 3, Number and Location of Vocational Education Programs by County, lists by counties the number of vocational education programs in each category according to purpose.

3. Program Offering in Area Vocational Schools

Table 4, Vocational Education Programs in Area Vocational Schools, lists by area vocational schools the vocational programs in each category according to purpose.

Map 1, Status of Area Vocational Schools in Ohio Fy 1967, categorizes them in 5 groups: N, school districts which have schools that will be in operation for the first time during the year; O, school districts which have schools that have been in operation; C, school districts which will be doing some construction; F, school districts whose application for a joint vocational school district has been approved by the State Board of Education and they have requested building construction assistance; J, school districts whose jointure for an area vocational school district has been approved by the Ohio State Board of Education but as yet have not requested construction assistance.

4. The State's Plan for the Provisions of Work-Study Programs Under the 1963 Act

a. Plan of State Administration

The State Board of Education is responsible for the overall administration of Work-Study Programs conducted under the State Plan. The State Board of Education's responsibility for approving and supervising the administration of Vocational Education Work-Study Programs by local educational agencies is implemented through the Division of Vocational Education. The Director of the Division of Vocational Education through the Supervisor of Disadvantaged Youth and Work-Study Programs is specifically responsible for administering standards established by the State Board of Education for the approval of school districts for participation in the Work-Study Program. He is also responsible for planning a budget in keeping with the Federal and State Allocations for the Work-Study Program and the approval of individual students for participation in Work-Study Programs submitted from schools having prior approval from the State Board of Education. The Supervisor of Disadvantaged Youth and Work-Study Programs is also responsible for providing supervision, coordination and leadership in terms of program development.

Table 3:-- Number and Location of Vocational Education Programs by County

Purpose Code: S - Secondary (Grades 9-12)
PS - Post-Secondary (Grades 13-14)
A - Adult (Preparatory & Supplementary)
X - Persons, Special Needs

State Ohio

Fiscal Year 1967

Name of County	Occupational Categories and Purposes Served						
	Agriculture	Distribution	Health Occupations	Home Economics	Office Education	Technical Education	*Trades & Industry
Adams	S - 5 A - 5 X - 1	A - 1		S - 5			
Allen	S - 6 A - 6	S - 1 A - 1	PS - 1	S - 4	S - 1 A - 1		S - 2 A - 1
Ashland	S - 4 A - 4	S - 1 A - 1		S - 4	S - 3		S - 2 X - 1
Ashtabula	S - 4 A - 3	S - 1 A - 2		S - 5 X - 1	S - 3 PS - 1	PS - 1	S - 1 A - 1
Athens	S - 2 A - 2	A - 1		S - 12			S - 2 X - 1
Auglaize	S - 6 A - 6	S - 1 A - 1		S - 4			A - 1
Belmont	S - 2 A - 2	S - 1 A - 2	PS - 1	S - 3	S - 1		S - 1 A - 1

*Trade and Industrial

Name of County	Agriculture Purpose No.	Distribution	Health Occupations	Home Economics	Office Education	Technical Education	Trades & Industry
Brown	S - 2 A - 2	A - 1		S - 5	S - 4		
Butler	S - 2 A - 2	S - 7 A - 3	PS - 1	S - 7	S - 9 A - 2	PS - 1	S - 3 A - 2
Carroll	S - 1 A - 1 X - 1			S - 1			
Champaign	S - 5 A - 4	A - 1		S - 5	S - 5		S - 1
Clark	S - 5 A - 4 PS - 1	S - 2 A - 2		S - 5	S - 4 A - 1 PS - 1	PS - 1	S - 1 A - 1
Clermont	S - 3 A - 2	S - 1		S - 8	S - 10		S - 1
Clinton	S - 3 A - 3	S - 2 A - 1		S - 3 S - 1 X - 1	S - 4 A - 1		S - 2 A - 1
Columbiana	S - 1 A - 1	A - 1		S - 6	S - 2 A - 1	PS - 1	S - 2 A - 1
Coshocton	S - 2 A - 2	A - 1		S - 3 X - 1	S - 1 A - 1		S - 1 A - 1
Crawford	S - 4 A - 3	S - 1 A - 2		S - 6	S - 2 X - 1		S - 2
Cuyahoga	S - 8 A - 1 X - 2	S - 13 A - 8	PS - 4	S - 2 A - 1	S - 21 A - 14	PS - 1	S - 14 A - 4 X - 4

Name of County	Vocational Purpose No.	Distribution	Health Occupations	Home Economics	Office Education	Technical Education	Trades & Industry
Jefferson	S - 1 A - 1	A - 1		S - 2	S - 2		S - 1 A - 1
Knox	S - 5 A - 4	S - 2 A - 2		S - 5			
Lake	S - 1	S - 2 A - 1	PS - 1	S - 2	S - 8 PS - 1 X - 1 A - 1	PS - 1	S - 5 A - 3 X - 1
Lawrence	S - 1	S - 1 A - 1		S - 4	S - 1		S - 1
Licking	S - 6 A - 6 X - 3	S - 1 A - 1		S - 13 S - 2 X - 1	S - 3 X - 1		S - 1 A - 1
Logan	S - 5 A - 5	S - 1 A - 1		S - 4 S - 1	S - 1 A - 1		S - 1
Lorain	S - 4 A - 4	PS - 1 S - 1 A - 1	PS - 1	S - 4 PS - 1 X - 1 A - 1	S - 5 A - 4 PS - 1	PS - 1	S - 4 A - 2 X - 2
Lucas	S - 1 A - 1	S - 4 A - 2	PS - 1 S - 1	S - 13 X - 2 A - 2	S - 4 A - 1		S - 5 A - 3 X - 1
Madison	S - 3 A - 3			S - 4	S - 1		
Mahoning		S - 1 A - 1	PS - 1	A - 1	S - 1 A - 3		S - 2 A - 1
Marion	S - 4 A - 3	S - 1 A - 1		S - 4 PS - 1	S - 4		S - 2 A - 1

Name of County	Agriculture Purpose No.	Distribution	Health Occupations	Home Economics	Office Education	Technical Education	Trades & Industry
Guernsey	S - 3 A - 3	A - 2		S - 4	S - 1 A - 1		S - 1
Hamilton		PS - 1 S - 9 A - 3	PS - 1	S - 9 X - 1 PS - 1 A - 4	S - 17 PS - 1 X - 3 A - 7	PS - 1	S - 6 A - 1
Hancock	S - 7 A - 7	S - 1 A - 1		S - 5	S - 1 A - 1		S - 1 A - 1
Hardin	S - 6 A - 5	S - 1 A - 1		S - 6	S - 2		S - 1 A - 1
Harrison	S - 3 A - 2			S - 3			
Henry	S - 4 A - 2	S - 2 A - 1		S - 4	S - 1		S - 1 A - 1
Highland	S - 5 A - 4	S - 1 A - 1		S - 5	S - 4		S - 2 A - 1
Hocking	S - 2 A - 2	S - 1 A - 1		S - 3			
Holmes	S - 2 A - 2			S - 2			
Huron	S - 5 A - 4	S - 2 A - 1		S - 7	S - 2 A - 1		S - 1
Jackson	S - 2 A - 1	S - 1 A - 1		S - 2	S - 3		S - 1

County	Agriculture Purpose No.	Distribution	Health Occupations	Home Economics	Office Education	Technical Education	Trades & Industry
Drake	S - 7 A - 7	A - 1		S - 9	S - 6 A - 1		A - 1
Defiance	S - 3 A - 3	S - 1 A - 1		S - 3			S - 1
Delaware	S - 4 A - 4	A - 1		S - 4 X - 1	S - 2		S - 1
Erie	S - 4 A - 4	A - 1	PS - 1	S - 2	S - 1		S - 1 A - 1
Fairfield	S - 6 A - 6	S - 3 A - 1 X - 1		S - 8 S - 1	S - 1		S - 1
Fayette	S - 1 A - 1	S - 2 A - 1		S - 2	S - 1		S - 1
Franklin	S - 6 A - 6 PS - 1	PS - 3 S - 16 A - 4	PS - 1 S - 1	S - 16 PS - 1 X - 5	S - 9 A - 3 PS - 1	PS - 1	S - 6 A - 3 X - 3
Fulton	S - 8 A - 6			S - 6			
Gallia	S - 4			S - 4	S - 1		
Geauga				S - 6	S - 1		
Greene	S - 4 A - 3	A - 2		S - 7 X - 2 A - 1	S - 2		S - 1

County	Purpose No.	Distribution	Occupations	Home Economics	Office Education	Technical Education	Trades & Industry
Medina	S - 3 A - 3 X - 1	A - 1		S - 1	S - 1		S - 2 A - 1
Meigs	S - 2 A - 1			S - 4	S - 3 A - 3		S - 2
Mercer	S - 6 A - 5			S - 5	S - 2		
Miami	S - 6 A - 6	S - 1 A - 2		S - 7 X - 1	S - 4 A - 1		S - 3 A - 2
Monroe	S - 2 A - 1 X - 1	PS - 2 S - 11 A - 3		S - 4	S - 2		
Montgomery	S - 2 A - 2		PS - 1 S - 1	S - 13 S - 1 X - 2	S - 12 A - 2 X - 1	PS - 1	S - 7 A - 1 X - 5
Morgan	S - 1 A - 1			S - 1	S - 1		
Morrow	S - 4 A - 3			S - 4			
Muskingum	S - 4 A - 4	S - 1 A - 1		S - 4	S - 1		S - 1 A - 1
Noble	S - 2 A - 2	A - 1		S - 2	S - 2		
Ottawa	S - 3 A - 2	S - 1 A - 1		S - 3 X - 1	S - 1 A - 1		

County	Purpose No.	Distribution	Occupations	Economics	Education	Education	Industry
Paulding	S - 3 A - 3			S - 4	S - 1		
Perry	S - 2 A - 2	A - 1		S - 4			
Pickaway	S - 2 A - 2	S - 1 A - 1		S - 2 X - 1	S - 1		
Pike	S - 1 A - 1			S - 4 X - 1 A - 1			S - 1 A - 1
Portage	S - 1 A - 1	S - 2 A - 2		S - 5	S - 9		S - 3
Preble	S - 5 A - 5	S - 1 A - 1		S - 7	S - 1		
Putnam	S - 7 A - 7	S - 1 A - 1		S - 8			S - 1
Richland	S - 5 A - 5	PS - 1 S - 3 A - 1	PS - 1	S - 7	S - 2 A - 1	PS - 1	S - 2 A - 1
Ross	S - 4 A - 3	S - 1 A - 1		S - 5	S - 2 A - 2		A - 1
Sandusky	S - 5 A - 3	S - 1 A - 1		S - 5			S - 2 A - 1
Scioto		S - 1 A - 1	PS - 1	S - 11	S - 1		S - 1 X - 1

County	Purpose No.	Distribution	Occupations	Economics	Office Education	Technical Education	Trades & Industry
Seneca	S - 6 A - 5	A - 1		S - 7			S - 1 A - 1
Shelby	S - 6 A - 6	S - 1 A - 1		S - 7	S - 1		S - 1 A - 2
Stark	S - 2 A - 2	PS - 1 S - 2 A - 2	S - 1	S - 12 S - 2	S - 11 A - 3 X - 3	PS - 1	S - 3 A - 4 X - 3
Summit		S - 8 A - 2	PS - 1 S - 1	S - 9	S - 16 A - 2	PS - 1	S - 5 A - 2
Trumbull	X - 1	A - 1	PS - 1	S - 4	S - 2		S - 1 A - 3 X - 2
Tuscarawas	S - 3 A - 3	A - 1		S - 8	S - 4 A - 1		S - 3 A - 2
Union	S - 3 A - 2			S - 3			S - 1 X - 1
Van Wert	S - 2 A - 2	A - 1		S - 4 S - 1	S - 1 A - 1		S - 1
Vinton	S - 2 A - 1			S - 4	S - 1		
Warren		S - 4 A - 2		S - 5	S - 2 A - 1		S - 1
Washington	S - 4 A - 4	S - 1 A - 1	PS - 1	S - 4 X - 1	S - 2		S - 1 A - 1

County	Adult Purpose No.	Distribution	Health Occupations	Home Economics	Office Education	Technical Education	Trades & Industry
Wayne	S - 8 A - 8 X - 2	S - 1 A - 1		S - 8	S - 1		S - 2 A - 1
Williams	S - 7 A - 4			S - 6			S - 2
Wood	S - 4 A - 4 X - 2 PS - 1	PS - 3 S - 3 A - 1	PS - 1 S - 1	S - 6 S - 1 PS - 1 X - 1	S - 3 A - 1 PS - 1	PS - 1	S - 1 A - 1 X - 1
Wyandot	S - 3 A - 3			S - 1			

Table 4:-- Vocational Education Programs in Area Vocational Schools

State Ohio

Fiscal Year 1967

Name of School	Occupational Categories and Purposes Served						
	Agriculture	Distribution	Health Occupations	Home Economics	Office Education	Technical Education	Trades & Industry
Akron Garfield					S	PS	S,
Cincinnati Taft		A		A	S, A, X		S
Cleveland Jane Adams			PS, A	A			S, A
Cleveland John Adams	S	S, A		A	S, A		S
Cleveland Collingwood	S	S, A		A	S, A		S
Cleveland John Marshall		S, A			S, A		
Cleveland James F. Rhodes	S	S, A		A	S, A		
Cleveland South		S			S, A		
Cleveland West Technical	S, A	S		A	S, A		S
Dayton		S, A		A	S, A	PS	S, A,

Table 4:-- Vocational Education Programs in Area Vocational Schools

State Ohio

Fiscal Year 1967

Name of School	Occupational Categories and Purposes Served						
	Agriculture	Distribution	Health Occupations	Home Economics	Office Education	Technical Education	Trades & Industry
Elyria		S, A		A	S, A		S, A
Lake County Joint Vocational					S		S, A
Lancaster	S, A	S, A					S, A
Heath	S, A X	S, A					S, A
Lorain South							
Mansfield		S, A	PS		S	PS	S, A
Mentor	S	S		S	S, X		S
Morgan County	S, A			S	S		S
Parma Sr. High		S					S, A, X

Table 4:-- Vocational Education Programs in Area Vocational Schools

State Ohio

Fiscal Year 1967

Name of School	Occupational Categories and Purposes Served						
	Agriculture	Distribution	Health Occupations	Home Economics	Office Education	Technical Education	Trades & Industry
Penta-County Vocational School	PS X	S, PS, A	S, A	S, PS, A	S, PS, A	PS	S, PS A, X
Pike County	S, A						
Plain Township Joint Vocational School				A			S, A
Southwestern City		S, A	S, A	S, A	A		S, A
Toledo Macomber		S			S, A		S, A
Warren Harding			S		S		S, A X
Warren Western Reserve					S		
Youngstown Chaffen Vocational School		S, A		A	A		S, A
Clark County Joint Vocational School		S, PS, A	S	PS	S, PS, A		S, A

Table 4:-- Vocational Education Programs in Area Vocational Schools

Fiscal Year 1967

State Ohio

Name of School	Occupational Categories and Purposes Served						
	Agriculture	Distribution	Health Occupations	Home Economics	Office Education	Technical Education	Trades & Industry
Akron-Hower		S	S, A				S, A
Cincinnati-Courter		S, PS	S, A	A	S, A, X	PS	S, PS, A
Cleveland-Max Hayes		S				PS	S, PS, A
Lorain-South							S, A
Canton-Timken		S, PS, A	S, A	A		PS	S, A

Map 1:-- Status of Area Vocational Schools in Ohio F Y 1967

O — Operational In F Y 1966

N — Operating First Time as Area School F Y 1967

C — Under Construction F Y 1967

F — Approved by State Board of Education. To be considered for funding F Y 1967.

J — Approved by State Board of Education.

Table 5:-- Status of Area Schools in Ohio Fiscal Year 1967

Area	Status	Area School	Status
Akron-Garfield	1 - N	Mansfield	15 - O - C
Akron-Hower	1 - O	Marion Area JVS	31 - J
Ashtabula County JVS	23 - F	Mentor	16 - O - C
Belmont County JVS	26 - J	Middletown East	43 - C
Canton-Timken	7 - O	Monroe County JVS	32 - J
Cincinnati-Courter	8 - O	Morgan County	17 - O - C
Cincinnati-Taft	8 - O	Moundbuilders JVS	33 - J
Clark County JVS	2 - N	Muskingum County JVS	34 - J
Cleveland-Jane Adams	9 - O - C	Northwestern JVS	35 - J
Cleveland-John Adams	9 - O	Parma	6 - N - C
Cleveland-Collingwood	9 - O	Penta-County JVS	18 - O
Cleveland-Max Hayes	9 - O	Pike County	19 - O
Cleveland-John Marshall	9 - O	Pioneer JVS	44 - C
Cleveland-James F. Rhodes	9 - O	Plain Township-Oakwood	4 - N - C
Cleveland-South	9 - O	Sandusky County JVS	36 - J
Cleveland-West Technical	9 - O	Scioto County JVS	37 - J
Dayton-Patterson	10 - O - C	Southwestern City	20 - O - C
Defiance-Fulton-Henry-Williams JVS	27 - J	Stark-Carroll County JVS	38 - J
Eastern Franklin JVS	25 - F	Tiffin Area	39 - J
Elyria	11 - O - C	Toledo-Macomber	21 - O - C
Erie-Huron-Ottawa JVS	28 - J	Tri-County JVS	45 - C
Greene County JVS	24 - F	Tuscarawas County JVS	40 - J
Heath	14 - O	Warren-Harding	5 - O - C
Knox County JVS	29 - J	Warren-Western Reserve	5 - N - C
Lake County JVS	12 - O	Wayne County JVS	41 - J
Lancaster	13 - O	Van Wert-Paulding County JVS	42 - J
Lawrence County JVS	30 - J	Youngstown-Chaffen Vocational School	22 - O - C
Lorain South	3 - N - C		

O -- Operational In - Y 1966
N -- Operating First Time as Area School F Y 1967
C -- Under Construction F Y 1967
F -- Approved by State Board of Education. To be considered for funding F Y 1967.
J -- Approved by State Board of Education.

b. Estimated Number of Local Educational Agencies and Number of Students Likely to Participate

On the basis of the development of Vocational Education Work-Study Programs over the past two years it is estimated that seventy local educational agencies will be participating in the program in 1966-67. Approximately three thousand students will be expected to participate in this program next year.

5. Members of the Ohio State Committee for Vocational Education

Lay Persons	Representing
Mr. Douglas Stanfield Executive Vice President Ohio Farm Bureau Federation, Inc. 245 North High Street Columbus, Ohio 43216	Ohio Farm Bureau
Mr. George Greenleaf Director Ohio Grain and Feed Dealers Association P. O. Box 151 Worthington, Ohio	Ohio Grain and Feed Dealers Association
Mr. Carroll Parry, II Manager Data Processing at North American Aviation (Columbus) 4300 East Fifth Avenue Columbus, Ohio 43219	Data Processing Management Association
Mr. Karl Kahler Executive Assistant Ohio State Council of Retail Merchants 71 East State Street Columbus, Ohio 43215	State Council of Retail Merchants

Mrs. Willadean Shockley 320 New Dale Drive Bryan, Ohio	Federation of Womens Club of Bryan, Ohio and area
Mr. Paul W. Kellam Director of Public Relations Ohio Chamber of Commerce 820 Huntington Bank Building Columbus, Ohio 43215	Ohio Chamber of Commerce
Mr. James P. Griffin Director of District 26 United Steelworkers of America 400 Realty Building Youngstown, Ohio	AFL-CIO
Mr. Leo Blackburn President Interstate Business College 815 Roy Rogers Esplanade Portsmouth, Ohio	Vocational Education

<u>School Administrators</u>

Dr. Gordon G. Humbert Superintendent Canton City Schools 618 High Avenue, Northwest Canton 3, Ohio	Ohio Association of School Administrators
Mr. Henry LaMuth Superintendent Lake County Board of Education 53 East Erie Street Painesville, Ohio	Ohio County Superintendents Association

<u>Higher Education</u>

Mr. Harold A. Bolz Dean College of Engineering Ohio State University 140 West 18th Avenue Columbus, Ohio 43210	Higher Education
Dr. Max J. Lerner President Lorain County Community College Tenth and Brownell Streets Lorain, Ohio	Higher Education

Vocational Education

Mr. Alva Dittrick Assistant Superintendent Cleveland City Board of Education 1380 East 6th Street Cleveland, Ohio	Vocational Education
Mr. Don Waliser Instructor Vocational Agriculture Lancaster City Schools 315 East Mulberry Street Lancaster, Ohio	Agricultural Education
Dr. (Mrs.) Randall Kline Business Administration Room 12 Carnegie Hall Wittenberg University Springfield, Ohio	Business Education
Mr. Kenneth V. Green Teacher-Coordinator Distributive Education 1733 East Hopkins Street Defiance, Ohio (Home Address)	Distributive Education
Mr. Donald Gray Family Life Education Consultant Nathan Hale School Shenandoah and Foster Avenue Toledo 7, Ohio	Home Economics Education
Mr. Russell M. Gardner Supervisor Trade and Industrial Education Massillon City Schools 128 South Avenue, Southwest Massillon, Ohio	Trade and Industrial Education
Dr. Lewis Jackson Acting President Central State College Wilberforce, Ohio	

PART B

Items Indicating Ohio's Plan to Extend and Improve the Vocational Education Program During the Current Year With the Place of Emphasis and Justification

Part A1; a, Occupations or Occupational Fields or Levels; b, Educational Levels; and c, Different Labor Market Areas or Communities of the State supported by Exhibits A, B_1, $_2$, $_3$ and C pointed up in detail occupational level trends and age trends in unemployment and occupational level and specific occupations which are in principal demand for various labor market areas and the State.

In brief these are the findings that indicate where the emphasis for priority of expansion and improvement should be placed and justify such emphasis in Ohio.

For men: the greatest number and per cent of unemployed in entry occupational levels under 19 age group which moves toward the higher occupational levels from entry under 19 through unskilled, semi-skilled, then skilled occupational level as age increases.

For women: the greatest number and per cent of unemployment in entry occupational levels under 19 age group that moves into higher occupational levels of unskilled and semi-skilled as age increases and a corresponding high number and per cent of unemployed in clerical and sales occupations beginning at age 19 to 21 that moves downward into service occupations at about 25 to 34 age group which make two groups of unemployed because skilled level is in between the two with few women employed at this level.

For principal demand occupational levels and occupations and the shortage occupations: the list is not repeated here, see pages 3 and 7.

These justify need for vocational and technical education.

Justification	With Emphasis in
1. for entry, unskilled and semi-skilled occupational levels, for ages under 19 to 25.	High school All vocational services
2. into higher occupational levels - technical, skilled service, clerical and sales.	Post high school High school All vocational services

3.	for continuous upgrading and retraining for ages 25 through 65 and over in unskilled, semi-skilled, skilled and service occupations because of the great number of persons who should originally have been trained for higher occupational levels, the marginal trained who becomes obsolete as technical advancements are made and the great number of high school students who attempt to enter employment without skills and knowledgement.	Adult All vocational services
4.	for the broadening in the training of certain fields to make persons more flexible.	High school Business Education Agricultural Education Distributive Education
5.	for the increase in the occupational fields in which women are trained.	High school Skilled (T & I)
6.	for the demands in specific occupational levels and occupations.	High school Business Education Distributive Education Trade and Industrial Education

1. Program Priorities to Expand Vocational and Technical Education for High School Students for the Current Year as Related to Manpower Needs and Employment Opportunities in Part A

The State's emphasis on program priorities to expand vocational and technical education for high school students for the current year is indicated by the fact that approximately 6 times as many new programs will be added in F. Y. 1967 as was added in F. Y. 1965. Also a second emphasis is the continued expansion of occupational fields to be offered.

a. New Teaching Personnel Requirements
b. New and Additional Occupational Fields to be Provided

Table 6, Vocational High School Programs F. Y. 1967, presents the demand for new secondary school teachers, number of program units added, occupational fields to be provided and justification for emphasis of expansion.

c. Plans for Replacement or Purchase of New Equipment

d. Plans for Improving Facilities

Since the Foundation Programs in Ohio provides the funds necessary for the instructional costs of vocational education programs at the high school level, monies from the Vocational Education Act of 1963 will be used only for supervisors, local directors and for the replacement or purchase of

Table 6:--Vocational High School Programs F. Y. 1967

Vocational Service	Approximate Number Teachers Needed	Approximate Number Program Units Added	Justification for Emphasis	Occupational Fields to be Provided
Total	864	615		
Agricultural Education	50	10	1, 2, 4	Agricultural Business, Agricultural Equipment, Horticulture Resources Conservation, Agricultural Program for Disadvantaged Youth
Business Education	326*	326	1, 2, 4, 6	None
Distributive Education	61	46	1, 2, 6	Service Station, Super Market
Home Economics Education	250	110	1, 2	Dietary Aides
Trade and Industrial Education	177	123	1, 2, 5, 6	None

*High school program expansion will continue at an expanded rate. Whereas 194 units (4,840 students) were approved in F. Y. 1966, 520 units (more than 13,000 students) are programed for F. Y. 1967. Most of the teaching demand has been met by converting certification of presently employed business education teachers who were vocationally qualified as the business education programs were made vocation by increasing the depth of the programs.

equipment for new programs and upgrading of existing programs.

Six hundred fifty thousand dollars has been planned in the budget for the upgrading of equipment in existing programs and purchase of equipment for new programs. This money is in addition to the amount budgeted under the Vocational Education Act of 1963 for construction and equipment of new facilities.

A total of $700,000 was allotted to 305 local communities during this past year for the replacement or upgrading of equipment. This allocation did much to stimulate the improvement of vocational education programs in the local communities.

Since the greatest need in Ohio is for the expansion of facilities for programs of vocational education, it is planned that 80% of the monies allotted to Ohio under the Vocational Education Act of 1963 will be spent for

construction and initial equipment of area vocational facilities. Experience this year in allotting money for construction and initial equipping of facilities points toward the importance of this activity in the expansion of vocational education and the stimulation of local communities in considering the development of programs.

2. Program Priorities to Expand Vocational and Technical Education for Post High School Students for the Current Year as Related to Manpower Needs and Employment Opportunities in Part A

During the past several years a good beginning has been made in the development of two year post high school technical programs in the areas of engineering and data processing. With the Vocational Act of 1963 now providing an opportunity for expansion of technical education in all service areas the technical institutions are preparing to expand and improve their curriculum. The State's emphasis on program priorities to expand vocational and technical education for post high school students for the current year is indicated by the large numbers of new occupational fields to be provided F. Y. 1967 as shown in Table 7. That is, the emphasis has been put on broadening the curriculum in higher level occupations. Some will be funded for equipment and others for leadership personnel during the year of preparation for expansion and improvement for F. Y. 1968.

a. New Teaching Personnel Requirements
b. New and Additional Occupational Fields to be Provided

Table 7, Vocational Post High School Programs F. Y. 1967, presents the demand for new post secondary school teachers, occupational fields to be provided and justification for emphasis.

c. Plans for Replacement or Purchase of New Equipment

d. Plans for Improving Facilities

Since dual use for both high school and adult programs is considered in the planning and acquisition of equipment and facilities, the plans for replacement or purchase of new equipment and plans for improving facilities described in Part B-1 c.d. is also applicable to the services provided for post high school, adult and out of school youth programs. The development of more area vocational centers is providing more facilities and equipment for use in the expanding of training, retraining and upgrading programs for all post high school programs.

3. Program Priorities to Expand Vocational and Technical Education for Persons Who Have Already Entered the Labor Market for the Current Year as Related to Manpower Needs and Employment Opportunities in Part A

Ohio has for a number of years maintained a good program to upgrade and improve those who have already entered the labor force. This year particular emphasis was placed upon the expansion and upgrading of courses for per-

Table 7:--Vocational Post High School Programs F. Y. 1967

Vocational Service	Approximate Number Teachers Needed	Justification for Emphasis	Occupational Fields to be Provided
Total	116		
Agricultural Education	6	2, 3, 4, 6	Horticulture; Food Processing including Meat Management; Laboratory Technicians, Soils, Feeds; Resources Conservation
Business Education	8*	2, 3, 4, 6	Medical-Dental Secretary, Industrial Accountant
Distributive Education	11	2, 3, 6	Petroleum Services Mid-Management, Banking Services Mid-Management, Sales-Marketing
Home Economics Education	6	2, 3, 6	Dietetics Technician, Child Development Technician
Trade and Industrial Education	85	2, 3, 5, 6	Medical Assistant, Surgical Technician, Professional Nursing A.D.M.

*Post high school programs expansion will continue at an expanded rate. Whereas in F. Y. 1966 there was 1 Business Office Education and 5 Business Data Practice with 460 students, there will be 5 Business Office Education and 6 Business Data Practice with 640 students enrolled in F. Y. 1967. Again most of the teaching demand has been met by converting certification of presently employed business education teachers who were vocationally qualified.

sons employed in the fields of business and office occupations. The State's emphasis this current year on program priorities to expand and improve programs to upgrade and improve those who have already entered the labor force is indicated by the large number of new occupational fields to be provided as shown in Table 8. That is, the emphasis has been put on broadening the curriculum in the rest of the services.

c. Plans for Replacement or Purchase of New Equipment

d. Plans for Improving Facilities

In planning the equipment and facilities for high school programs consideration is given for its use in programs to upgrade and improve those who have already entered the labor market. Therefore plans for acquisition of

Table 8:--Vocational Programs to Upgrade and Improve Those Who Have Already Entered the Labor Force F. Y. 1967

Vocational Service	Approximate Number Teachers Needed	Justification for Emphasis	Occupational Fields to be Provided
Total	430		
Agricultural Education	0*	2, 3, 4, 6	Agricultural Business, Agricultural Equipment, Horticulture
Business Education	75**	2, 3, 4, 6	None
Distributive Education	120	2, 3, 6	Store Buyer, Advertising Clinics, Income Tax
Home Economics Education	5	2, 3, 6	Home Makers Guide, Home Makers Assistant
Trade and Industrial Education	200	2, 3, 5, 6	Health Occupations

*It is believed that teachers of programs for secondary, post secondary, technical, and pupils with special needs supplemented with part time specialists from related agriculture pursuits will provide this instruction.
**Adult program expansion will drastically enlarge. While 8,118 adults received instructions through 23,445 hours of instructions in F. Y. 1966. It is estimated that 9,500 adults will be served by more than 27,000 hours of instruction in F. Y. 1967. The move to accept on adult certification specialists with only high school diplomas is meeting most of the teacher demands in the narrow course offerings.

replacement or new equipment and new or improved facilities described in Part B-1 c.d. is also applicable to the service provided for programs to upgrade and improve those who have already entered the labor force. The development of more area vocational centers is providing more and better equipment and facilities for use in the expanding of vocational programs for those who have already entered the labor force.

4. Program Priorities to Expand Vocational and Technical Education for Persons With Special Needs for the Current Year as Related to Manpower Needs and Employment Opportunities in Part A

An occupational work experience program for youth with I.Q. in the 75 to 89 range has been meeting with good success in serving these students. Programs that provide a workshop type experience within the school before the student is placed upon a work experience within the community are having the best results. Where consideration is given to those disadvantaged youth who are handicapped in reading and writing the English language and the skills of arithmetic, the programs are also meeting with greater results and making enroads in the accomplishment of the academic areas.

Most of the programs have been operated under the service of Trade and Industry. The State's emphasis on program priorities to expand and improve programs for those persons with special needs for the current year is indicated by the increase in programs in new occupational fields to be provided by the different vocational services and the new types of in-school shop experience to be provided by these services.

a. New Teaching Personnel Requirements
b. New and Additional Fields to be Provided

Table 9, Vocational Program for Those Persons with Special Needs F. Y. 1967, presents the demand for new teachers of pupils with special needs, occupations to be provided and justification for emphasis.

c. Plans for Replacement or Purchase of New Equipment

d. Plans for Improving Facilities

Since the occupational work experience programs are a part of the high school program, the provisions set forth in Part B-1 c.d. are here applicable.

5. Plans for the Construction of Area Vocational Education Schools for F. Y. 1967

During the past year the State Board for Vocational Education approved the expenditure of 80% of the funds made available under the Vocational Educational Act of 1963 for construction and initial equipment of facilities for new programs of vocational education since the State foundation plan provides money for the high school vocational instruction program. During the past year fourteen different schools received an allocation of funds for the construction and initial equipment of facilities. The great need for new facilities and equipment for the expansion of vocational education was indicated by the many applications received and the requests for additional funds.

On the basis of this and on the basis of stimulation of vocational education created by the construction, the State Board of Education has approved the expenditure of 80% of the funds made available to Ohio under the

Table 9:--Vocational Programs for Those Persons with Special Needs F. Y. 1967

Vocational Service	Approximate Number Teachers Needed	Justification for Emphasis	Occupational Fields to be Provided
Total	39		
Agricultural Education	10	1	Horticulture, On-the-Farm
Business Education	4*	1	Clerical Service (cluster of low level office jobs)
Distributive Education	1	1	Occupational Work Experience
Home Economics Education	4	1	None
Trade and Industrial Education	20	1	Single and Semi-skills

*The special needs programs will be expanded. The Business Office Education approach to disadvantaged youth with the "Clerical Service" program developed in Cincinnati is expanding into five schools. No further changes are contemplated until implementation has been evaluated after two more years. Again most of the teaching demand has been met by converting certification of presently employed business education teachers who were vocationally qualified and who had taken preparation for teaching this level of student.

Vocational Education Act of 1963 for this current year for the construction and initial equipment of facilities.

Notification has been sent to tell all school districts in Ohio concerning the availability of funds and that applications must be in the office of the Division of Vocational Education by August 20, 1966, for the initial allocations. To date a number of different school districts or joint vocational school districts have requested application forms for submission of requests. It is estimated that allocations will be made to 12 to 15 school districts making applications on the basis of the priority system recommended by the State Advisory Committee and established by the State Board of Education. Factors of the priority system are indicated on the application. See Exhibit D.

a. Number and Type of Schools

b. Educational Level of Program to be Offered

c. Occupational Fields to be Provided

d. Location and Area to be Served by School

e. Relating this to Item 3, Part A.

Table 10, Information on Area Vocational Schools Under Constuction F. Y. 1967, presents number and types of schools, educational level of program to be offered, occupational fields to be provided and location and area to be served.

These 17 schools have been identified in Part A-3 in Map 1, Status of Area Vocational Schools in Ohio F. Y. 1967, by outline in orange color and symbol "C" and in Table 5, Status of Area Schools in Ohio F. Y. 1967 by symbol "C".

6. State's Current Year Plans for Strengthening Programs

The vocational education program F. Y. 1967 is crowded with activities of expansion and improvement to strengthen its service to youth and adults for preparing them for their gainful endeavors in the world of work. No service or area has been overlooked. The lists are too long to review here so a single illustration has been selected from many to show the man sized task ahead of vocational educators in Ohio for F. Y. 1967. In vocational education programs for high school level 17 area buildings will be under construction, approximately 6 times as many new programs (615) will be started as was started in F. Y. 1965 with an estimated increased enrollment of over 12,000 students in vocational education over F. Y. 1965. Over 864 new teachers this year will be in the shops and related instructional rooms. All must have help.

a. Administration and Supervision--State and Local

To meet the stupendous upsurge the services of business education and guidance have each added an assistant supervisor and increased clerical staff and operating supplies. District, regional and national seminars conducted by the U.S.O.E. are proving to be an excellent stimulus for the State staff. Plans are being made to send as many of these leaders as possible to the meetings. To meet the task at the local level reimbursement is stimulating the employment of local supervisors and directors. More than 10 new directors and more than 21 supervisors will be employed for this current year to strengthen the local administration and supervision.

b. Teacher Education

The expansion of vocational education was anticipated last year and 8 teacher educators were added to three vocational services. However to build up and strengthen the teacher training service still more, for it is this service that must assist the supervisors in meeting the demands of the over 864 new teachers, another teacher educator will be added at Toledo University in Trade and Industrial Education. Maintenance allowance is stimulating attendance at workshops. An automotive workshop had 57 in attendance this year. More workshops are planned for F. Y. 1967 to provide stimulation and instruction for employed local vocational education teachers, supervisors and directors. A one week institute will also be conducted for all new teachers before the opening of school each year.

Table 10:--Information on Area Vocational Schools Under Construction F. Y. 1967

School No.	Map No.	School	Type of School	Educational Level of Program	Location and Area	Occupational Fields
1	9	Cleveland Jane Adams	A	HS OS PS	Cleveland City	Foods Tea Room, Foods Cafeteria, Baking, Cosmetology, Child Care, Dressmaking and Tailoring, Power Sewing, Secretary, Distributive Education, Food Service Supervisor, Nursing Aides, Practical Nursing, Dental Assistant*
2	10	Dayton Patterson	A	HS	Dayton City	Cosmetology, Dental Assistant, Commercial Art, Commercial Food, Business Machine Repair, Major Appliance Repair, Electrical Service and Repair, Auto Mechanic, Medical Arts, Printing, Business Education, Distributive Education*
3	11	Elyria	B	HS	Elyria City	Welding, Dental Assistant*
4	3	Lorain South	B	HS	Lorain City	Draftsman, Bookkeeper, General Clerical, Stenographic, Food Preparation and Service, Welding and Metal Fabrication, Auto Body Repairman, Coop-Office Education, Diversified Cooperative Training, Occupational Work Experience*
5	15	Mansfield	B	HS	Mansfield City	Cosmetology, Drafting, Sheetmetal, Woodworking, Welding*
6	16	Mentor	B	HS	Mentor Exempted Village	Occupational Work Experience, Diversified Coop Training, Electricity, Drafting, Auto Body, Auto Mechanics, Horticulture*
7	43	Middletown East	B	HS	Middletown City	Cosmetology, Drafting, Dental Assistant, Commercial Foods, Auto Body, Printing, Distributive Education, Coop-Office Education, Occupational Work Experience*

Table 10:--Information on Area Vocational Schools Under Construction F. Y. 1967 (Continued)

School No.	Map No.	School	Type of School	Educational Level of Program	Location and Area	Occupational Fields
8	17	Morgan County	B	HS	Morgan County	Cabinet Making, Auto Mechanics, Clerk-Steno, Office Practice, Agriculture, Machine Shop, Home Makers Assistant, Electronics, Cosmetology, Hydraulics and Pneumatics, Distributive Education*
9	6	Parma	B	HS	Parma City	Electronics and Industrial Communication, Machine Trades, Drafting, Auto Mechanic, Welding, Offset Printing, Bookkeeper, Secretary, Clerk Typist, Coop-Office Education, Distributive Education, Occupational Work Experience, Food Service*
10	44	Pioneer J.V.S.	A	HS	Richland County	Horticulture, Agriculture Equipment Repair, Off-the-Farm Coop, Animal Science and Agronomy, High Skill Stenography, Entry Data Processor, Account Clerk, Coop-Office Practice, Distributive Education, Auto Mechanics, Auto Body and Fender, Cosmetology, Machine Trade, Drafting, Electrical and Electronics, Carpentry and Cabinet Making, Restaurant Practice
11	4	Plain Township Oakwood	B	HS	Plain Local	Machinist, Auto Mechanic, Electrician, Draftsman, Cook and Chef, Waiter and Waitress, Cosmetology, Diversified Coop Training, Bookkeeping and Account Clerk, Stenographer, Tabulating Machine Operation, Coop-Office Practice, Distributive Education, Landscape Gardner and Nurseryman*

Table 10:--Information on Area Vocational Schools Under Construction F. Y. 1967 (Continued)

School No.	Map No.	School	Type of School	Educa-tional Level of Program	Location and Area	Occupational Fields
15	5	Warren Harding	B	HS	Warren City	Draftsman, Cosmetology, Offset Printing, Machine Trade, Electricity, Auto Mechanics, Coop-Office Training*
16	5	Warren Western Reserve	B	HS	Warren City	Industrial Graphics, Draftsman, Practical Nurse, Bookkeeper, Secretary, Clerk Typist, Horticulturist, Welder, Auto Body Repairman, Coop-Office Training*
17	22	Youngstown Chaffen	A	HS	Youngstown City	Auto Body Repairman, Auto Mechanics, Electrical and Electronics, Welder Combination, Drafting*

OS Out of school youth.
PS Post high school.
* School offers other occupational fields.
** Area not indicated on Map.

Table 10:--Information on Area Vocational Schools Under Construction F. Y. 1967 (Continued)

School No.	Map No.	School	Type of School	Educational Level of Program	Location and Area	Occupational Fields
12	20	Southwestern City	A	HS	Southwestern City	Food Service, Printing, Dental Assistant, Cosmetology, Drafting, Mechanical, Electronics, Machine Trades, Auto Mechanics, Welding, Unit Record*
13	21	Toledo Macomber	A	HS	Toledo City	Cabinet Making, Printing, Machine Shop, Sheet Metal, Welding, Electrical Construction, Industrial Electronics, Auto Mechanics, Auto Electricity, Automatic Transmissions, Auto Collision, Radio and Television, Electric Appliance Repair, Commercial Art, Architectural Drafting, Mechanical Drafting*
14	45	Tri County	A	HS	Alexander, Federal-Hocking, Southern Starr-Washington, Trimble and York Locals From Athens, Hocking, Perry Counties and Logan and Nelsonville Cities	Farm Management, Horticulture, Account Clerk, Business Machines, Secretarial, Clerk-Typist, Distributive Education, Auto Body Repair, Auto Body Repair, Auto Mechanic, Cosmetology, Drafting, Electronics, Machine Shop, Nursing Rest Home Aides, Sheet Metal and Welding
14	**	Tri County	C	Tech.	Athens, Fairfield, Hocking, Meigs, Morgan, Perry Vinton, Washington Counties	Executive Secretary, Junior Accounting, Ceramic Technology, Electrical and Electronic Technology, Industrial Technology, Mechanical Technology, Forestry Technology, Recreation and Wildlife Technology, Retail Mid Management, Petroleum Service Management, Food Management Technology, Dietary Technology

c. Vocational Guidance Programs and Services (State and Local)

A total of fourteen two-week seminars in Vocational Guidance will be conducted at five universities centers for 280 certificated school guidance counselors in the summer of 1966. The seminars are financed by the Division of Vocational Education and co-sponsored by the Division of Guidance and Testing and the participating universities.

The Division of Guidance and Testing expanded its Guidance Services Section personnel by employing a technical and vocational guidance coordinator whose responsibility involves state-wide supervisory, evaluative, and program development functions. Such functions include supervision of state policies and procedures for guidance, the administration and recommendation of reimbursement policies, and the supervision of all reimbursable programs assigned by the State Guidance Supervisor according to the plan for guidance under the Vocational Education Act of 1963.

Plans and activities are underway for (1) the continuation of GATB training sessions, (2) the publication of the Ohio Vocational Education Notebook - a school counselor source book devoted to vocational school programs, (3) student interest surveys in technical and vocational education, (4) the production and distribution of a sound film strip designed to explain vocational and technical education to parents and school patrons.

d. Curriculum Development

In trade and industrial education development of study guides has been given top priority. Guides for automotive, dental assisting, health occupations, and welding will be developed. Trade tests for measuring success are to go with the guides.

Home economics will complete a curriculum for homemaking to be presented at the annual conference. The curriculum guide includes the sequence program in home economics at the high school level with suggested content for semester courses of varing types.

Distributive Education is developing curriculums at post secondary level in sales-marketing, petroleum service, and banking services; at secondary level in economics of distribution, advertising and marketing; and at adult level in advertising, store buyer, general selling procedures, methods of detecting shoplifters, and display methods and techniques.

Business education is developing business office education manual of operation, adult-technical program guidelines, overall technical education planning and in service guidelines.

Agriculture will add an assistant supervisor to the instructional materials laboratory at Ohio State University.

All of the services have increased the budget for instructional material laboratories. See Exhibit E, Proposed Increases in Teacher Training and Supervision Budget Over 1965-66.

e. Research, Experimental and Developmental

Business education is experimenting with Cleveland in a project developing large size introductory typing classes, with Bucyrus in a disadvantaged youth clerical program in a rural setting similar to the successful one operated in Cincinnati-City setting, and four drive-in conferences with nationally known specialists to bring some new features to all Business Office Education teachers in Ohio.

Agriculture committees will further define the biological principles approach in teaching vocational agriculture, will develop procedures in the use of economic principals in teaching farm management, and consider the development of a program to identify physical principles which can be used in teaching vocational agriculture.

Trade and industrial education is working with several cities in developing and studying programs for pupils of limited ability. Dayton is one of the cities requesting a grant through United States Office Education to evaluate their program. Assistance has been given by trade and industrial services and the Ohio Research Coordinating Unit.

The Ohio Research Coordinating Unit will stimulate, coordinate, facilitate and disseminate research and information.

f. Evaluation of Programs and Activities

Vocational Home Economics will work with teacher education and teachers in developing techniques to use in evaluating local curriculum in vocational home economics. This committee will study the ways home economics for homemaking has contributed to the improvement of families as well as to the economy of the nation. Evaluation devices will also be developed to measure the outcomes of the job training program in vocational home economics. A teacher educator at Weselyan University will give full time to evaluation.

Trade and industrial education will study the team approach for evaluation of programs at the local level. The purpose is to evaluate programs in terms of soundness and breadth of offering possible in the local system. It is expected that this method will encourage programs to expand to offer vocational instruction at all levels.

Agriculture will study the effectiveness of the use of biological principles in teaching, the effect and value of the farm business and analysis program, as far as farm people are concerned, the effectiveness of technical school programs and the procedures in some areas where the patterns of instruction have been varied in the pilot programs.

Business education activities includes: A workshop at Toledo University in June, 1966, developed a guideline for evaluation procedures in the stenographic program. Publication of this document for dissemination to all Ohio programs for self-evaluation purposes and experimental useage will be made. A planned session to develop a pattern of testing in cooperation with the Ohio State Employment Service will be inaugurated. Achievement and analysis

testing will also be developed in cooperation with the State Guidance and Testing Division, Testing Program Service for evaluative purpose.

The research coordination unit will direct attention toward the evaluation of the State Division of Vocational Education activities and services, the establishment of a pattern of evaluation of local existing programs and activities and procedures for evaluating local programs and activities in preparation for the congressional evaluation to be made in 1967.

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Approval Expires 10/16/67

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Office of Education
Division of Vocational and Technical Education
Washington, D.C. 20202

OE-4256

State Ohio
Identification No.
Original Estimate /X/
Revised Estimate /_/

Fiscal Year 1967

Estimate of Total Expenditures for Vocational Education Purposes under all Vocational Education Acts

PROGRAM PURPOSES 1/	Total	Federal Funds		State and Local Funds	
		Smith-Hughes and George-Barden 2/	1963 Act 3/	State	Local
(1)	(2)	(3)	(4)	(5)	(6)
Secondary	10,898,939	361,585	1,139,994	5,115,465	4,281,895
Post-Secondary	2.303,034	936,282	180,185	558,637	627,930
Adult	2,002,232	574,406	121,712	682,105	624,009
Persons with special needs	205,988	-	102,994	-	102,994
Construction of area vocational schools	12,247,682	//////////////	6,123,841	-	6,123,841
Ancillary services	1,233,029	694,567	256,564	235,333	46,565
Total	28,890,904	2,566,840	7,925,290	6,591,540	11,807,234
Work Study	1,257,898	//////////////	1,257,898	-	-

1/ Estimates of expenditures as projected in accordance with the policies and procedures in Section 1.3 of the State plan.
2/ Include all funds under Smith-Hughes and George-Barden allotments except funds to be transferred to the allotment under the 1963 Act.
3/ Include funds to be transferred from Smith-Hughes and George-Barden allotments to the allotment under Section 3 of the 1963 Act.

I certify that the information set forth herein, including the representation as to amounts of State and local funds to be expended under the plan during the stated period, is true to the best of my knowledge and belief.

(Date) June 20, 1966 (Signed) _____ (Title) Director of Vocational Education

TABLE II

1963 ACT

	Secondary	Post-Secondary	Adult	Special Needs	Ancillary	Construction	Total
Agriculture	7,500.00	2,122.50	9,962.50	-	12,150.00	-	31,735.00
Business	68,717.75	137,116.67	36,247.75	30,000.00	104,365.79	-	376,447.96
Distributive Ed.	33,000.00	28,012.50	-	-	25,805.56	-	86,818.06
Home Economics	-	12,933.00	-	-	-	-	12,933.00
T & I	52,850.00	-	26,250.00	-	34,823.66	-	113,923.66
Guidance	41,130.53	-	-	-	35,914.00	-	77,044.53
Local Directors	49,252.09	-	49,252.08	-	-	-	98,504.17
Equipment	650,000.00	-	-	-	-	-	650,000.00
Construction	-	-	-	-	-	6,123,841.04	6,123,841.04
Joint Voc. Units	237,543.48	-	-	72,994.10	-	-	310,537.58
Salary Increases	-	-	-	-	43,505.00	-	43,505.00
TOTALS	1,139,993.85	180,184.67	121,712.33	102,994.10	256,564.01	6,123,841.04	7,925,290.00

Form No. OE 4257

Bureau of Budget No. 51-R 470.1
Approval Expires 10/16/67

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Office of Education
Division of Vocational and Technical Education
Washington, D.C. 20202

State Ohio
Identification No.
Fiscal Year 1967

Request for Transfer of Federal Funds
Allotted under Smith-Hughes and George-Barden Acts

Allotment from which transfer is to be made (Code No.) 1/	Allotment to which transfer is to be made (Code No.) 1/	Amount	Explanation 3/
None	None	None	None (Attach detailed explanations on supplementary sheet.)

Code 1/

1.1 Smith-Hughes agriculture
1.2 Smith-Hughes trade and industrial and home economics 2/
1.3 Smith-Hughes teacher-training
2.1 George-Barden Title I agriculture
2.2 George-Barden Title I home economics
2.3 George-Barden Title I trade and industrial
2.4 George-Barden Title I distributive
2.5 George-Barden Title I fisheries
3.0 George-Barden Title II
4.0 George-Barden Title III
5.0 Vocational Education Act of 1963 (Section 3)

All of the above code numbers are not applicable to Virgin Islands, Guam, and American Samoa. The following code numbers shall be applicable:

2. Supplementary acts (Virgin Islands: Act of March 14, 1950, Guam: Act of August 1, 1956, section 9, American Samoa: Act of September 25, 1962, section 2)
3. George-Barden Title II (applicable only to Virgin Islands and Guam)
4. George-Barden Title III (applicable only to Virgin Islands and Guam)
5. Vocational Education Act of 1963

2/ In the case of Puerto Rico allotment code No. 1.2 shall be subdivided in the following manner (pursuant to the Act of March 3, 1931):
.21 Smith-Hughes trade and industrial
.22 Smith-Hughes home economics

3/ See regulation section 104.28

(Signed)

June 20, 1966
(Date)

Director of Vocational Education
(Title)

Unemployed Personnel Seeking Jobs Through
Ohio State Employment Service April 1, 1966

Exhibit A

MEN SEEKING JOBS THROUGH OHIO STATE EMPLOYMENT SERVICE, BY AGE AND OCCUPATIONAL GROUP, APRIL 1, 1966

OCCUPATIONAL GROUP	ALL MEN	AGE GROUP: UNDER 19	19 TO 21	22 TO 24	25 TO 34	35 TO 44	45 TO 54	55 TO 64	65 AND OVER
1	2	3	4	5	6	7	8	9	10
	NUMBER								
TOTAL	80,323	4,694	11,536	9,134	18,351	15,113	11,741	7,459	2,295
PROFESSIONAL, MANAGERIAL	2,523	7	76	173	566	595	572	362	172
CLERICAL AND SALES	3,732	84	462	512	794	694	538	396	252
SERVICE	4,926	130	471	453	1,034	892	859	709	378
SKILLED	15,146	19	382	830	3,411	3,913	3,352	2,530	709
SEMISKILLED	17,338	139	1,388	2,109	5,221	4,105	2,697	1,392	287
UNSKILLED & AGRICULTURAL	20,845	380	2,464	2,570	5,564	4,289	3,326	1,859	383
ENTRY OCCUPATIONS[A]	15,813	3,935	6,293	2,487	1,761	625	397	201	114
	PERCENT OF AGE GROUP								
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
PROFESSIONAL, MANAGERIAL	3.1	.1	.7	1.9	3.1	3.9	4.9	4.8	7.5
CLERICAL AND SALES	4.6	1.8	4.0	5.6	4.3	4.6	4.6	5.3	11.0
SERVICE	6.1	2.8	4.1	5.0	5.6	5.9	7.3	9.5	16.5
SKILLED	18.9	.4	3.3	9.1	18.6	25.9	28.5	33.9	30.9
SEMISKILLED	21.6	3.0	12.0	23.1	28.5	27.2	23.0	18.7	12.5
UNSKILLED & AGRICULTURAL	26.0	8.1	21.3	28.1	30.3	28.4	28.3	25.1	16.7
ENTRY OCCUPATIONS	19.7	83.8	54.6	27.2	9.6	4.1	3.4	2.7	4.9
	PERCENT OF OCCUPATIONAL GROUP								
TOTAL	100.0	5.8	14.4	11.4	22.8	18.8	14.6	9.3	2.9
PROFESSIONAL, MANAGERIAL	100.0	.3	3.0	6.9	22.4	23.6	22.7	14.3	6.8
CLERICAL AND SALES	100.0	2.2	12.4	13.7	21.3	18.6	14.4	10.6	6.8
SERVICE	100.0	2.6	9.6	9.2	21.0	18.1	17.4	14.4	7.7
SKILLED	100.0	.1	2.5	5.5	22.5	25.9	22.1	16.7	4.7
SEMISKILLED	100.0	.8	8.0	12.2	30.1	23.7	15.6	8.0	1.6
UNSKILLED & AGRICULTURAL	100.0	1.8	11.8	12.3	26.7	20.6	16.0	9.0	1.8
ENTRY OCCUPATIONS	100.0	24.9	39.8	15.7	11.1	4.0	2.5	1.3	.7

[A] REPRESENTS APPLICANTS HAVING POTENTIAL QUALIFICATIONS FOR ENTERING WORK FOR WHICH THEY DO NOT HAVE FULLY QUALIFYING EXPERIENCE OR TRAINING.

DIVISION OF RESEARCH AND STATISTICS
OHIO BUREAU OF UNEMPLOYMENT COMPENSATION
COLUMBUS 4-19-66 TABLE RS 268.1

WOMEN SEEKING JOBS THROUGH OHIO STATE EMPLOYMENT SERVICE, BY AGE AND OCCUPATIONAL GROUP, APRIL 1, 1966

OCCUPATIONAL GROUP	ALL WOMEN	AGE GROUP: UNDER 19	19 TO 21	22 TO 24	25 TO 34	35 TO 44	45 TO 54	55 TO 64	65 AND OVER
1	2	3	4	5	6	7	8	9	10
	NUMBER								
TOTAL	44,805	2,525	9,101	4,934	9,294	8,688	6,522	3,007	734
PROFESSIONAL, MANAGERIAL	805	.....	40	94	154	199	196	103	19
CLERICAL AND SALES	10,892	141	1,977	1,442	2,317	2,104	1,734	883	294
SERVICE	8,716	179	875	811	1,964	1,952	1,747	960	228
SKILLED	548	.....	14	28	85	147	149	89	36
SEMISKILLED	4,869	10	212	421	1,264	1,475	1,000	413	74
UNSKILLED & AGRICULTURAL	5,329	19	366	564	1,595	1,466	931	337	51
ENTRY OCCUPATIONS[A]	13,646	2,176	5,617	1,574	1,915	1,349	765	222	32
	PERCENT OF AGE GROUP								
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
PROFESSIONAL, MANAGERIAL	1.8	.....	.5	1.9	1.7	2.3	3.0	3.4	2.6
CLERICAL AND SALES	24.3	5.6	21.7	29.2	24.9	24.2	26.6	29.4	40.0
SERVICE	19.4	7.1	9.6	16.5	21.1	22.5	26.8	31.9	31.1
SKILLED	1.2	.....	.2	.6	.9	1.7	2.3	3.0	4.9
SEMISKILLED	10.9	.4	2.3	8.5	13.6	17.0	15.3	13.7	10.1
UNSKILLED & AGRICULTURAL	11.9	.7	4.0	11.4	17.2	16.8	14.3	11.2	6.9
ENTRY OCCUPATIONS	30.5	86.2	61.7	31.9	20.6	15.5	11.7	7.4	4.4
	PERCENT OF OCCUPATIONAL GROUP								
TOTAL	100.0	5.6	20.3	11.0	20.8	19.4	14.6	6.7	1.6
PROFESSIONAL, MANAGERIAL	100.0	.....	5.0	11.7	19.1	24.7	24.3	12.8	2.4
CLERICAL AND SALES	100.0	1.3	18.2	13.2	21.3	19.3	15.9	8.1	2.7
SERVICE	100.0	2.1	10.0	9.3	22.5	22.4	20.1	11.0	2.6
SKILLED	100.0	.....	2.6	5.1	15.5	26.8	27.2	16.2	6.6
SEMISKILLED	100.0	.2	4.4	8.6	26.0	30.3	20.5	8.5	1.5
UNSKILLED & AGRICULTURAL	100.0	.3	6.9	10.6	29.9	27.5	17.5	6.3	1.0
ENTRY OCCUPATIONS	100.0	15.9	41.1	11.5	14.2	9.9	5.6	1.6	.2

[A] REPRESENTS APPLICANTS HAVING POTENTIAL QUALIFICATIONS FOR ENTERING WORK FOR WHICH THEY DO NOT HAVE FULLY QUALIFYING EXPERIENCE OR TRAINING.

DIVISION OF RESEARCH AND STATISTICS
OHIO BUREAU OF UNEMPLOYMENT COMPENSATION
COLUMBUS 4-19-66 TABLE RS 268.1-A

MEN SEEKING JOBS THROUGH OHIO STATE EMPLOYMENT SERVICE, BY OCCUPATIONAL GROUP, AGE GROUP, COUNTY, AND LOCAL OFFICE, APRIL 1, 1966

COUNTY AND OFFICE[A]	ALL MEN	OCCUPATIONAL GROUP							AGE GROUP							
		PROFESSIONAL, MANAGERIAL	CLERICAL AND SALES	SERVICE	SKILLED	SEMI-SKILLED	UN-SKILLED[B]	ENTRY OCCUPATIONS[C]	UNDER 19	19 TO 21	22 TO 24	25 TO 34	35 TO 44	45 TO 54	55 TO 64	65 AND OVER
TOTAL	80,323	2,523	3,732	4,926	15,146	17,338	20,845	15,813	4,694	11,536	9,134	18,351	15,113	11,741	7,459	2,295
EIGHT LARGE COUNTIES	44,639	1,600	2,227	3,384	7,806	8,838	11,022	9,762	2,467	6,716	4,890	9,779	8,541	6,667	4,213	1,366
CUYAHOGA	12,145	630	629	1,232	2,510	2,128	3,489	1,527	277	1,141	1,132	2,583	2,712	2,319	1,473	508
CLEVELAND CLERICAL[D]	1,286	566	507	.....	.....	.....	.....	213	.....	58	145	243	247	294	201	98
CLEVELAND INDUSTRIAL	3,621	.....	.....	.....	651	1,056	1,541	373	11	253	448	1,106	855	578	272	98
CLEVELAND SERVICE	4,475	1	.....	1,115	1,186	649	1,466	58	14	99	260	872	1,193	1,095	739	203
CLEVELAND SOUTH	1,689	63	99	60	651	382	377	57	4	81	129	337	417	351	261	109
CLEVELAND YOUTH	1,074	.....	23	57	22	41	105	826	248	650	150	25	.....	1	.....	.....
FRANKLIN	7,207	236	358	442	1,454	1,601	1,485	1,631	335	1,227	919	1,863	1,291	875	553	144
COLUMBUS ES	5,891	233	326	341	1,409	1,488	1,322	772	7	385	775	1,861	1,291	875	553	144
COLUMBUS YOUTH	1,316	3	32	101	45	113	163	859	328	842	144	2	.....	.....	.....	.....
HAMILTON	6,677	182	390	800	1,039	1,412	1,727	1,127	299	731	559	1,446	1,442	1,109	813	278
CINCINNATI	5,783	180	384	785	1,034	1,403	1,710	287	19	214	476	1,434	1,440	1,109	813	278
CINCINNATI YOUTH	894	2	6	15	5	9	17	840	280	517	83	12	2	.....	.....	.....
LUCAS	3,967	109	149	234	517	1,035	942	981	309	637	450	839	699	554	358	121
TOLEDO CLERICAL[D]	299	105	110	.....	.....	.....	.....	84	.....	2	52	73	62	51	38	21
TOLEDO INDUSTRIAL[E]	2,581	.....	.....	203	491	923	839	125	.....	.....	255	766	637	503	320	100
TOLEDO YOUTH	1,087	4	39	31	26	112	103	772	309	635	143	.....	.....	.....	.....	.....
MAHONING	4,510	120	177	161	643	740	1,089	1,580	407	848	618	962	751	567	277	80
YOUNGSTOWN	3,354	72	159	144	631	709	1,027	612	11	292	490	897	740	567	277	80
COLLEGE PLACEMENT	234	47	5	.....	.....	.....	.....	182	.....	84	75	64	11	.....	.....	.....
YOUNGSTOWN YOUTH	922	1	13	17	12	31	62	786	396	472	53	1	.....	.....	.....	.....
MONTGOMERY	3,686	135	168	253	602	687	847	994	292	721	449	825	600	440	283	76
DAYTON CLERICAL[D]	447	132	153	.....	.....	.....	.....	162	13	74	76	89	71	54	54	16
DAYTON INDUSTRIAL[E]	2,452	.....	.....	217	596	658	776	205	9	174	329	736	529	386	229	60
DAYTON YOUTH	787	3	15	36	6	29	71	627	270	473	44	.....	.....	.....	.....	.....
STARK	2,452	65	117	104	442	537	613	574	131	481	301	510	401	341	220	67
ALLIANCE	329	6	12	13	54	90	88	66	17	62	36	67	54	42	44	7
CANTON	1,192	47	70	59	269	308	308	131	.....	11	152	342	279	232	130	46
CANTON YOUTH	518	3	14	17	23	60	84	317	94	358	66	.....	.....	.....	.....	.....
MASSILLON	413	9	21	15	96	79	133	60	20	50	47	101	68	67	46	14
SUMMIT	3,995	123	239	158	599	698	830	1,348	417	930	462	751	645	462	236	92
AKRON CLERICAL[D]	322	95	102	.....	.....	.....	.....	125	17	28	40	89	71	37	23	17
AKRON INDUSTRIAL[E]	1,459	.....	.....	71	341	368	428	251	.....	1	161	444	359	285	151	58
AKRON YOUTH	1,176	4	104	31	44	89	91	813	312	737	127	.....	.....	.....	.....	.....
BARBERTON	1,038	24	33	56	214	241	311	159	88	164	134	218	215	140	62	17

SEE FOOTNOTES AT END OF TABLE.

4-22-66

TABLE RS 268.2

COUNTY AND OFFICE[A]	ALL MEN	OCCUPATIONAL GROUP							AGE GROUP							
		PROFESSIONAL, MANAGERIAL	CLERICAL AND SALES	SERVICE	SKILLED	SEMI-SKILLED	UNSKILLED[B]	ENTRY OCCUPATIONS[C]	UNDER 19	19 TO 21	22 TO 24	25 TO 34	35 TO 44	45 TO 54	55 TO 64	65 AND OVER
ALL OTHER COUNTIES	35,684	923	1,505	1,542	7,340	8,500	9,823	6,051	2,227	4,820	4,244	8,572	6,572	5,074	3,246	929
ADAMS (WEST UNION)[F]	391	1	2	6	74	123	147	38	19	33	31	103	90	74	34	7
ALLEN (LIMA)	762	21	40	57	118	156	218	152	35	138	115	162	132	81	72	27
ASHLAND (ASHLAND)[F]	109	1	5	2	23	40	27	11	1	13	10	18	24	20	18	5
ASHTABULA (ASHTABULA)	859	45	34	24	211	137	182	226	76	80	83	158	149	173	108	32
ATHENS (ATHENS)[F]	295	2	6	17	59	70	110	31	7	28	34	76	49	62	34	5
AUGLAIZE (ST. MARYS)	168	6	3	10	19	35	44	51	25	35	28	33	25	13	8	1
BELMONT	1,153	17	45	21	201	244	525	100	36	89	157	326	194	219	110	22
BRIDGEPORT	934	17	41	21	143	182	433	97	35	78	135	266	148	168	84	20
BARNESVILLE	219	.....	4	.....	58	62	92	3	1	11	22	60	46	51	26	2
BROWN (GEORGETOWN)[F]	193	.....	3	6	48	47	85	4	2	14	17	60	48	26	20	6
BUTLER	2,228	39	77	125	362	535	519	571	231	387	289	515	388	237	134	47
HAMILTON	1,333	24	59	57	232	363	356	242	94	216	180	322	248	158	83	32
MIDDLETOWN	895	15	18	68	130	172	163	329	137	171	109	193	140	79	51	15
CARROLL (CARROLLTON)[F]	216	5	5	5	32	64	67	38	9	37	28	37	37	36	27	5
CHAMPAIGN (URBANA)[F]	92	1	2	5	15	32	28	9	2	14	12	22	16	12	11	3
CLARK (SPRINGFIELD)	782	20	32	54	179	192	188	117	36	93	69	177	151	136	92	28
CLERMONT (BATAVIA)	873	16	26	32	245	284	214	56	38	69	81	216	190	136	108	35
CLINTON (WILMINGTON)[F]	100	2	2	4	26	27	30	9	2	10	10	28	16	20	11	3
COLUMBIANA	820	21	26	33	127	221	206	186	59	157	92	175	137	103	75	22
EAST LIVERPOOL	424	4	14	17	52	118	139	80	14	101	51	101	75	43	30	9
SALEM	396	17	12	16	75	103	67	106	45	56	41	74	62	60	45	13
COSHOCTON (COSHOCTON)	218	3	6	9	64	48	77	11	1	13	12	44	46	53	45	4
CRAWFORD	374	11	14	21	80	86	67	95	45	68	46	84	45	39	32	15
BUCYRUS	245	9	8	12	51	48	50	67	35	43	34	57	26	23	15	12
GALION[F]	129	2	6	9	29	38	17	28	10	25	12	27	19	16	17	3
DARKE (GREENVILLE)	170	6	9	7	30	38	53	27	20	24	23	33	22	19	22	7
DEFIANCE (DEFIANCE)	275	16	12	6	43	41	121	36	9	43	49	61	56	37	14	6
DELAWARE (DELAWARE)	279	7	17	20	66	72	55	42	17	44	35	56	54	53	19	1
ERIE (SANDUSKY)	598	39	38	46	123	156	133	63	9	79	83	132	116	76	74	29
FAIRFIELD (LANCASTER)	422	11	29	26	107	114	93	42	9	58	42	100	83	75	52	3
FAYETTE (WASHINGTON C.H.)	376	12	9	7	67	100	112	69	15	40	55	93	67	62	30	14
FULTON (WAUSEON)	54	3	1	.....	20	12	13	5	1	3	6	9	7	10	13	5
GALLIA (GALLIPOLIS)	358	1	16	14	67	112	125	23	10	37	50	97	69	53	37	5
GEAUGA[G] (PAINESVILLE)	78	2	1	2	40	11	18	4	.....	2	8	18	22	15	12	1
GREENE (XENIA)[F]	524	12	24	19	138	153	134	44	13	64	52	158	96	85	48	8
GUERNSEY (CAMBRIDGE)	743	20	40	42	187	194	161	99	17	74	81	195	155	127	71	23

SEE FOOTNOTES AT END OF TABLE.

4-22-66

TABLE RS 268.2

COUNTY AND OFFICE[A]	ALL MEN	OCCUPATIONAL GROUP							AGE GROUP							
		PROFESSIONAL, MANAGERIAL	CLERICAL AND SALES	SERVICE	SKILLED	SEMI-SKILLED	UN-SKILLED[B]	ENTRY OCCUPATIONS[C]	UNDER 19	19 TO 21	22 TO 24	25 TO 34	35 TO 44	45 TO 54	55 TO 64	65 AND OVER
HANCOCK (FINDLAY)	306	10	17	18	50	61	79	71	33	47	36	56	54	43	34	3
HARDIN (KENTON)[F]	134	3	5	7	21	33	56	9	3	24	18	33	18	19	13	6
HARRISON (CADIZ)[F]	47	2	.....	3	10	13	17	2	1	5	6	9	5	9	11	1
HENRY (NAPOLEON)	69	1	1	1	6	24	19	17	7	11	8	12	13	9	8	1
HIGHLAND (HILLSBORO)[F]	112	3	6	2	23	38	25	15	2	10	9	21	22	23	19	6
HOCKING (LOGAN)	460	8	18	15	121	117	120	61	19	57	54	115	86	79	39	11
HOLMES[G] (WOOSTER)	54	1	.....	1	9	12	26	5	22	10	5	5	4	6	1	1
HURON (NORWALK)	179	3	.....	15	25	66	47	23	12	21	14	33	25	37	29	8
JACKSON (JACKSON)	643	11	18	22	135	177	177	103	17	63	63	173	151	87	79	10
JEFFERSON	522	26	61	55	86	91	100	103	26	86	100	142	72	56	26	14
STEUBENVILLE	431	10	55	46	86	88	95	51	13	55	77	133	65	52	24	12
COLLEGE PLACEMENT	91	16	6	9	.....	3	5	52	13	31	23	9	7	4	2	2
KNOX (MOUNT VERNON)	364	4	14	14	61	59	55	157	7	79	45	74	49	42	51	17
LAKE (PAINESVILLE)	473	36	24	26	141	64	90	92	48	56	26	99	86	74	48	36
LAWRENCE (IRONTON)	791	13	18	25	178	161	222	174	102	106	98	188	141	97	50	9
LICKING (NEWARK)	819	21	38	46	197	220	207	90	25	142	105	189	149	111	75	23
LOGAN (BELLEFONTAINE)	223	4	14	15	51	40	35	64	19	25	16	48	37	38	33	7
LORAIN	1,641	42	72	62	367	356	357	385	44	305	218	415	315	194	119	31
ELYRIA	519	15	35	23	132	137	105	72	17	77	62	125	103	74	51	10
LORAIN	1,122	27	37	39	235	219	252	313	27	228	156	290	212	120	68	21
MADISON (LONDON)[F]	62	.....	1	3	9	8	37	4	2	7	5	17	15	6	9	1
MARION (MARION)	1,006	23	42	42	218	222	171	288	73	180	143	273	169	113	36	19
MEDINA[G] (BARBERTON)	144	1	7	2	49	32	43	10	5	13	21	35	26	26	14	4
MEIGS (POMEROY)[F]	195	3	6	4	55	56	64	7	.....	8	37	53	40	28	23	6
MERCER[G] (ST. MARYS)	129	3	6	3	15	25	45	32	7	26	30	21	16	18	9	2
MIAMI (PIQUA)	434	10	10	18	65	90	133	108	69	66	50	98	70	42	31	8
MONROE (WOODSFIELD)[F]	133	.....	3	1	33	30	65	1	.....	9	14	36	31	21	20	2
MORGAN (MC CONNELSVILLE)[F]	74	1	2	1	27	20	23	.....	.....	5	7	15	18	12	14	3
MORROW[G] (MARION)	19	.....	3	.....	4	5	2	5	1	4	4	4	1	1	4	.....
MUSKINGUM (ZANESVILLE)	768	15	24	49	176	197	235	72	42	99	75	204	137	109	82	20
NOBLE (CALDWELL)[F]	88	1	1	1	26	28	28	3	.....	5	6	24	25	13	14	1
OTTAWA (PORT CLINTON)	975	58	83	31	243	233	127	200	34	98	85	248	211	203	75	21
PAULDING[G] (DEFIANCE)	42	.....	1	3	7	18	7	6	1	5	2	13	7	9	2	3
PERRY (NEW LEXINGTON)[F]	152	2	4	6	42	60	36	2	1	8	8	33	37	33	24	8
PICKAWAY (CIRCLEVILLE)[F]	164	1	5	6	39	38	73	2	1	10	17	38	53	22	18	5

SEE FOOTNOTES AT END OF TABLE.

4-22-66

TABLE RS 268.2

COUNTY AND OFFICE[A]	ALL MEN	OCCUPATIONAL GROUP							AGE GROUP							
		PROFESSIONAL, MANAGERIAL	CLERICAL AND SALES	SERVICE	SKILLED	SEMI-SKILLED	UN-SKILLED[B]	ENTRY OCCUPATIONS[C]	UNDER 19	19 TO 21	22 TO 24	25 TO 34	35 TO 44	45 TO 54	55 TO 64	65 AND OVER
PIKE (WAVERLY)[F]	298	2	1	4	47	120	118	6	2	22	21	92	71	56	32	2
PORTAGE	647	27	19	35	191	150	157	68	45	67	64	141	132	99	74	25
KENT	340	17	11	22	113	83	67	27	23	33	33	81	69	53	39	9
RAVENNA	307	10	8	13	78	67	90	41	22	34	31	60	63	46	35	16
PREBLE (EATON)[F]	15	.....	.....	.....	8	2	5	.....	.....	.....	3	4	3	2	3	.....
PUTNAM (OTTAWA)[F]	167	4	10	18	13	30	74	18	12	35	23	33	22	24	13	5
RICHLAND (MANSFIELD)	760	20	54	50	131	161	226	118	85	82	65	180	160	100	56	32
ROSS (CHILLICOTHE)	702	9	23	29	138	215	244	44	14	62	93	206	142	101	77	7
SANDUSKY (FREMONT)	525	24	26	21	72	116	91	175	77	73	60	106	82	62	46	19
SCIOTO (PORTSMOUTH)	1,484	31	76	33	259	291	417	377	173	189	152	319	288	222	110	31
SENECA	416	10	23	14	62	92	77	138	71	69	50	87	61	44	24	10
FOSTORIA	156	5	11	7	20	37	39	37	13	33	21	36	26	14	8	5
TIFFIN	260	5	12	7	42	55	38	101	58	36	29	51	35	30	16	5
SHELBY (SIDNEY)	324	7	11	22	37	94	101	52	34	58	58	76	32	37	22	7
TRUMBULL	3,001	77	127	103	568	655	1,067	404	183	449	417	801	573	344	181	53
NILES	941	17	41	42	188	192	333	128	106	149	106	227	182	107	54	10
WARREN	2,060	60	86	61	380	463	734	276	77	300	311	574	391	237	127	43
TUSCARAWAS (NEW PHILADELPHIA)	721	16	31	31	146	184	244	69	7	109	89	196	148	82	62	28
UNION (MARYSVILLE)[F]	101	1	3	3	24	24	25	21	18	5	4	19	13	25	14	3
VAN WERT (VAN WERT)[F]	123	3	4	6	7	29	30	44	18	16	10	18	17	18	22	4
VINTON (MC ARTHUR)[F]	43	1	3	.....	5	13	19	2	.....	2	5	10	6	11	9	.....
WARREN (LEBANON)[F]	407	5	11	14	89	105	95	88	49	59	46	99	71	44	33	6
WASHINGTON (MARIETTA)	582	22	25	9	164	115	170	77	41	71	74	128	98	80	67	23
WAYNE (WOOSTER)	286	11	16	10	56	61	98	34	21	48	36	67	48	34	25	7
WILLIAMS (BRYAN)[F]	83	4	3	7	9	32	19	9	3	14	11	11	8	17	13	6
WOOD (BOWLING GREEN)	231	2	9	14	48	64	61	33	7	47	36	62	25	31	18	5
WYANDOT[G] (FINDLAY)	36	1	2	2	6	9	12	4	.....	7	4	7	5	9	4	.....

[A]OFFICES ARE INSET IN MULTI-OFFICE COUNTIES; OFFICES ARE IN PARENTHESES IN SINGLE-OFFICE COUNTIES. INSET OFFICES ADD TO COUNTY TOTALS. [B]INCLUDES AGRICULTURAL OCCUPATIONS. [C]REPRESENTS APPLICANTS HAVING POTENTIAL QUALIFICATIONS FOR ENTERING WORK FOR WHICH THEY DO NOT HAVE FULLY QUALIFYING EXPERIENCE OR TRAINING. [D]INCLUDES PROFESSIONAL AND MANAGERIAL APPLICANTS. [E]INCLUDES SERVICE APPLICANTS. [F]OFFICE IS AN ITINERANT POINT. [G]NO OFFICE LOCATED IN COUNTY. THE OFFICE IN PARENTHESES IS THE PARENT OFFICE WHICH SERVES THE COUNTY FOR ADMINISTRATIVE PURPOSES.

DIVISION OF RESEARCH AND STATISTICS
OHIO BUREAU OF UNEMPLOYMENT COMPENSATION
COLUMBUS 4-22-66 TABLE RS 268.2

WOMEN SEEKING JOBS THROUGH OHIO STATE EMPLOYMENT SERVICE, BY OCCUPATIONAL GROUP, AGE GROUP, COUNTY, AND LOCAL OFFICE, APRIL 1, 1966

COUNTY AND OFFICE[A]	ALL WOMEN	OCCUPATIONAL GROUP							AGE GROUP							
		PROFESSIONAL, MANAGERIAL	CLERICAL AND SALES	SERVICE	SKILLED	SEMI-SKILLED	UN-SKILLED[B]	ENTRY OCCUPATIONS[C]	UNDER 19	19 TO 21	22 TO 24	25 TO 34	35 TO 44	45 TO 54	55 TO 64	65 AND OVER
TOTAL	44,805	805	10,892	8,716	548	4,869	5,329	13,646	2,525	9,101	4,934	9,294	8,688	6,522	3,007	734
EIGHT LARGE COUNTIES	23,370	443	5,869	4,551	334	2,395	2,478	7,300	1,365	5,002	2,599	4,643	4,235	3,313	1,728	485
CUYAHOGA	5,926	151	1,410	1,321	127	899	557	1,461	229	940	563	1,139	1,214	1,034	619	188
CLEVELAND CLERICAL[D]	1,491	135	1,066	.....	.....	.....	.....	290	.....	155	188	303	297	273	197	78
CLEVELAND INDUSTRIAL	1,362	.....	.....	.....	110	683	385	184	2	61	99	326	374	306	164	30
CLEVELAND SERVICE	1,334	.....	1	1,070	3	69	67	124	.....	18	126	339	347	282	166	56
CLEVELAND SOUTH	775	15	280	180	14	139	96	51	7	52	63	168	196	173	92	24
CLEVELAND YOUTH	964	1	63	71	.....	8	9	812	220	654	87	3	.....	.....	.....	.....
FRANKLIN	3,421	53	755	740	74	221	330	1,248	204	797	434	739	564	439	200	44
COLUMBUS ES	2,633	49	688	696	74	214	319	593	.....	275	376	735	564	439	200	44
COLUMBUS YOUTH	788	4	67	44	.....	7	11	655	204	522	58	4	.....	.....	.....	.....
HAMILTON	3,685	61	935	825	41	609	512	702	158	355	444	988	755	541	341	103
CINCINNATI	3,293	60	919	810	41	609	510	344	14	168	384	987	755	541	341	103
CINCINNATI YOUTH	392	1	16	15	.....	.....	2	358	144	187	60	1	.....	.....	.....	.....
LUCAS	2,424	19	553	409	19	165	350	909	173	624	267	356	431	344	188	41
TOLEDO CLERICAL[D]	593	18	434	.....	.....	.....	.....	141	.....	17	88	143	142	117	71	15
TOLEDO INDUSTRIAL[E]	950	.....	.....	351	19	155	334	91	.....	.....	78	213	289	227	117	26
TOLEDO YOUTH	881	1	119	58	.....	10	16	677	173	607	101	.....	.....	.....	.....	.....
MAHONING	1,696	34	349	322	15	64	77	835	210	471	178	266	258	226	71	16
YOUNGSTOWN	1,099	31	320	301	15	63	69	300	10	110	144	264	258	226	71	16
COLLEGE PLACEMENT	37	2	4	.....	.....	.....	.....	31	1	31	4	1	.....	.....	.....	.....
YOUNGSTOWN YOUTH	560	1	25	21	.....	1	8	504	199	330	30	1	.....	.....	.....	.....
MONTGOMERY	2,072	68	555	296	22	137	244	750	102	532	288	450	338	236	87	39
DAYTON CLERICAL[D]	814	68	522	.....	.....	.....	.....	224	19	166	141	184	134	116	39	15
DAYTON INDUSTRIAL[E]	862	.....	.....	281	22	133	229	197	4	72	124	266	204	120	48	24
DAYTON YOUTH	396	.....	33	15	.....	4	15	329	79	294	23	.....	.....	.....	.....	.....
STARK	1,640	22	398	285	10	193	216	516	102	362	188	340	314	219	96	19
ALLIANCE	283	3	52	42	.....	37	15	134	31	46	31	68	68	27	11	1
CANTON	747	15	230	164	10	94	142	92	.....	25	102	195	190	152	67	16
CANTON YOUTH	313	1	43	21	.....	9	6	233	56	233	24	.....	.....	.....	.....	.....
MASSILLON	297	3	73	58	.....	53	53	57	15	58	31	77	56	40	18	2
SUMMIT	2,506	35	914	353	26	107	192	879	187	921	237	365	361	274	126	35
AKRON CLERICAL[D]	586	26	389	.....	.....	.....	.....	171	18	102	81	137	105	87	32	24
AKRON INDUSTRIAL[E]	514	.....	.....	194	17	62	107	134	.....	3	55	121	141	122	66	6
AKRON YOUTH	929	.....	357	57	.....	5	5	505	147	733	49	.....	.....	.....	.....	.....
BARBERTON	477	9	168	102	9	40	80	69	22	83	52	107	115	65	28	5

SEE FOOTNOTES AT END OF TABLE.

4-20-66

TABLE RS 268.2-A

WOMEN SEEKING JOBS THROUGH OHIO STATE EMPLOYMENT SERVICE, BY OCCUPATIONAL GROUP, AGE GROUP, COUNTY, AND LOCAL OFFICE, APRIL 1, 1966 (CONTINUED)

COUNTY AND OFFICE[A]	ALL WOMEN	OCCUPATIONAL GROUP							AGE GROUP							
		PROFESSIONAL, MANAGERIAL	CLERICAL AND SALES	SERVICE	SKILLED	SEMI-SKILLED	UNSKILLED[B]	ENTRY OCCUPATIONS[C]	UNDER 19	19 TO 21	22 TO 24	25 TO 34	35 TO 44	45 TO 54	55 TO 64	65 AND OVER
ALL OTHER COUNTIES	21,435	362	5,023	4,165	214	2,474	2,851	6,346	1,160	4,099	2,335	4,651	4,453	3,209	1,279	249
ADAMS (WEST UNION)[F]	46	1	3	20	.....	5	3	14	6	20	7	6	3	1	2	1
ALLEN (LIMA)	497	7	120	147	5	53	52	113	17	114	69	116	86	62	28	5
ASHLAND (ASHLAND)[F]	85	3	28	13	2	7	14	18	2	22	7	22	21	6	4	1
ASHTABULA (ASHTABULA)	384	10	67	54	2	54	33	164	44	57	34	49	76	70	49	5
ATHENS (ATHENS)[F]	67	2	35	14	1	1	5	9	1	10	4	16	13	16	6	1
AUGLAIZE (ST. MARYS)	128	4	18	17	1	12	33	43	14	24	21	31	22	11	3	2
BELMONT	280	3	77	44	7	66	15	68	24	38	19	45	56	68	27	3
BRIDGEPORT	253	3	65	38	7	65	14	61	24	34	16	38	53	60	26	2
BARNESVILLE	27	.....	12	6	.....	1	1	7	.....	4	3	7	3	8	1	1
BROWN (GEORGETOWN)[F]	31	1	12	11	.....	7	.....	.....	3	5	1	8	4	6	3	1
BUTLER	1,446	17	313	261	8	173	181	493	117	293	169	345	299	136	70	17
HAMILTON	623	9	140	114	3	51	120	186	53	105	69	148	143	58	38	9
MIDDLETOWN	823	8	173	147	5	122	61	307	64	188	100	197	156	78	32	8
CARROLL (CARROLLTON)[F]	101	.....	33	17	.....	14	8	29	2	10	5	28	25	20	5	6
CHAMPAIGN (URBANA)[F]	40	4	13	8	.....	5	3	7	.....	9	6	10	6	7	2	.....
CLARK (SPRINGFIELD)	463	12	111	164	6	33	32	105	22	95	50	104	78	67	37	10
CLERMONT (BATAVIA)	312	5	111	81	11	29	51	24	16	31	30	72	80	50	28	5
CLINTON (WILMINGTON)[F]	58	2	17	9	.....	7	13	10	3	12	8	13	8	4	5	.....
COLUMBIANA	640	12	122	117	7	85	158	139	33	130	60	132	128	91	59	7
EAST LIVERPOOL	356	3	55	72	4	29	125	68	12	80	37	87	75	47	13	5
SALEM	284	9	67	45	3	56	33	71	21	50	23	45	53	44	46	2
COSHOCTON (COSHOCTON)	116	1	19	18	1	13	51	13	.....	13	10	18	31	29	12	3
CRAWFORD	235	3	50	48	4	28	21	81	29	56	21	48	28	25	16	12
BUCYRUS	174	2	30	38	4	16	17	67	24	46	16	35	21	13	11	8
GALION[F]	61	1	20	10	.....	12	4	14	5	10	5	13	7	12	5	4
DARKE (GREENVILLE)	261	1	44	31	.....	26	102	57	10	46	31	65	51	40	16	2
DEFIANCE (DEFIANCE)	233	1	71	20	1	17	32	91	3	62	29	61	41	31	5	1
DELAWARE (DELAWARE)	128	7	32	37	2	8	13	29	6	28	13	30	29	13	3	6
ERIE (SANDUSKY)	661	14	198	157	2	82	59	149	3	148	85	162	122	94	34	13
FAIRFIELD (LANCASTER)	412	8	67	52	11	31	148	95	8	89	45	96	89	60	19	6
FAYETTE (WASHINGTON C.H.)	189	3	40	38	1	17	21	69	10	46	24	32	34	28	15	.....
FULTON (WAUSEON)	33	.....	7	2	1	3	10	10	.....	6	1	6	8	4	4	4
GALLIA (GALLIPOLIS)	86	.....	31	40	.....	2	.....	13	4	17	7	16	18	13	11	.....
GEAUGA[G] (PAINESVILLE)	16	1	8	5	1	.....	.....	1	.....	2	.....	3	2	7	1	1
GREEN (XENIA)[F]	207	5	66	59	8	16	18	35	6	32	23	47	41	38	19	1
GUERNSEY (CAMBRIDGE)	544	5	68	43	13	169	61	185	16	65	71	138	126	95	29	4

SEE FOOTNOTES AT END OF TABLE.

4-20-66

TABLE RS 268.2-A

WOMEN SEEKING JOBS THROUGH OHIO STATE EMPLOYMENT SERVICE, BY OCCUPATIONAL GROUP, AGE GROUP, COUNTY, AND LOCAL OFFICE, APRIL 1, 1966 (CONTINUED)

COUNTY AND OFFICE[A]	ALL WOMEN	OCCUPATIONAL GROUP							AGE GROUP							
		PROFESSIONAL, MANAGERIAL	CLERICAL AND SALES	SERVICE	SKILLED	SEMI-SKILLED	UN-SKILLED[B]	ENTRY OCCUPATIONS[C]	UNDER 19	19 TO 21	22 TO 24	25 TO 34	35 TO 44	45 TO 54	55 TO 64	65 AND OVER
HANCOCK (FINDLAY)	254	5	63	65	2	12	44	63	13	66	30	57	41	30	15	2
HARDIN (KENTON)[F]	45	.....	10	9	.....	9	9	8	1	14	3	8	10	6	3	.....
HARRISON (CADIZ)[F]	22	.....	5	12	1	3	1	.....	.....	2	1	4	1	10	4	.....
HENRY (NAPOLEON)	44	.....	7	6	.....	1	9	21	7	9	4	8	8	3	4	1
HIGHLAND (HILLSBORO)[F]	69	1	20	15	.....	13	7	13	2	12	5	19	15	11	4	1
HOCKING (LOGAN)	209	2	40	27	3	36	24	77	9	42	16	28	49	48	13	4
HOLMES[G] (WOOSTER)	10	.....	4	.....	.....	1	3	2	.....	4	1	2	1	.....	1	1
HURON (NORWALK)	197	2	39	33	3	36	42	42	13	34	24	26	45	41	10	4
JACKSON (JACKSON)	372	3	64	67	4	14	42	178	13	47	35	80	119	62	13	3
JEFFERSON	395	17	161	127	4	10	5	71	17	100	50	63	57	71	31	6
STEUBENVILLE	338	11	145	118	4	10	5	45	5	75	43	57	53	69	31	5
COLLEGE PLACEMENT	57	6	16	9	.....	.....	.....	26	12	25	7	6	4	2	.....	1
KNOX (MOUNT VERNON)	684	6	45	19	1	21	7	585	5	120	63	133	147	152	54	10
LAKE (PAINESVILLE)	306	10	105	95	4	19	13	60	17	45	31	49	76	67	20	1
LAWRENCE (IRONTON)	300	8	59	54	3	13	3	160	89	78	22	45	27	25	13	1
LICKING (NEWARK)	376	9	134	92	6	37	38	60	10	77	31	75	86	60	23	14
LOGAN (BELLEFONTAINE)	181	3	29	36	5	12	9	87	5	32	16	43	45	18	22	.....
LORAIN	972	26	255	202	9	141	66	273	18	225	90	185	235	163	49	7
ELYRIA	348	10	95	91	1	33	35	83	5	75	39	63	83	61	18	4
LORAIN	624	16	160	111	8	108	31	190	13	150	51	122	152	102	31	3
MADISON (LONDON)[F]	21	.....	.....	7	.....	2	11	1	.....	.....	2	9	6	3	1	.....
MARION (MARION)	384	5	122	77	3	27	20	130	17	80	48	74	83	57	22	3
MEDINA[G] (BARBERTON)	109	1	36	11	2	4	48	7	2	12	10	27	32	18	7	1
MEIGS (POMEROY)[F]	21	.....	4	14	.....	1	2	.....	.....	.....	3	3	6	6	3	.....
MERCER[G] (ST. MARYS)	120	1	30	17	2	11	34	25	2	27	14	31	18	23	5	.....
MIAMI (PIQUA)	384	2	61	76	2	70	69	104	40	83	53	79	66	40	18	5
MONROE (WOODSFIELD)[F]	17	1	4	3	.....	3	.....	6	1	1	2	2	5	4	1	1
MORGAN (MC CONNELSVILLE)[F]	18	.....	12	3	.....	.....	3	.....	.....	4	2	6	1	4	1	.....
MORROW[G] (MARION)	19	.....	3	7	.....	6	2	1	.....	2	.....	1	3	8	4	1
MUSKINGUM (ZANESVILLE)	452	11	98	49	8	36	160	90	26	73	45	118	77	74	38	1
NOBLE (CALDWELL)[F]	13	1	.....	4	.....	8	.....	.....	.....	.....	1	4	3	2	2	1
OTTAWA (PORT CLINTON)	887	11	262	188	6	117	67	236	14	145	68	175	249	158	69	9
PAULDING[G] (DEFIANCE)	51	.....	9	4	.....	12	10	16	1	15	9	8	6	8	4	.....
PERRY (NEW LEXINGTON)[F]	61	.....	3	9	4	34	11	.....	.....	2	3	10	13	21	10	2
PICKAWAY (CIRCLEVILLE)[F]	37	.....	10	16	.....	1	10	.....	.....	1	4	7	12	7	4	2

SEE FOOTNOTES AT END OF TABLE.

4-20-66

TABLE RS 268.2-A

COUNTY AND OFFICE[A]	ALL WOMEN	OCCUPATIONAL GROUP							AGE GROUP							
		PROFESSIONAL, MANAGERIAL	CLERICAL AND SALES	SERVICE	SKILLED	SEMI-SKILLED	UN-SKILLED[B]	ENTRY OCCUPATIONS[C]	UNDER 19	19 TO 21	22 TO 24	25 TO 34	35 TO 44	45 TO 54	55 TO 64	65 AND OVER
PIKE (WAVERLY)[F]	40	.....	6	8	.....	3	23	.....	.....	.....	2	8	12	15	3	.....
PORTAGE	356	5	115	82	7	39	50	58	22	66	48	67	66	62	20	5
KENT	193	2	63	43	5	26	18	36	13	37	29	40	35	30	9	.....
RAVENNA	163	3	52	39	2	13	32	22	9	29	19	27	31	32	11	5
PREBLE (EATON)[F]	25	.....	7	3	.....	3	12	.....	.....	1	2	6	10	5	1	.....
PUTNAM (OTTAWA)[F]	321	4	74	84	1	14	112	32	2	65	32	87	69	54	11	1
RICHLAND (MANSFIELD)	600	12	133	111	3	132	44	165	55	96	71	163	118	67	24	6
ROSS (CHILLICOTHE)	165	3	71	42	2	7	6	34	5	37	29	37	33	15	7	2
SANDUSKY (FREMONT)	396	4	55	58	1	36	48	194	39	90	43	85	74	44	20	1
SCIOTO (PORTSMOUTH)	571	11	157	92	1	12	21	277	85	141	62	95	88	58	36	6
SENECA	265	7	60	41	1	16	26	114	24	67	33	44	52	24	16	5
FOSTORIA	112	5	19	15	.....	8	18	47	3	25	22	18	25	8	7	4
TIFFIN	153	2	41	26	1	8	8	67	21	42	11	26	27	16	9	1
SHELBY (SIDNEY)	648	4	84	159	4	145	140	112	7	110	90	186	156	86	13	.....
TRUMBULL	1,301	26	348	259	3	108	104	453	106	265	172	322	245	132	50	9
NILES	384	9	138	81	1	39	29	87	48	60	48	90	73	46	18	1
WARREN	917	17	210	178	2	69	75	366	58	205	124	232	172	86	32	8
TUSCARAWAS (NEW PHILA.)	454	6	91	91	7	83	84	92	7	88	53	92	106	79	26	3
UNION (MARYSVILLE)[F]	118	.....	23	37	.....	1	20	37	17	16	9	34	18	15	4	1
VAN WERT (VAN WERT)[F]	297	2	28	9	1	27	42	188	4	49	38	69	59	59	17	2
VINTON (MC ARTHUR)[F]	12	.....	.....	10	.....	1	.....	1	.....	.....	2	3	5	1	1	.....
WARREN (LEBANON)[F]	259	13	68	46	6	37	41	48	23	39	20	60	55	45	13	4
WASHINGTON (MARIETTA)	214	1	75	41	4	26	21	46	14	40	27	45	51	28	8	1
WAYNE (WOOSTER)	179	1	50	33	.....	16	47	32	20	31	20	33	39	25	8	3
WILLIAMS (BRYAN)[F]	365	6	73	47	4	85	87	63	1	44	33	83	102	82	18	2
WOOD (BOWLING GREEN)	93	.....	23	31	2	8	15	14	7	19	11	16	23	14	3	.....
WYANDOT[G] (FINDLAY)	27	.....	7	10	.....	2	2	6	1	3	2	13	5	3	.....	.....

[A]OFFICES ARE INSET IN MULTI-OFFICE COUNTIES; OFFICES ARE IN PARENTHESES IN SINGLE-OFFICE COUNTIES. INSET OFFICES ADD TO COUNTY TOTALS. [B]INCLUDES AGRICULTURAL OCCUPATIONS. [C]REPRESENTS APPLICANTS HAVING POTENTIAL QUALIFICATIONS FOR ENTERING WORK FOR WHICH THEY DO NOT HAVE FULLY QUALIFYING EXPERIENCE OR TRAINING. [D]INCLUDES PROFESSIONAL AND MANAGERIAL APPLICANTS. [E]INCLUDES SERVICE APPLICANTS. [F]OFFICE IS AN ITINERANT POINT. [G]NO OFFICE LOCATED IN COUNTY. THE OFFICE IN PARENTHESES IS THE PARENT OFFICE WHICH SERVES THE COUNTY FOR ADMINISTRATIVE PURPOSES.

DIVISION OF RESEARCH AND STATISTICS
OHIO BUREAU OF UNEMPLOYMENT COMPENSATION
COLUMBUS 4-20-66 TABLE RS 268.2-A

Projected Manpower Needs and Employment Opportunities

Exhibit B_1

TOLEDO

(Lucas County)

OCCUPATIONAL SURVEY - 1965

THE LUCAS COUNTY MANPOWER ADVISORY COMMITTEE
In Cooperation With The
MANPOWER DEVELOPMENT SECTION
OHIO BUREAU OF UNEMPLOYMENT COMPENSATION

DECEMBER
1965

CONTENTS

Introduction
Highlights
Projected Requirements by Industry with Needs for 12 and 24 Months
Distribution of Current Female Employment
Supply and Demand Situation
Current Female Employment
Population and Work Force
Recommendations
Methodology

APPENDIX

Table I - Percentage Distribution of Nonagricultural Employment in the United States, Ohio and Lucas County
Table II - Nonagricultural Wage and Salary Workers by Industrial Divisions with Estimated Changes
Table III - Distribution of Female Employment by Occupational Groups
Table IV - Distribution of Female Employment by Industrial Divisions
Table V - Occupations and Reported Needs for 12 and 24 Months in all Industries
Table VI - Employment and Reported Needs for 12 and 24 Months by Occupational Groups
Table VII - Employment and Reported Needs for 12 and 24 Months by Industrial Divisions
Table VIII - Occupations and Reported Needs for 12 and 24 Months by Industrial Divisions
Table IX - Industry Groups and Projected Requirements for 12 and 24 Months by Occupational Groups
Table X - Applicants Seeking Jobs in Selected Occupations
Table XI - Men and Women Seeking Jobs Through Ohio State Employment Service by Occupational Groups
Table XII - Age Group of Men and Women Seeking Jobs Through Ohio State Employment Service

Definitions of Occupational Groups
Definitions of Industrial Divisions
Job Descriptions

INTRODUCTION

The Manpower Development and Training Act became effective in Ohio on September 1, 1962, upon the signing of an agreement by the affected agencies on the Federal and State levels. The purpose of this Act is to establish publicly-sponsored worker training programs to reduce unemployment and alleviate shortages in vital occupational categories. It is recognized that a number of employment opportunities exist during periods of substantial unemployment, but certain jobs remain unfilled because of a lack of qualified, experienced applicants.

Prior to the enactment of the Manpower Development and Training Act, the Ohio Legislature passed the Ohio Worker Training Act, effective October 11, 1961.

The Manpower Development and Training Act requires evidence that a need exists for a particular occupation before training in that occupation is approved. Such need may be determined by means of an occupational survey of the local labor market area. Upon the recommendation of the Toledo Manpower Advisory Committee, the Manpower Development Section of the Ohio Bureau of Unemployment Compensation agreed to undertake such a survey. The findings of this occupational survey are presented in this report.

When the survey was under consideration by the Manpower Advisory Committee the question of the area to be covered was discussed. It has been the general procedure when making such surveys that the Standard Metropolitan Statistical Area be the determining factor. In this case, however, it was decided that several factors made it desirable to restrict the sample to the confines of Lucas County. The large percentage of response and the fact that all large employers were included in the sample would permit the expansion of the published results by the following percentages in order to give area wide estimates: Total 18.2 percent; Manufacturing 21.7 percent; Construction 4.7 percent; Transportation and Utilities 10.3 percent; Wholesale and Retail Trade 16.1 percent; Finance and Insurance 7.7 percent; Service 10.3 percent; and Government 31.4 percent.

Only Lucas County, which is a part of the Toledo Standard Metropolitan Statistical Area including Wood County, Ohio and Monroe County, Michigan, is covered in this report.

46

HIGHLIGHTS

. . . The Manpower situation in Toledo has taken a new turn. Employers forecast a 1 year increase of 3.5 percent more jobs and a 2 year increase of 6.1 percent in employment.

. . . The 165 occupations studied here represent 82 percent of the total employment in Lucas County. Manufacturing provides the most jobs — 36 percent — Wholesale and Retail Trade is next with 22 percent.

. . . Job hunters will find 14,424 openings during the 12 months following the start of this survey in April 1965 — in 24 months 19,447 openings — just in the 165 occupations.

7,177 persons will be needed for expansion in twelve months
7,247 persons will be needed for replacement in twelve months
10,034 persons will be needed for expansion in twenty four months
9,413 persons will be needed for replacement in twenty four months

. . . Around 70 percent of the jobs are held by men and 30 percent by women. An increase in the proportion of females in recent years.

. . . Of the 165 occupations 54 show significant need — 39 will offer little or no chance for employment. Openings will develop in all fields but skilled and clerical workers will find the most opportunities.

. . . Occupations showing principal demand are:

Accountant	Bus Driver	Electric Motor Repairman
Asbestos Worker	Cashier	Electrician
Assembler	Central Office Repairman	Engineer
Auto Body Repairman	Checker	Foreman
Auto Mechanic	Clerk, General Office	Inspector
Auto Service Station Attendant	Clerk Typist	Insurance Salesman
Beauty Operator	Coil Assembler	Janitor/Maid
Bartender/Barmaid	Cook	Laboratory Technician
Bookkeeper	Draftsman	Laborer

This study is limited to 165 of the major occupations. Actually this represents many more due to combining may be critical if trained workers are not available.

. . . Gross needs in nonmanufacturing are almost double those in manufacturing — replacement needs are somewhat larger than expansion needs.

. . . There is a significant amount of commuting in and out of Lucas County with a net gain of 9.324 to the total work force.

. . . Recent technological developments will necessitate more scientific, engineering personnel, and supporting technicians and craftsmen. Future outlook is for rapid changes and steadily increasing complexity of the content of many professional, technical and skilled occupations.

. . . Demand will exceed the supply. Many of those presently counted as unemployed are either job attached or are not trained for today's skills.

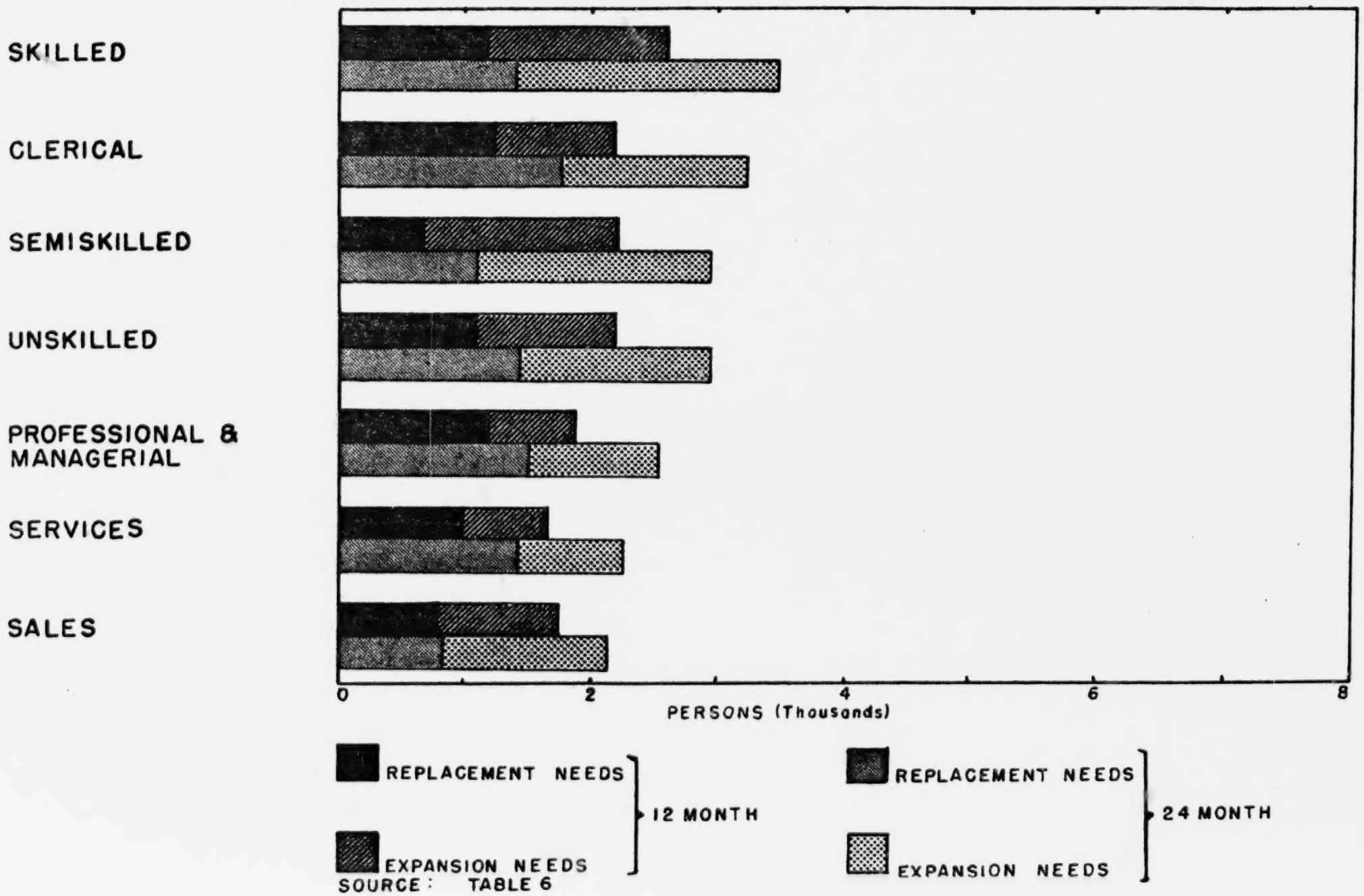
. . . School dropouts and people with no marketable skill will find it increasingly hard to find employment.

. . . The spotlight of this survey is on Manpower Resources and Skill development. Continued economic growth requires an intensification of employment opportunities and a work force capable of producing more goods and services. Failure to utilize the unwanted, unskilled and untrained manpower could be disastrous.

Machine Operator	Policeman/Guard	Stock Clerk
Machinist	Power Press Operator	Teacher
Maintenance Man	Pressman Printing	Telephone Operator
Maintenance Mechanic	Roofer	Tool and Die Maker
Managers	Salesman General	Truck Driver
Molder	Salesperson Retail	Upholsterer
Nurse LPN	Secretary	Waiter/Waitress
Nurse RN	Sewing Machine Operator	Warehouseman
Plumber/Pipefitter	Sheetmetal Worker	Welder

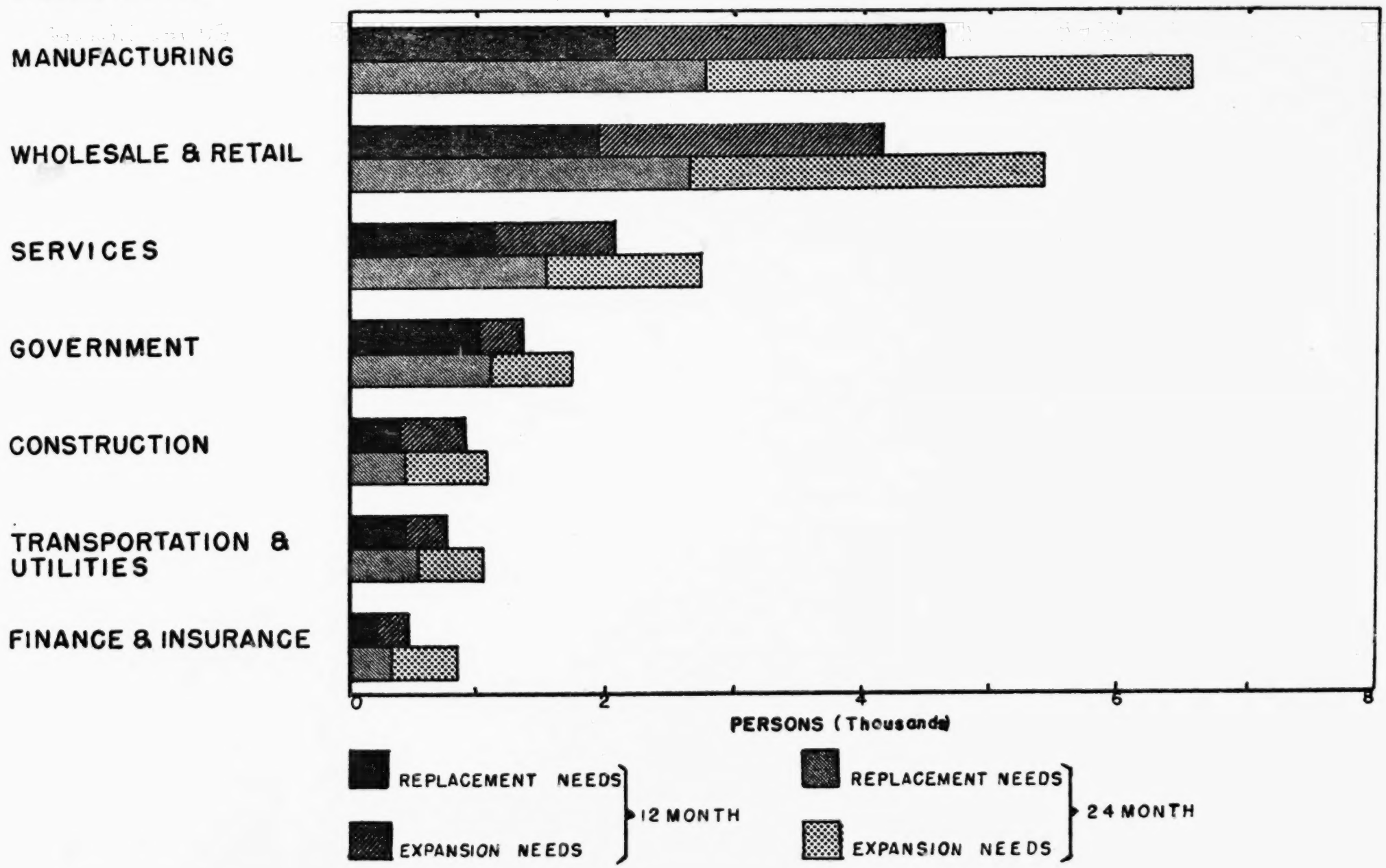
those having similar characteristics but different job titles. Others with too few workers to be included

PROJECTED REQUIREMENTS IN 165 OCCUPATIONS BY OCCUPATION GROUP
LUCAS COUNTY
1966-1967

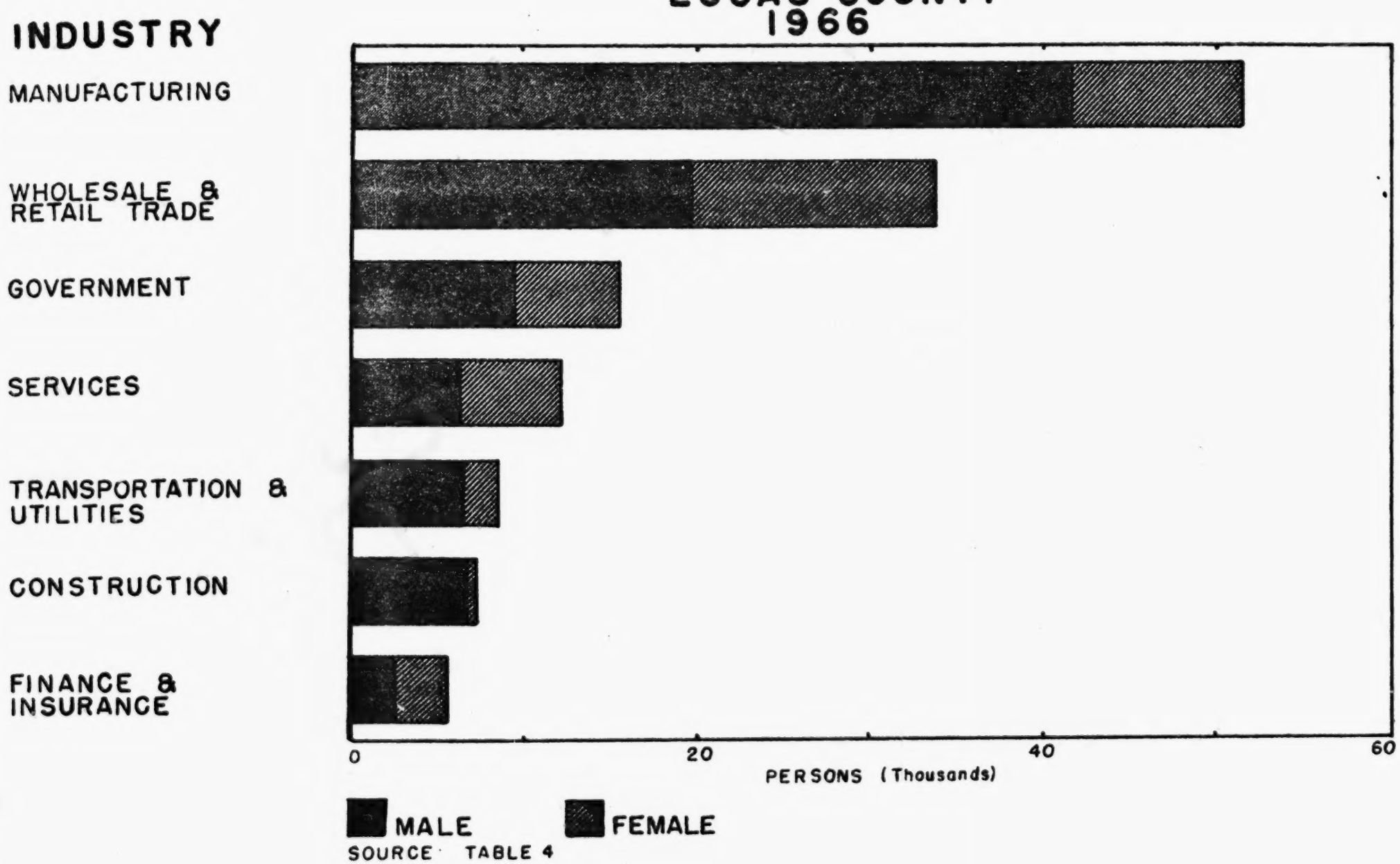


SOURCE: TABLE 6

PROJECTED REQUIREMENTS IN 165 OCCUPATIONS BY INDUSTRIAL GROUP
LUCAS COUNTY
1966-1967

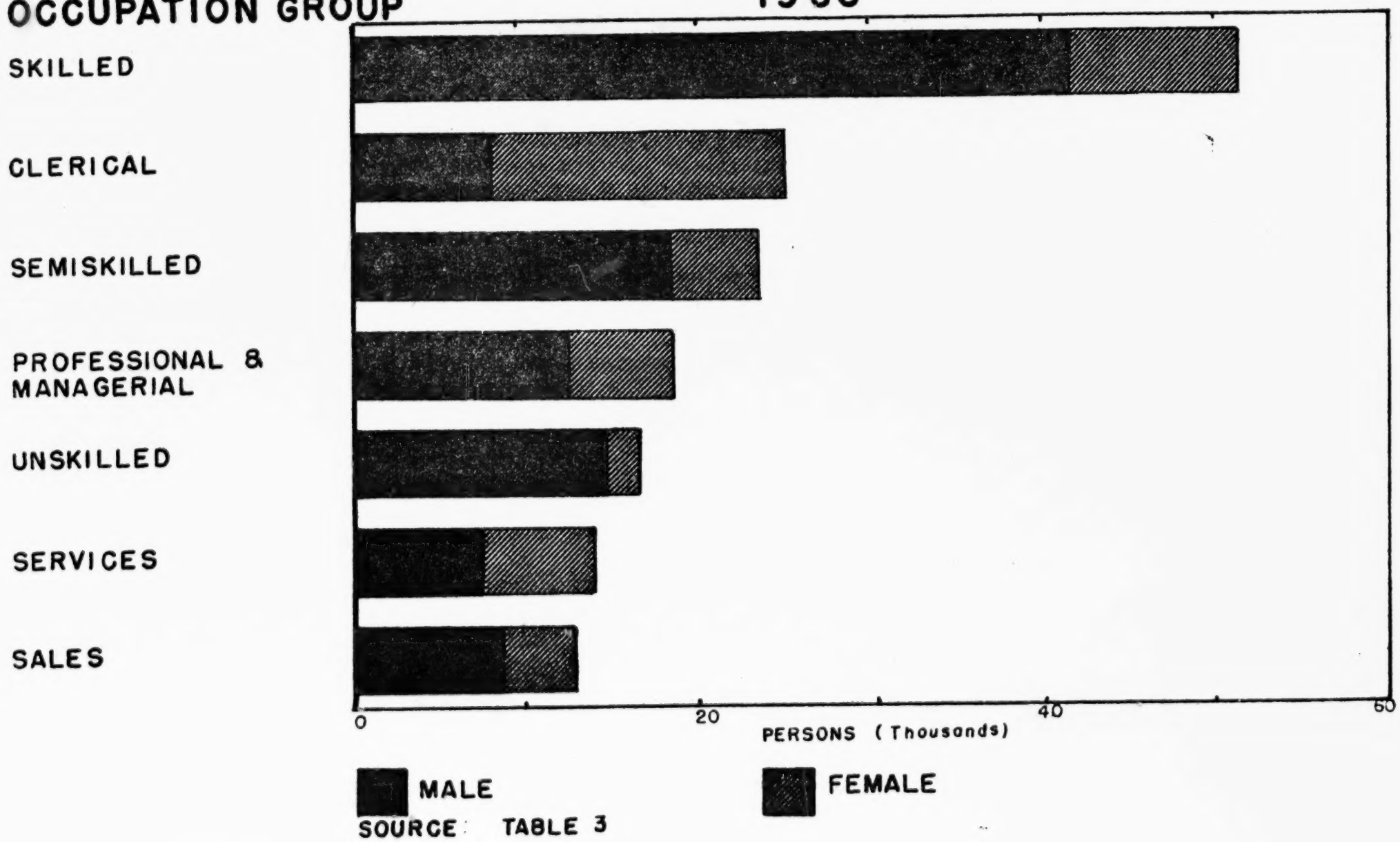


CURRENT EMPLOYMENT IN 165 OCCUPATIONS BY SEX AND INDUSTRIAL DIVISION LUCAS COUNTY 1966



SOURCE TABLE 4

CURRENT EMPLOYMENT IN 165 OCCUPATIONS BY SEX AND OCCUPATIONAL SKILL LEVEL LUCAS COUNTY 1966



SOURCE: TABLE 3

SUPPLY AND DEMAND SITUATION

DEMAND

Lucas County employers, reporting on their anticipated growth, forecast an increase of 3.5 percent in 12 months and 6.1 percent increase in 24 months. From a base of 163,100 persons employed as of April, 1965 they anticipate that by April, 1966, 168,809 will be employed and 12 months later 173,014 will be employed. This is a change of 5,709 in one year and 9,914 in two years. As a measure of the expansion shown here, the growth in population from 1950 to 1960 was 14.9 percent, or approximately 1.5 percent increase per year. In the statistical abstract of the State of Ohio it is estimated that there will be a 26.1 percent increase statewide in population from 1960 to 1970, or approximately 2.6 percent per year. From this it will be seen that employers expect a more rapid rate of increase in employment in the Lucas County area than the expected rate of population growth. Note: The industrial forecast of 5,709 and 9,914 new jobs in twelve and twenty-four months here, is smaller than the expansion needs of the 165 occupations due to the shifting of occupations within the industries.

There was a total of 912 current vacancies indicated by the employers responding to the survey. Many correspond to the jobs which have been indicated as shortage occupations. While not all employers respond to the part of the questionnaire which asks for job vacancies because of a reluctance to reveal such information it also should be considered that in many cases the employer would only hire on a very selective basis. Many of the vacancies indicated on the survey form also had a check in the following column showing that they were hard to fill occupations. The demand by employers engaged in Manufacturing shows an increase from the present employment of 58,700 to 61,020 in one year and 62,698 in two years. This would result in 2,324 jobs in 12 months which is a 4 percent increase and 3,998 in 24 months, an increase of 6.8 percent. In Nonmanufacturing the present employment is 104,400 which after a 3.2 percent increase in 12 months will amount to 107,789 and in a 5.7 percent growth in 24 months to a total figure of 110,316. Numerically the largest increase will be in Wholesale and Retail Trades where 1,317 more persons will be needed in 1 year and 2,283 in two years which is a 3.7 and 6.4 percent increase respectively. Percentage wise the largest increase is in Construction where employers forecast a 7.4 percent increase in one year and a 11.5 percent increase in two years however this would result in 559 in new jobs in 12 months 872 in 24 months. Significant gains will be made in Services in which 25,200 people are presently employed with a 3.6 percent increase in one year and 5.8 percent increase in two years resulting in 906 and 1,467 more jobs in the one and two year periods. Similar gains are predicted in other areas of Nonmanufacturing employment. So far only the step up in total employment has been discussed; however, it should be mentioned that a large number of people will be needed for replacement purposes for those leaving the labor force due to death, retirement, entering the armed forces or for a variety of other reasons. Information on replacement needs is available only in the 165 occupations studied; however, further demands of 14,424 in 12 months and 19,447 in 24 months should be added to the expansion needs. It is believed that replacement needs tend to be conservative, especially from smaller employers.

SUPPLY

For the base period of April 1965, a total of 6,433 were registered with Employment Service Offices in the Lucas County area. Of these 2,307 were males, and 4,126 were females. (See Table IX) This could be regarded as being an available supply of workers, although it should be pointed out here that many of these people may be temporarily laid off and should be considered as being job attached. That is, pending recall they would not accept employment with another firm. Due to the fact that many others are not sufficiently well trained or that they are trained in different occupations and would not be interested in other types of work, many may not be available for the jobs employers anticipate will be opening. Other than those presently out of work, the other source of labor supply come from those migrating into the county from other areas which during the past ten years has amounted to an average annual increase of about one percent. The total high school enrollment was 23,119 in 1960 or about 6,000 in each class. This does not mean the full 6,000 would immediately enter the labor market on graduation. A number of the females do not enter the labor force. Those graduates going on to College would not immediately enter the labor force; again, others would defer entering the labor force for a variety of reasons. Students graduating from nearby colleges can not be assumed as an available work force for the Lucas County area because many of them will accept employment in other places. The measure of the future trained work forces can not wholly be determined by the number of people presently unemployed, plus those who will be entering labor force by way of schools, and those who are receiving other kinds of training. The quality of the work force, however, will depend a great deal on the type of training those newly entering the labor market will receive or upon those who will have to be retrained in order to retain their position as a member of the labor force.

EXPANSION NEEDS

In this survey 134,482 wage and salary workers were found to be employed in 165 occupations. This is around 82 percent of the Nonagriculture work force. In the 165 occupations a total of 7,117 will be needed for expansion purposes in the next 12 months to fill new jobs developing. In 24 months, 10,034 will be needed. (See Tables V and VIII for listing of jobs.) During the first year covered by this survey, Manufacturing employment will increase by 2,545 due to expansion, while Nonmanufacturing employment will be increased by 4,632. The largest single gain under Nonmanufacturing will be in Wholesale and Retail Trades, where 2,212 will be needed by the end of the first year. In Services 1,122 and in Government 1,006 more persons will be employed. While proportionately the increase in the other four industrial groups is significant, the actual number of persons involved is considerably less than in Wholesale and Retail Trade, Government and Services. By the second year Manufacturing employment will have grown by 3,777 and Nonmanufacturing by 6,257.

By occupational group the skilled and semiskilled employment will increase by approximately equal amounts with 1,422 more needed in skilled jobs and 1,419 in semiskilled for expansion purposes. An estimated 1,102 more unskilled workers will be needed while clerical employment will increase by 932 and sales employment by 957. Professional and managerial employment and services will increase by 690 and 655 respectively. The rate of expansion in 24 months will not be quite as great as that forecast in the first year by employers; however, 10,034 new workers will find jobs which did not exist at the time the survey was made. About the same ratio of demand among the occupational groups exists in the 24 month need as with the 12 month need with skilled needs amounting to 2,079 and semiskilled to 1,831.

SHORTAGE OCCUPATIONS - Expansion

Accountant, asbestos worker, assembler, auto body repairman, auto service station attendant, bookkeeper, bus driver, cashier, central office repairman, clerk general office, clerk typist, coil assembler, cook, draftsman, electric motor repairman, electrician, engineer, inspector, insurance salesman, janitor/maid, laboratory technician, machine operator, machinist/job setter, manager/official, molder, registered nurse, policeman/guard, power press operator, salesman general, salesperson retail, sewing machine operator, sheet metal worker, stock clerk, teacher, tool and die maker, truck driver, waiter/waitress and warehouseman.

REPLACEMENT NEEDS

New entrants to the labor market or persons seeking employment need not depend entirely on the expansion of industry in order to find jobs. As shown in the chart on page 19 the majority of the work force are younger workers. Therefore as people leave the labor force they have to be replaced in order to keep the wheels turning. Half of the 19,447 jobs which will be opening up by the end of the 24 months in this area will be due to replacement needs. This is distinct from turnover where people leave one employer in the same area to take a job with another. A total of 7,247 will be needed in 12 months and 9,413 in 24 months for replacement purposes. This is at a rate of about 5.4 percent the first year for replacement needs. Employers engaged in Manufacturing employment dominate the picture numerically therefore the number of persons needed for replacement here is larger than those for other industry groups. A total of 2,078 in one year and 2,790 in two years will be needed. In the Nonmanufacturing segment, replacement needs in Wholesale and Retail Trade are considerably higher than that in other groups, however, Service and Government needs are somewhat higher than those in the other groups.

While governmental establishments do not expect much expansion, they did forecast a relatively high replacement need. In the occupational groups, for replacement needs, the job openings will be most plentiful in clerical occupations followed closely by skilled, professional and managerial, and unskilled occupations in the 12 month period. At the end of 24 months the number of clerical workers needed will remain relatively high. The replacement needs for both periods of sales personnel is relatively low as compared to that forecast for other occupations.

SHORTAGE OCCUPATIONS - Replacement

Shortage occupations for replacement include: assembler, auto mechanic, auto service station attendant, barber/beauty operator, bookkeeper, cashier, checker, clerk general office, clerk typist, cook, draftsman, engineer, foreman, insurance salesman, janitor/maid, laboratory technician, machine operator, machinist/job setter, maintenance mechanic, manager/official, molder, nurse aide, nurse LPN, nurse RN, plumber/pipefitter, policeman/guard, pressman, printing, routeman, salesman general, sales person retail, secretary, sewing machine operator, stenographer, stock clerk, teacher, telephone operator, truck driver, upholsterer, waiter/waitress, warehouseman.

CURRENT FEMALE EMPLOYMENT

The number and importance of women in the nations work force has been increasing steadily in recent years. Today approximately one third of the employment in this country is made up of women. Working females in the 165 occupations surveyed in Lucas County numbered 41,038, 30.5 percent which is slightly less than the ratio of employment in the United States

Among the industrial groups the proportion of female workers to male workers in Lucas County varies considerably. In manufacturing establishments throughout the county only 18.7 percent of the workers are women. The largest proportion of women are found in Finance and Insurance where over half, 55.3 percent, are females, followed closely by Services in which 48.7 percent are women. The smallest percentage (6.1 percent) is in Construction.

Because of the variation in the number employed among the industrial groups the proportion of females compared to males does not serve as a guide in studying the distribution of working women between the groups. About one third of all employed women are in Wholesale and Retail Trade while 23.4 percent are in Manufacturing. Only 1.1 percent are in Construction. Usually in governmental establishments the number of women is higher in relation to the total female employment than the 14.5 percent found in Lucas County.

In the occupational groups the proportion of females in relation to males shows even more variation than by Industrial groups. A very small number of the females are found in skilled and unskilled jobs while 55 percent of the total are divided about evenly among Sales, Professional, Services and Semiskilled. Clerical workers account for the balance, 38.7 percent.

In clerical jobs the male - female proportion leans strongly on the female side with 66.2 percent being women. Another occupation group with a high percentage of women is Services in which about half are females. Sales and Professional occupations each have about one third women while in semiskilled jobs about one fifth of the workers are females. Very few are found in skilled occupations.

Referring to the chart on page 19, it is shown that girls in the 14-19 year age group tend to work for wages in a larger proportion than among the males of the same age group with about 4,500 females employed. After high school many more go to work for a few years to bring the total up to above 6,000 in the 20 to 24 age group. Then there is a sharp reduction in those working in the 25 - 29 year age group. Employment among females then begins to climb back gradually to a peak consisting of those aged 40 to 44 years. From then on the curve follows somewhat that of the male workers in that there is a gradual decline in the number of those in each of the succeeding age groups at first then accellerating from 60 on. While the curve in the 1950 census does not recover to the peak reached in the 20 to 24 group of 1960 there is again a sharp decline after the initial climb.

Occupations in which female workers were employed in a high proportion of the jobs and in which employment opportunities would be the largest are: assembler, beauty operator, bartender/barmaid, bookkeeper, cashier, checker, clerk general office, clerk typist, coil assembler, cook, dietary worker, foreman, inspector, insurance sales, janitor/maid, laboratory technician, laborer, machine operator, manager, nurse aide, nurse LPN, nurse RN, press operator, sales person, secretary, sewing machine operator, stenographer, stock clerk, seamstress, teacher, telephone operator, and waitress.

MANUFACTURING

PROJECTED REQUIREMENTS IN 113 OCCUPATIONS
NEEDS FOR 12 AND 24 MONTHS
LUCAS COUNTY
1966 - 1967

113 SELECTED OCCUPATIONS	CURRENT EMPLOYMENT		12 MONTH NEED			24 MONTH NEED		
	TOTAL	FEMALE	REPLACEMENT	EXPANSION	GROSS	REPLACEMENT	EXPANSION	GROSS
TOTAL	51,334	9,615	2,078	2,545	4,623	2,790	3,777	6,567
PROFESSIONAL MANAGERIAL	4,453	149	117	127	244	162	239	401
CLERICAL	6,210	3,466	283	138	421	408	235	643
SALES	1,094	90	17	70	87	32	133	165
SERVICES	400	59	10	-1	9	14	6	20
SKILLED	13,137	204	528	628	1,156	636	949	1,585
SEMISKILLED	17,287	4,226	557	1,170	1,727	788	1,506	2,294
UNSKILLED	8,753	1,421	566	413	979	750	709	1,459

. . . Manufacturing in Lucas County accounts for approximately 36 percent of the 163,100 nonagricultural wage and salary workers. There were 113 occupations studied in manufacturing establishments with 51,334 persons employed. About one third of the workers in factories are semiskilled and about one fourth skilled workers with 17 percent falling into the unskilled category and 12 percent clerical workers. Little less than 10 percent are classed as professional or managerial employees and only a small percentage in sales and services. Expansion needs exceeds replacement needs with the 12 month demand for expansion being 2,545 and the replacement needs 2,078 making a gross need of 4,623 in 12 months. For the 24 month period the gross need is 6,567 of which 3,777 are for expansion purposes and 2,794 are for replacement. About a third of the total demand is for semiskilled occupations with considerable need being shown for skilled and unskilled categories. A moderate demand is shown for clerical and professional or managerial workers and only a relatively small demand for sales personnel. Probably the outstanding item in this category is the expansion needs for semiskilled workers. The occupations in which the largest demand is reported by employers are: assembler, auto body repairman, clerk general office, coil assembler, draftsman, electrician, engineer, inspector, laboratory technician, machine operator, machinist and job setter, maintenance mechanic, manager/official, molder, power press operator, pressman - printing and publishing, routeman, salesman general, secretary, sewing machine operator, sheet metal worker, tool and die maker, and welder. (See Table VIII).

CONSTRUCTION

PROJECTED REQUIREMENTS IN 41 OCCUPATIONS
NEEDS FOR 12 AND 24 MONTHS
LUCAS COUNTY
1966 - 1967

41 SELECTED OCCUPATIONS	CURRENT EMPLOYMENT		12 MONTH NEED			24 MONTH NEED		
	TOTAL	FEMALE	REPLACEMENT	EXPANSION	GROSS	REPLACEMENT	EXPANSION	GROSS
TOTAL	7,367	446	409	508	917	434	643	1,077
PROFESSIONAL MANAGERIAL	475	—	11	5	16	11	5	16
CLERICAL	570	381	16	33	49	11	33	44
SALES	141	65	11	-11	—	11	—	11
SERVICES	16	—	11	—	11	11	—	11
SKILLED	4,061	—	169	174	343	201	287	488
SEMISKILLED	521	—	27	86	113	37	86	123
UNSKILLED	1,583	—	164	221	385	152	232	384

. . . Total employment in Contract Construction amounts to a little less than 5 percent of the total of the work force of Lucas County. Employers in the Construction business anticipate a higher rate of expansion than is found in most of the other industrial groups. A total of 508 of new employees will be hired by the end of the first year and 643 by the end of the second year for expansion purposes in Contract Construction. This along with the 409 in one year and 434 in two years for replacement needs makes a gross need of 917 in 12 months and 1,077 in 24 months. Over half (65 percent) of those employed in Construction are skilled workers. While 21 percent are unskilled; the balance make up about one fourth of the total employment. Because the bulk are skilled workers the largest demand ;is for skilled craftsmen with 201 needed in 1 year and 488 in two years. The only other need of any significance is among the unskilled where 385 are needed. Out of the 41 occupations found in Contract Construction there are 5 in which a demand of significance was shown. These are: bricklayer/mason, electrician, laborer, plumber/pipefitter, and truck driver.

TRANSPORTATION AND UTILITIES

PROJECTED REQUIREMENTS IN 65 OCCUPATIONS
NEEDS FOR 12 AND 24 MONTHS
LUCAS COUNTY
1966 - 1967

65 SELECTED OCCUPATIONS	CURRENT EMPLOYMENT		12 MONTH NEED			24 MONTH NEED		
	TOTAL	FEMALE	REPLACEMENT	EXPANSION	GROSS	REPLACEMENT	EXPANSION	GROSS
TOTAL	8,541	1,958	453	339	792	554	508	1,062
PROFESSIONAL MANAGERIAL	585	73	21	2	23	21	6	27
CLERICAL	2,421	1,755	259	56	315	286	92	378
SALES	158	11	12	1	13	12	1	13
SERVICES	118	24	9	6	15	12	6	18
SKILLED	2,557	80	109	157	266	144	208	352
SEMISKILLED	1,783	12	21	87	108	30	131	161
UNSKILLED	919	3	22	30	52	49	64	113

. . . Fifth in size in the number of people employed Transportation and Utilities has 7.8 percent of the total employment in Lucas County. There were 65 occupations out of the 165 surveyed with an employment of 8,541 out of the total employment of 12,900 with 60 percent of the employment divided about evenly between clerical and skilled occupations. Another 21 percent is employed in the semiskilled occupations with about half that number being unskilled workers. The other 10 percent is found in the three remaining occupation groups. A total of 792 of the jobs will open up in the first year, 453 being for replacement purposes and 339 for expansion needs. By the end of 24 months a total of 1,062 will be needed with 554 for replacement and 508 for expansion. While there is considerable growth shown in the expansion needs in the skilled occupations the volume of the demand for the clerical occupations is in the replacement needs. There were 6 occupations in which significant demands appear. They are: bus driver, central office repairman, clerk general office telephone operator, truck driver and warehouseman.

TRADES

PROJECTED REQUIREMENTS IN 68 OCCUPATIONS

NEEDS FOR 12 AND 24 MONTHS
LUCAS COUNTY
1966-1967

68 SELECTED OCCUPATIONS	CURRENT EMPLOYMENT		12 MONTH NEED			24 MONTH NEED		
	TOTAL	FEMALE	REPLACEMENT	EXPANSION	GROSS	REPLACEMENT	EXPANSION	GROSS
TOTAL	33,660	13,927	1,958	2,212	4,170	2,666	2,748	5,414
PROFESSIONAL MANAGERIAL	2,089	368	59	61	120	103	75	178
CLERICAL	6,628	4,508	324	506	830	501	679	1,180
SALES	9,879	4,187	606	722	1,328	642	774	1,416
SERVICES	6,595	4,240	520	300	820	782	416	1,198
SKILLED	3,324	235	191	288	479	254	368	622
SEMISKILLED	2,387	182	102	35	137	161	54	215
UNSKILLED	2,758	207	156	300	456	223	382	605

. . . Employment in Wholesale and Retail Trade accounts for 35,500 jobs in Lucas County. In 68 occupations identified in Wholesale and Retail Trade, a total of 33,660 persons were employed. Employers forecast a 3.7 percent increase in one year and a 6.4 percent increase in the overall employment in two years. As might be expected about one half of the total employment is in the clerical and sales type of occupations with 20 percent being found in clerical and 29 percent in sales. Service type occupations make up 19 percent, 10 percent are skilled workers with the remaining 20 percent being found in the other categories. While the replacement needs in Services are considerably larger than the expansion needs, the reverse is true in clerical and sales type of occupations. A relatively large demand is shown for skilled workers in comparison to the total number employed. A total in all occupations of 4,170 will be needed in one year and 5,414 in two years. The occupations in which the largest demand is shown are: auto body repairman, auto mechanic, auto service station attendant, bartender/barmaid, cashier, checker, clerk general office, clerk typist, cook, laborer, manager/official salesman general, salesperson retail, stock clerk, upholsterer, waiter/waitress and warehouseman. (See Table VIII)

GOVERNMENT

PROJECTED REQUIREMENTS IN 68 OCCUPATIONS
NEEDS FOR 12 AND 24 MONTHS
LUCAS COUNTY
1966-1967

68 SELECTED OCCUPATIONS	CURRENT EMPLOYMENT		12 MONTH NEED			24 MONTH NEED		
	TOTAL	FEMALE	REPLACEMENT	EXPANSION	GROSS	REPLACEMENT	EXPANSION	GROSS
TOTAL	15,724	6,019	1,006	365	1,371	1,106	616	1,722
PROFESSIONAL MANAGERIAL	6,683	3,930	741	180	921	762	336	1,098
CLERICAL	2,530	952	77	34	111	84	54	138
SALES	—	—	—	—	—	—	—	—
SERVICES	3,752	896	131	104	235	172	155	327
SKILLED	1,378	89	36	45	81	55	61	116
SEMISKILLED	377	16	9	-4	5	15	-4	11
UNSKILLED	1,004	136	12	6	18	18	14	32

. . . The persons employed by governmental agencies in Lucas County as of April, 1965 numbered 17,200. A total of 68 occupations are reported here in which a total of 15,724 are employed. Nationally 17.1 percent of the total is accounted for by those working in public employment while in the State of Ohio the percentage is 14.1. In Lucas County however it is only 10.5 percent. The largest single group of people in government work are professional and managerial employees with 6,683 so employed making up 43 percent of the total. Of these by far the largest number are engaged in the teaching profession around one fourth are found in service types of occupation and 16 percent are found in clerical work. The balance are found in skilled, semiskilled and unskilled work. Because of the fact that the largest number of persons in governmental establishments are professional and managerial employees the largest demand will also be found in this area with 1098 needed in 24 months and 921 in 12 months. A large part of this is replacement needs with 741 needed for replacement and 180 for expansion in 12 months, 762 for replacement and 336 for expansion in 24 months. This accounts for a large part of the total need which amounts to 1,006 for replacement and 365 for expansion in one year. For the second year the replacement need will be 1,106 and the expansion need 616 in 2 years. Teachers, policeman/guard, and nurses are the principal occupations in which considerable demand is shown however there are a number of other occupations which show need. (See Table VIII)

SERVICES

PROJECTED REQUIREMENTS IN 77 OCCUPATIONS

NEEDS FOR 12 AND 24 MONTHS
LUCAS COUNTY
1966 - 1967

77 SELECTED OCCUPATIONS	CURRENT EMPLOYMENT		12 MONTH NEED			24 MONTH NEED		
	TOTAL	FEMALE	REPLACEMENT	EXPANSION	GROSS	REPLACEMENT	EXPANSION	GROSS
TOTAL	12,191	5,943	1,122	956	2,078	1,512	1,232	2,744
PROFESSIONAL MANAGERIAL	3,355	1,552	226	301	527	390	358	748
CLERICAL	2,595	2,092	160	112	272	271	226	497
SALES	351	61	60	-10	50	55	10	65
SERVICES	2,792	1,563	305	246	551	418	252	670
SKILLED	949	162	147	130	277	111	205	316
SEMISKILLED	856	456	58	45	103	55	58	113
UNSKILLED	1,293	57	166	132	298	212	123	335

. . .This survey identifies 77 occupations in the service industry with a total of 12,191 persons employed. Employers forecast a 3.6 percent increase in employment in 12 months and a 5.8 percent increase in 24 months in the overall employment. Since this survey is concerned with nonagricultural wage and salary employment and a considerable number of people in services are self employed or are in nonprofit organizations the number identified in the 77 occupations studied is only approximately one half of the total estimated employment in Services. It was found in the occupations examined that a total of 2,078 persons would find employment by the end of the 12 month period and 2,744 at the end of the 24 month period. There will be 1,122 needed for replacement and 956 for expansion in 12 months and 1,512 for replacement 1,232 for expansion in 24 months. The largest occupational group in Services are those engaged in jobs classified as professional or managerial where 27 percent of the total are so employed. The strictly service type occupations employed 23 percent of the total while clerical occupations provided work for 21 percent. Other than the 30 percent divided among the remaining occupation groups 11 percent are unskilled workers. The largest demand is in professional managerial and service type occupations. About 16 percent of the total employment in Lucas County is in Services which is slightly higher than the state average of 13 percent or the national average which is 14 percent. The principal occupations for which a demand is shown are: cashier, clerk general office, clerk typist, draftsman, electric motor repairman, electronics mechanic, engineers, janitor/maids, laborers, laundress/laundryman, nurse aide/orderly, nurse licensed practical, nurse registered, policeman/guard, salesman general, sheet metal worker, stenographer, waitress. (See Table VIII)

FINANCE

PROJECTED REQUIREMENTS IN 32 OCCUPATIONS

NEEDS FOR 12 AND 24 MONTHS
LUCAS COUNTY
1966-1967

32 SELECTED OCCUPATIONS	CURRENT EMPLOYMENT		12 MONTH NEED			24 MONTH NEED		
	TOTAL	FEMALE	REPLACEMENT	EXPANSION	GROSS	REPLACEMENT	EXPANSION	GROSS
TOTAL	5,665	3,130	221	252	473	351	351	861
PROFESSIONAL MANAGERIAL	686	50	13	14	27	46	5	51
CLERICAL	3,035	2,730	110	53	163	191	153	344
SALES	1,271	144	84	185	269	102	351	453
SERVICES	259	121	2	—	2	—	—	—
SKILLED	239	19	—	—	—	—	1	1
SEMISKILLED	36	36	12	—	12	12	—	12
UNSKILLED	139	30	—	—	—	—	—	—

. . . The smallest employment in terms of numbers is Finance, Insurance and Real Estate with only 3.7 percent of the total in Lucas County being found in such endeavor. This is somewhat lower than the average found in both United States and Ohio. The total employment in this category for Lucas County amounted to around 6,000 persons with 5,665 being found in the 33 surveyed occupations. Over half (54 percent) of the employment here is in the clerical field. Although only 22 percent of the total employment is in sales the 12 and 24 month demand calls for 269 and 435 respectively for replacement and expansion needs. In clerical occupations the total demand is for 163 in 12 months and 344 in 24 months. The balance of the demand is relatively small so that by the end of 12 months only 221 will be needed for replacement, 252 for expansion or a total of 473. For the 24 month period 351 will be needed for replacement, 510 for expansion for a total of 861. The principal occupations in which a demand will be shown are for clerk typist, and insurance salesman.

(See Table VIII)

POPULATION AND WORK FORCE

Certain data not covered by this survey but pertinent to a study of the labor force are found in Census Reports. Population growth is not necessarily correlated with labor force growth. Shifts in places of residence and industry growth on the fringe areas have resulted in changed patterns of employment. Standard Metropolitan Statistical Areas have been enlarged. Comparability of data is difficult to achieve. For instance, Census data is gathered from the individual person while most labor data is gathered from the employer and from tax records. The following is information only in relation to figures presented in the survey and cannot be considered as comparable. At the time the Census was taken the SMSA consisted of Lucas County, the same area covered by this survey.

The population of Lucas County grew from 344,333 persons in 1940 to 395,551 in 1950 which was a 14.9 percent increase. The rate was a little higher from 1950 to 1960 when the population reached 456,931 at a 1.55 percent increase per year for the ten year period. During the year live births numbered 10,664 while deaths numbered 4,649 - a net increase of 6,015, and a 1.1 percent increase due to natural growth. The net gain due to migration was only 136 persons from 1950 to 1960.

The 1950 Census reported a civilian work force of 168,872 while in 1960 the work force was reported at 179,580. The rate of change of employment in those jobs covered by Unemployment Compensation for a similar period 1950 to 1960 was from 127,115 to 125,863 workers or a 9.1 percent decrease. The decrease in covered employment was not a uniform rate in all industry groups. Construction decreased by 345 workers from 7,307; Manufacturing decreased by 6,434 from 66,711; Transportation & Utilities increased by 1,188 to 7,969; Wholesale and Retail Trade increased 974 to 33,752; Finance and Insurance increased 1,395 to 5,085 and Service grew by 1,907 to 11,385. The total covered employment in all industries was back up to 126,303 in 1964.

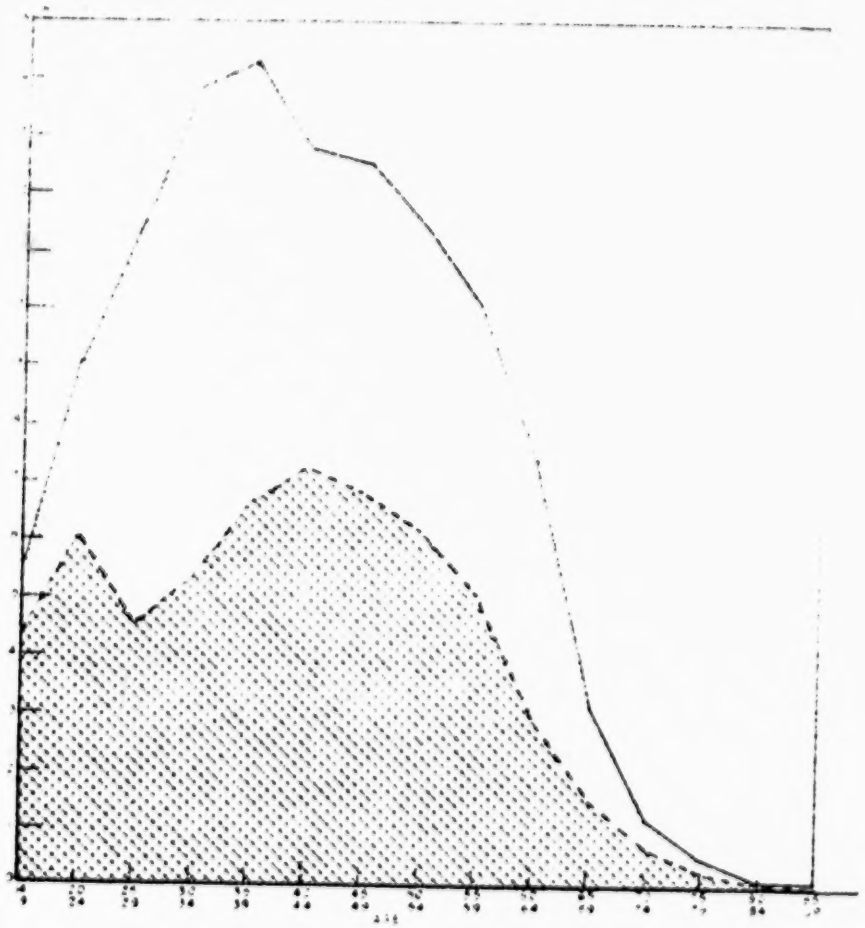
From this it will be seen that the proportion of the work force in relation to the population has been decreasing. One obvious reason is the increased number of persons in school. This is offset somewhat by the increase in the number of females employed which jumped from 28 percent to 33 percent. Other factors are at work in both directions but resulting in a smaller proportion in the work force.

Another important influence on the number of people employed in any locality is the commuting pattern. The effect here is somewhat different than that found in most counties and influenced the change in the metropolitan area definition now in use which includes both Wood County in Ohio and Monroe County in Michigan. It is reported that 9,014 persons living in the county work outside the county — a little over half in Wood County. On the other hand, 18,338 persons live outside the county and work in the county — around 6,000 each from Wood County and Monroe County. Incidentally, almost all travel by auto. This is a net gain of 9,324 persons to the work force.

School enrollment in 1960 was 110,273 -- 24.1 percent of the population -- another 11.6 percent are children under 5 years, 35.7 percent either in school or too young, over a third of the population. The work force with 39.3 percent and youngsters with 35.7 percent make up exactly three fourths of the population. The balance is nonworking females and retired persons.

While 11.6 percent are children under 5 years of age, 61.3 percent are persons 21 years and older. Those 65 and over make up 9.8 percent of the population. The median age is 31.1 slightly above the state average of 29.5 years. The age at which people enter the work force varies and there is a variation between men and women. Such things as baby booms also effect the age of the work force as well as retirement policies and hiring practices. The accompanying chart shows the various age groups, by sex, of the work force in Lucas County as of April 1960. Published data for 1950 are not exactly comparable however the peak is in the 25-29 year age group among the males. It is again difficult to compare female employment of 1950 with 1960 due to the growth in total number employed.

EMPLOYMENT STATUS BY AGE AND SEX



In 49.5 percent of the total number of families the head of the family is the only person in the work force. In 25.1 percent of the families both the head of the family and the wife are both employed. Similarly 33.9 percent of all families have only one member working; 30.5 percent have two members working; 6.9 percent have three or more members working; and 8.7 percent of families have no one working. In about half of the cases where the head of the family and the wife are both employed there are one or more children under 18.

RECOMMENDATIONS

In Lucas County, as well as in other areas throughout the country, the new dimension in the labor force is QUALITY, rather than quantity. If we are to maintain a high rate of economic growth, we must make a conscious effort to assure further development of our manpower resources and their more effective utilization.

To achieve an adequate, skilled and versatile work force, the Manpower Advisory Committee for the Lucas County area recommends the following:

ACTION FOR AREA LEADERS

Business and labor organizations in Lucas County and other community organizations must assume the responsibility of providing a planned program for improving the skills of the work force. They should disseminate the results of this survey to all persons and organizations interested in the development of our resources, particularly to employers, educators, vocational counselors, labor representatives, and Parent Teacher Associations.

Promote equal opportunities for all qualified individuals to acquire skills.

Strengthen the contributions of secondary schools, universities and colleges, and community colleges to assist workers in the acquisition of skills.

Urge employers and labor unions to accelerate and improve on-the-job, apprenticeship and other types of training programs.

Attract new industry into the area which can utilize the present and future work force of the county.

ACTION FOR EMPLOYERS

It will require an all out effort on the part of business and industrial leaders to train and develop skilled workers and relieve the growing unemployment among unskilled work groups.

Strengthen communication between the business community and school authorities in the development of new curriculum requirements resulting from technological changes.

Encourage full utilization and expansion of technical, apprenticeship and vocational training programs or develop needed programs where they do not exist. Strengthen and develop more effective cooperative work training programs between employers and schools. Participate in on-the-job training programs with the Bureau of Apprenticeship and Training under the Manpower Development and Training Act of 1962.

ACTION FOR EDUCATION

Key responsibility for developing "workers acceptable to employers" rests with the schools and training agencies.

1. Educate students and parents that "any honest, productive work with the hands is rewarding, both financially and socially, and that a job well done brings to the worker both prestige and dignity".

2. Develop more effective programs for vocational guidance, and improve counseling and placement programs.

3. Work with local employers in setting up and improving work study and vocational education programs.

4. Expand adult education under the Manpower Development and Training Act to upgrade workers skill in shortage occupations.

5. Expand programs for providing vocational and industrial training facilities and curricula with the same diligence and emphasis which has traditionally been placed on college preparatory programs.

METHODOLOGY

This study was conducted in general accord with the method recommended and outlined by the Federal Bureau of Employment Security in its Handbook on Labor Market Research Methods (Draft Section No. 5).

Information on all job titles of reporting firms was requested. Occupations totaling less than ten for the county, after applying the industrial inflation factor, were deleted leaving 165 identifiable occupations for study.

A list of firms covered by the Ohio Unemployment Compensation Law was used to group firms in the industries selected for survey into three size categories of 1-9, 10-99, and 100 or more employees. Because of the great variation in the number of firms in the two smaller size groups, from industry to industry, it was impractical to establish a set sample to the universe ratio that would be applicable to all industries. It was necessary to handle each industry individually in selecting a sample of smaller firms that would attain the desired reliability.

There were approximately 5005 covered employers in Lucas County. A total of 831 firms were included in the sample which represented 65 percent of the covered employment in the county. Major non-covered employers (government, hospitals, schools, etc.) were also included. Because of the inclusion of all employers with 100 or more employees, and their 85.7 percent response, 79.7 percent of all the employed workers in the sample were reported.

After checking the returned reports for accuracy, the total employment reported by the surveyed firms was then expanded by industry to equal the total April 1965 employment in each industry. The expansion factors were then applied by industry, to the broad and specific occupational categories, replacement data and the projected employment totals for twelve and twenty-four months to arrive at industry totals for this information. Data processing equipment was used in computing this information and much of the statistical material shown in tabular and graphic form in this report.

FOR THE PURPOSE OF THIS SURVEY THE FOLLOWING ASSUMPTIONS WERE MADE AS A GUIDE TO RESPONDING FIRMS:

1. The present long term trend of economic growth of the United States will continue with no major setback for the next few years.

2. Scientific and technological advances will continue, affecting our industrial production, methods, manpower requirements and consumption patterns.

APPENDIX

TABLE I
PERCENTAGE DISTRIBUTION OF NONAGRICULTURAL EMPLOYMENT
IN THE UNITED STATES, OHIO AND LUCAS COUNTY AREA*

	UNITED STATES	OHIO	LUCAS COUNTY AREA
TOTAL	100.0	100.0	100.0
Manufacturing	29.9	39.3	35.9
Mining & Quarrying	1.1	0.6	0.1
Contract Construction	4.6	3.7	4.7
Transportation & Utilities	7.0	6.3	7.8
Wholesale & Retail Trades	21.0	19.3	21.8
Finance, Insurance & Real Estate	5.1	4.1	3.7
Service	14.2	12.6	15.5
Government	17.1	14.1	10.5

*Employment and Earning Statistics for States and Areas - U. S. Department of Labor

TABLE II
NONAGRICULTURAL WAGE AND SALARY WORKERS (EXCEPT DOMESTIC) BY INDUSTRIAL DIVISIONS
WITH ESTIMATED EMPLOYMENT CHANGE IN 12 AND 24 MONTHS
LUCAS COUNTY - 1965 - 1966

	April 1965 Employment 1/	Estimated 12 Month Employment	Estimated 12 Month Change	Estimated 12 Month % Change	Estimated 24 Month Employment	Estimated 24 Month Change	Estimated 24 Month % Change
TOTAL 2/	163,100	168,809	5,709	3.5	173,014	9,914	6.1
Manufacturing	58,700	61,020	2,320	4.0	62,698	3,998	6.8
Nonmanufacturing Total	104,400	107,789	3,389	3.2	110,316	5,916	5.7
Contract Construction	7,600	8,159	559	7.4	8,472	872	11.5
Transportation & Utilities 3/	12,900	13,094	194	1.5	13,317	417	3.2
Wholesale & Retail Trades	35,500	36,817	1,317	3.7	37,783	2,283	6.4
Finance, Ins. & Real Estate	6,000	6,157	157	2.6	6,334	334	5.6
Services 4/	25,200	26,106	906	3.6	26,667	1,467	5.8
Government	17,200	17,456	256	1.5	17,743	543	3.2

1/ Source: Benchmark calculated from Research & Statistics, Bureau of Unemployment Compensation
2/ Mining & Quarrying Excluded
3/ Includes Estimated Railroad Employment
4/ Includes Estimated Nonprofit Employment

TABLE III
CURRENT EMPLOYMENT IN 165 OCCUPATIONS
BY SEX AND OCCUPATIONAL SKILL LEVEL
LUCAS COUNTY - 1965

OCCUPATIONAL	CURRENT EMPLOYMENT			OCCUPATIONAL SKILL LEVEL - PERCENT			SEX PERCENT		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
TOTAL	134,482	13,444	41,038	100.0	100.0	100.0	100.0	100.0	100.0
Professional & Managerial	18,326	12,204	6,122	13.7	13.1	14.9	100.0	66.6	33.4
Clerical	23,989	8,105	15,884	17.8	8.7	38.7	100.0	33.8	66.2
Sales	12,894	8,336	4,558	9.5	8.9	11.1	100.0	64.7	35.3
Service	13,932	7,029	6,903	10.3	7.5	16.8	100.0	50.5	49.5
Skilled	25,645	24,856	789	19.1	26.6	1.9	100.0	96.9	3.1
Semiskilled	23,247	18,319	4,928	17.3	19.6	12.1	100.0	78.8	21.2
Unskilled	16,449	14,595	1,854	12.3	15.6	4.5	100.0	88.7	11.3

TABLE IV
CURRENT EMPLOYMENT IN 165 COUNTIES
BY SEX AND INDUSTRIAL DIVISIONS
LUCAS COUNTY - April 1965

INDUSTRY	CURRENT EMPLOYMENT			PERCENT BY INDUSTRY			DISTRIBUTION BY SEX		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
TOTAL	134,482	93,444	41,038	100.0	100.0	100.0	100.0	69.5	30.5
Manufacturing	51,334	41,719	9,615	38.2	44.6	23.4	100.0	81.3	18.7
Nonmanufacturing Total	83,148	51,725	31,423	61.8	55.4	76.6	100.0	62.2	37.8
Construction	7,367	6,921	446	5.5	7.4	1.1	100.0	93.9	6.1
Transportation & Utilities	8,541	6,583	1,958	6.4	7.0	4.8	100.0	77.1	22.9
Wholesale & Retail Trade	33,660	19,733	13,927	25.0	21.2	33.9	100.0	58.6	41.4
Finance, Insurance and Real Estate	5,665	2,535	3,130	4.2	2.7	7.6	100.0	44.7	55.3
Service	12,191	6,248	5,943	9.0	6.7	14.5	100.0	51.3	48.7
Government	15,724	9,705	6,019	11.7	10.4	14.7	100.0	61.7	38.3

TABLE V
OCCUPATIONS AND REPORTED NEEDS FOR 12 AND 24 MONTHS
IN ALL INDUSTRIES
LUCAS COUNTY - April, 1965

165 Occupations	CURRENT EMPLOYMENT Total	Female	12 MONTH NEEDS Replacement	Expansion	Gross	24 MONTH NEEDS Replacement	Expansion	Gross
Estimated Employment	163,100							
Surveyed Occupations	134,482	41,038	7,247	7,177	14,424	9,413	10,034	19,447
Accountant	823	80	10	33	43	11	54	65
Accounting Clerk	337	222	7	14	21	10	19	29
Agent (Transportation)	117	82	—	—	—	—	—	—
Aircraft Mechanic	53	—	11	11	22	11	27	38
Annealer	19	—	—	—	—	—	—	—
Appliance Repairman	324	—	—	1	1	—	—	—
Appraiser	151	6	—	12	12	1	36	37
Asbestos Worker	43	—	11	27	38	16	54	70
Assembler	6,867	1,569	152	345	497	214	516	730
Attendant (Animal)	27	—	—	—	—	—	—	—
Auto Body Repairman	517	—	27	81	108	27	105	132
Auto Equipment Serviceman	57	—	—	—	—	—	1	1
Auto Mechanic	1,373	—	65	115	180	77	167	244
Auto Service Station Attendant	797	1	90	34	124	147	53	200
Baker	338	29	13	7	20	13	10	23
Barber/Beauty Operator	312	240	45	—	45	95	—	95
Bartender/Barmaid	1,225	594	57	59	116	41	32	73
Blacksmith	100	—	2	—	2	4	—	4
Bookkeeper	1,691	1,269	75	49	124	75	75	150
Bookkeeping Machine Operator	178	155	—	13	13	6	14	20
Box Maker	60	—	—	—	—	—	—	—
Bricklayer Mason	380	—	11	33	44	11	33	44
Bus Driver	781	27	49	34	83	80	56	136
Buyer	65	11	—	—	—	—	1	1
Cabinet Maker	32	—	—	12	12	—	24	24
Carpenter	863	—	23	—	23	23	—	23
Caseworker	56	32	1	2	3	1	5	6
Cashier	1,413	1,187	63	206	269	63	234	297
Cement Finisher	183	—	—	—	—	—	—	—
Central Office Repairman	698	2	20	97	117	20	101	121
Checker	460	254	42	23	65	85	40	125
Chemical Operator	382	—	2	6	8	8	24	32
Chemist	102	2	—	—	—	12	—	12
Clerk, General Office	8,585	6,273	402	314	716	584	483	1,067
Clerk Typist	2,980	2,770	185	82	267	328	215	543

TABLE V
OCCUPATIONS AND REPORTED NEEDS FOR 12 AND 24 MONTHS
IN ALL INDUSTRIES
LUCAS COUNTY - April, 1965
(Continued)

	CURRENT EMPLOYMENT		12 MONTH NEEDS			24 MONTH NEEDS		
	Total	Female	Replacement	Expansion	Gross	Replacement	Expansion	Gross
Coil Assembler	322	276	54	54	108	54	53	107
Commercial Artist	126	13	—	6	6	—	22	22
Compositor. Printing	673	8	—	12	12	—	24	24
Conveyor Man	13	—	—	—	—	—	—	—
Cook	1.459	689	164	84	248	215	79	294
Coremaker	46	—	—	—	—	—	—	—
Crane Operator	224	—	2	—	2	5	2	7
Cutter Operator	103	42	—	18	18	—	36	36
Decorator	38	19	—	—	—	—	—	—
Dental Technician	61	20	—	—	—	—	—	—
Designer	81	1	—	—	—	—	—	—
Dietary Worker	1.139	555	37	18	55	37	22	59
Dietitian	18	11	1	—	1	12	1	13
Dipper	60	—	—	12	12	—	24	24
Dispatcher	472	86	5	3	8	21	2	23
Draftsman	986	26	75	84	159	84	149	233
Duplicating Machine Operator	100	56	5	3	8	11	9	20
Electric Motor Repairman	101	—	51	25	76	—	101	101
Electrician	965	—	12	71	83	17	165	182
Electronic Assembler	50	18	—	—	—	—	—	—
Electronics Mechanic	140	5	26	31	57	31	36	67
Employment Interviewer	84	61	—	—	—	—	—	—
Engineer	1,600	4	80	192	272	124	247	371
Engraver	13	—	13	—	13	—	—	—
Estimator	35	1	—	5	5	—	5	5
Extruder Operator	233	—	—	—	—	—	—	—
Filling Machine Operator	273	—	—	2	2	—	4	4
Firefighter	601	—	15	—	15	29	—	29
Foreman	2,483	170	80	30	110	85	51	136
Furnace Installer	119	—	—	—	—	—	—	—
Furnace Tender	184	—	6	6	12	6	12	18
Glazier	38	—	—	—	—	—	—	—
Glueman	36	—	—	—	—	—	—	—
Heat Treater	184	—	9	—	9	10	—	10
Heavy Equipment Operator	429	—	23	11	34	25	16	41

TABLE V
OCCUPATIONS AND REPORTED NEEDS FOR 12 AND 24 MONTHS
IN ALL INDUSTRIES
LUCAS COUNTY - April, 1965
(Continued)

	CURRENT EMPLOYMENT		12 MONTH NEEDS			24 MONTH NEEDS		
	Total	Female	Replacement	Expansion	Gross	Replacement	Expansion	Gross
Housekeeper	19	8	—	—	—	—	—	—
Inspector, Machine Shop	383	68	9	11	20	18	13	31
Inspector	1,189	435	22	49	71	22	73	95
Instrument Repairman	165	—	3	14	17	6	8	14
Insurance Salesman	1,163	120	84	185	269	102	351	453
Janitor/Maid	2,447	867	100	132	232	133	172	305
Key Punch Operator	200	189	19	9	28	28	23	51
Laboratory Technician	900	238	44	35	79	84	67	151
Laborer	14,079	1,790	984	1,008	1,992	1,256	1,387	2,643
Laundress - Laundryman	459	405	40	25	65	40	26	66
Librarian	33	6	—	—	—	—	2	2
Lineman/Serviceman	13	—	—	—	—	—	—	—
Linoleum Layer	16	—	—	—	—	—	—	—
Machine Operator	2,172	520	144	320	464	173	253	426
Machine Tool Operator	154	—	—	12	12	—	12	12
Machinist/Job Setter	2,238	4	94	100	194	108	151	259
Mail Carrier	774	3	12	15	27	18	29	47
Maintenance Man Bldg.	1,157	126	33	34	67	54	52	106
Maintenance Mechanic	676	—	77	22	99	109	17	126
Manager/Official	5,413	525	146	96	242	234	147	381
Meat Cutter	526	32	6	5	11	15	26	41
Metal Finisher	373	12	8	11	19	8	11	19
Meter Reader	122	2	5	-1	4	7	-1	6
Miller	15	—	—	—	—	—	—	—
Millman	43	36	—	12	12	—	12	12
Millman, Wood	417	—	24	30	54	36	42	78
Millwright	184	—	3	7	10	3	5	8
Molder	453	—	56	116	172	82	178	260
Nurse Aide	1,250	523	40	4	44	70	5	75
Nurse, Licensed Practical	502	427	83	40	123	155	48	203
Nurse Register	910	899	70	32	102	105	56	161
Office Machine Operator	109	102	8	3	11	8	7	15
Office Machine Serviceman	146	—	14	13	27	18	14	32
Oiler	18	—	—	—	—	—	1	1
Optician	115	—	—	6	6	12	12	24

TABLE V
OCCUPATIONS AND REPORTED NEEDS FOR 12 AND 24 MONTHS
IN ALL INDUSTRIES
LUCAS COUNTY - April, 1965
(Continued)

	CURRENT EMPLOYMENT		12 MONTH NEEDS			24 MONTH NEEDS		
	Total	Female	Replacement	Expansion	Gross	Replacement	Expansion	Gross
Packer/Wrapper	466	261	4	2	6	4	-14	-10
Painter	398	52	15	37	52	27	29	56
Painter, Spray	133	12	1	3	4	1	3	4
Pasteurizer	24	—	—	—	—	—	—	—
Patternmaker	107	—	—	—	—	—	—	—
Pharmacist	277	38	—	—	—	2	3	5
Photographer	37	20	5	5	10	5	5	10
Plasterer	44	—	—	22	22	—	22	22
Plater	133	—	—	—	—	—	—	—
Plumber/Pipefitter	733	—	80	16	96	108	16	124
Policeman/Guard	1,544	39	123	111	234	140	150	290
Postal Clerk	656	61	10	15	25	15	10	25
Power Press Operator	2,248	179	19	242	261	27	290	317
Presser, Garment	152	56	16	15	31	6	15	21
Pressman, Printing	587	1	108	13	121	119	43	162
Programmer	81	2	—	—	—	—	2	2
Radio Operator	49	6	—	—	—	—	—	—
Rate Clerk	42	11	—	—	—	—	—	—
Reporter	289	51	—	6	6	1	7	8
Roofer	249	—	—	—	—	—	—	—
Room Clerk	25	10	—	—	—	—	—	—
Routeman	1,018	86	54	5	59	95	27	122
Rubber Compounder	16	—	—	—	—	—	—	—
Rubber Pressman	226	24	—	—	—	—	24	24
Salesman General	4,695	166	268	292	560	311	542	853
Salesman, Real Estate	96	24	—	—	—	—	—	—
Salesperson, Retail	6,940	4,248	438	480	918	441	376	817
Sandblaster	78	—	—	—	—	—	—	—
Secretary	827	789	40	10	50	69	16	85
Sewing Machine Operator	850	814	66	82	148	159	180	339

TABLE V
OCCUPATIONS AND REPORTED NEEDS FOR 12 AND 24 MONTHS
IN ALL INDUSTRIES
LUCAS COUNTY - April, 1965
(Continued)

	CURRENT EMPLOYMENT		12 MONTH NEEDS			24 MONTH NEEDS		
	Total	Female	Replacement	Expansion	Gross	Replacement	Expansion	Gross
Sheetmetal Worker	1,348	1	35	77	112	35	102	137
Shipping Clerk	551	28	5	1	6	8	3	11
Spring & Mattress Maker	60	—	12	—	12	—	—	—
Stationary Engineer	325	—	11	—	11	22	—	22
Stenographer	487	482	52	9	61	76	17	93
Stillman	255	—	—	—	—	—	—	—
Stock Clerk	2,022	319	131	103	234	162	148	310
Structural Steel Worker	335	—	1	—	1	3	—	3
Surveyor	16	10	1	18	19	3	3	6
Tabulating Machine Operator	101	75	9	19	28	16	21	37
Tailor/Seamstress	220	185	13	26	39	26	45	71
Teacher	5,714	3,619	672	136	808	662	200	862
Telephone Operator	733	717	127	19	146	130	48	178
Teller/Financial Clerk	783	669	27	—	27	31	13	44
Tester (Machine Shop)	206	113	7	1	8	8	—	8
Textile Machine Operator	45	4	1	—	1	1	—	1
Timekeeper	96	44	—	11	11	—	11	11
Tire Finisher	25	—	30	6	36	30	6	36
Tool Die Maker	1,349	—	24	127	151	19	143	162
Tool Grinder	31	15	1	—	1	—	—	—
Truck Driver	4,441	32	71	175	246	103	226	329
Truck Mechanic	207	—	11	5	16	—	11	11
Tube Machine Operator	35	—	6	6	12	6	12	18
Undertaker	30	—	—	—	—	—	—	—
Undertaker Assistant	30	10	—	—	—	—	—	—
Upholsterer	121	26	57	51	108	77	51	128
Waiter/Waitress	3,906	3,378	407	247	654	649	375	1,024
Warehouseman	2,370	64	102	94	196	148	137	285
Watch Repairman	45	—	—	6	6	—	6	6
Welder	923	35	36	62	98	37	72	109

TABLE VI
EMPLOYMENT AND REPORTED NEEDS FOR 12 AND 24 MONTHS
BY OCCUPATIONAL GROUPS
LUCAS COUNTY - April 1965

165 Occupations	CURRENT EMPLOYMENT Total	Female	12 MONTH NEEDS Replacement	Expansion	Gross	24 MONTH NEEDS Replacement	Expansion	Gross
TOTAL	134,482	41,038	7,247	7,177	14,424	9,413	10,034	19,447
Professional & Managerial	18,326	6,122	1,188	690	1,878	1,495	1,024	2,519
Clerical	23,989	15,884	1,229	932	2,161	1,752	1,472	3,224
Sales	12,894	4,558	790	957	1,747	854	1,269	2,123
Services	13,932	6,903	988	655	1,643	1,409	835	2,244
Skilled	25,645	789	1,180	1,422	2,602	1,401	2,079	3,480
Semiskilled	23,247	4,928	786	1,419	2,205	1,098	1,831	2,929
Unskilled	16,449	1,854	1,086	1,102	2,188	1,404	1,524	2,928

TABLE VII
EMPLOYMENT AND REPORTED NEEDS FOR 12 AND 24 MONTHS
BY INDUSTRIAL DIVISIONS
LUCAS COUNTY - April 1965

165 Occupations	CURRENT EMPLOYMENT Total	Female	12 MONTH NEEDS Replacement	Expansion	Gross	24 MONTH NEEDS Replacement	Expansion	Gross
TOTAL	134,482	41,038	7,247	7,177	14,424	9,413	10,034	19,447
Manufacturing	51,334	9,615	2,078	2,545	4,623	2,790	3,777	6,567
Nonmanufacturing Total	83,148	31,423	5,169	4,632	9,801	6,623	6,257	12,880
Construction	7,367	446	409	508	917	434	643	1,077
Transportation & Utilities	8,541	1,958	453	339	792	554	508	1,062
Wholesale & Retail Trades	33,660	13,927	1,958	2,212	4,170	2,666	2,748	5,414
Finance, Ins. & Real Estate	5,665	3,130	221	252	473	351	510	861
Service	12,191	5,943	1,122	956	2,078	1,512	1,232	2,744
Government	15,724	6,019	1,006	365	1,371	1,106	616	1,722

TABLE VIII
OCCUPATIONS AND REPORTED NEEDS FOR 12 AND 24 MONTHS
BY INDUSTRIAL DIVISIONS
LUCAS COUNTY - April 1965

MANUFACTURING

	CURRENT EMPLOYMENT		12 MONTH NEEDS			24 MONTH NEEDS		
	Total	Female	Replacement	Expansion	Gross	Replacement	Expansion	Gross
Estimated Employment	58,700							
Surveyed Occupations - 113	51,334	9,615	2,078	2,545	4,623	2,790	3,777	6,567
Accountant	83	7	8	2	10	11	6	17
Accounting Clerk	124	44	7	6	13	9	10	19
Annealer	19	—	—	—	—	—	—	—
Appliance Repairman	17	—	—	—	—	—	—	—
Assembler	6,813	1,515	152	345	497	214	516	730
Auto Body Repairman	326	—	—	36	36	—	54	54
Automatic Equipment Serviceman	36	—	—	—	—	—	1	1
Auto Mechanic	57	—	—	-4	-4	—	-3	-3
Baker	239	22	10	2	12	10	5	15
Blacksmith	65	—	2	—	4	4	—	2
Bookkeeper	229	167	21	4	25	12	14	26
Bookkeeping Machine Operator	12	10	—	—	—	—	—	—
Box Maker	60	—	—	—	—	—	—	—
Buyer	23	2	—	—	—	—	1	1
Cabinet Maker	12	—	—	12	12	—	24	24
Carpenter	35	—	1	—	1	—	—	—
Cashier	1	1	—	—	—	—	—	—
Chemical Operator	382	—	2	6	8	8	24	32
Chemist	77	—	—	—	—	—	—	—
Clerk General Office	3,048	1,591	112	92	204	187	133	320
Clerk Typist	939	902	66	-2	64	83	20	103
Coil Assembler	322	276	54	54	108	54	53	107
Commercial Artist	30	—	—	6	6	—	12	12
Compositor Printer	660	8	—	12	12	—	24	24
Conveyor Man	13	—	—	—	—	—	—	—
Cook	60	36	—	—	—	—	—	—
Coremaker	46	—	—	—	—	—	—	—
Crane Operator	109	—	2	—	2	5	—	5
Cutter Operator	103	42	—	18	18	—	36	36
Designer	79	1	—	—	—	—	—	—
Dipper	60	—	—	12	12	—	24	24
Dispatcher	240	19	—	—	—	—	—	—
Draftsman	434	26	25	37	62	22	68	90
Duplicating Machine Operator	28	19	4	3	7	10	9	19
Electrician	443	—	10	30	40	15	43	58

TABLE VIII
OCCUPATIONS AND REPORTED NEEDS FOR 12 AND 24 MONTHS
BY INDUSTRIAL DIVISIONS
LUCAS COUNTY - April 1965

MANUFACTURING (Continued)

	CURRENT EMPLOYMENT		12 MONTH NEEDS			24 MONTH NEEDS		
	Total	Female	Replacement	Expansion	Gross	Replacement	Expansion	Gross
Electronic Assembler	50	18	—	—	—	—	—	—
Electronics Mechanic	50	5	6	6	12	6	6	12
Engineer	1,071	1	20	15	35	26	32	58
Extruder Operator	233	—	—	—	—	—	—	—
Filling Machine Operator	273	—	—	2	2	—	4	4
Foreman	1,338	31	31	6	37	34	13	47
Furnace Tender	184	—	6	6	12	6	12	18
Glueman	36	—	—	—	—	—	—	—
Heat Treater	184	—	9	—	9	10	—	10
Heavy Equipment Operator	1	—	—	—	—	—	—	—
Inspector Machine Shop	373	68	9	11	20	18	13	31
Inspector	1,154	405	22	49	71	22	73	95
Instrument Repairman	44	—	—	1	1	1	—	1
Janitor/Maid	249	23	5	-1	4	7	6	13
Key Punch Operator	53	53	8	1	9	13	5	18
Laboratory Technician	580	12	20	28	48	50	53	103
Laborer	8,362	1,395	560	413	973	742	706	1,448
Librarian	8	—	—	—	—	—	—	—
Machine Operator	2,099	484	131	319	450	158	252	410
Machine Tool Operator	154	—	—	12	12	—	12	12
Machinist & Job Setter	2,188	4	89	95	184	108	151	259
Maintenance Man, Building	337	—	4	14	18	8	26	34
Maintenance Mechanic	545	—	76	6	82	108	12	120
Manager/Official	1,809	41	44	33	77	53	61	114
Meat Cutter	80	—	—	—	—	—	—	—
Metal Finisher	373	12	8	11	19	8	11	19
Miller	15	—	—	—	—	—	—	—
Millman	43	36	—	12	12	—	12	12
Millman, Wood	282	—	24	30	54	36	42	78
Millwright	173	—	3	7	10	3	5	8
Molder	453	—	56	116	172	82	178	260
Nurse Licensed Practical	1	1	—	—	—	—	—	—
Nurse Registered	23	22	—	—	—	—	—	—
Office Machine Operator	81	80	4	2	6	3	3	6
Oiler	18	—	—	—	—	—	1	1

TABLE VIII
OCCUPATIONS AND REPORTED NEEDS FOR 12 AND 24 MONTHS
BY INDUSTRIAL DIVISIONS
LUCAS COUNTY - April 1965

MANUFACTURING (Continued)

	CURRENT EMPLOYMENT		12 MONTH NEEDS			24 MONTH NEEDS		
	Total	Female	Replacement	Expansion	Gross	Replacement	Expansion	Gross
Packer/Wrapper	466	261	4	2	6	4	-14	-10
Painter	83	12	1	—	1	—	—	—
Painter, Spray	95	12	1	3	4	1	3	4
Pasteurizer	24	—	—	—	—	—	—	—
Patternmaker	107	—	—	—	—	—	—	—
Plater	133	—	—	—	—	—	—	—
Plumber Pipefitter	78	—	4	—	4	5	—	5
Policeman/Guard	91	—	5	—	5	7	—	7
Power Press Operator	2,248	179	19	242	261	27	290	317
Pressman, Printing & Publishing	573	—	108	13	121	114	38	152
Programmer	3	1	—	—	—	—	—	—
Rate Clerk	1	—	—	—	—	—	—	—
Reporter	232	35	—	6	6	—	6	6
Routeman	816	—	42	—	42	76	10	86
Rubber Compounder	16	—	—	—	—	—	—	—
Rubber Pressman	226	24	—	—	—	—	24	24
Salesman General	1,032	58	17	70	87	32	133	165
Salesperson, Retail	62	32	—	—	—	—	—	—
Sandblaster	78	—	—	—	—	—	—	—
Secretary	385	385	32	10	42	64	16	80
Sewing Machine Operator	850	814	66	82	148	159	180	339
Sheetmetal Worker	563	1	5	47	52	5	72	77
Shipping Clerk	475	22	5	1	6	8	3	11
Spring Mattress Maker	60	—	12	—	12	—	—	—
Stationary Engineer	57	—	3	—	3	7	—	7
Stenographer	109	109	10	1	11	9	-3	6
Stillman	255	—	—	—	—	—	—	—
Stock Clerk	364	7	7	1	8	2	6	8
Structural Steel Worker	126	—	1	—	1	2	—	2
Tabulator Machine Operator	23	10	6	19	25	6	19	25
Tailor/Seamstress	22	—	6	—	6	7	7	14
Telephone Operator	22	18	1	—	1	2	—	2
Tester, Machine Shop	206	113	7	1	8	8	—	8
Timekeeper	76	29	—	—	—	—	—	—
Tire Finisher	25	—	30	6	36	30	6	36

TABLE VIII
OCCUPATIONS AND REPORTED NEEDS FOR 12 AND 24 MONTHS
BY INDUSTRIAL DIVISIONS
LUCAS COUNTY - April 1965

MANUFACTURING (Continued)

	CURRENT EMPLOYMENT		12 MONTH NEEDS			24 MONTH NEEDS		
	Total	Female	Replacement	Expansion	Gross	Replacement	Expansion	Gross
Tool & Die Maker	1,349	—	24	127	151	19	143	162
Tool Grinder	31	15	1	—	1	—	—	—
Truck Driver	612	2	14	6	20	21	13	34
Truck Mechanic	6	—	—	—	—	—	—	—
Tube Machine Operator	35	—	6	6	12	6	12	18
Upholsterer	18	—	6	—	6	—	—	—
Warehouseman	391	26	6	—	6	8	3	11
Welder	805	35	16	37	53	17	47	64

CONTRACT CONSTRUCTION

Estimated Employment	7,600							
Surveyed Occupations - 41	7,367	446	409	508	917	434	643	1.077
Accountant	5	—	—	—	—	—	—	—
Accounting Clerk	11	11	—	—	—	—	—	—
Asbestos Worker	43	—	11	27	38	16	54	70
Auto Mechanic	5	—	—	—	—	—	—	—
Bookkeeper	174	72	5	11	11	16	—	11
Bricklayer Mason	347	—	11	33	44	11	33	44
Carpenter	742	—	22	—	22	22	—	22
Cement Finisher	183	—	—	—	—	—	—	—
Clerk General Office	280	237	11	11	22	11	11	22
Clerk Typist	46	19	—	—	—	—	—	—
Crane Operator	27	—	—	—	—	—	—	—
Draftsman	151	—	11	—	11	11	—	11
Electrician	421	—	—	38	38	—	119	119
Electronics Mechanic	11	—	—	—	—	—	—	—
Engineer	26	—	—	—	—	—	—	—
Estimator	33	—	—	5	5	—	5	5
Foreman	102	—	5	—	5	5	—	5
Heavy Equipment Operator	240	—	22	11	33	22	16	38
Janitor/Maid	16	—	11	—	11	11	—	11
Laboratory Technician	5	—	—	—	—	—	—	—

TABLE VIII
OCCUPATIONS AND REPORTED NEEDS FOR 12 AND 24 MONTHS
BY INDUSTRIAL DIVISIONS
LUCAS COUNTY - April 1965

CONTRACT CONSTRUCTION (Continued)

	CURRENT EMPLOYMENT		12 MONTH NEEDS			24 MONTH NEEDS		
	Total	Female	Replacement	Expansion	Gross	Replacement	Expansion	Gross
Laborer	1,583	—	164	221	385	152	232	384
Linoleum Layer	16	—	—	—	—	—	—	—
Manager, Official	255	—	—	—	—	—	—	—
Millwright	11	—	—	—	—	—	—	—
Painter	196	—	11	22	33	22	22	44
Painter, Spray	38	—	—	—	—	—	—	—
Plasterer	44	—	—	22	22	—	22	22
Plumber Pipefitter	566	—	76	16	92	103	16	119
Roofer	249	—	—	—	—	—	—	—
Salesman, General	76	—	11	-11	—	11	—	11
Salesperson Retail	65	65	—	—	—	—	—	—
Secretary	31	26	—	—	—	—	—	—
Sheetmetal Worker	756	—	—	—	—	—	—	—
Stationary Engineer	11	—	—	—	—	—	—	—
Stenographer	5	5	—	—	—	—	—	—
Stock Clerk	5	—	—	—	—	—	—	—
Structural Steel Worker	202	—	—	—	—	—	—	—
Timekeeper	18	11	—	11	11	—	11	11
Truck Driver	234	—	27	86	113	37	86	123
Truck Mechanic	57	—	11	—	11	—	—	—
Welder	81	—	—	5	5	—	5	5

TRANSPORTATION & UTILITIES

Estimated Employment	12,900							
Surveyed Occupations - 65	8,541	1,958	453	339	722	554	508	1.062
Accounting Clerk	3	15	—	—	—	—	—	—
Agent Transportation	117	82	—	—	—	—	—	—
Aircraft Mechanic	53	—	11	11	22	11	27	38
Appliance Repairman	67	—	—	—	—	—	—	—
Appraiser	30	—	—	—	—	1	—	1
Auto Body Repairman	4	—	1	—	1	1	—	1
Auto Equipment Serviceman	21	—	—	—	—	—	—	—
Auto Mechanic	218	—	6	17	23	6	35	41
Auto Service Station Attendant	2	1	—	—	—	—	—	—
Bookkeeper	130	87	—	—	—	—	6	6

TABLE VIII
OCCUPATIONS AND REPORTED NEEDS FOR 12 AND 24 MONTHS
BY INDUSTRIAL DIVISIONS
LUCAS COUNTY - April 1965

TRANSPORTATION & UTILITIES (Continued)

	CURRENT EMPLOYMENT		12 MONTH NEEDS			24 MONTH NEEDS		
	Total	Female	Replacement	Expansion	Gross	Replacement	Expansion	Gross
Bookkeeping Machine Operator	2	1	—	—	—	—	—	—
Bus Driver	468	12	42	25	67	73	35	108
Cashier	11	11	—	—	—	—	—	—
Central Office Repairman	698	2	20	97	117	20	101	121
Checker	119	1	4	1	5	8	3	11
Clerk General Office	792	659	104	35	139	92	27	119
Clerk Typist	104	100	2	7	9	13	8	21
Commercial Artist	1	—	—	—	—	—	—	—
Crane Operator	16	—	—	—	—	—	2	2
Designer	2	—	—	—	—	—	—	—
Dietary Worker	15	15	3	—	3	3	—	3
Dispatcher	173	24	—	—	—	16	2	18
Draftsman	22	—	—	2	2	—	4	4
Duplicating Machine Operator	4	2	—	—	—	—	—	—
Electrician	78	—	1	2	3	1	2	3
Electronics Mechanic	6	—	—	—	—	—	—	—
Engineer	53	2	—	—	—	—	1	1
Estimator	2	1	—	—	—	—	—	—
Foreman	315	66	22	—	22	22	—	22
Heavy Equipment Operator	83	—	—	—	—	—	—	—
Inspector Machine Shop	10	—	—	—	—	—	—	—
Inspector	5	—	—	—	—	—	—	—
Instrument Repairman	38	—	3	—	3	5	-5	—
Janitor/Maid	59	9	5	6	11	7	6	13
Key Punch Operator	27	27	—	—	—	1	—	1
Laboratory Technician	15	—	—	—	—	—	—	—
Laborer	548	3	22	-13	9	44	5	49
Machine Operator	24	—	—	—	—	—	—	—
Machinist & Job Setter	40	—	—	—	—	—	—	—
Maintenance Man, Building	55	—	—	—	—	—	—	—

TABLE VIII
OCCUPATIONS AND REPORTED NEEDS FOR 12 AND 24 MONTHS
BY INDUSTRIAL DIVISIONS
LUCAS COUNTY - April 1965

TRANSPORTATION & UTILITIES (Continued)

	CURRENT EMPLOYMENT		12 MONTH NEEDS			24 MONTH NEEDS		
	Total	Female	Replacement	Expansion	Gross	Replacement	Expansion	Gross
Manager/Official	343	62	21	—	21	21	—	21
Meter Reader	121	2	5	-1	4	7	-1	6
Office Machine Operator	1	1	—	—	—	—	—	—
Painter	4	—	1	—	1	1	—	1
Photographer	2	—	—	—	—	—	—	—
Plumber/Pipefitter	87	—	—	—	—	—	—	—
Policeman/Guard	44	—	1	—	1	2	—	[illegible]
Programmer	75	—	—	—	—	—	1	1
Radio Operator	49	6	—	—	—	—	—	—
Rate Clerk	41	11	—	—	—	—	—	—
Reporter	21	2	—	—	—	—	—	—
Salesman General	158	11	12	1	13	12	1	13
Secretary	99	100	6	—	6	1	—	1
Stationary Engineer	158	—	2	—	2	3	—	3
Stenographer	37	45	1	—	1	1	—	1
Stock Clerk	47	—	3	-5	-2	2	—	2
Structural Steel Worker	7	—	—	—	—	—	1	1
Telephone Operator	562	559	123	19	142	123	47	170
Teller/Financial Clerk	23	23	11	—	11	21	—	21
Timekeeper	2	4	—	—	—	—	—	—
Truck Driver	1.752	11	21	87	108	30	131	161
Truck Mechanic	114	—	—	5	5	—	11	11
Warehouseman	371	—	—	43	43	5	59	64
Welder	17	—	—	—	—	—	—	—

TABLE VIII
OCCUPATIONS AND REPORTED NEEDS FOR 12 AND 24 MONTHS
BY INDUSTRIAL DIVISIONS
LUCAS COUNTY - April 1965

WHOLESALE & RETAIL TRADE

	CURRENT EMPLOYMENT		12 MONTH NEEDS			24 MONTH NEEDS		
	Total	Female	Replacement	Expansion	Gross	Replacement	Expansion	Gross
Estimated Employment	35,500							
Surveyed Occupations - 68	33,660	13,927	1,958	2,212	4.170	2,666	2,748	5,414
Accountant	108	25	—	13	13	—	13	13
Accounting Clerk	39	39	—	8	8	—	9	9
Appliance Repairman	211	—	—	—	—	—	—	—
Assembler	54	54	—	—	—	—	—	—
Auto Body Repairman	182	—	26	45	71	26	51	77
Auto Mechanic	978	—	58	98	156	70	130	200
Auto Service Station Attendant	739	—	90	34	124	147	53	200
Baker	93	5	3	5	8	3	5	8
Bartender/Barmaid	1,062	541	32	39	71	26	27	53
Bookkeeper	512	404	23	22	45	25	23	48
Bookkeeping Machine Operator	31	31	—	13	13	—	14	14
Bricklayer/Mason	32	—	—	—	—	—	—	—
Buyer	25	6	—	—	—	—	—	—
Carpenter	67	—	—	—	—	1	—	1
Cashier	868	811	27	181	208	29	198	227
Checker	341	253	38	22	60	77	37	114
Clerk General Office	2,317	1,910	71	109	180	129	139	268
Clerk Typist	606	528	37	46	83	63	118	181
Commercial Artist	4	3	—	—	—	—	—	—
Compositor Printer	13	—	—	—	—	—	—	—
Cook	1,019	380	145	58	203	192	64	256
Decorator	38	19	—	—	—	—	—	—
Dietary Worker	406	186	—	—	—	—	—	—
Dispatcher	21	13	—	—	—	—	—	—
Draftsman	26	—	—	—	—	—	—	—
Duplicating Machine Operator	41	28	—	—	—	—	—	—
Electrician	8	—	1	1	2	1	1	2
Engineer	14	—	3	3	6	5	8	13
Engraver	13	—	13	—	13	—	—	—
Foreman	281	9	13	7	20	14	20	34
Furnace Installer	115	—	—	—	—	—	—	—
Glazier	38	—	—	—	—	—	—	—
Instrument Repairman	83	—	—	13	13	—	13	13
Janitor/Maid	545	84	12	—	12	16	20	36
Key Punch Operator	60	60	—	—	—	—	—	—

TABLE VIII
OCCUPATIONS AND REPORTED NEEDS FOR 12 AND 24 MONTHS
BY INDUSTRIAL DIVISIONS
LUCAS COUNTY - April 1965

WHOLESALE & RETAIL TRADE (Continued)

	CURRENT EMPLOYMENT		12 MONTH NEEDS			24 MONTH NEEDS		
	Total	Female	Replacement	Expansion	Gross	Replacement	Expansion	Gross
Laboratory Technician	13	—	—	—	—	—	—	—
Laborer	1,354	181	95	269	364	118	317	435
Laundress/Laundryman	35	34	5	—	5	5	—	5
Machine Operator	13	—	1	1	2	3	1	4
Maintenance Man Building	33	6	1	1	2	1	1	2
Maintenance Mechanic	46	—	—	12	12	—	—	—
Manager/Official	1.591	276	56	45	101	98	54	152
Meat Cutter	446	32	6	5	11	15	26	41
Millman Wood	135	—	—	—	—	—	—	—
Office Machine Operator	20	16	3	1	4	5	4	9
Office Machine Serviceman	121	—	13	13	26	14	14	28
Optician	115	—	—	6	6	12	12	24
Painter	4	—	—	—	—	1	—	1
Pharmacist	269	38	—	—	—	—	—	—
Policeman/Guard	29	6	—	1	1	—	1	1
Presser/Garment	12	6	6	—	6	6	—	6
Reporter	1	1	—	—	—	—	—	—
Routeman	69	69	—	—	—	—	—	—
Salesman General	3,218	97	198	207	405	231	363	594
Salesperson Retail	6,661	4,090	408	515	923	411	411	822
Secretary	30	27	1	—	1	3	—	3
Sheetmetal Worker	13	—	—	—	—	—	—	—
Shipping Clerk	76	6	—	—	—	—	—	—
Stenographer	25	25	1	-3	-2	7	-5	2
Stock Clerk	1,595	312	120	107	227	158	142	300
Tabulator Machine Operator	13	12	3	—	3	5	—	5
Tailor/Seamstress	169	157	6	25	31	19	38	57
Telephone Operator	33	33	—	—	—	—	—	—
Truck Driver	1,465	19	—	—	—	—	—	—
Upholsterer	83	26	51	51	102	77	51	128
Waiter/Waitress	3,534	3.043	331	202	533	548	304	852
Warehouseman	1,404	26	61	31	92	105	65	170
Watch Repairman	45	—	—	6	6	—	6	6

TABLE VIII
OCCUPATIONS AND REPORTED NEEDS FOR 12 AND 24 MONTHS
BY INDUSTRIAL DIVISIONS
LUCAS COUNTY - April 1965

FINANCE, INSURANCE & REAL ESTATE

	CURRENT EMPLOYMENT		12 MONTH NEEDS			24 MONTH NEEDS		
	Total	Female	Replacement	Expansion	Gross	Replacement	Expansion	Gross
Estimated Employment	6,000							
Surveyed Occupations - 32	5,665	3,130	221	252	473	351	510	861
Accountant	63	—	1	2	3	—	4	4
Accounting Clerk	118	95	—	—	—	1	—	—
Appraiser	108	6	—	12	12	—	36	36
Bookkeeper	242	229	7	1	8	14	7	21
Bookkeeping Machine Operator	132	108	—	—	—	6	—	6
Buyer	12	—	—	—	—	—	—	—
Cashier	68	68	—	—	—	6	6	12
Chemist	12	—	—	—	—	12	—	12
Clerk General Office	691	651	27	10	37	28	31	59
Clerk Typist	685	685	52	27	79	118	54	172
Duplicating Machine Operator	4	4	1	—	1	1	—	1
Engineer	6	1	—	—	—	—	-1	-1
Foreman	24	18	—	—	—	—	1	1
Insurance Salesman	1,163	120	84	185	269	102	351	453
Janitor/Maid	244	121	—	—	—	—	—	—
Key Punch Operator	32	24	2	3	5	2	5	7
Laborer	127	18	—	—	—	—	—	—
Machine Operator	36	36	12	—	12	12	—	12
Maintenance Man Building	152	—	—	—	—	—	—	—
Maintenance Mechanic	24	—	—	—	—	—	—	—
Manager/Official	593	49	12	12	24	34	2	36
Painter	36	—	—	—	—	—	—	—
Policeman/Guard	15	—	2	—	2	—	—	—
Pressman/Printer	3	1	—	—	—	—	—	—
Salesman General	12	—	—	—	—	—	—	—
Salesman Real Estate	96	24	—	—	—	—	—	—
Secretary	58	58	—	—	—	—	—	—
Stenographer	89	89	5	—	5	5	—	5
Tabulator Machine Operator	42	36	—	—	—	—	1	1
Telephone Operator	7	7	—	—	—	—	—	—
Teller Financial Clerk	783	646	16	—	16	10	13	23
Warehouseman	12	12	—	—	—	—	—	—

TABLE VIII
OCCUPATIONS AND REPORTED NEEDS FOR 12 AND 24 MONTHS
BY INDUSTRIAL DIVISIONS
LUCAS COUNTY - April 1965

SERVICE

	CURRENT EMPLOYMENT		12 MONTH NEEDS			24 MONTH NEEDS		
	Total	Female	Replacement	Expansion	Gross	Replacement	Expansion	Gross
Estimated Employment	25,200							
Surveyed Occupations - 77	12,191	5,943	1,122	956	2,078	1,512	1,232	2,744
Accountant	523	46	—	15	15	—	30	30
Accounting Clerk	5	3	—	—	—	—	—	—
Appliance Repairman	20	—	—	—	—	—	—	—
Auto Body Repairman	5	—	—	—	—	—	—	—
Auto Mechanic	60	—	—	—	—	—	—	—
Auto Service Station Attendant	56	—	—	—	—	—	—	—
Baker	6	2	—	—	—	—	—	—
Barber/Beauty Operator	312	240	45	—	45	95	—	95
Bartender/Barmaid	163	53	25	20	45	15	5	20
Blacksmith	35	—	—	—	—	—	—	—
Bookkeeper	352	286	12	22	34	19	26	45
Cabinet Maker	20	—	—	—	—	—	—	—
Carpenter	2	—	—	—	—	—	—	—
Caseworker	18	18	—	—	—	—	—	—
Cashier	458	294	36	25	61	28	30	58
Chemist	13	2	—	—	—	—	—	—
Clerk General Office	1,030	888	65	48	113	124	124	248
Clerk Typist	252	192	15	3	18	39	15	54
Commercial Artist	91	10	—	—	—	—	10	10
Cook	229	141	13	26	39	16	11	27
Dental Technician	61	20	—	—	—	—	—	—
Dietary Worker	75	64	6	5	11	6	6	12
Dietitian	5	5	1	—	1	10	—	10
Dispatcher	33	30	5	—	5	5	—	5
Draftsman	311	—	35	41	76	45	66	111
Duplicating Machine Operator	20	—	—	—	—	—	—	—
Electric Motor Repairman	101	—	51	25	76	—	101	101
Electrician	2	—	—	—	—	—	—	—
Electronics Mechanic	66	—	20	25	45	25	30	55
Employment Interviewer	81	61	—	—	—	—	—	—
Engineer	371	—	50	169	219	85	194	279
Firefighter	1	—	—	—	—	—	—	—
Foreman	57	1	—	—	—	—	—	—
Housekeeper	17	6	—	—	—	—	—	—
Inspector	30	30	—	—	—	—	—	—

TABLE VIII
OCCUPATIONS AND REPORTED NEEDS FOR 12 AND 24 MONTHS
BY INDUSTRIAL DIVISIONS
LUCAS COUNTY - April 1965

SERVICE (Continued)

	CURRENT EMPLOYMENT		12 MONTH NEEDS			24 MONTH NEEDS		
	Total	Female	Replacement	Expansion	Gross	Replacement	Expansion	Gross
Janitor/Maid	770	416	65	76	141	86	83	169
Key Punch Operator	13	13	8	4	12	12	9	21
Laboratory Technician	268	217	24	7	31	34	14	48
Laborer	1,101	57	131	112	243	182	113	295
Laundress /Laundryman	401	355	35	25	60	35	26	61
Librarian	6	6	—	—	—	—	2	2
Machinist & Job Setter	10	—	5	5	10	—	—	—
Maintenance Man Building	383	94	19	14	33	27	15	42
Maintenance Mechanic	4	—	—	—	—	1	1	2
Manager/Official	258	66	—	5	5	—	10	10
Nurse Aide / Orderly	367	295	24	3	27	48	5	53
Nurse Licensed Practical	333	295	70	27	97	142	35	177
Nurse Register	558	554	37	14	51	62	18	80
Painter	58	40	2	11	13	3	3	6
Pharmacist	5	—	—	—	—	1	2	3
Photographer	35	20	5	5	10	5	5	10
Policeman/Guard	456	3	51	71	122	51	71	122
Presser, Garment	140	50	10	15	25	—	15	15
Pressman, Printer	10	—	—	—	—	5	5	10
Reporter	20	10	—	—	—	—	—	—
Room Clerk	25	10	—	—	—	—	—	—
Routeman	133	17	12	5	17	19	17	36
Salesman General	199	—	30	25	55	25	45	70
Salesperson Retail	152	61	30	35	-5	30	-35	-5
Secretary	154	129	—	—	—	—	—	—
Sheetmetal Worker	15	—	30	30	60	30	30	60
Stenographer	160	160	19	10	29	38	21	59
Surveyor	10	10	—	15	15	—	—	—
Tabulator Machine Operator	15	10	—	—	—	5	—	5
Tailor Seamstress	25	25	—	—	—	—	—	—
Teacher	358	212	4	3	7	6	-28	-22
Telephone Operator	78	77	—	—	—	—	1	2
Textile Machine Operator	45	4	1	—	1	1	—	1
Truck Driver	51	—	—	—	—	—	—	—
Truck Mechanic	30	—	—	—	—	—	—	—

TABLE VIII
OCCUPATIONS AND REPORTED NEEDS FOR 12 AND 24 MONTHS
BY INDUSTRIAL DIVISIONS
LUCAS COUNTY - April 1965

SERVICE (Continued)

	CURRENT EMPLOYMENT		12 MONTH NEEDS			24 MONTH NEEDS		
	Total	Female	Replacement	Expansion	Gross	Replacement	Expansion	Gross
Undertaker	30	—	—	—	—	—	—	—
Undertaker Assistant	30	10	—	—	—	—	—	—
Upholsterer	20	—	—	—	—	—	—	—
Waiter/Waitress	372	335	76	45	121	101	71	172
Warehouseman	192	—	35	20	55	30	10	40
Welder	20	—	20	20	40	20	20	40
GOVERNMENT								
Estimated Employment	17,200							
Surveyed Occupations - 68	15,724	6,019	1,006	365	1,371	1,106	616	1,722
Accountant	41	2	1	1	2	—	1	1
Accountant Clerk	37	15	—	—	—	—	—	—
Appliance Repairman	9	—	—	1	1	—	—	—
Appraiser	13	—	—	—	—	—	—	—
Attendant (Animal)	27	—	—	—	—	—	—	—
Auto Mechanic	55	—	1	4	5	1	5	6
Bookkeeper	52	24	7	-11	-4	5	-12	-7
Bookkeeping Machine Operator	3	3	—	—	—	—	—	—
Bricklayer Mason	1	—	—	—	—	—	—	—
Bus Driver	313	15	7	9	16	7	21	28
Buyer	5	3	—	—	—	—	—	—
Carpenter	17	—	—	—	—	—	—	—
Caseworker	38	14	1	2	3	1	5	6
Cashier	7	2	—	—	—	—	—	—
Clerk General Office	427	337	12	9	21	13	18	31
Clerk Typist	348	344	13	1	14	12	—	12
Cook	151	132	6	—	6	7	4	11
Crane Operator	72	—	—	—	—	—	—	—
Dietary Worker	643	290	28	13	41	28	16	44
Dietitian	13	6	—	—	—	2	1	3
Dispatcher	5	—	—	3	3	—	—	—
Draftsman	42	—	4	4	8	6	11	17
Duplicating Machine Operator	3	3	—	—	—	—	—	—
Electrician	13	—	—	—	—	—	—	—
Electronics Mechanic	7	—	—	—	—	—	—	—

TABLE VIII
OCCUPATIONS AND REPORTED NEEDS FOR 12 AND 24 MONTHS
BY INDUSTRIAL DIVISIONS
LUCAS COUNTY- April 1965

GOVERNMENT (Continued)

	CURRENT EMPLOYMENT		12 MONTH NEEDS			24 MONTH NEEDS		
	Total	Female	Replacement	Expansion	Gross	Replacement	Expansion	Gross
Employment Interviewer	3	—	—	—	—	—	—	—
Engineer	59	—	7	5	12	8	13	21
Firefighter	600	—	15	—	15	29	—	29
Foreman	366	45	9	17	26	10	17	27
Furnace Installer	4	—	—	—	—	—	—	—
Heavy Equipment Operator	105	—	1	—	1	3	—	3
Housekeeper	2	2	—	—	—	—	—	—
Janitor/Maid	564	214	2	51	53	6	57	63
Key Punch Operator	15	12	1	1	2	—	4	4
Laboratory Technician	19	9	—	—	—	—	—	—
Laborer	1,004	136	12	6	18	18	14	32
Laundress/Laundryman	23	16	—	—	—	—	—	—
Librarian	19	—	—	—	—	—	—	—
Lineman Serviceman	13	—	—	—	—	—	—	—
Mail Carrier	774	3	12	15	27	18	29	47
Maintenance Man Building	197	26	9	5	14	18	10	28
Maintenance Mechanic	57	—	1	4	5	—	4	4
Manager/Official	564	31	13	1	14	28	20	48
Meter Reader	1	—	—	—	—	—	—	—
Nurse Aide/Orderly	883	228	16	1	17	22	—	22
Nurse Licensed Practical	168	131	13	13	26	13	13	26
Nurse Register	329	323	33	18	51	43	38	81
Office Machine Operator	7	5	1	—	1	—	—	—
Office Machine Serviceman	25	—	1	—	1	4	—	4
Painter	17	—	—	4	4	—	4	4

TABLE VIII
OCCUPATIONS AND REPORTED NEEDS FOR 12 AND 24 MONTHS
BY INDUSTRIAL DIVISIONS
LUCAS COUNTY - April 1965

GOVERNMENT (Continued)

	CURRENT EMPLOYMENT		12 MONTH NEEDS			24 MONTH NEEDS		
	Total	Female	Replacement	Expansion	Gross	Replacement	Expansion	Gross
Pharmacist	3	—	—	—	—	1	1	2
Plumber Pipefitter	2	—	—	—	—	—	—	—
Policeman/Guard	909	30	64	39	103	80	78	158
Postal Clerk	656	61	10	15	25	15	10	25
Pressman Printer	1	—	—	—	—	—	—	—
Programmer	3	1	—	—	—	—	1	1
Reporter	15	3	—	—	—	1	1	2
Secretary	70	64	1	—	1	1	—	1
Sheetmetal Worker	1	—	—	—	—	—	—	—
Stationary Engineer	99	—	6	—	6	12	—	12
Stenographer	62	49	16	1	17	16	4	20
Stock Clerk	11	—	1	—	1	—	—	—
Surveyor	6	—	1	3	4	3	3	6
Tabulator Machine Operator	8	7	—	—	—	—	1	1
Tailor/Seamstress	4	3	1	1	2	—	—	—
Teacher	5,356	3.407	668	133	801	656	228	884
Telephone Operator	31	23	3	—	3	4	—	4
Truck Driver	327	—	9	-4	5	15	-4	11

TABLE IX
PROJECTED REQUIREMENTS BY OCCUPATIONAL GROUP
AND BY INDUSTRY FOR 12 AND 24 MONTHS
LUCAS COUNTY - April 1965

PROFESSIONAL & MANAGERIAL

	CURRENT EMPLOYMENT		12 MONTH NEEDS			24 MONTH NEEDS		
	Total	Female	Replacement	Expansion	Gross	Replacement	Expansion	Gross
TOTAL	18,326	6,122	1,188	690	1,878	1,495	1,024	2,519
Manufacturing	4,453	149	117	127	244	162	239	401
Contract Construction	475	—	11	5	16	11	5	16
Transportation & Utilities	585	73	21	2	23	21	6	27
Wholesale & Retail Trades	2,089	368	59	61	120	103	75	178
Finance, Ins. & Real Estate	686	50	13	14	27	46	5	51
Service	3,355	1,552	226	301	527	390	358	748
Government	6,683	3,930	741	180	921	762	336	1,098

CLERICAL

TOTAL	23,989	15,884	1,229	932	2,161	1,752	1,472	3,224
Manufacturing	6,210	3,466	283	138	421	408	235	643
Contract Construction	570	381	16	33	49	11	33	44
Transportation Utilities	2,421	1,755	259	56	315	286	92	378
Wholesale & Retail Trades	6,628	4,508	324	506	830	501	679	1,180
Finance, Ins. & Real Estate	3,035	2,730	110	53	163	191	153	344
Service	2,595	2,092	160	112	272	271	226	497
Government	2,530	952	77	34	111	84	54	138

TABLE IX
PROJECTED REQUIREMENTS BY OCCUPATIONAL GROUP
AND BY INDUSTRY FOR 12 AND 24 MONTHS
LUCAS COUNTY - April 1965

SALES

	CURRENT EMPLOYMENT		12 MONTH NEEDS			24 MONTH NEEDS		
	Total	Female	Replacement	Expansion	Gross	Replacement	Expansion	Gross
TOTAL	12,894	4,558	790	957	1,747	854	1,269	2,123
Manufacturing	1,094	90	17	70	87	32	133	165
Contract Construction	141	65	11	-11	—	11	—	11
Transportation & Utilities	158	11	12	1	13	12	1	13
Wholesale & Retail Trades	9,879	4,187	606	722	1,328	642	774	1,416
Finance, Ins. & Real Estate	1,271	144	84	185	269	102	351	453
Service	351	61	60	-10	50	55	10	65
Government	—	—	—	—	—	—	—	—

SERVICES

TOTAL	13,932	6,903	988	655	1,643	1,409	835	2,244
Manufacturing	400	59	10	-1	9	14	6	20
Contract Construction	16	—	11	—	11	11	—	11
Transportation & Utilities	118	24	9	6	15	12	6	18
Wholesale & Retail Trades	6,595	4,240	520	300	820	782	416	1,198
Finance, Ins. & Real Estate	259	121	2	—	2	—	—	—
Service	2,792	1,563	305	246	551	418	252	670
Government	3,752	896	131	104	235	172	155	327

TABLE IX
PROJECTED REQUIREMENTS BY OCCUPATIONAL GROUP
AND BY INDUSTRY FOR 12 AND 24 MONTHS
LUCAS COUNTY - April 1965

SKILLED

	CURRENT EMPLOYMENT		12 MONTH NEEDS			24 MONTH NEEDS		
	Total	Female	Replacement	Expansion	Gross	Replacement	Expansion	Gross
TOTAL	25,645	789	1,180	1,422	2,602	1,401	2,079	3,480
Manufacturing	13,137	204	528	628	1,156	636	949	1,585
Contract Construction	4,061	—	169	174	343	201	287	488
Transportation & Utilities	2,557	80	109	157	266	144	208	352
Wholesale & Retail Trades	3,324	235	191	288	479	254	368	622
Finance, Ins. & Real Estate	239	19	—	—	—	—	1	1
Service	949	162	147	130	277	111	205	316
Government	1,378	89	36	45	81	55	61	116

SEMISKILLED

TOTAL	23,247	4,928	786	1,419	2,205	1,098	1,831	2,929
Manufacturing	17,287	4,226	557	1,170	1,727	788	1,506	2,294
Contract Construction	521	—	27	86	113	37	86	123
Transportation & Utilities	1,783	12	21	87	108	30	131	161
Wholesale & Retail Trades	2,387	182	102	35	137	161	54	215
Finance, Ins. & Real Estate	36	36	12	—	12	12	—	12
Service	856	456	58	45	103	55	58	113
Government	377	16	9	-4	5	15	-4	11

TABLE IX
PROJECTED REQUIREMENTS BY OCCUPATIONAL GROUP
AND BY INDUSTRY FOR 12 AND 24 MONTHS
LUCAS COUNTY - April 1965

UNSKILLED

	CURRENT EMPLOYMENT		12 MONTH NEEDS			24 MONTH NEEDS		
	Total	Female	Replacement	Expansion	Gross	Replacement	Expansion	Gross
TOTAL	16,449	1,854	1,086	1,102	2,188	1,404	1,524	2,928
Manufacturing	8,753	1,421	566	413	979	750	709	1,459
Contract Construction	1,583	—	164	221	385	152	232	384
Transportation & Utilities	919	3	22	30	52	49	64	113
Wholesale & Retail Trades	2,758	207	156	300	456	223	382	605
Finance, Ins. & Real Estate	139	30	—	—	—	—	—	—
Service	1,293	57	166	132	298	212	123	335
Government	1,004	136	12	6	18	18	14	32

TABLE X
APPLICANTS SEEKING JOBS IN THE SELECTED OCCUPATIONS
LUCAS COUNTY - April 1965

There were approximately 6,433 job applications in the active files of the Toledo Office of the Ohio State Employment Service. These were examined to determine the characteristics of applicants in the selected occupations. Although all are generally qualified on their application when counted, they may not specifically meet the employer's needs.

TOTAL	2,592
Accountant	9
Accounting Clerk	53
Auto Mechanic	35
Auto Service Station Attendant	92
Baker	4
Barber/Beauty Operator	9
Bartender/Barmaid	30
Bookkeeper	42
Bookkeeping Machine Operator	28
Bricklayer Mason	40
Cabinet Maker	5
Carpenter	101
Caseworker	4
Cashier	58
Cement Finisher	62
Checker	16
Clerk, General Office	89
Clerk Typist	82
Coil Assembler	14
Cook	119
Dispatcher	24
Draftsman	21
Duplicating Machine Operator	17
Electrician	10
Engineer	9
Extruder Operator	5
Heavy Equipment Operator	45
Janitor/Maid	58
Key Punch Operator	36
Laundress/Laundryman	7
Machine Operator	150
Machine Tool Operator	19
Machinist/Job Setter	3
Maintenance Man Bldg.	23
Maintenance Mechanic	17
Millwright	5
Molder	11
Nurse Aide/Orderly	91
Nurse Registered	6
Painter	75
Photographer	5
Plumber/Pipefitter	12
Policeman/Guard	33
Postal Clerk	6
Presser Garment	14
Reporter	23
Routeman	38
Rubber Compounder	3
Salesman General	147
Salesperson, Retail	114
Secretary	18
Sewing Machine Operator	16
Sheetmetal Worker	16
Shipping Clerk	31
Stock Clerk	41
Tailor/Seamstress	14
Telephone Operator	33
Teller/Financial Clerk	6
Timekeeper	11
Truck Driver	363
Waiter/Waitress	91
Welder	33

TABLE XI
MEN AND WOMEN SEEKING JOBS THROUGH OHIO STATE EMPLOYMENT SERVICE, BY OCCUPATIONAL GROUP
LUCAS COUNTY - April 1965

	Male	Female	Total
TOTAL	4,126	2,307	6,433
Professional and Managerial	156	45	201
Clerical and Sales	236	693	929
Service	285	396	681
Skilled	620	19	639
Semi-Skilled	1,181	181	1,362
Un-Skilled	1,075	423	1,498
Entry Occupations	573	550	1,123

Source Table 268 - Research & Statistics Division,
Bureau Unemployment Compensation

TABLE XII
AGE GROUP OF MEN AND WOMEN SEEKING JOBS THROUGH OHIO STATE EMPLOYMENT SERVICE
LUCAS COUNTY - April 1965

	Male	Female	Total
TOTAL	4,126	2,307	6,433
Under 19	101	92	193
19 to 21	451	378	829
22 to 24	493	231	724
25 to 34	1,024	407	1,431
35 to 44	829	483	1,312
45 to 54	669	456	1,125
55 to 64	427	217	644
65 and over	132	43	175

Source Table 268 - Research & Statistics Division,
Bureau of Unemployment Compensation

DEFINITIONS OF OCCUPATIONAL GROUPS

1. PROFESSIONAL AND MANAGERIAL - This group includes occupations that predominantly require a high degree of mental activity by the worker and are concerned with theoretical or practical aspects of complex fields of human endeavor. Such occupations require for the proper performance of the work either extensive and comprehensive academic study, or experience of such scope and character as to provide an equivalent background, or a combination of such education and experience.

2. CLERICAL AND SALES - This group includes occupations concerned with the preparation, transcribing, transferring, systematizing or preserving of written communications and records in offices, shops, and other places of work where such functions are performed.

   Included in this group are occupations concerned with the sale of commodities, investments, real estate, and services, and occupations that are very closely identified with sales transactions even though they do not involve actual participation in such transactions.

3. SERVICE - Included in this group are occupations concerned with performing services for persons that require predominantly direct contact or close association with the individual. Other occupations in this group are those specifically concerned with the protection or guarding of buildings and other property and of individuals.

4. SKILLED - This group includes craft and manual occupations that require predominantly a thorough and comprehensive knowledge of process involved in the work, the exercise of considerable independent judgment, usually a high degree of manual dexterity, and, in some instances, extensive responsibility for valuable product or equipment. Workers in these occupations usually become qualified by serving apprenticeships or completing extensive training periods. Foremen of manual and craft workers are also included with these occupations.

5. SEMISKILLED - This group includes manual occupations that are characterized by one, or a combination of parts, of the following requirements: The exercise of manipulative ability of a high order, but limited to a fairly well-defined work routine; major reliance, not so much upon the worker's judgment or dexterity, but upon vigilance and alertness, in situations in which lapses in performance would cause extensive damage to product or equipment; and the exercise of independent judgment to meet variables in the work situation, which is not based on wide knowledge of a work field and with the nature and extent of the judgments limited either (a) by application over a relatively narrow task situation or (b) by having important decisions made by others.

6. UNSKILLED - This group includes manual occupations that involve the performance of simple duties that may be learned within a short period of time and that require the exercise of little or no independent judgment.

DEFINITIONS OF INDUSTRIAL DIVISIONS

A brief description of each industrial division follows with examples in each to provide for a better understanding of the data published in this report.

1. MINING AND QUARRYING - This group includes all establishments engaged in mining or quarrying. Mining is here used in the broad sense to include the extraction of minerals occurring naturally. It also includes quarrying, well operations, milling (crushing, screening, etc.) and other preparations needed to render the material marketable.

2. CONTRACT CONSTRUCTION - The term "construction" includes new work, additions, alterations, and repairs. Three broad types of contract construction activity are covered: (a) building construction by general contractors, (b) other construction by general contractors and (c) construction by special trade contractors (specialized construction activities, such as plumbing, painting, electrical work, and carpentry).

3. MANUFACTURING - This group includes establishments engaged in the mechanical or chemical transformation of inorganic or organic substances into new products, and usually described as plants, factories, or mills which used power driven machines and materials handling equipment. The final product of a manufacturing establishment may be finished in the sense that it is ready for utilization or consumption, or it may be semifinished to become a raw material for a plant engaged in further manufacturing.

4. TRANSPORTATION - (Also communication, electric, gas, and sanitary services). This group includes enterprises engaged in passenger and freight transportation by railway, highway, water, or air, or furnishing services related to transportation; petroleum pipe line transportation; warehousing; telephone and telegraph services; radio and T. V. broadcasting; and the supplying of electricity, gas, steam, water, or sanitary services. Most of the establishments included are regulated by commissions and other public authorities as to rates charged, etc.

DEFINITIONS OF INDUSTRIAL DIVISIONS - Continued

5. TRADE, WHOLESALE AND RETAIL - The chief functions of establishments included in wholesale trade are selling goods to retail trading establishments, or to industrial, commercial, institutional and professional users; and bringing buyer and seller together.

   Retail trade establishments engage in selling merchandise for personal, household, or farm consumption, and rendering services incidental to the sale of goods. In general, these establishments are classified by kind of business according to the principal lines of commodities sold.

6. FINANCE, INSURANCE AND REAL ESTATE - Finance includes banks and trust companies, credit agencies other than banks, holding companies, other investment companies, brokers and dealers in securities and commodity contracts, and security and commodity exchanges. Insurance covers all carriers of all types of insurance, and insurance agents and brokers. Real Estate includes owners, lessors, lessees, buyers, sellers, agents, and developers of real estate.

7. SERVICES - This division includes establishments engaged in rendering a wide variety of services to individuals and business establishments; hotels; establishments providing personal, business, repair, and amusement services; medical, legal, engineering, and other professional services; educational institutions; nonprofit membership organizations; other miscellaneous services.

8. GOVERNMENT - Government includes all Local, State and Federal government activities, such as the legislative, judicial, and administrative functions, as well as government owned and operated business enterprises.

JOB DESCRIPTIONS

Accountant	- Devises, installs, controls, examines or supervises accounting operations. Includes cost, budget, general and tax.
Accounting Clerk	- Performs routine posting, calculating and checking of accounts.
Agent (Transportation)	- Ticket, station, and express agents in all types of transportation.
Aircraft Mechanic	- Inspects, overhauls, and services airplanes. Licensed by C.A.A.
Annealer	- Tends an annealing furnace to heat treat metal parts, or may heat parts and quench in oil or water to harden.
Appliance Repairman	- Repairs and installs major appliances in homes or business establishments. Adjusts part or parts and/or replaces defective components and operates appliance to make adjustment.
Appraiser	- Makes appraisals of real property. Interviews persons familiar with property, inspects property, and searches public records of sales, leases, assessments, and other transactions to determine proper value. Compiles material and sets a correct, definite rate.
Asbestos Worker	- Covers with insulating material exposed hot or cold surfaces of equipment.
Assembler	- Fits together or installs complicated mechanical parts or electrical equipment.
Attendant (Animal)	- Feeds and waters birds and animals in a zoo, circus or managerie.
Auto Body Repairman	- Removes dents in automobile bodies and fenders or replaces damaged parts.
Auto Equipment Serviceman	- Adjusts and repairs automotive repair, servicing, and testing equipment.
Auto Mechanic	- Repairs automobiles and trucks, disassembles and overhauls engines, transmissions, clutches, rear ends; grinds valves, adjusts brakes, align wheels.
Auto Service Station Attendant	- Supplies auto or truck with oil, water or gasoline. Sells and installs accessories. Performs minor repairs to autos and trucks.
Baker	- Produces from raw materials finished baked goods such as, breads, cakes and pies.
Barber/Beauty Operator	- Renders any or all services in a barber shop or beauty parlor.
Bartender/Barmaid	- Uses formulas to mix alcoholic beverages, serves same.
Blacksmith	- Forges metal articles and parts into desired shape.
Bookkeeper	- Keeps a complete and systematic set of records of business transactions of establishments.
Bookkeeping Machine Operator	- Places appropriate bookkeeping forms in machine, presses keys for each item, and records total on form.
Box Maker	- A general term used to designate worker who makes boxes.
Bricklayer/Mason	- Lays brick, terra cotta, hollow tile, building blocks, stone and marble, to construct walls, arches, fireplaces, smoke stacks and other structures.
Bus Driver	- Transports passengers from one place to another according to a definite time schedule.

Buyer	- Purchases at the most favorable prices consistent with quality, quantity, and other factors, raw materials, equipment, machinery, and supplies necessary for the operation of a particular organization.
Cabinet Maker	- Performs the hand carpentry necessary to cut, shape and assemble prepared parts of high-grade articles of furniture.
Carpenter	- Performs general carpentry work requiring the skillful use of carpenter's tools.
Caseworker	- Studies physical and social environment of a family, person, or persons in order to determine and execute practical plans for alleviating existing undesirable conditions. Professional.
Cashier	- Collects money for payment of bills and performs work dealing with receiving or initiating bills or makes up bills showing amount due.
Cement Finisher	- Secures a surface of specified texture on floors, walls, or other float-cement surfaces by using trowels, floats, and screens.
Central Office Repairman	- Tests and repairs telephone or telegraph circuits and equipment.
Checker, Merchandise	- Itemizes and totals cost of customers' purchases; receives payments from customers and makes change.
Chemical Operator	- Operates or tends a number of pieces of equipment, performing a number of complex operations to carry out chemical reaction process for a finished product meeting rigid specifications.
Chemist	- Performs analytical and research work of a professional nature in the general field of chemistry.
Clerk, General Office	- Performs any combination of clerical duties. Makes up and files reports, tabulates, and posts records, operates various office machines, etc.
Clerk - Typist	- Performs general clerical work requiring the use of a typewriter. Files records, answers phone and sorts mail.
Coil Assembler	- Solders lead wires to protruding ends of coils and places insulating material around coil so that there will be no shorts between coil and frame of machine or appliance that holds coil.
Commercial Artist	- Creates and designs figures, posters, sign-boards, billboards and showcards. Designs and prepares charts, diagrams, sketches and maps for publication and exhibition.
Compositor/Printer	- Sets type by hand or machine for printing of articles, headings or other printed matter; breaks down and distributes type after use.
Conveyor Man	- Starts, stops and regulates the speed of conveyor systems by operating switchboard, adjusts, lubricates and repairs conveyor systems.
Cook	- Prepares, season and cooks meals or short orders by appropriate methods.
Coremaker	- Makes sand cores of uniform cross sections in a conveyor screw coremaking machine.
Crane Operator/Shovelman	- Operates a crane to hoist and move materials, raise and lower heavy weights and performs other related operations. Operates power shovel.
Cutter Operator	- Cuts continuous sheets of wood pulp in size suitable for processing to nitrocellulose to make plastics.

Decorator	- Plan the selection and arrangement of decorations for homes and other structures to achieve both artistical and functional effect.
Dental Technician	- Prepares patients for examination, treatment, or surgery and assists dentist.
Designer	- A general term applied to a worker who creates or marks out designs for clothes, furniture, machines, or other articles.
Dietary Worker	- Portions food in accordance with diets in a hospital under the direction of a dietitian, also cook helper or kitchen helper in hotel or restaurant.
Dietitian	- Plans menus and special diets for hospital, institution, school, restaurant or hotel. Supervises food service employees.
Dipper	- Operates a machine in which thin rubber articles, such as gloves and nipples are made.
Dispatcher	- Assigns motor vehicles and drivers for conveyance of freight or passengers and maintains records.
Draftsman	- Develops drawing to scale making detailed drawings of parts of machines, products or structures from rough or general design sketches or drawings indicating dimensions, material to be used, and other information necessary to make the detailed drawing clear and complete.
Duplicating Machine Operator	- Operates a machine that prints copies of reading matter, figures, ruled forms, and other data on paper, using any one of several types of machines.
Electric Motor Repairman	- Repairs electric motors, generators, and accessory equipment, such as, starting devices, switches and wiring.
Electrician	- Lays out, assembles, installs and tests electrical fixtures, apparatus, control equipment and wiring.
Electronic Assembler	- Assembles components of electronic equipment.
Electronics Mechanic	- Tests, repairs and adjusts direction finding, computing, radar, television and related electronic equipment.
Employment Interviewer	- Interviews job applicant from viewpoint of an employer to ascertain what work is best suited for his particular abilities. Makes study of employment possibilities, selects applicants he feels best suited.
Engineer	- A general term used to designate persons who meet the educational, experience, or legal qualifications established for the fields of professional engineering.
Engraver	- Engraves lettering or designs on copper or steel plates.
Estimator	- Computes labor, material and equipment installation costs to prepare bids for contractors for construction work or as estimate for customers.
Extruder Operator	- Forms rubber into a tublar, flat or irregularly shaped, continuous strip by machine.
Filling Machine Operator	- Fills sacks or bags, or other containers with loose material, such as flour, sugar, or cement, using a machine that automatically fills the container with the desired weight of the material. Operates an automatic filling machine to fill bottles, caps bottles, may be carbonated beverages, spiritous liquors, or drug products.

Firefighter	- Fights fires and performs emergency rescue work. Rescue work. Rescues persons overcome by fire or smoke and administers first aid to them.
Foreman	- A person who supervises a group of workers.
Furnace Installer & Repairman	- Installs and repairs hot - air furnaces. Replaces defective parts and performs repair duties as required.
Furnace Tender	- Fires and charges an oil or gas fired furnace in which various metals or alloys' are melted to be used in making castings.
Glazier	- Cuts and sets window glass, or glazing of any character using various fastening devices or materials.
Clueman	- Glues together pieces previously cut to specification in assembly of manufacturing articles.
Heat Treater	- Alters the physical and chemical properties of the steel of such parts as dies, cutters, and machine parts, to produce a specified degree of hardness, toughness or strength of an established process of controlled heating and cooling.
Heavy Equipment Operator	- Operates a gasoline or diesel-powered automotive or crawler tread tractor including self-propelled scrapers, graders, rollers, earth movers, etc. May oil, grease, and make minor adjustments and minor repairs to unit.
Housekeeper-Steward	- Supervises the housekeeping personnel and is responsible for the cleanliness, orderliness of the establishment.
Inspector, Machine Shop	- Examines parts or products for flaws or defects and checks dimensions against blue print specifications using precision devices for measuring.
Inspector	- Examines parts or products for flaws or defects and checks dimensions against blue prints specifications using precision devices for measuring.
Instrument Repairman	- Installs, repairs, and adjusts instruments and gages.
Insurance Salesman	- Sells various types of insurance to new clients. (life, fire and marine).
Janitor/Maid	- Keeps public parts of buildings in clean, orderly condition and good state of repair.
Key Punch Operator	- Records accounting and statistical data on tabulating cards by punching a series of holes in the cards in a specified sequence, using a punch machine similar to a typewriter.
Laboratory Technician	- Performs routine tests following established procedures using standard equipment and maintains necessary records.
Laborer	- An occupational grouping including a number of jobs of a lesser skill which are peculiar to certain industries where extensive training is not involved.
Laundress-Laundryman	- Performs all laundering duties, such as washing, drying and ironing.
Lineman/Serviceman	- Installs, maintains and repairs telephone, telegraph or power wires or cables.
Linoleum Layer	- Applies blocks or strips of shock absorbing, sound deadening, decorative floor covering.

Machine Operator	- A general term used to designate any worker who operates machines to change shape or condition of raw materials, usually semiskilled or lower level occupation.
Machine Tool Operator	- Operator of any of the various machine tools including engine lathes, milling machines, turret lathes, radial drill presses, boring mills, shapers and surface grinder.
Machinist/Job Setter	- Carries through to completion the construction and repair of all kinds of metal parts, tools and machines.
Mail Carrier	- Delivers mail to private homes and business establishments along an established route, after sorting mail.
Maintenance Man Bldg.	- Keeps physical structure of an office building, factory, apartment house or similar structure in good repair.
Maintenance Mechanic	- Keeps machinery and mechanical equipment of an establishment in a state of good repair.
Manager/Official	- Involved primarily with responsible policy-making, planning, supervising, coordinating, or guiding the work activity of others.
Meat Cutter	- Displays and sells meat, cuts meat to size, cleans fish and poultry.
Metal Finisher	- Filing, polishing, grinding or buffing metal to put proper finish on metal.
Meter Reader	- Reads recording dials of gas, electric, steam or water meters and records data.
Miller	- Grinds material, such as coal, cocoa beans, coffee, grain, or ore, using a machine.
Millman	- General form applied to worker who grinds and pulverizes materials. Usually classified according to material processed.
Millman Wood	- Fabricates various lumber products, such as sashes, window frames and door frames, doors and furniture parts, woodworking machines, and hand or powered saws.
Millwright	- Lays out, assembles, installs, repairs and dismantles heavy machinery and mechanical equipment in plants where moving machinery is installed.
Molder	- Prepares molds for casting using various hand tools.
Nurse Aide/Orderly	- Assists professional staff performing routine tasks.
Nurse, Licensed Practical	- Performs a combination of duties in hospitals or nursing homes. Must have Ohio State License.
Nurse Registered	- A person who has successfully completed an approved course of study at an accredited school of nursing and who holds a certificate of registration or license to practice.
Office Machine Operator	- Operates various machines found in an office and used in performing clerical duties.
Office Machine Serviceman	- Inspects, adjusts repairs, cleans and services office machines.
Oiler	- Lubricates in routine manner the moving parts or wearing surfaces of mechanical equipment.
Optician	- Makes eyeglass lenses to prescription of Oculist or Optometrist and assembles lenses in frames.
Packer/Wrapper	- Packs finished or wrapped products in cardboard or wooden boxes, cartons, kegs or other containers preparatory to shipment or storage.

Painter	- Performs all classes of painting work. Mixes paints and matches colors. Uses brushes and spray gun to apply paint. May remove old paint.
Painter, Spray	- Fills spray gun container with finishing or protecting material and coats surfaces of machines, manufactured articles and working areas.
Pasteurizer	- Pasteurizes raw milk to remove harmful bacteria by opening and closing valves and electric switches to pump the cold raw milk from the storage tanks through a heating tank and pump the hot milk through a cooling unit to a bottling machine.
Patternmaker	- Shapes rough patterns according to specifications shown on blueprints using appropriate machines and hard tools.
Pharmacist	- Compounds and dispenses medicines and preparations as directed by prescriptions prepared by licensed physicians and dentists.
Photographer	- Photographs persons, merchandise, exteriors and interiors, machinery and fashions both indoors and outdoors to be used in advertising and selling.
Plasterer	- Applies plaster to wall or ceiling with trowel. Pushes template over plaster, striking off excess plaster, until desired shape and smoothness of molding is obtained.
Plater	- Covers metal objects with a coating of another metal, usually electroplating.
Plumber/Pipefitter	- Installs, bends, cuts and threads air, water, gas pipe and fittings. Keeps pipe in good repair.
Policeman/Guard	- Guards an industrial plant, warehouse, or other property against fire, theft and illegal entry. Police officer or patrolman (gov. serv.)
Postal Clerk	- Prepares incoming mail for distribution and outgoing mail for mailing.
Power Press Operator	- A worker who operates a power-driven press to punch, trim, forge, or perform other shaping or fabricating operations.
Presser, Garment	- Smooths surfaces of garments using pressing machines.
Pressman, Printing	- Makes ready and tends the operation of any type of printing press.
Programmer	- Develops procedures to process data and prepares diagrammatic plans for solution of scientific and mathematical problems by means of automatic data-processing equipment.
Radio Operator	- Receives and sends commercial messages using radiotelegraph or radiotelephone equipment, or both.
Rate Clerk	- Determines rates and classifications applicable to various types of merchandise to be shipped or other rates such as passenger tickets.
Reporter	- Collects accurate, pertinent facts, by interview or investigation, about events having news value. Takes notes. Writes or types stories, referring to related material as necessary.
Roofer	- Lays any one of a variety of roofing materials, repairs and maintains.
Room Clerk	- Rent and assigns rooms, maintains records of reservations and other related duties.
Routeman	- Drives a truck over an established route to deliver bread, milk, ice, laundry, dry cleaning or ice cream to regular customers.

Rubber Compounder	- Assembles specified quantities of materials to be mixed together to form uncured rubber used in making rubber products.
Rubber Pressman	- Forms rubber rings, cups, washers and other articles in a hydraulic press.
Salesman, General	- Solicits customers, frequently outside of store to demonstrate and sell merchandise (auto, boats, appliances, etc.) to the customer.
Salesman, Real Estate	- Rents and sells property for clients on a commission basis.
Salesperson, Retail	- Displays, explains and sells merchandise on sales floor.
Sandblaster	- Cleans, paint, scale, grease, tar, rust and dirt from surface of metal or hard composition objects.
Secretary	- Performs confidential office work in relieving company officials of minor executive and clerical duties. Takes dictation, types, handles correspondence.
Sewing Machine Operator	- Performs any or all sewing machine operations on various fabrics to produce articles such as garments, upholstery, awnings or textile products.
Sheetmetal Worker	- Fabricates, assembles, alters, repairs and installs sheetmetal articles and equipment.
Shipping Clerk	- Receives goods shipped to an establishment, unpacks and verifies correctness of shipments against invoices and other records. Ships material from establishment and may keep record of stock.
Spring & Mattress Maker	- Assembles and fastens coil springs together in a spring frame to form bedsprings or chair-seat springs.
Stationary Engineer	- Operates and maintains stationary engines and mechanical equipment. Observes meters and gages to determine operating condition of equipment. License required.
Stenographer	- Takes dictation in shorthand of correspondence, reports and other matter and transcribes dictated material. May perform a variety of related clerical duties.
Stillman	- Supervises, directs, and is responsible for continuous, economical, and safe operation of one or a battery of stills in which crude or other oil is distilled to break it down into such products as gasoline, kerosene, lubricating oil, fuel oil and petroleum coke.
Stock Clerk	- Receives, stores and issues equipment, material, merchandise or tools in a stockroom or storeroom.
Structural Steel Worker	- Works as a member of a group that raises and places fabricated structural steel members and unites them permanently to form a completed structure.
Surveyor	- Supervises, directs and is responsible for the accuracy of the work of an engineering survey party.
Tabulating Machine Operator	- Operates a machine that automatically analyzes, makes calculations and translates or divides information represented by holes punched in groups of tabulating cards, and prints the translated data on form sheets.
Tailor/Seamstress	- Makes tailored garments and performs the more difficult hand and machine sewing tasks in their construction.
Teacher	- Instructs pupils of grade, grammar or high school in rural or urban communities.

Telephone Operator	- Operates switchboard to relay incoming calls to inter-office phones and to make connections with outside phones.
Teller/Financial Clerk	- Receives and pays out money, keeping accurate records.
Tester (Machine Shop)	- Cuts to specified dimensions metal specimens which are to be subjected to various physical tests in a laboratory, performing a series of simple, repetitive machining operations on machine tools which have been set up by other workers.
Textile Machine Operator	- This covers occupations concerned with the spinning of all types of thread and yarn including the weaving of cotton, rayon, silk, woolen, worsted, and mixed fabrics.
Timekeeper	- Keeps a daily record showing time of arrival on job and departure from work of company employees.
Tire Finisher	- Applies insignia striping to tires after inspecting them. Mounts tires on a free spindle and marks tires.
Tool & Die Maker	- Constructs, repairs and maintains machine shop tools, jigs, fixtures and instruments, calibrating them according to specification, as well as dies used for forging, punching, stamping and other metal-forming work.
Tool Grinder	- Sharpens tools that need not be ground to a very fine tolerance.
Truck Driver	- Drives a truck to transport materials, merchandise, equipment or men.
Truck Mechanic	- Repairs and overhauls truck motors and associated equipment such as power winches, etc.
Tube Machine Operator	- Forms rubber into a tubular, flat or irregularly shaped continuous strip by machine.
Undertaker	- Makes arrangements for and conducts funerals; directs pallbearers. Prepares body for shipment and frequently embalms body.
Undertaker Assistant	- Assists undertaker in preparing for and conducting funerals. Places coffin in position for service and arranges flowers and lights. Acts as receptionist. May help to embalm body.
Upholsterer	- Installs, arranges and secures springs padding and covering material such as cloth or leather to frames of furniture.
Waiter/Waitress	- Serves food to customers in quick and efficient manner. Sets table with clean linen and silver-ware.
Warehouseman	- Loads, unloads, record routs, and delivers incoming and outgoing merchandise in a warehouse.
Watch Repairman	- Cleans, adjusts, repairs and oils watches.
Welder	- Operates both electric-welding and acetylene - welding apparatus to fuse metal parts.

Extracts from Medina County Joint Vocational School District Survey

Exhibit B_2

Table 15:--Per Cent of Persons Working Outside County of Residence, 1960 (13)

Area	Per Cent	Rank
Highest County	60.4	1
Medina County	43.2	5
Lake County	42.8	6
Portage County	37.1	9
Ottawa County	21.1	30½
Ashland County	18.2	42½
Huron County	18.1	44½
Median *	18.1	44½
Lorain County	14.1	58½
Ashtabula County	11.7	66
Erie County	11.3	67½
Ohio State *	11.3	67½
Mahoning County	9.2	72
Summit County	7.6	79
Stark County	5.8	80½
Richland County	4.3	85
Cuyahoga County	2.1	88
Lowest County	2.1	88

* If a community had this ratio, it would have been ranked as indicated.

The Bureau of Unemployment Compensation, State of Ohio, conducts Occupational Surveys, collects information on employment by industrial classifications and by level of occupation. These surveys also estimate future employment needs by industrial classifications and by level of occupations. The surveys likewise collect information on the major occupations in the labor force areas studied. Those occupations showing greatest future shortage are designated as principal demands. A tremendous quanity of information is contained in these studies, but only a small portion has been extracted for specific use here.

Table 16, Employment and Reported Needs in Clerical Occupations for Twenty-Four Months, Table 17, Employment and Reported Needs in Sales Occupations for Twenty-Four Months, Table 18, Employment and Reported Needs in Service Occupations for Twenty-Four Months, Table 19, Employment and Reported Needs in Skilled Occupations for Twenty-Four Months and Table 20, Employment and Reported Needs in Semi-Skilled Occupations for Twenty-Four Months

Table 16:--Employment and Reported Needs in Clerical Occupations for Twenty-Four Months (2-8)

Area and Year	Current Clerical Employment		Twenty-Four Month Needs Clerical Employment		
	Total	Female	Replace.	Expand.	Gross
Ashland-Richland Counties - 1965	10,150*	5,393*	1,194*	652*	1,846*
Ashtabula County - 1963	3,943*	2,374*	462+*	256+*	718+*
Cuyahoga-Lake Counties - 1962	88,565	**	19,313+	11,581+	30,894+
Erie-Ottawa-Huron Counties - 1964	9,123*	5,446*	986*	265*	1,251*
Lorain County - 1965	7,268	4,999	937	296	1,233
Stark County - 1963	20,035*	11,344*	1,365*	1,245*	2,610*
Summit County - 1964	22,969	15,112	2,068	1,325	3,393
Portage County - 1963	3,614*	2,411*	360+*	178+*	538+*

* Includes sales occupations.

** Not reported.

+ Prorated for twenty-four months.

Table 17:--Employment and Reported Needs in Sales Occupations for Twenty-Four Months (2-9)

Area and Year	Current Sales Employment		Twenty-Four Month Needs Sales Employment		
	Total	Female	Replace.	Expand.	Gross
Ashland-Richland Counties - 1965	*	*	*	*	*
Ashtabula County - 1963	*	*	*	*	*
Cuyahoga-Lake Counties - 1962	41,648	**	4,981+	8,285+	13,266+
Erie-Ottawa-Huron Counties - 1964	*	*	*	*	*
Lorain County - 1965	3,193	1,673	248	405	653
Stark County - 1963	*	*	*	*	*
Summit County - 1964	13,817	5,668	1,695	1,657	3,352
Portage County - 1963	*	*	*	*	*

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* Included in clerical occupations.

** Not reported.

+ Prorated for twenty-four months.

Table 18:--Employment and Reported Needs in Service Occupations for Twenty-Four Months (2-9)

Area and Year	Current Service Employment		Twenty-Four Month Needs Service Employment		
	Total	Female	Replace.	Expand.	Gross
Ashland-Richland Counties - 1965	3,761	2,092	899	264	1,163
Ashtabula County - 1963	1,036	863	156+	90+	246+
Cuyahoga-Lake Counties - 1962	31,036	**	5,448+	3,592+	9,040+
Erie-Ottawa-Huron Counties - 1964	3,297	2,454	368	74	442
Lorain County - 1965	4,621	3,148	497	266	763
Stark County - 1963	7,198	5,031	890	265	1,155
Summit County - 1964	11,950	6,684	2,431	1,014	3,445
Portage County - 1963	520	433	200+	114+	314+

** Not Reported

+ Prorated on twenty-four months.

Table 19:--Employment and Reported Needs in Skilled Occupations for Twenty-Four Months (2-9)

Area and Year	Current Skilled Employment		Twenty-Four Month Needs Skilled Employment		
	Total	Female	Replace.	Expand.	Gross
Ashland-Richland Counties - 1965	7,395	412	545	783	1,328
Ashtabula County - 1963	1,980	43	166+	102+	268+
Cuyahoga-Lake Counties - 1962	101,743	**	9,754+	13,708+	23,462+
Erie-Ottawa-Huron Counties - 1964	7,745	327	573	25	598
Lorain County - 1965	9,702	154	972	834	1,806
Stark County - 1963	14,817	861	630	863	1,493
Summit County - 1964	20,816	863	961	1,781	2,742
Portage County - 1963	1,937	26	96+	80+	176+

** Not reported.

+ Prorated on twenty-four months.

Table 20:--Employment and Reported Needs in Semi-Skilled Occupations for Twenty-Four Months (2-9)

Area and Year	Current Semi-Skilled Employment		Twenty-Four Month Needs Semi-Skilled Employment		
	Total	Female	Replace.	Expand.	Gross
Ashland-Richland Counties - 1965	12,181	3,163	926	818	1,744
Ashtabula County - 1963	2,895	850	348+	252+	600+
Cuyahoga-Lake Counties - 1962	66,740	**	7,216	10,016+	17,232+
Erie-Ottawa-Huron Counties - 1964	8,702	2,101	528	515	1,043
Lorain County - 1965	14,344	1,712	1,877	1,234	3,111
Stark County - 1963	12,633	2,069	421	547	968
Summit County - 1964	20,504	1,829	1,005	2,419	3,424
Portage County - 1963	1,799	121	130+	66+	196+

** Not reported.

+ Prorated on twenty-four month basis.

presents vital information on current employment and future needs in levels of skilled occupations. The tables must be studied for detailed information.

Table 21, Principal Occupational Needs for Twenty-Four Month Period From Occupational Survey Finding in North Eastern Ohio, shows the needs for each of principal demand occupations listed in the surveys. Here again, the table must be studied for detailed information. In studying this table, it must be understood that blanks will occur because the occupation was either not listed in the survey or not considered one of the principal demands.

Implications

Two out of five workers who reside in Medina County work outside the county. If the vocational program is based on employment in Medina County, it will not include the employment opportunities open to adults. Under these circumstances, the breadth of the program may be increased as indicated by employment and principal occupational demands of counties in the Lakeshore Uplands Region. An examination of the occupations having principal demand will show that vocational education can prepare youth for most of them.

Table 21:--Principal Occupational Needs for Twenty-Four Month Period From Occupational Survey Finding in North Eastern Ohio (2-9)

Principal Occupations Showing Worker Needs	Alliance-Canton-Massilon Stark County 1963	Akron-Barberton Summit County 1964	Ashtabula County+ 1963	Cleveland+ Cuyahoga-Lake Counties 1962	Elyria-Lorain Lorain County 1965	Mansfield Richland-Ashland Counties 1965	Portage County+ 1963	Sandusky Erie-Ottawa-Huron Counties 1964
Account Clerk	36	2	---	571	---	10	---	---
Assembler	233	1,205	66	1,454	1,833	826	---	46
Auto Body	31	22	14	42	8	19	48	23
Auto Mechanics	190	151	56	152	107	97	28	105
Auto Service Station Mechanic	154	42	---	118	74	76	---	83
Automatic Equipment Serviceman	---	---	---	117	4	87	---	29
Beauty Operators	22	213	---	459	92	134	---	---
Bookkeeping Machine Operator	9	23	---	480	18	24	---	5
Bookkeeper	165	213	---	740	98	86	---	88
Carpenter	106	172	---	314	57	88	---	26
Cashier	51	163	14	---	36	39	---	117
Checker	---	---	---	---	104	24	---	---
Chemical Operator	---	56	---	274	45	---	---	---
Clerk General Offices	671	1,383	100	3,133	358	358	114	280
Clerk Billing	---	---	---	392	---	---	---	---
Clerk Stenographer	---	135	---	796	---	12	---	---
Clerk Typist	230	436	42	2,178	215	192	108	46
Coil Winder	19	7	---	---	48	142	---	---
Commercial Artists	---	33	---	53	---	---	---	---
Cooks and Bakers	207	1,000	22	496	60	275	216	74
Draftsman	189	209	26	484	56	49	---	11
Dry Cleaner and Laundryman	---	49	---	30	16	11	---	8
Electrical Appliance Repair	18	---	---	72	---	---	---	---
Electrical Motor Repairman	---	---	---	80	---	76	---	---
Electrician	52	29	34	290	148	61	---	9

47

Table 21:--Principal Occupational Needs for Twenty-Four Month Period From Occupational Survey Finding in North Eastern Ohio--Continued (2-9)

Principal Occupations Showing Worker Needs	Alliance-Canton Massilon Stark County 1963	Akron-Barberton Summit County 1964	Ashtabula County+ 1963	Cleveland+ Cuyahoga-Lake Counties 1962	Elyria-Lorain Lorain County 1965	Mansfield Richland-Ashland Counties 1965	Portage County+ 1963	Sandusky Erie-Ottawa-Huron Counties 1964
Foreman	30	166	---	886	33	---	---	---
Inspector (Machine Shop)	35	85	---	295	173	55	---	38
Janitor	64	139	---	---	91	198	---	61
Key Punch Operator	15	---	---	230	3	11	---	---
Kitchen Helper	---	560	---	---	81	---	---	37
Laboratory Assistant	13	55	---	---	49	38	---	---
Machine Operator	---	801	154	1,957	510	208	78	680
Machine Tool Operator	146	---	---	---	81	47	---	100
Machine Tool Set-Up and Operator	---	56	---	---	---	---	---	---
Machinist	217	556	10	648	293	128	38	66
Maintenance Man, Building	---	106	---	407	87	23	---	9
Manager Office	---	252	---	350	---	36	---	---
Manager Retail	---	118	---	300	---	---	---	---
Maintenance Mechanic	109	17	12	286	42	102	---	51
Meat Cutter	9	199	---	140	30	5	---	71
Mill Wright	8	---	---	181	57	---	---	---
Nurses Aide	299	153	88	549	163	114	14	51
Nurse Licensed Practical	48	146	82	361	99	128	70	19
Office Machine Repairman	---	---	---	68	---	---	---	---
Office Machine Operator	67	61	---	215	---	---	---	---
Pattern Maker	30	37	---	183	27	---	---	---
Polisher Grinder	10	17	---	---	---	---	---	---
Postal Mail Clerk	30	70	---	---	11	---	---	11
Presser Garments	---	43	---	256	38	57	---	14
Punch Press Operator	---	74	---	---	149	---	---	36

Table 21:--Principal Occupational Needs for Twenty-Four Month Period From Occupational Survey Finding in North Eastern Ohio--Continued (2-9)

Principal Occupations Showing Worker Needs	Alliance-Canton Massilon Stark County 1963	Akron-Barberton Summit County 1964	Ashtabula County+ 1963	Cleveland+ Cuyahoga-Lake Counties 1962	Elyria-Lorain Lorain County 1965	Mansfield Richland-Ashland Counties 1965	Portage County+ 1963	Sandusky Erie-Ottawa-Huron Counties 1964
Sales Clerk	7	2,631	162	---	125	317	100	---
Salesman General	122	388	94	669	77	205	56	116
Salesman Insurance	240	213	24	681	33	100	---	14
Salesman Manufacturing	---	32	---	463	43	---	---	---
Salesman Real Estate	148	---	---	228	---	36	---	---
Salesman Routeman	80	37	---	301	34	10	---	20
Salesperson	199	---	---	2,568	412	---	---	425
Secretary	53	64	---	1,815	73	22	12	12
Sewing Machine Operator	126	---	140	935	---	---	---	25
Sheetmetal Worker	39	53	82	316	90	96	---	2
Spray Painter	---	---	---	62	96	---	---	17
Stock and Shipping Clerk	129	453	152	440	139	223	---	142
Tailor and Seamstress	---	10	---	224	---	10	---	20
Teller-Financial Clerk	51	41	54	478	60	95	58	29
Telephone Operator	141	135	---	198	27	59	28	12
Tool and Die Maker	35	169	22	432	65	6	---	50
Transcribing Machine Operator	---	---	---	110	---	---	---	---
Truck Mechanic	100	---	---	202	---	---	---	---
Waitress	533	1,186	118	1,174	193	415	28	142
Warehouseman	---	159	---	---	---	15	---	---
Welder and Flame Cutters	59	141	---	606	215	51	---	174

+ Prorated for twenty-four month need.

* Cleveland survey had greater break-down than recent surveys. Therefore, related occupations combined.

Table 21:--Principal Occupational Needs for Twenty-Four Month Period From Occupational Survey Finding in North Eastern Ohio--Continued (2-9)

Principal Occupations Showing Worker Needs	Alliance-Canton-Massilon Stark County 1963	Akron-Barberton Summit County 1964	Ashtabula County+ 1963	Cleveland+ Cuyahoga-Lake Counties 1962	Elyria-Lorain Lorain County 1965	Mansfield Richland Counties 1965	Portage County+ 1963	Sandusky Erie-Ottawa-Huron Counties 1964
Number Occupations Surveyed	121	165	63	224	116	150	64	125
Number Occupations Showing Principal Demand	33	54	17	50*	48	28	12	26
Number Occupations Listed in Principal Demand for Which Secondary Vocational Education can Prepare Workers	24	38	11	35*	40	24	9	23
Total Estimated Employment in Survey Area	108,600	179,300	22,480	-------	31,380	51,510	18,900	40,981
Employment (Wage and Salary) in Surveyed Occupations	75,815	125,861	10,345	415,062	24,349	45,017	8,723	37,046

+ Prorated for twenty-four month need.

* Cleveland Survey had greater break-down than recent surveys. Therefore, related occupations combined.

Compliation of all Occupational Surveys

Exhibit B_3

Ohio Labor Market Information

BUREAU OF UNEMPLOYMENT COMPENSATION

JAMES A. RHODES, *Governor*
WILLARD P. DUDLEY, *Administrator*

OHIO LABOR FORCE ESTIMATES, BY COUNTY

THE BUREAU OF UNEMPLOYMENT COMPENSATION, AIDED BY ITS LOCAL NETWORK OF OHIO STATE EMPLOYMENT SERVICE OFFICES, PREPARES PERIODIC LABOR FORCE REPORTS FOR EACH OF OHIO'S 88 COUNTIES. THESE ONE-PAGE STATEMENTS, UPDATED EVERY FOUR MONTHS, OFFER CURRENT ESTIMATES OF THE LABOR FORCE, EMPLOYMENT, AND UNEMPLOYMENT, AS WELL AS QUALITATIVE INFORMATION ON THE LABOR SUPPLY.

THE LATEST AVAILABLE REPORT FOR A GIVEN COUNTY, AS OF JUNE 30, 1966, PRESENTS ESTIMATES FOR THAT COUNTY FOR THE REFERENCE MONTH INDICATED.

OHIO LABOR FORCE ESTIMATES, BY COUNTY*

COUNTY AND REFERENCE MONTH	EMPLOYMENT	UNEMPLOYMENT	RATE	COUNTY AND REFERENCE MONTH	EMPLOYMENT	UNEMPLOYMENT	RATE
ADAMS 02-66	4,750	925	16.3	FULTON 03-66	12,400	300	2.4
ALLEN 04-66	45,000	1,200	2.6	GALLIA 04-66	7,175	475	6.2
ASHLAND 05-66	15,300	350	2.2	GEAUGA 05-66	13,750	300	2.1
ASHTABULA 04-66	32,600	1,400	4.1	GREENE 03-66	35,700	1,300	3.5
ATHENS 02-66	18,000	900	4.8	GUERNSEY 04-66	12,000	650	5.1
AUGLAIZE 02-66	13,250	350	2.6	HAMILTON 02-66	420,700	13,700	3.2
BELMONT 05-66	22,800	900	3.8	HANCOCK 05-66	23,050	450	1.9
BROWN 02-66	5,900	600	9.2	HARDIN 05-66	10,250	250	2.4
BUTLER 05-66	75,000	3,100	4.0	HARRISON 02-66	6,250	225	3.5
CARROLL 04-66	5,150	325	5.9	HENRY 03-66	9,450	250	2.6
CHAMPAIGN 04-66	9,150	200	2.1	HIGHLAND 04-66	10,300	200	1.9
CLARK 04-66	49,100	1,300	2.6	HOCKING 02-66	5,700	700	10.9
CLERMONT 02-66	11,800	2,100	15.1	HOLMES 03-66	6,175	125	2.0
CLINTON 04-66	11,050	250	2.2	HURON 04-66	17,950	400	2.2
COLUMBIANA 04-66	30,400	1,100	3.5	JACKSON 02-66	6,800	700	9.3
COSHOCTON 04-66	12,600	450	3.4	JEFFERSON 03-66	33,500	1,100	3.2
CRAWFORD 05-66	21,200	450	2.1	KNOX 04-66	15,200	400	2.6
CUYAHOGA 05-66	798,800	19,700	2.4	LAKE 05-66	41,800	800	1.9
DARKE 04-66	14,575	375	2.5	LAWRENCE 03-66	12,700	1,200	8.6
DEFIANCE 03-66	13,800	300	2.1	LICKING 03-66	37,200	1,200	3.1
DELAWARE 03-66	12,150	500	4.0	LOGAN 04-66	10,350	250	2.4
ERIE 04-66	28,150	800	2.8	LORAIN 03-66	79,700	2,300	2.8
FAIRFIELD 03-66	22,450	700	3.0	LUCAS 03-66	193,800	6,100	3.1
FAYETTE 04-66	8,600	400	4.4	MADISON 02-66	6,950	400	5.4
FRANKLIN 03-66	331,900	8,500	2.5	MAHONING 05-66	117,500	3,800	3.1

*SEE FOOTNOTE (OVER)

For additional Labor Market Information, write
WILLIAM PAPIER, *Director of Research and Statistics*, BUREAU OF UNEMPLOYMENT COMPENSATION, COLUMBUS

OHIO LABOR FORCE ESTIMATES, BY COUNTY* (CONTINUED)

COUNTY AND REFERENCE MONTH	EMPLOY-MENT	UNEMPLOY-MENT	RATE	COUNTY AND REFERENCE MONTH	EMPLOY-MENT	UNEMPLOY-MENT	RATE
MARION 05-66	24,400	600	2.4	RICHLAND 05-66	52,500	1,400	2.6
MEDINA 05-66	19,100	500	2.6	ROSS 02-66	20,050	1,300	6.1
MEIGS 04-66	4,800	325	6.3	SANDUSKY 02-66	19,500	800	3.9
MERCER 02-66	11,800	350	2.9	SCIOTO 02-66	21,600	2,100	8.9
MIAMI 03-66	26,600	900	3.3	SENECA 04-66	23,300	550	2.3
MONROE 05-66	6,600	200	2.9	SHELBY 03-66	14,750	300	2.0
MONTGOMERY 03-66	253,500	5,400	2.1	STARK 05-66	137,700	4,000	2.8
MORGAN 02-66	3,800	200	5.0	SUMMIT 05-66	210,000	5,700	2.6
MORROW 05-66	5,675	125	2.2	TRUMBULL 05-66	84,300	2,600	3.0
MUSKINGUM 02-66	27,700	1,500	5.1	TUSCARAWAS 02-66	25,300	1,300	4.9
NOBLE 04-66	3,025	125	4.0	UNION 02-66	7,650	375	4.7
OTTAWA 04-66	11,050	350	3.1	VAN WERT 04-66	9,750	275	2.7
PAULDING 03-66	4,550	100	2.2	VINTON 02-66	1,975	150	7.1
PERRY 02-66	5,650	500	8.1	WARREN 02-66	11,850	1,550	11.6
PICKAWAY 03-66	10,200	500	4.7	WASHINGTON 05-66	18,650	600	3.1
PIKE 02-66	4,000	700	14.9	WAYNE 03-66	30,900	700	2.2
PORTAGE 05-66	30,700	1,000	3.2	WILLIAMS 03-66	13,500	300	2.2
PREBLE 03-66	7,400	200	2.6	WOOD 03-66	27,400	600	2.1
PUTNAM 05-66	9,050	200	2.2	WYANDOT 05-66	7,350	175	2.3

*SUM OF EMPLOYMENT (WHICH INCLUDES WORKERS INVOLVED IN LABOR-MANAGEMENT DISPUTES) AND UNEMPLOYMENT EQUALS ESTIMATED CIVILIAN LABOR FORCE. RATE IS UNEMPLOYMENT DIVIDED BY CIVILIAN LABOR FORCE. EMPLOYMENT ESTIMATES ARE GEARED TO COUNTY OF WORK, RATHER THAN COUNTY OF RESIDENCE; UNEMPLOYMENT ESTIMATES ARE AFFECTED BY THE NUMBER OF CLAIMANTS FILING IN A COUNTY, REGARDLESS OF COUNTY OF RESIDENCE OR FORMER PLACE OF WORK.

DIVISION OF RESEARCH AND STATISTICS
OHIO BUREAU OF UNEMPLOYMENT COMPENSATION
COLUMBUS 6-30-66

Ohio Labor Market Bulletin
BUREAU OF UNEMPLOYMENT COMPENSATION

JAMES A. RHODES, *Governor*
WILLARD P. DUDLEY, *Administrator*

OHIO LABOR MARKET, JUNE 1966

Remarkably low! That's the level for unemployment in Ohio. Overall rate of unemployment, at 2.6 percent of civilian labor force in April, was lowest on record. Though estimates were first prepared in January 1960, latest figure was probably below any month since 1956. With new entrants to labor force starting to rise, May 1966 figure (not yet available) may be a little higher.

How many claimants? Persons out of work one week or longer and claiming benefits under Ohio Unemployment Compensation Law totaled less than 21 thousand last week. This was lowest figure for any week since November 1952. Eight out of every thousand workers covered under the Law are claiming benefits.

What about benefits? During first five months of 1966 claimants with dependents averaged $48.28 per week of total unemployment, while claimants without dependents averaged $34.73. Corresponding figures for same months of 1965 were slightly lower. Nevertheless, aggregate cost of benefits in Ohio dropped sharply--down 30 percent. Fewer have been unemployed, and for shorter lengths of time. The number unemployed long enough to exhaust their benefit rights dropped 42 percent.

How much in collections? With covered employment continuing at record-high levels, employer contributions (including interest on the Fund) amounted to $103.6 million during first five months of 1966--virtually the same as in comparable months of 1965. With benefits totaling less than $31.2 million in 1966 (through May 31) the Ohio Fund available for further benefits hit $433.7 million. This is highest balance on record since September 30, 1958. Recovery since all-time low of $67.6 million on April 30, 1963 has been fairly steady. All-time peak was reached as of December 31, 1953, when the Fund contained $686.5 million.

Is business cycle "dead"? Chase Manhattan Bank of New York recently received replies to this question from more than five hundred economists. Ninety-three percent of university economists and 95 percent of business economists said "No."

What would recession cost? As yet, no recession is in sight. During most severe 12 months of national recession of 1960-61 unemployment benefits under Ohio Unemployment Compensation Law totaled $302.2 million. With more covered workers and higher earnings a future recession could cost as much or more.

Immediate prospects? Figures for June, July, and August will probably show some increase in unemployment, as students enter labor market and as automotive industry cuts back production and prepares for new models. (6-15-66)

For additional Labor Market Information, write
WILLIAM PAPIER, *Director of Research and Statistics*, BUREAU OF UNEMPLOYMENT COMPENSATION, COLUMBUS

Ohio Labor Market Information
BUREAU OF UNEMPLOYMENT COMPENSATION
JAMES A. RHODES, *Governor*
WILLARD P. DUDLEY, *Administrator*

HOCKING COUNTY, OHIO

Labor Force In February 1966, the Hocking County civilian workforce totaled around 6,400. Of this number, an estimated 5,700 were employed and 700 (including 200 women) were jobless. Those unemployed represented 10.9 percent of the labor force.

Location Hocking County is situated in south-central Ohio. In July 1964, its population was 20,500--up over 300 from the 1960 U.S. Census count. The principal city and County seat, Logan, had 6,400 inhabitants in 1960.

Industries According to 1960 U.S. Census reports close to one-fourth of the resident jobholders traveled to work in nearby counties. During February almost two-fifths of the persons employed within County borders were on factory payrolls. Leading industries are stone-clay-glass, rubber, nonelectrical machinery, fabricated metals, and paper. Items turned out locally include abrasive wheels, clay sewer pipe, face brick, glass tubing, auto crash-pads, fabricated metal products, and office filing supplies.

Jobseekers Nearly one-fourth of the men seeking work through the local office of the Ohio State Employment Service were skilled and around three-tenths were semiskilled. The rest were largely unskilled or inexperienced. Seven-tenths were not yet 45 years old. A number had worked in the production of shoes as cobblers, lasters, heel trimmers, scourers, treers, and packers; and in aircraft plants as drill and punch press operators and assemblers. Others had experience in clay products concerns as brick and tile setters, kiln burners, off-bearers, and laborers, and in electrical products firms as machine adjusters and unskilled workers. Also in supply were circular saw and planer operators, spray finishers, and laborers from woodworking plants, and truck drivers and laborers from the construction industry. Needed are doctors, laboratory technicians and assistants, machinists, tool and die makers, and automobile mechanics.

Of the women registrants in February, over one-sixth were trained clerical or sales workers and close to one-fifth were qualified for service positions. Better than one-sixth were semiskilled while the balance were, for the most part, unskilled or inexperienced. One out of two was under the age of 35. Many had job backgrounds in the production of shoes as stitchers, treers, lacers, assemblers, and inspectors. Others had worked in electrical equipment firms as assemblers, testers, winders, and packers. Area employers are currently having difficulty finding registered and practical nurses, nurse aides, waitresses, and domestics.

Wage Rates County manufacturers usually offer entry hourly wage rates which vary as follows. Men: unskilled, $1.25 to $1.90; semiskilled, $1.65 to $2.25; skilled, $1.90 to $3.00. Women: unskilled, $1.25 to $1.70; semiskilled, $1.45 to $1.90; skilled, $1.75 to $2.25.

For additional Labor Market Information, write
WILLIAM PAPIER, *Director of Research and Statistics*, BUREAU OF UNEMPLOYMENT COMPENSATION, COLUMBUS

Table 1:--Current Employment and Reported Needs for Twenty-Four Months by Occupational Groups* in Twenty-Four Counties

Occupational Skill Level	Current Employment				Twenty-Four Months' Need	
	Total	Female	Per Cent***		Expansion and Replacement=Gross	Per Cent*
			Total	Female		
Average 129 Occupations** Total	446,271	144,086	100.00	100.00	69,076	100.00
Professional and Managerial	55,840	21,857	12.51	15.17	7,914	11.46
Clerical and Sales	113,883	65,776	25.52	45.65	18,497	26.78
Service	45,252	28,849	10.14	20.02	9,763	14.13
Skilled	82,900	3,903	18.58	2.71	10,846	15.70
Semi-Skilled	92,929	15,853	20.82	11.00	14,307	20.71
Unskilled	55,467	7,848	12.43	5.45	7,748	11.22

*Composite of twenty-four surveyed counties. See Exhibit H for source of material.

**Number of occupations varied from 97 to 165 in surveys.

***Weighted average.

****These Occupational Surveys involved twenty-four counties---Sandusky, Clinton, Fayette, Highland, Pike, Ross, Allen, Clark, Hancock, Hardin, Putnam, Wyandot, Summit, Richland, Ashland, Lorain, Tuscarawas, Licking, Marion, Cuyahoga, Lake, Erie, Ottawa and Huron.

Employment Aspect

Table 13[b], Total and Farm Workers Employed for Selected Counties in Ohio, 1960, indicates the relative importance of farming by the number of workers employed. There were 92.57 persons in other occupations to every one farmer. Only 6 counties had a higher ratio. It had 8 times as many other workers to every farmer as did the median in the state. Mahoning County, like most of the counties near it, was decidedly industrialized. This would imply that vocational education programs should be weighted in favor of those occupations found in and supporting industry and business.

Table 13[b]:--Total and Farm Workers Employed for Selected Counties in Ohio, 1960 (2-A9)

Area	Total Employed	Farmers, Farm Managers, Foreman, and Laborers	Ratio Total Employed to Farm Employed	Rank of Ratio
Highest County	642,835	1,187	541.56	1
Cuyahoga County	642,835	1,187	541.56	1
Summit County	188,960	796	237.38	3
Mahoning County	104,884	1,133	92.57	7
Lake County	53,582	782	68.52	8
Jefferson County	32,784	519	63.17	9
Trumbull County	73,060	1,200	60.88	10
Stark County	120,895	2,009	60.18	11
Lorain County	75,758	1,977	38.32	13
State	--	--	29.61	19 1/2
Portage County	31,054	1,277	24.32	21
Columbiana County	37,405	1,539	24.30	22
Tuscarawas County	26,251	1,290	20.35	26
Geauga County	16,647	956	17.41	32
Medina County	22,776	1,480	15.39	35
Ashtabula County	32,196	2,207	14.59	37
Median*	--	--	12.34	44 1/2
Wayne County	27,386	3,229	8.48	57
Carroll County	6,904	969	7.12	65
Lowest County	5,910	1,853	3.19	88

*If a community had this ratio, it would have been ranked as indicated.

Table 14, Ratio of Persons Not in Labor Force (Including Children Under Fourteen) to Labor Force for Selected Counties in Ohio, 1960, presents an index or density of employed persons in the population. Mahoning County had a density near the median as did most of the counties near it. About one person in every 2.68 persons was working.

For planning a vocational program, this implies that no adjustment factor need be added in the quantity of vocational programs to prepare high school pupils for adult employment.

Table 14:--Ratio of Persons Not in Labor Force (Including Children Under Fourteen) to Labor Force for Selected Counties in Ohio, 1960 (24-223)

Area	Ratio	Rank
Highest County	2.67	1
Carroll County	1.85	25
Jefferson County	1.83	28
Portage County	1.79	30 1/2
Tuscarawas County	1.76	33 1/2
Medina County	1.76	33 1/2
Geauga County	1.74	38
Lorain County	1.72	41 1/2
Median*	1.71	44 1/2
Columbiana County	1.69	49
Mahoning County	1.68+	53 1/2
Trumbull County	1.67	59 1/2
Wayne County	1.66	65
Stark County	1.65	68
Lake County	1.64	69 1/2
Ashtabula County	1.63	71 1/2
Ohio State*	1.61	74 1/2
Summit County	1.57	77 1/2
Cuyahoga County	1.42	88
Lowest County	1.42	88
+Youngstown (24-219)	1.63	

*If a community had this ratio, it would have been ranked as indicated.

Mahoning County ranked 72nd in the State in the per cent of persons working outside the county of residence. Mahoning County is unlike most of the counties near it in this respect. See Table 15, Per Cent of Persons Working Outside County of Residence for Selected Counties in Ohio, 1960. Only about one person in every 10 persons was working outside the county.

For vocational education planning, this implies that it is not necessary to prepare pupils for employment opportunities outside the county as the present population is not traveling outside the county for work.

Table 15:--Per Cent of Persons Working Outside County of Residence for Selected Counties in Ohio, 1960 (24-223)

Area	Per Cent	Rank
Highest County	60.4	1
Geauga County	52.2	3
Medina County	43.2	5
Lake County	42.8	6
Carroll County	40.3	8
Portage County	37.1	9
Columbiana County	28.9	17
Jefferson County	20.4	34
Median*	18.1	44 1/2
Trumbull County	17.8	47
Lorain County	14.1	58 1/2
Tuscarawas County	13.0	62
Ashtabula County	11.7	66
Wayne County	11.2	69
Ohio State*	11.3	67 1/2
Mahoning County	9.8+	72
Summit County	7.6	79
Stark County	5.8	80 1/2
Cuyahoga County	2.1	88
Lowest County	2.1	88

+Youngstown (24-219) 6.1

*If a community had this ratio, it would have been ranked as indicated.

The Bureau of Unemployment Compensation, State of Ohio, in conducting occupational surveys, collects information on employment by industrial classifications and by occupational skill levels. The surveys also contain future employment needs by industrial classifications and by occupational skill levels. Those occupations showing greatest future shortages are designated as principal demands. Information pertaining to clerical, sales, service, skilled and semi-skilled occupations has been reproduced for use in this report.

Table 16, Employment and Reported Needs in Clerical Occupations for Twenty-four Months; Table 17, Employment and Reported Needs in Sales Occupations for Twenty-four Months; Table 18, Employment and Reported Needs in Service Occupations for Twenty-four Months; Table 19, Employment and Reported Needs in Skilled Occupations for Twenty-four Months; and Table 20, Employment and Reported Needs in Semi-skilled Occupations for Twenty-four Months presents vital information on employment and needs by occupational levels.

Table 16:--Employment and Reported Needs in Clerical Occupations for Twenty-four Months (3 through 19)

Area Surveyed	Years	Current Clerical Employment		Twenty-four Month Needs Clerical Employment		
		Total	Female	Replace.	Expand.	Gross
Allen County	1964-66	6,610*	4,068*	618*	474*	1,092*
Ashtabula County	1963-64	3,943*	2,374*	462+*	256+*	718+*
Clark County	1964-66	7,062*	4,074*	1,248*	142*	1,390*
Clinton-Fayette-Highland-Pike-Ross Counties	1965-67	7,244*	4,114*	1,099*	733*	1,832*
Cuyahoga-Lake Counties	1962-67	88,565	**	19,313+	11,581+	30,894+
Erie-Ottawa-Huron Counties	1964-66	9,123*	5,446*	986*	265*	1,251*
Hancock-Hardin-Putnam-Wyandot Counties	1964-66	6,412*	3,885*	693*	403*	1,096*
Licking County	1963-64	**	**	**	**	**
Lorain County	1965-67	7,268	4,999	937	296	1,233
Lucas County	1965-67	23,989	15,884	1,752	1,472	3,224
Marion County	1963-64	**	**	**	**	**
Portage County	1963-64	3,614*	2,411*	360+*	178+*	538+*
Richland-Ashland Counties	1965-67	10,150*	5,393*	1,194*	652*	1,846*
Stark County	1963-65	20,035*	11,344*	1,365*	1,245*	2,610*
Summit County	1964-66	22,969	15,112	2,068	1,325	3,393
Tuscarawas County	1963-64	**	**	**	**	**

* Includes sales occupations.

**Not reported.

+ Prorated for twenty-four months.

Table 17:--Employment and Reported Needs in Sales Occupations for Twenty-four Months (3 through 19)

Area Surveyed	Years	Current Sales Employment		Twenty-four Month Needs Sales Employment		
		Total	Female	Replace.	Expand.	Gross
Allen County	1964-66	*	*	*	*	*
Ashtabula County	1963-64	*	*	*	*	*
Clark County	1964-66	*	*	*	*	*
Clinton-Fayette-Highland-Pike-Ross Counties	1965-67	*	*	*	*	*
Cuyahoga-Lake Counties	1962-67	41,648	**	4,981+	8,285+	13,266+
Erie-Ottawa-Huron Counties	1964-66	*	*	*	*	*
Hancock-Hardin-Putnam-Wyandot Counties	1964-66	*	*	*	*	*
Licking County	1963-64	**	**	**	**	**
Lorain County	1965-67	3,193	1,673	248	405	653
Lucas County	1965-67	12,894	4,558	854	1,269	2,123
Marion County	1963-64	**	**	**	**	**
Portage County	1963-64	*	*	*	*	*
Richland-Ashland Counties	1965-67	*	*	*	*	*
Stark County	1963-65	*	*	*	*	*
Summit County	1964-66	13,817	5,668	1,695	1,657	3,352
Tuscarawas County	1963-64	**	**	**	**	**

* Included in clerical occupations.

**Not reported.

+ Prorated for twenty-four months.

Table 18:--Employment and Reported Needs in Service Occupations for Twenty-four Months (3 through 19)

Area Surveyed	Years	Current Service Employment		Twenty-four Month Needs Service Employment		
		Total	Female	Replace.	Expand.	Gross
Allen County	1964-66	3,040	1,899	253	188	441
Ashtabula County	1963-64	1,036	863	156+	90+	246+
Clark County	1964-66	3,478	2,403	1,112	173	1,285
Clinton-Fayette-Highland-Pike-Ross Counties	1965-67	3,959	2,473	643	149	792
Cuyahoga-Lake Counties	1962-67	31,036	**	5,448+	3,592+	9,040+
Erie-Ottawa-Huron Counties	1964-66	3,297	2,454	368	74	442
Hancock-Hardin-Putnam-Wyandot Counties	1964-66	3,948	2,683	528	191	719
Licking County	1963-64	**	**	**	**	**
Lorain County	1965-67	4,621	3,148	497	266	763
Lucas County	1965-67	13,932	6,903	1,409	835	2,244
Marion County	1963-64	**	**	**	**	**
Portage County	1963-64	520	433	200+	114+	314+
Richland-Ashland Counties	1965-67	3,761	2,092	899	264	1,163
Stark County	1963-65	7,198	5,031	890	265	1,155
Summit County	1964-66	11,950	6,684	2,431	1,014	3,445
Tuscarawas County	1963-64	**	**	**	**	**

**Not reported.

+ Prorated for twenty-four months.

Table 19:--Employment and Reported Needs in Skilled Occupations for Twenty-four Months (3 through 19)

Area Surveyed	Years	Current Skilled Employment		Twenty-four Month Needs Skilled Employment		
		Total	Female	Replace.	Expand.	Gross
Allen County	1964-66	4,454	458	230	238	468
Ashtabula County	1963-64	1,980	43	166+	102+	268+
Clark County	1964-66	7,088	246	968	290	1,258
Clinton-Fayette-Highland-Pike-Ross Counties	1965-67	6,037	249	482	586	1,068
Cuyahoga-Lake Counties	1962-67	101,743	**	9,754+	13,708+	23,462+
Erie-Ottawa-Huron Counties	1964-66	7,745	327	573	25	598
Hancock-Hardin-Putnam-Wyandot Counties	1964-66	4,846	333	321	362	683
Licking County	1963-64	**	**	**	**	**
Lorain County	1965-67	9,702	154	972	834	1,806
Lucas County	1965-67	25,645	789	1,401	2,079	3,480
Marion County	1963-64	**	**	**	**	**
Portage County	1963-64	1,937	26	96+	80+	176+
Richland-Ashland Counties	1965-67	7,395	412	545	783	1,328
Stark County	1963-65	14,817	861	630	863	1,493
Summit County	1964-66	20,816	863	961	1,781	2,742
Tuscarawas County	1963-64	**	**	**	**	**

**Not reported.

+ Prorated for twenty-four months.

Table 20:--Employment and Reported Needs in Semi-Skilled Occupations for Twenty-four Months (3 through 19)

Area Surveyed	Years	Current Semi-Skilled Employment		Twenty-four Month Needs Semi-skilled Employment		
		Total	Female	Replace.	Expand.	Gross
Allen County	1964-66	4,957	503	579	353	932
Ashtabula County	1963-64	2,895	850	348+	252+	600+
Clark County	1964-66	5,328	320	868	260	1,128
Clinton-Fayette-Highland-Pike-Ross Counties	1965-67	7,662	1,531	710	459	1,169
Cuyahoga-Lake Counties	1962-67	66,740	**	7,216+	10,016+	17,232+
Erie-Ottawa-Huron Counties	1964-66	8,702	2,101	528	515	1,043
Hancock-Hardin-Putnam-Wyandot Counties	1964-66	6,618	2,625	1,054	777	1,831
Licking County	1963-64	**	**	**	**	**
Lorain County	1965-67	14,344	1,712	1,877	1,234	3,111
Lucas County	1965-67	23,247	4,928	1,098	1,831	2,929
Marion County	1963-64	**	**	**	**	**
Portage County	1963-64	1,799	121	130+	66+	196+
Richland-Ashland Counties	1965-67	12,181	3,163	926	818	1,744
Stark County	1963-65	12,633	2,069	421	547	968
Summit County	1964-66	20,504	1,829	1,005	2,419	3,424
Tuscarawas County	1963-64	**	**	**	**	**

**Not reported.

+ Prorated for twenty-four months.

Table 21, Principal Occupational Needs for Twenty-four Months, shows the need for the principal demand occupations listed in the surveys. The table should be studied for detailed information on occupational needs. In studying this table, it should be understood that blanks will occur because the occupation was either not studied in the survey or not considered one of the principal demands.

In planning the vocational program for Mahoning County, this information indicates that if the vocational program is based on employment in the local community it will not prepare youth for the many employment opportunities open to qualified workers. Therefore, the breadth of the program should be increased as indicated by employment and known principal occupational demands of counties which have had occupational surveys. An examination of the listed occupations in principal demand shows that vocational education prepares youth for most of them and that the occupational employment and demands can be used as guidelines in preparing the vocational program.

Table 21:--Principal Occupational Needs for Twenty-four Months (3 through 19)

Principal Occupations Showing Worker Needs	Alliance-Canton-Massilon Stark County 1963 1965	Akron-Barberton Summit County 1964 1966	Ashtabula County+ 1963 1964	Cleveland+ Cuyahoga-Lake Counties 1962 1967	Elyria-Lorain Lorain County 1965 1967	Findlay Hancock-Hardin-Putnam-Wyandot Counties 1964 1966	Five County South Central Ohio Clinton-Fayette-Highland-Pike-Ross Counties 1965 1967	Licking County+ 1963 1964	Lima Allen County 1964 1966	Mansfield Ashland-Richland Counties 1965 1967	Marion County+ 1963 1964	Portage 1963 1964	Sandusky Erie-Ottawa-Huron Counties 1964 1966	Springfield Clark County 1964 1966	Toledo Lucas County 1965 1967	Tuscarawas County+ 1963 1964
Account Clerk	36	2	---	571	---	---	---	---	10	10	---	---	---	10	29	---
Assembler	233	1,205	66	1,454	1,833	1,230	355	50	183	826	130	---	46	210	730	---
Auto Body Repairman	31	22	14	42	8	2	48	60	29	19	---	48	23	10	132	---
Auto Mechanics	190	151	56	152	107	10	96	92	131	97	22	28	105	46	244	10
Auto Service Station Mechanic	154	42	---	118	74	35	57	22	198	76	164	---	83	132	200	---
Automatic Equipment Serviceman	---	---	---	117	4	---	---	---	---	87	---	---	29	18	---	---
Beauty Operators	22	213	---	459	92	36	7	---	62	134	---	---	---		95	---
Bookkeeping Machine Operator	9	23	---	480	18	---	36	10	---	24	38	---	5	25	20	---
Bookkeeper	165	213	---	740	98	73	140	92	17	86	---	---	88	121	150	8
Cabinet Makers	---	---	---	---	---	---	---	---	---	---	---	---	---	---	102	---
Carpenter	106	172	---	314	57	4	48	136	24	88	---	---	26	16	23	---
Cashier	51	163	14	---	36	75	246	---	8	39	---	---	117	---	297	---
Central Office Repairman	---	---	---	---	---	---	---	---	---	---	---	---	---	---	121	---
Checker	---	---	---	---	104	---	---	162	32	24	---	---	---	143	125	---
Compositor Printing	---	---	---	---	---	---	---	---	---	---	---	---	---	---	24	---
Chemical Operator	---	56	---	274	45	---	2	---	---	---	---	---	---	---	32	---
Clerk General Offices	671	1,383	100	3,133	358	111	223	224	107	358	346	114	280	263	1,067	52
Clerk Billing	---	---	---	392	---	---	---	6	---	---	---	---	---	---	---	---
Clerk Stenographer	---	135	---	796	---	68	---	136	47	12	258	---	---	---	93	---
Clerk Typist	230	436	42	2,178	215	100	151	---	30	192	---	108	46	147	543	4
Coil Winder	19	7	---	---	48	21	---	---	2	142	---	---	---	---	107	---
Commercial Artists	---	33	---	53	---	---	---	---	---	---	---	---	---	---	22	---
Cooks and Bakers	207	1,000	22	496	60	176	208	108	84	275	44	216	74	96	314	10
Draftsman	189	209	26	284	56	29	12	---	---	49	36	---	11	47	233	---
Dry Cleaner and Laundryman	---	49	---	30	16	16	---	---	12	11	---	---	8	67	66	---
Electrical Appliance Repair	18	---	---	72	---	24	---	---	---	---	---	---	---	---	---	---
Electrical Motor Repairman	---	---	---	80	---	---	---	---	---	76	---	---	---	---	101	---

Table 21:--Principal Occupational Needs for Twenty-four Months (3 through 19) Continued

Principal Occupations Showing Worker Needs	Alliance-Canton-Massilon Stark County 1963 1965	Akron-Barberton Summit County 1964 1966	Ashtabula County+ 1963 1964	Cleveland+ Cuyahoga-Lake Counties 1962 1967	Elyria-Lorain Lorain County 1965 1967	Findlay Hancock-Hardin-Putnam-Wyandot Counties 1964 1966	Five County South Central Ohio Clinton-Fayette-Highland-Pike-Ross Counties 1965 1967	Licking County+ 1963 1964	Lima Allen County 1964 1966	Mansfield Ashland-Richland Counties 1965 1967	Marion County+ 1963 1964	Portage 1963 1964	Sandusky Erie-Ottawa-Huron Counties 1964 1966	Springfield Clark County 1964 1966	Toledo Lucas County 1965 1967	Tuscarawas County+ 1963 1964
Electrician	52	29	34	290	148	11	3	---	---	61	---	---	9	24	182	10
Electronics Mechanic	---	---	---	---	---	---	---	---	---	---	---	---	---	---	67	---
Foreman	30	166	---	886	33	21	32	---	14	---	---	---	---	96	136	---
Inspector (Machine Shop)	35	85	---	295	173	78	63	44	11	55	---	---	38	95	126	---
Janitor-Maid	64	139	---	---	91	32	111	38	42	198	---	---	61	123	305	---
Key Punch Operator	15	---	---	230	3	29	4	---	12	11	40	---	---	15	51	---
Kitchen Helper	---	560	---	---	81	---	---	---	---	---	---	---	37	---	---	---
Laboratory Assistant	13	55	---	---	49	---	47	22	---	38	30	---	---	---	---	---
Machine Operator	---	801	154	1,957	510	129	213	54	65	208	---	78	680	372	426	134
Machine Tool Operator	146	---	---	---	81	120	108	---	146	47	298	---	100	---	12	---
Machine Tool Set-Up & Operator	---	56	---	---	---	---	---	---	---	---	---	---	---	138	---	---
Machinist	217	556	10	648	293	56	68	56	53	128	---	38	66	---	259	50
Maintenance Man, Building	---	106	---	407	87	24	10	---	---	23	---	---	9	70	106	---
Maintenance Mechanic	109	17	12	286	42	51	86	60	31	102	---	---	51	21	126	12
Manager Retail	---	118	---	300	---	---	---	---	---	---	---	---	---	---	---	---
Meat Cutter	9	199	---	140	30	12	66	---	30	5	---	---	71	8	41	---
Medical Service Occupations	---	---	---	---	---	---	---	---	49	---	---	---	---	---	---	---
Millright	8	---	---	181	57	16	22	---	---	---	---	---	---	19	8	---
Nurses Aide	299	153	88	549	163	137	161	---	38	114	---	14	51	158	75	12
Nurse Licensed Practical	48	146	82	361	99	43	36	---	12	128	124	70	19	82	203	30
Office Machine Repairman	---	---	---	68	---	---	---	---	---	---	---	---	---	---	32	---
Office Machine Operator	67	61	---	215	---	58	---	---	---	---	---	---	---	---	35	---
Pattern Maker	30	37	---	183	27	---	---	---	---	---	---	---	---	---	---	---
Polisher Grinder	10	17	---	---	---	12	82	---	12	---	---	---	---	---	19	---
Postal Mail Clerk	30	70	---	---	11	---	---	---	---	---	---	---	11	---	25	---
Presser Garments	---	43	---	256	38	74	---	---	---	57	42	---	14	4	21	---
Punch Press Operator	---	74	---	---	149	56	118	30	49	---	---	---	36	[illegible]	117	---

Table 21:--Principal Occupational Needs for Twenty-four Months (3 through 19) Continued

Principal Occupations Showing Worker Needs	Alliance-Canton-Massilon Stark County 1963 1965	Akron-Barberton Summit County 1964 1966	Ashtabula County+ 1963 1964	Cleveland+ Cuyahoga-Lake Counties 1962 1967	Elyria-Lorain Lorain County 1965 1967	Findlay Hancock-Hardin-Putnam-Wyandot Counties 1964 1966	Five County South Central Ohio Clinton-Fayette-Highland-Pike-Ross Counties 1965 1967	Licking County+ 1963 1964	Lima Allen County 1964 1966	Mansfield Ashland-Richland Counties 1965 1967	Marion County+ 1963 1964	Portage 1963 1964	Sandusky Erie-Ottowa-Huron Counties 1964 1966	Springfield Clark County 1964 1966	Toledo Lucas County 1965 1967	Tuscarawas County+ 1963 1964
Sales Clerk	7	2,631	162	---	125	---	303	---	---	317	---	100	---	73	---	---
Salesman General	122	388	94	669	77	81	130	72	72	205	398	56	116	40	853	---
Salesman Insurance	240	213	24	681	33	6	54	10	137	100	---	---	14	24	453	---
Salesman Manufacturing and Wholesale	---	32	---	463	43	---	98	---	---	---	---	---	---	---	---	---
Salesman Real Estate	148	---	---	228	---	4	---	---	---	36	---	---	---	2	---	---
Salesman Routeman	80	37	---	301	34	10	46	56	---	10	54	---	20	39	122	---
Salesperson	199	---	---	2,568	412	189	247	362	434	---	---	---	425	228	817	36
Secretary	53	64	---	1,815	73	112	14	50	---	22	32	12	12	76	85	---
Sewing Machine Operator	126	---	140	935	---	55	35	18	5	---	---	---	25	9	339	---
Sheetmetal Worker	39	53	82	316	90	---	---	14	---	96	---	---	2	19	137	---
Spray Painter	---	---	---	62	96	---	---	---	---	---	---	---	17	---	---	---
Stock and Shipping Clerk	129	453	152	440	139	148	92	56	103	223	---	---	142	60	321	46
Tailor and Seamstress	---	10	---	224	---	11	---	---	---	10	---	---	20	15	71	---
Teller-Financial Clerk	51	41	54	478	60	2	21	6	13	95	---	58	29	33	44	---
Telephone Operator	141	135	---	198	27	8	50	---	35	59	---	28	12	28	178	---
Tool and Die Maker	35	169	22	432	65	12	45	34	8	6	---	---	50	84	162	---
Transcribing Machine Operator	---	---	---	110	---	---	---	---	---	---	---	---	---	---	---	---
Truck Mechanic	100	---	---	202	---	---	---	---	---	---	---	---	---	---	---	---
Waitress	533	1,186	118	1,174	193	205	156	286	196	415	124	28	142	196	1,024	---
Warehouseman	---	159	---	---	---	---	95	---	12	15	---	---	---	---	285	---
Welder and Flame Cutters	59	141	---	606	215	132	8	42	71	51	160	---	174	73	109	---

+Prorated for twenty-four months.

*Cleveland survey had greater break-down than recent surveys. Therefore, related occupations combined.

Table 21:--Principal Occupational Needs for Twenty-four Months (3 through 19) Continued

Principal Occupations Showing Worker Needs	Alliance-Canton-Massilon Stark County 1963 1965	Akron-Barberton Summit County 1964 1966	Ashtabula County 1963 1964	Cleveland Cuyahoga-Lake Counties 1962 1967	Elyria-Lorain Lorain County 1965 1967	Findlay Hancock-Hardin-Putnam-Wyandot Counties 1964 1966	Five County South Central Ohio Clinton-Fayette-Highland-Pike Ross Counties 1965 1967	Licking County 1963 1964
Number Occupations Surveyed	121	165	63	224	116	115	115	72
Number Occupations Showing Principal Demand	33	54	17	50*	48	28	32	16
Number Occupations Listed in Principal Demand for Which Secondary Vocational Education Prepare Workers	24	38	11	35*	40	23	26	15
Total Estimated Employment in Area Surveyed	108,600	179,300	22,480	------	31,380	35,047	37,263	24,248
Employment (Wage and Salary) in Surveyed Occupations	75,815	125,861	10,345	415,062	24,349	28,199	32,270	12,462

+Broad fields.
*Cleveland Survey had greater break-down than recent surveys. Therefore, related occupations combined.

Table 21:--Principal Occupational Needs for Twenty-four Months (3 through 19) Continued

Principal Occupations Showing Worker Needs	Lima Allen County 1964 1966	Mansfield Ashland-Richland Counties 1965 1967	Marion County 1963 1964	Portage County 1963 1964	Sandusky Erie-Ottawa-Huron Counties 1964 1966	Springfield Clark County 1964 1966	Toledo Lucas County 1965 1967	Tuscarawas County 1963 1964
Number Occupations Surveyed	97	150	25	64	125	158	165	28
Number Occupations Showing Principal Demand	23	28	17	12	26	31	54	8+
Number Occupations Listed in Principal Demand for Which Secondary Vocational Education Prepare Workers	19	24	17	9	23	24	40	7+
Total Estimated Employment in Area Surveyed	35,289	51,510	18,400	18,900	40,981	36,200	163,100	19,300
Employment (Wage and Salary) in Surveyed Occupations	25,667	45,017	6,962	8,723	37,046	27,945	134,482	9,272

+Broad fields.
*Cleveland Survey had greater break-down than recent surveys. Therefore, related occupations combined.

State, County and Metropolitan Labor Force Areas

Exhibit C

Ohio Labor Market

JAMES A. RHODES, *Governor*
WILLARD P. DUDLEY, *Administrator*

SHORTAGE AND SURPLUS OCCUPATIONS*

FIRST QUARTER 1966

Reflecting the general improvement in the economy, shortage occupations both for men and women were more widely reported in the first quarter of 1966 than in the corresponding quarter of 1965. Surplus occupations were less apparent though the pattern was more evident for women than for men.

Five men's shortage occupations were reported in 25 or more counties during the quarter just completed--machinists, draftsmen, engineers, tool and die makers, and welders. A year earlier, only machinists were scarce in as many local areas. Counties were added for nearly all occupations previously listed, including foremen, managers, and such white-collar skills as salesworkers and accountants.

In women's shortage occupations, shortages were also more widespread in the first quarter of 1966 than a year ago. The leaders were the same: secretaries and stenographers, practical and registered nurses. Shortages of waitresses, bookkeepers, and clerk-typists were more extensively noted. Nurse aides, housekeepers, and domestics were added to the current list.

As can be expected in winter, men's surplus occupations were dominated by construction jobs. Aside from factory laborers (ranking fourth in number of counties listed) the leaders were construction laborers, truck drivers, carpenters, painters, operating engineers, heavy equipment operators, and bricklayers. Some of these occupations, notably heavy equipment operators, were reported surplus more widely than in the first quarter of 1965. In general, factory occupations were down in the number of local areas indicating surpluses. This was particularly true for assemblers, machine operators, press operators, welders, packers, and loaders.

Heading the women's surplus occupations in the first quarter of 1966 were general office clerks, salesworkers, waitresses, assemblers, and packers--the same occupations reported a year earlier. Fewer counties had surpluses of women as salesworkers, assemblers, clerk-typists, sewing machine operators, inspector-gauger-testers, press operators, and nurse aides.

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*SHORTAGE OCCUPATIONS ARE THOSE FOR WHICH THERE WAS A SIGNIFICANT LACK OF QUALIFIED CANDIDATES TO MEET DEMANDS IN THE GIVEN COUNTY. SURPLUS OCCUPATIONS ARE THOSE IN WHICH THERE WERE SUBSTANTIALLY MORE CANDIDATES AVAILABLE IN THE COUNTY THAN WERE IN DEMAND THERE. THESE DATA WERE COMPILED FROM REPORTS SUBMITTED BY LOCAL OHIO STATE EMPLOYMENT SERVICE OFFICES, BASED ON JOB ORDERS AND RELATED INFORMATION FROM EMPLOYERS, AND ON LOCAL OFFICE FILES OF REGISTERED JOBSEEKERS.

For additional Labor Market Information, write
WILLIAM PAPIER, *Director of Research and Statistics*, BUREAU OF UNEMPLOYMENT COMPENSATION, COLUMBUS

SHORTAGE OCCUPATIONS FOR MEN

Machinists (44 counties) -- Allen, Athens, Auglaize, Belmont, Butler, Champaign, Clark, Columbiana, Coshocton, Crawford, Cuyahoga, Darke, Defiance, Erie, Franklin, Geauga, Hamilton, Hancock, Hardin, Hocking, Huron, Knox, Lake, Licking, Logan, Lorain, Lucas, Mahoning, Medina, Mercer, Miami, Montgomery, Muskingum, Ottawa, Portage, Sandusky, Scioto, Seneca, Stark, Summit, Trumbull, Tuscarawas, Warren, Wood.

Draftsmen (31 counties) -- Ashtabula, Auglaize, Butler, Champaign, Clark, Columbiana, Coshocton, Cuyahoga, Darke, Erie, Fairfield, Franklin, Geauga, Hamilton, Knox, Lake, Lawrence, Logan, Lorain, Lucas, Mahoning, Marion, Medina, Miami, Montgomery, Sandusky, Shelby, Summit, Trumbull, Warren, Washington.

Engineers--chemical, civil, electrical, industrial, mechanical (28 counties) -- Allen, Ashtabula, Auglaize, Butler, Clark, Columbiana, Coshocton, Cuyahoga, Franklin, Geauga, Hamilton, Hancock, Hardin, Knox, Lake, Logan, Lorain, Lucas, Mahoning, Medina, Mercer, Montgomery, Putnam, Scioto, Stark, Summit, Trumbull, Wyandot.

Tool and die makers (27 counties) -- Ashtabula, Clark, Columbiana, Coshocton, Cuyahoga, Darke, Defiance, Franklin, Fulton, Geauga, Hamilton, Hardin, Henry, Hocking, Lake, Lorain, Lucas, Marion, Miami, Montgomery, Muskingum, Ottawa, Sandusky, Shelby, Stark, Summit, Trumbull.

Welders (25 counties) -- Allen, Auglaize, Butler, Columbiana, Cuyahoga, Erie, Franklin, Hamilton, Hardin, Knox, Lorain, Lucas, Marion, Medina, Mercer, Miami, Portage, Seneca, Shelby, Summit, Trumbull, Tuscarawas, Warren, Wayne, Wood.

Electricians (19 counties) -- Clinton, Defiance, Erie, Fairfield, Fayette, Hardin, Henry, Knox, Licking, Lorain, Lucas, Marion, Medina, Muskingum, Sandusky, Seneca, Stark, Summit, Tuscarawas.

Automobile mechanics (18 counties) -- Butler, Clermont, Clinton, Cuyahoga, Defiance, Erie, Franklin, Hamilton, Hancock, Hocking, Knox, Lake, Lucas, Montgomery, Pike, Seneca, Stark, Tuscarawas.

Machine operators, miscellaneous (18 counties) -- Allen, Ashtabula, Butler, Clark, Crawford, Cuyahoga, Defiance, Fairfield, Lake, Logan, Lucas, Marion, Medina, Stark, Summit, Trumbull, Tuscarawas, Wood.

Engine and turret lathe operators (16 counties) -- Ashtabula, Auglaize, Butler, Champaign, Clark, Cuyahoga, Defiance, Franklin, Hamilton, Hancock, Holmes, Lucas, Marion, Mercer, Warren, Wayne.

Salesworkers (16 counties) -- Columbiana, Cuyahoga, Erie, Fayette, Franklin, Gallia, Greene, Jefferson, Lawrence, Montgomery, Ottawa, Pike, Ross, Scioto, Summit, Williams.

Accountants (14 counties) -- Butler, Erie, Franklin, Hamilton, Knox, Lawrence, Lucas, Mahoning, Morgan, Scioto, Stark, Summit, Trumbull, Williams.

Milling machine operators (10 counties) -- Butler, Clark, Cuyahoga, Hamilton, Hancock, Holmes, Lucas, Trumbull, Warren, Wayne.

Social workers--case and group (10 counties) -- Butler, Clermont, Cuyahoga, Franklin, Hamilton, Lorain, Lucas, Mahoning, Montgomery, Summit.

Repairmen--electrical and electronic (8 counties) -- Clark, Cuyahoga, Fayette, Franklin, Hamilton, Licking, Marion, Tuscarawas.

Boring machine operators (7 counties) -- Butler, Clark, Cuyahoga, Franklin, Hamilton, Lucas, Trumbull.

Electronic technicians (7 counties) -- Cuyahoga, Franklin, Hancock, Mahoning, Montgomery, Putnam, Summit.

Factory maintenance mechanics (7 counties) -- Allen, Clark, Coshocton, Fulton, Hancock, Henry, Marion.

Foremen (7 counties) -- Clark, Franklin, Hamilton, Hancock, Marion, Montgomery, Preble.

Managers, miscellaneous (7 counties) -- Cuyahoga, Franklin, Hamilton, Lorain, Lucas, Richland, Summit.

Millwrights (7 counties) -- Coshocton, Defiance, Lorain, Lucas, Mahoning, Marion, Stark.

Setup men (7 counties) -- Ashtabula, Cuyahoga, Holmes, Lake, Montgomery, Warren, Wayne.

Tool and die designers (7 counties) -- Cuyahoga, Franklin, Hamilton, Montgomery, Stark, Summit, Trumbull.

Chemists (6 counties) -- Cuyahoga, Franklin, Hamilton, Lucas, Montgomery, Summit.

Press operators--punch, drill, forming (6 counties) -- Auglaize, Clark, Hamilton, Hancock, Mercer, Warren.

Clerical workers (5 counties) -- Gallia, Meigs, Miami, Pike, Ross.

Grinders (5 counties) -- Butler, Clark, Cuyahoga, Hamilton, Lucas.

Job setters (5 counties) -- Auglaize, Cuyahoga, Geauga, Henry, Mercer.

Machine tool operators (5 counties) -- Butler, Clermont, Columbiana, Franklin, Shelby.

Patternmakers (5 counties) -- Cuyahoga, Defiance, Hamilton, Knox, Trumbull.

Repairmen, television (5 counties) -- Butler, Cuyahoga, Franklin, Lorain, Richland.

Screw machine operators (5 counties) -- Butler, Cuyahoga, Defiance, Hamilton, Montgomery.

SHORTAGE OCCUPATIONS FOR WOMEN

Secretaries (35 counties) -- Ashtabula, Butler, Columbiana, Coshocton, Cuyahoga, Defiance, Fairfield, Franklin, Geauga, Greene, Hamilton, Hardin, Holmes, Huron, Jefferson, Knox, Lake, Logan, Lorain, Mahoning, Marion, Medina, Morgan, Muskingum, Ottawa, Portage, Sandusky, Stark, Summit, Trumbull, Tuscarawas, Warren, Washington, Wayne, Wood.

Nurses, practical (30 counties) -- Adams, Athens, Auglaize, Belmont, Butler, Clark, Coshocton, Darke, Fayette, Hamilton, Hardin, Hocking, Holmes, Jackson, Knox, Lucas, Mercer, Montgomery, Morgan, Muskingum, Perry, Putnam, Richland, Scioto, Seneca, Summit, Trumbull, Tuscarawas, Warren, Wayne.

Stenographers (30 counties) -- Ashtabula, Auglaize, Belmont, Butler, Champaign, Clark, Columbiana, Coshocton, Cuyahoga, Delaware, Erie, Franklin, Gallia, Geauga, Hamilton, Hardin, Jackson, Lake, Lawrence, Logan, Lorain, Lucas, Marion, Mercer, Montgomery, Muskingum, Portage, Scioto, Stark, Wyandot.

Nurses, registered (23 counties) -- Adams, Athens, Belmont, Butler, Champaign, Clark, Coshocton, Cuyahoga, Erie, Franklin, Hamilton, Hocking, Knox, Lorain, Lucas, Montgomery, Morgan, Muskingum, Ross, Scioto, Summit, Tuscarawas, Warren.

Waitresses (23 counties) -- Ashtabula, Athens, Auglaize, Coshocton, Darke, Defiance, Delaware, Franklin, Gallia, Guernsey, Hancock, Henry, Hocking, Jefferson, Logan, Marion, Meigs, Mercer, Montgomery, Noble, Summit, Trumbull, Wood.

Bookkeepers (14 counties) -- Columbiana, Coshocton, Defiance, Delaware, Gallia, Henry, Lorain, Lucas, Montgomery, Sandusky, Scioto, Stark, Summit, Warren.

Clerk-typists (13 counties) -- Auglaize, Champaign, Clark, Columbiana, Defiance, Erie, Franklin, Geauga, Lake, Lucas, Medina, Mercer, Warren.

Cooks (13 counties) -- Auglaize, Butler, Delaware, Erie, Fairfield, Franklin, Henry, Jefferson, Mahoning, Mercer, Pike, Seneca, Summit.

Housekeepers (13 counties) -- Brown, Butler, Clermont, Columbiana, Cuyahoga, Hancock, Hardin, Lorain, Medina, Putnam, Ross, Stark, Tuscarawas.

Domestics (12 counties) -- Athens, Defiance, Franklin, Geauga, Hamilton, Hocking, Lake, Pike, Sandusky, Scioto, Summit, Warren.

Nurse aides (11 counties) -- Auglaize, Butler, Hocking, Holmes, Mercer, Morgan, Muskingum, Perry, Tuscarawas, Warren, Wayne.

Child monitors (9 counties) -- Fairfield, Hancock, Jackson, Lorain, Meigs, Ottawa, Putnam, Stark, Washington.

Social workers--case and group (9 counties) -- Butler, Clermont, Cuyahoga, Franklin, Hamilton, Lucas, Mahoning, Montgomery, Summit.

Medical technicians (7 counties) -- Cuyahoga, Franklin, Hamilton, Miami, Summit, Trumbull, Warren.

Salesworkers (6 counties) -- Gallia, Greene, Henry, Logan, Meigs, Summit.

Home care attendants (5 counties) -- Mahoning, Miami, Ottawa, Seneca, Washington.

Maids (5 counties) -- Cuyahoga, Erie, Hancock, Lake, Montgomery.

Pressers (5 counties) -- Cuyahoga, Lucas, Montgomery, Stark, Summit.

SURPLUS OCCUPATIONS FOR MEN

Construction laborers (65 counties) -- Adams, Allen, Ashland, Ashtabula, Athens, Auglaize, Belmont, Brown, Butler, Champaign, Clark, Clermont, Clinton, Columbiana, Coshocton, Cuyahoga, Darke, Defiance, Delaware, Fairfield, Fayette, Franklin, Gallia, Geauga, Guernsey, Hamilton, Hancock, Hardin, Henry, Highland, Hocking, Huron, Jackson, Jefferson, Knox, Lake, Lawrence, Licking, Logan, Lorain, Madison, Meigs, Mercer, Miami, Monroe, Montgomery, Morgan, Muskingum, Ottawa, Pickaway, Pike, Portage, Richland, Ross, Sandusky, Scioto, Seneca, Shelby, Stark, Trumbull, Union, Van Wert, Vinton, Warren, Washington.

Truck drivers (65 counties) -- Adams, Allen, Ashtabula, Athens, Auglaize, Belmont, Brown, Butler, Carroll, Champaign, Clark, Clermont, Clinton, Columbiana, Crawford, Darke, Erie, Fairfield, Fayette, Geauga, Greene, Guernsey, Hamilton, Hancock, Hardin, Harrison, Highland, Hocking, Holmes, Huron, Jefferson, Knox, Lake, Lawrence, Licking, Logan, Lorain, Madison, Marion, Mercer, Miami, Monroe, Morgan, Muskingum, Noble, Ottawa, Perry, Pickaway, Pike, Putnam, Richland, Ross, Sandusky, Scioto, Seneca, Shelby, Stark, Trumbull, Tuscarawas, Union, Van Wert, Vinton, Washington, Wayne, Wood.

Carpenters (40 counties) -- Adams, Belmont, Brown, Butler, Carroll, Champaign, Clark, Clermont, Clinton, Columbiana, Darke, Fairfield, Fayette, Gallia, Geauga, Greene, Hamilton, Hancock, Hardin, Highland, Jackson, Lake, Lawrence, Licking, Logan, Madison, Mahoning, Medina, Meigs, Monroe, Morgan, Muskingum, Noble, Perry, Pickaway, Pike, Portage, Ross, Scioto, Washington.

Factory laborers (36 counties) -- Ashland, Auglaize, Belmont, Brown, Butler, Clermont, Columbiana, Crawford, Cuyahoga, Fulton, Geauga, Hamilton, Henry, Hocking, Holmes, Jefferson, Knox, Lake, Lucas, Madison, Mahoning, Marion, Mercer, Miami, Monroe, Noble, Perry, Pike, Putnam, Stark, Trumbull, Tuscarawas, Van Wert, Vinton, Warren, Wayne.

Painters (24 counties) -- Belmont, Brown, Butler, Carroll, Clark, Clermont, Columbiana, Hamilton, Hancock, Hardin, Huron, Jefferson, Lawrence, Licking, Lucas, Mahoning, Medina, Monroe, Montgomery, Noble, Pickaway, Scioto, Seneca, Washington.

Operating engineers (20 counties) -- Butler, Carroll, Champaign, Clark, Columbiana, Guernsey, Jackson, Lawrence, Licking, Medina, Miami, Monroe, Muskingum, Noble, Portage, Seneca, Stark, Vinton, Warren, Washington.

Heavy equipment operators (19 counties) -- Brown, Butler, Carroll, Clermont, Clinton, Gallia, Greene, Hamilton, Hancock, Jefferson, Logan, Mahoning, Meigs, Monroe, Perry, Pike, Richland, Ross, Stark.

Bricklayers (17 counties) -- Belmont, Clark, Clermont, Columbiana, Crawford, Geauga, Hamilton, Hancock, Lake, Licking, Marion, Medina, Muskingum, Perry, Portage, Trumbull, Washington.

Finishers, cement (13 counties) -- Butler, Champaign, Clark, Crawford, Gallia, Hamilton, Huron, Jackson, Logan, Marion, Montgomery, Pickaway, Portage.

Press operators--punch, drill, forming (12 counties) -- Butler, Carroll, Cuyahoga, Franklin, Geauga, Hocking, Huron, Lake, Lucas, Richland, Stark, Tuscarawas.

Assemblers (11 counties) -- Clermont, Crawford, Cuyahoga, Delaware, Franklin, Hardin, Hocking, Licking, Lucas, Marion, Stark.

Janitors and porters (11 counties) -- Allen, Brown, Butler, Clermont, Cuyahoga, Franklin, Greene, Hamilton, Lucas, Mahoning, Richland.

Bulldozer operators (10 counties) -- Brown, Butler, Carroll, Champaign, Clermont, Harrison, Monroe, Muskingum, Putnam, Tuscarawas.

SURPLUS OCCUPATIONS FOR WOMEN

General office clerks (38 counties) -- Brown, Butler, Carroll, Champaign, Clark, Clermont, Clinton, Columbiana, Darke, Fayette, Fulton, Greene, Hancock, Hardin, Harrison, Henry, Highland, Jackson, Jefferson, Knox, Lawrence, Lorain, Miami, Monroe, Montgomery, Morrow, Muskingum, Paulding, Pickaway, Pike, Richland, Ross, Scioto, Tuscarawas, Van Wert, Warren, Washington, Wood.

Salesworkers (35 counties) -- Adams, Ashland, Athens, Belmont, Brown, Butler, Carroll, Clark, Clermont, Columbiana, Coshocton, Crawford, Defiance, Fayette, Hardin, Harrison, Jackson, Jefferson, Knox, Lorain, Mahoning, Miami, Montgomery, Morrow, Ottawa, Richland, Sandusky, Scioto, Seneca, Shelby, Stark, Trumbull, Tuscarawas, Van Wert, Washington.

Waitresses (31 counties) -- Allen, Belmont, Brown, Butler, Clinton, Erie, Fairfield, Fayette, Hamilton, Hardin, Harrison, Highland, Jackson, Knox, Lorain, Lucas, Miami, Monroe, Muskingum, Ottawa, Pickaway, Pike, Putnam, Richland, Ross, Shelby, Tuscarawas, Union, Vinton, Warren, Washington.

Assemblers (29 counties) -- Ashtabula, Athens, Carroll, Champaign, Clark, Clermont, Cuyahoga, Darke, Delaware, Erie, Franklin, Greene, Guernsey, Hamilton, Hardin, Hocking, Huron, Licking, Lucas, Madison, Mahoning, Muskingum, Noble, Perry, Richland, Seneca, Stark, Warren, Williams.

Packers (25 counties) -- Butler, Carroll, Champaign, Clermont, Coshocton, Cuyahoga, Darke, Erie, Franklin, Greene, Hamilton, Henry, Highland, Hocking, Huron, Licking, Lucas, Medina, Miami, Montgomery, Morgan, Preble, Stark, Summit, Warren.

Cashiers (18 counties) -- Ashland, Athens, Brown, Butler, Carroll, Clark, Clermont, Columbiana, Erie, Hamilton, Jefferson, Lorain, Mahoning, Montgomery, Muskingum, Richland, Scioto, Seneca.

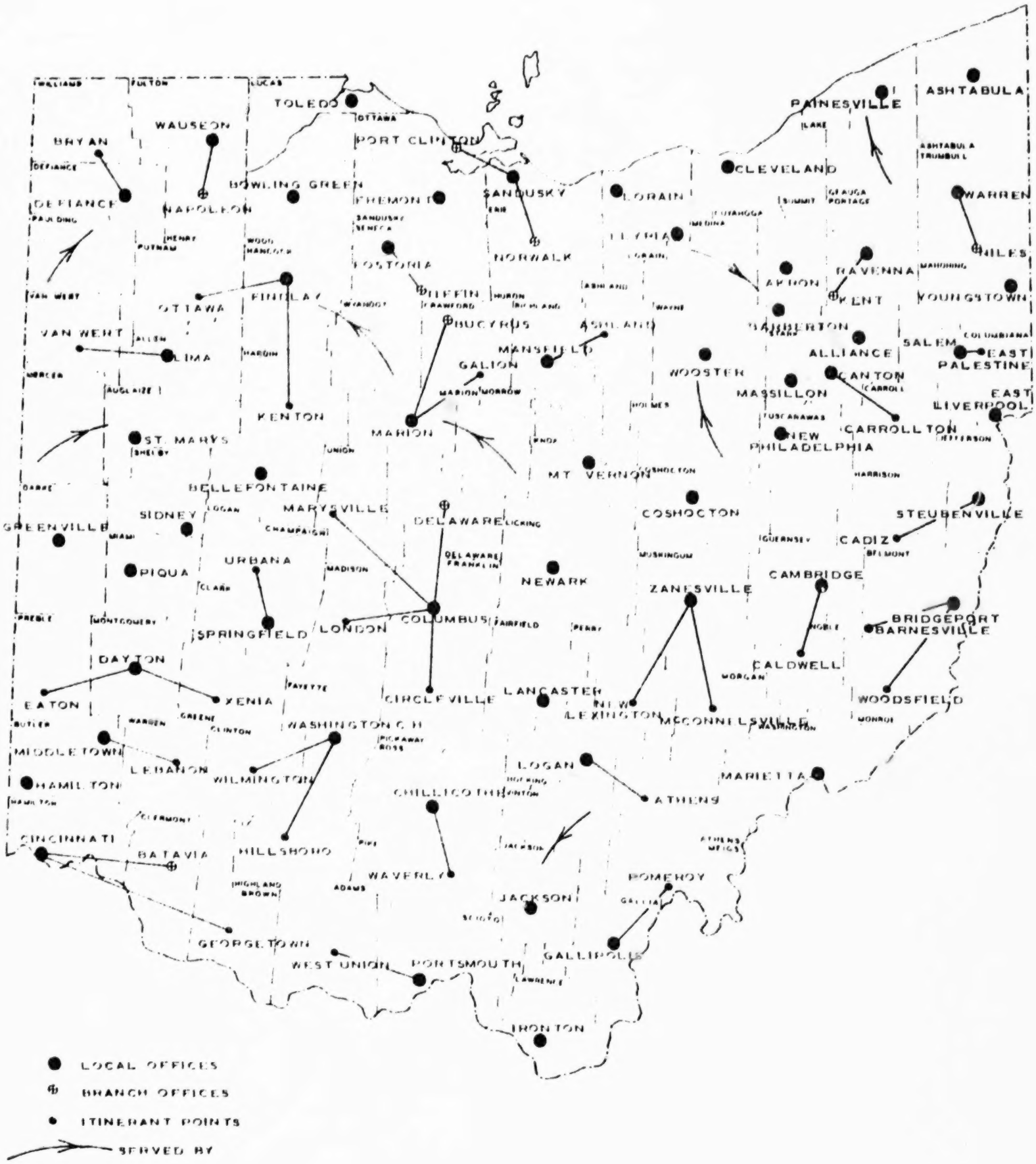
Clerk-typists (13 counties) -- Allen, Athens, Brown, Carroll, Clermont, Guernsey, Hamilton, Huron, Jefferson, Knox, Lawrence, Miami, Scioto.

Sewing machine operators (12 counties) -- Brown, Butler, Clark, Fayette, Hamilton, Lucas, Miami, Noble, Pike, Ross, Stark, Warren.

Press operators--punch, drill, forming (10 counties) -- Belmont, Butler, Carroll, Cuyahoga, Fulton, Geauga, Highland, Lake, Licking, Stark.

Division of Research and Statistics
Ohio Bureau of Unemployment Compensation
Columbus
4-7-66

OHIO BUREAU OF UNEMPLOYMENT COMPENSATION
LOCAL OFFICES, APRIL 25, 1965



Division of Research and Statistics
Ohio Bureau of Unemployment Compensation
Columbus

JAMES A. RHODES
Governor

WILLARD P. DUDLEY
Administrator

BUREAU OF UNEMPLOYMENT COMPENSATION
OHIO STATE EMPLOYMENT SERVICE
LABOR MARKET INFORMATION
AFFILIATED WITH U.S. EMPLOYMENT SERVICE

June 6, 1966

TOLEDO OFFICE	724 MONROE STREET	243 - 1141
BOWLING GREEN OFFICE	139 WEST WOOSTER STREET	354 - 0051

TOLEDO METROPOLITAN AREA*

Unemployment Toledo area unemployment dropped from an estimated 7,700 in mid-March to 6,700 in mid-April. As a result, the jobless rate fell from 3.1 percent to 2.7 percent of the civilian labor force. Total employment in April was around 243,900, including persons involved in labor-management disputes, compared with 239,400 in March.

Nonagricultural Jobs Nonfarm wage and salary employment was 213,700 in April--up 3,700 from March. Nonmanufacturing advanced by just that amount with all divisions contributing. The most noteworthy increases occurred in contract construction, services, and retail trade. In manufacturing, nondurable goods was up slightly but there was an offsetting loss in the hard goods sector. Workforce cutbacks in glass, primary metals, and transportation equipment exceeded a moderate gain in fabricated metals.

Year-Ago Comparison Nonagricultural establishments employed 10,500 more persons in April 1966 than they did one year earlier. Nearly seven-tenths of the increment was in nonmanufacturing where gains were universal. Increases in services and government were the most sizable. Most of the gain in manufacturing was centered in the durable goods segment. Though transportation equipment suffered a cutback and stone-clay-glass held close to its year-ago level, every other group was substantially higher. Primary metal industries (+1,000) advanced most significantly.

Hours And Earnings Average weekly earnings of factory production workers rose from $136.62 in March to $141.14 in April while the workweek increased from 42.5 to 43.3 hours. In April 1965, a 40.4 hour workweek yielded $125.69 in gross earnings.

Claims Down In April a weekly average of around 2,000 persons, unemployed one week or more, filed claims in Lucas, Wood, and Monroe Counties for benefits under the Ohio and Michigan Unemployment Compensation Laws. This was 1,450 below the continued claims average for March and 1,650 under the corresponding April 1965 figure.

Supply And Demand At the end of April, some 3,200 men and 2,500 women were registered for work at the Toledo and Bowling Green offices of the Ohio State Employment Service and the Monroe office of the Michigan Employment Security Commission. Local employers have been seeking men qualified as accountants, engineers, retail salespersons, machinists, tool-and-die makers, grinder operators, automobile mechanics, and appliance servicemen. Job opportunities exist for women as bookkeepers, secretaries, typists, pressers from dry cleaning establishments, waitresses, and domestics.

*DEFINED AS LUCAS AND WOOD COUNTIES, OHIO, AND MONROE COUNTY, MICHIGAN.

NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT IN TOLEDO METROPOLITAN AREA[a]
APRIL 1966

Industry	Employment (in thousands)			Percent Change From[d]	
	April 1966[b]	March 1966[c]	April 1965[c]	March 1966	April 1965
TOTAL	213.7	210.0	203.2	1.8	5.2
MANUFACTURING	79.0	79.0	75.8	.0	4.3
Durable Goods[e]	60.6	60.8	58.0	- .3	4.5
Stone, clay, and glass products	12.5	12.7	12.5	- 1.5	- .1
Primary metal industries	6.9	7.0	5.8	- 1.2	18.4
Fabricated metal products	8.0	7.9	7.5	1.6	6.9
Metal stampings	3.3	3.3	3.3	.1	1.7
Machinery, except electrical	8.8	8.8	8.2	.1	7.1
General industrial machinery	3.3	3.3	2.9	.0	13.9
Transportation equipment	17.5	17.6	18.0	- .5	- 2.5
Motor vehicles and equipment	16.4	16.4	16.6	.0	- 1.2
Nondurable Goods[f]	18.4	18.2	17.7	1.0	3.4
Food and kindred products	4.7	4.6	4.6	2.0	1.9
Petroleum refining, related industries	2.0	2.0	1.9	.3	4.0
NONMANUFACTURING	134.7	131.0	127.5	2.8	5.7
MINING AND QUARRYING	.4	.3	.3	7.0	8.3
CONTRACT CONSTRUCTION	8.9	7.7	8.1	14.6	9.8
TRANSPORTATION AND UTILITIES	15.9	15.6	15.1	2.5	5.6
Communication, electric, gas services	4.6	4.6	4.4	- .2	5.7
WHOLESALE AND RETAIL TRADE	43.6	42.8	42.8	2.1	1.9
Wholesale Trade	10.1	10.1	10.0	.5	1.4
Retail Trade	33.5	32.7	32.8	2.6	2.1
FINANCE, INSURANCE, AND REAL ESTATE	6.8	6.7	6.6	.8	2.0
SERVICE AND MISCELLANEOUS INDUSTRIES	31.3	30.3	29.5	3.4	6.3
GOVERNMENT	27.8	27.6	25.0	.8	11.1
Local government (includes schools)	19.6	19.5	17.9	.4	9.5

[a]Estimated in cooperation with U.S. Bureau of Labor Statistics. Toledo area is defined as Lucas and Wood Counties, Ohio, and Monroe County, Michigan. Based on March 1965 benchmark. Includes full and part-time wage and salaried workers employed during pay periods which include the 12th of the month. Excludes self-employed, domestics, and armed forces. Subtotals may not add to totals, because of rounding or exclusion of minor groups. [b]Preliminary. [c]Revised. [d]Based on unrounded figures. [e]Includes ordnance; lumber and wood products; furniture and fixtures; electrical machinery; instruments, optical goods, and clocks; miscellaneous manufacturing. [f]Includes tobacco manufactures; textile mill products; apparel and other finished fabric products; paper and allied products; printing, publishing, and allied industries; chemicals and allied products; rubber and miscellaneous plastics products; leather and leather products. &Affected by labor-management disputes.

Division of Research and Statistics
Ohio Bureau of Unemployment Compensation
Columbus, Ohio

HOURS AND GROSS EARNINGS OF PRODUCTION WORKERS IN TOLEDO METROPOLITAN AREA[a]
APRIL 1966

Industry	Average Weekly Earnings			Average Weekly Hours			Average Hourly Earnings		
	April 1966[b]	March 1966[c]	April 1965[c]	Apr. 1966[b]	Mar. 1966[c]	Apr. 1965[c]	Apr. 1966[b]	Mar. 1966[c]	Apr. 1965[c]
TOTAL	.....	.....	.....	....	....	....	....	....	....
MANUFACTURING	$141.14	$136.62	$125.69	43.3	42.5	40.4	$3.26	$3.21	$3.11
Durable Goods[d]	141.34	138.14	126.03	43.0	42.5	40.2	3.29	3.25	3.14
Stone, clay, and glass products	163.21	162.16	153.80	44.1	44.3	42.4	3.70	3.66	3.63
Primary metal industries	138.91	134.68	120.11	42.6	41.8	38.8	3.26	3.22	3.10
Fabricated metal products	132.49	125.78	110.90	43.3	41.9	39.0	3.06	3.00	2.84
Metal stampings	123.75	125.28	112.05	43.1	43.5	41.1	2.87	2.88	2.73
Machinery, except electrical	135.05	132.14	113.09	42.8	42.2	38.0	3.16	3.13	2.98
General industrial machinery	128.59	126.50	113.80	40.9	40.3	38.0	3.14	3.14	2.99
Transportation equipment	148.00	145.65	128.44	42.7	42.5	40.6	3.47	3.43	3.16
Motor vehicles and equipment	149.56	144.78	128.84	43.0	42.1	40.5	3.48	3.44	3.18
Nondurable Goods[e]	140.39	130.87	124.44	44.3	42.8	41.4	3.17	3.06	3.01
Food and kindred products	104.47	111.89	109.74	38.5	40.8	40.6	2.71	2.74	2.70
Petroleum refining, related industries.	184.88	168.73	159.13	46.6	43.7	43.0	3.97	3.86	3.70
NONMANUFACTURING	.....	.....	.....	....	....	....	....	....	....
MINING AND QUARRYING	.....	.....	.....	....	....	....	....	....	....
CONTRACT CONSTRUCTION	202.75	187.45	164.16	41.5	39.5	38.4	4.89	4.75	4.28
TRANSPORTATION AND UTILITIES	.....	.....	.....	....	....	....	....	....	....
Communication, electric, gas services .	131.03	129.09	132.21	41.4	41.0	42.5	3.16	3.15	3.11
WHOLESALE AND RETAIL TRADE[f]	88.32	90.19	84.57	36.2	36.2	36.2	2.44	2.49	2.34
Wholesale Trade	110.37	113.74	103.05	40.6	41.2	39.3	2.72	2.76	2.62
Retail Trade[f]	79.96	81.09	77.57	34.5	34.2	35.0	2.32	2.37	2.22
FINANCE, INSURANCE, AND REAL ESTATE	.....	.....	.....	....	....	....	....	....	....
SERVICE AND MISCELLANEOUS INDUSTRIES	.....	.....	.....	....	....	....	....	....	....
GOVERNMENT	.....	.....	.....	....	....	....	....	....	....
Local government (includes schools) ...	.....	.....	.....	....	....	....	....	....	....

[a]Estimated in cooperation with U.S. Bureau of Labor Statistics. Toledo area is defined as Lucas and Wood Counties, Ohio, and Monroe County, Michigan. Data relate to full and part-time production workers (nonsupervisory employees in nonmanufacturing) employed during pay periods which include the 12th of the month. Average earnings are computed from gross payroll before tax and other deductions. Includes pay for overtime, incentive bonuses paid regularly, holidays, vacations, and sick leave. Excludes special bonuses, retroactive pay, and payments in kind. [b]Preliminary. [c]Revised. [d]Includes ordnance; lumber and wood products; furniture and fixtures; electrical machinery; instruments, optical goods, and clocks; miscellaneous manufacturing. [e]Includes tobacco manufactures; textile mill products; apparel and other finished fabric products; paper and allied products; printing, publishing, and allied industries; chemicals and allied products; rubber and miscellaneous plastics products; leather and leather products. [f]Excludes eating and drinking places. [g]Low due to labor-management disputes during part of pay period.

Division of Research and Statistics
Ohio Bureau of Unemployment Compensation
Columbus, Ohio

Ohio Labor Market

JAMES A. RHODES, *Governor*
WILLARD P. DUDLEY, *Administrator*

OHIO LABOR MARKET, JUNE 1966

Remarkably low! That's the level for unemployment in Ohio. Overall rate of unemployment, at 2.6 percent of civilian labor force in April, was lowest on record. Though estimates were first prepared in January 1960, latest figure was probably below any month since 1956. With new entrants to labor force starting to rise, May 1966 figure (not yet available) may be a little higher.

How many claimants? Persons out of work one week or longer and claiming benefits under Ohio Unemployment Compensation Law totaled less than 21 thousand last week. This was lowest figure for any week since November 1952. Eight out of every thousand workers covered under the Law are claiming benefits.

What about benefits? During first five months of 1966 claimants with dependents averaged $48.28 per week of total unemployment, while claimants without dependents averaged $34.73. Corresponding figures for same months of 1965 were slightly lower. Nevertheless, aggregate cost of benefits in Ohio dropped sharply--down 30 percent. Fewer have been unemployed, and for shorter lengths of time. The number unemployed long enough to exhaust their benefit rights dropped 42 percent.

How much in collections? With covered employment continuing at record-high levels, employer contributions (including interest on the Fund) amounted to $103.6 million during first five months of 1966--virtually the same as in comparable months of 1965. With benefits totaling less than $31.2 million in 1966 (through May 31) the Ohio Fund available for further benefits hit $433.7 million. This is highest balance on record since September 30, 1958. Recovery since all-time low of $67.6 million on April 30, 1963 has been fairly steady. All-time peak was reached as of December 31, 1953, when the Fund contained $686.5 million.

Is business cycle "dead"? Chase Manhattan Bank of New York recently received replies to this question from more than five hundred economists. Ninety-three percent of university economists and 95 percent of business economists said "No."

What would recession cost? As yet, no recession is in sight. During most severe 12 months of national recession of 1960-61 unemployment benefits under Ohio Unemployment Compensation Law totaled $302.2 million. With more covered workers and higher earnings a future recession could cost as much or more.

Immediate prospects? Figures for June, July, and August will probably show some increase in unemployment, as students enter labor market and as automotive industry cuts back production and prepares for new models. (6-15-66)

For additional Labor Market Information, write
WILLIAM PAPIER, *Director of Research and Statistics*, BUREAU OF UNEMPLOYMENT COMPENSATION, COLUMBUS

Ohio Labor Market

JAMES A. RHODES, *Governor*
WILLARD P. DUDLEY, *Administrator*

HOCKING COUNTY, OHIO

Labor Force In February 1966, the Hocking County civilian workforce totaled around 6,400. Of this number, an estimated 5,700 were employed and 700 (including 200 women) were jobless. Those unemployed represented 10.9 percent of the labor force.

Location Hocking County is situated in south-central Ohio. In July 1964, its population was 20,500--up over 300 from the 1960 U.S. Census count. The principal city and County seat, Logan, had 6,400 inhabitants in 1960.

Industries According to 1960 U.S. Census reports close to one-fourth of the resident jobholders traveled to work in nearby counties. During February almost two-fifths of the persons employed within County borders were on factory payrolls. Leading industries are stone-clay-glass, rubber, nonelectrical machinery, fabricated metals, and paper. Items turned out locally include abrasive wheels, clay sewer pipe, face brick, glass tubing, auto crash-pads, fabricated metal products, and office filing supplies.

Jobseekers Nearly one-fourth of the men seeking work through the local office of the Ohio State Employment Service were skilled and around three-tenths were semiskilled. The rest were largely unskilled or inexperienced. Seven-tenths were not yet 45 years old. A number had worked in the production of shoes as cobblers, lasters, heel trimmers, scourers, treers, and packers; and in aircraft plants as drill and punch press operators and assemblers. Others had experience in clay products concerns as brick and tile setters, kiln burners, off-bearers, and laborers, and in electrical products firms as machine adjusters and unskilled workers. Also in supply were circular saw and planer operators, spray finishers, and laborers from woodworking plants, and truck drivers and laborers from the construction industry. Needed are doctors, laboratory technicians and assistants, machinists, tool and die makers, and automobile mechanics.

Of the women registrants in February, over one-sixth were trained clerical or sales workers and close to one-fifth were qualified for service positions. Better than one-sixth were semiskilled while the balance were, for the most part, unskilled or inexperienced. One out of two was under the age of 35. Many had job backgrounds in the production of shoes as stitchers, treers, lacers, assemblers, and inspectors. Others had worked in electrical equipment firms as assemblers, testers, winders, and packers. Area employers are currently having difficulty finding registered and practical nurses, nurse aides, waitresses, and domestics.

Wage Rates County manufacturers usually offer entry hourly wage rates which vary as follows. Men: unskilled, $1.25 to $1.90; semiskilled, $1.65 to $2.25; skilled, $1.90 to $3.00. Women: unskilled, $1.25 to $1.70; semi-skilled, $1.45 to $1.90; skilled, $1.75 to $2.25.

For additional Labor Market Information, write
WILLIAM PAPIER, *Director of Research and Statistics*, BUREAU OF UNEMPLOYMENT COMPENSATION, COLUMBUS

Ohio Labor Market

JAMES A. RHODES, *Governor*
WILLARD P. DUDLEY, *Administrator*

OHIO LABOR FORCE ESTIMATES, BY COUNTY

THE BUREAU OF UNEMPLOYMENT COMPENSATION, AIDED BY ITS LOCAL NETWORK OF OHIO STATE EMPLOYMENT SERVICE OFFICES, PREPARES PERIODIC LABOR FORCE REPORTS FOR EACH OF OHIO'S 88 COUNTIES. THESE ONE-PAGE STATEMENTS, UPDATED EVERY FOUR MONTHS, OFFER CURRENT ESTIMATES OF THE LABOR FORCE, EMPLOYMENT, AND UNEMPLOYMENT, AS WELL AS QUALITATIVE INFORMATION ON THE LABOR SUPPLY.

THE LATEST AVAILABLE REPORT FOR A GIVEN COUNTY, AS OF MAY 31, 1966, PRESENTS ESTIMATES FOR THAT COUNTY FOR THE REFERENCE MONTH INDICATED.

OHIO LABOR FORCE ESTIMATES, BY COUNTY*

COUNTY AND REFERENCE MONTH	EMPLOYMENT	UNEMPLOYMENT	RATE	COUNTY AND REFERENCE MONTH	EMPLOYMENT	UNEMPLOYMENT	RATE
ADAMS 02-66	4,750	925	16.3	FULTON 03-66	12,400	300	2.4
ALLEN 04-66	45,000	1,200	2.6	GALLIA 04-66	7,175	475	6.2
ASHLAND 01-66	14,550	450	3.0	GEAUGA 01-66	12,400	350	2.7
ASHTABULA 04-66	32,600	1,400	4.1	GREENE 03-66	35,700	1,300	3.5
ATHENS 02-66	18,000	900	4.8	GUERNSEY 04-66	12,000	650	5.1
AUGLAIZE 02-66	13,250	350	2.6	HAMILTON 02-66	420,700	13,700	3.2
BELMONT 01-66	21,600	1,900	8.1	HANCOCK 01-66	22,850	550	2.4
BROWN 02-66	5,900	600	9.2	HARDIN 01-66	9,350	300	3.1
BUTLER 01-66	69,200	3,100	4.3	HARRISON 02-66	6,250	225	3.5
CARROLL 04-66	5,150	325	5.9	HENRY 03-66	9,450	250	2.6
CHAMPAIGN 04-66	9,150	200	2.1	HIGHLAND 04-66	10,300	200	1.9
CLARK 04-66	49,100	1,300	2.6	HOCKING 02-66	5,700	700	10.9
CLERMONT 02-66	11,800	2,100	15.1	HOLMES 03-66	6,175	125	2.0
CLINTON 04-66	11,050	250	2.2	HURON 04-66	17,950	400	2.2
COLUMBIANA 04-66	30,400	1,100	3.5	JACKSON 02-66	6,800	700	9.3
COSHOCTON 04-66	12,600	450	3.4	JEFFERSON 03-66	33,500	1,100	3.2
CRAWFORD 01-66	19,900	500	2.5	KNOX 04-66	15,200	400	2.6
CUYAHOGA 01-66	772,900	23,800	3.0	LAKE 01-66	40,500	1,200	2.9
DARKE 04-66	14,575	375	2.5	LAWRENCE 03-66	12,700	1,200	8.6
DEFIANCE 03-66	13,800	300	2.1	LICKING 03-66	37,200	1,200	3.1
DELAWARE 03-66	12,150	500	4.0	LOGAN 04-66	10,350	250	2.4
ERIE 04-66	28,150	800	2.8	LORAIN 03-66	79,700	2,300	2.8
FAIRFIELD 03-66	22,450	700	3.0	LUCAS 03-66	193,800	6,100	3.1
FAYETTE 04-66	8,600	400	4.4	MADISON 02-66	6,950	400	5.4
FRANKLIN 03-66	331,900	8,500	2.5	MAHONING 01-66	112,000	6,300	5.3

*SEE FOOTNOTE (OVER)

For additional Labor Market Information, write
WILLIAM PAPIER, *Director of Research and Statistics*, BUREAU OF UNEMPLOYMENT COMPENSATION, COLUMBUS

OHIO LABOR FORCE ESTIMATES, BY COUNTY* (CONTINUED)

COUNTY AND REFERENCE MONTH	EMPLOY-MENT	UNEMPLOY-MENT	RATE	COUNTY AND REFERENCE MONTH	EMPLOY-MENT	UNEMPLOY-MENT	RATE
MARION 01-66	23,000	800	3.4	RICHLAND 01-66	50,200	1,600	3.1
MEDINA 01-66	17,500	550	3.0	ROSS 02-66	20,050	1,300	6.1
MEIGS 04-66	4,800	325	6.3	SANDUSKY 02-66	19,500	800	3.9
MERCER 02-66	11,800	350	2.9	SCIOTO 02-66	21,600	2,100	8.9
MIAMI 03-66	26,600	900	3.3	SENECA 04-66	23,300	550	2.3
MONROE 01-66	6,200	250	3.9	SHELBY 03-66	14,750	300	2.0
MONTGOMERY 03-66	253,500	5,400	2.1	STARK 01-66	132,700	5,300	3.8
MORGAN 02-66	3,800	200	5.0	SUMMIT 01-66	205,000	6,000	2.8
MORROW 01-66	5,600	150	2.6	TRUMBULL 01-66	79,500	4,000	4.8
MUSKINGUM 02-66	27,700	1,500	5.1	TUSCARAWAS 02-66	25,300	1,300	4.9
NOBLE 04-66	3,025	125	4.0	UNION 02-66	7,650	375	4.7
OTTAWA 04-66	11,050	350	3.1	VAN WERT 04-66	9,750	275	2.7
PAULDING 03-66	4,550	100	2.2	VINTON 02-66	1,975	150	7.1
PERRY 02-66	5,650	500	8.1	WARREN 02-66	11,850	1,550	11.6
PICKAWAY 03-66	10,200	500	4.7	WASHINGTON 01-66	17,150	1,200	6.5
PIKE 02-66	4,000	700	14.9	WAYNE 03-66	30,900	700	2.2
PORTAGE 01-66	28,100	1,500	5.1	WILLIAMS 03-66	13,500	300	2.2
PREBLE 03-66	7,400	200	2.6	WOOD 03-66	27,400	600	2.1
PUTNAM 01-66	8,450	200	2.3	WYANDOT 01-66	6,850	175	2.5

*SUM OF EMPLOYMENT (WHICH INCLUDES WORKERS INVOLVED IN LABOR-MANAGEMENT DISPUTES) AND UNEMPLOYMENT EQUALS ESTIMATED CIVILIAN LABOR FORCE. RATE IS UNEMPLOYMENT DIVIDED BY CIVILIAN LABOR FORCE. EMPLOYMENT ESTIMATES ARE BEARED TO COUNTY OF WORK, RATHER THAN COUNTY OF RESIDENCE; UNEMPLOYMENT ESTIMATES ARE AFFECTED BY THE NUMBER OF CLAIMANTS FILING IN A COUNTY, REGARDLESS OF COUNTY OF RESIDENCE OR FORMER PLACE OF WORK.

DIVISION OF RESEARCH AND STATISTICS
OHIO BUREAU OF UNEMPLOYMENT COMPENSATION
COLUMBUS 5-31-66

Project Proposal for Vocational Education
Under Vocational Education Act of 1963

Exhibit D

PROJECT PROPOSAL FOR VOCATIONAL EDUCATION
UNDER VOCATIONAL EDUCATION ACT OF 1963
AND REVISED PLAN FOR VOCATIONAL EDUCATION
--OHIO (1966)

OVEP-1

Date/Time Received _____

PROJECT PROPOSAL FROM _____

School District in _____ County

Telephone Number _____

Project Number _____

Index Number _____

For OhVoEd Use Only

Vocational Job Training areas in Project:
Agriculture
Business & Office
Distributive
Home Economics (Job Tr. Only)
Trade & Industrial
Copies submitted: _____ (one more than areas checked above)

Target Date for students starting school in this project _____

Return to:
Division of Vocational Education
State Office Building
Columbus, Ohio 43215

Before August 20

Subscribed in my presence and sworn to before me this ____ day of _____ 19__.

_____ NOTARY PUBLIC

My commission expires _____ 19__.

Note: Attach district's board resolution showing approval of this project proposal.

STATISTICAL INFORMATION for Priority Purposes:

(1) (Bases on 1960 census report) Number of children (5-17) from low income families ($2,000) in district _____

(2) % of high school dropout for fiscal 1965-1966 (grades 9-12) Reported by District _____

(3) % of H. S. graduates not entering college for a Baccalaureate Degree _____

(4) Average state tax valuation per pupil in district(s) (1965 Report-Div. Res. State Dept. Ed.) _____

(5) District school tax rate (or average) including bonds. _____

_____
Superintendent or Executive Head

_____
Mailing Address

_____
City, State, Zip Code

School District _____

Date _____

OVEP-2a

1. Dictionary of Occupational Titles CODE and OCCUPATIONAL TITLES for which training will be offered to high school youth (It is assumed that facilities planned for H. S. youth will be used for out-of-school youth and adults as well):

DOT Code	Occupational Titles	Section No.	Grade Level	Length of program in Hrs. per yr.	Annual Starting Date	Annual Ending Date	Section Enrollment	Expected Graduates	Service[1]	Evidence of need for program (Attach supporting document or statement if space is inadequate.)
Example: 1-01.31	Accounting Clerk	66-A 65-A	11 12	675 675	9/1/66 9/1/66	6/10/67 6/6/67	25 22	20	BOE	OSES Skill Survey attached

[1]Services include: Agriculture, Business & Office, Distributive, Home Economics (Job Training), Trade & Industrial, and Interrelated programs cutting across lines.

Permission granted to duplicate additional forms in district's office.

School District_____ OVEP-2b

2. Trainees: Including Guidance and Selection Procedures — Characteristics including needs, interests, and ability to benefit from training. IQ, socio-economic, student goals, etc. Describe procedures to be followed to determine that students enrolled will be able to profit from instruction.

3. Training plan: Describe plan to accomplish your objectives, including class time schedules, content of courses, outline of program, etc. Use supplemental sheets and attach; show separate for each area and DOT program shown in Item 1, Form 2a. Identify each program by the DOT code; include starting and stopping dates for each year of program.

4. Articulation: Show relationship with on-going vocational program, academic program, pre-requisites, and other related activities.

5. Supervision and direction: How will this be provided. List administrative and supervisory functions and positions, and indicate which persons will meet vocational standards as established in the Ohio Plan for Vocational Education.

6. Plan for evaluating results of project: Show reporting, study, etc.

7. Accessibility: What are the conditions for other districts, non-resident students, and others, to participate in program. Area school definition indicates that five or more vocational education programs must be offered in the same building.

8. Other pertinent information: (Attach supporting documents, reports, and other data that bears on project.)

School District _____ OVEP-3

Date _____

BUDGET REQUEST FORM - Equipment

Submit requests for each program in each vocational area on separate forms. Permission granted to locally copy the form.

Check equipment usage:	
Pilot Program	
Area Voc'l School	
New Program	
Technical Ed.	
Existing Program	

Vocational Area _____

D. O. T. Code _____

Program Title _____

Services: (Area)
- Agriculture
- Business & Office
- Distributive
- Home Economics - Job Training
- Trade & Industrial
- Interrelated

Item[1]	Number Now In Use	Number This Request	Add'l/Replac. Add	Add'l/Replac. Repl.[2]	Total COST	50% Reimbur. Requested	DO NOT USE

[1]When in doubt about description, use trade name and catalog number. (Over---)

[2]If replacing, why is reimbursement asked; why replacing.

Item[1]	Number Now In Use	Number This Request	Add'l/Replac.[2] Add	Repl.	Total COST	50% Reimbur. Requested	DO NOT USE
TOTAL EQUIPMENT BUDGET, Forwarded to OVEP-3							

It is understood by the local school that all equipment approved for reimbursement must be kept on a yearly inventory record. Approval of Vocational Division must be received prior to disposal of any equipment on which reimbursement is made. Whenever items of equipment, on which reimbursement is made, are sold or no longer used for purposes for which approved, it is agreed that the proportionate share of the value of the equipment at that time will be returned to the State; the value being determined on the basis of the sale price in the case of a bona fide sale, or the fair market value in the case of discontinuance of use for a vocational education purpose.

VOCATIONAL EDUCATION PROJECT PROPOSAL - CONSTRUCTION OVEP-4
under Vocational Education Act of
1963 and Revised Ohio Plan for
Vocational Education, 1964

1. List the subjects to be offered including the related classes and general subjects offered, estimated enrollment in each area and subject, the number of sections per day required, the number of periods or length of time required for each section, necessary storage, conference areas and service facilities required and the approximate square footage needed for each facility.

Name of Facility by Program as listed in 2a	Maximum Enrollment For Each Facility	Number Sections Per Day	Periods Allot. Each Section		Square Feet Needed	
			Related	Lab-Shop	Related Class Rm.	Lab-Shop
Example: Machine Trade	25	2	2	4	750	3,200

II. Provide in the space below a description (attach a proposed sketch or architect's drawing) of the proposed building including the number of floors, types of construction, and a complete description of the remodeling or alterations required if an existing building is to be used to house a part or all of the vocational education facilities. (Final prints must be approved by both Vocational Education and the Department's Building Section.)

III. Provide a description of the proposed site including information on accessibility, availability of water and other utilities, grading and other site development needed and the geographical location in relation to the district it will serve.

IV. Other Spaces in Building:

OVEP-6

	No. Rooms	Square Feet	DO NOT USE
1. Instruction - non-vocational*	x		
2. Administrative space	x		
3. Service, including utilities and cafeteria	x		
4. Hallways, etc.	x		
5. Recreational, and other non-vocational for which admission fees will be charged*	x		
TOTAL OTHER SPACES	x		

Comments: *(Such areas cannot be reimbursed from VoEd funds.)

V. Summary of Space Requirements:

	No. Rooms	Square Feet	DO NOT USE
1. Vocational labs/shops			
2. Vocational related classrooms			
3. Other reimbursable Spaces (IV)			
4. Non-Reimbursable Spaces (IV)			
TOTAL BUILDING SPACE			

Comments:

VI. Provide complete cost estimate figures for the complete building:

		DO NOT USE
a. Site	$	$
b. Site Improvement		
c. Utilities		
d. Construction and Fixed Equipment		
e. Loose Equipment		
f. Architect's Fees		
g. Miscellaneous and Legal Fees		
Total Estimated Cost	$	$

VII. Source of funds to be used for construction:

		DO NOT USE
a. Local Funds available	$	$
b. State Funds available to district		
c. Other Federal Funds (state the law under which funds will accure)*		
d. Requested funds under Vocational Education Act of 1963		
Total	$	$

*List Law:

VIII. General Requirements:

a. Provide a sketch showing the relative positions of each part of the building including dimensions in feet.

b. Provide an outline of the educational specifications with the application.

c. A qualified professional person or firm shall be hired to prepare plans, cost estimates and supervise the construction of this facility.

d. All facilities shall meet state and local building code requirements.

e. Contracts for construction and hiring practices for laborers and mechanics shall meet all federal and state laws and regulations.

f. Adequate title search or title insurance shall show proof of clear title to the site.

g. Provide evidence that an adequate water supply is available at the site of the proposed building facilities.

Proposed Increases in Teacher Training and Supervision Budget Over 1965-66

Exhibit E

STATE DEPARTMENT OF EDUCATION
Division of Vocational Education
Columbus, Ohio 43215

PROPOSED INCREASES IN TEACHER TRAINING AND SUPERVISION BUDGET OVER 1965-66

Agriculture:			
Ohio State Univ.:	Instr. Materials Laboratory	2,000.00	
	Assistant Supervisor - ½ time	6,289.00	8,289.00
Trade & Industrial:			
Kent State Univ.:	Clerical - ¼ time	1,200.00	
	Teacher Training Supplies	650.00	
Ohio State Univ.:	Instr. Materials Development	5,000.00	
	REA Clerical & Supplies	450.00	
	Teacher Training Supplies	850.00	
Cincinnati Univ.:	Teacher Training Supplies	150.00	
Toledo Univ.:	Teacher Educator	10,972.00	
	Clerk Steno 2 - ½ time	1,929.00	21,201.00
Home Economics:			
Ohio State Univ.:	Instr. Materials Development		2,700.00
Distributive:			
Kent State Univ.:	Clerical - ½ time		480.00
Business & Office:			
Kent State Univ.:	Assistant Supervisor		11,507.00
Guidance Services:			
Ohio State Univ.:	Assistant Supervisor		11,507.00
Salary Increases for Existing Personnel (Including Retirement)			42,305.00
	TOTAL PROPOSED INCREASES		97,989.00

Bureau of Budget No. 51-R 470.1
Approval Expires 10/16/67

OUTLINE FOR DESCRIPTION OF PROJECTED PROGRAM
ACTIVITIES IN VOCATIONAL EDUCATION FOR FISCAL YEAR _____
WITH ESTIMATED EXPENDITURES AND REQUEST FOR TRANSFER OF FUNDS.

Each State with an approved State plan shall submit annually a statement describing its projected program of activities for maintaining, extending, improving, and developing programs of vocational education (including the provision of part-time employment for youths pursuant to section 13 of the Vocational Education Act of 1963), so that persons of all ages in all communities of the State will have ready access to vocational training or retraining which is of high quality, which is realistic in the light of actual or anticipated opportunities for gainful employment, and which is suited to their needs, interests, and ability to benefit from such training.

This statement in effect becomes the State board's annual program plan for vocational education against which year-end reports may be evaluated. In addition, it provides a rationale for State decisions in allocating for various program purposes the Federal funds allotted to it.

An original and ~~one~~ two copy of the description is to be sent to the Assistant Commissioner for Vocational and Technical Education, Office of Education, U.S. Department of Health, Education, and Welfare, Washington, D.C. 20202, on or before May 15, 196_, along with (1) the State's fiscal year Estimate of Total Expenditures and (2) Request for Transfer of Funds.

Describe the following in a concise narrative form and support with appropriate statistical, survey, and evaluative data which is basic to the State's determination of program needs, emphases, and goals for the current fiscal year.

PART A

Items included in this part should relate to the State's total program of vocational and technical education which will be operated during this year.

1. Summarize the current and projected manpower needs and employment opportunities in the State in terms of

   a. Occupations or occupational fields.

   b. Educational levels.

   c. Different labor market areas or communities of the State.

2. Show by county table (inclusive of area vocational school offerings) the program offerings by occupational category and by purpose. (See attached example A)

3. On a State map locate the area vocational schools and indicate the area of the State served by each school. (Also identify by letter "N" which schools will begin operation for the first time during the year.) Show by table the vocational education offerings in each of the area schools identified on the State map. (See attached example B.)

4. Describe the State's plan for the provision of work-study programs under the 1963 Act.

   a. Plans for State administration.

   b. Estimated number of local educational agencies and number of students likely to participate.

5. List the names of members of the State board and/or advisory council, if one has been appointed or designated in compliance with the qualification requirements of section 5(a)(1) of the 1963 Act and Regulation 104.3(b)(1). Identify (1) the persons familiar with the vocational education needs of management and labor in the State and (2) the person or persons representative of junior colleges, technical institutes, or other institutions providing education beyond the high school, and describe their qualifications.

PART B

Items in this part should indicate the State's plan to extend and improve the vocational education program during the year indicating where the emphasis is to be placed and justifying such emphasis.

1. Describe the State's program priorities to expand vocational and technical education for high school students for the current year. (Relate to manpower needs and employment opportunities in Item 1, Part A, above.)

   a. New teaching personnel requirements.

   b. New or additional occupational fields to be provided for.

   c. Plans for replacement or purchase of new equipment.

   d. Plans for improving facilities.

2. Describe the State's program priorities to expand vocational and technical education for post high school students for the current year. (Relate to manpower needs and employment opportunities in Item 1, Part A, above.)

   a. New teaching personnel requirements.

   b. New or additional occupational fields to be provided for.

   c. Plans for replacement or purchase of new equipment.

   d. Plans for improving facilities.

3. Describe the State's program priorities to expand vocational and technical education for persons who have already entered the labor market for the current year. (Relate to manpower needs and employment opportunities in Item 1, Part A, above.)

   a. New teaching personnel requirements.

   b. New or additional occupational fields to be provided for.

   c. Plans for replacement or purchase of new equipment.

   d. Plans for improving facilities.

4. Describe the State's program priorities to expand vocational and technical education for persons with special needs for the current year. (Relate to manpower needs and employment opportunities in Item 1, Part A, above.)

   a. New teaching personnel requirements.

   b. New or additional occupational fields to be provided for.

c. Plans for replacement or purchase of new equipment.

d. Plans for improving facilities.

5. Describe the State's plans for the construction of area vocational education schools during the current year by

   a. Number and types of schools (in terms of section 8(2) of the 1963 Act).

   b. Educational level of program to be offered.

   c. Occupational fields to be provided for.

   d. Location and area (school district(s), county(ies), Statewide) to be served by the school.

   e. Relating this to Item 3, Part A.

6. Describe the State's current year plans for strengthening programs of

   a. Administration and supervision (State and local).

   b. Teacher training.

   c. Vocational guidance programs and services (State and local).

   d. Curriculum development.

   e. Research, experimental, and developmental programs.

   f. Evaluation of programs and activities.

VT 004 850
Industrial Arts Facilities.

Georgia State Dept. of Education, Atlanta
MF AVAILABLE IN VT-ERIC SET.
Pub Date - 67 15p.; Roughdraft, a section taken from "Guide for Planning and Construction of School Facilities in Georgia," August, 1967.

*INDUSTRIAL ARTS LABORATORIES; *SCHOOL PLANNING; EQUIPMENT STANDARDS; *BUILDING DESIGN; *FACILITY GUIDELINES; JUNIOR HIGH SCHOOLS; SENIOR HIGH SCHOOLS

General bases for facilities planning include course organization, program objectives, school organization, and school size. The number of shops necessary are based on grade level, enrollment, and periods of required course work. Guidelines are included which cover: (1) size, shape, and location, (2) walls, floors, and ceilings, (3) windows and doors, (4) illumination and painting, (5) equipment, and (6) utilities and heating. A suggested floor plan and an equipment list is included. (EM)

VT004850

ED0 31587

ROUGH DRAFT
A section taken from the
"Guide for Planning and
Construction of School
Facilities in Georgia"
August, 1967

INDUSTRIAL ARTS FACILITIES

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

Georgia State Department of Education
Jack P. Nix
State Superintendent of Schools

VT004850

INDUSTRIAL ARTS FACILITIES

Industrial Arts is a planned program of educational experiences requiring special facilities. The terms unit, limited general and comprehensive general are used to describe three major types of shop organization, housed in these facilities.

Bases for Facility Selection

The organization of each industrial arts shop (including classrooms, drafting rooms and laboratories) is influenced directly by the nature of the instruction and the stated objectives of the program. If the major objective is to provide a broad, industrial-technical exploratory type of program with emphasis on basic experiences and understanding related to industry, the shop should provide for experiences in several industrial arts instructional areas, the facility is organized as a comprehensive general shop. When the major objective is to provide a more concentrated emphasis, the course content is limited to a single area (such as general drafting) of industrial arts. A facility organized for instruction in a single general instructional area is a limited general shop.

At the high school level, a school in a small community that does not have sufficient enrollment to justify a series of limited general shops, it is more feasible to provide a comprehensive general shop. In larger high schools, the industrial arts facilities should consist of several limited general shops.

Comprehensive General Shop

A comprehensive general shop is organized and equipped to provide industrial-technical experiences which have been selected from a variety of activities in two or more instructional areas of industrial arts. The comprehensive general shop should have provisions for instruction in several areas such as drafting, electricity-electronics, metals, woods, power, and graphic arts.

The Limited General Shop

An industrial arts shop organized and equipped to provide instruction in two or more subareas of a single industrial arts instructional area is the limited general shop. As an example, a limited general shop in the area of graphic arts includes subareas such as bookbinding, linoleum block printing and offset printing.

The Unit Shop

An industrial arts shop organized and equipped for a single subarea of instruction such as cabinetmaking, machine shop or sheet metal is the unit shop. The major function of this type of organization is to provide a concentration in one industrial arts

subarea. Note: This facility is generally not recommended in Georgia except as a part of the limited general shop or the comprehensive shop.

School Organization

Junior High School - This type of school should contain one or more laboratory units providing for, at least, four of six areas of instruction (drafting, woods, metals, electricity, power, graphic arts). The instruction can be organized either in one laboratory or divided between or among two or more laboratories. When two or more laboratories are available, the pupils are scheduled through these laboratories to complete the industrial arts exploratory course (general industrial arts).

Senior High School - These schools are usually large enough to require two or more laboratory facilities. Frequently, more than four laboratory facilities are provided in large cities. A department with only two laboratory facilities should have each laboratory equipped for two areas of instruction and a four facility department would have each equipped for one instructional area. These instructional areas are general area courses which provide depth instruction as well as special courses in industrial arts education.

Junior-Senior High School - This type of school may include one or more laboratory units which are used for both junior and senior high school courses. A small school with a minimum laboratory and one teacher should be equipped for the general industrial arts course which provides for at least four of six areas of instruction (drafting, woods, metals, electricity, power, and graphic arts). The minimum facility should also be designed and provide for at least one of the general area courses such as general drafting, general metal, etc. The adjoining planning-drafting room should be of sufficient size (850 square feet minimum) to accommodate equipment and drafting desk for a general course in drafting.

In larger schools where two or more laboratories are required, four to six of the basic areas of instruction described for the minimum laboratory should be organized among these laboratories. These facilities should also provide for three or more general area courses.

Number of Shops Needed

Basic assumption used in determining the number of laboratory units needed are:

Grades 7 and 8:

24 pupils per class (maximum)
5 periods per week for 18 weeks (grade 7 and 8) or
5 periods per week for 36 weeks (grade 8)

Grades 9-12:

24 pupils per class (maximum)
5 periods per week for 36 weeks

Grade 9: 30% of the pupils (60% of boys) enrolled
Grades 10-12: 15% of the pupils (30% of boys) enrolled

Typical problem: How many laboratory units will be required for a junior-senior high school with an enrollment of 900 pupils in grades 7-12?

Grade	Number Pupils	Number Boys		Number Classes
7	200	100		5 (18 weeks)
8	200	100		5 (18 weeks)
			Number in Shop	
9	200X	30%	60	3
10-12	300X	15%	45	2

Total Number of Periods: 10 (2 laboratory units required).

The following recommendations and facility layout are intended as a guide to planning industrial arts facilities.

A. Size, Shape and Location

Total minimum floor area for shop laboratories, drafting rooms, classrooms, storage and finishing areas should be not less than 3,500 square feet. Of this total area, not less than 2,200 square feet should be used as a shop laboratory. A drafting room and electricity-electronics room should have not less than 850 square feet in each space.

Shop laboratories should be located on or above ground level and the floor space of shop laboratories should be on one level. Shop laboratories should be located where noise will cause the least interference to the rest of the school. A wing of the main building or a separate building near the main building is preferred.

A laboratory area, square or rectangular in shape, not exceeding a ratio of 1 to 2 is best. Avoid recessed areas, "L" and "T" shapes. All parts of the shop should be visible to the instructor.

Ceiling height should be at least 10 feet in laboratories (shops) when dust collectors are provided for wood machines; at least 12 feet without dust collectors.

The shop should not be a passage-way to other rooms. Each shop should be an integral unit.

The facilities should be designed so that additional laboratories, drafting rooms and classrooms could be added with a minimum of expense.

B. Walls, Floors and Ceilings

Drafting, planning and electricity-electronics room floors should be covered with tile. It is recommended that shop laboratory floors be covered with a non-skid tile. Colored concrete floors are generally satisfactory if finished smooth, hardened and sealed.

Conduit for machines should be laid before the floor is poured and allowed to terminate flush with the floor level with covered outlets at predetermined machine locations. Wall raceways containing 220-V 3 phase, 220-V single phase, and 110-V service should be provided as they permit flexibility in organizing or relocating machines and should provide sufficient power so that all machines can be operated at one time. Every outlet should be a grounded outlet. A magnetic control switch should be located for easy access - preferably near the office. This should be a part of the control system. Each machine circuit should be individually protected with a circuit breaker.

Walls should have a smooth finish. A wainscoating approximately 48" high and of a durable nature should be provided.

Provide glass (transparent) panels in partitions between shops and auxiliary rooms. Safety glass with wire mesh located in doors to auxiliary spaces will be satisfactory.

Partition walls should be non-bearing walls ceiling height, and of a semi-permanent construction to permit future alterations in floor plan.

Ceiling should be acoustically treated, or possess sound-absorbing qualities.

C. Windows and Doors

Window area should be approximately 20% of floor area. Use sash of the awning type when possible.

Windows should extend to the ceiling from a point 5' to 7' above the floor to permit more effective use of wall space. Where activities outside the building might interfere with shop classes, window sills should be above eye level. Select a northern exposure. Prismatic skylights, oriented northward, are effective.

Sunlight must be controlled, preferably before entering the shop, by means of overhanging roof or louvered reflectors. This is especially important in warm climates. Make provision for darkening certain areas for use of films and TV.

Provide only one door as the regular means of pupil entrance. Shops should have a 5'-6' double door, opening onto a service drive. Door locks within a shop should have a master key.

D. Illumination and Painting

A minimum of 30 feet candles at bench height should be provided in shops and a minimum of 50 feet candles in drafting and electricity-electronics laboratories. Local lighting should be provided where necessary. Secure the advice of lighting experts.

Semi-direct types of fixtures are satisfactory for shops. Diffused light is preferred. Fluorescent lighting used in and near an electronics shop should be furnished with a radiation filter to prevent interference with electronic equipment.

Light switches should be located near the main entrance to shops and drafting rooms. The lighting circuit should be separate from circuits for machines and wall convenience outlets.

Ceilings and walls should be painted with a flat, high reflection factor paint. Ceiling should be white with a reflection factor of 85% or above. Upper walls should be of a suitable color and with a reflection factor of 60%. Wainscoating should have a reflection factor 40 - 60%. Equipment in the shop should be painted to carry out a color scheme. Color schemes are available from paint manufacturers.

E. Equipment

Provide aisles of travel to commonly used areas. Insure that ample space exists around equipment, but do not distort the most effective arrangement for the occasional extra large piece. Locate machines so that operational procedures do not endanger others.

Machines used in sequential order should be arranged in the order of their operation. Machines should be mounted on celotex or leather and bolted to the floor sufficiently to keep them in position.

Locate the most frequently used equipment near the center of operation. Cut-off saws for wood and metal should be located near the storage rooms. Within a shop, locate related areas together, i.e., welding, forging, foundry, etc.

Utilize naturally lighted areas for precision equipment such as lathes, drawing tables, grinders, saws, etc., and consider direction of light with reference to operator position.

Allow sufficient floor space for assembly and demonstration areas.

Provide dust and shaving collectors for machines and exhausts for gases and fumes. Glazed terra-cotta tile, under the floor, works well. Shaving collectors should be outside of the shop.

Electrical service to machines should be controlled from a panel conveniently located in the shop. Extra circuit breakers should be provided for future additions.

Tools and equipment should be purchased with the sizes of the pupils in mind. Purchase high quality equipment, preferably of medium rather than light weight. Purchase only self-contained machines; not combination machines. Never run two or more machines from the same motor.

Planning and library centers should be located in an auxiliary room separated from the work area by a glass partition. Lighted display cabinets or cases should be provided outside of, but near the working area of the shop.

Lumber and metal bar stock, band iron, etc., may be stored in vertical bins with a resulting economy of space. Consider standard sizes of materials when planning storage.

F. Other Considerations

Provide adequate storage space for student projects, supplies. Provide adequate chalkboard and bulletin board space.

Provide a four station wash area, goose neck fixtures, with hot and cold water in each shop lab. Provide drinking fountain and slop sink in shop area. Provide toilets if building is detached from other school building.

Water, gas, and compressed air (80 - 100 lbs.) should be provided. Air compressors should be located outside the shop area and at least 25' from the nearest spray painting outlet. Air lines should pitch back to the compressor. Provide finishing room with dry type spray booth and regulated compressed air.

Locate convenience outlets in the walls of the shop at 10-12' intervals and at work benches. Wall outlets should be 42" above the floor. Outlets for soldering irons and other heating devices should be equipped with pilot lights.

Unit type heaters mounted near the ceilings are generally suitable. Heating and cooling controls for shops should be separate from the central control system for the rest of the school. Air conditioning should be provided, if not, provide fans of sufficient

size to properly ventilate the facilities. The fans may be located in the ceiling or on an outside wall.

A sounding unit of the school fire alarm and period change systems should be installed in each shop. Provide appropriate fire extinguishers and first aid cabinets.

Provision should be made for storage of cleaning equipment on an organized basis.

A signal bell operated independently in the shop laboratory should be provided.

G. Planning Individual Laboratories

When the kind of laboratory facilities has been determined, the detailed floor plan and equipment locations should be developed. This planning should be a joint effort by the principal, industrial arts teacher, local supervisor, architect, and industrial arts consultant of the State Department of Education.

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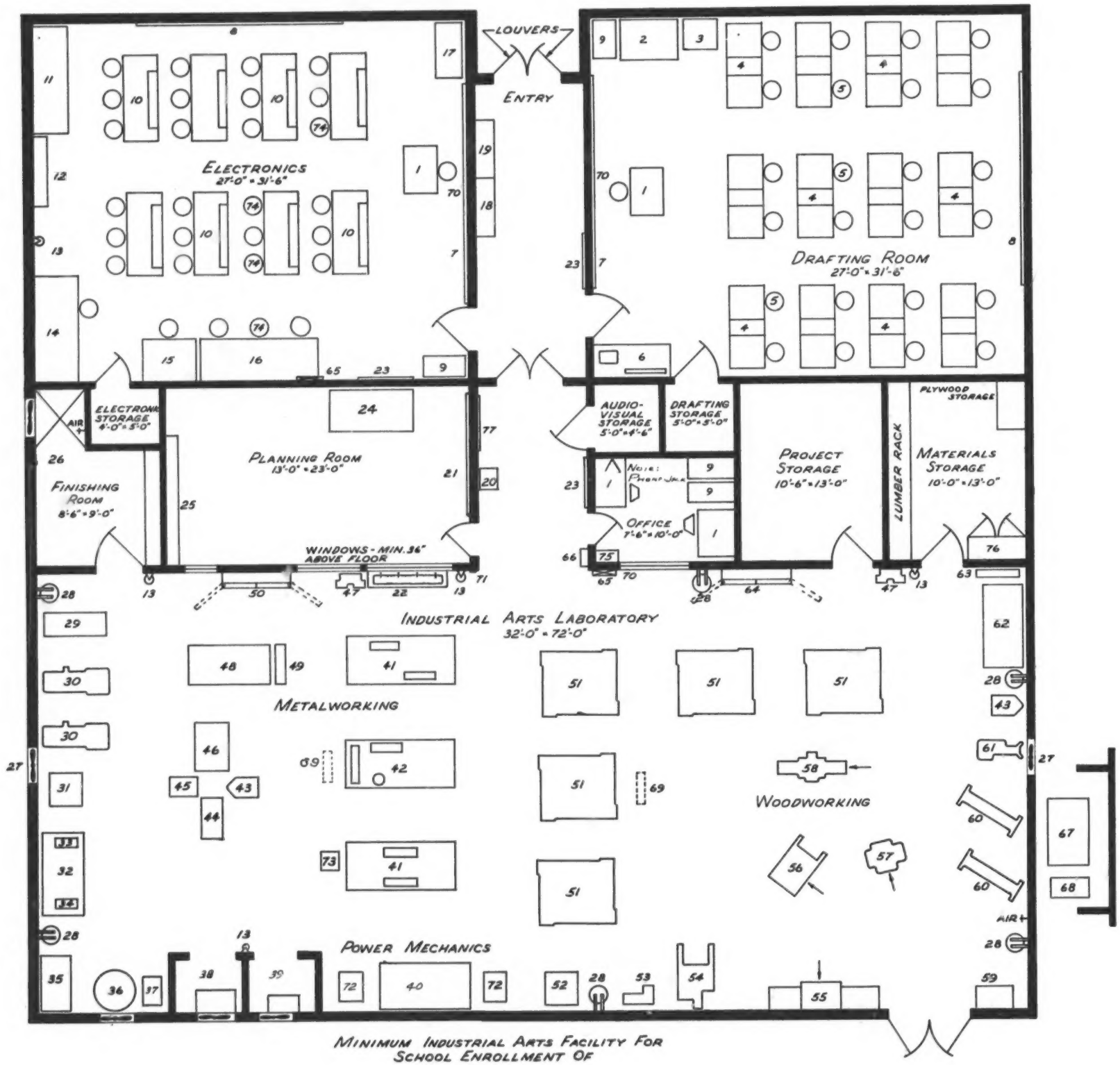
V. School Shop Development, Research and Planning, Delta Power Tool Division, Rockwell Manufacturing Company, Pittsburg, Pennsylvania, 1966.

I. Consultant's Services

State Consultant for Industrial Arts Education
State Department of Education
Atlanta, Georgia 30334



MINIMUM INDUSTRIAL ARTS FACILITY FOR SCHOOL ENROLLMENT OF 750

RECOMMENDED LAYOUT

EQUIPMENT INDEX FOR INDUSTRIAL ARTS FACILITY

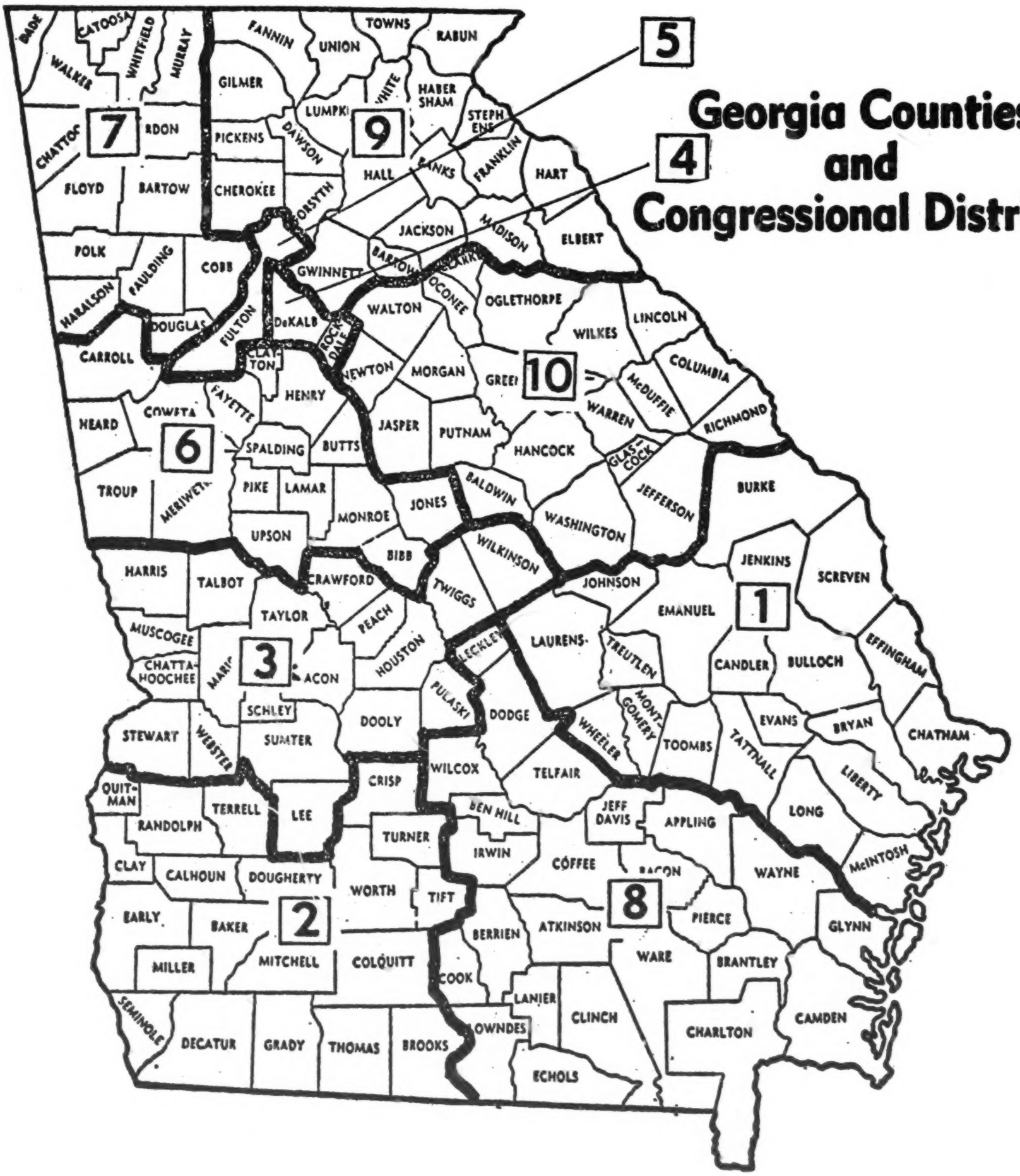
1. Desk, teacher.
2. Layout table.
3. Tracing table.
4. Drafting tables, dual type with storage, if tables without storage are purchased additional storage cabinets will be needed in rear of room.
5. Stools, drafting.
6. Sink enclosed with storage cabinets below and work surface above for reproduction equipment. 110-V outlet 36" above floor level.
7. Chalkboard, 16 ft., bottom located at least 36" from floor level.
8. Tack board, 16 ft., bottom located at least 40" above floor level.
9. File cabinet, legal size.
10. Electrical tables with storage below and power supply mounted on top, 110-V electrical connection in floor for each.
11. House and industrial electrical work area, locker storage below, three 110-V outlets 36" above floor level, one 220-V outlet.
12. Tool panel, electrical tools.
13. Fire extinguisher, appropriate type as located.
14. Small motors work surface with storage cabinets below, 110-V outlets 36" above floor level along the wall.
15. Electroplating work area, 110-V outlets, 36" above floor level.
16. Electronics test area with storage cabinets below, four 110-V duplex outlets along wall 36" above floor, one 220-V outlet 36" above floor.
17. Demonstration panel, 110-V outlets 36" above floor level.
18. Coat rack with book storage shelf above.
19. Display case with glass front and light inside, outlet needed.
20. Water fountain, 110-V outlet.
21. Chalkboard, 8 ft., 36" above floor level.
22. Wash area, with four wash faucets with hot and cold water, storage below for janitor supplies.
23. Tack board, 4 ft. long, 36" above floor level.
24. Planning table.
25. Book shelves.
26. Finishing area complete with spray booth, compressed air outlet, exhaust fan and hood, and work surface. Location of finishing room may be relocated after consulting the State Consultant for Industrial Arts, State Department of Education.
27. Exhaust fans located high on the wall (May be located in roof) are required for ventilation if facility is not air conditioned.
28. Broom rack with trash can below, provided in locations as shown on plan.
29. Metal spinning lathe, 220-V, 3 ph.
30. Metal lathe, 220-V, 3 ph.
31. Milling machine, 220-V, 3 ph.

32. Soldering table, three 110-V outlets 36" above wall.
33. Spot welder, 220-V 3 ph outlet 36" above floor level.
34. Gas furnace, provide natural gas outlet and 110-V outlet.
35. Foundry work ben.
36. Furnace, curcible, provide natural gas outlet and 110-V outlet.
37. Heat treating furnace, provide natural gas outlet.
38. Welding table for arc welder, 220-V outlet in back wall, provide exhaust fan and hood over welding area.
39. Welding table, gas, provide exhaust and hood above welding area.
40. Power mechanics work area, three110-V outlets 36" above floor level.
41. Work table, metal, 42" X 96" with 2 stake plants, lockers below.
42. Work bench, metal, 42" X 96" with storage shelves below for sheet metal, and combination mach, bar folder, and finger brake mounted on top.
43. Drill press, 220-V, 3 ph.
44. Metal shaper, 220-V, 3 ph.
45. Power hacksaw, 220-V, 3 ph.
46. Squaring shear, no power needed.
47. Grinder, 220-V, 3 ph.
48. Work bench, 36" X 6 ft., with lockers below.
49. Slip form roll, floor mounted.
50. Tool panel, for metal working tools, lock type.
51. 4 Station wood work bench, complete with 4 vises, storage lockers below, provide 110-V outlet dropped from above table to 4 ft. above floor line.
52. Wood shaper, 220-V, 3 ph. connect to dust and chip system.
53. Belt and disc sander, 220-V, 3 ph, connect to dust collector system.
54. Bandsaw, 220-V, 3 ph, connect to dust and chip system.
55. Overarm saw, 220-V, 3 ph, connect to dust and chip system.
56. Tilting arbor saw, max. size 10", 220-V, 3 ph, connect to dust and chip system.
57. Wood surfacer, 220-V, 3 ph, connect to dust and chip system.
58. Jointer, 6-8", 220-V, 3 ph, connect to dust and chip system.
59. Lumber rack, vertical.
60. Wood lathe, 220-V, 3 ph, connect to dust and chip system.
61. Jig saw, 110-V, connect to dust and chip system.
62. Portable glue table.
63. Clamp rock.
64. Tool storage, woodworking tools, lock type.
65. Recommended location for power panels, may be relocated.
66. First aid cabinet.
67. Dust and chip collector unit, provide adequate wiring for unit installed may be relocated.
68. Air compressor, provide adequate wiring for unit installed, may be relocated, pipe air to finishing room and provide at least one additional outlet in shop area as marked.
69. Floor openings for dust collector system for cleaning floor. Make provisions for closing and opening hole.
70. Clock outlet, 8 ft. above floor level or other appropriate location.
71. Location for push button for clean up buzzer. Clean up buzzer should be located on inside wall directly above switch.

72. Storage racks for power mechanic parts, etc.
73. Metal bender.
74. Electrical table stools.
75. Teachers' coat rack.
76. Storage cabinets, small supplies.
77. Mirror, bottom 48" above floor.

Notes:
(1) Windows are not shown in plan since size and type will depend on architectural design. Window sills should be from 5-7 ft. above floor level.
(2) Exhaust pipes for dust and chip collector should be under floor.
(3) Office and small storage rooms can be deleted and toilets added in this space if unit is detached.
(4) Skylights may be used for natural light in shop laboratory.
(5) Doors opening into laboratory should have polished wire glass in upper half of door.

Georgia Counties and Congressional Districts



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*TIRE AND TUBE INDUSTRY

This survey is one of a series of manpower studies designed to provide the United States Employment Service (USES) and its affiliated state employment services with labor market information needed to carry out operating responsibilities. A survey of 46 individual establishments in the tire and inner tube industry was made to ascertain the role of manpower in the industry. Increased mechanization has contributed to rising production and declining employment. The industry's principal employment center is the North Central region, with Ohio alone employing 46 percent of the industry workers. Shortage occupations have remained virtually non-existent with only a few job openings for highly qualified professional and skilled workers. Tire tube workers, among the highest paid industrial workers, received an average hourly wage of $3.25 in 1963, compared to an average of $2.46 per hour for all manufacturing workers. Although the industry's employment dropped between March 1963 and January 1964 by an estimated 2,600, or 3 percent, the decline was not sufficient to cause changes in the classifications of the industry's principal area of employment. On the other hand, should a significant downturn occur in the industry, the smaller geographic areas in which tire employment is a major portion of the labor force could be in serious trouble. (HC)

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INDUSTRY MANPOWER SURVEYS No. 107

TIRES and TUBES

Labor Market Developments

March 1964

U.S. DEPARTMENT OF LABOR
W. Willard Wirtz, Secretary
MANPOWER ADMINISTRATION
BUREAU OF EMPLOYMENT SECURITY
Washington, D.C. 20210

INDUSTRY MANPOWER SURVEYS

The current survey is one of a series of manpower studies prepared by the United States Employment Service of the Bureau of Employment Security. Other reports published since January 1956 are listed below.

Aircraft and Parts Manufacturing: No. 85, February 1958.

Bituminous Coal Mining: No. 106, December 1963.

Blast Furnaces, Steel Works, and Rolling Mills: No. 78, May 1956; No. 82, March 1957; No. 86, April 1958; No. 90, December 1958; No. 96, May 1960; No. 100, May 1961.

Broadwoven Fabrics--(All Fibers): No. 83, May 1957; No. 89, November 1958.

Chemicals: No. 84 (Scientific and Engineering Occupations in the Chemical Industry), December 1957.

Communication Equipment Manufacturing: No. 77, April 1956.

Computing Machines: No. 98, January 1961.

Farm Machinery and Tractors: No. 81, March 1957; No. 87, (article in August 1958 LABOR MARKET AND EMPLOYMENT SECURITY).

Footwear: No. 104, September 1962.

Furniture: No. 74, January 1956; No. 91, May 1959.

Household Appliances: No. 92, June 1959.

Household Machinery: No. 75, February 1956.

The Machine Tool Industry: No. 76, March 1956; No. 80, December 1956; No. 88, October 1958.

Meat Packing: No. 101, September 1961.

Missiles and Aircraft: No. 93, August 1959; No. 95, April 1960; No. 102, January 1962; No. 105, May 1963.

Newspapers and Commercial Printing: No. 94, December 1959.

Petroleum Refining: No. 97, December 1960.

Plastics: No. 99, March 1961.

Telephone Communication: No. 103, May 1962.

U. S. DEPARTMENT OF LABOR
Bureau of Employment Security
United States Employment Service
Washington, D. C. 20210

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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INDUSTRY MANPOWER SURVEYS No. 107

TIRES and TUBES

Labor Market Developments

U.S. DEPARTMENT OF LABOR
MANPOWER ADMINISTRATION
BUREAU OF EMPLOYMENT SECURITY

TIRES AND TUBES

Foreword

The industry covered by this survey is defined as Tires and Inner Tubes, Standard Industrial Classification Code 3011. The analysis is based in part on 46 individual establishment reports gathered by local offices of State agencies affiliated with the Bureau of Employment Security. The reporting units accounted for most of the industry's total employment.

The major purpose of this survey is to provide the public employment service system with labor market information needed to carry out its operating responsibilities. These include guidance and counseling, determination of job shortage, job development, impact of industry trends on area employment, development of more effective employer relations, evaluation of training programs as they affect displaced industry workers, and local area impact of imports for implementation of the Trade Expansion Act.

In addition, these industry statements provide information for discharging the responsibilities of the United States Employment Service at the national level for the Congress; for working with the Surplus Manpower Committee of the Office of Emergency Planning, the Department of Defense, and other Government agencies; and for replying to informational requests from numerous private sources.

The analysis was prepared by Kenneth D. Bell, under the direction of Norman Medvin, Chief, Branch of Skill and Industry Surveys, Office of Manpower Analysis and Utilization of the United States Employment Service.

BUREAU OF EMPLOYMENT SECURITY - Robert C. Goodwin, Administrator
U.S. EMPLOYMENT SERVICE - Louis Levine, Director

CONTENTS

	Page
Foreword	ii
Highlights	1
Output Rises	3
Imports a Minor Influence	5
Ohio Loses, South Gains Employment	6
Recent Layoffs in Areas of Heavy Unemployment	7
Few Firms Report Occupational Shortages	7
Industry's Workers Among Highest Paid in Nation	10

STATISTICAL TABLES

Table 1.	Average Annual Employment in the Tires and Inner Tubes Industry and All Manufacturing Industries, 1955-1963	5
Table 2.	Employment in Tires and Inner Tubes by Region and Selected States, March 1952 and March 1963	6
Table 3.	Employment in Tires and Inner Tubes Establishments in Selected Labor Market Areas, March 1962 and March 1963	8

APPENDIX

Table A.	Index of Production in the Tires and Inner Tubes Industry, 1955-1963	13
Table B.	New Capital Expenditures in the Tires and Inner Tubes Industry and All Manufacturing Industries, 1951-1962	13
Table C.	Output per Man-hour in the Tires and Inner Tubes Industry, 1950-1960	14
Table D.	Value of Tire and Inner Tube Shipments, 1958-1962	14
Table E.	Average Hours and Earnings of Production Workers in the Tires and Inner Tubes Industry and in Total Manufacturing, 1957-1963	15
Table F.	Entry Wage Rates for Male Production Workers in Tires and Inner Tubes Establishments, March 1963	15

TIRES and TUBES

March 1964

HIGHLIGHTS

Increased mechanization spurred by extensive capital outlays has contributed to rising production and declining employment in the tires and tubes industry, according to a recent survey of the United States Employment Service and its affiliated State agencies. Per employee expenditures for new plant and equipment in this industry were more than double the comparable expenditure for manufacturing industries as a whole.

Increased technological improvements have affected manpower requirements in virtually every phase of the industry's operations. As a consequence the number of production workers since 1955 has decreased by almost 22,000, despite a significant increase in tire production. Nonproduction workers also declined in the same period, but at a much slower rate.

Recent industry layoffs did not contribute substantially to serious labor surpluses since the principal layoffs were relatively small and occurred in major labor market areas. Moreover, industry employment registered gains in almost all of the small areas having substantial or substantial and persistent unemployment.

The industry's principal employment center is the North Central region with 64 percent of the 96,000 workers in establishments covered in a special Employment Service survey of this industry conducted about a year ago. Among the individual States, Ohio alone employed 46 percent of the industry's workers. About three-fourths of the industry's employment was in 18 major labor market areas of the Nation with Akron accounting for 55 percent of the 18-area total of 73,900.

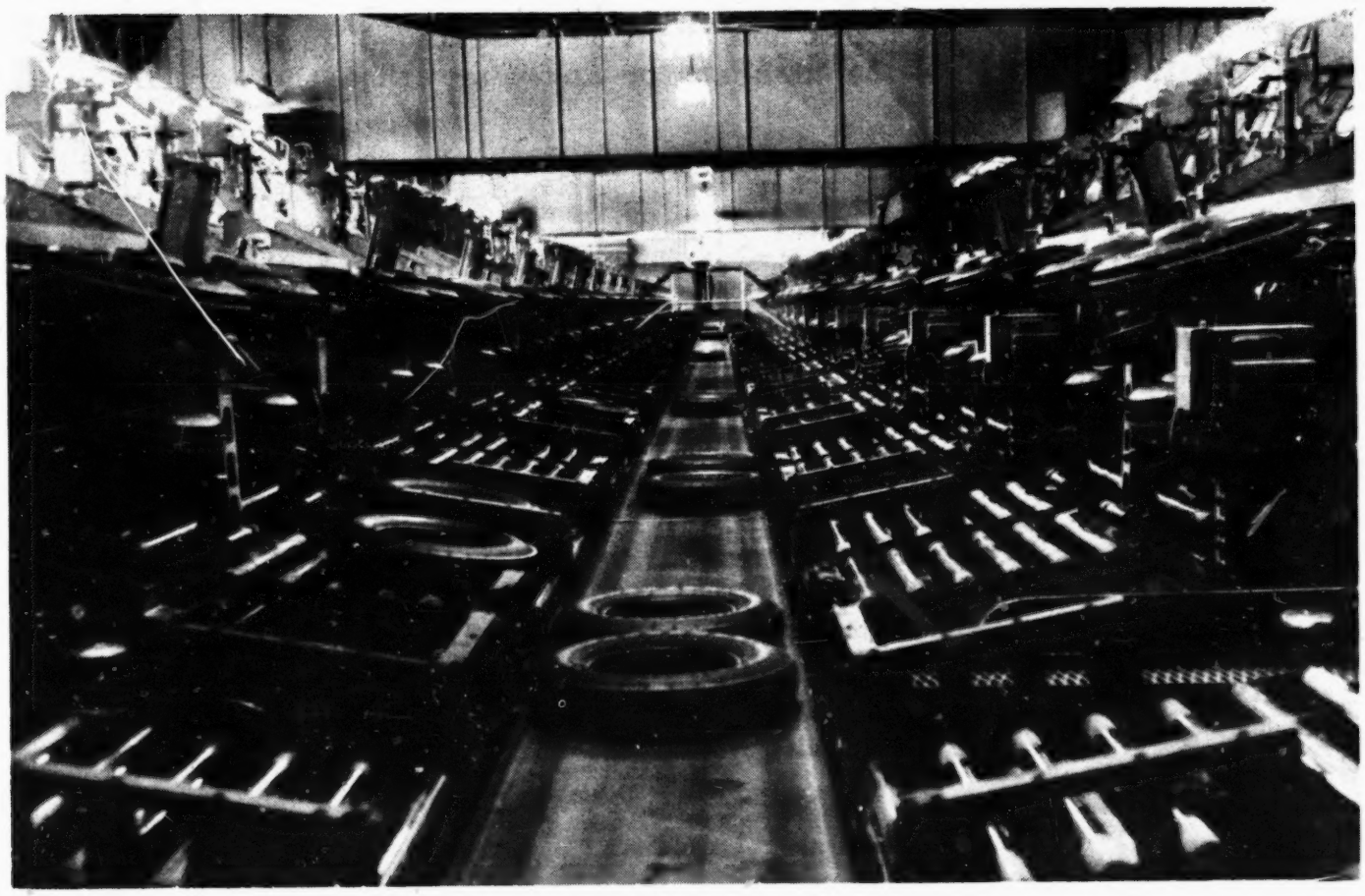
Regional distribution of the industry's workers has been shifting in favor of the South. Between March 1952 and March 1963 employment increased 12 percent in the South while in the North Central and West, employment declined, respectively, 23 percent and 27 percent. A slightly lower decline of about 18 percent was reported for the Northeast.

Shortage occupations have remained virtually non-existent. A few job openings, however, were reported for highly qualified professional and skilled workers. Difficulty in filling these positions was generally attributed to national shortages or rigid job specifications.

Although changing technology has reduced the physical requirements for many plant operations, employment opportunities for women have remained limited. Of the industry's total workers, only 13 percent are women,

compared to 32 percent in other rubber products, and 37 percent for all non-durable goods industries. In the past four years, the number of female workers in the industry declined about 18 percent, from 15,200 in 1959 to 12,500 in 1963.

The industry's production workers are among the highest paid of the Nation's factory workers. For 1963, tire and tube workers received an average hourly wage of $3.25, compared to an average of $2.46 per hour for all manufacturing workers. As a result of higher hourly earnings, the average weekly wage for tire and tube workers during 1963 amounted to $131.30--about $34.00 higher than that paid by manufacturers of other rubber products and close to $32.00 more than the average weekly wage paid to all manufacturing workers.



FIRST TRIP - A continuous conveyor carries just-cured tires from the curing presses. The double row of tires just behind the presses, or molds, are going through an inflation period to complete the curing process.

Photo Courtesy of Goodyear Tire and Rubber Company

Output Rises

The tires and tubes industry has been characterized by declining employment, rising production, and increased technology over a period spanning at least the last decade. Since 1955, the industry's employment declined nearly 23,000, or 19 percent, to an average of about 96,000 in 1963 (table 1). The relative decline in man-hours was even greater because of a reduction in the length of the workweek.

Despite the overall employment decline, the Federal Reserve index of tire and inner tube production increased over 20 percent between 1955 and 1963 (table A, Appendix). Most of the increase came from passenger tires, which rose more than 24 percent. The 1963 boom year in the automobile industry pushed shipments of original equipment tires for passenger cars alone to

almost 42.0 million units, the highest since 1955. With motorists setting new travel records, demand also continued strong for passenger car replacement tires. Production of truck and bus tires continued upward, reaching an index of 122.0 in 1963--the highest for any year since the Korean War.

Emphasis upon modernization of plant and equipment is shown by the amount of new capital invested over past years. Between 1951 and 1962, new capital expenditures increased almost 90 percent--from $58.0 million to $110.2 million annually (table B, Appendix). The 1962 expenditure represented an investment of $1,275 per employee, more than double the comparable average for 1951. Moreover, the per employee capital expenditure increase in the tires and tubes industry between 1951 and 1962 was more than four times that for manufacturing as a whole.

Technological innovations, arising from increased expenditures, have affected manpower requirements in virtually every phase of the industry's operations--from receiving and storing of raw materials to warehousing and storing of the finished product. Despite the problems posed by variations in the types of tires as well as in processing materials, particularly in the tire building phase, completely automatic tire building machines have, nevertheless, been installed in some plants. Semi-automatic tire curing equipment and continuous conveyor systems have reduced unit labor time in curing operations (see illustrations pages 3 and 9). New tire testing equipment and facilities have also been introduced. In addition, a fully automatic, electronic system for retreading car and truck tires may be used in larger plants where the volume of production justifies the cost of such equipment. Also in the line of product development, changes such as the reduction in the number of plys from four to two increases quality while reducing labor requirements.

Increased mechanization and plant modernization has had a significant effect upon output per man-hour in the tires and tubes industry. Between 1955 and 1960, output per employee man-hour rose 25 percent, while output per man-hour of production workers increased about 30 percent according to the Bureau of Labor Statistics (table C, Appendix). Estimates through 1962 indicate further increases in output per man-hour since 1960--amounting to about 14 percent for all employees and 13 percent for production workers. Reflecting this rise in productivity, the number of production workers declined almost 22,000, or 24 percent, between 1955 and 1963. At the beginning of this period, over 76 percent of the industry's workforce were production workers; by 1963 the proportion had dropped to 72 percent. This relative decline was in line with the employment trend for manufacturing activities as a whole, where the production worker segment represented a drop of 5 percentage points--from 79 percent in 1955 to 74 percent in 1963.

Concerned by the impact of changing technology and other problems affecting employment and worker status, the United Rubber, Cork, Linoleum and Plastic Workers Union has proposed the establishment of company-wide joint-study committees to be composed of union and management members. The purpose of these committees would be to study problems of mutual interest to both union and management. Major rubber companies have concurred in the merits of the proposal, and as of early May 1964, it was expected that such committees would be established soon.

Imports a Minor Influence

American tire exports have consistently exceeded the value of imports by a ratio of more than three to one. In 1962, U. S. exports were valued at $78 million compared to imports of $24 million. The value of imports was very small--less than 1 percent--in terms of total domestic tire shipments which amounted to $2.4 billion in 1962 (table D, Appendix).

In addition to tariffs and other trade restrictions, low exports reflect the fact that American-owned plants and sales outlets around the world supply a large segment of the foreign market. Presently, 92 of the 112 tire plants outside the United States and the Soviet bloc are owned by or affiliated with U. S. tire companies, according to the Business and Defense Services Administration of the Department of Commerce.

Although domestic sales of foreign cars have increased in recent years, tire imports have remained relatively low. This can be explained by the fact that American tire manufacturers have begun to produce tires for foreign automobiles, and also because some tires produced for domestic cars are interchangeable with foreign models.

Table 1.--Average Annual Employment in the Tires and Inner Tubes Industry and All Manufacturing Industries
1955-1963
(Thousands)

	Tires and inner tubes			All manufacturing		
Year	All employees	Production workers	Percent production workers of total	All employees	Production workers	Percent production workers of total
1955	118.5	90.5	76.4	16,882	13,288	78.7
1956	114.5	87.0	76.0	17,243	13,436	77.9
1957	112.9	85.1	75.4	17,174	13,189	76.8
1958	104.1	76.6	73.6	15,945	11,997	75.2
1959	104.5	77.0	73.7	16,675	12,603	75.6
1960	104.8	76.8	73.3	16,796	12,586	74.9
1961	97.7	70.6	72.3	16,327	12,085	74.0
1962	99.2	72.1	72.7	16,859	12,494	74.1
1963	96.0	68.9	71.8	17,035	12,585	73.9
Net change (No. of workers) 1955-1963	-22.5	-21.6	--	+153	-703	--
Percent change 1955-1963	-19.0%	-23.9%	--	+0.9%	-5.3%	--

Source: Bureau of Labor Statistics.

Ohio Loses, South Gains Employment

The regional distribution of tire and tube workers has been shifting in favor of the South, where tire producers are closer to their sources of raw materials and expanding markets. Between March 1952 and March 1963 employment increased 12 percent in the South, while in the North Central and West, employment declined, respectively, 23 percent and 27 percent. A slightly lower decline of about 18 percent was reported for the Northeast.

Despite the shift, however, over 60 percent of the industry's employment in 1963 was in the North Central States, with Ohio alone accounting for 44 percent of the Nation's total tire and tube workers (table 2). The South employed 19 percent of the industry's workforce while the Northeast and West employed 12 percent and 8 percent, respectively.

About four-fifths of the surveyed employment was located in seven States: Alabama, California, Iowa, Michigan, Ohio, Pennsylvania, and Tennessee.

Table 2.--Employment in Tires and Inner Tubes
by Region and Selected States
March 1952 and March 1963

Region and selected States 1/	March 1963		March 1952 2/		Change: March '52 - March '63	
	Total	Percent distribution	Total	Percent distribution	Net	Percent
Total, U. S. 3/	98,100	100.0	120,500	100.0	-22,400	-18.6
Northeast:	11,648	11.8	14,181	11.8	-2,533	-17.9
Pennsylvania	5,970	6.0	6,216	5.2	-246	-4.0
North Central:	61,037	61.6	78,863	65.6	-17,826	-22.6
Ohio	43,852	44.3	62,271	51.8	-18,419	-29.6
South:	18,430	18.6	16,391	13.6	+2,039	+12.4
Alabama	4,781	4.8	4,623	3.8	+158	+3.4
West:	7,899	8.0	10,856	9.0	-2,957	-27.2
California	7,899	8.0	10,856	9.0	-2,957	-27.2

1/ Source: Regional and State detail--Bureau of Employment Security, "Employment, Wages and Contributions Report," ES-202. Industry employment in the following States not listed because of disclosure of individual firm data in either March 1952 or March 1963: Arkansas, Connecticut, District of Columbia, Florida, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, New Jersey, New York, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, and Wisconsin.

2/ Regional and State employment for 1952 adjusted for change in industry classification in 1957.

3/ Source: Bureau of Labor Statistics.

Recent Layoffs in Areas of Heavy Unemployment

About three-fourths of the Nation's 96,000 tire and tube workers in surveyed establishments were employed in 18 major labor market areas in March 1963, with Akron, the principal industry center, representing approximately 55 percent of the 18-area total. Other important areas include: Los Angeles-Long Beach, Detroit, Philadelphia, Des Moines, and Memphis; however, the combined employment of these five areas was only about half the 40,500 tire and tube workers employed in Akron plants.

Although the industry's employment dropped between March 1963 and January 1964 by an estimated 2,600, or 3 percent, the decline was not sufficient to cause changes in the classifications of the industry's principal areas of employment. The majority of tire and tube workers continued to be employed in areas of relatively low or moderate labor surplus, including the Akron area where the industry's workforce also declined about 3 percent in the corresponding period.

The industry's layoffs during the 12 months ending March 1963 did not create a serious manpower surplus, primarily because the principal layoffs were relatively small and occurred in major labor market areas (table 3). Nevertheless, it is of interest that the bulk of the decline in tire and tube employment, small as it was, took place in those major areas least able to afford it, that is, those with already heavy unemployment. Fortunately, in the smaller and very small labor market areas, where there is substantial or substantial and persistent unemployment, the number of tire and tube workers actually increased during the year ending March 1963.

On the other hand, should a significant downturn occur in the tire and tube industry, the smaller areas in which tire employment constitutes a major portion of the area's labor force could be in serious trouble. Similarly, a sharp downturn in Akron, where tire and tube workers dominate the area's economy, could have serious implications.

Few Firms Report Occupational Shortages

Few surveyed establishments are experiencing manpower recruitment difficulties, primarily because of the large number of workers on lay-off status who are subject to recall as needs arise. As a result, the total number of occupational shortages is insignificant. Only eight firms expressed difficulty in finding a limited number of qualified job applicants, particularly in professional occupations such as engineering and chemistry. Difficulty in filling these positions was generally attributed to national shortages. Other hard-to-fill openings, confined to one or two plants, included journeymen tool and die makers, pipefitters, and maintenance machinists and mechanics.

Table 3.--Employment in Tires and Inner Tubes Establishments in Selected Labor Market Areas March 1962 and March 1963

Area	Employment March 1963			Employment March 1962		
	Number	Percent distribution	Area classification	Number	Percent distribution	Area classification
Total, U. S. 1/	98,100	100.0	--	98,700	100.0	--
Total selected areas:	95,962	97.8	--	96,061	97.3	--
Areas with relatively low or moderate unemployment:	61,016	62.2	--	60,291	61.1	--
Akron	40,517	41.3	C	39,999	40.5	C
Los Angeles-Long Beach	6,600	6.7	C	6,863	7.0	C
Other areas 2/	13,899	14.2	--	13,429	13.6	--
Areas with substantial or substantial and persistent unemployment:	21,994	22.4	--	22,939	23.2	--
Major labor market areas: 3/	13,587	13.8	D	14,775	15.0	D
Philadelphia	4,818	4.9	D	5,112	5.2	D
Smaller and very small labor market areas: 4/	8,407	8.6	--	8,164	8.2	--
Unclassified areas: 5/	12,952	13.2	--	12,831	13.0	--

1/ Bureau of Labor Statistics.
2/ Includes employment in the following labor market areas: Baltimore, Dayton, Des Moines, Harrisburg, Indianapolis, Memphis, Nashville, New Haven, Saginaw, San Francisco-Oakland, and St. Louis.
3/ Includes employment in the following labor market areas: Buffalo, Detroit, New Bedford, and Springfield-Chicopee-Holyoke.
4/ Includes employment in the following labor market areas: Cumberland (Md.), Gadsden (Ala.), Indiana (Pa.), Kent-Ravenna (Ohio), Mayfield (Ky.), and Miami (Okla.).
5/ Includes employment in areas not currently classified by the Bureau of Employment Security.

Source: Bureau of Employment Security.

GREEN TIRES - A "green," or uncured tire is loaded on a semi-automatic tire press. As the curing time is completed, the finished tire is ejected from the back of the press and one of the green tires is inserted for the next cycle.

Photo Courtesy of Goodyear Tire and Rubber Company

Production workers are generally hired at the unskilled level and promoted through on-the-job training. Recruitment is frequently conducted at the gate or through recommendations of present employees. State employment security agencies placed 17 percent of all new employees in surveyed establishments in a single month in 1963. Many plants require applicants for production jobs to meet rigid qualifications, including a strict physical examination, as well as height, weight, and age specifications. Some companies also require prospective production workers to pass manual dexterity tests.

Although changing technology has reduced the physical requirements for many plant operations, employment of female workers has remained limited. Of the industry's total employment, only 13 percent are women, compared to 32 percent in plants producing other rubber products, and 37 percent for all non-durable goods industries. In addition, the number of women employed in tires and tubes plants has declined both in number and as a percentage of total employment. In 1959 the industry employed 15,200 female workers--representing about 15 percent of total employment; by the end of 1963, women had declined in number to 12,500, or some 13 percent of total employment.

Industry's Workers Among Highest Paid in Nation

The industry's production workers are among the highest paid of the Nation's factory workers. For 1963 tire and tube workers received an average hourly wage of $3.25, compared to an average of $2.46 per hour for all manufacturing workers (table E, Appendix). As a result of higher hourly earnings, the average weekly wage for tire and tube workers during 1963 amounted to $131.30--nearly $32.00 above the comparable wage for all manufacturing workers. During the past six years, 1957-1963, production workers in tires and tubes received an average increase of 23 percent, including premium pay, for a week's work, compared to an average rise of 22 percent for all manufacturing workers.

More than half the firms surveyed by State employment security agencies in March 1963 were offering an entry wage rate of at least $1.95 per hour for male workers (table F, Appendix). Firms located in the Northeast and North Central regions generally reported higher entry wages than plants in other areas; between 70 to 80 percent of the plants offered at least $1.95 per hour. In the West, half of the firms had an entry wage of $1.95 per hour or higher. Plants throughout the South generally offered the lowest entry rates, with less than one-third of the reporting establishments offering $1.95 per hour or more.

APPENDIX

APPENDIX

Table A.--Index of Production in the Tires and Inner Tubes Industry
1955-1963
(1957-59 = 100)

Year	Tires and tubes	Auto tires	Truck and bus tires
1955	106.4	105.5	108.1
1956	97.4	91.9	107.2
1957	99.2	100.6	96.7
1958	90.6	89.2	93.3
1959	110.2	110.2	110.0
1960	110.2	113.2	104.0
1961	106.1	111.3	96.6
1962	122.1	126.7	113.8
1963	127.9	131.2	122.0

Source: Federal Reserve Board.

Table B.--New Capital Expenditures in the
Tires and Inner Tubes Industry and All Manufacturing Industries
1951-1962

	Tires and tubes			
Year	New capital expenditures ($1,000)	New capital expenditures per employee	New capital expenditures ($1,000)	New capital expenditures per employee
1951	$58,008	$629	$7,205,059	$471
1952	72,897	745	7,525,923	478
1953	79,733	822	7,541,606	452
1954	67,430	727	7,816,752	500
1955	69,056	700	7,853,494	481
1956	86,452	880	10,737,861	643
1957	91,029	940	11,408,069	686
1958	72,269	808	9,075,759	590
1959	72,605	767	9,012,336	561
1960	133,443 1/	1,450 1/	9,919,138	614
1961	106,559	1,236	9,415,852	598
1962	110,155	1,275	9,983,855	617

1/ The sharp rise reflects unusually heavy outlays for new machinery.
Source: Bureau of the Census.

APPENDIX

Table C.--Output per Man-Hour in the Tires and Inner Tubes Industry
1955-1960
(1957-59 = 100)

	Output per--			
Year	Employee	Production worker	All employee man-hour	Production worker man-hour
1955	95.6	93.9	89.2	86.2
1956	88.8	88.2	89.2	88.7
1957	94.3	94.1	93.9	93.8
1958	96.6	97.5	97.9	99.0
1959	109.2	108.4	108.4	107.4
1960	111.9	112.7	111.6	112.1

Source: Bureau of Labor Statistics.

Table D.--Value of Tire and Inner Tube Shipments
1958-1962
(Millions of dollars)

	Value of shipments						
Year	Total	Passenger car and motorcycle	Truck, bus, and off-the-road	Other 1/	All inner tubes	Imports 1/	Exports 1/
1958	$2,145	$1,077	$602	$366	$100	$13	$95
1959	2,424	1,215	696	400	113	26	86
1960	2,365	1,257	640	370	98	21	92
1961	2,254	1,213	589	359	93	21	74
1962	2,368	1,277	640	354	98	24	78

1/ Includes tread rubber, tire sundries, and repair materials in addition to other tire and inner tube shipments.

Source: Bureau of the Census.

APPENDIX

Table E.--Average Hours and Earnings of Production Workers in the Tires and Inner Tubes Industry and in Total Manufacturing 1957-1963

Year	Average weekly earnings		Average weekly hours		Average hourly earnings	
	Tires and tubes	Total manufacturing	Tires and tubes	Total manufacturing	Tires and tubes	Total manufacturing
1957	$107.04	$81.59	40.7	39.8	$2.63	$2.05
1958	105.38	82.71	38.6	39.2	2.73	2.11
1959	120.93	88.26	41.7	40.3	2.90	2.19
1960	116.62	89.72	39.4	39.7	2.96	2.26
1961	121.88	92.34	39.7	39.8	3.07	2.32
1962	130.47	96.56	40.9	40.4	3.19	2.39
1963	131.30	99.38	40.4	40.4	3.25	2.46

Source: Bureau of Labor Statistics.

Table F.--Entry Wage Rates for Male Production Workers in Tires and Inner Tubes Establishments March 1963

Rate per hour	Percent of reporting establishments:				
	Total	Northeast	North Central	West	South
$1.15 - $1.54	11	11	6	--	23
1.55 - 1.94	31	11	22	50	46
1.95 - 2.34	45	56	61	33	23
2.35 and over	13	22	11	17	8

Source: Bureau of Employment Security.

GPO 876-784

State Employment Security Agencies Affiliated With the Bureau of Employment Security

ALABAMA	Department of Industrial Relations, State Office Building, Montgomery 36104
ALASKA	Employment Security Division, Department of Labor, Box 2661, Juneau 99801
ARIZONA	Arizona Employment Security Commission, State Employment Service, 1717 West Jefferson Street, Phoenix 85005; Unemployment Compensation Division, P.O. Box 6123, Phoenix 85005
ARKANSAS	Employment Security Division, Department of Labor, Employment Security-Welfare Building, Box 2981, Little Rock 72203
CALIFORNIA	Department of Employment, 800 Capitol Avenue, Sacramento 95814
COLORADO	Department of Employment, 1210 Sherman Street, Denver 80203
CONNECTICUT	Connecticut Employment Security Division, Hartford 06115
DELAWARE	Employment Security Commission, 801 West Street, Wilmington 198099
DIST. OF COL.	United States Employment Service for the District of Columbia, Employment Security Building, Room 617, Sixth and Pennsylvania Avenue, N.W., Washington 20001; District Unemployment Compensation Board, Sixth and Pennsylvania Avenue, N.W., Washington 20001
FLORIDA	Industrial Commission, Caldwell Building, Tallahassee 32301
GEORGIA	Employment Security Agency, Department of Labor, State Labor Building, Atlanta 30303
GUAM	Department of Labor and Personnel, Government of Guam, Agana 96910
HAWAII	Employment Service Division, Department of Labor and Industrial Relations, 825 Mililani Street, Honolulu 96813
IDAHO	Employment Security Agency, P.O. Box 520, 317 Main Street, Boise 83701
ILLINOIS	Employment Security Administrator, Department of Labor, 165 North Canal Street, Room 200, Chicago 60606
INDIANA	Employment Security Division, 10 North Senate Avenue, Indianapolis 46204
IOWA	Employment Security Commission, 1000 East Grand Avenue, Des Moines 50319
KANSAS	Employment Security Division, State Labor Department, 401 Topeka Boulevard, Topeka 66603
KENTUCKY	Bureau of Employment Security, Department of Economic Security, Capitol Office Building, Frankfort 40601
LOUISIANA	Division of Employment Security, Department of Labor, Employment Security Building, 2200 Baton Rouge Expressway, P.O. Box 4094, Capitol Station, Baton Rouge 70804
MAINE	Employment Security Commission, 20 Union Street, Augusta 04332
MARYLAND	Department of Employment Security, 1100 North Eutaw Street, Baltimore 21201
MASSACHUSETTS	Division of Employment Security, 881 Commonwealth Avenue, Boston 02215
MICHIGAN	Employment Security Commission, 514 Boulevard Building, 7310 Woodward Avenue, Detroit 48202
MINNESOTA	Department of Employment Security, 369 Cedar Street, St. Paul 55101
MISSISSIPPI	Employment Security Commission, P.O. Box 1699, 1520 West Capitol Street, Jackson 39203
MISSOURI	Division of Employment Security, Department of Labor and Industrial Relations, 421 East Dunklin Street, Jefferson City 65101
MONTANA	Unemployment Compensation Commission, Unemployment Compensation Commission Building, P.O. Box 1728, Helena 59601
NEBRASKA	Division of Employment, Department of Labor, 550 South Sixteenth Street, P.O. Box 1033, Lincoln 68501
NEVADA	Employment Security Department, P.O. Box 602, Carson City 89701
NEW HAMPSHIRE	Department of Employment Security, 34 South Main Street, Concord 03301
NEW JERSEY	Division of Employment Security, Department of Labor and Industry Building, John Fitch Plaza, Trenton, 08625
NEW MEXICO	Employment Security Commission, P.O. Box 1799, 924 Park Street, S.W., Albuquerque 87103
NEW YORK	Division of Employment, Department of Labor, 800 North Pearl Street, Albany 12201
NORTH CAROLINA	Employment Security Commission, P.O. Box 589, Jones and North McDowell Streets, Raleigh 27602
NORTH DAKOTA	North Dakota State Employment Service, 207 East Broadway, Box 568, Bismarck; Unemployment Compensation Division, 201 East Broadway, Box 450, Bismarck 58502
OHIO	Bureau of Unemployment Compensation, 427 Cleveland Avenue, Columbus 43216
OKLAHOMA	Employment Security Commission, Will Rogers Memorial Office Building, Oklahoma City 73105
OREGON	Department of Employment, 403 Labor and Industrial Building, Salem 97310
PENNSYLVANIA	Bureau of Employment Security, Department of Labor and Industry Building, Seventh and Forster Streets, Harrisburg 17121
PUERTO RICO	Bureau of Employment Security, Stop 17-1/2 Fernandez Juncos Avenue, Santurce 00907
RHODE ISLAND	Department of Employment Security, 24 Mason Street, Providence 02903
SOUTH CAROLINA	Employment Security Commission, 1225 Laurel Street, P.O. Box 995, Columbia 29202
SOUTH DAKOTA	Employment Security Department, 310 Lincoln Street South, Aberdeen 57401
TENNESSEE	Department of Employment Security, Cordell Hull State Office Building, Nashville 37219
TEXAS	Texas Employment Commission, TEC Building, Austin 78701
UTAH	Department of Employment Security, Industrial Commission, 174 Social Hall Avenue, P.O. Box 2100, Salt Lake City 84110
VERMONT	Department of Employment Security, 7 School Street, P.O. Box 708, Montpelier 05602
VIRGINIA	Virginia Employment Commission, 703 East Main Street, P.O. Box 1358, Richmond 23211
VIRGIN ISLANDS	Virgin Islands Employment Security Agency, P.O. Box 1092, Charlotte Amalie, St. Thomas 00802
WASHINGTON	Employment Security Department, Employment Security Building, P.O. Box 367, Olympia 98501
WEST VIRGINIA	Department of Employment Security, State Office Building, California and Washington Streets, Charleston 25305
WISCONSIN	Wisconsin State Employment Service, P.O. Box 1607, 4802 Sheboyan Avenue, Madison 53701; Unemployment Compensation Department, P.O. Box 644, 4802 Sheboyan Avenue, Madison 53701
WYOMING	Employment Security Commission, ESC Building, Center and Midwest Streets, P.O. Box 760, Casper 82602

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The purpose of this survey was to provide the public employment service system with labor market information needed to carry out guidance, determination of job shortages, job development, industry trends, more effective employer relations, and evaluation of training programs. The 1,455 units surveyed, each employing 100 or more workers, had an aggregate employment of 692,900, about 74 percent of the industry total employment. From 1958 to 1963 department store employment grew at 13.3 percent compared to 10.0 percent for other retail employment. The average work force of close to 1 million in 1963, or one out of every nine workers in retail trades makes department stores one of the nation's principal employers, and still, more than one-fourth of the reporting establishments indicated some difficulty in filling job vacancies, particularly for skilled positions. The movement of department stores to the suburbs has increased the need for part-time sales personnel. Department stores have kept pace with competitors with a 62.4 percent volume increase between 1954-1963 compared to a 44.6 percent increase for other retail establishments. Average hourly earnings of non-supervisory department workers rose 20.3 percent to $1.72 from 1958 to 1963. (MM)

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INDUSTRY MANPOWER SURVEYS No. 109

DEPARTMENT STORES

Labor Market Developments

April 1964

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U.S. DEPARTMENT OF LABOR
W. Willard Wirtz, Secretary
MANPOWER ADMINISTRATION
BUREAU OF EMPLOYMENT SECURITY
Washington, D.C. 20210

INDUSTRY MANPOWER SURVEYS

The current survey is one of a series of manpower studies prepared by the United States Employment Service of the Bureau of Employment Security. Other reports published since January 1957 are listed below.

Aircraft and Parts Manufacturing: No. 85, February 1958.

Bituminous Coal Mining: No. 106, December 1963.

Blast Furnaces, Steel Works, and Rolling Mills: No. 82, March 1957; No. 86, April 1958; No. 90, December 1958; No. 96, May 1960; No. 100, May 1961.

Broadwoven Fabrics--(All Fibers): No. 83, May 1957; No. 89, November 1958.

Chemicals: No. 84 (Scientific and Engineering Occupations in the Chemical Industry), December 1957.

Computing Machines: No. 98, January 1961.

Farm Machinery and Tractors: No. 81, March 1957; No. 87 (article in August 1958 LABOR MARKET AND EMPLOYMENT SECURITY).

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Newspapers and Commercial Printing: No. 94, December 1959.

Petroleum Refining: No. 97, December 1960.

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Telephone Communication: No. 103, May 1962.

Tires and Tubes: No. 107, March 1964.

U. S. DEPARTMENT OF LABOR
Bureau of Employment Security
United States Employment Service
Washington, D. C. 20210

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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INDUSTRY MANPOWER SURVEYS No. 109

DEPARTMENT STORES

Labor Market Developments

U.S. DEPARTMENT OF LABOR
MANPOWER ADMINISTRATION
BUREAU OF EMPLOYMENT SECURITY

DEPARTMENT STORES

Foreword

The industry covered by this survey is defined as Department Stores, 1957 Standard Industrial Classification Code 5311.

The analysis is based in part on individual establishment reports gathered by local offices of State employment security agencies affiliated with the Bureau of Employment Security. The 1,455 units surveyed--each employing 100 or more workers--had an aggregate employment of 692,900, about 74 percent of the industry's total employment.

The major purpose of this survey is to provide the public employment service system with labor market information needed to carry out its operating responsibilities. These include guidance and counseling, determination of job shortages, job development, impact of industry trends on area employment, development of more effective employer relations, evaluation of training programs as they affect displaced industry workers, and local area impact of imports for implementation of the Trade Expansion Act.

In addition, these industry statements provide information for discharging the responsibilities of the United States Employment Service at the national level for the Congress, work with the Surplus Manpower Committee of the Office of Emergency Planning, the Department of Defense and other Government agencies, and informational requests from numerous private sources.

The report was prepared by Ernest F. Schroeder, under the direction of Norman Medvin, Chief, Branch of Skill and Industry Surveys, Office of Manpower Analysis and Utilization of the United States Employment Service.

BUREAU OF EMPLOYMENT SECURITY · **Robert C. Goodwin, Administrator**
U.S. EMPLOYMENT SERVICE · **Louis Levine, Director**

Page

Foreword..... ii

Highlights..... 1

Department Store Employment Continues to Rise..... 2

The Changing Pattern in Department Store Merchandising..... 2

Department Stores Keep Pace with Competition..... 4

West Has Largest Gain in Employment..... 5

Employment Centered in Larger Metropolitan Areas..... 5

Women Constitute Substantial Proportion of the Department Store Work Force..... 7

Relatively More Women Than Men Work Part Time..... 7

One-Fourth of Establishments Indicate Some Recruitment Problems..... 7

Hourly Department Store Earnings Continue to Rise..... 9

APPENDIX

Table A. Number of Nonsupervisory Department Store Employees, by Sex and Weekly Hours of Work, June 1962..... 13

Table B. Trends in Average Weekly Hours and Earnings of Nonsupervisory Employees in Retail Stores (SIC 52-59) and in Department Stores, 1958-1963..... 14

STATISTICAL TABLES

Table 1. Annual Average Employment in Department Stores and in All Other Retail Establishments, 1958-1963..... 2

Table 2. Department Store Employment by Size of Establishment, March 1959-March 1963..... 4

Table 3. Employment in Department Stores Covered Under State Unemployment Insurance Laws, March 1958-March 1963.. 6

Table 4. Employment Trends in Reporting Department Store Establishments in 39 Major Labor Market Areas with 4,000 or More Department Store Workers, October 1962..... 8

DEPARTMENT STORES

April 1964

HIGHLIGHTS

Expanding department store activities provide a broad range of job opportunities, according to a nationwide department store survey conducted by the United States Employment Service. From 1958 to 1963, department store employment grew at a faster rate than other retail employment--13.3 percent compared to 10.0 percent. With an average work force now close to 1 million, department stores employ one out of every nine workers in retail trades and constitute one of the Nation's principal employers.

The traditional department store is meeting the challenge of changing times by adopting widespread changes in organization and operation. This is reflected in the merger of some department store establishments, the opening of branch stores of various sizes and types in suburban areas, the introduction of automation in accounting and inventory systems, and changes in lines of merchandise. In addition, stores are remaining open longer and emphasizing self-service in some departments.

More than one in every four department store workers (29 percent) were employed in three States--California, Illinois and New York--as of March 1963. In addition, more than two-thirds of the 693,000 workers in department store establishments surveyed as part of the special USES State employment service study were concentrated in 39 major labor market areas.

Nationwide, 7 out of 10 department store employees in recent years have been women. For retail employment exclusive of department stores, women constituted fewer than 4 out of every 10 workers. Regionally, there was only a small variation in the proportion of women in surveyed department stores--from 66 percent in the South to 71 percent in the North Central States.

As might be expected because of the increasing participation of women in sales and clerical positions, especially on a part-time basis, a larger proportion of women than men department store workers were employed less than 35 hours. Relatively more women worked less than 35 hours in the Northeast while in the South relatively more women worked 40 or more hours.

More than one-fourth of the reporting establishments indicated some difficulty in filling job vacancies. The most frequent job openings were for experienced sales persons, particularly in such areas as apparel, shoes, and home furnishings. Other occupations for which some establishments reported difficulty in recruiting workers were: Tailor and seamstress, commercial artist and displayman, and department manager.

Department Store Employment Continues to Rise

Department store employment in 1963 rose 2 percent or 20,000 above the 1962 level to a new high of 980,000. Even further gains are anticipated in 1964.

During the period 1958-1963 about one out of every nine employees in the retail trades had a department store job (table 1). Among department store workers, there has been virtually no change in the proportion employed in the larger stores in recent years. In March 1963 as in March 1959, 60 percent of all department store employment covered by State unemployment insurance laws was in establishments with 500 or more workers. These firms, moreover, constituted only 7 percent of all department stores in each of the years (table 2).

The Changing Pattern in Department Store Merchandising

In the past decade or so, developments in the field of merchandising have resulted in major innovations in department store and other retail sales operations. Supermarkets have expanded into the general merchandising field, mail order houses are increasing their general retail merchandise outlets, "discount-department stores" have gained wide acceptance, and variety chains are broadening the scope of their activities. As a result of this shifting pattern in retail merchandising, the line of demarcation in determining what constitutes a department store sometimes becomes blurred.

Table 1. Annual Average Employment in Department Stores and in All Other Retail Establishments 1958-1963

	Employment (000's)			
Year	Total	Retail trade, except department stores	Department stores	Department stores as percent of all retail stores
1958	7,902	7,037	865	10.9
1959	8,182	7,285	897	11.0
1960	8,388	7,471	917	10.9
1961	8,344	7,419	925	11.1
1962	8,521	7,561	960	11.3
1963	8,722	7,742	980	11.2
Net change (000's) 1958-1963	820	705	115	--
% change 1958-1963	10.4%	10.0%	13.3%	--

Source: Bureau of Labor Statistics.

Prior to World War II, the typical department store was located in the downtown area and was dependent upon downtown business. As the city grew, so did the department store. The store was frequently a middle-class merchandising institution which enjoyed then, as at present, considerable prestige and a reputation for reliability. The great attraction of the downtown department store was the availability of a wide selection of merchandise under one roof. In addition, the store was designed to stimulate impulse buying. Contributing greatly to this appeal was the use of spacious areas which frequently became difficult to maintain as costs and competition mounted over the years.

During the postwar period, the old-line department store became subject to increased competition as large segments of the population shifted to the suburbs and new developments in merchandising met wider consumer acceptance. The movement of the population--especially the more affluent--out of the cities to the suburbs resulted in increased patronage of suburban stores with consequent loss of sales in downtown department stores. In addition, the expansion of specialty stores into wider lines of merchandise, the increase of non-food items in supermarkets and the phenomenal growth of the "discount-department store" widened the scope of department store competition.

The movement of department stores to the suburbs has increased the need for part-time sales personnel in the suburban stores as these stores are open later than the downtown stores. As a consequence, the suburban branches tend to have a larger share of part-time workers than the downtown stores. Many of these part-time employees are housewives, students, and other secondary workers. In some instances, where suburban stores are opened in the more remote areas, recruitment problems arise in obtaining personnel because of the inconvenience in traveling.

The peak period in department store sales is usually at mid-day. In their efforts to obtain the necessary sales personnel to meet this peak load, department stores find housewives and other part-time workers can be more readily recruited for the suburban stores than for the downtown stores since such workers live closer to the suburban stores.

While there is a need for more sales help in suburban stores, there is a greater concentration of the administrative staff in the downtown area where the accounting, purchasing, warehousing, and other sales-supporting services are still generally concentrated. Although these functions involve fewer part-time workers, the demand for full-time workers in certain craft and office occupations is strong.

Table 2. Department Store Employment
by Size of Establishment
March 1959-March 1963

Employee-size of establishment	Employment			
	Number		Percent	
	March 1963	March 1959	March 1963	March 1959
Total 1/	903,300	837,800	100.0	100.0
Less than 50	57,800	59,500	6.4	7.1
50-99	70,500	57,000	7.8	6.8
100-249	108,400	102,200	12.0	12.2
250-499	123,800	110,600	13.7	13.2
500-999	137,300	115,600	15.2	13.8
1,000 and over	405,500	392,900	44.9	46.9

1/ Excludes Puerto Rico and Virgin Islands.
Source: U. S. total--Bureau of Labor Statistics; employment size detail estimated by Bureau of Employment Security.

Department Stores Keep Pace with Competition

Despite inroads by other retail competition, department store sales between 1954-1963 increased 62.4 percent, from $10,272 million to $16,683 million, while sales in other retail establishments rose 44.6 percent, from $158,863 million to $229,752 million, according to Department of Commerce data. Between 1958 and 1963, department store sales, adjusted for price increases, rose 27 percent while average annual department employment grew by 13.3 percent. Actually the increase in employment reflects the addition of many part-time workers. If actual man-hours worked are used instead of the gross figure on employment, the disparity between employment and adjusted sales would be even greater.

The traditional department store is meeting the challenge of changing times by adopting greater flexibility in methods of operation. This flexibility is reflected in the merger of some department store establishments, the opening of branch stores of various sizes and types in suburban areas, the introduction of electronic data processing in accounting and inventory systems, as well as in material handling, and changes in the quality, and kinds of merchandise. In

some instances, the quality of merchandise has been upgraded in one company store while at the same time another store of the same company may sell discount items only. In other instances, discount merchandise as well as regular-priced fashion merchandise has been carried under the same roof. There is also an increasing trend to self-service and to remaining open longer.

West Has Largest Gain in Employment

The West experienced by far the largest employment gain while the North Central region lost ground as the principal employment center. Employment in Western States, including Alaska and Hawaii, rose 42,300, or 35.4 percent to 161,700 between March 1958 and March 1963 (table 3). For the North Central States, there was a gain of only 25,400 or 9.8 percent to 283,600. The Northeast and South followed the West with gains of 18.5 and 15.0 percent respectively.

As a result of these shifting regional employment trends, the West accounted for 17.3 percent of the Nation's department store employment in March 1963 compared to 15.0 percent in March 1958 while the North Central region's share during the period declined slightly to 30.4 percent from 32.5 percent. The Northeast and South, however, continued to maintain their relative positions during the period.

Among the 37 States having 4,000 or more department store workers in either March 1963 or March 1958, only five--Arkansas, District of Columbia, Oklahoma, Tennessee, and West Virginia--had declines, and one State--Pennsylvania--experienced no change. Contributing to the decline in the District of Columbia was a sharp growth in population in the Washington suburbs in Virginia and Maryland accompanied by expanding branch stores activities in those outlying areas.

Employment Centered in Larger Metropolitan Areas

The latest data on department store employment by local area are those developed as part of a special survey conducted by the public employment service in October 1962. This survey showed that more than two-thirds of the department store workers covered were located in 39 major labor market areas--each employing 4,000 or more such workers (table 4). The number of surveyed department stores in these areas, however, comprised only 46 percent of the total reporting.

Department store employment in all 39 areas in October 1962 represented 1.8 percent of total nonagricultural employment in these areas. Within the 39 areas, department store employment as a percentage of nonagricultural employment fell within the range of 1.3 percent in New York to 3.4 percent in Fort Worth.

Table 3. Employment in Department Stores
Covered Under State Unemployment Insurance Laws 1/
March 1958-March 1963

	Department store employment				
	March		Percent change March 1958-1963	Percent dist. March	
	1963	1958		1963	1958
Total, U. S.	903,300 2/	797,700 2/	+13.2	100.0	100.0
Northeast	252,217	212,913	+18.5	27.1	26.8
New York	97,470	80,489	+21.1	10.5	10.1
Pennsylvania	59,911	59,903	0	6.4	7.5
New Jersey	34,552	21,292	+62.3	3.7	2.7
Massachusetts	33,979	29,033	+17.0	3.6	3.7
Connecticut	16,321	13,702	+19.1	1.8	1.7
Rhode Island	4,615	3,602	+28.1	0.5	0.5
Other States 3/	5,369	4,892	+ 9.8	0.6	0.6
North Central	283,554	258,141	+ 9.8	30.4	32.5
Illinois	65,040	61,376	+ 6.0	7.0	7.7
Ohio	59,563	55,751	+ 6.8	6.4	7.0
Michigan	41,797	38,807	+ 7.7	4.5	4.9
Indiana	24,824	21,105	+17.6	2.7	2.7
Missouri	24,233	21,063	+15.1	2.6	2.7
Minnesota	19,779	16,784	+17.8	2.1	2.1
Wisconsin	19,134	17,720	+ 8.0	2.1	2.2
Iowa	11,230	9,951	+12.9	1.2	1.3
Kansas	7,569	6,605	+14.6	0.8	0.8
Nebraska	6,684	5,918	+12.9	0.7	0.7
Other States 3/	3,701	3,061	+20.9	0.4	0.4
South	234,679	204,105	+15.0	25.2	25.7
Texas	46,751	39,786	+17.5	5.0	5.0
Florida	30,319	19,490	+55.6	3.3	2.5
Maryland	21,974	16,561	+32.7	2.4	2.1
Virginia	20,291	17,568	+15.5	2.2	2.2
Georgia	16,000	14,115	+13.4	1.7	1.8
North Carolina	15,577	13,731	+13.4	1.7	1.7
Tennessee	12,492	13,670	- 8.6	1.3	1.7
Louisiana	11,674	11,049	+ 5.7	1.3	1.4
District of Columbia	10,816	11,449	- 5.5	1.2	1.4
Alabama	9,664	7,788	+24.1	1.0	1.0
Kentucky	8,449	7,103	+18.9	0.9	0.9
Oklahoma	7,298	8,973	-18.7	0.8	1.1
West Virginia	6,516	6,853	- 4.9	0.7	0.9
South Carolina	6,083	5,706	+ 6.6	0.7	0.7
Arkansas	4,319	4,340	- 0.5	0.5	0.5
Other States 3/	6,456	5,923	+ 9.0	0.7	0.7
West	161,659	119,361	+35.4	17.3	15.0
California	99,798	71,191	+40.2	10.7	9.0
Washington	15,417	12,575	+22.6	1.7	1.6
Oregon	11,755	9,785	+20.1	1.3	1.2
Colorado	9,584	6,588	+45.5	1.0	0.8
Arizona	6,903	3,642	+89.5	0.7	0.5
Utah	5,087	4,181	+21.7	0.5	0.5
Other States 3/	13,115	11,399	+15.1	1.4	1.4

1/ States shown separately had 4,000 or more workers in either March 1963 or in March 1962.
2/ Excludes Puerto Rico and Virgin Islands.
3/ States included under "Other States" for each of the regions are: Northeast--Maine, New Hampshire, and Vermont; North Central--North Dakota and South Dakota; South--Delaware and Mississippi; West--Alaska, Hawaii, Idaho, Montana, Nevada, New Mexico, and Wyoming.
Source: U. S. total--Bureau of Labor Statistics; Regional and State detail--Bureau of Employment Security.

Women Constitute Substantial Proportion of the Department Store Work Force

Seven out of every 10 employees in department stores are women. This compared with about 4 women workers out of every 10 workers in all other retail trades. Regionally there is only a small variation in the proportion of women workers in surveyed stores--from 66 percent in the South to 71 percent in the North Central States. The range in the proportion of women department store workers among the 39 areas varied from about 60 percent in San Antonio and San Diego to over 80 percent in Buffalo and Portland, Oregon.

Relatively More Women Than Men Work Part Time

Almost a third of the Nation's nonsupervisory work force in department stores was, as of June 1962, employed less than 35 hours per week, while over 52 percent worked 40 hours or more (table A, Appendix). The Northeast had the highest proportion of the industry's workers employed less than 35 hours and the smallest proportion of workers with 40 or more hours of work. In contrast, the South reported almost 60 percent of its nonsupervisory workers employed 40 or more hours. Many of those employed on a less than 40 hour weekly work schedule worked short hours by their own choice.

As might be expected because of the increasing participation of women in sales and clerical positions, especially on a part-time basis, a larger proportion of women than men department store workers were employed less than 35 hours. Among women, a higher proportion worked fewer hours in the Northeast than in other regions.

One-Fourth of Establishments Indicate Some Recruitment Problems

More than one-fourth of the reporting establishments indicated some difficulty in filling job vacancies. Although there was a broad range in the kinds of job openings, the most frequent jobs were for experienced sales persons, particularly in such areas as apparel, shoes, and home furnishings. Other workers for which some establishments reported difficulty in recruiting were:

Tailors and seamstresses
Comptometer operators
Secretaries
T. V. repairmen
Commercial artists
Displaymen
Department managers

Table 4. Employment Trends in Reporting Department Store Establishments in 39 Major Labor Market Areas with 4,000 or More Department Store Workers October 1962

	October 1962	% Change Oct. 1961 to Oct. 1962	% of Area Employment Oct. 1962	Female employment as percent of total 1/ Oct. 1962
Total, U. S.	692,851	+1.7%	1.2%	69.0%
Total, 39 areas	472,090	+1.3	1.8	69.1
Percent: 39 areas of U. S. total	68.1	--	--	--
New York	54,338	-2.9	1.3	65.1
Los Angeles-Long Beach	40,913	+3.5	1.6	69.2
Chicago	39,449	+4.3	1.6	70.3
Philadelphia	25,761	+6.3	1.7	67.9
Boston	19,616	-1.1	1.9	67.4
Detroit	17,010	-1.7	1.4	73.6
St. Louis	15,531	-6.6	2.1	69.1
Washington, D. C.	15,406	-0.6	1.9	68.2
San Francisco-Oakland	14,808	+7.7	1.4	72.4
Minneapolis-St. Paul	13,949	-4.0	2.3	74.2
Baltimore	12,463	+3.3	2.0	67.0
Newark	11,243	+6.0	1.7	68.6
Cleveland	11,015	-7.3	1.6	71.5
Pittsburgh	10,622	-5.5	1.4	69.9
Cincinnati	10,577	+10.5	2.6	69.7
Milwaukee	10,143	-9.8	2.2	73.7
Indianapolis	10,057	+5.0	3.3	70.1
Atlanta	9,304	+6.7	2.3	70.2
Dallas	8,524	-3.1	2.1	62.9
Seattle	8,325	+0.5	2.0	62.4
Houston	8,115	+5.1	1.8	64.2
Miami	7,903	+14.4	2.5	61.7
Tampa-St. Petersburg	6,746	+15.1	3.3	60.4
Kansas City	6,675	+7.0	1.7	71.2
Columbus, Ohio	6,667	-11.6	2.4	69.6
Buffalo	6,159	-9.8	1.5	80.2
Fort Worth	6,163	+7.7	3.4	73.7
Denver	6,122	+8.9	1.7	75.6
Dayton	6,088	+8.3	2.4	71.8
Paterson-Clifton-Passaic	5,944	+8.9	1.5	62.4
New Orleans	5,902	+1.0	2.1	68.7
Rochester	5,811	+8.7	2.5	67.8
San Diego	5,693	-9.0	2.2	58.6
Portland	5,478	-6.5	2.0	80.9
Hartford	5,444	+4.1	2.1	69.9
Richmond	5,031	+10.1	2.8	68.9
San Antonio	4,644	-4.0	2.6	56.9
Toledo	4,345	+4.4	2.8	72.8
Omaha	4,106	+3.9	2.5	75.2

1/ Includes only firms reporting total and female employment for October 1962. In all but 5 areas, employment in firms reporting both total and female employment represented at least 90 percent of total employment reported for the area.

Source: State employment security agencies.

New employees are recruited through direct application, public employment offices, friends and relatives, newspaper advertisements, and schools and colleges. High school graduates are preferred for sales clerks but not for all jobs. A neat appearance, tact, and ability to deal with the public are necessary prerequisites for sales positions. College or other special training in salesmanship or merchandising is sometimes required for advancement to buyer or other executive positions. Older workers are frequently hired for part-time employment and for some positions for which specialized experience is required.

Suburban housewives are commonly recruited for part-time employment in nearby department store branches. In the downtown area, the main department store frequently employs part-time workers who have other jobs. These workers find it convenient to remain downtown after work on their regular jobs to obtain some additional earnings as part-time department store workers.

Hourly Department Store Earnings Continue to Rise

The average hourly earnings of nonsupervisory department store workers rose 20.3 percent to $1.72 from 1958 to 1963 (table B, Appendix). This compared to an 18 percent increase to $1.80 during the period for workers in retail establishments, exclusive of eating and drinking places. Despite the somewhat higher rate of increase for department store workers, the hourly rate paid department store workers is still below the rate paid in retail trades as a whole, according to the Bureau of Labor Statistics.

On a weekly basis, the earnings of nonsupervisory department store workers in 1963 averaged $58.65 compared to an average of $68.04 for nonsupervisory workers in all retail trades. However, workers in all retail trades averaged 37.8 hours per week compared to an average of 34.1 hours per week for department store workers.

Contributing to the rise in department store earnings in 1961 was Federal legislation (Public Law 87-30) which provided for a minimum wage of $1.00 an hour, effective September 3, 1961, to workers in retail establishments engaged in interstate commerce and having a specified dollar volume of business. This legislation also provided for subsequent increases in hourly earnings to $1.15, effective September 3, 1964, and $1.25, effective September 3, 1965.

There was considerable variation in the earnings of nonsupervisory department store workers as of June 1, 1962, according to the Bureau of Labor Statistics June 1962 survey of department store workers. The June 1962 national hourly earnings for these workers averaged $1.62,

while among the four principal census regions, average hourly earnings ranged from $1.49 in the South to $1.83 in the West. For the United States as a whole, 59 percent of the nonsupervisory employees earned under $1.50 per hour. In the South 68 percent of the workers earned less than $1.50 per hour while in the West, the proportion was 41 percent.

APPENDIX

APPENDIX

Table A. Number of Nonsupervisory Department Store Employees, by Sex and Weekly Hours of Work June 1962

Weekly Hours of Work	Nonsupervisory employment (000's) United States Total	United States 100.0	Northeast Total	Northeast 100.0	South Total	South 100.0	North Central Total	North Central 100.0	West Total	West 100.0
Total nonsupervisory employment	823.0	100.0	227.8	100.0	207.3	100.0	268.1	100.0	119.8	100.0
Under 15	63.7	7.7	15.8	6.9	14.4	6.9	23.0	8.6	10.5	8.8
15 and under 35	194.8	23.7	63.8	28.0	41.5	20.0	61.8	23.0	27.7	23.1
35 and under 40	133.3	16.2	55.2	24.2	28.6	13.8	36.6	13.7	12.9	10.8
40	313.7	38.1	69.4	30.5	88.9	43.0	103.0	38.4	52.4	43.8
Over 40 and under 44	62.4	7.6	11.7	5.1	16.6	8.0	24.6	9.2	9.5	7.9
44 and over	55.1	6.7	12.1	5.3	17.3	8.3	19.1	7.1	6.7	5.6
Men										
Total nonsupervisory employment	246.8	100.0	70.0	100.0	63.6	100.0	77.2	100.0	36.0	100.0
Under 15	16.4	6.6	4.4	6.3	3.9	6.1	5.5	7.1	2.7	7.5
15 and under 35	38.3	15.5	12.6	18.0	8.9	14.0	11.4	14.8	5.4	15.0
35 and under 40	26.8	10.9	11.1	15.9	6.2	9.7	5.9	7.6	3.7	10.3
40	101.2	41.1	26.2	37.3	28.3	44.6	31.9	41.3	14.8	41.1
Over 40 and under 44	31.2	12.6	6.9	9.9	7.5	11.8	10.8	14.0	5.9	16.4
44 and over	32.9	13.3	8.8	12.6	8.8	13.8	11.7	15.2	3.6	10.0
Women										
Total nonsupervisory employment	576.2	100.0	157.9	100.0	143.6	100.0	191.0	100.0	83.7	100.0
Under 15	47.3	8.2	11.4	7.2	10.5	7.3	17.6	9.2	7.8	9.3
15 and under 35	156.5	27.2	51.2	32.5	32.5	22.6	50.4	26.4	22.4	26.8
35 and under 40	106.4	18.5	44.1	27.9	22.4	15.6	30.7	16.1	9.2	11.0
40	212.5	36.8	43.2	27.4	60.6	42.3	71.1	37.2	37.6	44.9
Over 40 and under 44	31.1	5.4	4.7	3.0	9.1	6.3	13.7	7.2	3.6	4.3
44 and over	22.3	3.9	3.2	2.0	8.5	5.9	7.4	3.9	3.1	3.7

Note: Sum of individual items may not equal totals because of rounding.

Source: Bureau of Labor Statistics, Employee Earnings in Retail General Merchandise Stores, June 1962, Bulletin No. 1380-2.

APPENDIX

Table B. Trends in Average Weekly Hours and Earnings of Nonsupervisory Employees in Retail Stores (SIC 52-59) and in Department Stores 1958-1963

Year	All retail stores 1/			Department stores		
	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings
1958	$58.82	38.7	$1.52	$50.05	35.0	$1.43
1959	60.76	38.7	1.57	52.15	35.0	1.49
1960	62.37	38.5	1.62	53.09	34.7	1.53
1961	64.01	38.1	1.68	55.04	34.4	1.60
1962	65.95	37.9	1.74	57.10	34.4	1.66
1963	68.04	37.8	1.80	58.65	34.1	1.72
Net change 1958-1963	+$9.22	-.9	+$.28	+$8.60	-.9	+$.29
Percent change 1958-1963	+15.7%	-2.3%	+18.4%	+17.2%	-2.6%	+20.3%

1/ Excludes eating and drinking places.

Source: Bureau of Labor Statistics.

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State Employment Security Agencies Affiliated With the Bureau of Employment Security

(Additional labor market information on areas covered by this publication can be obtained from the State agencies listed below.)

ALABAMA	Department of Industrial Relations, State Office Building, Montgomery 36104
ALASKA	Employment Security Division, Department of Labor, Box 2661, Juneau 99801
ARIZONA	Arizona Employment Security Commission, State Employment Service, 1717 West Jefferson Street, Phoenix 85005; Unemployment Compensation Division, P.O. Box 6123, Phoenix 85005
ARKANSAS	Employment Security Division, Department of Labor, Employment Security-Welfare Building, Box 2981, Little Rock 72203
CALIFORNIA	Department of Employment, 800 Capitol Avenue, Sacramento 95814
COLORADO	Department of Employment, 1210 Sherman Street, Denver 80203
CONNECTICUT	Connecticut Employment Security Division, Hartford 06115
DELAWARE	Employment Security Commission, 801 West Street, Wilmington 19899
DIST. OF COL.	United States Employment Service of the District of Columbia, Employment Security Building, Sixth and Pennsylvania Avenue, N.W., Washington 20001; Unemployment Compensation Board, Sixth and Pennsylvania Avenue, N.W., Washington 20001
FLORIDA	Industrial Commission, Caldwell Building, Tallahassee 32301
GEORGIA	Employment Security Agency, Department of Labor, State Labor Building, Atlanta 30303
GUAM	Department of Labor and Personnel, Government of Guam, Agana 96910
HAWAII	Employment Service Division, Department of Labor and Industrial Relations, 825 Mililani Street, Honolulu 96813
IDAHO	Employment Security Agency, P.O. Box 520, 317 Main Street, Boise 83701
ILLINOIS	Employment Security Administrator, Department of Labor, 165 North Canal Street, Room 200, Chicago 60606
INDIANA	Employment Security Division, 10 North Senate Avenue, Indianapolis 46204
IOWA	Employment Security Commission, 1000 East Grand Avenue, Des Moines 50319
KANSAS	Employment Security Division, State Labor Department, 401 Topeka Boulevard, Topeka 66603
KENTUCKY	Bureau of Employment Security, Department of Economic Security, Capitol Office Building, Frankfort 40601
LOUISIANA	Division of Employment Security, Department of Labor, Employment Security Building, 2200 Baton Rouge Expressway, P.O. Box 4094, Capitol Station, Baton Rouge 70804
MAINE	Employment Security Commission, 20 Union Street, Augusta 04332
MARYLAND	Department of Employment Security, 1100 North Eutaw Street, Baltimore 21201
MASSACHUSETTS	Division of Employment Security, 881 Commonwealth Avenue, Boston 02215
MICHIGAN	Employment Security Commission, 514 Boulevard Building, 7310 Woodward Avenue, Detroit 48202
MINNESOTA	Department of Employment Security, 369 Cedar Street, St. Paul 55101
MISSISSIPPI	Employment Security Commission, P.O. Box 1699, 1520 West Capitol Street, Jackson 39203
MISSOURI	Division of Employment Security, Department of Labor and Industrial Relations, 421 East Dunklin Street, Jefferson City 65101
MONTANA	Unemployment Compensation Commission, Unemployment Compensation Commission Building, P.O. Box 1728, Helena 59601
NEBRASKA	Division of Employment, Department of Labor, 550 South Sixteenth Street, P.O. Box 4600, State House Station, Lincoln 68509
NEVADA	Employment Security Department, P.O. Box 602, Carson City 89701
NEW HAMPSHIRE	Department of Employment Security, 34 South Main Street, Concord 03301
NEW JERSEY	Division of Employment Security, Department of Labor and Industry Building, John Fitch Plaza, Trenton 08625
NEW MEXICO	Employment Security Commission, 924 Park Street, S.W., P.O. Box 1799, Albuquerque, 87103
NEW YORK	Division of Employment, Department of Labor, State Office Building Campus, Albany 12201
NORTH CAROLINA	Employment Security Commission, P.O. Box 589, Jones & North McDowell Sts., Raleigh 27602
NORTH DAKOTA	North Dakota State Employment Service, 207 East Broadway, Box 568, Bismarck; Unemployment Compensation Division, 201 East Broadway, Box 450, Bismarck 58502
OHIO	Bureau of Unemployment Compensation, 427 Cleveland Avenue, Columbus 43216
OKLAHOMA	Employment Security Commission, Will Rogers Memorial Office Building, Oklahoma City 73105
OREGON	Department of Employment, 403 Labor & Industries Building, Salem 97310
PENNSYLVANIA	Bureau of Employment Security, Department of Labor and Industry Building, Seventh and Forster Streets, Harrisburg 17121
PUERTO RICO	Bureau of Employment Security, 414 Barbosa Avenue, Hato Rey, San Juan 00917
RHODE ISLAND	Department of Employment Security, 24 Mason Street, Providence 02903
SOUTH CAROLINA	Employment Security Commission, 1225 Laurel Street, P.O. Box 995, Columbia 29202
SOUTH DAKOTA	Employment Security Department, 310 Lincoln Street South, Aberdeen 57401
TENNESSEE	Department of Employment Security, Cordell Hull State Office Building, Nashville 37219
TEXAS	Texas Employment Commission, TEC Building, Austin 78701
UTAH	Department of Employment Security, Industrial Commission, 174 Social Hall Avenue, P.O. Box 2100, Salt Lake City 84110
VERMONT	Department of Employment Security, National Life Insurance Bldg., Fifth Floor, Montpelier 05602
VIRGINIA	Virginia Employment Commission, 703 East Main Street, P. O. Box 1358, Richmond 23211
VIRGIN ISLANDS	Virgin Islands Employment Security Agency, P.O. Box 1092, Charlotte Amalie, St. Thomas 00802
WASHINGTON	Employment Security Department, Employment Security Building, P.O. Box 367, Olympia 98501
WEST VIRGINIA	Department of Employment Security, State Office Building, California and Washington Streets, Charleston 25305
WISCONSIN	Wisconsin State Employment Service, P. O. Box 1607, 4802 Sheboygan Avenue, Madison 53701; Unemployment Compensation Department, P. O. Box 644, 4802 Sheboygan Avenue, Madison 53701
WYOMING	Employment Security Commission, ESC Building, Center and Midwest Streets, P.O. Box 760, Casper 82602

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Based upon data published by the Departments of Agriculture, Commerce, and Labor, this report concerning the 1.7 million farm workers hired in 1963, contained the following observations: (1) Farm numbers were decreasing, farm size was increasing, agricultural production assets per worker were $25,000, and productivity per worker was increasing, (2) Of all farms, 52 percent hired no labor, and 42 percent spent less than $2,500 for hired labor; only one percent of the farms hired 30 percent of the labor, (3) Farm operators and unpaid family workers outnumbered hired workers even at the peak of the season, but the total number of operators and unpaid family workers was decreasing, while the number of hired workers was remaining steady, (4) Farm population was decreasing and farm-to-city migration was high, however the lower level of education of rural farm people might have prevented the migration needed to relieve rural unemployment, underemployment, and low income, (5) Over two-fifths of those doing farm wage work did so less than 25 days during the year, and farm work is not the chief activity of one-half of the workers, and (6) There is more unemployment among farm workers than other workers even during the growing season. The report cites new federal laws enacted to alleviate problems. (JM)

VT004902

EDO 31587

December 1964

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HIRED FARMWORKERS
In the United States

U.S. DEPARTMENT OF LABOR
W. Willard Wirtz, Secretary
MANPOWER ADMINISTRATION

VT004902

BES No. R-200
December 1964

Hired Farmworkers in the United States

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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U. S. DEPARTMENT OF LABOR
W. Willard Wirtz, Secretary

BUREAU OF EMPLOYMENT SECURITY
Robert C. Goodwin, Administrator

This publication supersedes Hired Farmworkers in the United States, June 1961. This revision was prepared by James C. Nix and Ray W. Kohen of the Division of Research and Wage Activities, Office of Farm Labor Service, Bureau of Employment Security.

Contents

Introduction

The Setting

Numbers, Characteristics, Employment Patterns

Wage Rates and Earnings

Migratory U.S. Farmworkers

- Numbers
- Routes Traveled
- Problems

Foreign Contract Workers

- Numbers
- Concentration

Summary and Conclusion

References

Introduction

During 1963-

employment in agriculture averaged some 4.9 million. Of this number . . .

about 2.4 million were farm operators

.8 million did some work as unpaid family workers

1.7 million engaged in hired farmwork

These groups are not mutually exclusive. Some farm operators and unpaid family workers also engage in hired farmwork at times during the year.

This report is about those who work on farms for wages as hired workers. They are the part of the total farm work force upon which the larger farms--those responsible for most of our production--depend particularly. The workers' earning power, economic opportunity and security, and living conditions generally remain at low levels, although some gains have been made in recent years.

The study is based on data published by the Departments of Agriculture, Commerce, and Labor.

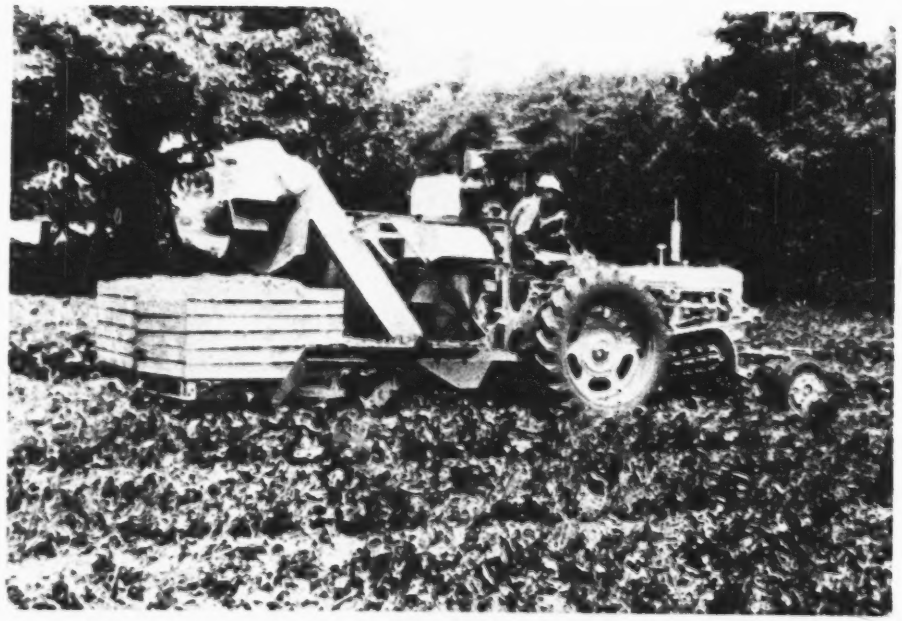
The Setting

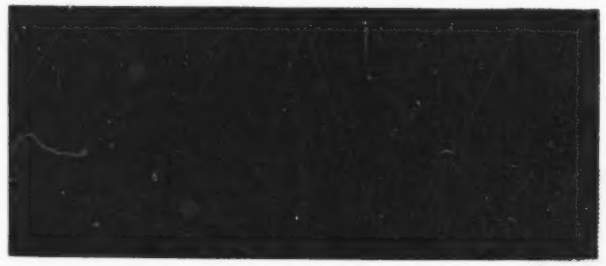
Swift Technological Advance

--Higher production on fewer acres

Decline in Farm Labor Needs

Decline in Farm Population



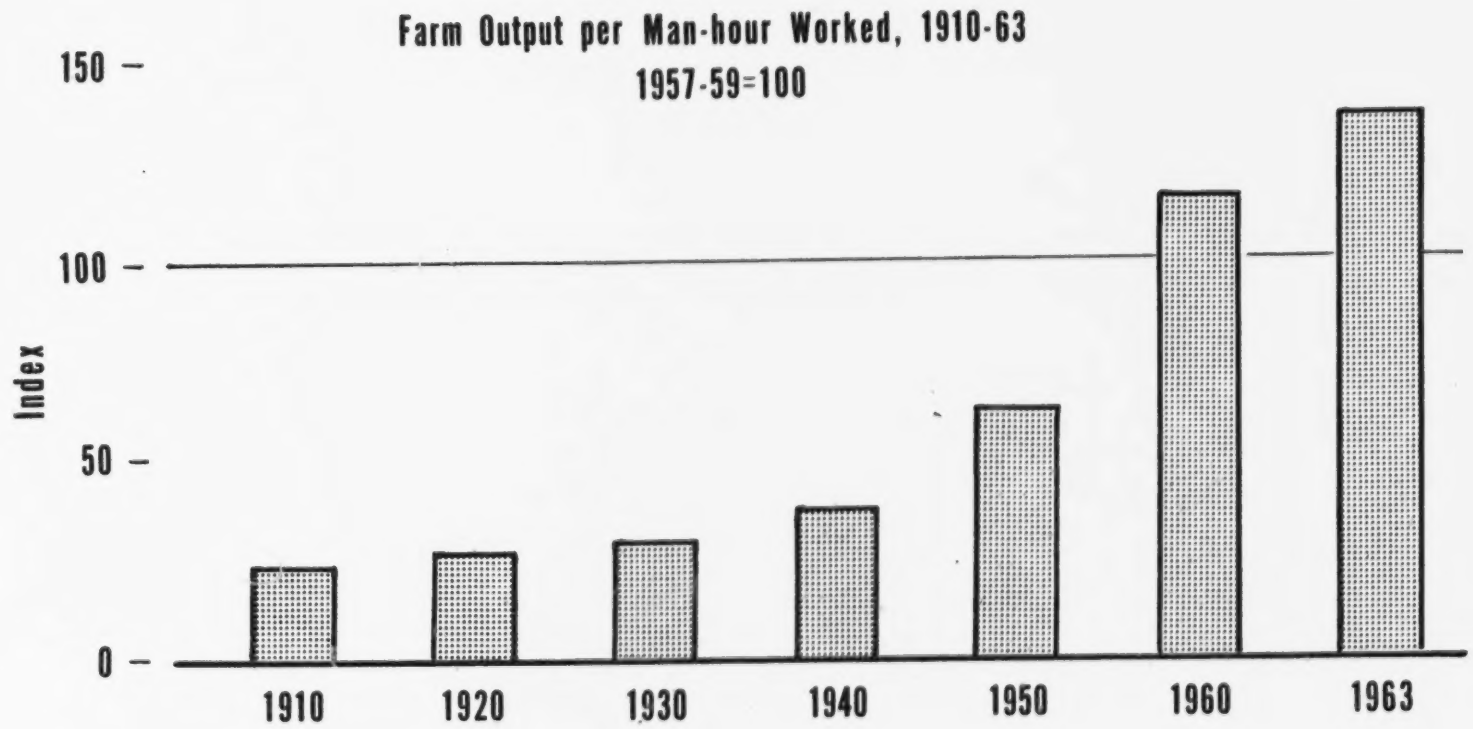


Developments in mechanization and in the organization and techniques of farming are changing U.S. agriculture. The number of farms fell from 5,647,800 in 1950 to 3,573,000 in 1963. Despite a decline of 4 percent in total land in farms, the average farm size increased from 213 acres in 1950 to 325 acres in 1963.

The typical commercial farm became a sizable business involving a substantial capital investment. In 1963, the value of assets used in agricultural production exceeded $25,000 per farmworker, greater than the investment per production worker in manufacturing.

Productivity of labor resulting from improved technology and changes in the organization of agriculture increased 30 percent between 1950 and 1963, in spite of a decline of more than 40 percent in man-hours of labor for farmwork.

Technological developments have brought an explosive increase in the productivity of farmworkers, particularly since 1940.

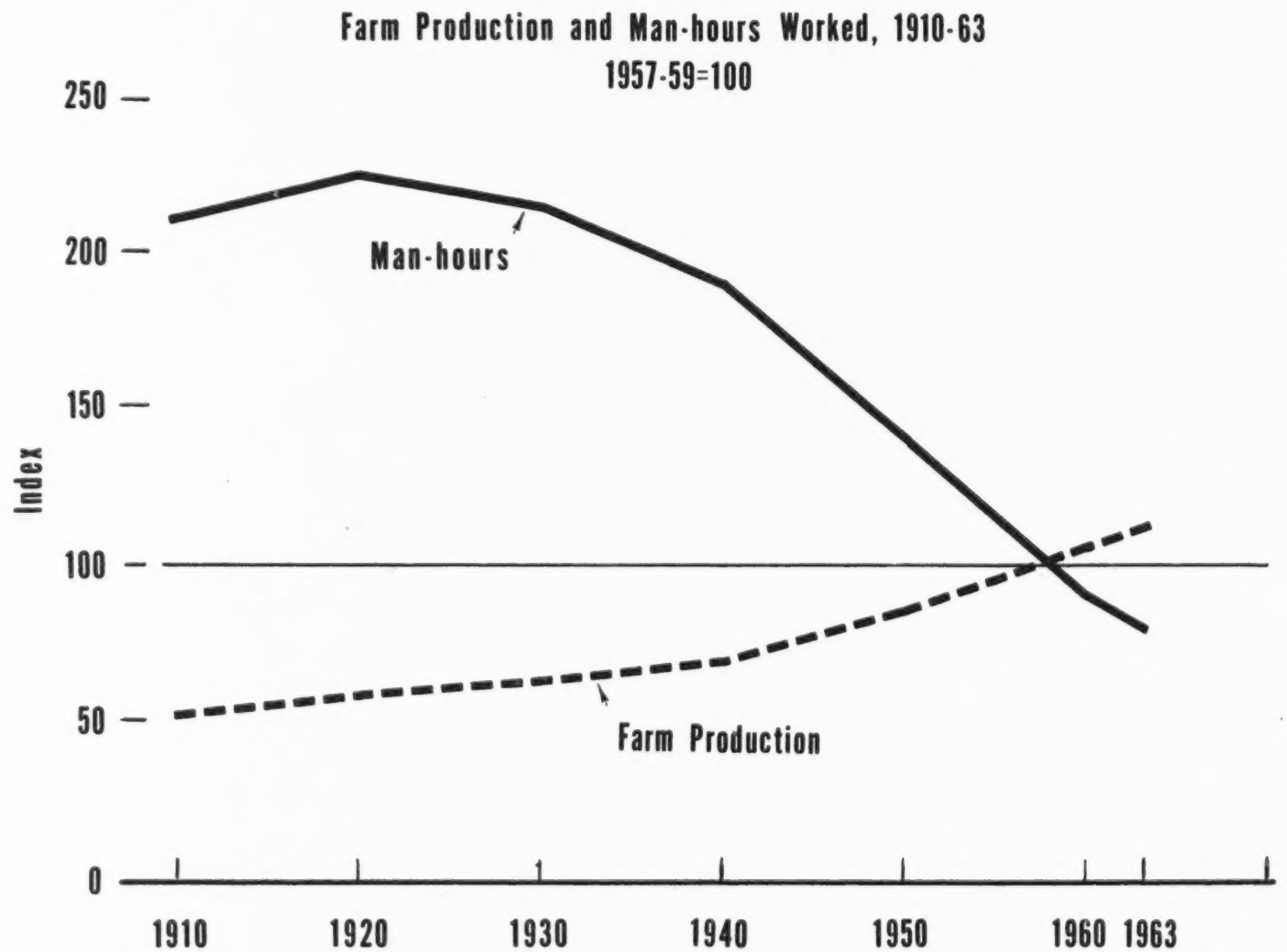


. . . In 1910, each American farmworker produced food and fibre for seven persons.

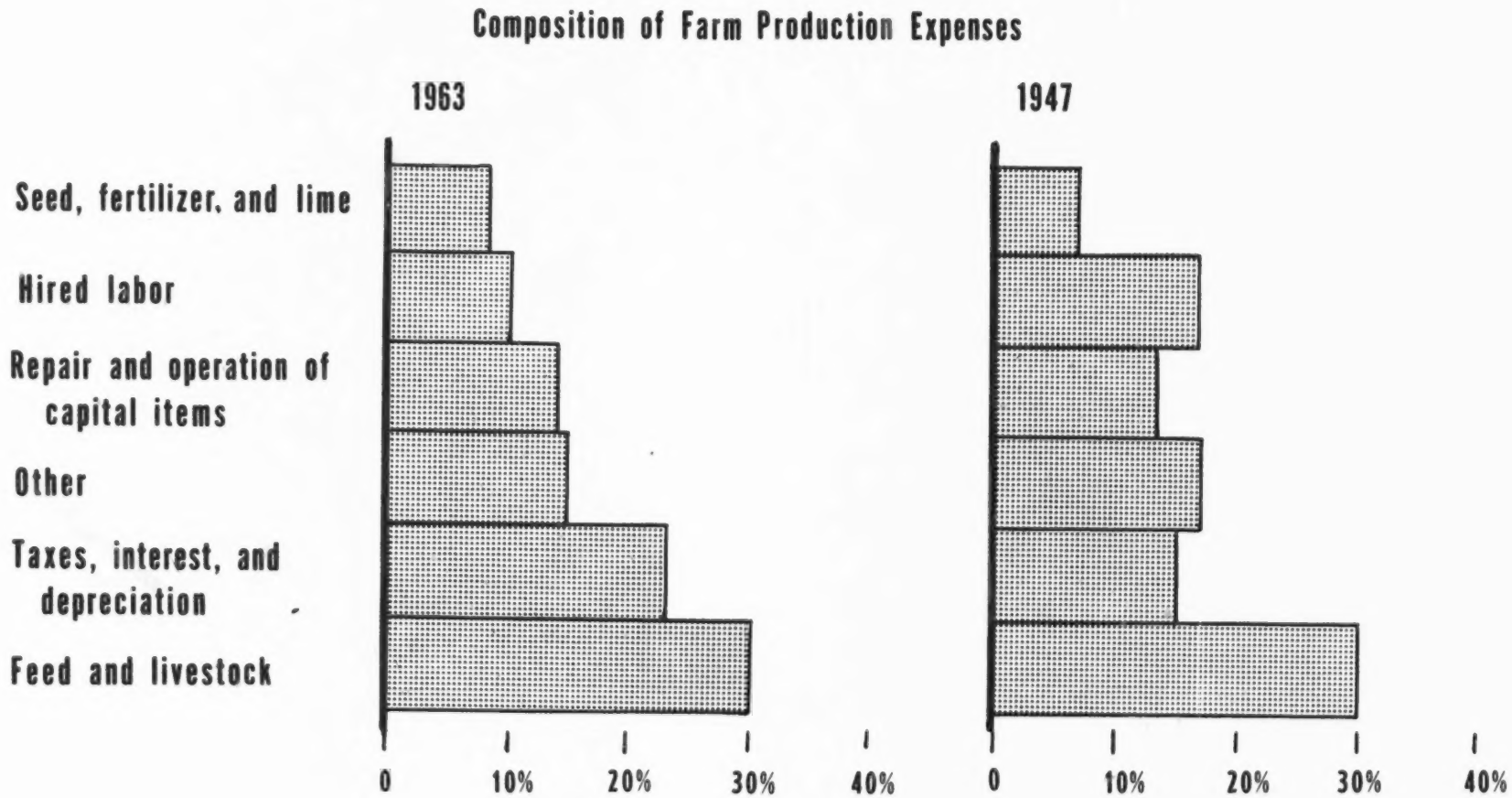
. . . By 1963, each farmworker produced food and fibre for 31 persons.

The technological developments that have made this possible have substantially raised skill requirements for part of the farm labor force and have released many rural workers for industrial jobs.

The amount of farm labor needed has dropped sharply despite increased production.



Increased labor productivity has been the principal cause of the decline in farm employment, and labor cost represents a declining proportion of total cost.



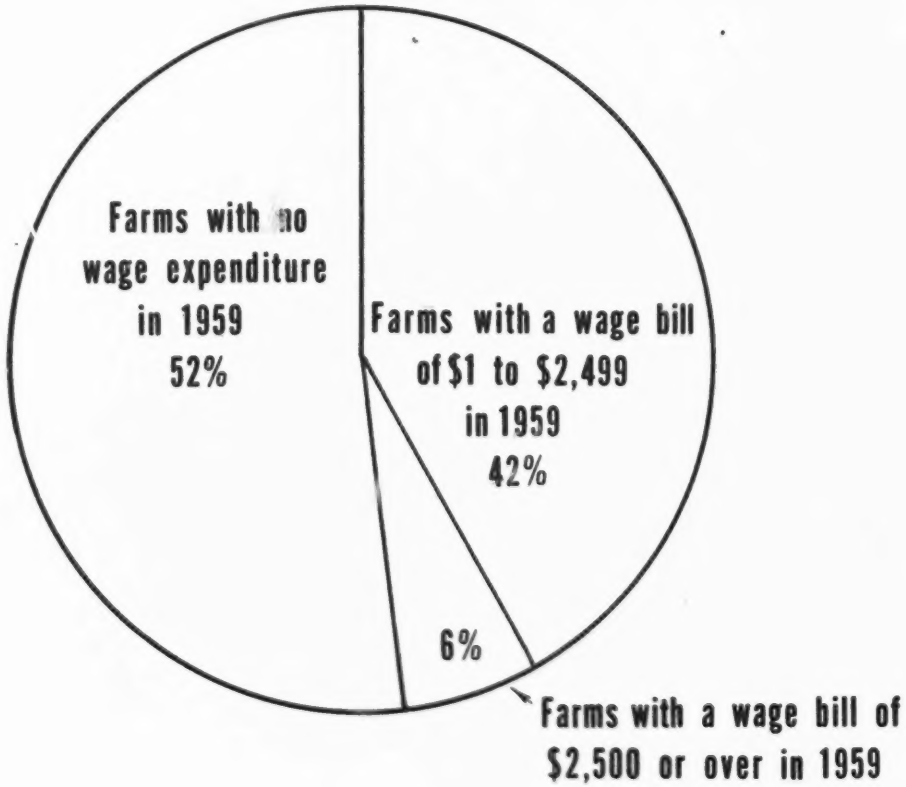
. . . Between 1947 and 1963, farm wage rates increased by about three-fifths, but because of the decline in employment, total wage costs remained stable, and wage cost as a proportion of all production cost decreased. In 1963, farm operators spent only 10 cents out of every dollar of production cost on hired farm labor. In 1947, labor cost 17 cents of every dollar.

Most farms make little or no use of hired labor.

52 percent of all farms used no hired workers in 1959.

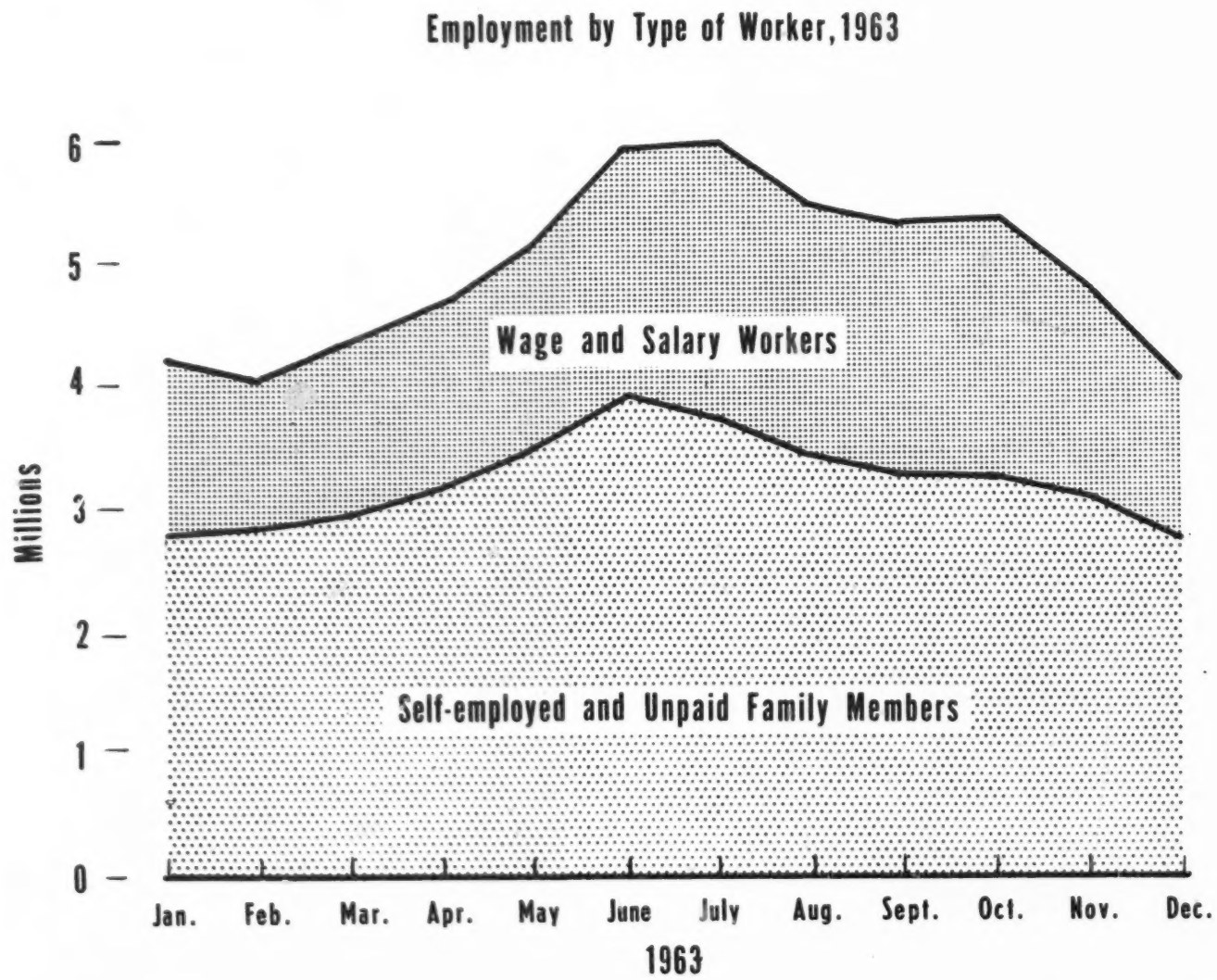
42 percent of all farms spent less than $2,500 for hired workers. For nearly three-fourths of these farms, the expenditure was less than $500.

6 percent of the farms had labor expenditures of $2,500 or more. Despite the overall decrease in number of farms, those reporting expenditures of $2,500 or more increased by 15 percent from 1954 to 1959.

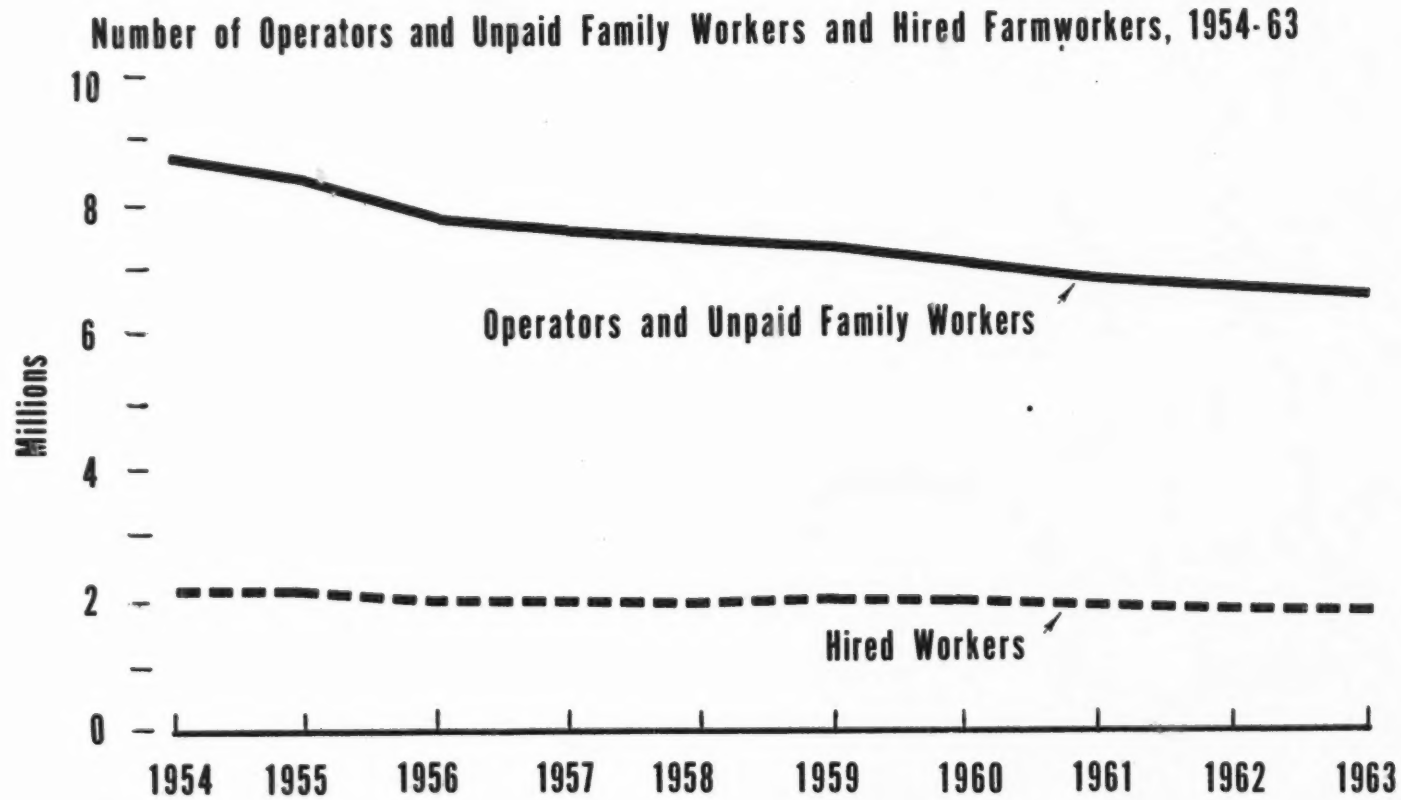


A few very large farms accounted for a substantial proportion of all wage expenditures. Farms with sales of $100,000 or more made up less than 1 percent of the total number of farms but paid 30 percent of all labor expenditures.

Even at the peak of the season farm operators and unpaid family workers outnumber wage and salary workers.



The decline in number of hired workers has been less than that of operators and unpaid family workers. As the number of operators and family workers declines, hired workers take on more importance in the total farm labor picture.



As the number of farms decreased, fewer farm operators and unpaid members of their families remained in the agricultural work force.

On the other hand, demand for hired labor has been sustained by--

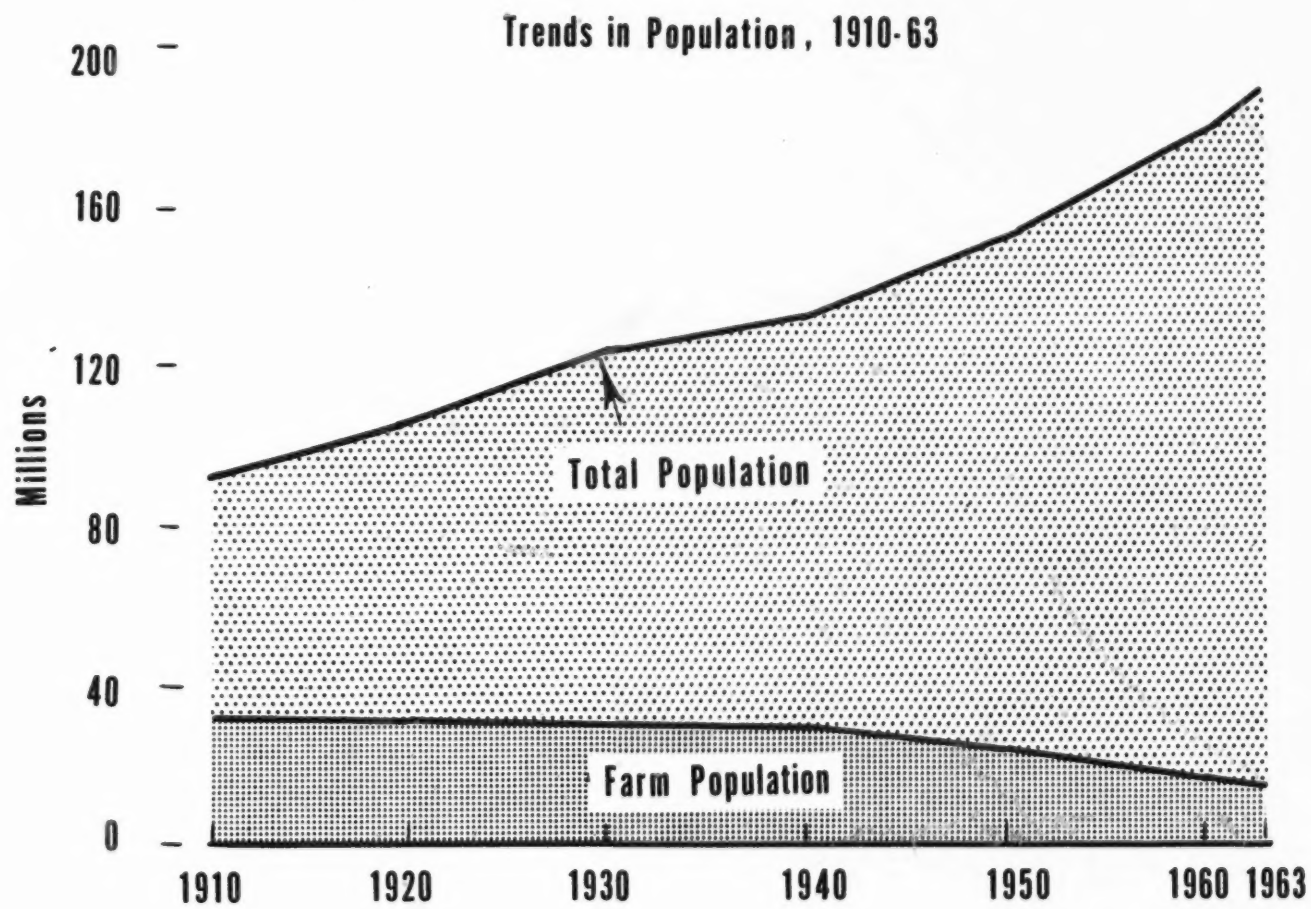
. . . Consolidation of farms into units larger than can be handled by the operator and his family.

. . . Increases in fruit and vegetable production which require large numbers of temporary hired hands.

. . . Replacement of young adults leaving the farm population by temporary seasonal hired workers.

As a result, average annual employment of hired workers decreased only 14 percent in the 1954-63 decade, while employment of operators and unpaid family workers decreased by 28 percent.

The farm population is declining, while the total population is growing.



In 1910, over 32 million persons lived on farms, and they accounted for 1 of every 3 people in the United States.

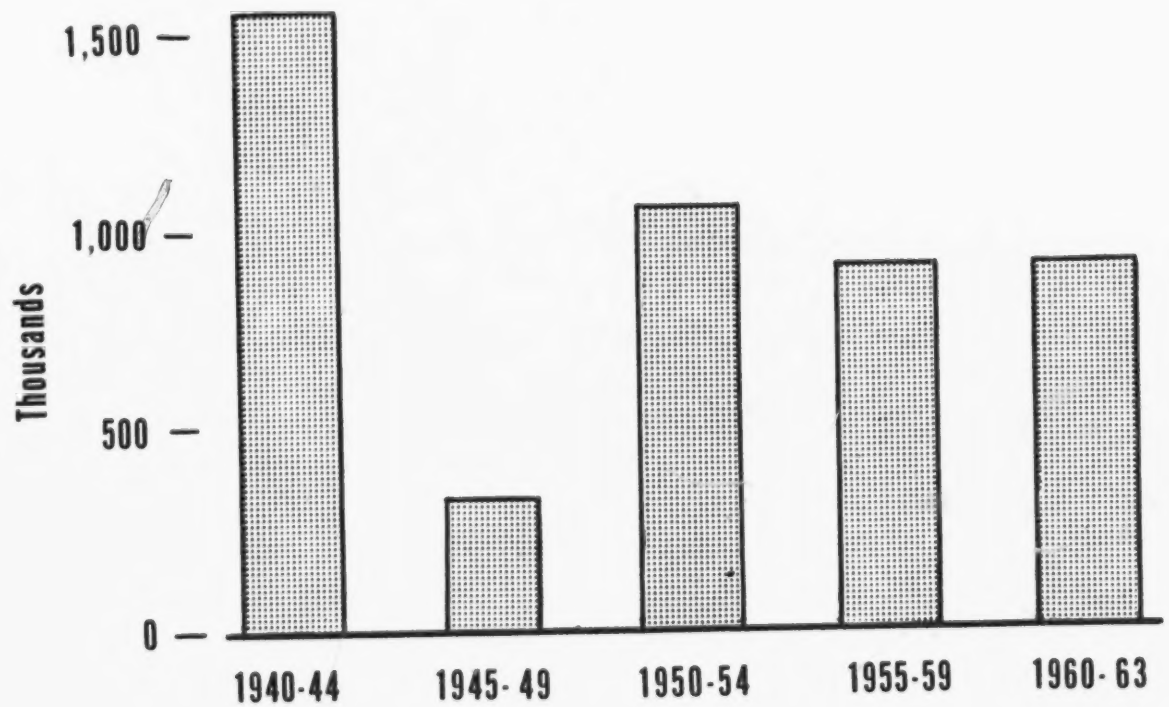
In 1963, fewer than 13.4 million persons lived on farms, and they accounted for only 1 out of every 14 people.

Migration from farm to city remains high.

The movement of farm people to urban areas has been one of the major trends in our Nation's history. Net migration from the farm totaled over 24 million from 1940 through 1963, averaging over 1 million per year during this period.

The largest decline in farm population since 1940 has been in the South and the West North Central States. All States have experienced some decline, however, except Alaska.

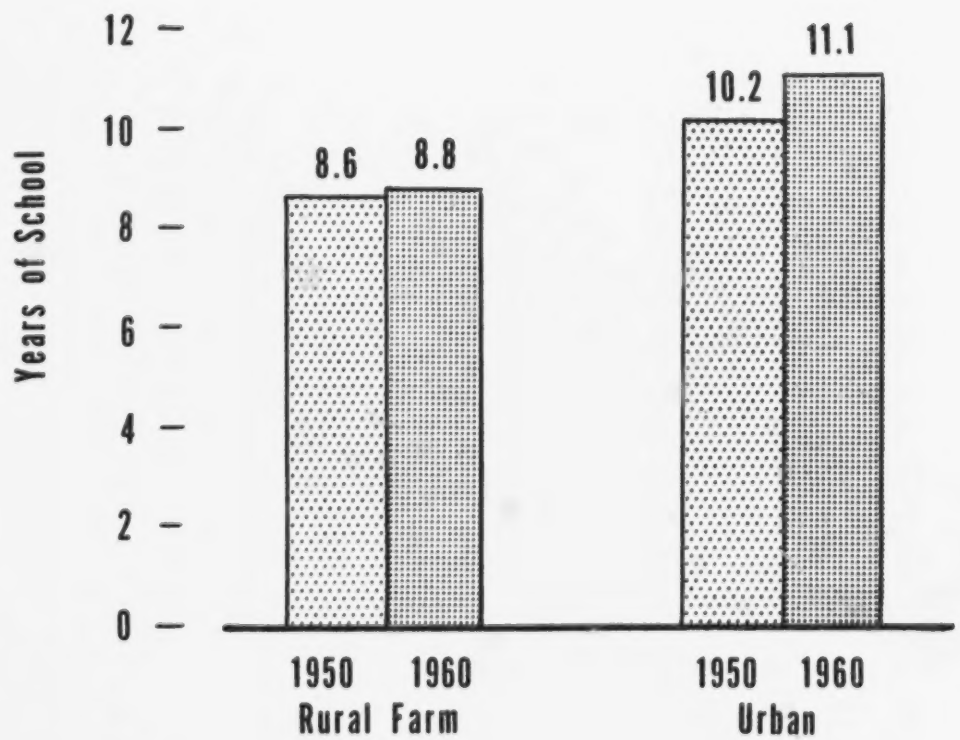
Average Annual Net Outmigration from the Farm Population, 1940-63



Lack of qualifications for skilled jobs prevents some people from leaving the farm.

While outmigration of farm people to cities has tended to relieve the problems of rural unemployment, underemployment, and low income, these problems are still severe in many rural areas. In order to move from rural areas, farm people need more education to qualify for skilled jobs in nonfarm occupations. But their level of schooling is lower than that of urban people and the lag is increasing.

Median Years of School Completed, 1950 and 1960



Numbers, Characteristics, Employment Patterns

Despite the great drop in total farm labor needs, the number of individuals in farm wage work increased in the 1954-63 decade.

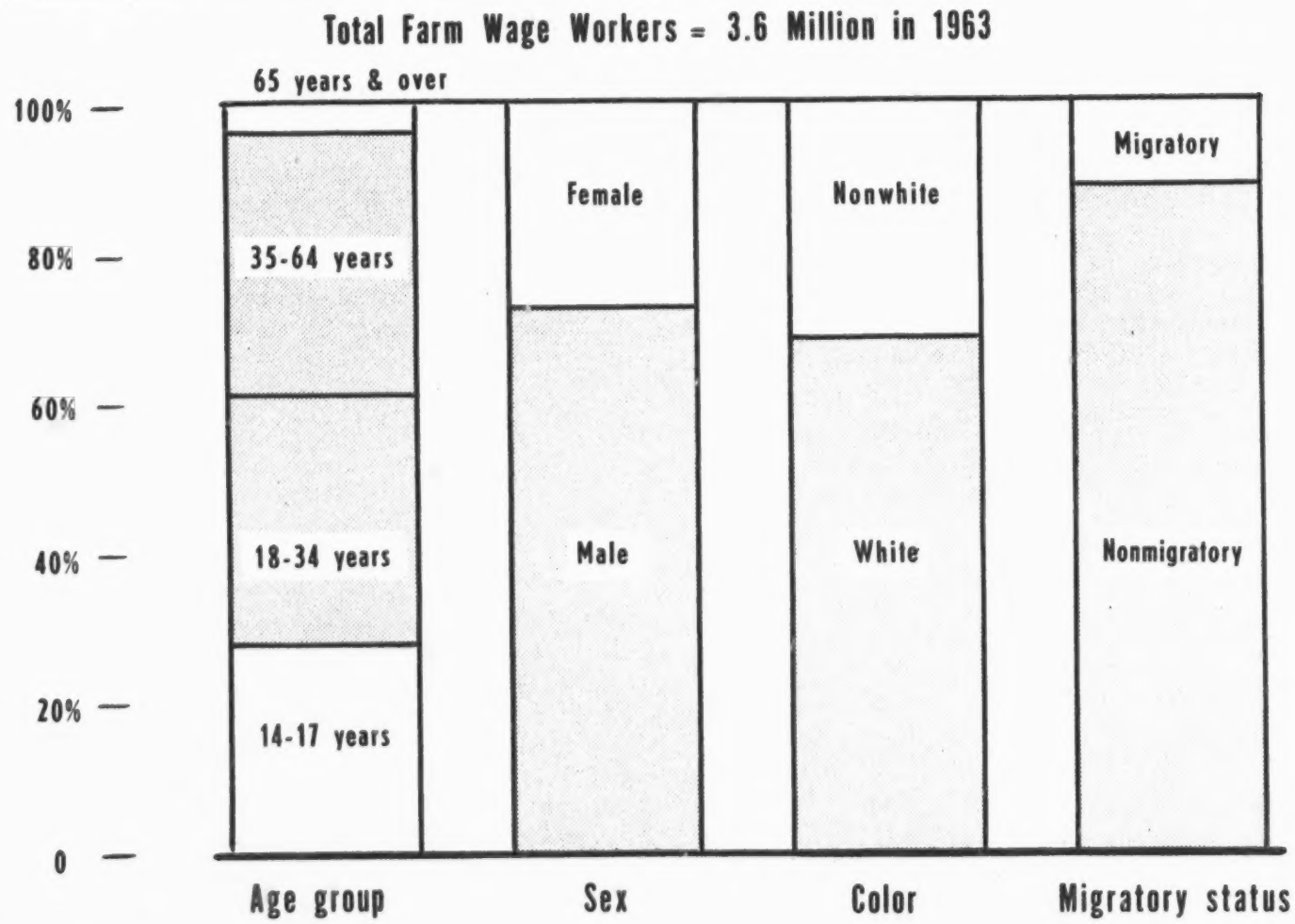
The number of individuals who engage in farm wage work at some time or other during the year has fluctuated considerably over the past decade but is generally higher than it was 10 years ago.

The proportion of workers with enough work during the year to be considered regular hired workers--150 days or more--has been only about one-fifth of the total in recent years. The number who do farm wage work for only a short period of time--less than 25 days during the year--is more than two-fifths of the total.

Year	Total	Persons engaging in farm wage work (thousands)		
		Less than 25 days	25-149 days	150 or more days
1954	3,009	1,101	1,074	834
1956	3,575	1,497	1,329	749
1957	3,962	1,762	1,545	655
1958	4,212	1,893	1,563	756
1959 1/	3,577	1,412	1,365	800
1960	3,693	1,531	1,333	828
1961	3,488	1,600	1,203	685
1962	3,622	1,555	1,341	726
1963	3,597	1,735	1,163	699

1/ Beginning with 1959, figures exclude persons doing custom work.

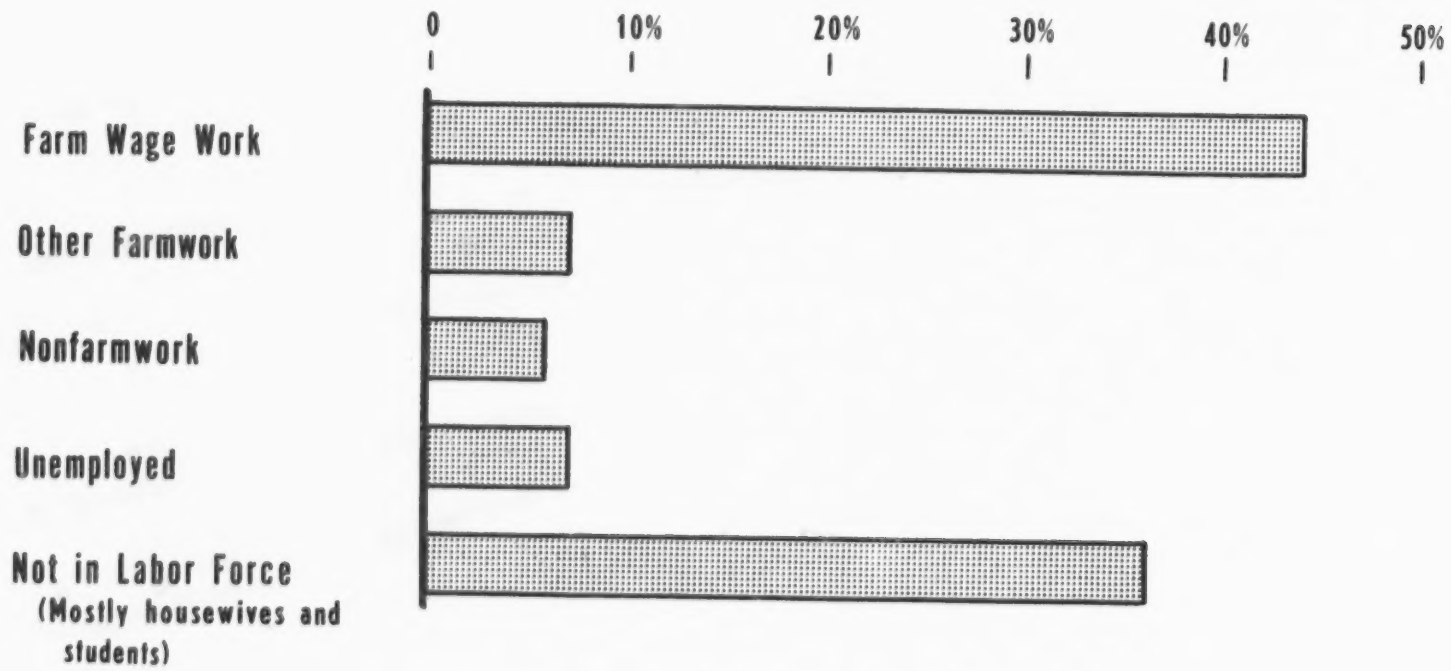
Most farmworkers are adult, male, white, and nonmigratory.



Many short-term workers in agriculture are women and youth. Sixty-one percent of the women and 67 percent of the 14-to-17-year-old farmworkers had less than 25 days of farm wage work during 1963.

For half of the farm wage workers, farmwork is not the chief activity during the year.

Chief Activity During the Year of Workers Doing 25 or More Days of Hired Farmwork, 1963



Of the 1,862,000 workers who were employed more than 25 days at farm wage jobs in 1963, a large proportion were out of the labor force or were unemployed much of the year.

The proportion of workers for whom farmwork was the major activity declined sharply from more than 70 percent in 1947 to 51 percent in 1963.

Hired farm laborers experience more unemployment than most workers.

For every 1,000 persons who had work experience of any kind in 1962:

838 had no unemployment;

104 had 1-14 weeks of unemployment;

33 had 15-26 weeks of unemployment; and

25 had more than 26 weeks of unemployment.

For every 1,000 workers whose longest job in 1962 was as a paid farm laborer:

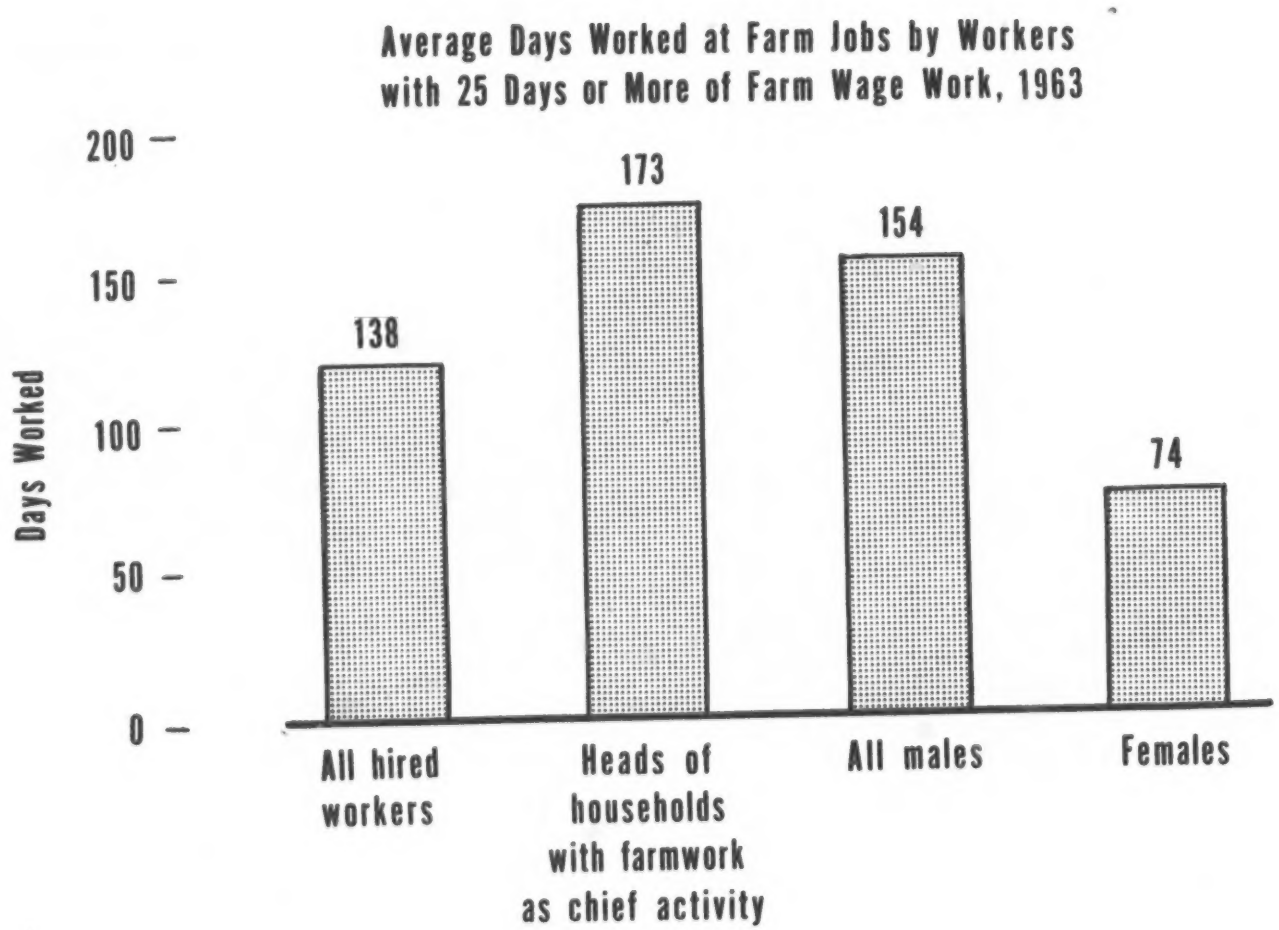
736 had no unemployment;

138 had 1-14 weeks of unemployment;

59 had 15-26 weeks of unemployment; and

67 had more than 26 weeks of unemployment.

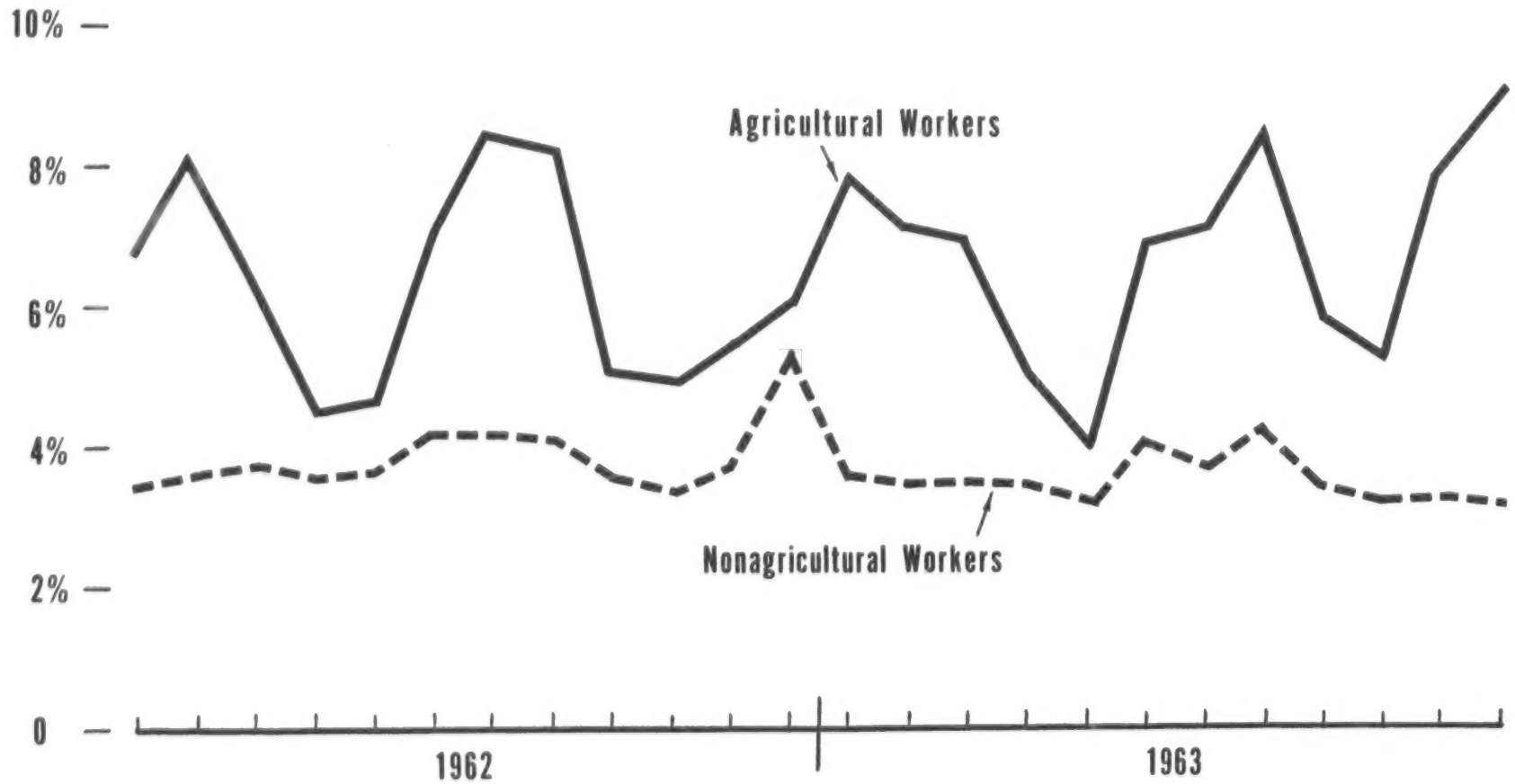
For most workers, the annual period of farm employment is short.



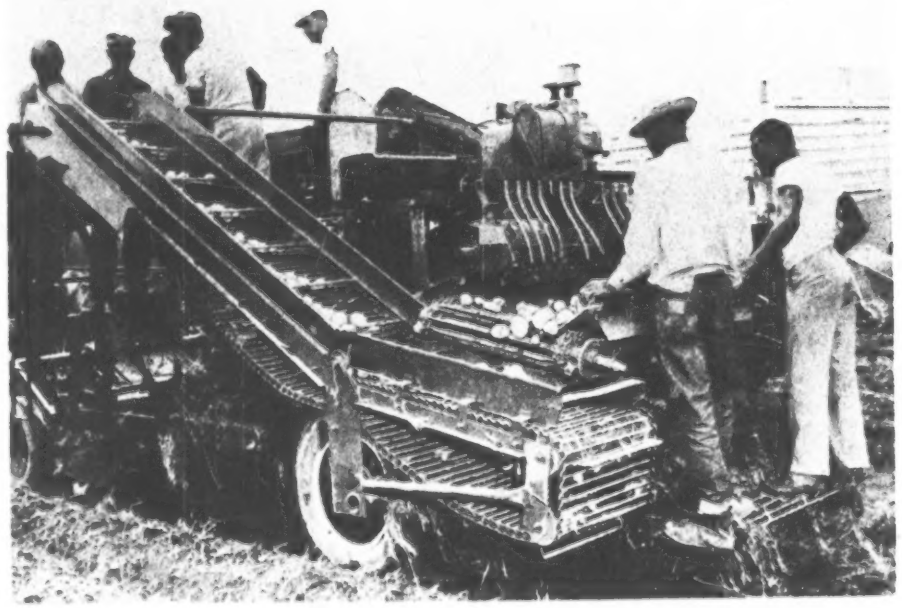
Seasonality is inherent in agricultural employment. However, it has been increased by the growing specialization of farms and by the use of machines, chemicals, and improved seed which reduce labor needs for many phases of crop production.

Even during the growing season, underemployment is more common among farm wage earners.

Percent of Employed Wage Earners Working Less Than 35 Hours per Week for Economic Reasons, 1962-63

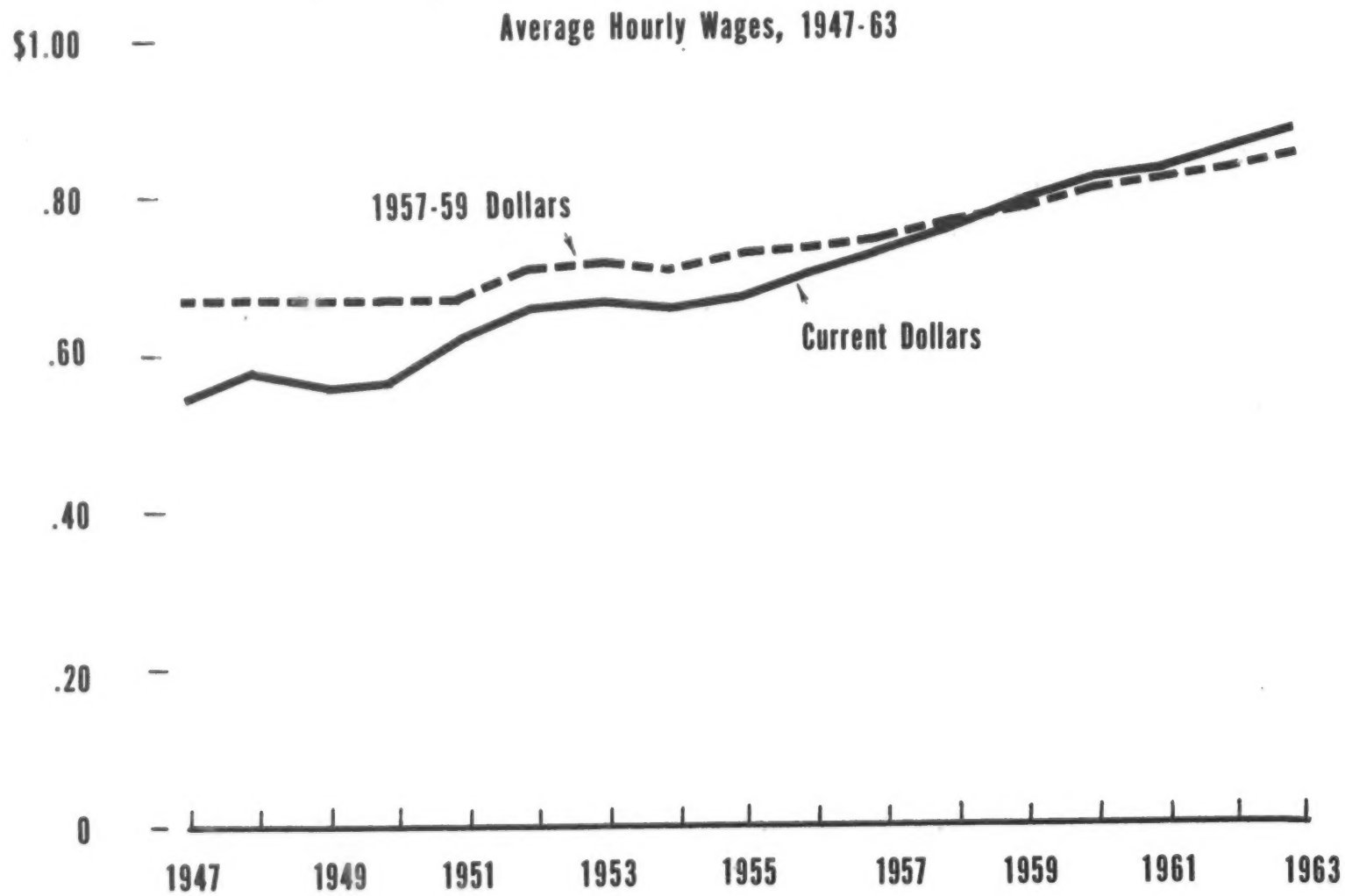


Wage Rates and Earnings



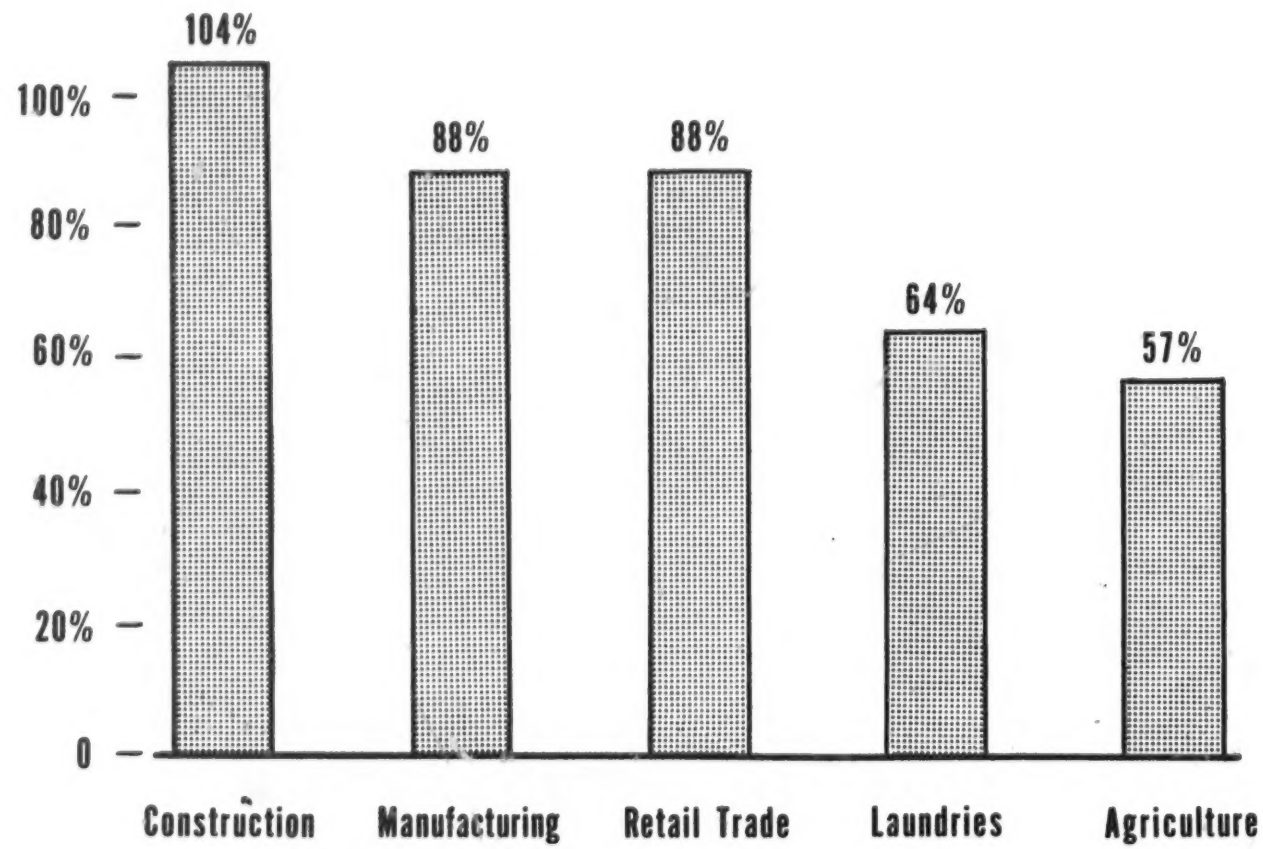
Farm wage rates have increased.

Between 1947 and 1963, average hourly wages of hired farmworkers rose 60 percent, from 55 cents to 88 cents. During the same period, however, rural living costs rose 25 percent and the purchasing power represented by the average hourly wage increased only 29 percent.



The gap between farm and nonfarm wages becomes greater despite the rise in farm wages.

Percentage Increases in Average Hourly Earnings in Selected Industries, 1947-49 to 1963



Although many farmworkers receive supplementary benefits, such as free housing, there is no indication that they have shared in increased nonwage forms of income (such as paid vacations, premium pay for overtime, and employer-financed health insurance and pension plans) which have occurred in most other industries.

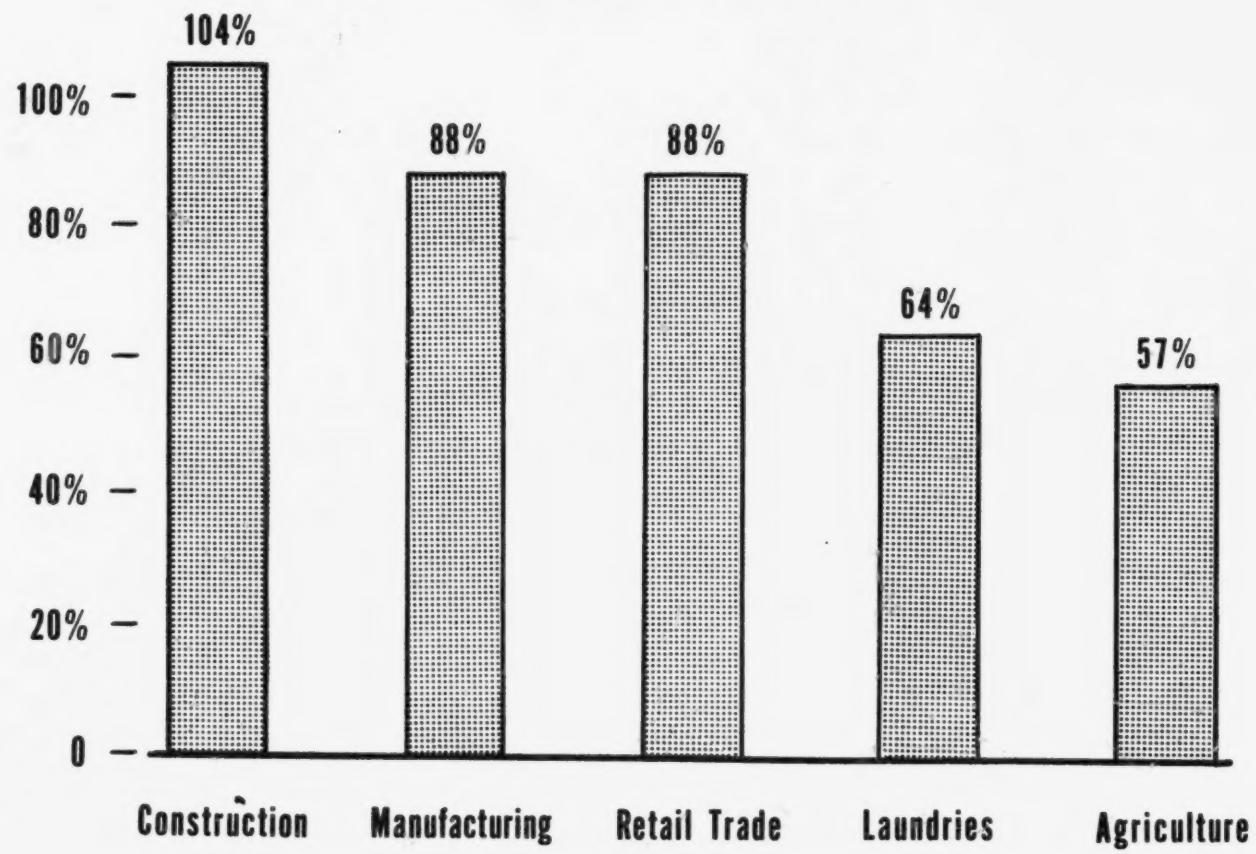
Farm wage rates show sharp regional variations.

Farm wage rates rise as one moves from the Southeast toward the North and West. The Pacific Coast States have the highest wage rates; the East South Central States, the lowest. In 1963, farmworkers along the Pacific Coast received more than twice the wage rates paid in some of the East South Central States.

In general, farm wage rates appear to be lowest in the Southeastern States, where the surplus of U.S. workers has been greatest, and in some of the areas in the Southwestern U.S. where foreign workers have been a major element in the work force.

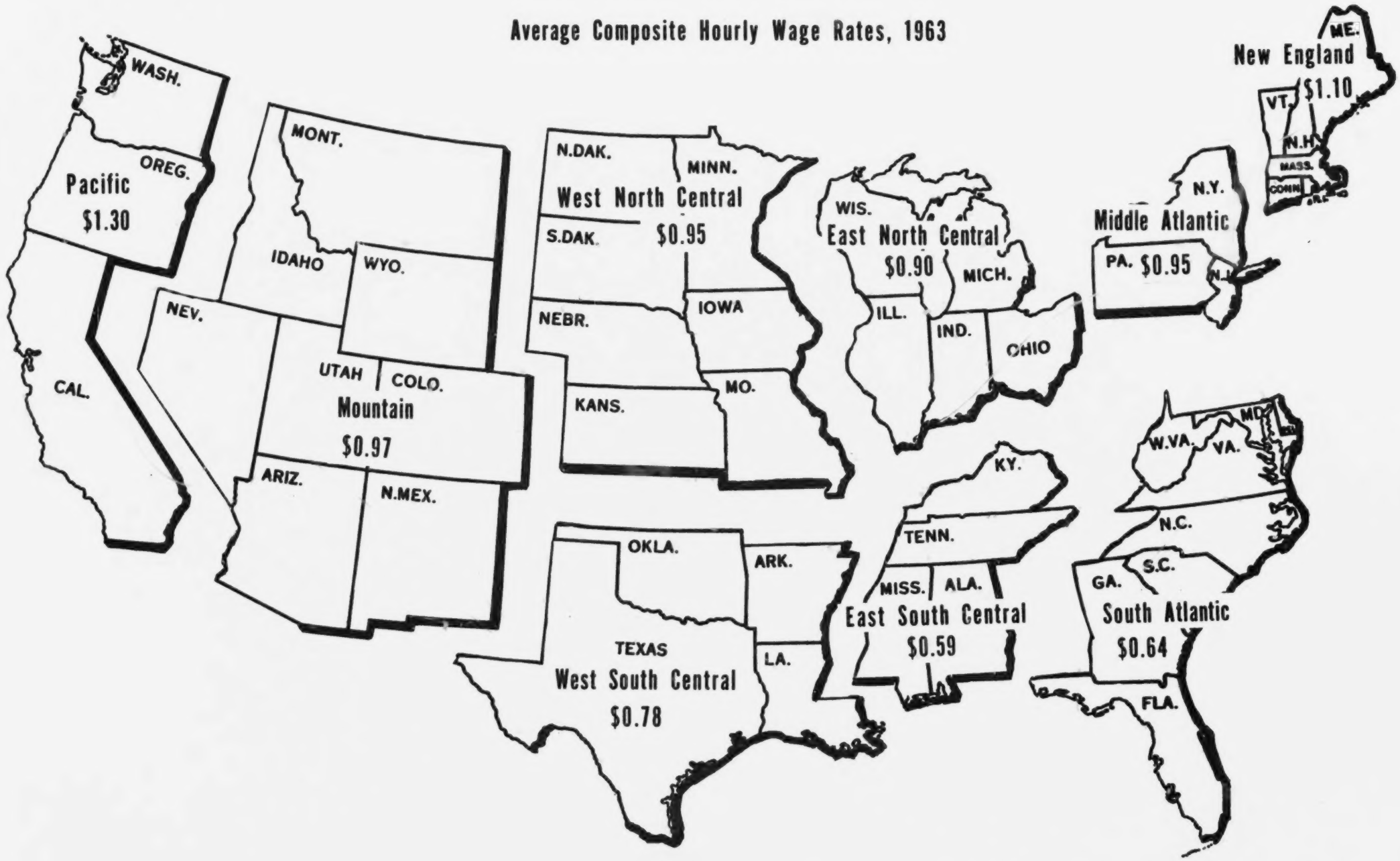
The gap between farm and nonfarm wages becomes greater despite the rise in farm wages.

Percentage Increases in Average Hourly Earnings in Selected Industries, 1947-49 to 1963



Although many farmworkers receive supplementary benefits, such as free housing, there is no indication that they have shared in increased nonwage forms of income (such as paid vacations, premium pay for overtime, and employer-financed health insurance and pension plans) which have occurred in most other industries.

Farm wages are lowest in South; are highest on West Coast.



Low wage rates coupled with short periods of employment keep farmworker earnings very low.

In 1963, wage workers employed on farms for 25 days or more had average earnings of $1,087, including $204 from nonfarm jobs.

Those who worked:	Numbered:	And had average cash earnings of:
25 - 74 days	771,000	$ 514
75 - 149 days	392,000	813
150 - 249 days	309,000	1,411
250 or more days	390,000	2,240

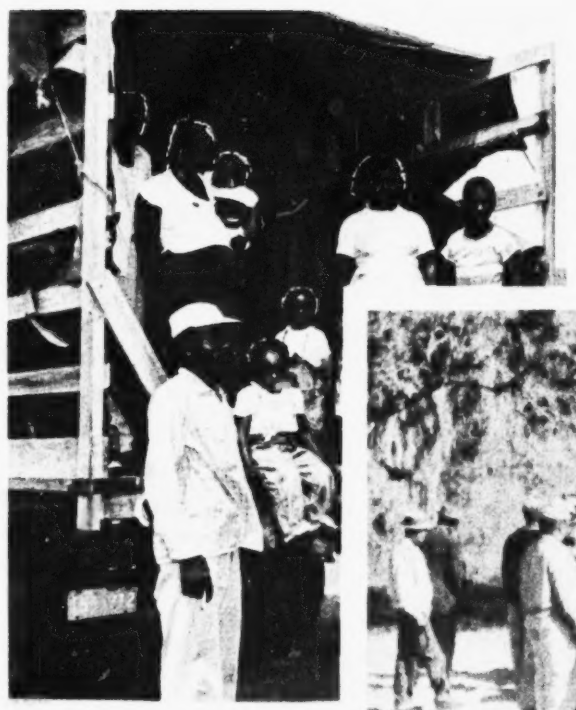
Low annual earnings reflect --

. . . Average daily earnings of only $6.40 per day worked on farms.

. . . Substantial underemployment. Male workers 14 years of age or older, who comprise most of the workers permanently attached to the farm labor force, averaged wages of only $1,260 in 1963 from a combination of farm and nonfarm jobs.

Migratory U.S. Farm Workers

Numbers
Routes Traveled
Problems



Many farmworkers leave their home areas in order to extend their period of employment with additional seasonal farmwork; often a relatively full work schedule can be achieved through a series of short seasonal jobs.

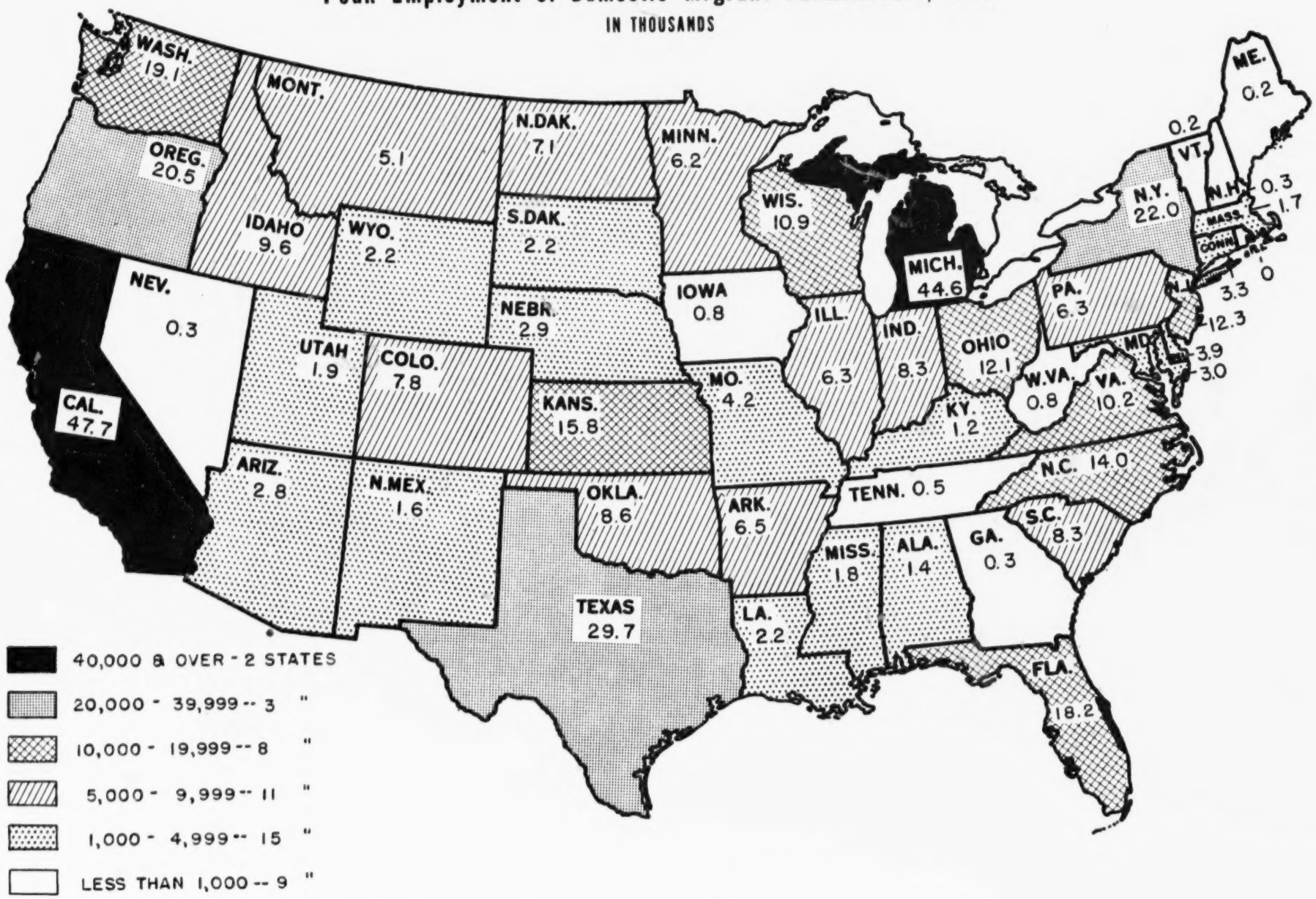
There are about 400,000 migrant U.S. farmworkers. In 1963, employment of such workers reached a seasonal peak of approximately 240,000 at the end of July. Although reliable statistics are lacking, all the available evidence suggests a high turnover rate among migrants, i.e., a significant proportion of the migrants in any given year do not follow the crops the next year.

Migrant workers tend to follow well defined paths developed over a period of years. The largest of these migrations is the midcontinent stream. In Texas, nearly 100,000 U.S. migrants leave their home areas each summer for employment further north or west. In some cases, their departure creates a labor shortage which is filled by foreign workers. The East Coast pattern involves 30,000 to 40,000 workers moving up the coast from Florida and other southern States. Along the West Coast, there is a substantial shifting of workers for fruit and vegetable activities.

A large proportion of the migrants are members of minority groups. Negroes comprise about two-fifths of the total and Spanish-Americans about one-fourth.

Under the Department of Labor is an Annual Worker Plan scheduling migrants to farm jobs in advance of the season to provide greater continuity of employment for workers and a reliable labor supply for employers. In 1963, about 168,000 migrant workers in 10,300 groups received assistance under the Plan.

U.S. migratory farmworkers are employed throughout the Nation.



Migrant farmworkers face severe economic and social problems.

Substantial underemployment

. . . Migrants often suffer long spells of involuntary idleness between jobs. Even when they find employment, sudden damage to crops by adverse weather may leave the migrants without means of support, far from their homes. Twenty-eight out of every 100 migrant workers had less than 25 days of farm wage work during 1963. (Many of these short-term workers were, of course, women and children who were available for only a few days of work during the year.)

Low earnings

. . . Migrant farmworkers who worked at least 25 days at farm jobs during 1963 averaged only $657 from those jobs. The highest average was for white workers who earned $681 for 110 days worked on farm jobs during the year, supplemented by $231 earned from nonfarm employment.

Inadequate housing

. . . Although 30 of the States set standards for migrant labor housing, and the interstate recruitment regulations of the Department of Labor suggest standards where there are no State regulations, inadequate quarters remain a problem in many areas.

Insufficient education and child care facilities

. . . Women in migrant households must work to supplement low family incomes. Day-care of young children while parents are in the field is often inadequate. A transient way of life reduces educational opportunities. One-half of the migrant workers complete no more than 8 years of school.

Inadequate health and welfare facilities

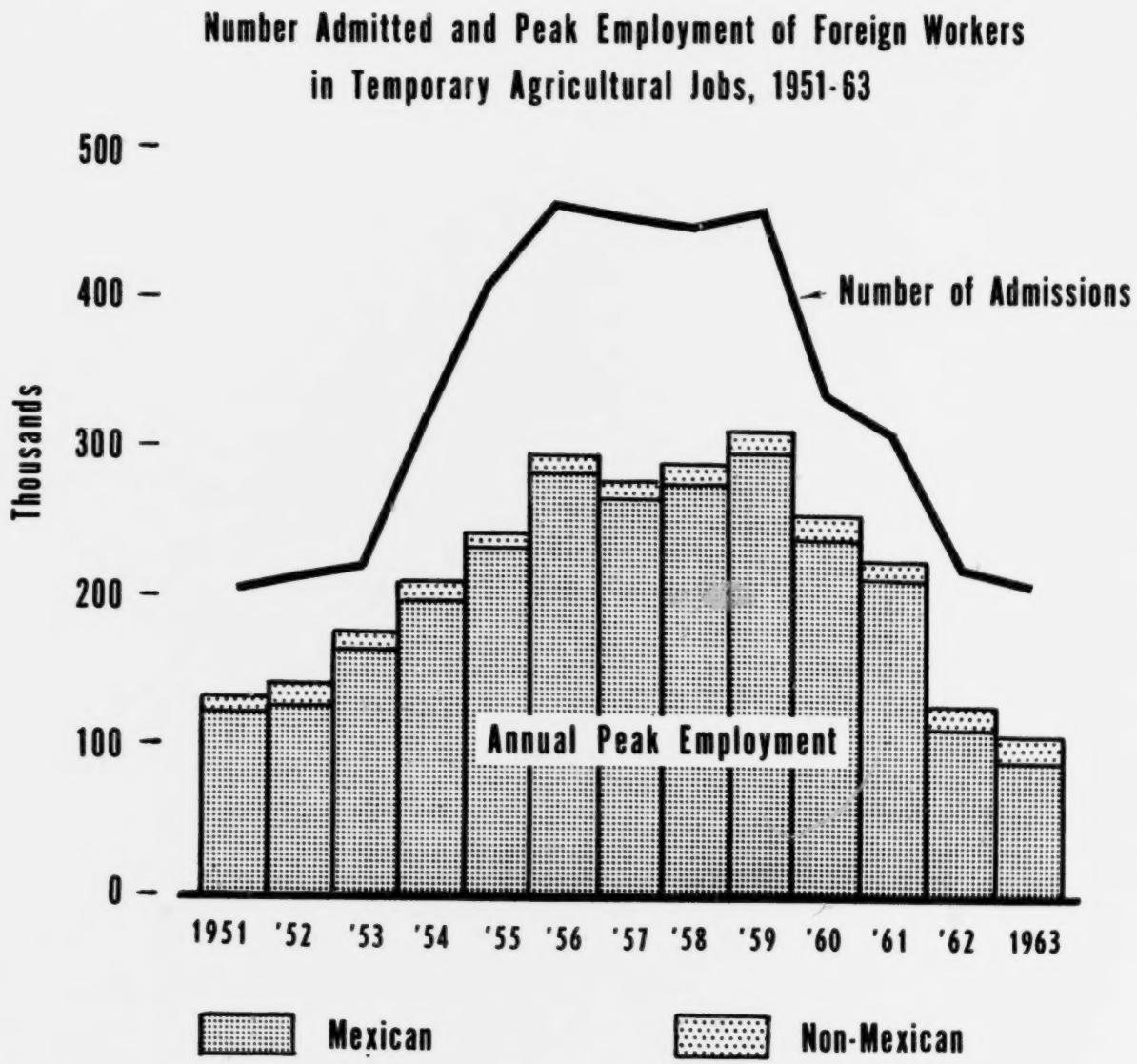
. . . Because of low earnings, many migrants shift back and forth across the line between subsistence income and pauperism. Because of residence restrictions on State welfare assistance, migrants are usually ineligible for public aid. Health problems associated with poverty and lack of education are additional difficulties.

Recently enacted legislation will help to solve some of the migrants' problems. The Migrant Health Act of 1962 is designed to provide improved health care and sanitary conditions. Federal grants have been awarded for health projects in almost half of the States. The Economic Opportunity Act of 1964 provides for assistance to both government agencies and private nonprofit groups in establishing and operating housing, sanitation, education, and child day-care programs for migrants and their families. They will also benefit from the Farm Labor Contractor Registration Act of 1964.

Foreign Contract Workers

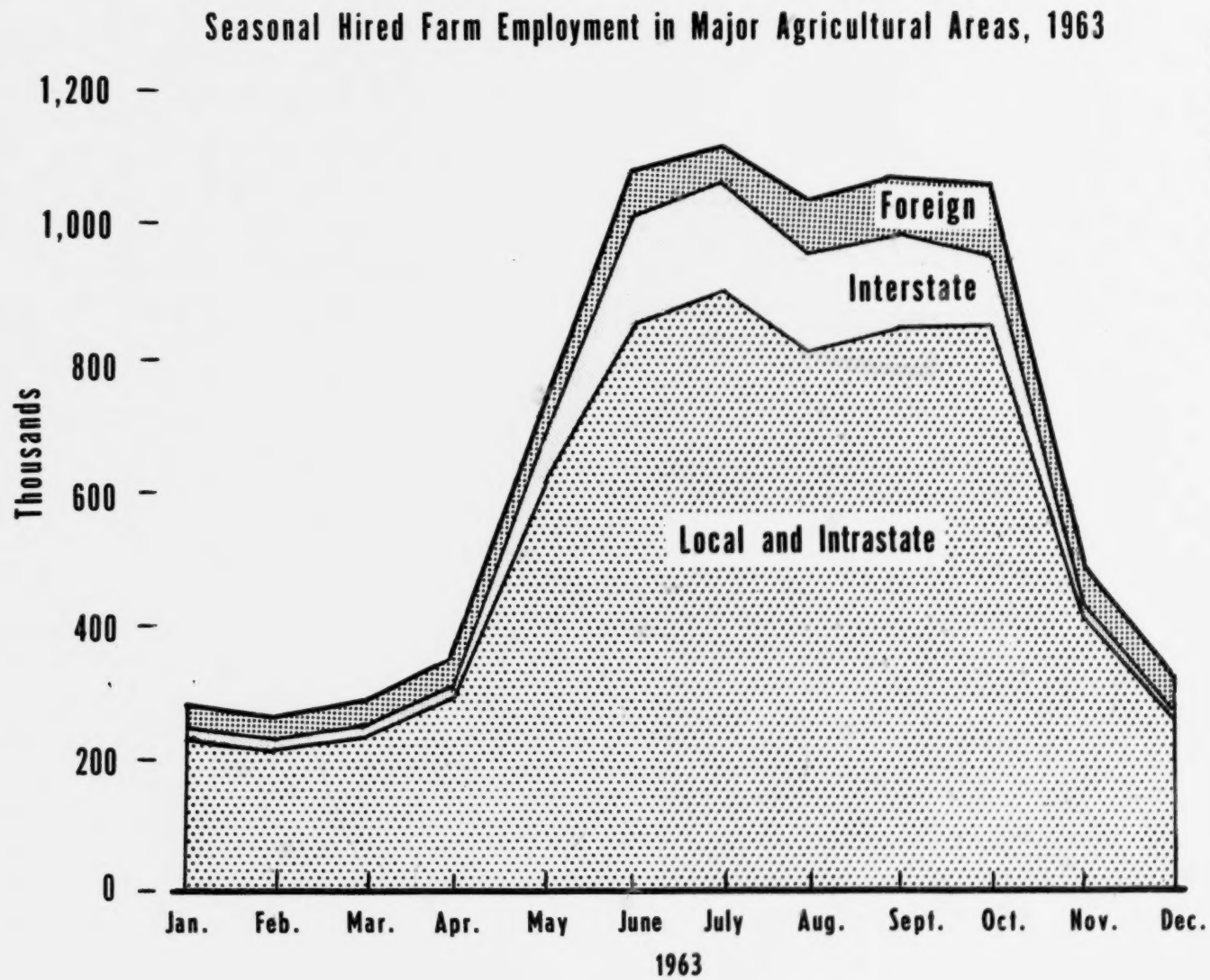
Numbers
Concentration

Started to meet wartime shortages, use of foreign contract workers continued at a high level for several years but since 1959 has declined sharply.



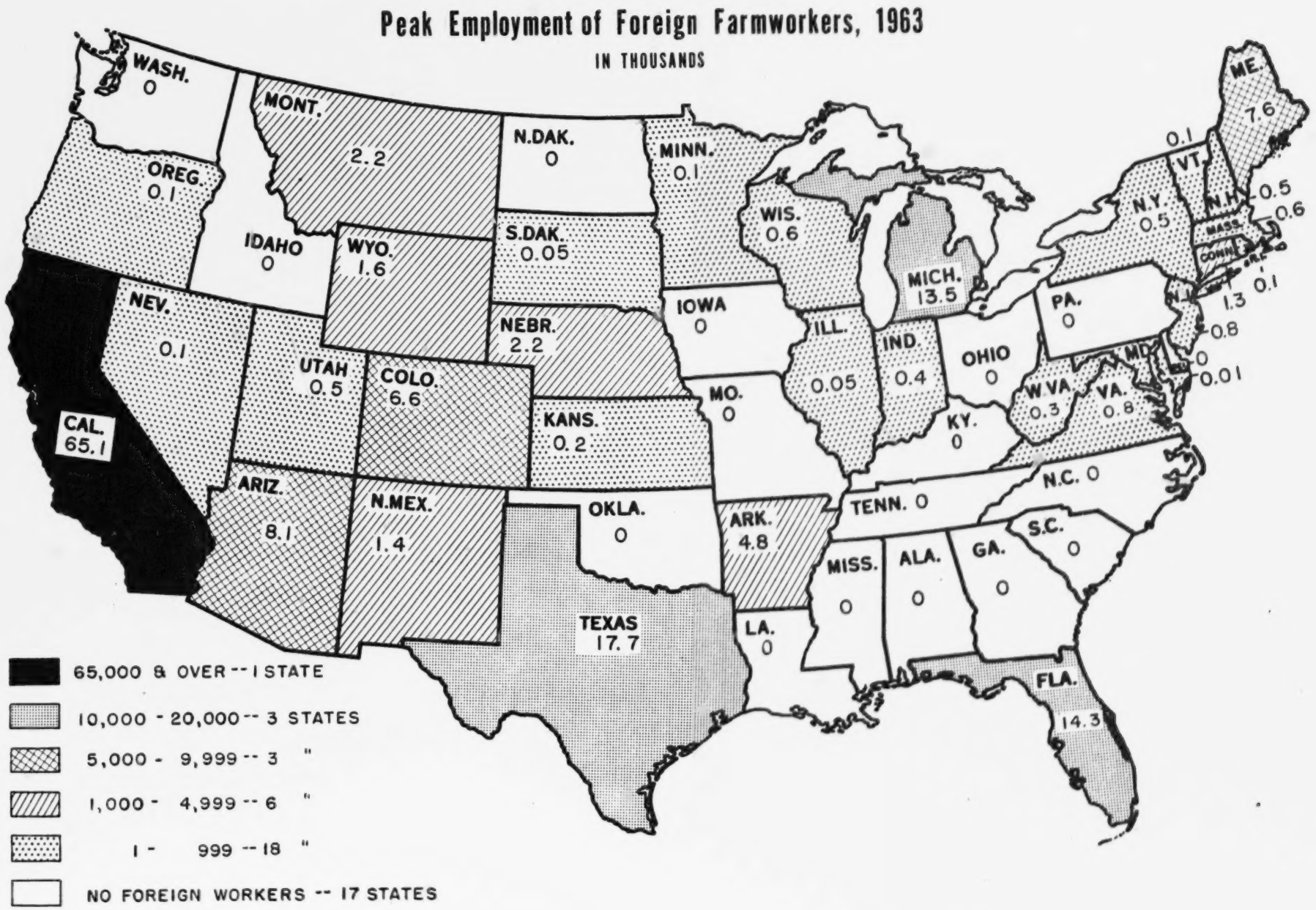
The first large decline in the number of foreign workers since the Korean War occurred in 1960. The decline has continued, and by 1963 the number of foreign workers admitted (209,000) was less than half the number of admissions in the peak years of 1956-59. The chief reasons for the diminishing use of foreign nationals were the mechanization of activities in which large numbers were previously employed, notably the cotton harvest; amendments to PL 78 enacted in 1961 which barred Mexican employment on machines or as year-round workers; and administrative measures taken by the Department of Labor, most notably a stricter interpretation of what constituted adverse effect on wages of domestic workers. PL 78, the act under which Mexicans were brought in, expired December 31, 1964.

Foreign contract workers comprise a relatively small proportion of the seasonal farm work force.

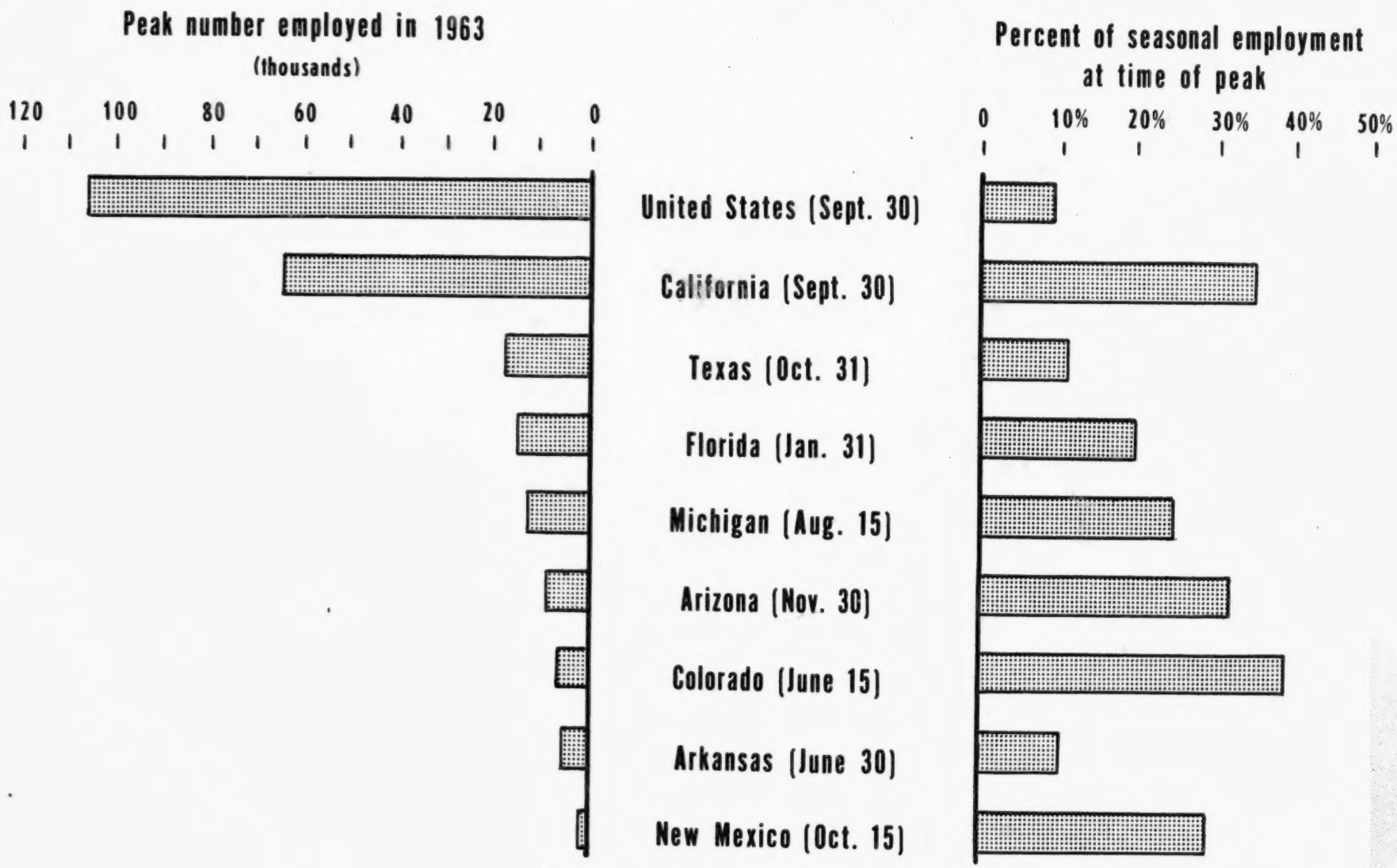


Foreign contract workers are used in all seasons and at peak make up almost one-tenth of the seasonal hired work force. However, foreign workers are employed on only about 1 percent of all U.S. farms.

Foreign workers were used to fill labor shortages in these States in 1963.

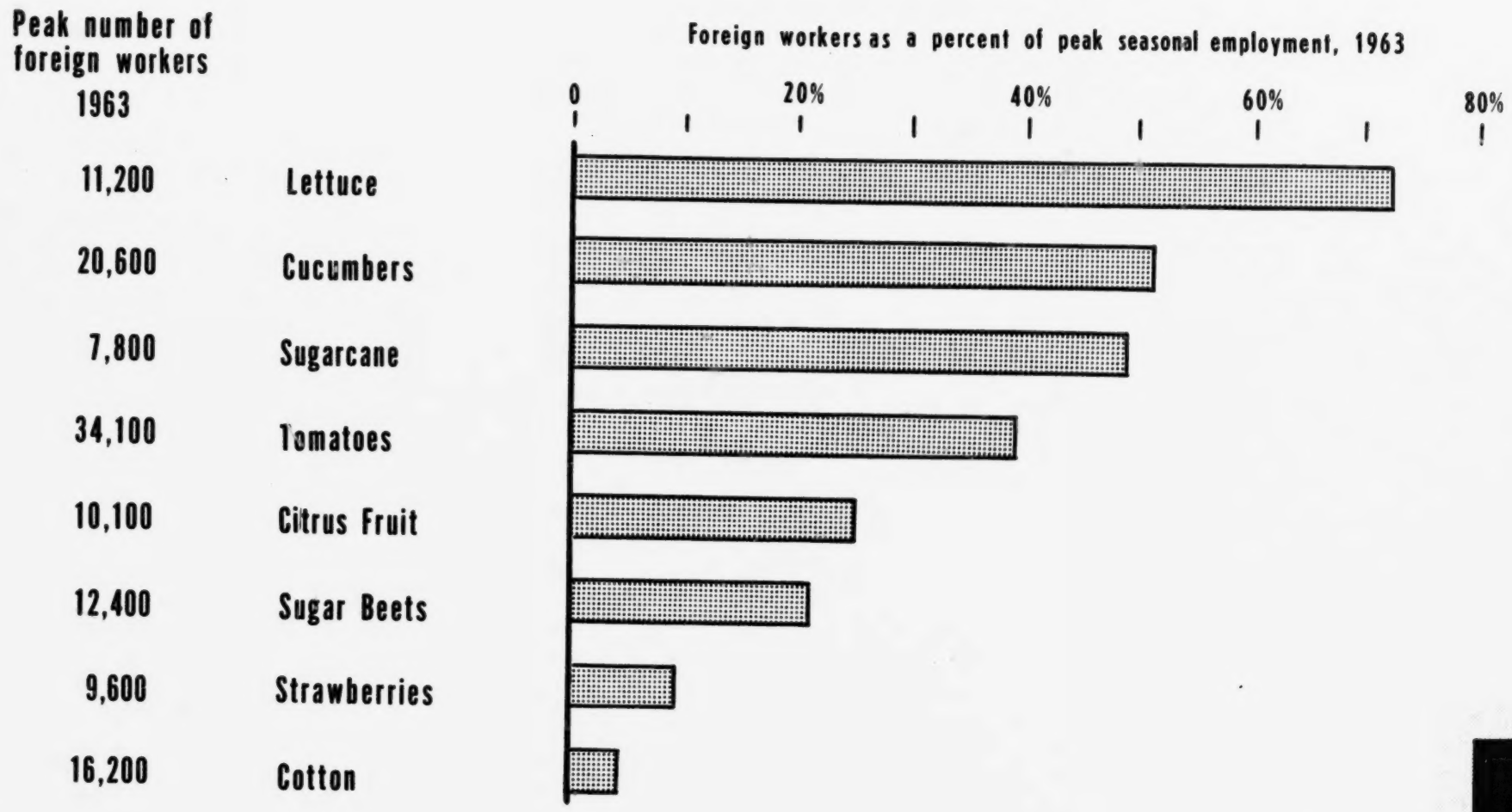


Use of foreign workers is concentrated in a few States.



Foreign workers contribute significantly to total production of some crops.

Employment of Foreign Workers, Selected Crops, 1963 Peak Periods



Summary and Conclusion

Advances in farm technology have drastically reduced employment on farms and brought about far-reaching changes in the organization of agriculture. There are no indications that the introduction of new and improved technology is slackening, and the plight of the great majority of farmworkers will continue to cause concern. Their wage rates are among the lowest, their rates of unemployment and underemployment among the highest. They are generally excluded from the protection of social legislation like minimum wage laws, unemployment insurance, workmen's compensation laws in most States, and Federal laws protecting the right to organize unions and to bargain collectively with employers. If they are migratory workers, they may also face social problems stemming from transiency--ineligibility for public health and welfare services, inadequate school opportunities for their children, discriminatory social customs, and lack of community acceptance.

The improvements that have been made in the lot of the farmworker should not be overlooked, however. Wage rates for agricultural work have risen considerably, although not as fast as in most other industries. The Manpower Development and Training Act and the Area Redevelopment Act provide opportunities for retraining, both for the skilled, better paying jobs in agriculture and for nonfarm occupations. Migrants will be helped by the recently enacted Migrant Health Act and the Farm Labor Contractor Registration Act which will be useful in correcting many of the abuses of the crew leader system. The Housing Act of 1949 was amended in 1964 to provide assistance in building low-rent housing for domestic farmworkers. The Economic Opportunity Act provides for special programs to combat poverty in rural areas. In addition to loans to low income rural families to help them effect a permanent increase in their income, it provides for housing, sanitation, education, and child care benefits to migrants and other seasonally employed agricultural workers. Aside from these special programs for rural areas, many farm residents will benefit under the Act from its more general provisions for community action programs, the Job Corps, and work training programs for youths.

Enactment of this legislation reflects great public concern about the welfare of farmworkers, particularly migrants. This public concern, probably greater than at any time since the depression of the 1930's, gives some reason for optimism that further improvements in the condition of farmworkers can be added to the modest gains recently made.

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Standards of Library Services in the Connecticut Vocational-Technical Schools. Bulletin No. 60.

Connecticut State Dept. of Education, Hartford. Div. of Vocational Education
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Pub Date - Oct64 8p.

*LIBRARY SERVICES; *VOCATIONAL SCHOOLS; *LIBRARY STANDARDS; LIBRARY FACILITIES; LIBRARY COLLECTIONS; PERSONNEL NEEDS; STATE STANDARDS
CONNECTICUT

A full-time certified library-teacher should be provided for schools with 500 or more students. The library-teacher should be scheduled for not more than two teaching periods a day for schools with 300-500 students and scheduled not less than half time in the library for schools under 300. A minimum seating capacity of 40-45 pupils should be provided for smaller schools and 6 to 7 percent of enrollment for larger schools. A minimum collection of 5,000 volumes should be maintained for schools under 500 enrollment and a minimum of 10 to 8 books per pupil in that order for schools over 500. A minimum annual budget of $1,000 should be provided for schools of 300 students and under and $4 to $3 per pupil for schools 350 and up. A minimum of $80 a year should be provided for periodicals and supplies. Additional funds should be allotted every 2 years for replacements. (PS)

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SEP 15 1966

Bulletin # 60
DIVISION OF VOCATIONAL EDUCATION

STANDARDS OF LIBRARY SERVICES

IN THE

CONNECTICUT

VOCATIONAL-TECHNICAL

SCHOOLS

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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Division of Vocational-Technical Schools
State Department of Education
Hartford, Connecticut
October 1964

VT004911

SUMMARY OF LIBRARY STANDARDS FOR CONNECTICUT VOCATIONAL-TECHNICAL SCHOOLS
REV. 1963 - 1964

PERSONNEL

Schools 500 and over

Full time Teacher-Librarian

Schools 300-500

Library-Teacher scheduled for not more than two teaching periods a day. Provision to be made for the supervision of the library at all times.

Schools under 300

Library-Teacher to be scheduled not less than half time in the library. Provision to be made for supervision of the library at all times.

Sub-professional clerical assistance to be provided for all schools in the period of organization.

Paid student assistants to be provided as needed for special tasks.

FACILITIES

Centralized library quarters are recommended for greater economy and efficiency.

Seating capacity of a minimum of 40-45 pupils for smaller schools. This provides for a class group plus five to ten stations for individual students.

Seating capacity of 6% to 7% of enrollment of larger schools.

Where possible a conference room and work room should be provided.

Additional storage room for periodicals should be provided nearby.

BOOK COLLECTION

A minimum collection of 5000 volumes should be maintained for all schools under 400.

Schools 500 and over should have a minimum collection of 10 to 8 books per pupil on this graduated scale.

APPROPRIATIONS

A minimum annual budget of $1,000 should be provided for schools of 300 students.

For schools 350 and up $4.00 to $3.00 per pupil should be annually allocated.

Where the original collection does not meet minimum standards, the annual appropriation should be increased to $8.00 to $10.00 per pupil until the desired standard is achieved.

Approximately every two years, additional funds should be allotted to provide for the replacement of the more expensive reference books, encyclopedia etc.

A budget for newspapers and magazines should be in addition to this book allotment. A minimum of $80.00 a year for supplies should be provided. This includes the cost

PROGRAM

Availability of library to teachers and pupils at all times is essential to the effectiveness of the library program.

The library should provide materials to supplement and enrich the curriculum, stimulate growth in factual knowledge and encourage development of literary appreciation and ethical standards.

It should offer instruction in the location, use and interpretation of library materials.

It should assist instructors in the enrichment of their areas of specialization by providing professional as well as subject content materials.

It should assist in the reading improvement program of the school.

CONNECTICUT STATE DEPARTMENT OF EDUCATION
Bureau of Vocational Education
Hartford

STANDARDS OF LIBRARY SERVICE IN THE CONNECTICUT STATE VOCATIONAL-TECHNICAL SCHOOLS

The Connecticut Vocational-Technical schools adhere to the following principles and practices as set forth by the American Library Association, School Library Bill of Rights.

"School libraries are concerned with generating understanding of American freedoms and with the preservation of these freedoms through the development of informed and responsible citizens. To this end the American Association of School Librarians endorses the Library Bill of Rights of the American Library Association and asserts that the responsibility of the school library is:

- To provide materials that will enrich and support the curriculum, taking into consideration the varied interests, abilities and maturity levels of the pupils served.

- To provide materials that will stimulate growth in factual knowledge, literary appreciation, aesthetic values and ethical standards.

- To provide a background of information which will enable pupils to make intelligent judgments in their daily life.

- To provide materials on opposing sides of controversial issues so that young citizens may develop, under guidance, the practice of critical reading and thinking.

- To provide materials representative of the many religious, ethnic and cultural groups and their contribution to our American heritage.

- To place principle above personal opinion and reason above prejudice in the selection of materials of the highest quality in order to assure a comprehensive collection appropriate for the uses of the library."

Personnel: Shall meet the Connecticut Certification requirements for the library-teacher.

Schools 500 or more	- full time certified library-teacher
Schools 300-500	- library-teacher scheduled for not more than two teaching periods a day. Provision to be made for the supervision of the library at all times.
Schools under 300	- Library-teacher to be scheduled not less than half time in the library. Provision to be made for the supervision of the library at all times.

Sub-professional or clerical assistance should be provided for all schools in the period of organization and whenever special needs arise.

Duties: The school library-teacher should:

- know the school curriculum and work with the administration and faculty to identify, locate and procure materials of all types and on varying levels of difficulty, for the improvement of the teaching program;

- work with teachers individually to locate and organize materials for specific units of work;

- work directly with students, training them in how to locate and interpret materials for their classroom and personal needs;

- offer regular planned instruction in the use of books, periodicals, bibliographical aids and other standard reference materials;

- keep administration and faculty abreast of new materials in the various fields, recommending and procuring these materials when necessary;

- organize, classify and catalog all materials for school use;

- be responsible for the circulation, repair and replacements of library materials;

- route new materials through the school so that the greatest number can benefit from the use of current materials;

- maintain a clipping file of current information of value to the school;

- prepare exhibits for library and classroom use;

- maintain a direct contact with the extra curricular activities offering assistance to the students in the growth of their interests in these fields.

- assist in the reading program of the school by cooperative planning with instructors by locating, procuring and organizing materials;

- report annually to administration concerning the library program, its accomplishments, costs and needs.

Facilities:

Centralized library quarters are recommended for greater economy and efficiency.

For smaller schools a minimum seating capacity of 40-45 pupils shall be provided. (One class group plus 5-10 seats for students working individually). The A.L.A. standards of 25 square feet per pupil should be used as the basis for estimating area needed.

For larger schools a seating capacity of 6% to 7% of enrollment should be provided. This is based on the type of schedule when 50% of students are in shop each week.

When possible, a conference room and separate workroom should be provided. Additional storage room for periodicals should be provided in an adjacent area.

Where space cannot be provided to seat the minimum 40-45 in the main reading room, the conference and work rooms may be eliminated and the workroom facilities designed behind cupboard doors at the end of the room or in the periodical storage area.

Equipment needs based on the size of the school enrollment and book collection should include:

Tables and chairs
Shelving - book and magazine
Catalog case
Atlas shelves
Legal size correspondence file - 4 drawers
Charging desk and chair
Dictionary stands
Bulletin boards
Librarian's desk and chair
Book truck
Typewriter and stand

In addition to shelving, the workroom should have running water, conveniently placed electrical outlets, and adequate supply storage space.

Book Collection:

The book collection should reflect every area of the school curriculum, trade, related and general education. Materials for the cultural growth of the students should also be included.

Materials should supplement texts, offering more breadth and variety and greater differentiation in the levels of reading difficulty.

Materials should include information and assistance in all the areas of learning which affect young people. The library has a responsibility to assist growing youth, by the various experiences received through reading, in the solution of their personal problems in home and family living, social adjustment and recreational interests as well as the specific curriculum of the school.

Materials for the professional growth of the staff should be included.

Financing the School Library Program:

A minimum of 5000 books should be maintained for all schools under 500 enrollment. For schools over 500 the minimum collection should be 10 to 8 books per pupil in that order.

Because of the large number of technical books which are substantially more expensive than the trade books and carry a shorter discount, the average cost per book is estimated at $6.50.

Wherever possible the initial allotment for books for the school library should provide a minimum budget to meet this 5000 volume collection. Present holdings transferred from the older school libraries should be evaluated in terms of condition and usability.

Where the initial allotment does not provide for the minimum collection, an increased annual appropriation should be provided until minimum standards are met.

An annual budget for satisfactory maintenance and growth should provide;

Schools 300 and under ---------- $1,000 annually.

Schools 350 and up ---------- $4.00 to $3.00 per pupil in that order of the scale.

Where the minimum collection has not been reached an annual appropriation from $8.00 to $10.00 per pupil should be provided until standards are met.

Approximately every two years, provision should be made for additional funds to replace or update essential references such as encyclopedias, handbooks etc.

In addition a budget must be provided for adequate periodical coverage. This will vary by schools according to trade offerings and curriculum variances. General library subscriptions as recommended should be provided for all schools.

A supplies budget of $80.00 annually should adequately meet the needs except on initial organization or unusually large accessions to the collection. This budget includes the cost of printed catalog cards.

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Community Organization for Employment Development.

Bureau of Employment Security (DOL), Washington, D.C.
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Pub Date - Dec64 22p.

*ECONOMIC DEVELOPMENT; *COMMUNITY ORGANIZATIONS; *EMPLOYMENT PROGRAMS; *EMPLOYMENT SERVICES; MANPOWER UTILIZATION; EMPLOYMENT OPPORTUNITIES; COMMUNITY COOPERATION; *COMMUNITY DEVELOPMENT; COMMUNITY PLANNING; COMMUNITY PROGRAMS
UNITED STATES EMPLOYMENT SERVICE; USES

This publication is designed to help local employment service personnel and community leaders stimulate the formation of community employment groups which plan programs for increasing employment opportunities in local areas. A definition of community employment development and procedures for determining long- and short-range program goals are outlined. A checklist of local factors, and needed information relevant to them, for area planners to consider in formulating community development programs are identified. The factors are: population, manpower resources, occupational training resources, natural resources, location, market, local industry, industrial sites, local government, community facilities, educational institutions, health facilities, housing, transportation, utilities and power, weather, and communications media. Guidelines for establishing or appointing the appropriate organization to achieve community development goals are presented. The broad range of manpower services available to community developers through the public employment service officers, such as a variety of informational services and comprehensive employer and job applicant services, are specified. For a later report (1966) which discusses the contribution made to community development by public employment service offices see VT 006 161 (ARM Summer 1969). (ET)

VT004921

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COMMUNITY ORGANIZATION FOR EMPLOYMENT DEVELOPMENT

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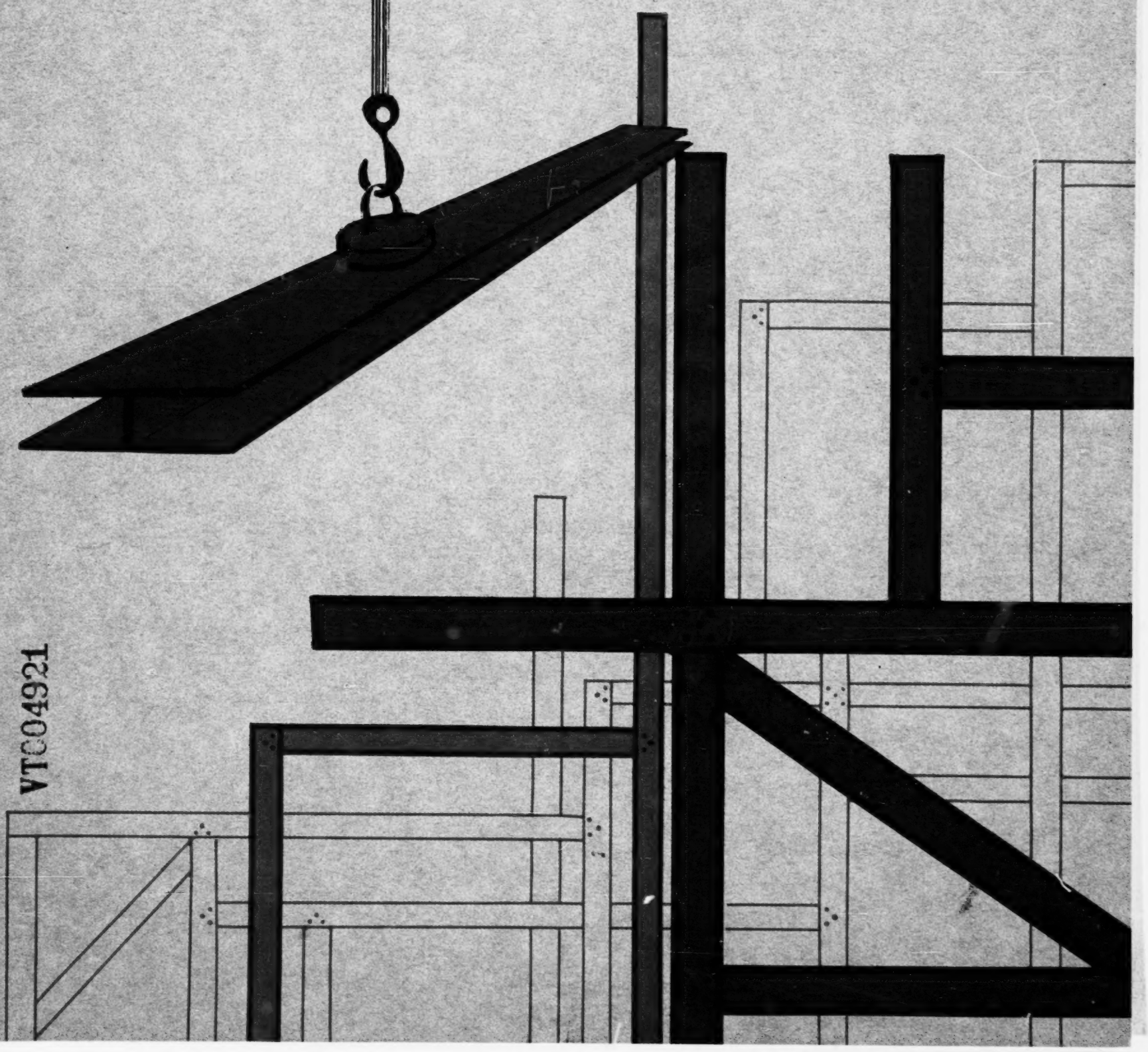
U. S. DEPARTMENT OF LABOR
W. Willard Wirtz, Secretary
MANPOWER ADMINISTRATION
Bureau of Employment Security
Washington, D. C., 20210

DECEMBER 1964



VTC04921

COMMUNITY ORGANIZATION *FOR* EMPLOYMENT DEVELOPMENT

BUREAU OF EMPLOYMENT SECURITY
Robert C. Goodwin, Administrator

U. S. EMPLOYMENT SERVICE
Louis Levine, Director

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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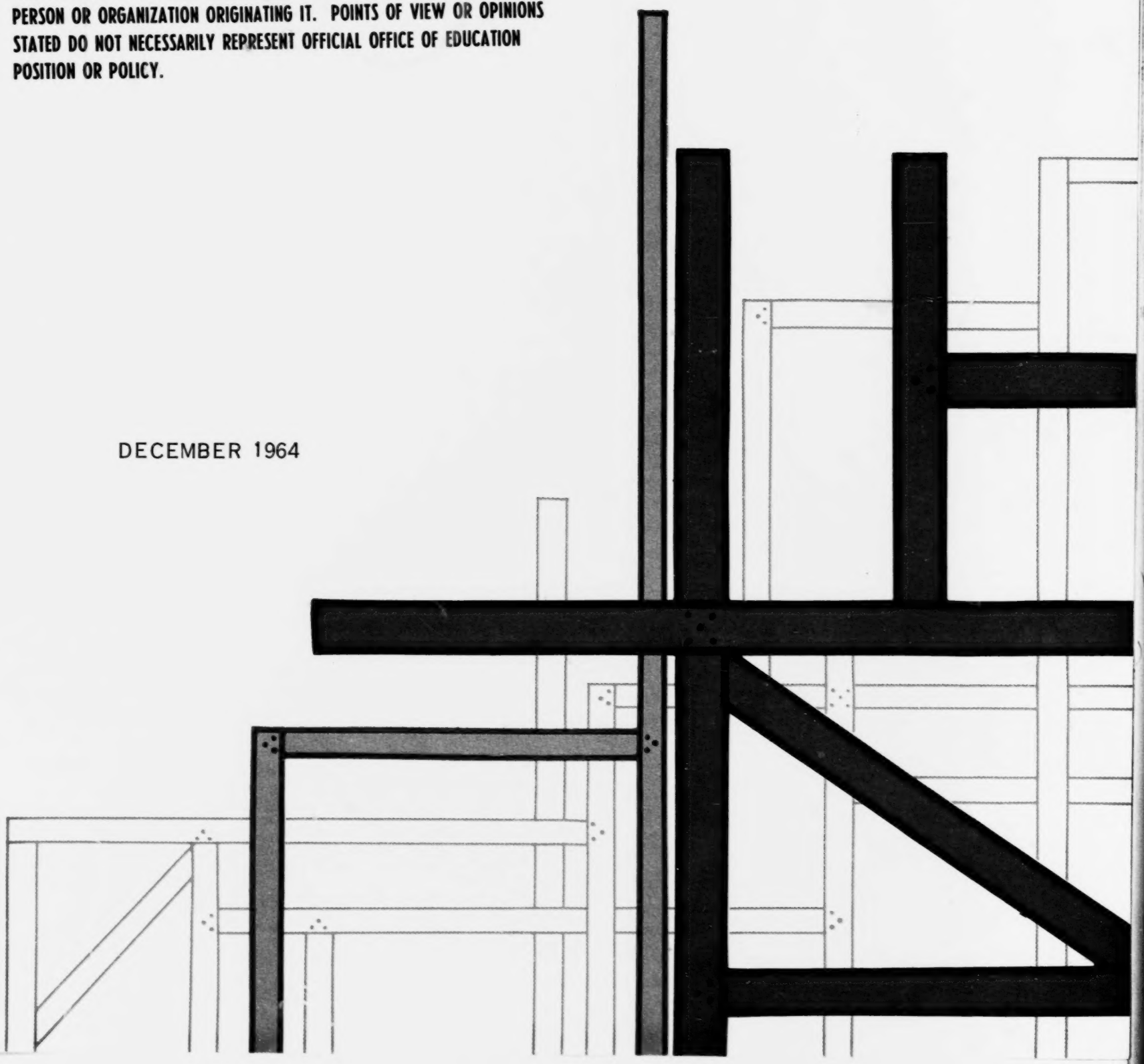


DECEMBER 1964

community organization for employment development

Subject	Page
Foreword	2
I. WHAT IS COMMUNITY EMPLOYMENT DEVELOPMENT? Development is everybody's business . . . the initial responsibility is local . . . leadership is a community resource.	3
II. SETTING THE GOALS Assessing community strengths and weaknesses and deciding on goals . . . plan priorities and timing . . . long-range planning is advisable . . . what kind of industry or commerce to seek . . . every town needs its people . . . evaluate the community resources—a community checklist.	5
III. CHOOSING THE ORGANIZATION Using new or existing organization . . . types of groups . . . overlapping of functions . . . highlights of development organization characteristics—the promotion committee, the financial development group, the special purpose committee, the Area Redevelopment Committee, community development organizational structure—common characteristics . . . leadership, sub-committees.	11
Organizational Charts	15
IV. LOCAL PUBLIC EMPLOYMENT OFFICES IN COMMUNITY DEVELOPMENT Available local employment office resources . . . additional information resources.	17
Postscript	Back Cover

community organization for employment development

FOREWORD

". . . the sources of poverty vary from family to family, city to city, region to region . . . we urgently need to bring together the many existing programs—Federal, State, local and private—and focus them more effectively in a frontal assault on the sources of poverty.

"Most important, we shall encourage and assist communities and regions to develop their own plans of action: to mobilize their own resources as well as those available under Federal programs."

President Lyndon B. Johnson—
Economic Message to Congress,
January 20, 1964.

The President's emphasis on community plans of action to attack the sources of poverty gives renewed importance to the overall community development approach and the community employment programs of the U.S. Employment Service.

The sources of economic expansion and local prosperity may vary. Local and regional community development groups reflect the unique needs of their communities and areas. They are, therefore, the best vehicles for encouraging employment opportunities within a community.

The U.S. Employment Service and its affiliated State employment services assume an important role in assisting community groups to plan programs which will effect new employment opportunities. Their concern with all factors which affect the Nation's manpower has helped the Federal-State employment security system to develop an alert responsiveness to changing needs. The broad range of ES services relating to manpower utilization and community employment development was designed to help obtain jobs and develop new employment opportunities for the present and future labor force. The Federal-State employment service system encourages the use of its broad manpower services to assist communities to rebuild, diversify, expand their local economies.

This publication is designed to help local employment service personnel and community leaders to stimulate the formation of community employment groups. It also should help those who are active in established community development groups.

This pamphlet was prepared by Ethel Polk under the direction of J. Dewey Coates, Chief of the Community Employment Development Branch of the Office of Manpower Analysis and Utilization of the U.S. Employment Service.

Louis Levine, Director,
U.S. Employment Service.

CHAPTER I

what is community employment development?

When community groups seek to increase employment opportunities in the local area . . . you have community employment development.

Promoting increased employment opportunities takes several directions:

Providing jobs for unemployed workers becomes a primary concern, particularly where there are many jobless workers.

Improving the use of manpower talents and skills is especially meaningful when employees work at less than their full potential—when they are underemployed.

Increasing employment opportunities is of community concern as youth swells the labor force in this era of population explosion.

A. Development Is Everybody's Business

A stranger in town, 20 years ago, coming upon a meeting which included representatives of churches, schools, industry, labor, women's groups, civic groups, and banking and commerce, might have assumed correctly that the meeting dealt with community fund raising or a similar activity. Today, he is likely to find that the meeting is called by an industrial development committee, with full community support, to offer encouragement for new business or industry to locate in town. He might find the meeting concerned with keeping an industry in the community or with diversifying the town's economic base.

Community development has been the subject of conversation, consultation, consideration, conferences, and more recently,

coordination, in communities throughout the Nation. Community self-improvement efforts have become part of the yardstick by which areas are measured when firms consider a new location. And broad participation by all segments of the community increases the respect for the community's efforts by company representatives in or out of the area.

Employment development in the community is affected positively by every improvement achieved, whether it takes the form of improved roads or better schools. Using schools for example: The broad view of employment development recognizes that better schools mean immediate employment in construction and maintenance and possibly more teachers, administrative personnel, and clerical staff. Better schools also mean that company representatives, seeking the best location, will be influenced by the fact that the company's employees may be assured of the best possible schools for their children. Better schools provide better education and training so that graduates are better qualified for employment. Moreover, improved schools may help encourage young people to remain in the community and this, too, is a factor influencing outsiders.

Employment opportunities in any community do not remain constant. The forward-looking community seeks to develop new opportunities for both the present and future labor force. Each participant in community development may begin with a specific interest. Expanded employment means more customers in the store for the merchant, more investment money for the banker, more paying clients for the doctor and lawyer, more profit for industry which, after all, depends on the consumer. Experience is proving that the broad approach of advancing the interests of the whole community is beneficial to each segment. Development of each community's human and natural resources to increase employment opportunity has become everybody's business.

B. The Initial Responsibility Is Local

Primary responsibility for dealing with local employment problems belongs to the local community. State and Federal Governments may cooperate with local governments and groups in promoting economic growth. They may help promote diversification of industry and stability. But community development is not permanently effective when it is superimposed from outside the locality.

The development effort must deal with local resources and examine local advantages and disadvantages. The solutions should be worked out and supported locally.

In all aspects of local community development relating to manpower—the human resources, the labor force—the Federal-State employment service system is the most accessible source of current information. It can provide information on manpower skills, experience, location, and availability.

The local office of the State employment service is qualified to interpret whatever relates to employment or unemployment, directly or indirectly.

C. Leadership Is a Community Resource

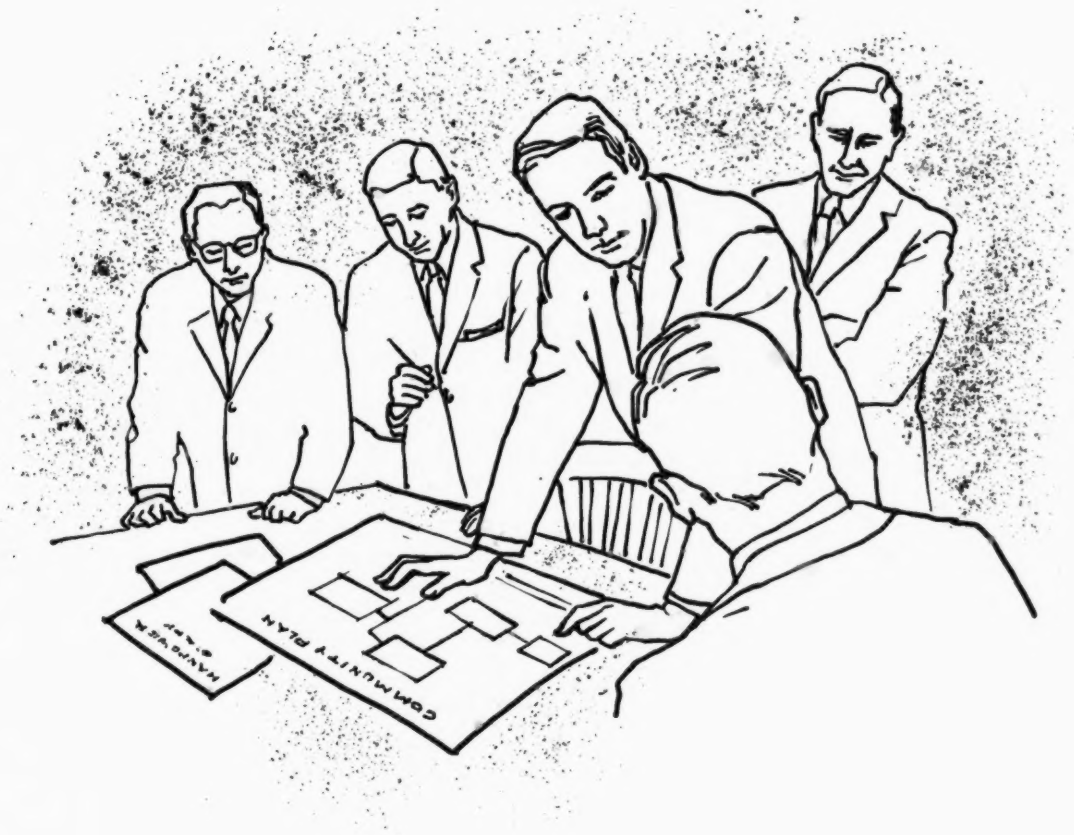
Every community has rich leadership resources. Some of its leaders may be specialists—for example, the architect whose expertness relates to planning in advance of construction. Others, such as the Mayor or city manager, are accustomed to representing the community as a whole.

Contributions to community development leadership may be made by any one or all of the following:

> Chambers of commerce, retail merchants, business associations, manufacturers, professional societies, bankers, better business bureaus, architects, engineers, accountants, attorneys, insurance groups, retired business leaders, school officials, unions, and civic and other interested groups.

Where no present organization exerts leadership for community economic-employment development, the initiative may come from persons in any of the groups listed above. Most communities, however, do have at least one group which is primarily concerned with economic development, and that group may serve as a rallying point.

Occasionally the impetus for local industrial development or economic development may originate with a statewide development or governmental group. This occurs especially where local competition in a geographic area has become wasteful and some degree of coordination on an area basis is recommended.



CHAPTER II

setting the goals

A sense of direction, a definite idea of goals desired, should be achieved before the organizational form is chosen for a development drive.

In almost every instance, two important steps should precede organizational action: SURVEY of the area's strength and weaknesses and ANALYSIS of the survey (with consideration of intangible factors) to determine realistic goals. Long-range and short-range goals should be determined but must be differentiated.

A primary goal for development groups, shared by the local employment service office, is employment stabilization—obtaining suitable jobs for workers and recruiting suitable workers for jobs. To attain this goal, a balanced supply of both jobs and workers must exist.

Job opportunities may be sought for both unemployed and underemployed workers. All factors of the community's life which affect employment opportunity and economic development should be considered in setting these goals.

A. Plan Priorities and Timing

Priorities should be considered. When the community's assets, liabilities, anticipated population growth, labor force, and skills are surveyed, it is possible to determine priorities among the projects to be undertaken and the liabilities to be reduced.

There should be no limit to the proposals considered, but the list should be realistic. Priority rank is given to problems including the following characteristics:

1. Projects considered essential to economic growth;
2. Situations important enough to merit communitywide action;
3. Projects which can be completed within reasonable time with tangible results.

The short-range priority projects are advantageous since their early accomplishment helps create community support.

B. Long-Range Planning Is Advisable

Comprehensive economic development planning is advisable for all communities. An "overall economic development plan" (OEDP) has been required before a community became eligible for assistance under the Area Redevelopment Act. Local employment service offices can be helpful to local

committees which need technical assistance in connection with such plans. Whether or not Federal or State aid is needed, long-range economic planning is advisable for all communities.

If no other circumstance demonstrates this need, the increasing labor force, with additional entrants added by each high school and college graduation, provides reason for long-range planning in every community.

C. What Kind of Industry or Commerce to Seek?

- New manufacturing industry
- Expanding industry already located in the community
- Merchandising
- Services, recreation, tourism, professions, consumer services, and facilities.

People tend to think of manufacturing as the major source of large-scale manpower utilization. Resourceful community developers, however, take a broad view in seeking employment opportunities. For example:

Park services provided by a community may not appear to mean many jobs, but a recreation area is soon surrounded by stores selling hunting, camping, fishing supplies, and by restaurants, motels, gas stations, and other service accommodations which usually follow.

Redeveloping blighted areas and updating community facilities bring short-range employment in demolition and construction. They also improve the economic potential of the local area involved—if only by making it more inviting for industrial or commercial expansion.

Merchants, service establishments, and professional persons are indirect but real beneficiaries of increased payrolls. In turn, they are employers, and the service trades are expected to be an expanding employment factor in the future. For example, 20 years ago considerably fewer people owned automobiles, TV sets, or air conditioners, and there was less need for auto salesmen, mechanics, car washers, TV repairmen, and other service needs which we take for granted today. In addition, suburban shopping centers and motels are quickly surrounded by beauty shops, barbers, even hobby centers, each involving sales personnel, service help for equipment, and office help.

New manufacturing need not depend on giant corporations. If a local natural resource can be processed locally by a small firm, an economic gain is achieved by the community. Ores and minerals with no current industrial value are being converted to costume jewelry. Instead of seeking distant markets for these, some communities have related tourist promotion with the availability of these resources for jewelry hobbyists.

Communities are learning not to wait until large contracts end or big industry decentralizes. Before critical circumstances occur, many areas are assessing their local industry to determine where expansion can occur via new products or markets.

D. Every Town Needs Its People

Communities are concerned that youngsters are leaving the "home town." Experience indicates that the youngster who intends to engage in a profession, such as teaching, medicine, or law, or in a highly skilled trade can be encouraged to practice in his hometown. Persuasion will depend on the way the community faces up to its economic problems. The community effort to help itself, to retain and use the whole potential labor force, will help in retaining its young people. Conversely, when employment mobility must be encouraged, the community's participation in a regional effort may help. If citizens can work on a commuter basis and remain residents of a community because the town made an effort, that community is making economic progress in keeping its young people as contributing citizens.

E. Evaluate the Community Resources

The following "Community Checklist" indicates many factors considered by plant location representatives of companies.* The thorough evaluation of a community's resources, including liabilities, has two values: It enables development groups to assess and publicize the advantages, and it may suggest potential industrial or economic expansion which might have been overlooked.

*The importance of manpower as a factor in plant location determinations by companies was confirmed in November 1963 by the Fortune Survey on Locating Plants, Warehouses, and Laboratories. Availability of workers led all other factors as a basic requirement considered by management in determining industrial location changes or expansion. Fifty-four percent of the respondents put manpower, availability of workers, first. In response to a question about environmental factors, 87.8 percent placed productivity of workers first. The availability of skilled labor was one of the five basic requirements considered. Thus, manpower information is of primary importance to managements concerned with plant location.

a community checklist

This checklist of local factors to be considered in community development may be helpful in analyzing assets and liabilities and in preparing brochures or other promotional material about the area's advantages.

1. POPULATION

What is the population of the State? the immediate community? the surrounding area? What are the forecasts for future population? What is the composition of the population and labor force by age, sex, languages spoken, education levels?

2. MANPOWER RESOURCES

How many people are employed, unemployed? What specific skills are available? Which skills are unavailable but needed? How many people are working in agriculture? in service occupations? in industry? in construction? in all occupations and skills?

3. OCCUPATIONAL TRAINING RESOURCES

What facilities and personnel are available for establishing multioccupational training programs such as those under MDTA and ARA?

4. NATURAL RESOURCES

What are the natural resources available in the area, e.g., metals, food, forest, minerals ? What items are imported? exported?

756-600 O—65——2

5. LOCATION

Where is the community located? What is its location in relation to major U.S. cities, to the State capital? How near is it to local or area markets? the Nation's principal markets?

6. MARKET

What is the specific trading area? How is it related to marketing facilities, including wholesalers, storage, and warehousing?

7. LOCAL INDUSTRY

How many industrial companies are in the community? What are their products? What is the type of production? Have there been recent additions? recent losses? Are special research and scientific facilities available? How much local industry (if any) is dependent on defense contracts?

8. INDUSTRIAL SITES

What land sites are available for industry? Are there restrictions? If so, specify. What financial aid, if any, is offered? Are industrial parks planned or already operating? Has anyone developed a master plan for the area? If so, specify.

9. LOCAL GOVERNMENT

What is the tax structure (personal and business)? What local laws are advantageous for industrial and business expansion? Which are disadvantageous? What zoning laws or other pertinent laws or regulations affect business or industry?

10. COMMUNITY FACILITIES

How many hotels or motels are there in town or nearby (indicate type or size)? banks? parking lots or garages? shopping centers? schools? post offices? recreational areas and facilities? cultural institutions? resturants? etc.? Are others needed? If so, specify.

11. EDUCATIONAL INSTITUTIONS

List every type of school with its enrollment and indicate whether it has grown. What transportation is provided? Is it adequate? Have school expansions been planned? What provisions exist for vocational training? adult education? business training? higher education? research facilities?

12. HEALTH FACILITIES

How many and what kinds of hospitals are available? doctors? nurses? health programs? clinics? technicians and institutions relating to health? How do they compare with the standards set by other cities?

13. HOUSING

How much and what type of residential housing is available in town? in the suburbs? How does housing location relate to community facilities? to industrial sites? What are general conditions in residential areas? Is there special housing for aged citizens? If so, describe.

14. TRANSPORTATION

What are the available forms of transportation in the area? for passengers? for freight? Are there airports nearby? Can they handle air freight?

15. UTILITIES AND POWER

What utilities and what sources of power are available? What industrial fuel? What are the rates? How do rates compare with those of other areas? What provisions are available for industrial waste, for sewage?

16. WEATHER

What are the maximum and minimum temperatures and how long do they last? Are there other climatic factors? (Climatological reports may be obtained from the U.S. Weather Bureau.)

17. PRESS, RADIO, TV

What communications media are available in the area? Do they have national affiliations? (Include TV; radio; press; special publications such as trade papers; farm, union, and foreign language press. List TV and radio programs of special characteristics and newspaper columns of potential use.)

18. GOALS CONSIDERED?

NEEDS EXPRESSED?

READY TO ORGANIZE?

The preceding checklist and general consideration of goals, priorities, timing, etc., should be applied from time to time and reapplied to keep the organization activities on the track and to change signals when necessary.

CHAPTER III

choosing the organization

"Is there need for a new organization?" is a question to be answered by the group initiating preliminary action.

One type of development group, active in most communities, is the Chamber of Commerce. The Chamber is, in most instances, likely to be represented among the participants discussing the need for organization for industrial development. Presently existing groups may be inappropriate because their original purposes cannot be adapted or their organizational form is restricted legally. Whether a new group is to be formed or an already existing organization is to serve as the vehicle depends on the goals and decisions made by the original participants. Existing organizations should be involved when and where appropriate even if a new group is formed. If one of the existing groups can fulfill the goal, a campaign, with broad community support, should be led by that group.

The following questions, in brief, should help determine the type of organization appropriate for the goals:

1. Is the community offering land sites or buildings which can be remodeled to suit industry or new factory sites or buildings as incentives for industrial location?

   If so, the industrial development corporation or foundation is the appropriate type of organization.
2. Is the community determined, primarily, to publicize its advantages for industries considering a new location or expansion through advertising, brochures, or other public relations methods?

   If so, the promotional type of organization, new or existing, is appropriate.
3. Is the goal a specific one which can be resolved in a single, short-term cam-

paign? For example, the town needs an airport—and the lack of air service has been hurting industrial expansion. The people may need to be persuaded to support building the airport facilities financially, legally, and through special zoning.

If so, the special-purpose type of organization, to promote solution of the one problem, would be appropriate.

4. Is competition among development organizations, or between two adjacent areas, hurting rather than helping? Would consolidation of groups or the simplest coordination help each area to achieve economic growth or expansion?

If so, a regional or area industrial development, or economic development, group should be organized, with each participant retaining its identity.

A. Overlapping of Functions Will Occur

The types of organizations mentioned above are described in terms of their primary function. Each, almost invariably, will experience overlapping of functions as part of the process of working toward the goal. The promotional group must deal with financing to raise at least enough money to achieve its purposes. The industrial financing group may undertake promotional activity to sell the campaign to the community or to call attention to the availability of financial incentives for locating in the area. The special-purpose group, usually of briefer duration, may involve both promotional and financial activities. Technical necessities, such as State registration of finance-investing or fund soliciting groups, make it necessary to distinguish the primary purpose of the organization before proceeding, in the event that legal distinctions do exist.

It should be noted that the following organizational information presumes that a new group is being organized. The details may be adapted, however, to serve as an organizational checklist in cases where an existing organization spearheads a development drive.

B. Highlights of Development Organization Characteristics

The negative and positive arguments presented below do not constitute recommendations. They are intended to help in determining the most appropriate organizational approach in each community or area, as part of the consideration of local leadership in making the decisions.

1. Promotional committee

A promotional committee for economic development is a public or quasipublic organization which engages in publicizing the community's advantages for the purpose of inviting new business or industry to locate there or encouraging home industry to expand. It also serves an important function in rallying community support behind actions designed to make the community more attractive or behind campaigns to finance promotion of the community.

Promotional methods used include:

- Personal contacts—
  via phone, over the luncheon table, in social contexts, etc.
- Brochures—
- Space in publications and newspapers—
  feature stories, advertising, photos, etc.
- TV and radio—
  news stories, interviews, advertising
- Special events—
  "Open House for Industry Day" or the like to stimulate public support and make news stories for press, radio, TV.

In general, the scope of the promotional committee is less limited than that of any other development committee. While some of its methods cost money, its operations are less costly than building a new plant or purchasing industrial sites. The disadvantages of a wholly promotional approach lie in the competitive nature of economic development.

2. Financial development group

An industrial development corporation, or foundation, or trust, whatever title is used, undertakes as its primary function the provision of financial assistance to expanding industry, business or firms seeking new locations.

Because the industrial development corporation deals in financing, its structure is formally corporate.

Financial development methods may include:

Making available industrial sites, for purchase or option to buy, prepare, improve or otherwise alter land for industrial sites.

Offering industrial facilities, building new plants, or rehabilitating existing facilities for lease or resale, usually on liberal terms, as an inducement to new industries or to assist "home industry" or local business to expand.

The leadership of the industrial financing group must choose whether the corporation will be nonprofit or profit-making. It also must decide whether to invite the community at large to invest or participate or to limit participation to the business community.

People who prefer to invest and receive a nominal return will advocate the profit-making type of corporation, and it may be argued that the management of a profit-making corporation will be more business-like in preserving the organization's assets.

The nonprofit form of organization is considered more attractive to persons concerned with tax advantages (deductibility) of a nonprofit corporation. Also, the nonprofit group may attract more communitywide support. Legal advice may be required to determine which is the appropriate form for the local corporation.

3. Special Purpose Committee

The special purpose, or limited purpose, committee is used when a community considers its economic problem temporary or at least susceptible to the one-shot solution or to periodic shots in the arm. In a community where the principal employer shuts down, a committee might be organized for the limited purpose of arranging for sale of the plant to another employer for continuity of employment for the displaced workers. Such a committee is promotional in character in most instances, but it might raise funds to buy the property for resale or to lease the space to new employment-providing industries.

Another form of limited purpose committee might petition the home office of a large concern to maintain or expand its local production facilities in the area. Usually this type of group forms when there is word that the parent company is planning to shut down the local branch or to expand elsewhere. Such a committee may seek to help local firms negotiate contracts with private buyers. Government procurement contracts or plans for placement of subcontracts have been the end in view of some limited purpose groups. Another single purpose committee function might be promoting amendment of tax and zoning ordinances to improve specific community facilities, such as utilities, housing, recreational or cultural facilities, streets, and highways. When local groups agree to coordinate their efforts for a period of time for a specific purpose, the committee representing the coordinated groups falls into the special purpose classification.

4. Area redevelopment committees

Since 1961, Area Redevelopment Committees have been formed throughout the Nation to plan job-generating projects for areas where substantial unemployment is characteristic. The Area Redevelopment Act requires that these committees be broad and representative of all major segments of the community. Where community leaders have agreed to designate an already existing economic development group to spearhead the drive, they have invited representatives of all major segments of the community to participate. One of the primary tasks of these committees is the preparation of an overall economic development plan which must be submitted to the Area Redevelopment Administration before an area may be considered eligible for ARA assistance.

As of late 1963, the more than 800 overall economic development plans submitted to the Area Redevelopment Administration were planned by committees ranging in name from the Area Economic Development Council to a Job Opportunities Committee. Many of these have stimulated organization of, or cooperation with, industrial development corporations. Others have initiated economic development promotion in their areas.

Regardless of whether Federal assistance is needed or a community is eligible for ARA, Federal emphasis is on community self-help and local economic planning.

B. Community Development Organizational Structure

Several common organizational considerations are included in the following broad checklist. In all cases, they should be adapted to local needs.

1. Leadership

a. A chairman should be chosen whose role will be coordinative. His background should include past leadership status, and he should have the respect of most segments of the community.

b. An executive or steering committee should be selected to make decisions and to interpret policy in the light of overall goals. This group should establish priorities for action. If circumstances require a large executive board or committee, a smaller steering committee may be needed to assure continuously active leadership and authority.

2. Subcommittees

Subcommittees should be formed to cover major functions. Since employment is a primary measure of economic development progress, a manpower or human resources subcommittee is desirable. Subcommittees should include:

a. Finance.—To obtain and administer funds to achieve the purpose of community development and to sustain the organization.

b. Publicity.—To persuade the community to cooperate fully and to sell the world outside on the advantages of the area.

c. Membership.—To promote broad or limited membership participation must be decided at an early stage. Widespread membership helps to demonstrate full support; smaller memberships are potentially more efficient.

d. Legal.—To provide information on zoning ordinances and State or local tax laws; to insure that structure of the organization meets legal requirements, and to avert embarrassment through inadvertently careless advertising or commitments.

e. Manpower or Human Resources.—To evaluate all aspects of the manpower resources in the area labor force (skilled, unskilled, professional, etc.) and to promote full use of all potential aids. This committee should include persons informed of employment opportunities, e.g., the manager or representative of the local State employment service office and also union and industrial personnel officials.

f. Home Industry.—To promote expansion and growth of "home industry." This committee should include representatives of industry with roots in the community. Its projects might include intercession on behalf of local business with State, local, or Federal Government agencies, military defense contractors, or the home office of firms where support of expansion is advocated. The members of this committee might draw on the talents of retired businessmen as consultants to local industries in solving management problems relating to sales direction, production, and transportation or in helping industries recognize suitable new product lines. This committee could survey local businessmen to determine if there are barriers to expansion which could be reduced and if there are problems involving community relationships to be solved to help home industry, e.g., city zoning, planning, and financing.

g. Reception-Sales Committee.—Whether part of the executive or steering committee or a separate group, a responsible cross-section of leadership should function as hosts in showing the community to prospective new business representatives. This group should include persons thoroughly familiar with all facets of the community. (If the State Employment Service is not directly represented, the visiting businessmen's itinerary in the community should include a stop at the local employment office to discuss the area manpower picture.)

h. Contract Negotiations.—The legal committee and contract negotiations committee are important, especially, to the financial type of industrial development group.

i. Staff.—An industrial development corporation may find it advisable to consider a professional industrial development person who would be responsible for the operations of the corporation. Where area industrial development corporations are operated by resident members contributing their time and effort, it is necessary that the divisions of authority and responsibility be clearly fixed, whether or not a director is hired, and decisions relating to finances, investments, loans, etc., are subject to determination by a responsible policy committee.

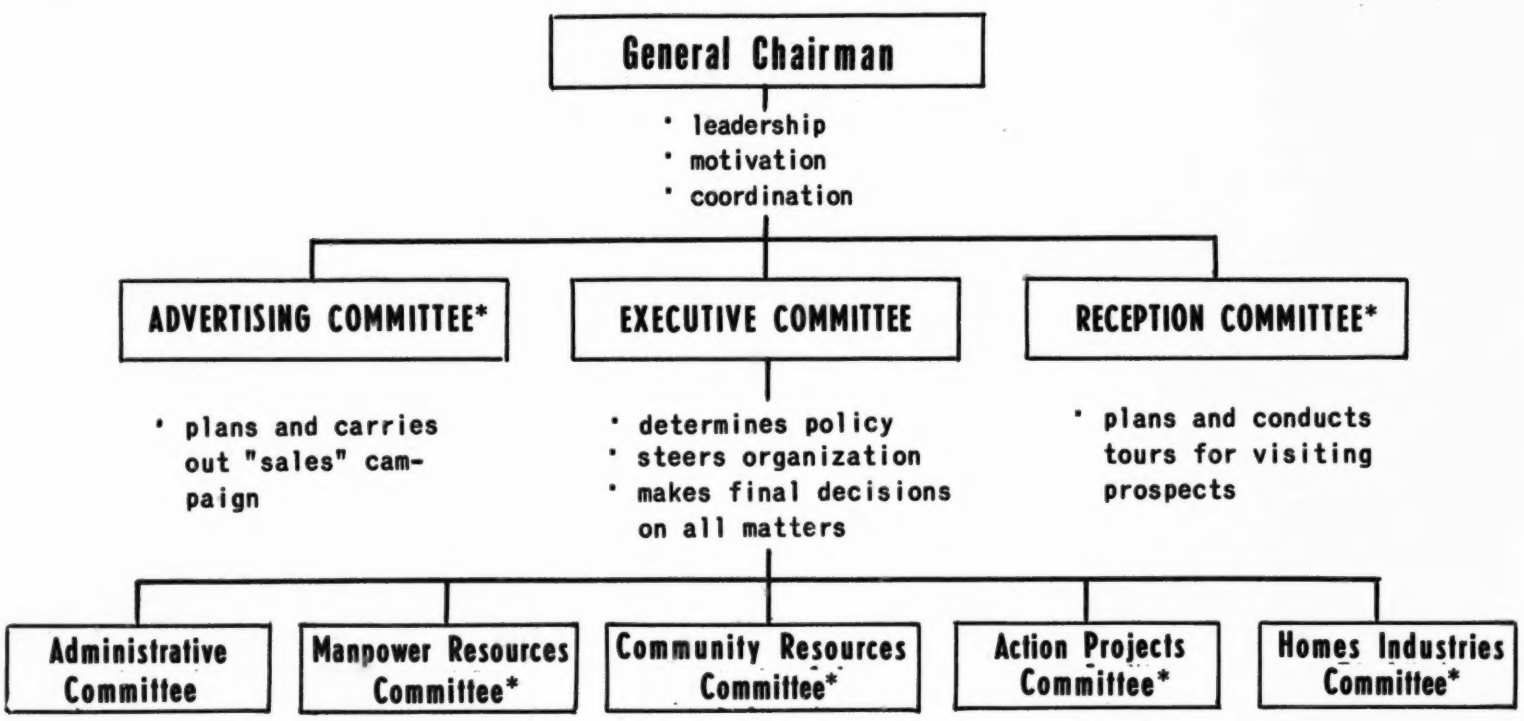
Even in the smallest organization, a person should be designated as secretary or administrative assistant to conduct the everyday business, respond to phone calls, and handle correspondence.

Volunteers, such as the consultants enlisted by the Home Industries Committee, are encouraged to work closely with staff personnel and the steering committee or officers.

Flexibility is a vital ingredient in applying organizational structure to a community development group's goals. The committees described here and in the following charts suggest functions which are sustained, in many smaller cities and towns, by a small group of individuals. The area circumstances and personnel currently available will be considerations in determining the structure and number of committees and combinations of functions.

COMMUNITY EMPLOYMENT DEVELOPMENT ORGANIZATION CHARTS: The following two charts are organizational composites, adaptable to local needs. In both charts, committees with which local State employment service office representatives can be particularly helpful are noted by an asterisk (*). This does not preclude local employment office activity with other committees as well.

COMMUNITY EMPLOYMENT DEVELOPMENT PROMOTIONAL ORGANIZATION AND FUNCTIONS



*A local employment service office representative could be most helpful on this committee.

Examples of special subcommittees functioning, as needed, under the above committees:

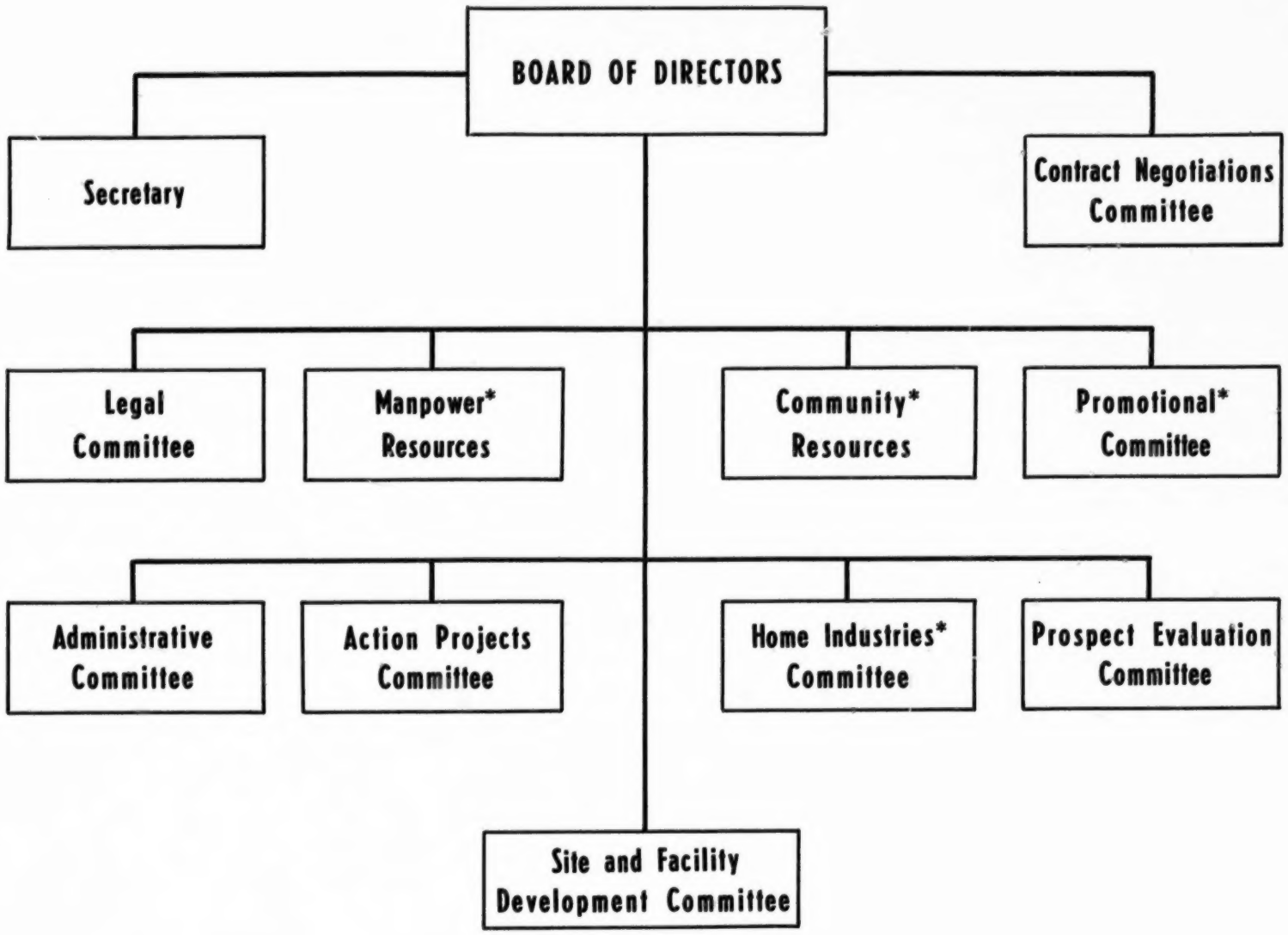
Brochure Publication - committee collects information from the resources committees and works with Advertising and Action Projects committees and publicity chairman to design and arrange effective brochures inviting industry or tourists...

Highway and Roads - committee works with community resources, action projects, and legal advisors to promote improvement of highways or roads to expedite industrial expansion.

"COMMUNITY JOBS, INCORPORATED"

or

(LOCAL) INDUSTRIAL DEVELOPMENT CORPORATION



*A local employment service office representative could be most helpful on this committee.

CHAPTER IV

the local employment office in community development

The local public employment office is the first agency to become aware of developing manpower problems. It is probably more familiar with the existing local economic situation than any other organization. It should, and often does, play a vital part in local employment development activities.

The interest of the local employment service office in area economic development derives from its statutory mandate to seek the reemployment of unemployed workers, to seek high levels of employment, to match men and jobs, and to achieve optimum utilization of a community's human resources. Helping the community's economic growth is an important way of finding jobs for workers. The chambers of commerce, industrial development corporations and committees, government agencies, unions, and other groups directly involved in planning expansions which create jobs for new employees (or new placement for underemployed workers) need area labor and manpower information which is readily available through the local employment service office.

Let's trace a typical example:

A local industrial development group has been organized. One of its committees is assessing the area's assets for prospective industrial location. How do you find out what kind of a labor force the community can offer? What skills are available? Which workers can be trained to adjust their experience to new skills needed? What are the pay rates in the area? These are some of the questions industry and business will ask about the labor force as it considers location in a community. The industrial development group turns to the local State employment service office. Most of the information is readily available because the local office maintains up-to-date resources.

To answer additional questions, the local office may offer skilled personnel to help design an appropriate survey. Training needs are made clear—for example, a possible new industry to locate in town will need machine operators and other skilled and semiskilled workers. The company will also need persons trained to repair and maintain plant equipment, and office help may be needed. The area skills survey conducted by, or with, the local State employment service office will indicate available skilled workers and also help in the selection of persons who can be trained to meet the employers' manpower requirements. On the basis of training needs of communities and individuals, the local State employment service office then cooperates with educational authorities to set up training.

The foregoing action is an example of what happens when there is some knowledge of the kind of industry which is considering locating in the area. Another common circumstance occurs when the industrial development organization has no specific industry in mind and no knowledge of any specific group interested in the location. In this situation, the information made available by the local State employment service office, information on available skills and the composition of the labor force, will constitute a vital part of the persuasive material to be included in brochures and discussions with new industries considering the area.

The availability of labor force information and the service of the local ES office as the community manpower center will help stimulate efforts in community employment development. Knowing that the ES office can provide reliable information and help in negotiations with industry or business firms, the industrial development leadership will move with greater confidence towards effective employment development activity.

1. Available Local Employment Office Resources Pertinent to Employment Development

   a. Informational Services:
      - Developing, analyzing, disseminating area labor information, including future outlook;
      - Surveying skills needed in area—skills available among workers; identifying training needs;
      - Surveying types of industry needed to diversify economic base and to promote employment stability; kinds of

industrial economic development needed to absorb the unemployed.

- Information on, or guidance as to where specific information can be obtained about labor laws, labor standards, workmen's compensation, unemployment insurance, wages, hours, working conditions, welfare and pension plans, automation, technological change, laws affecting management-labor relations.

b. Employer and Applicant Services:

- Recruitment, determining qualifications, referral of workers, vocational counseling, aptitude testing, training and retraining, special services to youth, older workers, minority groups, farm labor, veterans, and handicapped workers.
- Identifying training needs and cooperating with educational authorities in setting up programs;
- Initiating and/or participating in economic-employment development organizational activities within scope of manpower services center;
- Advising and helping communities obtain aid for economic development under Federal programs.

2. Additional Informational Resources

Many State and Federal agencies maintain regional or area offices and are listed in the phone book. The local employment service office will suggest the nearest contact when State or Federal assistance, service, or advice is needed. Public libraries and U.S. post offices are also helpful resources.

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POSTSCRIPT . . .

notes in conclusion

The U.S. Employment Service and affiliated State employment services are glad to assist all public and private groups in the programs and processes that make up Community Employment Development.

This pamphlet is designed to help community groups make the best use of the broad range of manpower services available through public employment service offices in their economic development planning. Unemployment insurance serves to maintain purchasing power in communities where layoffs jolt the economy and, at the same time, helps employers by keeping the skilled labor force at hand. The local employment service office knows the area's work force and can report on its full potential and most effective use. It can plan to supply the needs of employers for workers as communities plan economic development. It can provide all kinds of accurate area labor information which is needed in the development of a well-rounded community development program. It can select workers for training and help sustain a measure of income for these trainees, thus helping sustain community income. It can help plan for the future economic health of communities.

In short, it places all of its facilities, in one package, at the disposal of communities in support of a full communitywide effort. The local State employment service office is anxious to be a part of community development efforts. Its reward will be the immense satisfaction of making a contribution where it counts most—in the city, town, or hamlet—in the community where, in the final analysis, the solution to our more basic economic and manpower problems must be found.

VT 004 941
The Employment Service Goes to an Armour Plant Closing.

Iowa State Employment Service, Sioux City
MF AVAILABLE IN VT-ERIC SET.
Pub Date - Jun63 15p.

*EMPLOYMENT PROBLEMS; *JOB LAYOFF; *INDUSTRIAL PERSONNEL; *MEAT PACKING INDUSTRY; EMPLOYMENT PROGRAMS; *EMPLOYMENT SERVICES; UNEMPLOYED; COMMUNITY STUDY; COMMUNITY PROBLEMS; VOCATIONAL RETRAINING
SIOUX CITY; IOWA

Over 1,300 employees were without work as a result of the closing of a meat packing plant in Sioux City, Iowa, in 1963. Some observations by community and government agencies who handled the problems involved were: (1) Advanced planning, extensive interviewing, testing and counseling, retraining programs and community support are required, (2) The program should be activated rapidly, (3) Top interviewing techniques by efficient and well accepted employment service personnel are necessary, (4) All community groups must participate to aid the unemployed and improve the economic life of the area, (5) The level of general unemployment in the area has a direct bearing on whether displaced workers can be readily absorbed, (6) Good relations are needed with the press, TV, and radio stations, and (7) The retraining of workers is necessary when new skills must be learned in order to find another place in the labor force. Major problems were: (1) The wage rates on new jobs were often not equal to former wages, (2) The unemployed were reluctant to move from Sioux City, (3) The unemployed were reluctant to enroll in training programs unless guaranteed a job after training, and (4) The secondary effects of reduced payroll in Sioux City reduced employment in other industry and business. (DM)

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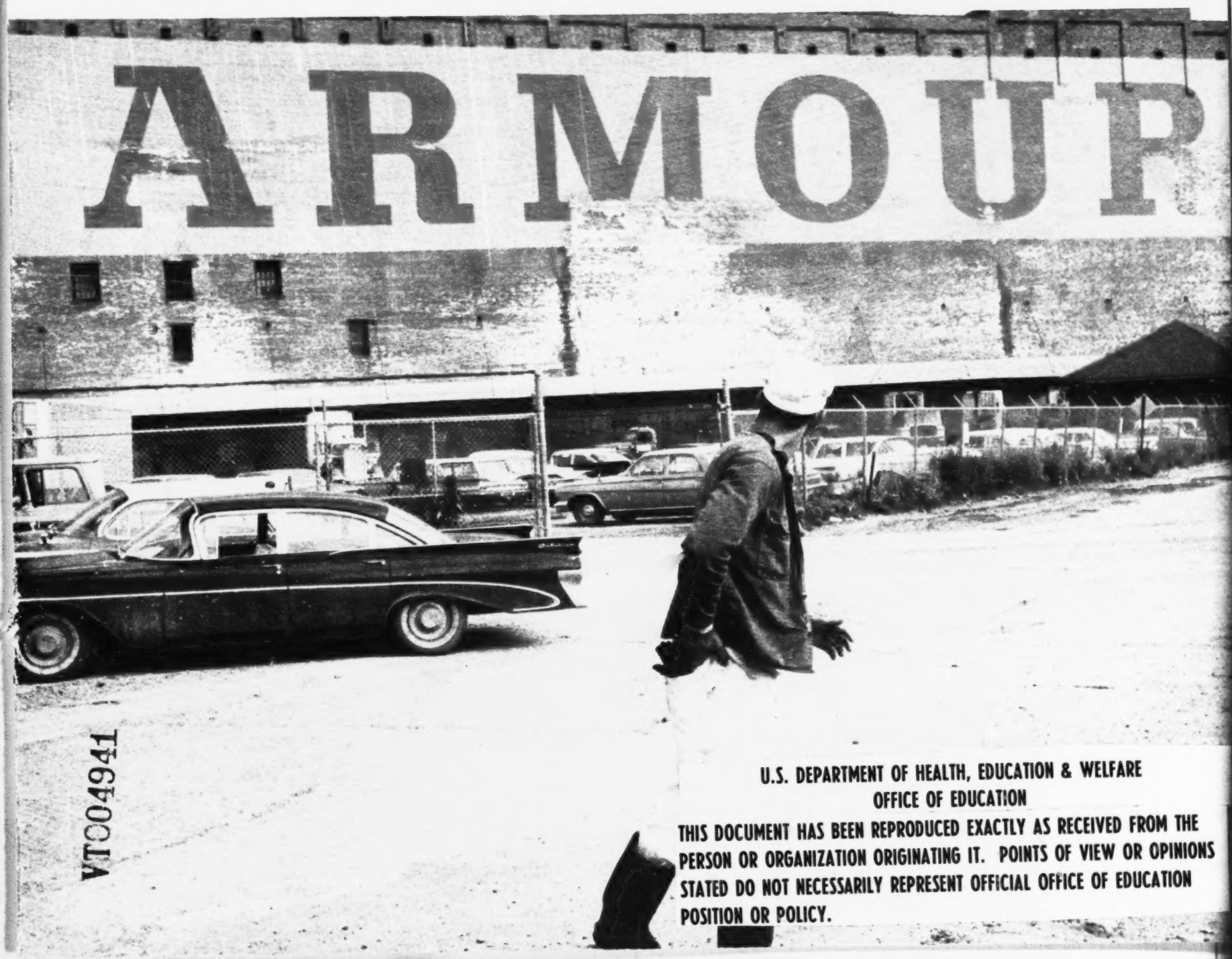
THE EMPLOYMENT SERVICE GOES TO AN ARMOUR PLANT CLOSING

A REPORT BY
IOWA EMPLOYMENT SECURITY COMMISSION
IOWA STATE EMPLOYMENT SERVICE

THIS CASE HISTORY OF THE CLOSING OF THE SIOUX CITY, IOWA, ARMOUR & COMPANY MEATPACKING PLANT IN JUNE, 1963, HAS BEEN COMPILED AS IT DEVELOPED OVER A PERIOD OF A YEAR. SPECIAL TECHNIQUES AND MATERIALS WERE USED IN SOLVING THE MANY PROBLEMS ASSOCIATED WITH THE CRISIS AND THESE WILL BE OF INTEREST TO OTHER STATES INVOLVED IN LAYOFF SITUATIONS AS THEY PREPARE SIMILAR WORKER SERVICES.



VT004941

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THE EMPLOYMENT SERVICE GOES TO AN ARMOUR PLANT CLOSING

Sioux City, Iowa, June, 1963

INTRODUCTION

An impending crisis in local unemployment in March, 1963, at Sioux City brought the local Iowa State Employment Service office, the Iowa Employment Security Commission, regional and federal officials into action. Soon there would be a change in the Sioux City industrial skyline with the closing of the large Armour & Company meatpacking plant in June and its subsequent razing. Sioux City had lost its largest, most solidly entrenched employer.

It was a shock to the packing house workers and fellow residents of Sioux City when the advance rumors were officially confirmed on March 14, 1963. The last day of employment for 1,178 production and maintenance employees and approximately 200 administrative employees would be June 16, 1963. The 60-year-old Armour meatpacking plant was closing its doors in a final shutdown.

While Sioux City had a nonagricultural payroll of 34,000 employees, community leaders expressed fears that it would be difficult to find work for the ex-Armour workers. The community had come to regard the meatpacking workers as a blue collar class whose strong union support had won for them more and better fringe benefits and higher wages than were paid other employees in local industries.

The March, 1963 civilian workforce in Sioux City was 43,870. The loss of the Armour plant with its annual payroll of $7 million meant that one in every seven factory workers in the community would be out of a job.

HISTORY

In 1860, six years after Sioux City was founded, the first meatpacking plant to rise in the rugged frontier town was started with local money by James E. Booge. As the frontier pushed across the wide Missouri River, his meatpacking business prospered and Sioux City developed into a major livestock shipping point for the Midwest. By 1880, Mr. Booge had built a huge half-million-dollar plant.

Other meatpacking plants were built by other entrepreneurs and they, too, prospered and became the backbone of Sioux City industrial life.

Now, more than 100 years after the first plant was built, the local meatpacking industry is being returned to hometown domination as the big-name packers close their rambling, multi-story plants and leave Sioux City.

GROWTH

From 1880 to 1890 the population of Sioux City expanded from 7,366 to 37,806. The 1910-1920 period was noted locally as a boom time with a population jump from 47,828 to 71,227. This was the era when Iowans referred to Sioux City as their "Little Chicago." The citizens lived up to its rugged name in word and deed. But times do change, and the prosperous days were forgotten in the depths of the Great Depression years of the late 20's. This depression affected not only Iowa farmers, but plunged the stock brokers in Manhattan into despair.

The 1930's are remembered in the Midwest chiefly as years of long summer droughts. The 40's were the World War II years with prosperity returning in the 50's.

The 1960 census for Sioux City raised the growth of the northwest Iowa city to 90,000. However, this increase was offset by the decline in the number of persons in the 20 to 40 age group as the younger working people left the state for greener working pastures.

One of the economic factors credited with the upset of the local economy was the phasing-out by the federal government of its air base installations at the Sioux City airport.

The Armour plant was not the first large meatpacking plant to feel the changes brought about by the technological revolution that has touched and automated most operations within the meatpacking industry. A Cudahy plant in Sioux City was shut down permanently in 1954. These older plants could not compete in output without major rehabilitation at costs considered prohibitive by their respective managements.

Modern, one-story meatpacking plants using the latest techniques were designed and built for stepped-up processing of more livestock faster and at a competitive price. More than five million head of livestock go through the Sioux City stockyards each year, making it the third largest market place in the United States. It is ranked just behind Omaha, Nebraska, and St. Paul, Minnesota, on the list of major livestock yards.

Present Sioux City meatpacking plants include the Swift plant, along with the newer meat processing plants which can handle as much livestock as the previous giants of the industry ever could. But these new automated plants need to employ fewer people, and the call for fewer workers causes economic repercussions in the area. An example is the new beef-kill plant that requires only 80 workers. The old Armour plant had employed a daily roster of 900 people plus additional gate hires needed at peak production times.

While there is no specific slum area in Sioux City, there are many low-class dwellings. An estimated three-fourths of the non-white population live in sub-standard homes. The city has a small urban renewal project in conjunction with the Floyd River channel relocation project.

In 1961 Sioux City was selected as the All-American City, an award for civic progress, sponsored annually by the National Municipal League and Look Magazine. Its reputation for being aware of civic problems and for efforts to do something about them met an acid test in 1963.

STEP-BY-STEP ACTION REPORT

The Sioux City Employment Service office staff began working with the Armour plant officials on March 14, 1963, the date the closing was announced. The local ISES office prepared Form ES-235, Establishment Report of Mass Layoff, on March 15, 1963, and forwarded it to the administrative office in Des Moines. The occupation and sex of permanent workers involved in layoff were as follows:

OCCUPATIONAL CODE (6 digits)	PLANT JOB TITLE	NUMBER OF WORKERS Total	Men	Women
1-05.01	General Office Clerk	30	18	12
4-09.20, 4-09.40	Skilled Butcher	100	65	35
6-09.1, 6-09.2, 6-09.3	Semi-Skilled Butchers	225	175	50
6-09.2, 6-09.3	Semi-Skilled, do not use knife	200	180	20
8-09.11	Laborers	250	200	50
	All Others	55	49	6

(Armour personnel stated that it would be impossible to break down the various positions in the meatpacking plant since jobs are considered in the broad classifications listed above. A minimum of 400 different jobs was given. Promotion was based on seniority, with openings being posted for bids and not on the basis of attained skills.)

Form ES-235 showed that the local Employment Service office was invited to participate in the resolution of manpower problems due to the layoff. The local office manager believed the impact of the layoff would have a secondary effect on business in many divergent categories and would push the Sioux City unemployment rate to about 6.3 percent.

The local manager went to Omaha, Nebraska, to study methods used when the Cudahy Packing Co. automated its plant in 1959 displacing 925 workers. He said he wanted to "glean from the Omaha experience What To Do and What Not To Do."

The Iowa State Employment Service on the local and state levels explored ways of helping the Armour employees when and if the plant should close. Meetings were held with national, state, regional and local representatives of the company, the union and the Employment Service to chart a course of action. The decision on the actual steps to be taken was reserved to the local officials.

Arrangements were made with the company's officials for a labor market economist from the administrative office of the Iowa Employment Security Commission, Des Moines, to meet with Armour plant personnel. The labor market economist was granted access to some company records after assuring officials that information secured from Armour would be treated confidentially and the ES would not attempt to influence any decisions that had been made.

A quick check revealed employee record cards contained information concerning jobs held but nothing on current job assignment, vacation data, grievance data, and disciplinary action. Records were practically devoid of the type of statistical data required for ES purposes. A subsequent request for access to the payroll record was not granted.

An attempt to use a personal data form to be filled out by each employee was acceptable but was approached with extreme caution because of the union-management relationship. The company required union approval which was secured through the diligent efforts of the local ES office manager the evening of March 19.

Company approval to use a personal data form was secured on the following day, but the firm would not distribute the form to workers until management had a chance to discuss it a week later at a regular meeting. At this point, the speed necessary in handling such situations had been lost.

Several steps which would be taken, some by this agency and some by the community, were enumerated:

THE IOWA EMPLOYMENT SECURITY COMMISSION WOULD:

1. Interview and classify, by skill level and skill potential, all workers affected by closing of the plant.
2. Explore every industry and business in the area to uncover any jobs which are going unfilled and for which these workers may be qualified or can be prepared.
3. Provide the community with the criteria established for participation in existing federal programs under present federal regulations.
4. Prepare and carry out, in conjunction with the State Department of Public Instruction, training projects to develop the potential skills of the affected workers according to the needs of the community.

Community leaders should take action to:

1. Attempt, through proper channels, to have the criteria waived which have been established for preference on government contracts.
2. Take action to have the criteria changed for participation in other Acts of Congress such as the Public Works Acceleration Act.
3. Assist the Employment Security Commission employees in obtaining a listing of all job openings in the area.
4. Assist in obtaining the cooperation of Armour & Company in making the workers available for interviews before the actual closing date.

The proposed action by the agency would require financial resources which were not presently in the budget. Interviewing, testing, and counseling of the workers by the Employment Security Commission would require additional resources. A supplemental budget request was prepared and submitted to the Bureau of Employment Security.

The local ISES manager kept the state office informed at all times and in detail through weekly and monthly reports, plus special reports, as requested, on the status of the Armour displaced workers. Regional and federal officials were also interested in following the progress of the Sioux City problem in great detail.

A committee of 29 business and labor leaders had been formed in March, 1963, by the city council to explore ways of keeping Armour in Sioux City. Proposals for helping Armour included financial assistance for plant modernization and wage reductions by labor to reduce costs. The committee's efforts proved of no avail.

In April, plans were made in the administrative office of the Iowa State Employment Service in Des Moines to send the mobile team of interviewers from the special Community Development Program to Sioux City. The team went to Sioux City in May for month-long series of interviews with some 850 Armour workers. Meanwhile, special forms were developed to aid in obtaining specific information on each individual to classify his own skill level and occupational potential. Each in-depth interview required 45 minutes to one hour to complete. Both union and management cooperated in arranging for the workers to take time from their jobs for the interviews and in setting up plans for mass claims taking.

The active file of persons seeking work in Sioux City through the local ISES office was 1,434 on May 1, 1963. Add the Armour 1,100, and the local office load would be increased by almost 100 percent.

Husbands and wives were invited to attend evening group meetings to learn what was being done to help their breadwinners. Reports of unemployment in other cities where Armour had closed large plants had added to the gloom and doom rumors. Attendance was good at the Sioux City meetings and helped to clear the air as well as pinpoint objectives of the Employment Service.

The local office had access to occupational surveys from the regional BES office, job inventories for Iowa, Nebraska and Minnesota and lists of prospective and planned MDTA programs.

In May, 1963, the Citizens Re-employment Committee was formed; and, as a part of its work, sent 420 letters to other meatpacking plants in the nation telling them experienced meatpacking employees were available.

On June 17, the Sioux City Chamber of Commerce mailed approximately 1,500 letters to its members to develop job openings. A list of the occupations of the available applicants, a survey form and a return envelope were enclosed. Early responses were good and 40 replies containing 89 job openings were referred to the local Employment Service office for action. However, at this early stage, Armour employees were exceedingly reluctant to accept employment that paid less than their previous wages.

Every effort was made to give priority to these workers in finding new jobs. In addition, counseling and GATB testing were continued in the local office as a part of the regular office operations.

The Sioux City Employment Service office explored the many industries and service outlets in the area and uncovered jobs that could be filled by employees soon to be released by Armour. The drying up of the source of $100 million annual income was sufficient impetus to many community-minded citizens to respond with offers of jobs.

A special mobile team of interviewers from the state office conducted in-depth interviews, testing and counseling of workers at the Armour plant. As one of the mobile team of interviewers declared, "We're not so much interested in what a worker has been doing as we are in what he used to do years ago or what he now has the ability to do." A man who cut off pigs' tails for 20 years is an expert at that task, but what is he to do for a living when he no longer has that special job? And, that worker wanted to stay in the meatpacking industry.

Many saleable skills in the labor market would have remained unknown to the local ES office, and probably to the worker as well, if only the usual application taking had been used instead of the probing in-depth interviewing technique.

For example, an ice crusher, man, age 59, and an Armour's employee for 21 years, was placed as a frame maker with a woodworking shop.

Another Armour's employee, a woman trimmer, age 50, with 13 years seniority, was placed as a sales clerk in a large department store.

This in-depth information proved to be an invaluable guide for planning and for reporting the nature of the re-employment problem to the community through the local newspapers and radio stations.

A summary tabulation was run on data processing equipment showing the universal characteristics of the workers involved in the Armour plant layoff. These data were summarized by age group with breakouts by sex, education, seniority, number of dependents, hourly wage, and number with future work plans, disabilities, and with special training. In summary form, 903 (167 women) workers were interviewed. Their average education was 8 years, their average seniority was 14 years, their average number of dependents was 2, their average hourly wage was $2.31; and the number with future work plans was 115. Those workers with disabilities numbered 90, while only 76 had special training. More than 50 percent of the former workers were 46 years of age and over. Nearly half were classified as unskilled workers.

Since the Sioux City workers had a somewhat higher education level, the outlook for them was more favorable than for the ex-workers in other Armour plant closings. However, their average age was higher than in the other plant closings and posed a serious problem in finding new employment for the displaced workers.

Data on the general information listing for Armour workers also included: codes (up to 3), years of employment at Armour, straight time hourly pay (ending wage), does he want work, has he been tested, is he willing to move (7 sub-items, each with 2 or more further breaks), is worker old enough to retire, type of present housing with 4 sub-items, and is worker main family support.

The sub-items on "willing to move" explored whether the worker would be willing to change jobs, what pay rates he would consider, if he would work for another firm, would he give up his seniority, would he pay his own moving expenses, and how far would he be willing to move.

The sub-items on "willing to train" covered wage rate requirements, moving, training costs and training time.

The sub-items on "housing" covered ownership, buying and renting. This general information listing could be the basis for an extended study and analysis; but, in the interest of time, it served as a placement tool for use in the local office, and in the state office as a guide to the types of training and related programs that could be instituted to help these individuals.

A second listing was prepared showing general information of each individual Armour worker. This listing was arranged in social security number sequence. In addition, a "locator listing" was prepared in social security number sequence and this listing gave the Armour workers' name and address. Thus it was possible to find the name and address of any of the Armour workers for which general information was available if it became necessary. However, it was also possible to keep the individual identification confidential by not releasing the "locator listing."

On February 15, 1964, a two-hour session in group job finding was held by the local ES office. Topics included labor force knowledge, how to fill out work applications, how to make up a work resume, use of the letter of application, how to interview for a job. Response was good and future job finding sessions were planned.

Interviews with 298 of the remaining unemployed Armour workers began in March, 1964. The same type of information report form used by the mobile team was utilized for these interviews. Changes were expected in the workers' attitude about mobility, training and minimum wages as they realized that they would have to re-train or accept jobs with lower wages than at Armour.

A series of four profile sheets listing 25 available Armour workers each week for four weeks was started in April, 1964, and was mailed to 70 local Sioux City employers. At first count, eight placements could be credited, in part, to the spring job drive promotion. The profiles covered outstanding applicants, including laborers, janitors, porters and body maintenance men.

A job development sheet listing ex-Armour employees willing to relocate was mailed to all meatpacking establishments in Iowa, Nebraska, South Dakota and Minnesota.

By the end of May, 1964, unemployment insurance claimants had for the most part exhausted their claim benefits. However, 40 displaced persons were still active and had extended their claim benefits by reporting payments from social security and private pensions.

SECONDARY EFFECTS

A survey was made in late March, 1963, to determine estimated changes that would come about in the community pursuant to the Armour closing in June.

Sioux City Construction League: Much repercussion would be felt in the construction industry as it was stated residential construction had already been over-extended. Commercial construction in the area currently in progress included two junior high schools.

It was estimated that fewer carpenters, masons, plumbers, metal workers, furnace installers, excavators and laborers would be needed in the 1963 season.

The Armour closing was expected to have an adverse effect on the jobs open to the high school and college youth seeking summer employment in construction. Around 10 percent increase in unemployment was due to the influx of students.

Industrial Development Council: Armour Plant No. 2 which produces Gus Glazer meat products and is separate from the main Armour plant will continue in production. It is anticipated the present work force of 40 would be increased to about 80. (It was finally estimated that only an additional 10 employees went on the payroll.)

Other estimates predicted that repercussions from the Armour closing would be evident in the Sioux City area for about two to three years. New industries might be coming into Sioux City, but there was no indication of the type or number of workers that might be involved.

A pessimistic statement heard from many quarters was that no business in the Sioux City area would hire Armour personnel with the underlying implication aimed at strong union affiliations.

Local Teamsters Union estimated 20 jobs of their members would be affected by the Armour plant closing.

Greater Sioux Land Merchandising Council predicted a slight but cumulative effect on major establishments. Some small stores will be affected and go out of business, but it is almost impossible to lay this directly to the Armour closing rather than on large establishments who compete with the smaller ones because of volume sales and purchases.

Railroads: Fewer meat products were being shipped by rail. Employment reductions in this industry will result from recent court decisions and will not be much affected by the Armour action.

Truck Lines: Only truck lines hauling principally for Armour were contacted. Little change was anticipated, although it was too early at the time of the report to be certain. No estimate could be obtained.

The president of the Sioux City Stock Yards Company was optimistic about the future of the nation's third-largest livestock and meatpacking center.

He explained that Sioux City's centralized location in the heart of the greatest feeding territory in the nation and its accessibility by rail and truck should keep the stockyards among the nation's leaders. In 1962, livestock purchased in Sioux City went to 40 states and 175 cities.

City officials were unable to forecast the full impact on the economy of the loss of the $100 million formerly spent each year by Armour in the local areas of services, supplies, payroll and livestock. Mayor George Young said efforts were being made at all levels to get employment for the displaced and asked for cooperation of citizens to weather the storm.

COMMUNITY EFFECTS

An article examining the effect of the closing on the economy of Sioux City appeared in the Sioux City Journal the week that the plant closed. Highlights of this report showed there was "an amazing lack of concern by the general public as Sioux City prepares for the closing Sunday of the Armour and Company packing plant."

"There apparently has been no reduction in credit buying since the March announcement that the plant would be closed. It appears that people not directly affected are confident enough in their jobs and in the local economy to obligate themselves for periods of a year or longer," said the Credit Bureau manager.

The key question asked was: How would preparations for the loss of the plant pay off?

Officials anticipated an increase in the unemployment rate from 3.1 percent in April to 5 or 6 percent in July, and estimated this rate could rise even higher in 1964.

NATIONAL REACTION

Edward Salner, Division of Automation Manpower Services, U. S. Employment Service, personal representative of the Secretary of Labor, visited Sioux City in May, 1963. His role was to provide technical guidance by drawing on experience from other places and, "in general to give every kind of help that we can in this particular situation."

Mr. Salner said the job of solving this problem, "not only should not be done but cannot be done from Washington. It is the local people who know the problem, face the problem and can act on it.

"This is not solely an employment service problem as we are involved mainly as technicians," he continued.

On June 1, 1963, the local union secretary wrote President John F. Kennedy, enlisting his aid in permitting surplus government commodities to be brought into Woodbury County as there were none at that time.

By the end of the week, the writer was assured that the President had received the letter and that it had been referred to the proper government agency for reply.

EMPLOYEES' ATTITUDES AND EFFECTS

The Armour workers became unemployed in a labor market with most unfavorable characteristics for blue-collar job seekers.

Several situations in Sioux City that have been difficult to overcome lie in the area of administration plus local labor market conditions and, of course, the unpredicability of displaced workers' reactions to training or job offers.

Private efforts at job placement were helpful in encouraging the displaced worker to overcome his first inertia and give him a sense of mobility and hope for possible new job opportunities in the labor market.

Sources of information leading to jobs included: friends and relatives; newspaper ads; public employment service; private employment service; contacted by another employer; contacted by union; direct application; self-employed; and radio and TV as public service announcements, time contributed by stations.

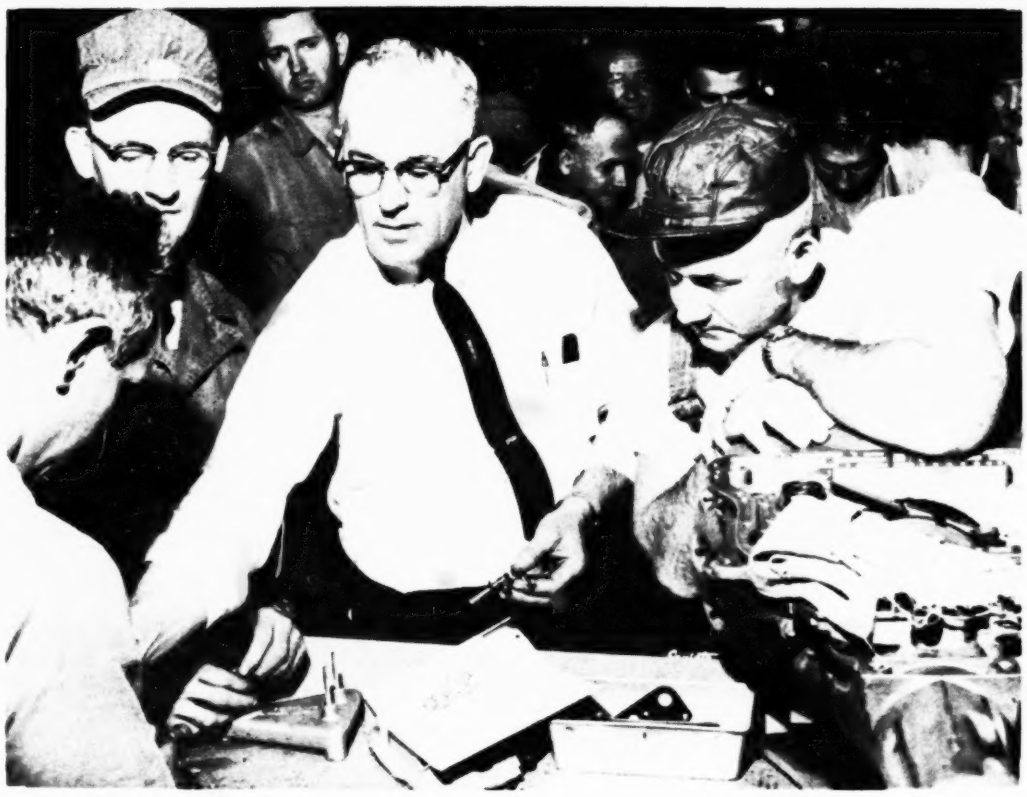
Approximately 130 persons between the ages of 55 and 62 applied for an early retirement pension and about 75 of them did accept pensions under the early retirement program.

About one-half of the Armour employees accepted their severance pay. Some employees used this money to finance their own business. Many others used it to pay expenses while searching for work. Severance pay had to be repaid to the company with interest if the worker accepted an Armour plant job.

While awaiting transfer to other Armour plants, the workers who signed up for T.A.P. (Technological Adjustment Plan) received payments of $65 per week from the company. These payments, a negotiated union benefit, began either from the time of unemployment or at the completion of the individual's vacation period, whichever was the latest. Allowances for moving costs were paid by the Armour Automation Fund. Most transfers did not take place until late in August.

The possibility of employment in new Armour plants has held out hope for some of the workers. They preferred to see what would develop for them. Some of these plant openings have only delayed the readjustment for many. As an example, when the West Point plant opened in Nebraska, 180 Armour workers agreed to transfer to this plant, but 110 of these returned shortly to Sioux City. They came "home to Sioux City."

MDTA PROGRAM



The Sioux City plant employees were the first to benefit from the start by the retraining available under the Manpower Development and Training Act.

MDTA is the tool that cushions the impact of a plant shutdown. The people without jobs are trained to fill jobs that currently are without qualified workers to fill them.

Around 450 displaced Armour workers initially indicated an interest in training. The majority of these individuals specified they would take training if: (1) the wage rate on the new job was equal to former wages, (2) the job would be in Sioux City, (3) the training would be provided in Sioux City, and (4) only if guaranteed a job after training.

A follow-up survey in April, 1964, of the 290 remaining unemployed Armour workers has further verified the specific conditions that must be met before they will consider training. A number indicated a specific occupation, such as carpenter, plumber, or heavy equipment operator for which they would take training. The recent amendments to the Act may now permit some to enter training on an individual basis.

The Iowa agency has made every manpower training class in Iowa available to these workers. Only four Armour workers accepted referral to training outside the area. This tends to bear out the information gathered in the follow-up interviews that the majority will only train in Sioux City for jobs in Sioux City.

The closing of the Armour plant had a softening effect on the over-all labor market in Sioux City. This has had a serious deterring effect on locating occupations for training where there would be reasonable expectation of employment. Sixty-one additional business firms closed in Sioux City the past year, which has not helped the situation. Estimated employment affected by these closings totaled 222, including 96 women. About 20 new places of business were opened during the same period employing 60 to 80 people.

Under the Manpower Development and Training Act, the Iowa Employment Security Commission determines the need for job training classes, selects the persons to be trained and takes responsibility for getting them into jobs after training. The State Public Instruction Department handles the educational part of the program.

The federal government allocated initially $61,000 for the two classes in auto mechanics and auto body repair. Unemployed workers taking the courses received a living allowance weekly during the training period. This allowance was equal to the Iowa average of unemployment insurance benefits and was paid only to trainees who were heads of families and met other requirements.

The Armour Automation Fund helped some workers who were not qualified for the federal training as well as provided some medical aid. The private fund, however, did not pay a living allowance for workers in training as the federal program provided.

Jobless workers in training outside the federal training program cannot receive unemployment benefits. The living allowance for qualified workers in the training program has been separate from the unemployment insurance program.

Under Iowa law, a jobless worker must be available for immediate employment to qualify for unemployment benefits. A worker attending school is not immediately available, so he is disqualified for unemployment insurance benefits.

Most states have similar restrictions, but a few have changed their laws to permit workers to receive unemployment benefits while in training.

Trainees are now allowed to work 20 hours a week while in training without any reduction in their retraining subsistence allowance.

Aside from the actual closing of the Armour plant as a conversation provoking topic, the MDTA program excited more comment in the press of Sioux City and Iowa. Many citizens were irate when they learned the cost of instituting trade programs for a few welders and auto body and fender men. One citizen was heard to proclaim loudly that a person could be sent to Harvard University on what it would cost per man to set up a federally financed training program. But, eventually even the irate could see that the cost of training men for jobs was small in comparison with the estimated cost of a life-long dole to the unemployed and unskilled worker. It was proved that a retrained worker would pay in taxes within three to four years the dollar amount of his training.

The local school board members had several changes of heart before allowing the MDTA program to use school facilities in the evening and graveyard shifts.

In February, 1964, the bulk of the 95 persons enrolled in these MDTA courses was former Armour employees:

Structural Draftsmanship, 52 weeks, Sioux City Area Technical School
Machine Operation (two courses underway), 50 weeks, Central High School
Welding, 16 weeks, Central High School
Auto Mechanics, 50 weeks, Central High School
Meat Cutting, 24 weeks, local meat market
Clerk-Stenographer (two courses underway), 40 weeks, local business college
Hairstyling, 48 weeks, local beauty school

The Sioux City Sunday Journal for February 2, 1964, published a feature article on the MDTA classes being set up in Sioux City under the headline, "Willing Hands Train for New Careers." A review of the MDTA program was included in the article.

"What's happening is that Sioux City is well on its way to becoming an area vocational training center. Nebraska and South Dakota are both eager to send trainees to us but right now, with the Armour problem still not taken care of, we can't take them," said Gus Hahn, local Employment Service manager. "These vocational education facilities and the ability to train skilled labor will be a definite enticement for industry to locate in Sioux City.

"A manufacturer who plans to locate here one year from now can come to the ES and tell us the skilled workers he will need and we can have them for him."

Of the 15 former Armour employees in the first section of the welding or machine tool operator course, 10 were employed immediately upon completion of the course. Some of the jobs for welders that summer were disrupted by a two-weeks' carpenter strike.

By December, 1964, 28 former Armour & Company employees were enrolled in Sioux City MDTA courses. They were trained as machine operators, clerks-general office, meat cutters, automobile body repairmen, practical nurses, stenographers, automobile mechanics, household appliance repairmen, and welders. Fifty-eight potential trainees were screened by the local office in November and 34 referrals to training were made. Three new classes were started in November to train 25 men, including four ex-Armour workers, as household appliance repairmen and welders, and 20 women as clerk-stenographers. The trainees' ages ranged from 40 to more than 60 years. A few additional ex-Armour workers enrolled in the machine operator class started later in December. The first section of a statewide program for farm equipment mechanics also began in December, with new classes for meat cutters and clerks-general office planned for January, 1965.

The facts reported in this case book point up the importance of recognizing that what can be accomplished by retraining is closely related to the general availability of jobs. However, the Employment Service has developed techniques for finding job openings.

In conclusion, an important element in getting the person to seek or accept a job in the occupation for which he was trained means that the placement process may have to extend well beyond the time after a person finishes his course.

THE ARMOUR AUTOMATION FUND COMMITTEE—BACKGROUND

Armour & Company has closed more than 20 of its older plants since 1953.

The Armour Automation Fund Committee, formed in 1959 to cope with problems caused by plant automation, is supported jointly by Armour and the United Packinghouse Workers and Amalgamated Meatcutters unions. The committee is made up of ten members: two representing the public; four representing Armour management; two representing the United Packinghouse Workers Union and two from the Amalgamated Meatcutters Union.

The facilities of the Armour Automation Fund were used during the closedown of only two plants before Sioux City. In 1960-61 the first attempt was made at Oklahoma City, Oklahoma, to help former employees qualify through training for new jobs. The results were regarded as ineffective with more than half the ex-workers still out of work a year after the shutdown.

In the 1962 closedown of the Fort Worth, Texas, plant, the Fund facilities were more successful with the result that only a third of the employees remained unemployed one year after the shutdown.

On June 13, 1963, the Armour Automation Fund Committee opened an office to assist the Sioux City ES office staff with training and placement of those workers who did not accept transfers to other plants.

Through the Armour Automation Fund, 33 persons interested in specific training courses received paid tuition.

The local Employment Service office did the testing and counseling of persons whose training was financed by the Automation Fund Committee. Records including the GATB score, counselor's evaluation and the interest check list were forwarded to the Fund for action.

Relations with the Armour Automation Fund Committee and the Iowa State Employment Service and the local Sioux City office have been termed excellent by Fund officials.

Leadership and personnel in the local ES office were found to be "adaptable and intelligently innovative."

The local ES office showed the Automation Committee what can be done through constructive cooperation between public and private agencies, and these lessons would be applied in other cities including the later Kansas City shutdown, according to a spokesman for the Automation Committee.

SIOUX CITY TODAY

Sixty-one additional firms closed their doors in Sioux City in the 1963-64 period following the closing of the Armour plant. Through the joint efforts of the local ES office, the community and the Armour Automation Fund Committee, the 1,100 unemployed Armour workers on June 16, 1963, were reduced to less than 300 by April 30, 1964.

All in all, the worst was over, with the employed total up one year after the closing of the Sioux City Armour plant. By June, 1964, the number of unemployed persons in Sioux City had decreased to the approximate level existing before the closing of Armour & Company in June, 1963.

"For the last nine months, unemployment in Sioux City has been higher than usual; and now the level is about the same as before the close of Armour & Company. I'm optimistic about the future, although there are still about 300 former Armour employees without jobs," stated the local ES office manager in an interview published in the Sioux City Journal.

"Construction of new meatpacking facilities in the city and in prospect nearby indicate employment recovery for this industry seems in store in the near future," wrote the Sioux City local ES office manager in August, 1964.

Two-thirds of the persons laid off are still in Sioux City. They have one thing in mind, supporting their families. Some stayed away from home as long as a year for retraining so they could find work. About 630 men and women have found jobs with the assistance of the ES and the Automation Committee. Four hundred are working in Sioux City. Two hundred are unaccounted for; either they have retired or have found jobs elsewhere without reporting to the ES.

Sioux City has weathered the storm. Latest employment figures are unusually bright for the winter slump period and predictions for spring and summer '65 are, to say the least, optimistic.

That the community has been successful is supported by the fact that the methods Sioux City has used to get work for unemployed workers were used by officials at South Bend, Indiana, when the Studebaker plant closed there. The triumph is summed up rather modestly by ES manager, D. W. "Gus" Hahn who says, "With plenty of people staying here, it speaks well for the town."

SUMMARY

Advance planning, extensive interviewing, testing and counseling, retraining programs and enlisting community support were required to meet the critical problems of those people unemployed in Sioux City through the closing of a major plant, Armour & Company.

Much work has been done in the Sioux City community, and continued work will need to be done in order to successfully return to the productive labor market all ex-Armour workers who want to work.

Recent interviews indicate that the hard core of unemployed workers will be even more difficult to assist. The remainder now represent the older group (over 45 years of age), less educated, less inclined to leave the area, and least adaptable to new job situations. Latest figures (April, 1965) show 133 are actively seeking employment through the local Sioux City office.

The job that remains to be done will probably not require any new technique, but will require concerted effort on the part of the Employment Service and the community. In the area of retraining, the multiple occupational approach to the training of groups of 50 unemployed persons may be the technique that will give adequate assistance to developing skills of the remaining hard-core unemployed.

The problem of plant closing and resultant mass unemployment is not new, and will continue in the future. Out of past experience, it is hoped that future problems will be better understood and solved effectively.

These points are considered the most critical in handling successfully the problems caused by any major plant closing:

1. The speed with which a preplanned program is activated after closedown announcement can be debated. The displaced workers may be numb with shock and will not cooperate with efforts to find new employment for them. Delay on part of community leaders may result from efforts to keep the plant open. Other troubles could stem from lack of speed on decisions by management. Management and union must cooperate fully in programs to help displaced workers.
2. An efficient and well-accepted Employment Service can do much to alleviate the problems of the unemployed through interviewing, testing, counseling, training and placement. Top interviewing techniques must be used. Vital information about the unemployed has to be carefully gathered, weighted, evaluated and summarized. Lack of access to payroll forms and other sources of personnel information slowed down effective employment service practices. Project experience should be integrated with regular operations of the Employment Service office. Involve state and local office specialists such as counselors, employer relations representatives, occupational analysts and labor market analysts—all have contributions to make to this program of finding new work for displaced persons. The Employment Service team approach seems to work best in arriving at a partial solution to the unemployment problem.
3. The entire community must be made aware of the problems caused by plant closings, and all community groups must participate in order to aid unemployed in particular and the economic life of the area in general. Enlist the cooperation of local organizations and local, state and federal government agencies, the school system, particularly vocational education. Each organization or agency can provide valuable assistance at different stages of the project.
4. The level of general unemployment in the area has direct bearing on whether the displaced workers can be readily absorbed by other employers.
5. Good relations with press, TV and radio stations proved to be important to all segments of the program to aid ex-Armour workers.
6. Sioux City officials and management had the benefit of experiences of previous Armour meatpacking plant closings and were able to plan and to do more for the unemployed.
7. The retraining of workers is a positive approach to the solving of individual problems when new skills must be learned in order to find another place in the labor force.

VT 004 949
Vocational Rehabilitation in America's Outpost in the Central Pacific,

Guam Dept. of Education. Vocational Rehabilitation
MF AVAILABLE IN VT-ERIC SET.
Pub Date - 66 6p.

*PROGRAM DEVELOPMENT; *VOCATIONAL REHABILITATION; HANDICAPPED
GUAM

Initiated in 1958 with the establishment of a workshop to train the retarded and severely disabled, the Vocational Rehabilitation Division presently has a staff including a chief and three counselors. A new facility for the retarded opened in February, 1966, and a pre-vocational program for clients with tuberculosis is beginning. The incidence of disability and the needs of the disabled will be determined in a door-to-door survey in all villages and in the remote jungle from January 1967, to June 1968. Plans for the future include a hearing aid distributorship and a selective service rejectee program. (JK)

VT004949

EDO 31587

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Guam Vocational Rehabilitation
Where America's Day Begins
HAFA ADAI (Hello)

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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VOCATIONAL REHABILITATION IN AMERICA'S OUTPOST IN THE CENTRAL PACIFIC

Struggling to overcome a 40-year time lag in starting the wheels of rehabilitation in motion, the Guam Vocational Rehabilitation Division is proud of its present progress and of the cooperation of its local citizens and government. The program now boasts a chief, three counselors, a workshop training 50 clients, three vending stands, and a rapidly increasing case load. The island has over 85,000 inhabitants spread over 209 square miles, but only about 50,000 are eligible for VR service. Aliens and military personnel comprise the remaining number.

On an island 6,000 miles from the U.S. mainland and in an area considered by some to be part of the orient, some differences in program and approach naturally occur.

One of the biggest problems in starting the program was to convince the people that the disabled could and should work. The Guamanian people have a long history of family cohesiveness. Any family member in better circumstances helps the one less fortunate without question. The disabled member of the family was often given no formal schooling and was taught little or no skills with which to support or help himself.

VT004949

When the program was started in 1958, it was decided to establish a workshop to train the retarded and the severely disabled. As often happens, the original concept is the one remembered longest, so many local people still feel that the VR program is still chiefly concerned with the training of the retarded. Gradually this impression is being changed as other programs are initiated and developed.

The island is composed of 22 major villages, each with an elected commissioner, a church, public health facility and, for some, a fire department and public elementary school. The houses in general are not numbered nor are they arranged along streets. Although future plans will remedy this situation, at present the best way to contact a client is to visit the commissioner's office and ask him to locate the person for you.

The island has a small college which, in 1963, was changed from a 2-year to a 4-year institution. Guam Trade and Technical School opened the doors of its new facility in October, 1966. Additional educational programs in operation include MDTA, OEO, Adult Education, NYC and others.

The VR counselor must improvise, use his wits, overcome a language handicap, correspond with facilities thousands of miles away, and still rehabilitate the disabled.

Statewide planning for the disabled on the island will be started in January, 1967 and will be completed in June, 1968. This will include a door-to-door survey in all villages and in the remote jungle to determine the incidence of disability and the needs of the disabled.

Guam is located in the Western Pacific in a region which is tropical and always warm and humid. A counselor doesn't have trouble with his car getting stuck in the snow, but he might turn around and find it rusted away to a few nuts and bolts. Then the road he planned to take that looked passable last month may be overgrown today with tropical vegetation.

Some medical and prosthetic facilities are not available on Guam. Clients are often sent to Hawaii (3,300 miles) or to the U.S. mainland for an artificial limb or a hearing aid. Clients requring heart surgery, special therapy and some types of training must also be sent to the Continental United States.

There are no institutions for the blind, for the deaf, or for the emotionally disturbed on the island. The program of pre-vocational training for clients with tuberculosis is just beginning. A new facility for the retarded opened in February, 1966.

The island is slowly picking up the pieces after 4 years of Japanese occupation in World War II and Typhoon Karen in 1962 which destroyed 90% of the homes. VR is one of the agencies supplying the spark for better things to come. A spanking new workshop-office complex was opened in

1966. A new bus was purchased in September 1966 to transport clients from the southern end of the island to the workshop, a distance of roughly 30 miles.

Guamanians are bilingual, speaking chamorro, which has many added Spanish words and use English as a second language. Few clients qualify for college training. The majority of public school teachers is from the mainland. One saving grace in the VR picture is the healthy supply of unskilled and semi-skilled jobs available. The military, with its diverse projects, has many unfilled jobs for which civilians are eligible.

Other troubles are a minor flood now and then during the rainy season or maybe a typhoon or tidal wave to battle about mid-year. But the VR message is being carried to every corner of the island. Among other things, the division hopes to establish a hearing aid distributorship, a new vending stand, a selective service rejectee program, and a OASIDI determination unit on the island. Adios, for now.

Compliments of:

Guam Vocational Rehabilitation - - - - - - - - - Richard W. Corbridge, Chief
Department of Education — Elmer J. LaBranche, Senior Counselor
Box 157 — Francisca T. Reyes, Counselor
Agana, Guam 96910 — Pricilla San Augustin, Counselor

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*VOCATIONAL EDUCATION; *EDUCATIONAL PROGRAMS; APPRENTICESHIPS; OCCUPATIONAL GUIDANCE; *EDUCATIONAL OPPORTUNITIES; COURSES
ARKANSAS; MDTA PROGRAMS; *MANPOWER DEVELOPMENT AND TRAINING ACT PROGRAMS

The purpose of this booklet is to assist counselors, school administrators, teachers, and others who have occasion to advise youths and adults concerning the availability, of public and private educational institutions in Arkansas offering approved vocational business, distribution, industrial and technical day school courses of less than baccalaureate degree level. Listings of approved Manpower Development and Training Act (MDTA) programs and registered apprenticeship programs are also included. More than 45 senior high schools offer approved, trade preparatory, vocational education courses as an adjunct to their curricula. Moreover, as of 1967, there are two area vocational-technical senior high schools operating and one area adult vocational school, and the State Board for Vocational Education is operating or has under construction 10 state vocational-technical schools. Major assistance for training operators and production workers is provided through MDTA programs. To provide higher skill level training, there is the Southwest Technical Institute, administered by the State Board for Vocational Education, as well as two community junior colleges, one four-year college, and numerous private schools. (MM)

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VOCATIONAL EDUCATION AND TRAINING IN ARKANSAS

Industrial Research and Extension Center
College of Business Administration
University of Arkansas
Little Rock

July, 1967

VT004951

VOCATIONAL EDUCATION AND TRAINING IN ARKANSAS

Roy W. Roberts
Professor Emeritus of Vocational Education
University of Arkansas

Frank H. Troutman
Senior Industrial Specialist

Industrial Research and Extension Center
College of Business Administration
University of Arkansas
Little Rock

July, 1967

Publication L-3

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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FOREWORD

The University of Arkansas' Industrial Research and Extension Center staff has estimated that from 1960 to 1980 total employment in the State will increase between 30 and 45 percent. In terms of the number of new jobs expected, the largest increases will occur in manufacturing, and in wholesale and retail trade. The increases will depend, to a large extent, on the availability of trained workers for the expansion of industry and business. This suggests that the State must not only provide education and training facilities, but also, that concerned individuals must make an effort to encourage both youths and adults to prepare for the positions of the future.

There are in Arkansas a number of public and private schools, training institutions, and private businesses that offer vocational training opportunities to youths and adults. More of these facilities will be provided in the future. One of the problems encountered is that of acquainting the present or prospective worker who is in need of training or retraining with the various facilities and programs available, and to encourage these persons to take advantage of the opportunities provided. This booklet is designed to provide some assistance in overcoming this problem.

The listings in this booklet contain the names of the approved vocational business distributive, industrial and technical day school courses of less than the baccalaureate degree level offered in public and private schools and training institutions in Arkansas, and approved Manpower Development and Training Act programs and registered apprenticeship programs in the State. The listings were compiled by Dr. Roy Roberts, Professor Emeritus of Vocational Education, University of Arkansas from reports of the various State agencies that have responsibility for approving education and training programs for youths and adults in Arkansas.

The booklet is designed to assist counselors, school administrators, teachers, ministers, business and professional persons and others who have occasion to advise with youths and adults concerning the availability of schools and other educational institutions in Arkansas. It is hoped that these listings will be useful to such advisors in supplying information to both youths and adults who are in need of further training.

July 1967

Barton A. Westerlund
Director
Industrial Research and Extension Center

TABLE OF CONTENTS

		Page
	FOREWORD	iii
I	INTRODUCTION	1
II	LIST OF APPROVED VOCATIONAL BUSINESS, DISTRIBUTIVE, INDUSTRIAL AND TECHNICAL DAY SCHOOL COURSES OF LESS THAN BACCALAUREATE DEGREE LEVEL OFFERED IN PUBLIC AND PRIVATE SCHOOLS IN ARKANSAS	3
	Courses	9
	Locations	21
III	MANPOWER DEVELOPMENT AND TRAINING	27
IV	REGISTERED APPRENTICE PROGRAMS	31

I
INTRODUCTION

A labor force capable of participating in a modern industrial society is recognized as one of the essentials for rapid economic development. A program of education and training to meet this need in Arkansas is being developed by the State Board for Vocational Education, in cooperation with the State Board of Barber Examiners, the Arkansas Board of Cosmetology, the State Board of Nurse Examiners, the Employment Security Division, and the Bureau of Apprenticeship and Training, U.S. Department of Labor.

Vocational education and training programs to meet the State's needs include the following:

1. Development of a supply of workers with a foundation of education, theory, and skill in skilled and technical occupations.
2. Training of clerical workers, operators, and production workers for new or expanding industries.
3. Continuing programs of evening, extension, and off-the-job courses to upgrade and update apprentices, experienced workers, and supervisors.

All programs in the three areas are planned and operated with the advice and counsel of an advisory committee representing the particular industry or occupation.

Skilled and Technical Workers

More than 45 senior high schools in Arkansas offer approved, trade preparatory, vocational education courses as an adjunct to their regular curricula. Also, there are two Area Vocational-Technical Senior High Schools currently operating in the State, along with one area adult vocational school.

In addition, the State Board for Vocational Education is operating or has under construction 10 State Vocational-Technical Schools which offer full-time preparatory or pre-employment courses to people from all areas of the State.

The graduates of these schools, while they are not finished technicians or mechanics, are well grounded in basic skills, applied math, science, and theory of occupations. They can begin work without the full-time supervision and training required for untrained workers.

To provide more sophisticated and/or higher skill level training, the Southwest Technical Institute, administered by the State Board for Vocational Education, is scheduled to open in September 1967. Also providing this type training are two community junior colleges, one four-year college, and numerous private or proprietary schools.

Operators and Production Workers

The major assistance for these semiskilled workers are provided through programs authorized by the Manpower Development and Training Act (MDTA). This Act also provides for courses to meet special needs of an area. These courses are based on needs or employment opportunities as determined by the State Employment Security Office.

Supplemental Instruction for Employed Workers

Courses for apprentices, journeymen, other industrial workers, and supervisors are provided in any area where needed to provide the necessary technical or related knowledge to upgrade or update present workers.

Organization of the Booklet

This booklet is in four sections. Section II contains the names of the approved vocational business, distributive, industrial and technical day school courses of less than baccalaureate degree level offered in public and private schools and other educational institutions in Arkansas. Section III includes a brief description of the Manpower Development and Training Act together with a list of the MDTA classes now in operation in the State. Section IV contains some comments about registered apprenticeship programs and a list of trades and places in Arkansas in which registered apprenticeship programs are in operation.

The listings do not include all vocational education programs in the State. About 300 school districts maintain departments of vocational agriculture and departments of vocational home economics which are not included in this list. Many schools offer shorthand and typewriting but only those that have been approved for federal reimbursement are listed.

II

LIST OF APPROVED VOCATIONAL BUSINESS, DISTRIBUTIVE, INDUSTRIAL AND TECHNICAL DAY SCHOOL COURSES OF LESS THAN BACCALAUREATE DEGREE LEVEL OFFERED IN PUBLIC AND PRIVATE SCHOOLS IN ARKANSAS

The following section lists the vocational course offerings of schools in Arkansas. The listings include both public and private schools. The private schools are designated by the abbreviation (Pvt.) following the name. All other schools are public institutions Some schools are scheduled to open in September 1967. These are designated (1967-68)

Senior High Schools

These schools offer courses for students who are regularly enrolled in the school designated. These students are not charged tuition. Students who do not reside in the local school district, however, are required to pay a tuition or registration fee. The vocational courses in the senior high schools and the Arkansas schools for the blind and deaf are a part of the regular high school courses of study and carry high school credits that may be used in partial fulfillment of the requirements for the high school diploma.

Area Vocational-Technical High Schools

These schools (Little Rock - Metropolitan and Fayetteville - Sequoyah Polytechnic) are administered by the local public school boards in the districts in which the school is located. The two schools are designed to serve an area comprising several local school districts Students who reside in the school district in which the school is located are not required to pay tuition, school authorities in the other school districts may make financial arrangements with the technical school district authorities for students from the outlying districts to attend this school. These technical high school courses are two year courses (grades 11 and 12) and carry high school credit The shop classes meet three periods per day, one section in the morning and one in the afternoon Students spend one-half day in shop classes and one-half day in related or other classes

Little Rock Adult Vocational School

This school is administered by the Little Rock public school district, and is designed to provide elementary and secondary remedial education as well as vocational training.

Students over 16 years of age from any part of the State, who can profit from courses offered, may attend. Both day and evening classes are offered. Tuition and fees are charged, however, tuition is nominal and fees are primarily for materials.

State Vocational-Technical Schools

These schools are administered by the Arkansas State Board for Vocational Education under Act 328 of 1957, with separate appropriations for each. Students over 16 years of age from any part of the State may attend any one of these schools. Students who desire admission are required to (1) file an application, (2) complete a General Aptitude Test Battery administered by the Employment Security Division, and (3) pay the first quarter's fee. The tuition fee is $15 per quarter or $60 per year. Most of the courses are one year (48 weeks) in length. Other courses vary in length from 5 to 24 months. Classes are in session 6 hours per day, 5 days per week. Some schools operate school buses for transporting students. Trainees who complete a course of study are awarded a certificate. The school assists in the placement of graduates.

The Southwest Technical Institute

This school, located at Camden, Arkansas, is scheduled to open in late 1967 or early 1968; it is administered by the Arkansas State Board for Vocational Education. The high school diploma or the equivalent is required for entrance. Most of the courses are highly technical and are two years in length.

Community Junior Colleges

Currently, Fort Smith (Westark) and Helena (Phillips County Community College) are the only two community colleges in the State, they are administered by seperate boards of Trustees appointed by the Governor. The tuition charge is $75 per

semester for resident students and $150 per semester for non-resident students plus some other fees. In general a high school diploma or the equivalent is required for admission. A student may enter some courses by satisfying the college authorities that he has the ability to succeed in the course. Most of the courses are two years (72 weeks) in length.

Arkansas Agricultural, Mechanical and Normal College

This college, located at Pine Bluff, Arkansas, offers one- and two-year terminal courses of less than baccalaureate degree level in a variety of trades. The courses are open to persons 16 years of age or older who have completed the eighth grade or its equivalent and can profit from such courses. A satisfactory rating on the General Aptitude Test Battery administered by the Employment Security Division is required of all applicants. Tuition and fees are about $73 per academic year. Students receive appropriate certificates upon satisfactory completion of a course.

Private or Proprietary Schools

These schools are owned by individuals or corporations, and supported by fees or tuition charges. Entrance requirements vary among the schools but in general a high school diploma or the equivalent is required for admission. Students whose abilities and qualifications seem to be such that they can successfully complete the courses of study may be admitted by special arrangement. Courses vary from one to two years in length with a few courses in specific skills of less than one year. Fees and tuition vary according to school and courses.

Most of the institutions listed offer evening classes for workers who are employed during the day. Also, many of them offer courses in general adult education to enable students to read and write and acquire the general learning abilities needed to learn a trade or retrain for a new trade.

Finally, curricula of all schools change with changing demands, therefore, it is important to note that the curricula listed are current offerings and offerings planned for the 1967-68 school year.

Enrollment Information

Senior High Schools:

Principal of the designated school.

Area Vocational-Technical High Schools:

Superintendent of Little Rock Public Schools
Board of Education Administrative Offices
West Markham and Izard Streets
Little Rock, Arkansas 72201

Superintendent of Fayetteville Public Schools
Administration Building
1000 Stone Street
Fayetteville, Arkansas 72701

Little Rock Adult Vocational School:

Director
Little Rock Adult Vocational School
14th and Scott Streets
Little Rock, Arkansas 72202

State Vocational-Technical Schools and Southwest Technical Institute:

Director of Trade and Industrial Education
State Department of Education
State Education Building
Little Rock, Arkansas 72201

Community Junior Colleges:

Director of Terminal Education
Westark Junior College
5210 Grand Avenue
Fort Smith, Arkansas 72901

Dean of Instruction
Phillips County Community Junior College
Helena National Bank Building
Helena, Arkansas 72342

Arkansas A. M. & N. College:

Director of Vocational Arts
Arkansas A. M. & N. College
Pine Bluff, Arkansas 71601

Private or Proprietary Vocational Schools:

Director of Vocational Standards Section
State Department of Education
State Education Building
Little Rock, Arkansas 72201

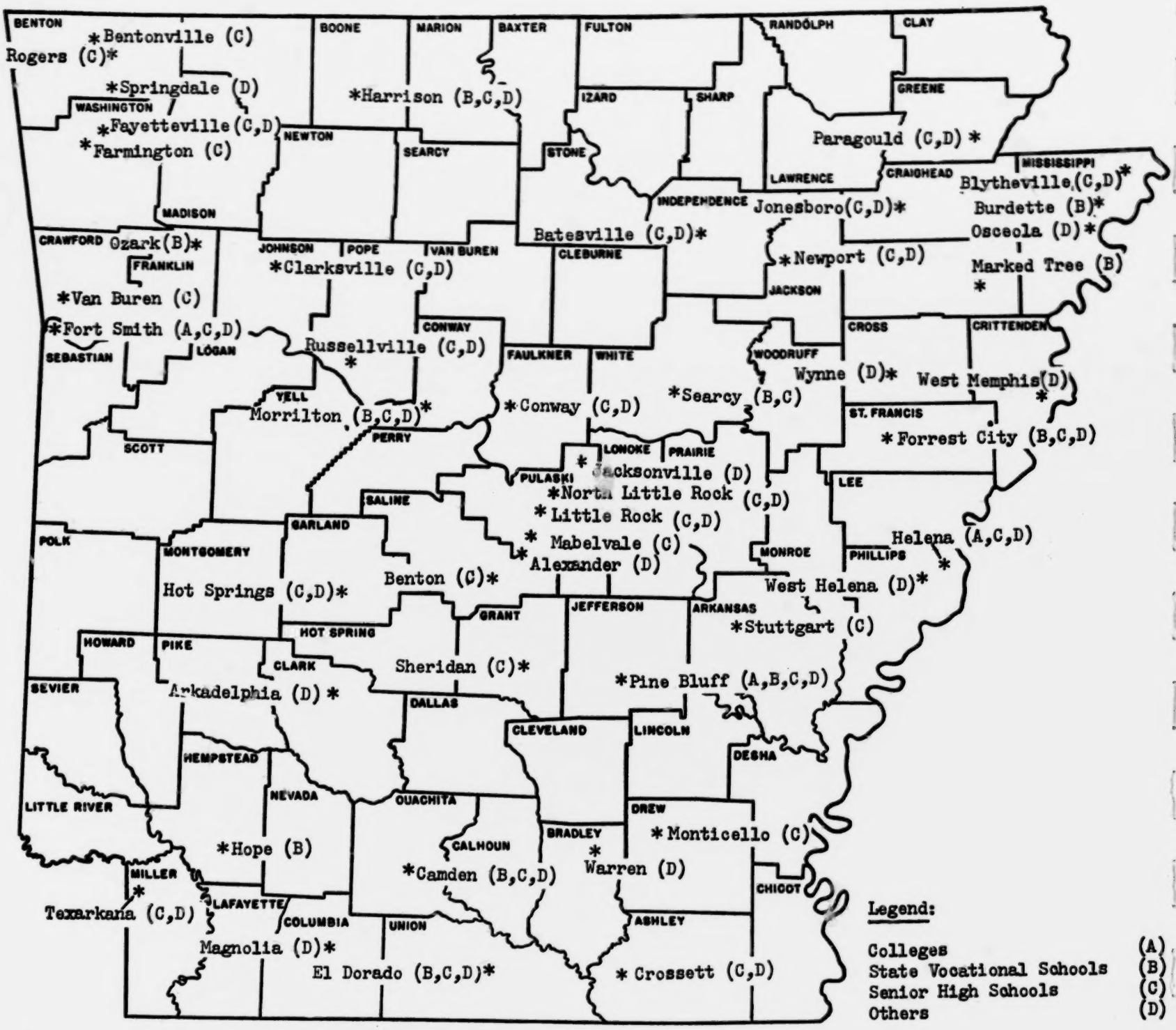
Barber Colleges:

Secretary
Arkansas State Board of Barber Examiners
527 Waldon Building
Little Rock, Arkansas 72201

Nursing Programs:

Executive Director
Arkansas State Board of Nurse Examiners
314 West Markham Street
Little Rock, Arkansas 72201

LOCATION OF APPROVED VOCATIONAL EDUCATION DAY SCHOOLS IN ARKANSAS



July 1967

Courses

ACCOUNTING (see office occupations)

AIR CONDITIONING AND REFRIGERATION

Burdette:	Cotton Boll Vocational-Technical School
Helena:	Phillips County Community College (1967-68)
Ozark:	Arkansas Valley Vocational-Technical School

APPLIANCE SERVICING

Fayetteville:	Sequoyah Polytechnic School
El Dorado:	Oil Belt Vocational-Technical School (1967-68)
Harrison:	Twin Lakes Vocational-Technical School (1967-68)
Little Rock:	Little Rock Vocational School
	Metropolitan High School
Marked Tree:	Delta Vocational-Technical School (1967-68)
Morrilton:	Petit Jean Vocational-Technical School
Pine Bluff:	Arkansas A. M. and N. College

AUCTIONEERING

Fort Smith:	Fort Smith Auction School, 7918 Tony (Pvt.)

AUTO BODY AND FENDER REPAIR

Fayetteville:	Sequoyah Polytechnic School
Fort Smith:	Westark Junior College
Harrison:	Twin Lakes Vocational-Technical School (1967-68)
Little Rock:	Arkansas School for the Deaf
	Central Arkansas Automotive and Trade School, 710 Broadway (Pvt.)
Ozark:	Arkansas Valley Vocational-Technical School
Pine Bluff:	Arkansas A. M. and N. College
	Pines Vocational-Technical School

AUTOMOBILE MECHANICS

Burdette:	Cotton Boll Vocational-Technical School
El Dorado:	Oil Belt Vocational-Technical School (1967-68)
	Washington High School
Fayetteville:	Sequoyah Polytechnic School
Forrest City:	Crowley's Ridge Vocational-Technical School (1967-68)
Fort Smith:	Westark Junior College
Harrison:	Twin Lakes Vocational-Technical School (1967-68)
Helena:	Phillips County Community College (1967-68)

Hot Springs:	Senior High School
Jonesboro:	Senior High School
Little Rock:	Central Arkansas Automotive and Trade School, 710 Broadway (Pvt.)
	Metropolitan High School
Morrilton:	Petit Jean Vocational-Technical School
North Little Rock:	Scipio Jones High School
	Senior High School
Ozark:	Arkansas Valley Vocational-Technical School
Pine Bluff:	Arkansas A. M. & N. College
	Pines Vocational-Technical School
Searcy:	Foothills Vocational-Technical School
Sheridan:	Senior High School
Texarkana:	Arkansas High School

AVIATION MECHANICS (see flight training)

Camden:	Southwest Technical Institute (1967-68)

BARBERING

Little Rock:	Eaton Barber College, 411 W. Capitol (Pvt.)
	Little Rock Barber College, 724 W. 9th (Pvt.)
	Tyler Barber College, 722 W. 9th (Pvt.)
North Little Rock:	Eaton Barber College, 202 Main (Pvt.)

BLUE PRINT READING

Fort Smith:	Westark Junior College
North Little Rock:	Senior High School

BOOKKEEPING (see office occupations)

BRICKMASONRY

Little Rock:	Horace Mann High School
Pine Bluff:	Arkansas A. M. and N. College

BUILDING CONSTRUCTION TECHNOLOGY

Camden:	Southwest Technical Institute (1967-68)

CARPENTRY AND BUILDING TRADES

Burdette:	Cotton Boll Vocational-Technical School
Camden:	Lincoln High School
Little Rock:	Arkansas School for the Deaf

Morrilton:	Petit Jean Vocational-Technical School
North Little Rock:	Scipio Jones High School
Texarkana:	Washington High School

CLEANING AND PRESSING

Little Rock:	Arkansas School for the Deaf

CLERICAL PRACTICE (see office occupations)

COMMERCIAL ART

Camden:	Southwest Technical Institute (1967-68)
Little Rock:	Arkansas School for the Deaf

COMPUTER PROGRAMMING (see data processing)

Little Rock:	Arkansas School of Business, 5606 W. 12th (Pvt.)
	Little Rock Vocational School
North Little Rock:	Southern Business College, 1523 Main (Pvt.)

COOKING AND BAKING

Harrison:	Twin Lakes Vocational-Technical School (1967-68)
Pine Bluff:	Pines Vocational-Technical School

COSMETOLOGY

Alexander:	McRae Beauty School, Box 123 (Pvt.)
Arkadelphia:	Arkadelphia Beauty School, 620 Clinton (Pvt.)
Batesville:	Beauty School of Opportunity, 423 E. Main (Pvt.)
Blytheville:	Classic Beauty College, 113 Main (Pvt.)
	Eagle Beauty School, 124 N. 2nd (Pvt.)
Clarksville:	Ross Beauty School, S. Cravens (Pvt.)
Conway:	Conway Beauty School, 1004 Oak (Pvt.)
Crossett:	Juanita's School of Hair Design, 203 W. 3rd (Pvt.)
El Dorado:	Paramount Beauty School, 430 N. Washington (Pvt.)
	Williams Beauty School, 1460 S. West Avenue (Pvt.)
Fayetteville:	Rita's Beauty School, Box 123 (Pvt.)
	Ruth's Beauty College, 1200 N. College (Pvt.)
	Sequoyah Polytechnic School
Forrest City:	La Vogue Beauty School, 321 S. Washington (Pvt.)
Fort Smith:	Arkansas School of Beauty, 2000 N. B (Pvt.)
	Mellie's Beauty School, 818 Rogers (Pvt.)
	Ruby's Beauty School, 1108 1/2 Garrison (Pvt.)
Harrison:	Imogene's Beauty School (Pvt.)
	Ozark Beauty School (Pvt.)

Hot Springs:	Aiken-Upton Beauty School, 627 Central (Pvt.)
	Hot Springs Beauty School, 819 Central (Pvt.)
	Hot Springs Rehabilitation Center
Jacksonville:	Arthur's National Beauty College #2, 213 Main (Pvt.)
Jonesboro:	La Vera Beauty School, 411 Union (Pvt.)
	Tuckers Beauty School, 3512 East Nettleton Road (Pvt.)
Little Rock:	Charles Beauty Academy, 1620 S. Main (Pvt.)
	Chitwood Laverne's Beauty School, 2316 Durwood Road (Pvt.)
	Clayton's School of Hair Design, 200 S. University (Pvt.)
	Eaton Beauty Training Center, 411 W. Capitol (Pvt.)
	Little Rock Beauty College, 7201 Asher (Pvt.)
	Metropolitan High School
	Velvatex Beauty School, 1004 State (Pvt.)
Magnolia:	Sue's School of Hair Design, 105 W. Calhoun (Pvt.)
Marked Tree:	Delta Vocational-Technical School (1967-68)
Morrilton:	Morrilton Beauty School, 1st State Bank Bldg. (Pvt.)
Newport:	Newport School of Beauty Culture, 123 Walnut (Pvt.)
North Little Rock:	Arthur's National Beauty College, 119 Main (Pvt.)
	James Beauty School, 109 W. Broadway (Pvt.)
Osceola:	Fashion Beauty College, 213 E. Hale (Pvt.)
Ozark:	Arkansas Valley Vocational-Technical School
Paragould:	R. & M. Beauty School, 215 S. Pruett (Pvt.)
Pine Bluff:	A. M. and N. Beauty College
	De Luxe Beauty School, 221 E. 3rd (Pvt.)
	Gay Paree Beauty School, 515 Main (Pvt.)
	Macie's Beauty School, Box 1225 (Pvt.)
	Ouida Collingworth's Beauty School, 1602 Texas St. (Pvt.)
Russellville:	Russellville Beauty College, 201 Commerce (Pvt.)
Springdale:	Northwest Arkansas Beauty School, 222 East Emma (Pvt.)
Texarkana:	Duke's Beauty School, 220 Olive (Pvt.)
	Four States Beauty School, 118 1/2 Stateline Road (Pvt.)
Warren:	La Verne's Beauty School, 116 E. Church (Pvt.)
West Helena:	Modern Beauty School, 216 Plaza (Pvt.)
	Twin City Beauty School, 313 Plaza (Pvt.)
Wynne:	Hair Fashion Center, 411 E. Union (Pvt.)

DATA PROCESSING (see computer programming)

Camden:	Southwest Technical Institute (1967-68)
El Dorado:	Oil Belt Vocational-Technical School (1967-68)
Little Rock:	Arkansas School of Business, 5606 W. 12th (Pvt.)
	Little Rock Vocational School
North Little Rock:	Southern Business College, 1523 Main (Pvt.)
Morrilton:	Petit Jean Vocational-Technical School
Helena:	Phillips County Community College (1967-68)

DENTAL ASSISTANT

Little Rock:	Little Rock Vocational School (July 1, 1967)

DIESEL AND HEAVY EQUIPMENT MECHANICS

Hope:	Red River Vocational-Technical School
Morrilton:	Petit Jean Vocational-Technical School
Pine Bluff:	Pines Vocational-Technical School
Searcy:	Foothills Vocational-Technical School

DISTRIBUTION (wholesale retail and service occupations)

The following public schools offer cooperative work-study programs in distributing goods and services.

Blytheville:	Senior High School
Clarksville:	Senior High School
Conway:	Senior High School
Crossett:	Senior High School
El Dorado:	Senior High School
Farmington:	Senior High School
Fayetteville:	Senior High School
Forrest City:	Senior High School
Harrison:	Senior High School
Hot Springs:	Senior High School
Little Rock:	Central High School
	Horace Mann High School
Monticello:	Senior High School
Morrilton:	Senior High School
Newport:	Senior High School
Paragould:	Senior High School
Pine Bluff:	Senior High School
Rogers:	Senior High School
Russellville:	Senior High School
Searcy:	Senior High School
Stuttgart:	Senior High School
Texarkana:	Senior High School
	Washington High School
Van Buren:	Senior High School

DRAFTING

Batesville:	Southside High School
Benton:	Senior High School
Bentonville:	Senior High School
Burdette:	Cotton Boll Vocational-Technical School

Camden:	Southwest Technical Institute (1967-68)
Crossett:	Senior High School
El Dorado:	Oil Belt Vocational-Technical School (1967-68)
Fayetteville:	Sequoyah Polytechnic School
Forrest City:	Crowley's Ridge Vocational-Technical School (1967-68)
Fort Smith:	Southside High School
	Westark Junior College
Helena:	Phillips County Community College (1967-68)
	Senior High School
Little Rock:	Arkansas School of Business, 5606 W. 12th (Pvt.)
	Central High School
	Hall High School
	Metropolitan High School
	Little Rock Vocational School
Mabelvale:	Senior High School
Morrilton:	Petit Jean Vocational-Technical School
North Little Rock:	Senior High School
	Scipio Jones High School
Pine Bluff:	Arkansas A. M. & N. College
	Pines Vocational-Technical School
	Whitehall Senior High School
	Dollarway Senior High School
Searcy:	Foothills Vocational-Technical School
Sheridan:	Senior High School
Texarkana:	Senior High School

DRIVER EDUCATION (car, truck and bus)

Little Rock:	Thompson Driving School, 214 Ellis Drive (Pvt.)

ELECTRICITY AND ELECTRONICS

Camden:	Lincoln High School
	Southwest Technical Institute (1967-68)
El Dorado:	Senior High School
Forrest City:	Crowley's Ridge Vocational-Technical School (1967-68)
Fort Smith:	Westark Junior College
Harrison:	Twin Lakes Vocational-Technical School (1967-68)
Helena:	Phillips County Community College (1967-68)
Little Rock:	Metropolitan High School
North Little Rock:	Senior High School
Ozark:	Arkansas Valley Vocational-Technical School
Pine Bluff:	Arkansas A. M. & N. College
	Pines Vocational-Technical School
Searcy:	Foothills Vocational-Technical School

FARM EQUIPMENT MAINTENANCE

Marked Tree:	Delta Vocational-Technical School (1967-68)
Searcy:	Foothills Vocational-Technical School

FLIGHT TRAINING

Fayetteville:	Fayetteville Flying Service (Pvt.)
Fort Smith:	Executive Aviation Inc. (Pvt.)
Jonesboro:	Flight Sales, Inc. (Pvt.)
	Jonesboro Executive Air Travel (Pvt.)
Little Rock:	Arkansas Aviation Air Charter (Pvt.)
	Central Flying Service (Pvt.)
	Razorback Aviation, Inc. (Pvt.)
	Starnes Aviation Service (Pvt.)
Pine Bluff:	Berry Aviation (Pvt.)
	Delta Aero, Inc. (Pvt.)
Texarkana:	Webb Flying Service (Pvt.)
West Memphis:	West Memphis Aviation Service (Pvt.)

FOOD PREPARATION AND PROCESSING

El Dorado:	Southwest Technical Institute (1967-68)
Ozark:	Arkansas Valley Vocational-Technical School

FORESTRY

Hope:	Red River Vocational-Technical School

FURNITURE REPAIR AND UPHOLSTERY

Little Rock:	Little Rock Vocational School
	Arkansas School for the Deaf

GARMENT MAKING

Little Rock:	Horace Mann High School
Pine Bluff:	Arkansas A. M. & N. College

HEAVY EQUIPMENT OPERATION

Hope:	Red River Vocational-Technical School
Morrilton:	Petit Jean Vocational-Technical School

INCOME TAX PREPARATION

Little Rock:	H & R Block Company, Box 4023 (Pvt.)
Pine Bluff:	H & R Block Company, 1023 Cherry (Pvt.)

INDUSTRIAL CHEMISTRY

Camden:	Southwest Technical Institute (1967-68)

INSURANCE

Little Rock:	Reynolds School of Business, 1924 Broadway (Pvt.)

INSTRUMENTATION

Camden:	Southwest Technical Institute (1967-68)

KEY PUNCH

Fort Smith:	Arkansas School of Business, 901 N. Greenwood (Pvt.)
Little Rock:	Arkansas School of Business, 5606 W. 12th (Pvt.)
	Draughon School of Business, 216 W. 6th (Pvt.)
	Capital City Business College, 800 Louisiana (Pvt.)

LABORATORY ASSISTANT (certified)

Little Rock:	Little Rock Vocational School (1967-68)
West Memphis:	Crittenden County Memorial Hospital, 200 Tyler (Pvt.)

LANDSCAPING AND HORTICULTURE

Morrilton:	Petit Jean Vocational-Technical School

LITHOGRAPHY

Little Rock:	Metropolitan High School

MACHINE SHOP

Blytheville:	Senior High School
Burdette:	Cotton Boll Vocational-Technical School
El Dorado:	Oil Belt Vocational-Technical School (1967-68)
	Senior High School
Fayetteville:	Sequoyah Polytechnic School
Forrest City:	Crowley's Ridge Vocational-Technical School (1967-68)
Fort Smith:	Northside High School
	Westark Junior College
Harrison:	Twin Lakes Vocational-Technical School (1967-68)
Hope:	Red River Vocational-Technical School
Little Rock:	Metropolitan High School
Morrilton:	Petit Jean Vocational-Technical School
North Little Rock:	Senior High School

Pine Bluff:	Arkansas A. M. & N. College
	Pines Vocational-Technical School
	Senior High School
Searcy:	Foothills Vocational-Technical School

MECHANICAL DRAWING (see drafting)

MECHANICAL TECHNOLOGY

Camden:	Southwest Technical Institute (1967-68)

MEDICAL TECHNOLOGY (see X-Ray technology)

Jonesboro:	School of Laboratory Technique, 282 S. Church (Pvt.)
Little Rock:	Arkansas Baptist Medical Center, 1700 W. 13 (Pvt.)

MODELING

Fort Smith:	Arkansas School of Business, 901 N. Greenwood (Pvt.)

NURSING (Diploma)

Fort Smith:	St. Edwards School of Nursing, 1411 Rogers (Pvt.)
	Sparks Memorial School of Nursing, 910 S. 12 (Pvt.)
Little Rock:	St. Vincent School of Nursing, W. Markham and University (Pvt.)

OFFICE OCCUPATIONS - ACCOUNTING, BOOKKEEPING, CLERICAL PRACTICE, SECRETARIAL-STENOGRAPHIC

Benton:	Senior High School
Blytheville:	Blytheville Business College, 400 W. Main (Pvt.)
Burdette:	Cotton Boll Vocational-Technical School
Camden:	Foster School of Business, 242 N. Adams (Pvt.)
	Southwest Technical Institute (1967-68)
Crossett:	Senior High School
El Dorado:	Ayers School of Business, Armstrong Building (Pvt.)
	Oil Belt Vocational-Technical School (1967-68)
	Senior High School
Fayetteville:	Fayetteville Business College, 309 W. Dickson (Pvt.)
Forrest City:	Crowley's Ridge Vocational-Technical School (1967-68)
Fort Smith:	Arkansas School of Business, 901 N. Greenwood (Pvt.)
	Draughon School of Business, 616 1/2 Garrison Avenue (Pvt.)
	Westark Junior College
Gentry:	Senior High School
Harrison:	Twin Lakes Vocational-Technical School (1967-68)
Helena:	Phillips County Community College
Hope:	Red River Vocational-Technical School

Hot Springs:	Brian's Hot Springs Business College, 315 W. Grand (Pvt.)
Jonesboro:	Jonesboro Business College, 216 E. Washington (Pvt.)
	Modern School of Business, 1790 S. Main (Pvt.)
Lepanto:	Senior High School
Little Rock:	Arkansas School of Business, 5606 W. 12th (Pvt.)
	Arkansas School for the Deaf
	Capital City Business College, 800 Louisiana (Pvt.)
	Central High School
	Draughon School of Business, 216 W. 6th (Pvt.)
	Horace Mann High School
	Little Rock Vocational School
	Metropolitan High School
	Reynolds School of Business, 1824 Broadway (Pvt.)
Marked Tree:	Delta Vocational-Technical School (1967-68)
Morrilton:	Petit Jean Vocational-Technical School
Mountain Home:	Senior High School
North Little Rock:	Southern Business College, 1523 Main (Pvt.)
Osceola:	Bandy's School of Business, 504 Quinn (Pvt.)
Ozark:	Arkansas Valley Vocational-Technical School
Paragould:	Senior High School
Pine Bluff:	Capital City Business College, 116 1/2 Main (Pvt.)
	Pines Vocational-Technical School
	Senior High School
Rogers:	Senior High School
Searcy:	Foothills Vocational-Technical School

PIANO TUNING

Little Rock:	Arkansas School for the Blind

PRACTICAL NURSING

Batesville:	Practical Nurse School
Camden:	Practical Nurse School, Whiteside School
El Dorado:	Practical Nurse School, Warner Brown Hospital
Fayetteville:	Sequoyah Polytechnic School
Forrest City:	Practical Nurse School
Fort Smith:	Practical Nurse School
	Practical Nurse School
Harrison:	Practical Nurse School, Boone County Hospital
Helena:	Practical Nurse School, Helena Hospital (Pvt.)
Hope:	Red River Vocational-Technical School
Hot Springs:	Practical Nurse School, Cedar and Whittington
Jonesboro:	Practical Nurse School

Little Rock:	Arkansas Baptist Medical Center (Pvt.)
	Little Rock Vocational School
	St. Vincent Infirmary, W. Markham and University (Pvt.)
Morrilton:	Petit Jean Vocational-Technical School
Pine Bluff:	Arkansas A. M. & N. College
	Pines Vocational-Technical School
Searcy:	Foothills Vocational-Technical School

PRINTING

El Dorado:	Senior High School
Fort Smith:	Northside High School
Little Rock:	Horace Mann High School
	Metropolitan High School
Morrilton:	Petit Jean Vocational-Technical School
North Little Rock:	Scipio Jones High School

RADIO ANNOUNCING AND PROGRAMMING

Little Rock:	Capital City Business College, 800 Louisiana (Pvt.)
	Draughon School of Business, 216 W. 6th (Pvt.)

RADIOLOGIC TECHNOLOGY (see X-Ray technology)

Fort Smith:	St. Edwards Mercy Hospital, 1411 Rogers (Pvt.)
Little Rock:	Arkansas Baptist Medical Center, 1700 W. 13 (Pvt.)
	St. Vincent Infirmary, W. Markham and University (Pvt.)
	University of Arkansas Medical Center, 4301 W. Markham
Texarkana:	St. Michael Hospital, 315 E. 5th (Pvt.)

REAL ESTATE

Hot Springs:	Brian's Hot Springs Business College, 315 W. Grand (Pvt.)
Little Rock:	Draughon School of Business, 216 W. 6th (Pvt.)

SECRETARIAL SCIENCE (see office occupations)

SERVICE STATION OPERATION

Little Rock:	Metropolitan High School

SHEET METAL WORK

Burdette:	Cotton Boll Vocational-Technical School
Fort Smith:	Westark Junior College
Helena:	Senior High School
Little Rock:	Metropolitan High School
North Little Rock:	Senior High School

SMALL GASOLINE MOTORS

Little Rock:	Arkansas School for the Deaf

WATER AND SEWER TREATMENT TECHNOLOGY

Camden:	Southwest Technical Institute (1967-68)

WELDING

Burdette:	Cotton Boll Vocational-Technical School
El Dorado:	Oil Belt Vocational-Technical School (1967-68)
Farmington:	Senior High School
Fayetteville:	Sequoyah Polytechnic School
Hope:	Red River Vocational-Technical School
Little Rock:	Central Arkansas Auto & Trade School, 710 Broadway (Pvt.)
Marked Tree:	Delta Vocational-Technical School (1967-68)
Morrilton:	Petit Jean Vocational-Technical School
Ozark:	Arkansas Valley Vocational-Technical School
Pine Bluff:	Arkansas A. M. & N. College
	Pines Vocational-Technical School
Searcy:	Foothills Vocational-Technical School

X-RAY TECHNOLOGY (see radiologic technology)

Fort Smith:	Sparks Memorial Hospital, 910 S. 12 (Pvt.)
Jonesboro:	School of Laboratory Technique, 282 S. Church (Pvt.)

Locations

ALEXANDER

Cosmetology

ARKADELPHIA

Cosmetology

BATESVILLE

Cosmetology; Drafting; Practical Nursing

BENTON

Drafting; Office Occupations

BENTONVILLE

Drafting

BLYTHEVILLE

Cosmetology; Distribution; Machine Shop; Office Occupations

BURDETTE

Air Conditioning and Refrigeration; Automobile Mechanics; Carpentry and Building Trades; Drafting; Machine Shop; Office Occupations; Sheet Metal Work; Welding

CAMDEN

Aviation Mechanics; Building Construction Technology; Carpentry and Building Trades; Commercial Art; Data Processing; Drafting; Electricity and Electronics; Industrial Chemistry; Instrumentation; Mechanical Technology; Office Occupations; Practical Nursing; Water and Sewer Treatment Technology

CLARKSVILLE

Cosmetology; Distribution

CONWAY

Cosmetology; Distribution

CROSSETT

Cosmetology; Distribution; Drafting; Office Occupations

EL DORADO

Appliance Servicing; Automobile Mechanics; Cosmetology; Data Processing; Distribution; Drafting; Electricity and Electronics; Food Preparation and Processing; Machine Shop; Office Occupations; Practical Nursing; Printing; Welding

FARMINGTON

Distribution; Welding

FAYETTEVILLE

Appliance Servicing; Auto Body and Fender Repair; Automobile Mechanics; Cosmetology; Distribution; Drafting; Flight Training; Machine Shop; Office Occupations; Practical Nursing; Welding

FORREST CITY

Automobile Mechanics; Cosmetology; Distribution; Drafting; Electricity and Electronics; Machine Shop; Office Occupations; Practical Nursing

FORT SMITH

Auctioneering; Auto Body and Fender Repair; Automobile Mechanics; Blue Print Reading; Cosmetology; Drafting; Electricity and Electronics; Flight Training; Key Punch; Machine Shop; Modeling; Nursing (Diploma); Office Occupations; Practical Nursing; Printing; Radiologic Technology; Sheet Metal Work; X-Ray Technology

GENTRY

Office Occupations

HARRISON

Appliance Servicing; Auto Body and Fender Repair; Automobile Mechanics; Cooking and Baking; Cosmetology; Distribution; Electricity and Electronics; Machine Shop; Office Occupations; Practical Nursing

HELENA

Air Conditioning and Refrigeration; Automobile Mechanics; Data Processing; Drafting; Electricity and Electronics; Office Occupations; Practical Nursing; Sheet Metal Work

HOPE

Diesel and Heavy Equipment Mechanics; Forestry; Heavy Equipment Operation; Machine Shop; Office Occupations; Practical Nursing; Welding

HOT SPRINGS

Automobile Mechanics; Cosmetology; Distribution; Office Occupations; Practical Nursing; Real Estate

JACKSONVILLE

Cosmetology

JONESBORO

Automobile Mechanics; Cosmetology; Flight Training; Medical Technology; Office Occupations; Practical Nursing; X-Ray Technology

LEPANTO

Office Occupations

LITTLE ROCK

Appliance Servicing; Auto Body and Fender Repair; Automobile Mechanics; Barbering; Brickmasonry; Carpentry and Building Trades; Cleaning and Pressing; Commercial Art; Computer Programming; Cosmetology; Data Processing; Dental Assistant; Distribution; Drafting; Driver Education; Electricity and Electronics; Flight Training; Furniture Repair and Upholstery; Garment Making; Income Tax Preparation; Insurance; Key Punch; Laboratory Assistant; Lithography; Machine Shop; Medical Technology; Nursing (Diploma); Office Occupations; Piano Tuning; Practical Nursing; Printing; Radio Announcing and Programming; Radiologic Technology; Real Estate; Service Station Operation; Sheet Metal Work; Small Gasoline Motors; Welding

MABELVALE

Drafting

MAGNOLIA

Cosmetology

MARKED TREE

Appliance Servicing; Cosmetology; Farm Equipment Maintenance; Office Occupations; Welding

MONTICELLO

Distribution

MORRILTON

Appliance Servicing; Automobile Mechanics; Carpentry and Building Trades; Cosmetology; Data Processing; Diesel and Heavy Equipment Mechanics; Distribution; Drafting; Heavy Equipment Operation; Landscaping and Horticulture; Machine Shop; Office Occupations; Practical Nursing; Printing; Welding

MOUNTAIN HOME

Office Occupations

NEWPORT

Cosmetology; Distribution

NORTH LITTLE ROCK

Automobile Mechanics; Barbering; Blue Print Reading; Carpentry and Building Trades; Cosmetology; Drafting; Electricity and Electronics; Machine Shop; Office Occupations; Printing; Sheet Metal Work

OSCEOLA

Cosmetology; Office Occupations

OZARK

Air Conditioning and Refrigeration; Auto Body and Fender Repair; Automobile Mechanics; Cosmetology; Electricity and Electronics; Food Processing; Office Occupations; Welding

PARAGOULD

Cosmetology; Distribution; Office Occupations

PINE BLUFF

Appliance Servicing; Auto Body and Fender Repair; Automobile Mechanics; Brickmasonry; Cooking and Baking; Cosmetology; Diesel and Heavy Equipment Mechanics; Distribution; Drafting; Electricity and Electronics; Flight Training; Garment Making; Income Tax Preparation; Machine Shop; Office Occupations; Practical Nursing; Welding

ROGERS

Distribution; Office Occupations

RUSSELLVILLE

Cosmetology; Distribution

SEARCY

Automobile Mechanics; Electronics; Farm and Diesel Mechanics; Machine Shop; Mechanical Drafting; Office Occupations; Practical Nursing; Welding

SHERIDAN

Automobile Mechanics; Drafting

SPRINGDALE

Cosmetology

STUTTGART

Distribution

TEXARKANA

Automobile Mechanics; Carpentry and Building Trades; Cosmetology; Distribution; Drafting; Flight Training; Radiologic Technology

VAN BUREN

Distribution

WARREN

Cosmetology

WEST HELENA

Cosmetology

WEST MEMPHIS

Laboratory Assistant

WYNNE

Cosmetology

III
MANPOWER DEVELOPMENT AND TRAINING

The Manpower Development and Training Act (MDTA) of 1962 was designed by Congress to reduce unemployment by training and upgrading eligible trainees. Persons eligible for training are selected from the unemployed or underemployed labor force who reside in counties in need of manpower development. Youths 16 years of age and low income farmers in need of training may be eligible. Federal funds are available for paying stipends to trainees.

Trainees are selected by the Employment Security Division. This Division also has responsibility for designating the occupations for which training may be given, and for the administration of the program. Stipends in the amount of $29 per week plus allowances for dependents and other stated costs are paid to the trainee by the Employment Security Division.

The Arkansas State Department of Education has responsibility for conducting the training programs. The department may organize classes, secure facilities and employ instructors or it may contract with public and private schools and colleges for in-school training. The regulations provide for training of less than class groups by which one or more individuals may be placed in an ongoing course. Basic education (reading, writing, and arithmetic) may constitute a part of a course if it is needed to enable this student to make progress in his course. The courses range from about 700 to 2000 clock hours in length.

The department may also contract with business establishments for on-the-job training (OJT) On-the-job training may be defined as the actual performance of work duties in any occupation, under the supervision and guidance of a trained worker or instructor. If an employer will provide job entry training to unemployed persons, or provide skill improvement training, or retrain workers whose skills have become or are becoming obsolete, and the employer cannot find an adequate number of persons to fill such skill requirements, the Federal Government will:

1. Reimburse job instructor fees
2. Pay for materials used in training
3. Pay for instructional supplies

4. Provide consultation and advice on training programs
5. Assist in developing training programs
6. Recruit job applicants
7. Arrange for group training for small shops
8. Arrange for area-wide training programs

Arkansas had a total of 112 courses in 83 projects in operation during the year 1966. These courses were in 19 cities and had a total enrollment of 2,522 students. Thirty-six of these courses with an enrollment of 909 were in Little Rock. The courses more frequently offered included: practical nursing, auto mechanics, stenography, electronics technician and laboratory testing.

The following courses were in operation in Arkansas as of January 1967:

AUTOMOBILE BODY REPAIRING

Fort Smith

AUTO MECHANICS

Fort Smith
McGehee

BOOKKEEPING

Little Rock

CATTLE RANCHER, UPGRADING

Mountain View

CLERK-TYPIST

Little Rock

DAIRY FARMER, UPGRADING

Batesville
Melbourne
Salem
Yellville

DOOR ASSEMBLING (AIRCRAFT)

Melbourne
Mountain Home

DRY CLEANING

Fort Smith

ELECTRICAL APPLIANCE SERVICING

Little Rock

FARMER, GENERAL

Forrest City
Marianna

INSPECTOR (QUALITY CONTROL)

Batesville

JOB SETTER

Batesville

PRACTICAL NURSING

Forrest City
Fort Smith
Little Rock

MACHINIST

Fort Smith

SHEET METAL FABRICATION

Fort Smith

SPECIAL YOUTH PROGRAMS

Little Rock (10 sections)

STENOGRAPHY

Fort Smith
Little Rock (2 sections)
Pine Bluff

TELEVISION SERVICING

Forrest City

TOOL AND DIE MAKER

Batesville

TOOL GRINDING

Batesville

UPHOLSTERING

Wilson

WELDING

Forrest City
West Memphis

In addition to the above organized classes there were 131 MDTA trainees enrolled in less than class groups in the State.

The Director of MDTA Programs, Arkansas State Department of Education, State Education Building, Little Rock, Arkansas, will supply further information on request.

IV
REGISTERED APPRENTICE PROGRAMS

Apprenticeship, which consists of learning a trade on the job under supervision and according to established specifications, is the earliest form of vocational education. The Babylonian Code of 2100 B C. included legal provisions for apprenticeship. The guilds of the Middle Ages depended on organized apprenticeship programs not only for teaching workers a trade but also for their general and often religious education. The first form of compulsory education in Colonial America was contained in the early apprenticeship laws.

Apprenticeship went into a decline during the industrial revolution and expansion of the factory system in the latter part of the eighteenth century. However, in recent years a renewed interest in apprenticeship has appeared. The National Apprenticeship Act was passed in 1937. This Act established the Bureau of Apprenticeship and Training in the U. S. Department of Labor. This Bureau endeavors to make the public aware of the need for apprenticeship and training and to encourage employers, labor organizations, and individuals to take appropriate action and insure a balanced number of skilled workers. It also encourages labor and management to adopt policies and procedures that will create a favorable climate for the development of apprenticeship and skill improvement programs. Provision was made for a voluntary registered apprenticeship system that has maintained acceptable standards and has received recognition by labor, management and government in much the same manner as an accredited school or college is recognized.

Most registered apprenticeship programs are operated by a local joint apprenticeship committee. This committee is composed of an equal number of persons from labor and management from the trade for which the apprenticeship program provides training. This committee has responsibility for selecting apprentices, establishing the course of study or schedule of work processes, determining the length of the apprenticeship period, fixing wages of apprentices, providing supervision on the job and related training in a classroom, and determining when the apprentice has completed his apprenticeship.

Apprenticeship Standards

The local joint committee operating a registered apprenticeship program is guided by state and national standards. Among these standards are age limits, usually 18-26 years of age; years of schooling, usually high school graduate or the equivalent; related instruction of not less than 144 clock hours per year; a progressively increasing wage scale, averaging not less than 50 percent of the journeyman's wage for the occupation; a schedule of work processes; adequate supervision; and provision for review and registration of the program.

Application for Apprenticeship

The candidate for apprenticeship is required to make a written application to a representative of the local joint committee. The application should include the age of the applicant, a transcript of his high school credits, and the results of a general aptitude test battery. If the joint committee decides that the applicant is a likely candidate a personal interview will be arranged. If accepted, the apprentice must successfully complete a probationary period before final acceptance.

The Bureau of Apprenticeship and Training, U. S. Department of Labor, 3006 Federal Office Building, Little Rock, Arkansas, or the local office of the Employment Security Division can supply the prospective apprentice with the name of the representative of the joint committee for the trade in which he desires to apply for apprenticeship training.

The apprentice spends from three to six years in the program, depending on the trade for which he is apprenticed and his aptitude, ability and diligence. Through collective bargaining the registered apprenticeship program is financed by labor and management and this program provides a means whereby a young person may learn a useful and profitable trade while earning a living.

Registered apprenticeship programs for the following trades are presently in operation in Arkansas. Some of these programs are for apprentices in one city, some for apprentices in two or more cities or areas, some are statewide and some are operating for apprentices in a larger establishment.

BARBERS

El Dorado
Fort Smith
Hot Springs
Little Rock
North Little Rock
Pine Bluff

BOILERMAKERS

Statewide program

BRICKLAYERS

Blytheville
El Dorado
Fort Smith
Hot Springs
Jonesboro
Little Rock
Malvern
Pine Bluff
Springdale
Texarkana

CARPENTERS

Blytheville
Conway
El Dorado
Fayetteville
Fort Smith
Hot Springs
Jonesboro
Little Rock
Pine Bluff
Texarkana, Arkansas and Texas

CEMENT FINISHERS

Little Rock

ELECTRICIANS (WIREMEN)

El Dorado
Fort Smith

Hot Springs
Jonesboro
Little Rock
Texarkana

ELECTRICIANS (LINEMEN)

Little Rock for S. E. Region

GLAZIERS

Fayetteville
Fort Smith
Hot Springs
Little Rock

IRON WORKERS

Statewide program

LATHERS

Little Rock and Hot Springs

MACHINISTS (single establishment program)

Little Rock: Arkansas Foundry Co.
Magnolia: Spencer-Harris Machine and Tool Co.

MOULDERS, CORE MAKERS AND PATTERN MAKERS
(single establishment program)

Mena: Francis M. Dix Co.

PAINTERS

Fayetteville
Fort Smith
Hot Springs
Little Rock
Pine Bluff
Russellville
Texarkana

PLANT MAINTENANCE TRADES (single establishment programs)

Arkadelphia: Reynolds Metals Co.
Bauxite: Reynolds Metals Co.
Reynolds Mining Co.
Jones Mill: Reynolds Metals Co.

PLASTERERS

Fort Smith
Little Rock

PLUMBERS AND PIPEFITTERS

El Dorado (for South Arkansas)
Fayetteville (for Northwest Arkansas)
Fort Smith (area program)
Hot Springs (area program)
Jonesboro (for Northeast Arkansas)
Little Rock
Pine Bluff
Texarkana

PRINTING TRADES (compositors, pressmen, and stereotypers)

Little Rock

ROOFERS

Statewide program

SHEET METAL WORKERS

Statewide program

VT 004 953

Guidelines for Compiling a Directory of Community Services in Rehabilitation and Employment of Handicapped Men and Women.

The President's Committee on Employment of the Handicapped, Washington, D.C. Women's Committee
MF AVAILABLE IN VT-ERIC SET.
Pub Date - Apr66 13p.

*REHABILITATION PROGRAMS; *HANDICAPPED; *DIRECTORIES; *GUIDELINES; QUESTIONNAIRES

In developing a directory that will assist in community planning, (1) objectives must be developed, (2) consideration must be given to the current existence of directories and the adequacy of their contents, and (3) decisions must be made regarding data collection, the kind and amount of information to be included, the geographical area to be included, financing of the project, utilization of the information to determine gaps and duplication, and responsibility for up-dating. A questionnaire to elicit information to be included in the directory and suggestions for organizing the directory are presented. Pertinent references are indicated. (JK)

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EDO 31587

Guidelines for Compiling a Directory of Community Services in Rehabilitation and Employment of Handicapped Men and Women

What Services Are Available?

What Services Are Needed?

Prepared by the Women's Committee

The President's Committee on Employment of the Handicapped

Washington, D. C.

April 1966

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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CONTENTS

	Page
Foreword	1
Introduction - Objectives in Compiling a Directory	2
What Services Are Available? What Services Are Needed?	
I. Before Starting a Directory Consider These Items	3
II. Some Decisions To Be Made If a New Directory Seems Necessary	4
III. Suggested Questionnaire for Information To Be Included in Directory	5
IV. Suggestions for Organizing the Directory Material for Publication	6
References	7-8
Background Information	9

FOREWORD

In every well-run business there is a time for taking stock before the planning and the purchasing is done for the next year. Stock-taking also works well in community planning for the rehabilitation and employment of handicapped men and women. This is especially true in communities where citizens are aware of the scope of the problem and are willing to take time to become personally acquainted with existing services for the handicapped. A background of information of this kind is an essential first step in developing adequate tax-supported and voluntary programs to help handicapped persons gain independence and make it possible for them to use their skills in employment.

The national organizations represented on the Women's Committee have enormous potential, through their local units, for getting at the facts in rehabilitation and employment at the grassroots. In many communities the compiling of a directory can be a cooperative venture by organizations represented on the Women's Committee, local representatives of the Governor's or the Mayor's Committee on Employment of the Handicapped, and professional workers in the fields of health and welfare.

We hope to feature the results of this project at our 1967 Annual Meeting by an exhibit of community directories and by suitable recognition for communities doing outstanding work. Further information about the Community Directory Competition may be obtained from the Women's Committee.

Congratulations and good wishes to the Women's Committee in launching this project and in all of their undertakings.

HAROLD RUSSELL
Chairman, The President's Committee

INTRODUCTION

Objectives in Compiling a Directory

The time spent in listing objectives before starting a community project, especially the compiling of a directory, will pay high dividends. This publication, GUIDELINES FOR COMPILING A DIRECTORY, lists some items to be considered.

To keep the project within reasonable boundaries, this publication will focus on services available for the vocational rehabilitation and employment of handicapped adults. Some community groups may wish to broaden the scope of the directory to include other age groups and a more comprehensive list of services.

After considering the scope of the overall problem it may be found advisable to plan separate directories on specific major problems for the convenience of the people for whom the directory is intended. The list of references on pages 7 and 8 will indicate how other communities have dealt with this problem.

Suggested Objectives

1. To give citizens concerned with rehabilitation and employment a first-hand contact with tax-supported and voluntary agencies serving the handicapped in their community or on a county or regional basis.

2. To become more aware of the gaps in the services offered and in apparent duplications. This awareness is needed for program planning.

3. To develop a classified list of rehabilitation and employment services available, along with a brief description of how each service may be obtained.

4. To publish a simple directory of "Services in Rehabilitation and Employment," available to handicapped persons and their families and to interested laymen and professional workers.

WHAT SERVICES ARE AVAILABLE? WHAT SERVICES ARE NEEDED?

I. BEFORE STARTING A DIRECTORY CONSIDER THESE ITEMS

A. Do local, regional or State directories of any kind already exist?

Consult your library, the county medical society, the home economics extension service of your county or your State Land Grant College or University, and the offices of tax-supported or voluntary agencies concerned with any aspects of the handicapped -- rehabilitation, employment, health, welfare, education, recreation, cultural opportunities, architectural barriers, etc.

B. Do the directories include up-to-date information on opportunities for rehabilitation and employment? Should they be supplemented?

Each community must decide which disabilities to include in a directory. The following list has been adapted from the Rehabilitation Survey Bulletin of the American Medical Association.

Amputations, arthritis, blindness or visual defects, cancer, cardiovascular diseases, cerebral palsy, cosmetic disfigurement, deaf and hard of hearing, diabetes, epilepsy, hemiplegia, mental retardation, mental illness, multiple sclerosis, muscular dystrophy, orthopedic, paraplegia, poliomyelitis, speech defects, tuberculosis, others.

C. Do the directories include services that may not be available locally but are available on a regional basis?

Look for such regional facilities as hospitals, rehabilitation services and centers, sheltered workshops, Goodwill Industries, health and welfare services, and employment offices.

D. Have pertinent Federal services available to States and local communities been listed? (See References 12, 13, 14.)

E. Do the directories include services needed but often neglected?

Examples of services often neglected: (1) Vocational rehabilitation for handicapped homemakers; (2) opportunities for gainful employment for homebound persons; (3) sources of temporary help in child care and housekeeping chores such as Homemaker Service; (4) sources of loan, rent or purchase of wheelchairs, crutches, hospital beds, etc.; (5) beauticians and barbers making home visits; (6) sources of information on home planning and remodeling to suit disabilities; and (7) sources of information on housing legislation concerning the handicapped - nearest office of the Department of Housing and Urban Development can help.

F. Is there a telephone number listed for an information center that can be used by those who are uncertain about where to obtain information?

II. SOME DECISIONS TO BE MADE IF A NEW DIRECTORY SEEMS NECESSARY

A. What will the directory cover and who is likely to use it?

B. Who will collect the information?

Will it be done by volunteers or by paid workers?

Will it be done by personal visits or by correspondence?

Could the making of the directory be a cooperative community project? Are there other organizations that might be interested in working with you? Are there professional workers willing to help? (See page 8 for examples of cooperative projects.)

C. How large an area will be included in the directory?

What are the boundaries of the geographical area to be included? A town, a county, a city, or a metropolitan area?

What age range will the directory include?

How many handicapped men and women live in the area covered by the directory? (Consult such agencies as the departments of health and welfare, the vocational rehabilitation office, and professional workers in the field.)

How many handicapped persons are now employed in the area to be included in the directory? (See the nearest employment service, the vocational rehabilitation office, or write the Governor's or the Mayor's Committee on Employment of the Handicapped.)

D. How much information should the directory include?

Who will prepare the directory information form? (See page 5.)

Which disabilities will be included? (See page 3, I-B.)

Who will edit and compile the directory?

What provision will be made to enable organizations concerned to check their descriptions for accuracy?

E. How will the compiling and the distribution of the directory be financed?

Consider items such as stationery, typing, postage, telephone, printing, mimeographing. It is assumed that the visits to agencies to obtain information for directory forms will be done by volunteers.

F. After getting a clear picture of the services now available, how will the gaps and duplications be determined?

G. Who will be responsible for keeping the directory up to date?

III. SUGGESTED QUESTIONNAIRE FOR INFORMATION TO BE INCLUDED IN DIRECTORY.

The most readable directories are brief, concise, in simple language and in outline form.

1. Name of agency or organization.

2. Address.

3. Telephone.

4. Purpose (Brief description).

5. Specific services for the <u>rehabilitation</u> of handicapped persons.

6. Specific services for the <u>employment</u> of handicapped persons.

7. Geographic area served.

8. Eligibility (Who may receive services?)

9. How to apply.

10. How is the agency financed?

11. What is the cost of the services to the handicapped person?

IV. SUGGESTIONS FOR ORGANIZING THE DIRECTORY MATERIAL FOR PUBLICATION

The form will depend on the size of the directory, the plan for distribution, and the finances available. (Send for samples listed on pages 7 and 8.)

A. Include this information on cover or title page:

1. Type of information contained.
2. Geographical boundaries of the area included.
3. Sponsors for compiling and distributing the directory.
4. Date of publication.
5. Where directory may be obtained. The cost if any.
6. Acknowledgments.

B. Table of contents and index

1. List all organizations and agencies included in the directory. Give the page reference.

2. Use a suitable symbol such as (T) or (V) to indicate which agencies are tax-supported and which are voluntary.

3. List agencies according to the type of service available.

An example, from the Chicago Physicians Directory of Rehabilitation Services and Facilities:

Psycho-Social

Domiciliary care	Psychological evaluation
Financial assistance	Personal adjustment counseling
Social case work	Psychiatric evaluation and psychiatric treatment

Physical Medicine and Rehabilitation Services

Nursing care	Coordinated comprehensive services
Physical therapy	Speech evaluation and therapy
Occupational therapy	Audiological evaluation and therapy

Vocational

Vocational guidance and counseling	Selected job placement
Vocational testing	Sheltered workshops
Work evaluation and work adjustment	Homebound work
Vocational training	

Special Treatment Resources

Alcoholism	Psychiatric
Blind and partially sighted	Mental retardation
Deaf and hard of hearing	Veterans
General information service on rehabilitation resources	

REFERENCES

In preparing these GUIDELINES, the Women's Committee studied scores of directories and consulted leaders of 35 national organizations. A few of the references follow. Prices listed in the publication are listed in the Reference. It may be possible to obtain some of the publications on request.

1. MEDICINE'S BACK TO WORK PLAN. Committee on Rehabilitation, American Medical Association, 535 N. Dearborn St., Chicago, Ill. (No date.) The A.M.A. also published a 1965 SURVEY OF STATE MEDICAL ASSOCIATION COMMITTEES CONCERNED WITH REHABILITATION.

2. A HANDICAPPED PERSON'S GUIDE TO ROCHESTER. Rehabilitation Unit, Department of Preventive Medicine and Community Health, University of Rochester, Rochester, N.Y. 1964.

3. PHYSICIAN'S DIRECTORY OF REHABILITATION SERVICES AND FACILITIES. Published jointly by The Chicago Medical Society and the Welfare Council of Metropolitan Chicago, 123 W. Madison St., Chicago, Ill. 1962 Price $1.00.

4. DIRECTORY OF SOCIAL SERVICES OF FORSYTHE COUNTY, N.C. Citizens Planning Council of Forsythe County, 610 Coliseum Drive, Winston-Salem, N.C. 1963.

5. A DIRECTORY OF AGENCIES SERVING MENTALLY AND PHYSICALLY HANDICAPPED CHILDREN OF NORTHERN SANTA CLARA COUNTY. Community Council of Northern Santa Clara County, 485 Cambridge Ave., Palo Alto, Calif. 1965.

6. HOW TO SECURE HELP FOR THOSE WHO NEED IT. A pocket guide to information about health and welfare services in New York City. Issued jointly by the Community Council of Greater New York, 225 Park Ave., South, New York, N.Y., and United Medical Service, Inc., Greater New York's Blue Shield, 2 Park Ave., New York, N.Y. 1965.

7. 1965 DIRECTORY OF HEALTH, WELFARE, RECREATION SERVICES. Community Services Council of Delaware, Inc., 701 Shipley St., Wilmington, Del. $1.00.

8. NATIONAL VOLUNTARY HEALTH AGENCIES. Handbook for Medical Societies and Individual Physicians, American Medical Association, Committee on Voluntary Health Agencies, 535 N. Dearborn St., Chicago, Ill. 1962.

9. DIRECTORY OF VOCATIONAL SERVICES FOR THE HANDICAPPED IN GREATER WASHINGTON, D.C. Metropolitan Rehabilitation Council of Greater Washington, 1101 M Street, N.W., Washington, D.C. 1965.

10. 1964 DIRECTORY OF REHABILITATION FACILITIES. Listing of facilities in the United States and Canada. Prepared by the Association of Rehabilitation Centers, 828 Davis Street, Evanston, Ill.

11. 1965 DIRECTORY OF RESOURCES SERVING THE BLIND AND VISUALLY HANDICAPPED IN THE GREATER MILWAUKEE AREA. Coordinating Council for the Blind and Visually Handicapped, United Community Services of Greater Milwaukee, Inc., Milwaukee, Wis.

12. NATIONAL DIRECTORIES LISTING AGENCIES OR PROFESSIONAL PERSONNEL THAT MAY PROVIDE SERVICES FOR THE HANDICAPPED. The Library, National Society for Crippled Children and Adults, 2023 W. Ogden Ave., Chicago, Ill. (Includes 37 directories.) Also available -- A SURVEY OF NATIONAL ASSOCIATIONS AND THEIR PROFESSIONAL EDUCATIONAL MATERIALS. Compiled by The Library, revised February 1964.

13. CATALOG OF FEDERAL PROGRAMS FOR INDIVIDUAL AND COMMUNITY IMPROVEMENT. Produced by the Office of Economic Opportunity, Washington, D. C. 1965.

14. U. S. GOVERNMENT ORGANIZATION MANUAL, 1965-66. For sale, Superintendent of Documents, Government Printing Office, Washington, D. C. $1.75.

15. ENCYCLOPEDIA OF SOCIAL WORK. National Association of Social Workers, 2 Park Ave., New York, N. Y. Look for library copy or order directly. $13.00 (Successor to the Social Work Year Book - 1965.)

16. Publications available through The President's Committee on Employment of the Handicapped:

THIS IS THE PRESIDENT'S COMMITTEE ON EMPLOYMENT OF THE HANDICAPPED

FACT SHEET ON MISSION, HISTORY, MEMBERSHIP, OPERATIONS

1965-1966 EMPLOYMENT FACTS

"VOICE" for the Handicapped. "Volunteers Oriented in Creating Employment for the Handicapped"

ABILITY CALLING. A program guide for women's groups.

WOMEN WORKING. Activities of the Women's Committee, PCEH

OPERATION VOLUNTEERS. A program to help the handicapped.

HELP OPEN THE DOORS. Information on architectural barriers.

BIBLIOGRAPHY ON THE REHABILITATION OF HANDICAPPED HOMEMAKERS

CONSIDER THE LABOR FORCE IN THE HOME. Excerpts from an address by Elizabeth Eckhardt May, given before the Women's Committee, 1962.

WHAT IS A HOMEMAKER WORTH? A fact sheet prepared by the Women's Division, Institute of Life Insurance.

Background Information

The President's Committee on Employment of the Handicapped is made up of some 600 public spirited organizations and individuals, appointed by the Chairman in the name of the President.

Members may also serve on the following subcommittees which have special responsibilities:

Awards, Disabled Veterans, Employer, Labor, Library, Medical, Membership, Mentally Handicapped, Public Information, Public Service, Rural Areas, Student Competition, Workmen's Compensation, and the Women's Committee. The purpose of the Women's Committee is to utilize the many talents of women to promote employment opportunities for handicapped workers, and to develop programs and projects for women's groups to achieve this objective.

Three main projects are now being sponsored by the Women's Committee: the arts and crafts program --"Project Earning Power," the elimination of architectural barriers, and the rehabilitation of handicapped homemakers. This bulletin on GUIDELINES FOR COMPILING A DIRECTORY is one of the special projects of the Homemaker Group.

The Women's Committee is made up of presidents of a number of leading women's organizations in the country, and individuals with wide organizational experience. The Women's Committee will work closely with women's groups in planning programs and projects --

*To promote employer acceptance of handicapped men and women in jobs for which they have been prepared through vocational rehabilitation and for which they have qualified by experience, aptitude and training;

*To promote favorable attitudes toward these workers on the part of the general public;

*To make known available rehabilitation resources and services for disabled persons;

*To inform handicapped men and women of rehabilitation benefits.

Further information and lists of publications and exhibit material available will be furnished on request by The President's Committee on Employment of the Handicapped, Washington, D.C. 20210.

DOROTHY C. STRATTON
Chairman, Women's Committee

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Hendrix, Vernon L.
Research Opportunities in Comprehensive Public Junior Colleges--Inter- and Intra-College Organizational Problems.

American Educational Research Association, Washington, D.C.
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INTERINSTITUTIONAL COOPERATION; *ADMINISTRATIVE ORGANIZATION; *JUNIOR COLLEGES; *VOCATIONAL EDUCATION; *RESEARCH OPPORTUNITIES; SPEECHES; COMMUNITY COLLEGES; *SCHOOL ORGANIZATION; ORGANIZATIONAL CLIMATE

This paper is concerned primarily with the internal organization of comprehensive public community junior colleges. Two basic concerns of occupational education in community junior colleges serve as a basis for discussion: (1) Occupational education must be equal with other facets of the college program, and (2) The occupational education program must be integrated as thoroughly as possible with the rest of the colleges. Two organizational structures are proposed. The first proposed pattern would divide the college into two parts, each administered by a dean who is directly responsible to the chief campus administrator. The third and fourth levels might be divisions and departments. The unique element under this pattern, any one division would be responsible to both deans of the college. In the second proposed organization, the divisions would not be identifiable as either general or occupational. These divisions would be responsible to only one administrator, perhaps a Dean of Instruction or the President himself. The need for research growing out of these proposals is discussed and includes a definition of the objectives of college programs, effects of college organization upon the achievements of the institution, and research pertaining to faculty attitudes. (PS)

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Research Opportunities in Comprehensive Public Junior Colleges: Inter - and Intra - College Organizational Problems

Vernon L. Hendrix
University of Minnesota

The basic thoughts presented in this paper are concerned primarily with the organization of comprehensive public community junior colleges. Most of the suggested organizational patterns and implied research opportunities were developed at a conference sponsored by the Midwest Technical Education Center in St. Louis last May. Although the organizational patterns and research opportunities were originally generated to hopefully improve the operation of the junior college in occupational curricular areas, the results would obviously concern the total college and may be generalized beyond the original intended domain. When Jim first informed me of his interests in organizing this symposium, I had just finished participating in this conference and was still enthusiastic about the intra-college opportunities and implications for inter-college patterns and thus agreed to present these ideas. I must emphasize that these were produced by a number of people working as a team and are not my own original creations. I will accept complete responsibility for all generalizations and implications beyond the original area of concern, i.e., the junior college and more specifically occupational education.

Although the following comments deal with a variety of subjects, there appears to be one central theme which pervades, i.e., organization. The internal organization of colleges or sub-units within colleges is the most dominant aspect of this theme. It is apparent, however, that extra-college organization is also relevant. These remarks will, as much as possible, be limited to the purely

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administrative aspects of organization. The task of collating these more general statements with the more specific demands of areas such as curriculum and student personnel services will not be treated here. The relationships should be quite obvious, but time prohibits any attempt to make them explicit.

PROBLEMS

Two basic concerns of occupational education in community junior colleges serve as a basis for this discussion. First, occupational education must be equal with other identifiable facets of the college program. Research by sociologists in the areas of prestige and status would seem to indicate that this is an impossible task. Within the context of society, perhaps this is the situation. Within the context of any particular college, the task is difficult but not impossible. Although the reality of this problem is recognized by everyone connected with community colleges, the existence of a few exemplary institutions indicate that equality can be achieved. Second, the occupational education program must be integrated as thoroughly as possible with the rest of the college. This has obvious implications for curriculum planning and staff utilization. Also, integration and equality are obviously related. In general, where one is found to exist, the other is likely to be found also. Any attempt to maximize one of these must, however, take the other into consideration.

It is also recognized that the "ideal" organization for a college cannot be determined by strictly internal considerations. For example, state governmental structures may determine certain aspects of the college organization or set certain restrictions. In many states the methods by which federal and state funds are disbursed dictate certain aspects of the college organization, or require the presence of certain identifiable positions, or require that persons holding certain positions have certain characteristics, etc. These requirements and restrictions are often completely unrelated to the tasks the college is attempting to achieve.

Concerning administrative structure and organization, in general many of the recommendations proposed at the conference were to achieve equality for occupational programs and to promote greater integration of occupational programs and staff with other programs in the college. In general, these recommendations reflected a desire to break away from "traditional" structures (e.g., traditional patterns in junior colleges, other institutions of higher education, secondary schools, business or public administration, etc.) and develop organizational structures relevant to the jobs community colleges are to achieve, the unique characteristics of the institutions, their staff members, and relationships with communities, other institutions, etc. A willingness to experiment and evaluate the results of the experimentation was strongly implied.

ORGANIZATION

Two organizational structures were proposed as potentially profitable departures from the traditional patterns. Both of these organizational structures are outgrowths of the more traditional patterns, but each attempts, in different ways, to minimize disadvantages and maximize advantages.

One additional comment might be made concerning these "non-traditional" organizational structures. It is assumed that an organization, e.g. a community college, exists to achieve certain primary objectives. In addition to these primary objectives, there are objectives of secondary importance, such as maximizing communication among units and individuals, maintaining high morale, etc. Recognizing that these secondary objectives interact with achievement of the primary objectives, they are nevertheless secondary. Therefore, if the community college must suffer some discomfort in the secondary areas, in order to achieve the primary objectives, this must be accepted as necessary and so recognized. No one is willing to say that college administration is an easy task,

nor are they willing to say that the primary task of college administration is to make college administration easier. If this were so, the appropriate course of action would be to merely hire some faculty members, let them group and organize themselves as they wish, offer whatever courses to whatever students they might choose, etc. I believe that most persons directly concerned with higher education today will agree that this pattern has long outlived its usefulness, not only in the community college.

The first of these proposed patterns is related to the bifurcated structure found in junior colleges. For example, the college would be divided into two parts, each administered by a second line administrator directly responsible to the chief campus administrator. These two administrators might be called Dean of General Studies and Dean of Occupational Studies. The third level within the organizational structure would be comprised of divisions, each administered by an appropriately titled administrator. A fourth level of structure might be departments. As far as structural considerations are concerned, the titles of these units are not important, and the number of levels required would depend primarily upon the size of the institution and the comprehensiveness of its offerings. If four levels are assumed in our exemplary organization (Chief Campus Officer, two deans, divisions, and departments) the divisions would be primarily identifiable as belonging to the general studies area (Science and Mathematics, Humanities, Social Sciences, etc.) or the occupational studies area (Electronic Technologies, Engineering Technologies, Health Sciences, etc.).

The unique element of this proposed pattern would be the absence of single line relationships between divisions and the deans. For example, the Health Sciences division would not be singularly responsible to the Dean of Occupational Studies, but would be responsible to both deans. Similarly, the Social Science

division would not be responsible to just the Dean of General Studies, but to the Dean of Occupational Studies as well. In effect, this would force the two deans to operate as a team and would avoid the "segregation" that is likely to occur in the completely bifurcated structure.

Such structures would have obvious advantages and disadvantages. Equality is implied since the two second level administrators would be at the same level in the structure. It is assumed that they would be treated equally in terms of salary, authority, etc. By breaking down the singular line relationships, integration would be promoted. For example, if the Engineering Technology division felt that it required a particular type of Mathematics course for one of its programs, the division administrator and appropriate faculty members could go directly to the Dean of General Studies and the division and/or department responsible for Mathematics instruction. The difficulties of staff members having responsibilities in both areas would be alleviated. An example might be Mathematics instructors who would have teaching loads consisting of regular college algebra and special Mathematics courses required by technical programs. This proposed structure seemingly violates one of the "laws" of administration: that any one person should have one and only one superior to whom he is responsible. This is a tradition to be questioned. Such traditions should not be followed simply because they are traditions, but the choice should be determined by the effectiveness with which the desired outcomes are achieved. It is recognized, however, that in order to avoid potential personnel difficulties, the functions for which deans and divisional administrators are responsible would require a high degree of specificity. For example, to again use the area of Mathematics as an illustration, the functions of the Occupational Studies Dean, division administrator, and individual faculty members, as they pertain to technical

programs, would have to be clearly defined and delineated from the functions that the division administrator and faculty members might have in common with the General Studies Dean, as defined and delineated in the field of Mathematics. In effect, each division administrator would have only one boss for one particular function.

A second pattern of organization departs entirely from the general versus occupational, transfer versus terminal, liberal arts versus technical, etc., type of organization. In this proposed organization, the divisions would not be identifiable as either general or occupational. Their titles would probably reflect the traditional units found in institutions of higher education, such as Social Science, Physical Science, Life Science, Humanities, Mathematics and/or Engineering, etc. These divisions would be responsible to only one administrator, perhaps a Dean of Instruction, or in smaller institutions the President himself. Their exact composition, as indicated with the other proposed organizations, would depend upon the size and comprehensiveness of the institution. Size would primarily determine the extent to which they would be divided into departments. This organizational pattern departs from the usual structure with one top level instructional administrator in that there are not separate divisions and/or departments of technical or occupational composition. Instead, the faculty members in these areas would be "integrated" in appropriate divisions. For example, faculty members in the Health Technology areas would logically belong to the Life Sciences division. Programs, courses and faculty members in the Electronics areas would logically belong in the Physical Sciences division.

Several advantages are obvious. The likeihood of "segregation" and unequal treatment of programs and faculty are greatly decreased. Greater integration is implied. For example, in the traditional type of organization it is quite easy

for a Physical Sciences division administrator to disregard the courses and faculty members in Electronics Technology. He can rightly say that the welfare of the faculty members are not his responsibility and that the quality in the courses does not reflect upon the integrity of his domain. Both of these arguments cease to exist when the Electronics Technology courses and faculty members are placed under his direct jurisdiction. He cannot ignore the quality of the courses and instruction.

Since the divisional, and perhaps even departmental units, are much smaller and faculty and administration within these units are likely to know each other much more personally, it becomes difficult for the administrator to not have some regard for all the faculty members in his area. This structure almost guarantees greater communication among staff members, especially as these communications pertain to task areas.

Any inequality would almost have to be at a personal level with this type of structure. In effect, the "separateness" of technical programs would cease to exist, to a large degree. This type of structure obviously places responsibility at a lower level and creates greater demands and responsibilities at lower levels in the organization. Likewise, this requires greater skill at definition, delegation and supervision at the upper levels of the organization.

Research has shown that faculty members, particularly in the academic areas, tend to have equal or greater allegiance to their disciplinary areas than their institutional allegiances. Informal communications and organizations also tend to follow these disciplinary channels, due to the more obvious visibility of common interests and concerns. This proposed structure should permit "academics" and "occupationalists" to share and develop broader common concerns. The initial establishment of such a pattern will undoubtedly, however, be accompanied by a

certain amount of discomfort, tension, misunderstanding, etc., since people would be placed in close contact with "different" types of persons than they have been used to associating with.

RESEARCH

The many research implications growing out of the discussion thus far are by now apparent to any skeptics in the audience. In fact, many of the reactions and recommendations quite explicitly require research activities of various sorts. In addition to these, a number of "single shot" topics are proposed.

Many of these proposals, especially those related to the previously identified problem areas, are of a basic nature, as opposed to applied or institutional research, and due to their interrelationships could best be placed within the framework of a more comprehensive design rather than being tackled separately. The most obvious of these comprehensive projects relates to the problems of organization and structure. It is not proposed that "the best" organizational structure be found, but that the criteria by which any individual institution might select "its best" structure, taking into consideration its own objectives, limitations, community environment, etc. This research might consist of the following coordinated sub-projects. The sub-projects imply a chronological ordering but many of the projects could proceed simultaneously and certain phases of the projects would by necessity have to overlap if a coordinated and tightly structured research design is to result.

The objectives of college programs, must be more specifically defined. Ways must be developed by which the achievement of these objectives can be measured. This project should not only be concerned with the definition and measurement of relevant areas of student achievement, job performance, etc., but should be concerned also with large scale institutional measures. For example, in terms of

the student population which the college serves, to what extent is human capital increased? This requires an examination of a problem which has long plagued Economists but to which they have recently addressed themselves with much interest. What are the economic returns to differing educational investments? In institutional terms this would involve a determination of the relative value to be placed on successful students in different programs as well as drop-outs, academic failures that cannot be "persuaded" to take appropriate programs, etc.

Research efforts should be directed toward the identification and classification of various organizational structures existing in colleges. The common and unique features of various organizations should be made evident. These should include persent organizations as well as currently proposed and yet to be developed experimental organizations. These studies should involve formal and informal structures, communications, extra-college determinants, multi-campus structures, as well as single campus institutions, inter-institutional relations, state systems, etc. The extent to which organizational characteristics and the characteristics of individuals interact should be more accurately assessed. Techniques such as those used by Blocker and associates at the University of Texas, and Davis (James A. Davis, et al. "A Technique for Analyzing the Effects of Group Composition." American Sociological Review, 26: 215-26. April 1961.) seem especially promising. Such studies would of necessity deal with the entire institution and thus are related to a variety of topics. The community and larger social units must also be included.

Given more accurate assessment of the achievement of educational programs, and more empirical examination of organizational structures, additional studies should be undertaken to see how these two areas are related. The effects of various patterns and characteristics of an institution upon its students and

constituents should be assessed. This study would of necessity involve an intensive examination of college-community interaction, liaison and communications between the college and other institutions, analysis and prediction and projection of educational needs, etc. This area of study is obviously related to techniques and studies in other areas such as public relations, advertising, sales management, media research, motivational research, etc. It is exceedingly frustrating when the manufacturer of dog food can predict with some accuracy the results of actions he might take whereas a community college can develop a technical program in an area of supposedly obvious need and have difficulty in obtaining students.

One of the more important research areas pertains to faculty attitudes. This can be considered a separate area of study but obviously is related to the previously mentioned sub-project concerned with administrative structure and organization. The nature of this research area can perhaps be best described, briefly, in terms of specific questions. How and when are faculty attitudes formed? Are there steps which might be taken in the education and selection of faculty members which might result in more positive attitudes? What things can be done to change faculty attitudes after they are employed especially in comprehensive community colleges? This proposed research area does not imply that the identification and classification of attitudes as positive or negative is to be taken for granted. For example, it is not the role of the administration to define what is to be regarded as positive or negative. Rather, the processes which result in the formation and change of attitudes toward characteristics of comprehensive community junior colleges by those operating in such institutions is the primary concern.

These research "proposals" are, of course, far from specific. Much additional work would need to undertaken before researchable questions could be developed. In fact, much of the needed "research" work appears to be concerned

with the identification of techniques which might take these problem areas more researchable. It is interesting to observe that several of the Research and Development Centers are concerned with different parts of this problem area. It is hoped that some coordination and extension of these parts might be possible.

Since inter-institutional relations were implied in the title of this session, I should make some reference to this. In the interests of time I will simply hypothesize the extension of the organizational principles inherent in the intra-college structures to multi-campus and inter-institutional levels, perhaps in state systems of higher education. We can return to this in the discussion period if interest warrants it.

Reference

Emphasis: Occupational Education in the Two-Year College. Washington, D.C., American Association of Junior Colleges, 1966, pp. 80-83.

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Unemployment Insurance Claimants, 1962-1963, Characteristics and Benefit Experience of New York Workers Who Filed Claims to Establish Benefit Years Ending in 1963.

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NEW YORK

Non-farm wage and salary employment averaged 6,259,900 in 1962 and registered unemployment averaged 293,000 in 1962. Thirty-three tables are provided containing information in the areas of: (1) employment background, (2) unemployment developments, (3) new claimants, (4) characteristics of beneficiaries, (5) length and frequency of unemployment, (6) weekly benefit payments, (7) base-year employment, (8) experience in major areas, and (9) claimants who were denied benefits. A brief written summary is also provided for each of these areas. (MM)

VT004958

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UNEMPLOYMENT INSURANCE CLAIMANTS

Characteristics and Benefit Experience of New York Workers
Who Filed Claims to Establish Benefit Years
Ending in 1963

1962 - 1963

STATE OF NEW YORK
Nelson A. Rockefeller, *Governor*

DEPARTMENT OF LABOR
M. P. Catherwood, *Industrial Commissioner*

DIVISION OF EMPLOYMENT
Alfred L. Green, *Executive Director*

VT004955

This is the tenth report in an annual series that began with unemployment insurance benefit years ending in 1954.

UNEMPLOYMENT INSURANCE CLAIMANTS, 1962-1963

Characteristics and Benefit Experience of New York Workers
Who Filed Claims to Establish Benefit Years
Ending in 1963

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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JANUARY 1968

NEW YORK STATE DEPARTMENT OF LABOR
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Research and Statistics Office
State Office Building Campus
Albany, New York 12201

CONTENTS

	Page
UNEMPLOYMENT INSURANCE CLAIMANTS	1
Employment Background	1
Unemployment developments	1
New claimants	2
Characteristics of beneficiaries	2
Length and frequency of unemployment	3
Weekly benefit payments	4
Base-year employment	4
Experience in major areas	4
Claimants who were denied benefits	5
TABLES	8
TECHNICAL NOTES	36

LIST OF TABLES

All tables give figures for New York State as a whole, except for Tables 2, 26 and 27 which include figures for the 10 major labor market areas. Data for new claimants and beneficiaries are based on a 10 per cent sample of new claimants in the periods designated.

Table

1. Nonagricultural employment, registered unemployment and new claimants, 1953-1963 8
2. Nonagricultural employment and registered unemployment, all industries and manufacturing by major labor market area annual average, 1961-1963 9
3. Age of new claimants who received benefits and of the civilian labor force, by sex 10
4. Occupation of new claimants who received benefits and of employed private wage and salary workers, by sex 11
5. Industry attachment of new claimants who received benefits and of workers in employment covered by unemployment insurance, 1962 12
6. Per cent women among new claimants who received benefits and among employed workers in manufacturing industries, 1962 12
7. Beneficiaries by sex, age, industry and occupation, benefit years ending in 1963 and 1962 13
8. Beneficiaries by industry and occupation, benefit years ending in 1963 14
9. Age in relation to industry and occupation of beneficiaries benefit years ending in 1963 15
10. Median age of men and women beneficiaries and proportion of women among beneficiaries, by industry and occupation, benefit years ending in 1963 16
11. Beneficiaries by number of weeks of benefits received, sex, age, industry and occupation, benefit years ending in 1963 17
12. Average benefit duration for men and women beneficiaries, and per cent who had maximum duration, by age, industry and occupation, benefit years ending in 1963 18
13. Benefit exhaustions by sex, age, industry and occupation, benefit years ending in 1954-1963 . . 19
14. Beneficiaries by number of spells of unemployment and sex, benefit years ending in 1963 20
15. Number of spells of unemployment in relation to average benefit duration, by sex, benefit years ending in 1963 20
16. Number of spells of unemployment in relation to exhaustion of benefit rights, by sex, benefit years ending in 1963 20
17. Number of spells of unemployment in relation to age, industry and occupation of beneficiaries, benefit years ending in 1963 21
18. Beneficiaries by weekly benefit rate and sex, benefit years ending in 1963 22
19. Average full-week benefit payment and per cent of beneficiaries at maximum weekly benefit rate of $50 by sex and age benefit years ending in 1963 22

20. Average full-week benefit payment and per cent of beneficiaries at maximum weekly benefit rate of $50 by sex, industry and occupation, benefit years ending in 1963 23
21. Beneficiaries by base-year weeks of work and earnings in covered employment and by sex, benefit years ending in 1963 and 1962 24
22. Per cent of men and women beneficiaries who worked fewer than 27 weeks or earned less than $2,000 in base-year covered employment benefit years ending in 1963 25
23. Per cent of men and women beneficiaries who had 50 to 52 weeks of work and earnings of $5,148 or more in base-year covered employment benefit years ending in 1963 26
24. Weeks of covered employment in base-year in relation to base-year earnings of beneficiaries, benefit years ending in 1963 27
25. Average benefit duration in relation to weeks of work and earnings in base-year covered employment, benefit years ending in 1963 27
26. Beneficiaries in New York Metropolitan area by sex, age, industry, occupation and benefit experience, benefit years ending in 1963 28
27. Beneficiaries in upstate labor market areas by sex, age, industry, occupation and benefit experience, benefit years ending in 1963 29
28. Benefit status and benefit denial experience of claimants, by sex, benefit years ending in 1963 30
29. Reasons for disqualification among all disqualified persons, by sex, benefit years ending in 1963 31
30. Reasons for disqualification of claimants at original claim filing or during benefit year, by sex, benefit years ending in 1963 32
31. Sex, age, industry and occupation of disqualified beneficiaries by reason for disqualification, benefit years ending in 1963 33
32. Disqualification rates, by sex, age, industry and occupation, benefit years ending in 1963 34
33. Benefit duration of all beneficiaries, nondisqualified beneficiaries and disqualified beneficiaries by sex and reason for disqualification, benefit years ending in 1963 35

UNEMPLOYMENT INSURANCE CLAIMANTS, 1962-63

During 1962, more than one million unemployed workers filed new claims for unemployment insurance benefits in New York State. Their entitlement to benefits was based primarily on work performed in the 52-week "base-period" preceding the date on which they filed a new claim. Their benefit year, if they were entitled to benefits, was the 52-week period following the filing of the new claim.

Persons who received benefit payments drew them for periods of unemployment in 1962 or 1963 or in both years, but all had benefit years ending in 1963. In this report they are called, for brevity, "1963 beneficiaries" or simply "beneficiaries."

This report describes the personal characteristics of the workers who filed new claims for benefits in 1962, their past work experience, and their benefit record.

Employment Background
(See Tables 1 and 2)

The year 1962 was one of recovery from the 1960-1961 recession. The rise in economic activity that began in March 1961 continued into 1962. Employment rose almost steadily from its seasonal low in January 1962 to its seasonal high point in September but dipped in the last quarter of the year. Nevertheless, throughout 1962 nonfarm employment in every month except December was higher than in the corresponding month of any previous year. Nonfarm wage and salary employment averaged 6,259,900 in 1962, about 103,000 above 1961.

Employment maintained its high level in 1963. Except for January and April, employment was the same or a little higher each month than a year earlier and averaged 6,272,500 for 1963 as a whole. Among the industry divisions, however, only service, government, and trade registered increases over a year earlier. All other industry divisions showed no growth or a small reduction in average employment between 1962 and 1963.

Manufacturing had a larger work force, on the average, in 1962 than in 1961, although the fourth-quarter level dropped. Biggest increases over the year were in electrical machinery, autos and trucks, primary metals, stone, clay and glass products and nonelectrical machinery. Employment in nondurable goods manufacturing averaged approximately the same in 1962 as in 1961.

Most major nonmanufacturing industry divisions reported employment gains between 1961 and 1962. Service industries showed the greatest employment growth, particularly in health, education and miscellaneous business services. Most of the increase in government employment was at the State and local government levels. Wholesale and retail trade employment expanded to new highs. In retail trade, large increases were recorded for eating and drinking places, and general merchandise and food stores. Employment in contract construction showed a substantial increase. Most of the rise in finance, insurance and real estate was in banks and other finance agencies, as it had been for several years.

The employment loss in transportation industries was due in part to a transfer of several thousand bus drivers to government payrolls.

Unemployment Developments
(See Tables 1 and 2)

Registered unemployment averaged 293,000 in 1962, 55,000 fewer than in 1961 and a five-year low.1/ In every month in 1962, except November and December, registered unemployment was below the level of the same month in the prior year. The late-year rise in registered unemployment continued into 1963, which started with more unemployment than a year earlier. By September the trend was reversed. However, the annual average of registered unemployment for 1963 was higher than in 1962.

During the course of every year, unemployment shows an irregular movement from month to month, in response to short-term seasonal and frictional influences. In January 1962, 104,000 more unem-

1/ Registration under the regular State and Federal unemployment insurance programs. Does not include 28,000 unemployed persons who were registered, on the average, in the first six months of 1962 under the Federal Temporary Extended Unemployment Compensation (TEC) Act.

ployed workers were registered for benefits than in the preceding month, the result of normal post-holiday and cold weather cutbacks. Between the seasonal high point of unemployment in January and the seasonal low in October 1962, registrations of the jobless decreased by 181,000. In 1963 the difference between the seasonal high and low points of unemployment was 240,000.

New Claimants
(See Table 1)

New unemployment also reflected both seasonal and cyclical influences. The number of persons who filed new claims for unemployment benefits in the first quarter of 1962 was at a high for the year. New unemployment decreased in the second and third quarters as seasonal manpower needs in some industries over-shadowed retrenchment in others. In the fourth quarter of 1962 job cut-backs that were perhaps more than seasonal raised unemployment above the level of the preceding quarter and also of the fourth quarter of 1961.

For 1962 as a whole, unemployed workers who filed new claims for State unemployment insurance benefits numbered 1,036,000. This was 43,000 less than the total for 1961. More than one-fifth of the new claimants in 1962 did not become beneficiaries. Of these, 40,000 filed valid original claims but drew no benefits because they shortly returned to work or for other reasons, and 193,000 persons were held not entitled to benefits.

Characteristics of Beneficiaries
(See Tables 3 - 10)

About 804,000 unemployed persons, more than three-fourths of the new claimants in 1962, drew benefits in their individual benefit years ending in 1963.

Beneficiaries differed from the State's labor force and employed population in several aspects. Beneficiaries included relatively more women than found in the working population as a whole. Production and other manual workers were a much larger segment of the unemployed than of the entire working population. Manufacturing workers—in particular, apparel workers—made up a larger share of the unemployed than of employed workers. Unemployment was also high in the construction industry, in which seasonal slowdowns and poor weather conditions made for intermittent layoffs. Although trade is also a seasonal industry, it accounted for a smaller proportion of beneficiaries than of covered employment.

The median age of unemployed workers who received benefits was about the same as that of the entire working population. Actually, teenagers and young adults had the highest unemployment rates within the total labor force, but many of these young workers are not eligible for unemployment insurance.

The number of 1963 beneficiaries was 3 per cent smaller than the number of 1962 beneficiaries. Decreases occurred in all age groups, and in most industries and occupations. Exceptions were non-durable goods industries other than apparel, finance-insurance-real estate and semi-skilled occupations in the apparel trades.

Manufacturing workers made up more than half of the beneficiaries, with apparel workers forming the largest single group. In the 1963 benefit year, one of every five beneficiaries was an apparel worker, one of every six came from trade activities, one of every eight from metals and machinery manufacturing and a similar proportion from construction.

The industrial distribution of beneficiaries has shifted over the years: manufacturing workers – in particular, apparel workers – have accounted for a smaller proportion of beneficiaries in recent years. Manufacturing workers as a whole decreased from 65 per cent of 1954 beneficiaries to 54 per cent of 1963 beneficiaries. Apparel workers made up 31 per cent of the beneficiaries in the 1954 benefit year compared with 21 per cent in the 1963 benefit year. The apparel industry work force has declined considerably in the past decade.

Most beneficiaries (67 per cent) were production and other manual workers. Semi-skilled workers were the largest single group, and unskilled and skilled workers followed in size. White-collar workers formed 19 per cent of the total and service workers, 8 per cent.

Semi-skilled workers made up 31 per cent of all beneficiaries but close to three-fourths of the beneficiaries from apparel manufacturing. Skilled workers made up 16 per cent of all beneficiaries, but accounted for 48 per cent of those from the construction industry. Clerical workers represented

11 per cent of all 1963 beneficiaries, 18 per cent of all women beneficiaries and 80 per cent of all women beneficiaries from finance-insurance-real estate.

Men made up 57 per cent of 1963 beneficiaries, about the same proportion as in the 1962 benefit year. Women beneficiaries outnumbered men, however, in various industries. These included apparel, textiles and leather manufacturing, telephone services, department and apparel stores, insurance companies, and personal health, legal and educational services. Women beneficiaries were also more numerous than men in clerical work and semiskilled apparel occupations.

The median age of 1963 beneficiaries was 41.9 years; three-fifths were between 25 and 55 years. Over the decade, young workers have risen in proportion to total beneficiaries, and older workers have declined. Those under 25 years of age accounted for 10 per cent of 1954 beneficiaries and for 15 per cent of 1963 beneficiaries. Beneficiaries over 65 years of age decreased from 7 per cent of the total in the 1954 benefit year to 6 per cent in 1963. More older workers are retiring as receipt of social security and private old-age pensions spreads.

Among 1963 beneficiaries, apparel workers were older, on the average, than those from other industries. Finance-insurance-real estate, however, contained the highest proportion of beneficiaries over 65 years, and also of beneficiaries under 25 years. In metals and machinery manufacturing, half of the beneficiaries were between 25 and 45 years of age.

Clerical workers and unskilled workers were the youngest occupational groups. Workers in service occupations excluding personal service were the oldest, on the average, among beneficiaries; three-fifths were 45 years or older. In the professional occupations, more than half the beneficiaries were between 25 and 45 years old.

The median age of women beneficiaries was higher than that of men. Relatively more women beneficiaries than men were in the middle age range whereas more men beneficiaries were under 35. The proportion of beneficiaries over 65 years was higher for men than for women.

Length and Frequency of Unemployment
(See Tables 11 - 17)

Although the total number of beneficiaries declined slightly, average duration of benefits increased somewhat in the 1963 benefit year. Beneficiaries received an average of 14.1 weeks of benefits that year compared with 13.9 weeks in the 1962 benefit year. Average length of unemployment increased in all age groups, except for those under 25 years where it stayed the same. In most industries and occupations, also, average duration increased slightly. In finance, and metals and machinery industries and in clerical and service occupations (excluding service), average duration decreased slightly. A fifth (22 per cent) of the 1963 beneficiaries drew benefits for the 26-week maximum allowed under the regular unemployment insurance program; the proportion for 1962 beneficiaries was similar. (Length of unemployment refers to the cumulative number of weeks of benefits received in a benefit year.)

Among the large industry groups, unemployment was shortest, on the average, for beneficiaries from transportation equipment, apparel and leather goods manufacturing. It was longest for those from food manufacturing, general contracting (excluding building), restaurants, hotels, amusement and recreation services, and from finance and real estate. In general, unemployment was shorter for skilled, semiskilled and unskilled workers than for other occupational groups.

Women were out of work slightly longer than men, on the whole. Older workers tended to be jobless longer than young and middle-aged workers. Half of the beneficiaries 65 years and over drew benefits for 26 weeks, the majority of them in one continuous period.

Most beneficiaries had more than one spell of unemployment. Almost two-thirds of all 1963 beneficiaries had two or more periods of unemployment; one-fifth had four or more periods. Production and other manual workers had more intermittent unemployment than white-collar workers. The apparel industry was characterized by frequent and short periods of unemployment.

Ten per cent of all beneficiaries drew 26 weeks of benefits in one continuous period. The proportion was 4 per cent in apparel manufacturing, 13 per cent in metals and machinery manufacturing, 22 per

cent in the finance group, and 26 per cent in service occupations excluding personal service. Of all persons who drew 26 weeks of benefits, almost half did so in one continuous period.

Weekly Benefit Payments
(See Tables 18 - 20)

One-third of the beneficiaries received $50 a week in benefits. More than half of the men but only 7 per cent of the women received the $50 rate. Nine per cent of the beneficiaries drew less than $25 a week; the proportion was 3 per cent among men and 17 per cent among women.

The average full-week benefit payment was $38 for all beneficiaries, $42 for men and $32 for women. Men consistently received higher average weekly benefit payments than women within the various age, industry and occupational groups. Young persons under 25 were less frequently eligible for the top rate than other age groups.

Beneficiaries in professional and skilled occupations and from construction, the transportation field and metals and machinery manufacturing qualified for the top weekly benefit rate more frequently than other beneficiaries.

Workers who drew high weekly benefit amounts had shorter unemployment, on the average, than workers who received low weekly benefits.

Base-Year Employment
(See Tables 21 - 25)

Half of the 1963 beneficiaries had both worked in at least 39 weeks and earned $2,000 or more in covered employment during the 52 weeks preceding their original claim. Disregarding earnings, a little over half of the beneficiaries had worked in at least 39 weeks and a fourth had worked in 50 or more weeks in their base year.

Full-year employment in the base period, that is, at least 50 weeks of work, more frequently occurred among men than among women, among white-collar workers, and in metal and machinery manufacturing, wholesale trade and financial fields than in other industries. The proportion of beneficiaries with 50 or more base-year weeks of work was lowest in apparel manufacturing, transportation and construction.

One-fifth of the 1963 beneficiaries had earned over $5,100 in their base year: 12 per cent had earned $6,000 or more. Men earned considerably more than women. Almost one-third of the men compared with 3 per cent of the women had earned over $5,100 in their base year.

Counting only weeks they actually worked, 32 per cent of the beneficiaries had earned over $100 a week in their base year, and 20 per cent had earned over $120 a week. Among men beneficiaries, 48 per cent had averaged over $100 a week in their base-year weeks of employment and 33 per cent had averaged over $120 a week.

Forty-four per cent of the women compared with 17 per cent of the men had earned less than $2,000 in their base year.

Low annual earnings among beneficiaries generally reflected both low weekly wages and short duration of employment during their base year. Young and elderly persons, workers from retail trade, service industries and service occupations, and unskilled workers tended to have both shorter base-year employment and lower annual earnings than other workers.

Comparison of base-year employment and benefit year unemployment indicates some repetition in the claimants' unemployment experience from one year to the next. Low-paid workers tended to be unemployed longer in their benefit year than better-paid workers. Even when their annual earnings were similar, workers with shortest base-year employment were likely to have the longest benefit-year unemployment.

Experience in Major Areas
(See Tables 2, 26 and 27)

Average annual nonfarm employment increased in eight of the ten major areas between 1961 and 1962, and in seven major areas between 1962 and 1963.[2] Binghamton showed a continuing downtrend in both periods. Elmira showed a decline in average employment between 1961 and 1962, but 1963 employment was above 1961. In New York City employment fell in 1963 but remained above 1961. In Utica the decline in employment between 1962 and 1963 brought the 1963 level below 1961.

2/ For full name and geographic coverage of labor market areas, see Technical Notes – Definitions.

51

Nassau-Suffolk was the most rapidly growing industrial area in the State and showed a large employment increase in both 1962 and 1963.

Average registered unemployment decreased in all ten major areas between 1961 and 1962. In most areas a decline from year-earlier levels began in the second half of 1961 and continued into the fourth quarter of 1962. Eight of the major areas recorded an increase in average unemployment between 1962 and 1963; in Buffalo and Elmira the downward trend in unemployment continued.

Jobless workers who filed new claims in 1962 to establish benefit years ending in 1963 were less numerous in seven major areas than in the preceding benefit year. Two areas – Binghamton and Nassau-Suffolk – showed a rise in new unemployment between 1961 and 1962.

In six of the 10 areas unemployment tended to be somewhat longer in the 1963 benefit year than in the 1962 benefit year. Average duration of unemployment among 1963 beneficiaries ranged from 10 weeks in Binghamton to 15 weeks in the Buffalo and Elmira areas. In Buffalo, 29 per cent of the beneficiaries received 26 weeks of benefits; in Nassau-Suffolk, 12 per cent.

In New York City, apparel workers formed the largest industry group, accounting for 31 per cent of total beneficiaries in the area. In Albany, Nassau-Suffolk, Syracuse and Westchester, construction workers formed the largest beneficiary group. In four upstate areas – Buffalo, Elmira, Rochester and Utica-Rome – beneficiaries from metals and machinery manufacturing were far more numerous than those from any other industry group.

Semiskilled workers were the largest occupational group among beneficiaries in most major areas. In Nassau-Suffolk, the skilled and semiskilled groups were almost equally large, and in Syracuse, skilled, semiskilled and unskilled workers were about equal in size. In Buffalo, skilled workers formed the largest occupational group. Production and other manual workers far outnumbered white-collar and service workers among beneficiaries in all areas.

Average full-week benefit payments ranged from $37 to $41 among the areas. Benefit payments were lowest, on the average, in Utica-Rome and highest in Westchester.

Claimants Who Were Denied Benefits
(See Tables 28 - 33)

Of the one million workers who filed new claims in 1962, one of every four was disqualified for benefits either at the time of his first claim or during his benefit year. The disqualified group totaled 264,000 persons as follows: 70,000 whose original claim was ruled invalid,3/ 4,000 who established a benefit year but were disqualified without receiving a benefit payment, and 190,000 beneficiaries who were disqualified during the course of their benefit year.

Of the 70,000 persons who were disqualified at the time of their original claim, almost three-fifths were denied benefits because they voluntarily quit their last job without good cause. Sixteen per cent were ruled ineligible because of unavailability.

Of the 190,000 beneficiaries who were disqualified at some time in their benefit year, more than three-fifths were denied benefits because of unavailability. One-fifth were denied benefits for failure to report as required. Many of the disqualifications for these two reasons were for part of a week only. Altogether the 190,000 beneficiaries received 260,000 disqualifications; three-fourths had one disqualification and one-fourth more than one.

Women made up two-fifths of all beneficiaries but about half of all disqualified beneficiaries. They accounted for the majority of beneficiaries disqualified for unavailability and job refusal but relatively few of those disqualified for industrial controversy.

Disqualified beneficiaries were younger than those who were not disqualified. Persons disqualified for job refusal and voluntary quit – 34 years old on the average – were younger than beneficiaries disqualified for other reasons.

About one-fourth of all beneficiaries were disqualified during the benefit year; the proportion varied somewhat by age, industry and occupation. Somewhat more of the women (28 per cent) than the men (21 per cent) were disqualified. One-third of the beneficiaries under 25 years were disqualified

3/ Excludes claimants who were not entitled because they lacked sufficient base-year employment or did not return to the local office after original claim filing.

during the course of the year compared with 20 to 25 per cent of other age groups. Thirty per cent of the beneficiaries from finance, insurance and real estate were disqualified compared with 16 per cent of those from contract construction. Only 18 per cent of the skilled workers were disqualified compared with 34 per cent of the clerical workers.

Disqualified beneficiaries received benefits for a longer period, on the average, than those who were not disqualified. Benefit duration for disqualified beneficiaries includes benefits received both before and after the period of disqualification. About the same proportion of disqualified and nondisqualified beneficiaries exhausted benefits. Those beneficiaries who were disqualified for unavailability drew benefits for the longest period and higher proportion than among other disqualified beneficiaries exhausted benefits. Those who were disqualified for voluntary quit received benefits for the shortest period.

TABLES 1-33

Table 1. NONAGRICULTURAL EMPLOYMENT, REGISTERED UNEMPLOYMENT AND NEW CLAIMANTS, 1953–1963

Year and month	Employment a/	Registered unemployment a/	New claimants b/
1953	5,935,800	203,100	754,700
1954	5,828,300	294,700	993,400
1955	5,917,100	231,900	838,700
1956	6,092,800	200,500	783,400
1957	6,177,800	228,800	935,300
1958	6,027,200	380,500	1,188,500
1959	6,128,000	307,800	1,045,700
1960	6,181,900	309,300	1,104,100
1961	6,157,700	348,300	1,079,300
1962	6,261,300	293,300	1,036,400
1963	6,273,700	314,300	1,057,800 p.
1961			
January	5,984,600	489,100	
February	5,972,600	471,500	347,200
March	6,046,600	429,400	
April	6,085,000	405,800	
May	6,126,000	370,900	243,800
June	6,180,500	337,300	
July	6,148,400	353,400	
August	6,197,200	284,400	228,300
September	6,257,900	255,400	
October	6,283,400	230,700	
November	6,292,600	253,100	260,000
December	6,318,100	298,200	
1962			
January	6,089,000	402,300	
February	6,104,800	346,800	298,300
March	6,154,300	332,700	
April	6,244,100	288,500	
May	6,274,400	275,300	228,800
June	6,323,500	272,400	
July	6,273,600	299,800	
August	6,317,300	243,000	212,900
September	6,367,900	235,400	
October	6,342,200	221,000	
November	6,329,400	263,100	296,400
December	6,315,800	339,400	
1963			
January	6,080,400	468,900	
February	6,107,200	394,600	345,200
March	6,161,900	379,200	
April	6,230,500	338,400	
May	6,275,800	296,000	222,700
June	6,323,500	296,500	
July	6,281,500	304,500	
August	6,318,700	246,700	207,600
September	6,375,500	228,700	
October	6,393,900	233,200	
November	6,364,600	262,800	282,300
December	6,370,500	321,800	

a/ Annual figures are an average of the monthly figures for nonfarm wage and salary employment. Monthly figures are the number reported for a representative period of the month, usually the week ending nearest the 15th of the month. Figures are adjusted to 1966 benchmark.

b/ Figures are totals for the periods designated and are estimated from a 10 per cent sample of new claimants.

p. Preliminary NOTE: Figures are rounded to nearest hundred.

Table 2. NONAGRICULTURAL EMPLOYMENT AND REGISTERED UNEMPLOYMENT, ALL INDUSTRIES AND MANUFACTURING BY MAJOR LABOR MARKET AREA, ANNUAL AVERAGE, 1961-1963

(In thousands)

Labor market area a/	Employment b/			Unemployment		
	1961	1962	1963	1961	1962	1963
			All industries			
New York State	6,157.7	6,261.3	6,273.7	348.3	293.3	314.3
NEW YORK METROPOLITAN AREA						
New York City	3,526.5	3,559.3	3,532.9	200.2	173.0	189.6
Nassau-Suffolk	464.0	496.3	524.6	20.7	17.9	21.1
Westchester	234.9	241.6	246.0	10.0	8.4	9.4
UPSTATE AREAS						
Albany	225.1	230.3	233.0	10.3	8.0	8.1
Binghamton	79.6	79.2	77.7	3.0	2.8	3.5
Buffalo	423.0	426.7	428.4	30.3	23.8	21.7
Elmira	32.1	31.9	32.4	2.0	1.4	1.1
Rochester	225.9	234.2	239.1	7.9	5.8	5.9
Syracuse	183.1	187.7	189.0	8.8	6.4	6.8
Utica	103.1	104.6	102.9	6.4	5.3	5.8
			Manufacturing			
New York State	1,823.0	1,837.9	1,804.1	184.2	153.3	162.0
NEW YORK METROPOLITAN AREA						
New York City	914.0	911.7	878.7	118.3	102.1	109.9
Nassau-Suffolk	126.6	132.9	139.2	7.9	7.3	8.6
Westchester	64.7	65.6	66.2	4.3	3.5	3.7
UPSTATE AREAS						
Albany	61.2	61.9	61.8	3.5	2.4	2.3
Binghamton	39.1	37.3	35.2	1.6	1.2	1.6
Buffalo	164.4	165.8	164.9	13.7	10.5	9.0
Elmira	14.3	13.9	13.9	1.4	0.8	0.6
Rochester	105.0	107.5	109.1	4.4	2.8	2.8
Syracuse	65.6	66.2	64.0	3.6	2.2	2.4
Utica	38.5	39.6	38.0	3.1	2.5	3.1

a/ For full name and geographic coverage of labor market areas, see Technical Notes - Definitions.

b/ Figures are adjusted to 1966 benchmark.

Table 3. AGE OF NEW CLAIMANTS WHO RECEIVED BENEFITS AND OF THE CIVILIAN LABOR FORCE, BY SEX

Per cent distribution

Age	New claimants in 1962	Civilian labor force, 1960 a/
BOTH SEXES — Total	100	100
Under 25 years	15	14
25 to 34 years	20	20
35 to 44 years	22	24
45 to 54 years	21	22
55 to 64 years	16	15
65 years or over	6	5
Unknown	b/	-
Median age (years)	41.9	41.8
MEN — Total	100	100
Under 25 years	15	12
25 to 34 years	22	22
35 to 44 years	21	24
45 to 54 years	19	21
55 to 64 years	15	16
65 years or over	8	5
Unknown	b/	-
Median age (years)	41.0	41.9
WOMEN — Total	100	100
Under 25 years	14	18
25 to 34 years	17	17
35 to 44 years	23	22
45 to 54 years	25	24
55 to 64 years	16	14
65 years or over	4	5
Unknown	b/	-
Median age (years)	43.0	41.5

a/ SOURCE: U.S. Census of Population, 1960, New York: Detailed Characteristics.
b/ Less than 0.5 per cent.

NOTE: Detail may not add to total because of rounding.

Table 4. OCCUPATION OF NEW CLAIMANTS WHO RECEIVED BENEFITS AND OF EMPLOYED PRIVATE WAGE AND SALARY WORKERS, BY SEX

Occupation	New claimants in 1962	Employed private wage and salary workers, 1960 a/
PER CENT DISTRIBUTION		
Both sexes — Total	100	100
Professional and managerial	5	16
Clerical and sales	14	27
Service	8	11
Production and other manual	67	38 b/
Skilled	16	b/
Semiskilled	31	b/
Unskilled	20	b/
Agricultural and unknown	7	8
Men — Total	100	100
Professional and managerial	7	19
Clerical and sales	9	18
Service	8	7
Production and other manual	68	48 b/
Skilled	23	b/
Semiskilled	24	b/
Unskilled	21	b/
Agricultural and unknown	8	8
Women — Total	100	100
Professional and managerial	3	11
Clerical and sales	21	43
Service	7	16
Production and other manual	65	22 b/
Skilled	6	b/
Semiskilled	40	b/
Unskilled	19	b/
Agricultural and unknown	4	8
WOMEN AS PER CENT OF TOTAL IN OCCUPATION		
All occupations c/	43	36
Professional and managerial	23	24
Clerical and sales	65	58
Service	40	56
Production and other manual	42	21 b/
Skilled	15	b/
Semiskilled	56	b/
Unskilled	40	b/

a/ SOURCE: U.S. Census of Population, 1960, New York: Detailed Characteristics.

b/ Comprises the following Census groups: craftsmen, operatives and laborers (excluding farm). Detail not shown for these 3 groups because they are not individually comparable with the skilled, semiskilled or unskilled classifications.

c/ Includes group, not shown separately, Agricultural workers and occupation unknown.

NOTE: Detail may not add to total because of rounding.

Table 5. INDUSTRY ATTACHMENT OF NEW CLAIMANTS WHO RECEIVED BENEFITS AND OF WORKERS IN EMPLOYMENT COVERED BY UNEMPLOYMENT INSURANCE, 1962

Per cent distribution

Industry	New claimants in 1962	Workers in covered employment (annual average)
All industries	100	100
Manufacturing	54	37
Durable goods:		
Metals and machinery	12	15
Other	2	1
Nondurable goods:		
Apparel	21	6
Other	18	15
Contract construction	12	5
Transportation and public utilities	5	8
Trade	16	25
Wholesale	5	8
Retail	11	17
Finance, insurance, real estate	3	10
Services	10	13
Other nonmanufacturing and unknown	1	1

NOTE: Detail may not add to total because of rounding.

Table 6. PER CENT WOMEN AMONG NEW CLAIMANTS WHO RECEIVED BENEFITS AND AMONG EMPLOYED WORKERS IN MANUFACTURING INDUSTRIES, 1962

Industry	Women as per cent of –	
	New claimants	Employed workers (annual average)
All manufacturing	43	34
Durable goods:		
Metals and machinery:		
Primary metal industries	6	9
Fabricated metal products (incl. ordn.)	22	16
Machinery (except electrical)	26	15
Electrical machinery, equipment, supplies	52	34
Transportation equipment	11	12
Instruments and related products	42	27
Other:		
Lumber & wood products (exc. furniture)	17	17
Furniture and fixtures	16	15
Stone, clay and glass products	15	19
Nondurable goods:		
Apparel and other finished fabric products	76	69
Other:		
Food and kindred products	49	24
Tobacco manufactures	48	48
Textile mill products	68	47
Paper and allied products	46	27
Printing, publishing & allied industries	42	32
Chemicals and allied products	41	29
Petroleum refining and related industries	12	28
Rubber & miscellaneous plastics products	57	37
Leather and leather products	59	51
Miscellaneous manufacturing	60	42

Table 7. BENEFICIARIES BY SEX, AGE, INDUSTRY AND OCCUPATION
BENEFIT YEARS ENDING IN 1963 AND 1962

Age, industry and occupation	1963 beneficiaries			Both sexes per cent change 1963 over 1962
	Both sexes	Men	Women	
Number of beneficiaries a/	803,800	458,500	345,300	- 3
	PER CENT DISTRIBUTION			
AGE – Total	100	100	100	- 3
Under 25 years	15	15	14	- 4
25 to 34 years	20	22	17	- 4
35 to 44 years	22	21	23	- 4
45 to 54 years	21	19	25	- 1
55 to 64 years	16	15	16	- 2
65 years or over	6	8	4	- 1
Unknown	c/	c/	c/	d/
Median age (years)	41.9	41.0	43.0	
INDUSTRY – Total	100	100	100	- 3
Manufacturing	54	42	69	- 1
Durable goods:				
Metals and machinery	12	16	8	- 2
Other	2	3	1	-23
Nondurable goods:				
Apparel	21	9	37	- 1
Other	18	14	23	+4
Contract construction	12	21	1	- 5
Transportation and public utilities	5	7	1	-12
Trade	16	15	16	- 7
Wholesale	5	5	4	- 5
Retail	11	10	11	- 8
Finance, insurance, real estate	3	3	3	+11
Services	10	9	10	- 2
Other nonmanufacturing	1	2	1	+2
OCCUPATION – Total	100	100	100	- 3
Professional and managerial	5	7	3	- 6
Clerical and kindred	11	5	18	c/
Sales and kindred	4	3	4	- 5
Service	8	8	7	- 5
Personal	6	5	6	- 5
Other	2	3	1	- 3
Skilled	16	23	6	- 7
Semiskilled	31	24	40	- 2
Apparel industry	15	6	28	+1
Other industries	15	18	12	- 4
Unskilled	20	21	19	c/
Agricultural and unknown	7	8	4	b/

a/ Estimated from a 10 per cent sample of new claimants in 1961 and 1962; figures are rounded to nearest hundred.
b/ The unknown category under Occupation was prorated to other occupational subgroups before computing per cent change. c/ Less than 0.5 per cent. d/ Not computed.

NOTE: Detail may not add to total because of rounding.

Table 8. BENEFICIARIES BY INDUSTRY AND OCCUPATION, BENEFIT YEARS ENDING IN 1963

Per cent distribution

Occupation	All industries a/	Manufacturing					Contract construction	Transportation and public utilities	Trade		Finance, insur., real estate	Services
		Total	Durable goods		Nondurable goods				Wholesale	Retail		
			Metals and machy.	Other	Apparel	Other						
All occupations	100	100	100	100	100	100	100	100	100	100	100	100
Professional & managerial	5	2	4	2	1	3	1	9	8	6	8	19
Clerical and kindred	11	6	9	5	3	8	2	14	28	15	47	22
Sales and kindred	4	1	1	1	1	2	b/	1	10	18	5	3
Personal service	6	1	1	1	b/	1	b/	9	1	26	4	20
Other service	2	1	1	1	b/	1	1	2	1	3	14	7
Skilled	16	12	18	19	10	9	48	15	9	11	6	9
Semiskilled	31	46	25	31	72	32	12	26	17	10	2	9
Unskilled	20	23	21	31	11	37	31	20	21	8	5	7
Other and unknown c/	7	8	20	10	2	7	3	5	5	3	8	5

a/ Includes industry group, Other nonmanufacturing, not shown separately.
b/ Less than 0.5 per cent.
c/ Includes agricultural workers.

NOTE: Detail may not add to total because of rounding.

Table 9. AGE IN RELATION TO INDUSTRY AND OCCUPATION OF BENEFICIARIES, BENEFIT YEARS ENDING IN 1963

Per cent distribution

Industry and occupation	Total	Age (years)						Median age
		Under 25	25-34	35-44	45-54	55-64	65 or over	
All beneficiaries a/	100	15	20	22	21	16	6	41.9
INDUSTRY								
Manufacturing	100	14	19	22	23	16	6	42.7
Durable goods:								
Metals and machinery	100	17	24	26	19	10	4	38.5
Other	100	18	28	22	16	10	6	36.7
Nondurable goods:								
Apparel	100	9	14	20	27	22	8	47.6
Other	100	18	21	21	20	14	6	40.2
Contract construction	100	12	23	24	20	16	5	41.0
Transportation and public utilities	100	12	22	24	21	14	7	41.8
Trade	100	18	20	21	20	15	7	40.9
Wholesale	100	21	25	21	17	12	5	37.2
Retail	100	16	18	21	21	16	7	42.5
Finance, insurance, real estate	100	24	18	16	16	13	13	40.2
Services	100	15	21	21	19	15	8	41.3
OCCUPATION								
Professional and managerial	100	10	27	25	18	13	6	40.1
Clerical and kindred	100	28	20	19	17	10	5	36.0
Sales and kindred	100	13	16	21	22	18	9	44.9
Service:								
Personal	100	11	17	22	24	18	8	47.3
Other	100	9	13	17	20	21	21	50.7
Skilled	100	8	17	22	23	21	8	46.4
Semiskilled:								
Apparel manufacturing	100	6	13	21	29	23	7	48.4
Other industries	100	16	23	23	20	13	5	39.9
Unskilled	100	23	25	22	17	10	4	36.0

a/ Includes following groups not shown separately: Other nonmanufacturing, under Industry; Agriculture-forestry-fishing and unknown, under Occupation.

b/ Less than 0.5 per cent.

NOTE: Detail may not add to total because of rounding.

Table 10. MEDIAN AGE OF MEN AND WOMEN BENEFICIARIES AND PROPORTION OF WOMEN AMONG BENEFICIARIES, BY INDUSTRY AND OCCUPATION BENEFIT YEARS ENDING IN 1963

Industry and occupation	Median age of beneficiaries (years)		Per cent women in each group
	Men	Women	
All beneficiaries a/	41.0	43.0	43
INDUSTRY			
Manufacturing	40.7	44.0	55
Durable goods:			
Metals	38.6	38.1	26
Other	36.3	38.9	16
Nondurable goods:			
Apparel	49.7	47.1	76
Other	39.0	41.0	55
Contract construction	41.1	39.0	2
Transportation and public utilities	42.8	32.8	13
Trade	40.1	41.7	43
Wholesale	37.6	36.8	39
Retail	41.4	43.5	45
Finance, insurance, real estate	51.8	33.6	40
Services	41.6	41.0	45
OCCUPATION			
Professional and managerial	41.1	37.1	23
Clerical and kindred	34.7	36.4	71
Sales and kindred	43.1	46.3	47
Service:			
Personal	47.1	43.2	47
Other	51.6	48.3	21
Skilled	44.8	53.2	15
Semiskilled:			
Apparel manufacturing	52.2	47.6	78
Other industries	38.2	42.8	34
Unskilled	34.8	37.7	40

a/ Includes following groups not shown separately: Other nonmanufacturing, under Industry; Agriculture-forestry-fishing and unknown, under Occupation.

Table 11. BENEFICIARIES BY NUMBER OF WEEKS OF BENEFITS RECEIVED, SEX AGE, INDUSTRY AND OCCUPATION, BENEFIT YEARS ENDING IN 1963

Per cent distribution

Sex, age, industry and occupation	Total	Number of weeks of benefits					Average number of weeks
		Less than 6	6—14	15—19	20—25	26	
All beneficiaries a/	100	26	28	12	12	22	14.1
Men	100	26	28	12	12	22	14.0
Women	100	24	30	12	11	23	14.2
AGE							
Under 25 years	100	29	30	12	11	18	13.1
25 to 34 years	100	27	29	12	11	21	13.7
35 to 44 years	100	27	29	12	12	20	13.6
45 to 54 years	100	27	30	12	11	20	13.5
55 to 64 years	100	23	28	13	12	24	14.7
65 years or over	100	11	17	10	14	49	19.6
INDUSTRY							
Manufacturing	100	30	29	11	10	19	13.1
Durable goods:							
Metals and machinery	100	40	21	8	8	22	12.2
Other	100	28	29	13	10	21	13.4
Nondurable goods:							
Apparel	100	26	36	13	11	14	12.7
Other	100	27	27	11	11	24	14.2
Contract construction	100	21	32	15	14	18	14.4
Transportation and public utilities	100	28	31	11	11	20	13.3
Trade	100	21	27	11	12	30	15.6
Wholesale	100	22	26	11	12	30	15.5
Retail	100	20	27	11	12	30	15.7
Finance, insurance, real estate	100	20	22	11	12	34	16.3
Services	100	19	26	12	14	29	16.0
OCCUPATION							
Professional and managerial	100	22	25	10	12	31	15.5
Clerical and kindred	100	23	26	11	11	30	15.3
Sales and kindred	100	20	26	10	12	32	16.0
Service	100	18	24	12	13	33	16.7
Personal	100	18	26	12	13	31	16.2
Other	100	16	19	11	13	41	18.0
Skilled	100	26	31	13	12	18	13.5
Semiskilled:							
Apparel manufacturing	100	28	38	13	10	11	12.1
Other industries	100	27	28	12	12	21	13.8
Unskilled	100	21	27	13	13	25	15.2

a/ Includes following groups not shown separately: Age unknown; Other nonmanufacturing, under Industry; Agriculture-forestry-fishing and unknown, under Occupation.

NOTE: Detail may not add to total because of rounding.

Table 12. AVERAGE BENEFIT DURATION FOR MEN AND WOMEN BENEFICIARIES AND PER CENT WHO HAD MAXIMUM DURATION, BY AGE, INDUSTRY AND OCCUPATION BENEFIT YEARS ENDING IN 1963

Age, industry and occupation	Average number of weeks of benefits		Per cent of each group who drew 26 weeks of benefits	
	Men	Women	Men	Women
All beneficiaries a/	14.0	14.2	22	23
AGE				
Under 25 years	13.1	13.2	17	19
25 to 34 years	13.4	14.3	19	23
35 to 44 years	13.1	14.1	18	22
45 to 54 years	13.3	13.7	19	21
55 to 64 years	14.8	14.5	25	24
65 years or over	20.1	18.3	52	41
INDUSTRY				
Manufacturing	12.8	13.3	21	18
Durable goods:				
Metals and machinery	11.6	13.6	20	28
Other	13.2	14.3	20	26
Nondurable goods:				
Apparel	13.4	12.4	16	13
Other	13.7	14.6	24	24
Contract construction	14.4	17.2	18	32
Transportation and public utilities	13.1	14.9	18	31
Trade	15.2	16.1	28	32
Wholesale	15.1	16.1	28	32
Retail	15.3	16.1	28	31
Finance, insurance, real estate	17.0	15.3	35	33
Services	15.8	16.2	28	31
OCCUPATION				
Professional and managerial	14.9	17.6	29	38
Clerical and kindred	15.2	15.3	30	30
Sales and kindred	15.5	16.5	31	34
Service:				
Personal	15.7	16.8	29	33
Other	17.9	18.1	41	41
Skilled	13.3	15.0	18	18
Semiskilled:				
Apparel manufacturing	12.9	11.8	13	10
Other industries	13.7	14.2	21	22
Unskilled	15.0	15.6	24	28

a/ Includes following groups not shown separately: Age unknown; Other nonmanufacturing, under Industry; Agriculture-forestry-fishing and unknown, under Occupation.

Table 13. BENEFIT EXHAUSTIONS BY SEX, AGE, INDUSTRY AND OCCUPATION
BENEFIT YEARS ENDING IN 1954-1963

Sex, age, industry and occupation	Per cent who exhausted benefit rights among beneficiaries with benefit years ending in –									
	1963	1962	1961	1960	1959	1958	1957	1956	1955	1954
All beneficiaries a/	22	22	23	19	26	21	12	13	15	14
Men	22	22	23	19	26	22	12	13	15	14
Women	23	23	22	20	25	21	11	13	15	14
AGE										
Under 25 years	18	18	20	16	24	19	6	6	10	9
25 to 34 years	21	20	22	17	24	19	8	9	13	11
35 to 44 years	20	20	21	16	23	19	9	11	14	12
45 to 54 years	20	19	20	17	23	19	11	13	14	13
55 to 64 years	24	24	23	21	26	22	13	16	16	16
65 years or over	49	50	49	48	55	48	37	38	34	36
INDUSTRY b/										
Manufacturing	19	19	20	16	22	19	10	11	14	12
Durable goods:										
Metals and machinery	22	23	28	19	31	28	12	14	21	17
Other	21	20	24	18	24	n.a.	n.a.	n.a.	n.a.	n.a.
Nondurable goods:										
Apparel	14	12	12	10	12	11	6	7	7	7
Other	24	24	24	22	25	n.a.	n.a.	n.a.	n.a.	n.a.
Contract construction	18	16	19	16	19	17	9	9	11	9
Transportation and public utilities	20	20	22	21	27	23	12	15	16	18
Trade	30	30	29	26	35	28	16	18	20	19
Wholesale	30	29	29	26	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Retail	30	30	30	26	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Finance, insurance, real estate	35	35	34	34	43	36	25	27	25	27
Services	29	31	30	28	34	30	20	21	19	20
OCCUPATION										
Professional and managerial	31	29	29	26	31	28	21	21	18	22
Clerical and kindred	30	31	30	27	38	29	15	18	19	20
Sales and kindred	32	32	31	28	37	30	16	20	21	20
Service	33	33	34	34	41	34	24	27	26	25
Personal	31	30	31	29	37	29	19	21	23	21
Other	41	43	41	45	52	44	34	38	33	33
Skilled	18	17	19	15	21	17	9	11	13	12
Semiskilled c/	16	16	17	13	18	14	7	9	11	10
Apparel manufacturing	11	11	10	8	9	9	5	5	5	5
Other industries	21	22	24	19	25	23	11	13	16	15
Unskilled	25	25	27	22	28	25	13	14	17	16

a/ Includes following groups not shown separately: Age unknown; Other nonmanufacturing, under Industry; Agriculture-forestry-fishing and unknown, under Occupation.

b/ Industry definitions in the 1959-1963 benefit years are not identical with those in earlier years but data are roughly comparable.

c/ Definitions of semiskilled subgroups for benefit years ending in 1958 or later are not identical with those for earlier years.

n.a. Not available.

Table 14. BENEFICIARIES BY NUMBER OF SPELLS OF UNEMPLOYMENT AND SEX
BENEFIT YEARS ENDING IN 1963

Per cent distribution

Number of spells	Both sexes	Men	Women
All beneficiaries	100	100	100
1 spell	36	39	31
Of 26 weeks (maximum)	10	11	10
Of 1 to 25 weeks	26	28	21
2 spells	28	30	25
3 spells	15	15	16
4 spells	9	7	10
5 spells or more	13	9	18

NOTE: Detail may not add to total because of rounding.

Table 15. NUMBER OF SPELLS OF UNEMPLOYMENT IN RELATION TO AVERAGE BENEFIT DURATION, BY SEX, BENEFIT YEARS ENDING IN 1963

Spells of unemployment experienced by beneficiary	Average number of weeks of benefits received by—		
	Both sexes	Men	Women
All beneficiaries	14.1	14.0	14.2
1 spell	13.6	13.2	14.2
2 spells	14.1	14.0	14.3
3 spells	14.3	14.7	13.9
4 spells	14.4	15.0	13.8
5 spells or more	14.8	15.4	14.5

Table 16. NUMBER OF SPELLS OF UNEMPLOYMENT IN RELATION TO EXHAUSTION OF BENEFIT RIGHTS, BY SEX, BENEFIT YEARS ENDING IN 1963.

Spells of unemployment experienced by beneficiary	Per cent of each group who received 26 weeks of benefits in benefit year		
	Both sexes	Men	Women
All beneficiaries	22	22	23
1 spell	29	28	32
2 spells	22	20	25
3 spells	18	19	18
4 spells	16	17	15
5 spells or more	13	14	12

Table 17. NUMBER OF SPELLS OF UNEMPLOYMENT IN RELATION TO AGE, INDUSTRY AND OCCUPATION OF BENEFICIARIES, BENEFIT YEARS ENDING IN 1963

Age, industry and occupation	Total	Per cent of each group who drew benefits for --		
		One spell of 26 weeks	One spell of 1 to 25 weeks	Two spells or more
All beneficiaries a/	100	10	26	64
AGE				
Under 25 years	100	8	35	57
25 to 34 years	100	9	30	61
35 to 44 years	100	9	26	65
45 to 54 years	100	9	22	69
55 to 64 years	100	11	18	71
65 years or over	100	29	14	57
INDUSTRY				
Manufacturing	100	9	21	70
Durable goods:				
Metals and machinery	100	13	34	53
Other	100	10	29	61
Nondurable goods:				
Apparel	100	4	12	84
Other	100	12	23	65
Contract construction	100	6	23	71
Transportation and public utilities	100	10	30	60
Trade	100	16	33	51
Wholesale	100	16	34	50
Retail	100	16	33	51
Finance, insurance, real estate	100	22	39	39
Services	100	14	30	56
OCCUPATION				
Professional and managerial	100	16	36	48
Clerical and kindred	100	17	38	45
Sales and kindred	100	18	36	46
Service:				
Personal	100	16	29	55
Other	100	26	29	45
Skilled	100	7	24	69
Semi skilled:				
Apparel manufacturing	100	3	10	87
Other industries	100	10	24	66
Unskilled	100	11	23	66

a/ Includes following groups not shown separately: Age unknown; Other nonmanufacturing, under Industry; Agriculture-forestry-fishing and unknown, under Occupation.

Table 18. BENEFICIARIES BY WEEKLY BENEFIT RATE AND SEX
BENEFIT YEARS ENDING IN 1963

Per cent distribution

Benefit rate	Both sexes	Men	Women
Total	100	100	100
$10 to 19	2	1	4
20 to 24	7	2	13
25 to 29	17	8	29
30 to 34	16	11	22
35 to 39	11	10	13
40 to 44	8	8	7
45 to 49	7	8	5
50 (maximum)	33	52	7
Average full-week payment	$37.90	$42.48	$31.89

NOTE: Detail may not add to total because of rounding.

Table 19. AVERAGE FULL-WEEK BENEFIT PAYMENT AND PER CENT OF BENEFICIARIES AT MAXIMUM WEEKLY BENEFIT RATE OF $50, BY SEX AND AGE
BENEFIT YEARS ENDING IN 1963

Age	Average payment			Per cent of each age group at maximum benefit rate of $50		
	Both sexes	Men	Women	Both sexes	Men	Women
All beneficiaries a/	$37.90	$42.48	$31.89	33	52	7
Under 25 years	33.75	36.57	29.84	13	20	3
25 to 34 years	38.45	42.43	32.13	34	49	8
35 to 44 years	38.55	44.34	32.11	38	63	8
45 to 54 years	38.47	44.58	32.54	36	63	8
55 to 64 years	39.18	44.21	32.78	37	60	8
65 years or over	37.97	41.11	29.67	36	48	7

a/ Includes group, not shown separately, in which age is unknown.

Table 20. AVERAGE FULL-WEEK BENEFIT PAYMENT AND PER CENT OF BENEFICIARIES AT MAXIMUM WEEKLY BENEFIT RATE OF $50 BY SEX, INDUSTRY AND OCCUPATION BENEFIT YEARS ENDING IN 1963

Industry and occupation	Average payment			Per cent of each group at maximum benefit rate of $50		
	Both sexes	Men	Women	Both sexes	Men	Women
All beneficiaries a/	$37.90	$42.48	$31.89	33	52	7
INDUSTRY						
Manufacturing	36.48	42.17	32.06	25	49	6
Durable goods:						
Metals and machinery	41.92	44.33	36.23	48	60	13
Other	40.00	41.61	32.00	38	44	4
Nondurable goods:						
Apparel	34.93	42.56	32.29	18	53	6
Other	34.59	40.02	30.49	18	35	4
Contract construction	46.78	47.04	35.94	75	76	20
Transportation & public utilities	43.62	44.64	37.64	60	66	18
Trade	35.19	39.21	30.25	22	33	7
Wholesale	39.04	41.78	35.04	33	45	13
Retail	33.50	37.94	28.44	17	28	4
Finance, insurance, real estate	38.16	39.93	35.20	25	33	14
Services	35.86	39.28	31.73	26	37	12
OCCUPATION						
Professional and managerial	$46.40	$47.43	$43.43	71	77	50
Clerical and kindred	36.16	39.68	34.75	16	30	11
Sales and kindred	35.32	42.76	27.57	29	50	6
Service:						
Personal	31.97	36.45	27.22	16	26	4
Other	33.30	35.18	26.43	10	13	1
Skilled	44.78	46.57	35.87	64	73	16
Semiskilled	36.68	42.32	32.14	24	48	5
Apparel manufacturing	34.98	43.78	32.19	17	57	5
Other industries	38.39	41.82	32.03	31	45	6
Unskilled	35.62	40.49	28.67	25	40	2

a/ Includes following groups not shown separately: Other nonmanufacturing, under Industry; Agriculture-forestry-fishing and unknown, under Occupation.

Table 21. BENEFICIARIES BY BASE-YEAR WEEKS OF WORK AND EARNINGS IN COVERED EMPLOYMENT AND BY SEX, BENEFIT YEARS ENDING IN 1963 AND 1962

Per cent distribution

Weeks of work and earnings in base year	1963 beneficiaries			1962 beneficiaries - Both sexes
	Both sexes	Men	Women	
WEEKS OF WORK				
Total	100	100	100	100
15 to 26 weeks a/	20	19	22	20
27 to 38 weeks	26	26	27	27
39 weeks or more	54	56	51	53
39 to 44 weeks	15	14	16	14
45 to 49 weeks	15	14	16	14
50 to 52 weeks	23	26	20	23
At least 39 weeks b/	1	1	c/	2
EARNINGS				
Total	100	100	100	100
$225 to 999 d/	6	2	10	7
$1,000 to 1,499	12	7	17	12
$1,500 to 1,999	12	8	17	12
$2,000 to 2,999	23	18	30	23
$3,000 to 3,999	16	17	15	16
$4,000 to 5,147	13	17	7	13
$5,148 or over	19	31	3	17
$5,148 to 5,999	7	11	2	6
$6,000 to 7,499	7	11	1	5
$7,500 or over	5	8	c/	4
At least $5,148 b/	1	1	c/	2

a/ Persons with 15-19 weeks of base-year employment were 2.2 per cent of 1963 beneficiaries and 2.6 per cent of 1962 beneficiaries.

b/ Specific figure was not reported.

c/ Less than 0.5 per cent.

d/ Persons with base-year earnings of $225-299 were less than 0.1 per cent of the 1963 and the 1962 beneficiaries.

NOTE: Detail may not add to total because of rounding.

Table 22. PER CENT OF MEN AND WOMEN BENEFICIARIES WHO WORKED FEWER THAN 27 WEEKS OR EARNED LESS THAN $2,000 IN BASE-YEAR COVERED EMPLOYMENT BENEFIT YEARS ENDING IN 1963

Age, industry and occupation	Per cent in each group who had –			
	15 to 26 weeks of work		Earnings under $2,000	
	Men	Women	Men	Women
All beneficiaries a/	19	22	17	44
AGE				
Under 25 years	25	26	35	53
25 to 34 years	18	23	16	46
35 to 44 years	26	21	12	43
45 to 54 years	16	19	11	39
55 to 64 years	16	19	11	40
65 years or over	25	32	27	61
INDUSTRY				
Manufacturing	15	21	16	43
Durable goods:				
Metals and machinery	12	17	11	28
Other	15	21	18	41
Nondurable goods:				
Apparel	16	19	17	43
Other	17	24	22	49
Contract construction	22	21	9	32
Transportation and public utilities	20	16	12	24
Trade	20	24	25	51
Wholesale	17	19	18	34
Retail	21	26	29	58
Finance, insurance, real estate	16	13	23	25
Services	25	27	27	49
OCCUPATION				
Professional and managerial	17	20	6	15
Clerical and kindred	15	17	21	32
Sales and kindred	18	26	17	61
Service:				
Personal	24	31	32	66
Other	21	28	34	64
Skilled	17	21	8	35
Semiskilled:				
Apparel manufacturing	14	18	13	41
Other industries	18	21	18	43
Unskilled	23	28	25	58

a/ Includes following groups not shown separately: Age unknown; Other nonmanufacturing, under Industry; Agriculture-forestry-fishing and unknown, under Occupation.

Table 23. PER CENT OF MEN AND WOMEN BENEFICIARIES WHO HAD 50 TO 52 WEEKS OF WORK AND EARNINGS OF $5,148 OR OVER IN BASE-YEAR COVERED EMPLOYMENT BENEFIT YEARS ENDING IN 1963

Age, industry and occupation	Per cent in each group who had –			
	50 to 52 weeks of work		Earnings of $5,148 or over	
	Men	Women	Men	Women
All beneficiaries a/	26	20	31	3
AGE				
Under 25 years	19	20	8	1
25 to 34 years	28	19	28	4
35 to 44 years	29	21	40	4
45 to 54 years	28	20	40	3
55 to 64 years	26	18	35	3
65 years or over	27	17	28	4
INDUSTRY				
Manufacturing	30	17	32	2
Durable goods:				
Metals and machinery	35	32	43	7
Other	27	30	25	2
Nondurable goods:				
Apparel	18	12	28	2
Other	33	19	25	2
Contract construction	18	33	38	12
Transportation and public utilities	19	34	38	12
Trade	31	25	20	4
Wholesale	36	35	30	8
Retail	28	21	15	2
Finance, insurance, real estate	38	44	22	9
Services	26	22	22	6
OCCUPATION				
Professional and managerial	41	33	57	30
Clerical and kindred	38	37	21	7
Sales and kindred	41	22	35	2
Service:				
Personal	21	17	12	1
Other	31	26	7	-
Skilled	26	11	44	5
Semiskilled:				
Apparel manufacturing	15	11	30	1
Other industries	27	18	25	2
Unskilled	19	15	18	1

a/ Includes following groups not shown separately: Age unknown; Other nonmanufacturing, under Industry; Agriculture-forestry-fishing and unknown, under Occupation.

Table 24. WEEKS OF COVERED EMPLOYMENT IN BASE YEAR IN RELATION TO BASE-YEAR EARNINGS OF BENEFICIARIES, BENEFIT YEARS ENDING IN 1963

Per cent distribution

Earnings in base year	All beneficiaries	Weeks of work in base year		
		15 to 26 weeks	27 to 38 weeks	39 or more weeks
Total	100	20	26	54
$225 to 999	100	85	12	2
$1,000 to 1,499	100	56	37	7
$1,500 to 1,999	100	28	47	25
$2,000 to 2,999	100	16	30	54
$3,000 to 3,999	100	7	27	66
$4,000 to 5,147	100	3	21	76
$5,148 or over	100	1	9	90
$5,148 to 5,999	100	1	13	85
$6,000 to 7,499	100	b/	8	91
$7,500 or over	100	1	6	93
At least $5,148 a/	100	-	-	100

a/ Specific figure was not reported.

b/ Less than 0.5 per cent.

NOTE: Detail may not add to total because of rounding.

Table 25. AVERAGE BENEFIT DURATION IN RELATION TO WEEKS OF WORK AND EARNINGS IN BASE-YEAR COVERED EMPLOYMENT BENEFIT YEARS ENDING IN 1963

Earnings in base year	All beneficiaries	Average number of weeks of benefits received by persons who had base-year employment of--			
		15 to 25 weeks	26 to 30 weeks	31 to 38 weeks	39 or more weeks
Total	14.1	18.0	16.7	14.9	12.0
$225 to 999	17.9	18.1	17.3	16.0	15.2
$1,000 to 1,499	16.7	17.7	16.5	15.2	14.6
$1,500 to 1,999	15.3	18.0	16.4	14.4	13.0
$2,000 to 2,999	14.0	18.5	17.1	14.8	11.9
$3,000 to 3,999	13.7	17.8	16.8	15.5	12.4
$4,000 to 5,147	13.2	16.3	16.4	14.6	12.5
$5,148 or over					
$5,148 to 5,999	11.9	14.9	16.7	14.6	11.4
$6,000 to 7,499	11.1	16.6	16.7	14.0	10.8
$7,500 or over	11.9	14.2	15.1	15.3	11.7
At least $5,148 a/	11.8	-	-	-	11.8

a/ Specific figure was not reported.

Table 26. BENEFICIARIES IN NEW YORK METROPOLITAN AREA BY SEX, AGE, INDUSTRY OCCUPATION AND BENEFIT EXPERIENCE, BENEFIT YEARS ENDING IN 1963

Per cent distribution

Sex, age, industry, occupation and benefit experience	New York City	Nassau-Suffolk	Westchester
Number of beneficiaries a/	451,000	59,000	25,200
SEX—Total	100	100	100
Men	51	64	66
Women	49	36	34
AGE—Total	100	100	100
Under 25 years	15	13	9
25 to 34 years	20	16	18
35 to 44 years	20	27	23
45 to 54 years	21	24	23
55 to 64 years	17	15	20
65 years or over	7	5	7
Unknown	b/	b/	b/
Median age (years)	42.6	42.8	45.0
INDUSTRY—Total	100	100	100
Manufacturing	58	44	44
Durable goods:			
Metals and machinery	7	19	15
Other	2	2	1
Nondurable goods:			
Apparel	31	14	17
Other	19	9	10
Contract construction	8	20	23
Transportation and public utilities	5	4	3
Trade	15	17	14
Wholesale	5	4	4
Retail	10	13	9
Finance, insurance, real estate	3	3	3
Services	10	10	10
Other nonmanufacturing	b/	3	3
OCCUPATION—Total	100	100	100
Professional and managerial	5	7	8
Clerical and kindred	11	13	9
Sales and kindred	3	5	4
Service	7	6	6
Skilled	13	22	20
Semiskilled	36	23	27
Apparel manufacturing	22	11	14
Other industries	13	12	13
Unskilled	21	14	18
Agricultural and unknown	3	10	9
BENEFIT EXPERIENCE			
Weeks of benefits—Total	100	100	100
Less than 6 weeks of benefits	24	36	33
6 to 14 weeks of benefits	30	31	32
15 to 19 weeks of benefits	12	12	12
20 to 25 weeks of benefits	12	9	9
26 weeks (maximum) of benefits	22	12	14
Average number of weeks of benefits	14.1	11.3	11.9
Average full-week benefit payment	$37.18	$40.53	$41.42

a/ Estimated from a 10 per cent sample of new claimants in 1962; figures are rounded to the nearest hundred.

b/ Less than 0.5 per cent. NOTE: Detail may not add to total because of rounding.

Table 27. BENEFICIARIES IN UPSTATE LABOR MARKET AREAS BY SEX, AGE, INDUSTRY OCCUPATION AND BENEFIT EXPERIENCE, BENEFIT YEARS ENDING IN 1963

Per cent distribution

Sex, age, industry, occupation and benefit experience	Albany	Binghamton	Buffalo	Elmira	Rochester	Syracuse	Utica-Rome
Number of beneficiaries a/	20,700	10,600	59,900	3,500	15,900	15,900	12,100
SEX—Total	100	100	100	100	100	100	100
Men	64	56	74	59	56	68	54
Women	36	44	26	41	44	32	46
AGE—Total	100	100	100	100	100	100	100
Under 25 years	17	19	17	12	14	18	17
25 to 34 years	17	18	24	19	20	23	20
35 to 44 years	23	19	25	26	26	23	21
45 to 54 years	21	23	19	23	21	19	25
55 to 64 years	16	16	11	12	10	13	13
65 years or over	6	4	5	6	8	6	5
Unknown	b/	1	b/	-	b/	b/	b/
Median age (years)	41.9	41.7	38.7	41.9	41.0	39.3	41.4
INDUSTRY—Total	100	100	100	100	100	100	100
Manufacturing	37	62	53	53	49	39	57
Durable goods:							
Metals and machinery	12	13	37	38	22	20	28
Other	2	2	2	6	1	3	2
Nondurable goods:							
Apparel	12	1	1	b/	9	1	7
Other	12	46	12	9	17	15	20
Contract construction	21	15	16	19	20	24	15
Transportation and public utilities	3	2	4	2	2	4	3
Trade	20	12	17	19	16	20	13
Wholesale	4	3	4	4	4	5	2
Retail	15	9	13	14	12	15	11
Finance, insurance, real estate	2	2	2	1	3	2	1
Services	10	6	7	6	8	9	8
Other nonmanufacturing	6	2	1	1	2	2	2
OCCUPATION—Total	100	100	100	100	100	100	100
Professional and managerial	4	4	3	2	5	4	2
Clerical and kindred	13	9	10	11	11	9	7
Sales and kindred	4	3	4	6	4	5	4
Service	9	4	8	10	7	10	9
Skilled	19	14	21	21	17	22	16
Semiskilled	24	39	17	29	24	21	30
Apparel manufacturing	9	1	1	-	5	1	5
Other industries	15	38	17	29	19	20	25
Unskilled	19	11	19	21	23	23	16
Agricultural and unknown	8	15	17	1	9	7	16
BENEFIT EXPERIENCE							
Weeks of benefits—Total	100	100	100	100	100	100	100
Less than 6 weeks of benefits	25	50	26	25	30	25	26
6 to 14 weeks of benefits	27	20	22	26	26	25	25
15 to 19 weeks of benefits	12	8	11	10	11	11	14
20 to 25 weeks of benefits	14	7	12	11	11	13	14
26 weeks (maximum) of benefits	22	16	29	28	22	26	20
Average number of weeks of benefits	14.4	10.1	15.2	15.0	13.4	14.9	14.2
Average full-week benefit payment	$38.21	$37.35	$40.73	$37.10	$38.39	$38.97	$36.84

a/ Estimated from a 10 per cent sample of new claimants in 1962; figures are rounded to the nearest hundred.

b/ Less than 0.5 per cent.

NOTE: For full name and geographic coverage of labor market areas, see Technical Notes — Definitions.

Table 28. BENEFIT STATUS AND BENEFIT DENIAL EXPERIENCE OF CLAIMANTS, BY SEX
BENEFIT YEARS ENDING IN 1963

Benefit status and benefit denial experience	Both sexes		Men	Women
	Number a/	Per cent	Number a/	Number a/
Persons who filed original claims in 1962 - Total	1,036,430	100	n.a.	n.a.
BENEFIT STATUS				
Became beneficiaries	803,820	78	458,500	345,320
Did not become beneficiaries	232,610	22	n.a.	n.a.
BENEFIT DENIAL EXPERIENCE				
Persons whose original claim was invalid b/	192,570	19	n.a.	n.a.
Insufficient base-year employment	49,090	5	n.a.	n.a.
Did not return after original claim	73,180	7	n.a.	n.a.
Disqualified	70,300	7	41,310	28,990
Persons who established a benefit year but did not receive benefits	40,040	4	25,130	14,910
Not disqualified during benefit year	36,130	3	22,870	13,260
Disqualified during benefit year	3,910	c/	2,260	1,650
Persons who became beneficiaries	803,820	78	458,500	345,320
Not disqualified during benefit year	614,120	59	363,990	250,130
Disqualified during benefit year	189,700	18	94,510	95,190
Once	141,130	14	71,260	69,870
More than once	48,570	5	23,250	25,320
Number of disqualifications received by --				
All disqualified beneficiaries	259,600		128,370	131,230
Beneficiaries disqualified more than once	118,470		57,110	61,360
Summary:				
Total persons whose original claim was invalid and persons who were disqualified during benefit year	386,180	37	n.a.	n.a.
Total persons who were disqualified at time of original claim or during benefit year	263,910	25	138,080	125,830

a/ Estimated from a 10 per cent sample of new claimants in 1962.
b/ Excludes persons who established a benefit year subsequent to filing a prior invalid original claim.
c/ Less than 0.5 per cent.
n.a. Not available.

NOTE: Detail may not add to total because of rounding.

Table 29. REASONS FOR DISQUALIFICATION AMONG ALL DISQUALIFIED PERSONS, BY SEX
BENEFIT YEARS ENDING IN 1963

Per cent distribution

Type of claimant and reason for disqualification	Both sexes	Men	Women
Persons who were disqualified: Number a/ b/	263,910	138,080	125,830
Per cent	100	100	100
TYPE OF CLAIMANT			
Original claim was invalid c/	27	30	23
Established benefit year but did not receive benefits	1	2	1
Became a beneficiary	72	68	76
REASON			
Unavailability or incapability	51	43	59
Disqualified for part of week d/	23	21	24
Disqualified for one week or more	28	22	35
Illness	7	7	7
Pregnancy	2	-	4
Other	19	15	24
Voluntary quit	20	20	19
Job refusal	2	2	3
Misconduct	1	2	e/
Industrial controversy	7	11	2
Excess employment in week of claim	5	6	4
Failed to report as required	14	16	12
Disqualified for part of week d/	11	12	10
Disqualified for one week or more	3	4	2

a/ Estimated from a 10 per cent sample of new claimants in 1962.

b/ Excludes claimants who were nonentitled because they lacked sufficient base-year employment or did not return to local office after original claim filing.

c/ Excludes persons who established a benefit year subsequent to filing an invalid original claim. They are classified by their later status.

d/ Applicable only to claimants (beneficiaries and nonbeneficiaries) who established a benefit year.

e/ Less than 0.5 per cent.

NOTE: Detail may not add to total because of rounding.

Table 30. REASONS FOR DISQUALIFICATION OF CLAIMANTS AT ORIGINAL CLAIM FILING OR DURING BENEFIT YEAR, BY SEX, BENEFIT YEARS ENDING IN 1963

Per cent distribution

Reason	Claimant disqualified at time of original claim a/ b/			Beneficiaries disqualified during benefit year a/ c/		
	Both sexes	Men	Women	Both sexes	Men	Women
Persons who were disqualified: Number a/	70,300	41,300	29,000	189,700	94,500	95,200
Per cent	100	100	100	100	100	100
Unavailability or incapability	16	10	26	64	59	70
Disqualified for part of week	d/	d/	d/	31	31	32
Disqualified for one week or more	d/	d/	d/	33	28	38
Illness	3	3	3	9	9	9
Pregnancy	2	-	5	2	-	4
Other	11	7	18	22	18	26
Voluntary quit	57	52	65	6	6	5
Job refusal	1	1	1	3	2	4
Misconduct	3	5	1	e/	e/	e/
Industrial controversy	19	28	5	2	4	1
Excess employment in week of claim	3	4	2	6	7	5
Failed to report as required	d/	d/	d/	19	23	16
Disqualified for part of week				15	17	13
Disqualified for one week or more				4	6	3

a/ Estimated from a 10 per cent sample of new claimants in 1962.

b/ Excludes claimants who were nonentitled because they lacked sufficient base-year employment or did not return to local office after original claim filing.

c/ Excludes 3,910 persons who were disqualified after establishing a benefit year but who did not receive any benefits during the benefit year.

d/ Applicable to disqualified beneficiaries only.

e/ Less than 0.5 per cent.

NOTE: Detail may not add to total because of rounding.

Table 31. SEX, AGE, INDUSTRY AND OCCUPATION OF DISQUALIFIED BENEFICIARIES BY REASON FOR DISQUALIFICATION BENEFIT YEARS ENDING IN 1963

Per cent distribution

Sex, age, industry and occupation	Total disqualified	Beneficiaries disqualified for one week or more							Disqualified for part of week b/
		Unavailability and incapability	Voluntary quit	Job refusal	Misconduct	Industrial controversy	Excess employment	Failed to report	
Number of persons a/	189,700	62,630	10,740	5,440	410 c/	4,580	10,990	8,080	86,830
SEX - Total	100	100	100	100		100	100	100	100
Men	50	42	56	33		80	58	64	52
Women	50	58	44	67		20	42	36	48
AGE - Total	100	100	100	100		100	100	100	100
Under 45 years	63	63	74	73		42	55	65	62
Under 25 years	22	25	29	30		6	12	21	20
25 to 34 years	21	21	24	22		12	20	24	21
35 to 44 years	19	17	21	21		24	23	19	20
45 years or over	37	37	26	27		58	45	35	38
45 to 54 years	18	15	17	17		33	23	17	20
55 to 64 years	13	13	7	8		22	19	13	13
65 years or over	6	9	2	3		3	3	5	5
Median age (years)	38.6	37.5	33.8	34.3		47.5	53.0	37.4	39.1
INDUSTRY - Total	100	100	100	100		100	100	100	100
Manufacturing	52	47	51	46		61	65	42	55
Apparel	21	17	16	19		9	18	16	27
Metals and machinery	10	9	15	10		22	16	7	9
Other	20	21	20	16		30	31	19	19
Nonmanufacturing	48	53	49	54		39	35	58	45
Contract construction	9	7	6	4		8	9	15	10
Transportation and public util.	5	5	6	2		26	3	6	5
Wholesale and retail trade	18	22	21	27		3	13	18	16
Finance, insurance, real estate	4	5	4	6		d/	1	5	3
Service	11	13	11	14		3	7	13	11
Other nonmanufacturing	1	1	2	1		-	2	1	1
OCCUPATION - Total	100	100	100	100		100	100	100	100
White collar and service	33	43	36	45		11	17	31	29
Professional and managerial	5	5	3	1		1	4	9	5
Clerical and kindred	15	22	20	26		5	5	9	11
Sales and kindred	4	5	3	8		1	3	4	4
Service	9	10	10	10		4	6	9	9
Production and manual	62	53	59	52		74	73	63	67
Skilled	12	10	10	7		16	16	15	12
Semiskilled:									
Apparel industry	15	11	12	15		5	12	9	20
Other industries	14	12	16	13		17	23	15	14
Unskilled	21	20	21	17		35	22	23	20
Agricultural and unknown	5	4	6	3		15	10	6	4

a/ Estimated from a 10 per cent sample of new claimants in 1962.
b/ Because of unavailability or failure to report as required.
c/ Distribution not shown because number in sample is too small.
d/ Less than 0.5 per cent.

NOTE: Detail may not add to total because of rounding.

Table 32. DISQUALIFICATION RATES, BY SEX, AGE, INDUSTRY AND OCCUPATION
BENEFIT YEARS ENDING IN 1963

Sex, age, industry and occupation	Rate for claimants disqualified at time of original claim a/	Rate for beneficiaries disqualified during benefit year b/
Total c/	8%	24%
Men	8	21
Women	7	28
AGE		
Under 25 years	13	34
25 to 34 years	9	25
35 to 44 years	7	21
45 to 54 years	5	20
55 to 64 years	5	20
65 years or over	7	22
INDUSTRY		
Manufacturing	6	23
Apparel	2	24
Metals and machinery	8	20
Other	9	24
Contract construction	2	16
Transportation & public utilities	13	27
Wholesale and retail trade	11	27
Finance, insurance, real estate	21	30
Services	9	28
OCCUPATION		
Professional and managerial	8	22
Clerical and kindred	17	34
Sales and kindred	11	28
Service	12	28
Skilled	6	18
Semiskilled	4	23
Apparel industry	1	23
Other industries	6	22
Unskilled	5	24

a/ Claimants disqualified at original claim date as per cent of new claimants. Excluded from computation of rate are persons whose original claims were invalid because they lacked sufficient base-year employment for entitlement or because they did not return to local office after original claim filing. This exclusion was made in order to relate disqualified claimants to claimants who were potentially subject to disqualification.

b/ Disqualified beneficiaries as per cent of all beneficiaries.

c/ Includes groups not shown separately: Age unknown; Other nonmanufacturing, under Industry; Agricultural and unknown under Occupation.

Table 33. BENEFIT DURATION OF ALL BENEFICIARIES, NONDISQUALIFIED BENEFICIARIES AND DISQUALIFIED BENEFICIARIES BY SEX AND REASON FOR DISQUALIFICATION BENEFIT YEARS ENDING IN 1963

Per cent distribution

Benefit status, sex and reason for disqualification	Per cent distribution -- Number of weeks of benefits						Average duration of benefits
	Total	Less than 6	6-14	15-19	20-25	26 maximum	
All beneficiaries — Total	100	26	28	12	12	22	14.1
Men	100	26	28	12	12	22	14.0
Women	100	24	30	12	11	23	14.2
Nondisqualified beneficiaries — Total	100	28	28	11	11	22	13.8
Men	100	29	28	11	11	22	13.6
Women	100	26	29	11	10	23	13.9
Disqualified beneficiaries — Total	100	19	30	14	15	22	15.2
Men	100	19	28	14	16	23	15.6
Women	100	19	32	14	14	20	14.9
Disqualified for —							
Unavailability or incapability a/	100	13	29	16	17	26	16.6
Illness	(						
Pregnancy	(	Not available					
Other	(						
Voluntary quit	100	35	39	11	10	5	10.2
Job refusal	100	29	37	16	12	6	11.6
Misconduct	b/						
Industrial controversy	100	45	23	10	10	12	10.5
Excess employment in week of claim	100	28	38	13	11	11	12.0
Failure to report a/	100	16	28	14	17	25	16.3
Part-week disqualification because of unavailability or failure to report	100	18	29	14	16	23	15.6

a/ Excludes disqualifications for part of week.

b/ Distribution not shown because number in sample is too small.

NOTE: Detail may not add to total because of rounding.

TECHNICAL NOTES

Group Studied

This report is based on a sample of approximately 10 per cent of all persons, including out-of-state residents, who filed one or more original claims for benefits under the New York State Unemployment Insurance Law during 1962. Persons living in New York State whose benefits were charged to the Fund of another State and persons who filed claims exclusively under the Federal unemployment compensation programs were excluded from the sample.

The sample consists of claimants whose social security numbers end in the range 2000-2999. The total sample population divides into three groups with respect to receipt of benefits: (1) *beneficiaries* – workers who filed a valid original claim in 1962, established a benefit year ending in 1963 and received at least one benefit payment for either a full or a partial week of unemployment; (2) *entitled nonbeneficiaries* – those who met the statutory requirements for entitlement to benefits but who received no payment because their claim duration did not extend beyond the one-week waiting period; and (3) *nonentitled claimants* – those who never received a benefit payment because they failed to meet one or more of the statutory requirements for entitlement to benefits.

Each new claimant is classified into one of the categories above according to the final status he reached with respect to a benefit year.

Benefit Provisions of U.I. Law

Major provisions applicable to new claimants in 1962 under the regular State unemployment insurance program were:

1. An individual benefit year consisting of the 52-week period following the week of filing a valid original claim.

2. An individual base year consisting of the 52-week period preceding the week of filing an original claim. Under certain conditions, entitlement to benefits is based on employment in the two-year period (104 weeks) preceding the filing of an original claim.

3. A one-week waiting period (four effective days) for each benefit year.

4. Weekly benefit amount, ranging from a minimum of $10 to a maximum of $50, based on claimant's average weekly wages in his base year.

5. Maximum duration of benefits of 26 weeks (104 effective days) in a benefit year for all entitled claimants. (Extension of benefit duration to 39 weeks was provided under a temporary Federal program; experience under this program is not included in this report.)

Major entitlement provisions are described in section, Definitions of Terms, under *Claim, valid original.*

Industrial Classification

Industry data in the reports for benefit years ending in 1959 and later are classified according to the *Standard Industrial Classification Manual* (SIC), 1957 edition, Office of Statistical Standards, U.S. Bureau of the Budget. In earlier reports, employment in manufacturing industries was classified according to the 1945 edition of the SIC and employment in nonmanufacturing industries, according to the *Industrial Classification Code,* 1942 edition, of the Social Security Administration, Federal Security Agency. The change to the new classification system affects to a limited extent historical comparison of industry data.

Grouping of Manufacturing Industries

Manufacturing is subdivided into durable goods and nondurable goods. Within these subdivisions, data for the 21 two-digit manufacturing industry groups defined in the SIC are combined into four groups in this report. Industry titles of the four groups and the SIC groups they comprise are as follows.

Durable Goods

Metals and machinery. Ordnance and accessories; primary metal industries; fabricated metal products; machinery (except electrical); elec-

trical machinery, equipment and supplies; transportation equipment; professional, scientific and controlling instruments, photographic and optical goods, watches and clocks.

Other durable goods. Lumber and wood products (except furniture); furniture and fixtures; stone, clay and glass products.

Nondurable Goods

Apparel. Apparel and other finished products made from fabrics and similar materials.

Other nondurable goods. Food and kindred products; tobacco manufactures; textile mill products; paper and allied products; printing, publishing and allied industries; chemicals and allied products; products of petroleum and coal; rubber products; leather and leather products; miscellaneous manufacturing industries.

Grouping of Nonmanufacturing Industries

Tables in this report give data for each of the major industry divisions defined in the SIC except for agriculture, forestry and fisheries, mining and government. These industry divisions and establishments not elsewhere classified are grouped under *other nonmanufacturing.*

The title of one industry division is abriged for convenience in this report: *Transportation and public utilities* is used for transportation, communication, electric, gas and sanitary services.

Occupational Classification

Occupations are classified according to the *Dictionary of Occupational Titles* (DOT), 1949, prepared by the Bureau of Employment Security, U.S. Department of Labor.

Tables in this report give data for the major occupational groups except agriculture, forestry, fishing. This occupational group is included with occupation unknown in a combined group.

Because of the large number of claimants from apparel manufacturing, semiskilled is subdivided into semiskilled-apparel manufacturing and semiskilled-other industries.

DEFINITIONS OF TERMS

Base Year or period. The 52 weeks prior to the week of filing an original claim. "Week" is defined as Monday through Sunday.

Beneficiary. An individual who filed a valid original claim, established a benefit year, and received at least one benefit payment for either a full or partial week of unemployment during his benefit year. In this report, 1963 beneficiaries are beneficiaries whose benefit years ended in 1963.

Benefit payment, average full-week. Total amount of benefits paid to all beneficiaries divided by total number of full weeks of benefits (partial weeks are converted to equivalent full weeks of four effective days each).

Benefit rate, weekly. Amount of benefits to which a claimant is entitled for a full week of unemployment (four effective days), depending on his average weekly wage during base year. Benefit rates ranged from $10 to $50 a week for claimants with benefit years ending in 1963.

Benefit year. The 52 weeks beginning with the Monday following the filing of a valid original claim. Thus, 1963 benefit years referred to in this report are 52-week periods beginning in 1962 and ending in 1963.

Benefits, average duration of. Total number of full weeks of benefits divided by number of beneficiaries (partial weeks are converted to equivalent full weeks of four effective days each). Waiting period, for which benefits are not payable, is not included.

Benefits, weeks of. Number of weeks of unemployment in a benefit year for which benefits are paid to a claimant (partial weeks are converted to equivalent full weeks of four effective days each). Maximum duration is 26 weeks.

Claim. Application for unemployment insurance benefits.

Claim, additional. As used in this report, second or subsequent claim filed during a claimant's established benefit year after his preceding claim has lapsed by the intervention of a week or more for which he was not entitled to benefits.

Claim, invalid. Claim that does not meet one or more of the conditions for a valid original claim.

Claim, new or original. Claim filed by claimant for the purpose of establishing a benefit year.

Claim, valid original. Original claim filed by a claimant who meets the following conditions: (a) is able to work and is available for work; (b) is not subject to any disqualification or suspension; (c) his previously established benefit year, if any, has expired; (d) has had at least one effective day of unemployment in the week in which he files his claim; (e) has had base-year covered employment in at least 20 weeks with average weekly earnings of $15 or, lacking that, has had base-year covered employment in at least 15 weeks with average weekly earnings of $15 *and,* in the two years (104 weeks) preceding the filing of an original claim, has had covered employment in at least 40 weeks with average weekly earnings of $15.

Claimant or claimant, new. As used in this report, a worker who filed an original claim for the purpose of establishing a benefit year.

Claimant, entitled. Claimant who filed a valid original claim and established a benefit year, during which he was qualified to receive unemployment insurance benefits.

Claimant, nonentitled. Claimant who filed one or more original claims but who failed to meet all the requirements for a valid original claim. Claimant who filed a valid original claim after filing an invalid one is not included in the count of nonentitled claimants.

Denial of benefits. Suspension or withholding of benefits to claimants for all reasons (monetary and nonmonetary), either at the time of their original claim or during their benefit year.

Disqualification. As used in this report, all formal rulings by the unemployment insurance offices that deny benefits to claimants in connection with original claims or with claims filed after the start of a benefit year, with the following exception: claims ruled invalid because of insufficient base-year employment or earnings to establish a benefit year are not included. The term "disqualification" excludes also benefit claims that lapsed automatically (i.e., without a formal ruling) because the claimant did not return to the unemployment insurance office after filing an original claim. Disqualifications of claimants are made for one or more of the following reasons: unavailability for or incapability of employment, voluntary separation from employment without good cause (including voluntary quitting because of marriage or to follow spouse to another locality), refusal of suitable employment, discharge for misconduct, loss of employment owing to industrial controversy, excess earnings or employment in week of claim or failure to report as required. A part-week disqualification refers to a claimant who has received benefits or employment for part of a week and has been denied benefits for part of the same week.

Disqualified beneficiary. Individual whose benefit payments were interrupted or terminated during his benefit year because of a disqualification. A beneficiary disqualified more than once in the benefit year is classified according to the first or principal reason for disqualification. (One table in this report, however, provides a distribution of all disqualifications by reason for disqualification.)

Disqualified claimant. Claimant who was disqualified at original claim filing or during his benefit year.

Earnings in base year. Amount earned by claimant in employment covered under the New York State Unemployment Insurance Law during the 52-week period preceding the filing of his original claim, except that weeks in which claimant earned less than $15 are generally not included in the earnings total.

Effective day. Each full day of unemployment (including Saturday and Sunday) after the third day of unemployment in a week during which claimant did not earn more than the maximum allowed ($50 for claimants with benefit years ending in 1963). "Week" is defined as Monday through Sunday. Benefits are payable for a maximum of 104 effective days in a benefit year. Each unit of four effective days is counted as a week of unemployment.

Employment, covered. Employment covered by the New York State Unemployment Insurance Law. Activities excluded from covered employment are: self-employment, employment in agriculture (with a few exceptions) and interstate railroads; also, except under voluntary election of coverage, employment in nonprofit organizations and local gov-

ernmental bodies. Coverage was extended in 1960 to firms with one employee, except that employers of domestic workers were covered only when they employed four or more such workers. (In 1966 coverage of domestic workers was extended.)

Employees of New York State and some local governmental bodies are covered by the New York State Law, but Federal employees are not (they are covered under the Federal unemployment compensation law).

Employment, nonagricultural. Estimated number of nonfarm wage and salary workers who received pay for any part of the pay period including the 12th of the month. Persons on paid sick leave, paid holiday or paid vacation are included, but those on leave without pay for the entire payroll period are excluded. Persons on the payroll of more than one establishment during the period are counted each time reported. Proprietors, self-employed persons, unpaid family workers, domestic workers and personnel of the armed forces are excluded.

Entitlement to benefits. Meeting the requirements prescribed by statute for a valid original claim.

Exhaustion of benefit rights. Receipt of maximum amount of benefits to which claimant is entitled in his benefit year under the State law. The maximum of 104 effective days is equivalent to 26 full-week payments or the same amount of money in partial-week payments.

Industry. Industrial classification assigned to a claimant, usually made in accordance with the industry of his last base-year employer. In some cases the occupational classification assigned relates to a different period of employment; consequently, anomalies may arise in cross-tabulation of industrial and occupational classifications. (See also *Industrial classification*, page 36.)

Labor market area. Geographic area in which there is a major concentration of employment and economic activity. The ten major areas in New York State, which contain about 85 per cent of claimants in the State, were defined as follows:

Albany-Schenectady-Troy. Albany, Rensselaer, Saratoga and Schenectady counties.
Binghamton-Endicott-Johnson City. Broome County. 1/
Buffalo. Erie and Niagara counties.
Elmira. Chemung County
Nassau-Suffolk. Nassau and Suffolk counties.
New York City. Bronx, Kings, New York, Queens and Richmond counties.
Rochester. Monroe County. 1/
Syracuse. Madison, Onondaga and Oswego counties.
Utica-Rome-Herkimer-Little Falls. Herkimer and Oneida counties.
Westchester. Westchester County.

Nonbeneficiary, entitled. Claimant who met the statutory requirements for entitlement to benefits but who received no benefits because his claim duration did not extend beyond the one-week waiting period.

Nonbeneficiary, nonentitled. Same as *Claimant, nonentitled.*

Occupation. Occupational classification assigned to claimant, usually based on his recent work experience or usual work activity, education and training. In some cases the industrial classification assigned relates to a different period of employment, consequently, anomalies may arise in cross tabulation of occupational and industrial classifications. (See also *Occupational classification*, page 37.

Registered unemployment. Number of persons in New York State applying for benefits in mid-week of the month under the New York unemployment insurance program and the Federally financed programs covering civilian employees of the Federal government and ex-servicemen.

Unemployment, duration of or length of. As used in this report, same as *Benefits, weeks of.*

Unemployment, partial. A week (Monday through Sunday) during which claimant had from one to three effective days of unemployment.

Unemployment, spell of. Single continuous period of unemployment during which a beneficiary received benefit payments. (Number of spells shown in this report is an overstatement because it is based on a count of original and additional claims, which do not always represent the start of a new spell of unemployment.)

Unemployment, week of. Four effective days of unemployment.

1/ Area coverage was extended, effective January 1965.

Waiting period. Period of four effective days of unemployment at beginning of each benefit year for which entitled claimant receives no benefits. The days do not have to be within a single week, but must be accumulated before any effective day is credited for benefit payment.

Week, partial. Same as *Unemployment, partial.*

Weeks of work in base year. Weeks in which claimant worked in employment covered under the New York State Unemployment Insurance Law during the 52-week period preceding the filing of his original claim. Any week (Monday through Sunday) in which claimant was employed in at least one day is counted as a "week of work," except that weeks in which claimant earned less than $15 are usually not included.

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State Plan Inventory. Section 3-A, Projections of Employment for the Year 1980.

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Arkansas Univ., Fayetteville. Dept. of Agricultural Economics and Rural Sociology
Arkansas State Housing and Home Finance Agency, Little Rock
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*EMPLOYMENT PROJECTIONS; *INDUSTRY; *EMPLOYMENT TRENDS; EMPLOYMENT PATTERNS; *STATE SURVEYS
ARKANSAS

Two methods and three data sources were used to project employment in Arkansas for the year 1980. Data were taken from census reports, Arkansas Employment Security Division publications, and National Planning Association projections for the United States and Arkansas. First, the historical trend technique was used to project total agricultural and non-agricultural employment, and to determine projected employment in individual non-agricultural industries. This group of projections assumed a rate of employment growth below that expected for the nation as a whole for the period. The second method involved measuring and projecting individual industry and total employment growth rates under the assumption that the Arkansas growth rates would approximate those expected for the nation as a whole through 1980. Presented separately according to the method used, the tabular data show, for both 1960 and 1980, several aspects of employment: (1) employment by industry and percent distribution, showing Arkansas as a percent of the United States,, (2) employment diversification, (3) diversification of manufacturing employment, and (4) employment by major industry group by region. (ET)

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STATE PLAN INVENTORY

SECTION 3-A

PROJECTIONS OF EMPLOYMENT FOR THE YEAR 1980

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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Prepared by

Industrial Research and Extension Center
College of Business Administration
University of Arkansas
Little Rock

and

Department of Agricultural Economics and Rural Sociology
Division of Agriculture
University of Arkansas
Fayetteville

for

Arkansas Planning Commission

April, 1964

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VT004962

LIST OF TABLES

Table		Page
3-A.1	Employment by Industry, and Percent Distribution, Arkansas, Showing Arkansas as a Percent of the United States, 1960 and Projected (Series I) 1980 . . .	6
3-A.2	Employment by Industry, and Percent Distribution, Arkansas, Showing Arkansas as a Percent of the United States, 1960 and Projected (Series II) 1980 . .	8
3-A.3	Employment Diversification, Arkansas, 1960 and Projected (Series I) 1980	10
3-A.4	Employment Diversification, Arkansas, 1960 and Projected (Series II) 1980	11
3-A.5	Employment Diversification, United States, 1960 and Projected 1980	12
3-A.6	Diversification of Manufacturing Employment, Arkansas, 1960 and Projected (Series I) 1980	13
3-A.7	Diversification of Manufacturing Employment, Arkansas, 1960 and Projected (Series II) 1980	15
3-A.8	Diversification of Manufacturing Employment, United States, 1960 and Projected 1980	17
3-A.9	Employment by Major Industry Groups, Arkansas, by Region, 1960 and Projected (Series I) 1980	19
3-A.10	Employment by Major Industry Groups, Arkansas, by Region, 1960 and Projected (Series II) 1980	21

Methodology

Two methods were utilized to project employment in Arkansas to 1980. First the historical trend technique (Series I) was used and modified where appropriate, to project both agricultural and non-agricultural employment, and to determine projected employment in individual non-agricultural industries. The total of these individual projections was then compared to the total non-agricultural employment projection, and where necessary, adjustment was made in the individual industry projections especially in the manufacturing sector. This group of projections assumes a rate of growth that is somewhat below that expected for the United States as a whole for this period.

The second procedure involved measuring and projecting the growth rate of an industry in Arkansas relative to that projected for the same industry at the national level (Series II). Here again, individual non-agricultural industries were treated separately, and thereafter aggregated and compared to the projected total for all non-agricultural employment, the objective being to derive from the two sets of data a single projection. This second set of projections represents growth of total employment in Arkansas at a rate that approximates that expected for the nation through 1980.

Similar methods were used to project employment in each region, except that non-agricultural employment was not disaggregated, and agricultural employment was given special allocative treatment based on historical decline in number of small farms, changes in cotton technology, and other pertinent influences. In addition, the regional employment projections for manufacturing employment,

non-agricultural non-manufacturing employment, and agricultural employment based upon the individual growth rates among the separate regions were reconciled to be consistent with the state totals.

It is not possible to make statements of probability regarding both the Series I and Series II projections except to say that they are likely levels of employment if the underlying assumptions continue to be valid. Periodic study of the actual future situation as compared with that which is assumed will be necessary if planning activities based upon these projections are to remain realistic.

Data Sources

The data for providing an annual historical picture for the state by industry sector employment and for the regions by manufacturing and non-agricultural non-manufacturing are those published by the Arkansas Employment Security Division. The Census of Population data provided more detailed information on employment within the regions and information for relating state employment figures to certain demographic characteristics of the population. Data from both of these sources were analyzed and related to the National Planning Association projections for the United States and Arkansas.

Assumptions

In constructing the industry projections several basic assumptions were made:

1. It was assumed that there would be no significant natural calamities;

2. The present major social institutions would continue to be the dominant behavioral influences;

3. There would be no major war; and

4. No major economic depression would occur.

In addition to the basic assumptions, it was assumed that certain state trends would continue into the future and that certain trends would change in the future.

The state trends that are expected to continue are as follows:

1. Movement toward the United States distribution of employment by industry, age group, and sex;

2. Existing types of manufacturing industries will continue expanding or locating in Arkansas;

3. Advances in cotton production technology will continue to be incorporated and extended at approximately the same rate as in the recent past; and

4. Total personal income will increase in the future at about the same rate as in the last several years.

The state trends that are expected to change are as follows:

1. Some Arkansas manufacturing industries which enjoy a real cost or locational advantage will increase more rapidly than is true for the nation as a whole;

2. State labor force participation rates by color and sex will rise toward the 1960 United States average;

3. The occupational mix of Arkansas will change. There will be relatively more skilled workers than at present, but Arkansas will continue to lag behind the pattern of the occupational mix for the nation.

4. Out-migration will diminish substantially from that which took place during the 1950-1960 decade;

5. The rate of decline in the number of small farms will lessen over the twenty-year span; and

6. Unemployment will decline reaching a level of approximately 5 percent by 1980.

Presentation of Projections. Employment growth in Arkansas was presented in the written and tabular material of Sections 3 and 7 of this report. Between 1940 and 1960 there were large agricultural employment decreases, substantial non-agricultural employment increases, and in some industries, very rapid employment increases.

Tables 3-A.1 and 3-A.2 show that these trends in employment are likely to continue into the future, although the rate of change is expected to decline from 1960 to 1980. The lower projected employment (Series I) for 1980 is 736,800, and the higher projected employment (Series II) for 1980 is 811,900. As was mentioned earlier, the lower employment figures represent a somewhat less than proportional growth for the state compared to that expected for the nation through 1980; the higher figure represents an expectation of employment growth that will keep Arkansas's proportion of national employment nearly the same in 1980 as it was in 1960.

Tables 3-A.3 through 3-A.8 show the Arkansas employment pattern becoming more specialized in manufacturing, and less

specialized in agriculture. Manufacturing shows increased diversification, but with the exception of the electrical machinery industry, the state's manufacturing will likely be dominated by those industries that have historically been the principal employers.

Series I and II employment projections for the regions of the state are presented in Tables 3-A.9 and 3-A.10, and show the expected employment for major industry groups and the change in relative importance of these industry groups among these regions.

TABLE 3-A.1

EMPLOYMENT BY INDUSTRY, AND PERCENT DISTRIBUTION, ARKANSAS, SHOWING ARKANSAS AS A PERCENT OF THE UNITED STATES, 1960 AND PROJECTED (SERIES I) 1980

Industry	Employment		Percent Distribution		Arkansas as a Percent of the United States	
	1960	Series I 1980	1960	Series I 1980	1960	Series I 1980
Agriculture, forestry and fisheries	100,200	58,700	17.7	8.0	2.304	1.832
Nonagricultural	450,388	651,070	79.7	88.3	0.781	0.698
Mining	4,848	3,530	0.9	0.5	0.741	0.503
Construction	36,464	42,860	6.4	5.8	0.956	0.639
Manufacturing	113,513	202,770	20.1	27.5	0.648	0.879
Durable goods	60,114	112,850	10.6	15.3	0.612	0.791
Lumber and furniture and wood products	36,246	34,510	6.4	4.7	3.396	3.103
Lumber and wood products (except furniture)	29,690	20,960	5.2	2.9	4.299	3.592
Furniture and fixtures	6,556	13,550	1.2	1.8	1.740	2.563
Primary metal industry	2,473	2,060	0.4	0.3	0.202	0.143
Fabricated metal industry	3,304	12,750	0.6	1.7	0.256	0.858
Machinery, except electrical	2,850	12,350	0.5	1.7	0.182	0.525
Electrical machinery	4,453	28,900	0.8	3.9	0.299	0.881
Transportation equipment	2,196	3,140	0.4	0.4	0.121	0.114
Other durable goods	8,592	19,140	1.5	2.6	0.627	1.035
Stone, clay and glass products	4,002	5,820	0.7	0.8	0.667	0.805
Instruments and related products	1,835	1,900	0.3	0.3	0.510	0.279
Miscellaneous manufacturing industries	2,755	11,420	0.5	1.5	0.671	2.563
Nondurable goods	53,399	89,920	9.5	12.2	0.695	1.024
Food and kindred products	17,637	25,800	3.1	3.5	0.968	1.377
Textile mill products	2,156	2,830	0.4	0.4	0.226	0.373
Apparel and finished products	8,299	19,190	1.5	2.6	0.716	1.333
Printing, publishing, and allied products	5,340	7,640	1.0	1.0	0.468	0.539
Chemicals and allied products	5,244	6,170	0.9	0.9	0.607	0.469

- continued -

TABLE 3-A.1
EMPLOYMENT BY INDUSTRY, AND PERCENT DISTRIBUTION, ARKANSAS, SHOWING ARKANSAS AS A PERCENT OF THE UNITED STATES, 1960 AND PROJECTED (SERIES I) 1980 -(Continued)

Industry	Employment		Percent Distribution		Arkansas as a Percent of the United States	
	1960	Series I 1980	1960	Series I 1980	1960	Series I 1980
Other nondurable goods	14,723	28,290	2.6	3.8	0.845	1.428
Tobacco products	62		(a)		0.072	
Paper and allied products	7,095	14,000	1.3	1.9	1.224	1.617
Petroleum and coal products	1,625	1,620	0.3	0.2	0.576	0.847
Rubber and miscellaneous plastic products	1,309	4,310	0.2	0.6	0.338	0.852
Leather and leather products	4,632	8,360	0.8	1.1	1.334	2.350
Transportation, communications, and public utilities	34,880	32,510	6.2	4.4	0.782	0.537
Wholesale and retail trade	103,820	135,700	18.4	18.4	0.880	0.672
Finance, insurance and real estate	15,266	32,450	2.7	4.4	0.567	0.684
Services	98,362	136,400	17.4	18.5	0.893	0.626
Government	43,235	64,850	7.6	8.8	0.753	0.649
Industry not reported	14,903	27,060	2.6	3.7	0.571	1.030
Total	565,491	736,830	100.0	100.0	0.875	0.744

[a]Less than 0.1 percent.

Sources: 1960 - U.S. Department of Commerce, Bureau of the Census, Census of Population, 1960: Detailed Characteristics, Arkansas, Part 5, Vol. 1 (Washington: Government Printing Office), Table 126, p. 5-358 and 5-359; and 1980 - Industrial Research and Extension Center, College of Business Administration, University of Arkansas, Little Rock.

TABLE 3-A.2

EMPLOYMENT BY INDUSTRY, AND PERCENT DISTRIBUTION, ARKANSAS, SHOWING ARKANSAS AS A PERCENT OF THE UNITED STATES, 1960 AND PROJECTED (SERIES II) 1980

Industry	Employment 1960	Employment Series II 1980	Percent Distribution 1960	Percent Distribution Series II 1980	Arkansas as a Percent of the United States 1960	Arkansas as a Percent of the United States Series II 1980
Agriculture, forestry and fisheries	100,200	65,800	17.7	8.1	2.304	2.054
Nonagricultural	450,388	712,750	79.7	87.8	0.781	0.764
Mining	4,848	5,570	0.9	0.7	0.741	0.793
Construction	36,464	44,850	6.4	5.5	0.956	0.669
Manufacturing	113,513	225,030	20.1	27.7	0.648	0.976
Durable goods	60,114	125,570	10.6	15.5	0.612	0.880
Lumber and furniture and wood products	36,246	41,450	6.4	5.1	3.396	3.728
Lumber and wood products (except furniture)	29,690	24,960	5.2	3.1	4.299	4.279
Furniture and fixtures	6,556	16,490	1.2	2.0	1.740	3.120
Primary metal industry	2,473	2,370	0.4	0.3	0.202	0.164
Fabricated metal industry	3,304	13,370	0.6	1.6	0.256	0.900
Machinery, except electrical	2,850	12,620	0.5	1.6	0.182	0.536
Electrical machinery	4,453	29,970	0.8	3.7	0.299	0.914
Transportation equipment	2,196	5,550	0.4	0.7	0.121	0.202
Other durable goods	8,592	20,240	1.5	2.5	0.627	1.095
Stone, clay and glass products	4,002	6,390	0.7	0.8	0.667	0.884
Instruments and related products	1,835	3,020	0.3	0.4	0.510	0.444
Miscellaneous manufacturing industry	2,755	10,830	0.5	1.3	0.671	2.430
Nondurable goods	53,399	99,460	9.5	12.2	0.695	1.132
Food and kindred products	17,637	27,550	3.1	3.4	0.968	1.471
Textile mill products	2,156	2,940	0.4	0.4	0.226	0.387
Apparel and finished products	8,299	21,950	1.5	2.7	0.716	1.525
Printing, publishing and allied products	5,340	6,950	1.0	0.8	0.468	0.490
Chemicals and allied products	5,244	8,120	0.9	1.0	0.607	0.618

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TABLE 3-A.2
EMPLOYMENT BY INDUSTRY, AND PERCENT DISTRIBUTION, ARKANSAS, SHOWING ARKANSAS AS A PERCENT OF THE UNITED STATES, 1960 AND PROJECTED (SERIES II) 1980 - (Continued)

Industry	Employment		Percent Distribution		Arkansas as a Percent of the United States	
	1960	Series II 1980	1960	Series II 1980	1960	Series II 1980
Other nondurable goods	14,723	31,950	2.6	3.9	0.845	1.613
Tobacco products	62		(a)		0.072	
Paper and allied products	7,095	15,290	1.3	1.9	1.224	1.766
Petroleum and coal products	1,625	2,540	0.3	0.3	0.576	1.327
Rubber and miscellaneous plastic products	1,309	5,550	0.2	0.7	0.338	1.097
Leather and leather products	4,632	8,570	0.8	1.0	1.334	2.409
Transportation, communications and public utilities	34,880	40,230	6.2	5.0	0.782	0.664
Wholesale and retail trade	103,820	146,070	18.4	18.0	0.880	0.723
Finance, insurance and real estate	15,266	32,270	2.7	4.0	0.567	0.680
Services	98,362	146,100	17.4	18.0	0.893	0.671
Government (including public schools)	43,235	72,630	7.6	8.9	0.753	0.727
Industry not reported	14,903	33,320	2.6	4.1	0.571	1.268
Total	565,491	811,870	100.0	100.0	0.875	0.820

Sources: 1960 - U.S. Department of Commerce, Bureau of the Census, Census of Population, 1960: Detailed Characteristics, Arkansas, Part 5, Vol. 1 (Washington: Government Printing Office), Table 126, p. 5-358 and 5-359; and 1980 - Industrial Research and Extension Center, College of Business Administration, University of Arkansas, Little Rock.

TABLE 3-A.3

EMPLOYMENT DIVERSIFICATION, ARKANSAS, 1960 AND PROJECTED (SERIES I) 1980

Rank No. of 1960 U.S. Array	Industry	1960 Percent of Total Employment	1960 Cumulative Percentage	Rank No. of 1960 U.S. Array	Industry	Series I 1980 Percent of Total Employment	Series I 1980 Cumulative Percentage
I	Manufacturing	20.1	20.1	I	Manufacturing	27.5	27.5
II	Wholesale and retail trade	18.4	38.5	II	Wholesale and retail trade	18.4	45.9
VI	Agriculture, forestry and fisheries	17.7	56.2	III	Services	18.0	63.9
III	Services	17.4	73.6	IV	Government	8.8	72.7
IV	Government	7.7	81.3	VI	Agriculture	8.0	80.7
VII	Construction	6.4	87.7	VII	Construction	5.8	86.5
V	Transportation, communication and public utilities	6.2	93.9	V	Transportation, communication and public utilities	4.4	90.9
VIII	Finance, insurance and real estate	2.7	96.6	VIII	Finance, insurance and real estate	4.4	95.3
IX	Industry not reported	2.6	99.2	IX	Industry not reported	4.2	99.5
X	Mining	0.9	100.1	X	Mining	0.5	100.0
	Total	100.0	747.2		Total	100.0	762.9

Diversification Index = $\frac{747.2-550.0}{450} = 43.8$

Diversification Index = $\frac{762.9-550.0}{450} = 47.3$

Source: Table 3-A.1.

TABLE 3-A.4

EMPLOYMENT DIVERSIFICATION, ARKANSAS, 1960 AND PROJECTED (SERIES II) 1980

Rank No. of 1960 U.S. Array	Industry	1960 Percent of Total Employment	1960 Cumulative Percentage	Rank No. of 1960 U.S. Array	Industry	Series II 1980 Percent of Total Employment	Series II 1980 Cumulative Percentage
I	Manufacturing	20.1	20.1	I	Manufacturing	27.7	27.7
II	Wholesale and retail trade	18.4	38.5	II	Wholesale and retail trade	18.0	45.7
VI	Agriculture, forestry and fisheries	17.7	56.2	III	Services	18.0	63.7
III	Services	17.4	73.6	IV	Government	8.9	72.6
IV	Government	7.7	81.3	VI	Agriculture	8.1	80.7
VII	Construction	6.4	87.7	VII	Construction	5.5	86.2
V	Transportation, communication and public utilities	6.2	93.9	V	Transportation, communication and public utilities	5.0	91.2
VIII	Finance, insurance and real estate	2.7	96.6	IX	Industry not reported	4.1	95.3
IX	Industry not reported	2.6	99.2	VIII	Finance, insurance and real estate	4.0	99.3
X	Mining	0.9	100.1	X	Mining	0.7	100.0
	Total	100.0	747.2		Total	100.0	762.4

Diversification Index = $\frac{747.2-550.0}{450} = 43.8$

Diversification Index = $\frac{762.4-550.0}{450} = 47.2$

Source: Table 3-A.2.

TABLE 3-A.5

EMPLOYMENT DIVERSIFICATION, UNITED STATES, 1960 AND PROJECTED 1980

Rank No. of 1960 U.S. Array	Industry	1960 Percent of Total Employment	1960 Cumulative Percentage	Rank No. of 1960 U.S. Array	Industry	1980 Percent of Total Employment	1980 Cumulative Percentage
I	Manufacturing	27.1	27.1	I	Manufacturing	23.3	23.3
II	Wholesale and retail trade	18.2	45.3	III	Services	22.0	45.3
III	Services	17.0	62.3	II	Wholesale and retail trade	20.4	65.7
IV	Government	8.9	71.2	IV	Government	10.1	75.8
V	Transportation, communication and public utilities	7.0	78.2	VII	Construction	6.8	82.6
VI	Agriculture, forestry and fisheries	6.7	84.9	V	Transportation, communication and public utilities	6.1	88.7
VII	Construction	5.9	90.8	VIII	Finance, insurance and real estate	4.8	93.5
VIII	Finance, Insurance and real estate	4.2	95.0	VI	Agriculture, forestry, and fisheries	4.4	97.9
IX	Industry not reported	4.0	99.0	IX	Industry not reported	1.5	99.4
X	Mining	1.0	100.0	X	Mining	0.6	100.0
	Total	100.0	753.8		Total	100.0	772.2

Diversification Index = $\frac{753.8-550.0}{450} = 45.3$

Diversification Index = $\frac{772.2-550.0}{450} = 49.4$

Sources: 1960 data from Table 3.40 in Section 3, Manpower and Employment; and projected employment, 1980, Industrial Research and Extension Center, College of Business Administration, University of Arkansas, Little Rock.

TABLE 3-A.6

DIVERSIFICATION OF MANUFACTURING EMPLOYMENT, ARKANSAS, 1960 AND PROJECTED (SERIES I) 1980

			1960					Series I 1980	
Rank No. of 1960 U.S. Array	SIC No.	Industry	Percent of Total Employment	Cumulative Percentage	Rank No. of 1960 U.S. Array	SIC No.	Industry	Percent of Total Employment	Cumulative Percentage
XI	24	Lumber and wood products (except furniture)	26.2	26.2	IV	36	Electrical machinery	14.3	14.3
I	20	Food and kindred products	15.5	41.7	I	20	Food and kindred products	12.7	27.0
VII	23	Apparel and finished products	7.3	49.0	XI	24	Lumber and wood products	10.3	37.3
XIII	26	Paper and allied products	6.2	55.2	VII	23	Apparel and finished products	9.5	46.8
XV	25	Furniture and fixtures	5.8	61.0	XIII	26	Paper and allied products	6.9	53.7
VIII	27	Printing, publishing and allied products	4.7	65.7	XV	25	Furniture and fixtures	6.7	60.4
X	28	Chemicals and allied products	4.6	70.3	V	34	Fabricated metal products	6.3	66.7
XVIII	31	Leather and leather products	4.1	74.4	III	35	Machinery (except electrical)	6.1	72.8
IV	36	Electrical machinery	3.9	78.3	XIV	39	Miscellaneous industries	5.6	78.4
XII	32	Stone, clay, and glass products	3.5	81.8	XVIII	31	Leather and leather products	4.1	82.5
V	34	Fabricated metal products	2.9	84.7	VIII	27	Printing, publishing and allied products	3.8	86.3
III	35	Machinery (except electrical)	2.5	87.2	X	28	Chemicals and allied products	3.0	89.3
VI	33	Primary metal industry	2.2	89.4	XII	32	Stone, clay, and glass products	2.9	92.2
XIV	39	Miscellaneous industries	2.2	91.6	XVI	30	Rubber products	2.1	94.3
II	37	Transportation equipment	1.9	93.5	II	37	Transportation equipment	1.6	95.9
IX	22	Textile mill products	1.9	95.4	IX	22	Textile mill products	1.4	97.3
XVII	38	Instruments and related products	1.6	97.0	VI	33	Primary metal industry	1.0	98.3
XIX	29	Products of petroleum and coal	1.4	98.4	XVII	38	Instruments and related products	0.9	99.2

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TABLE 3-A.6
DIVERSIFICATION OF MANUFACTURING EMPLOYMENT, ARKANSAS, 1960 AND PROJECTED (SERIES I) 1980 - (Continued)

Rank No. of 1960 U.S. Array	SIC No.	Industry	1960 Percent of Total Employment	1960 Cumulative Percentage	Rank No. of 1960 U.S. Array	SIC No.	Industry	Series I 1980 Percent of Total Employment	Series I 1980 Cumulative Percentage
XVI	30	Rubber products	1.2	99.6	XIX	29	Products of petroleum and coal	0.8	100.0
XX		Other (including not specified)	0.4	100.0	XX		Other	-	100.0
		Total	100.0	1,540.4			Total	100.0	1,492.7

Diversification Index = $\frac{1,540.4-1,050.0}{950} = 51.6$

Diversification Index = $\frac{1,492.7-1,050.0}{950} = 46.6$

Source: Table 3-A.1.

TABLE 3-A.7

DIVERSIFICATION OF MANUFACTURING EMPLOYMENT, ARKANSAS, 1960 AND PROJECTED (SERIES II) 1980

Rank No. of 1960 U.S. Array	SIC No.	Industry	1960 Percent of Total Employment	1960 Cumulative Percentage	Rank No. of 1960 U.S. Array	SIC No.	Industry	Series II 1980 Percent of Total Employment	Series II 1980 Cumulative Percentage
XI	24	Lumber and wood products (except furniture)	26.2	26.2	IV	36	Electrical machinery	13.3	13.3
I	20	Food and kindred products	15.5	41.7	I	20	Food and kindred products	12.2	25.5
VII	23	Apparel and finished products	7.3	49.0	XI	24	Lumber and wood products	11.1	36.6
XIII	26	Paper and allied products	6.2	55.2	VII	23	Apparel and finished products	9.8	46.4
XV	25	Furniture and fixtures	5.8	61.0	XV	25	Furniture and fixtures	7.3	53.7
VIII	27	Printing, publishing and allied products	4.7	65.7	XIII	26	Paper and allied products	6.8	60.5
X	28	Chemicals and allied products	4.6	70.3	V	34	Fabricated metal products	5.9	66.4
XVIII	31	Leather and leather products	4.1	74.4	III	35	Machinery (except electrical)	5.6	72.0
IV	36	Electrical machinery	3.9	78.3	XIV	39	Miscellaneous industries	4.8	76.8
XII	32	Stone, clay, and glass products	3.5	81.8	XVIII	31	Leather and leather products	3.8	80.6
V	34	Fabricated metal products	2.9	84.7	X	28	Chemicals and allied products	3.6	84.2
III	35	Machinery (except electrical)	2.5	87.2	VIII	27	Printing, publishing and allied products	3.1	87.3
VI	33	Primary metal industries	2.2	89.4	XII	32	Stone, clay, and glass products	2.8	90.1
XIV	39	Miscellaneous industries	2.2	91.6	II	37	Transportation equipment	2.5	92.6
II	37	Transportation equipment	1.9	93.5	XVI	30	Rubber products	2.5	95.1
IX	22	Textile mill products	1.9	95.4	XVII	38	Instruments and related products	1.4	96.5

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TABLE 3-A.7
DIVERSIFICATION OF MANUFACTURING EMPLOYMENT, ARKANSAS, 1960 AND PROJECTED (SERIES II) 1980 - (Continued)

			1960					Series II 1980	
Rank No. of 1960 U.S. Array	SIC No.	Industry	Percent of Total Employment	Cumulative Percentage	Rank No. of 1960 U.S. Array	SIC No.	Industry	Percent of Total Employment	Cumulative Percentage
XVII	38	Instruments and related products	1.6	97.0	IX	22	Textile mill products	1.3	97.8
XIX	29	Products of petroleum and coal	1.4	98.4	XIX	29	Products of petroleum and coal	1.1	98.9
XVI	30	Rubber products	1.2	99.6	VI	33	Primary metal industry .	1.1	100.0
XX		Other (including not specified)	0.4	100.0	XX		Other	-	100.0
		Total	100.0	1,540.4			Total	100.0	1,474.3

Diversification Index = $\frac{1,540.4-1,050.0}{950} = 51.6$

Diversification Index = $\frac{1,474.3-1,050.0}{950} = 44.7$

Source: Table 3-A.2.

TABLE 3-A.8

DIVERSIFICATION OF MANUFACTURING EMPLOYMENT, UNITED STATES, 1960 AND PROJECTED 1980

Rank No. of 1960 U.S. Array	SIC No.	Industry	1960 Percent of Total Employment	1960 Cumulative Percentage	Rank No. of 1960 U.S. Array	SIC No.	Industry	1980 Percent of Total Employment	1980 Cumulative Percentage
I	20	Food and kindred products	10.4	10.4	IV	36	Electrical machinery	14.2	14.2
II	37	Transportation equipment	10.4	20.8	II	37	Transportation equipment	11.9	26.1
III	35	Machinery (except electrical)	8.9	29.7	III	35	Machinery (except electrical)	10.2	36.3
IV	36	Electrical machinery	8.5	38.2	I	20	Food and kindred products	8.1	44.4
V	34	Fabricated metal products	7.4	45.6	V	34	Fabricated metal products	6.4	50.8
VI	33	Primary metal industries	7.0	52.6	VI	33	Primary metal industry	6.3	57.1
VII	23	Apparel and finished products	6.6	59.2	VII	23	Apparel and finished products	6.2	63.3
VIII	27	Printing, publishing and allied products	6.5	65.7	VIII	27	Printing, publishing and allied products	6.2	69.5
IX	22	Textile mill products	5.5	71.2	X	28	Chemicals and allied products	5.7	75.2
X	28	Chemicals and allied products	4.9	76.1	XIII	26	Paper and allied products	3.8	79.0
XI	24	Lumber and wood products (except furniture)	3.9	80.0	IX	22	Textile mill products	3.3	82.3
XII	32	Stone, clay, and glass products	3.4	83.4	XII	32	Stone, clay, and glass products	3.1	85.4
XIII	26	Paper and allied products	3.3	86.7	XVII	38	Instruments and related products	3.0	88.4
XIV	39	Miscellaneous manufacturing industries	2.3	89.0	XI	24	Lumber and wood products (except furniture)	2.5	90.9
XV	25	Furniture and fixtures	2.2	91.2	XV	25	Furniture and fixtures	2.3	93.2

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TABLE 3-A.8
DIVERSIFICATION OF MANUFACTURING EMPLOYMENT, UNITED STATES, 1960 AND PROJECTED 1980 - (Continued)

			1960					1980	
Rank No. of 1960 U.S. Array	SIC No.	Industry	Percent of Total Employment	Cumulative Percentage	Rank No. of 1960 U.S. Array	SIC No.	Industry	Percent of Total Employment	Cumulative Percentage
XVI	30	Rubber products	2.2	93.4	XVI	30	Rubber products	2.2	95.4
XVII	38	Instruments and related products	2.1	95.5	XIV	39	Miscellaneous manufacturing industries	1.9	97.3
XVIII	31	Leather and leather products	2.0	97.5	XVIII	31	Leather and leather products	1.5	98.8
XIX	29	Products of petroleum and coal	1.6	99.1	XIX	29	Products of petroleum and coal	0.8	99.6
XX		Other (including not specified)	0.9	100.0	XX		Other (including not specified)	0.4	100.0
		Total	100.0	1,385.3			Total	100.0	1,447.2

Diversification Index = $\frac{1,385.3-1,050.0}{950} = 35.3$

Diversification Index = $\frac{1,447.2-1,050.0}{950} = 41.8$

Sources: See Table 7.18 in Section 7, Manufacturing Power, and Industrial Research and Extension Center, College of Business Administration, University of Arkansas, Little Rock.

TABLE 3-A.9

EMPLOYMENT BY MAJOR INDUSTRY GROUPS, ARKANSAS, BY REGION, 1960 AND PROJECTED (SERIES I) 1980

Region and Sector	Employment 1960	Employment Series I 1980	Percent Distribution 1960	Percent Distribution Series I 1980	Region as a Percent of Arkansas 1960	Region as a Percent of Arkansas Series I 1980
Arkansas	565,491	736,427	100.0	100.0		
Agriculture, forestry and fisheries	100,200	58,277	17.7	7.9		
Nonagricultural	465,291	678,150	82.3	92.1		
Manufacturing	113,513	203,558	20.1	27.6		
Nonmanufacturing	351,778	474,592	62.2	64.5		
North Region	67,792	117,471	100.0	100.0	12.00	15.95
Agriculture, forestry and fisheries	15,476	11,260	22.8	9.6	15.45	19.32
Nonagricultural	52,316	106,211	77.2	90.4	11.24	15.66
Manufacturing	13,051	36,660	19.3	31.2	11.50	18.01
Nonmanufacturing	39,265	69,551	57.9	59.2	11.16	14.65
East Region	130,149	152,162	100.0	100.0	23.02	20.66
Agriculture, forestry and fisheries	44,008	22,602	33.8	14.9	43.92	38.78
Nonagricultural	86,141	129,560	66.2	85.1	18.51	19.10
Manufacturing	18,347	41,780	14.1	27.5	16.16	20.52
Nonmanufacturing	67,794	87,780	52.1	57.6	19.27	18.50
Central Region	224,753	298,977	100.0	100.0	39.74	40.60
Agriculture, forestry and fisheries	23,339	14,542	10.4	4.9	23.29	24.95
Nonagricultural	201,414	284,435	89.6	95.1	43.29	41.94
Manufacturing	45,242	74,135	20.1	24.8	39.86	36.42
Nonmanufacturing	156,172	210,300	69.5	70.3	44.40	44.31

- continued -

TABLE 3-A.9
EMPLOYMENT BY MAJOR INDUSTRY GROUPS, ARKANSAS, BY REGION, 1960 AND PROJECTED (SERIES I) 1980 - (Continued)

Region and Sector	Employment		Percent Distribution		Region as a Percent of Arkansas	
	1960	Series I 1980	1960	Series I 1980	1960	Series I 1980
West Region	43,337	68,671	100.0	100.0	7.66	9.32
Agriculture, forestry and fisheries	3,711	2,121	8.6	3.1	3.70	3.64
Nonagricultural	39,626	66,550	91.4	96.9	8.52	9.81
Manufacturing	11,000	22,310	25.4	32.5	9.69	10.96
Nonmanufacturing	28,626	44,240	66.0	64.4	8.14	9.32
South Region	99,460	99,146	100.0	100.0	17.59	13.46
Agriculture, forestry and fisheries	13,666	7,752	13.7	7.8	13.64	13.30
Nonagricultural	85,794	91,394	86.3	92.2	18.44	13.48
Manufacturing	25,873	28,673	26.0	28.9	22.79	14.09
Nonmanufacturing	59,921	62,721	60.3	63.3	17.03	13.22

Sources: Tables 3.9 through 3.14, 3-A.1, and 3-A.2, and Industrial Research and Extension Center, College of Business Administration, University of Arkansas, Little Rock.

TABLE 3-A.10

EMPLOYMENT BY MAJOR INDUSTRY GROUPS, ARKANSAS, BY REGION, 1960 AND PROJECTED (SERIES II) 1980

Region and Sector	Employment 1960	Employment Series II 1980	Percent Distribution 1960	Percent Distribution Series II 1980	Region as a Percent of Arkansas 1960	Region as a Percent of Arkansas Series II 1980
Arkansas	565,491	811,677	100.0	100.0		
Agriculture, forestry and fisheries	100,200	65,377	17.7	8.1		
Nonagricultural	465,291	746,300	82.3	91.9		
Manufacturing	113,513	224,775	20.1	27.7		
Nonmanufacturing	351,778	521,525	62.2	64.2		
North Region	67,792	122,164	100.0	100.0	11.99	15.05
Agriculture, forestry and fisheries	15,476	13,504	22.8	11.1	15.45	20.66
Nonagricultural	52,316	108,660	77.2	88.9	11.24	14.56
Manufacturing	13,051	37,800	19.3	30.9	11.50	16.82
Nonmanufacturing	39,265	70,860	57.9	58.0	11.16	13.59
East Region	130,149	166,249	100.0	100.0	23.02	20.48
Agriculture, forestry and fisheries	44,008	22,602	33.8	13.6	43.92	34.57
Nonagricultural	86,141	143,647	66.2	86.4	18.51	19.25
Manufacturing	18,347	48,825	14.1	29.4	16.16	21.72
Nonmanufacturing	67,794	94,822	52.1	57.0	19.27	18.18
Central Region	224,753	345,855	100.0	100.0	39.74	42.61
Agriculture, forestry and fisheries	23,339	17,439	10.4	5.0	23.29	26.67
Nonagricultural	201,414	328,416	89.6	95.0	43.29	44.01
Manufacturing	45,242	83,025	20.1	24.0	39.86	36.94
Nonmanufacturing	156,172	245,391	69.5	71.0	44.40	47.05

- continued -

TABLE 3-A.10
EMPLOYMENT BY MAJOR INDUSTRY GROUPS, ARKANSAS, BY REGION, 1960 AND PROJECTED (SERIES II) 1980 - (Continued)

Region and Sector	Employment		Percent Distribution		Region as a Percent of Arkansas	
	1960	Series II 1980	1960	Series II 1980	1960	Series II 1980
West Region	43,337	73,505	100.0	100.0	7.66	9.06
Agriculture, forestry and fisheries	3,711	2,540	8.6	3.5	3.70	3.89
Nonagricultural	39,626	70,965	91.4	96.5	8.52	9.51
Manufacturing	11,000	24,075	25.4	32.7	9.69	10.71
Nonmanufacturing	28,626	46,890	66.0	63.8	8.14	8.99
South Region	99,460	103,904	100.0	100.0	17.59	12.80
Agriculture, forestry and fisheries	13,666	9,292	13.7	8.9	13.64	14.21
Nonagricultural	85,794	94,612	86.3	91.1	18.44	12.68
Manufacturing	25,873	31,050	26.0	29.9	22.79	13.81
Nonmanufacturing	59,921	63,562	60.3	61.2	17.03	12.19

Sources: Tables 3.9 through 3.14, 3-A.1, and 3-A.2, and Industrial Research and Extension Center, College of Business Administration, University of Arkansas, Little Rock.

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This paper reviews literature for administration theory, social system theory, antecedent variables, perception of decision making roles, criterion variables, planned and implemented curricular change, and ancillary variables as they relate to pilot studies involved with decision making, curriculum productivity and quality, and personnel participation in curriculum planning, and reports a study based on this review. A "Decision Point Analysis Instrument" was devised and administered to 6,138 persons in 31 Wisconsin school systems. It contained 25 items designed to determine perceptions concerning the decisions made by 10 position holders in each system. Measures of productivity, quality, and participation were also made in these systems. Some sample results were: (1) School systems differ widely in their productivity, participation, and quality of curricular planning, (2) Productivity and quality were not significantly related to participation, (3) A positive correlation was found between the amount of change in curricular plans and the extent of use and implementation by teachers, (4) Curricular changes involving content deletion were seldom found, and (5) Curriculum planning was positively related to curriculum productivity. A response to this paper, by Arthur McBeath, is included. (EM)

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Administration and the Educational Program

by James M. Lipham

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Administration and the Educational Program*

James M. Lipham
Department of Educational Administration
UNIVERSITY OF WISCONSIN

What is the nature of the relationship between the adminstration of the schools and the educational program of the schools? Oversimplified answers to this rhetorical question range from "philosophical" to "operational" and from "extensive" to "occasional." Among those who view administration as a process, some maintain that the primary contribution of the administrator to the program of the schools is assisting in the process of goal setting; others feel that the process of evaluating classroom behavior represents the ultimate criterion of leadership. Among those who view administration as a series of tasks, some maintain that the educational program is, or should be, a functional area of primary concern to administrators; others are quick to point out that finance, plant, and community relations activities often occupy as much as 90 percent of the administrator's time--with the educational program receiving very little attention.

To avoid tautological answers and to explore the complex interrelationship of administration to the instructional program, a series of long-range studies recently was initiated in the Department of Educational

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Administration at the University of Wisconsin.[1] These studies were conducted with regard to a particular theoretical point of view; they were concerned with three major variables--decision-making roles, planned curricular change, and implemented curricular change--and they included several intermediate, ancilary variables. Let us examine, however briefly, each of the aforementioned concepts before turning to some pilot findings and implications for action.

A Point of View

In general, administration has been conceptualized from two approaches, the sociological point of view and the psychological point of view. Gouldner[2] referred to these two approaches in terms of the rational model and the natural system model. In the rational model, the organization is viewed much like a machine with manipulatable parts which the administration may modify to increase the efficiency of the whole--virtually "organization against people." Exponents of this view follow essentially Weberian principles

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[1]Glen G. Eye and James M. Lipham, "Relationship Between Instructional Change and the Extent to which School Administrators and Teachers Agree on the Location of Responsibilities for Administrative Decisions," United States Office of Education Project 1913 Proposal, (Madison: Department of Educational Administration, December 1963). Individual studies related to this project include the following dissertations completed in the Department of Educational Administration at the University of Wisconsin: Donald C. Francke, "Perceptual Accuracy and Personal Variables;" Kenneth H. Reinke, "Authority Structure and Decision Making in School Systems;" Bryce M. Fogarty, "Characteristics of Superintendents of Schools and Centralization-Decentralization of Decision Making;" Eugene W. Tornow, "A Study of the Relationship of Teachers, Perception of Decision Points and the Interactions of the Superintendent of Schools, The Director of Instruction, and the High School Principal;" Emmett J. Duffy, "The Role of Director of Instruction--Tasks, Interactions, and Processes."

[2]Alvin W. Gouldner, "Organizational Analysis," Sociology Today: Problems and Prospects, Merton, Bloom, and Cottrell, Eds. (New York: Basic Books, 1959).

of bureaucracy, of which some of the most salient characteristics are: (1) behavior within the organization is bound by normative or technical rules, (2) labor is divided into a high degree of specialization, (3) offices are organized following the principles of hierarchy, and (4) administrative acts and decisions are codified into written rules.[3] Recently, Selznick[4] and Merton[5] developed models of this approach, based in part upon Weberian principles, in order to describe modern organizational phenomena.

The second view of administration, the natural system model, is one in which the organization is perceived as being spontaneously maintained by individuals who have needs of their own which must be satisfied regardless of the plans of the creators or maintainers of the organization. The natural system model was expounded most effectively by Mayo[6], Roethlisberger[7], Lewin[8], and more recently, Argyris[9]. This view can best be represented as

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[3]Max Weber, The Theory of Social and Economic Organization, Translation by Talcott Parsons. (Glencoe, Illinois: Free Press and Falcon's Wing Press, 1947), pp. 330-332.

[4]Philip Selznick, Leadership in Administration, (Evanston, Illinois: Row Peterson, 1947).

[5]Robert Merton, Social Theory and Social Structure, Rev. Ed. (Glencoe, Illinois: Free Press, 1957).

[6]Elton Mayo, The Social Problems of an Industrial Civilization (Boston: Harvard Business School, 1945).

[7]Fritz J. Roethlisberger and William J. Dickson, Management and the Worker, (Cambridge, Massachusetts: Harvard University Press, 1939).

[8]Kurt Lewin, Resolving Social Conflict (New York: Harper and Brothers, Publishers, 1948).

[9]Chris Argyris, Personality and Organization (New York: Harper and Brothers, Publishers, 1957).

holding that individuals are the most significant component of an organization and that although formal organization exists, it does so at the pleasure of individuals singly or collectively in the informal organization. The aim of the informal organization is to achieve the goals of the individuals rather than the goals of the organization--virtually "people against organization."

As many have recognized, somewhere between these divergent views lie more productive means for analyzing administration and its relationship to the educational program. One of these, social system theory, attempts to synthesize these divergent views. It was in terms of this theory that the research reported herein was conducted.

Parsons[10] and his colleagues proposed a basic theory of human action which delineates the primary components of social system theory. Adapting this theory into a functional model of administration as a social process, Getzels and others[11] defined a social system as two or more people interacting to achieve common goals. The social system involves both normative and personalistic dimensions which are conceptually independent and phenomenally interactive. One dimension, the normative, is described by values within the culture and roles within the organization; the other dimension, the personal, is described by the values within the individual and the

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[10] Talcott Parsons and E. A. Shils, Toward A General Theory of Action, (Cambridge, Massachusetts: Harvard University Press, 1951).
Talcott Parsons, The Social System, (Glencoe, Illinois, Free Press, 1951).

[11] Jacob W. Getzels and Egon G. Guba, "Social Behavior and the Administrative Process," School Review, 55(Winter, 1957), 423-44; Jacob W. Getzels and Herbert A. Thelen, "The Classroom Group as a Unique Social System," Dynamics of Instructional Groups, N.S.S.E. Yearbook, Part II (Chicago: The Society, 1960), pp. 53-82.

need-dispositions within the individual. The elements comprising the two dimensions interact within the framework of the social system to produce observed behavior.

According to this theory, administration may be examined from three stances. Structurally, administration may be considered as a hierarchy of superordinate-subordinate relationships within the social system. Functionally, within this hierarchy of relationships is the locus for allocating and integrating roles in order to achieve the goals of the system. Operationally, administrative processes take place in enviornments characterized by person-to-person relationships. Thus, any given superordinate-subordinate relationship within the administrative structure is enacted in two dynamic and separate personal situations, one embedded in the other. This relationship is perceived and organized by each incumbent in terms of his needs and goals, skills and experiences. The two situations are related to the extent that the individuals' perceptions are mutual.

The central question, and primary antecedent variable thus becomes, "To what extent do complementary role incumbents in a given social system tend to agree or disagree in their mutual perceptions of their respective roles?"

Roles within an organization may, of course, be defined in numerous ways--the tasks one performs, the processes one utilizes, or the products of one's services. They also may be defined in terms of the decision one makes.

The Perception of Decision-Making Roles

For years authorities have argued cogently that decision making is the very heart of administration. Originally discussed by Barnard,[12] decision making was expanded by Simon,[13] who wrote, "The task of deciding pervades the entire administrative organization quite as much as does the task of doing--indeed, it is integrally tied up with the latter." McCamy[14] made the same point when he stated, "The making of decisions is at the very center of the process of administration." Griffiths[15] recently applied Bross'[16] design for decision making to the educational organization, defining decisions as judgments which effect a course of action.

Decision making was, therefore, selected as a focus for study, not because of any heuristic value of the concept itself, but because of several utilitarian factors. First, decision making may involve numerous complementary role incumbents, since it is possible to share in the process of decision making--and to share with varying degrees of frequency and intensity. Second, decision making occurs within all formal organizations--albeit at differing levels of centralization or decentralization. Third, decision making may be perceived or inferred by parties to an interaction.

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[12] Chester Barnard, The Functions of the Executive (Cambridge, Massachusetts: Harvard University Press, 1948).

[13] Herbert Simon, Administrative Behavior, 2nd Ed. (New York: MacMillan, 1957), p. 1.

[14] James McCamy, "An Analysis of the Process of Decision Making," Public Administrative Review, No. 7, 1947.

[15] Daniel E. Griffiths, Administrative Theory (New York: Appleton-Century-Crofts, 1949).

[16] Irwin D. J. Bross, Design for Decision (New York: MacMillan Company, 1953).

And, finally, decision making bridges conceptually the rational (normative) systems model and the natural (personal) systems model. It is compatible in this regard with the theoretical framework used, social system theory.

Operationally, the central question and primary antecedent variable then becomes, "To what extent is there congruence in the perceptions of the decision-making responsibilities of personnel within public school systems?" or, put differently, "To what extent do administrators and teachers in a given school system tend to agree or disagree in their perceptions of decision-making roles and responsibilities?"

Numerous investigations of decision-making roles recently have been conducted, but these studies usually end at the point of highlighting the nature and extent of conflict in role expectations or perceptions. While such studies are of value, there was found a crucial need for determining the extent to which conflict in decision-making roles relates to the educational program defined in terms of such significant criterion variables as planned curricular change and implemented curricular change.

The Educational Program

The educational program is typically defined as the curriculum of the school. Since the term curriculum came into use in the nineteenth century in France, a variety of meanings has been attached. According to Ragen[17], curriculum traditionally has meant the subjects taught in school--the course of study. Eye and Netzer[18] stated that the most common definition of

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[17] William B. Ragen, Modern Elementary Curriculum (New York: Henry Holt and Company, 1960), p. 3.

[18] Glen G. Eye and Lanore A. Netzer, Supervision of Instruction, A Phase of Administration (New York: Harper and Row, Publishers, 1965), p. 313.

curriculum is that it constitutes all of the educative experiences that come under the direction and control of the school. Shane and McSwain suggested that curriculum consists of two separate, but related entities:

> First, in written form as a record of group consensus as to methods, materials, scope and sequence; and second, under the skin of the teacher and child as the sum of experiences and guides-to-action that each has interpreted for himself as the outcomes of their interactions in school.[19]

Since it is the written curricular plans to which most people refer when speaking of the educational program, however, the following salient questions may be raised: "To what extent do curricular plans represent planned instructional change?" and "To what extent are these plans implemented?"

Planned Instructional Change

Instructional change has received considerable attention, though not to the point of examining and quantifying the extent of change contained in curricular plans. Curricular workers have indicated an awareness of the need to know more about the intricacies of curricular change.

The impetus for examining change in curriculum may be traced to a general emphasis placed on educational change. Barrington expressed as follows the reason for the importance of change to education:

> Education needs to comply with the law of dynamic survival not only because of change in our social order, but because of newer insights into the learning process, the conditioners of behavior, the tools of teaching, and the powers of education in the lives of people . . . These new insights have led to new educational practices or inventions which are designed to take the place of outdated practices.

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[19] Harold Shane and E. T. McSwain, Evaluation and the Elementary Curriculum (New York: Henry Holt and Company, 1958), p. 171.

> Only by being aware of changing social needs and by being willing to break with tradition and discard outmoded practices can education meet the challenge which it faces today.[20]

In 1951, Ross summarized in part the attention devoted to change throughout the 1930's and 1940's in studies by Mort and his associates. Under the term "adaptability" these educators examined the systematic readiness and capacity of schools to adopt innovations, adapt to environmental changes, and continue functioning.[21] Representative of these studies was that conducted by Mort and Cornell in which they concluded that diffusion of innovation is a slow process. " . . . We infer it will take a half century for the average adaptation to diffuse completely."[22]

Recently, there has been a renewed emphasis upon educational change and innovation. As Pellegrin commented, curricular change is a topic of interest both to the practitioner and to the theoretician.

> Within the field of education there are also many pressures for change. There is widespread recognition among educators that there are notable deficiencies and limitations in the content, organization, and administration of the curriculum. At the same time, there has arisen a higher level of aspiration, a feeling that education can increase its contributions to the welfare of society. There is, in short, a belief that changes in education are necessary and desirable . . .[23]

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[20]Thomas M. Barrington, The Introduction of Selected Educational Practices into Teachers Colleges and Their Laboratory Schools (Institute of Administrative Research: No. 8, New York: Bureau of Publications, Teachers College, Columbia University, 1953), p. 5.

[21]Donald H. Ross, (ed.) Administration for Adaptabilility, 2nd ed. rev. (New York: Metropolital School Study Council, Teachers College, Columbia University, 1958), p. VI.

[22]Paul R. Mort and Francis G. Cornell, American Schools in Transition (New York: Bureau of Publications, Teachers, College, Columbia University, 1941), p. 53.

[23]Roland J. Pellegrin, "The Place of Research in Planned Change," Change Processes in the Public Schools, A Report of a Seminar prepared by the Center for Advanced Study of Educational Administration (Eugene: University of Oregon Press, 1965), p. 65.

As typically defined, change simply conveys the meaning of alteration, or modification. In the field of education, however, change is most often used in a positive sense: the meaning absorbs the concept of betterment and improvement. Illustrative of this usage is the proposition developed about the supervision of instruction by Eye and Netzer who stated, "The major function of supervision is that of influencing situations, persons, and relationships for the purpose of stimulating change that may be evaluated as improvement."[24]

The social sicences generally have contributed much toward the understanding of change. Doll recognized this when he stated the following:

> Whatever social scientists and educators have learned about the process of change in individuals and groups may generally be applied to the process of improving persons and institutions. With reference to improvement of the curriculum, the educator must, of course, make further applications of the findings of social psychology, sociology and other social sciences to his own field.[25]

Lippitt, Watson, and Westley[26] commented that change processes in organizations may be classified as spontaneous, developmental within the system, fortuitous, unplanned changes outside the system, or planned change. Planned change they defined as that which originates in a decision to make a deliberate effort to improve the system. Also, a social scientist, Bennis[27], categorized planned change as one of eight types of change in a paradigm of

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[24] Eye and Netzer, op. cit., p. 53.

[25] Roland C. Doll, Curriculum Improvement: Decision Making and Process (Boston: Allyn and Bacon, Inc., 1964), p. 124.

[26] Ronald Lippitt, Jeanne Watson and Bruce Westley, The Dynamics of Planned Change (New York: Harcourt, Brace and Company, 1958), p. 10.

[27] Warren G. Bennis, "A Typology of Change Process," The Planning of Change (eds. Warren G. Bennis, Kenneth D. Benne and Robert Chin), (New York: Holt, Rinehart and Winston, 1962), p. 154.

change processes. He described planned change as entailing mutual goal setting by one or both parties of the change relationship--the parties having equal amounts of power and deliberativeness or intentionality.

The stages by which planned change occurs also have received the attention of social scientists. According to Loomis,[28] change occurs in three stages. Included in initiation, the first stage, are ideas and decisions regarding the nature, direction, and extent of change. Sentiment pertaining to the change is communicated in the second stage, legitimization. The third stage involves achieving congruence of those systems of values which are held by the persons seeking to create change and those affected by the proposed change. Lewin, too, viewed the process of change to consist of three stages. He stated, "A successful change includes, therefore, three aspects: unfreezing (if necessary) the present level, moving to the new level, and freezing group life on the new level."[29] Considering change as innovation, Rogers[30] conceptualized five steps in the change process: awareness, interest, evaluation, trial, and adoption.

In the field of education, curricular plans may be regarded as expressions of planned change. Mackenzie described curricular change as the outcome of the interaction of participants, power, and process, as follows: "Participants in curricular change, having control of certain sources of power and methods of influence, proceed through various phases in a process

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[28] Charles P. Loomis, "Tentative Types of Directed Social Change Involving Systematic Linkage," Rural Sociology, XXIV (December, 1959), p. 384.

[29] Kurt Lewin, "Frontiers in Group Dynamics," Human Relations, I(January, Glencoe, 1962), p. 81.

[30] Everett M. Rogers, Diffusion of Innovations (New York: The Free Press of Glencoe, 1962), p. 81.

to influence the determiners of the curriculum."[31]

The literature of the field of curriculum does not contain instances of attempts to measure either planned change or extent of change in curricular plans. Curricular change is nominally reported as an isolated event with little reference either to past or concomitant change. However, change in curriculum has been viewed in relation to other factors which provide some perspective for examining extent of planned change in the curriculum. Benne and Muntyan[32] considered such factors when they observed that curricular change has been approached in three basic ways: change the objectives of the curricular program, change the content, and change the teaching method. Miel[33] wrote that the changes involved when school curriculum is truly modified are actually changes in attitudes and behaviors of persons.

Although there appears to be an increasing awareness on the part of curricular theorists and practitioners of the importance of planned change, there exist speculative intervals in the literature regarding the extent of change contained in curricular plans. And what of the implementation of these plans?

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[31]Gordon N. Mackenzie, "Curricular Change: Participants, Power and Processes," Innovation in Education, Mathew B. Miles, ed. (New York: Bureau of Publications, Teachers College, Columbia University, 1964), p. 401.

[32]Kenneth Benne and Bozidar Muntyan, (eds.) Human Relations in Curricular Change, Illinois Secondary School Curriculum Program Bulletin No. 7 Springfield: Department of Public Instruction, 1949), p. 16.

[33]Alice Miel, Changing the Curriculum (New York: Appleton-Century-Crofts, 1946), p. 14.

Implemented Instructional Change

Educators probably engage much more in the planning of instructional change than in the implementing of instructional change--at least if the quantity of research and writing in the field is indicative. Only a handful of investigators has been concerned with the implementation of change.

Godbey[34], evaluating curricular development in Michigan, observed that poor communication was a deterrent to adequate reporting of the results of curriculum study and implementing programs resulting from the curriculum study. Heusner[35] investigated the use of curricular guides in relation to teacher participation in their development, and concluded that utilization of curricular guides by teachers did not necessarily result from those teachers having participated in the planning of the guides. He concluded that conditions must be present relative to such factors as recognition of need for curricular change, time adequacy, and role and organization. Milstein[36] sought to determine the extent and direction of changes in classroom practices of teachers which might be expected from their having participated in the production of curriculum guides. In his study, only negligible change was observed, the exception being in the use of materials in language arts and arithmetic.

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[34]James L. Godbey, "Evaluation of Curriculum Development Practices in Selected School Systems of Wayne County, Michigan" (unpublished Ed. D. dissertation, Wayne State University, 1960.)

[35]Henry C. Heusner, "A Study of the Utilization of Curriculum Guides as Related to Selected Factors in their Planning and Construction," (unpublished Ed. D. dissertation, Wayne State University, 1964).

[36]Abe Milstein, "The Effect of Teacher Participation in Curriculum Guide Development upon Selected Classroom qractices," (unpublished Ed. D. dissertation, Stanford University, 1960).

Krug implied use of curricular plans when he stressed that curricular planning and development is composed of five groups of activities:

(1) Teaching and learning
(2) Identifying and stating purposes of schooling
(3) Developing the all-school program
(4) Providing curriculum guides
(5) Providing instructional aids for teachers and learners.[37]

Representative also of work in curricular improvement is that of Alberty and Alberty who arranged the activities of curricular improvement into the following steps:

(1) Creating a feeling of need for improving the curriculum
(2) Determining a comprehensive organizational structure for curriculum improvement
(3) Formulating or reexamining the basic philosophy and goals of the school
(4) Developing working principles for dealing with adolescent development and learning
(5) Determining the general design of the curriculum
(6) Determing the scope and sequence of the curriculum
(7) Developing principles and procedures for planning and guiding learning
(8) Discovering and organizing resource materials for instruction
(9) Setting up a comprehensive evaluation program.[38]

Again, it appears that the assumption is made that teachers will be using the improved curricular program, which will then be evaluated.

In the area of curricular evaluation, Taba inferred the use of curricular plans when she wrote:

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[37] Edward Krug, Curriculum Planning (New York: Harper and Brothers, Publishers, 1957), p. 17.

[38] Harold B. Alberty and Elsie J. Alberty, Reorganizing the High School Curriculum (New York: MacMillan Company, 1962), p. 502.

> A special weakness of current evaluation programs is the fact that data about the progress of students toward educational objectives are evaluated or interpreted without sufficient knowledge of the nature of the instructional program.[39]

The cyclical nature of the evaluation process, with the accompanying assumption that curricular plans are implemented, is demonstrated in the following comment by Saylor and Alexander:

> Evaluation and planning are really complementary processes. We plan the curriculum to achieve educational values. Our planning is based on evaluation of existing plans in terms of their relevance to these values, and our subsequent evaluation determines the relevance of new plans to whatever values are held, and then we plan further. We plan on the basis of evaluation and we evaluate the basis of planning; evaluation without planning or planning without evaluation is incomplete and hence unwise.[40]

In summary, the conclusion may be reached that, as an area of investigation, the implementation of curricular change represents a potentially fruitful, largely unmapped domain.

Ancilary Variables

In addition to the dual criterion variables, planned and implemented curricular change, several intermediate, ancilary variables must also be taken into account when examining the relationship of administration to the educational program. These include both organizational and personal factors. Organizational factors presumed to influence the relationship of administration to the instructional program include extent of administrative centralization-decentralization, interaction patterns among the

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[39] Hilda Taba, Curriculum Development (New York: Harcourt, Brace and World, Inc., 1962), p. 323.

[40] J. Galen Saylor and William Alexander, Curriculum Planning for Better Teaching and Learning (New York: Rinehart and Company, Inc., 1958), p. 579.

administrative and supervisory staff, school district size, and school district wealth. Personal factors presumed relevant include leadership characteristics, personality orientations, and biographical characteristics, such as age, sex, training, and experience, of school personnel.

Having discussed the nature of the supporting theory, social system theory; the antecedent variable, the perception of decision making roles; the criterion variables, planned and implemented curricular change; and having enumerated several intermediate, ancilary variables, we may now turn to some of the pilot findings.

Some Pilot Findings

To assess the extent of congruence among teachers' supervisors', and administrators' perceptions of the locus of decision making responsibilities, a Decision Point Analysis instrument was devised and administered to 6,138 respondents representing the total professional staff members in thirty-one Wisconsin public school systems. The Decision Point Analysis instrument consisted of twenty-five items, related to and divided equally among the functional areas of pupil personnel, staff personnel, curriculum, business management, and school-community relations. It also contained the titles of the ten following positions common to each of the school systems in the sample: business manager, principal, vice-principal, department head, special subject supervisor, superintendent, director of instruction, guidance coordinator, board of education, and teacher. For each decision item respondents provided answers to the following three questions: (1) "Who makes this decision?", (2) "What other persons participate in making this decision?", (3) "What is the nature of your participation in making this

decision?". It was therefore possible to conduct a simultaneous analysis of ten major organizational roles.

Results from this instrument were indeed revealing. To cite only some examples of the major findings, we discovered that:

(1) School systems differed significantly in the extent to which administrators and teachers agreed on the locus of decision making responsibilities. In some school districts there was, in fact, little agreement on who made which decisions. This was particularly the case with regard to curricular decisions: it was somewhat less so with regard to financial decisions.

(2) In some districts, administrators, by comparison with teachers, tend to underestimate (and, in other districts, to overestimate) the frequency and extent of their own involvement in decision making. For example, in one district the administrator felt that he shared widely with others the responsibility for making curricular decisions, yet the teaching staff perceived that he made most, if not all, such decisions.

(3) Teachers often stated that they did not know who made which decisions. In some districts, the teacher's knowledge of decision making roles and responsibilities was limited.

(4) Teachers in some districts felt that they were minimally involved in the decision making process. On many decision items they simply responded "no involvement," on others they simple "provided information only"--a minimal level of involvement.

(5) Contrary to what one might expect, size of district was not significantly related to agreement on the locus of the responsibility

for decision making. There was as likely to be agreement on perceptions of decision making roles in large school districts as in small ones.

(6) Several personal and biographical variables, such as leadership characteristics: needs for achievement, dominance, and conjunctivity; years of experience; recency of training; and sex of respondent were significantly related to agreement on perceptions of decision making roles. That is, the possibility exists that one might identify in terms of a stereotypic, personalistic syndrome those who tend to misperceive decision making roles.

To extend further our knowledge ragarding the perception of decision making roles, efforts are presently being made to manipulate experimentally perceptions of decision making roles, to assess the extent of change resulting from such manipulation, and to determine the subsequent impact of such change on curricular planning and curricular implementation.

To ascertain evidence of planned instructional change, all curricular plans produced in the five high and the five low congruence school systems during the last three years were collected and evaluated. A <u>productivity</u> index for each school system was calculated in terms of the number of curricular plans (documents) produced. A <u>participation</u> index for each school system was calculated in terms of both the number of staff and the hours spent, individually and collectively, in the production of curricular plans. A <u>quality</u> index for each school system was computed by content analysis and evaluation of each curricular document.

To assess the degree of implemented instructional change, data were elicited through structured individual interviews with teachers in each of

the five high and the five low congruence school systems. Within each school system an eighteen percent sample of teachers was selected randomly for interviewing. Each teacher was interviewed concerning only one curricular plan related to his subject matter area or instructional grade level. The interviews were structured by the use of a Curricular Implementation Index interviewer guide and scoring sheet. Each interviewee was asked three questions concerning twelve instructional decisions: (1) "How much do you use this plan for . . .?", (2) "How much of a change is this from what you were doing before?" and (3) "What kind of change is this, addition, subtraction, or rearrangement?" Responses were summarized to obtain a picture of the degree of curricular implementation.

Regarding the assessment of the educational program, again it is possible to mention here only some sample results. It was found that:

(1) School systems ranged widely in their productivity, participation and quality of curricular planning. In some districts, little had been produced, that which had been produced was of low quality and represented little or no change over previous curricular documents.

(2) Productivity and quality were not significantly related to participation in curricular planning. That is, neither the number of people involved nor the number of hours spent working on a plan made any appreciable difference in quantity of output or quality of output.

(3) A positive correlation was found between the amount of change in curricular plans and the extent to which teachers implemented the plans, using them in making instructional decisions.

(4) Curricular changes which might be characterized by the deletion of material seldom were found, compared with those characterized by the addition of material or the rearrangement of material. Comparatively speaking, teachers seldom were unable to recall eliminating anything from the curriculum.

(5) The quality of curriculum planning was significantly related to productivity in curriculum planning. That is, some school systems not only produced more, but the more they produced, the higher the quality.

(6) Quality of curricular planning was found to be significantly related to congruence in perceptions of responsibility for making the "decision on the appointment of teachers to curriculum committees" as well as the "decision on the adequacy of teacher performance." Both productivity and quality of curricular planning were found to be significantly related to congruence in perceptions of responsibility for making the "decision on the selection of textbooks."

Some Implications

Let us now draw briefly some practical implications. On the basis of the findings, as well as personal experience, it appears that we would do well to:

(1) Discuss frankly and openly mutual perceptions of expectations for complementary roles within the school. Administrator-administrator, administrator-teacher, and teacher-teacher perceptions should be raised from the implicit level to the explicit level, since consensus in perceptions, particularly regarding certain curricular decision, appears to be systematically related to quality

and productivity of curricular planning.

(2) Provide teachers-in-training, particularly in undergraduate programs, with a clearer understanding of the complexity of administrative decision making within the educational organization. In this regard, it also is likely that many of our local orientation and in-service programs should at least be re-examined, if not restructured entirely.

(3) Alter our present mechanisms for involving teachers. Since many teachers did not feel involved in making major decisions, it may well be that many of our present teachers' committees are concerned only with making minor decisions.

(4) Quit blaming dysfunctional operation on such largely irrelevant factors as size of the bureaucracy. Large school districts can, and do, operate as smoothly as small ones.

(5) Attempt to increase the "organizational awareness" of submissive, retiring, inexperienced, females of limited training, since they more often misperceive decision making responsibilities within the organization.

(6) Save the ditto paper that is used in many local districts to produce ill-conceived, poor quality curricular documents. It might be just as well, if not better, to seal the curriculum from the next district than to be forever starting from scratch. That is, it is the quality of the curricular plan, rather than participation in its development, which determines whether or not teachers will use it.

(7) Analyze the precise nature of changes in the curriculum with respect to taking some things out, rather tha continually adding or

rearranging concepts, materials, and activities. In fact, "What can be thrown out?" might be a fruitful initial stance to take in many curricular planning sessions.

(8) Pay closer attention to the selection of textbooks, the appointment of teachers to curricular committees, and the evaluation of teacher performance, since it is these decisions which bear significant, positive relationships either to curricular productivity or curricular quality, or both. For example, some people take issue with the use of a text when they might better profit from taking issue only with the use of a poor text.

(9) Change our curricular plans more often if we wish the plans to be implemented. Otherwise, many teachers will update what they are doing and make changes anyway--even random changes--leaving the old plans on the shelf gathering dust. Under such circumstances, the school has, in effect, no over-all curricular plan but as many idiosyncratic individual plans as there are teachers on the staff.

(10) Listen to what the students, by their feed-back behaviors, are attempting to tell us. Just as the administrator misperceives teachers, thinking that he is sharing widely responsibilities for decision making, so do teachers misperceive students, thinking that students actually are learning when, in fact, they are only being taught.

COMMENTS ON PROFESSOR LIPHAM'S
ADMINISTRATION AND THE EDUCATIONAL PROGRAM"

Arthur McBeath
University of Illinois

Introduction

Professor Lipham presents a report of studies at the University of Wisconsin on some aspects of the "complex interrelationship of administration to the instructional program" and the framework within which these studies were conducted. In studying this kind of topic, and similarly in commenting on such studies, one faces a dilemma. Should we take the molecular approach wherein we may study the real substance of the topic or shall we take the molar approach wherein we may be able to look at the entire picture with all the variables included plus the interrelationships and also the cross-situational and cross-cultural effects. In the first case our view may be so microscopic as to be practically lost when one who is working in the organization tries to perceive the image. In the second case, although new terminology and models initially appear interesting, the study has a tendency to be so superficial that often it is practically worthless as far as extending our knowledge or understanding. Professor Lipham's solution to the dilemma is to study at the molecular level but to set it in a framework at the molar level. Guba, though, suggests that with the general level of sophistication so low in change research, it is more beneficial to stick to the molar approach.[1] One then has to raise the questions, "How molecular is the study?" or "How basic are the elements?" and also "How suitable is the theoretical framework?" Part of my purpose in this paper is to address myself to these questions.

Variables

Professor Lipham has limited his report to the relationships among conflict in perception of the decision-making roles, planned curricular change, and implemented curricular change. One might ask why these particular relationships received the emphasis of the Wisconsin studies? From an "organization" or "administrative" viewpoint it is easy to see that decision making is an important variable and

Professor Lipham has substantiated this. From a teacher's viewpoint in looking at change in educational program, I think the decision making would be considered important also. But it must be kept in mind that the report of these studies is limited to perceptions of roles in decision making and I assume that this restriction is used because research has often shown that it is not the actual decision making that is important but how different persons perceive the act that appears to be crucial. These studies, though, have been even more restricted to the consensus or lack of consensus of this perception. Thus, when we restrict a study to amount of consensus we have a group variable.

The criterion variable of planned curricular change in the form of an official document is really an organizational or administrative factor and is less defensible as a crucial program variable in my estimation. Implemented curricular change, as measured in this study, seem to be more valuable as a crucial program variable. One should note that the kernel of the criterion variables is "change" and thus the emphasis is on the relationship of consensus to "change" although change is restricted to two narrow limitations of educational program.

The criterion for good change is here defined as planned change as recorded in an official document. This again seems to be an administrative criterion for the best kind of program change or it may have been the only objective measure that could be obtained. From a program viewpoint I think it might be more defensible to use change in course goals or objectives whether formally documented or not as an example of a better criterion variable. Also, it seems to me that degree of difference in about three areas might be a valuable criterion of change in program.

I look on planned change as what we have to put up with if teachers are not planning. Planned change as it is most often used is external to the operation and imposed. It is abrupt and irregular. Planning is obviously necessary in educational programs and unless teachers constantly involve themselves, they will find changes planned for them. Thus, I would not choose planned change as defined by a curriculum document for my criterion variable.

The area of investigation is extended by the inclusion of some situational variables such as organizational factors and by the inclusion of some personal variables. These are considered as intermediate variables to the major equation of consensus of perception and program change.

Results

In commenting on the results reported by Professor Lipham, I have included only those results which I found of interest or those results which stood out from my point of view.

I think it should be restated that they describe the picture as it was at the time of the study. Sometimes conclusions or implications are made which infer that these are the results you would always expect or that these are the results you should expect. For instance a different kind of study might look at what happens to decision making about educational program following a self-assessment seminar for teachers and administrators. What happens in the decision-making process if one changes the kind of control within the organization from that of an administrator who is primarily concerned with maintaining the organizational structure to a leader who is primarily concerned with initiating a new structure or procedure to accomplish the organization's goals? This view which distinguishes between administration and leadership is described by Professor Lipham in another recent publication.[2] Answers to these kinds of questions would add further to our understanding of decision making regarding educational program.

Since Professor Lipham has provided us only with some examples of the results, my comments would need to be clarified further, but they will serve the purpose of raising questions.

The results (p. 17) do not seem to indicate any pattern on the perception of decision-making roles within the State of Wisconsin. This emphasizes the importance of getting hold of the situational factors both within the organization

and outside the organization. Both administrators and teachers varied widely and the consensus varied widely. Pettigrew had stated that the importance of the situation has been demonstrated in a wide variety of settings.[3] He is discussing the much stronger area of racial interaction and thus, the implications are widespread. Many individuals seem fully capable of immediate behavior change as situations change. There are a few persons (apparently the extremes of authoritarianism at both ends) who are consistent no matter what the situation, but the majority of people shift their attitudes and therefore their perceptions as the situation changes.

The reported results seem to indicate some personal patterns related to consensus. Thus, there appears to be a need for an interactional approach where we study the consensus of certain personal types in defined situations. I wonder what the picture would have been had the perception of decision-making roles been related to "organizational climate" or types of organization?

The results in this section seem to indicate a great variation in the consensus of perception of who makes the program decision, a lack of communication within the institutions, and the universal attitude of teachers that they are minimally involved in the decision-making process. To each of these one asks, "Why?" The interesting fact that size was not a factor in the extent of the relationship should emphasize that bureaucratization can occur in any organization.

When the program variables were related to extent of consensus, the results have been polarized into those with high consensus and those with low consensus (pp. 19 & 20).

The results that participation, as defined by the number of hours spent working on a plan or the number of people involved, did not affect the quality or quantity of output is not too surprising considering the confusing results which have been found in industrial psychology.

Vroom (1964) discusses many studies in which increased involvement of the employees in decision making was related to increased production.[4] French and his associates studied the workers in a garment factory who were involved in a large-scale industrial change. Participation was extensive and consisted of a series of eighty meetings and changes were made as a result of employee suggestions. The results showed that a year later there was increased productivity and decreased turnover.[5] Vroom carried out a study which suggests that there are individual differences in the effects of participation in decision making on performance. The amount of participation was related to performance for all persons, but the size of the correlations varied systematically with needs for independence and authoritarianism. Vroom concludes this section by stating:

> It seems important for future research to proceed beyond the demonstration that 'participation works' to determine the conditions under which it "works most" and "works least." The usefulness of participation . . . can be greatly enhanced by further knowledge concerning the conditions under which the effects of participation on decision quality, group norms, and ego involvement are maximized and minimized.[7]

Hoffman (1965) found that the important ingredient of participation is influence. The more influence one had on the decision the more likely he was to implement the decision. Pseudo-participative procedures such as letting a person take part in a decision which was already made were ineffective in improving satisfaction and amount of participation in discussion seemed unimportant for acceptance of the group decision.[8]

In other words "participation" is a complex phenomenon and any conclusion based on a restricted definition of participation which does not fully explore the situational patterns should be considered very tentative.

Implications

The implications (pp. 20, 21, & 22) discussed at the conclusion of the paper are important for people involved in program development. Most are quite

obvious results of what Professor Lipham has told us. Number 10 seems to be an intuitive leap to an area of student behavior for which there is no evidence in the information we have.

I have already made reference to the entire question of participation and thus, I would consider the latter part of number 6 to be far too strong.

The implications (number 1 & 3) which refer to making roles more explicit and altering the mechanism for involving teachers are of prime importance. The difficulty is that no direction is given as to the respective roles of administrators and teachers in planning curriculum change. To conclude that the only important element is consensus is fraught with all kinds of dangers. Since the original equation was restricted to consensus, it is obvious that other relationships would not be found in these studies.

Framework

Finally, and as an extension of the report on the Wisconsin studies we should consider some aspects of the frame of reference.

Implied in role theory is the belief that certain kinds of behavior are expected of incumbents of certain position but not of others. Pellegrin has provided some evidence that the teacher participates almost exclusively in activities pertaining to her classroom and he concludes:

> For one thing, the teacher is constrained by the environment-both formal and informal-in which she works. This is generally true of other positions and their incumbents. Second, existing role expectations both encourage and impede change, but in the main they mitigate against the teacher's serving as a source of innovation. Third, it is quite evident that there is a lack of institutionalized procedures through which the teacher can play an important role in the innovative process. Given the existing situation it is unrealistic to expect basic changes to occur as a result of innovativeness by teachers.[9]

Since Lipham has shown a lack of consensus of perception of decision-making roles and since Pelligrin has indicated that in reality the role the teacher is expected to fulfill is quite narrow, it behooves us to look carefully at some possible

reasons for this. One consideration that is often neglected is the professional role of the teacher. Thus, it is quite possible for teachers to take part in some stage of many curriculum changes through the institution of the professional organization and through influence of the norms of professionalization which might be quite separate from participation through the formal organization of the institution of the school. For example collective bargaining is one form of institutionalized procedure for involving teachers in change.

The point is that participation in certain kinds of change within the institution of the school or the school system is firstly not expected and secondly may not indicate actual participation.

The other aspect is the entire question of kinds of program decisions. A number of educators have indicated that there are at least three or four program levels. The first is the instructional or classroom level and it is reasonable to expect more decisions regarding content and method which will emphasize adaptation to individual students at this level. Secondly, there is an institutional level in which the program decisions can be related to the area needs such as vocational emphasis. Then there is a State and National level. Some of the very complex questions concerning the nature of the discipline will be determined at these levels. Participation by teachers from any one school is not likely to be related to factors of quality or quantity in the State or National aspects of programs.

The point then is that there is a good possibility that the elements of program are likely to vary greatly according to the level at which they are mainly determined. Thus, the intensive study of program change needs to differentiate among levels when considering the effect of participation.

Conclusion

Professor Lipham and his colleagues at the University of Wisconsin have studied in more depth than previously the area of involvement in program development and it is to be hoped that this area continues to receive intensive study.

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*CURRICULUM EVALUATION; *RESEARCH PROBLEMS; *MODERN MATHEMATICS; *EVALUATION NEEDS; *EDUCATIONAL STRATEGIES

The four major aspects of the project's research and development effort are: (1) course design and textbook production, (2) evaluation and psychological research, (3) teacher education, and (4) the operation of an experimental mathematics program in secondary schools. Evaluation techniques involving classical research techniques or programed instruction have not been suitable for developing an optimum method or an optimum curriculum. Problems relative to formative evaluation stemmed from observer preparation and feedback interpretation of classroom data. Problems relative to summative evaluation stemmed from lack of contemporary test instruments, lack of control in instructional conditions, sampling techniques, and the format of raw data. These problems led to a shift in evaluation efforts from the experimental design to methodological and procedural studies and an attempt to contribute to a discipline of curriculum evaluation. A response to this paper by R.E. Spencer is included. (EM)

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Evaluation Problems of the UICSM Curriculum Project

by John Easley, Jr.

VT004965

comments by Spencer

EVALUATION PROBLEMS OF THE UICSM CURRICULUM PROJECT — A CASE STUDY

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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J. A. Easley, Jr.
UICSM
Research Coordinator

LIBRARY
THE CENTER FOR VOCATIONAL AND TECHNICAL EDUCATION
THE OHIO STATE UNIVERSITY

I. A Brief History of UICSM

Organized in 1951 as the first of the project-type curriculum improvement efforts, the University of Illinois Committee on School Mathematics has engaged in research and development in four major aspects of mathematics education. Course design and textbook production, evaluation and psychological research, teacher education, and the operation of a mathematics program in an experimental school have been integrated parts of the work of the project almost from its inception. As the project has grown to its present size [an academic staff of 37 with supporting nonacademic personnel] under the leadership of its director, Max Beberman, these four aspects have come to have somewhat separate identity.

Course design and textbook production From the beginning of the project, mathematicians, teachers, and educators collaborated in the experimentation which led to course design and in the writing and editing processes which led to text production. Dozens of high schools around the country participated in the trial of new materials. UICSM staff members visited all of these schools at least annually, and a few "pilot schools" were visited almost monthly for detailed feedback. Primarily supported by the Carnegie Corporation of New York, this work has resulted in the publication of a college preparatory mathematics series (eleven units) designed for use in grades nine through twelve. D. C. Heath and Company, the publisher and distributor of the eleven units, is now in the process of replacing the eleven units with four hard-bound textbooks. The ninth- and tenth-grade volumes are now available for classroom use.

Since 1962, with the support of the National Science Foundation, course development has been centered in two areas of the secondary school curriculum. For seventh- and eighth-grade underachievers in mathematics, who typically would never get to study regular high school mathematics, the project is preparing materials designed to rescue as many as possible of this group for further mathematical study. Headed by Professors Braunfeld and Sanders, a group of writers and teachers is working with underachieving classes in Champaign-Urbana public schools in the development of these materials. Special supplementary materials are being prepared to accommodate individual and class differences in background knowledge and in ability. Visual aids of many kinds are being devised to make mathematical concepts more graphic.

The seventh-grade course — developing operations with rational numbers — has now progressed to the field trial stage, and teachers of selected classes in Boston, Newton (Massachusetts), New York, Philadelphia, Memphis, Springfield (Illinois), Los Angeles, and Honolulu are now using them. In 1966-67 these same classes will try out the eighth-grade materials, which treat geometry intuitively in terms of transformations. Staff members visit these schools regularly, and teachers make detailed written reports on their successes and failures with the materials. After field trials and evaluation are completed, the materials will be revised again before release for publication.

Another team, led by Professor Vaughan, is developing a new tenth- and eleventh-grade course which treats three-dimensional geometry and trigonometry from the point of view of a vector algebra. This course, which is the first of its kind to be tried in this country, is primarily intended for college-bound students. It integrates geometry and algebra, thereby making each subject more useful for further study of mathematics. In addition, it provides a concrete introduction to

linear algebra, a subject of rapidly growing importance. This course is now being taught in five schools, including University High School where the authors observe pupil reactions directly. We turn now to consideration of evaluation in the formative process.

II. Strategies for Optimization of Mathematics Instruction

Most curriculum projects have been more concerned to have an impact on the total perception of a given field in the curriculum than with finding an optimum path through a discipline — a path which could be traveled by the largest number of students to appropriate vantage points from which they can make their own way (a) in collegiate study of mathematics as a major or minor or (b) in coping confidently with mathematical matters as they arise in everyday affairs or in courses outside those a mathematics major would take. Every student may be expected to continue to show an interest in mathematics; in short, to be mathematically literate — as one who keeps up with the world affairs through newspapers and magazines is politically literate. (Borrowed from Karplus' term "scientific literacy.") Although usually not included in the concept of literacy, problem-solving ability in math is also a general objective.

Beberman has exhibited a concern, from the beginning of the project, for devising materials that were best for students. This concern is reflected in the many revisions (see revision charts) and the years of personal classroom teaching that went into getting textbooks ready for hard covers. It is also reflected in the attention that Beberman paid to the voices of criticism raised against new mathematics programs. However, there are several problems of evaluation a concern for optimization raises. First, developing an optimum

DEVELOPMENT OF UICSM MATHEMATICS - (1953-1963)

1953-54	Grade	Chapter	1954-55	Grade	Chapter	1955-56	Course	Unit	1956-57	Course	Unit	1957-58	Course	Unit
						FIRST YEAR								
The Number Line	9	1	The Number Line	9	1	Directed Numbers	I	1	Directed Numbers	I	1	Directed Numbers	I	1
The General Number	9	2	The General Number	9	2									
Equations in One General No.	9	3	Equations in One General No.	9	3	Pronumerals, Generalizations and Algebraic Manipulation	I	2	Pronumerals, Generalizations and Algebraic Manipulation	I	2	Numbers, Numerals, Pronumerals	I	2
The Coordinate Plane	9	4	The Coordinate Plane	9	4									
Angles, Polygons, Circles	9	5	Angles, Polygons, Circles	9	5									
Similar Figures	9	6	Similar Figures	9	6	Equations	I	3	Equations	I	3	Equations	I	3
Principles of Measurement	9	7	Principles of Measurement	9	7									
Measurement of Areas and Volumes	9	8	Measurement of Areas and Volumes	9	8	Graphs and Ordered Pairs	I	4	Graphs and Ordered Pairs	I	4	Graphs and Ordered Pairs	I	4
Indirect Methods of Measurement	9	9	Indirect Methods of Measurement	9	9									
						SECOND YEAR								
			The Natural Number System	10	1	Natural Numbers	II	1						
			Integers and Rational Numbers	10	2	Number Systems	II	2	Geometry (Page T-F)	II	1	Geometry (Vaughan)	II	1
			Equations in Two Variables	10	3	Real Numbers and Quadratic Equations	II	3						
			Exponents	10	4				Sets and Relations	II	2	Sets and Relations	II	2
			Plane Geometry (Hochschild)	10	5	Systems of Equations	II	4						
						THIRD YEAR								
						Complex Numbers (Page)	III	1	Geometry (Page T-F)	II	1	Real Numbers	III	1
						Equations, Functions, Slope Function	III	2	Mathematical Induction	III	1	Mathematical Induction	III	1
						Theory of Equations	III	3	Exponents and Logarithms	III	2	Exponents and Logarithms	III	2
						FOURTH YEAR								
									Geometry (Page T-F)	II	2	Complex Numbers (Vaughan)	III	2
									The Circular Functions			Circular Functions and Trigonometry	IV	1

COLOR KEY

- Original Unit
- First Revision
- Second Revision
- Third Revision
- Fourth Revision
- Fifth Revision

1958-59	Course	Unit	1959-60	Course	Unit	1960-61	Course	Unit	1961-62	Course	Unit	1962-63	Course	Unit
						FIRST YEAR								
Real Numbers		1	The Arithmetic of Real No's.		1	The Arithmetic of Real No's.		1	The Arithmetic of Real No's.		1	The Arithmetic of Real No's		1
Numbers, Numerals Pronumerals		2	Generalizations and Algebraic Manipulation		2	Generalizations and Algebraic Manipulation		2	Generalizations and Algebraic Manipulation		2	Generalizations and Algebraic Manipulation		2
Equations and Inequations		3	Equations and Inequations		3	Equations and Inequations		3	Equations and Inequations		3	Equations and Inequations		3
Ordered Pairs and Graphs		4	Ordered Pairs and Graphs		4	Ordered Pairs and Graphs		4	Ordered Pairs and Graphs		4	Ordered Pairs and Graphs		4
						SECOND YEAR								
Sets and Relations	II	1	**Relations and Functions**		5	Relations and Functions		5	Relations and Functions		5	Relations and Functions		5
Geometry	II	2	**Geometry**		6	Geometry		6	Geometry		6	Geometry		6
						THIRD YEAR								
Mathematical Induction	III	1	**Mathematical Induction**	III	1	**Mathematical Induction**	III	1	Mathematical Induction		7	Mathematical Induction		7
									Sequences		8	**Sequences**		8
Exponents and Logarithms	III	2	**Exponents and Logarithms**	III	2	**Exponents and Logarithms**	III	2						
									Elementary Functions: Powers, Exponentials and Logarithms		9	Elementary Functions: Powers, Exponentials and Logarithms		9
						FOURTH YEAR								
Complex Numbers	III	2	Complex Numbers	III	2	Complex Numbers	III	2	Complex Numbers	III	2	Complex Numbers	III	2
Circular Functions and Trigonometry	IV	1	Circular Functions and Trigonometry	IV	1	Circular Functions and Trigonometry	IV	1	Circular Functions and Trigonometry	IV	1	Circular Functions and Trigonometry	IV	1

curriculum or developing an optimum method of instruction for a given group of students do not lend themselves to satisfactory attack by the classical method of comparison of treatments (adopted from agronomy) nor by the new method of programmed instruction. The problem is closer to (but far more complex than) the problem of shaping animal behavior.

It will be objected that programmed instruction is not be compared with hand shaping of a pigeon because the human learner of complex subject matter has already acquired a language and can be guided by verbal instructions as a pigeon cannot. Since we may reasonably expect most human beings to comply with our instructions, the argument goes, the use of language can save the enormous time it would take a person to discover the subject matter even under the best possible reinforcement contingencies. This argument still presupposes that we know our objectives quite precisely and the route by which we wish to take the students to them. Although the first program we produce may fail to reach the objectives and later ones may succeed, there is no provision or guidance for the researcher in making major departures in path between successive revisions, since data are collected only on answers given to questions asked, and spontaneous or free responses are not elicited nor used for research guidance.

Many curriculum projects have followed this general strategem — though usually not by producing materials in self-instructional form — e.g., SMSG, CBA, CHEMS, BSCS, and others have not encouraged major departures from preliminary approaches to instruction. These, like programmed instruction research, have concentrated upon getting a particular presentation prepared in usable form and have not dealt seriously with the optimization

problem nor with understanding educational processes.

Exploratory Method in Curriculum and Instruction

Physicists have often used a test body of some kind to explore the gradient patterns (topography) of a force field. If a field of knowledge were structured topographically, the optimization problem would consist in finding a path to strategic points whose average slope is as low as possible but which is as short as possible — thus permitting most students to travel with least effort to the best viewpoints. The student himself would be the ideal test body for exploring the structure of such a field — much as Piaget has employed children to study the genetic relationships of conceptual structures. However, a topographic model may be much too simple for useful guidance in research on curriculum and instruction.

Anthropologists studying a strange culture often use themselves as participant-observers in a community of that culture, in order to get a closer look at social processes such as communication and decision making. In this method, as well as in the test-body method of exploratory research in physics, the effect of injecting a foreign body into the system being studied has to be taken into account. Doing so is part of the discipline of research.

The curriculum and instructional problems seem to require a participant-observer who directs the students' attention first to this and then to that matter and notes their reaction, but he must explore a field that already has one well-known logical structure and seek another psychological one. He must map a kind of psychological gradient of comprehensibility on a logical map of theory,

somewhat analogously to the physicist mapping forces on a geometric space. Is some combination of test-body and participant-observer approaches possible for problems of curriculum and instruction? Is it possible to carry out such a procedure in a disciplined manner that we could call scientific research?

Max Beberman has developed a style of curriculum research, having some similar characteristics, which a number of other workers in new curriculum projects have emulated or perhaps discovered independently. One can describe Beberman's research by saying that he brings students into contact with various portions of a field of knowledge and with various arrangements to presentations of these portions, and he interacts with the students to try to discover their interaction with the subject matter. Depending on their response, he suggests to them one way or another in the field as he searches for an optimum path to the regions of greatest vantage. In such research, he cannot afford to adopt specific objectives for individual lessons or portions thereof; to determine pupil responses, he must be constantly on the alert for unexpected moves on the part of students which rule out the anticipated avenues of approach or which open up new avenues for continued exploration.

This is not to say that practitioners of this style of research have no idea of what the high points are to which they seek to lead students. It is precisely with respect to what are the best vantage points for students that mathematics educators have disagreed, so strongly in what has been called "the math wars." (DeMott, 1962) However, this disagreement ultimately must be a matter to be settled by research. They do not appear to disagree on long-range objectives, such as problem-solving ability or enabling the student to be able to "navigate" the field of mathematics as much as possible "under his own steam." (Easley, 1965)

What determines whether a particular path segment in a mathematics lesson is easy or hard (likely to be followed or unlikely to be followed), we may wish to attribute to the conceptual ability of the student and the properties of the concepts along this path segment. Once this relationship is well described for the entire field, it becomes possible to design a near optimum path — that is, a path which as many students as possible in that student population find passable. Continued study of students moving along this path can now help to improve both the path and refine the underlying structure. Then presumably teachers can be trained to guide students along it.

As materials were developed from such explorations, schools and teachers were found who were willing to submit them to pilot trials. In the pilot schools new problems of formative evaluation occurred.

Feedback from teachers was collected and analyzed by a few highly trained persons who traveled from school to school to find out how the materials were working. The field observer often took charge of classes in order to find out how the students were progressing. Both they and the pilot school teachers wrote detailed reports which were used in the revision of materials.

Later, other schools, called participating schools, were allowed to use the materials provided their teachers sent in detailed reports on the difficulties they encountered and the remedies they found for them.

As the project grew in size and scope, attention was given to the task of preparing additional persons with skills as classroom observers and analyzers of teacher feedback reports. A variety of training techniques were explored:

(a) Observation reports written by trainees were scanned for clarity of communication and returned to their authors for revision until clarity was obtained. Finished reports were typed on keysort cards and punched for easy retrieval. Two of these cards are shown as an exhibit.

(b) An anthropologist was called in to lead a workshop with observers on observation techniques.

(c) A system of tape-recording a detailed account of exploratory lessons with supplementary photographs was developed by Hendrix and taught to other observers. (See the attached pages from a Newsletter which illustrate this technique.)

All of these methods proved so cumbersome that, in practice, as new writing projects were started, several members of the writing teams took on the responsibility of teaching experimental classes in order to obtain feedback directly. In order to obtain a record of pilot trial experience, teachers and observers were asked to report daily by making marginal notes on pages of the text. They were then collated on a single copy for reference by authors engaged in revision.

Despite extensive efforts to obtain detailed, if not a systematic, feedback it was generally found that revisions based on logical analysis or creative restructuring of materials account for more than 90 percent of the changes made in rewriting. Two members of one writing team, who were trained statisticians and specifically charged with developing test items for feedback, were convinced after six months effort that they could contribute more as observers in the classroom and participants in the rewriting and administering of test items.

Teacher: 10.05.03 pp. 101-103
Observer:
Date: Jan. 23, 1963

Part C, p. 101 seems to go very easily. Many students did not 'get' Ex. 3:

$$\text{Prove that } \tan 2x = \frac{1}{2}\left[\tan\left(x + \frac{\pi}{4}\right) + \tan\left(x - \frac{\pi}{4}\right)\right]$$

although the discussion is clear. They still hesitated to do the necessary work to make some of these things work out.

Ex. 6, p. 103 is not easy. The hint given by Jim was to observe that:

$$\cos (n + 1)x = \cos nx \cos x - \sin nx \sin x$$

In comparing this to the right hand side of the desired equality,

$$\cos (n + 1)x = 2\cos nx \cos x - \cos (n - 1)x$$

there was some hesitation. Even after expanding $\cos (n - 1)x$, the result was not clear. In any event, this probably ought to be discussed by the teacher, or written in the text.

1. Yes 2. Yes 3. Most 4. Some 5. No

MCBEE KEYSORT U. S. PAT. NO. 2,213,607 KD 5848 REV.

Teacher: 5.05.01
Observer:
Date: October 16, 1962

Using the function $h = \{(2, 3), (9, 5)\}$ the teacher asked for the value for the function with argument 2 $[h(2) = 3]$. Then, what is $h(9)$? When he asked if relations have values, the student called on didn't know. The teacher said that some do, and when asked why, the student answered, 'Because functions are relations.'

$$C = \{(4, 3), (4, -3), (-4, -3), (-4, 3), (0, 5), (0, -5)\}$$

Teacher: If I ask for $C(4)$, what am I asking for?

Student: The value of the ordered pair whose argument is 4.

The teacher noted that the student said 'the value'. In this case $C(4) = 3$ and $C(4) = -3$ would force acceptance of $3 = -3$, thus 'value' is reserved for functions.

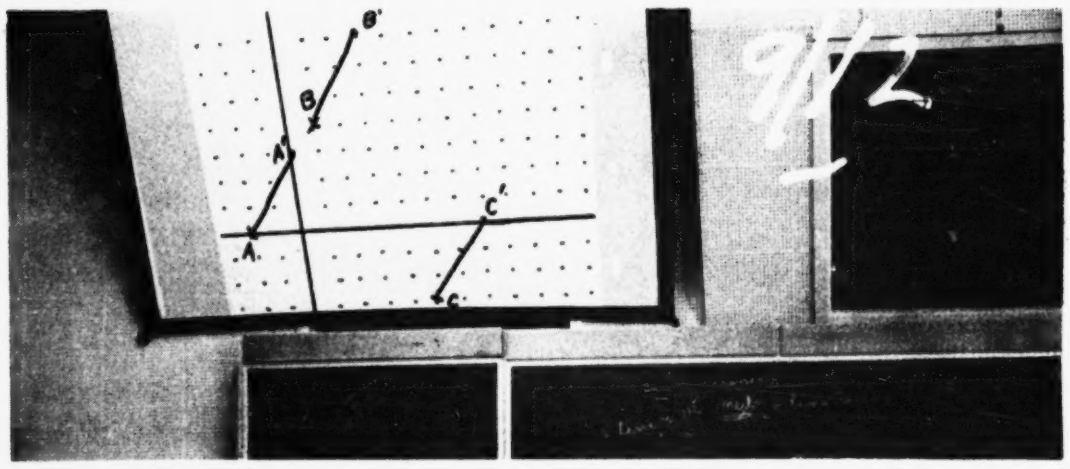
In considering the set $\{(4, 3), (-4, 3), (0, 5)\}$, the students decided that it was a function. Then regarding '$C(4)$', he asked: "What does it do? What is this symbol? Second component of ordered pair is what? A number or a numeral?"

MCBEE KEYSORT U. S. PAT. NO. 2,213,607 KD 5848 REV.

Vector Geometry
Meeting No. 4
308 Univ. H. S., Urbana
11 a.m., Thurs., 12 Sept. 1963
Teacher: M. Beberman
Observer: G. Hendrix

The class opens with a discussion of the homework on Part B, pages 1-5, 1-6, 1-7. The teacher is using a transparency on an overhead projector. The design is large and clear, and the device is working well. The teacher has an overlay with the design of the triangle ABC and the dot for point D marked on it. He slides the overlay on the number plane picture, keeping the line through points A and D parallel to the first component axis.

The teacher marks the original position of the triangle with crosses at points A, B, and C (crosses on the lower transparency). The new positions A′, B′, C′, are marked with dots. The segments $\overleftrightarrow{AA'}$, $\overleftrightarrow{BB}$, and $\overleftrightarrow{CC'}$ are drawn.



The teacher asks,

"What are some obvious things about those three segments?"

Someone suggests,

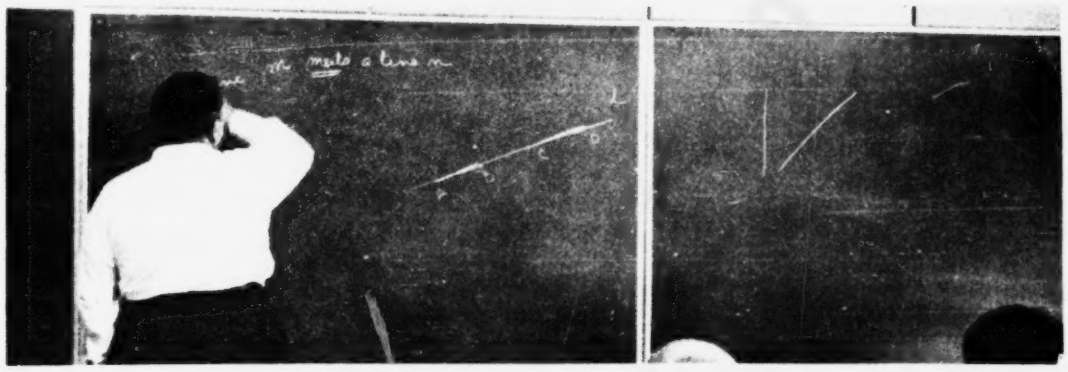
"Any two of them are parallel."

Someone objects to this because $\overleftrightarrow{BB'}$ looks like an extension of $\overleftrightarrow{AA'}$. After some discussion the students decide this is just because of the way the figure looks in the free-hand drawing. The teacher, however, raises the question,

"But suppose she were right? Suppose A, A′, B, and B′ were all in the same line? Would $\overleftrightarrow{AA'}$ and $\overleftrightarrow{BB'}$ still be parallel?"

This leads into a lengthy discussion of the nature of parallelism. What does 'parallel' mean for segments? They decide that merely saying the two segments have no point in common is not enough. The students soon find that they are not

quite sure what they mean by 'parallel lines' either. Lines that do not meet? What does it mean to say that one line meets another?



The discussion is concerned with what it should mean to say that two segments are parallel. It is agreed that this question is to be resolved by considering the lines to which the segments belong. Now the question is restated with a drawing on the board in which segments $\overline{AB}$ and $\overline{CD}$ belong to the same line ℓ and appear to be congruent.

The class is reminded,

"We are still worrying about whether the segments $\overline{AB}$ and $\overline{CD}$ are parallel. This question is still undecided." The teacher now writes on the board:

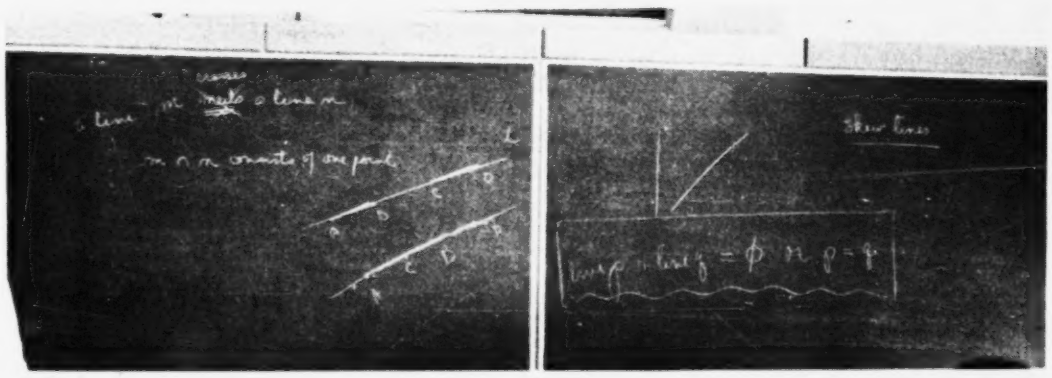
$$\text{line } p \cap \text{line } q = \emptyset$$

He reminds the class that someone has proposed this as a defining condition for parallel lines. Mr. Beberman now says,

"I can think of two lines which satisfy this condition but which I believe no one would want to call 'parallel'."

The concept of skew lines emerges readily and the concept is named, the name written on the chalk board. The class has decided also that they do not want to say that a line "crosses" itself. (See left half of the blackboard in the photo below.) Hence, if line p and line q are not skew lines, and if line p does not cross line q, then line p is parallel to line q.

Finally, they revise their definition of parallel lines to include the case, line p = line q. (See photo below.) Photo at 11:16 a.m.



We turn now to the problems of summative evaluation — or those arising out of consumer interests.

III. Performance Characteristics of UICSM Texts

The following remarks, made by Max Beberman in the foreward to UICSM Research Report No. 1, illustrate the basic problem of comparative evaluation studies, which were demanded, in many cases, by the pilot and participating schools.

"A primary objective which UICSM set for itself when it was organized in 1951 was to improve the learning of the skills and facts comprising the college preparatory sequence found in most high schools at that time. In trying to achieve this objective, UICSM made major changes in pedagogy and major changes in content especially with respect to logical organization. Teaching-by-discovery replaced teaching-by-telling in order to build interest and to tap the creative talents of students. We maintained very high standards of precision of language in our instructional materials. In order to achieve the understanding which intellectual integrity demands as a prerequisite to the acquisition of skills, we introduced the notion of a deductive organization of elementary algebra. Thus students derived the theorems which justified the usual manipulation rules and they became aware of the logical connections among the manipulation rules [e.g., the rules for combining like monomials and the rule for combining like radicals are logical consequences of the same principle]. Topics from the elementary theory of sets were introduced to give students insights into what made the mechanical procedures work when they solved equations and inequations

or when they solved systems of equations by graphing. Thus UICSM students had the opportunity not only to acquire the skills and knowledge expected from the "traditional" curriculum but also to learn mathematical ideas and techniques which were not provided for in school mathematics programs prior to UICSM. In addition, as we were told by cooperating teachers in experimental classes and as we observed on our visits to these classrooms, UICSM students were routinely developing insights into mathematics and attitudes toward new problems which were acquired by only the best students in the best of traditional classes and which mathematics educators have professed to be among the most significant outcomes of instruction.

"Any comprehensive evaluation program should consider both the primary skills-and-knowledge objective which is common to both our program and the traditional one, and the rather astounding secondary objectives which we appeared to accomplish almost as by-products. In the early years of our work we were able to look only at the primary objective in making comparative studies of UICSM students and students trained in the traditional curriculum. Naturally, it was not possible to make comparative studies with respect to new content, and we had neither the skill nor the time to develop objective tests for making comparative studies with respect to the development of insight and creativity in attacking new problems. What we could do and what we did was to collect data on students' achievement as measured by standardized algebra and geometry tests which were designed for the pre-1950 traditional curriculum. We do not pretend that these tests have provided us with a complete description of our students' achievement, and we recognize that the language used in many of the items on these tests was somewhat unfamiliar to our students. Nevertheless, we were willing to use the test results as a rough guide in revising our

instructional materials. The study reported below is the first we have published based on an analysis of the data collected by means of such tests.

"The results of the analysis are not as satisfactory as we might have hoped. Achievement by students in our pilot and participating schools was not uniformly high. These results are in accord with the subjective reports we have received from teachers and with very rough analyses which we carried out some years ago as the data was collected. These preliminary findings persuaded us to revise our instructional materials for our advanced units in the direction of including many review sections of miscellaneous manipulative exercises."

Another problem of comparison, the lack of control of conditions of instruction, is illustrated by the following chart, Figure 1, from the same report. Duration of instruction over a given body of materials was completely uncontrolled in the experimental classes but very tightly controlled in the traditional ones. Similarly, it was impossible to match groups on ability, class size, teacher training and experience. Statistical control of numerical and verbal ability (DAT) was employed with the results shown in Figure 2. Differences were mainly in favor of UICSM groups, but less than one standard deviation. However, distributions of uncontrolled variables were such as would further reduce the differences if adjustments were made on them. I suppose the disappointing results of that study have tended to slow down the work of getting the data reported.

In introducing UICSM Research Report No. 9, in which Comley analyzed correlations among 25 variables, I attempted to rationalize our efforts to make sense out of the accumulated data as follows:

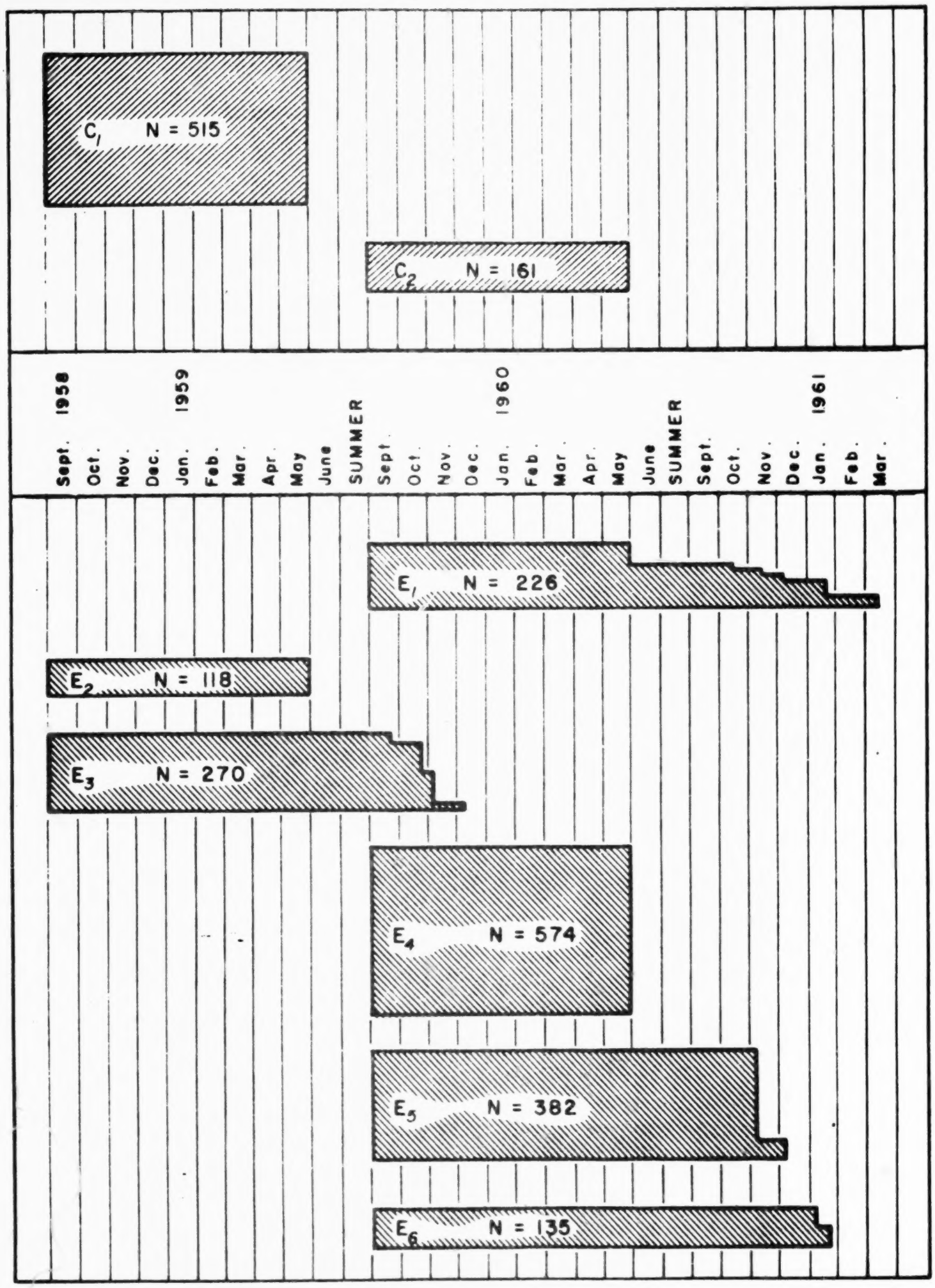


Figure 1

Block diagram showing the groups into which the control and experimental samples were divided. The left edge of each block indicates the time at which that group began its course. The distribution of times of testing for these groups is indicated by the right hand boundaries of the blocks.

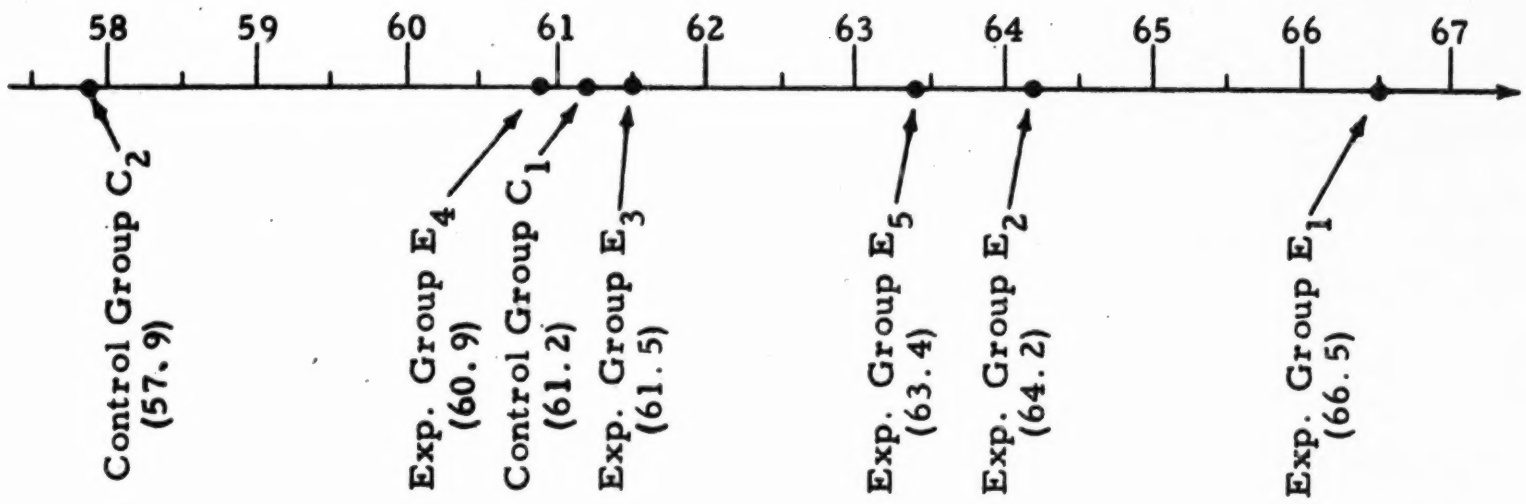


Figure 2. Adjusted Coop Algebra means for five experimental and two control groups (adjustments based on regression equation for combined sample). Mean Group SD: Exp. 9.30, Control 10.72.

"Curriculum evaluators are expected to answer different kinds of questions raised by a number of quite different groups of people. Authors of text materials want to know, "Where did we fail?" Psychologists want to know, "Is discovery doing anything for the pupils?" Philosophers want to know, "Are students being indoctrinated?" The supporting foundation wants to know, "Have the results justified the investment?" Most important and most difficult of all to satisfy are the demands of the consumers — school administrators, teachers, students, and parents — who want to know, "What's in it for us that we can't get just as well some other way?"

"So little progress has been made in meeting the consumers' demand in most curriculum projects, that the advice generally offered is, "Pick several programs that look good and try them out yourself." This procedure, appealing as it may be to those who nurture the ideal of teacher selection of text materials

and teacher design of the local curriculum, is fraught with administrative nightmares. Projects often fall back on less satisfying suggestions equivalent to the old bromide, "Ask the man who owns one." Comparative curriculum evaluation by means of achievement tests is a most hazardous business, although most of the consumers would settle for some such results, if offered them. The fairness of traditional tests as a measure of achievement in a new math program is a serious problem from a psychometric point of view, but to raise this question in a skeptical context seems like special pleading. More precise instruments are needed to do the job adequately, and the curriculum evaluator may be wisest in the long run who devotes the largest portion of his resources to the refinement of instruments so that what they do measure is well known.

"A more practical sort of stumbling block is to be found in the problem of sampling. The statistician's instinct is to suggest a random sample of the nation's classrooms stratified to ensure representativeness. However, classical design yields only the calculated risk that one takes in acting as though the observed superiority of one treatment over another is not due to an accident of sampling. What does this say to a potential consumer? Is he not entitled to look at the overlap in distributions for two treatments and inquire whether his classes, because of their various peculiarities, are not more likely to be among those for which the direction of difference is reversed than in the more populous categories which produce the major effect? The representative sample of teachers, of communities, of school budgets, and whatnot provides little to go on in making a decision about his classes, if he has reason to believe that these factors make a difference in the outcome and that his school is atypical in these regards. Stratified replication of comparisons would solve this problem if we had an economically small number of generally recognized types of schools to study.

"However, curriculum projects are now a part of the educational scene and exert an influence far beyond their meager output of experimental conclusions. Schools have participated or not, for reasons sound or unsound, and the history of their participation needs to be told. The present report, by Robert Comley, represents a continuation and intensification of the efforts of researchers at UICSM to reconstruct the increasingly distant history of this project — especially that of its students.

"The documents our "historians" have to work with resemble the raw data of the psychometrician more than the data one expects to find historians working with. However, the assumptions of the statistical models, which are implied in summarizing these data, are difficult to justify because the data were collected years ago by teachers who differ widely in psychometric training. The reader is cautioned to bear in mind that the data here represented have more often than not been extracted from dusty IBM cards found in envelopes the interpretation of whose markings requires considerable ingenuity. He should also keep in mind the image of the modern-day slave laborer, the undergraduate student hourly worker, who (perhaps because he too was a UICSM student or knows one) searches patiently through decks of cards and musty, wrinkled printouts to find evidence that might indicate whether Robert S. Brown, who took the DAT in 1958, and R. Stewart Brown, who took the COOP Geometry test in 1960, are one and the same person.

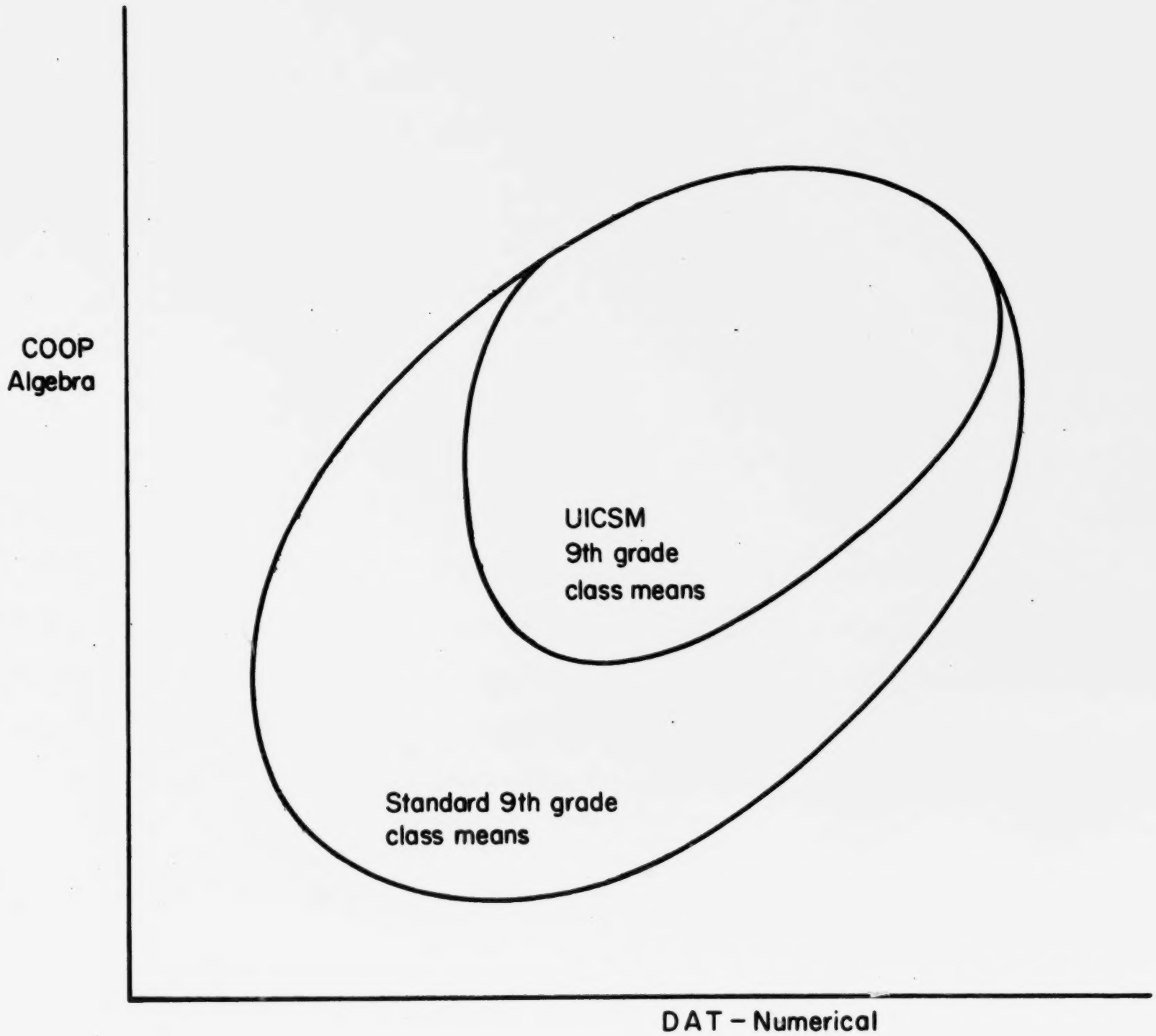
"Surrounded as they must be by other researchers disciplined to react in horror to data collected under unknown conditions, those who have assembled this report are to be commended on their perseverance and their discipline-of-a-different-sort. It may turn out that the diggings from which this report comes

will provide better clues to guide the decisions of practicing educators than are likely to come out of the next five years of formal research designed according to mathematical models.

"Some readers of this report may value the lists of pilot and participating schools who ventured to use UICSM materials without much in the way of comforting evaluation data. Others may be interested in searching out hidden meanings in the tables of correlations. Others will look over the CEEB scores and reject the rest. A few will be interested in the additional support given to Ferris' conjecture that the predictions offered by tests of academic ability have decreasing validity as students progress through a new-style curriculum. Those who wish to calculate intellectual risks with probabilistic models rather than with a historian's intuition are advised to read no further. Those who do read, however, are urged to send us their comments and advice in the interests of our further studies."

The somewhat pessimistic note of the foregoing discussion has been brightened by a few important results, one of which has not yet been reported. The bivariate distribution of UICSM class means on COOP algebra and DAT-Numerical is as shown in the graph attached. The distribution clearly indicates outstanding success by a fair number of teachers of moderate ability classes. This result has led us to search for teacher variables that would account for the very wide variations in results with children of comparable ability.

"Many studies of general teacher variables have been carried out, and in a few cases, such variables have been shown relevant to pupil accommplishment



Approximate relationship of UICSM achievement-ability class means with that of standard ninth grade classes.

in the new curricula.* However, most measures of classroom behavior, personality, and training of teachers seem, a priori, to have little relevance for use in evaluation of new curricula. This does not deny the value of further studies with general teacher variables, but it does suggest that some approaches to content oriented teacher variables should be developed."

That was from the foreword of a preliminary study of teacher held objectives by Ikeda using as a measure, teacher judgment of the relevance of types of test items to evaluation of their own students. Ikeda summarized his factor analysis of data from 105 teachers as follows:

"For teacher ratings, the first principal factor was related to the general tendency of each teacher's ratings, i.e., the teacher's general response set. Items asking for understanding of the basic mathematical concepts tended to have high coefficients on this factor. The second principal factor was related, in part, to a preference for conventional vs. new mathematics items. The third factor was related to objectives somewhat irrelevant to the text. The fourth factor was related to the objective of algebraic manipulation, and the fifth was left unidentified."

Pupil achievement on these items by students of six teachers did not yield factors congruent with the teacher rating factors. Kraatz is now attempting to discover a relation between teacher ratings and achievement of their pupils.

---

* Alpert, R., et al, Psychological factors in mathematics education. SMSG Newsletter, April, 1963, No. 15, 17-24.

Spaulding, Robert L., Achievement, Creativity, and Self-Concept Correlates of Teacher-Pupil Transactions in Elementary Schools. Coop. Res. Proj. No. 1352, University of Illinois, 1963.

IV. Psychological Characteristics of Preferred Methods of Instruction

Very early in its history, the UICSM Mathematics Project became identified with the phrase "discovery method of teaching." According to Beberman, his intention was only to give every pupil the courtesy of allowing him to think a question through until he was satisfied. His colleagues, however, recognized in his style of teaching an unusual degree of artistry. This led some of them to seek a label for his style and to attempt to formulate rules for his instructional method.

Hendrix published two articles on discovery teaching, and rules of instruction were formulated under the label of UICSM discovery teaching. Ausubel challenged the discovery notion as a mystique (1961). My own interest was stimulated in an attempt to formulate such rules precisely enough to permit interpretation in psychological terms. I later modified this concern to the more realistic one of simply understanding psychological phenomena associated with teaching in the Beberman style, whether the original principles could be interpreted or not.

I began a series of experimental studies, in which I was joined by Avner who eventually continued alone until he was forced to leave for military duty. The first question we attacked was the alleged motivational effect of making a discovery. The emotional excitement of a discovery was supposed by some to whet a student's appetite for more discoveries.

Following a clue from a study by Blatt (1961), we attempted to find a correlation between heart rate increases and moments of discovery. We made use of the PLATO computer-based system for inducing mathematical discoveries and recording physiological data. The results were disappointing. Although sudden increases in heart rate occurred frequently — they were not consistently associated with moments of discovery as indicated by the successful answering of a problem that had been earlier attempted unsuccessfully. We also found that discoveries were quickly forgotten when we tried a retention test 20-30 minutes later.

Meanwhile, Wolfe, Brown, and Gilpin had worked with several portions of the UICSM materials in the form of programmed booklets. Their efforts, as well as those of Avner and myself, made it clear that we had captured, in a sequence of problems for the student, a means of inducing a generalization on the part of the student. Yet it was also clear that something quite different happened when such sequences were employed in Beberman's classroom or in those of teachers he had personally trained.

The sequences of problems were examined for structure. Were there rules for optimum sequencing? Sequences are too numerous to investigate experimentally, but this work did open the way to explore another rubric, the prohibition against verbalization of the rule before the discovery was made. After behavior was well established and linguistic skills were available that permitted precise formulation, UICSM texts did present rules to the students. However, efforts on the part of students or teachers to formulate rules earlier than that

were often frowned upon. Wolfe (1962) tried putting rules in his programmed materials preceding the discovery exercises designed to lead to their discovery. This made no difference in pupil achievement, suggesting that the exercises carried the burden of the instruction.

Avner tried to find a negative effect of verbalization on transfer that Hendrix had reported, but without success.

Our researches into instructional method came to an end — primarily because one sponsoring agency felt that we were getting too far afield from the main business of curriculum evaluation.

V. Follow-up Studies

The information most in demand, it seems, is usually the most difficult to obtain. The project understandably gets more requests for information about performance of former UICSM students in college than any other matter. Fear of adversely affecting college admissions has often interfered seriously with the adoption of innovations, and principals want facts with which to reassure parents who are queazy about letting their children enroll in UICSM mathematics classes. We have, therefore, released all the information we could get on former UICSM students. But follow-up information of any kind is very difficult to interpret.

We were able to contact, for example, 400 1962 high school graduates who had 3 or 4 years of UICSM mathematics and were enrolled in college. They were enrolled in 160 colleges and universities in 36 states and the District of Columbia. Eleven hundred forty-one 1963 graduates were distributed among 38 states, the District of Columbia, Belgium and Canada in 316 institutions of higher learning. Of this latter group 454 had three or fewer classmates in their institution who had studied UICSM. One wonders what grade point averages mean from such a collection of students. Nevertheless, we collected grades and averaged them. For example, Comley found that 30% of the 1962 graduates took calculus as their first math course and averaged 3.7 on a scale with C = 3. Thirty-three percent took no math in their freshman year and the rest took lower level math courses — and made slightly higher grades in them. This result doesn't sound great but doesn't sound bad either. Eighty-four out of the 400 went to Dartmouth, Harvard, Illinois, Michigan, Purdue, Stanford, or Wisconsin. (Don't ask me how I picked that list!) Most of all don't ask me what it means.

Comley is now collecting information from several hundred college seniors who took 3 or 4 years of UICSM and a comparable number of seniors, who took so-called traditional mathematics from high schools in school districts of somewhat similar socio-economic level. What is he likely to find? Probably nothing striking in the way of grades. Judging by freshmen and sophomores previously studied, the UICSM students will probably speak more highly of their high school training than the non-UICSM. However, this could mean nothing more than that we have succeeded in indoctrinating them with a pro-UICSM line.

VI. Summary

UICSM curriculum research has not followed the classical mode of experimental design, setting up experimental and control groups to assess the effect of treatment. It has seen teaching mathematics as no simple combination of clearly defined variables as in agronomy experiments, where amounts of fertilizer, insecticide, and irrigation might determine production. Rather, a successful teacher of mathematics is seen as an interaction with the stream of pupil behavior to move them toward behaving in accordance with mathematical and logical generalizations — that is, using them reliably to solve problems.

An exploratory mode of curriculum research is employed, but serious difficulties stand in the way of objectifying such research procedure. Most methods of recording and analyzing classroom data are so cumbersome that, in practice, they give way to the demands of producing educational materials. (Even films, which were used to record a ninth-grade algebra class in great detail, was edited for teacher training only, and do not adequately demonstrate the research methodology and results.)

Efforts made in the direction of summative evaluation, teacher variables, psychological studies of a teaching method, and follow-up studies have raised serious problems of research methodology which await further investigation before generally useful results can hope to be obtained.

We have made a "college try", if not a classic attempt, and have found out many of the problems of curriculum evaluation. We have generally shifted our efforts to methodological and procedural studies in hopes that we can contribute to a discipline of curriculum evaluation in a way that would be useful

to other projects. We have made some significant beginnings toward such solutions, but that is another story to be told at a somewhat later date.

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UICSM RESEARCH REPORTS

Check those reports you desire to receive.

- ☐ 1. Comparison of UICSM vs. "Traditional" Algebra Classes on Coop Algebra Test Scores -- By Maurice M. Tatsuoka and J. A. Easley, Jr.
- ☐ 2. Detection of Rate Changes in Periodic Phenomena -- by R. A. Avner
- ☐ 3. Preferential Factors in Order of Operations -- by R. A. Avner
- ☐ 4. Some Comparisons of Mathematics Achievement in UICSM and Non-UICSM Classes in Inglewood, California -- by Maurice M. Tatsuoka and Robert E. Comley
- ☐ * 5. Making and Using Achievement Tests for Instructional Research and Curriculum Evaluation -- by John Gilpin
- ☐ * 6. A Case Study in Preparing Programed Instruction Materials for High School Mathematics -- by John Gilpin
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- ☐ 8. A Method for Handling Missing Data in Computing Phi or Tetrachoric r -- by Maurice M. Tatsuoka and James Kraatz
- ☐ 9. A Follow-up Study of UICSM Students Who Started Course 1 in 1958 and 1959 -- by Robert E. Comley
- ☐ 10. A Factorial Study of the Relationships Between Teacher-held Objectives and Student Performance on UICSM High School Mathematics -- by Hiroshi Ikeda

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* Reports that have not as yet been published but are expected to be available soon.

RELATED DOCUMENTS

- ☐ A Plato Program For Instruction And Data Collection In Mathematical Problem Solving (Coordinated Science Laboratory Report No. 185) -- by J. A. Easley, Jr., Harvey Gelder, William Golden

- ☐ Heart Rate Correlates Of Insight (Coordinated Science Laboratory Report No. 198) -- by R. A. Avner

- ☐ UICSM Programed Instructional Research in Secondary School Mathematics -- by O. Robert Brown, Jr.

- ☐ Comparative Studies of Principles for Programming Mathematics in Automated Instruction (Technical Report No. 12) -- by O. Robert Brown, Jr.

- ☐ UICSM Follow-up Study Preliminary Report -- by Judith Boyle

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Comments on "Evaluation Problems of the UICSM Curriculum Project - A Case Study" by J. A. Easley, Jr.

Presented by

R. E. Spencer, Head
Measurement and Research Division
Office of Instructional Resources
University of Illinois

Thursday, May 19, 1966

There are several major points in Dr. Easley's paper which deserve consideration in this, purportedly, a critical review. These points can be categorized into two distinct areas:

(SPECIFIC) (1) analysis of the UICSM project itself, or more specifically the research and evaluation of it; and

(MORE GENERAL) (2) analysis of the evaluation/research/testing procedures explored in the paper in terms of philosophy and assumptions.

Being a neophyte in mathematics, fearing it, and having subliminal anxieties about math, as well as having children in the new math in school without being able to understand what they are doing, I feel grossly inadequate to any analysis of UICSM.

"EXCEPT" for a few points: Ergo into the Lion's Den we go:

1. The four major aspects of math education in the first paragraph of Dr. Easley's report are stated in a manner which I am sure he did not intend or I perceive it in a way which was not intended. The areas of (1) <u>course design and textbook production</u>, (2) <u>evaluation and psychological research</u>, (3) <u>teacher education</u>, and (4) <u>operations of a program</u>, do not state "WHAT FOR?" I would have preferred statements such as:

   In order to improve the learning of mathematical concepts, the use of math logic in the solution of problems, the application of math to the analysis of systems, etc. four areas have been experimented with, - - - - etc. I was looking for a "learning" orientation, and not a teaching orientation.

2. <u>OPTIMIZATION PROBLEM</u>:

   I would also like to see the objectives of the math project stated differently. The "optimum path through a discipline"

approach seems to me to indicate or possibly imply that the path is the same for everybody, the goal is rather homogeneous, and the end point is known. It would seem to me that the objective would be to present the material in a manner which optimizes learning efficiency through a discipline to whatever extent the individual can personally afford, or chooses to afford, to his own maximum level. I introduce here an element of individual differences not explored in the paper; and an element of WILL.

3. The objectives as stated in the paper include students' making their own way in (1) collegiate study of math as a major or minor or (2) coping confidently with mathematical matters in everyday life. I would like to add a third objective, i.e.(3) to use mathematical models for the solution of problems because they have become useful, efficient, and economic problem solving tools. The individual becomes more willing to use the tool, and in fact, does use it more.

4. I don't care for Karplus' definition of scientific literacy, or Easley's "politically literate." What is a mathematically literate individual? I do not believe that one becomes or can necessarily be classified as a literate merely by reading a newspaper (for political literacy); going to concerts (for musical literacy): knowing artists names and what they painted (for artistic literacy); or solving mathematical problems (for mathematical literacy). Or at least this is not the kind of literacy I would support as an educational objective.

Let me explain. I may, for example, be classified as literate about cancer and cigarette smoking. I can give you all the data, name the studies that have been done -- and even recommend that people should not smoke cigarettes. BUT I STILL SMOKE! If literacy is knowledge ABOUT something, then I am cancer/cigarette

literate, but it simply doesn't matter. Karplus' and Easley's literacy is, as T. S. Eliot put it "This is not it; this is not it at all." It's similar to the classification of education I recently saw. The question posed by an interviewer was relative to how educated was I. It was determined by the question -- how many years of schooling had I completed. The two are not necessarily related. Some students complete a bachelor's degree in three years, and are usually considered more educated than a student who took 4 years, and yet the 3 year student would be classified as "less educated" in the questionnaire. Let us not, therefore, confuse literacy, which might be knowledge <u>about</u> a discipline, with ability in, or with, a discipline.

The general objective of the UICSM program, therefore, is not, as I see it, literacy -- but capability in the use of mathematical tools when they seem applicable and most efficient.

If I want to evaluate cigarette smoking, I can ask questions and build a test around knowledge of the effects of smoking. It may or may not have anything to do with the <u>behavior</u> of smoking. The test instrument may capably measure the overt behaviors related to literacy -- but does not get at the real issue -- SMOKING. Tests can be built about smoking, cancer, psychological variables inherent in smoking - i.e. those aspects which might be included in an instructional program about smoking. These tests would serve to evaluate how much, or what part of an instructional program got across, or how many students learned what. There is another requirement for evaluation however -- did they stop smoking?

5. A final point about the content of UICSM involves the term "teaching by discovery." Upon this concept hangs the analysis of evaluation and research which I will deal with next.

   To insist upon the discovery procedure, to consider it best for all, to consider it applicable in a generalized sense, may be to redefine the term to yield "teaching by conformity" -- discovery in

these instances may be conformity. In a comparison of discovery procedures to classical statistical analyses -- which were developed on agriculture and animal behavior -- I suggest that animals learn more by discovery than by any other procedure. Discovery, the heart and soul of sub-human development, is also the reason why we are not inundated with an overpopulation of animals. Many of them have validly "discovered" the wrong way to behave, but have not lived to tell about it. The discovery method may be useful, for some concepts within some disciplines at sometime with some students under some teachers. But in general, teaching-by-telling, although uncomfortable to swallow, is more efficient!

Another point worth considering, is how do we know the student got there by discovery? What is our means of observing and classifying covert behavior in such a manner that we can categorize discovery from some other kind of activity? By intuitive observation? Obviously we would be in hot water whenever we start classifying behavior of this type -- we would disagree. What is discovery by a student to one teacher is "too much talking" to another, and indications of unstable behavior to another. Thus we arrive at our major topic -- evaluation.

EVALUATION -

The problems that Dr. Easley mentions, relative to evaluation, are complex. How do we evaluate a curriculum which contains content that no other curriculum contains, for which no or few suitable measuring instruments exist? The evaluation techniques explained through "participant reactors" and subjective (perhaps unreliable) observors, leave much to be desired. These behaviors are not really research; they are teaching methods, or data collection, and the data collected are responses by a teacher, or teacher-substitute, to a teacher/pupil interaction. This is at best a type of research but not research toward the identification of a "better" method. It lacks certain necessities, present in classical evaluation techniques, and, I think, essential in all evaluation.

1) reproductibility - the research can be replicated

2) agreement among judges - others will come to the same conclusions

3) a known or common, or at least comparable, measurement scale

What is lacking is a criterion. One cannot use the Cooperative Algebra test, or the Differential Aptitude test for criterion as they favor the students who has had made and content of instruction.

But let us consider for a moment what it is that is being done. Why is mathematics being taught? What is the curriculum in mathematics - new or old - there for?

I suggest that mathematics is taught to enable students to do something. What? What is it that they are expected to do with mathematics, new or old, that they could not do without it? When this answer is developed, it becomes the criterion - and about it, toward it, is developed a criterion examination. This test need not be mathematics at all, but it is to measure, specifically, that which mathematics was taught for! Given this instrument, classical, agriculturally based research and experimental designs can be implemented. The new math gets students to this criterion faster, or more completely, or with greater interest, or willingness than does the old math. Traditional tests of old math are also inadequate to measure this new criterion - they merely measure how much of the old math a student has learned. They too do not answer the question, the greater question, if you will, of the more ultimate criterion, i.e. MATH FOR WHAT? We need to search further to define this criterion, and a test will be an automatic outcome, and the problems of evaluation mentioned by Dr. Easley will be more easily attacked.

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Careers with the State of Minnesota.

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*OCCUPATIONAL INFORMATION; *STATE AGENCIES; *GOVERNMENT EMPLOYEES; *CAREER OPPORTUNITIES
MINNESOTA

Minnesota civil service has more than 16,000 full time employees whose job titles fall into these categories: (1) administration and personnel, (2) agriculture, (3) auditing, accounting, and inspection, (4) clerical, (5) education, (6) engineering, architecture, and mechanics, (7) forestry and conservation, (8) health services, (9) social services, and (10) statistics and research. The state attempts to keep salaries commensurate with the rising cost of living and to limit the work week to 40 hours. Further information may be obtained by writing the Minnesota Civil Service Department, 180 State Office Building, St. Paul, Minnesota, 55101. A list of high school and college level job titles are included as well as a sample application form. (EM)

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EDO 31587

careers

WITH THE
STATE OF MINNESOTA

VT004969

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STATE OF MINNESOTA,

DEPARTMENT OF EDUCATION

St. Paul, Minnesota 55101

1964

Careers

WITH THE
STATE OF MINNESOTA

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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A Minnesota Guidance Publication
developed with the cooperation of Minnesota State Civil Service and edited by state guidance staff.

table of contents

CHOOSING A CAREER 5
WORKING FOR THE STATE OF MINNESOTA 7
WHAT KIND OF A JOB? 11
Administration and Personnel 12
Agriculture 13
Auditing, Accounting and Inspection 14
Clerical and Office 15
Education 17
Engineering, Architecture and Mechanics 19
Forestry and Conservation 21
Health Services 23
Social Services 25
Statistics and Research 27
OTHER JOB INFORMATION 31
Salaries 31
The Work Week 31
Vacations and Sick Leave 32
Other Benefits 32
Job Security 32
HOW TO GET THE JOB 33
The College Senior Placement and the High School Senior Placement Examinations 33
Applying for a Particular Job 34
Where to Write 35
APPENDIX 36
Copy of Civil Service Application Blank 36 37
Lists of Civil Service Positions 39

choosing a career

You as a student are no doubt thinking now about your future. You are probably asking yourself what career choices you should be considering. What work will be closely related to your interests, abilities, values and goals? What work will give you a sense of accomplishment and satisfaction? What work will allow you to advance to a position with the responsibility you feel you can handle? What working situations or combinations should you consider—working with people, working out-of-doors, working with your hands?

As you try to answer these questions you will want to look at the opportunities offered in many fields of employment. You will look at industry, at the professions such as medicine, teaching and law, at retail selling, at military careers. You will also want to take a look at the opportunities and rewards of a career in government.

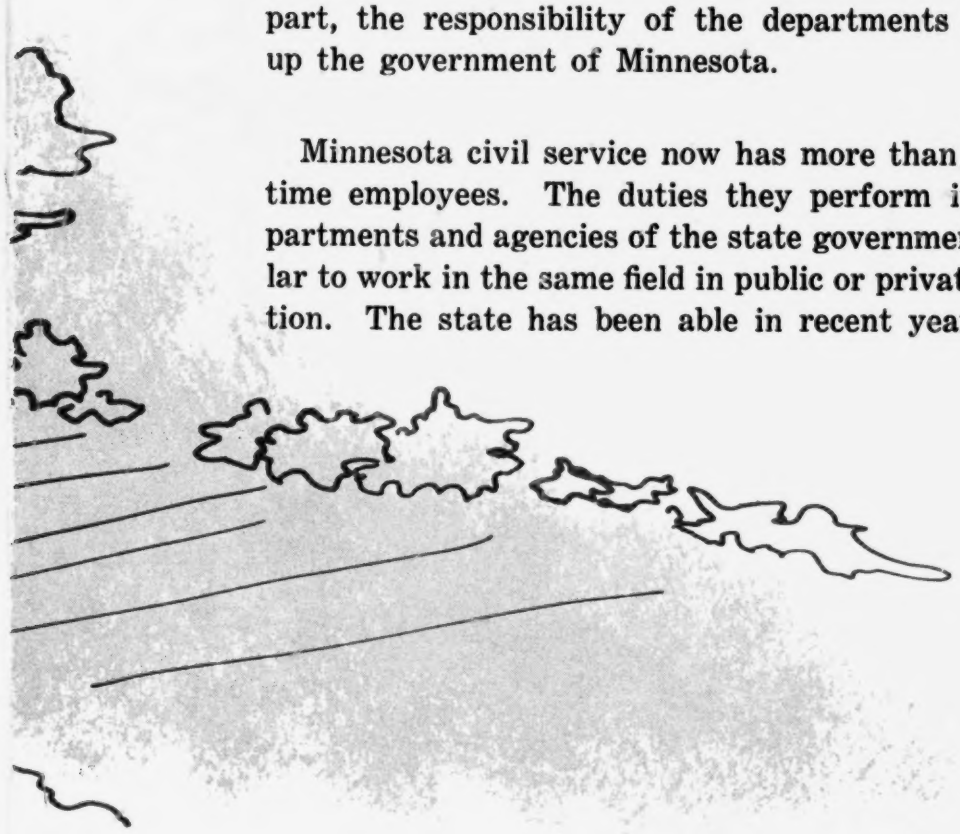
This booklet is designed to give you information about working for the State of Minnesota. You may want

to know about civil service opportunities—the advantages and disadvantages. Reading this booklet may answer some of your questions, clarify ideas you now have, and give you some basic information about jobs you are exploring.

working for the state of minnesota

What does the government of Minnesota do? You may be surprised at the variety of services the state performs to make life richer and more secure for its residents. Everyone knows about such functions as highway construction; the conservation of natural resources; public welfare programs which provide assistance to the needy; guidance, counseling and treatment services for the handicapped and delinquent; enforcement of laws and regulations; and the protection of health and safety. These are only a few of the services that are, in large part, the responsibility of the departments that make up the government of Minnesota.

Minnesota civil service now has more than 16,000 full time employees. The duties they perform in most departments and agencies of the state government are similar to work in the same field in public or private organization. The state has been able in recent years to make



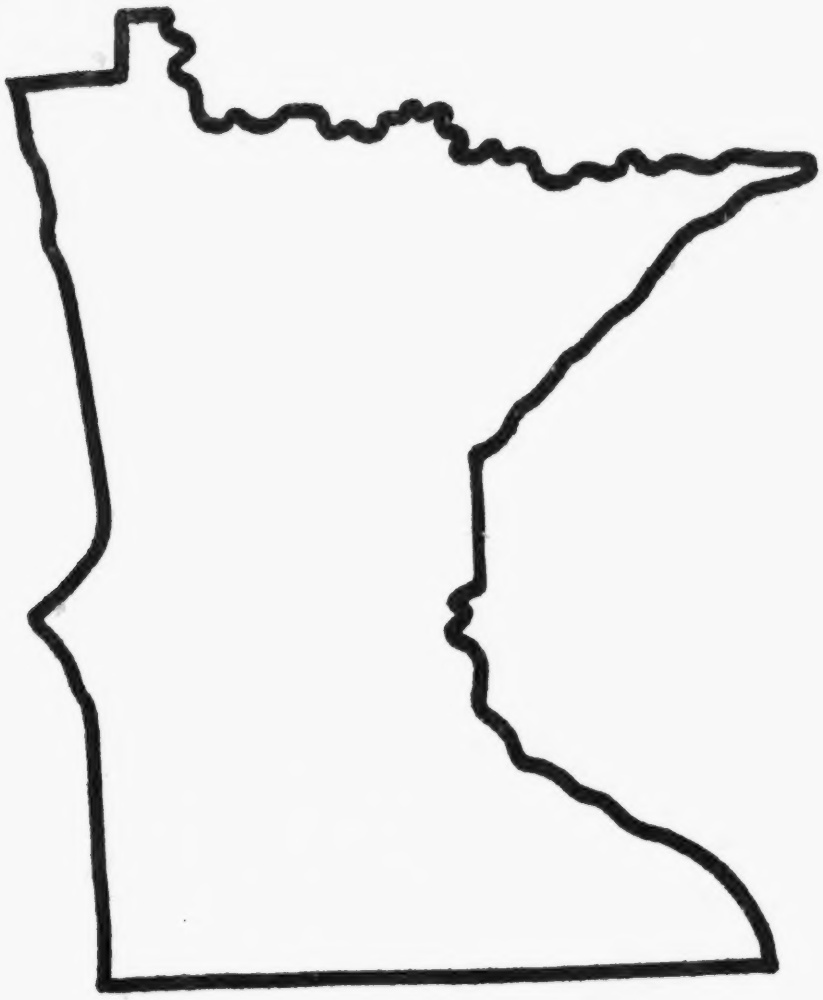
civil service salaries and benefits more similar to those outside government—often better for beginners with little experience.

There are also some "extras" in government work. Many people find deep satisfaction in actively participating in their government. Serving the public in a direct, essential way as state employees do, can give a sense of achievement not always found in other employment. Workers in state government often find themselves working in close association with leaders in their field outside as well as inside government. As a representative of the state, the civil servant is treated with respect in accordance with his position and ability by persons in important positions in government and industry. State government offers its career employees a chance to practice and grow in their professions.

Not everyone however, finds government work satisfying as with any large organization. There may be delays and frustrations due to the structure within departments or to the "bigness" of government. The state employee usually works closely with other workers in his department and in many cases does not have the freedom to work on his own that he might find in small business or private professional practice.

Minnesota civil service employs qualified, competent employees, and it offers opportunities for advancement to high-level positions. Promotions are based on examination. The same opportunities for employment and advancement are open to all qualified men and women regardless of race, creed or national origin.

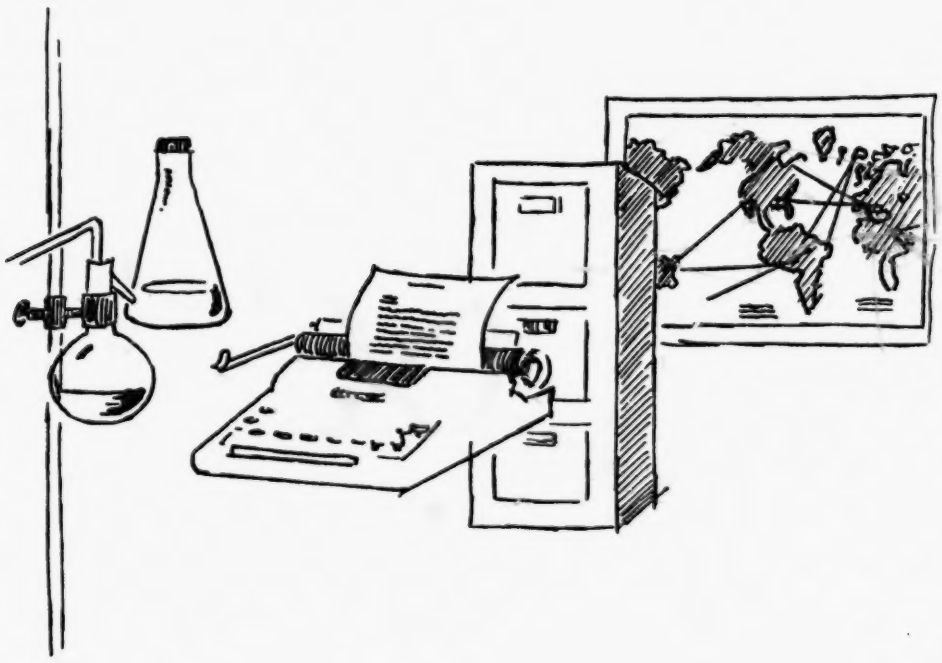
State institutions, offices and installations are located throughout the state. For example, you can find state hospitals in the north at Fergus Falls, Moose Lake, and Brainerd, and in the south at Rochester, Hastings and Faribault, to mention only a few. About one in every three state employees works in the capitol city of St. Paul; many others are based in St. Paul and travel throughout the state in the performance of their duties. Whenever possible, the candidate for a job is given his choice of location.



what kind of a job?

Let's take a look at the career opportunities open to you in Minnesota state service. Most of the jobs described below are beginning positions. Duties and requirements of these selected jobs are set forth to give you an idea of some of the openings available in a few areas and departments.

Of course, we cannot describe in detail all the many jobs the state has to offer. At the back of this booklet you will find a list of beginning positions. If you would like to know more about any of the jobs described in these pages or listed at the back of the booklet, write to the office listed on page 35.



ADMINISTRATION and PERSONNEL

The state of Minnesota is a big business, and those who have an interest in and aptitude for business management, administration, personnel work or clerical work will find many openings in civil service.

The Department of Administration is the state's business office. It is responsible for planning, budgeting, purchasing, maintenance of state property, and such central services as tabulating, duplicating and mailing reports and other related office detail work.

The Civil Service Department is the central personnel agency for the state service. It conducts examinations and maintains lists of qualified candidates to fill over 900 kinds of positions in civil service.

COLLEGE LEVEL JOBS

There are also business positions in nearly all other departments of state government. One such job is that of *Buyer I.*

This employee performs an important administrative function. He arranges for the purchase of material, supplies and equipment. Preparation for this work requires a college degree with a major in business or public administration, including advanced courses in marketing.

A person with a college degree in accounting, public or business administration or personnel administration may qualify as a *Budget Examiner I.* This employee reviews and coordinates such financial operations as salary budget and purchasing equipment and supplies of smaller and less complex state departments.

The *Civil Service Technician* performs professional personnel work in the recruiting, testing and classification of state employees. A college degree with a major in industrial relations, psychology or public administration is considered good preparation for this position.

AGRICULTURE

Both high school and college graduates with an interest in farming or a farm background can find many openings in the Minnesota Department of Agriculture. Agriculture accounts for about 50% of the state's total income. It is the responsibility of the Agriculture Department to assist farmers in developing and using better farming methods.

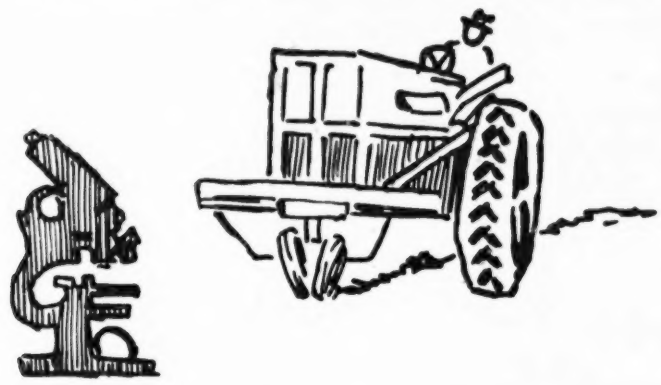
COLLEGE LEVEL JOBS

The holder of a college degree in plant pathology or entomology may qualify for the position of *Entomologist I.* This employee makes inspections, surveys, and investigations and assists senior entomologists on major insect and plant disease control projects.

Other college-level positions in the Department of Agriculture include Agronomists, Agricultural Products Inspectors, Bacteriologists, Chemists, and Veterinarians. These jobs require suitable preparation in agronomy, agriculture, marketing or veterinary science.

HIGH SCHOOL LEVEL JOBS

For the high school graduate there are a number of jobs open in the field of agriculture. An example is the position of *Grain Sampler I.* This employee is responsible for obtaining a true sample of grain from railroad cars, trucks, elevators, boats and barges, and for detecting unusual conditions of the load or equipment. The *Grain Laboratory Aide* works in a laboratory assisting in grain testing and experimentation. The *Farmer I* does farm work on state experimental farms or at state operated institutions.



AUDITING, ACCOUNTING and INSPECTION

Accountants and auditors are found throughout civil service. All state agencies have financial accounts and some are responsible for examining the accounts of commercial firms and for enforcing certain standards and rules for financial transactions such as insurance, banking and securities exchange. There are many opportunities in this field for those with an interest in and aptitude for detailed work with numbers.

COLLEGE LEVEL JOBS

A beginning *Accountant* maintains financial records within a department of moderate size or acts as an assistant to a higher-level accountant in a large department. He must be familiar with accounting principles and have the ability to apply them. The most desirable preparation for this position is a college degree in business administration and a major in accounting.

The beginning *Auditor* applys professional auditing methods to the books and records of governmental units or private businesses and assists higher level auditors in more complex audits. A college degree in business administration with a major in accounting is the best preparation for this work.

Other positions which require a college degree in business administration or accounting are those of *Bank Examiner I*, *Tax Examiner I*, and *Insurance Examiner I*. The Bank Examiner assist in examinations of larger banking institutions. He must know something about the laws and regulations relating to banks and other financial institutions. The Insurance Examiner assists with the financial examination of insurance companies.

CLERICAL and OFFICE

As with any large business or industrial organizations, clerks, typists and stenographers are always needed in state service.

HIGH SCHOOL LEVEL JOBS

The *Clerk I* sorts and files documents, delivers departmental mail, serves as receptionist and operates simple office machines. The *Clerk Typist I* types letters, statements and reports, forms and form letters, file cards and indexes. In addition to the typewriter and adding machine, she operates other similar office machines. She also does other related clerical work. The *Clerk-Stenographer I* takes dictation and transcribes it, types from copy and rough draft, does clerical work and operates simple office machines. All these positions require a high school education. The Clerk-Typist must have completed a typing course and the Clerk-Stenographer must know typing and shorthand.

The *Key punch Operator* punches precoded material on IBM punch cards using a key punch machine. The operator uses the verifyer machine to verify the accuracy of the punch cards. In addition to high school graduation, it is desirable to have had a course in key-punch operations from an accredited school and some experience as a key punch operator.

EDUCATION

Although the state government of Minnesota does not employ the classroom teachers for the public schools of the state, there are some teaching positions available in state civil service. *Special Teachers* are employed for work in special state schools, hospitals and prisons. These teachers must have the training required for teacher certification in Minnesota, and in addition should have extra training appropriate to the institutions handling teaching problems encountered in working with children or adults handicapped by emotional disturbance, delinquency, mental retardation, blindness, deafness or other physical disabilities.

COLLEGE LEVEL JOBS

A number of educational consultants are employed by the Department of Education to work with local schoolmen throughout the state in formulating long-range education programs and goals, to provide educational leadership and to help develop and maintain high standards in the schools. Graduate training beyond a college degree and appropriate educational experience is usually required.

TECHNICAL LEVEL JOBS

Teachers are employed by the Department of Education to conduct adult education classes in retail selling and techniques and safety for workers in telephone systems, municipal electric, gas and water systems, and steam engineering. The *Education Field Instructor* works with an adult education program and instructs apprentices and trainees in job skills and related academic subjects on a part time or intermittent basis, either through corres-

spondence or classroom instruction. A college degree is not required; however, the instructor must have had considerable experience at the journeyman level in the trade or work activity to be taught plus some college level teacher training courses.

ENGINEERING, ARCHITECTURE and MECHANICS

Those interested in and trained in engineering or architecture and those with mechanical or engineering aptitude are needed in Minnesota Civil service. The number of public buildings and public highways built and maintained by the state is increasing rapidly due to the growing population and the complexity of modern life.

The Department of Highways is the custodian of more than 12,000 miles of trunk routes and is concerned indirectly with many miles of other roads in the state. Other departments are responsible for the construction and maintenance of colleges, hospitals, prisons, office buildings, waterways, bridges, parks and recreation facilities.

COLLEGE LEVEL JOBS

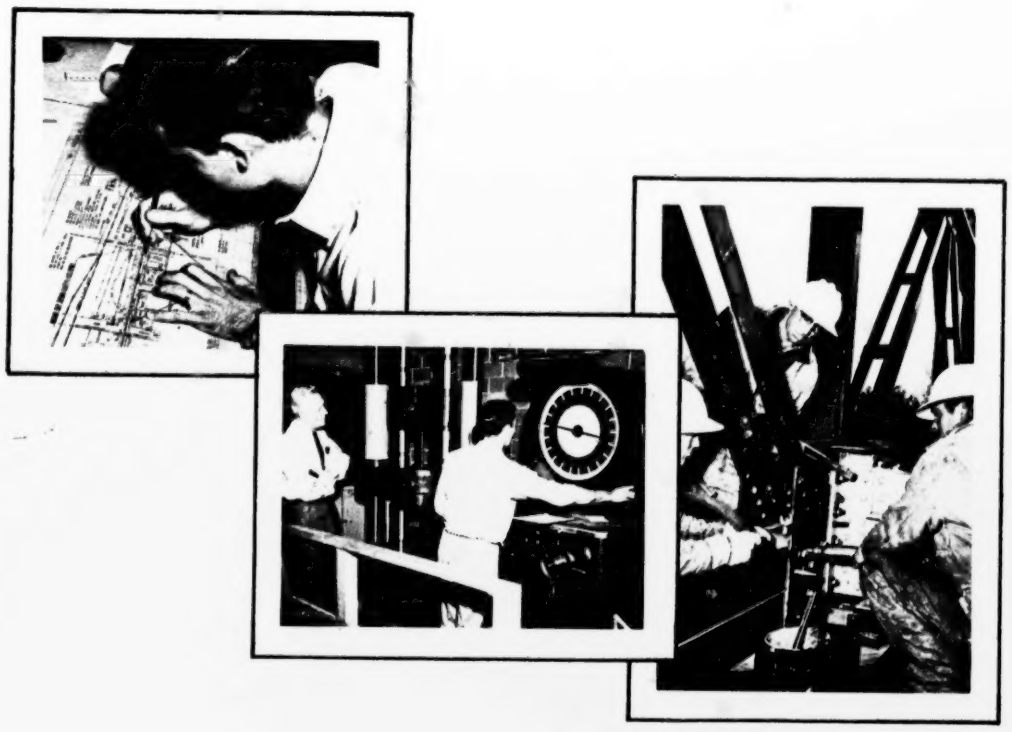
College-trained *Engineers* are nearly always able to find positions in state service which allow them to specialize in that branch of engineering for which they are best prepared and most interested. Assignments for *Architects* and *Landscape Architects* also cover a wide range of projects.

HIGH SCHOOL LEVEL JOBS

For the high school graduate with mechanical aptitude and interest, the Highway Department has an *Automotive Mechanic Apprentice Program.* Apprentices learn to repair, maintain and modify highway equipment. On-the-job training may be supplemented by classroom instruction at accredited vocational schools; the cost of

attendance at such schools is borne partially by the state and partially by the apprentice, who will become eligible for a journeyman's certificate upon successful completion of the four-year training program.

Other high school-level positions with the Highway Department include *Traffic Recorder*, who sets and adjusts portable traffic recording machines and counts traffic, *Highway Maintenance Man*, who does manual and semi-skilled maintenance work on the state highways, and *Highway Technician*, who serves as a field or drafting technician on surveys, relocations and construction.



FORESTRY and CONSERVATION

Those interested in the important work of helping to conserve and promote the wise use of Minnesota's lands, minerals, waters, forests and wildlife may find many career opportunities in the Department of Conservation.

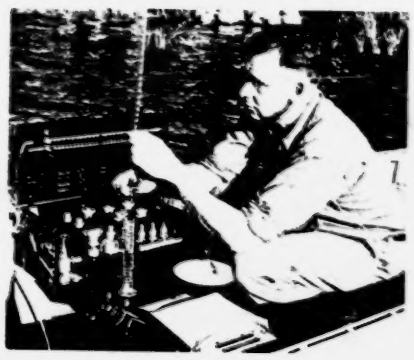
COLLEGE LEVEL JOBS

College-trained persons with a major in fish and wildlife management, zoology or forestry are needed by this department. Some of the positions available are *Game Biologist,* who conducts field surveys to evaluate habitats and recommends management projects to improve the game-carrying capacity of an area; the *Forester,* who evaluates various phases of work in forest management, such as forest development, timber sales and fire prevention; and the *Area Game Manager,* who works on projects such as evaluation of lands considered for purchase, development of game management plans, wild life census work, and cover planting. There are openings in this department for bacteriologists and engineers to work on parks, mining projects and water resources projects.

HIGH SCHOOL LEVEL JOBS

High school graduates with an interest in forestry or wild life can find opportunities to work under supervision on reforestration projects, in the operation of fish hatcheries, as forest guards and park workers. The position of *Game Warden* is also open to high school graduates over 21, who have had hunting, fishing, farming or woods experience and some experience in law enforcement. The Game Warden helps enforce game and fish laws and

regulations in an assigned district by detecting violations and apprehending and arresting violators. He may also assist with field studies and game surveys and fish rescue work, and may feed game birds and animals when necessary.



HEALTH SERVICES

Employees of the Department of Health help perform the vital task of protecting and caring for the physical and mental health of the citizens of Minnesota. The department acts to prevent disease, disability and death through education and the application of preventive medicine techniques and the elimination of health hazards in the environment.

COLLEGE LEVEL JOBS

In the performance of these services, highly trained specialists such as *physicians, dentists, psychiatrists, psychologists, chemists, epidemiologist, public health educator* and *nutritionists* are needed. Many of the jobs require training beyond the four-year college degree and an ability to meet state licensing requirements.

HIGH SCHOOL LEVEL JOBS

Many laboratory workers are employed in this department. High school graduates who have completed some laboratory training course, such as *Laboratory Technicians, Practical Nurses,* and *X-Ray Technicians* can find a career working in hospitals and public health clinics and laboratories.

SOCIAL SERVICES

Those who find a career in the Minnesota Department of Public Welfare give supervision and consultation to the special schools for blind and deaf, schools and hospitals for retarded, special hospitals, nursing homes and hospitals for mentally ill, to mental health clinics, voluntary agencies and to county welfare departments who are engaged in providing direct services to clients. Other social service workers in the Department of Corrections help with the rehabilitation, training, counseling and custody of adults and juveniles who are placed under state jurisdiction by the courts.

COLLEGE LEVEL JOBS

Persons with college training are needed to fill many jobs in welfare services. While the majority of *Social Workers* are required to have graduate training, there are opportunities for *Social Workers* with undergraduate degrees in child welfare, public assistance, medical or psychiatric (institutional) settings. The *Rehabilitation Counselor* determines eligibility for vocational aid, evaluates capabilities, and helps his clients choose occupational goals and find suitable employment. The *Volunteer Services Coordinator* recruits individuals and groups, coordinates the activities of these volunteers in a state institution and dispenses information to groups and the public concerning the institution's program and activities. The *Patient Placement Agent* places mental patients and patient parolees in work assignments to aid in their recovery and rehabilitation. All of these positions require a college degree and usually additional work with a major in the special field.

HIGH SCHOOL LEVEL JOBS

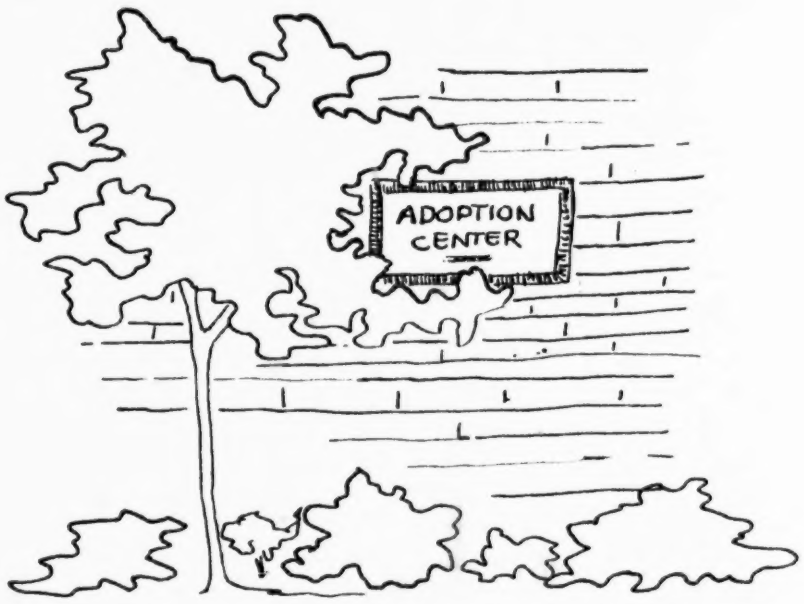
High school graduates will also find many jobs available in the hospitals and institutions about the state. The

Special School Counselor provides counseling services while supervising the daily activities of delinquent or retarded children living in a group at an open institution. The *Patient Activities Assistant* directs the recreational activities of patients as well as assisting in the job placement of patients within an institution. The *Correctional Officer* is responsible for the custody and discipline of inmates assigned to his direction in a state correctional institution.

Other jobs for high school graduates include *Laboratory Technician, Hospital Aide,* and *Psychiatric Technician.* A Laboratory Technician works under supervison in a laboratory doing such tasks as preparing samples for analysis, classifying and labeling specimens and operating simple laboratory equipment.

The *Hospital Aide* works under the direction of nurses in a hospital setting doing such work as accompanying patients about the hospital, writes letters for them and performs other personal services. The aide also performs the necessary ward housekeeping tasks and related nursing duties for patients such as feeding, bathing and dressing.

A *Psychiatric Technician I* helps in caring for mentally ill patients in a hospital. Duties include such personal service as bathing, feeding and dressing patients. Other duties include observing changes in patient behavior for the professional treatment staff. There is an on-the-job training program for Psychiatric Aides, which lasts one year and consists of both classroom work and actual work experience on the wards of state mental hospitals.



STATISTICS and RESEARCH

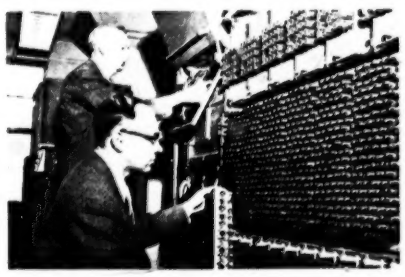
Statisticians and other research personnel are employed in a wide range of activities by most state agencies. They study and interpret information to allow for more efficient techniques and to provide facts for future planning—an important part of any business as large and complex as Minnesota state government.

COLLEGE LEVEL JOBS

Most research positions require a college education. The *Administrative Analyst I* conducts studies of departmental organization, methods and procedures, and recommends solutions to operating and efficiency problems. Preparation for this work should include a degree in public or business administration, industrial psychology or industrial engineering.

A position which has grown important with the increased use of large electronic computers in the operation of government is that *E D P Assistant Programmer*. This employee interprets data and puts it into the mathematical form which the computing machine can understand and use. A college degree with a major in mathematics, accounting, statistics or related subjects is desirable preparation.

The *Research Anlyst I* conducts surveys and uses statistical techniques to interpret and present results. College training should include course work in statistics.



OTHER JOBS--
HIGH SCHOOL and
COLLEGE LEVELS

The preceding sections mention only some of the career opportunities for high school and college graduates in state civil service. There are many other interesting positions—for example, that of *Highway Patrolman*. The man filling this position patrols state highways, promotes safety, directs and controls traffic, provides assistance to the public and enforces traffic laws. He must be a high school graduate, between 21 and 30 years of age and in good physical health.

The college graduate with a degree in English or journalism may qualify for the position of *Informational Writer I*. This employee is responsible for drafting written material of complex subject matter. He must be able to collect information through interviews and research. A knowledge of the techniques of news and publicity writing is essential.

The state of Minnesota also employs *lawyers, economists, librarians, artists, draftsmen, legal secretaries,* and *home economists,* to name a few. Whatever your field of interest or specialization, the chances are good that you can find a place in state civil service.

other job information

Anyone considering a career in state civil service will certainly want to know something about the tangible benefits he will receive. Exact salaries and other benefits for jobs change from time to time. Current job information may be obtained from the State Civil Service Office listed on page 35.

SALARIES

In recent years, Minnesota state government has moved salaries steadily upwards until now they are becoming comparable to those in private business. The state also attempts to keep salaries commensurate with the rising cost of living.

To obtain exact salary information about a particular job for which you feel you may be qualified, write to the office listed on page 35 or contact your local state employment office for this information.

THE WORK WEEK

Most state employees work a 40-hour week. Those working in offices work five days a week, while those employed in institutions may work 8-hour shifts, seven days a week, up to 40 hours. The professional person may sometimes find that obligations to attend meetings or the schedule demands of travel may make it necessary to work more than 40 hours.

There are usually eight or nine and sometimes as high as eleven paid legal holidays per year for state employees.

VACATIONS and SICK LEAVE

An employee in state service accumulates vacation time according to the following schedule: four hours of paid vacation for every two weeks worked which adds up to at least 13 days of vacation each year for the first five years of employment; after five years of employment, you earn five hours every two weeks which adds up to 16-1/4 vacation days each year.

Sick leave is accumulated at the rate of four hours for every two weeks worked, and will be paid up to 800 hours of absence (roughly 100 days). Accumulated sick leave can be added to vacation time in accordance with certain fixed schedules.

OTHER BENEFITS

All state employees except the highway department (they have their own), are eligible to become members of the State Capitol Credit Union, where they may save or borrow money at very reasonable interest rates. Retirement is paid for by both the State Employees Retirement System and by Old Age and Survivors Insurance (Social Security). The retirement system includes disability benefits.

State employees are protected by Workman's Compensation and are entitled to Unemployment Insurance protection on the same basis as workers in private industry.

JOB SECURITY

If a civil service employee does his work well, he may be reasonably assured of a career in state service. There are, of course, occasional staff reductions when services are altered or discontinued. Dismissals are also made for incompetence or misconduct.

how to get the job

THE COLLEGE SENIOR PLACEMENT and the HIGH SCHOOL SENIOR PLACEMENT EXAMINATIONS

The Civil Service Department holds annual College Senior Placement Examinations (CSPE) and High School Senior Placement Examinations (HSPE). The CSPE and HSPE programs are especially designed to acquaint college and high school graduates with the wide variety of career opportunities in state service and to offer the graduating senior a chance to qualify for a variety of positions by filling out *one* application and taking *one* examination.

This is how these programs work. You, the high school or college senior, obtain an application at your college placement office, from your high school counselor, or from the office listed on page 35. You complete it and mail it, together with a transcript of college courses or high school record, to Minnesota Civil Service Department, 180 State Office Building, St. Paul, Minnesota 55101. Be sure to mark your application CSPE or HSPE.

You will be notified by mail of the time and place of a written examination designed to measure your general abilities. These tests are given several times a year at convenient locations.

Applicants passing the written examination will be rated on their academic achievement and will be placed

on the lists for those classes of employment which relate to their educational background and personal interests. Individuals are given an opportunity to express job preferences on the application. Referrals will be made on the basis of examination scores, school record, and openings available in the geographical area in which the candidate is willing to work.

It is a good idea to get your application in as early as possible, since testing and placement may require several weeks or even months.

APPLYING FOR A PARTICULAR JOB

If you have one specific job in mind for which you wish to apply, you will often have to take both a written and an oral examination. The first step is to obtain an application, complete it, and mail it to Minnesota Civil Service Department, 180 State Office Building, St. Paul, Minnesota, 55101. To help you in filling out your application, we have included a copy of an application form on page 36.

You will be notified on the time and place of the written examination. Tests for most positions are held at least once a year—some more frequently.

If you obtain a score of 70 or above on the written test, you may be asked to report for an oral examination.

Qualified interviewers will talk with you about your job knowledge, work interests, preparation, and ideas in a recorded interview. Appearance, personality interests, job knowledge, preparation, and other related information are rated. Written and oral scores will be evaluated and if eligible, you will be placed on a list of applicants for the position.

WHERE TO WRITE

For more information about jobs mentioned in this booklet or other civil service jobs, you may write to:

Minnesota Civil Service Department
180 State Office Building
St. Paul, Minnesota, 55101

APPENDIX

Fill in with typewriter or ink. Answer *completely* all questions on *both sides* of this sheet.

STATE OF MINNESOTA
CIVIL SERVICE DEPARTMENT
180 State Office Bldg., St. Paul, Minn. 55101
APPLICATION FOR EXAMINATION

IMPORTANT: Notify this office promptly in case of change of address. Fill out one application for each examination title.

1. Title of the examination (position) for which you are applying. (See examination announcement).
Clerk Typist I

2. NAME:
White Judy Marie
Last Name First Middle Maiden

3. ADDRESS:
1205 West Street
Street Number or R.F.D.

4.
Coon Rapids, Minnesota
City Postal Zone No. State

5. Residence Phone 521-3690

6. Business Phone

7. Date of Application 1 · 24 · 64
No. Day Year

8. Social Security No. 091-30-5410

9. Date of Birth 1 20 45
No. Day Year
Present Age 19 - Yrs. Mos.

10. May we inquire of your present employer about your character or qualifications? Yes ___ No ___

11. Relationship and Age of Dependents Living With You

12. Has your drivers license ever been suspended or revoked? Yes ___ No X
If yes, give full particulars on a separate sheet.

13. Marital Status
Single X
Married ___
Separated ___
Widowed ___
Divorced ___

14. Height 5 4 Ft. In.
Weight 110 Pounds

15. Sex: Male ___ Female X

16. Circle highest school grade completed: 5 6 7 8 9 10 11 12 Were you graduated? Yes X No ___ Date 6-4-63

17. Name and location of last school attended (grade or high school). Northwest High - Coon Rapids

College, University, Technical or Professional School (List all undergraduate & graduate work)		Dates of Attendance Month and Year		Day or Night School	Qtr. or Semester Hrs. Cred. received	Degree	Date	Major and Minor Subjects
Name	Location	From	To					

Business, Corres., Trade, Service or other school		Dates of Attendance		Full or Part time	Certificates Received	Per Cent of Course completed	Subjects taken
Name	Location	From	To				

List below your complete work experience, GIVE YOUR PRESENT OR MOST RECENT EMPLOYMENT FIRST
Be complete. Evaluation of your experience will be based on this information.

For "Specific Duties" list volume and kind of work and number and kind of employees supervised, if any. Emphasize your own specific tasks.

Employing Firm: Mr. Joe's Drive-In Address: Coon Rapids
Your Title: Car Hop Supervisor:
Specific Duties: Taking and delivering orders
Reason for Leaving: School

Length of Employment
From 6 62 (Mo. Yr.)
To 8 63 (Mo. Yr.)
Total ___ Yrs. ___ Mos.
Full Time? No
Starting Salary 80¢ hr.
Last Salary 85¢ hr.

Employing Firm: Address:
Your Title: Supervisor:
Specific Duties:
Reason for Leaving:

From: ___ To: ___ Total ___ Yrs. ___ Mos.
Full Time? ___
Starting Salary ___
Last Salary ___

Employing Firm: Address:
Your Title: Supervisor:
Specific Duties:
Reason for Leaving:

From: ___ To: ___ Total ___ Yrs. ___ Mos.
Full Time? ___
Starting Salary ___
Last Salary ___

(OVER)

CS 101 Rev. 12-62

Employing Firm: _____ Address: _____
Your Title: _____ Supervisor: _____
Specific Duties: _____
Reason for Leaving: _____

From: _____
To: _____ Mo. Yr.
Total _____ Mo. Yr. _____ Yrs. Mos.
Full Time? _____
Starting Salary _____
Last Salary _____

Employing Firm: _____ Address: _____
Your Title: _____ Supervisor: _____
Specific Duties: _____
Reason for Leaving: _____

From: _____
To: _____ Mo. Yr.
Total _____ Mo. Yr. _____ Yrs. Mos.
Full Time? _____
Starting Salary _____
Last Salary _____

18. Are you a citizen of the United States? . . . . . Yes X No ____

19. Have you been a resident of the State of Minnesota for the last 2 years? . . . . . Yes X No ____

20. Are you physically handicapped in any way? . . . . . Yes ____ No X

21. Have you ever been hospitalized for mental illness . . . . . Yes ____ No X

22. Have you ever had employment difficulties because of excessive drinking . . . Yes ____ No X

23. Have you ever been arrested for other than a minor traffic violation. . . . . Yes ____ No X

24. Have you ever been convicted of a misdemeanor or a felony . . . . . Yes ____ No X

25. Have you ever been discharged or forced to resign from a position . . . . . Yes ____ No X

If yes, give full particulars on a separate sheet.

26. **AVAILABILTY**
In the space below list the cities or areas where you are available for employment. Do not list a city unless you are actually willing to go there to work. If you are available in more than one city or area list them in the order of your preference St. Paul, Minneapolis

27. Are you available for: Permanent work? ☒ Part time? ☐ Temporary? ☐ Seasonal? ☐ Summer only? ☐

28. How often are you willing to travel? Never ☒ Sometimes ☐ Frequently ☐ Constantly ☐

29. Use this space to give additional information such as certificates, registrations or occupational licenses held (includ- class, number and expiration date). Also list scholastic honors, memberships in professional societies, etc., and for professional positions requiring a license, your state registration number.

30. **VOLUNTEER AND UNPAID WORK EXPERIENCE:** List below activities such as: Teaching nursery school, Girl or Boy Scout leader, Red Cross worker, etc.; BE SPECIFIC, List type of work you did, and approximate number of hours per week and total years of service. Include any hobbies and special interests or leisure time activities.

31. Have you ever applied for this position before? No When? _____

FOR CIVIL SERVICE DEPARTMENT USE ONLY

Explain No.'s ____ ____ ____ ____ ____ ____ ____

Date Adm. Card Sent _____

Date Scheduled _____

Vets Pref. Form Sent _____

DATE STAMP

I hereby (swear) (affirm) that I will honestly and faithfully protect and preserve the property and money of the State of Minnesota and will abide by, uphold and defend the Constitution of the United States of America and the State of Minnesota, and except as provided in said constitution, I will not take part in any movement to alter or change our form of government. I hereby declare that any statements herein are true and complete, with the same force and effect as though given under oath.

Judy White
(Applicant sign here)

TWENTY LARGEST CLASSES IN NUMBER OF FULL-TIME EMPLOYEES

January, 1963

Class	Number of Employees
Psychiatric Technician I	1,487
Highway Technician II	501
Highway Maintenance Man I	472
Clerk Stenographer II	467
Clerk Typist II	463
Psychiatric Technician II	460
Highway Maintenance Man II	455
Clerk II	434
Clerk Typist I	425
Custodial Worker I	379
Highway Technician III	345
Clerk I	330
Janitor	315
Highway Technician I	297
Correctional Officer I	239
Clerk Stenographer I	190
Registered Nurse II	170
Civil Engineer II	162
Hospital Aide	156
Clerk III	154
Total	7,901
All Others	8,425
Total Number of Full-time Employees	16,326

A SELECTED JOB LIST — HIGH SCHOOL

The following is a list of civil service jobs which are commonly filled by high school graduates. Any special course work, vocational training, abilities, or experience required is listed after the job title.

Automobile Driver (Chauffeur's License)
Automobile Serviceman
Automotive Mechanic Apprentice
Baker I
Clerk I
Clerk Typist I (30 wpm)
Clerk Stenographer I (80 wpm)
Comptometer Operator (calculator course)
Cook I (vocational training)
Custodial Worker I
Dental Assistant
Duplicating Machine Operator I (vocational training)
Elevator Operator (licensed)
Engineering Aide I (math and drafting)
Farmer I (some related training and experience)
Fisheries Aide
Food Service Supervisor
Forest Guard
Forest Ranger I
Grain Laboratory Aide
Groundsman I
Highway Field Assistant (Algebra and Geometry)
Highway Maintenance Man I
Highway Technician I (Math through Trig)
Hospital Aide
Housekeeper I
Janitor
Keypunch Operator I (Keypunch course)
Laboratory Technician I (Laboratory courses)
Laborer I and II
Lifeguard (Red Cross Certificate)
Mining Aide I (Science and math)
Patient Activities Assistant I (Art and Crafts background)
Park Ranger
Psychiatric Technician (Special training)
Seamstress
Signman I (Art and painting)
Special School Counselor I (Group experience)
Stores Clerk I
Switchboard Operator (PBX)
Tabulating Machine Operator I (tabulating course)
Traffic Recorder
Truck Driver (Chauffeur's License)
Window Washer
X-Ray Technician (X-Ray Tech course)

A SELECTED JOB LIST — COLLEGE

The following is a list of entry level professional positions normally filled by college graduates with course work in the appropriate area.

Accountant I
Administrative Analyst I
Appraiser I
Aquatic Biologist 1
Architect I
Assistant Area Game Mgr.
Attorney I
Auditor I
Bacteriologist I
Bank Examiner I
Budget Examiner I
Business Manager I
Buyer I
Chemist I
Child Care Counselor
Civil Engineer I (Engineer in training I)
Civil Service Technician I
Corrections Agent
Dental Health Advisor
Dietitian I
District Sanitation Inspector
E D P Assistant Programmer
Employment Counselor I
Employment Security Interviewer I
Entomologist I
Executive I
Forester I
Game Biologist I
Health Educator
Informational Writer I
Insurance Examiner I
Job Analyst I
Labor Investigator
Landscape Architect I
Librarian I
Medical Technologist I
Mining Engineer I
Nutritionist I
Occupational Test Technician I
Occupational Therapist I
Patient Activities Leader I
Patient Placement Agent
Personnel Officer I
Physical Therapist I
Public Health Engineer I
Public Health Nurse I
Registered Nurse I
Rehabilitation Counselor I
Research Analyst I
Research Scientist I
Right of Way Agent I
Social Worker I
Special Teacher
Surgical Nurse I
Tax Examiner I
Visual Aid Illustrator
UC Field Advisor I
Volunteer Services Coordinator I

MINNESOTA GUIDANCE PUBLICATIONS

Guidance: A Statement of Philosophy
Minnesota Blueprint for Guidance
The Parent and the Counselor
The Teacher's Role in Career Development
Counselor's Handbook
The Teacher Looks at Guidance
The Administrator's Guidance Handbook
The Teacher and Guidance in Minnesota
College Information Guide
Minnesota Test Norms — Expectancy Tables
Apprenticeship Training in Minnesota
Earning While Learning — An Apprenticeship Brochure
Suggested Unit on Self Analysis and Vocational Planning
The Minnesota Filing Plan
AudioVisual Guidance Materials
Careers with the State of Minnesota
Referral and Rehabilitation Resources in Minnesota
Paramedical Training in Minnesota

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MIDDLE EAST; FORD FOUNDATION

This report describes Ford Foundation assistance to selected activities in the United Arab Republic, Lebanon, Syria, Jordan, Iraq, Saudi Arabia, Iran, Turkey, and North Africa. Since 1951, the Foundation has assisted in the social and economic activities of these countries and has contributed 32 million dollars for research, development, and education. The main objectives of this assistance was to strengthen the institution framework for the development of trained personnel and new knowledge and approaches to promote change. Projects which are discussed include: (1) the National Institute of Management Development in the United Arab Republic. (2) a multi-purpose agricultural research laboratory in Syria, (3) a school and farm project in Jordan, (4) programs at Beirut College for Women in Lebanon, (5) the Gorgon-Dasht rural development project in Iran, (6) the teacher training and curriculum project for the National Science High School in Turkey, (7) the International Cultural Center in Tunisia, (8) educational leadership scholarships in Algeria, and (9) agricultural research in Israel. (EM)

VT004974

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Tapestry for Tomorrow

The Ford Foundation Program in the Middle East

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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Tapestry for Tomorrow is one of a series of booklets on activities supported by the Ford Foundation. The purpose is to present informally and in a general, nontechnical way the story of some phase of the Foundation's work. Other publications are listed on the back cover.

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WEST OF THE RIVER NILE the lands of Egypt – now named the United Arab Republic – fuse abruptly into the vast, empty dominions of the Sahara Desert. Except for an occasional patch of scrub and, now and again, the distant movement of a few Bedouin nomads and their camels and flocks, all is barren, lifeless, and silent. Through the thousands of years of Egyptian history it has always been so.

The scene is beginning to change, however. Impelled to increase her arable lands to feed a population that has soared from some twenty million in 1950 to twenty-six million today, and to resettle some of the highly dense population of the Nile Valley, Egypt has started to reclaim the desert terrain. Not much of it (for the desert covers about 360,000 square miles), but enough to place this effort among the largest land-reclamation projects in history. A primary focus of the work is a series of enormous, irregular cavities that dent the western desert. Among these is Wadi Natrun, an oval-shaped basin some twenty-five miles long near the Rosetta branch of the Nile. The sands of Wadi Natrun, like the other depressions, cover a life-giving prize – strata of porous rock richly charged with water.

The problems of using this precious resource to establish desert agriculture were the object of a field trip to Wadi Natrun in the fall of 1962 by a small party of Egyptians and Americans. The Egyptians were Mohammed Naguib, professor of soil science at the Institute of Land Reclamation, University of Alexandria, and Kamal Metwally and Hattim Attar, students at the Institute. The Americans were Perry R. Stout and Frank T. Bingham, soil scientists from the University of California who were spending a year, under a grant from the Ford Foundation, assisting the Institute's teaching and research.

The feasibility of farming the desert was vividly apparent among the wells that tapped the water beneath Wadi Natrun. There were fruit-laden groves of orange, lemon, and tangerine trees, sheltered from the killing winds by stands of eucalyptus and casuarina (Australian pine). Like an encampment of miniature teepees, an orchard of mangoes was taking root under conical shields of cane. Elsewhere

were large fields of tomatoes and alfalfa; and here and there test plots produced corn, beans, eggplant, peanuts, onions, and carrots.

But before desert agriculture can be developed to support substantial colonies of settlers, baffling problems must be solved. The solutions lie with men trained in plant nutrition, soil science, and irrigation and drainage. Which is why the two students from the Institute of Land Reclamation – Metwally and Attar – had come to Wadi Natrun to study the kinds of problems they would face in their professional work.

Why, they asked, as they stood in a citrus grove, should these trees, which had been meticulously fertilized, irrigated, and sprayed, be mottled with the spots of some mysterious ailment? Professor Bingham plucked a few leaves, held them up to the sun. The spots, he explained, were a symptom of a micronutrient deficiency, probably manganese. All healthy plants require small quantities of elements (micronutrients) like boron, copper, zinc, and molybdenum. In temperate climates these are provided by the action of rain water on soluble minerals. Arid-zone agriculture, though, requires regular analysis of the irrigation water to check the micronutrient content. Mottling or withering of the leaves are symptoms of deficiency.

The group moved from the citrus grove to inspect a nearby field. Here they encountered still another mystery. Workers were harvesting large, healthy-looking peanuts. But nearly every third one, when cracked open, was empty. Attar pulled up a plant; it, too, was large and healthy. Why, then, he asked, should it yield nuts that didn't have meat?

In response, Professor Stout smoothed out a patch of sand and inscribed a diagram of a peanut plant. "It has a peculiar root system," he said. "The roots that feed the plant grow in the lower soil. But the ones that feed the nuts grow a lot shallower – only a few inches from the surface. So it's the quality of *this* soil, not only the lower, you also have to worry about if you want to have a good crop."

Attar and Metwally then inquired what the soil lacked. Stout's opinion was calcium; Bingham's was copper. "You see," Stout remarked, "you are working in an area where even the experts disagree. Why don't you take a couple of samples of this soil back to the laboratory and test them?"

Soil analysis and plant nutrition were only a few of the subjects Attar and Metwally had been studying since they had entered the opening class of the Institute of Land Reclamation in 1961. The two-

Opposite, *desert bears mangoes under effort aided by Egypt's Institute of Land Reclamation, whose director, Mustafa Elgabaly, is shown at right.*

year course also includes hydraulics, irrigation and drainage, leaching of salts, alkali correction, farm machinery, land economics, and rural sociology. And Attar, Metwally, and their classmates were also engaged in individual research projects on which they would have to write a thesis.

The Institute was conceived by Professor Mustafa Elgabaly, chairman of the University of Alexandria's soil-science department, to help meet a crucial need for specialists in Egypt's immense land-reclamation program. During the next ten years Egypt expects to increase the country's cultivable land by one third, an effort equivalent to creating an Imperial Valley, California, every two years. Moreover, through drainage, chemical fertilization, and other means, Egypt also aims to *double* the yield of lands now under cultivation.

"Both jobs require the solution of problems in engineering, agriculture, and community development," says Professor Elgabaly, a University of California Ph.D. and a veteran of twenty-five years of teaching, research, consulting, and writing on agriculture. "First, the land must be made productive, then the crop and irrigation systems worked out, and finally farmers and their families must be settled and provided with the services and incentives to create a genuine community. Thus the Institute seeks to produce not academicians but professionals who can understand the process as a whole and integrate each phase."

With an enrollment of over forty, the Institute of Land Reclamation is a postgraduate institution that recruits its students – all holders of the B.Sc. in engineering or agricultural sciences – from government agencies responsible for Egypt's land reclamation. It also conducts research and provides consulting services to the government. The Ford Foundation has provided the Institute with $588,000 for visiting professors from abroad, overseas training fellowships for Egyptian faculty, library materials, and laboratory equipment.

Support to the Institute illustrates one of the main phases of the Ford

Foundation's work in the Middle East: helping to surmount the acute problems that limit food production. In this vast area, encompassing Egypt, Arabia, the Levant, Anatolia, the rugged mountains of Iran, and all of Africa north of the Sahara, only about a tenth of the total acreage can be farmed, and then only with one crop a year because it is mostly unirrigated land. This has meant a living standard hardly above bare subsistence for most of the region's people. Meanwhile, the spread of modern health measures, by reducing the death rate, has steadily increased the population.

To the extent that agricultural and rural programs are guided by purposeful, technically proficient leadership, they represent a new phenomenon in the long and troubled history of the Middle East, and the other side of the coin to the political tensions, the paralyzing poverty, and the torpor that continue to plague the area.

From the changes instituted by Kemal Atatürk and Reza Shah in Turkey and Iran in the 1920s and 1930s to the new course the United Arab Republic has evolved since 1952, the pace and scope of modernization and reform have steadily increased, giving Middle Eastern nations – different as they are from one another – many features in common. Among these are:

–A drive to bring neglected segments of society into the mainstream of national life; this includes both villagers and impoverished urban dwellers.

–The expansion of education at all levels, including women's education, as the prime instrument of constructive social change.

–Actions to increase agricultural output: irrigation and land-reclamation projects; research, education, and extension programs to transform agricultural practice.

–Stepped-up industrial capacity, not only through new plants and equipment but also through programs to train skilled workers and managerial personnel.

–Basic organizational reforms and sustained training programs to strengthen the efficiency and quality of the public service.

—Comprehensive national planning and related economic and social research to speed and organize economic and social development.

Since 1951 the Ford Foundation has been assisting the nations of the Middle East, at their request, with their efforts to advance the social and economic well-being of their peoples. Altogether the Foundation has provided nearly $32 million for agricultural and rural development, industrial and business development, education and vocational training, public administration, and economic and social research. These funds have financed the services of scores of scholars and experts from the United States and other countries; provided for advanced training both in the Middle East and abroad of teachers and officials in agriculture, business management, and other critical fields; and supplied needed books and equipment. The main objective of the Foundation's assistance is to help strengthen the institutional framework for the development of the trained men and women and the new knowledge and approaches that are the mainsprings of forward change.

To keep in close touch with the people and institutions leading the region's nation-building efforts, the Foundation has five full-time representatives in the Middle East: James S. Lipscomb (Cairo) for the United Arab Republic;* W. Hugh Walker (Beirut) for Lebanon, Syria, Jordan, Iraq, and Saudi Arabia; Rey M. Hill (Tehran) for Iran; Eugene P. Northrop (Ankara) for Turkey; and James D. Hardy (Tunis) for North Africa. Grants in Israel are administered from the Foundation's New York office.

This report describes Foundation assistance to selected activities in these countries. In every case, the Foundation's purpose is the same as in some forty other developing nations in which it has made grants — to strengthen the conditions of world peace through the advancement of human welfare.

* John F. Hilliard, representative from 1959 through November, 1963, is on leave from the Foundation to serve with the United States Agency for International Development, in Washington, D.C.

The United Arab Republic

Enterprise and Development

To create an enlarged industry – which means fewer imports and more exports, more jobs for a burgeoning labor force, and rising national income – the United Arab Republic has a substantial base to build on: a modern textile industry, a new steel mill, fertilizer and other chemical plants, factories producing cement, paper, sugar, and other products. Its public utilities, transportation, and communications are relatively well developed. Also, the country's skilled engineers and technologists have been an important asset in stepping up manufacturing volume, which between 1954 and 1961 rose 56 per cent. But the advances thus far and the ambitious targets for the coming years have revealed (outside the pressing need for capital) one critical deficiency: a shortage of senior executives with the managerial competence demanded by the modern industrial process.

A team of consultants provided by the Ford Foundation reported in 1958 the top ranks of Egyptian industry "are overworked and hard-pressed because they are unable to delegate responsibility and authority to subordinates. . . . Egypt lacks more than anything else persons who have had the training to build organizations, to coordinate activities of specialists, and to develop and motivate personnel in the lower and middle ranks of management."

On the recommendation of the consultants, the National Institute of Management Development (N.I.M.D.) was established in 1959. Accelerating education for business management is susceptible to no ready-made formulas. "It is quite different from accelerating training in vocational areas, where a standardized course and schedule can be set up, tested, and used to speed training," explains A. Fouad Sherif, board chairman of N.I.M.D., who holds a University of Chicago Ph.D. in business. "Education for management is highly individual. The program must meet very specific needs of a heterogeneous group. No standardized approach will apply."

Sherif and his fifteen-man faculty have departed from the hallowed practice in Egyptian higher education of largely theoretical and impersonal instruction. Classes center on discussion between students and faculty. Rote learning is displaced by problem-solving sessions on actual company situations (the case-method approach). Full-time residence is required, bringing students and faculty into regular contact outside class hours.

Participants in N.I.M.D. courses are of two levels: senior executives, generally in their forties, who hold policy and operating posts such as board chairman and managing director, and younger men who report to the top ranks. N.I.M.D. conducts a separate program for each group, the first lasting five weeks and stressing the role of the business firm in a developing economy, the second lasting seven weeks and focusing on major aspects of the managerial process. Both programs embrace an exacting array of studies ranging from the economics of development to the practical problems of organization, planning, and coordination in the business firm. Modern techniques in such areas as industrial relations, marketing, production, and finance and controls are also covered.

The typical executive studying at N.I.M.D. has had an engineering background and has risen rapidly to a management position where he finds himself sorely overworked and inadequately trained to cope with the hydra-headed intricacies of administration. Samir Taher, for instance, an alumnus of the senior-manager's course, left university teaching in metallurgy to join the Egyptian Iron and Steel Company where, in a few years, he advanced to the top ranks. "My most difficult problems are not technological ones," he says, "but things like cost and quality control – how, in other words, to institute practices that will make our modern steel plant operate efficiently."

The ability of N.I.M.D. to help meet such needs explains why busy executives like Taher are willing to leave their work for from five to seven weeks at a stretch to undertake full-time study. Already producing some 330 graduates a year, N.I.M.D. has a growing waiting

list of applicants. Meanwhile, it has launched more than a dozen research projects (problems in marketing, distribution, and manpower, for example), produced a series of case studies on Egyptian companies, and has planned a management journal.

To help N.I.M.D. become established as a leading center of education, research, and information serving Egyptian industry, the Foundation has provided it with $928,091. The funds are being used to underwrite Ph.D. and post-doctoral study abroad for N.I.M.D.'s faculty, to provide library and teaching materials, and to finance the services of American business teachers who are assisting its staff while members of its faculty are completing their overseas training. The government has budgeted funds for a permanent center to replace the Institute's makeshift quarters spread between a downtown Cairo office building and a hotel.

The Profession of Government

With modernization largely dependent in Egypt on government action, the quality of civil servants determines how well or poorly the nation's development proceeds. The revolutionary government that came to power in 1952 early discovered that its reform programs were being impeded by the low state of administrative competence it had inherited from the corrupt system it had overthrown.

Accordingly, the new government established the Institute of Public Administration (I.P.A.) in 1955 to improve the nation's career civil service. Under the direction of M. Tewfik Ramzi, a Glasgow University Ph.D. and author of five books on government administration, I.P.A. has produced some 3,000 graduates and become a major route to promotion for the ambitious government worker. The Institute has been assisted by the United Nations and by the Ford Foundation, which has granted $324,350 for consultants, for training abroad of its present and future faculty, and for establishment of training centers for clerks and secretaries.

Administrative talent is being developed for civil service (symbolized by government building in Cairo). . .

. . . and industry. Here, bicycle plant is inspected by management executives.

I.P.A.'s main program is a ten-and-a-half month course during which middle-level officials report three days a week to its ancient, high-ceilinged building in Cairo for lectures, seminars, and workshops. Taught by over 100 university professors and high-ranking government officials serving on loan or part-time, the demanding course covers the principles of public administration; personnel management and development; work procedures, office administration, and other organizational methods; and financial controls, such as the use of budgeting as a management tool. To graduate, each student must successfully complete a research project and write a thesis.

The Development Planners

No phase of the governmental process is more critical in a developing country than national planning – how best to use scarce resources to accelerate social and economic growth. By now, most emergent countries have learned that a plan is more than a compendium of projects; it is, rather, a national design for comprehensive action. If the design is to be more than a paper monument, means for its execution must be built into the fabric of the government and nation. In the United Arab Republic, besides a National Ministry of Planning, there are also planning units in each ministry, public agency, and in some twenty provinces and large cities. All of these participate in formulating and carrying out the national plan, converting it from a design to a process.

Planning, like land reclamation, industrial management, and public service, requires professionally trained people. To meet the need, Egypt established the Institute of National Planning (I.N.P.) in 1960. It is headed by I. H. Abdel-Rahman, who was then Under Secretary of State for National Planning and head of the technical planning staff.*

By 1963, I.N.P. had become a brainy constellation of activities jostling for room in five floors of a Cairo apartment building. Training was underway for senior executives, specialists, and several score bright young university graduates. A library and documentation center had assembled and catalogued 6,000 volumes and published close to 400 research papers. Also an operations research and computation center had been set up, for which a 1620 IBM computer had been ordered. Meanwhile, a new building was being constructed.

To assist him in running I.N.P., Abdel-Rahman has a permanent teaching and research staff of fifteen. In addition, senior officials, development experts, and university professors participate regularly in the activities of the Institute on a part-time basis. Future faculty

* For a two-year period, beginning September, 1963, I. H. Abdel-Rahman is serving as United Nations Commissioner for Industrial Development, in New York, after which he will return to the Institute of National Planning.

are being trained abroad under a $438,000 grant from the Foundation, which also includes assistance for short-term consultants and library and teaching materials.

I.N.P. conducts one-to-three-month courses for senior planning personnel in special areas such as labor-force planning and national budgeting, and an intensive, year-long course for about fifty university graduates working in planning posts.

The most thoroughgoing program of its kind in the Middle East, the course starts in November with specialized work in one of five planning areas – agriculture, industry, manpower, economics and finance, and mathematical techniques of planning. From January to June, the students attend lectures and seminars in general planning, which include economic theory, development economics, statistics, national-income analysis, regional planning, and organization of planning machinery. Summer and fall are devoted to the preparation of a thesis. Most of the students then return to their jobs. A few, however, are selected for further training as future I.N.P. staff members, which means a year on the job with I.N.P., then Ph.D. education in the U.A.R. or abroad.

I.N.P. has also emerged as an important international center. For example, it is cooperating with the U.N. Economic Commission on Africa in establishing in Cairo a branch of the African Institute for Economic Development and Planning.

Tools for Action and Education

Improved statistical services – the very stuff of planning and operational decisions in industry and government – is the aim of another Foundation-aided effort in the U.A.R.: the Institute of Statistical Services. Established at the University of Cairo in 1962 as a national training and research center in the field, the Institute conducts a two-year graduate course in statistics. The Foundation has provided $217,000 for staff development and other assistance.

A pioneering educational project under way in Cairo with Foundation help is the preparation of a one-volume Arabic encyclopedia. At present no modern, authoritative encyclopedia of any kind exists in Arabic either for scholars or general readers. According to Hassan El Aroussy, administrator of the project, the encyclopedia will be "precise, comprehensive, and up-to-date, yet small enough to assure utility as a reference throughout the Arab world." The new work, edited by Abdel Rahman Zaki, is based mainly on the Columbia-Viking Desk Encyclopedia, but it is being adapted to the needs of Arab students by condensing or eliminating such items as those on less prominent people (John J. McGraw, baseball manager) and by the addition of a substantial amount of Arabic material – for instance, accounts of poets, scientists, philosophers, and other figures from both the classical and modern eras. The finished volume, which is expected by 1964, will have some 22,000 separate items and will run to nearly 1,600 pages. It is being produced under the auspices of Franklin Publications, a nonprofit organization of American publishers that assists educational publication in the developing countries.

Regional Development

The High Dam at Aswan will have tremendous social and economic consequences for a wide region. The entire agricultural system will be transformed from one based on the cyclic rise and fall of the Nile to intensive year-round cultivation. With dam-generated electric power available, new industries will be established, bringing in a large labor force that will have to be supplied with housing, food, and services. Then the lake behind the dam – which will be one of the world's largest man-made bodies of water – will open new potentialities for fisheries, transportation, and tourism.

In preparation for changes that will follow the completion of the High Dam, the U.A.R. government has recently established a team of Egyptian experts to study and advise on all major aspects of develop-

ment in the Governorate of Aswan. The Ford Foundation has agreed to assist in this work over the next several years. Thus far it has provided funds to enable the Egyptian team to recruit foreign specialists in agriculture, industry, lake management, and other fields critical to the region's development.

The Foundation also helped finance an intensive ethnological study of the living patterns of the 60,000 Nubian Egyptians whose lands will be flooded by the project. Results of the study, which was conducted by the American University in Cairo in cooperation with the government, are being used in planning new villages for the displaced Nubians.

Syria—Lebanon—Jordan—Iraq—Saudi Arabia

The Agricultural Sector

Like other countries of the Middle East, Syria is expanding her agriculture both by increasing the area of irrigated land and by increasing per-acre yields. In the northern part of the country, this has involved the launching of a large project to harness the Euphrates River and the establishment of two new institutions, both of which are being aided by the Ford Foundation: a Faculty of Agriculture at the University of Aleppo, and a multi-purpose agricultural research laboratory under the Ministry of Agriculture.

The impressive start made by the Faculty of Agriculture owes much to a young ecologist with an encyclopedic command of the details of his country's agriculture, Abdul Hamid Mansour, who served as its first dean. "If our agricultural engineers were trained abroad," he observes, "they would return without a close knowledge of our local problems – what varieties of wheat we grow, for instance, and how to improve this crop. Here we work on specific problems that count most in increasing our yields."

Because of this concern for the specific, one of Mansour's first steps was to activate a 350-acre experimental farm eight miles from Aleppo. Mansour and his farm manager, Farouk Chebib, drilled nine wells (the first in the area) and set up an irrigation system; started experiments in alfalfa, wheat, barley, and cotton; initiated feeding and breeding programs with poultry, cattle, sheep, and goats; and assigned each student a plot of land to till, seed, irrigate, and harvest. "Most of our students have never worked with their hands before and earn their first blisters here," Chebib notes. "But unless they have the experience of cultivating the earth, using tools, and raising a crop, they will never truly understand what farming is all about."

"The experimental farm is the true seat of the University of Aleppo's agricultural efforts, where research, teaching, and learning will form an integrated enterprise involving both students and facul-

ty," says Mansour. "We have made a start on our crop and animal programs, but there is horticulture, too. Aleppo is an important center for pistachio nuts, almonds, olives, and figs. What are the best varieties and the best ways to grow them? Another question is, how can we make the best use of our long growing season? How many crops – and what kinds – can we grow on the same ground during the year?"

By 1964, when it will graduate its first class, the Faculty of Agriculture will have about 275 students. Under Foundation grants of $448,000, consultation and teaching assistance are being provided by a group of American agricultural scientists headed by R. D. Lewis, former director of the Texas A & M experimental station. The funds also provide for overseas graduate education for future teachers and for equipment and books.

Similar support, amounting to $270,000, is being provided for the nearby multi-purpose agricultural laboratory. The laboratory is an extension of the laboratories of Syria's Cotton Bureau, which was established in 1952 to work on the nation's major cash crop, and has since helped increase lint production more than three-fold. Heading the Bureau since 1959 is a cotton technologist in his early thirties named Rateb Jaber. As acting director of the multi-purpose labora-

tory, he hopes to make it "an institution that can focus all pertinent branches of science on such other major crops as wheat and barley – indeed on any crop that needs intensive research."

The multi-purpose laboratory is developing programs in plant pathology, soil science, entomology, and other fields. A Foundation consultant-group directed by John R. Vaughn, a Wyoming plant pathologist, is assisting the effort.

Agricultural science is also being developed on a regional level in the Middle East. The American University of Beirut School of Agriculture, for example, which was established with a Foundation grant, conducts research on irrigation practices and other problems common to the area, and provides graduate, undergraduate, and technical-vocational training to some 170 students from many countries.

"Agricultural development is as much a human process as it is a scientific activity," observes Felix J. Brucher, Swiss-born veteran of fourteen years of rural-development service abroad who supervises the Foundation's work in Syria. "Better agricultural methods can be implanted in village societies bound to age-old ways by people who understand the cultivator and the ways he is likely to accept improved practices."

Syria's cotton laboratory and experimental farm (opposite) *exemplify Middle East's drive to boost farm output. Lebanese extension officers* (right) *represent another main feature.*

Consequently, the Foundation assists agricultural extension systems in Syria and Lebanon, particularly formal training programs and on-the-job training for extension workers, who communicate technical knowledge to village farmers and, in turn, "feed back" their problems to the specialists in horticulture, animal husbandry, and other agricultural fields. "Farmers have to trust you before they'll trust your knowledge," says Isam Sfeir, twenty-eight-year-old extension officer for a banana and citrus district of coastal Lebanon. "For instance, we have made a good start in teaching them how and when to use sprays. But farmers who have the means to buy pesticides find their efforts defeated because their poorer neighbors can't afford the investment, and the disease remains. So my hope now is to get all the farmers together and start them thinking about a cooperative."

As Sfeir indicates, the extension worker's task includes sparking common action among villagers toward solution of their problems. To prepare grass-roots agents of social change (extension workers, teachers, health officers), the American University of Beirut, with Foundation assistance, has established a Rural Leaders Training Institute. It enrolls about fifteen young rural officials a year from all over the Middle East.

The development of agricultural cooperatives – which supply farmers with short-term credit, low-cost farm materials and implements, and marketing services – requires officials particularly adept at generating and guiding local initiative. In Jordan, where a lively cooperative movement will be more than doubled in size under the country's 1962-67 Five-Year Plan, a new Cooperative Institute has been set up, assisted in part by a Foundation grant, to train such personnel and conduct research.

In a Foundation-aided extension effort aimed at the non-agricultural aspects of rural life, Syria's Ministry of Municipalities and Village Affairs has established a program to provide technical-service staffs for the *mukhtars* (mayors) of the country's 215 municipalities. The municipalities comprise more than 4,000 villages, in which two-

thirds of Syria's four-and-a-half million people live. More than 1,000 rural youths have been recruited and trained as mechanics to operate and maintain pure-water pumping systems, electricians to look after generators and power lines, surveyors and construction foremen to build roads and irrigation systems, and in other skills necessary to bring the benefits of twentieth-century life to village communities.

One of the most extraordinary rural-development projects in the Middle East is in one of the region's most unlikely places – the bleak, putty-colored Jordan Valley between Jericho and the Dead Sea, 1,300 feet below sea level. The project is concerned with one of the area's most distressing problems: the thousands of dispossessed Arab Palestinian families living in Jordanian refugee camps.

Convinced that this bitter land and hostile climate could be settled by some of these people, a middle-aged Palestinian lawyer named Musa Bey Alami ignored the advice of hydrological experts and began in the summer of 1949 to dig for water. Using hand tools, then an improvised, hand-operated drilling rig, the work proceeded for over five months. Then one day in January the cry went up – *moy!* water!

Today Musa Bey is still tirelessly at work on an effort that, after fourteen years, can show the following:

–One thousand acres of reclaimed land, shaded with cypress, pine, and palm and bearing citrus fruits, dates, olives, and papayas, as well as field and vegetable crops of all kinds: alfalfa, wheat, barley, tomatoes, lettuce, celery.

–A vocational boarding school enrolling 160 refugee orphan boys, with programs in agriculture, machine shop, and carpentry.

–A modern poultry farm (12,000 broilers, 5,000 layers, and 2,000 turkeys) that includes an egg-candling machine, processing and packing equipment, and deep-freeze storage rooms.

–A dairy herd of fifty-six black-and-white cows, heifers, and calves (equipment includes pasteurizer, creamery, ice-cream maker).

The farm has become a school to the entire Jericho region. With

techniques developed there, 40,000 nearby acres have been reclaimed and settled, many by refugee families. What was desert in 1950 is a flourishing island of green.

But agriculture in the extreme summers of the Jordan Valley demands ingenuity. Poultry, Musa Bey was told, could not survive such temperatures. Housed in coops with very high roofs, however, sprinkled with a hose from time to time, and fed with ice water, his flocks have done well. Dairying, too, was said to be unthinkable: sufficient forage could not be grown. Musa Bey thereupon introduced the area's first alfalfa, and he gets up to ten cuttings a year.

Much of the work on the farm is done by the boys in its vocational school. "We want them to leave here imbued with the pride that goes with being able to support themselves with their own hands," says Musa Bey. The boys enter the school as young as eight or nine, taking elementary-school work until they are ready for the four-year vocational course. Here they are first grounded in three trades – agriculture, machine shop, and carpentry – then required to specialize in one. Maximum responsibility is given the boys at each stage; they graduate knowing how to size up a job and do it well. One result: a waiting list of requests from as far away as Saudi Arabia for agricultural graduates to serve as farm managers.

Staffed by eighteen people, the farm-and-school project operates under the auspices of the Arab Development Society, of which Musa Bey Alami is founder and president. It has received Foundation support totaling $516,485 for agricultural specialists and equipment.

Another Arab Development Society project is a self-help program in the Jordanian villages along the frontier with Israel, many of which were cut off from their lands and wells by the 1949 truce line. "Life is so depressed among these people," says Leila Mudawar, project staff member, "that assistance with even the simplest things can make a difference. We have helped them start poultry flocks, raise bees, build cisterns, dig wells, and terrace their small holdings of land. For the women, we have classes in needlework, embroidery, and knitting, and

we sell their things in our shop in Jerusalem. This is only a fraction of what needs to be done, but it has brought hope to many communities where there was only despair." The village program has been assisted by a Foundation grant of $500,000.

The Role of Education

It has been said that to educate a man is to educate an individual, to educate a woman is to influence a civilization. And one of the most progressive facets of social change in the Middle East is the emergence of women from the tradition-bound seclusion of the past to a role in the shaping of the world about them.

"In the long run, a society can advance only as far as its women can advance," says Frances M. Gray, president of Beirut College for Women. "The women – in their role as mothers and teachers – establish the initial outlook of the young. If women have not experienced the possibilities of progress and do not feel their worth as individuals, the children of a nation will continue to be trapped in the patterns of the past."

Among the principal institutions assisting the rising status and contributions of women in Middle Eastern society is Miss Gray's – the Beirut College for Women. Occupying a shady, five-acre campus among the pastel-colored buildings of residential Beirut, it offers a four-year bachelor-of-arts program in nine major fields. Its enrollment of 420 includes young women from more than a dozen countries in the Middle East. Blending intellectual attainment with social service, the College stresses the liberal arts and conducts substantial programs in teacher education and home economics. Initiative and responsibility are fostered through such activities as the College-sponsored Neighborhood House (where students form the main staff of an elementary-school and case-work program for some 100 underprivileged children and their families); and an Arabic-language children's theater and a literacy project for the College's maids, cooks, and handymen.

Numbers of Beirut College alumnae have become elementary-school and home-economics teachers or school principals in the Middle East's expanding effort in the education of girls. Others are staffing public and private agencies concerned with orphanages, maternity clinics, homes for the aged, and other health and welfare institutions.

Faculty development, library improvement, dormitory construction, and home-economics expansion are among the ways the Ford Foundation has aided the College through grants of $666,400.*

Twenty-five miles north of Jerusalem lies Bir Zeit College, a cluster of cool, thick-walled buildings in a hilltop town of 5,000, which became a full-fledged junior-college institution in 1961. (In the Middle East, incidentally, the term "college" does not necessarily imply higher education.) As the pioneer coeducational institution in Jordan, about a fourth of Bir Zeit's 120 students are women. The College, whose development has been aided by $287,000 from the Foundation, has two main curricula. The first is arts and sciences, which Musa Nasir, president of the College, calls "a crucial transition from school to university study." The second curriculum is public administration and business, and its graduates enter government service or commercial and industrial firms. "This group is filling a tremendous need in a small country like Jordan where only a handful of its administrative personnel has had any higher education," says Nasir. This need was one of the reasons why King Hussein appointed a Royal Commission on Education (Musa Nasir was chairman; the Foundation provided the services of educational consultants) and recommended the founding of a Jordanian university, inaugurated in the fall of 1962.

Foundation assistance to higher education in Iraq includes $463,000 to help establish in 1956 the Al-Hikma University, and sup-

* Receiving increasing support from sources in the Middle East, the Beirut College for Women is an American-sponsored institution. Three similar regional institutions have received $3.6 million from the Foundation to strengthen their faculties and develop their educational programs. They are: the American University of Beirut, the American University in Cairo, and Robert College, Istanbul.

Students at Beirut College for Women assembly (above) *take social-work training.*

Right, *one of Lebanon's modern high schools, being expanded in rural areas with private support.*

port to the central library of the University of Baghdad. Al-Hikma, built and staffed by American Jesuit Fathers, occupies neatly landscaped yellow-brick buildings in a suburb of Baghdad. It offers basic liberal-arts training and business and engineering specialization to more than 300 Iraqi men and women. The Foundation's assistance to the 30,000-volume University of Baghdad central library provided consultants and overseas training fellowships.

In teacher-training and secondary education, the Foundation's support has been characterized by the necessity of adapting teaching and learning to the needs of rural children.

Grants totaling $884,910 have been made for teacher-training colleges in Hawara, Jordan, and in Homs and Hama, Syria. For secondary-school development, four grants amounting to $400,000 have been made in Lebanon.

The emphasis in teacher-training is exemplified by the program of Hawara College, a two-year institution in a wheat-growing area of northern Jordan. Enrolling 300 young men, its academic work includes a solid injection of rural sociology; its pedagogical training requires extensive practice teaching in village schools. Students make weekly visits to villages to conduct literacy classes and to study health, agriculture, education, hygiene, housing, and other needs. "We are trying to create true community schools," explains Husni Fareez, Jordan's Under Secretary of Education. "The students at our teacher-training colleges are being prepared not only to serve village pupils, but also to serve as leaders in the community for social and economic progress. The teacher is the natural ally of the extension officer and others working to improve rural life."

Although most Middle Eastern villages are within reach of a grade school, the same is not true of secondary education. Most rural children are denied access to more than a grade-school education, unless they are lucky enough to be able to live with relatives in the nearest large town.

In Lebanon, a number of groups have sought to meet this problem by establishing high schools in the more remote regions of the country. Strengthening these schools is one of the purposes of the National Council for Secondary Education, a nongovernmental organization aided by a $200,000 Foundation grant. Also, three such secondary schools – Marj'oyoun National College, Shouf National College, and Bishmizzine High School – are attempting to develop as regional and national models of attainable quality, assisted by grants totaling another $200,000. There would be virtually no secondary education in their areas if they did not exist.

All three schools have built modern campuses with good labora-

tories and libraries. Coeducational, nonsectarian institutions attracting students from a wide area, they are hard-working places requiring from four to five hours of homework a night. The schools stress the teaching of English as a second language, an important key to a job and to success in college.

This points to another Foundation interest in education in the Arab states. At Baghdad College, a Jesuit-run secondary school in Iraq that is equipped with a new language laboratory, the Foundation is assisting a pilot project in English as a second language, which has developed a special series of texts. In Syria, funds have been provided for an intensified effort to improve English-language competence at the Universities of Aleppo and Damascus. In Egypt, support is being provided for books and equipment for the Ministry of Education's new Linguistic Unit – a group of Egyptian experts who are applying modern linguistic methods in upgrading the skills of English-language teachers and in preparing new materials.

Also in the Arab countries, the Foundation is cooperating with the University of Wisconsin in providing advisory and training services in the field of science education. In addition, Lebanon is receiving similar assistance in connection with her plans to expand technical and vocational education.

Modernization in Government and Business

Lebanon began a thorough overhaul of its public administration in 1959 with the establishment of a high-level Civil Service Board. One of the Board's principal activities is the Institute of Public Administration, which conducts an on-the-job training effort for about 300 civil servants a year in all ranks – from file clerks to top executives. With the probability of promotion as an incentive, participants attend four-month sessions three afternoons a week. A faculty of practicing administrators teaches courses ranging from filing systems and work simplification to job analysis and data processing. Helping to develop

curriculum and teaching materials are two Ford Foundation consultants: Roy Jumper, a North Carolinian with overseas technical-assistance experience in Saigon, and Raoul Grenier, a seasoned Canadian public-administration expert. With their assistance, Charles Rizk, director of studies, is initiating a full-time, two-year course for hand-picked master's-degree graduates who will be prepared for civil-service executive careers.

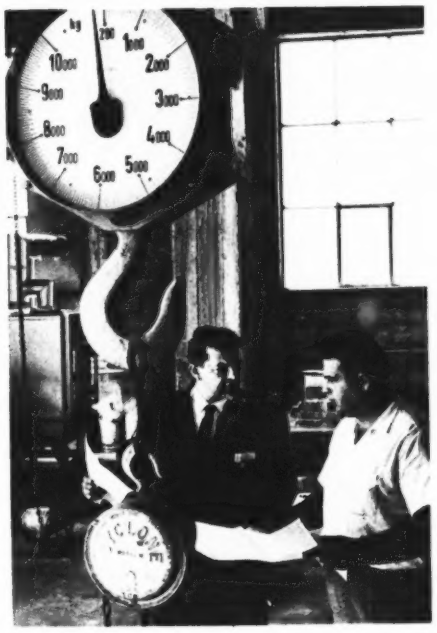
Among the stumbling blocks to improved government administration are inadequate census figures and data on such matters as national income and agricultural and industrial output. The Foundation has assisted efforts to obtain better statistical information and analysis both locally – in Jordan, for example, by helping set up a modern department of statistics – and regionally, by support to the International Statistical Education Center, in Beirut. The regional center is directed by Faiz Khuri, a former executive statistician for the World Health Organization. Since 1953, the Center has trained more than 300 statisticians from eighteen countries.

Faced with major decisions in long-range planning for development projects, the government of Jordan requested the Foundation to provide an advisory group to help train professional staff for its Development Board and work with the Board in formulating a national plan for 1962-67. Nine experts participated over a two-year period in studies and discussions which produced a detailed five-year program and helped establish the personnel-training and organizational procedures for carrying it out. Under the plan, Jordan has embarked on a national effort aimed at achieving a 60 per cent boost in Gross National Product and a substantial start in cutting her huge annual balance-of-payments deficit. Related to this effort is a fresh attack on one of the hardest problems of development economics – tax and fiscal reform. With the aid of Foundation consultants, a Royal Fiscal Commission developed recommendations that have resulted in basic improvements in Jordan's tax structure and budget management.

The recent inauguration in Saudi Arabia of national planning has

heightened the government's awareness of the need for building a modern public service. An extensive program of administrative reform and personnel-training is being undertaken; three senior advisers provided by the Foundation will assist the government in implementing the program and recruiting specialists in economics, finance, personnel development, and other fields.

Two regional centers that are promoting modern economies in the Middle East – the Economic Research Institute at the American University of Beirut, and the Industry Institute, also in Beirut – have received Foundation assistance of $586,000 and $300,000, respectively.



Test equipment (left) *at Industry Institute, Beirut, serves area's manufacturers.*

Below, *Charles Rizk, study director of Lebanon's civil-service training program.*

"The concept of research has only recently found expression in the Arab world," says Yusif Sayigh, Economic Research Institute director. "The pressure of day-to-day problems and the immense weight of immediate concerns have made research seem a luxury. Of course, exactly the opposite is the case – we would be working in the dark without it." The research efforts of Sayigh and his colleagues are shedding light on many timely questions – for instance, the scope and nature of Lebanon's national income, service industry, and balance of payments; the role and potential of tourism as a regional economic asset. The Institute has also undertaken a survey of the needs for economic education and research in the Arab-speaking countries.

The Industry Institute, started with United States Government assistance, has both an economic and scientific staff and is the Middle East's only independent industrial research and development organization. Like its Western counterparts, it is devoted to improving manufacturing processes and products and also provides management-survey, market-research, and other similar services. It places an array of modern industrial laboratories, test equipment, technical literature, and managerial know-how at the disposal of its users. A Lebanese foundry, for instance, was able to jump sales 25 per cent with testing and quality-control procedures set up by the Institute. Companies in Kuwait, Syria, Jordan, Saudi Arabia, and Iran have also been aided. It plans to double its present staff of thirty-five engineers, economists, and technicians in the next four years through a training program aided by the Foundation's grant.

30

Iran

Rural Reconstruction

In a plains area of northern Iran bordering the Caspian Sea and Soviet Russia live some 135,000 Turkoman farmers. One of the villages typical of the area is Dogonji, a small, mud-brick, thatched-roofed community of about 400. Here, in a tidy two-room cottage, lives Reza Hosseini, twenty-three, one of Dogonji's most respected citizens. Holding the title of dehyar (friend of the village), it is his task to serve the village in three ways: to promote understanding and use of technical services available from the government in agriculture, health, education, and other fields; to convey the village's needs and problems to the appropriate technical agencies; and, most important, to awaken within the village people a faith in their own power to overcome their legacy of ignorance and poverty.

Dehyar Hosseini's work has, in the span of a few years, put Dogonji in touch with progress. Streets and yards have been cleaned of rubbish, houses repaired and whitewashed, shade and fruit trees planted, sanitary latrines installed, and literacy classes started. Food production has been boosted through the use of a rust-resistant variety of wheat and the raising of garden crops like spinach, most of which were unknown to these recently settled, nomadic Turkomans.

Assisting Hosseini and other dehyars in the area is a woman dehyar, Mrs. Mahboobeh Erfanian, who concentrates on programs for women and girls. Lessons in cooking to improve diet, and classes in literacy, sewing, rug-weaving (an important Turkoman home industry), child care, sanitation, and health are among Mrs. Erfanian's tasks. "Teaching something as ordinary as washing and treating a child's cut has a very real effect on the quality of village life," she points out. "Infection and even tetanus are commonplace in villages not covered by the dehyar service."

Dongonji is in Iran's Gorgon-Dasht rural-development program, which includes both Turkoman and Fars (Persian-speaking) villages.

The villages are served by 138 dehyars specially trained to guide the reconstruction of village life. Because of Dehyar Hossein Golkar, for instance, the village of Ahangar-Mahaleh now has a spring-fed fresh-water supply and a rebuilt and enlarged school. Also, production of its honey-bee colony has doubled. And Oozineh, farther west, is now accessible in all seasons because Dehyar Gholam Boroumand spurred the rebuilding of its road. And its streets, once a sea of mud, have been ditched and drained.

Dehyars have also helped farmers establish credit cooperatives to keep them from the predatory grasp of money lenders; encouraged them to inoculate their poultry, sheep, and cattle; and trained them in the use of chemical fertilizers, improved seeds and tools, irrigation, and other practices. For technical assistance the dehyars rely on agricultural engineers, veterinarians, public-health officers, and other experts in Gorgon, the area's principal city. The dehyars are supervised and trained by a project staff of extension-methods experts, rural sociologists, and field officers.

Covering 338 villages representing three-fifths of the 320,000 people in an 11,400 square-mile region, Iran's Gorgon-Dasht project is one of the most comprehensive rural-development efforts in the Middle East. Its purpose is to demonstrate a feasible pattern for improving the economic and social conditions of the 80 per cent of Iran's twenty million people who live in villages. Following earlier support for rural-community experiments in Iran (particularly in the Varamin plains, near Tehran, where the first dehyar-training service was instituted), the Ford Foundation provided some $330,000 to help launch the Gorgon-Dasht effort. It also provided a rural-development specialist, Robert Smither, a native of Kentucky with a background in social anthropology, to work with the project's staff.

The project uses the "unit-system" or "group-interest" technique in raising farm output. Five farmers from the same village each agree to try out new methods on part of their land. They are given the full gamut of assistance – improved seed and fertilizer, for instance – on

the condition that they donate to five other farmers enough of their harvest to permit them to make similar plantings. This group, in turn, pledge themselves to assist a third group of five.

"The process seldom reaches the third stage," explains Vajihollah Asbaghi, a project field officer. "With ten good farmers using better methods and proud of their results, most of the others in the village are soon won over to following their practices."

The number of independent cultivators is expected to increase rapidly in Iran as a result of new land-reform efforts to break up feudal holdings and reconstruct rural life. Thus, agricultural education assumes added importance. With the help of two consultants provided by the Ford Foundation, the Pahlavi University Faculty of Agriculture, in Shiraz, southern Iran, has developed a teaching and research program dominated by a concern for the *users* of agricultural knowledge – the area's farmers. Studies are based on crops, soils, and animals of the region, and students help produce a regular series of agricultural-extension "how-to" bulletins. Also, primary emphasis is placed on training, demonstration, and experimental work at the University's 1,300-acre farm.

Projects in Education

"Of the 300 students we have graduated since we started in 1957," says Ali N. Khodabandeh, principal of Shiraz's Nemazee Vocational School, "75 per cent have jobs, mostly in trades for which they were trained, and another 5 per cent have gone on to college. The remaining 20 per cent are unemployed, which is not a large number when you consider that at least three-fourths of the graduates of other secondary education in Iran not going to college can't find jobs."

As Khodabandeh indicates, Iranian youth, like their counterparts elsewhere, are not easily absorbed by a modern-day labor force that sets a high premium on skilled personnel. Particularly difficult to develop in newly industrializing countries is a group capable of filling foreman and technical-assistant jobs, the essential link between the engineer and the semi-skilled worker. The preparation of this level of craftsman (to serve in industry or as teachers in Iran's expanding vocational system) is the purpose of the Nemazee School.

Housed in a capacious, skylighted building and resounding with the whirr of motors, the whine of bandsaws, and the tattoo of ham-

Villages in northern Iran are aided by extension workers (dehyars), one of whom is shown (opposite) *speaking to farmers. Pure-water cistern* (right) *was village project guided by dehyar.*

mers, it has well-equipped shops in six trades (machine shop, auto mechanics, electricity, plumbing, carpentry, and masonry). The school offers a three-year curriculum for each field. In the afternoon the school's 350 students shed their blue shop overalls for classroom work in mathematics, physics, chemistry, mechanical drawing, English, Persian, social studies, and other subjects.

Founded as a regular secondary school, it began its vocational emphasis in 1953. In addition to support from the Iran Foundation, of New York, and the government of Iran, it has been aided by $510,000 from the Ford Foundation, which underwrote the services of an American vocational-teacher team and financed teacher-training and shop equipment.

Two other educational projects supported by the Ford Foundation in Iran are intended to create two basic educational tools – a Persian dictionary and a one-volume Persian-language encyclopedia. "There is no standard, convenient dictionary in Persian," explains M. Minovi, editor of the dictionary. "Previous writers of dictionaries regarded a dictionary as a tool for a learned man, not as something the general reader, or even students, would want. Therefore previous dictionaries concentrated on the most abstruse and difficult words." To collect words that comprise the main body of the language, Minovi and his associates have gone to classical authors, who created modern Persian and in whose works the language reached its purest, richest form. Every principal word in thirty books ranging from Firdausi's epic, *Shahnameh*, to the lyrical writings of Hafiz will be extracted and illustrated by the sentence in which it was used. Descriptions and citations will be written for the 40,000 to 50,000 words expected in the finished product, with the direct, derived, and figurative meanings identified. "For some Persian words, this is a sizeable job," notes Minovi. "The word *ab*, meaning water, for instance, has nineteen direct meanings and 250 derivative and figurative expressions."

Compiling the Persian-language encyclopedia, too, is an exacting task. "The encyclopedias we have are not only hopelessly antiquated,"

says its editor, Hossein Mossaheb, "they are written in Arabic, which to the average student in this country is about as familiar as Latin is to students in the West." The completed work, expected in 1964, will contain about 40,000 items and will be about 2,000 pages long. Like the dictionary (target date: 1965), the project is being carried out under the direction of Franklin Publications.

Charting the Course

As a nation with a relatively large number of university graduates, many with training abroad, and with substantial economic resources, including oil, Iran's capabilities are strong.

In developing its industrial and rural potential, Iran has been trying to broaden understanding of the planning process and increase the number of competent planners.

The Ford Foundation provided $1,283,000 between 1958 and 1961 for the Economic Affairs Division of the Plan Organization – a research and training unit that worked on a comprehensive, national plan for 1962-68. In addition to overseas training fellowships, the Foundation's grant financed the services of specialists in economics, finance, agriculture, and transportation, who were recruited and supervised by the Development Advisory Service of Harvard University's Center for International Affairs. When in 1962 the Economic Affairs Division was assigned a relatively subordinate role in government decision-making, a number of the senior staff resigned. "Nevertheless," notes a former director of the Division, "the 1962-68 Plan constitutes Iran's first comprehensive national plan for coordinating such factors as monetary and financial policy with development activity." The Division also developed a group of professionally competent economic planners. But the long-term outcome will depend on how extensively planning is used as a guide to economic policy and on creation of an adequate organizational framework for implementation of plan objectives.

36

Turkey

The Path of Science

Kemal Atatürk, founder of modern Turkey, proclaimed, "The truest guide in life is science," and during his lifetime a genuine scientific community was born. But in the years following, talented young people turned to law, medicine, and other careers, and science languished. Recently, however, Turkey has recovered her early grasp on the vital connection between research and progress.

Among the leaders of the renascence of science are a group of men in their thirties and early forties who are establishing graduate programs in experimental and theoretical physics, mathematics, and chemistry at Middle East Technical University, Ankara. Their work is being aided by $600,600 from the Ford Foundation to finance staff training, interim services of visiting foreign professors, research equipment, and books.

The most conspicuous advantage held by the young group, however, is the climate of the University itself. Differing from most others in the Middle East, it is not a federation of autonomous faculties but a functionally coherent institution with a modern administration. Founded with United Nations aid in 1956, Middle East Technical University has begun an ambitious building program under the leadership of Kemal Kurdas, its president. By the fall of 1963, on a 11,000-acre tract four miles from Ankara (as large as the city itself), fifteen buildings had been pushed close to completion, accommodating 2,000 students in a spectrum of scientific, engineering, and managerial fields. Future plans envisage an academic community of 12,000 students and faculty members.

While the faculty carried on in make-shift quarters near the starkly modern facades of Turkey's national legislature, its science and mathematics departments moved forward with their research: Bahattin Baysal in polymer and radiochemistry; Vedat Enüstün in colloidal chemistry and statistical thermodynamics; Cengiz Uluçay

in the theory of functions; Adnan Saplakoglu in the use of radioisotopes in agricultural research, and Erdal Inönü and Feza Gürsey in elementary particles, general relativity, and reactor theory.

These are men who have served in leading research centers (California Institute of Technology, Argonne and Brookhaven National Laboratories) and worked with such scientists as I. I. Rabi of Columbia University and Princeton's Eugene Wigner. They are in a good position to select foreign colleagues to help them create a sound program of graduate teaching and research. With seventeen students in the first year of the program, they ultimately hope to have as strong a call on Turkey's ablest young minds as universities in the United States, Europe, and the Soviet Union.

They are also represented in a partnership between Turkish scientists and the country's Ministry of Education that has resulted in the establishment of a National Science Lise, or high school of science. Turkey's first program for the scientifically gifted, it will enroll about 300 students recruited through a nationwide competitive examination. The first class of 100 boys and girls is expected to begin the three-year course in the fall of 1964. The school will be a boarding institution on grounds donated by Middle East Technical University.

With the aid of a $1.1 million Foundation grant, a strenuous teacher-training and curriculum-development program for the school is under way, including the recruitment of thirty outstanding teachers through a national competitive examination; a year's intensive training in Ankara; a summer institute in the United States; then, with the opening of the school, a two-year period of forging modern curricula for Turkish students in mathematics, physics, biology, and chemistry.

The new Lise will have close links with the rest of Turkish education, since half of the thirty teachers will be assigned to other high schools in Ankara. Working with Turkish scientists and science teachers at each stage will be a group of scientists and science teachers from Florida State University and other American institutions.

A further step by Turkish scientists in stimulating improved

54

teaching in the schools is the publications program of the Turkish Society for Pure and Applied Mathematics. Begun with Foundation help in 1962, the program in its first year selected and translated into inexpensive Turkish editions more than fifteen works on modern developments in mathematics for use by high-school teachers and students.

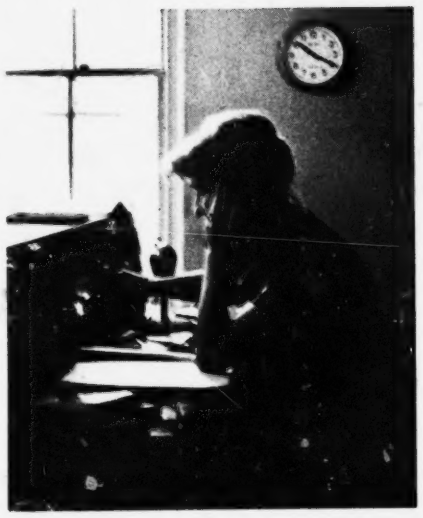
Library and Language Problems

Turkey is in a better position than most Middle Eastern nations to create a modern library system, a weapon against ignorance as important as schools and teachers. With an established library-science program at Ankara University, she has the means to overcome the chief bottleneck – the dearth of professional librarians.

Now in its ninth year, with 200 students, the Institute of Librarianship is among the largest and most popular programs in Ankara's Faculty of Letters, in whose cumbrous, purple-stone building it is housed. Its demanding four-year academic syllabus includes training ranging from childrens' libraries to special collections in law, science, and other fields. As a condition for admission to the final examination, students must complete a thesis. Practical knowledge is injected through the requirement of 160 hours of on-the-job experience under a professional librarian.

Osman Ersoy, the Institute's University of Chicago-trained director, and his colleagues are also furthering Turkish librarianship by expanding the country's small body of literature in the field and by working with the Turkish Library Association and National Library in in-service training and other programs. To help the Institute develop, the Foundation provided $321,875 between 1954 and 1961 for the services of six library experts selected by the American Library Association and for overseas training fellowships for the Turkish staff.

Access to languages is another educational need for the less-developed countries. The vast knowledge accumulated by the West in



Language laboratory at Robert College, Turkey, illustrates use of modern electronic aids to speed training in English as a second language.

science, agriculture, economics, and other fields is under the lock and key of tongues strange to the developing nations, and – short of massive, costly translation programs – command of at least one Western language is essential. As reflected in Foundation-aided efforts in Egypt, Iraq, Syria, and Tunisia (see page 44), English as a second language has emerged as a preferred choice in the Middle East.

Robert College, on a hillside overlooking the Bosporus just outside Istanbul, is using the once esoteric science of linguistics, together with modern electronic devices (a language laboratory), to speed acquisition of English. With assistance from the Foundation, it has set up an English Language Division to prepare students for its two component sections – a high school and a college, both of which are taught largely in English.

Backbone of the Division's one-year course is a sequence of exercises prepared by Sheldon Wise, a tall, sandy-haired, Yale-trained linguist. "The exercises stress repetition of phrases and sentences that establish the normal usage of words," explains Wise. "The purpose is to build up an automatic response to grammatical patterns. It is the pattern of use – not the rule for it – that matters."

On the other hand, Wise does not bypass grammar or the stu-

dent's native language. "The source of many of the student's problems is in his own language, not in the one he is learning," he says. For example, the Turkish ear does not easily distinguish a vowel between a group of consonants. The verb form *stirring* may become the noun *string*. ("The sugar won't dissolve in the coffee without string.")

Technology and Management

No less than in cities like Cairo, Beirut, or Tehran, the traffic swarming beneath Istanbul's minarets, and the humming factories rising in its environs, symbolize the noisy advent of the industrial age in the Middle East. Like Egypt, Turkey, too, is launching a new profession – skilled enterprise management – in the face of a tradition that has favored careers like soldiering, law, engineering, and medicine. Since it started in 1954, Istanbul University's Institute of Business Administration has established a solid beachhead. With more than 600 graduates of two programs – a nine-month certificate course for new university graduates, and a three-month in-service course for experienced middle managers – it has won recognition by the business community. Not only does it receive financial aid from seventy-five industrial sponsors, but top managers pick their best men for the middle-management course, continue to pay their salaries, and contribute to the cost of their training.

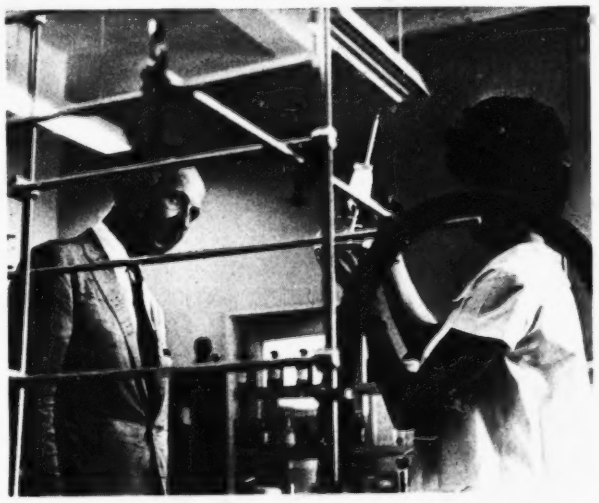
Both Institute programs cover production, human relations, marketing, cost accounting, and business policy. Instruction adheres strictly to the case-method approach, reflecting the training of the faculty, most of whom – with Foundation assistance – attended the Harvard Graduate School of Business Administration. Foundation grants, which total more than $1 million from 1954 to 1962, also provided a series of Harvard professors as resident advisers.

The director of the Institute is Mehmet Oluç, an economist who has done advanced work in business at three American graduate schools. He is proud not only of the Institute's value to its graduates

(alumni of the middle-management program earn on the average twice as much as their contemporaries who have not had their training), but also of the Institute as a research center. Its study of the Bursa province was the first regional economic survey in Turkey, and has brought requests from other provinces for similar projects.

Top management's growing responsibility is exemplified by two new organizations in Turkey — a Turkish Management Association and an Economic and Social Studies Conference Board. In the latter, which grew out of a Foundation-aided meeting in 1959 on international law and development, business executives are participating with government and academic figures in a national forum to improve understanding of problems of development. "It is unusual in Turkey for leaders from all sectors to come together to explore important issues dispassionately and objectively," observes Nejat Eczacibasi, a leading Turkish industrialist and Conference Board president. "The program is giving us all a spirit of mutual confidence and purpose."

Because a variety of associations for management training and research on business are emerging, the Foundation has assigned a full-time specialist on business management in Turkey to work with them on objectives and organization.



Drug manufacturer visits one of his laboratories. Advanced business training is a feature of Turkish national development.

Tunisia and Algeria

The Cultural Base

During the bleak centuries when Europe groped through its dark age until well into the medieval period, the Middle East attained one of the most brilliant cultures of civilization. In poetry, philosophy, history, mathematics, astronomy, architecture, and medicine, the region's scientists, scholars, and artists built a monumental heritage. It is a matter of some irony, therefore, that this rich cultural tradition should also cast up a bewildering dilemma: how to retain the teachings of the past and still press forward to build a modern society.

This is the context of a new institution in Tunisia – an International Cultural Center that opened in 1962 with the aid of a $71,000 grant from the Ford Foundation. Located in the beautiful seacoast town of Hammamet some forty miles from Tunis, the Center is bringing together leaders of thought from throughout the Middle East to consider – with Asian, African, and Western thinkers – the region's cultural needs.

Individual artists and scholars are invited to use the Center. In an exquisite setting, with ten acres of gardens, three cottages, and a main building whose cool, colonnaded porch overlooks the sea, the Center affords serenity and quiet for creativity and thought.

"We hope that here we can keep open the windows of the Arab mind," says its director, Cecil Hourani, former professor of political science, who is special adviser to President Bourguiba. "We need to look outward and inward – to enlarge our vision of the international community and to look at ourselves and our civilization, at what we were and are and hope to become."

Research and Training

Systematic study of Tunisia and her four million people – the impact

of social change and the potential for development – is the task of scholars at the University of Tunis' Center for Economic and Social Research, which has received $100,000 in Foundation support. Housed in a refurbished apartment building in an old market quarter of Tunis, the research center comprises two groups of social scientists and student assistants – one in sociology, the other in economics. They are gathering data and making analyses on such questions as change in traditional attitudes, social mobility, the structure of commerce, and underemployment.

Concerned that population pressures may seriously impede the nation's ability to advance living standards, the government of Tunisia in 1963 requested Foundation assistance for an experiment in family planning. The Ministry of Health, with the help of a $200,000 grant, is establishing in twelve Maternal and Child Health Centers a program to further the understanding and practice of family limitation. Medical records will be kept to determine which procedures work best among various parts of the population. Results of the experiment will provide the basis for a subsequent, expanded program.

Research on economic-policy problems (savings, investment, price policies, regional development) is being conducted by the country's Ministry of Planning and Finance, assisted by a senior economist, Professor Torsten Gardlund, of Stockholm University, whose consulting services were provided by the Foundation.

Meanwhile, Tunisia, like other new nations, has found the day-to-day affairs of government and business hampered by lack of trained office staff, and has therefore established, in Tunis, a Secretarial and Accountancy School. Operating on an intensive, double-shift schedule, the school opened in 1962 with some 100 future accountants, office managers, and administrative secretaries enrolled. The Tunisian government, which initiated the school with the help of $60,000 from the Foundation, underwrites the students' education on the condition that they agree to take jobs during a five-year period wherever they are needed in the country.

Future office staff of Tunisia's government and business are trained in new school.

Cultural center, Hammamet, Tunisia, is international meeting and working place for artists and leaders of thought.

For another new educational effort in Tunisia, English-language training, the Foundation provided $156,000 to expand the teacher-training capacity of the Bourguiba Institute of Languages. Although the country has long had a second language – French – its leadership is anxious to strengthen access to the knowledge, ideas, and people of the English-speaking world, and it has made English a required subject in secondary schools.

The Foundation's assistance is underwriting an instructional program at the Institute which introduces working teachers to linguistic methods and tape recorders and other electronic equipment

used in language teaching. The program was started by Cornell linguist Robert A. Hall and is being continued by Richard M. Payne, who has taught languages at Stanford and Louisiana State. Later, the Institute expects to train new teachers in modern techniques in cooperation with the country's teacher-education centers. Since most English-language instructors at these centers are French, the task is complex: to improve the ability of French-speaking teachers to impart the English tongue to students whose native language is Arabic. The long-term solution, obviously, is to train Tunisians as English-language teachers, and the Foundation's grant provides overseas fellowships to make a start in this direction.

In neighboring Algeria, the latest Middle Eastern nation to secure its independence, the Foundation is helping enlarge the country's pool of educated leadership through scholarships for Algerian students studying abroad. This assistance began during the war with France, when $210,000 was given to help Algerian students who had to leave French universities for other European universities. In 1963, a further grant—$144,000—was made for scholarship aid to Algerians completing their education in Tunisia.

Pressing immediate needs for trained personnel in Algeria are being assisted through two recent grants. In Algiers and Oran, with the help of $88,300 from the Foundation, accelerated courses have been initiated to prepare qualified secretaries and accountants. And in Miliana, near Algiers, a $19,000 grant is aiding a training program for foremen and technical instructors in mining.

Israel

The Quest and Use of Water

For eight centuries following its settlement by the Nabataens in 200 B.C. the acropolis city of Avdat – now a ruin deep in the heart of Israel's bleak, windy Negev desert – supported a thriving population. The area's rainfall today is the same as it was 2,000 years ago – a meager four inches annually. Hence this mystery: how did the ancients maintain their civilization in this barren terrain?

In 1951, under the direction of botany professor Michael Evenari, a team of scientists from Jerusalem's Hebrew University went to the Negev to explore the riddle. By 1959, they had pieced together the answer. The ancients practiced "run-off" agriculture. Networks of channels in the hillsides formed "catchments" to lead rain water into low-walled, terraced fields on the valley floors. Because the fine, powdery soil (*loess*) formed a hard crust as soon as it was wet by rain, the run-off rate was exceptionally high. Captured in the terraces below the slopes, the water soaked three to four feet deep into the thick, wind-deposited layers of soil there. A few good rains – even one – were sufficient to support agriculture.

But Evenari and his group were concerned with more than an archaeological phenomenon. The Negev desert composes more than half of the state of Israel. Could the techniques of the ancient farmers open the way for modern settlers? To find the answer, two farms modeled on those of early times have been constructed – one in Avdat, the other in nearby Shivta. Fruit trees, pasture plants, cereal crops, and a variety of vegetables are being grown. Whether run-off agriculture is economically feasible for the Negev on a large scale depends on more data, although Evenari believes the prospects are promising.

Israel is searching for all possible means to make the maximum use of available water. Since the nation's water resources are already 90 per cent exploited, scientists are turning to the question of how saline water, found underground in relatively large quantities, might

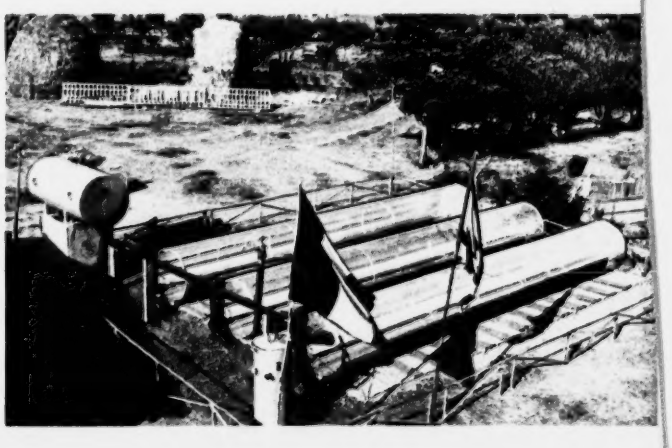
be made useable. At the Negev Institute for Arid Zone Research, located in the booming, dusty city of Beersheba, a small pilot plant has been designed for desalinization of brackish water. As the water passes between chemically treated plastic membranes, sodium ions are drawn off on one side and chlorine ions on the other, leaving the water fresh as it flows from the end of the membranes. "Because it takes out the salt and leaves the water, which is the reverse of conventional methods," explains Institute director Joel Schechter, "the system requires a good deal less energy for brackish water conversion than other systems. The Negev has an estimated 100 million cubic meters of underground water now too saline to use, so the system's potential impact is enormous."

Two other devices concerned with water use – a compact, solar-powered turbine motor and a perfected sprinkler – are being developed respectively by Harry Zvi Tabor, at Hebrew University, and A. de Leeuw, at Technion (Israel Institute of Technology), Haifa. The first, a sealed, maintenance-free unit using chlorobenzine instead of steam (much higher energy-conversion efficiency for small units), will provide a cheap, handy power-source for pumping irrigation water. In the project to improve sprinkler systems (already the most efficient means of irrigation) designs are being sought that extend sprinkling distance, yet don't produce droplets of such size and velocity that, on striking the soil, they compact it and cut down water penetration. In Israel, literally every drop of water must count.

To improve ways of husbanding rainfall, Ahron Nir, of the Weizmann Institute of Science, Rehovoth, is doing research on aquifers, water-bearing layers of rock. After the underground supply contained in the aquifer has been used up, and the wells drilled into it have gone dry, the rock layer can be artificially recharged by pumping water back into it through the well holes. Thus the aquifer becomes a large underground tank for storing rainy-season water for later use. By the use of radioisotopes, Nir is developing new measurements essential to the accurate management of these rock-stored supplies.

These projects in water resources are but a sampling of the 149 scientific-research efforts in Israel in many fields that have been supported by the Ford Foundation. The purpose of this assistance, which totals $2,496,650 since 1953, is to help Israel make the best use of her substantial corps of trained scientists in the development of her limited natural resources. The projects are evaluated and recommended to the Foundation by the Israel Foundations Trustees, an organization of scientists and educators drawn from the country's major research institutions.

Scientist examines fruit tree grown in Negev desert by use of ancient principles.



Israeli device collects sun's energy and converts it to power irrigation pump.

Salt and Survival

A number of the Foundation-aided research projects in Israel deal with agriculture. The prospect that the country will have to farm with increasingly brackish water has attracted many scientists to the problem of raising the salt tolerance of basic crops. Some investigators have been probing the enigma of how desert plants manage to survive devastating extremes of salt and dryness. One finding: desert plants have a built-in "rain gauge." A water-soluble chemical substance in the seed coating acts as a germination inhibitor. Only when there is enough rainfall to remove the inhibitor completely will the seed germinate. Otherwise the plant would die overnight.

The mechanisms of how drought-resistant plants grow, use their water, resist salinity, and take up minerals are being explored by botanist Dov Koller, of Hebrew University. Eschewing the greenhouse approach, he has gone to the desert itself to study the plants. He works from a mobile laboratory – a small trailer equipped with devices that can be attached to the plant to measure such factors as carbon dioxide intake and water transmission. "The data we are getting on plants in their natural, undisturbed state have an order of reliability never obtained before," Koller says. "If we can find out precisely how desert plants succeed, then we will know the requirements for adapting agricultural plants to these extreme conditions."

Besides such basic research, applied research on arid-zone agriculture is also under way. A group at the agricultural institute at Beit-Dagon is conducting root-stock and grafting experiments in growing vines and fruit trees in saline water; developing a wilt-resistant tomato; and experimenting with rust-resistant strains of wheat by breeding with wild species native to the area. A young geneticist at Hebrew University is working on a variety of pond-raised carp – a principal protein source – hardy enough to thrive in brackish water; and a bacteriologist at the University's medical school is striving to control toxic algae that wipe out entire ponds of fish.

The Ford Foundation's program in the Middle East, now in its thirteenth year, has provided modest expenditures for development, compared with the outlays by these countries themselves and by technical-assistance agencies of foreign governments. The Foundation's purpose has been to make meaningful and lasting contributions by helping to prepare the skilled manpower for strategic, high-priority activities it has been asked to assist.

In the words of F. F. Hill, vice president responsible for the Foundation's Overseas Development program: "If a country is to develop, it must develop its people and its institutions. This is a difficult, long-term job that requires decades and even generations. If we are to assist, it requires people who have an understanding of the development process and the understanding and patience which come only from a firm belief in what one is doing and a heartfelt interest in the welfare of the people in the country where one is working."

Text:
Terrance Keenan
Photographs:
Ford Foundation Photo Library (William Simmons: cover, 3, 10 bottom, 28, 41; Terrance Keenan, 2, 16, 17, 20 left and bottom, 24, 32 right, 39, 44 bottom, 48 top; Sheldon Machlin: 20 top and middle); United Nations, frontispiece; Arab Information Center, 10 top; Tunisian Information Office, 44 top; Hebrew University, 48 bottom

The following is a selected list of publications available without charge from the Ford Foundation, Office of Reports, 477 Madison Avenue, New York, N.Y. 10022. A complete list of publications is also available.

The Ford Foundation Annual Report

About The Ford Foundation: *General description of programs and objectives.*

The Apprentice Experts: *An account of fellowship activities.*

The Ford Foundation in the 1960s: *Statement of the Board of Trustees on policies, programs, and operations.*

Golden Years?: *Experiments and research in problems of the aging.*

Metropolis: *An account of the Urban and Regional program.*

The New Teacher: *Assistance for new patterns in teacher education.*

The Pay of Professors: *Report on grants for college teachers' salaries.*

The Public Stake in Private Service: *An address by Henry T. Heald, president, Ford Foundation.*

Roots of Change: *The Ford Foundation program in India.*

Scholars' Work and Works: *Assistance to scholarly publication by university presses and improvement of library resources.*

The Society of the Streets: *Activities in youth development and delinquency prevention and treatment.*

Time, Talent, and Teachers: *Experiments in better utilization of school and college teachers.*

The Wealth of a Nation: *A cross-section of activities in the Foundation's program in Economic Development and Administration.*

VT 004 975
A Progress Report on Area Vocational-Technical School Developments to June 30, 1966.

Pennsylvania State Dept. of Public Instruction, Harrisburg
MF AVAILABLE IN VT-ERIC SET.
Pub Date - Sep66 14p.

*AREA VOCATIONAL SCHOOLS; *FACILITIES; COURSES; HIGH SCHOOL STUDENTS; *ATTENDANCE; *PROGRAM DEVELOPMENT
PENNSYLVANIA

This brochure reports the progress in the development of area vocational-technical school programs within the state. An attendance area should have enough school districts to maintain a minimum of ten shop-laboratory activities and a senior high school pupil enrollment of about 2,500. A total of 74 attendance areas have been approved covering 55 counties. The average enrollment per attendance area is 5,100 pupils. Twelve counties were not served by approved attendance areas. Educational program plans are prepared by the local director of vocational education to justify program size and course offerings. Thirty-one plans have been approved. The average pupil size of school is 815 pupils and average number of course offerings is 20. As 24 to 30 months are required to plan a program and construct a building facility, construction of building was limited for the 2-year period, but 11 area school building projects were under construction. Seventeen programs were in operation and 27 more have planned school opening dates of September 1968 or before. (MM)

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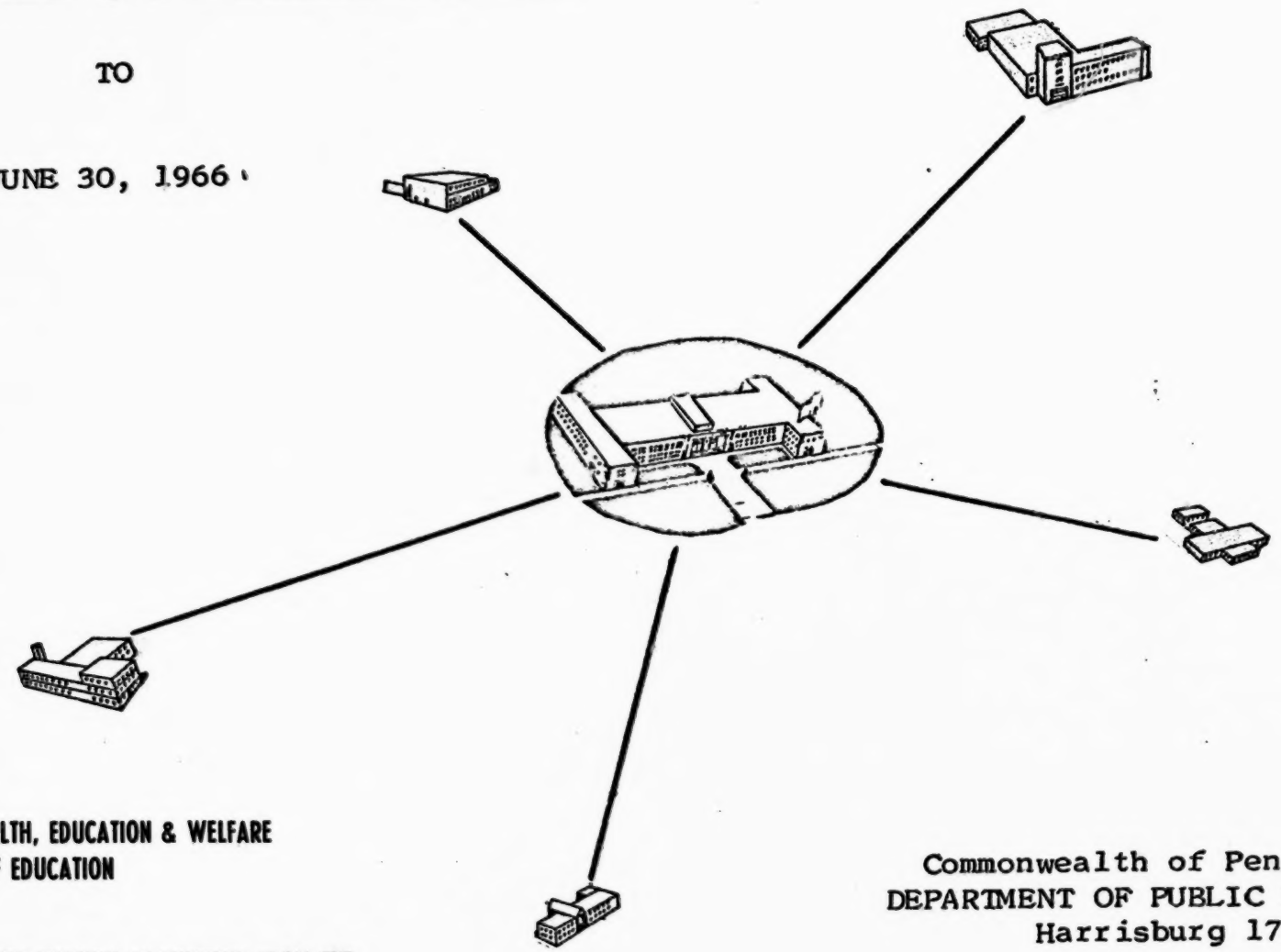
A PROGRESS REPORT

ON

AREA VOCATIONAL-TECHNICAL SCHOOL DEVELOPMENTS

TO

JUNE 30, 1966



U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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Commonwealth of Pennsylvania
DEPARTMENT OF PUBLIC INSTRUCTION
Harrisburg 17126

COMMONWEALTH
OF
PENNSYLVANIA

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Governor

DEPARTMENT OF PUBLIC
INSTRUCTION

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John W. Struck
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Vocational Education

PREFACE

The rapidly increasing complexity of business and industry operation has brought to the attention of local, State, and National leadership the need to provide a comprehensive program of Vocational Education as a part of the educational system.

State and local leaders throughout the Commonwealth have been meeting this challenge through enabling legislation, encouraging the organization, establishment and operation of area vocational-technical schools on a regional basis.

This brochure gives a report on the progress in the Commonwealth in the development of area vocational-technical school programs from the initial stage of attendance area development to the construction of building facilities.

September
1966

Robert Jacoby
State Supervisor
Technical and Industrial Education

CONTENTS

The Attendance Area ---------- 1
Approved Attendance Areas ---------- 2
Characteristics of Approved Attendance Areas- 3
Map-Approved Attendance Areas ---------- 4
Educational Program Plans ---------- 5
School Enrollments and Course Offerings ----- 6
Map-Areas with Programs in Operation and Educational Program Plans ---------- 7
Building Construction ---------- 8
Buildings Constructed and Funded ---------- 8
Projected Building Construction Projects ---- 9
Programs In Operation ----------10

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THE ATTENDANCE AREAS

The area vocational-technical school is an educational institution offering programs in one or all phases of vocational education on a technical, skilled, and occupational levels of instruction to secondary school pupils and out-of-school youth and adults in a geographical area comprised and operated on a cooperative basis by several school administrative units.

The basic purpose of the area technical school is to make vocational education available to all pupils of the Commonwealth by the establishment of programs to serve secondary schools in a given geographical area known as attendance areas. Attendance areas, therefore, outline the geographical boundaries of school districts and pupils to be served by an area vocational-technical school.

County Boards of School Directors have been delegated the responsibility to plan, prepare, and submit to the Department of Public Instruction proposals for arranging all school districts of the county into one or more attendance areas. These proposals are developed in counsel with school administrators, industrial, labor, and lay representatives of the area.

An attendance area school should have sufficient number of school districts to maintain a minimum of ten shop/laboratory activities. This requires a senior high school pupil enrollment of approximately 2500 pupils. Factors considered in planning areas include pupil population, community interest, facility of transportation, financial ability, organization of school districts, characteristics of school districts, etc. Attendance areas must be approved by the Department of Public Instruction and the State Board for Vocational Education before proceeding with the establishment of a school in the area.

APPROVED ATTENDANCE AREAS

ATTENDANCE AREAS APPROVED PRIOR TO ACT 463

No. Areas	Area	Approval Date
1	Fayette County	
1	Wyoming Valley	
1	Carbon County	11-57
1	Bucks County	2-58
1	Forbes Trail	6-59
1	Upper Bucks County	6-61
1	Northumberland	9-62
1	Central Westmoreland	5-63
1	Steel Valley	5-63

ATTENDANCE AREAS APPROVED UNDER ACT 463

No. Areas	Area	Approval Date
3	Delaware	2-64
1	Allegheny (Parkway West)	2-64
1	Lebanon	2-65
1	Armstrong	3-65
1	Montgomery #3	3-64
2	Luzerne	3-64
1	York	3-64
1	Mercer	4-64
1	Lawrence	4-64
2	Washington	5-64
1	Allegheny (North)	6-64
1	Clearfield	6-64
1	Westmoreland (East)	6-64
1	Lehigh	6-64
1	Crawford	6-64
1	Dauphin	6-64
1	Columbia-Montour	8-64
1	Snyder-Union-Northumberland	8-64
1	Indiana	8-64
1	Bradford	8-64
1	Franklin	8-64
1	Philadelphia	8-64
1	Pittsburgh	8-64
1	Cumberland-Perry	9-64
1	Greene	9-64
1	Juniata-Mifflin	9-64
30		

No. Areas	Area	Approval Date
1	Venango-Forest	9-64
2	Lancaster	9-64
2	Chester	10-64
2	Schuylkill	10-64
1	Erie	10-64
3	Montgomery #1,2 & 4	11-64
1	Clarion-Forest	12-64
1	Lackawanna	12-64
1	Bucks (Central)	12-64
3	Berks	12-64
1	Somerset	12-64
1	Bedford	2-65
1	Lycoming	2-65
1	McKean	2-65
2	Northampton	2-65
1	Warren	2-65
2	Cambria	3-65
1	Clinton	4-65
1	Monroe	6-65
1	Jefferson	6-65
1	Centre	6-65
1	Huntingdon	8-65
1	Cameron-Elk	1-66
1	Fayette	1-66
1	Lancaster	1-66
1	Altoona Area	2-66
35		

CHARACTERISTICS OF APPROVED ATTENDANCE AREAS

1. A total of seventy-four (74) have been approved including those areas having schools in operation, covering fifty-five (55) counties.

2. Sixty-five (65) attendance areas have been approved since February 1964, under Act 463.

3. Fifteen (15) counties have more than one attendance area:

Allegheny (4)	Luzerne (3)	Westmoreland (2)
Montgomery (4)	Bucks (3)	Schuylkill (2)
Delaware (3)	Northumberland (2)	Chester (2)
Berks (3)	Northampton (2)	Cambria (2)
Lancaster (3)	Washington (2)	Fayette (2)

4. Seven (7) attendance areas involve major portions of more than one county:

Columbia-Montour	Venango-Crawford-Forest
Juniata-Mifflin	Snyder-Union-Northumberland
Cumberland-Perry	Cameron-Elk
Clarion-Forest	

5. Ten (10) attendance areas are below the minimum standard of 2500 pupil enrollment.

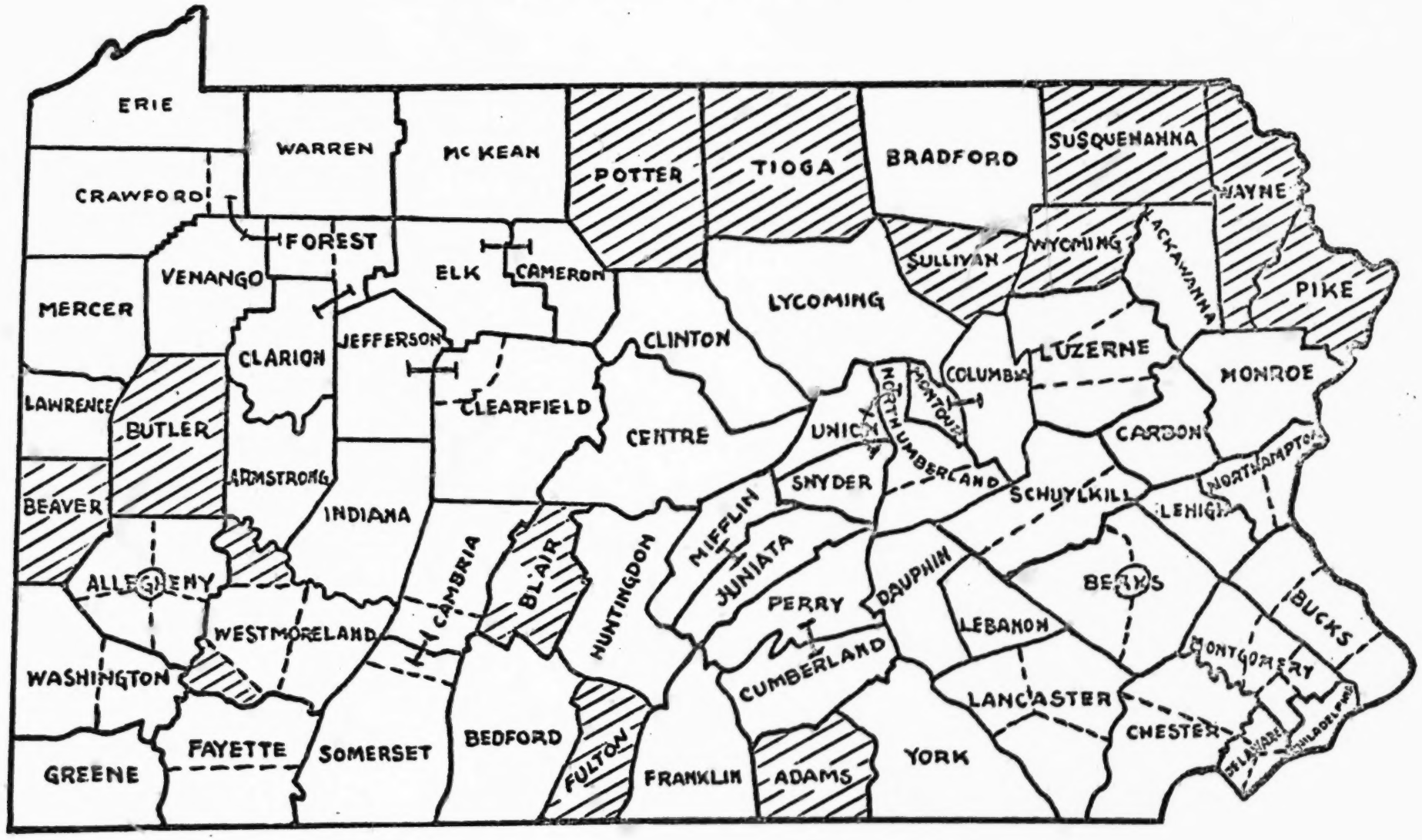
   Greene, Bedford, Warren, Clarion-Forest, Upper Bucks, Clinton, Monroe, Huntingdon, Cameron-Elk, Fayette #2

6. The average senior high enrollment per attendance area is 5100 pupils.

COUNTIES AND PUPILS NOT SERVED BY APPROVED ATTENDANCE AREAS

County	Estimated Senior High Enrollment
Adams	1,947
Beaver	10,143
Blair	3,520
Butler	5,896
Fulton	548
Pike	282
Potter	867
Sullivan	288
Susquehanna	1,876
Tioga	1,854
Wayne	999
Wyoming	866
Total	29,086

MAP
APPROVED ATTENDANCE AREAS
FOR
AREA VOCATIONAL-TECHNICAL SCHOOLS



KEY:

Non-shaded areas indicate portions of Commonwealth having approved attendance areas.

Cross-hatching indicates portions of Commonwealth without approved attendance areas.

Tie indicates a multi-county attendance area.

EDUCATIONAL PROGRAM PLANS

The basic purpose of educational program plans is to prepare and justify program size and course offerings. The educational program plan is developed by the local Director of Vocational Education in cooperation with the professional and general advisory committees and field Supervisors of Vocational Education. Preliminary draft plans are reviewed, revised, and presented to the Department of Public Instruction for review and approval of a curriculum committee. The educational plan is used as a basis for drafting a room schedule in preparation for planning a building facility.

Summary of Facts Concerning Educational Plans

1. Total number of educational program plans approved is thirty-one (31).

2. Sixteen (16) of these programs are located in the Eastern Region of the Commonwealth, seven (7) in the West, and eight (8) in the Central.

3. Twenty-seven (27) programs are County Board operated and four (4) Joint Board.

4. Six (6) programs are being planned as full-time schools and twenty-five (25) as part-time service centers providing only the shop/laboratory phase of the program.

5. The average pupil size of school is approximately 815 pupils.

6. The average number of course offerings is twenty (20).

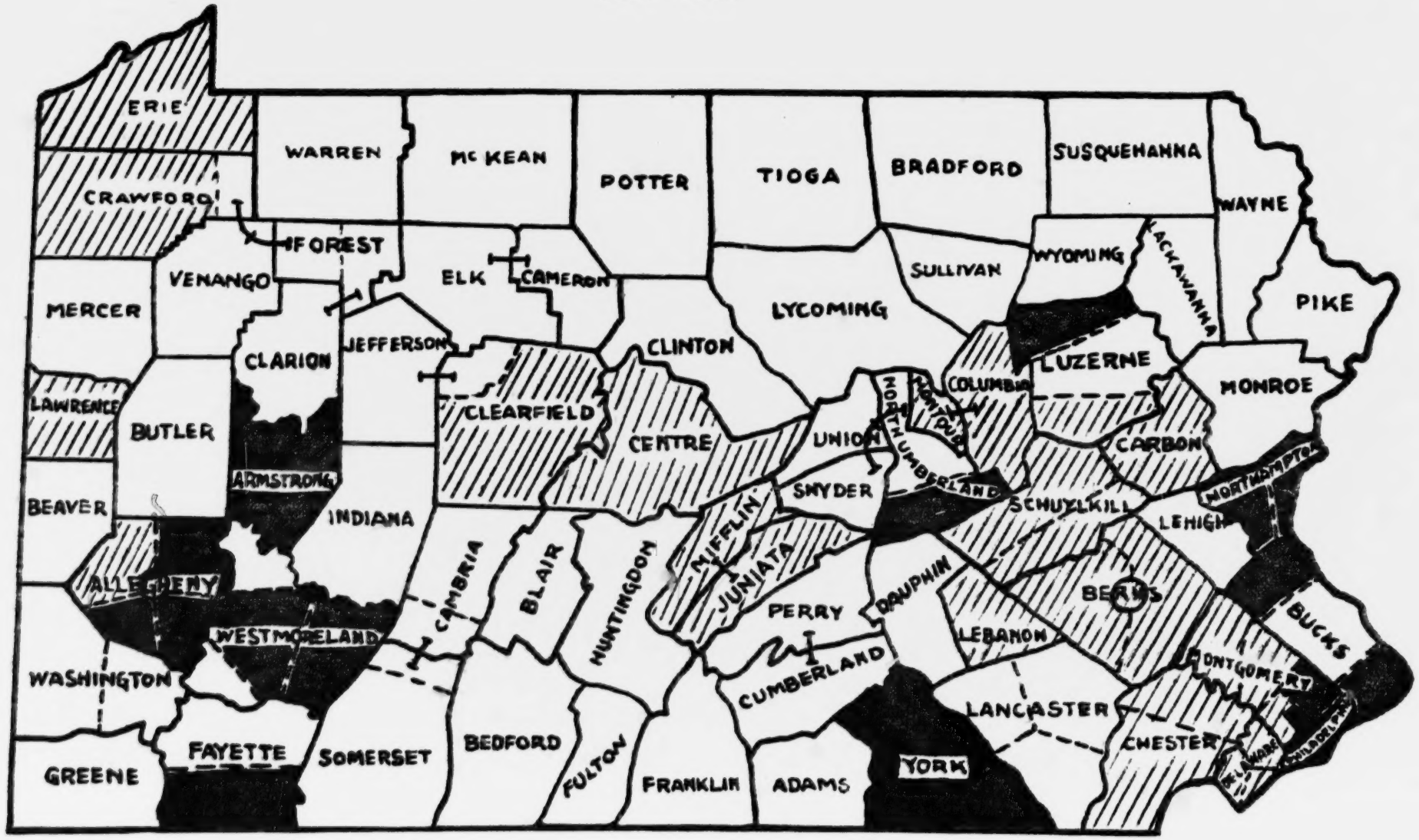
7. The average percentage of proposed enrollment of technical school pupils to total enrollment of senior high school pupil in the participating districts is 15.8.

School Enrollments and Course Offerings
(For New Buildings Being Planned)

	ENROLLMENT			NUMBER OF COURSES	COURSE OFFERINGS *							TYPE SCHOOL		TYPE BOARD	REGION OF STATE
	SR. HIGH	TECH. SCHOOL	% TECH SCH.		AG	BUS	D.E.	H.E.	HEALTH	T&I	TECH	FULL TIME	PART TIME		
Montgomery #3	6,163	990	16.1	24	1	0	2	0	1	15	5		X	Co.	East
Lenape Area T.S.	2,986	500	16.7	12	0	1	1	0	0	5	5	X		Co.	West
Carbon County	2,248	675	30.0	15	0	0	1	0	1	9	4		X	Co.	East
Wyoming Valley	4,749	640	13.5	16	0	1	1	0	0	11	3	X		Co.	Central
Delaware #1		600	)	15	0	1	1	0	1	8	4		X	Co.	East
Delaware #2	17,806	1,000	) 9.5	25	0	1	1	0	2	14	7		X	Co.	East
Delaware #3		1,100	)	20	0	1	0	1	2	8	8		X	Co.	East
Lawrence Co.	5,036	880	17.5	22	0	1	1	0	2	14	4	X		Co.	West
Lebanon Co.	2,862	700	24.5	18	1	0	1	0	1	12	3		X	Co.	East
Parkway West	9,571	720	7.5	18	0	0	2	0	0	4	12		X	Co.	West
Schuylkill - N	3,133	590	18.8	14	0	1	0	0	0	11	2		X	Co.	East
Schuylkill - S	3,450	660	19.1	17	0	2	1	0	1	9	4		X	Co.	East
Crawford Co.	3,304	600	18.2	15	1	0	1	0	1	8	4		X	Co.	West
Chester-North	4,593	800	17.4	20	1	2	1	0	0	11	5	X		Jt.	East
Chester-Central	6,203	966	15.6	23	1	1	2	1	2	11	5		X	Co.	East
Juniata-Mifflin	2,906	680	23.4	18	2	1	1	0	1	11	2		X	Co.	Central
Montgomery #1	6,369	840	13.2	19	0	0	1	0	1	12	5		X	Co.	East
Montgomery #2	2,964	480	16.2	12	1	0	1	0	1	6	3		X	Co.	East
Montgomery #4	4,435	840	18.9	19	0	0	1	0	1	13	4		X	Co.	East
Berks-East	4,650	840	18.0	21	0	0	2	0	1	14	4		X	Co.	East
Berks-West	3,967	840	21.2	21	0	0	2	0	0	14	5		X	Co.	East
Erie County	5,489	760	13.8	18	0	1	1	0	0	12	4		X	Co.	West
Reading-Muhlnbg.	4,550	1,200	26.4	26	0	2	1	0	1	18	4		X	Jt.	East
York County	11,362	1,740	15.3	35	1	1	2	0	2	24	5	X		Co.	Central
Columbia-Montour	3,041	592	19.4	16	1	0	1	0	2	10	2	X		Co.	Central
Clearfield Co.	3,301	594	17.9	16	0	0	0	0	2	10	4		X	Co.	Central
Centre Co.	3,001	950	31.6	26	1	1	1	0	2	16	5		X	Co.	Central
Franklin Co.	5,064	900	17.8	22	1	0	2	0	2	12	5		X	Jt.	Central
Forbes Trail	14,560	880	6.0	22	0	1	2	0	1	5	13		X	Co.	West
Hazleton Area	3,018	920	30.5	22	1	0	1	0	2	15	3		X	Jt.	Central
Northern Area	8,864	800	9.0	19	0	2	2	0	1	6	8		X	Co.	West
TOTAL	159,645	25,277	15.8	606	13	21	37	2	34	348	151	6	25	4 Jt. 27 Co.	
Percentage of Total					2.2	3.5	6.1	0.3	5.6	57.4	24.9				

*Does not include multi-teacher courses.

AREA VOCATIONAL-TECHNICAL SCHOOL
AREAS WITH PROGRAMS IN OPERATION
AND
APPROVED EDUCATIONAL PROGRAM PLANS
JULY 1966



Shaded areas indicate Area Vocational-Technical Schools in Operation.

Cross-Hatching indicates areas with approved Educational Program Plans for Area Vocational-Technical School.

Tie indicates a multi-county attendance area.

BUILDING CONSTRUCTION

Planning and construction of building facilities evolves from the preliminary steps of planning an attendance area, development of an operating administrative organization for the school, planning an educational program, and planning and constructing a building facility. Since twenty-four (24) to thirty (30) months is required to plan an educational program and construct a building facility, the actual construction of buildings was limited in the past two (2) years. An extensive building construction program will develop in fiscal year 1966-67 as indicated on page 9.

Buildings Constructed and Funded

During the two (2) fiscal years, 1964-65 and 1965-66, eleven (11) area vocational-technical school building projects were under construction. The total cost of the eleven schools represents an expenditure of approximately $27,000,000 for building and equipment. The Federal allocation of funds to these building projects amounted to $4,560,000.00.

	Type School	Pupil Capacity	Equipment Cost	Const. Contract Awarded	Total Cost of Project	% Cost Eligible For Reimb.	Allocation Federal Funds: Vocational Ed. Act of 1963	Allocation Federal Funds: Appalachian Regional Dev. Act
1964-65								
Fayette County	Part T.	1200	$ 461,083	Jan. '65	$ 2,086,277	96%	$ 264,549	
Carbon County	Part T.	672	$ 425,000	March '65	$ 1,600,000	86%	$ 310,358	
Lenape Tech. Sch.	Full T.	500	$ 225,471	April '65	$ 1,008,319	89%	$ 169,730	
Upper Bucks Co.	Part T.	680	$ 310,000	May '65	$ 1,735,000	87%	$ 377.958	
Bucks County	Part T.	* 700	$ 300,000	June '65	$ 1,885,000	92%	$ 437,761	
Montgomery Co. #3	Part T.	840	$ 565,000	June '65	$ 2,773,836	78%	$ 833,522	
TOTAL		4692	$2,286,554		$11,088.432		$2,393,878	
1965-66								
Montgomery Co. #1 Central	Part T.	840	$ 480,000	May '66	$ 2,830,000	87.05%	$ 431,115	
Montgomery Co. #4 North	Part T.	840	$ 456,000	May '66	$ 2,535,000	94.5 %	$ 448,582	
Lawrence County	Full T.	880	$ 823,003	June '66	$ 4,845,732	74.81%	$ 358,034	$ 358,034
Montgomery Co. #2 Western	Part T.	500	$ 370,000	June '66	$ 2,286,479	78.63%	$ 350,582	
Central Chester Co.	Part T.	966	$ 750,000	June '66	$ 3,327,754	82.79%	$ 577,285	
TOTAL		3826	$2,879,003		$15,824,965		$2,165,598	
Total both fiscal years		8518	$5,165,557		$26,913,397		$4,559,476	$ 358,034

*Expansion of facility

PROJECTED BUILDING CONSTRUCTION PROJECTS

The following attendance areas have planned educational programs for the number of courses indicated and are at various stages of planning a building facility. Since a minimum of one year is required to construct a building, those areas awarding construction contracts by September 1966 will be in a position to begin program operation by September 1967.

FISCAL 1966-67 NAME OF SCHOOL	TYPE SCHOOL Full Time	TYPE SCHOOL Part Time	SHOP/LAB COURSES	AWARD CONSTR CONTRACT	COST OF CONSTRUCTION & EQUIPMENT	SCHOOL OPENING DATE	PUPIL CAPACITY
Lebanon Co. AVTS		x	18	Sept.'66	$ 2,800,000	Sept. '67	700
Delaware Co. AVTS - West		x	15	Oct. '66	$ 1,831,945	Sept.'67	600
Delaware Co. AVTS - South		x	25	Oct. '66	$ 2,773,959	Sept.'67	1,000
Delaware Co. AVTS - East		x	27	Oct. '66	$ 2,939,096	Sept.'67	1,100
*Erie Co. AVTS		x	18	Oct. '66	$ 3,177,153	Sept.'67	760
*Crawford Co. AVTS		x	15	Oct. '66	$ 2,080,000	Sept.'67	608
Berks Co. AVTS - East		x	21	Nov. '66	$ 2,500,000	Sept.'68	840
Berks Co. AVTS - West		x	21	Nov. '66	$ 2,500,000	Sept.'68	840
*Juniata-Mifflin Co. AVTS		x	18	Nov. '66	$ 1,818,936	Sept.'68	680
*Schuylkill Co. AVTS - South		x	17	Nov. '66	$ 2,239,448	Sept.'68	660
*Schuylkill Co. AVTS - North		x	15	Nov. '66	$ 1,814,260	Sept.'68	590
*Allegheny Co. - Forbes Trail		x	22	Nov. '66	$ 2,800,000	Sept.'68	880
*Allegheny Co. - Northern Area		x	20	Nov. '66	$ 2,100,000	Feb. '68	800
*Allegheny Co. - Parkway West		x	20	Nov. '66	$ 2,500,000	Sept.'68	800
*Allegheny Co. - Steel Valley		x	11	Nov. '66	$ 500,000	--	440
*Luzerne Co. - Westside AVTS	x		16	Nov. '66	$ 2,600,927	Sept.'68	640
Reading-Muhlenburg AVTS		x	30	Feb. '67	$ 3,300,000	Sept.'68	1,200
*Greater Hazleton AVTS		x	24	Feb. '67	$ 1,925,000	Sept.'68	920
Franklin Co. AVTS		x	22	Mar. '67	$ 2,357,280	Sept.'68	900
Middle Bucks AVTS		x	30	Mar. '67	$ 3,000,000	Sept.'68	1,200
*Centre Co. AVTS		x	24	Mar. '67	$ 3,228,000	Sept.'68	950
York Co. AVTS	x		35	Mar. '67	$ 5,000,000	Sept.'68	1,740
*Westmoreland Co. AVTS-Central		x	16	Apr. '67	$ 2,000,000	Sept.'68	1,000
Lancaster Co. AVTS - Area X		x	30	June '67	$ 2,700,000	Sept.'68	1,440
Lancaster Co. AVTS - Area Y		x	19	June '67	$ 2,000,000	Sept.'68	840
Lancaster Co. AVTS - Area Z		x	19	June '67	$ 2,000,000	Sept.'68	880
Northern Chester Co. AVTS	x		20	June '67	$ 3,000,000	Sept.'68	800
*Bradford Co. AVTS		x	16	June '67	$ 1,400,000	Sept.'68	640
Total 1966-67	3	25	584		$ 68,886,004		24,448

* In Appalachia Area

PROGRAMS IN OPERATION

	County	School	Original Date of Opening	Expanded or New Facility
1.	Luzerne	West Side Tech. School	September 1955	
2.	Fayette	Fayette County Tech. School	September 1955	September 1966
3.	Bucks	Bucks County Tech. School	September 1958	*September 1965
4.	Allegheny	Forbes Trail Tech. School	September 1959	
5.	Bucks	Upper Bucks Co. Tech. School	September 1962	September 1965
6.	Northumberland	Northumberland Co. Tech. School	September 1963	
7.	Westmoreland	Central Westmoreland Tech. School	September 1963	
8.	Allegheny	Steel Valley Tech. School	January 1964	
9.	Westmoreland	Eastern Westmoreland Tech. School	September 1964	
10.	Philadelphia	Philadelphia School District (Mastbaum, Bok, Dobbins)	September 1964	
11.	Allegheny	Pittsburgh School District	September 1964	
12.	Allegheny	**Parkway West Area Tech. School	September 1964	
13.	Armstrong	Lenape Area Tech. School	September 1965	
14.	Northampton	Easton Area Tech. School	September 1965	
15.	Northampton	Bethlehem Area Tech. School	September 1965	
16.	Montgomery	Eastern Montgomery Co. Tech. School	September 1965	
17.	York	**York Co. Area Tech. School	September 1965	

* New expanded facility
** Interim operating programs.

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EDUCATIONAL PROGRAMS; *TECHNICAL EDUCATION; *POST HIGH SCHOOL GUIDANCE; *POST SECONDARY EDUCATION; *VOCATIONAL EDUCATION
OHIO

The purpose of this publication is to provide school counselors with meaningful information about technical education programs which are sponsored by Ohio public schools. It is not intended for direct use by students. Information is given for 12 post-secondary schools in a standard format under these headings: (1) school address, (2) descriptive enrollment and housing information, (3) financial information, (4) general admissions requirements, (5) admissions procedures, (6) curricula offered, (7) 1965 freshman profile, and (8) 1965 graduate employment follow-up data. (DM)

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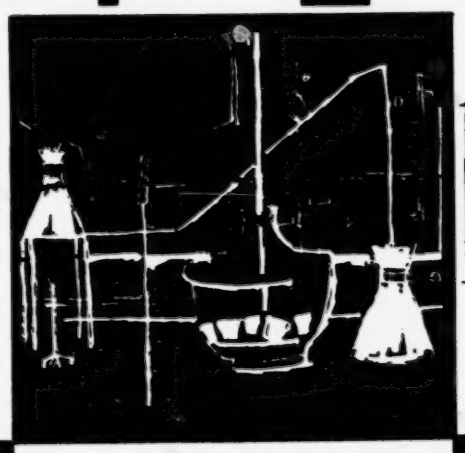
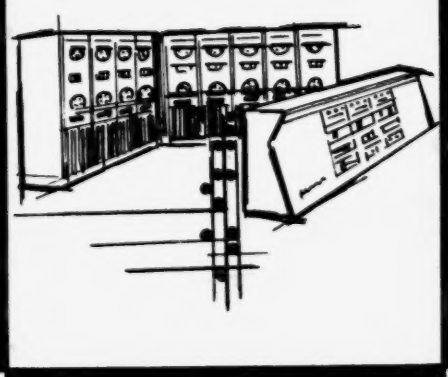
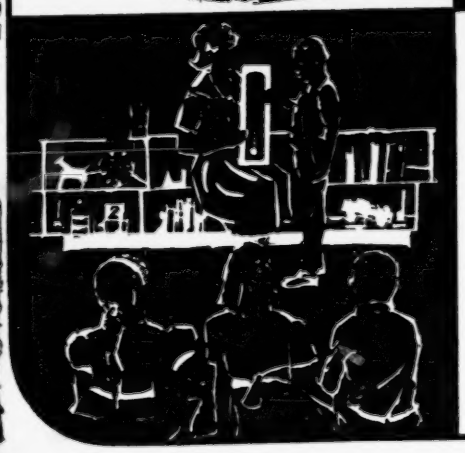
OHIO PUBLIC TECHNICAL EDUCATION PROGRAMS

1965-1966

NOTEBOOK



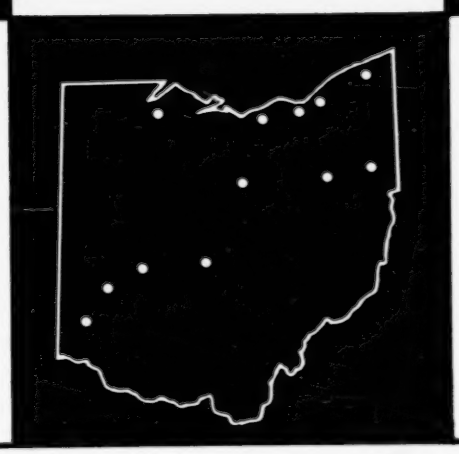




E. E. HOLT
STATE SUPERINTENDENT OF PUBLIC INSTRUCTION

DIVISION OF GUIDANCE AND TESTING
STATE DEPARTMENT OF EDUCATION
751 NORTHWEST BOULEVARD
COLUMBUS, OHIO 43212

MARCH, 1966



STATE BOARD of EDUCATION OHIO

OHIO NOTEBOOK

OF

PUBLIC

TECHNICAL EDUCATION PROGRAMS

~~(Revised Edition)~~ 1965-1966

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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FOREWORD

The advancement of science and technology has created a demand for more technicians. This need is being met, in part, by post high school technical education. These two-year programs are designed to prepare high school graduates for employment as technicians in a variety of industries and businesses.

The purpose of this publication is to assist school counselors to obtain meaningful information about the technical programs in Ohio which are sponsored by public schools. The counselor is reminded that this publication is not intended for direct use by students, but rather, for counselor use in facilitating student decisions about education beyond high school. This practice should be closely adhered to in order to eliminate any misuse or misinterpretation of this information. This notebook includes many of the features of the Ohio College Notebook so that the two may be used together as resource tools.

Appreciation is extended to the directors of all of the technical schools for their cooperation in providing the needed information about their programs to prepare this revised edition. Also, supervisory staff members of the Division of Vocational Education, State Department of Education have provided their support, in the preparation of this edition.

This publication is a service of the Division of Guidance and Testing, State Department of Education. It has been prepared by the Guidance Services Section under the supervision of Sam Angus, District Guidance Supervisor for North Central Ohio and is based on the developmental and organizational work done for the first edition under the leadership of H. Eugene Wysong of the Test Program Section.

John G. Odgers, Director
Division of Guidance and Testing
751 Northwest Boulevard
Columbus, Ohio 43212

JGO/dp
March, 1966

TABLE OF CONTENTS

	Page
Foreword	iii
Post High School Technical Education In Ohio	vi
Schools And Programs In A Glance	ix
Ashtabula Technical School	1
Canton Area Technical School	3
Chandler Technical School	5
Cleveland Technician School	7
Columbus Area Technician School	9
Hamilton Technical School	11
Lorain County Community College, Semi-Professional/Technical Division.	13
Mansfield School Of Technology	15
Penta Technical College	17
Salem School Of Technology	19
Springfield And Clark County Technical Education Program	21
Technical Education Center (Dayton).	23

POST HIGH SCHOOL TECHNICAL EDUCATION IN OHIO

Opportunities for technical education have increased significantly in Ohio during the past few years due to post high school technical programs established through the assistance and coordination of the State of Ohio Department of Education and public school systems. With the passage of the National Defense Education Act of 1958, funds were made available under Title VIII to assist with the development of post high school technical education programs. Minimum standards for these technical education programs were established by the State Board of Education. The technical schools included in this publication are administered locally by boards of education and supervised by a person appointed by the board of education, who meets the qualifications established by the State Board of Education. Supervision for the maintenance of minimum standards and leadership for program development and improvement is provided at the state level by personnel in the Trade and Industrial Education and Business Education Services, Division of Vocational Education, State Department of Education. A state advisory committee with membership from business and industry provide advice and counsel to the Division of Vocational Education concerning program development and improvement. In addition to the technical programs administered by public school systems, school counselors also should seek information about the good technical programs operated by other institutions.

The two-year post high school technical programs are designed to prepare technicians to occupy para-professional occupations. Persons in such occupations work in team relationship with engineers or other professional persons, supporting the professional person in activities involving design, development, testing, management or marketing. The technician is a person who has a high degree of "know why" as well as "know how". A conservative estimate indicates that for every engineer, three to five technicians are needed. Depending upon the technical area of work the technician may use specialized measuring devices; build special machinery to test new devices; design electrical circuits, tools or machinery; program and operate computing systems; or perform supervisory, sales, or liaison duties in which technical knowledge is important. Both men and women are eligible for technical occupations.

The technical schools included in this publication will offer a curriculum for the education of technicians which will include approximately the following percentages of instructional time:

A. Fifty percent in mathematics, science, and technical laboratories.
B. Twenty percent in communications and leadership subjects.
C. Fifteen percent in basic manipulative skills.
D. Fifteen percent in any of the above areas or social sciences.

General Description of Technicians Being Educated in Ohio Technical Programs

Accounting Technician applies principles of accounting to install and maintain operation of the general accounting system. He may specialize in budget, cost, machine processing, or tax accounting aspiring to supervisory or managerial positions. The program is a two-year sequence of accounting and communication courses with laboratory experience using mechanical and electrical machines.

Agri-Business Technician may serve as a specialist in grading, processing, and marketing of grain; horticulture production and marketing; nursery production sales and service; agricultural machinery and services; or farm credit and management. These individuals may be trained to serve as specialists who would deal with farmers. They may study the purchase and use of materials and equipment and make recommendations to farmers. They may be employed in elevators or feed and farm stores.

Agricultural Equipment Technician will select, demonstrate, install, and maintain agricultural equipment and will have the ability to utilize technical bulletins and manuals related to the agricultural equipment and mechanics industry. He will have the understanding of the principles of business organization, management, and agricultural economics applicable to the business. Opportunities for employment will include farm equipment sales and service, farmstead mechanization, retail and wholesale salesman, foreman and supervisor, and management positions. Generally, the technician will be supervising or directing the work of others.

Architectural Drafting Technician this course of study applies to the building industry. The technician works with engineers and architects in the drawing and designing of buildings. The work is concerned with the drafting room in particular, but could lead to work in the field such as inspection and supervision on construction sites.

Chemical Technician works with chemists and chemical engineers in the development, production, sale, and utilization of chemical products and equipment. They may help to conduct chemical experiments by making tests or by computing, compiling, and analyzing results. In testing work, technicians may make chemical tests to determine if particular substances are present and in what quantities.

Civil Engineering Technicians may assist civil engineers in the design, layout, and construction of streets, sewage and water systems, and other municipal facilities. They may conduct and prepare studies of traffic control and building construction growth. They may test materials, conduct surveys, inspect materials, survey land, prepare maps, and subdivide land.

Data Processing and Computer Technician may be the programmer who prepares the detailed instructions which are needed to direct the computer's operations. The programmer usually starts the job by conferring with professional staff members who are in a position to furnish detailed information about the problem. The technician then makes a flow chart, or diagram, showing the order in which the computer must perform each operation. Detailed instructions are prepared for each operation which are transferred to the computer's memory and which tell the machine exactly what to do with all of the facts and figures associated with the problem.

Electrical Technician may work with electrical engineers in the designing, testing, and modification of new electrical equipment or products. They may prepare plans and diagrams for the wiring of electrical machinery and control circuits. They may sell electrical equipment or work in operation control of power stations and distribution systems.

Electronics Technician works in the field of communication electronics. They may assist the electronic engineer in such activities as the operation of electronic equipment, design and development of electronic products, and in production processes related to electronics. Their activities may be directly related to radio or television communications. They may sell electronics equipment or be field consultants to customers.

Food Distribution Technician program involves supervised training on-the-job with a supermarket firm as well as classroom work. The student enrolled in this program, will be trained to assume various jobs of responsibility in the supermarket industries after graduation.

Food Processing Technician program provides semi-professional training related to testing, computation and analysis in the laboratory. The technician understands the operation and maintenance of food processing equipment and he learns the procedures for conducting quality control studies. Supervision of others is an essential responsibility.

Food Service Technician program is open to both men and women who have interest and aptitude in managing food service facilities. It is designed for the student preparing for supervisory and managerial positions in the several areas of food service.

Industrial Technician may make statistical studies and analyses of production costs, periodically check a product's conformity to specifications, devise ways of improving tool and machine efficiency or determine wage incentives. They may be concerned with plant location, equipment layout, control methods, materials handling, or job evaluation. Production improvement is his prime concern.

Mechanical Technician may perform work in the fields of tool designing, machine designing, technical selling, or laboratory testing. They may originate and prepare sketches for tools, jigs, dies or other attachments used in machine operation. When planning and carrying out tests of performance, durability, and efficiency on experimental engines and equipment, the technician is often required to use testing apparatus, to prepare and interpret drawings, and to write reports.

Metallurgical Technician program includes courses designed to prepare the individual to work in the metals industry. After completing courses in basic and advanced theory as well as practical experience, the graduate of this program is qualified to enter such positions as foundry lab technician, metallurgical research technician, and metallurgical assistant.

Nursing Technician program involves preparation for the Associate Degree in Nursing. Classroom instruction and supervised patient care are included in the program preparing the technician for employment in any of the nursing fields. Upon successful completion of the program, the graduate may take the Registered Nurse State Board Examination.

Retail Technician program is designed to train high school graduates for retail supervision and managerial positions in areas such as advertising, display selling, and personnel relations.

Secretarial Science program includes such activities as scheduling appointments, taking dictation, typing, filing, and general office work and supervision. Specialization is possible to qualify for positions in medical, legal, or technical fields.

Wholesale Management Technician may perform work related to such activities as business administration, marketing, business economics, selling, advertising, and personnel management. It is a two year program that combines classroom instruction and on-the-job training to educate students for mid-management positions in the wholesaling of such diversified products as groceries, candy, toys, drugs, heating and air conditioning equipment electronics, paper products, sports goods, shoes, lumber, service supplies, and others.

SCHOOLS AND PROGRAMS AT A GLANCE

Programs / Schools	Ashtabula Technical School	Canton Area Technical School *	Chandler Technical School *	Cleveland Technician School	Columbus Area Technician School	Hamilton Technical School	Lorain County Community College, Semi-Professional Technical Div.	Mansfield Technical College *	Penta Technical College *	Salem School of Technology	Springfield & Clark County Technical Education Program	Technical Education Center (Dayton)
Accounting							X					
Agri-Business												
Agricultural Equipment												
Architectural Drafting												
Chemical				X	X							
Civil												
Data			X		X		X					
Electrical		X				X	X		X			
Electronics	X		X	X			X					
Food Distribution												
Food Processing					X							
Food Service					X							
Industrial			X	X			X					
Mechanical	X	X	X	X	X		X					
Metallurgical					X							
Nursing					X							
Retail					X							
Secretarial Science					X							
Wholesale					X							

* Have additional proposed programs-see the school's curricula offered section

OHIO NOTEBOOK
OF
PUBLIC TECHNICAL
EDUCATION PROGRAMS
1965-1966

NAME Ashtabula Technical School

SPONSORED BY Ashtabula Area City Schools and State of Ohio Department of Education, Division of Vocational Education

ADDRESS W. 44th St.
Ashtabula, Ohio

TELEPHONE 992-8231 AREA CODE 216

ADMINISTRATOR: Name William J. Ryan Title Director, Tech. Program

DESCRIPTIVE INFORMATION

Fall 1965 Enrollment: Men 40 Women 0 Freshman Class 27 Upper Class 13 Total Capacity 80

Number of Students Aged: 19 or under 25 20-24 14 25-29 1 30 or over 0

Fall 1965 Freshman Class: Number of Applicants 40 Number Offered Admission 30

Available Housing for Non-Resident Students: School Dormitory None YMCA/YWCA None
Not a Resident Institution Private Rooms None Other None

Hours When Classes are Conducted 8:00 a.m. to 10:00 p.m. Student Class Time Per Week 25-30 hours

Number on Instructional Staff: Full Time None Part Time 6-10

Summer Job Placement Service? Informal Graduate Placement Service? Yes Co-op. Program? No

College Credits Earned? Course work is on college level, but individual courses are not planned with transferability as a prime objective but rather for the purpose of preparation for technical employment

FINANCIAL INFORMATION

Anticipated 1966-1967 Yearly Cost: Tuition for Residents of School District 100.00/quarter
Tuition for Non-Residents of School District 105.00/quarter

Approx. Room and Board Fees 10.00/quarter Books 30.00/quarter Other Test fees etc. 2.00

Tuition Payment Plan Any reasonable arrangement will be considered. A number of employer tuition refund plans are in effect.

Financial Aids One loan fund through local labor council Contact Person W. J. Ryan

GENERAL ADMISSIONS REQUIREMENTS

Prerequisite Level of Education High School graduate or equiv. Specific Course Requirements 2 years of mathematics (Algebra, Plane Geometry) or strong math. aptitude

Specific Course Recommendations Physics, Trigonometry

Entrance Testing Mech. Abilities Test, Engr. & Phy. Science Aptitude Test When Prior to Admission By Appointment

Personal Interview Required-also with parents where seemingly appropriate When Prior to Admission

Other

ADMISSIONS PROCEDURES

Suggested Date for Filing Application: Prior to August 15

Deadline Date for Filing Application: August 30

Deadline Date for Filing School Transcript: August 30

Date of Acceptance Notification to Student: August 30

Deadline Date for Financial Aid Application: .....

Date of Financial Aid Notification to Student: .....

School Entrance Date: First Monday after Labor Day

Opportunity for School Visitation? Yes, at any time Suggested Time: Days

CURRICULA OFFERED

1. Electronics Technology Fall 1965 Freshman Enrollment: 7 Freshman Capacity: 20

   Remarks: .....

2. Mechanical Technology Fall 1965 Freshman Enrollment: 20 Freshman Capacity: 20

   Remarks: First quarter courses identical in both curricula - some of above not yet definite on field of interest

3. ..... Fall 1965 Freshman Enrollment: ..... Freshman Capacity: .....

   Remarks: .....

4. ..... Fall 1965 Freshman Enrollment: ..... Freshman Capacity: .....

   Remarks: .....

5. ..... Fall 1965 Freshman Enrollment: ..... Freshman Capacity: .....

   Remarks: .....

STUDENT PROFILE DATA FOR FALL 1965 FRESHMAN CLASS

Per Cent of Freshman Class Students who were in the High School Class Rank of:

Top Tenth	%
Top Quarter	25 %
Top Third	%
Top Half	%
Top Two-Thirds	100 %
Top Three-Fourths	%

FOLLOW-UP DATA ON EMPLOYMENT OF 1965 GRADUATING CLASS

7	Placed in Technical Field for Which Trained
1	Placed in Technical Field Related to Training
2	Placed in Field Not Related to Training
	Reported Unemployed as of .....
3	Continued Education
	No Information
10	Total of 1965 Graduating Class

* * * *

Number of 1965 Graduates whose Starting Monthly Wages Were: Below $300 ....., $300-$399 3, $400-$499 7, $500-$599 ....., $600 or more .....

REMARKS At second quarter in Dec. 1965, several additional excellent technical school prospects were admitted who had dropped out of college programs for various reasons. These students are not included in the above enrollment figures.

OHIO NOTEBOOK
OF
PUBLIC TECHNICAL
EDUCATION PROGRAMS
1965-1966

NAME Canton Area Technical School SPONSORED BY State of Ohio Department of Education and Canton City Board of Education

ADDRESS 521 Tuscarawas West
Canton, Ohio

TELEPHONE 452-0350 AREA CODE

ADMINISTRATOR: Name G. R. Weiler Title Supervisor

DESCRIPTIVE INFORMATION

Fall 1965 Enrollment: Men 75 Women 1 Freshman Class 48 Upper Class 28 Total Capacity 96

Number of Students Aged: 19 or under 56 20-24 20 25-29 0 30 or over

Fall 1965 Freshman Class: Number of Applicants 105 Number Offered Admission 55

Available Housing for Non-Resident Students: School Dormitory YMCA/YWCA X
Private Rooms Other

Hours When Classes are Conducted 8 a.m. - 10 p.m. Student Class Time Per Week 25 hours

Number on Instructional Staff: Full Time 3 Part Time 13

Summer Job Placement Service? Graduate Placement Service? Yes Co-op. Program? No

College Credits Earned? This program is not intended to provide college transfer credits, but rather to assist graduates to go directly into technical occupations.

FINANCIAL INFORMATION

Anticipated 1966-1967 Yearly Cost: Tuition for Residents of School District $95 per Quarter
Tuition for Non-Residents of School District $105 per Quarter

Approx. Room and Board Fees $2 Books $60 Other

Tuition Payment Plan Due Quarterly

Financial Aids Have three scholarships Contact Person G. R. Weiler

GENERAL ADMISSIONS REQUIREMENTS

Prerequisite Level of Education High School Graduate Specific Course Requirements Not less than one year High School Algebra and one year Physical Science

Specific Course Recommendations Algebra, Geometry, Physics

Entrance Testing EPSAT - ACE When Scheduled throughout year

Personal Interview When Mostly after test results

Other

ADMISSIONS PROCEDURES

Suggested Date for Filing Application: Prior to second semester of high school senior year

Deadline Date for Filing Application: At time of entrance examination

Deadline Date for Filing School Transcript: Two weeks after examination

Date of Acceptance Notification to Student: Within two weeks after receiving transcript

Deadline Date for Financial Aid Application: .....

Date of Financial Aid Notification to Student: .....

School Entrance Date: September 10, 1965

Opportunity for School Visitation? Yes Suggested Time: By appointment

CURRICULA OFFERED

1. Mechanical — Fall 1965 Freshman Enrollment: 24 — Freshman Capacity: 26

   Remarks: .....

2. Electrical — Fall 1965 Freshman Enrollment: 24 — Freshman Capacity: 26

   Remarks: .....

3. Chemical-Metallurgical — Fall 1965 Freshman Enrollment: 0 — Freshman Capacity: 24

   Remarks: This is an anticipated new program for the 1966-67 school year

4. Industrial — Fall 1965 Freshman Enrollment: 0 — Freshman Capacity: 24

   Remarks: This is an anticipated new program for the 1966-67 school year

5. ..... — Fall 1965 Freshman Enrollment: ..... — Freshman Capacity: .....

   Remarks: .....

STUDENT PROFILE DATA FOR FALL 1965 FRESHMAN CLASS

Per Cent of Freshman Class Students who were in the High School Class Rank of:

Top Tenth	%
Top Quarter	%
Top Third	%
Top Half	%
Top Two-Thirds	%
Top Three-Fourths	%

FOLLOW-UP DATA ON EMPLOYMENT OF 1965 GRADUATING CLASS

14	Placed in Technical Field for Which Trained
2	Placed in Technical Field Related to Training
0	Placed in Field Not Related to Training
0	Reported Unemployed as of .....
1	Continued Education
	No Information
17	Total of 1965 Graduating Class

* * * *

Number of 1965 Graduates whose Starting Monthly Wages Were: Below $300 ..... , $300-$399 9 , $400-$499 8 , $500-$599 ..... , $600 or more .....

REMARKS

OHIO NOTEBOOK
OF
PUBLIC TECHNICAL
EDUCATION PROGRAMS
1965-1966

NAME Chandler Technical School SPONSORED BY Willoughby-Eastlake City Schools

ADDRESS 37047 Ridge Road Willoughby, Ohio

Willoughby, Ohio

TELEPHONE 946-5000 AREA CODE 216

Ext. 245

ADMINISTRATOR: Name Leonard M. Slominski Title Director

DESCRIPTIVE INFORMATION

Fall 1965 Enrollment: Men 157 Women 11 Freshman Class 129 Upper Class 39 Total Capacity 300

Number of Students Aged: 19 or under 141 20-24 27 25-29 ..... 30 or over .....

Fall 1965 Freshman Class: Number of Applicants 205 Number Offered Admission 146

Available Housing for Non-Resident Students: School Dormitory ..... YMCA/YWCA .....

Private Rooms X Other .....

Hours When Classes are Conducted 8:00 - 5:00 Student Class Time Per Week 25 hours

Number on Instructional Staff: Full Time 9 Part Time 7

Summer Job Placement Service? Yes Graduate Placement Service? Yes Co-op. Program? No

College Credits Earned? Not in the purpose & Philosophy of the program, but environment for transferability does exist

FINANCIAL INFORMATION

Anticipated 1966-1967 Yearly Cost: Tuition for Residents of School District 100.00/quarter

Tuition for Non-Residents of School District 110.00/quarter

Approx. Room and Board ..... Fees 25.00 Books 60.00 Other .....

Tuition Payment Plan Tuition payable by quarter.

Financial Aids Scholorship, Grants-in-aid, NV Student Loan Contact Person Director

GENERAL ADMISSIONS REQUIREMENTS

Prerequisite Level of Education High School graduation Specific Course Requirements For engineering technologies, Algebra & Geometry (or equivalent in integrated modern math).

Specific Course Recommendations For engineering technologies, additional Algebra & Trigonometry desirable, as is at least one unit of laboratory science.

Entrance Testing EPSAT or RPAT and SCAT When Monthly beginning in December

Personal Interview Yes Post-test When By appointment prior admission

Other .....

ADMISSIONS PROCEDURES

Chandler Technical School

Suggested Date for Filing Application: Preferably during first semester of senior year; certainly prior graduation.

Deadline Date for Filing Application: August 15 or until classes are filled

Deadline Date for Filing School Transcript: Within two weeks after application or availability of 7-semester transcript

Date of Acceptance Notification to Student: Within two weeks following interview

Deadline Date for Financial Aid Application: June 30

Date of Financial Aid Notification to Student: Within two weeks of receipt of financial aid application

School Entrance Date: September (Day after Labor Day)

Opportunity for School Visitation? Yes Suggested Time Open

CURRICULA OFFERED

1. Data Processing & Computer Programming — Fall 1965 Freshman Enrollment 60 — Freshman Capacity 60

   Remarks

2. Electronic Engineering Tech. — Fall 1965 Freshman Enrollment 35 — Freshman Capacity 50

   Remarks

3. Mechanical Engineering Tech. — Fall 1965 Freshman Enrollment 17 — Freshman Capacity 30

   Remarks

4. Industrial Engineering Tech. — Fall 1965 Freshman Enrollment 17 — Freshman Capacity 30

   Remarks

5. Fall 1965 Freshman Enrollment — Freshman Capacity

   Remarks

STUDENT PROFILE DATA FOR FALL 1965 FRESHMAN CLASS

Per Cent of Freshman Class Students who were in the High School Class Rank of:

Top Tenth	%
Top Quarter	%
Top Third	18 %
Top Half	%
Top Two-Thirds	79 %
Top Three-Fourths	%

FOLLOW-UP DATA ON EMPLOYMENT OF 1965 GRADUATING CLASS

23	Placed in Technical Field for Which Trained
4	Placed in Technical Field Related to Training
1	Placed in Field Not Related to Training
	Reported Unemployed as of
	Continued Education
	No Information
28	Total of 1965 Graduating Class

Number of 1965 Graduates whose Starting Monthly Wages Were: Below $300 , $300-$399 3 , $400-$499 20 , $500-$599 5 , $600 or more

REMARKS New programs for fall, 1966:

Secretarial Science Capacity 30
Accounting " "

In planning stages, possible fall, 1966:
Midmanagement Retailing, Horticultural Technology, Numerical Control & Parts Programming

OHIO NOTEBOOK
OF
PUBLIC TECHNICAL
EDUCATION PROGRAMS
1965-1966

NAME Cleveland Technician School SPONSORED BY State of Ohio Department of Education and the Cleveland Board of Education

ADDRESS 4600 Detroit Avenue
Cleveland 2, Ohio

TELEPHONE 631-1528 AREA CODE CH 1-3660

ADMINISTRATOR: Name H. B. Armstrong Title Coordinator of Technician Training

DESCRIPTIVE INFORMATION

Fall 1965 Enrollment: Men 115 Women 0 Freshman Class 75 Upper Class 50 Total Capacity 250

Number of Students Aged: 19 or under 40 20-24 70 25-29 12 30 or over 3

Fall 1965 Freshman Class: Number of Applicants 60 Number Offered Admission 43

Available Housing for Non-Resident Students: School Dormitory ____ YMCA/YWCA YMCA
Private Rooms ____ Other Commuter

Hours When Classes are Conducted 9:25 a.m. - 9:30 p.m. Student Class Time Per Week 26 hours

Number on Instructional Staff: Full Time 4 Part Time 10

Summer Job Placement Service? Yes Graduate Placement Service? Yes Co-op. Program? No

College Credits Earned? This program is not intended to provide college transfer credits, but rather to assist graduates to go directly into technical occupations.

FINANCIAL INFORMATION

Anticipated 1966-1967 Yearly Cost: Tuition for Residents of School District $290.00
Tuition for Non-Residents of School District $290.00

Approx. Room and Board ____ Fees $16.00 Books $60.00 Other ____

Tuition Payment Plan Due prior to first class meeting, 40% initial payment-40% at end of 2 weeks-20% at end of 4th week.

Financial Aids Scholarship (Kiwanis) (National Acme Company) Contact Person H. B. Armstrong

GENERAL ADMISSIONS REQUIREMENTS

Prerequisite Level of Education High School Graduate Specific Course Requirements one year Algebra - one year Geometry - one year either Physics or Chemistry

Specific Course Recommendations Second year Algebra - Mechanical Drawing

Entrance Testing SRA MAT, Otis I. Q., Placement Analysis When 30 day intervals

Personal Interview Recommended but not required When By appointment

Other

ADMISSIONS PROCEDURES

Suggested Date for Filing Application: Early in senior year

Deadline Date for Filing Application: Until class is filled or 2 weeks beyond starting date of class

Deadline Date for Filing School Transcript: Two weeks after making application

Date of Acceptance Notification to Student: Ten days after receipt of all credentials

Deadline Date for Financial Aid Application: By starting date of classes

Date of Financial Aid Notification to Student: .....

School Entrance Date: Opening dates of first and second semesters are decided by Board of Education

Opportunity for School Visitation? Yes Suggested Time By appointment

CURRICULA OFFERED

1. Mechanical Technology — Fall 1965 Freshman Enrollment 33 — Freshman Capacity 40

   Remarks .....

2. Electronic Technology — Fall 1965 Freshman Enrollment 39 — Freshman Capacity 40

   Remarks .....

3. Industrial Technology — Fall 1965 Freshman Enrollment 20 — Freshman Capacity 40

   Remarks .....

4. Chemical Technology — Fall 1965 Freshman Enrollment ..... — Freshman Capacity 40

   Remarks .....

5. ..... — Fall 1965 Freshman Enrollment ..... — Freshman Capacity .....

   Remarks .....

STUDENT PROFILE DATA FOR FALL 1965 FRESHMAN CLASS

Per Cent of Freshman Class Students who were in the High School Class Rank of:

Top Tenth	%
Top Quarter	%
Top Third	%
Top Half	50 %
Top Two-Thirds	%
Top Three-Fourths	%

FOLLOW-UP DATA ON EMPLOYMENT OF 1965 GRADUATING CLASS

54	Placed in Technical Field for Which Trained
2	Placed in Technical Field Related to Training
0	Placed in Field Not Related to Training
	Reported Unemployed as of
2	Continued Education
	No Information
60	Total of 1965 Graduating Class

Number of 1965 Graduates whose Starting Monthly Wages Were: Below $300 ....., $300-$399 25, $400-$499 25, $500-$599 ....., $600 or more .....

REMARKS Class rank is considered but will not be the final factor to determine admission or rejection

OHIO NOTEBOOK
OF
PUBLIC TECHNICAL
EDUCATION PROGRAMS
1965-1966

NAME Columbus Area Technician School SPONSORED BY State of Ohio Department of Education and Columbus Board of Education

ADDRESS 557 Mt. Vernon Avenue
Columbus, Ohio 43215

TELEPHONE 221-6743 AREA CODE 614

ADMINISTRATOR: Name Clinton E. Tatsch Title Director
Paul H. Gatsch Counselor

DESCRIPTIVE INFORMATION

Fall 1965 Enrollment: Men 280 Women 25 Freshman Class 225 Upper Class 80 Total Capacity 550

Number of Students Aged: 19 or under 266 20-24 29 25-29 6 30 or over 4

Fall 1965 Freshman Class: Number of Applicants (Inquiries) 496 Number Offered Admission 258

Available Housing for Non-Resident Students: School Dormitory YMCA/YWCA X
Private Rooms X Other Hotel Dormitory

Hours When Classes are Conducted 8 a.m. to 5 p.m. Student Class Time Per Week 25-40 hours

Number on Instructional Staff: Full Time 23 Part Time 2

Summer Job Placement Service? Yes Graduate Placement Service? Yes Co-op. Program? Yes (2)

College Credits Earned? This program is not intended to provide college transfer credits, but rather to assist graduates to go directly into technical occupations.

FINANCIAL INFORMATION

Anticipated 1966-1967 Yearly Cost: Tuition for Residents of School District $270
Tuition for Non-Residents of School District $300

Approx. Room and Board Fees Regis. $10 Books $75 Other Test $2.00 Lab$5.00

Tuition Payment Plan One third of annual tuition at the beginning of each quarter.

Financial Aids Civic Clubs, Beginning a loan fund Contact Person Office of Admissions

GENERAL ADMISSIONS REQUIREMENTS

Prerequisite Level of Education High School Graduation Specific Course Requirements 1 year of Algebra

Specific Course Recommendations Additional mathematics for Business Data Processing, Electronics and Mechanical Engineering. English XII for all programs.

Entrance Testing Act, (I.B.M. Programmers Test for Business Data Processing), DAT, NMSQT, SAT and GATB are acceptable. When By appointment

Personal Interview Recommended When By appointment

Other Recommendation from school counselor is requested. (Phone in special questions)

ADMISSIONS PROCEDURES

Suggested Date for Filing Application: Senior year

Deadline Date for Filing Application: September 10 (Varies with program enrollments.)

Deadline Date for Filing School Transcript: Same as application

Date of Acceptance Notification to Student: Ten days following receipt of all information.

Deadline Date for Financial Aid Application: Following acceptance

Date of Financial Aid Notification to Student: As soon as possible

School Entrance Date: September (January, March, June under special conditions)

Opportunity for School Visitation? Yes Suggested Time: 8 a.m. to 4 p.m. on regular school days

CURRICULA OFFERED

Architectural Drafting	Fall 1965 Freshman Enrollment	21,	Freshman Capacity 24
Business Data Processing	Fall 1965 Freshman Enrollment	46,	Freshman Capacity 50
Chemical Research	Fall 1965 Freshman Enrollment	12,	Freshman Capacity 18
Electronics Engineering	Fall 1965 Freshman Enrollment	47,	Freshman Capacity 48
Food Processing	Fall 1965 Freshman Enrollment	15,	Freshman Capacity 18
Food Service (December)	Fall 1965 Freshman Enrollment	0,	Freshman Capacity 18
Mechanical Engineering	Fall 1965 Freshman Enrollment	28,	Freshman Capacity 30
Metallurgical Engineering	Fall 1965 Freshman Enrollment	0,	Freshman Capacity 18
Retail Mid-Management	Fall 1965 Freshman Enrollment	24,	Freshman Capacity 50
Wholesale Mid-Management	Fall 1965 Freshman Enrollment	32,	Freshman Capacity 50

STUDENT PROFILE DATA FOR FALL 1965 FRESHMAN CLASS

Per Cent of Freshman Class Students who were in the High School Class Rank of:

Top Tenth	1 %
Top Quarter	12 %
Top Third	19 %
Top Half	30 %
Top Two-Thirds	58 %
Top Three-Fourths	71 %

FOLLOW-UP DATA ON EMPLOYMENT OF 1965 GRADUATING CLASS

4	Military Service
30	Placed in Technical Field for Which Trained
0	Placed in Technical Field Related to Training
1	Placed in Field Not Related to Training
0	Reported Unemployed as of
3	Continued Education
1	No Information
39	Total of 1965 Graduating Class

Number of 1965 Graduates whose Starting Monthly Wages Were: Below $300 0, $300-$399 4, $400-$499 20, $500-$599 6, $600 or more 1

REMARKS

Average class size: 18
Prognostic data and admissions data available to counselors on request.
Course descriptions available on request.

OHIO NOTEBOOK
OF
PUBLIC TECHNICAL
EDUCATION PROGRAMS
1965-1966

NAME Hamilton Technical School

SPONSORED BY Hamilton City Board of Education in cooperation with the Ohio State Dept. of Education. High School Technical Dept. (Voc. Shop) 1315 Chestnut Street Hamilton, Ohio

ADDRESS Taft Senior High School
Eaton Road
Hamilton, Ohio

TELEPHONE 894-9934 AREA CODE 513

ADMINISTRATOR: Name Mr. A. C. Woedl
332 Dayton Street
Hamilton, Ohio

Title Director

DESCRIPTIVE INFORMATION

Fall 1965 Enrollment: Men 51 Women ..... Freshman Class 22 Upper Class 12 Total Capacity 51

Number of Students Aged: 19 or under ..... 20-24 ..... 25-29 ..... 30 or over .....

Fall 1965 Freshman Class: Number of Applicants 63 Number Offered Admission 25

Available Housing for Non-Resident Students: School Dormitory ..... YMCA/YWCA .....
Private Rooms ..... Other .....

Hours When Classes are Conducted 4:00 p.m. - 10:40 p.m. Student Class Time Per Week 27 hours

Number on Instructional Staff: Full Time None Part Time 25

Summer Job Placement Service? Yes Graduate Placement Service? Yes Co-op. Program? No

College Credits Earned? This program is not intended to provide college transfer credits, but rather to assist graduates to go directly into technical occupations.

FINANCIAL INFORMATION

Anticipated 1966-1967 Yearly Cost: Tuition for Residents of School District $270
Tuition for Non-Residents of School District $300

Approx. Room and Board ..... Fees ..... Books ..... Other .....

Tuition Payment Plan $90.00 for each quarter (3 quarters) payable before start of quarter

Financial Aids None Contact Person None

GENERAL ADMISSIONS REQUIREMENTS

Prerequisite Level of Education High School graduate or provide evidence of equivalence Specific Course Requirements 3 units of English, 2 units of Mathematics, one unit of Physical Science

Specific Course Recommendations Algebra I and II or Algebra I and Plane Geometry, 1 year of Physical Science plus another year of Science (either laboratory Physics or Chemistry) These are the minimum requirements.

Entrance Testing General Aptitude Test Battery When Anytime before start of school year.

Personal Interview By school director When Anytime before start of school year.

Other Use of application and high school transcript

ADMISSIONS PROCEDURES

Suggested Date for Filing Application: During second semester of senior year in high school

Deadline Date for Filing Application: September 1 or anytime prior to start of school year

Deadline Date for Filing School Transcript: Soon after making application

Date of Acceptance Notification to Student: Within 2 weeks after completion of all application procedures

Deadline Date for Financial Aid Application: None available

Date of Financial Aid Notification to Student: .....

School Entrance Date: September 1

Opportunity for School Visitation? Yes Suggested Time 4:00 - 10:30 p.m.

CURRICULA OFFERED

1. Electrical Technology Fall 1965 Freshman Enrollment 8 Freshman Capacity 20

   Remarks .....

2. Mechanical Technology Fall 1965 Freshman Enrollment 12 Freshman Capacity 20

   Remarks .....

3. ..... Fall 1965 Freshman Enrollment ..... Freshman Capacity .....

   Remarks .....

4. ..... Fall 1965 Freshman Enrollment ..... Freshman Capacity .....

   Remarks .....

5. ..... Fall 1965 Freshman Enrollment ..... Freshman Capacity .....

   Remarks .....

STUDENT PROFILE DATA FOR FALL 1965 FRESHMAN CLASS

Per Cent of Freshman Class Students who were in the High School Class Rank of:

Top Tenth	%
Top Quarter	%
Top Third	%
Top Half	100 %
Top Two-Thirds	%
Top Three-Fourths	%

FOLLOW-UP DATA ON EMPLOYMENT OF 1965 GRADUATING CLASS

	Placed in Technical Field for Which Trained
	Placed in Technical Field Related to Training
	Placed in Field Not Related to Training
	Reported Unemployed as of
	Continued Education
	No Information
13	Total of 1965 Graduating Class

* * * *

Number of 1965 Graduates whose Starting Monthly Wages Were: Below $300 ....., $300-$399 ....., $400-$499 13, $500-$599 ....., $600 or more .....

REMARKS

OHIO NOTEBOOK
OF
PUBLIC TECHNICAL
EDUCATION PROGRAMS
1965-1966

NAME Lorain County Community College, Semi-Professional/Technical Division

SPONSORED BY Lorain County Community College Board of Trustees

ADDRESS 128 O'Neil Sheffield Center
Lorain, Ohio

TELEPHONE CE 3-7165 AREA CODE

ADMINISTRATOR: Name Dr. Max J. Lerner Title President

DESCRIPTIVE INFORMATION

Fall 1965 Enrollment: Men ____ Women ____ Freshman Class 347 Upper Class 99 Total Capacity ____

Number of Students Aged: 19 or under 313 20-24 133 25-29 ____ 30 or over ____

Fall 1965 Freshman Class: Number of Applicants 405 Number Offered Admission 405

Available Housing for Non-Resident Students: School Dormitory ____ YMCA/YWCA x
Private Rooms x Other ____

Hours When Classes are Conducted 8 a.m. to 6 p.m. Student Class Time Per Week 23 hours

Number on Instructional Staff: Full Time 26 Part Time 12

Summer Job Placement Service? Yes Graduate Placement Service? Yes Co-op. Program? Yes-Certain Programs

College Credits Earned? Yes

FINANCIAL INFORMATION

Anticipated 1966-1967 Yearly Cost: Tuition for Residents of School District $250.00 (Lorain County)
Tuition for Non-Residents of School District $400.00 (Lorain County)

Approx. Room and Board ____ Fees $15.00 Books $50.00 Other Registration Application $5.00

Tuition Payment Plan ____

Financial Aids Loans and Scholarships Contact Person Dean of Students

GENERAL ADMISSIONS REQUIREMENTS

Prerequisite Level of Education High School Graduate Specific Course Requirements Varies with each curriculum

Specific Course Recommendations ____

Entrance Testing Either ACT or SAT When Dates established by Testing Company as soon as application forms are complete

Personal Interview Required When As early as possible

Other Recommendation by high school principal and physical examination

ADMISSIONS PROCEDURES

Lorain County Community College,
Semi-Professional/Technical Division

Suggested Date for Filing Application: Prior to graduation

Deadline Date for Filing Application: September 1, provided space is still available in curriculum area.

Deadline Date for Filing School Transcript: Two weeks following filing of application.

Date of Acceptance Notification to Student: Within two weeks following interview

Deadline Date for Financial Aid Application: .....

Date of Financial Aid Notification to Student: .....

School Entrance Date: Third week in September

Opportunity for School Visitation? Yes Suggested Time: Daily 8 a.m. to 4 p.m.

CURRICULA OFFERED

Chemical Technology	Fall 1965	Freshman Enrollment	22	Freshman Capacity	35
Civil Engr. Technology	Fall 1965	Freshman Enrollment	20	Freshman Capacity	32
Data Processing Tech.	Fall 1965	Freshman Enrollment	60	Freshman Capacity	60
Electrical Engr. Tech.	Fall 1965	Freshman Enrollment	37	Freshman Capacity	48
Industrial Engr. Tech.	Fall 1965	Freshman Enrollment	33	Freshman Capacity	44
Mech. Engr. Tech.	Fall 1965	Freshman Enrollment	37	Freshman Capacity	40
Accounting	Fall 1965	Freshman Enrollment	36	Freshman Capacity	40
Nursing	Fall 1965	Freshman Enrollment	38	Freshman Capacity	40
Retailing	Fall 1965	Freshman Enrollment	29	Freshman Capacity	30
Secretarial Science	Fall 1965	Freshman Enrollment	35	Freshman Capacity	36

STUDENT PROFILE DATA FOR FALL 1965 FRESHMAN CLASS

Per Cent of Freshman Class Students who were in the High School Class Rank of:

Top Tenth . . . . %
Top Quarter . . . . %
Top Third . . . . %
Top Half . . . . %
Top Two-Thirds . . . . %
Top Three-Fourths . . . . %

FOLLOW-UP DATA ON EMPLOYMENT OF 1965 GRADUATING CLASS

1 Military Service
46 Placed in Technical Field for Which Trained
..... Placed in Technical Field Related to Training
..... Placed in Field Not Related to Training
..... Reported Unemployed as of .....
1 Continued Education
..... No Information
48 Total of 1965 Graduating Class

* * * *

Number of 1965 Graduates whose Starting Monthly Wages Were: Below $300 0, $300-$399 17, $400-$499 25, $500-$599 3, $600 or more 1

REMARKS

OHIO NOTEBOOK
OF
PUBLIC TECHNICAL
EDUCATION PROGRAMS
1965-1966

NAME Mansfield School of Technology SPONSORED BY State of Ohio Department of Education and Mansfield Board of Education

ADDRESS 218 Marion Avenue
Mansfield, Ohio 44903

TELEPHONE 525-1090 AREA CODE 419

ADMINISTRATOR: Name George N. Yoder Title Director
Floyd E. Barcus Director of Admissions

DESCRIPTIVE INFORMATION

Fall 1965 Enrollment: Men 61 Women 2 Freshman Class 63 Upper Class 27 Total Capacity

Number of Students Aged: 19 or under 20-24 25-29 30 or over

Fall 1965 Freshman Class: Number of Applicants Number Offered Admission

Available Housing for Non-Resident Students: School Dormitory YMCA/YWCA x
Private Rooms x Other

Hours When Classes are Conducted 8:00 a.m. to 6:00 p.m. Student Class Time Per Week

Number on Instructional Staff: Full Time Part Time

Summer Job Placement Service? Yes Graduate Placement Service? Yes Co-op. Program? Yes

College Credits Earned? By arrangement with sponsoring college.

FINANCIAL INFORMATION

Anticipated 1966-1967 Yearly Cost: Tuition for Residents of School District $300
Tuition for Non-Residents of School District $300
Approx. Room and Board $900 Fees $25 Books $75 Other None

Tuition Payment Plan $100 payable at registration for each quarter

Financial Aids Professional and public scholarships Contact Person Mr. Floyd E. Barcus
Director of Admissions

GENERAL ADMISSIONS REQUIREMENTS

Prerequisite Level of Education High School graduation Specific Course Requirements 2 years of high school mathematics including Algebra

Specific Course Recommendations 1 year high school Chemistry for Metallurgical Technology applicants

Entrance Testing D.A.T. - Retail Management When Year around
Physical Science Aptitude Test - Engineering and Industrial Technologies

Personal Interview Required with school official When After testing

Other Written recommendation of high school counselor and/or principal

ADMISSIONS PROCEDURES

Suggested Date for Filing Application: During first and second semester of senior year of High School

Deadline Date for Filing Application: August 31

Deadline Date for Filing School Transcript: August 31

Date of Acceptance Notification to Student: Within 2 weeks following completed registration procedure.

Deadline Date for Financial Aid Application: June 15

Date of Financial Aid Notification to Student: August 31

School Entrance Date: Second - Third week in September

Opportunity for School Visitation? Yes Suggested Time: 8 a.m. - 4 p.m. Monday thru Saturday

CURRICULA OFFERED

1. Mechanical Technology Fall 1965 Freshman Enrollment ..... Freshman Capacity .....

   Remarks .....

2. Business Retail Management Fall 1965 Freshman Enrollment ..... Freshman Capacity .....

   Remarks .....

3. Electrical Technology Fall 1965 Freshman Enrollment ..... Freshman Capacity .....

   Remarks .....

4. Metallurgical Technology Fall 1965 Freshman Enrollment ..... Freshman Capacity .....

   Remarks .....

5. Industrial Technology Fall 1965 Freshman Enrollment ..... Freshman Capacity .....

   Remarks .....

STUDENT PROFILE DATA FOR FALL 1965 FRESHMAN CLASS

Per Cent of Freshman Class Students who were in the High School Class Rank of:

Top Tenth . . . . %
Top Quarter . . . . %
Top Third . . . . %
Top Half . . . . %
Top Two-Thirds . . . . %
Top Three-Fourths . . . . %

Another Proposed Program is

REMARKS Ophthalmic Processing Technology

FOLLOW-UP DATA ON EMPLOYMENT OF 1965 GRADUATING CLASS

90% Placed in Technical Field for Which Trained
10% Placed in Technical Field Related to Training
..... Placed in Field Not Related to Training
..... Reported Unemployed as of .....
..... Continued Education
..... No Information
..... Total of 1965 Graduating Class

* * * *

Number of 1965 Graduates whose Starting Monthly Wages Were: Below $300 ....., $300-$399 ....., $400-$499 ....., $500-$599 ....., $600 or more .....

OHIO NOTEBOOK
OF
PUBLIC TECHNICAL
EDUCATION PROGRAMS
1965-1966

NAME Penta Technical College

SPONSORED BY Board of Education
Penta County Vocational High School
& Penta Technical College
Oregon Road
Perrysburg, Ohio

ADDRESS Oregon Road
Perrysburg, Ohio

TELEPHONE 698-1531 AREA CODE 419

ADMINISTRATOR: Name K. H. Moltrecht Title Dean

DESCRIPTIVE INFORMATION

Fall 1965 Enrollment: Men 170 Women 20 Freshman Class 190 Upper Class 0 Total Capacity 750

Number of Students Aged: 19 or under 114 20-24 50 25-29 20 30 or over 6

Fall 1965 Freshman Class: Number of Applicants 240 Number Offered Admission 219

Available Housing for Non-Resident Students: School Dormitory Yes YMCA/YWCA Yes
Private Rooms Yes Other

Hours When Classes are Conducted 12 p.m. - 7 p.m. Student Class Time Per Week 25 hours

Number on Instructional Staff: Full Time 10 Part Time 8

Summer Job Placement Service? Yes Graduate Placement Service? Yes Co-op. Program? Yes

College Credits Earned? Yes

FINANCIAL INFORMATION

Anticipated 1966-1967 Yearly Cost: Tuition for Residents of School District $500 annually
Tuition for Non-Residents of School District $500 annually

Approx. Room and Board Not known Fees None Books Approx. $100 annually Other Special supplies $25.00

Tuition Payment Plan Yes

Financial Aids Work - Study Contact Person Vincent Kidd
Registrar

GENERAL ADMISSIONS REQUIREMENTS

Prerequisite Level of Education High School Graduation Specific Course Requirements None

Specific Course Recommendations Three years of English, 2-4 in Math., Physics in some cases

Entrance Testing Achievement for placement in Math and English When July and August

Personal Interview By appointment When Before admission

Other

ADMISSIONS PROCEDURES

Penta Technical College

Suggested Date for Filing Application: Last semester of senior year

Deadline Date for Filing Application: August 31

Deadline Date for Filing School Transcript: Obtained from High School by College

Date of Acceptance Notification to Student: Within two weeks after receiving transcript

Deadline Date for Financial Aid Application: At time of application for admission

Date of Financial Aid Notification to Student: Determined on individual basis

School Entrance Date: September 12 and at start of each succeeding quarter

Opportunity for School Visitation? Yes Suggested Time: Appointment

CURRICULA OFFERED

1. Mechanical — Fall 1965 Freshman Enrollment ..... Freshman Capacity 50

   Remarks .....

2. Electrical — Fall 1965 Freshman Enrollment ..... Freshman Capacity 50

   Remarks .....

3. Chemical — Fall 1965 Freshman Enrollment ..... Freshman Capacity 25

   Remarks .....

4. Data Processing — Fall 1965 Freshman Enrollment ..... Freshman Capacity 100

   Remarks .....

5. Food Distribution & Super Market Management — Fall 1965 Freshman Enrollment ..... Freshman Capacity 50

   Remarks .....

STUDENT PROFILE DATA FOR FALL 1965 FRESHMAN CLASS

Per Cent of Freshman Class Students who were in the High School Class Rank of:

Top Tenth . . . . %
Top Quarter . . . . %
Top Third . . . . %
Top Half . . . . %
Top Two-Thirds . . . . %
Top Three-Fourths . . . . %

FOLLOW-UP DATA ON EMPLOYMENT OF 1965 GRADUATING CLASS

..... Placed in Technical Field for Which Trained
..... Placed in Technical Field Related to Training
..... Placed in Field Not Related to Training
..... Reported Unemployed as of .....
..... Continued Education
..... No Information
..... Total of 1965 Graduating Class

* * * *

Number of 1965 Graduates whose Starting Monthly Wages Were: Below $300 ....., $300-$399 ....., $400-$499 ....., $500-$599 ....., $600 or more .....

REMARKS Five additional programs available in Autumn, 1966: Civil Engineering, Welding Engineering, Tool and Mfg. Engineering Technology, Accounting, Food Service Management

OHIO NOTEBOOK
OF
PUBLIC TECHNICAL
EDUCATION PROGRAMS
1965-1966

NAME Salem School of Technology SPONSORED BY State of Ohio Dept. of Education

ADDRESS 1200 East Sixth Street and Salem Board of Education

Salem, Ohio 44460

TELEPHONE 337-9513 AREA CODE 216

ADMINISTRATOR: Name H. W. Cameron Title Director

DESCRIPTIVE INFORMATION

Fall 1965 Enrollment: Men 116 Women ..... Freshman Class 82 Upper Class 34 Total Capacity 100

Number of Students Aged: 19 or under 66 20-24 8 25-29 0 30 or over 0

Fall 1965 Freshman Class: Number of Applicants 120 Number Offered Admission 90

Available Housing for Non-Resident Students: School Dormitory ..... YMCA/YWCA .....
Private Rooms x Other .....

Hours When Classes are Conducted 8:10 - 4:45 Student Class Time Per Week 25

Number on Instructional Staff: Full Time 7 Part Time 2

Summer Job Placement Service? ..... Graduate Placement Service? Yes Co-op. Program? No

College Credits Earned? Only by arrangement with a specific college. This program is not intended to provide college transfer credits, but rather to assist graduates to go directly into technical occupations.

FINANCIAL INFORMATION

Anticipated 1966-1967 Yearly Cost: Tuition for Residents of School District $375.00
Tuition for Non-Residents of School District $375.00

Approx. Room and Board $660 Fees $15 Books $75 Other .....

Tuition Payment Plan Each quarter's tuition and fees are due on the first day.

Financial Aids Does not apply Contact Person .....

GENERAL ADMISSIONS REQUIREMENTS

Prerequisite Level of Education High School graduates Specific Course Requirements 1 year of high school Algebra with a minimum grade of "C"

Specific Course Recommendations Four years of Mathematics, one year of Chemistry, one year of Physics, and four years of English

Entrance Testing Otis Gamma and own mathematics test When At scheduled times

Personal Interview Required When At scheduled times

Other .....

ADMISSIONS PROCEDURES

Salem School of Technology

Suggested Date for Filing Application: First week in May

Deadline Date for Filing Application: Friday preceding opening day of school

Deadline Date for Filing School Transcript: Friday preceding opening day of school

Date of Acceptance Notification to Student: As soon as possible after filing application

Deadline Date for Financial Aid Application: Does not apply

Date of Financial Aid Notification to Student: Does not apply

School Entrance Date: 3rd week in September

Opportunity for School Visitation? Yes Suggested Time By appointment

CURRICULA OFFERED

1. Mechanical Technology Fall 1965 Freshman Enrollment 32 Freshman Capacity 50

Remarks

2. Electrical Technology Fall 1965 Freshman Enrollment 22 Freshman Capacity 50

Remarks

3. Civil Technology Fall 1965 Freshman Enrollment 18 Freshman Capacity 30

Remarks

4. Industrial Technology Fall 1965 Freshman Enrollment 0 Freshman Capacity 30

Remarks

5. Fall 1965 Freshman Enrollment Freshman Capacity

Remarks

STUDENT PROFILE DATA FOR FALL 1965 FRESHMAN CLASS

Per Cent of Freshman Class Students who were in the High School Class Rank of:

Top Tenth	2.38 %
Top Quarter	7.13 %
Top Third	21.6 %
Top Half	38.1 %
Top Two-Thirds	21.6 %
Top Three-Fourths	9.55 %

FOLLOW-UP DATA ON EMPLOYMENT OF 1965 GRADUATING CLASS

42	Placed in Technical Field for Which Trained
	Placed in Technical Field Related to Training
	Placed in Field Not Related to Training
	Reported Unemployed as of
	Continued Education
	No Information
42	Total of 1965 Graduating Class

* * * *

Number of 1965 Graduates whose Starting Monthly Wages Were: Below $300 , $300-$399 4 , $400-$499 36 , $500-$599 2 , $600 or more

REMARKS

OHIO NOTEBOOK
OF
PUBLIC TECHNICAL
EDUCATION PROGRAMS
1965-1966

NAME Springfield and Clark County Technical Education Program

SPONSORED BY State of Ohio Department of Education and the Public Schools of Springfield and Clark County

ADDRESS 701 East Home Road
Springfield, Ohio

TELEPHONE 399-5178 AREA CODE 513

ADMINISTRATOR: Name R. O. Brinkman Title Director
Harry H. Carter Supervisor

DESCRIPTIVE INFORMATION

Fall 1965 Enrollment: Men 165 Women 21 Freshman Class 106 Upper Class 80 Total Capacity 190

Number of Students Aged: 19 or under 139 20-24 35 25-29 7 30 or over 5

Fall 1965 Freshman Class: Number of Applicants 186 Number Offered Admission 120

Available Housing for Non-Resident Students: School Dormitory No YMCA/YWCA x
Private Rooms x Other Hotel

Hours When Classes are Conducted 2 p.m. - 9 p.m. Student Class Time Per Week 25 hours

Number on Instructional Staff: Full Time 9 Part Time 19

Summer Job Placement Service? Yes Graduate Placement Service? Yes Co-op. Program? No

College Credits Earned? (At the discretion of the particular college involved.)

FINANCIAL INFORMATION

Anticipated 1966-1967 Yearly Cost: Tuition for Residents of School District $300.00
Tuition for Non-Residents of School District $330.00

Approx. Room and Board Open Fees $25.00 Books $50.00 Other Testing fee $2.00

Tuition Payment Plan By Semesters; Special Arrangements for Special Cases

Financial Aids Limited Full and Partial Scholarships Contact Person Mrs. Margaret Riley Coordinator of Student Services

GENERAL ADMISSIONS REQUIREMENTS

Prerequisite Level of Education High School Graduation Specific Course Requirements

Specific Course Recommendations (See Remarks under Curricula offered)

Entrance Testing Aptitude Testing
Ability Testing When At Time of Application
At Time of Enrollment

Personal Interview Required When Before Acceptance

Other Be physically qualified to enter the occupation selected. Be mature enough to profit from the instruction.

ADMISSIONS PROCEDURES

Suggested Date for Filing Application: January - Year of Entry

Deadline Date for Filing Application: Until Classes are Filled

Deadline Date for Filing School Transcript: Before activation of application

Date of Acceptance Notification to Student: March 15

Deadline Date for Financial Aid Application: July 1st

Date of Financial Aid Notification to Student: Immediate

School Entrance Date: September (Day after Labor Day)

Opportunity for School Visitation? Yes Suggested Time: Open

CURRICULA OFFERED

1. Agri-Business Technology — Fall 1965 Freshman Enrollment: 23 — Freshman Capacity: 25

   Remarks: Recommended that students have farm background

2. Agri-Equipment Technology — Fall 1965 Freshman Enrollment: 15 — Freshman Capacity: 25

   Remarks: Recommended that students have farm background

3. Business Data Processing and Computer Technology — Fall 1965 Freshman Enrollment: 31 — Freshman Capacity: 25

   Remarks: Recommended high school courses: Algebra, Bookkeeping, Typing

4. Electrical Engr. Technology — Fall 1965 Freshman Enrollment: 15 — Freshman Capacity: 25

   Remarks: Recommended high school courses: Algebra, Geometry, Physics, Mech. Drawing

5. Mechanical Engr. Technology — Fall 1965 Freshman Enrollment: 22 — Freshman Capacity: 25

   Remarks: Recommended high school courses: Algebra, Geometry, Physics, Mech. Drawing

STUDENT PROFILE DATA FOR FALL 1965 FRESHMAN CLASS

Per Cent of Freshman Class Students who were in the High School Class Rank of:

Top Tenth	6 %
Top Quarter	19 %
Top Third	25 %
Top Half	45 %
Top Two-Thirds	67 %
Top Three-Fourths	74 %

FOLLOW-UP DATA ON EMPLOYMENT OF 1965 GRADUATING CLASS

4	Armed Forces
29	Placed in Technical Field for Which Trained
5	Placed in Technical Field Related to Training
0	Placed in Field Not Related to Training
0	Reported Unemployed as of
3	Continued Education
1	No Information
42	Total of 1965 Graduating Class

* * * *

Number of 1965 Graduates whose Starting Monthly Wages Were: Below $300: 1, $300-$399: 17, $400-$499: 12, $500-$599: 2, $600 or more: 2

REMARKS

OHIO NOTEBOOK
OF
PUBLIC TECHNICAL
EDUCATION PROGRAMS
1965-1966

NAME Technical Education Center SPONSORED BY Ohio Department of Education and the Dayton Board of Education

ADDRESS 118 East First Street
Dayton, Ohio 45402

TELEPHONE 222-6303 AREA CODE 513

ADMINISTRATOR: Name Paul C. Snyder Title Director

DESCRIPTIVE INFORMATION

Fall 1965 Enrollment: Men 23 Women 8 Freshman Class 31 Upper Class ..... Total Capacity 100

Number of Students Aged: 19 or under 25 20-24 4 25-29 2 30 or over .....

Fall 1965 Freshman Class: Number of Applicants 43 Number Offered Admission 31

Available Housing for Non-Resident Students: School Dormitory None YMCA/YWCA .....
Private Rooms None Other .....

Hours When Classes are Conducted 4 to 10 p.m. Student Class Time Per Week .....

Number on Instructional Staff: Full Time 1 Part Time 9

Summer Job Placement Service? Yes* Graduate Placement Service? Yes* Co-op. Program? Yes*
*Mid-Management Tech.

College Credits Earned? .....

FINANCIAL INFORMATION

Anticipated 1966-1967 Yearly Cost: Tuition for Residents of School District Industrial Technology $300 Mid-Management Retail Tech. $250
Tuition for Non-Residents of School District same

Approx. Room and Board ..... Fees ..... Books $30/quarter Other .....

Tuition Payment Plan Industrial Tech. $100 at the beginning of each term (three terms per year) Mid-Management Retail Tech. $125. 1st and 3rd quarters

Financial Aids No Contact Person .....

GENERAL ADMISSIONS REQUIREMENTS

Prerequisite Level of Education High School graduate Specific Course Requirements Ind. Tech. 2 years of Math & Science

Specific Course Recommendations Ind. Tech. Algebra and Geometry desirable also Chemistry or Physics

Entrance Testing Industrial Technology--Prognostic Mech. Ability, Kuder, California MM, Mid-Management Retail Tech.-DAT When Prior to admission, by arrangement

Personal Interview Ind. Tech. required When With the Registrar, by appointment

Other .....

Technical Education Center

ADMISSIONS PROCEDURES

Suggested Date for Filing Application: Prior to August 15

Deadline Date for Filing Application: August 30

Deadline Date for Filing School Transcript: August 25

Date of Acceptance Notification to Student: One week after completion of required tests

Deadline Date for Financial Aid Application: No plans at this date

Date of Financial Aid Notification to Student: None

School Entrance Date: Tuesday after Labor Day

Opportunity for School Visitation? Yes Suggested Time: After 4 p.m.

CURRICULA OFFERED

1. Industrial Technology Fall 1965 Freshman Enrollment: 8 Freshman Capacity: 25

   Remarks:

2. Mid-Management Retail Tech. Fall 1965 Freshman Enrollment: 23 Freshman Capacity: 50

   Remarks: This is a cooperative plan 25 in school 25 on the job

3. ____ Fall 1965 Freshman Enrollment: ____ Freshman Capacity: ____

   Remarks:

4. ____ Fall 1965 Freshman Enrollment: ____ Freshman Capacity: ____

   Remarks:

5. ____ Fall 1965 Freshman Enrollment: ____ Freshman Capacity: ____

   Remarks:

STUDENT PROFILE DATA FOR FALL 1965 FRESHMAN CLASS

Per Cent of Freshman Class Students who were in the High School Class Rank of:

Top Tenth	%
Top Quarter	%
Top Third	%
Top Half	100 %
Top Two-Thirds	%
Top Three-Fourths	%

FOLLOW-UP DATA ON EMPLOYMENT OF 1965 GRADUATING CLASS

*	Placed in Technical Field for Which Trained
	Placed in Technical Field Related to Training
	Placed in Field Not Related to Training
	Reported Unemployed as of
	Continued Education
	No Information
	Total of 1965 Graduating Class

* * * *

Number of 1965 Graduates whose Starting Monthly Wages Were: Below $300 ____, $300-$399 ____, $400-$499 ____, $500-$599 ____, $600 or more ____

REMARKS

VT 004 977
Counselor's Manual.

Columbus Area Vocational-Technical School, Ga.
MF AVAILABLE IN VT-ERIC SET.
Pub Date - 66 55p.

*PROGRAM DESCRIPTIONS; *VOCATIONAL EDUCATION; *TECHNICAL EDUCATION; COURSES; *AREA VOCATIONAL SCHOOLS; POST HIGH SCHOOL GUIDANCE
*COLUMBUS AREA VOCATIONAL TECHNICAL SCHOOL; GEORGIA

The purpose of this handbook is to provide guidance personnel with information about the curriculum, facilities, and procedures at the Columbus Area Vocational-Technical School. Information includes: (1) admission requirements and procedures, (2) course offerings, (3) fee schedule, (4) types of feedback to school counselors, and (5) program descriptions including course length. (EM)

VT004977

ED0 31587

COLUMBUS AREA VOCATIONAL-TECHNICAL
SCHOOL

Columbus, Georgia

COUNSELOR'S MANUAL

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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VT004977

MESSAGE

The purpose of this handbook is to assist guidance personnel in acquiring a better understanding of the curriculum and facilities available to youth and adults at Columbus Tech, and to aid them in counseling with youth and adults seeking a better future through technical and industrial training.

In order to be of value to guidance personnel, the school has also published brochures and will publish a catalog explaining in more detail school policies and curriculem offerings.

George A. Corley

George A. Corley
Director, Student Personnel
Columbus Tech

Carlton Jackson
Asst. Director, Student
Personnel

CONTENTS

Foreword

Calendar

General Information

Admission Requirements

Application

Suggested High School Courses

Testing Dates

Test Admission Slips

School Tours

Tour Forms

Services to Counselors

Miscellaneous Information
- a. Entrance Dates
- b. Length of Trimester
- c. Part Time Training

Course Outlines and Description
- Appliance Servicing
- Automotive Mechanics
- Business Education
- Cosmetology
- Data Processing Technology
- Distributive Education
- Electronics I & II
- Machine Shop
- Masonry
- Mechanical Technology
- Medical Office Assistant
- Radio & Television Servicing
- Refrigeration & Air Conditioning
- Upholstery
- Welding

Questions

FOREWORD

Columbus Tech is located at 4460 River Road with Branch #1 facilities located on Courtland Avenue at Forest Road. The Central Admission Office is located at 4460 River Road. The school was established through the joint efforts of the Muscogee County School District Board of Education and the Division of Vocational Education of the Georgia State Department of Education. The school is operated as part of the total educational program of the Muscogee County School District.

The building was designed specifically as an Area Vocational-Technical School. It is modern and up-to-date in all respects including equipment is kept current with the changes and demands of business and industry.

Columbus Tech is one of a network of area technical schools established for the purpose of rendering an educational service to youths and adults in counties with a commuting distance of Columbus. However, persons living outside this area or in another state who meet the requirements for admission will be welcomed as students. Out-of-state students are charged an additional fee.

No dormitory or boarding facilities are available in the area vocational-technical schools. Students desiring living accommodations will be assisted in locating satisfactory quarters in Columbus.

Transportation to and from school will be the responsibility of each individual student.

The purposes of the school are to:

1. Make vocational and technical training, on an institutional basis, available to every youth and adult especially to those who do not plan to attend a college or university.

2. To develop in students manipulative skills, technical knowledge and the ability to interpret and use this knowledge in successful and gainful employment as technicians, craftsmen, or service personnel in business and industry.

3. To upgrade and improve the status of employed personnel and retrain those employed in occupations declining in demand due to the ever-present technological changes in our economy.

4. To make available to businesses and industry a continuing supply of technically trained, productive employees, thereby increasing individual earning potential and the industrial economy of the area.

5. To develop understandings, appreciations, personal interests and satisfactions, essential to the assumptions of civic, home and community responsibility.

The school will be operated as an educational service with course offerings modified, adapted and geared to the business and industrial needs of the area to be served.

Columbus Area Vocational-Technical School
Columbus, Georgia

SCHOOL CALENDAR
1966 - 1967

1. Central Admissions Office
4460 River Road

2. Forrest Road
Rt. #2 Courtland Avenue

August 26, 1966	Instructors Report To School
August 29, 1966	Classes Begin
September 5, 1966	Holiday - Labor Day
October 17, 1966	GEA District Conference - Holiday for Students 4460 River Road
October 20, 1966	GTEA Region Six Conference - Holiday for Students Forrest Road-Courtland Avenue
November 24-25, 1966	Holidays - Thanksgiving
December 15, 1966	End of First Trimester
December 22, 1966	Christmas Holidays Classes Dismissed at End of School Day
January 2, 1967	Classes Resume After Holidays
March 16-17, 1967	Spring Holidays 4460 River Road
April 6-7, 1967	Spring Holidays Forrest Road-Courtland Avenue
April 11, 1967	End of Second Trimester
June 8-9, 1967	GVA & GAVA Conference Holidays for Students
July 4, 1967	Independence Day - Holiday
July 26, 1967	Graduation Day
July 28, 1967	End of Third Trimester

TOTAL - 225 School Days as Required By The State Department Of Vocational Education

COLUMBUS AREA VOCATIONAL-TECHNICAL SCHOOL
Columbus, Georgia

Central Admissions Office
4460 River Road

Branch # 1
Forest Road

The Columbus Area Vocational-Technical School operates as a part of the Muscogee County School District Educational Program and the Division of Vocational Education of the Georgia State Department of Education.

DEPARTMENTS	LENGTH OF COURSE
** Automotive Mechanics	5 Trimesters or 1½ years
Appliance Servicing	3 Trimesters or 1 year
Machine Shop	6 Trimesters or 2 years
Radio-Television Servicing	6 Trimesters or 2 years
Refrigeration & Air Conditioning	6 Trimesters or 2 years
** Electronics I and II	6 Trimesters or 2 years
Accounting	3 Trimesters or 1 year
Mechanical Technology	6 Trimesters or 2 years
Data Processing Technology	6 Trimesters or 2 years
* Cosmetology	13 Months
* Upholstery	5 Trimesters or 1½ year
* Masonry	5 Trimesters or 1½ year
** Business Education	3 Trimesters or 1 year
Distributive Education	3 Trimesters or 1 year
Medical Office Assistants	3 Trimesters or 1 year
Welding	3 Trimesters or 1 year

* Offered only at Branch # 1, Forrest Road
** Offered at both locations

ENTRANCE REQUIREMENTS:

A student must be of good moral character, in good health, financially able to complete the course and show a desire for the training he is seeking.

SPECIFIC REQUIREMENTS:

Technical Classes: High School Graduate (or GED Equivalent) Vocational Classes: 18 years of age with ninth grade education or equivalent. Pass aptitude, intelligence and manipulative tests. Personal interview with counselor or assistant director. Secure a medical examination from your family physician, High School transcript requested by you from your former school. Submit a small photograph to the school. Application form secured from the Area School Office.

SCHOOL DAY CALENDAR:

Classes weekdays from 8:30 A. M. to 3:30 P. M. Courses vary from one to two years. School operates eleven (11) months each year - closed the month of August.

SUPPLY FEE:

All students - $ 20.00 a Trimester supply fee plus cost of books needed for the course. No tution for Georgia students. Out-of-state students $55.00 a Trimester.

Columbus Area Vocational-Technical School
Central Admission Office
4460 River Road
Columbus, Georgia 31904

STEPS TO GAIN ADMISSION TO COLUMBUS AREA VOCATIONAL-TECHNICAL SCHOOL

1. Submit an application for admission form to:

   Director of Admissions
   Columbus Area Vocational-Technical School
   4460 River Road
   Columbus, Georgia 31904

   This form may be obtained from the area school or your high school counselor. To insure prompt action on applications for the September term, you are encouraged to apply early, at least by the preceding January.

2. Submit an official transcript of high school work. The applicant should request his present for former school to send a transcript to Columbus Tech.

3. Report to the school for the Entrance Aptitude Test on the date and time assigned to you by the Admissions Office.

4. Send a small recent photograph of yourself to the school.

5. As soon as possible after the aptitude test arrange for personal interview with the assistant director or counselor.

6. Have your physician give you a medical examination. Form for medical examination will be mailed to you with your acceptance letter. The acceptance letter and medical form will be sent when you have completed requirements 1 thru 5.

COLUMBUS AREA VOCATIONAL-TECHNICAL SCHOOL
4460 River Road
Columbus, Georgia

COURSE PREFERENCE:

1. _____

2. _____

3. _____

REQUEST FOR ADMISSION

(PRINT OR TYPE)

NAME _____ SEX _____ DATE _____
LAST FIRST INITIAL

MAILING ADDRESS _____ CITY _____ STATE _____

DATE OF BIRTH _____ PLACE OF BIRTH: CITY _____ COUNTY _____ STATE _____

PARENT'S NAME _____

PARENT'S ADDRESS _____ CITY _____ COUNTY _____ STATE _____

PHONE _____

EDUCATION

CIRCLE HIGHEST YEAR OF EDUCATION COMPLETED.

GRADE SCHOOL	HIGH SCHOOL	GRADUATED		COLLEGE	DEGREES
1 2 3 4 5 6 7 8	1 2 3 4	YES	NO	1 2 3 4	

LIST SCHOOLS ATTENDED

	NAME	CITY OR COUNTY	STATE
GRADE SCHOOL			
HIGH SCHOOL			
OTHERS			

WORK HISTORY

INCLUDING MILITARY SERVICE. (LIST MOST RECENT EXPERIENCE FIRST.)

EMPLOYER'S NAME _____ EMPLOYER'S NAME _____

ADDRESS _____ ADDRESS _____

EMPLOYER'S BUSINESS _____ EMPLOYER'S BUSINESS _____

POSITION HELD _____ POSITION HELD _____

ARE YOU IN GENERAL GOOD HEALTH? YES___ NO___, IF "NO" DESCRIBE CONDITION _____

PHYSICAL DEFECTS (IF ANY) _____

CHARACTER REFERENCES (LIST THREE)

NAME _____ ADDRESS _____

NAME _____ ADDRESS _____

NAME _____ ADDRESS _____

_____
SIGNATURE OF APPLICANT

SUGGESTED HIGH SCHOOL COURSES FOR ENTRANCE INTO VOCATIONAL-TECHNICAL SCHOOL

English	-	4 Units
Math	-	2 Units
Science	-	2 Units
History	-	2 Units
Typing	-	1 Unit
		11
Electives		7
TOTAL		18

For technical programs two years of algebra and one year of physics are desirable. Other science and math electives would also be helpful.

For business education programs general math, business math, accounting, typing, shorthand, and other business courses are desirable.

If your high school offers shop programs, it is a good idea to take advantage of them if you plan to pursue that field of training.

Columbus Tech
Columbus, Georgia

TO: All High School Counselors and Students

SUBJECT: Vocational-Technical School Entrance Test Dates

FROM: Columbus Tech, Admissions Office

A pre-entrance test is required for admission to the school. The testing program has been established to help the potential student clarify educational and vocational objectives. Tests can be used to help the potential student get an understanding of his or her abilities and then make a vocational decision that is realistic. The test aids in counseling and placing students in one of a broad range of courses offered in vocational-technical schools. The entrance test is not meant to make your decision for you but the interpretation is designed to provide you with basic information obtained from the entrance test, and to offer suggestions which should prove helpful in making your educational and vocational plans.

DATE	TIME	PLACE
November 18	4:00 p.m.	Forest Road
December 10	8:30 p.m.	River Road
January 16	7:30 p.m.	River Road
February 1	4:00 p.m.	Forest Road
February 18	8:30 a.m.	River Road
March 4	8:30 a.m.	Forest Road
March 23	4:00 p.m.	River Road
March 27	7:30 p.m.	Forest Road
April 18	7:30 p.m.	River Road
April 28	4:00 p.m.	Forest Road
May 6	8:30 a.m.	River Road

To take the Entrance Test please secure the proper form from your high school counselor, complete, and drop in the mail to:
Columbus Tech
Central Admissions Office
4460 River Road
Columbus, Ga.

TEST ADMISSION SLIP

Date _____

Name _____

Address _____ Phone _____

High School _____

Address _____

Date of Test _____
Month Day Hour Location

Give to High School Counselor

(Tear Here)

TEST ADMISSION SLIP

Date _____

Name _____

Address _____ Phone _____

High School _____

Address _____

Date of Test _____
Month Day Hour Location

Please mail to: Columbus Tech
Central Admissions Office
4460 River Road
Columbus, Georgia 31904

SCHOOL TOURS

All high schools are invited to tour the campus. Below is an outline of how a tour would be condusted. The approximate length of a tour is one hour.

I. General Session (Welcome)
   A. What does a V-T school have to offer
      1. Purpose of the school
      2. Location and History of the school
      3. Objectives of the school

   B. Educational Opportunities
   C. Entrance Requirements
   D. Admissions Procedure
   E. Expenses of Training
   F. Student Opinion of school
   G. Housing
   H. Financial Aid & Part Time Jobs
   I. Selective Service Deferments

II. Department Tours
   A. Questions answered by each department head
      1. Where can I work after graduation
      2. How much can I make
      3. How long is the course
      4. What is the training like
      5. How did you decide to take this course
      6. Why did you decide on a vocational-technical school
      7. How many students in your course
      8. What is the instructor like
      9. How much classwork do you have
      10. How much homework

III. General Session (summary)
   A. Think about courses you have seen
   B. Evaluate the courses in light of your ambition and plans
   C. Welcome any students back for further information
   D. Question and answer session

Groups for touring are kept to a maximum to 15 in number. We feel at Columbus Tech that this is a wonderful opportunity for boys and girls to get a bird's eye view of vocational training and possibly of the vocation they are particularly interested in.

If you are limited in transportation, try to include those students that you feel would gain the most benefit from this experience.

It may be helpful if after the trip you arrange to meet with the students in groups or individual counseling sessions to

further assist them in determining if the courses offered at Columbus Tech seem reasonable for them to enter.

If you feel that the Columbus Tech school counselor could be of help to you in conferences with your students after returning to school do not hesitate to call on us.

To schedule a tour please fill out the below form and return to:

Director of Admissions
Columbus Tech
4460 River Road
Columbus, Georgia 31904

Name of School _____

Address of School _____

Number in Group _____

Approximate age & grade level of group _____

Date you wish to visit our school _____

Arrival time at school _____

Departure time from vocational-technical school _____

Location you wish to visit _____

Person sponsoring group _____

_____
Signature of Principal or Counselor

We have two locations: A Central Admissions Office located at 4460 River Road and Branch #1 located on Forest Road. Consult page 6 in the manual for a list of courses offered at each location. We will send you a confirmation on your tour to the vocational school.

SERVICES TO COUNSELORS

1. Columbus Tech will publish a newsletter each trimester.

2. Columbus Tech will furnish you a list of students from your school by departments.

3. Columbus Tech will furnish you a progress report on each of your former students at the end of the fall trimester.

4. Columbus Tech will furnish you a letter each time a student is accepted from your school showing course entered and school entrance date.

MISCELLANEOUS INFORMATION

Entrance Dates:

Columbus Tech enters students normally only once a year. This is the beginning of the fall trimester. Under certain circumstances a student maybe admitted at a later date by going before our admissions committee. We do not admit new students each trimester.

Length of Trimester:

A trimester is 15 school weeks in length with three trimesters making a school year.

Part Time Training:

Columbus Tech encourages full time training. We do have a limited number of courses open for part time preparatory. For part time courses contact the school.

APPLIANCE SERVICING

Appliance Servicing is a one year, pre-employment course designed to prepare the student for employment at entry levels in the servicing and repair of all types of household appliances. Both theoretical and practical training are provided for persons who desire to enter this field. The program develops the necessary background in electricity and the related sciences.

The instructor is a master craftsman in his field and is a professionally-trained and state certified teacher. The course occupies a modern classroom-laboratory, equipped with the most modern equipment as is found in industry. Facilities are among the finest available.

Appliance servicemen are employed in almost every locality; in dealer service departments, independent repair shops including general repair establishments, as well as in shops specializing in a particular type of repair work. Many such servicemen are self-employed. Employment opportunities in this field are expected to increase in the years immediately ahead due to the widespread use of electrical appliances.

Course Outline

APPLIANCE SERVICING

1st Trimester	Classroom	Lab	Total
Fundamentals of Electricity	110	115	225
The Nature of Electricity Basic Electrical Quantities Ohm's Law and Its Application Electrical Circuits Magnetism and Electromagnetism			
Principles of Refrigeration	110	115	225
Systems and Cycles Nature and Effect of Heat Energy Temperature Measurement & Recording Compressors Refrigerants, Metering Devices & Driers Charging and Testing Systems			
			450
2nd Trimester			
Mechanical Operation & Repairing	150	300	450
Refrigerators Domestic Freezers Room Air Conditioners Heating Appliances Home Laundry Equipment			
			450
3rd Trimester			
Diagnosing and Correcting Trouble	150	300	450
Electrical Mechanical			
			450

AUTOMOTIVE MECHANICS

Automotive Mechanics is a pre-employment course designed to prepare the student for employment at entry levels in the repair and maintenance of automobiles and light trucks. The program of instruction consists of theory, practice, and maintenance in the disassembly, assembly, and diagnoiss of various types of engines, carburetors, fuel pumps, generators and alternators, starters, ignition systems, clutches, transmissions, rear axles, front ends, and power and hydraulic automotive brakes.

The instructor is a master craftsman in the field of Automotive Mechanics, and is a professionally-trained and state certified teacher. The Automotive Mechanics occupies a modern classroom-shop unit, fully equipped with machinery and tools of the most modern kind, and contains instructional units of all types for student work. These facilities are among the most modern and up-to-date available in the state.

The Automotive Field is vast. We are known as a "nation on wheels". Out of every seven workers, one is employed in the Automotive field. Jobs are available in automotive maintenance and repair. These jobs are found in garages, service stations, company fleet units, public utilities, and government organizations. Auto Mechanics may advance into supervisory positions and allied fields, such as salesmen, managers, owners, etc.

Course Outline

AUTOMOTIVE MECHANICS

1st Trimester	Classroom	Lab	Total
Front End Alignment & Brakes			
1. Steering Systems	75	150	225
2. Brakes	75	150	225
			450
2nd Trimester			
Engine Work			
1. Removal	15	30	45
2. Disassembly	20	40	60
3. Inspection	50	100	150
4. Assembly	25	50	75
5. Installation	10	20	30
6. Testing	30	60	90
			450
3rd Trimester			
Electrical Systems			
1. Generators	25	50	75
2. Regulators	20	40	60
3. Starter Systems	25	50	75
4. Ignition Systems	25	50	75
5. A.C. Charging Systems	30	60	90
6. Wiring	25	50	75
			450

Automotive Mechanics Course Outline - Continued:

4th Trimester	Classroom	Lab	Total
Fuel System & Tune-up			
1. Fuel Pumps	10	20	30
2. Single Carburetion	20	40	60
3. Dual Carburetion	20	40	60
4. Engine Tune-up	100	200	300
			450

5th Trimester			
Power Train			
1. Clutches	10	20	30
2. Drive Shafts	10	20	30
3. Transmissions (std.)	65	130	195
4. Overdrives	25	50	75
5. Rear Axle Assemblies	40	80	120
			450

TOTAL HOURS 2250

MASONRY

Masonry is a pre-employment course designed to prepare the student for employment at entry levels in brick, tile, and stone masonry. In this program students learn to use, care for, and handle safely the tools, machines, and materials commonly used in this area. The course consists of brick masonry, concrete finishing, blue print and plan reading and drawing. The course in masonry is geared to train young men to become proficient brickmasons.

The instructor is a master craftsman in the field of masonry and is a professionally-trained and state certified teacher. The masonry department occupies a modern classroom-laboratory, equipped with the most modern equipment as found in industry. Facilities are among the finest available.

Graduates specialize in various aspects studied in the program or do general masonry work utilizing a combination of skills. Many men in this field are self-employed. Employment opportunities in this field are expected to increase in the years immediately ahead due to the anticipated increase in construction activities. Technological developments in construction techniques and materials also contribute favorably to the job outlook.

COLUMBUS AREA VOCATIONAL-TECHNICAL SCHOOL
BRANCH # 1
Columbus, Georgia 31907

BRICK MASONRY

COURSES	HOURS
History of Brick	45
Masonry Materials	75
Blueprint Reading, Plan, and Trade Sketching	120
Masonry Mathematics	45
Details of Construction	90
Shop Practice	255
Wall Construction	140
Layout and Erection (Corner and Building)	195
Pointing and Patching	40
Concerte Block	175
Concrete Finishing	140
On The Job Practice	970
TOTAL	2190

BUSINESS EDUCATION

Business education is a one year, pre-employment course designed to prepare the student for employment at entry levels in a choice of three areas: Accounting, clerical, and secretarial. Both theoretical and practical training are provided for persons who desire to enter this field. This program develops the necessary background for a position in business.

The instructors are professionally-trained and state certified teachers. The course occupies a modern classroom-laboratory, equipped with the most modern equipment as is found in the business world. Facilities are among the finest available.

Business education students are employed in almost every locality; secretarial, general clerical, and accounting. Some of the positions available in the secretarial field are: Legal, medical, and executive secretaries; in general clerical or office clerk, typist, record clerk, and file clerk; in accounting are bookkeeper, and accounting clerk. Opportunities for business personnel are limited for they are employed in every business and industry as well as in Federal, State, and Local governmental agencies.

COLUMBUS AREA VOCATIONAL-TECHNICAL SCHOOL
COLUMBUS, GEORGIA

ACCOUNTING

	First Trimester	Hours		Second Trimester	Hours		Third Trimester	Hours
1.	Accounting I	75	1.	Accounting II	75	1.	Accounting III	75
2.	Typewriting I	75	2.	Accounting Lab.	75	2.	Accounting Lab.	75
3.	Business Communications	75	3.	Business Mathematic	75	3.	Office Procedures	75
4.	Business Mathematics	75	4.	Typewriting II	75	4.	Principal of Economics	75
5.	Accounting Lab.	75	5.	Business Communications	75	5.	Business Law	75
6.	Office Procedure	75	6.	Introduction to Business	75	6.	Business Comm. III	75
	Total Hours	450		Total Hours	450		Total Hours	450

COLUMBUS AREA VOCATIONAL-TECHNICAL SCHOOL
Columbus, Georgia

CLERICAL

First Trimester	Hours	Second Trimester	Hours	Third Trimester	Hours
1. Accounting I	75	1. Business Communication II	75	1. Typewriting III	75
2. Typewriting I	75	2. Bueiness Law	75	2. Businoss Communciation	75
3. Business Communication	75	3. Office Procedures	75	3. Office Procedures	75
4. Business Mathematic	75	4. Business Mathematic	75	4. Busniess Psychology	75
5. Shorthand I	75	5. Typewriting II	75	5. Elective	75
6. Office Procedure	75	6. Introduction to Business	75	6. Introduction to Business	75
Total Hours	450	Total Hours	450	Total Hours	450

COLUMBUS AREA VOCATIONAL-TECHNICAL SCHOOL
Columbus, Georgia

SECRETARIAL

	First Trimester	Hours		Second Trimester	Hours		Third Trimester	Hours
1.	Accounting I	75	1.	Shorthand II	75	1.	Shorthand III	75
2.	Typewriting I	75	2.	Office Procedures	75	2.	Typewriting III	75
3.	Business Communications	75	3.	Typewriting II	75	3.	Business Communication	75
4.	Business Mathematic	75	4.	Business Communications	75	4.	Office Procedures	75
5.	Shorthand I	75	5.	Principles of Economics	75	5.	Business Psychology	75
6.	Office Procedure	75	6.	Business Law	75	6.	Elective	75
	Total Hours	450		Total Hours	450		Total Hours	450

COSMETOLOGY

Cosmetology is a 13 month, post high school, pre-employment course designed to prepare the student for employment in the field. Cosmetology training includes a thorough study of all phases of beauty culture in both classroom theory and shop practice. Students are prepared to perform all the services usually available in beauty shops.

The instructor is a master beautician and a professionally-trained and a state certified teacher. The course occupies a modern well-equipped classroom-laboratory, equipped with the most modern equipment as is found in beauty shops. Facilities are among the finest available.

Upon graduation, students qualify to take the State Board of Cosmetology Examination to become licensed beauty operators. Graduates may become specialists in a large shop working as a hair color expert, a manicuriest or a certified specialist to remove superfluous hair. They may be employed in a small shop as a general beautician performing all duties which customers require or own and operate their own shops in which case they would also perform such managerial duties as record keeping, property maintenance, control of supplies and supervision of employees.

COLUMBUS AREA VOCATIONAL-TECHNICAL SCHOOL
BRANCH # 1
Columbus, Georgia 31907

COSMETOLOGY

COURSES	HOURS
Professional Ethics	60
Hygiene and Personality	90
Bacteriology, Sterilization and Sanitation	120
Anatomy and Physology	150
Electricity	60
Chemistry	90
Shampoose and Rinses	210
Hair Pressing	570
Manicuring, Pedicuring and Massages	90
Beauty Salon Management	120
GRAND TOTAL	1560

DATA PROCESSING

Data Processing is a two year post high school, pre-employment course designed to prepare the student as a junior programmer in the field of Data Processing. The course of instruction includes accounting, data processing math, communication skills, punch card applications, programming, computer applications, and a field project.

The instructor is professionally-trained and a state certified teacher. The course occupies a modern classroom-laboratory equipped with the most modern equipment as is found in industry. Facilities are among the finest available.

There are many specialist jobs in data processing, ranging from the technicians who plan the programs to solve the problem, to the programmer who translate the verbal plan into machine language, to the operator who uses the machines to the typist who decodes and translate the rolls of punched tape into printed records.

Course Outline

DATA PROCESSING TECHNOLOGY
(First Year)

1st Trimester	Classroom	Lab	Total
Elementary Accounting I	75	75	150
Business Mathematics I	75		75
Punch Card Machines	75	75	150
Communication Skills I	75		75
			450

2nd Trimester			
Elementary Accounting II	75	75	150
Data Processing Math I	75		75
Punch Card Machines II	75	75	150
Communication Skills II	75		75
			450

3rd Trimester			
Cost Accounting	75	75	150
Computer Fundamentals	75		75
Data Processing Math II	75		75
Punch Card Applications	75	75	150
			450

DATA PROCESSING TECHNOLOGY
(Second Year)

4th Trimester	Classroom	Lab	Total
Intermediate Accounting I	75	75	150
Computer Programming	75	75	150
Programming Systems	30	45	75
Economic Principles	75		75
			450

5th Trimester			
Intermediate Accounting II	75	75	150
Computer Programming II	75	75	150
Advanced Programming Systems	30	45	75
Business Psychology	75		75
			450

6th Trimester			
Business Statistics	75		75
Computer Applications	30	45	75
Business Systems Design & Development	75		75
Data Processing Field Project		225	225
			450

TOTAL HOURS 2700

DISTRIBUTIVE EDUCATION

Distributive education is a post high school, pre-employment course designed to prepare the student for employment in marketing, distribution, or management. Training is offered in mid-management, marketing , advertising, business administration, wholesale and retail services.

The instructor is professionally-trained and a state certified teacher. The instructor has had experience in distribution and sales in business and industry. The course occupies a modern classroom-laboratory, equipped with the most modern equipment as is found in business. Facilities are among the finest available.

Graduates of distributive education are employed in management, marketing, advertising, business administration, wholesale and retail services.

ELECTRONIC TECHNOLOGY

Electronic Technology is a two-year, post high school, pre-employment course designed to prepare the student for employment as a technician in the field of Electronics. In general, students are trained to apply theoretical knowledge and manual skills to such tasks as the preparation or interpretation of layouts and other diagrams and the design of intricate electronic units. They will be able to diagnose troubles in equipment, conduct tests for verification, and make necessary repairs. The course of instruction includes technical mathematics, technical drafting, applied physics, direct current circuits, time varying circuits, basic electronics and shop processes the first year. The second year covers advanced electronics circuits and systems.

The instructor for the course is a professionally-trained and state certified teacher. The course occupies a modern classroom and laboratory unit which contains all of the basic and advanced instructional equipment. These facilities are among the finest and most complete found in the state.

Electronics Technicians are employed in plants producing electronic equipment, in research activity, in the Department of Defense, the Federal Aviation Agency, the military services, various state and local governmental units, tabulation and computer field in various types of manufacturing plants and in radio and television equipment maintenance. The Electronic field is so broad that some go into specialized fields - for example - induction or dielectric heating, servomechanisms, ultrosonics, etc. Ther are used in special maintenance and repair jobs where knowledge above the routine repair level is needed. This has been one of the fastest growing occupational groups and there is an indication of continued growth.

Course Outline

ELECTRONIC TECHNOLOGY

1st Trimester	Classroom	Lab	Total
Applied Algebra	75		75
Physics - Mechanics	45	60	270
D.C. Fundamentals	180	90	270
			450

2nd Trimester			
Applied Trigonometry	75		75
A.C. Fundamentals	125	100	225
Physics (Heat, Sound & Light)	50	40	90
Vacuum Tube Fundamentals	15	45	60
			450

3rd Trimester			
Logarithms & Vectors	75		75
Basic Electronic Circuits	145	170	315
Electronic Drawing	60		60
			450

4th Trimester			
Calculus	75		75
Transistors	75	75	150
Video & Pulse Systems	90	90	180
Report Writing	45		45
			450

5th Trimester			
Calculus	75		75
Industrial Electronic Systems	75	75	150
Microwave & Radar Systems	120	105	225
			450

6th Trimester			
Computer Math	75		75
Computer Circuits & Systems	150	75	225
Instrument Maintenance	75	75	150
			450

TOTAL HOURS 2700

MACHINE SHOP

The Machine Shop course is a program of pre-employment training designed to prepare the student for employment at entry levels in the machine shops of industries. The program of instruction covers both theory and practice and includes installation, care, and repair of machines found in machine shop; job interpretation, set-up, and operation required to complete work in a manner acceptable to industry; and tool care, repair, and basic tool and die making. A student is encouraged to advance at a rate commensurate with his capabilities; advancement is dependent upon the individual's performance of established standards for each unit of the course.

The instructor is a master craftsman in the fields of Machine Shop Theory and Practice, and is a professionally-trained and state certified teacher. The Machine Shop occupies a modern classroom-shop unit which is equipped with machinery and tools that are found in industry. There are facilities for both hot and cold working processes, materials testing, and metallurgy. The facilities are among the most modern and up-to-date to be found in the state, as evidenced by their constant usage by local industry.

The Machinist Trade is a great trade -- in its necessity, in its interest, and in its opportunity for advancement. Ninety percent of foremen and superintendents of manufacturing plants were promoted from the ranks of Machinists. Because of scientific management, quality control practices, improved production methods, the Machinist is on a higher level. There is an increasing demand for Machinists in plant maintenance shops, metal industrial plants, utility shops, machine shops, and government organizations. They are employed in almost every locality and industry because of their skill.

Course Outline

MACHINE SHOP

1st Trimester	Classroom	Lab	Total
Machine Shop Theory & Practice	75	225	300
Basic Mathematics	75		75
Blueprint Reading	75		75
			450

2nd Trimester			
Machine Shop Theory & Practice	75	225	300
Machine Shop Mathematics	75		75
Blueprint Reading	75		75
			450

3rd Trimester			
Machine Shop Theory & Practice	75	225	300
Machine Shop Mathematics	75		75
Structure of Materials	50		50
Human Relations	25		25
			450

4th Trimester			
Machine Shop Theory & Practice	75	225	300
Machine Shop Mathematics	75		75
Oxy-Acetylene Welding	10	65	75
			450

5th Trimester			
Jig & Fixture Theory & Development	75	225	300
Advanced Machine Shop Mathematics	75		75
TIG & Electric Welding	10	65	75
			450

6th Trimester			
Die Theory & Development	75	225	300
Metallurgy & Heat Treatment	25	50	75
Advanced Machine Shop Math	75		75
			450

Total Hours 2700

MECHANICAL TECHNOLOGY
(Design & Production)

The course in Mechanical Technology is a two-year, post high school, pre-employment course designed to prepare the student for employment as a Technician in one of two specialized fields: Design or Production. The term Technician is used to describe a large and loosely defined group of occupations at many levels of skills and with a wide variety of training requirements. The DESIGN Technician must have a background of basic mathematics and engineering science, complete familiarization with modern machine tools - their limitations and capabilities, together with ability to perform adeptly on the drafting board. The PRODUCTION Technician must have a background of mathematics and the engineering sciences, familiarization with machine tools, and a working knowledge of modern production methods including material handling systems, plant layouts, and methods of determining production costs.

A new classroom and labortory unit located in a new modern building, and other auxiliary features, fully equipped with the latest in modern machine tools and precision instruments provides one of the most modern and up-to-date facilities of its kind in the entire country.

Mechanical Technician will be employed in manufacturing plants of all kinds. It is estimated that as a result to Automation and other modern industrial advances, 200,000 trained Technicians will be needed in industry each year for the next 10 years. Technicians to fill jobs such as: Cost ananysis technician, Design checker, Engineering assistant, Laboratory technician and tester, Production planner, Tool designer, and many others.

Course Outline

MECHANICAL TECHNOLOGY
(Design & Production)
First Year

1st Trimester	Classroom	Lab	Total
Mech. Math (Algebra)	75		75
Technical Drawing	20	100	120
Science I (Physics-Mechanics)	45	60	105
Metals Lab		150	150
			450

2nd Trimester			
Mech. Math (Trigonometry)	75		75
Technical Drawing		90	90
Communication Skills	45		45
Metals Lab		150	150
Science II (Physics-Heat, Light, Sound)	50	40	90
			450

3rd Trimester			
Technical Sketching	20	100	120
Science III (A.C. Electricity)	45	60	105
Strength of Materials	45	15	60
Materials of Engineering	60	30	90
Human Relations	75		75
			450

MECHANICAL TECHNOLOGY
(Design Option)
Second Year

4th Trimester

Basic Mechanisms	300
Metals Lab	150
	450

5th Trimester

Machine Design	175
Tool Design	200
Industrial Organization & Management	45
Economics	30
	450

6th Trimester

Design Problems	450
	450

TOTAL HOURS
With Design Option 2700

MECHANICAL TECHNOLOGY
(Production Option)
Second Year

4th Trimester

Motion & Time Study	75
Production Control	75
Process Planning	75
Controls Systems	75
Metals Lab	150
	450

5th Trimester

Motion & Time Study (Strength of Materials)	75
Production Control	75
Process Planning	75
Economics	30
Industrial Organization & Management	45
Metals Lab	75
Quality Control	75
	450

6th Trimester

Quality Control	75
Cost Estimating	150
Material Handling	40
Plant Layout	35
Process Planning	75
Safety Engineering	75
	450

TOTAL HOURS
With Production Option 2700

MEDICAL OFFICE

Medical Office Assistant's Course is a one-year pre-employment course designed to prepare the student for employment at entry levels in a doctor's office. The fundamental role of the medical assistant is to act as a public relations agent between the physician and his patients and to assist him in many clinical situations. Among her duties may be those of a Secretary, receptionist, technician, or doctor's assistant. She will be able to vary her role and responsibilities depending on the number of office personnel and on the specialty of her employer.

The instructor is professionally trained and a state certified teacher. The course occupies a modern classroom-laboratory equipped with the most modern equipment as is found in a physician's office.

Graduate of this program may be the only assistant a doctor has in his office. They may have specialized duties as one of several assistants or may go with a hospital, clinic, special care institution, or public health service as a trained medical office assistant. There are many possibilities now open and the number is rapidly increasing.

Proposed

Course Outline

MEDICAL OFFICE ASSISTANT

1st Trimester	Classroom	Lab	Total
Personal and Vocational Relationships	15		15
Personal, Patient, and Public Psychology	15		15
Anatomy	30		30
Pharmacology	30		30
Nutrition	20		20
Sterilization	10	10	20
First Aid	10		10
Medical-Surgical Nursing I	120		120
Medical Secretarial Duties	40	50	90
Laboratory Techniques	50	50	100
			450

2nd Trimester			
Secretarial Experience in Physician's Office		216	216
Special Tests and Treatments (Electrocardiograms, etc.)	34		34
Medical Terminology	60		60
Clinical Procedures		50	50
Maternal-Child Nursing	40		40
Medical-Surgical Nursing II	50		50
			450

3rd Trimester			
Clinical Experience in Physician's Office		300	300
Problem Solving and Review	100		100
Medical-Legal Aspects	50		50
			450

TOTAL HOURS 1350

RADIO AND TELEVISION SERVICING

Radio and Television Servicing is a twenty-two month, pre-employment course designed to prepare the student for employment at entry levels in the repair and servicing of radio receivers (including transistors), televsion receivers (including color and closed circuit), and high fidelity and other associated equipment. The program develops the necessary background in mathematics, electricity, and the related sciences.

The instructor is a master craftsman in his field and is a professionally-trained and state certified teacher. The course occupies a modern classroom-laboratory, equipped with the most modern equipment as is found in industry. Facilities are among the finest available.

Many Radio and Television servicemen are employed in small repair shops; often they are self-employed, operating their own shops. Some are employed in large repair shops including service branches of large manufacturing companies. Appliance stores, department stores and other sales outlets for radios and television sets also employ repairmen in their service departments. Electronic servicemen will continue to have excellent opportunities in the 1960's. Widespread introduction of color television is expected to increase the demand for servicemen in the years immediately ahead. Not only employment increases in existing fields, but many new areas of electronics work are expected to develop.

Course Outline

RADIO AND TELEVISION SERVICING

1st Trimester	Classroom	Lab	Total
Mathematics	75		75
Basic Concepts & D.C. Circuits	150	225	375
			450

2nd Trimester			
Mathematics	75		75
Fundamentals of A.C. and A.C. Circuit Analysis	150	225	375
			450

3rd Trimester			
Mathematics	75		75
A. C. Circuits	75	125	200
Vacuum Tubes	75	100	175
			450

4th Trimester			
Mathematics	75		75
Electronic Circuits & Systems	75	125	200
Audio Circuits	75	100	175
			450

5th Trimester			
Radio Transmitters	125	100	225
Radio Receivers	125	100	225
			450

6th Trimester			
Television Circuits & Systems	75	75	150
Television Receivers, Troubleshooting and Servicing		150	150
Color Television Receivers	50	100	150
			450

TOTAL HOURS 2700

REFRIGERATION AND AIR CONDITIONING

Refrigeration and Air Conditioning is a pre-employment course designed to prepare the student for employment at entry levels in the fields of Refrigeration and Air Conditioning. Both theoretical and practical training are provided for persons who desire to enter this field. Instruction is directed toward meeting the need for technically-trained personnel in the fields of system design and layout, equipment installation, maintenance, and servicing. The program develops the necessary background in mathematics, electricity, and the related sciences.

The instructor is a master craftsman in his field and is a professionally-trained and state certified teacher. The course occupies a modern classroom-laboratory, equipped with the most modern equipment as is found in the industry. Facilities are among the finest available.

Workers are employed in all parts of the country, because of the widespread use of Refrigeration and Air Conditioning equipment. The demand for additional mechanics is growing because of the increase use of refrigeration and air conditioning equipment in industrial, commercial and home use. Refrigeration and Air Conditioning mechanics may work with contractors, maintenance companies, large industries and utilities, government organizations, department stores, general servicing, and may go into business for themselves. The future looks unlimited as the need increases in industrial, commercial, and home use, and in the manufacture of new products.

Course Outline

REFRIGERATION AND AIR CONDITIONING

1st Trimester	Classroom	Lab	Total
Fundamentals of Refrigeration	100	50	150
Fundamentsls of Electricity	100	50	150
Tubing & Pipe Work	5	25	30
Tools & Equipment	2	28	30
Lubrication	5	25	30
Cabinet Work	10	50	60
			450

2nd Trimester			
Relays; Magnetic	25	100	125
Solonoids	25	75	100
Motor Control	30	100	130
Starters	20	75	95
			450

3rd Trimester			
Air Conditioning	40	140	180
Heat Pumps	110	160	270
			450

4th Trimester			
Gas Fired Heating System	30	100	130
Servicing auto Air Conditioning	20	100	120
Installation Work	30	170	200
			450

REFRIGERATION AND AIR CONDITIONING Course Outline - Continued:

5th Trimester	Classroom	Lab	Total
Refrigerant, Valves	30	90	120
Back Pressure Valves	30	90	120
Condensers	20	80	100
Cooling Coils	10	50	60
Cleaning System	10	30	50
			450

6th Trimester			
Calculation & Heat Loads	60	30	90
Elementary Blueprint Reading	30	30	60
Fundamentals of Math	60		60
Diagnosing & Correcting Troubles	65	175	240
			450

TOTAL HOURS 2700

UPHOLSTERY

Upholstery is a one and a half year, post high school, pre-employment course designed to prepare the student for employment in the field of upholstery. This course is designed to train students to become proficient in furniture upholstery, selection and proper use of materials and their application, the maintenance and use of hand tools and machinery used in the trade.

The instructor is a master craftsman in his field and is a professionally-trained and state certified teacher. The course occupies a modern classroom-laboratory, equipped with the most modern equipment as is found in industry. Facilities are among the finest available.

Upholstery graduates are employed in almost every locality. Many upholstery graduates are self-employed. Employment opportunities in this field in the years immediately ahead are expected to increase.

COLUMBUS AREA VOCATIONAL-TECHNICAL SCHOOL
BRANCH # 1

Columbus, Georgia 31907

UPHOLSTERY

COURSES	HOURS
Orientation	30
Springs	243
Patterns	405
Sewing	370
Cushing Contructions	710
Channels and Tufts	112
Auto Upholstery	90
Covering	20
Business Principal	120
Applied Mathematics	60
Job Behavior	30
TOTAL	2190

WELDING

Welding is a one year, pre-employment course designed to prepare the student for employment at entry levels in the welding field. Both theoretical and practical training are provided for persons who desire to enter this field. The purpose of this course is to provide a sound training program of the skills involved in welding along with a background of technical information needed by the modern welder.

The instructor is a master craftsman in his field and is a professionally-trained teacher. The course occupies a modern classroom-laboratory, equipped with the most modern equipment as is found in industry. Facilities are among the finest available.

Welders are employed in almost every locality. Graduates of this program will be prepared for employment in motor vehicle and equipment plants, construction companies, metal working repair shops, sheet metal shops, or pipe line construtior companies.

Proposed

Course Outline

WELDING

1st Trimester	Classroom	Lab	Total
Applied Mathematics	75		75
Blueprint Reading	50	25	75
Arc Welding I	15	60	
Oxy-Acetylene Welding I	15	60	75
Properties of Metals	20	55	75
Welding Codes and Standards	50	25	75
			450

2nd Trimester			
Arc Welding II	50	80	130
Oxy-Acetylene Welding II	50	80	130
Applied Mathematics	50		50
Welding Codes and Standards	25	75	100
Properties of Metals	25	15	40
			450

3rd Trimester			
Arc Welding III	50	90	140
Applied Mathematics	25		25
Customer Relations	75		75
Inert Gas Welding	25	45	70
Oxy-Acetylene Welding III	50	90	140
			450

Total Hours 1350

QUESTIONS

1. What do I have to do to be accepted? Refer to steps of admission.

2. Can I be deferred from military service? According to our present law you can if you maintain satisfactory grades and your attendance is regular.

3. Is the school accredited? We are licensed under the State Board of Education to operate thru the Muscogee County School District and the Department of Vocational Education Department.

4. What about a job after graduation? Columbus Tech maintains a placement service for graduates applying for full-time positions.

5. When can I apply? Applications can be made at any time. Students for September enrollment are encouraged to apply by at least the preceding January.

6. How much does it cost? Supply fee of $20.00 per trimester plus cost of books and personel supplies. As a rule, the training is approximately $12.00 per month. This includes the cost of all books.

7. How long is the school day? Normal school days are from 8:30 a.m. till 3:30 p.m., Monday thru Friday.

8. How long is a trimester? Fifteen school weeks with three trimesters making a school year.
   Fall trimester - September 1 thru December 15
   Winter trimester - December 16 thru April 15
   Spring trimester - April 16 thru July 30

9. Can I go at night or part-time? Not as a general rule on pre-employment courses. Some training is offered on a very limited scale. For more information contact Columbus Tech.

10. How am I graded? In arriving at your grade more is involved than just the grades that you make on written tests. The following areas will be used in determining your grade:

    a. Courtesy, leadership, promptness, thoroughness, and dependability.
    b. Industriousness, mental alertness, general alertness, and personal appearance.
    c. Following instructions, accepting responsibility, ability to get along with others, and ability to apply related technical information.
    d. Written classwork and test.

11. Can girls attend this school? Yes, we have offerings for girls in Business Education, medical office assistants, data processing, distributive education, cosmetology, upholstery, electronics and others.

VT 004 994

Cook, Alfred W.; Gaspari, Carole

The Navajo Rehabilitation Project, Pre-Vocational Laboratory. Navajo Rehabilitation Project Technical Report No. 8.

Northern Arizona Univ., Flagstaff

Vocational Rehabilitation Administration (DHEW), Washington, D.C. RD-1213-G

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*NAVAHO; VOCATIONAL APTITUDE; ADULT EDUCATION; *EVALUATION METHODS; *VOCATIONAL REHABILITATION; PROGRAM DESCRIPTION

*PROJECT NAVAJO REHABILITATION

The Pre-Vocational Laboratory used work sample techniques, dexterity tests, and other observational methods to evaluate the vocational abilities of the Navajo rehabilitation clients. Because of English language handicaps and different cultural values, the Navajo clients had unique problems in the laboratory situation. They were unfamiliar with many of the tools and machines and the whole concept of evaluation. They had limited work experiences. A final report was made on each client and recommendations were made for placement in training or directly on a job where they would probably experience a success. (MM)

VT004994

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THE NAVAJO REHABILITATION PROJECT

PRE-VOCATIONAL LABORATORY

Navajo Rehabilitation Project Technical Report No. 8

Alfred W. Cook

and

Carole Gaspari

Northern Arizona University
Flagstaff, Arizona

1967

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OFFICE OF EDUCATION

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ABSTRACT

The Pre-Vocational Evaluation Laboratory of the Navajo Rehabilitation Project used a work sample method of assessment to evaluate the vocational abilities and aptitudes of a disabled group of Navajo clients.

Among the different types of tasks offered in the Pre-Vocational Laboratory were leather and jewelry work, electrical wiring, welding, typing and business machine operation, woodworking, and other tasks. The Navajo clients were usually evaluated in most of the available areas because their job interests were vague and limited.

On two dexterity tests administered in the Laboratory, Navajo clients scored highly (68th percentile) on the O' Connor Finger Dexterity Test, and poorly on the Minnesota Rate of Manipulation (significantly below the standardization group at the .01 confidence level). Their finger dexterity was apparently above average, while their dexterity in a task of more gross rapid body movements was well below average. Since there are no norms for a disabled population, it is difficult to interpret these test data.

The evaluation made in the Laboratory was often subjective in nature, but it was hoped that the validity of such an evaluation could be more adequately determined in the future with the establishment of norms for many of the tasks, and with a long-term follow-up research study of rehabilitation clients.

TABLE OF CONTENTS

CHAPTER		PAGE
I.	Introduction	1
	The Meaning and Purpose of Pre-Vocational Evaluation in Rehabilitation	
	The Pre-Vocational Evaluation at the Navajo Rehabilitation Project	
II.	Description of the Navajo Rehabilitation Project Pre-Vocational Evaluation	3
	Purpose	
	Description of Facilities	
	Equipment	
III.	Pre-Vocational Methods and Procedures	5
	Tests Used	
	Description of Pre-Vocational Evaluation Process	
IV.	Results of Several Evaluation Methods Employed In The Pre-Vocational Laboratory	8
	Discussion of Test Results	
V.	Navajo Rehabilitation Project Client Characteristics	12
VI.	Summary and Conclusions	15
	Bibliography	16
	Appendix A: List of Equipment	18
	Appendix B: Evaluation Tasks	20
	Appendix C? Pre-Vocational Laboratory Final Report	22
	Appendix D: Correspondence	32

CHAPTER I

INTRODUCTION

The Meaning and Purpose of Pre-Vocational Evaluation in Rehabilitation

Moed (1960, P. 1), in a review of current procedures in pre-vocational evaluation of the disabled, stated that pre-vocational evaluation may be divided into several components, which are "realistic vocational appraisal, appraisal of behavior dynamics in a work situation, and a therapeutic work experience which helps the individual gain a better understanding of himself as a worker." Pre-vocational evaluation is a practical method of measuring vocational effectiveness (Allan, 1958, P. 78). It is the use of supervised work to provide a practical test for the evaluation and development of work skills and attitudes.

Pre-vocational evaluation units may be housed in a variety of facilities. The most common of these are a separate pre-vocational evaluation unit, an occupational therapy department, or a sheltered workshop (Moed, 1960). These units are found in either a medically or a vocationally oriented rehabilitation setting. A center with a medical orientation is primarily concerned with work tolerance, while a vocationally oriented center is concerned with exploring and developing the vocational potential of the client.

There are various methods of vocational appraisal, including the work sample method, the use of sub-contract production, psychometric evaluation, and industrial engineering techniques.

The most frequently used method of vocational appraisal is the work sample (Moed, 1960, P. 2). This method was the one primarily used in the Navajo Rehabilitation Project. The work sample tasks are designed to resemble actual job situations. Though sampling in all occupations which offer possible employment is not practical, enough tasks are assigned in a variety of areas to predict general areas of vocational success.

One of the major exponents of the work sample technique is the Institute for the Crippled and Disabled. Their work sample method is called the TOWER System, which stands for Testing, Orientation, and Work Evaluation in Rehabilitation (Institute for the Crippled and Disabled, 1960, P. 50). The TOWER System consists of thriteen broad areas of vocational evaluation, including Clerical, Drafting, Drawing, Electronics Assembly, Jewelry Manufacturing, Leathergoods, Lettering, Mail Clerk, Optical Mechanics, Receptionist, Sewing Machine Operating, Workshop assembly, and Welding.

A pre-vocational unit in a rehabilitation center is usually a vocational evaluation laboratory. According to Allan (1958, P. 79), the client should be given at least three weeks of work in the laboratory, and during that time he should have a trial in the performance of a variety of work experience.

The ideal Pre-Vocational Evaluator is a composite of a counselor, a teacher, a tester, an occupational therapist, and a person with industrial experience; yet, it is difficult to obtain evaluators with all these qualifications. Most evaluators in pre-vocational laboratories come from an industrial setting or from college industrial education departments. These backgrounds in many ways come nearest to meeting the requirements for the job of Pre-Vocational Evaluator, and these were the sources drawn upon for the Pre-Vocational Evaluators at the Navajo Rehabilitation Project.

The Pre-Vocational Evaluation at the Navajo Rehabilitation Project

The Pre-Vocational Evaluation at the Navajo Rehabilitation Project was designed as a separate unit within the Project. The Project was vocationally oriented and one of its primary purposes was to develop techniques for the vocational evaluation of disabled Navajos.

The Navajo Rehabilitation Project Pre-Vocational Evaluation Unit used the work sample technique and several of the TOWER tests. As the Project evolved, new paper and pencil tests were added to the evaluation, and the TOWER tests were revised to suit the Navajo client group. Also, dexterity tests were added to the evaluation.

CHAPTER II

DESCRIPTION OF THE NAVAJO REHABILITATION PROJECT

PRE-VOCATIONAL EVALUATION

Purpose

The objectives of the Pre-Vocational Evaluation were to evaluate as many aspects of each client's vocational capabilities as possible, to observe and report on the physical and mental limitations of each client, to keep research notes on the client, and to introduce many varied samples of vocations and different tools to the client.

Throughout the Pre-Vocational Evaluation, the emphasis was on assessment of the client in the following areas: educational background, previous work history, present abilities, aptitudes, potentials, interests and hobbies, physical and mental limitations, and personal characteristics and attitudes towards work.

Another purpose of the evaluation unit was to establish performance norms and evaluation procedures for the Navajo clients.

Description of the Facilities

The Pre-Vocational Evaluation Unit was organized into a comprehensive general shop with a variety of activities conducted simultaneously. It was both a shop facility and an experimental facility, since the work conducted was directed towards research as well as evaluation. The Unit was later relabeled the "Pre-Vocational Labortory."

The Pre-Vocational Laboratory was first located in a small room on the bottom floor of the Northern Arizona University Applied Arts Building. The Laboratory was converted from a classroom and proved inadequate as an evaluation shop facility because of limited floor space.

The smallness of the Laboratory limited the number of clients, and the type of tasks that could be performed simultaneously. The Laboratory facility was used from the beginning of the Project until August, 1966. At that time, the Laboratory was moved into the new Northern Arizona University Rehabilitation Center. The new Laboratory has space for the simultaneous evaluation of twelve to fifteen people. A separate testing room is available for the administration of eye examinations and manual dexterity tests. Another feature of the Laboratory is a glass enclosed office where private conversations can take place without isolating the evaluator from viewing the Laboratory.

Equipment

The Pre-Vocational Laboratory was equipped with tools and machinery that duplicated or resembled those used in industry. Peterson and Parnicky (1963, P. 15) stress that the underlying rationale of pre-vocational evaluation programs is that "the closer the testing situation approximates the real life setting, the more accurate the evaluation will be and the more meaningful the experience." Though the Laboratory tried to simulate actual job situations, this was not entirely successful since there were no monetary rewards for performing the tasks adequately.

The tools, machines, and other equipment in the Laboratory were donated to the Project by various groups--the Navajo Tribe, Arizona Blind Services, and the Division of Vocational Rehabilitation. A list of the shop equipment is in Appendix A of this report.

CHAPTER III

PRE-VOCATIONAL METHODS AND PROCEDURES

Tests Used

The major portion of the evaluation tests were obtained from the TOWER System. The Laboratory used five of the thirteen available tests. These were Clerical, Drafting, Jewelry Manufacturing, Workshop Assembly, and Leathergoods. Portions of the other eight TOWER Tests, plus some locally developed appraisal methods comprised the remainder of the Pre-Vocational Evaluation. The Training and Reference Manual for Job Analysis (Department of Labor, 1944) was used to establish the evaluation procedures in the Laboratory. Job sample tasks were designed to resemble actual jobs. If a client could perform the type of tasks the specific job required, it was assumed he could do the actual job. A list of all the tasks used in the Laboratory is in Appendix B.

Description of the Pre-Vocational Evaluation Process

After the Navajo Rehabilitation Project was well established, the rehabilitation staff began evaluating other disabled clients, including Mexican-American, Negroes, Caucasians, and other Indian groups. Thus, a general comparison of the Navajo clients with other rehabilitation clients ultimately could be made. The evaluation process was similar for all clients. However, Navajo clients were usually given a longer period of evaluation than was required for other rehabilitation clients. The reasons for this difference were that most of the Navajo clients were unfamiliar with the tasks they were required to perform in the Laboratory; they often had limited or no work experience; and were unfamiliar with many of the tools and machines used in the Laboratory. Also, data on Navajos was needed to meet the research aims of the Project.

The evaluation began with a personal interview to establish rapport with the client. This interview was

followed by a physical capabilities questionaire, an eye examination on the Telebinocular or Ortho-rater, and some dexterity tests. The remainder of the evaluation was composed of practical examinations and a variety of job sample tasks. Because the Navajo clients seemed to dislike the practical paper and pencil tasks, several different methods of presenting the sample tasks and the practical examinations were tried. To increase interest and motivation, the Evaluator usually alternated the manipulative and the written tasks. The client was often started in a work sample task in which he was interested. After the relationship between client and Evaluator was improved, the client would be more willing to attempt the written tasks.

A Navajo client was left in one phase of the evaluation long enough to assess his performance in that area. The client was then moved to a different phase of the evaluation, and this phase was continued until he had completed the Laboratory evaluation. The observations made of the client's attitudes, interests, aptitudes, and abilities in the Laboratory were then summarized on a final assessment sheet (see Appendix C). A final report was written on each client, discussing his general performance in the Laboratory, and giving recommendations for job possibilities for the client. General, rather than specific, recommendations for vocations were given, so that the client would not be limited to the specific vocational areas simulated in the Pre-Vocational Laboratory.

The total evaluation time in the Laboratory varied for each client. During the Project's existence the evaluation time was continually shortened because the staff felt they knew more about the evaluation of Navajos, and could evaluate them effectively in a shorter period of time. Originally the client was in evaluation three hours a day for seven or eight weeks. Gradually this was shortened to six weeks, four weeks, and finally three weeks.

It was often difficult to evaluate Pre-Vocational Laboratory performance objectively. There is no normative data available as yet on the use of the TOWER Tests, though a study is in progress (see Appendix D). To create a more objective evaluation, the evaluation consisted of several phases, and each client was evaluated by more than one Evaluator. Thus, there was some opportunity to

check reliability and the construct validity of these evaluations. Without long term follow-up of employment histories, studies of predictive validity of pre-vocational evaluation are somewhat questionable.

CHAPTER IV

RESULTS OF SEVERAL EVALUATION METHODS EMPLOYED IN THE PRE-VOCATIONAL LABORATORY

The O'Connor Finger Dexterity Test (O'Connor, 1926) was constructed to evaluate a person's ability to rapidly manipulate objects, especially the picking up and placing of small parts. This test is used in the selection of pivot setters, gear train assemblers, and meter assemblers. The mean time on this test for thirty-seven Navajos evaluated in the Pre-Vocational Laboratory was 248 seconds, faster than the mean for the standardization group, which was 262 seconds. The range of scores for Navajos was 180 seconds (99th percentile) to 360 seconds (11th percentile). Because of a lack of statistical data on the O'Conner, it was not possible to compare the standard error of the difference between means. However, the average Navajo client scored at approximately the 68th percentile on this test.

The Minnesota Rate of Manipulation Test (Educational Test Bureau, 1957) is used to evaluate manipulative skills. This test was developed from a test used by the University of Minnesota Employment Stabiliation Research Institute. The present form of the Minnesota Rate of Manipulation is now used by public employment offices, and in trade and industry. The test has two parts: Placing and Turning; which were standardized on Minneapolis' Public Library patrons with a median age of nineteen. Results of administering this test to thirty-four Navajo Rehabilitation Project clients evaluated in the Laboratory showed that the average Navajo client was slower than the first percentile on both parts of the test. Mean scores for Navajo clients were 188 seconds for Placing and 165 seconds for Turning. The highest score obtained by a Navajo was the 90th percentile on the Placing test and the 80th percentile on the Turning test. Thus, a sample of Project clients scores significantly (at the .01 confidence level) slower than the test norm population.

The Personnel Test for Industry, Form S (Langmuir, 1954) was used in the Pre-Vocational Laboratory. This test of general abilities was designed specifically for industrial use in personnel selection. Form S consists of thirty-nine scorable responses, and requires fifteen minutes to administer. The oral directions and test administration are pre-recorded on a standard tape. Navajos who took this test were compared with textile mill applicants, who were the lowest of the nine norm groups. The mean score for the Navajo clients was 14.41 (24th percentile) while the mean score for the textile mill applicants was 21.1 (50th percentile). Therefore, the Personnel Test for Industry also produced Navajo Rehabilitation Project client scores significantly (at the .01 confidence level) below the standardization population.

Two other tests that were developed in the Laboratory by the Pre-Vocational Evaluators were the Practical Knowledge Task and the Read-A-Rule Task. These tasks tested knowledge of measurements and practical mathematics. No normative data is yet available on these tests, so it is not possible to compare Navajos with other groups taking the tests. The mean scores for the Navajo clients on these tests are available, however, in Table I.

Discussion of the Test Results

The Navajo Rehabilitation clients scored better than average on the O'Connor, which is a test of rapid manipulation of small parts, while on the Minnesota Rate of Manipulation their scores were, in general, quite poor. In the Examiner's Manual for the Minnesota (1957, P. 3), the authors mentioned that this test measures more than speed in finger, hand, and arm movements. "It appeared to many psychologists that the functional involvement was more extensive than this, that it also included gross body movements, intelligence, vision, and perseverance."

Apparently, the Navajos tested on the O'Connor were not penalized by their disabilities. They could perform well on a test of finger dexterity. However, when a test of more gross body movements was given them, they performed poorly. It is possible that a disabled group of clients would also perform poorly on this test; since

there is no normative data available for a disabled population, it was not possible to compare the performance of Navajo clients with the performance of other disabled groups.

On the Personnel Test for Industry, Navajos scored much lower than the general population. This test is given orally, and penalized those who are English language handicapped. Since most Navajos speak English as a second language, it was probably often difficult for them to understand the instructions, and their scores were lowered as a result.

TABLE I

COMPARATIVE DATA FOR NAVAJO REHABILITATION CLIENTS
ON SEVERAL TESTS USED IN THE LABORATORY

	NORM GROUP		NAVAJO REHABILITATION PROJECT CLIENTS					
TEST	MEAN	STANDARD DEVIATION	MEAN	STANDARD DEVIATION	MINI-MUM SCORE	MAXI-MUM SCORE	NUMBERS TAKING TEST	CONFIDENCE LEVEL FOR DIFFERENCE BETWEEN MEANS
O'Connor Finger Dexterity Test	262 sec	not avail.	248 sec	39.15	180	360	37	---
Minnesota Rate of Manipulation								
1. Placing	123 sec	10.1	188 sec	60.18	110	303	34	.01
2. Turning	98 sec	9.3	165 sec	77.90	89	482	30	.01
Personnel Test for Industry (39 possible)	21.1	8.2	14	9.31	0	30	28	.01
Practical Knowledge (24 possible)	not avail.	not avail.	14	6.62	0	23	29	---
Read-A-Rule (26 possible)	not avail.	not avail.	16	8.35	0	26	39	---

CHAPTER V

NAVAJO REHABILITATION PROJECT CLIENT CHARACTERISTICS

In comparing the evaluation time for different client groups, it was found that the Navajos required a longer evaluation period, in general, than other rehabilitation clients. More time was required for Navajos because of client attitudes and cultural differences.

It was usually more difficult to establish rapport with Navajo clients than with other Laboratory clients. Frequently the Navajos conversed with each other in their native language, and preferred to be with other Navajos. This need lessened as the evaluation progressed, and a friendly relationship was usually established between client and Evaluator.

Many of the Navajo clients began the evaluation with a negative attitude. This was usually the result of misunderstanding the purposes of the evaluation, or feeling threatened by a confusing situation. These characteristics were more prevalent among the Reservation-oriented clients who were unfamiliar with industrial settings.

The Navajos were usually quiet while in the Laboratory, and were reluctant to express their feelings about their Laboratory experiences. They seemed less aggressive, less self-directive, and more socially withdrawn than other non-Indian cultural groups.

The average Navajo client entering evaluation had less formal education than other ethnic groups. The average grade completed by the Navajo Rehabilitation Project clients was the sixth, while for other cultural groups it was the ninth. Many Navajo clients were also handicapped by their inability to communicate effectively in English. This lack of education was a detriment to the client's performance in the Pre-Vocational Evaluation Laboratory.

The Navajo clients were also often lacking in work experience. Since there is limited industry on the Navajo Reservation and most Project clients had worked in unskilled jobs, little of the knowledge gained from a Navajo's work experiences could be transferred and applied in the Pre-Vocational Laboratory. This lack of vocational experience and knowledge made it difficult for the Navajo client to know what kind of job he wanted. Often the major desire of the client was only that the job be located on or near the Reservation.

The most usual areas of interest of the Navajo clients were the artistic fields and the hand manipulation tasks, and these were the areas in which they were usually the most competent. These interests are consistent with their relative success on aptitude tests. For example, the majority of Navajo Rehabilitation Project clients scored highest on the Block Design Sub-test of the Wechsler Adult Intelligence Scale, though their mean score was still slightly below the mean of the average population. Most Navajos appeared to have better than average ability in drawing, sketching, and flat-plane and space perception. They also appeared to have good finger dexterity and hand manipulation, which was indicated by their above average performance on the O'Connor Finger Dexterity Test. They achieved on this above the norm group, even though some of them were able to use only one hand or were otherwise handicapped.

When assigned tasks such as drafting, leatherwork, or jewelry-making, the Navajos appeared to feel competent in their abilities. They were very imaginative and created many of their own designs. The Navajos scored below average in mechanical tasks, usually because they had no knowledge of basic mechanical principles. Once the concept was understood by the clients, they usually completed such tasks successfully, though slowly.

Navajos do not have as rigid a time concept as do members of the dominant United States culture. This difference was evident in the timed tests in the Laboratory. Many of the clients did not understand the idea of doing a task as rapidly as possible; they preferred to work at their own speed, and consequently, often required more time to complete the tasks than other cultural groups.

One of the major cultural differences noted with Navajo clients was a difference in value orientation. Navajos placed more value on a piece of leather or turquoise than on an equally priced piece of wood or metal used in the Laboratory. They placed less value on tools and machines than did other ethnic groups; and as a consequence, Navajos often were abusive with such equipment.

The actual performance of Navajo clients on job tasks in the Laboratory indicated that they worked more slowly than other rehabilitation clients, but were still within the range of the average population in abilities and dexterity and were usually careful and adequate workers. These observations conflict with the exceptionally low scores the Navajos received on the Minnesota Rate of Manipulation Test. The performance in the simulated job situations in the Laboratory, since they were less threatening than the timed dexterity tests, was thought to be more concrete evidence of the Navajos' true manipulative abilities.

CHAPTER VI

SUMMARY AND CONCLUSIONS

The Pre-Vocational Laboratory used work sample techniques, dexterity tests, and other observational methods to evaluate the vocational abilities of Navajo Rehabilitation clients.

Navajo clients had unique problems in the Laboratory situation because of English language handicaps and differences in cultural experiences and values. They were unfamiliar with many of the tools and machines in the Laboratory, and with the whole concept of evaluation. Their past work experiences were usually limited to seasonal or unskilled work and their knowledge of jobs was narrow. The Navajo clients were assigned a variety of tasks, and the Evaluator noted the client's reactions to each work area. The observations of the Evaluator were then combined into a final report on each client. General recommendations were made for placement in training or directly on a job where they would probably experience success.

It was found that many tasks used successfully with other rehabilitation clients could also be used with Navajos if interpretations of abilities were made cautiously and if a staff has some knowledge of Navajo culture.

Since there is not standardization data on most of the Laboratory tasks, much of the Laboratory evaluation was subjective in nature. Standardization data is needed to make the evaluations in the Laboratory more objective and accurate and more long-term follow-up is needed to satisfactorily validate the pre-vocational evaluation tasks and procedures.

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APPENDIX

APPENDIX A

PRE-VOCATIONAL LABORATORY

LIST OF EQUIPMENT

Clerical:

1 dictating machine and transcriber unit
1 electric typewriter and stand
1 twenty-seven drawer file card cabinet
1 tape recorder
1 mail scale
1 electric adding machine
1 paper cutter

Drafting:

2 drafting boards
2 drafting tables
2 drafting sets
2 lettering sets

Electrical:

1 electrical circuit board

Leather Working:

2 work benches
40 saddle stamps
2 mallets
assorted leather tools

Metal Working:

1 metal bench
1 vice
1 bench grinder
1 oxyacetylene welding bench
1 oxyacetylene welding equipment
1 nine-inch lathe
1 air compressor
1 drill press
1 ½-inch portable drill
1 A.C. Arc Welding Machine and Equipment

Plumbing:

cast iron and galvanized pipe for plumbing tree

Power Mechanics:

6 carburators
4 generators
2 starters
1 brake unit
1 fuel pump
1 metal bench
1 automatic transmission
1 set of mechanics tools
1 gasoline engine

Stone Working:

1 18-inch slabbing saw
1 trimming saw
1 grinding outfit
1 cabinet
1 tumbler

Woodworking:

1 lathe
1 jig saw
1 electric sander
1 table saw
1 jointer
1 dust collector
1 four-station work bench
104 assorted hand tools
1 portable electric drill
1 portable electric jig saw
1 router
4 bar clamps
2 hand clamps

Miscellaneous:

12 stools
1 time clock
1 plastic oven
1 plastic buffer
1 semi-automatic sewing machine
4 metal tables
4 metal cabinets
6 metal shelves

APPENDIX B

EVALUATION TASK CHECK LIST

TASK	COMPLETED
1. Personal information	_____
2. Telebinocular	_____
3. Physical Capabilities	_____
4. Dominance	_____
5. Dexterity	
a. O'Connor Finger Dexterity	_____
b. Minnesota Rate of Manipulation	_____
c. Stromberg Dexterity	_____
d. Bennett Hand Tool	_____
6. Practical Examination	
a. Math	_____
b. Spelling	_____
c. Writing	_____
d. Time Checking	_____
e. Drawing Duplications	_____
f. Practical Knowledge	_____
7. Clerical	
a. Cross-checking (speed test)	_____
b. Telephone	_____
c. Abbreviations	_____
d. Money handling	_____
e. Shorthand	_____
f. Machine Calculator	_____
g. Cash register	_____
h. Typing	_____
i. Filing	_____

TASK	COMPLETED
8. Mechanical	
a. Personnel Test for Industry	_____
b. Tool Identification	_____
c. Read-A-Rule	_____
d. Mechanical Wheels	_____
e. Carburetor (small)	_____
f. Carburetor (large)	_____
g. Brake	_____
h. Engine	_____
9. Assembly Line	
a. Washers	_____
b. Stapling machine	_____
10. Drafting	
a. Plate 1	_____
b. Plate 2	_____
c. Plate 3	_____
d. Plate 4	_____
e. Plate 5	_____
11. Plumbing	_____
12. Electricity	_____
13. Leather	_____
14. Woodworking	_____
15. Jewelry	_____
16. Printing	_____
17. Lapidary	_____
a. Slab	_____
b. Trim	_____
c. Grind	_____
d. Sand	_____
e. Polish	_____
18. Final Report	_____

APPENDIX C

PRE-VOCATIONAL EVALUATION
NORTHERN ARIZONA UNIVERSITY

CLIENT'S NAME: _____

DATE: _____

EVALUATOR: _____

NUMBER OF HOURS IN THE SHOP: _____

AREAS COVERED: 1( ) 2( ) 3( ) 4( ) 5( ) 6( ) 7( ) 8( ) 9( ) 10( ) 11( ) 12( ) 13( ) 14( ) 15( ) 16( ) 17( ) 18( ) 19( ) 20( ) 21( ) 22( ) 23( ) 24( )

A. SOCIAL AND PERSONALITY CHARACTERISTICS: The following characteristics are marked in this manner: (1) ALWAYS or USUALLY (2) SOMETIMES (3) SELDOM OR NEVER. "U" is marked if valid judgement cannot be given.

BEHAVIOR ITEMS	1	2	3	U	COMMENTS
1. APPEARANCE. Well groomed, shaved, hair, clothes.					
2. CHEERFULNESS. At work and socially.					
3. CONSTRUCTIVE CRITICISM. Accepts and profits from constructive criticism.					
4. COOPERATION. Gets along well with instructors, etc.					
5. COURTESY. To co-workers, instructors, etc.					
6. PERSONAL HYGIENE. Clean teeth, fingernails, bath					
7. HONESTY. Stealing lying or deceiving.					
8. INDEPENDENCE. Can work independently from instructor.					
9. MANNERISM. Normal gestures and speech habits.					
10. NON-INTERFERENCE. Stays at his own job. Does not bother others.					

BEHAVIOR ITEMS	1	2	3	U	COMMENTS
11. SELF APPRAISAL. Judges his own work abilities realistically.					
12. SOCIAL ADJUSTMENT. Behavior at work and socially is acceptable to others.					
13. TEAMWORK. Works well in a group situation.					
B. WORK ADJUSTMENT AND WORK ATTITUDE					
BEHAVIOR ITEMS					
1.. ATTENDANCE. Present at working time.					
2. CAREFULNESS. With tools and materials.					
3. COMPLETION OF JOB. Finishing the assigned task.					
4. DEPENDABILITY. Reliable on job.					
5. ECONOMY. In use of time, tools and energy.					
6. EFFORT. Tries hard even though ability may be lacking.					
7. INITATIVE. Taking the lead in activities.					
8. MEETS TIME DEADLINES. Adjusts to time pressures.					
9. NEATNESS. Good habits in housekeeping.					
10. PERSEVERANCE. Performs continuously over normal periods.					
11. PUNCTUAL. At work on time and returning from breaks.					
12. QUALITY OF WORK. Accuracy and detail is good.					

BEHAVIOR ITEMS	1	2	3	U	COMMENTS
13. RULES. Follows regulations and rules.					
14. SAFETY HABITS. Uses caution in hazardous activities.					
15. SPEED. Speed is appropriate for type of job.					

C. APTITUDES: This is the individual's ability to perform tasks. This scale compares his degree of ability to that of the average person in the working population. There are six degrees of ability. These are:

1. Extremely high degree of ability
2. Above average
3. Average, or medium degree of ability
4. Below average
5. Very low ability
6. Valid judgment cannot be made

BEHAVIOR ITEMS	1	2	3	4	5	6	COMMENTS
1. FINGER DEXTERITY. Rapidly and accurately manipulates small objects with fingers.							
2.. MANUAL DEXTERITY. Moves hands with ease and skill - as in placing and turning motions.							
3. USE OF HAND TOOLS. Uses tools skillfully.							
4. EYE-HAND-FOOT COORDINATION. Coordinates hands and feet in response to job.							
5. HAND-EYE COORDINATION. Coordinates eyes, hands and fingers.							
6. HAND COORDINATION. Both hands used in coordination.							
7. COLOR DISCRIMINATION. Identifies colors.							

BEHAVIOR ITEMS	1	2	3	4	5	6	COMMENTS
8. SPACE PERCEPTION. Understands relationships of plane and solid objects.							
9. FORM PERCEPTION. Identifies the details of objects, pictures and can compare the differences in shape and size.							
10. COMPUTATION. Adding, subtracting, etc. as required by a job.							
11. MEASUREMENT: Can use various measuring instruments.							
12. SPELLING. Can spell adequately.							
13. COMMUNICATION. Uses words effectively.							
14. WRITING. Can write.							
15. COMPREHENSION. Understands the meaning of words, ideas.							
16. ATTENTIVENESS. Concentrates on a job and is not easily distracted.							
17. DECISIVENESS. Can decide among alternatives on job.							
18. INSTRUCTIONS, VERBAL. Understands and follows verbal instructions.							
19. INSTRUCTIONS, WRITTEN. Can read and follow instructions.							
20. LEARNING ABILITY. Can adapt to a work routine.							
21. PLANNING ABILITY. Plans ahead when working.							
22. MECHANICAL APTITUDE. Has a knowledge of mechanical principles.							
23. RETENTION. Remembers instructions, names, and procedures.							

D. INTERESTS: Indicate the individual's interest in or preference for engaging in various activities below. Indicate "U" if valid judgement cannot be made.

ACTIVITIES	YES	NO	U	COMMENTS
1. Activities involving contact with people.				
2. Activities resulting in tangible satisfaction.				
3. Activities involving objects.				
4. Routine, concrete activities.				
5. Activities which increase his prestige in a group setting.				
6. Working for the good of other people.				
7. Creative or abstract activities.				
8. Activities using machines, techniques, and processes.				
9. Technical activities.				

E. TEMPERAMENT: Indicate whether the individual is capable of adjusting to and performing in the situations below. Indicate "U" if valid judgement cannot be made.

SITUATION	YES	NO	U	COMMENTS
1. Adjusts to various duties with frequent change.				
2. Adjusts to repetitive operations carried out according to set procedures.				
3. Can perform jobs independently with little instruction.				
4. Can direct and control effectively an entire activity.				
5. Deals effectively with people in a job beyond instruction. (secretary or foremen)				

SITUATION	YES	NO	U	COMMENTS
6. Effectively works alone in isolation from others.				
7. Influences attitudes, opinion or judgements of people.				
8. Performs well under stress such as taking a risk.				
9. Makes judgements and decisions on objective criteria. (measurements, standards, tests)				

F. PHYSICAL ABILITIES: Indicate the ability of the individual to perform various physical activities of a job. If you believe he is capable of performing a job which you did not observe, indicate YES and "U". If he is physically handicapped, indicate in COMMENT column.

ABILITY	YES	NO	U	COMMENTS
1. Lifting, carrying, pushing pulling. a. Light work b. Medium work c. Heavy work d. Sedentary work				
2. Agility, equilibrium				
3. Stooping, kneeling and crawling				
4. Reaching, handling, and feeling (upper extremities)				
5. Talking and hearing				
6. Telebinocular Test - Comments				
7. Dominance (circle the appropriate letter)				
a. Hand R L				
b. Foot R L				
c. Eye R L				

G. **WORKING CONDITIONS.** Indicate the ability to work under different types of environment. If you believe he could tolerate a condition which was not observed, indicate YES and "U". If physically handicapped, indicate.

CONDITIONS	YES	NO	U	COMMENTS
1. a. Inside				
b. Outside				
2. Extremes of cold.				
3. Extremes of heat.				
4. Wet and humid extremes				
5. Noise and vibration extremes				
6. Mechanical hazards (lack of phobia)				
7. Toxic conditions, fumes, odors				

SUMMARY

Additional services required by the client.

_____ Further Educational Training
_____ Further Vocational Training
_____ Further Vocational Evaluation
_____ Medical Service
_____ Counseling and Guidance
_____ Other (Specify)

Occupational History:

1. _____
2. _____
3. _____
4. _____
5. _____

Vocational Interests:

1. _____
2. _____
3. _____

Recommended Jobs for Client:

1. _____
2. _____
3. _____

VOCATIONAL PLACEMENT:

_____ Direct Placement (can perform as well as the average employee)

_____ Selective placement ("right" job must be found)

_____ Sheltered workshop (care and attention is needed)

_____ On-the-job try-out recommended

_____ On-the-job training recommended and estimate the number of months of training needed before final placement.

_____ number of months

DEXTERITY TEST

CLIENT'S NAME _____ DATE _____

STROMBERG DEXTERITY

Comments:

TOTAL TIME _____

PERCENTILE _____

NORMS USED _____

BENNETT HAND TOOL

Comments

TIME _____

PERCENTILE _____

NORMS USED _____

O'CONNOR FINGER DEXTERITY

Comments:

TIME (1) _____ (2) _____

PERCENTILE _____

NORMS USED _____

MINNESOTA RATE OF MANIPULATION

Comments:

PLACING:

TIME _____

PERCENTILE _____

TURNING:

TIME _____

PERCENTILE _____

NORMS USED _____

SUMMARY:

SUMMARY OF EVALUATION:

APPENDIX D

DEPARTMENT OF REHABILITATION
Navajo Rehabilitation Project

January 23, 1967

Institute for the Crippled & Disabled
TOWER Tests
400 First Avenue
New York 10, New York

Dear Sirs:

We at the Navajo Rehabilitation Project have been using your vocational evaluation tests in the pre-vocational phase of our evaluation for the Navajo Indian clients. In assessing our program, I find that we do not have enough data on your T.O.W.E.R. tests. Information on validity, reliability, sample groups, norms, and test environments would be very helpful at this time.

Please inform me if this information is available, and where it can be located.

I am eagerly awaiting your reply.

Sincerely,

Al Cook
Pre-Vocational Evaluator

AC/ps

March 10, 1967

Institute for the Crippled & Disabled
TOWER Tests
400 First Avenue
New York 10, New York

Dear Sirs:

Enclosed is a copy of a letter written by one of our staff over a month and a half ago, requesting information on the T.O.W.E.R. Tests.

We are in the final stages of researching services rendered to the Navajo Rehabilitation Clients, using, as a part of our research study, the usefullness of different tests. As a background for our report on the T.O.W.E.R. Tests we would like to get from you a copy of or references to any normative data you have on the above mentioned Tests.

It would be a much more meaningful report if we could relate our findings with information you have accumulated on norm groups, reliability, and predictive validity of the T.O.W.E.R. Tests.

Thank you.

Very truly yours,

Norman B. Henderson, Ph.D.
Director, Navajo Rehabilitation Project
Diplomate in Clinical Psychology,
American Board of Examiners in Professional Psychology

NBH:nca

INSTITUTE FOR THE CRIPPLED AND DISABLED

400 First Avenue • OR 9-0100 • New York, N. Y. 10010

(Research and Vocational Training • 340 East 24th Street)

I.C.D.

JAMES N. BURROWS
THE DIRECTOR

MYRON S. KOLTUV, Ph.D.
DIRECTOR OF RESEARCH

March 23, 1967

Norman B. Henderson, Ph.D.
Director, Navajo Rehabilitation Project
Northern Arizona University
Flagstaff, Arizona

Dear Dr. Henderson:

In reply to your letter of March 10th, addressed to TOWER Tests of this institute, we are currently finishing up this TOWER research and have placed your name on the mailing list to receive the final report.

Sincerely yours,

Myron S. Koltuv

Myron Koltuv, Ph.D.
Director of Research

VT 004 995
Gaspari, Carole
Education as a Process of Vocational Evaluation. Navajo Rehabilitation Project Technical Report No. 6.

Northern Arizona Univ., Flagstaff
Vocational Rehabilitation Administration (DHEW), Washington, D.C.
MF AVAILABLE IN VT-ERIC SET. RD-1213-G
Pub Date - 67 68p.

*NAVAHO; REMEDIAL PROGRAMS; *VOCATIONAL APTITUDE; VOCATIONAL REHABILITATION; *EVALUATION; EDUCATIONAL NEEDS; EDUCATIONALLY DISADVANTAGED; *ADULT EDUCATION
*PROJECT NAVAJO REHABILITATION

The purpose of the Educational Evaluation at the Navajo Rehabilitation Project was to evaluate the functional achievement level and learning ability of the clients. It was found that the actual achievement level of most clients was significantly (.01 level) below the grade they had completed in school. The evaluation of the client was based on achievement test results and subjective rating by the instructor. A written report was made on each client including achievement test scores, classwork, attitudes, and learning ability. Most clients did make some achievement test gains after a short period of remedial instruction. Average gain was .6 of a year and intelligence measures and learning measures were significantly correlated (.05 level) with verbal measures of intelligence correlating more highly than performance measures. The Educational Evaluation was valuable in indicating that many clients could benefit from remedial education and was instrumental in the establishment of the Pre-Vocational Education Program. (MM)

VT004995

ED0 31587

EDUCATION AS A PROCESS OF VOCATIONAL EVALUATION.

Navajo Rehabilitation Project Technical Report No. 6

Carole Gaspari

Northern Arizona University
Flagstaff, Arizona

1967

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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VT004995

ABSTRACT

The purpose of the Educational Evaluation at the Navajo Rehabilitation Project was to evaluate the functional achievement level and learning ability of the clients. It was found that the actual achievement level of most Navajo Rehabilitation Project clients was significantly below (.01 level of confidence) the grade they had completed in school. The Navajo Rehabilitation Project staff felt that the clients' ability in reading, writing, and mathematics might affect his vocational potential.

The Educational Evaluation of the client was based on achievement test results, and a more subjective rating by the Instructor. A written report was made on each client, including achievement test scores, classwork, attitudes, and learning ability.

In a study of the Educational Evaluation Results, it was found that most of the clients did make some achievement test gains after a short period of remedial instruction. The average gain was .6 of a year. It was also found that intelligence measures and learning measures were significantly correlated (at .05 level of confidence), with verbal measures of intelligence correlating more highly than performance measures. These correlations ranged from .41 to .86, and, in general, gains in the language portions of the achievement tests were made by clients who scored poorly on the intelligence measures. Correlations ranged from .52 to .72, and were significant at the .05 level of confidence.

The Educational Evaluation was valuable in indicating that many of our clients could benefit from remedial education, and was instrumental in the establishment of the Pre-Vocational Education Program.

TABLE OF CONTENTS

PAGE

CHAPTER

I. GENERAL PURPOSES AND HISTORICAL BACKGROUND OF EDUCATIONAL EVALUATION 1

Definition and Description of Educational Evaluation

History of Education With The Disadvantaged Adult

History of Educational Evaluation Used In A Rehabilitation Setting

II. EDUCATIONAL EVALUATION AS USED IN THE NAVAJO REHABILITATION PROJECT 7

III. EVALUATION PROCEDURES 9

IV. GENERAL DESCRIPTION OF NAVAJO REHABILITATION PROJECT CLIENTS 15

V. THE CLASS SITUATION AND FORM OF INSTRUCTION 19

VI. EDUCATIONAL EVALUATION REPORT 25

VII. RESULTS OF THE EDUCATIONAL EVALUATION AREA 27

Areas of Investigation

Results Of The Investigation

Discussion Of The Results

VIII. SUMMARY OF THE EDUCATIONAL EVALUATION 35

BIBLIOGRAPHY 37

APPENDIX A.

Case Study #1, Mr. R. J. 39

Case Study #2, Miss M. L. 41

Case Study #3, Mr. H. J. 43

PAGE

APPENDIX B. Educational Evaluations Assessment Sheet . . 45

APPENDIX C. Sample Of An Educational Evaluation Report . 47

APPENDIX D. List of Educational Books and Materials Used at the Navajo Rehabilitation Project . 49

APPENDIX E. Validity Data On The Tests Used In The Educational Evaluation 53

APPENDIX F. Comparison Of Educational Level With Actual Achievement Test Scores On Several Achievement Tests Used In The Navajo Rehabilitation Project 56

Comparison Of Educational Level With Actual Achievement Test Scores On Several Achievement Tests Used In The Navajo Rehabilitation Project 57

Comparison Of Educational Level With Actual Achievement Test Scores On Several Achievement Tests Used In The Navajo Rehabilitation Project 58

Comparison Of Educational Level With Actual Achievement Test Scores On Several Achievement Tests Used In The Navajo Rehabilitation Project 59

APPENDIX G. Iowa Tests Of Basic Skills - Pre-Test Scores 60

APPENDIX H. Iowa Tests Of Basic Skills - Post-Test Scores 61

APPENDIX I. Correlation Matrix For Intelligence Measures and Scores On the Iowa Tests Of Basic Skills - Pre-Test. 62

APPENDIX J. Correlation Matrix for Relationship Between Intelligence Measures and Gains on the Iowa Tests Of Basic Skills (330 correlations were originally made, including all WAIS and Beta subtests; only those listed here were significant) 63

CHAPTER I.

GENERAL PURPOSES AND HISTORICAL BACKGROUND OF EDUCATIONAL EVALUATION

Definition and Description of Educational Evaluation

The Committee on Evaluation of the Adult Education Association of America (Brunner, 1959, p. 245) stated that the primary purpose of evaluation in education is to find out how much growth and change have taken place as a result of educational experiences. Burroughs (Lanning & Many, 1966, p. 311) stresses the importance of measurement in the evaluation process. Smith and Tyler (1942, p. 28) mention the following purposes of evaluation:

1. To validate the hypothesis upon which the school operates--the curriculum.

2. To provide a periodic check of the effectiveness of the school and serve as an indicator of points of improvement.

3. To provide a basis for the guidance of individual pupils.

Evaluation in the educational process, then, is the use of measurement, usually standardized tests, to determine the progress and growth of the individual student or the class group over a specified period of time.

History of Education With The Disadvantaged Adult

Though education has greatly improved in the United States, many people miss these educational opportunities or are not prepared to benefit from them. Most of these people are in a low socio-economic status and are considered to be culturally disadvantaged. Many migrant laborers, "mountain

whites", Negroes, Puerto Ricans, American Indians, and Mexican Americans have not had the same chances for personal progress as have most Americans. They have been disadvantaged by sub-cultures which did not prepare them for the demands and opportunities of modern life. (Educational Policies Commission, 1965, Pp. 1-2).

In 1964, the median years of school completed for adults twenty-five years and older, was 12.0 for whites and 8.9 for nonwhites (Baer, 1965, p. 969). Thompson (1964, p. 48) stated that the median educational level for the Indian population is even less, 5.0. This means, as illiteracy was defined by the Army during the last war as below a fifth grade level, that half of the Indian population is functionally illiterate.

Thompson (1964, p. 26) also states that Indian failures to hold jobs have been caused by the lack of knowledge of how to live in accordance with standards required in the average community or how to manage finances, rather than to lack of job skills.

The educational level of the average adult Navajo is well below that of the average United States adult, and he is also without the basic skills needed to live successfully in a non-reservation community such as Flagstaff.

The need for adult basic education programs for the culturally or socially disadvantaged adult has been recognized, and through the war on poverty programs, such as Manpower Development and Training Act and Job Corps, many adults and young adults are getting another chance at education and job training. Unfortunately, the Flagstaff school systems have no programs of adult basic education, whereby an individual who has left school before completion can continue his education, and perhaps receive a high school diploma. However, Indian adult education programs are becoming more prevalent in the Reservation areas, and many Navajos and other Indian groups are recognizing the value of and need for going to school themselves as well as sending their children to school. Much more work needs to be done in the area of adult basic education, but progress is being made.

History of Educational Evaluation Used In A Rehabilitation Setting

The majority of research studies on the educational evaluation of adults have been fairly recent in origin. One of the first attempts to evaluate educational attainment before and after a rather short educational experience was the Army Special Training Program during World War II (Lanning & Many, 1966, Pp. 59-60). Men found illiterate upon induction into the Armed Forces were tested and assigned to one of four groups, the groups corresponding to the first four grades in school. If a trainee started at the first level, he ordinarily finished the program in eight weeks. If he entered a more advanced section, less time was required. In order to graduate, the men had to make acceptable scores on tests in reading, arithmetic, and language ability. More than 90 percent of the trainees were successful.

A demonstration research project at Virginia State College entitled "Training the Hard-Core Unemployed" (Cooper, 1964) had as its purpose the devising of training methods for the semi-literate and literate unskilled worker. The men, primarily Negroes, in this project were enrolled in a general education class as part of their training program and were given the Gates Reading and Iowa Basic Arithmetic Tests to test achievement level at the beginning and end of the training period. The average gain in reading skills at the end of the Project was 1.87 grade levels over a six month period, and for those men with fewer than seven years of education, the gain was 2.13 grade levels.

The National Committee for Children and Youth has a continuous Youth Services Project in Baltimore, Maryland and Washington, D.C. (National Committee for Children & Youth, 1966). The purpose of this project is to help youth who have failed the Armed Forces screening tests. An educational program has been designed to prepare these youth to retake the tests and qualify for military service. The Armed Forces Qualifying Tests are the pre-test and post-test comparison instruments for the evaluation aspects of the project. In their September, 1966 report (p. 13), twenty-seven students had completed the educational class, and eighteen of these (66.6%) qualified for the military after completion.

At the Job Training Center in Lansing, Michigan, a program has been established for the hard-core unemployed. The purpose is to develop language skills, computational skills, and cultural understanding with the intention of preparing the trainees to successfully undertake vocational training (Michigan Catholic Conference, 1965). Evaluation by means of achievement tests (Botel Reading Inventory, S.R.A. Diagnostic Reading Test, California Achievement Test) was done when the trainee began pre-vocational training, repeated at the end of six months, and given again at the end of the client's training period. One of the tentative conclusions reached by this Project is that those clients functioning below a fourth grade level require a full 104 weeks of training at the Center before they are prepared to begin vocational training. No results are available as yet on significant increases in achievement level as a result of this training program.

A rehabilitation research project entitled "Vocationally Handicapped Montana Indians" was recently completed at Northern Montana College (Johnson, 1966). This project utilized the technical and vocational classes at the College to provide additional needed education for a select group of disabled Indians in the State of Montana. Even though the average grade completed for the Indian Rehabilitation Project client was higher(10.96) than that of the majority of the Montana Division of Vocational Rehabilitation Indians, most of the clients were in need of remedial education in order to handle the college classes. This remedial education was provided for the clients in the evenings. In the Montana Project Report no post-test information was given for achievement gains made while the client was in the Project.

Another project completed at Northern Arizona University (then Arizona State College) in 1965, was the Preparatory Training Project (Peterson, 1965). This Project grew out of the Navajo Rehabilitation Project, and was of shorter duration. The purpose of the Project was to upgrade the educational skills and social development of a select group of Navajo high school droup-outs. The Project attempted to raise the communication and mathematics skills of forty Navajo young men, as well as to develop the social skills necessary for urban living. Though achievement tests were used as part of the selection method

for the participants and as a means of determining actual functional level of achievement, no data is available as to increases in achievement level as a result of the Project.

CHAPTER II.

EDUCATIONAL EVALUATION AS USED IN THE NAVAJO REHABILITATION PROJECT

When the Navajo Rehabilitation Project staff first began its work with disabled Navajos, they combined a remedial Education Evaluation function with a personal and social adjustment evaluation function. The first Educational Evaluations done by the Project staff were primarily concerned with an assessment of the Navajo client's English language ability. It was found that the attained educational grade level in school did not accurately reflect the client's actual achievement level or his ability to read and understand English. The client's ability to understand spoken and written English was often several grade levels below his actual grade completed in school. For example, some of the clients who had completed ninth-tenth grade were reading at a fourth-fifth grade level of reading comprehension. Some evaluation of the client's abilities in the language area was considered valuable to the evaluation of the client's vocational potential.

As the Project evolved, the importance of the client's lack of education became increasingly apparent and the Educational Evaluation became more structured and academically oriented.

Thus, the Navajo Rehabilitation Project staff experimented with the usefulness of an Educational Evaluation as part of the total vocational evaluation procedure for the Navajo. An evaluation of the client's functional school achievement level was considered valuable in this total evaluation process because of the information it could give about the types of jobs the client was able to perform adequately. This evaluation was based on achievement test results and a more subjective rating by the Educational Evaluator. The area of Educational Evaluation did not become well

structured until the third year of the Project. The late development of this function was the result of changes in personnel. Each new evaluator had new or different views of evaluation, or new procedures and techniques which he wished to try. Changes were made in staff titles and duties as new needs were recognized by the Project personnel. Most of the statistical data in this report, therefore, are test results on clients who entered the Project only during its last two years.

The purposes of the Educational Evaluation at the Navajo Rehabilitation Project were as follows:

1. To ascertain the achievement level of the client as measured by standardized achievement tests, and compare it with the years of school he had completed;

2. To assess the functional English language ability of the client;

3. To assess the learning ability of the client;

4. To give the client a few weeks of basic instruction to help improve his academic skills;

5. To act as a check on the value of the intelligence tests given in the Psychometric Evaluation Area.

In addition to these basic purposes, the Educational Evaluation Area was also useful in gaining rapport with the client, noting his attitudes toward the evaluation and the staff members, and noticing physical handicaps that needed correcting, such as poor vision and hearing.

The Educational Evaluation made at the Navajo Rehabilitation Project differed from the usual educational progress evaluation because of its short duration. The entire vocational evaluation process originally took about eight weeks and was gradually shortened to six weeks, and then four to five weeks. Only a portion of this total time (approximately one-third) was actually spent in the Educational Evaluation Area. It resembled the usual educational evaluation situation in its design of a pre- and post-test situation, using a standardized achievement test as the measuring device.

CHAPTER III.

EVALUATION PROCEDURES

The Educational Evaluation consisted of making a preliminary assessment, using a detailed achievement test battery, then engaging the client in remedial instruction, and re-testing him with the achievement test battery.

When the client entered evaluation, he was placed in the Educational Evaluation Area on a half-day basis. However, the client was also given psychometric tests during this time; thus, he was not continuously in the Educational Evaluation Area.

The first step in the Educational Evaluation procedures was a brief interview with the client to gather background information such as name, age, disability, number of years of formal education, and place of formal education. If the client needed an interpreter in order to communicate with the Evaluator, a note was made of this. If the client could speak English, his verbal ability was noted (good, fair, or poor). Also noted were his degree of accent, and the difficulty he presented to those attempting to understand his speech. During this first interview, the Evaluator explained what the client would be doing in the Educational Evaluation Area, and the purposes of such an evaluation.

The next step in the preliminary assessment of the client was the Wide Range Achievement Test (Jastak, 1946). This test gives separate scores for reading, spelling, and arithmetic. Most of the clients could take this test, since it begins with first grade material, such as writing one's name correctly, recognizing the letters of the alphabet, and simple addition problems. The Wide Range Achievement Test thus gave the Evaluator the approximate grade achievement level of the client.

If the client received at least a 3.0 grade placement score in reading on the Wide Range Achievement Test,

he was then given the Iowa Tests of Basic Skills (State University of Iowa, 1956), a more complete test of the client's school grade achievement level. The Iowa is designed for use with students in grades three through nine, and takes approximately five hours of testing time. Though the test has norms for children rather than adults, the use of the test was considered useful in gaining information as to the academic abilities exhibited by Navajo Rehabilitation Project clients. For example, low achievement in arithmetic or reading might delete certain job possibilities from the client's choices unless these difficiencies could be remedied. The areas tested by the Iowa Tests of Basic Skills are vocabulary, reading comprehension, language skills, (including spelling, capitalization, usage, and punctuation), work-study skills (including map reading, reading graphs, and tables, and knowledge and use of reference materials), and arithmetic skills (concepts and problem solving). A composite grade placement score was computed as the average of the five tests.

During the first few days of evaluation, the client was also given the Gilmore Oral Reading Test (Gilmore, 1951). This test was used in an experimental manner in the Educational Evaluation Area at the Navajo Rehabilitation Project. Form A of the Test was used to determine the oral reading comprehension level of the clients (traditional use of the test). Form B of the Test was administered as an oral listening test. The assumption made was that if the clients listened to the graded paragraphs read to them and then answered the comprehension questions that went with each paragraph, and if they were reading at their mental age level, their Form B score would be comparable to their oral reading score. If the person read poorly, but understood English well, one would expect his oral listening score to be much higher than his oral reading score. If he was English language handicapped, both of his scores would be lower than his present grade or last grade completed in school. In any event, his oral listening comprehension score should be an indicator of his actual ability to comprehend spoken English. When a client's oral listening score is well below his oral reading score, other problems such as auditory discrimination, emotional problems, inattention, etc., should be investigated. However, the use of the Gilmore Oral Reading Test as an oral listening test was a new use for it, and it may not measure what the

theory tentatively assumed, since time did not allow testing the validity of this theory.

After the client had completed the achievement testing, he was ready for remedial instruction. When the idea of comparing pre-test and post-test achievement scores was initiated, the length of remedial instruction time was set at six weeks. It was believed that in six weeks the Evaluator could expect moderate gains in achievement if the client was capable of benefitting from such instruction and had a positive attitude toward instruction. The Educational Evaluator, however, continually had to shorten this period to five, four, three, and finally two weeks because one of the aims of the Project was to shorten the total amount of evaluation time for each client. With success in shortening the test battery and the knowledge gained in the evaluation of Navajo clients resulting from Project experience, the Navajo vocational evaluation could adequately be completed in a shorter period of time. This conclusion was valid in general, but did put pressure on the Educational Evaluator who was charged with giving the clients as much time as possible to improve their basic educational skills. Even with the shortened time period, a fairly accurate estimate of learning ability could be made by the Educational Evaluator; however, significant achievement score gains became more difficult to accomplish as the period of instruction was shortened. Evidence in support of this statement is presented in the chapter on "Results" in this paper.

In the remedial instruction period, emphasis was placed on improving basic skills in reading, language, and arithmetic. The test information indicated to the Evaluator which learning materials the client was ready to work with. Emphasis was placed on improving the client's skills in areas showing the greatest weakness. Also, if the client had a preference for learning skills in certain areas, more time was spent on these areas of interest. It was believed that the client would learn more and be more interested in what he was doing if he could study subjects of interest to him.

At the finish of the Educational Evaluation, the client was again tested on the alternate form of the <u>Iowa</u>

Tests of Basic Skills. His achievement test scores on both forms were then compared for significant differences. In assessing significant differences, the score had to be significantly different from what could be expected from chance variation. On the Iowa Tests of Basic Skills the standard error of measurement varies for each subtest, test total, and composite score. The alternate forms of the test give equivalent grade placement scores; thus, chance differences in two thirds of the cases, when students are re-tested, will be within the limits set by the standard error of measurement. Doubling the score differences expected by the standard error of measurement would include more than 95 percent of the range of score variation at different testings. Thus, if a score difference of ± .2 is the standard error of measurement, a difference greater than ± .4 would not be expected to occur by change alone 95 percent of the time, and could be considered as a statistically significant increase or decrease in scores. A decrease in test score may be the result of chance, lack of motivation, poor test-taking attitude, fatigue, illness, or related factors. A significant increase in score, however, may be attributed to an increase in achievement level, resulting from intervening learning experiences. Other factors also may play a part in an increase in achievement score, such as increased test-taking knowledge, reviving of unused skills, difference in number of test items completed, increase in motivation, etc. The standard error of measurement was fairly large for some of the subtests (± .2 to ± .8), less for the test totals (± .2 to ± .5), and fairly small for the composite score (± .1 to ± .2). Thus, on different testings, subtest scores may vary considerably, but composite scores are much more stable.

Our ideal evaluation procedures, then, were to use the Wide Range Achievement Test and the Gilmore Oral Reading Test as preliminary assessments of achievement level and the Iowa Tests as a more complete pre-testing device. Remedial instruction was given for several weeks, and then the client was post-tested on an alternate, equivalent form of the Iowa Tests. Significant increases in achievement scores were considered an indication of a good learner. Through the observations made and the work completed in the classroom, the Evaluator gained other valuable qualitative information about the attitudes

and abilities of the client that could not be ascertained through the measurement of achievement gains or losses.

The ideal evaluation procedures could not be used with all of the Navajo Rehabilitation Project clients. Most, but not all, of the clients could take the Wide Range Achievement Test. One advantage of the Wide Range Achievement Test was that the client could exhibit his arithmetical computational abilities even though he spoke no English, since minimal reading is required on this section of the test. If the client spoke no English at all, he was not usually able to take any of the standardized tests given as part of the educational evaluation. The evaluations of these clients had to be made primarily from data collected in working with the individual in the classroom; and was, thus, more subjective in nature. The Dailey Language Facility Test (Dailey, 1965) was sometimes used to assess the language age of the client. This experimental test consists of a set of pictures; each picture is presented separately and the client is told to make up a story about the picture. The story which the client tells is later scored to determine the language age of the client. This Test could be administered in Navajo by using an interpreter. The interpretations of the client's language ability made from this test had to be done cautiously with Navajo Rehabilitation Project clients, since these clients usually described the picture, but could not tell a story built around the picture. Their usual inability to tell a story might be a result of shyness or not understanding the directions properly.

The ideal evaluation procedures were also modified with clients who scored below a third grade level in reading on the Wide Range Achievement Test and the Gilmore Oral Reading Test. Their testing was usually finished at this point, since they read too poorly to take the Iowa Tests. The Dolch Basic Sight Vocabulary Cards (Dolch, 1949) were often used with clients who could recognize some written English. The ratio of words pronounced correctly to the total number of words was calculated and changed into a percentage. This "score" gave an indication of what reading material, if any, the client was ready to handle. The remainder of their evaluation was based on work in the classroom.

Some of the clients did not stay in the Project long enough to complete the full Educational Evaluation. These were the clients found non-feasible before they had finished evaluation, or those who had completed most of the evaluation and needed to leave the Project as soon as possible for personal reasons. Since the Educational Evaluation was usually the longest part of the Navajo Rehabilitation Project evaluation, it often had to be shortened.

CHAPTER IV

GENERAL DESCRIPTION OF NAVAJO REHABILITATION PROJECT CLIENTS

The Navajo Rehabilitation Project rendered evaluation services to 117 clients during its existence. Eighty-eight of these clients were male, while the remaining twenty-nine were female clients. The clients' ages ranged from sixteen years to over fifty years. The majority of the clients were under thirty-five years of age; the most frequent age category was from twenty-seven to thirty years of age.

All clients evaluated had either a physical or mental handicap. Most of the clients were physically disabled, but there were a number of younger clients referred who were evaluated to assess possible mental retardation.

The educational attainment of the clients varied widely. There were twelve clients who had had no formal education, while seventeen clients had completed the twelfth grade. Three clients had been to college for a year, and one client was a college graduate. The most frequent educational level was fifth grade, and the mean educational level for the total client group was 6.6. Thirty-three clients had been to school less than five years.

The Table on page 17 is a breakdown of the types of schools attended by Navajo Rehabilitation Project clients. These categories are not necessarily mutually exclusive.

The Table indicates that most clients attended schools managed by the Bureau of Indian Affairs. These schools are located both on and off the reservation, and are usually boarding schools or have a dormitory available where students are housed.

Most Navajo Rehabilitation Project clients had been to school, but had quit school before completion. The majority of clients were greatly under-educated, and this lack of school experience and lack of academic achievement made it difficult for them to find good jobs.

TABLE I

SCHOOLS ATTENDED BY NAVAJO REHABILITATION PROJECT CLIENTS

Type of School	Number of N.R.P. Clients Who Attended
Bureau of Indian Affairs Schools	
Grade School (including 5-year special program students)	56
High School	17
Public Schools	
On the Reservation	15
Off the Reservation	33
Mission Schools	
High Schools on Reservation	0
Grade Schools on Reservation	2
Off the Reservation	8

CHAPTER V

THE CLASS SITUATION AND FORM OF INSTRUCTION

Clients usually entered the Project individually, rather than in a group, partly because of the transportation difficulty on the Reservation. The staff finally realized it could not expect a group of clients to arrive at the same time. Also, many clients would postpone their evaluation because they could not leave home immediately. It was also found that some clients could complete evaluation more quickly than others. These factors combined to make it impractical to await the arrival of one group at a time. Thus, Project personnel decided to bring in a new client as soon as an old one left. Therefore there was usually much time overlap of clients; at any given period some clients were completing evaluation, some were in the middle of evaluation, and others were just beginning evaluation.

This ever-changing evaluation group did affect the Educational Evaluation Area, since at times there were people operating at approximately the same achievement level who could be taught as a group. It was difficult, however, if one client was finishing evaluation, and another beginning. The Educational Evaluator noted that if a small instructional group were formed and some of the group members finished evaluation before the others, it was difficult to keep the remaining group member(s) interested in instruction. This fluctuating group was not often a serious disadvantage because the majority of the instruction was individualized. Individual instruction was given frequently because groups were small, varying from one to eight clients at a time. The usual group size was four to six clients. Group work was done where possible, but with people operating at varying levels of understanding, it was better to work with each client and his individual needs. For example, at one time there might have been a client who spoke little or no English, one who was at a beginning read-

ing level, and several who were operating at higher levels of achievement.

Obviously, clients at a lower achievement level needed much more instruction time, and could not do much studying on their own. Clients operating at a higher level could be given instruction; then they could attempt by themselves some work sheets to test understanding of the instruction. Later, the Instructor would go over the material with the client, correcting errors and giving assistance when necessary.

Remedial instruction centered around reading, language, and arithmetic. Since there are practically no learning materials prepared specifically for Navajos, a wide variety of materials were used in instruction. An exception is the Wycliffe Navajo-English materials which are designed to teach the reading of Navajo.

Clients who spoke little or no English and were operating at a low level of basic skills were given instruction in oral English, basic arithmetic, and such skills as telling time, counting money, and making change. Inability to speak adequate English did not always mean the client was also unable to do such things as tell time, and count money, but frequently a low English level was accompanied by a general lack of off-Reservation experiences and skills. The Navajo Rehabilitation Project Navajo interpreter was used as much as possible in explaining new concepts to the non-English speaking client, and he was used as an assistant instructor in working with these lower achieving clients. The materials used with these clients were often concrete objects they could handle or hold. For instance, play money was used in learning to count money and make change. A place-value board with movable disks was used to explain the number system. A drawing of a large clock, with movable hands, was used to teach the clients how to tell time. The Cuisenaire Rods (Cuisenaire Co. of America) [colored wood rods used to explain mathematical concepts] were tried with these clients, but not used extensively.

In practicing oral English, Mitchell's (1957) Beginning American English was used. With this book sentence

patterns, rather than mere vocabulary words, are practiced; pictures are used throughout the book to facilitate the student's understanding, and a minimum of interpretation is needed. Transfer from the text to the real world was facilitated by discussing objects in the classroom and by patterning class conversation after the sentence patterns in the book.

The Wycliffe Navajo-English reading materials were used in several ways--to compare Navajo and English oral sentence patterns, to help the Navajo understand English sentences, and to give the student some skill in reading Navajo in the hope it would facilitate the learning of reading English. The latter use was not preferred by the staff, since most Navajos cannot read their own language; and it appears to be just as difficult for them to learn to read Navajo as to learn to read English. Furthermore, Navajo was not a written language, and little has been adapted to the "synthetic" written Navajo. It seemed more useful to concentrate on English even if the client was not prepared to begin reading in English. Objectivity demands the mention that some instructors, especially the people who have developed and promoted the Wycliffe series, feel that the best method of teaching Navajos to read is to use the reading of Navajo as a bridge to the reading of English.

If the client was fairly proficient in oral English, he was started in elementary adult readers. These readers had a content that was written to interest adults; yet, the reading skill required was low. Phonics drills often accompanied the client's introduction to reading.

For the more advanced readers, actual skill level was ascertained through achievement test scores, and materials were assigned accordingly. The Reader's Digest Skill Builder's and Advanced Skill Builder's (Reader's Digest Services, 1958) for levels one through eight, were used extensively. This reading series is based on stories from the Reader's Digest, but written at varying levels of reading skill. The majority of the clients seemed to enjoy reading these books. At the end of each story, there are a series of comprehension questions about content, vocabulary, and unusual sentence structure or word phrasings. Completion and discussion of these exercises

gave an indication of how well the client understood the reading.

In the language and grammar area, several books were used, including I Want to Learn English (Smith & Wilbert, 1965), for the lower level reader, and Building Better English (Greene, 1962), for the more advanced clients. No matter which book was used, concentration was in the areas of verb usage, capitalization, and punctuation. The language area was a difficult one for the Navajo clients, as most of them used rather poor grammar and sentence structure. It appeared to be very difficult to improve skills in this area. One client raised her achievement scores moderately in this area after a couple of months of instruction, but did not improve after this, though instruction was continued for several more months.

In the arithmetic area, other than work with handling money, arithmetic work sheets and various text books and work books were utilized at different levels of achievement. In explaining arithmetic concepts to the clients, the instructor hoped to increase the client's understanding of arithmetic as well as to increase his computational skills. The client's ability level was obtained from test results, and work in arithmetic was started with a review of skills which the client had known but was not sure of at that time. New skills were then built on the solid foundation of the old.

In all the classwork done by the client, he was allowed to take as much time as he needed to complete an assignment. No studying outside of class was required, but the client could take class materials to the dormitory if he wished. The Instructors tried to create an atmosphere in which the client would feel comfortable, be able to work at his own rate of progress, and remain interested in improving his educational skills.

Most of the Navajo Rehabilitation Project clients appeared to enjoy the Educational Evaluation Area, and were interested and diligent students. There were exceptions, of course. Some of the younger clients who had had recent unhappy experiences in school tended to be disinterested and

even uncooperative at times. Other clients, who had been out of school a long time, or who had not had much education, found formal learning a difficult task and often became discouraged. Increased encouragement and praise on the part of the Instructors was instrumental in improving the client's attitude and desire to keep trying.

One of the major questions raised by the Educational Evaluation Area is concerned with the form of instruction needed by the "typical" Navajo Rehabilitation Project client. Were the areas stressed in the Educational Area the ones most needed by the clients? Perhaps this question can best be answered by saying that the client was receiving instruction in needed areas, but that what was taught was only a small cross-section of the spectrum of needs exhibited by the clients. During the short period of remedial instruction, attention had to be focused on areas in which there was the greatest chance of finding significant improvements. Areas were also needed in which these improvements could be measured by testing devices to help determine the learning ability of the client.

As well as the formal instruction given to the client in the classroom situation, the client was expected to be in the classroom at a specified time each day, and to let the Instructor know when he was going to be absent from class. The client was also presented the idea that education was valuable and useful, and that an increase in knowledge and skills was an important step in finding better employment. In this respect, the Instructors were trying to teach some of the values of the dominant United States culture, though in the last two years of the Project, this instruction was more subtle than overt. It was not expected that Navajo clients could or should change their way of thinking, but if they could incorporate some of the behavior necessary for job success such as punctuality, courtesy, and reliability, their chances for successful employment would probably increase considerably.

CHAPTER VI

EDUCATIONAL EVALUATION REPORT

In the Navajo Rehabilitation Project, gathering information about the clients was a continuous process. Even before the client entered evaluation, a general information folder was made for each client. The Educational Evaluator used the information in this folder to learn something about the client, his disability, and his social and educational history.

When the client entered the Educational Area, a folder specifically for this area was started. A summary assessment sheet was placed in the folder to be completed as the client took the achievement tests and began remedial instruction. A daily record was maintained of the client's progress in the Educational Area. The instruction he had received and his reactions to this instruction were included here, as well as notes concerning the behavior and attitude of the client.

As the client finished his achievement tests, the results were noted on the summary assessment sheet, and were compared with his educational background. The Evaluator wanted to know if the client was under or over-achieving, and the reasons for this under or over-achievement. The age of the client, and the length of time he had been away from school were also considered.

A comparison of the client's achievement test scores on the two forms of the Iowa was made, and significant gains or losses studied in more detail. If the client made significant gains on the test he was considered to be a better learner or more motivated to learn than a person who made no gains or who made significant losses. These results had to be studied carefully, however, because a client who had recently been in school, or who had received a greater amount of education would likely gain less or nothing over a short

period of time, since his skills were already fairly adequate or of recent experience. Clients who were severely under-educated or who had forgotten a great deal of what they had learned in school would probably be the most likely to gain significantly in achievement level with a brief period of remedial instruction.

The Educational Evaluation report on each client included background information such as age and years of school completed, achievement test scores, description of the client's class work and behavior in the classroom, a comparison of pre-test and post-test results from the Iowa Tests, and an estimate of the client's learning ability. If the client was seriously under-educated, and had shown good motivation and ability to learn in the classroom, he was usually recommended for further adult basic education.

The Educational Evaluation report was one of several reports utilized in the total vocational evaluation of the client. Other reports included the Psychometric Evaluation, the Pre-Vocational Laboratory Evaluation, and the Social Evaluation. Information from the Educational Area was useful in establishing the current achievement level of the client, his learning ability, and his ability to benefit from further adult basic education.

CHAPTER VII

RESULTS OF THE EDUCATIONAL EVALUATION AREA

Areas of Investigation

One of the purposes of the Educational Evaluation was to investigate some of the relationships between achievement test results and other relevant factors. This investigation was done statistically, where possible, by means of rank-order correlation coefficients. The Evaluator wanted to know not only whether the clients could make achievement test score gains, but also what relevant factors contributed to the gains that were made. More specifically, the areas of investigation were as follows:

1. The relationship between years of formal education and intelligence measures, including the Wechsler Adult Intelligence Scale, the Revised Army Beta Test, and the Raven Progressive Matrices.[1]

2. The relationship between years of formal education completed and grade placement on the Iowa Tests of Basic Skills.

3. The relationship between grade placement on the Iowa Tests of Basic Skills and intelligence measures.

4. The ability to make achievement test score gains after a short period of remedial instruction.

5. The relationship between gains on the Iowa Tests of Basic Skills and intelligence measures.

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[1]These tests were given in the Psychometric Evaluation, and more detailed discussion of the use of these tests with Navajo clients is available as a separate Navajo Rehabilitation Project monograph.

6. The relationship between gains on the Iowa Tests of Basic Skills and years of formal education completed.

7. The relationship between gains on the Iowa Tests of Basic Skills and client age.

8. The relationship between gains on the Iowa Tests of Basic Skills and the year the client left school.

9. The relationships of different achievement tests with each other.

Results Of The Investigation

All of the specific correlations discussed in this "Results" section were significant at at least the .05 level of confidence.

1. All of the verbal tests on the Wechsler Adult Intelligence Scale correlated positively with years of formal education. These correlations ranged from .36 to .73. It is interesting to note that some of the performance measures on the Wechsler also correlated positively with years of school completed. These performance measures were Digit Symbol & Block Design. As would be expected, the correlation of the amount of formal education with the Wechsler Verbal I.Q. was considerably higher (.67) than with the Performance I.Q. (.32). The Beta Total score and the Raven score also correlate positively with years of school, though these correlations are not high (.31 and .38). These correlations were significant at the .05 level of confidence.

2. A positive relationship was found between years of formal education and achievement scores on the Iowa Tests of Basic Skills. The correlation for the composite score on the Iowa was .76, and significant at the .01 level of confidence.

   Even though positive correlations were found, it was noted that a considerable discrepancy existed between

grade completed in school and grade placement on the achievement tests. One of the general characteristics of Navajo clients was that grade placement scores calculated from the achievement tests were well below actual grade completed in school. For a group of fifty Navajo clients who were given achievement tests, their average grade placement on the tests was 5.0, while their average grade completed in school was 8.0. The difference between the means was significant at the .01 level of confidence. Appendix E compares the clients' grade completed in school with their grade placement on several achievement tests.

3. A number of significant (at least .05 level of confidence) positive correlations were found between the intelligence measures and grade placement on the Iowa Tests of Basic Skills. A table of these correlations can be seen in Appendix I. These correlations include performance, as well as verbal, measures of intelligence. It appears that intelligence tests for the Navajo group are, to a great degree, measuring learning.

4. Of the fifty clients who were evaluated after September 15, 1965, twenty-two were given both the pre-test and post-test on the Iowa Tests of Basic Skills. The remainder of the clients either could not read well enough to take these tests, or else had left before their evaluation was complete.

Eleven of these twenty-two clients (fifty percent) made significant composite score gains on the second testing. Their average composite gain was .6 of a year. Twenty of the clients made significant gains on two or more of the subtests. In Appendix C and H a comparison is made of the clients' scores on both forms of test. Appendix H indicates where significant gains were made. When it is remembered that these clients received only a few weeks of remedial instruction, their gains are quite encouraging. Most of the clients did benefit from the remedial instruction, and were able to improve achievement test scores in the post-testing situation. Of course, some of the clients made more improvement than others, and two clients showed no improvement at all.

Using achievement test scores as a criterion, those who made gains in the composite score can be considered to have benefitted the most from the remedial education experience. One factor that affected the ability to make achievement score gains was the length of the educational evaluation period.

Using June of 1966 as a dividing line (at this time, evaluations began to be of shorter duration), this group of twenty-two clients can be divided into two equal groups of eleven. Those who were in evaluation before June, 1966, had a longer period of remedial instruction, in general, than the second group. Of the first group, nine made significant composite score gains and two did not; of the second group, two made significant gains while nine did not. Using a chi-square test, this difference between early and late groups is significant at between the .02 and .01 levels. It appears that there is evidence to support the hypothesis that a very short period of remedial instruction (less than ten days) is much less effective in producing achievement gains than a slightly longer period (ten to thirty days).

5. There were several significant correlations (.05 level of confidence) relating some of the intelligence measures with gains in achievement. Gains in the total language achievement area correlate negatively with some of the intelligence measures, including the WAIS Information subtest, the WAIS Digit Span subtest, the WAIS Vocabulary subtest, the WAIS Verbal Score, the WAIS Picture Completion Subtest, the WAIS Total Score, and the Beta Total Score.

   Those students who performed poorly on the intelligence measures made the most significant gains in language achievement. However, there were also significant positive correlations between the Raven and two of the Iowa tests-- vocabulary and usage. Those who performed well on the Raven made the most gains in vocabulary and usage. There is also a positive correlation between WAIS Digit Symbol and a gain in the Iowa Arithmetic Problems, and a positive correlation between WAIS Similarities and a gain in the Iowa Reference Materials subtest. A Table of all significant correlations is in Appendix J.

6. No significant relationships were found between years in school and gains on the Iowa Tests of Basic Skills.

7. Client age was found to correlate negatively (.05 level of confidence) with a gain in Arithmetic Problems and positively with a gain in Reference Materials and Total Work Study Skills. The older clients did not make gains in Arithmetic Problems as well as the younger clients. One reason for this difference was that the older clients scored higher on the pre-test in Arithmetic Problems, indicating they knew more arithmetic than the younger clients and, since they were at a higher achievement level to begin with, they would be less likely to make significant gains in this area.

8. It was also found that clients who had been out of school most recently gained the most in Arithmetic Problems, and gained the least in Graphs and Tables, Reference Materials, and Total Work-Study Skills. This corroborates our previous observation concerning client age and gains on the achievement tests, since in general, the oldest clients have been out of school the longest.

9. In investigating the tests used in the educational evaluation, significant correlations were found for the Navajo group, between the following achievement tests:

   The Wide Range Reading Test correlated highly (.82) with the Iowa Reading Comprehension Test (.01 level of confidence).

   The Wide Range Spelling Test correlated highly (.88) with the Iowa Spelling Test (.01 level of confidence).

   The Wide Range Arithmetic correlated .72 (.01 level of confidence) with the Iowa Arithmetic concepts, .49 (.05 level of confidence) with the Iowa Arithmetic Problems, and .66 (.01 level of confidence) with the Iowa Arithmetic Total.

   The Gilmore Oral Reading Test correlated .73 (.01 level

of confidence) with the Wide Range Reading Test, and .60 (.05 level of confidence) with the Iowa Reading Comprehension test.

One interesting correlation was found between scores on the Wide Range Reading and on the Wide Range Spelling Tests. They correlate .95 (.01 level of confidence) with each other, indicating that they must be measuring almost the same skills for the Navajo client group.

Discussion of the Results

The investigations made in the Educational Evaluation indicated that measures of intelligence and measures of learning or achievement were definitely related to one another. This relationship would be expected for verbal measures of intelligence. In the performance measures of intelligence, where it is assumed that lack of formal education will not as greatly penalize the individual, performance measures of intelligence are also correlated with the amount of formal education of Navajo clients. This correlation indicates that a lack of education penalized the Navajo Rehabilitation Project clients on intelligence tests.

Navajo Rehabilitation Project clients, in general, also did not achieve scholastically as well as their non-Indian peers. They were usually functioning at an achievement level several grades below their completed grade in school. The probable reasons for this discrepancy are language handicaps and cultural differences. The Navajo student from the Reservation areas probably needs many extra educational experiences and language instruction before he is prepared to compete in school with non-Indian students.

In investigating the ability to make gains in achievement after a short period of remedial instruction, it was found that most of the clients could make some significant gains in achievement level. In an attempt to find specific reasons for extensive gains on the part of many clients, a study was made of the relationships between achievement score gains and years of school, gains and intelligence test scores, gains and client age, and gains and the year the client left school. For measures of language achievement, clients who

made the most significant gains did poorly on tests of intelligence. These clients were probably functioning at a low basal level in language ability, had more opportunity to gain and therefore, could make gains more quickly than their more educated associates. Client age and the number of years out of school were correlated with gains in some achievement areas. The older clients and those who had been out of school for a longer time, made less gain in arithmetic, but made more gains in the work-study skills area.

CHAPTER VIII

SUMMARY OF THE EDUCATIONAL EVALUATION

The Educational Evaluation was established to evaluate the educational abilities of Navajo Rehabilitation Project clients. It was hypothesized that language ability and other academic skills would be important in determining the vocational potentials and abilities of the Navajo Rehabilitation Project clients.

It was found in the Educational Evaluation that most Navajo Rehabilitation Project clients were operating scholastically several grades below their actual grade completed in school. The average grade completed by the clients was sixth grade, and some of the clients had no formal education. As a group, the clients were severely under-educated by formal standards. It was realized that the majority of the Navajo clients needed further adult education. The fact that most of the clients made achievement gains at the end of their evaluation period indicated that they could benefit from remedial instruction. Thus, the Navajo Rehabilitation Project Educational Evaluation was instrumental in indicating the need for an adult basic education program. The Department of Rehabilitation has since established the Pre-Vocational Education Program to provide instruction in academic and social skills. Clients classified as culturally or socially deprived may enter this program for a six months period.

The Educational Evaluation also indicated a need to include achievement tests in the psychometric battery of the Rehabilitation Department since grade completed in school is not a valid indication of the actual achievement level of the client.

The Educational Evaluation was useful for research purposes, and appeared useful in corroborating impressions obtained from other Evaluation Areas; but it was decided that the Educational Evaluation was not essential to the usual

vocational evaluation process. Nonetheless, it was educationally useful for the Navajo Rehabilitation Project clients, and indicated some areas for further work in adult education.

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Wycliffe Bible Translaters, Let's Read Navajo, Navajo Missions Press, Farmington, New Mexico.

APPENDIX A: Case Study #1, Mr. R. J.

Mr. R. J. was a thirty-four year old paraplegic client who had only completed the third grade. He could speak English well. His scores on standardized achievement tests indicated that R. J. was operating at a fifth grade level of achievement.

This client was highly motivated during his evaluation period, and seemed to be of average or above average learning ability. He stated a desire to continue his education, and the Instructor felt that he could benefit from an adult education program with emphasis on instruction geared to his own needs and the hope of eventually passing the General Educational Development Test (high school equivalency test).

Mr. R. J. received excellent recommendations from each of the evaluation areas; it was generally felt by the staff that he possessed above average ability and potential for successful rehabilitation. It was recommended that he enter the Pre-vocational Education Program for a six-months period with emphasis on improving specific academic skills.

R. J. was in this program a number of weeks, and became increasingly dissatisfied with the Program and the Rehabilitation Center. He felt he was not getting what he wanted, and was also worried about his family in Gallup, New Mexico. The staff tried to persuade R. J. to stay in the Program, but he said he needed to go to work. He left the Project, and his current status is unknown.

Mr. R. J. was a disappointment to the Navajo Rehabilitation Project staff, perhaps because he seemed superior in abilities and motivation. We put our hopes in him, and he could not live up to them. This was a case that we perhaps should have handled a bit more carefully. The Instructor and the other Navajo Rehabilitation Project staff members had built up his faith in his abilities, and we may have given him the impression that he could easily study for and pass the General Educational Development Test. When he began his Pre-vocational Education Program and looked at the level of reading and math required to pass the test,

he became discouraged and tried to push himself too fast. The task before him seemed overwhelming, and he probably felt that it was too much for him to handle. With family problems added to his personal problems, there was not enough incentive for him to remain in the Program.

A P P E N D I C E S

APPENDIX A: Case Study #2, Miss M. L.

Miss M. L. was a twenty-six year old single Navajo when she entered the evaluation. She had completed the tenth grade in Canada where she was involved in a serious automobile accident. Her legs were paralyzed, and she had to spend several months in the hospital. She did regain the use of her legs and applied for the Bureau of Indian Affairs Employment Assistance Relocation Program. She was trained as a nurse's aide, and worked as one until her right ankle started to bother her. She returned to the hospital for a fusion of this ankle to increase support for standing and walking. This surgery did not heal properly and a re-fusion had to be performed. The client could not return to work as a nurse's aide because of difficulty with walking and pain in her ankle after walking or standing for any length of time. When M. L. came to the Navajo Rehabilitation Project, she was interested in becoming a medical records librarian or a secretary.

Preliminary achievement testing in the Educational Evaluation Area indicated that Miss M. L. was performing at a ninth to tenth grade level of achievement, which was quite remarkable considering she had only completed the tenth grade, and had been away from school about seven years. The Instructor felt that Miss M. L. might pass the General Educational Development Test (high school equivalency test), and remedial instruction was started with this goal in mind. Speed reading techniques were stressed, as well as vocabulary and attention to directions and details. She was also given instruction in arithmetic word problems.

Miss M. L. was highly motivated to pass this test since she needed a high school diploma to enter business college. She worked diligently for a three-week period, taking study materials back to the dormitory in the evenings. When the Instructor felt she was prepared to take the test, arrangements were made and the test scheduled.

M. L. passed the GED test, and applied for her high school equivalency diploma. She was still interested in work along secretarial lines, so recommendations were made

for M. L. to attend a business school. She enrolled in a business college in Dallas under the auspices of Bureau of Indian Affairs Employment Assistance and successfully completed a nine-months course in business machines and keypunch operation. At the present time, she is successfully employed as an IBM Keypunch Operator in Dallas, Texas.

This client undoubtedly had the ability and motivation to succeed, but the help she received in preparing for the high school equivalency examination was thought to be a significant contribution to her successful rehabilitation.

APPENDIX A: Case Study #3, Mr. H. J.

Mr. H. J. was a twenty-four year old Navajo when he was evaluated at the Navajo Rehabilitation Project in November of 1966. He had a dragging foot and weakened arm as a result of cerebral palsy. Mr. H. J. had no work history, and was residing with his parents at Lukachukai, Arizona, on the Navajo Reservation.

This client had completed a Five-Year Special Program at the Intermountain School in Utah. H. J. said that he had learned to speak English while at school, and his English was adequate for simple conversations, though heavily accented. His educational skills were extremely low-- he could not read, could write only his name, and could add only simple numbers. His writing was practically illegible.

Testing in the psychometric area showed that Mr. H.J. was operating in the handicapped range of intelligence in both verbal and performance areas. His scores, however, were considered to be depressed because of low English communication skills, cultural differences, and poor coordination.

Mr. H. J. was in the Educational Evaluation Area several weeks. When he first began evaluation, he was shy and ill at ease. He was self-conscious and not overly cooperative. He felt that some of the classwork was "baby work" and did not want to do it. Since H. J. wanted to begin reading, the Instructor started the client on simple reading even though she did not feel he was ready to begin reading. However, H. J.'s attitude improved greatly as instruction progressed, and he became friendly and eager to work. His progress was slow, but he did learn some sight words, practiced his penmanship which improved slightly, and made fair progress in addition and subtraction. His difficulty in concentration and short memory span seemed to indicate possible organic brain damage associated with his cerebral palsy.

The functioning and improvement shown by this client indicated that he could benefit from remedial education, social adjustment, training, and physical therapy. He was

referred to the Pre-Vocational Education Program and the Physical Therapist for further services in these areas, and is still enrolled in this Program. His attitude and progress have been good, and the Rehabilitation Staff hopes to successfully place this man when his training period ends.

APPENDIX B: EDUCATIONAL EVALUATIONS ASSESSMENT SHEET

CLIENT:_____EVALUATOR:_____

DISABILITY:_____

FORMAL EDUCATION COMPLETED:_____GRADE_____COMPLETED_____AGE___
DATE OF BIRTH:_____WHERE_____WHEN_____RECORDS HERE_____
WHY LEFT SCHOOL_____
PRELIMINARY ASSESSMENT
VERBAL ABILITY (good, fair, poor) Comments:_____
_____

READING (Oral Comprehension) Grade Level:_____DOLCH 220
Words Vocab._____
Comments:_____
_____

ARITHMETICAL ABILITY:
WHOLE NUMBERS: (Basic Operations)_____
_____

FRACTIONS (Basic Operations)_____

DECIMALS (Basic Operations)_____

ALGEBRA, ETC._____

STANDARDIZED TEST GIVEN:_____
DATE:_____LEVEL:_____ CEILING:_____ FORM:_____

SCORES (In grade level)

READING:	LANGUAGE:	WORK STUDY SKILLS	ARITH.
VOCAB: _____	_____	_____	_____
COMPRE:_____	_____	_____	_____
TOTAL_____	_____	_____	_____
	_____	TOTAL_____	
TOTAL:	_____		

COMMENTS:_____
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APPENDIX B: (continued)

CLIENT:_____

OBSERVED STRENGTHS AND WEAKNESSES:_____
_____
_____

REMEDIAL WORK: No. of weeks_____, No. of days_____, HRS.per day___
EST. Total Hrs._____

TYPE OF WORK:_____
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_____
_____

RE-TEST

STANDARDIZED TEST GIVEN:_____

DATE:_____LEVEL:_____CEILING:_____FORM:_____

SCORES: (In grade level)

READING:	LANGUAGE:	WORK STUDY SKILLS	ARITH.
VOCAB:_____	_____	_____	_____
COMPRE:_____	_____	_____	_____
TOTAL_____	_____	_____	_____
	_____	TOTAL:_____	_____
TOTAL:_____			TOTAL:_____

COMMENTS:_____
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APPENDIX C: Sample Of An Educational Evaluation Report

Client: Mr. P. L.

Date: October 24, 1966

Evaluator: Carole Gaspari, Instructor

EDUCATIONAL EVALUATION

Mr. P. L. is a twenty-one year old Navajo-Zuni who was referred for rehabilitation services because of social behavior problems and possible mental retardation. He speaks English fluently with no accent. He is not bi-lingual.

When P. L. entered evaluation, he was given the Wide Range Achievement Test. His grade placement scores were all between first and second grade levels. On the Gilmore Oral Reading Test P. L. scored below first grade level on both the oral reading and the listening forms of the test. His listening comprehension level seemed unusually low, considering that P. L. has good verbal ability and can carry on ordinary conversations quite adequately.

P. L. was in the classroom about three weeks, and worked on building up his reading, writing, and arithmetic skills. P. L. learns slowly, and needs much individual attention. He seems to require the psychological support of having someone interested in him and his accomplishments. He does seem to learn adequately when encouraged. I noticed that when I was busy working with other clients, P. L. had a tendency to just sit and do nothing, or else to keep asking for help so that my attention would be drawn back to him. Also, the client seems to have had the frequent experience of people telling him he was stupid and incapable of learning. This has led to his easy discouragement when he is confronting something that is difficult for him. He is able to overcome this feeling if given assistance and encouragement from the instructor.

P. L. is making good progress with his reading and has

shown improvement in his writing skills. He has worked on number values, and simple addition and subtraction. He has trouble with arithmetic and needs patient instruction in this area. He has a fair comprehension of money values, but needs more work in this area. He learned how to tell time fairly well, which he could not do before instruction (he could tell time on the hour, but that was all.)

Summary: P. L. seems to be an excellent example of the educationally retarded and culturally deprived individual. He needs an adult basic education program, which should include remedial education with emphasis in the basic skills as well as socialization activities and instruction in physical hygiene. This client seems capable of normal learning as long as someone takes a personal interest in his progress and keeps encouraging him. If P. L. is ignored or left to work alone, he wastes time and gets little accomplished. He will require much individual attention until he gains a better grasp of the basic skills,and gains also a greater confidence in his abilities.

CG/ps

cc: DVR, New Mexico
VLA
File

APPENDIX D: List of Educational Books and Materials Used at the Navajo Rehabilitation Project

Alves, H., et. al., Modern Practice Book in Arithmetic - Book 4, Steck Co., Austin, Texas, 1955.

A basic arithmetic work book for the intermediate level student.

California Test Bureau, Lessons for Self-Instruction In Basic Skills, Monterey, California, 1963.

A series of programmed learning materials in reading, following directions, grammar, and arithmetic. The reading level for these materials begins at about the third grade level and continues to more advanced levels. Very suitable for work with adults. These materials are quite useful, since once the student knows what he is to do, he can work on his own for several hours with the minimum assistance from the instructor.

Cuisenaire Company of America, Cuisenaire Rods, Cuisenaire Company of America, Mt. Vernon, New York.

These are mathematics learning rods that can be used to explain simple and complex mathematical operations. They are especially useful in showing size relationships.

Editorial Staff, Steps to Learning - Book 1, Steck-Vaughn Company, Austin, Texas, 1965.

A beginning book for adults who are ready to learn to read. Sight-sound associations are used extensively with the assistance of pictures. The book also contains extensive handwriting exercises and some number problems. This book is designed as a reading and workbook for the uneducated adult.

Greene, H. A., et. al., Building Better English, Row, Peterson and Company, Elmsford, New York, 1962.

This is a seventh grade English Grammar textbook. The book discusses all the various phases of English grammar and has many exercises to test the understanding of the rules. The book is suitable for clients who read at at least a seventh grade level.

McSwain, E. T., et. al., Understanding Arithmetic, Laidlaw Brothers, River Forest, Illinois, 1956.

This is a fourth grade arithmetic text that was used frequently at the Navajo Rehabilitation Project before newer materials, more suitable for work with adults, were available. It is suitable for its purposes, but has the disadvantage of using examples from a child's world and may seem silly to adult students.

Mitchell, Elizabeth G., Beginning American English, Prentice-Hall, Inc., Englewood Cliffs, N. J., 1957.

This book is designed to teach oral and written English to non-English speaking adults. It was written with the intention that the Instructor need not know the language which his students speak. It is suitable for work with mixed language groups. Word meanings are understood through accompanying drawings in the text. This is a good book for teaching oral English.

Reader's Digest Services, Reading Skill Builders, Pleasantville, New York, 1958.

A series of readers for first to eighth grade reading levels. The stories are written at an adult level of interest, and are taken from the Reader's Digest. Exercises at the end of each story are available to test for understanding.

Robertson, M. S., Learning and Writing English, Steck-Vaughn Company, Austin, Texas, 1964.

This is a self-help book for adults who can read at the third to fourth grade level. The book is primarily designed to teach the writing of correct English. It includes proper use of verbs, writing letters, capitalization, punctuation, etc. An excellent book for adults who want to learn more about English grammar.

Robertson, M. S., Adult Reader, Steck Company, Austin, Texas, 1964.

This is a beginning reader for adults. It begins with short, simple sentences, and there is much repetition. The content material is based on adult interests, and was enjoyed by Navajo Rehabilitation Project clients who used it.

Shea, J. T., Working With Numbers, Steck Company, Austin, Texas, 1957.

A useful workbook in arithmetic. Examples of problems completely worked out are given on each page, followed by problems for the student to do. There are different grade levels available.

Smith, H. A. and Wilbert, Ida, I Want to Learn English, Steck-Vaughn Co., Austin, Texas, 1965.

A language arts workbook for adults. It is written at about the third to fourth grade level. Its purpose is to build better speaking and writing habits and to develop and strengthen skills in reading.

Smith, H. A. and Wilbert, Ida, I Want to Read and Write, Steck-Vaughn Company, Austin, Texas, 1965.

An adult reader that introduces reading and writing skills. This book, as well as Robertson's Adult Reader, is a good introductory reading text and workbook for adults.

Varnado, E. M., English Essentials, Steck Company, Austin, Texas, 1964.

This combination text-workbook is a good review of English usage for the more advanced student. It would be most easily used by those students with seventh to twelfth grade reading level.

Wallace, Mary C., Figure It Out, (Books 1 and 2), Follett Publishing Company, Chicago, 1965.

Book 1 is a review of the basic arithmetic essentials. It can be used as an introductory arithmetic workbook if supplemental instruction is given. Book 2 is an excellent text-workbook for introducing fractions, decimals, and percentages. The text is written at about a fourth to fifth grade comprehension level, and uses adult experiences in the examples and illustrations.

Wheat, H. G., et. al., Row-Peterson Arithmetic (2nd Edition), Row, Peterson, and Company, White Plains, New York, 1959.

This text book is written for an eighth grade arithmetic class, but may be used satisfactorily with adults who are able to work at this level. It was used extensively at the Navajo Rehabilitation Project and seemed adequate, though it does not use a modern math approach.

Wycliffe Bible Translaters, Learning English, Navajo Missions Press, Farmington, New Mexico.

Wycliffe Bible Translaters, I Want A Job, Navajo Missions Press, Farmington, New Mexico.

Wycliffe Bible Translaters, Let's Read Navajo, Navajo Missions Press, Farmington, New Mexico.

The above three listings are Navajo-English Readers designed to teach the reading of Navajo, and to compare the Navajo and English languages. They may be used to teach the Navajo language to English-speaking peoples who want to work on the Reservation, or to teach Navajos more English.

APPENDIX E: Validity Data On The Tests Used In The Educational Evaluation

The Wide Range Achievement Test (Jastak, 1946) is designed to test achievement level from kindergarten to college in the areas of reading, spelling, and arithmetic. The test was designed for use as a clinical test. The Author's reliability coefficients for repeated testing ran from .88 for Spelling to .95 for Reading. Criticism of the test is given by the reviewers in Buros' Third Mental Measurement Yearbook (1949, Pp. 46-48). They believed the test was not adequately standardized, since correlations with various sections of the Stanford Achievement Test were substituted for direct standardizing on a national scale. These correlations range from .81 to .93 at the seventh and eighth grade levels. Douglas stated that the Wide Range Achievement Test appears to have adequate face validity as a coarse screening measure in the three areas tested (Buros, 1949, P. 47).

The Wide Range Achievement Test was used in the Educational Evaluation to ascertain the approximate achievement level of Navajo clients. If the client made scores above the third grade level on the Wide Range Achievement Test, he was given a more extensive and accurate achievement battery, the Iowa Tests of Basic Skills. The Wide Range Achievement Test was useful because of the relatively short time it takes to administer (about 45 minutes). Also, on the Arithmetic section the mechanics of arithmetic are tested rather than verbal problems which require skill in reading. This meant that Navajo clients who read poorly had a better chance to demonstrate their arithmetic computational skills.

The Iowa Tests of Basic Skills (State University of Iowa, 1956) have as their purpose the measurement, at the third to ninth grade levels, of certain skills involved in reading, word study, language, and arithmetic. In reviewing the test, Herrick states that the focus of the tests is on the evaluation of generalized ability rather than on specific content achievement (Buros, 1959, P. 30). This achievement battery is praised highly in Buros' Fifth Mental Measurement Yearbook (1959). The reliability coeffi-

cents range from .84 to .96 for the subtests. Composite score reliabilities for the entire test range from .97 to .98 for the different grades. The test is thus highly reliable. The reviewers praise the standardization procedures and feel confidence in the stability and representativeness of the norms and the comparability of the two forms. The test has adequate curricular and statistical validity. The only weakness in standardization data is the absence of information concerning the predictive validity of the test; however, the reviewers feel the correlations with academic success should be as adequate as those for the older Iowa Every-Pupil Test. (Buros, 1959, Pp. 30-37)

The Iowa Tests of Basic Skills battery was the evaluatory measuring device used in the educational evaluation. There are two comparable forms of the test and one was used as the pre-test measuring device and the other as the post-test measuring device. Any significant gains made on the second test were assumed to be an increase in actual achievement level on the part of the client as a result of remedial education and other experiences in the evaluation process.

The Gilmore Oral Reading Test (Gilmore, 1951) is designed to analyze a child's oral reading performance in Grades 1 through 8. The test measures accuracy, comprehension, and rate of oral reading. There are two equivalent forms of the test, A and B. Each form contains ten reading paragraphs, followed by five comprehension questions for each paragraph.

Statistical evidence of the validity of the tests was obtained from a comparison of scores made by twenty-four fifth grade pupils of the same age on this test and on Gray's Standardized Oral Reading Paragraphs and the Durrell Analysis of Reading Difficulty. Correlations ranging from .39 to .80 are reported, with medium correlations for the comprehension scores. Normative test data is based on a standardization program involving 1,620 pupils in five states. Duggins, in reviewing the Gilmore Oral Reading Test in Buros' Fifth Mental Measurement Yearbook, feels that the face validity is so obvious that the scanty statistical evidence of validity should not deter its use. (1959, Pp. 767-768). The alternate-forms corre-

lations for groups of second, fifth, and seventh grade pupils indicate reliability coefficients of .68, .67, and .52 for comprehension scores. Kuder-Richardson coefficients are higher for comprehension (.82, .78, and .78).

APPENDIX F: Comparison Of Educational Level With Actual Achievement Test Scores On Several Achievement Tests Used In The Navajo Rehabilitation Project

Client	Educational Level-(Grade Completed In School)	Iowa Every-Pupil Test (Total Score)	California Achievement Test (Total Score)	Iowa Tests Of Basic Skills (Composite)	Wide Range Achievement Test		
					Read.	Spell.	Arith.
W.Z	10	-	-	5.6	8.5	6.7	4.7
L.T.	0	-	-	-	2.5	1.8	2.0
G.S.	9	-	-	-	4.6	5.7	5.4
H.S.	9	-	-	4.8	5.7	5.1	4.8
C.S.	12	-	-	6.8	9.0	5.9	4.8
J.N.	5	-	-	3.9	3.7	3.3	4.5
J.M.	0	-	-	-	1.2	1.0	2.2
G.H.	1	-	-	-	1.5	1.5	1.0
A.B.	7	-	6.1	-	-	-	-
J.H.	12	-	-	5.4	5.6	5.0	5.0
J.H.	5	-	-	-	1.1	1.0	1.8
R.E.	6	-	-	3.7	3.4	2.5	4.5
T.R.	3	-	-	5.0	5.2	3.8	3.9
R.Y.	3	-	-	4.5	4.2	2.7	5.2
J.Y.	11	-	-	5.2	5.8	6.5	3.8
B.T.	11	-	-	5.2	4.5	5.7	4.4
A.W.	13	-	15.8	-	13.4	10.1	13.0

APPENDIX F: Comparison Of Educational Level With Actual Achievement Test Scores On Several Achievement Tests Used In The Navajo Rehabilitation Project

Client	Educational Level-(Grade Completed In School)	Iowa Every-Pupil Test (Total Score)	California Achievement Test (Total Score)	Iowa Tests Of Basic Skills (Composite)	Wide Range Achievement Test		
					Read.	Spell.	Arith.
L.V.	9	-	-	4.1	4.4	3.8	2.7
L.L	5	-	-	-	1.8	2.0	3.3
K.N.	12	-	-	5.8	6.4	7.6	5.4
P.L.	6	-	-	-	1.7	1.0	1.8
R.D.	11	-	-	3.7	-	-	-
J.M.	9	-	-	4.7	5.0	5.5	6.1
L.C.	10	-	-	5.4	5.1	6.9	6.4
P.B.	5	-	3.8	-	-	-	-
J.Y.	8	3.0	-	-	2.5	2.2	3.6
J.S.	8	-	-	5.3	4.8	-	5.0
A.T.	6	-	-	2.8	4.0	3.0	3.5
K.S.	10	-	-	3.7	4.2	3.7	5.4
K.M.	6	4.4	-	-	-	-	-
E.L.	12	-	-	-	7.3	7.1	7.3
L.L.	8	4.9	7.7	-	-	-	-
S.L.	13	-	-	6.5	5.6	8.7	6.2
B.D.	5	-	-	3.0	2.9	2.3	3.9

APPENDIX F: Comparison Of Educational Level With Actual Achievement Test Scores On Several Achievement Tests Used In The Navajo Rehabilitation Project

Client	Educational Level-(Grade Completed In School)	Iowa Every-Pupil Test (Total Score)	California Achievement Test (Total Score)	Iowa Tests Of Basic Skills (Composite)	Wide Range Achievement Test		
					Read.	Spell.	Arith.
B.W.	6	4.3	-	-	-	-	-
T.N.	10	5.0	6.6	-	-	-	-
H.C.	12	-	-	8.3	12.4	11.5	6.5
H.F.	12	-	11.5	-	-	-	-
N.B.	11	-	6.6	-	-	-	-
C.A.	6	2.7	-	-	-	-	-
T.J.	10	3.6	-	-	-	-	-
F.S.	3	4.8	-	-	-	-	-
T.G.	5	-	5.8	-	-	-	-
K.B.	5	2.3	-	-	0.7	1.0	-
P.Y.	7	-	-	-	6.8	7.3	5.9
J.Y.	12	7.3	-	-	-	-	-
A.Y.	4	-	-	-	2.8	2.5	3.1
C.T.	5	3.5	-	-	3.8	3.6	4.9
B.M.	11	-	9.1	-	-	-	-
J.J.	5	3.0	-	-	-	-	-
E.H.	5	-	-	3.3	3.8	3.5	4.4

APPENDIX F: Comparison Of Educational Level With Actual Achievement Test Scores On Several Achievement Tests Used In The Navajo Rehabilitation Project

Client	Educational Level-(Grade Completed In School)	Iowa Every-Pupil Test (Total Score)	California Achievement Test (Total Score)	Iowa Tests Of Basic Skills (Composite)	Wide Range Achievement Test		
					Read.	Spell.	Arith.
B.E.	9	-	-	5.8	8.0	-	9.0
J.D.	3	-	-	-	3.2	3.4	2.7
M.C.	5	3.9	-	-	-	-	-
S.C.	3	-	-	2.4	2.3	1.5	3.5
S.B.	8	-	-	5.5	5.9	-	6.7
J.B.	5	2.8	-	-	-	-	-
B.C.	10	-	-	[illegible].2	6.6	7.9	7.1
J.S.	4	3.0	2.5	-	-	-	-
J.R.	11	-	-	-	4.0	3.4	7.1
B.J.	F	-	-	4.4	3.9	-	4.6
L.S.	5	-	-	3.1	3.6	1.6	4.4
L.S.	6	-	-	4.6	4.6	5.5	4.1

APPENDIX G: Iowa Tests Of Basic Skills - Pre-Test Scores

Client	Vocabulary	Reading Comprehension	Spelling	Capitalization	Punctuation	Usage	Total Language	Arith. Concepts	Arith. Problems	Total Arith.	Map Reading	Tables & Graphs	Reference Materials	Total Work-Study	Composite
W.Z.	5.0	5.3	4.5	4.7	7.8	5.2	5.5	5.1	8.0	6.5	6.5	5.1	5.1	5.6	5.6
H.S.	4.5	4.3	6.2	4.3	5.1	5.1	5.2	4.2	5.8	5.0	4.5	6.1	4.6	5.1	4.8
C.S.	6.7	8.1	7.9	8.2	6.4	5.9	7.1	5.5	6.1	6.6	8.3	5.2	6.4	6.6	6.8
J.N.	3.3	3.8	4.4	4.2	3.9	3.4	4.0	4.7	5.4	5.1	2.9	3.8	3.6	3.4	3.9
J.H.	5.4	4.7	6.9	3.6	4.7	5.3	5.1	5.1	7.1	6.1	7.4	5.3	4.2	5.6	5.4
R.E.	2.7	3.5	3.5	4.0	5.5	2.2	3.8	4.3	5.1	4.7	3.6	3.8	3.8	3.7	3.7
T.R.	5.3	4.7	6.7	5.0	4.4	5.3	5.3	4.4	5.1	4.7	5.7	4.6	5.0	5.1	5.0
R.Y.	2.9	4.2	-	-	-	-	-	5.3	5.1	5.2	5.9	5.4	-	-	4.5
J.Y.	5.0	5.3	7.4	4.1	5.3	6.7	5.9	4.8	3.6	4.2	7.2	5.6	4.7	5.8	5.2
B.T.	5.2	5.3	8.3	5.6	5.5	4.8	6.1	4.0	3.9	4.0	5.0	5.6	5.6	5.4	5.2
J.M.	4.1	3.8	6.4	5.2	6.1	4.8	5.6	5.2	5.1	5.2	5.1	3.3	6.5	5.0	4.7
L.C.	3.8	5.2	8.1	7.0	6.5	4.1	6.4	5.1	4.2	4.7	7.4	5.8	6.9	6.7	5.4
J.S.	4.7	5.4	6.2	5.8	5.5	5.1	5.7	4.3	5.9	5.1	5.3	5.8	6.4	5.8	5.3
A.T.	2.7	3.0	3.3	3.2	3.6	1.7	3.0	3.4	3.4	3.4	2.1	1.9	-	-	2.8
K.S.	3.5	3.9	3.8	3.4	-	-	-	4.1	4.6	4.4	3.9	3.3	3.0	3.4	3.7
B.D.	2.5	1.9	3.0	3.7	5.6	2.5	3.7	3.1	3.5	3.4	3.6	3.4	3.7	3.6	3.0
H.C.	10.1	8.9	12.0	9.9	10.9	10.4	10.8	6.1	4.8	5.5	5.7	6.3	6.0	6.0	8.3
E.H.	2.9	2.2	2.0	4.5	5.3	3.6	3.9	3.5	4.5	4.0	2.9	3.6	4.2	3.6	3.3
S.B.	3.4	5.2	10.4	9.5	7.3	5.8	8.3	5.0	4.5	4.7	6.5	4.6	6.7	5.9	5.5
E.B.	2.7	2.1	2.6	3.7	2.8	1.1	2.6	3.4	3.6	3.5	2.6	-	3.2	2.9	2.8
B.C.	5.5	5.8	9.3	5.1	5.5	4.3	6.0	6.2	7.6	6.9	6.4	7.0	6.7	6.7	6.2
L.S.	3.6	2.8	4.8	3.2	2.6	1.4	3.0	2.8	3.6	3.2	3.4	3.2	2.1	2.9	3.1

APPENDIX H: Iowa Tests Of Basic Skills - Post-Test Scores

Client	Vocabulary	Reading Comprehension	Spelling	Capitalization	Punctuation	Usage	Total Language	Arith. Concepts	Arith. Problems	Total Arith.	Map Reading	Tables & Graphs	Reference Materials	Total Work-Study	Composite
W.Z.	5.3	5.0	5.2	3.8	4.3	3.9	4.3	5.2	6.4	5.8	4.8	6.6	4.3	5.2	5.1
H.S.	*5.7	4.8	6.2	4.9	*6.3	4.3	5.4	*5.7	5.8	*5.8	*5.8	*7.3	5.1	*6.1	*5.6
C.S.	*8.5	6.4	7.5	7.6	*7.6	6.4	7.3	5.4	5.9	5.0	7.6	*7.0	*7.1	*7.2	7.0
J.N.	3.2	*4.4	*5.2	*4.9	*5.6	1.6	4.3	4.5	5.4	5.0	*5.1	4.4	*4.6	*4.7	*4.3
J.H.	5.4	*6.5	*7.9	*5.2	4.9	6.1	*6.0	5.6	7.4	6.5	7.7	5.5	*5.6	*6.3	*6.1
R.E.	*3.7	3.3	3.8	4.4	3.3	*3.0	3.6	3.2	4.8	4.0	3.9	3.7	3.5	3.7	3.7
T.R.	5.3	3.6	6.6	4.4	4.6	3.5	4.8	3.8	4.3	4.1	*7.0	5.5	5.1	*5.9	4.7
R.Y.	*4.1	4.2	6.1	4.1	-	-	-	*5.9	*6.2	*6.1	5.3	5.6	-	-	*5.0
J.Y.	5.6	5.2	7.5	4.9	4.3	5.5	5.6	5.5	*5.1	*5.3	6.4	5.7	5.2	5.8	5.5
B.T.	4.8	5.4	7.5	4.9	6.1	4.5	5.8	*5.0	4.3	*4.7	4.8	5.2	4.9	5.0	5.1
J.M.	3.0	4.3	6.8	5.1	*7.6	3.8	5.8	*6.1	*5.9	*6.0	5.8	*5.2	6.2	*5.7	5.0
L.C.	4.1	5.3	7.4	6.4	7.1	4.7	6.4	4.6	*6.6	*5.6	7.2	5.5	7.4	6.7	5.6
J.S.	3.7	5.6	*7.2	5.7	5.1	5.0	5.8	*5.4	5.9	*5.7	5.8	5.5	6.0	5.8	5.3
A.T.	3.2	3.1	3.7	*3.9	3.7	*4.0	*3.8	*4.1	*4.8	*4.5	*4.4	*3.5	3.2	3.7	*3.7
K.S.	2.7	3.4	*5.4	*4.3	-	-	-	4.4	3.9	4.2	4.3	3.8	-	-	*3.9
B.D.	2.8	1.9	3.7	4.2	6.0	*4.1	*4.5	3.4	*4.9	*4.2	3.5	3.9	3.6	3.7	*3.4
H.C.	10.9	9.5	11.7	9.3	10.2	9.7	10.2	*8.3	5.3	*6.8	9.7	6.3	6.4	5.7	8.6
E.H.	3.0	*3.4	*4.6	4.1	4.2	3.2	4.0	4.0	4.9	*4.5	3.3	3.5	3.8	3.5	*3.7
S.B	*6.3	5.7	10.3	10.1	6.9	6.5	8.5	*6.7	6.1	*6.4	*8.3	*7.7	7.4	*7.8	*6.9
E.B.	3.1	*3.0	2.9	3.6	*3.5	*3.7	*3.4	*4.3	*4.6	*4.5	*3.7	2.8	2.8	3.1	*3.4
B.C.	5.2	4.8	7.1	5.6	5.9	4.3	5.7	6.3	7.3	6.8	7.0	5.0	6.8	6.3	5.8
L.S.	3.3	3.2	*5.6	*4.4	*3.5	*3.0	*4.1	*3.9	*4.8	*4.4	3.7	3.7	*3.7	*3.7	*3.7

* Denotes significant gains.

APPENDIX I: Correlation Matrix For Intelligence Measures and Scores On The Iowa Tests Of Basic Skills - Pre-Test

Iowa Scores	Wais Infor.	Wais Compr.	Wais Arith.	Wais Simil.	Wais Digi. Span	Wais Vocab.	Wais Verbal	Wais Dig. Symbol	Wais Pict. Complet.	Wais Bloc. Design	Wais Pict. Arrange.	Wais Obj. Assembly	Wais Perform.	Wais Total	Beta Total	Raven
76 Iowa Vocab.	o .74	o .68	* .42	n.s.	o .49	o .86	n.s.	n.s.	n.s.	o .74	* .68	* .42	o .49	o .86	o .49	o .86
77 Read.Compr.	o .63	o .60	n.s.	n.s.	* .41	o .79	n.s.	n.s.	n.s.	o .63	o .60	n.s.	* .41	o .79	* .41	o .79
78 Spelling	o .74	o .58	* .45	* .44	o .61	o .77	* .44	* .44	* .45	o .75	o .58	* .45	o .61	o .77	o .61	o .77
79 Capital.	o .62	* .42	n.s.	n.s.	o .62	o .65	n.s.	o .48	o .59	o .62	* .42	n.s.	o .62	o .65	o .62	o .65
80 Punctuation	o .51	n.s.	n.s.	* .49	n.s.	o .55	* .49	o .50	o .58	o .51	n.s.	n.s.	n.s.	o .55	n.s.	o .55
81 Usage	o .75	o .74	* .49	n.s.	o .55	o .81	n.s.	n.s.	n.s.	o .75	o .74	* .49	o .55	o .81	o .55	o .81
82 Total Lang.	o .72	o .59	* .46	n.s.	o .62	o .74	n.s.	n.s.	* .47	o .72	o .59	* .46	o .62	o .74	o .62	o .74
83 Arith.Concept	o .81	o .65	o .70	o .50	* .46	o .74	o .50	n.s.	* .43	o .81	o .65	o .70	* .46	o .74	* .46	o .74
84 Arith.Probs.	o .52	o .47	o .51	n.s.	n.s.	o .68	n.s.	n.s.	n.s.	o .52	o .47	o .51	n.s.	o .68	n.s.	o .68
85 Total Arith.	.71	.61	.63	.44	n.s.	.78	.44	n.s.	n.s.	.71	.61	.63	n.s.	.78	n.s.	.78
86 Map Reading	o .67	o .73	o .55	* .41	* .43	o .70	* .41	n.s.	* .42	o .67	o .73	o .55	* .43	o .70	* .43	o .70
87 Graphs & Tab.	o .66	o .62	o .53	* .45	* .46	o .61	* .45	n.s.	n.s.	o .66	o .62	o .53	* .46	o .61	* .46	o .61
88 Ref.Material	o .62	* .51	n.s.	n.s.	* .59	* .49	n.s.	* .42	o .63	o .62	* .51	n.s.	o .59	* .49	o .59	* .49
Total 89 Work Study	o .77	o .76	* .50	* .47	o .59	o .73	* .47	* .40	o .56	o .77	o .76	* .50	o .59	o .73	o .59	o .73
90 Composite	o .82	o .73	o .56	n.s.	* .52	o .86	n.s.	n.s.	* .48	o .86	o .73	o .56	o .52	o .86	* .52	o .86

o = .01 level of confidence

* = .05 level of confidence

APPENDIX J: Correlation Matrix for Relationship Between Intelligence Measures and Gains on the Iowa Tests Of Basic Skills (330 correlations were originally made, including all WAIS and Beta subtests; only those listed here were significant)

Iowa Scores (Gains)	Wais Informat.	Wais Similari.	Wais Digt Span	Wais Vocabul.	Wais Digit Sym	Wais Pic. Complet.	Wais Verbal	Wais Total	Beta Digit Sym.	Beta What Is Wrong?	Beta Pic. Complet.	Beta Similarit.	Beta Total	Raven
Vocabulary														*.47
Reading Comprehension										o-.72				
Spelling	-.52			-.56		o-.60	*-.57	o-.60	*-.58			o-.68	o-.69	
Capitalization			*-52			*-.52					o-.57			
Punctuation														*.47
Usage										o-.72				
Total Language	*-.52		o.68	*-.56		o-.60	*-.57	o.60	*-.58			o-.68	o-.69	
Arith. Concepts											*-.57			
Arith. Problems					*.54									
Total Arithmetic														
Map Reading														
Graphs and Tables														
Reference Materials		*.46												
Total Work-Study Skills														
Composite										o-.68				

o = .01 level of confidence * = .05 level of confidence

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Shoemaker, Byrl R.
A Position Paper on Vocational Education in the Public Schools.

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*VOCATIONAL EDUCATION; *EDUCATIONAL PHILOSOPHY; ACADEMIC ACHIEVEMENT; TEACHER INFLUENCE; COMPREHENSIVE PROGRAMS; *PUBLIC SCHOOLS
OHIO

The primary purpose of vocational education is to equip persons for useful employment. Vocational education helps to give definite purpose and meaning to education by relating it to occupational goals. Vocational education is not a discipline, but it cuts across and draws content from a number of disciplines and from the practical work of the world. A research study completed by the Division of Vocational Education in Ohio revealed that students enrolled in depth programs of vocational education in the trade and industrial field achieved significantly higher scores on trade achievement tests than did students who were enrolled in programs requiring less of the students' time for vocational education. Another research study, also concerned primarily with trade and industrial education, pointed up the importance of competence in occupational skills and knowledge on the part of the teacher as being the one teacher factor making a significant contribution to student achievement. Other significant findings of these two studies are listed. (PS)

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A POSITION PAPER ON VOCATIONAL EDUCATION IN THE PUBLIC SCHOOLS

by

Byrl R. Shoemaker

Director, Vocational Education, Ohio

VT005002

A definition or description of vocational education could be worded as follows:

The primary purpose of vocational education is to equip persons for useful employment. The program is designed to serve the needs of people in two distinct groups. First, adults who have entered upon, and second, youth and adults who are preparing to enter occupations in agriculture, business, home making, distribution, trade, technical, and industrial fields requiring less than a college degree.

Vocational education helps to give definite purpose and meaning to education by relating it to occupational goals. It provides the technical knowledge and work skills necessary for employment; but, it is more inclusive than training for job skills. It develops abilities, attitudes, work habits, and appreciations which contribute to a satisfying and productive life.

Vocational education contributes to the general educational needs of youths, such as citizenship, respect for others, acceptance of responsibilities; but, it makes its unique contribution in the field of the preparation for work. It is a part of a well-rounded program of studies aimed at developing qualified, efficient workers. It recognizes that the American worker should be competent--economically, socially, emotionally, physically, and in a civic sense.

The uniqueness of the vocational education program in our public schools is in its contribution to the skills and technical knowledge required for employment. Recognizing the needs of youth and adults for instruction in the field of occupations, no educational program or school can be classed as comprehensive unless the educational offerings include a comprehensive vocational education to serve youth and adults.

It is my belief that vocational education is not a discipline, but that it cuts across and draws content from a number of disciplines and from the practical work of the world. The contribution of vocational education is the blending of theoretical knowledge from the disciplines with the practical experiences and requirements of entry jobs, recognizing the nature of the world of work.

In vocational education we weave together the principles of mathematics and science, skills, and technical knowledge into a mix which will help youth and adults to enter and ad-

just to employment opportunities or to upgrade themselves in their chosen field of work.

A preparatory program of vocational education is essentially a "core" program built around the "pegged-core" concept of Dr. Alberte, Professor Emeritus, Ohio State University. The program makes significant use of the concepts or principles of learning which point out the importance of relationship of knowledge taught to effective use by the student of such knowledge.

Some principles of learning serving as the basis for instruction in the field of vocational education are as follows:

1. We learn best when we are ready to learn. When we have a strong purpose, a well fixed reason for learning something, it is easier to receive the instruction and to make progress in learning.
2. The more often we use what we have learned the better we can perform or understand it.
3. If the things we have learned are useful and beneficial to us, so that we are satisfied with what we have accomplished, the better we retain what we have learned.
4. Learning something new is made easier if the learning can be built upon something we already know. It is best to start with simple steps which are related to things we can now do or which we already understand, and proceed to new and more difficult tasks or ideas.
5. Learning takes place by doing. Before the learning can become complete, we must put into practice what we are attempting to learn.

It is my opinion that the most significant contributions of any of the social sciences to the field of vocational education have come from the field of psychology.

Vocational education is not the total answer to the over-all unemployment problem brought about by cyclical and structural changes in our employment pattern. Vocational education is one of the answers for unemployed individuals who wish to prepare to re-enter the labor market, and for youths in high school or post-high school levels who are preparing to enter the labor market for the first time.

I would predict that when the answer to the problem of unemployment is found, vocational education will have a prom-

inent part in the solution. This prediction is based upon the concept that the new technological revolution brought about by automation has placed a premium upon preparation in skills and technical knowledge for new jobs, and has diminished the need for the unskilled worker.

As the governmental unit in our society works frantically to develop the "Great Society," a greater and greater reliance is being placed upon the concept of education as the only ladder out of a continuous poverty cycle.

Secretary of Labor Wirtz made this challenge clear as he made this statement before the general subcommittee on education in the National Congress.

> There was a place in the old work force for the boy or girl who left high school, either dropping out, or with a diploma in hand, and entered the work force with no skilled training. He or she could, and did take an unskilled job and worked up from there. Now, such jobs are vanishing, and so, today, there are 700,000 sixteen to twenty year olds out of work and out of school. Every American youngster has to be given today, as a part of his education, some know-how about making a living, which means for a great many of them. vocational education.

A review of a June, 1965, report on unemployment in Ohio reveals that when the unemployment of males is considered by each age category, the largest percentage of unemployment exists within the youth between the ages of sixteen and twenty-four, and that the vast majority of the unemployed in this category are classed as unskilled workers. This points up the great need in the youth group for preparatory training for employment.

The need for upgrading courses for employed workers is in evidence, particularly for the worker thirty-five years of age or older. Both upgrading and retraining courses are important for the worker in the forty-five years of age and over category.

Looking at the pattern for women, we find again that unemployment is highest among the unskilled youth group. A review of the unemployed youth pattern would indicate that there is a need for training girls in occupations other than clerical and business occupation. Other occupations, however,

such as cosmetology, dental assistants, medical assistants, laboratory assistants, and technical areas such as food service and food management, child care, etc., should be given consideration for the training of girls and women.

The pattern of employment and unemployment for women points up the need for the retraining of persons who are reentering the labor market at about age thirty-five. There is little indication, however, of the need for the training of older women workers, since they seem to retire earlier than men, or else do not change jobs as an older worker.

Reports from both the Ohio State Employment Service and the United States Department of Labor point out that the jobs available between 1960 and 1970 and subsequent periods of time will require skills and technical knowledge, and that the unskilled person earning his living with his back is in danger of becoming obsolete.

It is a professional person's desire, and an administrator's obligation, to project his plans as far in the future as possible. I find it difficult, however, to talk now about the preparation of youth or adults for jobs to be available in 1975. It is true that for some the academic studies will enhance their chances of employment. The problem, however, is stated succinctly by Grant Venn in the book entitled Man, Education, and Work, published by the American Council on Education.

> Their assumption seems to be that the best and only necessary preparation for a job today is the longest possible immersion in academic and professional subjects.
>
> This assumption at once fails to heed the factor of youth unemployment and misapprehends the relevance of general education. The liberal, or academic, studies do enhance the long-range civic and occupational competence of a person; they do not, at least below the baccalaureate degree level and as a rule, qualify young people for meaningful job entry. The technological work world is one of specialization and sophisticated skills, and being a 'bright young man' cuts relatively little ice with employers looking for skills to do some specific kind of work.

It is impossible for me at the present time to project the job pattern in 1975; but, it is within my range of abilities to provide for sound entrance programs today, and to encourage

a flexible curriculum, flexible facilities and flexible program offerings for those vocational education programs now functioning within our State.

The term "flexibility" has become quite popular and, in too many cases, may mean the concept of lowering the investment of time by the student in a program of vocational education in order to enhance his opportunities to enroll in courses of mathematics and science and other related disciplines. There is a real question as to whether this type of flexibility improves either his vocational education or his abilities in mathematics and science.

The Division of Vocational Education, in cooperation with the Ohio State University, has completed two research studies involving the question of depth of training for students enrolled in vocational education.

From the one study, it is evident that students enrolled in depth programs of vocational education in the trade and industrial field achieved significantly higher scores on trade achievement tests than did those students who were enrolled in programs requiring less of the students' time for vocational education and making available a greater portion of the students' time for liberal and academic studies.

A further study of the report reveals the fact that students enrolled in a more flexible program requiring less time in the vocational areas do not achieve more in the area of mathematics and science than those who continue in depth programs of vocational education. To the contrary, those students who remained enrolled in depth programs in vocational education showed a significantly higher achievement in understandings of principles of mathematics and science than did the students in the more flexible programs.

Too often the value of a sound vocational education program to the total educational process has been overlooked by those imbued with the concept that the college preparatory curriculum is the "general education" curriculum that all students can and should follow. The contribution of vocational education to the total curriculum is alluded to by Dr. Conant in the January issue of "Changing Times." Dr. Conant was asked the question, "Dr. Conant, suppose that one or more of the children in a family are not interested in going to college?"

His answer was, "Along with its academic courses the high school should offer a vocational program. Thus, a boy could develop an occupational skill which would interest him such as automobile mechanics, tool and die work or carpentry. This would also stimulate him to learn mathematics, history, social studies and English, since he would now see the point of it all. Girls might take such courses as stenography, typing or home economics."

The research study reported earlier in this paper has indicated that the interest and growth in the areas of mathematics and science takes place under the following conditions:

1. The instruction is a required part of the vocational program.
2. The instruction is provided in a block of time separate from the skill instruction but correlated with such skill instruction.
3. The students are taught in homogenous groups according to the occupational area which they are studying (i.e. machine trade, auto mechanics, etc.).
4. The principles of science and functions of mathematics are taught in relationship to the real problems in the occupation for which the student is preparing.
5. The principles of science and the functions of mathematics are selected on the basis of applicability to the occupational area and taught at the "applied" rather than "proof" level.

The report from one large city indicated that less than fifteen percent of the students were enrolled in the higher mathematics and science courses at the eleventh and twelfth year level. A much higher percentage of the students will need mathematics and science following graduation. Not all students who need mathematics and science need the "proof" type of instruction provided in the college preparatory mathematics and science programs. The students who are not going on to college do not have the goal orientation necessary to encourage success in the college prep classes and many do not have the apitude or ability to succeed.

Often the next obvious solution attempted is the establishment of "general," "shop," or "applied" mathematics courses which place all students not in the college preparatory

courses into classes together or all vocational students in such common courses. The history of such courses has been poor. The goal orientation in such classes is no more clear for the students not planning to go to college than in the college prep courses, even though the content may be functional or applied. Functional in what way? Applied to what? What does the boy in an auto mechanics vocational program care about the functions of trigonometry as applied to the machine trade. As a matter of fact, why should the boy in auto mechanics be required to learn the functions of trigonometry? Unused knowledge is soon forgotten and the auto mechanics student has no use for trigonometry.

Vocational education should not be considered principally as a means to teach principles of mathematics and science but as a program which incorporates them in reaching a goal of preparing to live and to earn a living. Vocational programs prepare students for entrance into a family of occupations, not into "a" job. As an example, vocational training in the auto mechanics field would be basic to approximately 750 of the jobs listed in the occupational handbooks. A comprehensive vocational program will offer a wide variety of programs to meet the interests and abilities of the students at the high school level and the out of school youth and adults. A minimum comprehensive program would include:

Three different agriculture programs
Three different business and office programs
Two distributive education programs
One job training area relating to home economics
Five trade and industrial education programs

The following program of vocational education included in the Penta-County Joint Vocational School District would be considered a desirable or optimum comprehensive program.

High School Programs

A. Agriculture
   1. Training for non-Production Agricultural Occupations
   2. Vocational Horticulture
   3. Advanced Farm Business Management and Accounting
   4. Advanced Agricultural Equipment and Mechanics

B. Business Education
   1. High Skill Steno/entry Secretarial 11-12
   2. Account Clerk 11-12
   3. Entry Business Data Processor 11-12
   4. Office Machines Operator 11-12
   5. Cooperative Office Education (12th only)
   6. Office Reproduction Specialist 11-12
   7. Intensive Horizontal Business Office Education (12th only)

C. Distributive Education
   1. Retail Selling, Buying and Pricing of Merchandise and Personnel Management

D. Home Economics
   1. Child Care Assistant
   2. Child Care Worker
   3. Homemaker's Assistant
   4. Dietary Aide

E. Trade and Industrial Education
   1. Machine Trades
   2. Auto Mechanics
   3. Auto Body Repair
   4. Cosmetology
   5. Drafting
   6. Electrical Construction
   7. Commercial Art
   8. Carpentry
   9. Dental Assistant
   10. Medical Laboratory Assistant
   11. Industrial Electronics
   12. Welding and Sheet Metal
   13. Commercial Foods
   14. Printing

F. Occupational Work Experience Program

Technical College

Data Processing Technology
Chemical Enginnering Technology
Electrical Engineering Technology
Mechanical Engineering Technology
Civil Engineering Technology
Tool and Manufacturing Engineering Technology

Welding Engineering Technology
Accounting
Food Service Management
Wholesale Management
Others

One other research study, also concerned primarily with the area of trade and industrial education, points up the factor of the importance of competence in occupational skills and knowledges on th part of the teacher in the area in which he is teaching as being the one teacher-factor making a significant contribution to student achievement. Other significant findings of this research are:

1. The expenditure spent per student in Ohio's trade and industrial programs as viewed in this study was a significant contributor to student success. The amount spent per student in the high-achieving groups was over $100 more than the amount spent per student in the low-achieving groups.
2. Teacer personality, in terms of self-concept, is an indicator of how students will achieve. Teachers of the high-achieving groups displayed a higher Intellectual Quality concept than did teachers of the low-achieving groups.
3. Local supervisors' ratings of teachers are significant indicators of quality learning situations.
4. Teacher age, grade level completed, years of teaching experience in present trade, total teaching experience and degree held do not appear to be significant factors in student success. Teachers industrial experience is a significant positive factor in relation to student achievement.
5. Trade and industrial education teachers are considerably more motivated than the normal population.
6. Student intelligence is a factor in trade achievement; however, some of the low-achieving schools reported mental maturity scores at or above those of the high-achieving schools. The teacher and the environmental factors also contribute to the differences found in the students' achievement.
7. Teachers who are creative, as measured by the Opinion,

Attitude and Interest Survey, are typically rated by local supervisors as poor or poorer performers. Students of teachers who are identified as creative but have low Intellectual Quality scores achieve at a lower level than do other students.

8. Facilities as evaluated by area supervisors are a factor in quality programs. Shop space and equipment are essential for quality performance by students.

There are those who suggest that the problem of training students ought to be turned over to the industries. Such statements lack an understanding of the competitive nature of modern industry and business and underestimate the ability of the public educational sector of the total education program to provide instruction for entrance into business and industry and upgrading courses for employed workers on a reasonable basis from the standpoint of both cost and effectiveness.

One indication of the unwillingness of business and industry to train an adequate number of workers for their employment needs is evidenced in the area of apprenticeship training. It is estimated by the United States Department of Labor that a total of five million new skilled workers will be needed between the years of 1960-1970. The industrial pattern for training these people within industry is the apprenticeship training program. At the present rate of training through qualified apprenticeship training programs, there would be a shortage of half million a year over each year of the projection.

Vocational preparatory training, upgrading, and retraining can be done effectively and economically through the public education sector of our society. The modern vocational education programs will be characterized by flexible facilities, an evolving curriculum, up-to-date equipment, a broad preparatory vocational-technical program at the high school and post-high school levels, a continuing educational program for upgrading of employed workers, a continuing retraining of the unemployed workers, and last, and perhaps most important, a competent staff and leadership to assess the needs and to adjust the programs.

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Young, Robert C.
Planning for Technical Education in the CMD (Calcutta Metropolitan District), an Outline.

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*TECHNICAL EDUCATION; *EDUCATIONAL PLANNING; *PROGRAM DEVELOPMENT; EDUCATIONAL NEEDS; EMPLOYMENT OPPORTUNITIES; PROGRAM ADMINISTRATION; EDUCATIONAL FACILITIES; INSTRUCTIONAL STAFF; EDUCATIONAL FINANCE; *TRADE AND INDUSTRIAL EDUCATION; APPRENTICESHIPS; MANPOWER DEVELOPMENT; DEVELOPING NATIONS INDIA; CALCUTTA METROPOLITAN DISTRICT

This paper presents an outline upon which a technical education plan could be developed for the Calcutta Metropolitan District of India. Increased employment of craftsmen and skilled office workers was anticipated to meet industrial needs. Some important questions to be answered were (1) Who will administer and finance this training? (2) Who should receive the training? (3) How many workers should be trained? (4) What will be the quality of their training? (5) Where will capable instructors be found? and (6) Where should these training programs be conducted? Background information and proposals for a technical education program were presented for discussion purposes prior to the preparation of a comprehensive technical education plan. It was recommended that a series of project studies which could involve in-plant training, junior technical schools, information systems, trade analyses, government support, and followup studies of graduates would be highly desirable. The appendixes list a report on Vocational Training in France and a note on the rigidity in technical education. (WB)

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PLANNING FOR TECHNICAL EDUCATION IN THE CMD AN OUTLINE

BY

ROBERT C. YOUNG

January 1967

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U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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TABLE OF CONTENTS

	Page
INTRODUCTION	1
SUMMARY AND CONCLUSIONS	1
I. TODAY'S TECHNICAL EDUCATION PROGRAMME	4
I.A. ORGANIZATIONS PARTICIPATING IN TECHNICAL EDUCATION	4
I.B. FORMAL TECHNICAL EDUCATION	5
I.C. APPRENTICESHIP	6
I.D. TECHNICAL EDUCATION WITHIN GENERAL EDUCATION	8
I.E. OTHER IN-PLANT TRAINING	8
I.F. THE FINANCING OF TECHNICAL EDUCATION	8
I.G. THE ROLES OF INDUSTRY AND GOVERNMENT COMPARED	9
I.G. LOCATION, SIZE AND LAND USE	9
I.I. TEACHER TRAINING AND EQUIPMENT	10
I.J. THE SUPPLY AND DEMAND FOR TECHNICAL EDUCATION	11
II. PROBLEMS IN GOVERNMENTAL SUPPORT OF TECHNICAL EDUCATION	11
II.A. HISTORICAL EVIDENCE	11
II.B. DYSFUNCTIONALITY IN TECHNICAL EDUCATION	12
II.C. TECHNICAL EDUCATION FOR SELF-EMPLOYMENT	12
II.D. TRAINING AT AN EARLY AGE	13
II.E. COSTS OF TECHNICAL EDUCATION	13
II.F. SUMMARY COMMENTS AND PRIORITIES	14
III. THE FUTURE OF TECHNICAL EDUCATION	15
III.A. EMPLOYMENT TARGETS	15
III.B. MANPOWER REQUIREMENTS	15
III.C. THE STRATEGY FOR SUBSIDISED TECHNICAL EDUCATION	16
III.C.I. THE CLIMATE FOR TECHNICAL TRAINING	16
III.C.II. RETURNS TO TECHNICAL EDUCATION	17
III.C.III. JUNIOR TECHNICAL SCHOOLS AND THE ITI'S	19
III.C.IV. IMPORTANCE OF A SOUND GENERAL SECONDARY EDUCATION	19
III.C.V. AN EXTERNAL EXAMINATION SYSTEM	19
III.C.VI. AUXILIARY COURSES	20
III.C.VII. GOVERNMENT SUBSIDY FOR INDUSTRY MANAGED TRAINING	21
IV. IMPLICATIONS FOR POLICY	23
IV.A. THE IMMEDIATE FUTURE	23
IV.B. AFTER THE SURVEY: PHASE TWO	25
IV.C. THE LONG RUN: PHASE THREE	25

APPENDICES

I. A NOTE ON RIGIDITY IN TECHNICAL EDUCATION

II. REPORT BY THE AUSTRIAN TRADE UNION TEAM WHICH VISITED FRANCE FROM 28th to 31st OCTOBER, 1963 to STUDY VOCATIONAL TRAINING.

PLANNING FOR TECHNICAL EDUCATION[1] IN THE CMD

AN OUTLINE

INTRODUCTION

The Calcutta Metropolitan District is anticipating a rapid increase in employment during the coming decades, and much of the six lakhs increase in industrial employment and 12 lakhs increase in total employment between 1966 and 1976 will have to be in the skilled category. One way or another these craftsmen and skilled office workers will receive some form of training essential for the performance of their job.

Numerous important questions remain unanswered; Who will administer and finance this training? Who should receive the training? How many should be trained? What will be the quality of their training? Where will the instructors be found who are willing and capable of providing such instruction? Where should these training programmes be conducted?

This outline attempts to (1) present an outline upon which a technical education plan could be developed, (2) raise some of the questions that must be considered in preparing such a plan, (3) present some of the ideas which have occurred to the author during his study of India's technical education system, (4) present some of the background material necessary for the development of a technical education plan, and (5) give some idea of the magnitude of the problem in preparing a comprehensive technical education plan.

SUMMARY AND CONCLUSIONS

This paper is not intended to be a work programme, for the question raised implicitly and explicitly in this paper should be discussed within CMPO prior to the allocation of staff to the further study of technical education. A work programme that might result from such discussions could take any of several directions among which are the following:

(1) A quick and rough manpower projection and technical education plan using current ratios and best guesses regarding sectoral rates of growth, changes in technology, and training requirements to be provided by the various training programmes (ITI's, apprenticeship schemes, etc.) for each occupation to determine the scale of the plan.

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[1]"Technical education", like "vocational education," will be used in this outline to mean any systematic presentation to a student body of information and techniques intended to facilitate the future efficient performance by the students of a particular set of tasks assigned them by their employer. This level of instruction will be given those who have already completed class eight, class eleven, and the Industrial Training Institutes (ITIs) but will be more advanced than the craft training conveyed in the primary schools or junior secondary schools and it will not be as advanced as that training given in the degree courses of colleges or universities. "Graduate" will be used in this paper to mean anyone completing successfully a curriculum and examination offered by an educational or training institution. Thus it will be more inclusive than the usual Indian usage, where it refers only to degree holders.

(2) A comprehensive technical education plan examining as many of the questions raised in this paper, and other questions, as they arise, which are deemed relevant to a well conceived plan, developed through consultation with industry, other branches of government, and the academic community and which will prove of reasonable financial proportion and political acceptability.

(3) A series of project studies rather than a comprehensive plan, the subjects of the studies perhaps falling along lines such as these: in-plant training and its effectiveness; rigidity in technical education; follow-up studies of those passing out of polytechnics, ITI's, and junior technical schools; and information system to guide technical education planning; trade by trade analyses of the supply and demand for skilled manpower (groups of trades within one industry may be handled together); and, government support for an industrially managed technical education system.

Considering the difficulty of the subject matter, its extremely broad scope and the current availability of personnel in CMPO, the latter alternative would seem the most fruitful. This alternative could, in fact, eventually evolve into a comprehensive plan, and in any case such studies would be extremely useful in providing the groundwork for appraising the current system and possibilities for the future. The speed with which they are undertaken will obviously depend upon the calibre of the staff assigned to them. The studies could lead to immediate policy propcsals without waiting for the completion of a comprehensive plan, and in so doing could have immediate repercussions on the economy.

None of the propositions in this paper are put forth with a sense of absolute finality, for all of them are subject to alteration resulting from more detailed research and its revelations. This paper is put forth merely to present a few ideas which the author feels worthy of further discussion within and beyond CMPO. He hopes that it is with this objective in mind the paper will be read. The tentative conclusions of this preliminary inquiry into technical education are as follows:[1]

(1) Technical education outside the formal technical education system should be strengthened through improved in-plant training, better general secondary education, an external examination system, evening courses, and adult education courses in fields related to industry and commerce. (III.C.; IV.C.)

(2) The technical education system should be made increasingly flexible through an improved information system to structure the output of students from the technical training institutes, so that as old bottlenecks are broken and new manpower shortages appear, the training system will similarly change the composition of its training programme. (III.Cvii.; IV.A.; IV.C.; Appendix I).

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[1]The figures in brackets indicate the section of the paper in which the proposition is followed up either in detail or in context.

(3) The formal technical education system needs to be strengthened through the provision of better instructors, programmed materials, and an improved curriculum. (I.I.; II.F.; III.C.vii.)

(4) Wastage in training should be minimized by training only the more mature and those with strong commitments to the occupations in which they receive their training. (I.B.; II.B.; II.D.; II.E.)

(5) A careful assessment should be made of the effectiveness of formal and informal on-the-job training programmes. (I.E.; II.E.; III.C.; IV.A.)

(6) The Industrial Training Institutes (ITI's) should be resorted to only where on-the-job training programmes are shown inadequate to meet demands for trained personnel or where the costs of the subsidy for ITI training are less than the costs of in-plant training while being equally effective. (II.B.; III.C.)

(7) The junior technical schools should be either abolished or converted to post-secondary training institutions along the lines of the ITI's. (I.B.; II.B.; III.C.iii.)

(8) As most of the production process workers are trained on-the-job rather than in pre-employment training programmes, improvement and expansion of the general secondary education system would greatly facilitate this in-plant process. (II.A.; III.C.iv.)

(9) The CMD should be very selective in its future investment in technical training. (III.C.)

(10) Industry should be given increased responsibility for formal training wherever it is necessary. (III.C.vii.)

(11) Social and occupational mobility within the training programmes and their corresponding occupations should be examined to determine the degree of freedom of entry and monopolistic inefficiency. (III.C.i.)

(12) An examination system along the lines of the University of London's external degree programme but at the level of production process workers and other skilled manpower should be implemented as a means of stimulating private training programmes and providing recognition to their successful trainees. (III.C.v.)

(13) Consideration should be given to the possibility of and benefits from reimbursing industry up to the cost of ITI or polytechnic training for producing an increased quantity of trainees. This training programme might take the form of either an off-hours training programme, utilizing the staff and equipment currently operating on the assembly line (by paying overtime wages plus compensation for depreciation), an intensified apprenticeship programme, or new training schools managed by the industry, whichever would be mutually agreeable in the eyes of industry and government. (I.F.; I.I.; III.C.vi.; III.C.vii.; Appendix I)

I. TODAY'S TECHNICAL EDUCATION PROGRAMME

I.A. ORGANIZATIONS PARTICIPATING IN TECHNICAL EDUCATION

One of the most important of the organizations in the field of technical education is the All-India Council of Technical Education, whose job it is to advise the country regarding methods and programmes of technical education. The AICTE "is composed of representatives of Union and State Governments, Parliament and associations in the fields of commerce, industry, labour, the professions and education. Though the Council has advisory functions only, experience shows that its recommendations have invariably been accepted by the Union and State Governments". The AICTE has four Regional Committees, one of which is located in Calcutta[1] and their responsibilities are to serve the same function for their respective regions that the AICTE does for the nation as a whole. The AICTE has established seven Boards of Technical Studies "to advise the Council on such technical matters as the preparation of model courses of studies, laying down standards and regulating the award of national diplomas." As a result of an AICTE recommendation, the Government of West Bengal, as have all other states, has set up a Board of Technical Education, with whom CMPO will have to work closely if it is to develop a technical education plan for the CMD.[2]

In addition to these agencies of the AICTE, there are numerous other governmental organizations that are directly involved in the process of technical training, and among them are the following: the Board of Secondary Education of the Government of West Bengal (GWB); the Technical Education of the Education Department, GWB; the State Apprentice Advisor in the Department of Commerce and Industry, GWB; the Industrial Training Institutes of the Department of Commerce and Industry, GWB; the Central Training Institute of the Government of India, GOI; the National Council for Vocational Training (GOI); the Education Ministry of the GOI; the Ministry of Railways, GOI; the Refugee Rehabilitation programmes of the GWB and the GOI; the Ministry of Iron and Steel; and the Labour Ministry, GOI.

These government training efforts are, of course, greatly supplemented by private training programmes, some of which are partially supported with governmental funds and some of which are totally independent of government. One example of the former are the various governmentally supported but privately operated technical schools, and examples of the latter are the Calcutta Technical School and the several commercial colleges conveying office skills of the stenographic and secretarial variety. In addition to these, of course, are many on-the-job training programmes where unskilled labour gradually learn the skilled craft through observation and inquiry rather than formal training.

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[1] The others are in Kanpur, Madras and Bombay.

[2] Ministry of Education, Government of India, Education in Eighteen Years of Freedom, 1965.

In order to develop a balanced and integrated technical education plan, all of these organizations and programmes would have to be consulted and/or considered, else the output of one programme may be of unwarranted cost considering alternative costs and means of training utilizing another programme. For CMPO to hope to develop such a plan without the cooperation, say, of the Regional Committee of the AICTE, the State Board of Technical Education, the National Council for Vocational Training, or the Department of Commerce and Industries, would be futile, for the advice and experience of these branches of government will be vital to the coherent development of the plan. The fact that it will be these other agencies, rather than CMPO itself, that will implement the plan is another extremely crucial reason for their involvement in its formulation.

In the development of the plan the opinions and experience of the academic community must also be considered, and interviews should be held with members of the IITs, the IIM, and the economics departments of Calcutta and Jadavpur Universities, some of whom may have had considerable contact with industry and its training problems. Nor should the experience of the business community be overlooked[1], and it should be contacted directly through some of the individual firms as well as indirectly through its associations, such as the Indian Engineering Association and the Indian Chemical Manufacturers Association. All of these groups are directly or indirectly involved in the provisions of skilled manpower to the economy, and all, hopefully, will have useful ideas to contribute to the construction of a technical education plan.

I. B. FORMAL TECHNICAL EDUCATION

A very important part of the technical education of any country or region is that which takes place within institutions established primarily for the provision of such training. Among such institutions are the ITIs, the CTIs, the junior technical schools, the Calcutta Technical School, and various other private technical training institutions. Some of these combine formal academic (mathematics, physics, and chemistry) programmes with in-plant training while others are entirely pre-employment training, provided entirely within the training institution itself. Their distinguishing feature, however, is that they are primarily a vocational training institution rather than a special programme within an organization whose basic objective is other than the provision of skilled personnel.

To assess the current performance of the CMD's technical training system, estimates should be made of the total output of trained craftsmen from such institutions, the cost and quality of their training, their success in finding positions utilizing their new skills following completion of the training programme, and other skills that may be developed through this approach. The cost and quality estimates as well as some

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[1]Although business is represented in the AICTE, the latter is an all-India organization, and in dealing with a plan for Calcutta, more localized experience would be useful.

information regarding the post-training employment achieved by the students will all be crucial in the construction of a rational training programme, based on the comparative costs of various training programmes.[1]

Not only will decisions have to be made regarding the allocations of students between formal training programmes and other training systems, such as the apprenticeship scheme, but within the formal technical education programme decisions must be made regarding, for example, the expansion of the junior technical schools relative to the ITIs, and thus investigation must determine the relative merits of the various programmes within the formal technical training schemes. Therefore, it, as reported by the Education Commission[2], the junior technical schools have a high wastage rate and a significant percentage of those who do pass out do not enter employment but rejoin the education stream either in the pre-university courses or the polytechnics, then this might indicate that youth at this age were too young to receive such specialized training and that such training might be best deferred until completion of, say, the eleventh class or perhaps even until after they have been employed for some time and have a commitment to a job or an occupation.

I. C. APPRENTICESHIP

With the passage of the Apprenticeship Act of 1961, the GOI stepped actively into the field of on-the-job training as it specified that notified firms with craftsmen working in any of fourteen trades should admit at least one apprentice for every seven workers (the exact ratio varying with the trades concerned) in that trade other than those who are unskilled. This Act was later extended to include twelve other trades as indicated below.

Initial Coverages	Extended Coverages
1. Fitter	1. Plumber
2. Turner	2. Mill wright
3. Miller	3. Tool and die maker
4. Grinder	4. Instrument mechanic
5. Machinist	5. Refrigerator and air-conditioning mechanic
6. Sheet metal worker	6. Motor vehicle mechanic
7. Pattern maker	7. Diesel mechanic
8. Moulder	8. Tractor Mechanic
9. Blacksmith	9. Mechanic
10. Welder	10. Surveyor
11. Electrician	11. Draughtsman, civil
12. Linesman	12. Draughtsman, mechanical
13. Wireman	
14. Carpenter	

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[1]The most meaningful costs for planning purposes would be costs per trainee employed in a craft utilizing his training, but these costs will have to be estimated from raw cost, enrollment, and completion of training data.

[2]See its recent report, p. 372. Many of those who enter the polytechnics then appear to use the polytechnics in turn as a springboard to the university, which is again dysfunctional.

Information that would be useful in coordinating this sector of the technical education plan with the other schemes would be estimates of the cost (implicit and explicit) of such apprentices to the industrialists, what happens to the apprentices after they complete their training, what kinds of personnel are taken on as apprentices and which of the three apprenticeschemes do they enter.[1] The possibility of using this technique for the development of other skills also needs to be considered in the light of the success in the above twenty-six programmes.

One of the consequences of the Apprenticeship Act giving the industrialists the option of whether to take on apprentices for the six month, eighteen month, or the thirty-six month course is that if they are not interested in employing many of their own apprentices, and are thereby interested in merely minimizing the cost of their statutory obligation, then all of the apprentices they would take on would be for the thirty-six month fresher course, for which their outlay per student would be minimized.

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[1]According to the Directorate of Industries (Training), GWB, notification of 30th September, 1962,

. . . there will be three categories of apprentices according to the period of training:

(1) Six months' course: This will be a short term apprenticeship for candidates who have already completed 1½ years' training in any of the designated trades at an Industrial Training Institute/Center or any other Institution recognized by the National Council for Vocational Training. This short course is intended to be a substitute arrangement for the present course of in-plant training.

(2) Eighteen months' course: this will be the full term apprenticeship for candidates who have already completed 1½ years' Craftsman Training in one of the designated trades at an Industrial Training Institute/Center or an Institute recognized by the National Council for Vocational Training. In their case, credit is intended to be given for their eighteen months' institutional training in any of the designated trades.

(3) Three years' course: This will be the full term apprenticeship for freshers in designated trades . . . .

Syllabi for the apprenticeship courses:--

(a) The apprentices under the 3 Years' Course will receive basic training for the first six months and thereafter shop-floor training and related instruction during the rest of the period.

(b) The apprentices under 1½ years' course will not require any basic training, but will receive shop-floor training and related instruction throughout the course of training.

(c) The short term apprentices (6 months') will not be given any basic or related instruction since they have already completed 1½ years' institutional training in specific trades. In the workshops they will be given training in repetitive jobs only so as to acquire special skills in specific shops.

However, if the firm is concerned about employing as many skilled personnel as possible from its own courses, then it would stress the six month scheme, through which the output of trained apprentices is maximized. Thus, the output of students from the apprentice schemes for any particular firm will depend not upon the needs of the economy as a whole but rather upon its own expansion programme and the availability of ITI graduates in the market to fill positions in the six and eighteen month apprentice programmes.

I. D. TECHNICAL EDUCATION WITHIN GENERAL EDUCATION

Some technical education is conveyed to all students in general education curricula, and the nature of this training needs to be examined: What subject matter is covered? How thoroughly? At what cost? For how many students? How useful are the skills conveyed to the students? Are there other forms of technical training that might be more useful, such as enhanced mathematics or science programmes? Should all forms of secondary education entail some quota of manual training, such as carpentry, electricity, engine mechanics, and/or metal working?

I.E. OTHER IN-PLANT TRAINING

As the majority of the technical education in the CMD is currently conveyed on a very informal basis, and as this is undoubtedly the least expensive means of providing technical education--whether it is the most efficient or not is a moot point, and probably depends upon the trade concerned--some investigation into its effectiveness must be made. Interviews with educators, academicians, employers, and governmental personnel should include inquiries regarding the relative efficiency of those who have received the informal training relative to those who have received formal (e.g., ITI) instruction. On the grounds of these interviews and some a priori consideration of the problem,[1] some distribution of trainees between formal and informal training programme will have to be made.

I. F. THE FINANCING OF TECHNICAL EDUCATION

Estimates of the cost of technical education, not simply to the students, but to the economy, are crucial to enable decisions regarding the most effective training strategy. It may be that industry would be willing to undertake, for example, the training of larger numbers of apprentices, if they were paid something like the cost of their training in the ITIs. Such a shift might be a very effective means of providing closer links between industry and the training institutes, curriculum and current in-plant practices, and equipment in the technical schools and the technology of the plant.

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[1]Problems such as external economies (a possible reason for governmental involvement) in the field of technical education will exist even if they cannot be dealt with quantitatively. A qualitiative assessment should be made simply to bring into open discussion such factors as the savings to employers as a result of subsidized training, the opportunity cost of technical education expenditures, and the reduction of wear and tear on machinery because of improved handling techniques acquired during instruction in the technical schools.

The cost data that would be useful in plan development would be training staff salaries, plant and equipment expenditures, cost of administrative overhead, raw material costs, hostel and student amenity expenditures, scholarships, etc. Hopefully, it would then be possible to compare these costs with those involved in the training of personnel in the plant, although the latter will probably be extremely difficult to assess.

I. G. THE ROLES OF INDUSTRY AND GOVERNMENT COMPARED

Following the collection and analysis of data in the above fields, it would be useful to compare the roles in technical education that are played by industry and government. What percentage of the trained personnel in industry were trained in governmental insitutions? What were the costs of training in governmental institutions relative to those in the private training programmes? Were the training programmes equally effective in skill development? Such information would provide some benchmarks from which to plan future training programmes.

I. H. LOCATION, SIZE AND LAND USE

Some consideration must be given to the location of the training institutions and their optimal size. While some training schools have in the past been located in rural areas and/or areas relatively removed from industry, this policy seems a bit dubious, and consideration must be given to the importance of factory visits, the ability of instructors to work part time in industry, the location and quality of post-training employment by area of training, the isolation of rural schools, the difficulty of enticing qualified staff to assume such positions, and the importance of the boys adjusting to the urban environment prior to their training so that they do not simply return to their village soon after employment because they found urban life too congested, noisy, and high pressured.

The size of the training facilities will also be important in the consideration of its location, unless hostel facilities are to be provided for the students. Size will also be important in at least one other consideration, that of the most efficient use of the institute's staff, plant, and equipment. If the school is too small, then it may mean that valuable equipment lies idle for long periods of time, whereas a larger student body would enable more intensive use of that equipment. On the other hand, a student body that is too large may mean that each student would then have too little time to work with the available equipment, that classes were too large to enable discussion, or that the complexities of administrating such a large organization overwhelmed the staff. The primary danger, however, particularly in a country or region concerned with regional and urban-rural imbalances, would be that of inefficiency arising from the former cause, that of the school being too small.

If a technical education plan is undertaken by CMPO, it should incorporate some estimates of land consumption that will be required in the plan: thus, data on technical training land use should be gathered which would provide a basis for proposals for future training facilities.

I. I. TEACHER TRAINING AND EQUIPMENT

Any data that is available on the quality of the instructional staff in the training institutions should be gathered and ordered. Difficulties in the utilization and procurement of such staff should be noted, and possibilities of breaking such bottlenecks should also be listed. If the staff of such institutions require opportunities for part time employment outside the schools, this is also an important consideration to place in the record. Some instructional staff members spend large portions of their time in the employ of industry, and the frequency of this occurrence, in conjunction with the quality of such staff relative to the quality of the full-time staff, is a consideration with great implications for the future structure of technical education, and should thereby be carefully investigated and analysed.

Considering the very important role that equipment must inevitably play in vocational and technical education, a plan for such training must give some consideration to its adequacy: are the tools used in training an adequate preparation for industry? Are the latest training techniques, such as the use of programmed instruction[1] being utilized? Is the equipment being used efficiently, or does it lie idle for long periods when, with a larger student body, it might be utilized more intensively? Is up-dating of the equipment a major problem? Can ways be found to use equipment in factories for training purposes during the factories' off hours?

I. J. THE SUPPLY AND DEMAND FOR TECHNICAL EDUCATION

Once all the information available on the production and employment of trained personnel is gathered, some attempt at a synthesis must be made. Is there considerable unemployment among the ITI graduates?[2]

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[1]This technique, used widely in the West, has proven very effective in cutting training time, one estimate being that it reduces the time by two-thirds. For a discussion of the technique, see for example B.F. Skinner's article in various journals of psychology and education or Smith and Moore's book, Programmed Learning, Van Nostrand, 1961. For an example of its use in technical education, see the series by Coover and Helsel, Programmed Blueprint Reading, McGraw-Hill, 1963. Many programmed texts currently published could be improved for the Indian context by the addition of branching, elimination of superfluous paper consumption, and introduction of Indian languages, idioms and examples.

[2]Evidence in this area is very sketchy and evasive, for although the trainees may later be employed, they are not always employed in tasks using their skills developed during training. Often they fail to register with the employment exchange when they are unemployed, and many of those who are registered with the employment exchange are already employed. A Statesman article (17/5/66) noted that there were 5,000 unemployed ITI graduates in Bihar alone.

An affirmative answer would lead one to question the proposal of the Education Commission Report to more than double their numbers during the fourth plan. One test of the value industry places on the ITI programme would be to examine the income differential received by the students of the ITIs relative to those of the non-ITI employees. This differential could then be discounted over time and compared with the cost of their training to provide one index of the productivity of the investment in ITIs.[1]

It is conceivable, however, that industry would be unaware of the value of the training provided by the ITIs, and in this case, their willingness to increase such wages would be a poor index of the true value of such training. In any case, conversations with those in the field of hiring, firing, employing and training must be held to serve as a gauge for the assessment of whatever data is available. Finally, an appraisal will have to be made regarding the current situation in order to provide a benchmark for future programmes.

II. PROBLEMS IN GOVERNMENTAL SUPPORT OF TECHNICAL EDUCATION

II.A. HISTORICAL EVIDENCE

Historically, powerful countries have developed that have placed relatively small stress on the role of subsidized technical education and instead placed considerable importance on the value of strong primary and secondary systems. In the United States, for example, eighty per cent of the trained industrial laborers have received their training on-the-job rather than in technical schools, something like one-fifth of the skilled labour force have ever been in an apprenticeship programme, and probably only half of these finished their course. Training for skilled craft positions in West Germany is also characteristically carried out within the firm.[2] Even India herself has shown considerable industrial expansion in recent years in spite of the fact that most of her training programmes are carried out on an unsubsidised basis, and currently it seems to be shortages in the areas of capital, foreign exchange and raw materials rather than production process workers that constitute the predominant bottlenecks.

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[1]The fact that some firms prefer ITI graduates to those who have not completed the ITI programme, does, of course, mean that the training imparted is of value to the firm, but it does not necessarily mean that the subsidy involved in their training is balanced by a proportional increase in their productivity on the job. In order for the subsidy to be worthwhile, the costs to the economy of their training must be offset by their increased productivity on-the-job.

[2]See the reports by the Spanish team which visited the Federal Republic of Germany (from 21st-27th June, 1964) to study Vocational Training and the international employer/worker team which visited the United States (from 13th-26th October, 1963) to study Occupational Preparation and Training and Regional Economic Re-development, both issued free of charge by the Organization for Economic Cooperation and Development. See also the joint AID and United States Department of Labour report on Manpower Programs and Planning in Economic Development, 1963.

Although the United States formerly relied relatively little upon formal subsidised technical education, recent congressional legislation has, however, placed increased emphasis upon it. This, however, should be recognized not as an indication of the fact that the U.S.A. feels it is a highly productive investment but rather that since the country is relatively affluent it can now afford to become concerned with areas of frictional unemployment, to subsidise their training or retraining, and tax the many to support the few who will benefit from this enlightened form of welfare. The fact that it is prudent for a relatively affluent nation with a shortage of skilled labour to subsidise the training of its unemployed does not mean that it is therefore prudent for a relatively poor country to embark on a widespread programme of subsidised technical education. Welfare measures in an affluent society are relatively cheap whereas they are relatively costly in a nation only recently entering the growth process.

II. B. DYSFUNCTIONALITY IN TECHNICAL EDUCATION

The formal technical education currently offered in India appears to have a sharp dysfunctionality between its aims and achievements. The Planning Commission[1] has reported, for example, that the junior technical schools not only have a high wastage rate but many of those passing out are able to avoid manual employment in skills utilising their training and instead rejoin the formal educational system in the pre-university courses or the polytechnics. There is some evidence that a high percentage of the polytechnics graduates also return to the educational stream and go on to the university. If such training is thus wasted, the prudence of expanding the system is called into question. The Director General of Employment and Training[2] reported that only two-thirds of the ex-trainees from ITIs covered in their survey were employed in trades utilising the skills they received in training. This raises the cost of employed ex-trainees by fifty per cent above the cost of what it would be if all were employed in trades using their ITI training.

II. C. TECHNICAL EDUCATION FOR SELF-EMPLOYMENT

Some people have argued that technical education should be expanded and the trainees encouraged to set up their own workshops and thus find employment through self-employment.[3] This argument appears a bit

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[1]Factual Survey of Junior Technical Schools, New Delhi, 1964, paraphrased in the Report of the Education Commission, 1964-66, p. 372.

[2]Report on the Pilot Enquiry to Ascertain the Employment Status of Craftsmen Trained Under The Craftsman Training Scheme, 1963.

[3]See, for example, the Report of the Education Commission, 1964-66. p. 376. The cyclostyled report of the Directorate of Industries of the Government of West Bengal entitled "Note on Craftsmen Training Scheme and Its effect on Employment Position Prepared for the Lahiri Commission of Inquiry, West Bengal" states, "It has been seen that only a small number of passed-out trainees prefer to start their own industry in preferance to securing jobs in existing medium or large scale industries."

weak, however, and falls short at several points: first, most men establishing their own organizations have first gained experience through employment with other firms, thus, before they employ themselves, they must first become employed by another firm, and it is in finding this initial employment that the difficulty arises; second, self-employment requires considerable administrative knowhow plus capital, both of which are crucial bottleneck factors; and third, education, both general and technical, has historically bred organization men, and the experience in India does not appear unique.[1] Consequently, although it may in fact be possible to inculcate the entrepreneurial spirit in larger proportions of students than has been true in the past,[2] since the technology for developing the entrepreneurial spirit is still far from being either developed, tested, or an integral part of the Indian education system, to plan the expansion of the technical education system on the assumption that such trainees will find employment in their own shops appears a bit optimistic.

II. D. TRAINING AT AN EARLY AGE

The Report of the Education Commission 1964-66 has recommended that boys be encouraged to enter directly into the ITIs from their primary schools.[3] Considering the fact that these boys at this young age are still somewhat uncommitted to any occupation and resentful at having been screened off from the mainstream of education, thereby attending the technical school only with considerable reluctance, and considering that, as mentioned above, the junior technical schools already have a high wastage rate and send many of their ex-trainees back into the general education stream, there seems to be good evidence for a re-examination of the recommendation to lower the age of entry into the ITI. The minimal requirement for entry should be matriculation, so that the boy has the basic academic skills with which to utilise his training.

II. E. COSTS OF TECHNICAL EDUCATION

It has already been mentioned that the subsidised technical education provided through the ITIs is looked upon with some favour by industry, for in their hiring policies, they prefer the ITI trained applicant to the untrained. This, however, does not mean that the social investment in technical education is worth the social return to such outlays, it merely means that some training is better than no training. Whether the Rs. 4,500 spent on each graduate of the polytechnics is a productive investment remains to be seen, particularly when a large percentage of them return to the university. If fifty per cent of the polytechnic graduates returned to the university, it

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[1]In the DGET report mentioned above, only two of 190 ex-ITI trainees were self-employed four years after their trade test.

[2]See, for example, the work by David Clarence McClelland, The Achieving Society, Princeton, N.J., Van Nostrand, 1961, in which he has attempted to isolate the factors in education responsible for the "achievement motivation" which is in part responsible, he feels, for economic development.

[3] P. 371.

would raise the cost of each polytechnic graduate returning to work[1] to Rs. 9,000, a considerable investment. Further investigation into (1) the actual costs (including a consideration of wastage) of training itself, (2) the relative efficiency of those trained on-the-job and those trained in formal technical education programmes prior to employment, and (3) the post-training activities (whether using their skills or not) of the trainees from various programmes will be vital in any evaluation of priorities for the technical training system.[2]

II. F. SUMMARY COMMENTS AND PRIORITIES

One experienced observer of manpower development in developing countries has levied these additional charges against formal technical education:

> Vocational school teachers should have industrial experience - yet typically the vocational school system simply cannot pay what it takes to hire industrially qualified technical personnel, who in addition are already pedagogues, from industry and into the school system . . . .
>
> The costs of vocational education are about double the costs of academic education. When you consider that the drop-out rate from vocational schools is uaually almost twice as high, the cost per "finisher" is almost four times as much. School systems ought not to waste their money on such dubious propositions . . . .
>
> Vocational schools tend to teach methods and machines either far in advance of those in actual industrial practice in the country, thanks to foreign machines and teaching methods having been brought in, or else they are far behind the practice of the country, if local resources have had to be depended upon to equip and run the school. It is rare indeed that a vocational high school can reproduce actual working conditions found in the industry of the country . . . .
>
> Training should be given as close to the specific job to be filled as is possible if the trainee is to develop the rhythm, specific discipline, and production tolerance of the specific job he is to fill. That cannot be done in the general training he receives in school . . . .
>
> Two boys, one of whom acquires his skill by training on the job, and the second by attendance at a vocational high school, simply cannot thereafter be set side by side to work together without creating a tough industrial relations problem for the employer.[3]

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[1]Assuming that all of those who did not go to the university were able to find a job in a field in which they could utilise their skills developed in the polytechnic.

[2]See also section III. C. ii. "Returns to Technical Education."

[3]George Tobias, in a letter to the author dated September 29, 1966.

Clearly, then, there are very strong arguments that are raised in opposition to technical education.

There are, however, instances when the government may play a very important role in the promotion of technical education. One such situation is when there is a new area of technology that has not yet built up the hard core of technicians upon which the in-plant or on-the-job training programmes are built, such as air-conditioning maintenance men or non-ferrous welders. Another such instance is when a new technique has recently been developed that deserves rapid dissemination throughout the economy, such as the propagation of programmed instruction in the field of technical education.

Generally then, vocational education deserves to be subsidised principally when there are considerable external economies to be gained by so doing, crucial bottlenecks that must be broken, or new techniques that deserve rapid injection into the labour force. If subsidy is undertaken, then it should be done with care that the instruction is in the techniques currently utilised by industry or those which may be assimilated by industry using its current technological structure. Instructors must be qualified; students must be old enough to appreciate the subject matter and the necessity of its absorption; and the equipment utilised for demonstration and practice by the students must be similar to that they will encounter in their own workshops or offices.

III. THE FUTURE OF TECHNICAL EDUCATION

III. A. EMPLOYMENT TARGETS

Employment projections by industry and occupation will be essential for the development of a comprehensive technical education plan. The projections will be filled with complications and uncertainties, but estimates, in this case, are better than no estimates, assuming the former are not used as a facade for irrational policy proposals. The weaknesses of the projections should be underscored by their architect, and their policy implications drawn only with caution.

The problems to be dealt with in the projections will include the following: What will be the impact upon the economy's expansion of foreign competition? How rapidly will new technology replace formerly labour intensive production systems? How rapidly will new technology create new types of employment, such as in business services, data processing, air-conditioning, transportation and communications? What kinds of new skills will be called for in the future economy of Calcutta? What kinds of occupational shifts within industry will take place as a result of technological change? These and other questions will be dealt with either implicitly or explicitly in formulating an employment projection that would be imperative in a manpower strategy.

III. B. MANPOWER REQUIREMENTS

When assessing the manpower necessary to fulfill the employment projection, the occupational descriptions should include the minimum formal education required for efficient job performance along with

alternative means of meeting the technical training requirements of the position. In other words, the requirements for fitters might be expressed as, say, matric plus (a) ITI certificate plus six months on the job, or (b) two years on the job plus evening courses three times a week (which should also be described), or(c) three years on the job. By so expressing the manpower requirements, one does not preclude flexibility in development of the technical education plan through the elimination of choice between training programmes.

In developing a complete manpower planning programme, one would attempt to do this for all categories of industries and occupations, but as this plan is for technical education, the occupations dealt with should be only those requiring some form of technical education, either formal or on-the-job following some minimal level of education. The important questions for such an investigation would then be along these lines: What is the minimal level of formal and general education required by a fitter for the efficient performance of his job? What are the different ways in which the fitter may receive the technical education necessary for his craft? How much of this technical education may be given in a formal technical training institution, and how much of it may be given to him on-the-job?

In order to conserve time and effort critical areas for training support could be isolated and analysed rather than all of the above categories. Such vital areas, as suggested earlier, might be those industries or skills which have only recently been introduced into the economy, such as aluminium welding and/or those areas which are particularly critical in terms of coordinated and efficient plant operation, such as the training of supervisors and overseers in the polytechnics. For academic thoroughness, one is tempted to study all of the occupations and industries, but in order to hit the crucial bottlenecks with the minimal resources available, one should concentrate on those areas with the most binding shortage. These shortages can be assessed by investigating new growth sectors and new occupations within old but important industires.

III. C. THE STRATEGY FOR SUBSIDISED TECHNICAL EDUCATION

III. C.I. THE CLIMATE FOR TECHNICAL TRAINING

One of the most important factors in the encouragement of technological expansion is the creation of a climate amenable to the development of technical craftsmen. This climate envelops many factors, ranging from the legal to the psychological. The structure of relative wages must be such as to encourage the competent to follow through in the development of their skills. Attitudes towards manual labour must change so that it becomes increasingly respectable to work with ones hands, so that boys who currently aspire merely to "sit under a fan," as one technical education official in Calcutta has so aptly expressed it, will be encouraged to take pride in their ability to operate a turret lathe or maintain an internal combusion engine. This social stigma on manual vocations has even received legal sanction:

> In Bombay the law stipulates that no one who has passed the matriculation examination may be kept in a manual job. At the municipal transport yard where my Brahmin acquaintance showed me around and told me about his problems with Scheduled Caste drivers, he pointed out one young man in a white shirt tabulating records on a long white sheet. He had become a pretty good man on the motors, he told me, but he also went to school and when he passed the matric, they had to make him a clerk.[1]

Until this frame of reference is changed, the encouragement of technical education and vocations will fall on deaf ears, who will accept such training and employment only when all other doors, save unskilled labour, are closed to them.

Another important aspect of the climate for technical education pertains to social mobility. Is admission to the technical institutes de facto exclusive of certain members of the society, or does the percentage distribution of trainees by caste, language, religion or place of birth correspond to the percentages existent in the society as a whole? Is employment in certain trades exclusive of certain groups or does the distribtuion of labourers within each trade correspond to that of the entire community? If the distributions differ significantly, what are the causes of the differences and the implications for policy? These considerations should not be overlooked, for inefficiencies may exist within the respective trades, arising out of their monopolistic positions, the goals of equality of social and economic opportunity may be seriously violated, and the cost of training per employee using his skill received in training may be unnecessarily high as a result of restricted entry into the occupation.

III. C.II. RETURNS TO TECHNICAL EDUCATION

Yet Calcutta is not alone in the dilemma of technical training, for a recent survey of the literature in the field of technical education concluded that not only is the return to investment in technical education less than the return earned by other educational forms, the return to technical education has been negative.[2] While the precision of such calculations leaves much to be desired, there are, as has already been indicated, many grounds for criticising orthodox forms of formal pre-employment technical or craft training, and not the least powerful of these criticisms is that it is terribly costly relative to its returns.

Ghana is another country encountering throes of growth and employment somewhat similar to those of India:

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[1]Harold R. Isaacs, India's Ex-Untouchables, Bombay, Asia Publishing House, 1965, p. 95.

[2]See the article by Mary Jane Bowman in the March 1966 issue of The Sociology of Education.

> In virtually every African territory there appears to be a current stress upon the need for the provision of technical education upon a massive scale to meet the "needs" of the economy. Sometimes such demands are based upon the conslusions of manpower surveys, the source of whose projections may not be too clear. Yet a sober inspection of the actual structure of job opportunities within an economy such as that of Ghana gives no reason to suppose that the products of technical schools can be absorbed soon on a large scale.[1]

Pakinstan has found investment in secondary level technical training constitutes an unwarranted diffusion of its educational energy and decided to concentrate on high quality general secondary education:

> The secondary school system should not be relied (sic) to train pupils for specific occupations in agriculture, business, industry or government. Its role in relation to vocational education should be to prepare boys and girls in the knowledge and skills which will widen their opportunities for more particularised vocational or professional training, in special or higher institutions, or in employment . . . . The best educational process for training in an occupation is "learning by doing it on the job." Moreover, any expectation that the school system should provide skilled specialists for the innumerable types of work in industry, business, commerce, government and agriculture would mean an intolerable economic and curriculum burden. The schools can and should provide a solid basis for specialised training by educating pupils in principles, by assisting them to reach mental and manual maturity, and by providing them with information and guidance concerning opportunities in various occupations. Secondary schools cannot be expected to sacrifice their essential objectives to the narrow training required for specific occupations.[2]

These two countries have found, as have other developing nations[3] that investment in vocational training at the secondary level yields a very low rate of return. This, however, does not mean that India and Calcutta should therefore avoid all forms of technical education, but rather that it should be very selective in such investments.

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[1]See the excellent article by Philip J. Foster, "The Vocational School Fallacy in Development Planning," p. 148, in C.A. Anderson and Mary Jean Bowman (eds.), Education and Economic Development, London, Frank Cass, 1966, 436 pp.

[2]National Planning Board, Government of Pakistan, The First Five Year Plan: 1955-60, Karachi, 1958, p.550, quoted in Frederick Harbison and Charles A. Myers, Education, Manpower, and Economic Growth, London. McGraw-Hill, 1964, p. 96.

[3]See also, Harbison and Myers, Manpower and Education: Country Studies in Economic Development, London, McGraw-Hill, 1965.

The high costs of ITIs, junior technical schools, and polytechnics have already been referred to above along with mention of the tendency for their former trainees to rejoin the general education stream. Considering the cost and the difficulties their graduates encounter procuring jobs, the Education Commission's proposals to strengthen and expand these programmes seem to warrant a careful re-examination.

III. C. III. JUNIOR TECHNICAL SCHOOLS AND THE ITI's

Considering the fact that both the ITI's and the junior technical schools are designed to prepare skilled production process workers for their future occupations, one wonders why two separate forms of instruction have been established to perform the same job. As entry into the ITIs requires matriculation and entry into the junior technical schools requires merely an eighth class pass, who is still quite young and occupationally uncommitted. While the author would support expansion of the ITIs only with reluctance, and only then in areas of proven shortages of new skills and technologies, this policy would seem more sound than similar investment in junior technical schools.

III. C. IV. IMPORTANCE OF A SOUND GENERAL SECONDARY EDUCATION

As the vast majority of skilled labour is actually trained on the job through informal techniques, the most prudent investment in a skilled labour force would seem to be a well-balanced and high quality general secondary education system that would provide the essenial mathematics, language (especially English, German, Russian or French), and scientific skills to all of the labour force.[1] The primary danger in technical education at this early age is that of over-specialisation prior to employment which makes it extremely difficult to place the student following the completion of his training. This emphasis upon a sound general secondary education with an emphasis on math and the sciences will be especially important as the aversion of people to manual occupations is gradually broken down by changes in the wage structure and acceptance of the modern technology.

III. C. V. AN EXTERNAL EXAMINATION SYSTEM

The possibility for an employee to further his education following his employment should be strengthened, perhaps through the establishment of an equivalent, at the crafts level, to the University of London's external degree system, whereby anyone may subject himself to an examination of both his theoretical and practical skills in any of several fields, the successful passing of which would entitle him to a certification of having met the minimum standards for the craft of skill. These tests could be given in any or all of the relevant fields, from

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[1]The high cost of this "high quality" instruction should not be the source of savings within the educational system, but should provide all of the tools now available, including audio-visual aids (radio and television, when available), trained instructors, study visits to factories and community institutions, the latest textbooks - which should include programmed instruction tests as referred to above in sec. II - and a reasonable amount of equipment for science courses. Any economies or cuts in expenditures within secondary education should be in terms of quantity rather than quality.

stenography and accounting to inventory management and machine tool operation. The establishment of such an examination system would make it possible for the employees to seek education on their own and in the evening to develop their skills on their own time. This examination system would not only save the government the revenue involved in the development of such skills, but it would also provide constructive channels for the energy and determination of the ambitious. This examination system would encourage private enterprise to enter the technical education field, and it may even be that supervisors and other employed skilled personnel would establish their own tutoring programmes in the evenings to supplement their incomes, or they might be employed by small, private training schools to teach a course or two in the evening. This would be a means of rewarding those who are ambitious, already employed and willing to pass on their skills to others equally endowed with ambition during their off hours.

III. C. VI. AUXILIARY COURSES

The training system should be augmented by the provision and support of short courses, auxillary training programmes, and sandwich courses which cater to the needs of employers and employees already committed to particular jobs or production processes. When the courses require that the trainees become familiar with particular types of equipment, the equipment used for training might be the same equipment as that used on the production line, but the training might take place during the hours when the production line is not in operation, such as the weekend, early morning or evening hours.[1] These courses would be a natural complement to the external examination system proposed above.

Where the information system indicated a severe shortage of personnel, government might profitably decide to subsidise such training programmes. The benefits of utilising the equipment in place in the plant would be that the students would thereby be trained in the current technology, with which they would have to be familiar after employment. If the supervisors or operatives from the plant were given a supplement to their income for providing the instruction in equipment operation, and if the industry were well paid for the use of its equipment during the off hours, such a proposal seems a reasonable means of training as well as providing competent instruction on up-to-date equipment.[2]

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[1]This proposal would obviously be inapplicable where the production process is a continuous one and a stoppage of the flow would require the shutdown of all operations and a gradual re-starting of the flow, as would be true in chemical or fertilizer plant operations.

[2]For a more detailed discussion of this point, see Appendix I, "A Note on Rigidity in Technical Education."

III. C. VII. GOVERNMENT SUBSIDY FOR INDUSTRY MANAGED TRAINING

Another one of the difficulties in technical and vocational training, that of coordinating the interests of industry with the administration by government, has been dealt with in France through their Vocational Training Institute.[1] This institute, from which India might learn a lesson, is financed almost entirely by governmental subsidy with the exception of some support by employers, employees, and firms for the wages of trainees and instructors during the periods in which they are involved in training. The governing body of the institution is a board of directors made up of six representatives each from government, trade unions, and employers, with subcommittees which deal with the specific problems of the individual vocational areas. The primary advantages of this system are that industry is strongly in favour of it and willing to grant leave to employees to enter the courses, instructors are paid wages competitive with those in industry, industry supplies some skilled labour to work as instructors in the institutes, and that the quality of instruction must be of a sufficiently high level, or industry would not be willing to pay part of the salaries of their employees while they undertake such training. If government feels that it should play a strong role in the provision of technical training, such an administrative structure, with appropriate modification for the Indian setting, would seem to insure that the training so subisdised would be of high quality and consistent with the interests of industry. It could easily be argued that the entire control of such an institution be placed in the hands of industry[2] with the proviso that its activities would be subject to annual review by government, say through the All-India Council for Technical Education and/or the National Council for Vocational Training. The Institute of Jute Technology in Calcutta and the Ahmedabad Textile Industry's Research Association are existing examples of governmental-industrial cooperation in training, and possibilities for further cooperation must not be overlooked.

The main reasons for such a joint training effort combining governmental finance and review with industrial management are that, first, when the government operates such training institutions, they are usually subject to the criticism by industry that the types of skills and the level of their development are out of line with the requirements of industry; second, when industry alone is responsible for such training it may fail to produce a sufficient number of trained personnel

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[1]See Appendix II, "The Report by the Austrian trade union team which visited France from 28th-31st October 1963, to study Vocational Training," OECD, Social Affairs Division, Programme for Employers and Unions, National Missions 1963 - Report No. 6.

[2]Technical training for engineering crafts may be placed in the hands of the Indian Engineering Association and/or other engineering associations.

to take advantage of the potential external economies[1] that exist in the field of training; third, the single firm operating in isolation may not be large enough to keep abreast of the latest training techniques; and fourth, the industry currently may be too disorganised to cooperate effectively on the establishment and maintenance of an up-to-date technical training system. As a partial guarantee that the training administered by industry and financed by government is actually required by industry and not simply a way to increase the number of skilled craftsmen in order to bring down the wage rate of such craftsmen, government might well require that industry finance some portion of the training.[2]

Two very important aspects of a technical education plan are, first, the establishment of an information system that will reflect current and potential shortages and surpluses of skilled labour and, second, the construction of administrative procedures that will automatically adjust the training programme to meet the changing structure of shortages and surpluses. If the responsibility for changes in the types of skills to be developed remains in the hands of industry, it means that the power to make the institutional changes would lie with the potential beneficiary of the changes - rather than industry having to persuade government that such alterations would be beneficial - and consequently, the likelihood of the proposed change being implemented is enhanced. The devolution of administrative authority into the hands of industry would also mean that if the quality of training declined below that required, industry itself would have the responsibility for raising the standards. Such an administrative structure for technical education would mean that industry rather than government itself would be

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[1]External economies: Cost advantages which accrue to the firm as a result of activities beyond the control of the firm, such as the creation of a supply of skilled manpower through the ITIs; internal economies: those savings that accrue to the firm as a result of activities within its control.

[2]West Germany's technical education system is also worth some study, for here technical training is characteristically within the firm, and the Central Bureau for Industrial Vocational Training (Arbeitestelle fur Betriebliche Berufsausbildung) in Bonn, which is the "nerve center" of Germany's vocational training programme, is not an official body but holds the "patronage of the three important bodies", the Federation of Chambers of Industry and Trade, the Federation of German Industries, and the Association of German Employers. This Bureau holds the responsibility for the planning of courses, determination of levels, and formulation of terms of agreement between the trainees, the school and the firm. See the Report by the Spanish team which visited the Federal Republic of Germany, from 21st-27th June 1964, to study "Vocational Training," OECD, Social Affairs Division, Programme for Employers and Unions, National Missions 1964 - Report No. 5, Paris, 34 pp.

responsible for breaking the rigidities of institutionalised technical education. Government, with less to gain from flexibility, would be correspondingly less likely to pursue such a policy.

Another scheme - which would be devised in an attempt to compensate firms only for those training costs from which the benefits would accrue to firms other than the ones providing the training - might be to compensate firms for all technical personnel whom they originally hired as unskilled labour and who, following training and up-grading within the firm, later leave the firm to take up a position as skilled labour with another firm. The amount of the compensation should be inversely proportional to the employee's length of employment as a skilled labourer with the original firm in order to deduct for depreciation of training costs and benefits already earned from the training by the firm imparting the training. Such a scheme would mean that industry would be compensated only when personnel left a firm after receiving training in the firm and thus would receive no compensation for those whose productivity is beneficial only to the firm which provided the training. Firms would not be compensated for training of their own staff, so long as they kept their staff, nor would they be compensated for departed skilled labour when that labourer was skilled prior to employment. Consequently, those firms who were net suppliers of skilled manpower to the economy would be compensated accordingly.

Once the administrative machinery for training is developed, it will be important that the training conducted is done as efficiently as possible, with the latest techniques for instruction, utilising up-to-date textbooks, audio-visual aids, and programmed instructional materials.[1] Government should see to it that such up-to-date teaching materials are available to trainers in both public and private organisations.

Much of the training should be given through the media of evening, sandwich, and part-time courses, - for reasons which have been given earlier - although there will probably be a continuing need and/or demand for full time programmes as well. The greater the burden that industry is willing to shoulder, the more resources government will have for roads, utilities and formal education, all of which are equally vital in a viable economy.

IV. IMPLICATIONS FOR POLICY

IV. A. THE IMMEDIATE FUTURE

The immediate steps to be taken in the process of planning for technical education should concentrate on an assessment of the process and efficiency of the current technical education system. This would include a good number of interviews with small as well as large firms,

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[1]See section I.I.

industrial associations (Indian Engineering Association, Indian Chemical Manufacturing Association, etc.), chambers of commerce and industry, ITIs, the CTI in Dasnagar, the Employment Exchange, the National Sample Survey, the Indian Statistical Institute, and the Census of India. Questions which would be asked of these organisations would be along these lines: How well is the current technical education system working? Are there blatant skill shortages that are not being met by the system? Has the system produced an excess of any skill categories? Is the quality of training provided consistent with the time and money invested in the institutes? What additions to or changes in the current system would you propose? What are the shortage areas in the skilled labour market? To which of these should the governmentally controlled training system direct its activities? What do you think of our recommendations for improving the training system?

The interviews with the ITIs and CTI might attempt to discover the means through which they adjust to shifts in the supply and demand for various skill categories, the rapidity with which their graduates are able to find employment following completion of the curriculum, and the means through which they attempt to keep their technology up to date and their instructors familiar with the latest technique. Some study of their costs and salaries would also be useful.

The Indian Statistical Institute, the Census, the National Sample Survey, and the Employment Exchanges should be contacted principally to consider the problems of developing an information system that would depict fairly readily the labour shortage and surplus areas. Interviews with other organisations should then seek to discover means of connecting this information system to the training system so as to facilitate rapid adjustment to changes in the supply and demand for various skills. The effectiveness of the supervisors of the Directorate of Industries in assessing the demands for skilled personnel should also be examined.

Another important part of the first stage of a work programme would be for the personnel to become as familiar as possible with the literature in the field of manpower development and technical training. This survey would include the OECD literature in the field of manpower and educational development,[1] John Vaizey's Economics of Education, P. J. Foster's excellent article on "The Vocational School Fallacy . . ."[2], Harbison and Myers' Education, Manpower, and Economic Growth, Adam Curle's Educational Strategy for Developing Societies, and Stephen F. Cotgrove's Technical Education and Social Change.

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[1]A complete bibliography of the OECD literature is to be found in the latest issue of the OECD Observer, the organisations quarterly journal, issued free of charge to technical agencies in developing countries.

[2]Referred to above.

IV. B. AFTER THE SURVEY: PHASE TWO

Following the preliminary survey described above, the analysis should begin to grasp the nature of the training system, its strengths and its weaknesses. At this stage then, the data and information accumulated should be synthesised and from the synthesis should come some tentative proposals regarding shortages and surpluses in skilled manpower, techniques for building in more flexibility into the training system, and possible changes necessary in the current organisation for technical education. These proposals should, of course, be discussed in second phase interviews with employer representatives as well as those currently involved in technical education. From these discussions, then, should come hardened proposals, either to keep hands off the system, as it is already quite satisfactory, or to change the system according to a detailed programme.

IV. C. THE LONG RUN: PHASE THREE

The long-run planning for technical education should seek to develop an information system which will be sensitive to shifts in the supply of and demand for skilled manpower. Then the plan should structure the administration of technical education so that institutional rigidities will be minimised and sensitivity to changes in the manpower market reflected by the manpower information system will be maximised. One index of the latter, for example, which might well be examined, would be to study the correlation between the shortages as reflected in the employment exchanges and the adjustment of the ITIs and apprenticeship system to meet these shortages.

The need for long-run detailed projections of the demand for skilled manpower is minimised by the length of time necessary to train such manpower given the availability of men with a sound secondary education. Given well grounded secondary school leavers, the maximum time necessary for training such men into skilled craftsmen should be no longer than two or three years, depending upon their vocation. This assumes, of course, the availability of instructors and equipment necessary to impart the training. Consequently, the important considerations for the technical training system are that it have a pool of well educated secondary school leavers, be sensitive to changes in the supply and demand for craftsmen, and that it have built into it flexibility in terms of plant, equipment, and instructors.

That the technical education plan must be closely geared to the overall economic development programme is axiomatic. The employment projections for the technical education plan must be the same as those upon which the population trends are based, and the demand for skills must be based on the best estimates of technological change. Fortunately, however, as indicated above, the detailed projections for skilled personnel will not have to be made more than five or so years in advance, for that would be sufficient to enable changes in or expansion of the output of the various skills. Unfortunately, on the other hand, considerable technological change may take place within a period of five years, and so the planners will have to keep their ears well tuned to the technological shifts likely to displace their trainees.

The long run would be the period for the implementation of agreed upon proposals for changing the technical education system. These proposals may be worked out jointly with the Department of Commerce and Industries and/or with the Education Department. It may be that proposals will arise which should be aimed directly at the Government of India, such as a University of Delhi equivalent to the University of London external examination system which would cover vocational and technical skills as well as university subjects.

Only in the long run will the appraisal of certain proposals be possible. For example, it would only be over the long run that the market would be able to develop techniques for utilising the external degree system for the production of skills. Only over a period of time would private technical schools and training programmes arise to meet this increased demand for training, and to appraise such a proposal too quickly after its implementation would be a flagrant miscalculation.

The long-run work programme for technical education would also have to consider some of the more detailed calculations that would be useful for making the marginal decisions necessary for the enhanced efficiency of the system. Improved data on costs, salaries, employment and trainees should be developed and made increasingly available to the planners. Technical education planning will gradually become more closely linked with overall educational and manpower planning as the society gradually upgrades its skills and as the instructors for the operatives increasingly hold higher and higher academic qualifications. In fact, employment projections for the next couple decades will also depend upon the availability of higher level manpower, for as such talent proves a bottleneck on the economy, they also prove a ceiling on the quantity of operatives that must be trained. The same is, of course, also true of other inputs into the system, for, indeed, as any essential resource becomes a shortage commodity and blockage to production, it likewise provides a maximum for the demand for trained production process workers.

R. C. Young
January 19, 1967

APPENDIX I
A NOTE ON RIGIDITY IN TECHNICAL EDUCATION

THE PROBLEM:

Rigidity in technical education may be found in several forms: instructors who are unfamiliar with the latest technology; machinery that is out of date; curricula that have little relation to in-plant operations, and the inability of the system to adjust to changes in the priorities for training arising from changes in the supply and demand for technical personnel, to name four. This note attempts to open discussions on new means of attacking these rigidities within the constraints of India's economy.

One of the very high costs involved in the establishment of a technical training institution involves the purchase of expensive machinery on which the trainees will be trained. One of the reasons that this machinery is expensive is that its opportunity cost is the productivity of that machine in the manufacturing process. An investment by the technical school thus incurs a very high fixed cost, which, in the event of a change in technology would mean that either it would have to sell such machinery (at a considerable discount, in the face of another more advanced technology) and purchase new machinery or it would have to continue using the out-dated machinery at the high cost of training its students in an out-dated technique.

A similar long-term technological commitment, though somewhat less rigid, takes place when an instructor, trained in the latest technology, is hired by a technical institute. In the first place, the fact that the insitute is able to afford the instructor may mean any of several things: that the instructor is incompetent, unable to get a job in industry and therefore willing to take up a low-paying teaching position; that the institute can afford to hire competent personnel as instructors, who would otherwise take high paying positions with industry as a supervisor, because the institute is very wealthy (a happy but rather uncommon circumstance for technical training schools in developing countries); or else, the highly skilled instructor is willing to accept low wages paid by the training school because he is highly devoted to industrial training in his country (likewise, a happy occasional but rather uncommon occurrence in developing nations). Assuming that the technical school is able to hire staff fully familiar with the technology current at the time of their employment, five or ten years later, the technology of the industry may have changed considerably while that original and formerly up-to-date staff is still in the employ of the technical school. If the technical schools were to dismiss their staff members every ten years as technology changed, this would mean recruitment of new staff members would take on new difficulties, for few men like to take a position knowing that, even if they like the job and do well in it, they are doomed to dismissal in five to ten years.

Another aspect of the rigidity problem is that the excess of demand over supply of certain types of skilled personnel may only be ephemeral; that is, it may be that after a certain number of such personnel have been trained through special training programmes, the excess of demand over supply for such personnel, which technical institutes are designed to meet, may disappear, leaving the technical training authorities with idle instructors and equipment for such training. The establishment of traditional training institutions is able to meet such ephemeral shifts in demand and supply for technical personnel only at very high cost.

SOME COMMENTS ON SOLVING THE PROBLEM:

One of the prominent features of India's economy is the underutilization of her plant and equipment. This has been pointed out by many analysis and must not be forgotten when one is developing a system of technical education. Given this underutilization of industry's own plant and equipment, one might then ask, why should the country continue to invest in such technical institutions when capital is already standing idle (for certain hours of the day and week) during the off hours of the production line? Why not make arrangements for the technical trainees to use industry's idle equipment during the off hours of the production line?

If the equipment of certain plants is not utilized until, say, eight o'clock in the morning, then why not arrange for the technical trainees to be taught on the equipment from, say, five or six o'clock until eight o'clock? Or from seven till nine in the evening? The rest of their technical training, which will often consist of courses such as introductory physics, metals, chemistry, labour relations, etc., and which would not require the use of machinery (with the exception, perhaps, of laboratory equipment), might then be carried on elsewhere under normal class room situations.

Most industries will, of course, be very reluctant to allow a group of unskilled men, with instructors who may leave a good bit to be desired, to come into their plant to receive their training. Considering the fact that a group of improperly supervised students could do considerable damage to the equipment, impair the operations of the production line, and raise the costs of normal operation, such a plan would be looked upon with considerable scepticism.

Suppose, however, that the government were to approach the industrialists with a plan which would mean that the training were to be conducted by their own supervisors and would mean that the manufacturer would be reimbursed in cash for the use of his machinery and his personnel. Current supervisors might be encouraged to participate in the programme through wage bonuses for serving during either the early morning hours or the late evening hours. As only part of their day, perhaps two or three hours of their eight hour day, would be given over to the formal technical education programme, they could still carry on in their former capacity for say, five of their eight hours and delegate their responsibilities to other supervisors during their absence, which would be only two or three hours per day. It clearly would mean that all resources, both the human and the physical capital of the firm, would be utilized more intensively than is now the case, but if training in the most up-to-date techniques and with the most capable personnel is truly an imperative for the economic development of the region, then this is one possibility which might be considered to resolve the problem of rigidities in both equipment and personnel.

The managerial aspects of such an approach to institutional rigidity must not be slighted; they will be of not inconsiderable difficulty. First, there is the problem of determining which skills require augmentation

through government involvement in the training process, and in this problem, the National Employment Service and industrial associations should be quite helpful. Second, there is the problem of encouraging supervisors to work during other than their customary hours; however, considering the willingness of personnel to "moonlight," or hold more than one job, this does not seem an insuperable barrier to the programme. The government could afford to pay him slightly more per hour than he would otherwise receive because of the fact that the government was saving money through a reduction of their fixed costs. Third, there is the problem of compensation to the company for the use of their plant and equipment for the training programme. Theoretically, the government should be willing to pay the company up to the depreciation charges on the plant and equipment that the government would otherwise have to purchase in order to provide such facilities to their trainees. And still other difficulties will become apparent if such a proposal is broached to industry. This technique could, of course, be applied to other skills, such as card punching in automatic data processing, typing, private branch exchange telephone operations, etc.

Clearly such a proposal is not foolproof, but neither is the current rigid and oft criticised system of technical education, with its outdated machinery, ill-equipped instructors, and lack of coordination between the trainers and employers. Improvements in the current system are sorely needed, and it is hoped that proposals better than this paper are about to be unfolded. Until they are, however, these proposals at least seem worthy of initial consideration.

APPENDIX II

REPORT BY
the Austrian trade union team
which visited France
from 28th-31st October, 1963
to study
Vocational Training

I. General

The purpose of this mission was to study accelerated vocational training in France, where there is a particularly advanced system of training, re-training and advanced training for adults, both from the point of view of organisation and teaching methods.

The programme prepared for the team began with general talks at the Ministry of Labour and included detailed discussions at the Head Offices of the Vocational Training Institute, at Champs-sur-Marne near Paris, and visits to the French trade unions, G.G.T.-Force-Ouvriere, the C.F.T.C. and the C.G.C.

II. The System of Accelerated Vocational Training in France

1. History

Accelerated vocational training was instituted in France during the post-war period, in order to make up for the lack of skilled workers, particularly in the iron and steel building industries. Later, the emphasis was changed from initial training to supplementary training (1959 Law on the Advancement of the Labour Force) aimed at adapting workers, who were already trained, to changed technical conditions. 328,000 workers have undergone training since 1946. Up till now, 25,000 workers per year have undergone training courses, and the number will shortly be increased to 40,000.

2. Types of Training

A basic distinction is made between first and second grade training. The purpose of first grade training is to prepare skilled workers for the various branches of industry. Second grade training provided supplementary training for highly skilled workers, such as technicians, chemists, draughtsmen, etc. Special attention is paid to the training of the disabled.

3. Trades

Training is at present provided for 172 trades which are mainly in the iron and steel, chemical, textiles and building industries but also for office employment (shorthand typists, etc.). Training requirements are based on the long-term employment forecasts which are made in France; these are broken down by trades and regions, but of course give only general information as to future requirements of labour.

4. Administration

Whereas education in France, both in ordinary schools and trade schools, is the responsibility of the Ministry of Education, vocational training of adults comes within the competence of the Ministry of Labour. A corporate body with legal personality known as the "Association Nationale Inter-professionnelle pour la Formation Rationnelle de la Main-d'Oeuvre" (ANIFRMO) has been set up under the auspices of the Ministry of Labour for the organisation of vocational training. The governing body of this corporation is a board of directors consisting of six government representatives, six employers representatives and six trade union representatives. In addition, there are committees which deal with the major vocational groups, comprising five employers' and five workers' representatives. There is also a sub-committee for each individual trade and each "Department," also organised on a joint basis.

The government representatives are appointed by the Ministry of Labour and those of the employers by the Employers Federations. The workers' representatives are designated by the four French Trade Confederations the C.G.T. (Communist), the C.F.T.C. (Christian), C.G.T.F.O. (Socialist) from those trade unions which have a majority of workers in the trade or area concerned. The chairman of these tripartite committees are the government representatives, while the employers' and workers' organisations each provide a vice-chairman; chairman of joint committees hold office for one year.

The Vocational Training Institute includes its own psychotechnical research department.

There are 120 Public Training Centres throughout France run by the Head Office. Each Centre has a director, together with two assistants - one for administrative and one for training matters.

5. Finance

Financing is ensured by a fund provided by the Government; there are no contributions either from the employers or from the workers. We were told that the sum set aside for this purpose during the current year was 180 Million francs. It is worthy of note, however, that employers and workers and individual firms do participate in the financing of some of these activities for instance by paying the wages of trainees and instructors during the period of training (see below).

6. Training in the Firms

Apart from training at the centres, some training is carried out within the firms themselves. This is subsidised by public funds through the Vocational Training Insitute, providing that it conforms to the Institute's standards. In addition, a subsidy is uaually paid in respect of instructors' and trainees' wages during the period of the course.

7. Conditions of admission and selection of participants

Applicants for accelerated training courses must be between 17 and 35 years of age. The upper age limit may, however, be raised providing official consent is obtained. The trade unions are pressing for the abolition of the maximum age limit, so that measures of vocational training can be extended to older workers.

Women have the right of admission, and this also applies to the technical trades. In practice, however, women only take advantage of this in respect of the textiles industry and for office employment.

Applications for training courses are made either on the workers' own initiative (in fact there is even advertising for this purpose) or, in the case of the unemployed, they may be directed to training courses by the labour exchange as a condition for receiving continued unemployment assistance.

All applicants must undergo a psycho-technical test (see below). If the numbers of applicants exceeds the number of vacancies available, a selection is made based partly on the results of the psycho-technical test and partly on the order in which the applications were received. Only about 5% of applicants, however, are actually refused.

8. Duration of Training

Training takes place during the day. Normal courses were formerly of six months duration with a 40-hour week, but they have not been shortened to 5-½ months with a 44-hour week. In the case of particularly difficult trades (such as electro-technician) the course lasts up to 11 months. On the other hand, there are advanced training courses which last only from 3 to 5 weeks.

9. Financial Assistance during Training

Trainees are entitled, during training, to the guaranteed minimum wage, which in France is the same for all trade and is laid down by law. This comes at present to 360 francs per month. In addition, there are extra payments made from the unemployment insurance fund to which both employers and workers contribute; lastly, in certain cases there are payments by the firm which employes the trainee. The wages earned by trainees therefore vary considerably, the minimum being the guaranteed minimum wage and the maximum being between 60 and 80% of the wages earned before training began. On an average, wages during training work out at about twice unemployment assistance.

Where advanced training courses (2nd grade training) are concerned, trainees generally continue to receive their full wages, the employer paying part and the remainder coming from publuc funds.

Trainees are covered by the national health insurance system and are entitled to family allowances.

In addition they are paid travelling costs to and from the training centre or, if they live at the centre, the cost of travelling to visit their families. Actual training costs are borne by the government. About 80 % of trainees live at the training centre, where they are also provided with board. A small sum is deducted from their pay for board and lodging.

10. Security of Tenure of Job

If training does not take place in the firm where the worker is normally employed, his job is usually kept open for him by the employer in cases of retraining and advanced training.

In addition to daytime training as described above, there are evening and week-end courses, for which all expenses are also borne by the state.

11. Pedagogical Principles of Training

Training is carried out in accordance with a standard method based on Cartesian principles.

The individual working processes to be taught are first analysed by scientists and broken down into fractional processes which in turn are classified according to difficulty and arranged in groups. The trainee is first taught the more simple fractional processes and, by the method of proceeding from repetitions of the known to the unknown, is gradually introduced to the more difficult processes.

Trainees are formed into small groups of ten to fifteen and the instructors are encouraged to foster good relations in the group. The instructor first demonstrates the process to be taught and then makes his trainees copy it immediately, so that they can learn from their own experience. The subject of lessons is also available in writing, and copies of the printed lesson are handed out to trainees at the end of each lesson.

Instruction is meant to be kept as practical as possible, and theory is only occasionally used, when considered absolutely necessary.

This method is shown to have been successful, and has thus far also been introduced into Italy, Spain, Portugal and Yugoslavia.

12. Psycho-techniques

We are here referring to the selection and guidance of trainees in accordance with psychological methods. As has already been stated, all trainees are given psychological tests at the beginning of the course, and psychological methods are also sometimes used during the course.

The Vocational Training Institute has its own psycho-technical department for carrying out tests, during which individual trainees are

asked various questions (e.g. mathematical problems for technicians, to which correct answers must be given within a given time limit, 10 to 15 minutes). The results of tests are expressed in marks. Following on the tests, trainees are interviewed by psychologists, university graduates who have a special three-months course. Instruments for measuring the speed of reaction and skill are also used.

The trade unions are sceptical about these tests and the psychological methods used, and the fact is that in practice these methods do not give any indication of the personality of applicants for jobs or traineeships, although this is an important consideration for the success of certain types of training.

13. Teaching Staff

The teaching staff must of course be highly skilled workers. They are released by their firms for three years in order to act as instructors, during which period they continue to receive their wages, in accordance with an agreement concluded between the Ministry of Labour and the employers' federations. Since, however, it has not been possible to recruit sufficient staff in this way, it has been found necessary to train instructors from among the trainees themselves, and particularly skilled trainees are invited to follow a six weeks' course in pedagogics at the end of their training course and serve as instructors to other trainees.

Since the Vocational Training Institute is not a governmental organization, it can pay higher salaries than those to which government officials of the same grade are entitled.

14. Examinations

The courses end with an examination, and an official certificate is awarded to successful candidates. The examining board consists of the trade sub-committee of the "Department" concerned and is composed of representatives of the employers and workers under the chairmanship of the director of the local employment service. Examination tests are drawn up in Paris and distributed to the centres. The examination lasts five hours or more. It is based on the notes which trainees have been given by the instructor during the course. These notes are processed by a complicated system, as a result of which both the quality of the work done and the time taken to do it are assessed. Ninety percent of the candidates are successful. In exceptional cases, the examination may be repeated.

15. Results of Training

Successful trainees are very much in demand, owing to the shortage of skilled labour, so that there is practically no placement problem. Those who have been trained as specialists are officially recognized as such after a short period.

16. Attitude of Trade Union

(a) C.G.T.-Force Ouvriere (French General Confederation of Labour)

Force-Ouvriere is very much in favour of the system, by means of which the advancement of the workers is encouraged, and which results in a rise in average wages. Initially there was some mistrust among older trade unionists with regard to younger ones who had undergone accelerated vocational training, but this difficulty has now been overcome.

So far as the Union's influence on the Vocational Training Institute is concerned, the workers' representatives often work in close co-operation with those of the employers, as for example in the matter of raising the wages of workers in the Institute. Government representatives also work in close co-operation with the workers' representatives, since both sides are concerned that the organization should be successful. The trade unions also have very reliable experts in this field.

A claim is now being put forward that trainees should be paid at least 80% of their former wages during the training period.

One of the disadvantages arising from the fact that in France there are four Trade Unions Confederations is that the degree of co-operation between trade union representatives is not as satisfactory as could be wished (e.g. no joint talks between the representatives of different unions before meetings). This also makes for difficulties in connection with trade union activities in the training centre.

(b) Confederation Francaise des Travaileurs Chretions - C.F.T.C. (French Christian Trade Union)

The C.F.T.C. also favours the vocational training system, its aim being to ensure by this means that all workers have the right to training. The C.F.T.C. also sees advantages in the fact that many workers who were not in a position to receive training when they were young, can become specialists as a result of accelerated vocational training. The fact is that there is a surplus of young workers in France, with the result that, in 1962 for example, 80,000 young workers were unable to find traineeships (either in schools or factories) and therefore had to work as assistants to trained workers. Accelerated vocational training provides them with the opportunity for advancement.

So far as disadvantages are concerned, see "Problems and Difficulties" under 18 below.

(c) Confederation Generals des Cadres (Confederation of Supervisory Staff)

The union consisting of technicians, foremen, supervisors, etc., is also in favour of the system for the reasons which have already been mentioned.

17. Attitude of Employers

French employers were initially very sceptical about accelerated vocational training. Among other things, they considered that this was not a means of achieving sound specialized training. Subsequently, however, they changed their attitude and are now very much in favour of it. They have recognized that it constitutes the means of adapting workers more easily to technical modifications, making up for the shortage of skilled workers and providing facilities for adapting agricultural workers to industry. The employers now actively co-operate in the work of vocational training; they make workers available either as instructors of trainees in the centres and even contribute to their wages, providing that they are ensured of being able to re-employ them after their period of training, or instruction as the case may be, is finished. The French employers' Confederation has undertaken that each firm shall provide a skilled worker as instructor for a given period at one of the centres.

18. Problems and Difficulties

Accelerated vocational training in France has given rise to the following problems:

(1) In certain branches of industry (e.g. the building industry) the demand for traineeships among the workers is insufficient. This is probably also connected with the fact that the number of trainees at present only comes to about 0.1% of the total labour force. The lack of demand for traineeships is partly due to the general feeling of well-being, partly to the fact that there is insufficient publicity in connection with training and also to the lack of financial incentive. What is required to overcome these difficulties is the organization of information and recruiting with regard to training and an increase in the amount of assistance granted during the training period to between 80% and 95% of the former earnings.

(2) Many workers have difficulty in obtaining temporary leave from their jobs in order to attend a training centre.

(3) The present maximum age limit of 35 must be abolished, in order to provide the necessary opportunities for advanced training for older workers.

(4) In certain branches there is not only a lack of trainees but also of instructors. Here again, higher wages would be a help.

(5) Employers are too reserved about future labour requirements; this makes it difficult to make accurate forecasts which, in turn, are essential for the organization of training. A survey of those trades in which long-term training requirements are inherent or recommended, should be carried out.

(6) A further problem, which has already been mentioned, consists in the fact that the French trade unions do not co-operate sufficiently, thus rendering impossible any real trade union activities in the centres (talks, etc., including perhaps the inclusion of labour rights in the curriculum).

III. A few conclusions of interest to Austria

The following points concerning the French system of accelerated vocational training are of particular interest to Austria.

1. Training in France is concentrated, not so much in the firms, as in official training centres which are jointly managed by the Ministry of Labour, the employers and the workers. This makes possible a more intensive system of training then would be possible in individual firms; it is a system which has proved its worth.

2. Training organizations are administered by an independent corporation; this has the advantage of making a concentration of work possible, and above all that the instructors employed in the centres are not considered as government officials and can therefore be paid wages in line with those paid in private enterprises.

3. Training is not financed by contributions from employers and workers but from the State budget.

4. The training period is much longer than in Austria (average of $5\frac{1}{2}$ months as against a few weeks in the case of daytime training in Austria) and training is therefore more thorough.

5. Financial incentives for training are considerable. In the case of advanced training, the full wages are paid, and in other cases between 60% and 80%; in addition traveling and training expenses are borne by the government. In Austria, on the other hand, only a proportion of the workers receive their unemployment benefits, which amount to only 30% of wages, and even traveling and training expenses generally have to be borne by the trainee.

6. Trainees have the possibility of living in the training centre, which constitutes a considerable advantage in rural areas where distances are involved.

7. The pedagogical system of training (systematic organization of practical work according to difficulty) is shown to be very effective.

8. It is also interesting that instructors can be selected from among trainees and that there is an agreement between the Ministry of Labour and the Employers' Confederation as to long-term leave for highly skilled workers who are prepared to act as instructors.

9. It is also interesting that French employers are so much in favour of the system that they grant leave to trainees and potential instructors and continue to pay a part of their wages while they are engaged in the centres.

10. Our experience in France also indicates the special significance of proper publicity and recruiting for such training.

* * *

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Approximately 400 representatives of the welfare and health fields from 34 states, Canada, and Puerto Rico participated in the forum which directed attention to the implications of recent home care legislation and problems related to financing homemaker-home health aide services. The report integrates the content of speeches by Ellen Winston, John W. Cashman, Winifred Kellogg, Clark W. Blackburn, Francis E. Browning, Mrs. Asher Yaguda, Grace W. Bell, Ruth V. Bien, Robert B. Hill, Verna M. Criss, Charles L. Hudson, and Peter G. Meek under the following headings: (1) Three Years of Growth, (2) Response to Legislation Is Slow, (3) Impact of Medicare, (4) Problem Areas Identified, (5) Service Must Be Interpreted, (6) Three Professions View Integrated Services, (7) Appeal Made for Unified Service, (8) Need vs. Source of Funds...And Other Concerns, (9) Civil Service Test Questioned, (10) Patterns of Organization Discussed, (11) Some Uniformity Deemed Necessary, (12) Need for Harmony Recognized, and (13) So Little Time...So Much to Explore. (JK)

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on

Homemaker-Home Health Aide Service

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National Council for Homemaker Services, Inc.

Report of
1967 Forum
on
Homemaker-Home Health Aide Service

New York City • May 4-5, 1967

Written by Evelyn Hart

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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Table of Contents

	Page
Foreword	5
On the Way to the Forum	7
Three Years of Growth	7
Response to Legislation is Slow	9
The Forum . . . Current Realities and Future Opportunities	10
Impact of Medicare	10
Problem Areas Identified	12
Service Must Be Interpreted	13
Three Professions View Integrated Services	15
Appeal Made for Unified Service	17
Need vs. Source of Funds . . . and other Concerns	17
Civil Service Tests Questioned	18
Patterns of Organization Discussed	19
Some Uniformity Deemed Necessary	21
Need for Harmony Recognized	21
So Little Time . . . So Much to Explore	22
Forum and Annual Meeting Program	23
Workshops	27

National Council for Homemaker Services

The National Council for Homemaker Services was incorporated in 1962 to stimulate the expansion and promote the improvement of homemaker services throughout the country. Membership is open to agencies providing homemaker services and to organizations and individuals interested in supporting the Council's purposes.

Working cooperatively with other national health and welfare organizations and with public and voluntary agencies, the Council:

- Promotes understanding of the values of homemaker-home health aide service
- Provides a central source of information and a medium through which knowledge and experience can be pooled and made available
- Encourages and guides communities in organizing and extending homemaker-home health aide programs
- Promotes development of standards
- Publishes reports and distributes educational and promotional materials
- Sponsors conferences and seminars.

Foreword

It is the hope of the National Council for Homemaker Services that this report of the 1967 Forum, held in New York City, May 4-5, will serve as a sequel to the report of the 1964 National Conference on Homemaker Services. The three-year span between these two national meetings was a period of tremendous activity in the Homemaker-Home Health Aide field.

While both meetings were national in character, attracting volunteer and professional personnel from Canada, Puerto Rico and all sections of the United States, there were marked differences in approach and in content of the sessions. The 1964 Conference brought together some 800 participants to consider all aspects of the service, to share experiences and exchange ideas and information — to discuss a wide variety of problems and possible solutions, to view the entire field in relationship to the growing need for homemaker-home health aide service, and to explore potentialities for expansion of the service.

The 1967 Forum, on the other hand, was deliberately less comprehensive in content and more concentrated in approach. Advance registration was opened first to Council members only, with a limit set at 300, but the enthusiastic response of members and non-members alike made it necessary to extend the limit to 400. Obviously, it was impossible to roam the length and breadth of the field in two days of deliberation; therefore, the attention of participants was directed to two major areas of concern — the implication of recent legislation which provides that care in the home be made available, under certain conditions, for all who need it; and problems related to financing adequate homemaker-home health aide services. These two vitally important areas were carefully examined in the plenary sessions and were freely discussed in each of the six workshops which were conducted concurrently as a part of each day's schedule.

Although priority was given to two major areas, it should be noted that participants found themselves speaking inevitably of other related concerns such

as staffing, recruiting, training, fund-raising, and keeping the service unified. Emphasis was placed on the need for increasing the traditional use of homemaker-home health aide service to help families with children, along with initiating and improving new uses of the service called for by recent, important developments in the health field. The 1967 Forum, significant and productive in its own right, served effectively to set the stage for another national conference in 1968.

At the close of the Forum, a number of participants wrote to the Council office, expressing their reactions to the sessions. One man wrote: "Even before leaving New York, I must write to say what a successful meeting this was . . . I learned a lot, and this feeling is shared by the other participants from my area. Our orientation has been strongly in the health care field, and I think we've done a satisfactory job there. But the two-day meeting has broadened our perspective, and we've already decided to try to stimulate our local people to take a harder look at the broad picture."

Much of the success of the Forum can be attributed to the active participation of members of the NCHS Board of Directors who served as chairmen of key committees, workshop leaders, major speakers, or assumed responsibility in other important areas. Special mention must be made of the effective leadership of Mrs. Clarkson Hill, Chairman of the Planning Committee, and Mrs. John M. Wagner, Chairman of the Program Committee.

The Council deeply appreciates the valuable contributions made by all who worked on Forum committees, presented papers at the sessions, or served as resource personnel or recorders in the workshops. We are grateful to the American Medical Association for publishing "Highlights," a compilation of major Forum papers, immediately following the meeting. Our special thanks go to the Metropolitan Life Insurance Company and The Equitable Life Assurance Society of the United States for their financial contributions in support of the Forum.

As this report is submitted, we are looking ahead to 1968 when we shall meet again to continue exploring better ways to serve all the people who need homemaker-home health aide service.

Betty Trippe

Mrs. Juan T. Trippe, *President*
National Council for Homemaker Services

On the Way to the Forum

They came from 34 states, Canada and Puerto Rico to contribute to and take something from the Forum, held in New York City in May 1967 in conjunction with the annual meeting of the National Council for Homemaker Services. Many of them were the same professional workers and volunteers who attended the first National Conference on Homemaker Services in Washington, D. C., in 1964 — and, in the three-year interval, they had gained a great deal of experience and sophistication, and had lost none of their enthusiasm and determination. Many others, new in the field, were equally enthusiastic and determined — and eager to learn from the experience of veterans.

There was an atmosphere of excitement, of expectancy, in the meeting rooms and corridors at the Forum where participants talked and listened with the same concentration, posed difficult questions, offered possible answers, and never for a moment lost sight of their common objective: provision of effective homemaker-home health aide service for all families and individuals who need it, whether their problems are related to health or social welfare. It seemed as though the Forum were the focal point of the tremendous momentum that had been building up over the past three years throughout the country. Despite the fact that all, apparently, had been running at top speed during the interval and no one had caught up with the jet stream of need for service, there was heard no sigh of discouragement — only a rising note of confidence and resolution.

"The most striking feature of the Forum and annual meeting was the diversity of backgrounds of the participants and the high level of competence of all involved, both professionals and volunteers," was the view expressed by a participant from Ohio in a report to her agency.

The welfare and health fields were represented in just about equal numbers, the former by social workers and the latter by physicians and nurses. They came from small and large community agencies, public and voluntary; from state departments of health and welfare, university faculties, and national health and welfare organizations. As the sessions progressed, the impression was that the National Council does indeed reflect the vision and the thinking of the broad field in which homemaker-home health aide service is developing so quickly out of adolescence and facing the complex problems that accompany maturity.

Three Years of Growth

Three years can be eternity if one is hanging by his thumbs, or they can be too brief a moment if one is caught up in high-gear activities that challenge his intelligence, skill, imagination and ingenuity. It was obvious that, to Forum participants, the interlude between the two national conferences had seemed far too short a time for all that needed to be done — yet, measured in terms of what actually had been done, those three years might well have been a decade.

A report of preliminary findings of the survey conducted to obtain information for the 1966-67 Directory of Homemaker-Home Health Aide Services highlighted the remarkable expansion of service since 1963. Much of this unusual growth was stimulated by the National Council and the Welfare Administration, U.S. Department of Health, Education and Welfare, and was planned and directed by persons attending the Forum. Over the three-year period, the number of service programs had nearly tripled, the number of homemaker-home health aides on the job had doubled, and the number of families served had quadrupled. The actual figures reported were:

	1963	1966
Service programs	303	812
Homemaker-home health aides	3,900	7,900
Families served	6,000	24,000

The greatest expansion occurred in the area of public welfare where the number of services increased from 93 to 385, and next in line was public health where the jump was from 15 services to 84. The following table, taken from the preliminary report prepared by Mrs. Grace W. Bell, Chief of Special Services, Methods Group, Bureau of Family Services, Welfare Administration, U.S. Department of Health, Education and Welfare, indicates the growth of homemaker-home health aide service during the three-year period under various auspices.

Homemaker-Home Health Aide Services

	1963	1966
Public Auspices		
Public Welfare	93	385
Public Health	15	84
Other	4	13
Voluntary Auspices		
Family and Children's Agencies	116	144
Visiting Nurse Associations	21	58
Home Health Agencies	12	20
Independent Community Programs	32	70
Other	4	12
Combined Public & Voluntary	6	14

In 1963, ten states reported no homemaker services; by 1966 all states and territories, except Idaho and the Virgin Islands, reported at least one homemaker-home health aide service, and most reported more than one. A service program

was being developed in the Virgin Islands, but was not operational, while in Idaho homemaker service was provided on an informal basis by the public child welfare service, but no formally organized program had been set up. It was noted that many of the states reporting the greatest expansion of service were those where state consultants on homemaker service were attached to the state welfare office, as in Minnesota, New York, North Carolina and Wisconsin. In Massachusetts, it was the state health department that took the lead in developing the service.

Response to Legislation is Slow

Recent Federal legislation and the availability of increased public funds in both the health and welfare fields were identified as important factors influencing the growth of homemaker-home health aide service. But the survey questionnaires reflected a surprising lag in the field's response to the 1965 Medicare and Medicaid legislation (Titles XVIII and XIX, Social Security Amendments). Total number of services provided under public and voluntary health auspices increased from 48 in 1963 to only 162 in 1966. Far greater expansion might have been expected, with funds available for homemaker-home health aide service as an essential part of home care for the aged sick and for low income families unable to cope with health or social problems.

It was noted that this was not the complete picture, for many agencies reported they were providing service under third party payments or on contract with other agencies and, in this way, were receiving Medicare funds. However, it was obvious that the impact of Medicare and Medicaid was just beginning to be felt in the field.

Mrs. Bell reported that a study of the survey findings indicated a growing trend toward provision of a broad-scale service by social welfare agencies, public and private, and by the so-called "independent" community agencies, including those financed by the Office of Economic Opportunity.

"I anticipate," she said, "that we will find more and more programs seeking to serve all people in their own homes, whether the need for 'home help' stems from absence of the parent, disability, illness or from problems strictly social in nature. The trend is to fit the service to the need, not the individual to the peculiarities of the agency."

Despite these encouraging developments, she warned, workers must remain keenly aware of the great gaps in the field, of the extremely uneven quality as well as quantity of service, of the serious lack of adequate training programs and specialist consultation. The status of homemaker-home health aide service in 1966, measured against its availability in 1963, was indeed satisfying — but, measured against national need, it represented only a small beginning in the enormous task of providing truly adequate service.

The Forum was, in no sense, a triumphant celebration of ultimate success after three years of concentrated effort; it was, rather, a brief pause for review, assessment, and re-charging for a running start into the next period of continuing expansion and improvement of service for increasing numbers of families in need of it.

THE FORUM

Current Realities and Future Opportunities

The demonstration period was over; the effectiveness of homemaker-home health aide service, as an essential link in the community's network of health and welfare services, had been thoroughly documented.

"I know of no other specialized service which makes so great a contribution to the welfare of families, the aged and disabled, and to the services of other social agencies," asserted Ellen Winston, Ph.D., U. S. Commissioner of Welfare, at the opening Forum session. Her statement was founded, not on conjecture and hope, but on personal observation of the service in operation in many different places in a variety of settings, in response to widely divergent needs.

The American Medical Association's "intense and continuing interest in homemaker services, as an important facet of the over-all field of home health care" was reaffirmed by Charles L. Hudson, M.D., AMA President. He referred to the service as a "vital part" of a community's home health program.

Forum participants launched their discussions from a pad of total acceptance, speaking out of the knowledge that homemaker-home health aide service is necessary, well established, and here to stay. That is not to say the service was free of problems. No, indeed! Everyone concedes that money, as a medium of exchange, is necessary, well established, and here to stay — but this does not mean the end of money problems. Wherever participants gathered in groups of two or more — whether in the lounge, the meeting rooms, the hallways or the elevators — there was talk of the need to expand and extend services, to develop better training programs, to combine scattered services under a single sponsorship, to find a way to meet social welfare and health needs equally well, to gear the service to priority needs rather than to sources of income, to interpret the service to all residents of the community . . . and to perform many other tasks that were neither simple nor easy.

Six workshop groups met concurrently on both days of the Forum, with more than 60 participants in each group. Each workshop, led by a Council board member, had a recorder and a resource panel of four persons representing the fields of coordinated home care, nursing, social work and the field in general. The four broad areas discussed in all workshops were: patterns of organization and administration, financing, staffing, and integration of services.

Impact of Medicare

Throughout most of the Forum discussions one word kept recurring with the regularity of a fog horn, and sometimes in a comparable tone of warning. The word was MEDICARE. Behind the word was Title XVIII of Public Law 89-97, the health insurance program under Social Security. The Medicare law, by including home health services under benefits covered in Title XVIII, made possible — as a matter of fact, made imperative — significant expansion of these services for all Americans 65 years of age or older. The hospital insurance

program pays for up to 100 home health visits in the one-year period following most recent discharge from a hospital or extended care facility (nursing home); in addition, the Medicare voluntary medical insurance program helps to pay for up to 100 visits in each calendar year, regardless of hospitalization. Visits may include part-time nursing care, therapy (physical, occupational or speech), medical social service, and the services of homemaker-home health aides.

The Medicare law became operative in mid-1966 and, in the following months, tremendous effort was directed toward assisting agencies in meeting requirements for certification as home care agencies under that law. At the same time, the very existence of the law carried various implications and generated many questions in the minds of workers in the field. Answers were sought for such queries as:

> "If we provide homemaker-home health aide service for Medicare beneficiaries, will we have enough resources to expand our service for other families who need it?"
>
> "How can we prevent the development of two separate services — one geared to health needs, and the other to social welfare needs?"
>
> "Does this mean that our training programs for homemaker-home health aides and the nature of our service will become more and more health oriented?"
>
> "Medicare payments often are extremely slow in coming through — how do we manage the financial problem this creates?"
>
> "How can we develop our record-keeping procedures to determine 'reasonable cost' which is essential for obtaining reimbursement for care of patients who are Medicare beneficiaries?"

To some Forum participants, Medicare was already a hard fact, a way of professional life; to others it was still just a paper law. And it was difficult to determine which group came armed with the greater load of questions. There was general recognition that all, sooner or later, would be involved in or significantly affected by the Medicare and other insurance programs.

The Council viewed the law as one of the major developments in the field since 1923, the year accepted as the birth date of homemaker-home health aide service in the United States. Scheduled as a major address in the Forum's opening session was a discussion of the implications of Title XVIII by John W. Cashman, M.D., Director of the Division of Medical Care Administration, Bureau of Health Services, U. S. Public Health Service.

Pointing out that home health services were only part of the broad spectrum of health services made available under Medicare, Dr. Cashman reported that some 6,800 hospitals and nearly 3,700 extended care facilities had been certified for participation in the program, as of April 1, 1967.

"The 1,800 certified home health agencies," he declared, "serve as a vital link in the chain of community resources which makes continuity of patient care today more feasible, more practical than ever before."

To qualify for certification, a home health agency must provide, in addition to nursing care, at least one other therapeutic service. In 1963, not more than 200 agencies could have met this requirement, but by the spring of 1967 the number had grown nine-fold and certified home health agencies were located in every state except Alaska.

Under what auspices were these agencies operating — and what additional therapeutic services were they offering? Of the first 1,400 certified, 626 were official health agencies, 530 were administered by Visiting Nurse Associations, 125 by hospitals, 90 by a combination of public and voluntary agencies, and 28 were under other types of auspices.

"In terms of volume of services provided," Dr. Cashman asserted, "the home health agencies administered by Visiting Nurse Associations have set an outstanding record from the very start of the Medicare program."

In regard to therapeutic service provided, in addition to nursing, he reported that of this same group of 1,400 agencies, 72 per cent offered physical therapy, 35 per cent offered homemaker-home health aide service, 23 per cent gave speech therapy, 21 per cent provided medical social service, and 15 per cent offered occupational therapy. He noted that 65 per cent of the agencies provided two or more services in addition to nursing.

Converting the Medicare law into an effective program throughout the United States was a gigantic task, requiring a great deal of innovation, adaptation and cooperation. It could not be done overnight, nor even over a nine-month period, but by April 1, 1967 a solid and encouraging start had been made and many elderly persons were already receiving benefits. During the first nine months, nearly four million hospital admission notices had been received, along with some 173,000 home health "start of care" notices — for each admission to home care, there were 22 hospital admissions. The record shows that nearly 19,000 Medicare patients were being admitted each month to home care. The record also reveals that a surprisingly high proportion — 70 per cent — were admitted to home care without prior hospitalization, highlighting the urgent need for home health care services geared to prevention of hospitalization and institutionalization. This situation points up a serious gap in the Medicare law, for it does not provide funds for preventive services. The necessity of meeting the needs of this large group of elderly individuals, from a humane as well as a practical viewpoint, creates a serious administrative problem for the agencies involved.

Problem Areas Identified

Eight major problem areas which impede progress in the important task of improving home care programs, in which homemaker-home health aide service is an essential ingredient, were identified by Dr. Cashman. He called for action at the community level where these problems can be attacked and resolved more effectively than at the national level. The eight problem areas are:

1. Lack of understanding of home health services among consumers, providers, and fiscal intermediaries

2. Financial problems of agencies that can be attributed to (a) faulty initial planning; (b) precipitate withdrawal of community funds; (c) the necessity to design and maintain a complex set of financial records; (d) unfamiliarity with deductibles and coinsurance; (e) no previous experience with fiscal intermediaries; (f) contracting by home health agencies for home health aide service
3. Failure of agency staff to understand the significance of some of the Conditions of Participation and the inter-relationships among them
4. Lack of experience and know-how concerning the organization and effective use of medical advisory committees
5. A long standing pattern of insufficient attention to the form and substance of patient records, particularly the clinical records
6. Shortages in most of the kinds of personnel needed to staff a home health agency
7. Outmoded personnel policies, including state and local civil service requirements that call for full-time staff; and finally,
8. Difficulties in achieving harmony among the several home health agencies a community supports.

Both Dr. Cashman and Dr. Hudson pointed to lack of awareness and understanding as a prime cause of the wide gap between the need for and provision of home health care services. If people don't know a service exists in the community or do not understand why it exists, they cannot apply for it or even realize they need it — nor will they support it.

Service Must Be Interpreted

Letting everyone know what the service is and what it does is a basic first step which may well determine the length and direction of later steps. The story of home health care and of homemaker-home health aide service must be told repeatedly through the spoken and written word and, whenever possible, through pictures. To reach all community groups, every channel of communication must be used — community and neighborhood newspapers, radio and television, business and industrial house organs, church publications, speakers' platforms.

Equally effective — or, probably more effective — is the kind of informal interpretation that can be done at dinner, across a bridge table, at the swimming pool, on a golf course. Dr. Cashman reported that both the U. S. Public Health Service and the Social Security Administration conduct extensive information programs, designed to reach beneficiaries and providers. But, he added, this is not enough.

"Agency board members," he said, "can be extremely successful in state and local communities because many of them serve also on the boards of other agencies and have far-reaching community contacts. Agency executives can make an enormous contribution by arranging for physicians and staff members

of area-wide planning agencies and fiscal intermediaries to visit the home health agency and by making arrangements, if possible, for a few key people to visit patients in their homes. We have tried this expedient with Federal staff, as a part of orientation, and know that it works well."

Dr. Hudson's concern was directed to those physicians — and there are far too many of them — who are unaware of the benefits of home care for their own patients.

"A home-centered care program cannot really succeed without the physician," Dr. Hudson said. "It cannot reach all of those who need its services without referral and direction from the patient's physician."

One of the best ways to enlist the interest and cooperation of physicians in home care services is to involve the medical community in initial planning and implementation of the program. The American Medical Association, through its official Journal last year, urged all physicians to participate in home care programs for the benefit of their patients, and charged local medical societies with the task of providing "community leadership in improving the coordination of existing home care services and in stimulating development of new services where they are needed."

It may seem odd that so much attention was given to the discussion of problems related to home care programs when, actually, only about one-third of those programs included homemaker-home health aide service. But it must be kept in mind that what happens to the rapidly developing home care programs, under Medicare, has a direct effect on what happens in the homemaker-home health aide field for it is anticipated that, ultimately, the service will be incorporated into every home care program. This expectation has given added impetus to the National Council's activities in promoting broad understanding of the purposes and values of homemaker-home health aide service. Much of the Council's work in this area has been designed to help its member agencies interpret the service in the local community. For example, available at the Forum were publicity kits which included a sample speech, a one-page fact sheet, and a variety of newspaper and radio materials that could be adapted easily to the local situation. Many participants expressed appreciation for these items tailored to help meet pressing local needs.

A memorable highlight of the Forum was the premiere showing of "Homefires," a 28-minute dramatic sound-film presenting a homemaker-home health aide on the job in three different homes, helping families cope with various problems. Response of the audience was extremely enthusiastic. Here was a film, many of them said afterward, which combined strong emotional appeal with clear, straightforward information so expertly that the viewer carried away both feeling and knowledge. "Just what we want," they added, "for showing to service clubs, PTAs, church groups, professional organizations, women's clubs and civic groups in our home towns."

The U. S. Office of Education made it possible for the Mental Health Film Board to produce "Homefires." The intent, from the very beginning, was to create a film that would serve, with equal effectiveness, as a recruiting and training tool for homemaker-home health aides and as a vehicle for interpreting the service to community groups, as well as to far larger audiences through

showings on local television stations. The film demonstrates the specific kind of help a homemaker-home health aide gives to elderly individuals who are not well and can no longer manage completely on their own, to a family of young children whose mother is being rehabilitated after an accident, and to a family struggling with the anxiety created by a mentally ill member. The relationship of the homemaker-home health aide with her supervisor, as well as with other professional workers helping the same family, is clearly portrayed. Her role in helping a family raise its standard of living is also shown. It was the consensus of the Forum that wide use of the film would help substantially to inform the American public about homemaker-home health aide service and to narrow the gap between need for and availability of home health care.

Three Professions View Integrated Services

The integration of homemaker-home health aide service with other community services as a prerequisite for effective home care was examined by a nurse, a social worker and a physician.

Turning to Mr. Webster for an authoratative definition, Winifred Kellogg, Assistant Director of the Visiting Nurse Association of Detroit, pointed out that "to integrate" meant "to form into one whole — to make entire or perfect." By direct application, she added, integration of homemaker and nursing service should facilitate the provision of a "whole" or "perfect" service for the benefit of the patient.

She recalled that always the public health nurse has depended on capable members of the family "to keep the patient warm, fed, clean, medicated and appropriately active or quiet between professional visits." Integration of their services with those of the physician and nurse made up the "whole" of care required by the patient. The absence of such a dependable family member has posed for the nurse a most difficult and frequent problem. By assuming the role of the concerned family member, the homemaker-home health aide fills the void and resolves the problem.

The Detroit VNA employs the home health aide to give personal care to patients and housekeeping service to their families, Miss Kellogg reported. Although the worker is called a "home health aide," her function is actually that of a "homemaker-home health aide." The physician prescribes home care and the service the patient requires, and the agency staff decides when the service of an aide is needed. The case worker, nutritionist and other consultants participate with supervisor and nurses in deciding on placement of aides and guiding the service.

In 1966 the VNA provided home health aide service for 542 families. In addition to personal care, services received by these families included help with child care, food preparation, cleaning, laundry and shopping. In mid-year, the agency was certified as a participating home care agency under Medicare, and the use of home health aides began increasing steadily — at the end of the year the agency had 56 aides on staff, although only 40 such positions had been budgeted.

"It is not possible at this time," Miss Kellogg said, "to measure the probable impact of Medicare and Medicaid on health care of the aged and the economically deprived. But it is possible, already, to see and feel their influence on the integration of home health aide with nursing and other health services required for the 'whole' of care."

The importance of integrating homemaker services with other community services, from the point of view of social work, was discussed by Clark W. Blackburn, General Director, Family Service Association of America, one of the founding fathers of the National Council for Homemaker Services.

In establishing the Council, he said, "it was our hope to create a national organization that would serve as an umbrella for both social welfare and health interests."

He interpreted the oversubscription of the Forum as a testament to the vitality of homemaker-home health aide service and as an indication that, in the field, there was recognition of the need for the different disciplines and professions involved to talk and work together, to explore ways of merging their services in a broad program that would best serve the people of their community.

The physician's viewpoint was expressed by Francis E. Browning, M.D., President of the Home Care Association of Rochester and Monroe County (N. Y.). Dr. Browning described how homemaker-home health aide service had been integrated into the coordinated home care program administered by the Association. The program was established in 1960 to fill a void in community services — to meet the needs of patients who could be spared institutional care provided centrally coordinated multiple services were available and used efficiently.

The Association staff provided no direct services for patients, except for social work service and intravenous therapy service, Dr. Browning said. All other direct services were provided by other agencies through contractual agreements. Home health aide service, for example, was provided by the Visiting Nurse Service.

"We cannot overemphasize the importance of the home health aide in the intensive type of coordinated home care program," he asserted. "Without this service, our program would have to reject more than 70 per cent of the patients we now serve."

There was a recognized distinction between homemakers and home health aides in the Rochester program. Dr. Browning reported that homemakers were used in selected situations, but the use ratio of aides to homemakers was about 13 to one because most patients needed direct service from the aide.

"I realize," he added, "that some communities train persons to function either as a homemaker or as a home health aide to achieve maximum flexibility in the use of personnel. At the present time, we obtain homemaker service from an agency other than the Visiting Nurse Service. This division is the result of practical considerations. I feel sure this general concept will come up for discussion during the workshop meetings."

And indeed it did! There was a great deal of talk about the danger of a split down the middle, at the point where the hyphen appears in homemaker-home health aide service. Such a separation, one participant commented, would

mean that a home health aide could wash the patient's face — but not the dishes. A homemaker would have to be assigned to the latter task. It was recognized that, in some areas, steps had been taken to separate the function of the homemaker from that of the home health aide, with different approaches to training, supervision and salary scale.

Appeal Made for Unified Service

A strong case for keeping the service unified was made by Mrs. Asher Yaguda, member of the NCHS Board of Directors and President of the Woman's Auxiliary to the American Medical Association, in a major address to the Forum. While other speakers had touched lightly on this problem, she gave it full attention, examined closely its implications and accepted it as a challenge to action. She called for concerted effort in the field to retain the hyphen in the term "homemaker-home health aide" and to equalize the training, supervision and salary for all workers carrying that title.

"We agree," she said, "that the motherless home may not need personal care services, but we find no reason for the homemaker in this situation not having well-rounded training. Her next case may well be an elderly, chronically ill person."

Mrs. Yaguda could find no valid justification for training two sets of homemakers to serve the same families. She indicated that personnel shortages alone made this kind of operation a luxury few communities could afford. Illness in the family often created the need for homemaker service, but the homemaker assigned to such a family was expected usually to do more than care for the sick individual. It became obvious, as she spoke, that the most practical and efficient procedure was to train all homemaker-home health aides to work in both the health and social welfare fields, to care for the sick and the handicapped as well as to manage a household and look after children.

Use of the term "home health aide" throughout the text of the Medicare law was viewed by Mrs. Yaguda as a serious threat to unified service. She suggested that the time might be right for the voluntary sector to move to persuade Congress to restore to this worker the time-honored, generic term, "homemaker."

Need vs. Source of Funds . . . and Other Concerns

Many participants expressed concern about the growing tendency to gear service to the available sources of funds rather than to existing need. Some pointed to Medicare and Medicaid programs as significant contributors to this trend. Agencies struggling to finance homemaker-home health aide service designed to meet total family needs have found it tempting to abandon their broad program and direct their efforts to providing a single health-oriented service which would be financed under Medicare or Medicaid. While such a step might solve the agency's financial problems, it would leave many families without the help they need in coping with social problems.

However, a more optimistic note was struck by Dr. Ellen Winston in her discussion of Medicaid, the health care program provided through Federal-State partnership. Medicaid funds can pay for homemaker-home health aide service for low-income families or individuals who need help because of illness or disability, but not for families or individuals who need help in raising their living standards or combatting other social ills.

"But, to the extent that services can be financed with Medicaid funds," Dr. Winston asserted, "other public funds are freed to pay for service to deprived families that do not have pressing medical problems. Thus, the total homemaker-home health aide service program can be expanded."

She urged Forum participants to work with citizen groups in their own states to make sure that the Medicaid program included provision of homemaker-home health aide service and that a homemaker service specialist was attached to the state public welfare staff. While Dr. Winston spoke strictly from the viewpoint of public welfare, she gave full recognition to the recent growth of homemaker-home health aide service under public health and voluntary health and welfare auspices, and stressed the need for continued acceleration of all these efforts.

Such acceleration calls for recruitment of more homemaker-home health aides, a task that was thoroughly discussed in workshop sessions. Most participants agreed that recruitment, in and of itself, posed no major problem. Homemaker-home health aides already employed had proved to be the most effective recruiters, for they had first-hand knowledge of what the job entailed and what qualities were required to do the job well; word-of-mouth was their best channel of communication. Some agencies had found candidates by placing notices in neighborhood newspapers, community newspapers, church bulletins, and preparing recruitment spot announcements for local radio stations. Agency board members, volunteers and staff, in some areas, had recruited workers simply by talking about the service and the need for homemaker-home health aides to their friends, acquaintances and neighbors. It was apparent that in most communities there still existed a large reservoir of woman-power which had scarcely been tapped . . . women who had reared their own children and managed their own households, who now had time on their hands and wanted to earn money by working in a job they enjoyed and in which they could excel.

Civil Service Tests Questioned

A few participants shared a common need for help in resolving an employment problem related to Civil Service procedures. In some areas where homemaker-home health aides were certified as Civil Service employees, difficulty had arisen over the use of screening tests which did not actually measure the specific abilities and knowledge required for the job. The problem stemmed from the fact that many homemaker-home health aide candidates were totally unaccustomed to taking tests of any kind and became so fearful and confused when confronted with this alien task that they could not function. Agency executives have learned that quite often a candidate who is inarticulate in a

first interview relaxes later when the strangeness of the setting and the procedure wears off and can then discuss her own feelings and desires, needs and capabilities. It is not odd that such women are blocked when required to take a written examination.

It was suggested that an effort be made by the Council to work with the U. S. Civil Service Commission in formulating an appropriate screening procedure for determining the eligibility of homemaker-home health aide candidates. Such a measure would help to assure certification of those persons truly qualified and adequately trained.

It was recognized in workshop sessions that there is urgent need for generic training standards and a tested curriculum pattern, using a multi-disciplinary approach. Some suggested that training programs should be more comprehensive than the accepted minimum guidelines indicated and that personal care should be an integral part of those programs. On the other hand, there were those who questioned the wisdom of, and need for, training all homemaker-home health aides to give personal care to an ill family member in addition to meeting the other needs of the family. The latter pointed out that homemaker service was needed by many families in which there was no problem involving illness. This statement was countered by the first group who maintained that workers must be trained to serve as both "homemakers" and "home health aides" because a family's social problems are inexorably tied in with health problems. The feeling was expressed that perhaps specialization — that is, training in care of the handicapped or the mentally retarded or other persons with special problems — should be related to placement and in-service training rather than to basic training of the homemaker-home health aide.

Patterns of Organization Discussed

Out of the general sessions, out of the workshop presentations and discussions came the clearly defined impression that here was a field in which the atypical was typical. No master plan for administering, staffing or financing the service had emerged because many different plans had been put into operation — and who was to say which one should serve as the official blueprint? Variety was the rule — not the exception. Most services were community-wide, some were county-wide, and a few were regional; some were provided only for families receiving public assistance, others for families *not* receiving such assistance. Services were being provided by community-based agencies, public welfare or public health departments, Family Service agencies, Visiting Nurse Associations and hospitals. Financial support for the service came from the local United Fund, Federal funds, insurance programs (Medicare, Blue Cross, etc.), foundations, individual and corporate contributions, fees paid by recipients of the service — or any combination of these sources.

A plenary session devoted to patterns of administration, staffing and financing of homemaker-home health aide service, on a state, regional and local basis, provided material for further discussion along comparable lines in workshop sessions.

Development of New Jersey's statewide program was described in some

detail by Mrs. Ruth V. Bien, Executive Director of the Visiting Homemaker Association of New Jersey which works closely with the Division of Chronic Illness Control, State Department of Health. The program consists of autonomous local services, with guidance, coordination and financial aid provided by the state. Local services are community supported by individuals and by voluntary and governmental agencies. Mrs. Bien reported that Medicare necessitated increased recruitment and publicity and twice as many training courses. In 1966, training was given to 506 homemaker-home health aides, a 91 per cent increase over 1965. Integration of services went smoothly, she said, and the only snag was slowness of payment. All local agencies used a uniform, state approved cost analysis and statistical reporting system.

The regional operation of Intercommunity Homemaker Service, covering five separate towns in the western suburbs of Boston, was discussed by Robert B. Hill, Executive Director of Family Counseling Service (Region West) in Newton, Mass. In 1962, Mr. Hill recalled, a group of representatives of the five towns decided that homemaker service might do better on a coordinated regional basis rather than as separate services operating in each of the five communities. This arrangement made it possible to recruit homemakers from a wider geographical area and to spread the cost of the service among several communities.

Concurrent with the growth of homemaker services, Mr. Hill reported, United Community Services had developed by January 1963 a blueprint for a series of regional family agencies in Boston's suburbs. Now in its fourth year, he said, Family Counseling Service (Region West) is a nine-town area which includes the five towns served by Intercommunity Homemaker Service. The two agencies have been brought together to consider the advisability of affiliation. Such liaison would help the homemaker agency financially, for United Community Services would provide deficit financing in an amount comparable to the State Health Department grant which had been provided during the first three years of the agency's operation. Affiliation would also make available casework service and consultation with medical social workers when needed by the Intercommunity Homemaker Service. Joining of the two agencies, Mr. Hill noted, should prove highly beneficial to both.

Importance of a strong, working board of directors for a growing agency was emphasized by Verna M. Criss, Executive Director of Berks County Home Service, the only homemaker-home health aide service agency in Reading, Pa. Problems of budgeting, fund-raising, public relations and inter-agency communication, she said, often can be handled most effectively by well-informed board members.

To administer a program with funds coming from fees, United Fund, and from county, state and Federal grants, Miss Criss pointed out, requires a well organized, adequate bookkeeping system. She reported that her agency used the service of an accounting firm to aid in bookkeeping and record keeping. The agency's staff included an assistant director, a full-time registered nurse, a part-time public health nurse, a bookkeeper and a secretary. Miss Criss expressed the hope that the agency would continue to be flexible enough to adjust to community needs and to new legislation.

Some Uniformity Deemed Necessary

The only apparent common denominator in the field was the commitment to meet human needs within the home. Much of the discussion in workshop sessions seemed to be a kind of preface to the development of a master plan of operation, a plan which would provide the framework for a stable, consistent, efficient and effective service, permitting the freedom and flexibility so essential to this particular service. There was general agreement that this was a task to which a later national conference might well address itself.

There were two areas in which the pressing need for uniformity was recognized by all participants — record keeping and cost accounting. Importance of the latter had been heightened by the advent of Medicare, for the law required an accounting of "reasonable cost" of service prior to reimbursement to the agency providing service.

It was suggested, during workshop discussions, that it would be extremely helpful if the Council could set up a project to do at the national level what could not be done locally: to examine the various recording systems in use (including intake, service, personnel and finance), determine the system that is most effective and promote its adoption by local agencies. It was the considered opinion of many participants that some serious problems might be resolved by the establishment of standard procedures in record keeping.

Need for Harmony Recognized

The need to achieve and maintain harmony among the various disciplines and professions whose cooperative efforts are essential to the provision of top quality home care programs was given full recognition at the Forum. And, at the same time, the unpleasant truth that meeting this need was one of the most difficult tasks confronting the health and social welfare fields was honestly discussed.

Nurses and social workers spoke frankly of the "stress" between the two professions and of the difficulties often encountered in cooperative projects. They agreed that the two groups should examine jointly these areas of "stress" so that, with greater understanding, they might better coordinate their efforts to serve, without overlapping or duplication, patients who need help at home.

Dr. Cashman viewed the problem in broader outlines and noted its direct effect on homemaker-home health aide service. He reported that in some communities, the home health agency looked on the homemaker-home health aide agency as its satellite, ignoring the fact that it had been in operation many years and that its consumer group was much larger than the aged population entitled to Medicare benefits. Such a homemaker-home health aide agency, he said, could not be expected to abandon the families it had been serving over the years.

He referred to executives of some nursing agencies who were over-concerned with doing business as usual and were reluctant to enter into an agreement with other community agencies to establish a certified home health agency, thus depriving the community of Medicare benefits.

"Board members and executives alike," Dr. Cashman declared, "must devote special attention to such situations to weld a true partnership among the agencies."

So Little Time . . . So Much to Explore

Workshop sessions were marked by a kind of breathless quality, an urgency that stemmed from the knowledge that there was so little time and so much to question, to examine, to learn. The leaders' task was not one of stimulating discussion, but of keeping it on an even keel, regulating the bombardment of questions, restraining enthusiasm when it threatened to turn the dialogue into a chorus. The eagerness of participants to talk about problems besetting their agencies, and to find clues in the experience of others, reflected a deep need for communication.

In a sense, these were workers fresh from a revolution — a quiet revolution, but none the less disrupting. Many homemaker-home health aide services had just begun to narrow the gap between need and service in their communities when the rapid implementation of Medicare and Medicaid exploded the status quo and stretched the gap beyond the visible horizon. There was no time for gradual, normal adjustment to the new situation — the demand for more service, as part of a cooperative program, was immediate.

The Forum provided a more than welcome opportunity for objective review and assessment, enabling participants to withdraw from the field of action and view recent developments in their proper perspective. The two-day sessions performed the extremely useful function of producing for key leaders, both volunteer and professional, a kaleidoscopic picture of homemaker-home health aide service across the country, in relationship to other community services and to the total needs of families and individuals. For some, this was a first chance to compare the job they were doing with what was being done in other communities.

At the conclusion of the Forum, a penetrating, thought-provoking summary was presented by Peter G. Meek, Executive Director of the National Health Council and Treasurer of the National Council for Homemaker Services.

Mr. Meek spoke for all participants when he gave top priority to "the need to explore further many of the matters that deeply concern us" . . . and when he suggested that a follow-up national conference be arranged for the purpose of hammering out a pattern for the orderly development of the service to meet the varied and expanding and insistent need for it.

Forum & Annual Meeting

"CURRENT REALITIES AND FUTURE OPPORTUNITIES FOR HOMEMAKER-HOME HEALTH AIDE SERVICE"

Thursday, May 4 **Hotel Biltmore**

8:30-9:30 A.M. — Registration	Fountain Court

GENERAL SESSION

9:30 A.M. - 12 Noon Grand Ballroom

Presiding: MRS. CLARKSON HILL
Chairman, NCHS Forum Committee

Speakers: MRS. JUAN T. TRIPPE
President, NCHS
"Goals of the Forum"

ELLEN WINSTON, Ph.D.
U.S. Commissioner of Welfare
Dept. of Health, Education, and Welfare
"Progress and Potential"

JOHN W. CASHMAN, M.D., MPH
Chief, Medical Care Administration
U.S. Public Health Service
Dept. of Health, Education, and Welfare
"Special Implications of Public Law 89-97 Title XVIII"

Symposium

"Integration of Homemaker and Other Community Services"

as seen by

Nursing
WINIFRED KELLOGG, *Assistant Director*
Visiting Nurse Association
Detroit, Mich.

Social Work
CLARK W. BLACKBURN, *General Director*
Family Service Association of America
New York, N. Y.

Coordinated Home Care
FRANCIS E. BROWNING, M.D., *President*
Home Care Association of Rochester and Monroe County
Rochester, N. Y.

Speaker: MRS. ASHER YAGUDA
President, Woman's Auxiliary to AMA

"Homemaker-Home Health Aide Service: A Unified Service"

12 Noon-12:30 P.M. Fountain Court
Dutch Treat Cocktails

LUNCHEON

12:30-2:30 P.M. Grand Ballroom

Presiding: MRS. JUAN T. TRIPPE
President, NCHS

Speaker: LAURENCE M. WILLIAMS
President, Williams, Inc.
New Orleans, La.

"Partnership of Voluntary and Public Services"

AFTERNOON SESSION

2:30-4:30 P.M. Rooms H, J, K, M, N, P

Six Concurrent Workshops

These workshops, each led by an NCHS Board member and each with resource persons representing the fields of nursing, social service and coordinated home care, will examine PL 89-97 and its effect on homemaker-home health aide service; explore the best use of available funds to meet community needs for this service; and delineate patterns for establishing permanent organizational roots for a service within a community.

Open House

8:00-10:00 P.M. Council Suite

FOURTH ANNUAL MEETING

Friday, May 5

ANNUAL MEETING BREAKFAST

8:00-9:30 A.M. Music Room

Presiding: MRS. JUAN T. TRIPPE
President, NCHS

Speaker: MRS. GRACE W. BELL
Chief, Social Service Methods Group
Bureau of Family Services
Welfare Administration
Dept. of Health, Education, and Welfare

"New Directory Findings"

GENERAL SESSION

9:30-10:30 A.M. Music Room

"Financing, Administration and Staffing Homemaker-Home Health Aide Service"

Presiding: MRS. NORA P. JOHNSON
Assistant Director
The Children's Aid Society
New York, N. Y.

Leader: MRS. ELIZABETH G. WATKINS
Staff Associate
American Public Welfare Association
Chicago, Ill.

Representatives of:

State Agency
MRS. RUTH V. BIEN
Executive Director
Visiting Homemaker Association of New Jersey
Trenton, N. J.

Regional Agency
ROBERT B. HILL
Executive Director
Family Counseling Service (Region West)
Newton, Mass.

Local Agency
VERNA M. CRISS
Executive Director
Berks County Home Service
Reading, Pa.

10:30 A.M.-12 Noon Rooms H, J, K, M, N, P
Six Concurrent Workshops

Discussions will include such areas as use of public and voluntary funds to improve program; training, including administrative and supervisory personnel as well as homemaker-home health aides; employment policies; and recruitment.

Friday, May 5

12 Noon-12:30 P.M. Fountain Court
Dutch Treat Cocktails

LUNCHEON

12:30-2:30 P.M. Grand Ballroom

Presiding: MRS. JOHN M. WAGNER
Vice President, NCHS

Speaker: CHARLES L. HUDSON, M.D.
President, American Medical Association

"Is There a Homemaker in the House?"

GENERAL SESSION

2:30-4:00 P.M. Grand Ballroom

Presiding: MRS. CLARKSON HILL
Chairman, NCHS Forum Committee

Film Presentation

MRS. ALBERTA JACOBY
Mental Health Film Board

BERENICE MALLORY, PH.D.
U.S. Office of Education

Premiere showing of HOMEFIRES, a film interpreting such rapidly developing areas of homemaker-home health aide service as caring for the aging and chronically ill, caring for families with a mentally ill member, and teaching improved standards of living. Produced by the Mental Health Film Board.

Forum Findings

PETER G. MEEK
Executive Director
National Health Council

Adjournment

WORKSHOPS

WORKSHOP I — Room H

Leader: CLARK W. BLACKBURN
Family Service Association of America
New York, N. Y.

Resource Panel:

General: NORMAN V. LOURIE
Pennsylvania Dept. of Public Welfare
Harrisburg, Pa.

Home Care: MRS. SUZANNE B. GREENBERG
Training Center for Comprehensive Care
Lemuel Shattuck Hospital
Jamaica Plain, Mass.

Nursing: HELEN M. JONES, R.N.
New York State Dept. of Health
Albany, N. Y.

Social Work: PATRICIA A. GILROY
Homemaker Service of the National Capital Area
Washington, D.C.

Recorders: MRS. JANE U. NORWOOD
State of North Carolina Dept. of Public Welfare
Raleigh, N. C.

MRS. MANJA M. DAVIS
Child and Family Services
Chicago, Ill.

WORKSHOP II — Room J

Leader: RICHARD D. RIFE
Capital Blue Cross
Harrisburg, Pa.

Resource Panel:

General: MRS. ELIZABETH D. BURFORD
Child and Family Services
Chicago, Ill.

MRS. GRACE W. BELL
Bureau of Family Services
Welfare Administration
Dept. of Health, Education, and Welfare
Washington, D.C.

Home Care: FRANCIS E. BROWNING, M.D.
Home Care Association of Rochester and Monroe County
Rochester, N. Y.

Nursing: MARGARET B. WOODRUFF, R.N.
American Nurses' Association
New York, N. Y.

Social Work: JEANNE MARIE PARKER
Family Service Society of Bridgeport
Bridgeport, Conn.

Recorders: SALVATORE A. MANDALFINO
Cleveland Homemaker Service
Cleveland, O.

CAROLYN J. MURPHY
New York City Dept. of Welfare
New York, N. Y.

WORKSHOP III — Room K

Leader: PETER G. MEEK
National Health Council
New York, N. Y.

Resource Panel:

General: WINIFRED KELLOGG
Visiting Nurse Association
Detroit, Mich.

Home Care: CLAIRE F. RYDER, M.D., M.P.H.
Division of Medical Care Administration
Dept. of Health, Education, and Welfare
Arlington, Va.

Nursing: ADAH R. DAVIS
Visiting Nurse Service of Rochester
and Monroe County
Rochester, N. Y.

Social Work: MRS. GLADYS S. LAWSON
Children's Bureau
Welfare Administration
Dept. of Health, Education,
and Welfare
Washington, D.C.

Recorders: M. ASENATH JOHNSON
State of Connecticut
Dept. of Health
Hartford, Conn.

L. M. DETMER
American Hospital Association
Chicago, Ill.

WORKSHOP IV — Room M

Leader: EUGENE H. FREEDHEIM
Attorney-at-Law
Cleveland, O.

Resource Panel:

General: ROBERT S. BURGESS
Rhode Island Council of
Community Services, Inc.
Providence, R. I.

Home Care: ADELE RICHARDSON, R.N.
The Visiting Nurse Association
of Chicago
Chicago, Ill.

Nursing: FRANCES A. MCVEY
Visiting Nurse Association of
Brooklyn, Inc.
Brooklyn, N. Y.

Social Work: MRS. VIRGINIA O'NEILL
New York City Dept. of Welfare
New York, N. Y.

ROBERT B. HILL
Family Counseling Service
(Region West), Inc.
Newton, Mass.

Recorders: MRS. RUTH S. JETTE
Stamford Homemaker Service, Inc.
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VT 005 058
Manpower and Immigration. Manpower Report Number 4.

Manpower Administration, Washington, D.C. Office of Manpower Automation and Training
MF AVAILABLE IN VT-ERIC SET.
Pub Date - Jul65 7p.

*IMMIGRANTS; *OCCUPATIONS; *FEDERAL LEGISLATION; *STATISTICAL DATA; EMPLOYMENT PATTERNS

For the period 1947 to 1964, 4.4 million immigrants entered the United States and two-thirds of these were non-quota immigrants. About 2.1 million of this total reported having occupational experience with the remainder being housewives, young persons, and retired people. The proportion of professional, technical, skilled, semiskilled, and unskilled has consistently been higher than the proportion of these classifications for the U.S. labor force. During the period 1954 to 1964, 150,000 immigrants in demand occupations entered the country due to preferential selection which were deemed to be in the national interest. Under proposed legislation, the quotas of all quota countries will be placed in a pool from which individuals of all quota countries, subject to certain family and occupation preferences, will be able to draw on a first-come first-serve basis. About 63,300 additional quota immigrants might be expected to enter due to pooling the quotas. It is estimated that 23,900 of these additional people would enter the labor market. (EM)

VT005058

manpower report

NUMBER 4
REVISED JULY 1965

EDO 31587

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MANPOWER AND IMMIGRATION

The history of our country is inseparable from the history of the immigrants who have come to its shores. During every period of our history, the immigrant's contribution to our society has been invaluable, whether one considers our material wealth, our institutions or the ideas and values we live by.

Eight of the 56 signers of the Declaration of Independence were immigrants. Capitalists like Scotch-born Andrew Carnegie and French-born E. I. Du Pont helped lay the foundation for our present-day industrial society. Labor leaders like British-born Samuel Gompers and Russian-born Sidney Hillman were instrumental in raising the American worker to the high position he now occupies.

Innumerable musicians and artists coming from other lands have contributed to our culture. Thousands of scientists have provided innovations which ultimately have resulted in jobs for millions. Enrico Fermi, Albert Einstein, Igor Sikorsky, and Alexander Graham Bell are but a few of the immigrants whose pioneering developments are now providing jobs for countless numbers.

While the contributions of these individuals are outstanding, this country has also benefitted from the millions of lesser known immigrants who, since colonial days, have provided our labor force with needed skills. In the late 19th and early 20th century, the flow of immigrants satisfied the needs for unskilled and semiskilled labor in industries such as coal mining, steel, apparel, meat packing, and transportation. In more recent years, particularly since World War II, immigrants have helped meet our need for more highly educated and trained workers. About one out of every three postwar immigrant workers has had a professional or skilled occupation.

RECENT IMMIGRATION

Between 1947 and 1964, 4.4 million immigrants entered this country. (See table 1.) During 1964 about 290,000 immigrants entered.[1] About one-third were "quota" and two-thirds "nonquota" immigrants. Under the existing immigration laws, countries not in the Western Hemisphere are considered "quota countries." With certain exceptions, the ethnic distribution of immigrants allowed to enter this country each year from the quota area is related to the ethnic distribution of the population in this country in 1920.[2] Immigrants from the Americas are given nonquota status and can enter freely, as long as indications are that they will be financially self-sufficient.

Occupational distribution. Slightly under one-half, or 2.1 million, of the 4.4 million immigrants who entered this country between 1947 and 1964 were reported as having experience in some occupation. The remaining 2.3 million were primarily housewives, young persons, and retired people.

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[1] Immigration data in this report are for fiscal years. U.S. labor force data are annual averages.

[2] Exempted from the quota are spouses and children of U.S. citizens, individuals admitted through special legislation and certain other groups. Asiatic immigration is subject to more stringent limitations than is that from Europe. Also Jamaica, Trinidad, and Tobago in the Caribbean are subject to quotas, even though they are Western Hemisphere countries.

005058

U.S. DEPARTMENT OF LABOR: W. WILLARD WIRTZ, Secretary
MANPOWER ADMINISTRATION
Office of Manpower, Automation and Training

Table 1. Number and Percent Distribution of Immigrants by Broad Occupational Groups, for 1947–64 and Selected Years

[Fiscal years]

Occupational group	Total 1947–64		1964		1954		1947	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Total admitted	4,424,460	100.0	292,248	100.0	208,177	100.0	147,292	100.0
With occupation	2,077,594	47.0	131,098	44.9	96,110	46.2	65,583	44.5
No occupation	2,346,866	53.0	151,076	51.7	[1]112,067	53.8	[1]81,709	55.5
No occupation reported	([1])	-	10,074	3.4	([1])	-	([1])	-
With occupation[2]	2,077,594	100.0	131,098	100.0	96,110	100.0	65,583	100.0
Professional, technical, and kindred workers	343,414	16.5	28,756	21.9	13,817	14.4	10,891	16.6
Farmers and farm managers	92,180	4.4	1,732	1.3	3,846	4.0	3,462	5.3
Managers, officials, and proprietors, except farm	101,708	4.9	6,822	5.2	5,296	5.5	5,886	9.0
Clerical, sales, and kindred workers	367,845	17.7	30,015	22.9	16,018	16.7	13,961	21.3
Craftsmen, foremen, and kindred workers	321,453	15.5	17,568	13.4	15,396	16.0	8,726	13.3
Operatives and kindred workers	279,646	13.5	14,243	10.9	16,755	17.4	10,580	16.1
Private household workers	157,306	7.6	8,451	6.4	8,096	8.4	4,922	7.5
Service workers, except private household	125,053	6.0	10,396	7.9	5,203	5.4	3,882	5.9
Farm laborers and foremen	78,044	3.8	3,988	3.0	1,622	1.7	442	.7
Laborers, except farm and mine	210,945	10.2	9,127	7.0	10,061	10.5	2,831	4.3

[1] "No occupation" includes "no occupation reported" group.

[2] Includes immigrants 14 years of age and over.

NOTE: Detail may not add to totals due to rounding.

SOURCE: Annual Reports of the Immigration and Naturalization Service, U.S. Department of Justice.

Table 2. Number of Immigrants in Selected Critical Occupations Admitted Each Year, 1954–64[1]

[Fiscal years]

Occupation	Total 1954–64	1964	1963	1962	1961	1960	1959	1958	1957	1956	1955	1954
Biological scientist	601	112	81	49	48	53	57	56	51	35	36	23
Chemist	6,335	825	814	474	551	504	645	626	668	494	351	383
Dentist	1,429	160	177	115	119	110	99	129	132	159	113	116
Engineer	36,461	3,660	3,966	2,909	2,868	3,338	3,936	4,008	4,524	2,794	2,067	2,391
Geologist and geophysicist	659	85	73	88	66	42	59	58	62	51	41	34
Mathematician	345	50	56	39	24	31	29	32	35	17	18	14
Nurse	36,858	4,230	4,355	3,700	3,449	3,828	3,620	3,729	3,517	3,064	1,864	1,502
Physician and surgeon	18,424	2,249	2,093	1,797	1,683	1,574	1,630	1,934	1,990	1,388	1,046	1,040
Physicist	1,610	242	216	187	151	162	155	145	128	75	75	74
Professor and instructor	4,767	839	761	589	500	367	340	352	372	290	173	184
Teacher, not specified	27,218	4,086	3,727	3,182	2,686	2,532	2,670	2,471	2,304	655	1,549	1,356
Technician	17,209	2,448	2,197	1,838	1,635	1,632	1,821	1,346	1,553	1,095	840	804
Machinist	10,252	969	897	681	819	993	1,476	836	1,393	1,106	594	488
Tool maker, die maker, and setter	7,334	423	473	369	460	706	654	858	1,150	894	587	760

[1] The occupational categories listed in this table are those which immigrants reported on their arrival in the United States. It was not possible, in a few instances, because of lack of sufficient occupational detail to make a precise match with the occupations which appear on the List of Currently Critical Occupations as determined by the Technical Committee on Critical Occupations of the U.S. Department of Labor. For this reason, totals are not shown.

SOURCE: 1959 through 1964: Annual Reports of the Immigration and Naturalization Service, U.S. Department of Justice; 1954 through 1958: Data furnished by the Immigration and Naturalization Service, U.S. Department of Justice.

About 16 percent, or almost 350,000, of the immigrants with occupations who entered between 1947 and 1964 were professional and technical workers whereas only about 10 percent of all persons employed in this country during this period were in these occupations. (See chart 1.) Nearly one out of every six immigrants in this postwar period was reported as a skilled worker compared with one out of eight for the U.S. labor force. The proportion in professional and technical work has been consistently higher for immigrants than for the U.S. labor force for every year since 1947. The pattern has been substantially the same for skilled workers. (See chart II.)

Semiskilled workers accounted for about 13 percent and unskilled laborers 10 percent of the immigrant group.[3] In the Nation as a whole, these groups averaged 19 and 6 percent, respectively, of the labor force during this 18-year period.

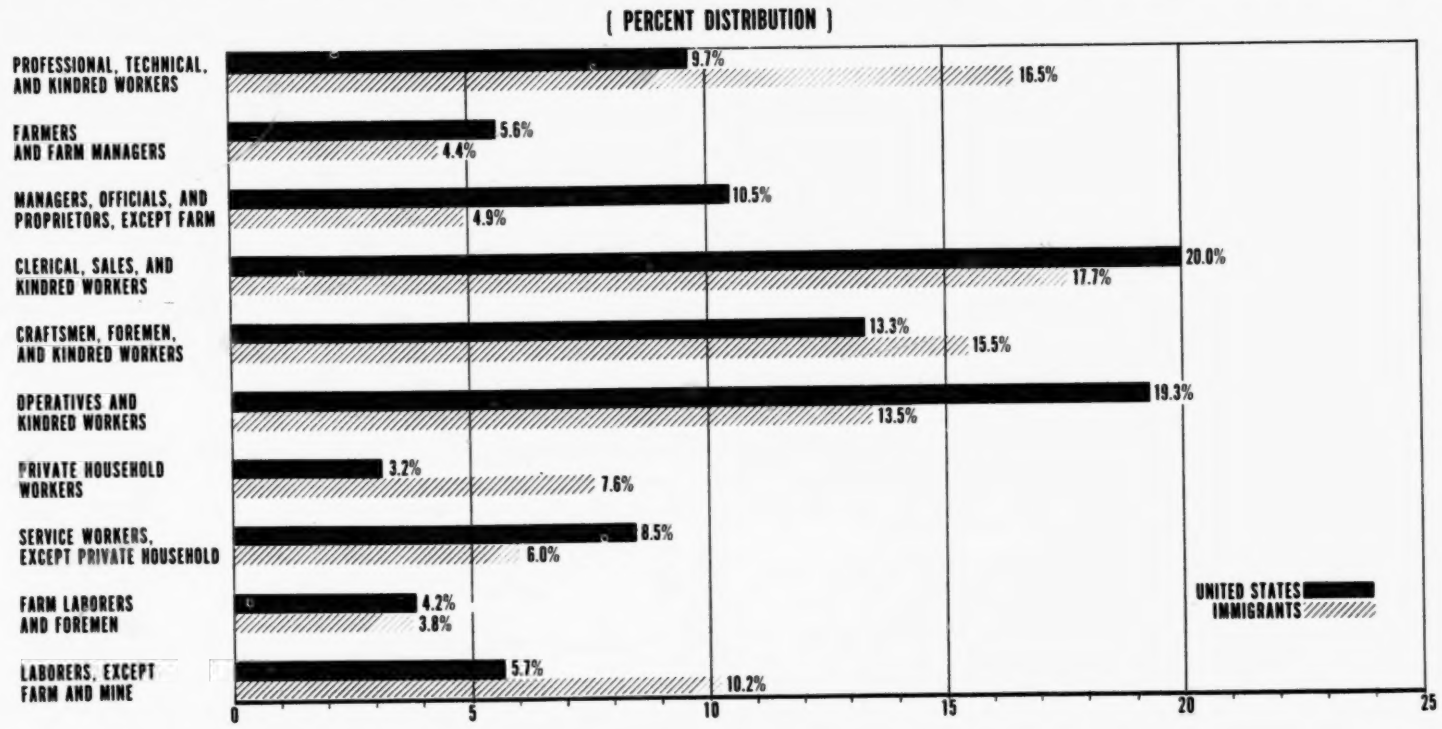
The occupational distribution of the post-World War II immigrants coincided with the needs of our economy and also reflected, to some degree, changes made in immigration policy. The Immigration and Nationality Act of 1952 gives first preference for admission to quota immigrants with "special skills or ability who would be substantially beneficial to the national economy, cultural interests, or welfare of the United States." This provision has been utilized primarily by immigrants from countries which usually use up their whole quota. Immigrants from countries not using their full quotas have usually not found it necessary to utilize this first preference provision.

Immigrants in shortage occupations. The potential contribution of immigrants to the Nation's work force is illustrated by the number of immigrants who enter with occupations similar to those classified as critical or those considered to be in short supply by the Technical Committee on Critical Occupations of the United States Department of Labor. These occupations are used by the Selective Service System in determining deferments in the national interest. From 1954 to 1964, over 150,000 immigrants in such critical occupational areas as engineering, physics, nursing, and tool-and-die making entered this country. (See table 2.)

During 1964, over 20,000 immigrants in critical occupations entered this country, with two out of every three professionals in this category. Over the past decade, the number of engineers

[3]Well over half of these lesser skilled workers entered this country from nonquota Western Hemisphere countries.

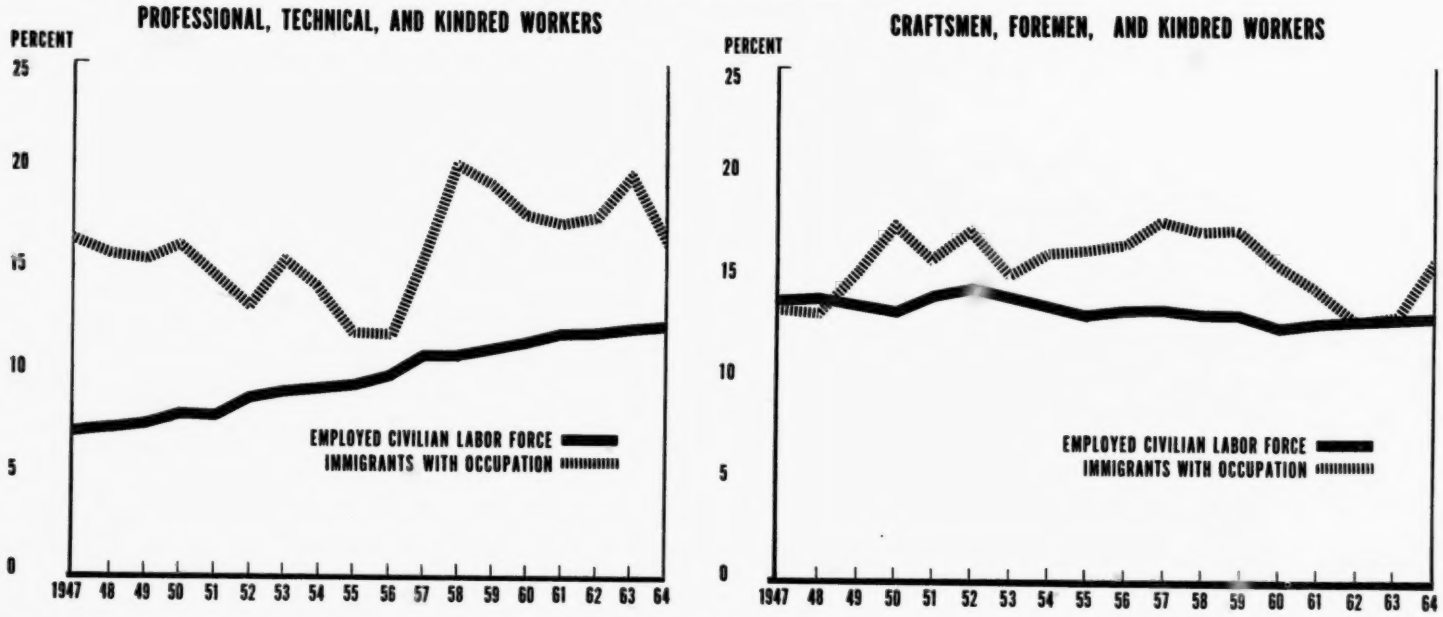
CHART I. OCCUPATION OF IMMIGRANTS AND EMPLOYED PERSONS IN UNITED STATES, 1947-64



SOURCE: Immigration data: Annual Reports of the Immigration and Naturalization Service, U.S. Department of Justice; U.S. Employment data: Manpower Report of the President, March 1965, U.S. Department of Labor.

CHART II. A HIGH PROPORTION OF IMMIGRANTS ARE PROFESSIONAL AND SKILLED WORKERS

(PERCENT OF WORKERS IN OCCUPATION, 1947-64)



SOURCE: Immigration data: Annual Reports of the Immigration and Naturalization Service, U.S. Department of Justice; U.S. Employment data: Manpower Report of the President, March 1965, U. S. Department of Labor.

entering this country annually increased from 2,391 to 3,660. Almost three times as many nurses (4,230 compared with 1,502) are now entering; over twice as many physicians and surgeons and three times as many teachers now find their way to our shores.

A recent Labor Department publication lists 71 occupations which have reflected a steady national demand for qualified workers.[4] This listing includes occupations such as nurse, draftsman, machinist, physician, and engineer. Many immigrants can qualify for these kinds of jobs and can help alleviate the shortages in these and dozens of other occupations.

More immigrant engineers entered this country during the past decade than were graduated from all our colleges and universities in 1964. Over 18,000 physicians and surgeons entered this country during the past decade.

The 4,000 nurses who enter this country every year help alleviate the shortage in this critical occupation. The many hundreds of chemists, physicists, and biologists are contributing their technical know-how to industry and government, in many cases being supported by the 2,000 technicians who enter the United States each year.

The immigration of these highly skilled workers also represents a substantial contribution to our economy because of the heavy economic investment in their education and training

[4] U.S. Department of Labor, Career Guide for Demand Occupations, 1965.

Table 3. Estimated Labor Force Changes Between 1964 and 1975, With and Without Immigration, by Age

[Millions]

Ages	With immigration	Without immigration	Difference due to immigration
Total, all ages	16.7	15.0	1.7
Under 25	6.6	6.2	.4
25 to 34	6.3	5.7	.6
35 to 44	-.9	-1.3	.4
45 and over	4.7	4.4	.3

made prior to their arrival in this country. It has been estimated, for example, that it costs $35,000 to rear a child and send him through college. On this basis, the professional workers on the "critically skilled" list who have entered this country since 1954 represent an investment by other nations of almost 3.5 billion dollars. The cost of sending through medical school the 18,424 physicians and surgeons who immigrated during this period, based on current estimates of over $30,000 per student, would have been well over half a billion dollars. The experience these doctors have acquired in their years of practice cannot, of course, be reduced to dollar terms, nor can their potential for future creativity in research and development.

Some immigrants initially have to take jobs which require less skill, education, or training than those in which they had worked in their native land. However, after overcoming problems such as language difficulties and licensing requirements and after gaining familiarity with the workings of our job market, they are better able to find employment which enables them to use their full potential. That immigrants are able to adapt to our economy is shown by the fact that the unemployment rate of all foreign-born workers in the United States is no higher than that of all other workers.

Age distribution. Over 35 percent of all immigrants in 1964 were in the prime working ages of 25 through 44, compared with 24 percent for the U.S. population as a whole. If the age distribution of immigrants does not change substantially and the total flow of immigration remains at its present level, almost 20 percent, or 1,000,000, of the increase in the number of workers in this age group during the 1964-75 period will be the direct result of immigration. These are the workers with the greatest potential to contribute to our society, a group that is highly educated and highly employable. (See table 3.)

Most importantly, immigrants will make a significant contribution to alleviating the expected shortage in the key working-age group—35 to 44—during the next decade. It is estimated that the number of workers in this age group will decline by 900,000 between 1964 and 1975. If there were no immigration, the decline would be 400,000 greater or 1,300,000. Workers in this age group represent a crucial group whose leadership, management know-how, and skills and experience are needed in our economy.

IMMIGRATION UNDER THE PROPOSED LEGISLATION

The principal purpose of the immigration legislation now being considered is to eliminate the national origins quota under which prospective immigrants from countries outside of the Western Hemisphere are judged, not by their personal qualities, but by their ethnic or national origin. Under the proposed legislation, the quotas of all quota countries will be placed in a pool from which individuals of all quota countries, subject to certain family and occupation preferences, will be able to draw on a first-come-first-serve basis. This provision will be implemented gradually over a 5-year period with a 20-percent annual cutback in each country's quota going into a general pool from which individuals from all countries may then draw. With a few exceptions, individuals of any single country may draw up to 10 percent of this pool.

At the present time, many countries, such as Italy and Greece, regularly use all their quota numbers while other countries, such as Great Britain and Ireland, do not. Thus, at the same time that many countries have long waiting lists of people desiring entry to this country, others let a large part of their quota go unused. In 1964, only 102,844 quota immigrants entered this country even though 158,161 quota numbers were available. The proposed legislation would remedy this situation. Since all the quota numbers would be in a common pool, Italians or Greeks, for example, could enter on the quota numbers the British do not need. Thus, under the proposed legislation, 63,300[5] additional quota immigrants might be expected to enter this country. (See table 4.) Only 7,300 of this increase, however, would be due to an increase in the quota itself. The remaining 56,000 increase would be the result of a better utilization of quota numbers currently available but not used.

[5]Excludes an estimated 5,000 refugees.

Table 4. Estimates of Quota Immigration Under the Current Law and the Proposed Law, by Occupation[1]

Quota immigrants	Average quota immigration under the current law	Anticipated quota immigration under the proposed law	Increases due to change in law
Total	97,500	160,800	63,300
With occupations	48,600	72,500	23,900
Professional, technical, and kindred workers	8,800	11,850	3,050
Farmers and farm managers	1,400	1,500	100
Managers, officials, and proprietors, except farm	1,900	2,650	750
Clerical and kindred workers	8,700	12,650	3,950
Sales workers	2,000	2,750	750
Craftsmen, foremen, and kindred workers	8,600	13,950	5,350
Operatives and kindred workers	5,900	8,800	2,900
Private household workers	2,300	3,650	1,350
Service workers, except private household	4,100	6,450	2,350
Farm laborers and foremen	1,600	3,050	1,450
Laborers, except farm and mine	3,300	5,200	1,900
Housewives, children, and persons with no occupation reported	48,900	88,300	39,400

[1] Estimates under the proposed law are for the immigration during the 5th year of operation; they do not include an estimated immigration of 5,000 refugees.

It is estimated that 23,900 of these additional 63,300 immigrants would enter the labor force,[6] with over half holding white-collar or craft jobs. Over 3,000 of these workers will have much needed professional experience.

Under the present legislation, an immigrant worker may enter under the "first preference" provision if an employer in this country certifies that he has a "special skill or ability" beneficial to our economy. Under the proposed legislation, these highly educated and trained workers would no longer have to find an employer in this country before they could come on a first preference basis. Thus, the admission of these people who would be highly advantageous to our society would be eased.

The proposed legislation would have no significant impact on immigration from nonquota countries and when the additional 23,900 workers from quota countries are compared with our expected 1970 labor force of 86,000,000, it is clear that the economic impact of the proposed legislation is exceedingly small.

As President Johnson said, "Over the years the ancestors of all of us have migrated to these shores." Immigrants have contributed mightily to this country's economic, social, and political development. In turn, these immigrants and their descendants have enabled succeeding generations to do likewise.

[6] The proportion of immigrants entering the labor force under this projection is somewhat smaller than has been true in recent years because more of the additional immigrants would be parents of resident aliens and others with relatively low labor force participation rates. Even if the proportion were to remain as high as it has been, the number entering the labor force would be no higher than 34,400.

By Frank L. Mott
Division of Manpower
Utilization Research

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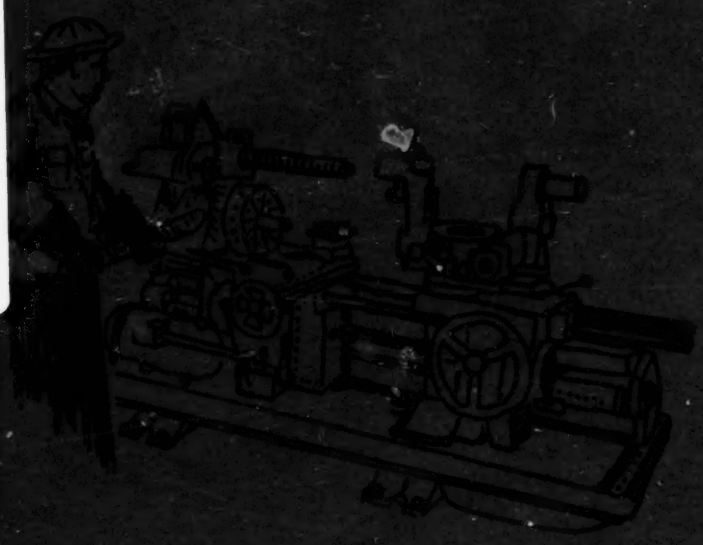
VT 005 125
Glese, Harlan E.
Training Needs for Metal Tradesmen in Iowa.

University of Northern Iowa, Cedar Falls
Iowa Research Coordinating Unit, Des Moines
MF AVAILABLE IN VT-ERIC SET.
Pub Date - Oct67 115p.

*EDUCATIONAL NEEDS; *MANPOWER NEEDS; *MANUFACTURING INDUSTRY; *METAL WORKING OCCUPATIONS; SKILLED OCCUPATIONS; SEMISKILLED OCCUPATIONS; OCCUPATIONAL SURVEYS
IOWA

The purpose of this study was to identify, by state wide survey, the training needs for skilled and semiskilled metal tradesmen in 11 job classifications. The population of the study was limited to 823 metal working manufacturing firms in the state of Iowa. The job descriptions presented on the questionnaires identified skills and abilities used by the workers in execution of the jobs. The 440 firms responding to the questionnaire employed a total of 23,763 metal tradesmen. The number of new workers employed in 1966 and the number of new workers which will be employed in 1968, as anticipated by the manufacturers, is nearly equal, while the need for replacement workers in 1968, 1970, and 1972 will be at a rate of approximately two-thirds of the number of trained new and replacement workers will be needed in the production machinist category. Employers expressed a desire to hire most of their new and replacement employees from those who will graduate from preparatory vocational-technical curriculums. Where there is an insufficient need to justify training in one district, districts should combine needs to provide a multi-district need and the training content for these programs and other programs should be developed by an advisory committee. (HC)

VT005 125



IOWA TRAINING NEEDS FOR METAL TRADESMEN

Conducted under a grant from:

STATE OF IOWA
DEPARTMENT OF
PUBLIC INSTRUCTION

Vocational Education Branch

UNIVERSITY OF
NORTHERN IOWA
Cedar Falls, Iowa

Nov. 1967

by
Harlan Giese

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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TRAINING NEEDS FOR METAL TRADESMEN IN IOWA

A Summary of

A Study

Presented to

the Faculty of the Graduate School

University of Northern Iowa

In Partial Fulfillment

of the Requirements for the Degree

Master of Arts

by

Harlan E. Giese

October 1967

FOREWORD

This is a summary of a study undertaken to fulfill a two-fold purpose. It was initially designed to identify training needs for skilled and semi-skilled metal tradesmen. The results would provide information on which occupational training programs could be organized in local and area schools based on needs identified by industries in the state. This study was partially funded by the Research Coordinating Unit, Division of Vocational Education, Iowa Department of Public Instruction, Des Moines. The funding of this project is made possible under the provisions of Title 4A Public Law 88-210, The Vocational Education Act of 1963.

The second purpose of the study was to fulfill the thesis requirement for an M. A. Degree at the University of Northern Iowa, Cedar Falls.

ACKNOWLEDGEMENTS

The writer desires to express his gratitude to the numerous persons and organizations that provided a variety of services that made this study possible.

Mr. Donald Hauser, Administrative Assistant, Iowa Manufacturers Association, assisted by recommending names of key persons in Iowa industries who would be willing to review the questionnaire for this study prior to the general mailing.

Mr. J. Sid Craiger, Executive Vice-President, Iowa Manufacturers Association, assisted by writing the introductory letter that accompanied all of the initial mailings for this research.

Mr. Robert P. Schmidt, Editor, Business and Industry magazine assisted by printing a news article introducing this study to his readers. He also assisted by offering constructive criticism of the questionnaires used in this study.

Drs. Kenneth Wold and Donald Green of the Research Coordinating Unit, Division of Vocational Education, Iowa Department of Public Instruction, assisted by offering constructive criticism of the phrasing of questions used in the questionnaires.

Drs. Howard O. Reed, Lawrence S. Wright, Gordon Rhum, Cecil Phillips, Robert Johnson, and Mr. Willis Wagner of the University of Northern Iowa, Cedar Falls assisted with editorial comments on the questionnaires, this summary and the thesis.

The following industrial representatives reviewed the questionnaires and made valuable comments and suggestions for corrections:

Mr. Fred M. Chase, Director, Area Industry Development, Northern Natural Gas Company, Omaha, Nebraska

Mr. George Hall, Vice-President, Pittsburgh-Des Moines Steel Company, Des Moines, Iowa

Mr. Walter Brown, Executive Vice-President, Kiowa Corporation, Marshalltown, Iowa

Mr. Vernon Peters, Vice-President-Engineering, Viking Pump Company, Cedar Falls, Iowa

Mr. G. W. Yeager, Treasurer, Iowa Malleable Iron Company, Fairfield, Iowa

Mr. E. F. Scoutten, Vice-President-Personnel, Maytag Company, Newton, Iowa

Mr. J. R. Sickert, Vice-President, Murray Iron Works Company, Burlington, Iowa

TABLE OF CONTENTS

CHAPTER		PAGE
I.	THE PROBLEM AND DEFINITIONS OF TERMS	1
	The Problem	1
	Statement of the problem	1
	Limitations of the study	1
	Definitions of Terms Used	2
	Area community college	2
	Area vocational school	2
	Merged area	3
	Metal tradesman	3
	Preparatory training	3
	Semi-skilled worker	3
	Skilled worker	3
	Standard Industrial Classification	3
	Supplemental training	3
II.	RELATED LITERATURE	5
III.	THE METHOD OF PROCEDURE	6
	Selection of The Population	6
	Design of Survey Procedure	8
	Survey Elements Common to Both Groups	9
	The mailing list	9
	The covering letter	10
	The direction sheet	10

TABLE OF CONTENTS (Cont'd.)

CHAPTER		PAGE
	The Survey Tools	11
	The post card	11
	The covering letters	11
	The reminder	11
	Sending the questionnaires	11
	Surveying Firms Employing More Than One-Hundred Persons	14
	The inclusion of blank forms	14
	The reminder	15
	The Questionnaires	15
	The job description	15
	The questions	16
IV.	FINDINGS OF THE STUDY	17
	Responses to the questionnaires	17
	Processes used in manufacturing	20
	State-Wide Needs	24
	State-wide patterns by occupation	24
	Institutional training	24
	Employment patterns	24
	State-wide needs	24
	Geographic representation of state-wide needs	24
	State-wide needs in other occupations	24
	On-the-job training	40
	Needs by Merged Area Districts	43
	Vocational training	43
	Supplemental training	43
	Merged area needs in other occupations	77

TABLE OF CONTENTS (Cont'd.)

CHAPTER		PAGE
V.	SUMMARY CONCLUSIONS AND RECOMMENDATIONS	86
	Summary	86
	Scope of the study	86
	Method of the study	87
	Conclusions	87
	Recommendations	88

LIST OF TABLES

TABLE		PAGE
I.	Area Community College and Vocational School Districts . .	7
II.	Standard Industrial Classifications	8
III.	Total Firms in Merged Area Districts Responding To Questionnaires	18
IV.	Metalworking Firms Responding to Postcard and Questionnaires	19
V.	Questionnaires Returned by Firms Outside of SIC 33 to 37 Employing More Than 100 Persons	21
VI.	Manufacturing Processes Used by 80% Metalworking Manufacturers	22
VII.	State-wide Employment Pattern and Institutional Training Needs in 440 Firms	26
VIII.	Replacements Employed During January-December, 1966 . . .	27
IX.	State-wide Needs for Workers Trained in Vocational Curricula in Occupations Other Than Those Specifically Covered in This Survey	28
X.	New and Replacement Vocational Training Needs For Assemblers	29
XI.	New and Replacement Vocational Training Needs For Forge Press Operators	30
XII.	New and Replacement Vocational Training Needs For Hydraulic Mechanic	31
XIII.	New and Replacement Vocational Training Needs For Industrial Equipment Salesman	32

LIST OF TABLES (Cont'd.)

TABLE		PAGE
XIV.	New and Replacement Vocational Training Needs For Machine Repairman	33
XV.	New and Replacement Vocational Training Needs For Machinist (Job Shop)	34
XVI.	New and Replacement Vocational Training Needs For Machinist (Production)	35
XVII.	New and Replacement Vocational Training Needs For Molder-Foundry Worker	36
XVIII.	New and Replacement Vocational Training Needs For Patternmaker	37
XIX.	New and Replacement Vocational Training Needs For Tool and Die Maker	38
XX.	New and Replacement Vocational Training Needs For Welder	39
XXI.	State-wide Needs For New and Replacement Workers to be Acquired by On-the-Job Training	41
XXII.	State-wide Needs For Workers Trained by On-the-Job Training in Occupations Other Than Those Specifically Covered in This Survey	42
XXIII.	Employment Patterns and Preparatory Training Needs in Merged Area District I	45
XXIV.	Employment Patterns and Preparatory Training Needs in Merged Area District II	46
XXV.	Employment Patterns and Preparatory Training Needs in Merged Area District III	47

LIST OF TABLES (Cont'd.)

TABLE		PAGE
XXVI.	Employment Patterns and Preparatory Training Needs in Merged Area District IV	48
XXVII.	Employment Patterns and Preparatory Training Needs in Merged Area District V	49
XXVIII.	Employment Patterns and Preparatory Training Needs in Merged Area District VI	50
XXIX.	Employment Patterns and Preparatory Training Needs in Merged Area District VII	51
XXX.	Employment Patterns and Preparatory Training Needs in Merged Area District VIII	52
XXXI.	Employment Patterns and Preparatory Training Needs in Merged Area District IX	53
XXXII.	Employment Patterns and Preparatory Training Needs in Merged Area District X	54
XXXIII.	Employment Patterns and Preparatory Training Needs in Merged Area District XI	55
XXXIV.	Employment Patterns and Preparatory Training Needs in Merged Area District XII	56
XXXV.	Employment Patterns and Preparatory Training Needs in Merged Area District XIII	57
XXXVI.	Employment Patterns and Preparatory Training Needs in Merged Area District XIV	58
XXXVII.	Employment Patterns and Preparatory Training Needs in Merged Area District XV	59

LIST OF TABLES (Cont'd.)

TABLE		PAGE
XXXVIII.	Employment Patterns and Preparatory Training Needs in Merged Area District XVI	60
XXXIX.	Needs for Part-Time Supplemental Classses in Merged Area District I	61
XL.	Needs for Part-Time Supplemental Classes in Merged Area District II	62
XLI.	Needs for Part-Time Supplemental Classes in Merged Area District III	63
XLII.	Needs for Part-Time Supplemental Classes in Merged Area District IV	64
XLIII.	Needs for Part-Time Supplemental Classes in Merged Area District V	65
XLIV.	Needs for Part-Time Supplemental Classes in Merged Area District VI	66
XLV.	Needs for Part-Time Supplemental Classes in Merged Area District VII	67
XLVI.	Needs for Part-Time Supplemental Classes in Merged Area District VIII	68
XLVII.	Needs for Part-Time Supplemental Classes in Merged Area District IX	69
XLVIII.	Needs for Part-Time Supplemental Classes in Merged Area District X	70
IL.	Needs for Part-Time Supplemental Classes in Merged Area District XI	71
L.	Needs for Part-Time Supplemental Classes in Merged Area District XII	72

LIST OF TABLES (Cont'd.)

TABLE		PAGE
LI.	Needs for Part-Time Supplemental Classes in Merged Area District XIII	73
LII.	Needs for Part-Time Supplemental Classes in Merged Area District XIV	74
LIII.	Needs for Part-Time Supplemental Classes in Merged Area District XV	75
LIV.	Needs for Part-Time Supplemental Classes in Merged Area District XVI	76
LV.	Needs in Merged Area District I For Workers Trained in Vocational Curricula in Occupations Other Than Those Covered by Standard Questionnaires in This Survey . . .	78
LVI.	Needs in Merged Area District II For Workers Trained in Vocational Curricula in Occupations Other Than Those Covered by Standard Questionnaires in This Survey . . .	78
LVII.	Needs in Merged Area District III For Workers Trained in Vocational Curricula in Occupations Other Than Those Covered by Standard Questionnaires in This Survey . . .	79
LVIII.	Needs in Merged Area District IV For Workers Trained in Vocational Curricula in Occupations Other Than Those Covered by Standard Questionnaires in This Survey . . .	79
LIX.	Needs in Merged Area District V For Workers Trained in Vocational Curricula in Occupations Other Than Those Covered by Standard Questionnaires in This Survey . . .	79
LX.	Needs in Merged Area District VI For Workers Trained in Vocational Curricula in Occupations Other Than Those Covered by Standard Questionnaires in This Survey . . .	80

LIST OF TABLES (Cont'd.)

TABLE		PAGE
LXI.	Needs in Merged Area District VII For Workers Trained in Vocational Curricula in Occupations Other Than Those Covered by Standard Questionnaires in This Survey . . .	80
LXII.	Needs in Merged Area District VIII For Workers Trained in Vocational Curricula in Occupations Other Than Those Covered by Standard Questionnaires in This Survey . . .	80
LXIII.	Needs in Merged Area District IX For Workers Trained in Vocational Curricula in Occupations Other Than Those Covered by Standard Questionnaires in This Survey . . .	81
LXIV.	Needs in Merged Area District X For Workers Trained in Vocational Curricula in Occupations Other Than Those Covered by Standard Questionnaires in This Survey . . .	82
LXV.	Needs in Merged Area District XI For Workers Trained in Vocational Curricula in Occupations Other Than Those Covered by Standard Questionnaires in This Survey . . .	83
LXVI.	Needs in Merged Area District XII For Workers Trained in Vocational Curricula in Occupations Other Than Those Covered by Standard Questionnaires in This Survey . . .	84
LXVII.	Needs in Merged Area District XIII For Workers Trained in Vocational Curricula in Occupations Other Than Those Covered by Standard Questionnaires in This Survey . . .	84
LXVIII.	Needs in Merged Area District XIV For Workers Trained in Vocational Curricula in Occupations Other Than Those Covered by Standard Questionnaires in This Survey . . .	84

LIST OF TABLES (Cont'd.)

TABLE		PAGE
LXIX.	Needs in Merged Area District XV For Workers Trained in Vocational Curricula in Occupations Other Than Those Covered by Standard Questionnaires in This Survey . . .	85
LXX.	Needs in Merged Area District XVI For Workers Trained in Vocational Curricula in Occupations Other Than Those Covered by Standard Questionnaires in This Survey . . .	85

CHAPTER I

THE PROBLEM AND DEFINITIONS OF TERMS USED

In 1965 the Iowa Legislature passed a law providing for the establishment of area vocational-technical schools and area community colleges. Both types of institutions are to offer in whole or in part vocational and technical curricula for the training of persons to enter employment. By March of 1967, fifteen groups of county and local school districts merged to form area community college and area vocational-technical school districts. Seven of the ninety-nine counties in Iowa did not support area schools at this time.

I. THE PROBLEM

Statement of the problem. The purpose of this study was to identify, by state-wide survey, the training needs for skilled and semi-skilled metal tradesmen in eleven job classifications. After the information was compiled and organized, it would be made available to area school administrators for their use in initiating occupational training programs.

Limitations of the study. This study was concerned with identification of training needs for skilled and semi-skilled metal tradesmen in the following eleven job classifications: assemblers, forge-press operators, hydraulic equipment mechanics, industrial equipment salesmen, machine repairmen (maintenance), machinist (custom) and (job shop), machinist (production), molder-foundry worker, patternmaker, tool and diemaker, and welder-combination. Blank forms were provided for the manufacturers to report anticipated needs in other job classifications.

The population of this study was limited to 823 metalworking manufacturing firms that are listed in the Iowa Development Commission Directory of

Manufacturers between the standard industrial classifications of thirty-three and thirty-seven inclusive. In addition 189 Iowa firms, outside the standard industrial classification above, but employing more than one hundred persons were sent questionnaires. It was assumed that many firms of this size employ personnel to maintain their production equipment and therefore may employ semi-skilled or skilled metal tradesmen.

The survey forms were sent to manufacturing concerns within the state of Iowa.

The findings of this study are summaries of information returned by responding firms. The questionnaires were answered by personnel directors, owners, business managers, or shop foremen.

The study was limited to the identification of training needs for certain occupations. The job descriptions presented on the questionnaires identified skills and abilities used by the worker in execution of his job. Additional study should be made to identify in greater detail the training content for each occupational category.

II. DEFINITIONS OF TERMS USED

The following terms are used in this study. They are included here to clarify their usage. Other terms will be defined when necessary within the body of the report.

Area Community College. "Area Community College" means a school offering the first two years of college work, vocational and technical training, and in-service training and retraining of workers.[1]

Area Vocational School. "Area vocational school" means a school offering vocational and technical training, and programs for in-service training and retraining of workers.[2]

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[1] Iowa Legislature, 1965, Senate File 550.

[2] Ibid.

Merged area. "Merged area" means an area where two (2) or more county school systems or parts thereof merge resources to establish and operate a vocational school or community college.[3]

Metal tradesman. Any person who earns his livelihood by machining, forming, welding, molding, casting, forging, assembling, or selling metal parts or products.

Preparatory training. Occupational training programs usually pursued by the student who possesses little or no skill or technical knowledge of the subject at the time of enrollment. The student usually attends class and laboratory work a minimum of six hours per day, five days per week to receive training leading to his vocational goal.

> Semi-skilled worker. One who requires less training than the skilled worker. His work is specialized and often limited to one machine or a small area of the trade. His use of independent judgement is limited and he is under closer supervision than the skilled worker. High manipulative ability is a necessity.[4]
>
> Skilled worker. One who attains maximum productivity through a period of training usually more than two years in duration. He must have high manipulative ability. He must be able to exercise independent judgement and assume responsibility for the proper care and use of complex machines and the products produced.[5]

Standard Industrial Classification. A nationally-recognized numerical identification system classifying industries according to the products or services produced by the company.

Supplemental training. Occupationally oriented classes attended by an employed worker on a part-time basis. The worker receives training primarily in manipulative skills on-the-job. It is usually stated that he is

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[3] Ibid.

[4] Robert A. Crowley, "Guidance Information for the Vocational Metalworking Program of Waterloo, Iowa" (an unpublished independent paper, The University of Minnesota, St. Paul 1958) p. 5.

[5] Ibid., p. 6.

learning "how" to complete the job. The worker learns the "why" of his job through supplemental classes. Supplemental classes include apprenticeship-related instruction, journeymen-upgrading classes, and other occupationally related classes.

CHAPTER II

RELATED LITERATURE

Various materials were reviewed to secure information relating to this study. One group of studies pertained to procedures to be used when making labor market surveys. Outstanding in this group was the Handbook on Employment Security Job Market Research Methods.[6] Included in this publication were step by step procedures to be followed in making a labor market survey as well as helpful hints on receiving endorsement of the study by community groups. Pointers on the review of questionnaires prior to mailing and the follow-up procedures for those who do not return questionnaires were especially valuable. The Bureau of Employment Security also recommends procedures to be used in projecting future replacement needs where the employer did not feel able to estimate these needs.

The National Education Association also prepared a research memo entitled Studies of High School Graduates.[7] This publication was valuable for its contribution in terms of developing a schedule of mailing the questionnaires as well as recommending the tone of letters used to accompany the questionnaire.

In 1960 Robert Jacoby prepared a manual for the state of Pennsylvania pertaining to Trade and Technical Education Surveys.[8] This study enumerated sources for mailing lists and covered both student interest and industrial surveys. Jacoby also recommends elements to be included in the report following the survey.

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[6] Bureau of Employment Security, U. S. Department of Labor, Handbook on Employment Security Job Market Research Methods (Washington: Government Printing Office, 1965).

[7] National Education Association, Studies of High School Graduates (Research Memo No. 1963-16. Washington: National Education Association, 1963).

[8] Robert Jacoby, Trade and Technical Education Surveys Department of Public Instruction, Commonwealth of Pennsylvania (Harrisburg: Trade and Industrial Education, 1960).

CHAPTER III

THE METHOD OF PROCEDURE

INTRODUCTION

In reviewing the methods and techniques used in conducting this survey, reference will be made to sources of information on survey procedures. The topic headings are listed in the chronological order of the steps followed.

I. SELECTION OF THE POPULATION

This study was developed to identify the training needs for metal tradesmen on a state-wide as well as merged area school basis.

A map of the state of Iowa showing the geographical boundaries of each merged area district may be found on page 7. Since at the time of this study there were approximately seven counties not supporting a merged area school, four of these counties were attached to existing merged area schools for purposes of this study. Three counties were grouped as a merged area district. Crawford and Cherokee Counties were listed as part of Merged Area District XII. Carroll County was listed as part of Merged Area District V. Audubon and part of Guthrie County were listed as part of Merged Area District XIII. Jackson, Dubuque and Delaware Counties were listed as Merged Area District VIII.

Because of the variation in concentration and size of manufacturing firms across the State and the diversity of products produced, it was decided to survey all of the metalworking manufacturing firms in the State listed in the Directory of Iowa Manufacturers, published by the Iowa Development Commission. This Directory lists approximately ninety-six percent of all manufacturers in the State.[9]

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[9]Iowa Development Commission, Directory of Iowa Manufacturers (Des Moines: Research Division, Sixth Edition, 1965), Procedures.

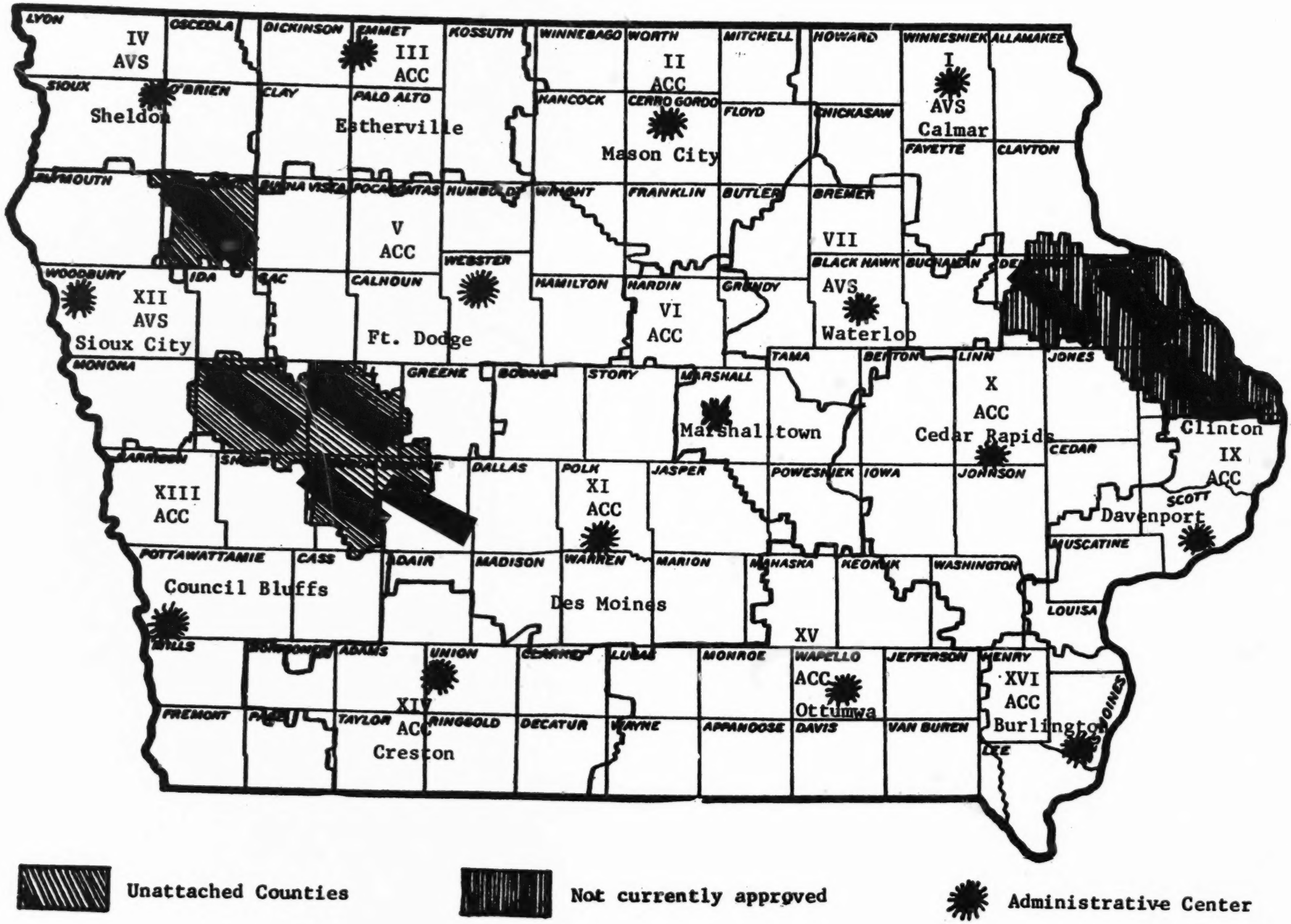

TABLE 1

AREA COMMUNITY COLLEGE AND VOCATIONAL SCHOOL DISTRICTS

It was anticipated that, for some of the occupations surveyed, there would not be sufficient need for trained workers in any one of the merged area districts. However, on a state-wide basis there may be sufficient need for a single or a small number of training programs. It seemed justifiable that this need be satisfied by the establishment of training in a merged area school district to meet the needs of the manufacturers elsewhere in the State.

The initial proposal for this research specified that all manufacturers listed in the Directory of Iowa Manufacturers in Standard Industrial Classifications 33 through 37 inclusive would be surveyed. Table II shows the type of product produced by firms found in each of the Standard Industrial Classifications 33 through 37 inclusive.

In addition firms employing one hundred or more persons outside of the Standard Industrial Classification 33 through 37 were surveyed since these firms may employ metal tradesmen to maintain their production equipment.

Because the number of firms listed in the classifications of 33 through 37 inclusive was 823, and the firms employing 100 or more persons numbered 189 it was decided to mail the survey form to the population.

TABLE II[10]

STANDARD INDUSTRIAL CLASSIFICATIONS

33	PRIMARY METAL INDUSTRIES
34	FABRICATED METAL PRODUCTS
35	MACHINERY EXCEPT ELECTRICAL
36	ELECTRICAL MACHINERY, EQUIPMENT AND SUPPLIES
37	TRANSPORTATION EQUIPMENT

II. DESIGN OF SURVEY PROCEDURE

The firms that were surveyed in this study were placed in two groups. One group was composed of the manufacturers who produced non-metallic products and who employed one hundred or more persons. The other group of manufacturers contained those who produced metal products.

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[10] Iowa Development Commission, op. cit., p. 204.

III. SURVEY ELEMENTS COMMON TO BOTH GROUPS

Some efforts expended in organizing the survey were common to both groups of manufacturers.

One common element in surveying both groups of manufacturers was that of making the future respondents of questionnaires aware of the scope, methodology, and purpose of the study. The Bureau of Employment Security states that ". . . sufficient . . . publicity should be obtained to insure community awareness of the survey's importance."[11] The writer requested Mr. Robert B. Schmidt, Editor of Iowa Business and Industry to publish an article containing the type of information outlined above, about this study, in the October 1966 issue of that magazine.[12] A copy is located in the appendix, Exhibit 1. This periodical was selected because of its wide circulation (3,168) in Iowa to the management level of manufacturing firms.[13]

The mailing list. The next step was to obtain the names and addresses of the manufacturing firms to be covered by this study. This was accomplished by obtaining the magnetic tapes from which the Directory of Iowa Manufacturers was printed. The names and addresses were extracted from the magnetic tapes by computer. The computer was programmed to print-out the names within a space two and three-quarters of an inch wide and one inch high. When printed three columns wide and eleven rows high, this consumed a space on each print-out sheet of eight and one-half inches by eleven inches. It was then possible to reproduce gummed labels by using a heat type copying machine and the proper heat sensitive perforated, gummed label sheets. The cost of this process was much less than printing all needed gummed labels directly on the computer.

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[11] Bureau of Employment Security, Handbook on Employment Security Job Market Research Methods, Area Skill Survey (Washington, U. S. Department of Labor, 1965), p. 10.

[12] "Metalworking Survey on Jobs, Skills, Begins", Iowa Business and Industry, (October, 1966), p. 22.

[13] Personal Conversation with Robert Schmidt, Editor, Iowa Business and Industry (Des Moines) March 27, 1967.

The computer was programmed so that if a given firm employed less than 100 persons the name of the owner of the firm preceded the name of the company. If the firm employed 100 or more persons, "Personnel Director" preceded the name of the firm.

The United States Department of Labor recommends this procedure.

> It is very important that the proper official(s) be contacted with respect to obtaining the necessary information for the survey. In many cases, this person will be a member of the firm's management since it is only at this level that future plans of the firm are known. If possible, contacts should be made with management, the personnel office, foremen, and other suitable sources.[14]

It was this writer's assumption that the smaller firms probably would not have a personnel officer. For this reason the survey instrument was mailed to the owner of the firm. Since most larger firms do have a personnel office, the survey instrument was mailed to their personnel director.

The covering letter. A second common element in conducting the survey for this study was that of obtaining an introductory letter from the Iowa Manufacturers Association endorsing the survey. The purpose of this letter was to notify and arouse interest. A copy of the letter may be found in the appendix, Exhibit 2.

Direction sheet. Space for directions on completing the questionnaires was not available on the forms. For this reason a separate direction sheet was developed which was included with each mailing of questionnaires. At the suggestion of Dr. Donald Green, cartoons were placed in the left margin of the direction sheet. The purpose of the cartoons was to attract the attention of the respondent and to motivate him to read the directions. A copy of the direction sheet may be found in the appendix, Exhibit 3.

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[14] Bureau of Employment Security, loc. cit., p. 14.

IV. THE SURVEY TOOLS

It was decided that a higher percentage of returned questionnaires would be achieved if the metalworking manufacturers (SIC 33 to 77) were requested to complete inquiries about their training needs in job classifications presently found in their plant operations. While the Directory of Iowa Manufacturers lists the products produced by each manufacturer there is no listing of the manufacturing processes used to produce these products.

The post card. The initial questionnaire sent to the metalworking manufacturers was a post card asking them to check the manufacturing process(es) used in their plant. The responses on the post card included casting, machining, forming and forging, and welding. Based on the items checked on the return post cards, the manufacturers were then sent questionnaires which would apply only to their manufacturing operations. A copy of the post card appears in the appendix, Exhibit 4.

The covering letters. Included in the mailing of the post card was the letter from the Iowa Manufacturers Association which was described earlier. In addition this writer prepared a covering letter explaining the purpose of the study as well as its anticipated outcome. The article which appeared in Iowa Business and Industry was reprinted in the left margin of this letter. This was done to refresh the memory of the recipient, of this endorsement of the study. A copy of the letter may be found in the appendix, Exhibit 5.

The reminder. A reminder letter and second post card, identical to the first post card mailed, were mailed to those firms that did not respond within one week of the initial mailing. It was decided that a one week lapse of time was sufficient since the information requested could be placed on the card from memory and knowledge of the business. A copy of the reminder letter may be found in the appendix, Exhibit 6.

Sending the questionnaires. After the post cards were received by this writer, questionnaires were mailed to the manufacturers according to the manufacturing processes used in each firm.

A covering letter was prepared in which the manufacturer was reminded that he had recently returned a post card which was the first step in identifying state-wide training needs for skilled and semi-skilled metal tradesmen. He was also reminded of the scope and purpose of the survey. A copy of the letter may be found in the appendix, Exhibit 7.

Questionnaires were mailed for job classifications which could apply to the manufacturing process used. The manufacturers that stated that they made castings received questionnaires for Molder-Foundry Worker, Patternmaker, and Machinist (Production).

The reason for including the questionnaire on Machinist (Production) is that the job description included skills in the set-up and operation of die casting machines. This skill was included in the Machinist (Production) job description because this writer considered this more of a machine operation skill than a molder foundry-worker skill.

The manufacturers that used the process of forging and forming received questionnaires on Forge Press Operator and Machinist (Production). The reason for including the questionnaire bearing the job description of Machinist (Production) is that this description includes the skills of setting-up and operating brakes and punch presses. Some manufacturers may have correctly checked the forming and forging entry on the post card because they have punch presses in their plant operations. Punch press and brake work are considered to be forming processes.

The manufacturers that responded on the post card by indicating that they machined metals in their plant received questionnaires bearing the job descriptions for Machine Repairman - Maintenance (any industry), Machinist (Custom) (Job Shop), and Machinist (Production), and Tool and Die-Maker.

Those manufacturers who stated that they used welding processes in the production of their products or services received the questionnaire with the job description Welder, Combination.

The questionnaires not included in the above are ASSEMBLERS, HYDRAULIC-EQUIPMENT MECHANIC, and INDUSTRIAL EQUIPMENT SALESMAN.

It was not possible to identify specific industries that might employ persons possessing the skills outlined in these job classifications, therefore these questionnaires were included in the mailing to all manufacturers in the Standard Industrial Classification code 33 through 37.

The questionnaire for the HYDRAULIC EQUIPMENT MECHANIC was used because the greater use of hydraulics on machinery every year there may be a need for repairmen knowledgeable in this field. The growth in sales of hydraulic equipment can be used as an indicator of its importance in industry. In 1945, manufacturers of fluid power systems and components produced about one-third of a billion dollars worth of equipment. In 1957 these manufacturers produced five-hundred and twenty-four million dollars worth of equipment. With the increase in demand for fluid power equipment the per unit cost of components has been reduced.[15]

The questionnaire to determine the needs for ASSEMBLERS was developed because of clues provided by two manufacturers of construction equipment in Iowa. In 1965 this writer visited both manufacturing facilities. One firm employed less than 250 persons and the other firm employed less than 20 persons. This writer considered both firms low volume production operations. The products produced were assembled on an assembly floor as a complete unit. Assembly line methods typical of the automotive industry were not used. The operations performed by the assemblers appeared to fit the semi-skilled category. For this reason it appeared advisable to determine the training needs for this type of worker.

The questionnaire for Industrial Equipment Salesman was developed on the basis that some of Iowa's manufacturers employ their own sales force.

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[15] National Fluid Power Association, "National Survey of the Availability of Manpower Trained in Fluid Power" (Thiensville, Wis: National Fluid Power Association, 1963), pp. 2,3. (Mimeographed).

This group of workers maintain contact with wholesale and retail sales organizations as well as directly with the consumer of the product. It would seem reasonable to assume that replacements and additional employees may be needed in this occupation. It also was apparent that in order to be an effective machinery salesman that they should receive instruction in mechanics as well as sales. For the above reasons this questionnaire was included in all mailings to Standard Industrial Classification firms 33 through 37. Samples of questionnaires can be found in the appendix, Exhibits 9 through 19.

V. SURVEYING FIRMS EMPLOYING MORE THAN ONE-HUNDRED PERSONS THAT ARE LISTED IN STANDARD INDUSTRIAL CATEGORIES OTHER THAN 33 THROUGH 37

This writer assumed that many large manufacturers or processors that do not fabricate metal products employ skilled or semi-skilled metal tradesmen to maintain their production machinery. All firms employing one-hundred or more persons listed in the Directory of Iowa Manufacturers in categories other than Standard Industrial Classification 33 through 37 were surveyed. Since the type of work performed by metal tradesmen in these firms would be of a maintenance nature the following questionnaires were sent to these manufacturers:

Hydraulic Equipment Mechanic
Machine Repairman, Maintenance (any industry)
Machinist (Custom) (Job Shop)
Welder, Combination

A covering letter was prepared and included with the questionnaires mailed to the above type of firm. A copy of this letter may be found in the appendix, Exhibit 8. The letter of endorsement by the Iowa Manufacturers Association, cited earlier, was included with this questionnaire mailing.

The inclusion of blank forms. All firms in this study also received two questionnaires which did not list a job description. The respondent was asked to complete the blank questionnaire for any job classification not

included in the packet in which he was experiencing a shortage of workers. A copy of the blank questionnaire may be found in the Appendix, Exhibit 20.

The reminder. All firms that did not respond to the initial mailing of the questionnaires within two weeks were sent reminder letters and a second set of questionnaires. Those manufacturers within Standard Industrial Classifications 33 through 37 were mailed a complete set of eleven prepared questionnaires and two blank questionnaires with their reminder letter. No effort was made to send questionnaires according to the manufacturing process used when mailing the reminder. The reason for this course of action was that all of the post cards that had been returned were categorized according to manufacturing process used and it would have been a time-consuming process to sort through the fourteen combinations of responses to locate the returned post card from the manufacturers that had not responded to the initial mailing of questionnaires.

Those manufacturers that employed more than 100 persons in Standard Industrial Classifications other than 33 through 37 were sent a reminder letter and a set of questionnaires identical to those included in the first mailing.

The reminder letter used for both groups of manufacturers was identical. The letter stressed the need for a response from each firm. A copy of this letter may be found in the Appendix, Exhibit 11.

THE QUESTIONNAIRES

The job description. Questionnaires were developed for eleven job classifications for which it appeared to this writer there would be demands for trained workers. The job descriptions do not match those found in publications, such as the Dictionary of Occupational Titles. The job classifications

are based on two factors. One factor is the observation of industrial work being done in selected manufacturing plants in the state. The other factor is an estimate by the writer of an adequate amount of identifiable content on which a preparatory vocational training program could be developed.

The questionnaires were sent to an advisory committee made up of key personnel in nine manufacturing firms located in Iowa. These persons were recommended by Mr. Don Hauser of the Iowa Manufacturers Association. Seven of the nine persons responded and reacted to the questionnaires. The questionnaires were then revised to reflect the constructive criticisms of these persons. The manufacturers who assisted with this are recognized in the ACKNOWLEDGEMENTS. Most of the reactions provided by this group pertained to the job descriptions on the questionnaires.

The questions. It was decided that since certain information would be required for each of the eleven occupations being surveyed that all questions on the forms would be identical. The only deviation from this in each of the eleven job classifications can be found in question 8. This question pertained to needs for supplemental classes. Since the duties in each job classification are different, it is reasonable that titles for supplemental classes vary according to the job description.

Since all questions, except number eight, were identical the reader may wish to consult Exhibit 9 to review the items of interrogation. The job descriptions used are listed in Exhibit 10. Question eight and possible responses are listed in Exhibit 11.

Since all questions, with the exception of 8, are identical there appeared to be the possibility that the respondent might discard a number of questionnaires after answering one or two, assuming that duplicate questionnaires had been mailed. For this reason the questionnaires were printed on six different colors of paper. This would call to the attention of the respondent a difference in the questionnaire.

CHAPTER IV

I. FINDINGS OF THE STUDY

The initial survey instruments were mailed during the first week in January of 1967. Procedures followed in the mailing are outlined in the preceding chapter. The last responses were received on February 10, 1967.

Responses to the questionnaires. The total population of this study included 1,012 firms located in the state of Iowa. A total of 440, or 43.6 percent, responded to the questionnaires. The responses by Merged Area District ranged from a low of 25.9 percent in Merged Area District XIV to a high of 61.5 percent in Merged Area District III. Table III provides number and percent responses from all Merged Area Districts as well as the State.

Of the firms classed as metalworking manufacturers (SIC 33 through 37) in the State, 80 percent returned the post card questionnaire. The Merged Area District with the highest response was XV with a percentage of 93 while the lowest was Merged Area I with a percentage of 66.7.

Forty-one and nine tenths percent of all of the metalworking manufacturers returned questionnaires or slightly more than one-half of those that returned post cards. Sixty percent of the manufacturers in Merged Area District IV returned questionnaires. This was the largest percentage of return. The lowest percentage of return of questionnaires by firms occurred in Merged Area District XIV. The return equaled 28 percent. The largest number of metalworking manufacturers are located in Merged Area XI while the smallest number of this type of firm is located in Area IV. Table IV provides details about responses of firms within other Merged Area Districts.

The firms outside of Standard Industrial Classifications 33 through 37 employing 100 or more persons demonstrated greater interest in the study by returning 49.7 percent of the questionnaire. All firms in this category

TABLE III

TOTAL FIRMS IN MERGED AREA DISTRICTS
RESPONDING TO QUESTIONNAIRES

Merged Area	Population N.	SIC 33-37 Questionnaire Returned N_1	Firms Employ 100 or more Questionnaire Returned N_2	ΣN_1+N_2	$\frac{\Sigma N_1+N_2}{N}$
I	27	10	1	11	40.7
II	41	10	5	15	36.6
III	26	12	4	16	61.5
IV	10	6	0	6	60
V	89	26	9	35	39.4
VI	44	12	4	16	36.2
VII	87	36	5	41	47.1
VIII	45	15	3	18	40
IX	114	40	16	56	49
X	111	46	10	56	50.9
XI	176	50	16	66	37.5
XII	71	18	10	28	39.5
XIII	32	12	0	12	37.5
XIV	27	7	0	7	25.9
XV	52	23	3	26	50
XVI	60	22	9	31	51.7
State Totals	1012	345	95	440	43.6

TABLE IV

METALWORKING MANUFACTURERS RESPONDING TO
POST CARD AND QUESTIONNAIRE (SIC 33 THROUGH 37)

Merged Area District	N	Returned Post Card N_1	% Returned Post Card $\frac{N_1}{N}$	Questionnaire Returned N_2	$\frac{N_2}{N}$	$\frac{N_2}{N_1}$
I	24	16	66.7	10	41.6	62.5
II	33	27	81.7	10	30.3	37.1
III	22	15	68.2	12	54.5	80
IV	10	12	80	6	60	50
V	72	62	86.1	26	36.1	42
VI	37	29	78.5	12	32.4	41.4
VII	76	58	76.2	36	47.3	62
VIII	38	27	71	15	39.4	55.5
IX	87	75	86.1	40	46	53.3
X	89	77	86.5	46	51.7	59.8
XI	142	106	74.7	50	35.2	47.1
XII	54	42	84.6	18	33.3	42.9
XIII	29	21	72.5	12	41.4	57.1
XIV	25	15	76	7	28	36.8
XV	44	41	93	23	52.3	56
XVI	41	35	85.4	22	53.6	62.8
State Total	823	658		345		
State Median			79.2		41.5	55.7
State Mean			80		41.9	53.4

located in Merged Area District III responded. None of the firms in Merged Area Districts XIII and XIV responded. The median response from all firms in this category was 47.2 percent. Table V provides detailed information on number and percent of responses by firms within each Merged Area District.

Processes used in manufacturing. As mentioned earlier, post cards were mailed to the metalworking manufacturers requesting them to report the manufacturing process(es) used in their firm. The four processes listed on the post card were casting, forging and forming, machining, and welding. There were 16 possible combinations of responses to the questionnaire. Of the 658 firms that responded, the combined processes of machining and welding were used most predominantly. One hundred and sixty-seven manufacturing firms used these processes. The one single process used least in the State was forming and forging. Sixteen firms used that process alone. Table VI shows the tabulation of the 658 firms by Merged Area District and state-wide totals with respect to the process(es) used.

TABLE V

QUESTIONNAIRES RETURNED BY FIRMS OUTSIDE
OF SIC 33 TO 37 EMPLOYING MORE THAN 100 PERSONS

Merged Area District	N	Questionnaires Returned N_1	$\frac{N_1}{N}$
I	3	1	33
II	8	5	62.5
III	4	4	100
IV	0	0	100
V	17	9	52.8
VI	7	4	57.1
VII	11	5	45.5
VIII	7	3	42.8
IX	27	16	59.3
X	22	10	45.5
XI	34	16	47
XII	17	10	58.8
XIII	3	0	0
XIV	2	0	0
XV	8	3	37.5
XVI	19	9	47.4
State Totals	189	95	
State Mean			49.7

59

TABLE VI

MANUFACTURING PROCESSES USED BY 80% OF IOWA METALWORKING MANUFACTURERS
VARIOUS COMBINATIONS IN ANSWERING POST CARD

MERGED AREAS

Process Combinations	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	State Totals
Casting	1	0	0	0	3	3	6	1	6	1	3	0	2	0	4	1	31
Casting Machining	0	1	1	0	2	2	0	3	3	1	1	1	0	0	1	1	17
Casting Welding	0	0	0	0	0	0	1	1	1	1	0	0	1	1	0	0	6
Casting Form and Forg Machining Welding	1	2	1	0	3	0	2	1	2	6	7	6	3	0	1	1	36
Casting Machining Welding	0	1	0	0	3	3	8	1	2	1	4	2	0	0	4	3	32
Form and Forg	0	0	0	1	0	2	1	1	2	2	4	0	0	0	2	1	16
Form and Forg Machining	0	1	0	1	0	0	1	1	3	4	2	0	0	1	1	1	16
Form and Forg Machining Welding	3	2	3	4	5	0	11	4	10	7	14	6	3	0	5	3	80

TABLE VI (Continued)

MERGED AREAS

Process Combinations	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	State Totals
Form and Forg Welding	2	3	1	0	2	2	4	2	9	6	11	3	2	2	1	2	52
Machining	1	0	0	1	4	2	2	1	11	13	12	1	0	2	2	7	59
Machining Welding	2	10	6	4	23	5	15	4	14	20	25	10	4	5	11	9	167
Welding	4	2	2	1	8	3	5	4	5	7	14	8	2	2	4	5	76
Casting Form and Forg	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	4
No Process Marked	2	5	1	0	9	7	2	3	7	7	8	4	3	2	5	1	66
Area District Totals	16	27	15	12	62	29	58	27	75	77	106	42	21	15	41	35	658

II STATE - WIDE NEEDS

State-wide patterns by occupation. The respondents were asked to indicate whether they would employ graduates of vocational technical programs to fill the anticipated vacancies they would have in each job classification in 1968, 1970, and 1972. If the response was "yes" the need for workers was tabulated in a column in Table VII entitled New Employees Needed by Institutional Training. Replacement needs are tabulated in the following columns of the same table.

Institutional training. Table VII shows the state-wide needs for new and replacement skilled and semi-skilled workers in the eleven occupations surveyed. In addition employment patterns in the occupations surveyed are shown.

Employment patterns. The 440 firms responding employed a total of 23,763 metal tradesmen. The largest employment occurred in the job classification Machinist (Production), with a total employment of 8,947. The second highest employment occurred in the occupation Welder-Combination with the level at 2900.

Often a labor market analyst will study replacement rates and other factors about occupations and draw conclusions about the labor force, working conditions, and organized labor. This study was limited to identifying needs as expressed by employees. No effort will be made to analyze data based on replacement records of the populations. Table VII shows the replacement rates in the eleven occupations surveyed with percentages computed in the last column.

State-wide needs. The number of new workers employed in 1966 and the number of new workers which will be employed in 1968, as anticipated by the

manufacturers, is nearly equal. From this information one can conclude that manufacturers anticipate continued national economic growth and increasing demand for their products.

The need for replacement workers in 1968, 1970, and 1972 will be at a rate of approximately two-thirds of the number required in 1966.

The largest number of trained new and replacement workers will be needed in the Production Machinist category in 1968, 1970, and 1972. Second to this is the need for Moulder-Foundry Workers and ranking third is the need for Assemblers. The occupations Patternmaker and Forge Press Operator will require the least number of workers trained.

Geographic representation of state-wide needs. Tables number X through XX show needs for trained workers by Merged Area District. Some individual Merged Area Districts will not be able to justify the establishment of certain occupational training programs covered in this study. Tables X through XX show needs geographically by Merged Area Districts as well as state-wide needs. These tables illustrate that in certain occupations, manufacturers in adjacent Merged Area Districts report sufficient need to justify an occupational training program. Where this occurs the administration and boards of the adjacent Merged Area Districts should meet to decide which Merged Area District should offer the program. The Merged Area District in which there is greatest need should initiate the multi-merged area district meeting.

State-wide needs in other occupations. The employers responding to this survey had the opportunity to indicate occupations in which they were experiencing shortages in skilled workers outside of the eleven they were specifically requested to answer. Many firms did this to the degree that 19 occupations were represented which were different from those initially surveyed. Table IX lists these occupations and the number of workers required on a state-wide basis for the next six years.

TABLE VII

STATE-WIDE EMPLOYMENT PATTERN AND INSTITUTIONAL TRAINING NEEDS IN 440 FIRMS

Occupation	Employment Patterns					New Employees Needed by Institutional Training								
	Number of positions closed in 1966	Number Employed in January 1966	New Employees Jan.-Dec. 1966	Replacements Jan.-Dec. 1966	Total Employees January 1967	New Employees 1968	New Employees 1970	New Employees 1972	Replacements 1968	Replacements 1970	Replacements 1972	Total New and Replacement Workers 1968	Total New and Replacement Workers 1970	Total New and Replacement Workers 1972
Assemblers	6	2783	561	772	3344	461	460	500	452	462	448	913	922	948
Forge Press Operators	0	205	39	30	144	22	26	34	17	15	19	39	41	53
Hydraulic Mechanic	2	209	25	31	234	50	52	53	31	42	50	81	94	103
Industrial Salesman	4	262	45	64	307	78	71	78	51	56	68	129	127	146
Machine Repairman	4	2359	228	341	2587	233	265	237	212	223	240	445	488	477
Machinist (Job Shop)	4	1076	110	183	1186	224	194	202	140	113	159	364	307	361
Machinist (Production)	17	7743	1204	1740	8947	1184	1106	1220	1143	1034	1084	2327	2140	2304
Moulder-Foundry Worker	3	2271	608	1174	2879	524	461	409	1101	1018	986	1625	1479	1395
Patternmaker	1	169	16	14	185	28	17	29	17	6	15	45	23	44
Tool and Die Maker	2	907	143	125	1050	254	238	254	141	133	140	395	371	394
Welder-Combination	5	2359	541	753	2900	405	430	477	353	334	353	758	764	830

TABLE VIII

REPLACEMENTS EMPLOYED DURING
JANUARY-DECEMBER 1966

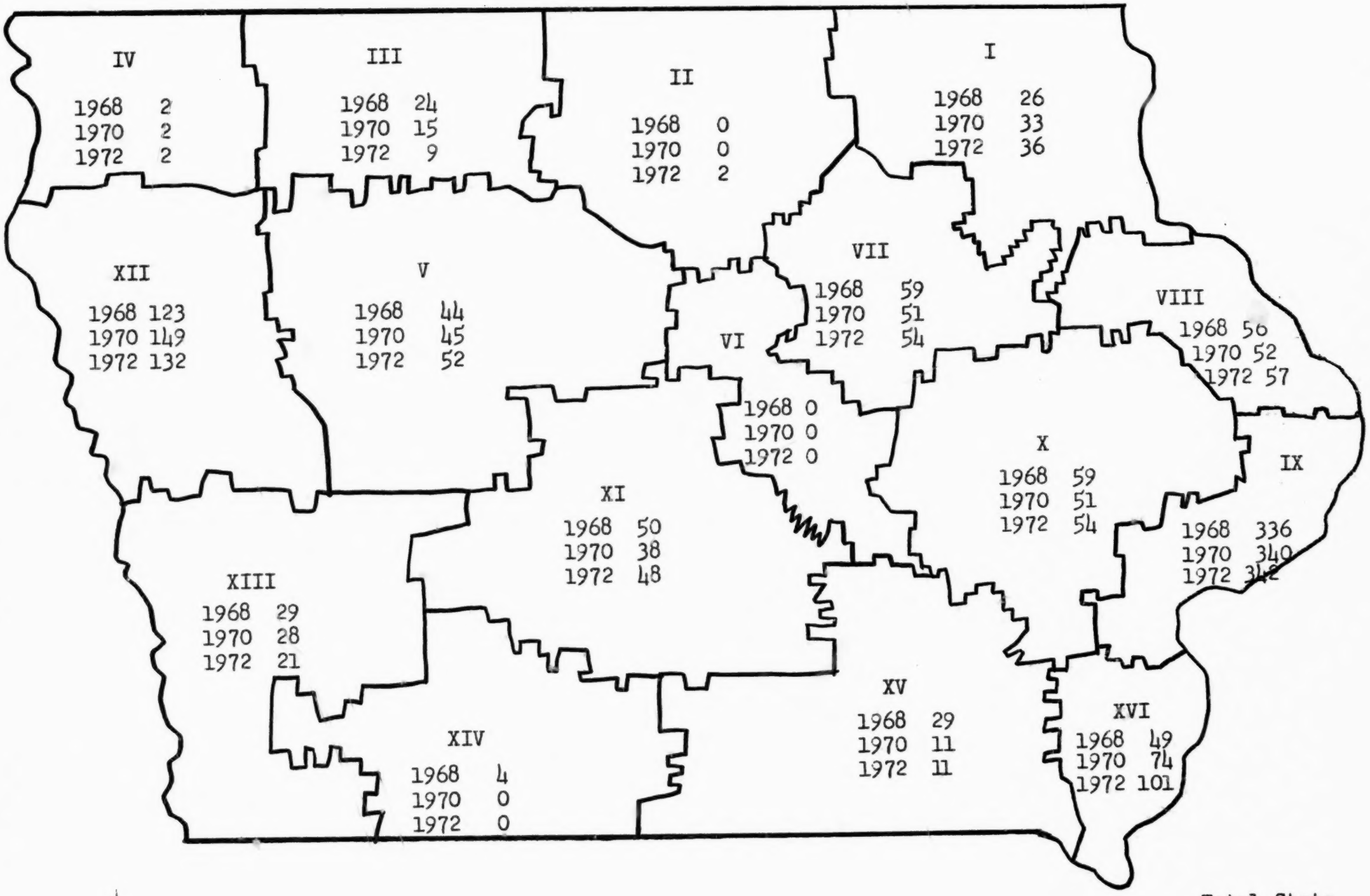
	Replace-ments	Total Employees	Replacement Percentage
Hydraulic Equipment Mechanic	31	234	13.5
Industrial Equipment Salesman	64	307	22.6
Machinery Repair	341	2587	13.5
Machinist (Job Shop)	183	1186	15.3
Machinist (Production)	1740	8947	19.5
Moulder-Foundry Worker	1174	2879	40.7
Patternmaker	14	185	7.5
Tool and Die Maker	125	1050	11.9
Welder Combination	753	2900	29.4

TABLE IX

STATE-WIDE NEEDS FOR WORKERS TRAINED IN VOCATIONAL CURRICULA IN OCCUPATIONS OTHER THAN THOSE SPECIFICALLY COVERED IN THIS SURVEY

	Total 1968, 1970, 1972
Auto Mechanics	40
Carpenter-Cabinetmaker	283
Chemical Technicians	31
Draftsman, Mechanical, Electrical, Structural, Artist	85
Electrical Maintenance Mechanic	69
Electro Platers	22
Foreman and Supervisors	80
Instrument Repairman	40
Inventory Control	58
Maintenance Engineer Including Refrigeration	15
Mechanical Technician	65
Pipefitter, Maintenance	5
Printers	86
Sewing Machine Operator and Upholsterers	130
Sheetmetal Worker	57
Spray Painter	30
Structural Steel Fabricator	27
Tool Design Technician	41
Miscellaneous	51

TABLE X

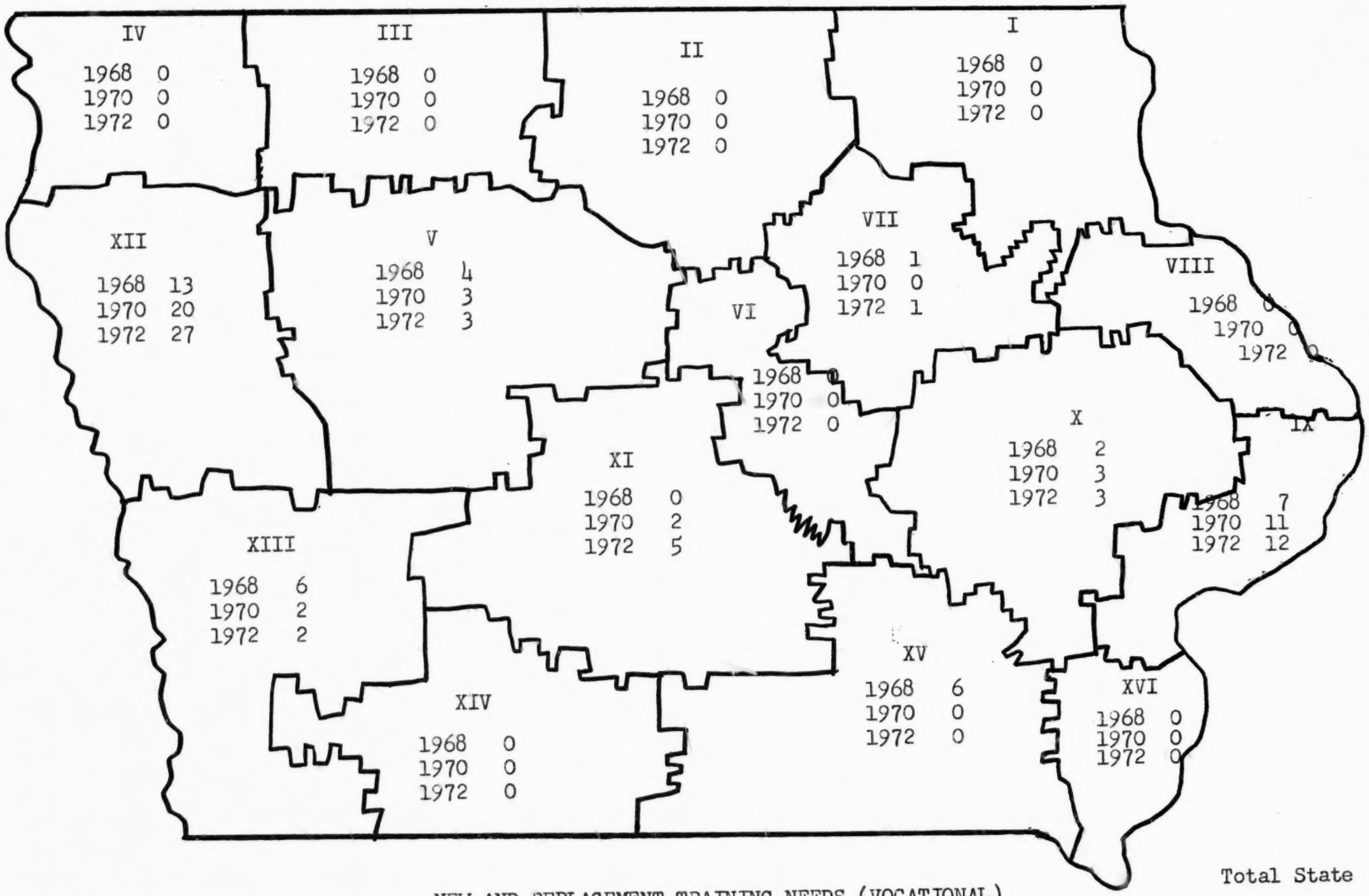


Total State

1968	913
1970	922
1972	948

NEW AND REPLACEMENT TRAINING NEEDS (VOCATIONAL)
BY MERGED AREAS FOR ASSEMBLERS

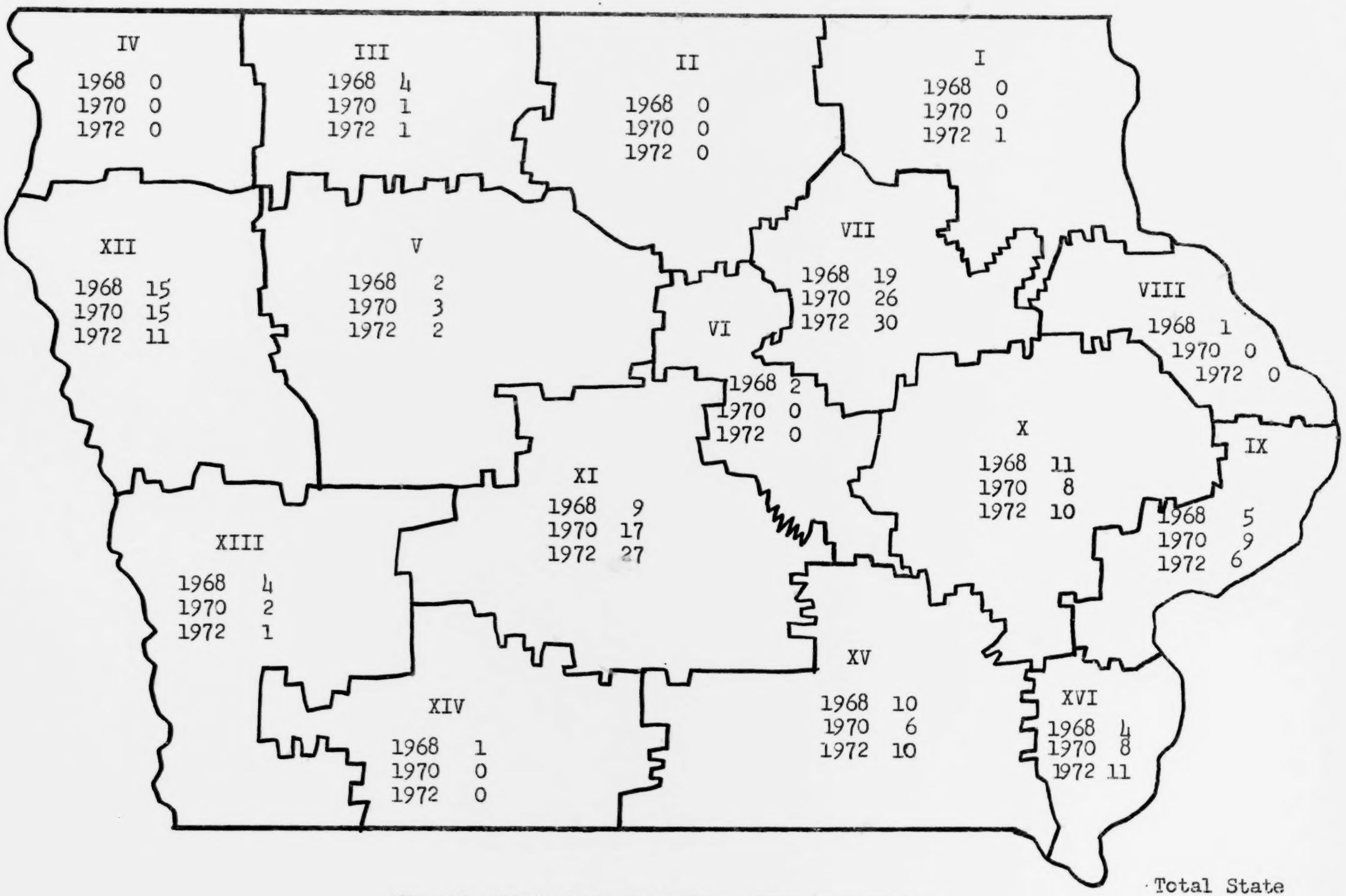
TABLE XI



NEW AND REPLACEMENT TRAINING NEEDS (VOCATIONAL)
BY MERGED AREAS FOR FORGE PRESS OPERATORS

Total State	
1968	39
1970	41
1972	53

TABLE XII

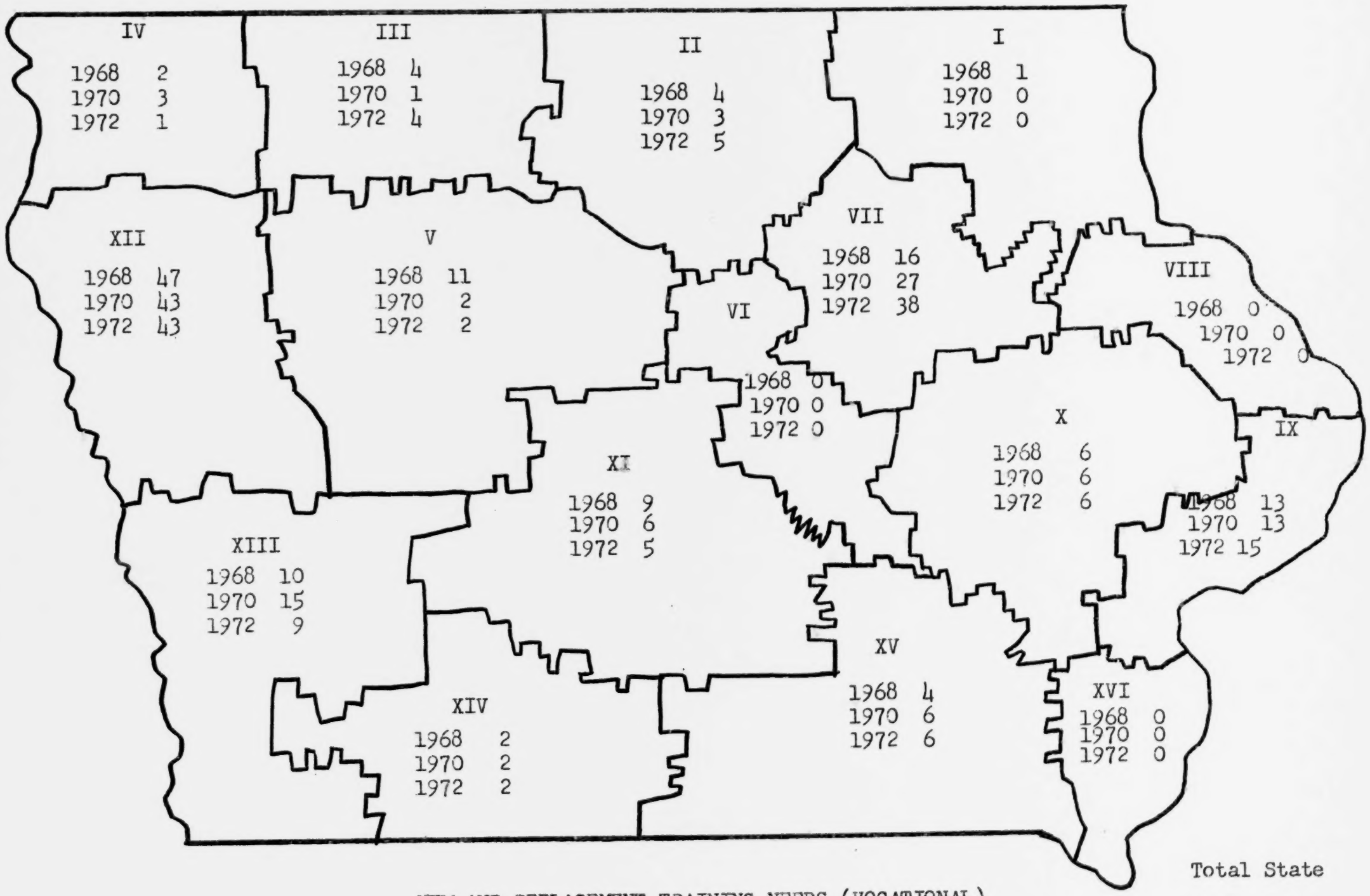


NEW AND REPLACEMENT TRAINING NEEDS (VOCATIONAL)
BY MERGED AREAS FOR HYDRAULIC MECHANIC

Total State

1968	81
1970	94
1972	103

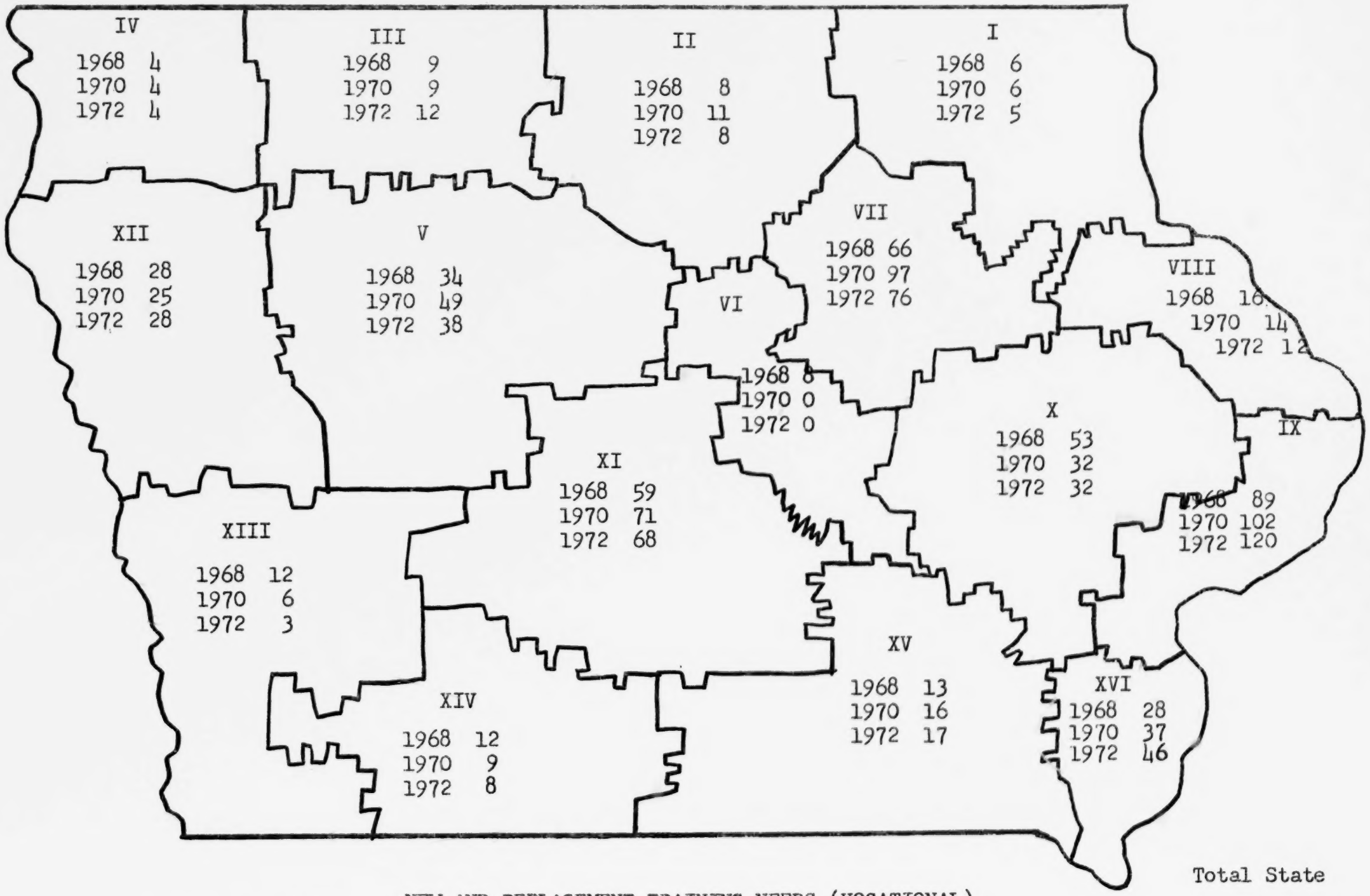
TABLE XIII



NEW AND REPLACEMENT TRAINING NEEDS (VOCATIONAL)
BY MERGED AREAS FOR INDUSTRIAL EQUIPMENT SALESMAN

Total State	
1968	129
1970	127
1972	146

TABLE XIV

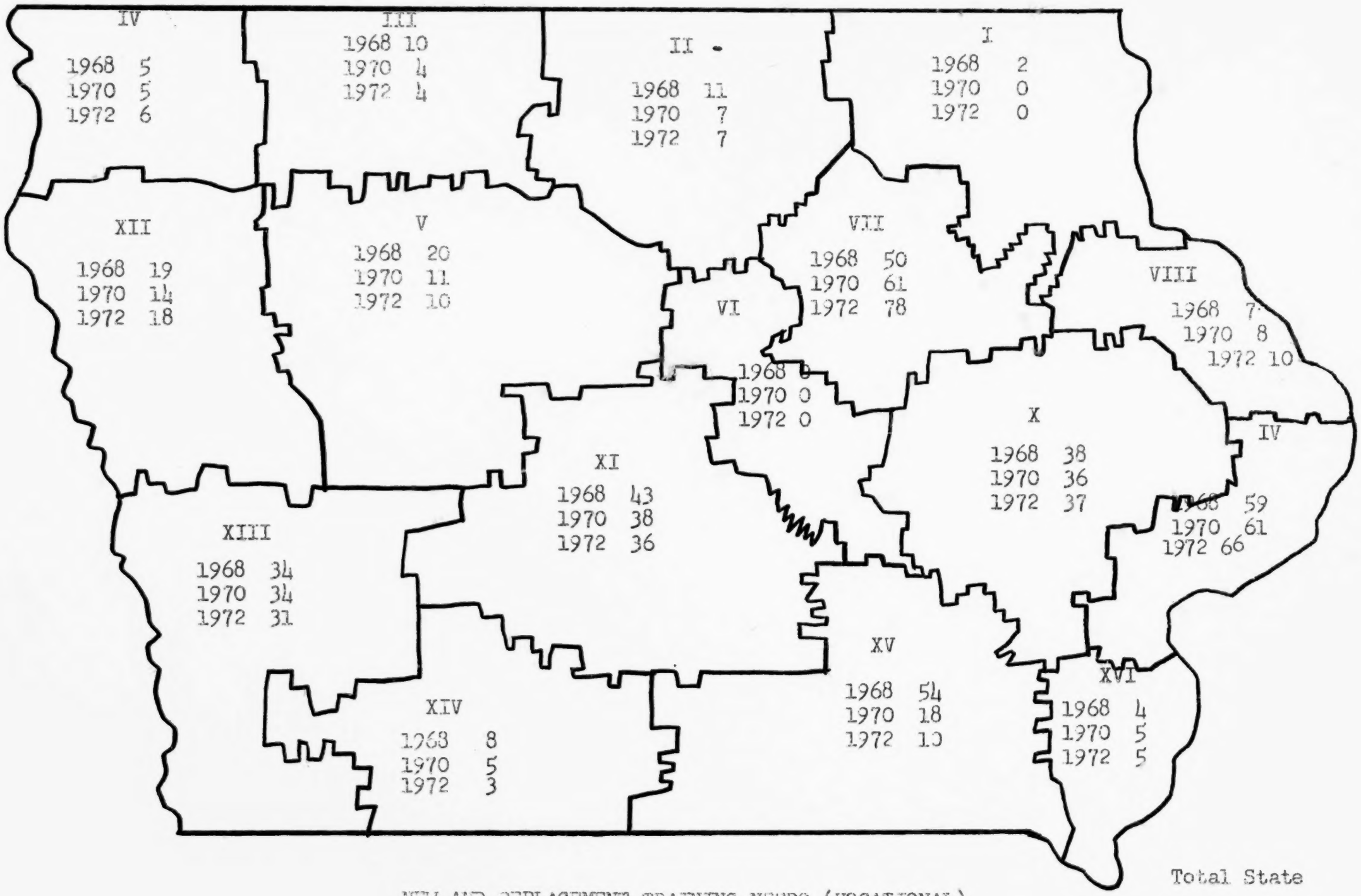


Total State

1968 445
1970 488
1972 477

NEW AND REPLACEMENT TRAINING NEEDS (VOCATIONAL)
BY MERGED AREAS FOR MACHINE REPAIRMAN

TABLE XV

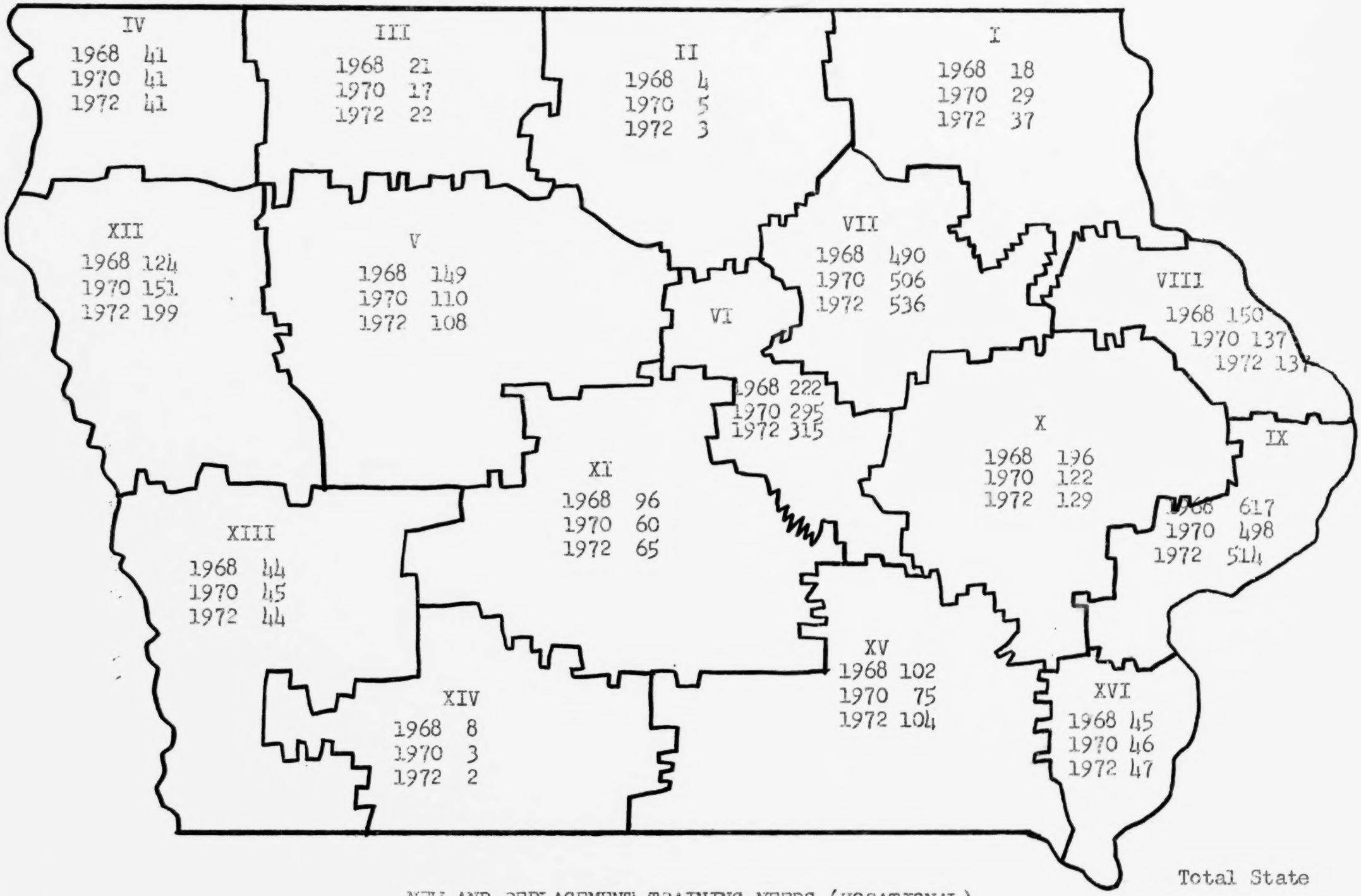


NEW AND REPLACEMENT TRAINING NEEDS (VOCATIONAL)
BY MERGED AREAS FOR MACHINIST (JOB SHOP)

Total State

1968	364
1970	307
1972	361

TABLE XVI

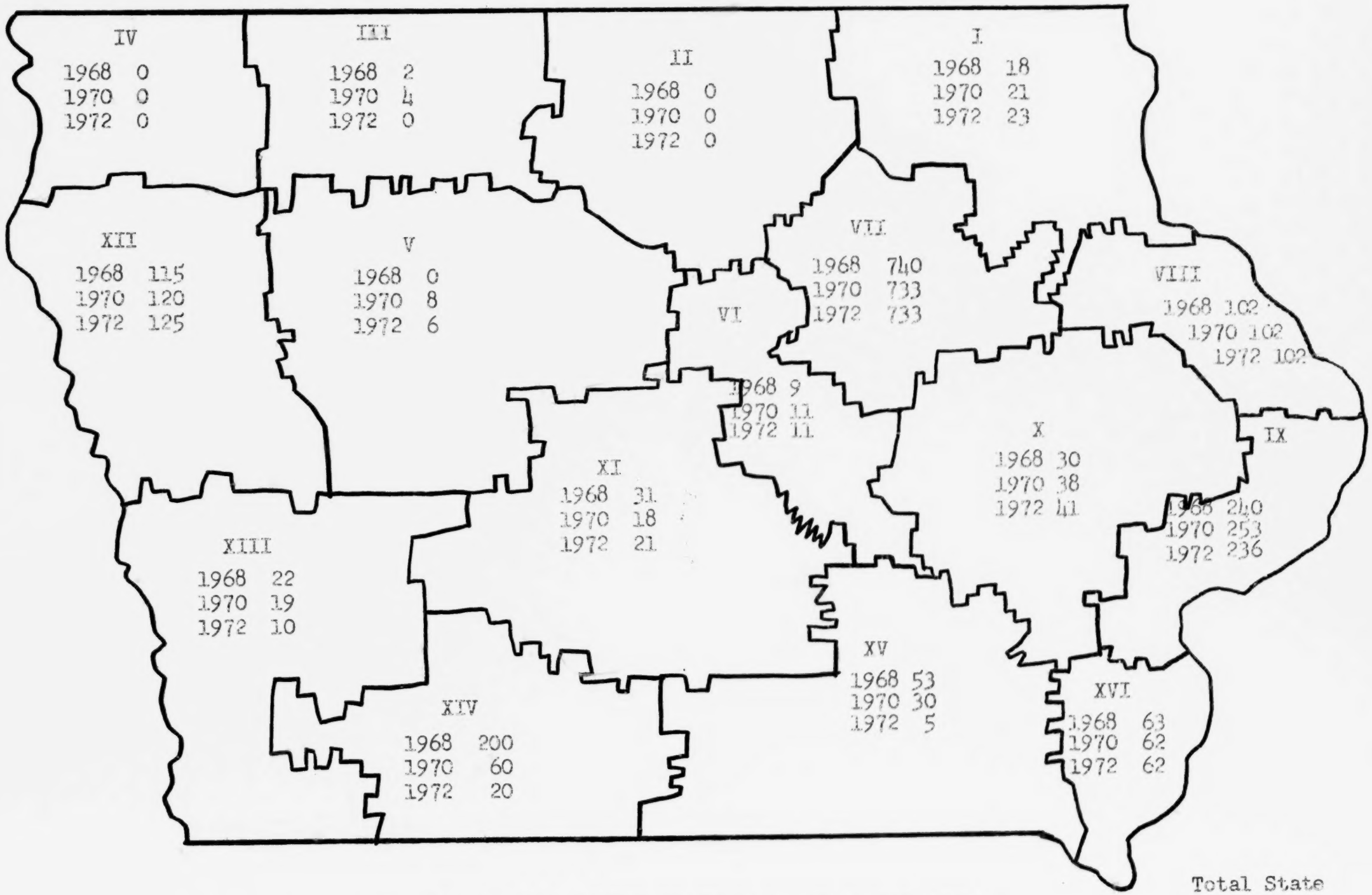


NEW AND REPLACEMENT TRAINING NEEDS (VOCATIONAL)
BY MERGED AREAS FOR MACHINIST (PRODUCTION)

Total State

1968	2327
1970	2140
1972	2304

TABLE XVII

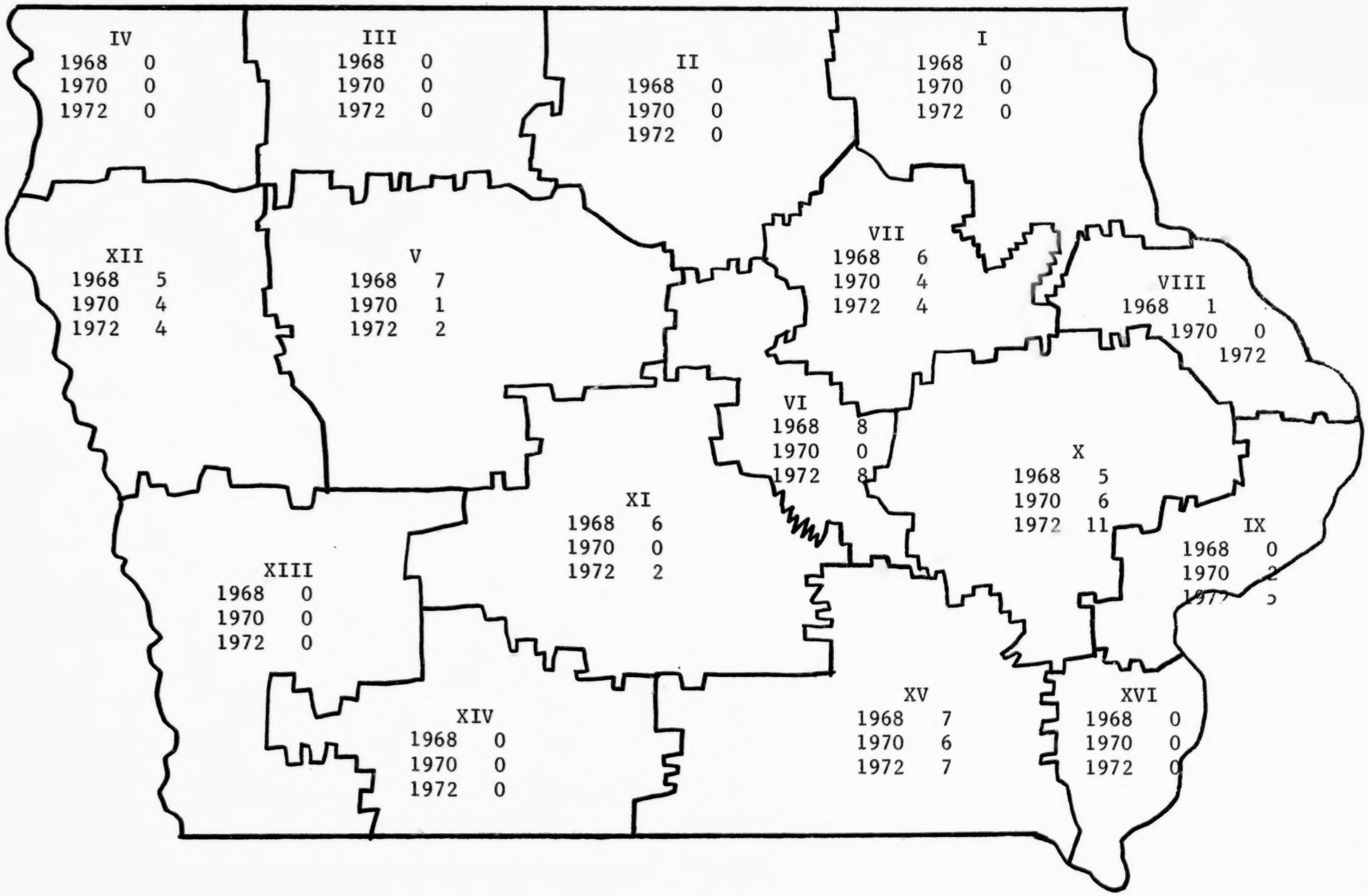


Total State

1968 1625
1970 1479
1972 1395

NEW AND REPLACEMENT TRAINING NEEDS (VOCATIONAL)
BY MERGED AREAS FOR MOLDER-FOUNDRY WORKER

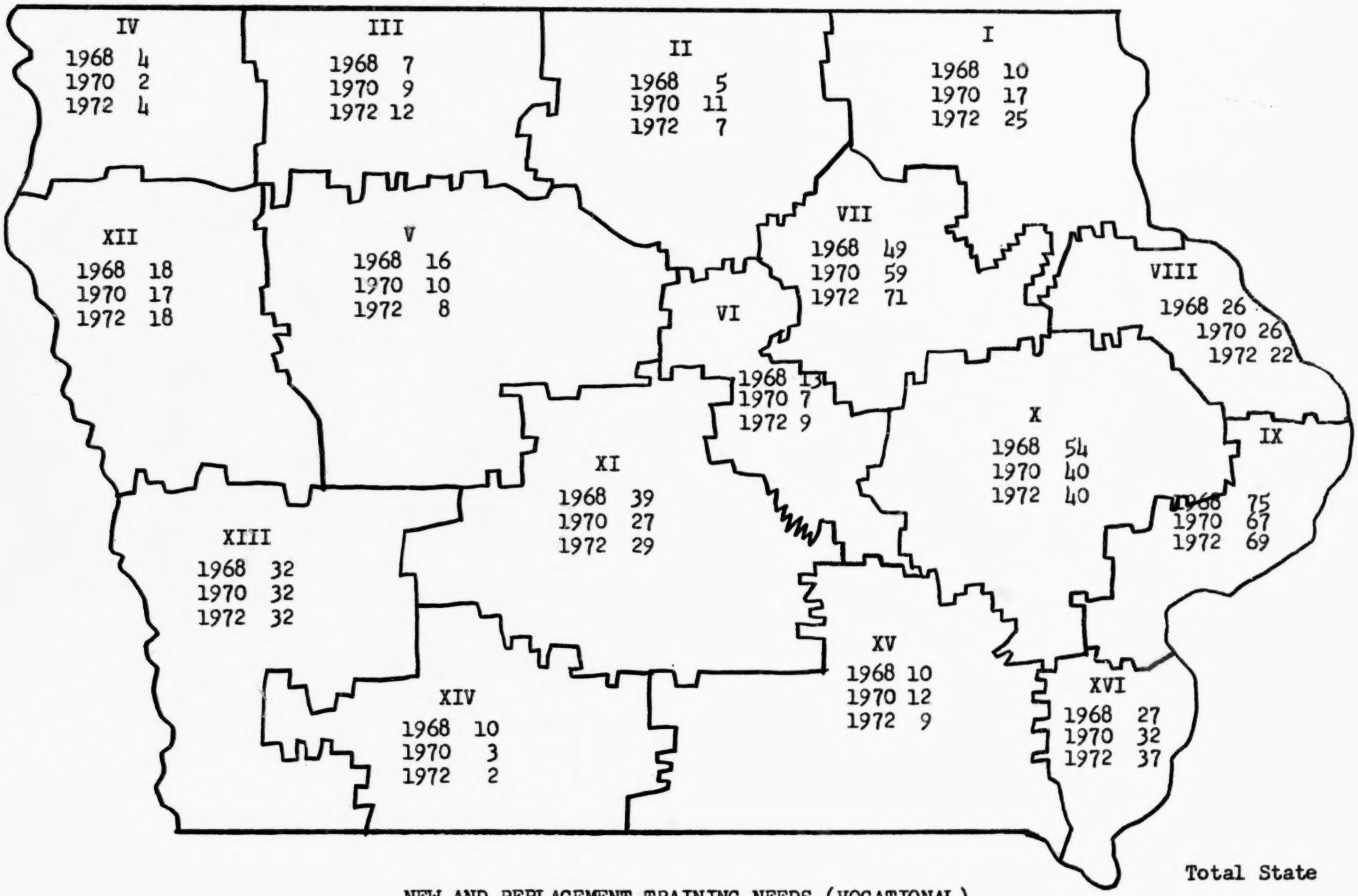
TABLE XVIII



NEW AND REPLACEMENT TRAINING NEEDS (VOCATIONAL)
BY MERGED AREAS FOR PATTERNMAKER

Total State	
1968	45
1970	23
1972	44

TABLE XIX

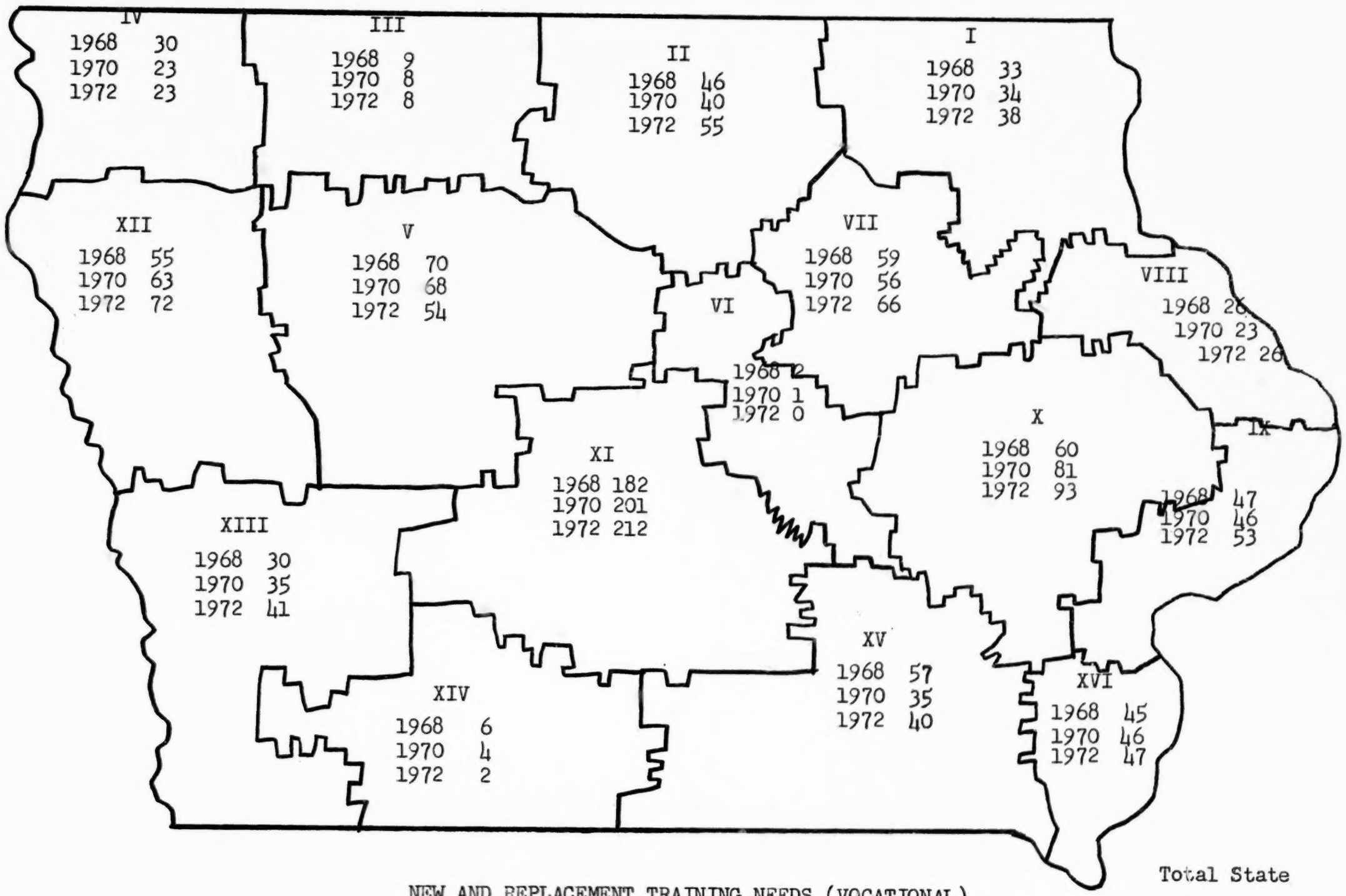


NEW AND REPLACEMENT TRAINING NEEDS (VOCATIONAL)
BY MERGED AREAS FOR TOOL AND DIE MAKER

Total State

1968	395
1970	371
1972	394

TABLE XX



NEW AND REPLACEMENT TRAINING NEEDS (VOCATIONAL)
BY MERGED AREAS FOR WELDER (COMBINATION)

Total State

1968	758
1970	764
1972	830

On-the-job training. Item six of the questionnaire used in this survey asked the respondent, "For positions in this job classification, would you hire graduates of vocational-technical programs possessing the skills listed above?"

The needs as expressed by those firms that answered NO to item six were tabulated as requiring on-the-job training. The respondent had the opportunity to elaborate in item seven, the method that would be used to fill needs if NO had been checked in item six. The choices in item seven included two which were variations of on-the-job training, one of hiring skilled workers from other firms, and "other". The number of responses indicating "other" and "hiring from other firms" were very small in number. For this reason all NO responses in item six were considered, "on-the-job training," in this study. The reader should realize that a YES response in item six did not imply that only graduates of vocational-technical programs would be employed to fill job vacancies. Many firms will undoubtedly continue to utilize their on-the-job training programs to fill job vacancies. However, if vocational-technical curriculum graduates are available they would be given the opportunity for employment in 440 firms in the State.

The greatest need for persons to be trained in the eleven occupations, through on-the-job training, is in the occupation of Assemblers. The occupation of Welding ranked second. Complete details on state-wide requirements for workers in eleven occupations are contained in Table XXI.

Occupations in which workers would be trained through on-the-job training in job classifications other than the eleven specifically included in this survey are listed in Table XXII. The greatest need expressed by employers was for packinghouse workers followed by the need for sheetmetal workers.

TABLE XXI

STATE-WIDE NEEDS FOR
NEW AND REPLACEMENT WORKERS TO BE ACQUIRED
BY ON-THE-JOB TRAINING

	Employees to be Acquired by On-the-Job Training								
	New Workers			Replacement Workers			Total New and Replacement Workers		
Occupations	1968	1970	1972	1968	1970	1972	1968	1970	1972
Assemblers	76	113	118	41	46	52	117	159	170
Forge Press Operators	10	13	12	7	6	7	17	18	19
Hydraulic Equipment Mechanic	15	15	13	4	9	9	19	24	24
Industrial Equipment Salesman	17	18	23	6	13	10	23	31	33
Machine Repairman	43	41	35	25	40	37	68	81	72
Machinist, Custom	18	24	26	14	14	17	32	38	43
Machinist, Production	43	44	13	31	23	19	74	67	32
Moulder-Foundry Worker	2	2	2	9	3	3	11	5	5
Patternmaker	15	7	9	2	3	2	17	10	11
Tool and Die Maker	31	20	21	22	13	17	53	33	38
Welder, Combination	40	51	43	53	63	59	93	114	102

TABLE XXII

STATE-WIDE NEEDS FOR WORKERS TRAINED BY
ON-THE-JOB TRAINING IN OCCUPATIONS OTHER THAN
THOSE SPECIFICALLY COVERED IN THIS SURVEY

	Total 1968, 1970, 1972
Electrician & Electrical Maintenance	7
Foreman and Supervisors	9
Galvanizer	3
Packinghouse Worker	145
Pipefitters	22
Printers and Related	12
Refrigeration Mechanic & Electrician	8
Sheetmetal Worker	44
Spray Painters	11
Wire Fabricator	7

III. NEEDS BY MERGED AREA DISTRICT

Vocational training. Tables XXIII through XXXVIII show employment patterns and new and replacement worker needs in the eleven occupations reported by industries in each Merged Area District. When analyzing the needs as reported in this summary it would be advisable that school administrators consider the replacement record in relation to total employment in the occupation during 1966. A high percentage of replacement may indicate further study is necessary on the part of local and area school officials before establishing a training program for an occupation in which there has been a record of high turn-over of personnel. Replacement rates computed on a state-wide basis may be found in Table VII.

When school officials consider the establishment of a training program, the need for workers in that occupation should be at least thirty annually before a program is established. This will provide for two classes to be offered in the same facility each day. Each class would then have the opportunity to use the shop facilities for five hours and also have the same facility available for part-time supplementary training. In some cases Merged Area Districts will need to combine needs to make efficient use of one shop facility in one of the Merged Area Districts. When training can be accomplished in a period of six months or less the number used above will need to be doubled in order to maker year around use of the facility.

Supplemental training. Each responding industry was asked to estimate the number of employees they felt should be enrolled in part-time supplemental classes. These estimations are listed in Tables XXXIX through LIV. A tabulation of need for supplemental classes follow the tables showing employment patterns and preparatory training needs in each Merged Area District. These needs are shown by occupation. The reason for this is that, for instance,

the blueprint reading course content for a Machinst (Production) would be entirely different from the blueprint reading course content for a Welder. Instructor competencies would be different for each class also.

There will be a listing of need for trained workers in each Merged Area District in occupations not included in the eleven occupations surveyed by standard questionnaire. These needs will be shown for the six year period projection since, in the majority of cases, the needs are small.

TABLE XXIII

EMPLOYMENT PATTERNS AND PREPARATORY TRAINING NEEDS
IN MERGED AREA DISTRICT I

11 FIRMS RESPONDING

Occupation	Employment Patterns					Employees Needed by Vocational Training								
	Number of Positions Closed in 1966	Number Employed in January 1966	New Employees Jan.-Dec. 1966	Replacements Jan.-Dec. 1966	Total Employees January 1967	New Employees 1968	New Employees 1970	New Employees 1972	Replacements 1968	Replacements 1970	Replacements 1972	Total New and Replacement Workers 1968	1970	1972
Assemblers	0	14	5	5	19	16	20	22	10	13	14	26	33	36
Hydraulic Equipment Mechanic	0	6	1	0	7	0	0	0	0	0	1	0	0	1
Industrial Equipment Salesman	0	4	0	1	4	0	0	0	1	0	0	1	0	0
Machine Repairman	0	12	0	1	12	3	3	2	3	3	3	6	6	5
Machinist, Custom	0	1	0	0	1	1	0	0	1	0	0	2	0	0
Machinist, Production	6	44	7	7	51	13	21	26	5	8	11	18	29	37
Moulder-Foundry Worker	0	15	4	13	19	7	7	7	11	14	16	18	21	23
Patternmaker	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tool & Die Maker	0	17	2	2	19	8	12	17	2	5	8	10	17	25
Welder, Combination	0	41	7	10	48	18	17	20	15	17	18	33	34	38

TABLE XXIV

EMPLOYMENT PATTERNS AND PREPARATORY TRAINING NEEDS
IN MERGED AREA DISTRICT II

15 FIRMS RESPONDING

Occupation	Employment Patterns					Employees Needed by Vocational Training								
	Number of Positions Closed in 1966	Number Employed in January 1966	New Employees Jan.-Dec. 1966	Replacements Jan.-Dec. 1966	Total Employees January 1967	New Employees 1968	New Employees 1970	New Employees 1972	Replacements 1968	Replacements 1970	Replacements 1972	Total New and Replacement Workers 1968	Total New and Replacement Workers 1970	Total New and Replacement Workers 1972
Assemblers	0	3	0	0	3	0	0	1	0	0	1	0	0	2
Hydraulic Equipment Mechanic	0	5	0	0	5	0	0	0	0	0	0	0	0	0
Industrial Equipment Salesman	0	10	1	1	11	1	1	2	3	2	3	4	3	5
Machine Repairman-	0	82	7	19	89	3	4	3	5	7	5	8	11	8
Machinist, Custom	2	36	0	1	36	6	4	4	5	3	3	11	7	7
Machinist, Production	0	13	2	3	15	3	3	2	1	2	1	4	5	3
Moulder-Foundry Worker	0	4	0	0	4	0	0	0	0	0	0	0	0	0
Patternmaker	0	1	0	0	1	0	0	0	0	0	0	0	0	0
Tool and Die Maker	0	14	2	3	16	4	7	3	1	4	4	5	11	7
Welder, Combination	0	76	17	33	93	25	22	30	21	18	25	46	40	55

TABLE XXV

EMPLOYMENT PATTERNS AND PREPARATORY TRAINING NEEDS IN MERGED AREA DISTRICT III

16 FIRMS RESPONDING

Occupation	Employment Patterns					Employees Needed by Vocational Training								
	Number of Positions Closed in 1966	Number Employed in January 1966	New Employees Jan.-Dec. 1966	Replacements Jan.-Dec. 1966	Total Employees January 1967	New Employees 1968	New Employees 1970	New Employees 1972	Replacements 1968	Replacements 1970	Replacements 1972	Total New and Replacement Workers 1968	1970	1972
Assemblers	0	32	11	19	43	15	12	6	9	3	3	24	15	9
Hydraulic Equipment Mechanic	0	5	0	0	5	2	1	1	2	0	0	4	1	1
Industrial Equipment Salesman	2	4	2	0	6	3	0	1	1	1	3	4	1	4
Machine Repairman	0	26	4	1	30	6	6	9	3	3	3	9	9	12
Machinist, Custom	0	15	0	1	15	7	3	3	3	1	1	10	4	4
Machinist, Production	3	33	9	6	42	14	10	12	7	7	10	21	17	22
Moulder-Foundry Worker	0	8	2	2	10	2	4	0	0	0	0	2	4	0
Patternmaker	0	0	1	0	1	0	1	0	0	0	0	0	1	0
Tool and Die Maker	1	15	4	3	19	4	7	9	3	2	3	7	9	12
Welder, Combination	0	79	3	89	82	6	6	5	3	2	3	9	8	8

TABLE XXVI

EMPLOYMENT PATTERNS AND PREPARATORY TRAINING NEEDS IN MERGED AREA DISTRICT IV

6 FIRMS RESPONDING

Occupation	Employment Pattern					Employees Needed by Vocational Training								
	Number of Positions Closed in 1966	Number Employed in January 1966	New Employees Jan.-Dec. 1966	Replacements Jan.-Dec. 1966	Total Employees January 1967	New Employees 1968	New Employees 1970	New Employees 1972	Replacements 1968	Replacements 1970	Replacements 1972	Total New and Replacement Workers 1968	1970	1972
Assemblers	0	3	3	2	6	2	2	2	0	0	0	2	2	2
Forge Press Operators	0	2	0	0	2	0	0	0	0	0	0	0	0	0
Hydraulic Equipment Mechanic	0	6	1	0	7	0	0	0	0	0	0	0	0	0
Industrial Equipment Salesman	0	8	2	1	10	2	2	1	0	1	0	2	3	1
Machine Repairman	0	14	1	2	15	2	2	1	2	2	3	4	4	4
Machinist, Custom	0	38	8	15	46	5	4	4	0	1	2	5	5	6
Machinist, Production	0	112	15	37	127	11	9	11	30	32	31	41	41	42
Tool and Die Maker	0	10	1	0	11	4	2	3	0	0	1	4	2	4
Welder, Combination	0	53	15	19	68	11	10	10	19	13	13	30	23	23

TABLE XXVII

EMPLOYMENT PATTERNS AND PREPARATORY TRAINING NEEDS IN MERGED AREA DISTRICT V

35 FIRMS RESPONDING

Occupations	Employment Pattern					Employees Needed by Vocational Training								
	Number of Positions Closed in 1966	Number Employed in January 1966	New Employees Jan.-Dec. 1966	Replacements Jan.-Dec. 1966	Total Employees January 1967	New Employees 1968	New Employees 1970	New Employees 1972	Replacements 1968	Replacements 1970	Replacements 1972	Total New and Replacement Workers 1968	Total New and Replacement Workers 1970	Total New and Replacement Workers 1972
Assemblers	0	97	28	0	125	14	17	22	30	28	30	44	45	52
Forge Press Operators	0	16	3	5	19	2	1	1	2	2	2	4	3	3
Hydraulic Equipment Mechanic	1	6	0	0	6	2	3	2	0	0	0	2	3	2
Industrial Equipment Salesman	0	38	10	2	48	7	2	2	4	0	0	11	2	2
Machine Repairman	0	143	6	16	149	12	24	13	22	25	25	34	49	38
Machinist, Custom	0	26	4	5	30	13	8	7	7	3	3	20	11	10
Machinist, Production	1	147	33	106	180	60	43	42	89	67	66	149	110	108
Moulder-Foundry Worker	0	2	1	0	3	0	6	4	0	2	2	0	8	6
Patternmaker	0	4	3	3	7	5	1	1	2	0	1	7	1	2
Tool and Die Maker	0	30	3	10	33	9	7	4	7	3	4	16	10	8
Welder, Combination	0	170	30	55	200	37	37	31	33	31	23	70	68	54

TABLE XXVIII

EMPLOYMENT PATTERNS AND PREPARATORY TRAINING
NEEDS IN MERGED AREA DISTRICT VI

16 FIRMS RESPONDING

Occupation	Employment Pattern					Employees Needed by Vocational Training								
	Number of Positions Closed in 1966	Number Employed in January 1966	New Employees Jan.-Dec. 1966	Replacements Jan.-Dec. 1966	Total Employees January 1967	New Employees 1968	New Employees 1970	New Employees 1972	Replacements 1968	Replacements 1970	Replacements 1972	Total New and Replacement Workers 1968	Total New and Replacement Workers 1970	Total New and Replacement Workers 1972
Assemblers	0	134	30	40	164	0	0	0	0	0	0	0	0	0
Hydraulic Equipment Mechanic	0	2	0	0	2	2	0	0	0	0	0	2	0	0
Industrial Equipment Salesman	0	2	0	0	2	0	0	0	0	0	0	0	0	0
Machine Repairman	0	42	6	4	48	3	0	0	5	0	0	8	0	0
Machinist, Custom	0	23	4	3	27	0	0	0	0	0	0	0	0	0
Machinist, Production	0	591	100	162	691	111	184	202	111	111	113	222	295	315
Moulder-Foundry Worker	0	109	9	28	118	7	8	8	2	3	3	9	11	11
Patternmaker	0	4	2	0	6	4	0	4	4	0	4	8	0	8
Tool and Die Maker	1	44	4	9	48	7	4	6	6	3	3	13	7	9
Welder, Combination	0	54	11	12	65	0	0	0	2	1	0	2	1	0

TABLE XXIX

EMPLOYMENT PATTERNS AND PREPARATORY TRAINING NEEDS IN MERGED AREA DISTRICT VII

41 FIRMS RESPONDING

Occupation	Employment Pattern					Employees Needed by Vocational Training								
	Number of Positions Closed in 1966	Number Employed in January 1966	New Employees Jan.-Dec. 1966	Replacements Jan.-Dec. 1966	Total Employees January 1967	New Employees 1968	New Employees 1970	New Employees 1972	Replacements 1968	Replacements 1970	Replacements 1972	Total New and Replacement Workers 1968	1970	1972
Assemblers	0	590	47	51	637	50	49	53	31	33	32	81	82	85
Forge Press Operators	0	7	1	0	8	0	0	0	1	0	1	1	0	1
Hydraulic Equipment Mechanic	0	55	7	6	62	11	14	16	8	12	14	19	26	30
Industrial Equipment Salesman	2	42	7	10	49	3	2	4	13	25	34	16	27	38
Machine Repairman	0	282	35	57	317	28	60	39	38	37	37	66	97	76
Machinist, Custom	0	250	16	28	266	32	37	52	18	24	26	50	61	78
Machinist, Production	0	2953	184	244	3137	220	231	259	270	275	277	490	506	536
Moulder-Foundry Worker	0	1027	365	310	1392	210	203	203	530	530	530	740	733	733
Patternmaker	0	73	3	2	76	2	2	2	4	2	2	12	13	14
Tool and Die Maker	0	162	17	19	179	40	47	59	9	12	12	49	59	71
Welder, Combination	2	253	43	59	296	36	33	39	23	23	27	59	56	66

TABLE XXX

EMPLOYMENT PATTERNS AND PREPARATORY TRAINING NEEDS IN MERGED AREA DISTRICT VIII

18 FIRMS RESPONDING

Occupation	Employment Patterns					Employees Needed by Vocational Training								
	Number of Positions Closed in 1966	Number Employed in January 1966	New Employees Jan.-Dec. 1966	Replacements Jan.-Dec. 1966	Total Employees January 1967	New Employees 1968	New Employees 1970	New Employees 1972	Replacements 1968	Replacements 1970	Replacements 1972	Total New and Replacement Workers 1968	1970	1972
Assemblers	0	436	30	15	466	45	42	41	11	11	10	56	52	51
Forge Press Operators	0	2	1	1	3	0	0	0	0	0	0	0	0	0
Hydraulic Equipment Mechanic	0	5	0	0	5	1	0	0	0	0	0	1	0	0
Industrial Equipment Salesman	0	9	2	3	11	0	0	0	0	0	0	0	0	0
Machine Repairman	0	103	10	14	113	11	9	7	5	5	5	16	14	12
Machinist, Custom	1	75	22	7	97	5	5	6	2	3	4	7	8	10
Machinist, Production	0	1028	143	61	1171	105	97	97	45	40	40	150	137	137
Moulder-Foundry Worker	0	389	50	56	439	75	75	75	27	27	27	102	102	102
Patternmaker	0	23	1	2	24	0	0	0	1	0	1	1	0	1
Tool and Die Maker	0	59	28	16	87	18	20	16	8	6	6	26	26	22
Welder, Combination	0	87	18	20	105	15	14	15	11	10	11	26	23	26

TABLE XXXI

EMPLOYMENT PATTERNS AND PREPARATORY TRAINING NEEDS IN MERGED AREA DISTRICT IX

56 FIRMS RESPONDING

Occupation	Employment Patterns					Employees Needed by Vocational Training								
	Number of Positions Closed in 1966	Number Employed in January 1966	New Employees Jan.-Dec. 1966	Replacements Jan.-Dec. 1966	Total Employees January 1967	New Employees 1968	New Employees 1970	New Employees 1972	Replacements 1968	Replacements 1970	Replacements 1972	Total New and Replacement Workers 1968	1970	1972
Assemblers	0	362	58	315	420	125	129	131	210	211	211	330	340	342
Forge Press Operators	0	18	20	9	38	3	7	7	4	4	5	7	11	12
Hydraulic Equipment Mechanic	0	8	1	0	9	4	5	5	1	4	1	5	9	6
Industrial Equipment Salesman	0	24	2	2	26	9	9	12	4	4	3	13	13	15
Machine Repairman	1	614	27	72	641	44	50	59	45	52	61	89	102	120
Machinist, Custom	0	212	1	48	213	29	31	34	30	30	62	59	61	66
Machinist, Production	5	715	101	365	816	311	216	224	306	282	290	617	498	514
Moulder-Foundry Worker	0	80	52	182	132	29	42	20	211	211	216	240	253	236
Patternmaker	0	21	0	0	21	0	1	3	0	1	2	0	2	5
Tool and Die Maker	0	139	19	11	158	42	35	38	33	32	31	75	67	69
Welder, Combination	1	138	26	44	164	20	20	27	27	26	26	47	46	53

TABLE XXXII

EMPLOYMENT PATTERNS AND PREPARATORY TRAINING NEEDS IN MERGED AREA DISTRICT X

56 FIRMS RESPONDING

Occupation	Employment Patterns					Employees Needed by Vocational Training								
	Number of Positions Closed in 1966	Number Employed in January 1966	New Employees Jan.-Dec. 1966	Replacements Jan.-Dec. 1966	Total Employees January 1967	New Employees 1968	New Employees 1970	New Employees 1972	Replacements 1968	Replacements 1970	Replacements 1972	Total New and Replacement Workers 1968	1970	1972
Assemblers	3	331	58	57	399	36	29	30	23	22	24	59	51	54
Forge Press Operators	0	34	3	6	37	1	2	2	1	1	1	2	3	3
Hydraulic Equipment Mechanic	0	13	5	5	18	7	5	5	4	3	5	11	8	10
Industrial Equipment Salesman	0	24	0	1	24	3	3	3	3	3	3	6	6	6
Machine Repairman	0	236	43	32	279	35	17	17	18	15	15	53	32	32
Machinist, Custom	1	138	17	16	155	32	30	31	6	6	6	38	36	37
Machinist, Production	2	990	200	450	1190	92	57	64	104	65	65	196	122	129
Moulder-Foundry Worker	0	108	83	114	191	11	19	23	19	19	18	30	38	41
Patternmaker	0	10	0	0	10	4	6	11	1	0	0	5	6	11
Tool and Die Maker	1	155	19	11	174	32	20	19	22	20	21	54	40	40
Welder, Combination	1	284	78	75	362	40	55	59	20	26	34	60	81	93

TABLE XXXIII

EMPLOYMENT PATTERNS AND PREPARATORY TRAINING NEEDS IN MERGED AREA DISTRICT XI

66 FIRMS RESPONDING

Occupation	Employment Pattern					Employees Needed by Vocational Training								
	Number of Positions Closed in 1966	Number Employed in January 1966	New Employees Jan.-Dec. 1966	Replacements Jan.-Dec. 1966	Total Employees January 1967	New Employees 1968	New Employees 1970	New Employees 1972	Replacements 1968	Replacements 1970	Replacements 1972	Total New and Replacement Workers 1968	1970	1972
Assemblers	0	169	87	66	256	24	12	16	26	26	32	50	38	48
Forge Press Operators	0	0	2	0	2	0	2	4	0	0	1	0	2	5
Hydraulic Equipment Mechanic	0	37	3	6	40	4	6	10	5	11	17	9	17	27
Industrial Equipment Salesman	0	44	11	8	55	7	4	3	2	2	2	9	6	5
Machine Repairman	3	346	39	26	385	34	40	34	25	31	34	59	71	68
Machinist, Custom	0	91	11	18	102	29	21	21	14	17	25	43	38	46
Machinist, Production	0	399	179	87	578	60	32	33	36	28	32	96	60	65
Moulder-Foundry Worker	0	53	4	48	57	19	10	13	12	8	8	31	18	21
Patternmaker	0	4	5	4	9	5	0	0	1	0	2	6	0	2
Tool and Die Maker	1	63	25	16	88	31	20	21	8	7	8	39	27	29
Welder, Combination	0	556	147	188	703	99	115	120	84	86	92	182	201	212

TABLE XXXIV

EMPLOYMENT PATTERNS AND PREPARATORY TRAINING NEEDS IN MERGED AREA DISTRICT XII

28 FIRMS RESPONDING

Occupation	Employment Pattern					Employees Needed by Vocational Training								
	Number of Positions Closed in 1966	Number Employed in January 1966	New Employees Jan.-Dec. 1966	Replacements Jan.-Dec. 1966	Total Employees January 1967	New Employees 1968	New Employees 1970	New Employees 1972	Replacements 1968	Replacements 1970	Replacements 1972	Total New and Replacement Workers 1968	1970	1972
Assemblers	1	56	45	56	101	75	88	100	48	61	32	123	149	132
Forge Press Operators	0	5	3	4	8	7	13	19	6	7	8	13	20	27
Hydraulic Equipment Mechanic	0	12	4	5	16	10	10	8	5	5	3	15	15	11
Industrial Equipment Salesman	0	9	3	26	12	32	32	32	15	11	11	47	43	43
Machine Repairman	0	67	16	20	83	16	13	14	12	12	14	28	25	28
Machinist, Custom	0	19	3	5	22	11	10	11	8	4	7	19	14	18
Machinist, Production	0	204	24	58	228	71	100	125	53	51	74	124	151	199
Moulder-Foundry Worker	3	56	0	200	56	30	35	40	85	85	85	115	120	125
Patternmaker	0	3	0	0	3	4	3	3	1	1	1	5	4	4
Tool and Die Maker	0	15	3	5	18	12	12	13	6	5	5	18	17	18
Welder, Combination	1	89	42	51	131	28	35	45	27	28	27	55	63	72

TABLE XXXV

EMPLOYMENT PATTERNS AND PREPARATORY TRAINING
NEEDS IN MERGED AREA DISTRICT XIII

12 FIRMS RESPONDING

Occupation	Employment Pattern					Employees Needed by Vocational Training								
	Number of Positions Closed in 1966	Number Employed in January 1966	New Employees Jan.-Dec. 1966	Replacements Jan.-Dec. 1966	Total Employees January 1967	New Employees 1968	New Employees 1970	New Employees 1972	Replacements 1968	Replacements 1970	Replacements 1972	Total New and Replacement Workers 1968	1970	1972
Assemblers	2	51	20	19	71	25	24	19	4	4	2	29	28	21
Forge Press Operators	0	17	4	4	21	3	1	1	3	1	1	6	2	2
Hydraulic Equipment Mechanic	0	5	0	0	5	3	2	0	1	0	1	4	2	1
Industrial Equipment Salesman	0	25	3	6	28	6	10	12	4	5	7	10	15	19
Machine Repairman	0	38	4	10	42	9	6	3	3	0	0	12	6	3
Machinist, Custom	1	47	4	11	51	18	19	17	16	15	14	34	34	31
Machinist, Production	0	55	10	24	65	24	28	25	20	17	19	44	45	44
Moulder-Foundry Worker	0	15	1	2	16	12	10	6	10	9	4	22	19	10
Tool and Die Maker	0	46	5	11	51	18	19	20	14	13	12	32	32	32
Welder, Combination	0	40	13	26	53	17	18	26	13	17	15	30	35	41

TABLE XXXVI

EMPLOYMENT PATTERNS AND PREPARATORY TRAINING NEEDS IN MERGED AREA DISTRICT XIV

7 FIRMS RESPONDING

Occupation	Employment Pattern					Employees Needed by Vocational Training								
	Number of Positions Closed in 1966	Number Employed in January 1966	New Employees Jan.-Dec. 1966	Replacements Jan.-Dec. 1966	Total Employees January 1967	New Employees 1968	New Employees 1970	New Employees 1972	Replacements 1968	Replacements 1970	Replacements 1972	Total New and Replacement Workers 1968	1970	1972
Assemblers	0	9	3	3	12	2	0	0	2	0	0	4	0	0
Hydraulic Equipment Mechanic	0	1	0	0	1	1	0	0	0	0	0	1	0	0
Industrial Equipment Salesman	0	1	0	0	1	2	2	2	0	0	0	2	2	2
Machine Repairman	0	31	5	2	36	8	6	6	4	3	2	12	9	8
Machinist, Custom	0	10	3	0	13	5	4	2	3	1	1	8	5	3
Machinist, Production	0	6	1	3	7	6	2	1	2	1	1	8	3	2
Moulder-Foundry Worker	0	240	20	120	260	100	30	10	100	30	10	200	60	20
Tool and Die Maker	0	6	1	1	7	7	2	1	3	1	1	10	3	2
Welder, Combination	0	7	2	2	9	3	2	1	3	2	1	6	4	2

TABLE XXXVII

EMPLOYMENT PATTERNS AND PREPARATORY TRAINING
NEEDS IN MERGED AREA DISTRICT XV

26 FIRMS RESPONDING

Occupation	Employment Pattern					Employees Needed by Vocational Training								
	Number of Positions Closed in 1966	Number Employed in January 1966	New Employees Jan.-Dec. 1966	Replacements Jan.-Dec. 1966	Total Employees January 1967	New Employees 1968	New Employees 1970	New Employees 1972	Replacements 1968	Replacements 1970	Replacements 1972	Total New and Replacement Workers	[illegible]	[illegible]72
Assemblers	0	245	90	28	335	12	6	6	17	5	5	29	11	11
Forge Press Operators	0	4	2	1	6	6	0	0	0	0	0	6	0	0
Hydraulic Equipment Mechanic	1	19	1	4	20	8	4	7	2	2	3	10	6	10
Industrial Equipment Salesman	0	12	1	2	13	3	4	4	1	2	2	4	6	6
Machine Repairman	0	112	4	15	116	6	8	10	7	8	7	13	16	17
Machinist, Custom	0	62	15	23	77	29	16	7	25	2	3	54	18	10
Machinist, Production	0	221	161	92	382	60	50	73	42	25	31	102	75	104
Moulder-Foundry Worker	0	97	8	36	105	22	12	0	31	18	5	53	30	5
Patternmaker	1	13	1	2	14	4	3	5	3	2	2	7	5	7
Tool and Die Maker	0	39	3	1	42	7	10	7	3	2	2	10	12	9
Welder, Combination	0	200	54	35	254	27	23	25	30	12	15	57	35	40

TABLE XXXVIII

EMPLOYMENT PATTERNS AND PREPARATORY TRAINING NEEDS IN MERGED AREA DISTRICT XVI

31 FIRMS RESPONDING

Occupation	Employment Pattern					Employees Needed by Vocational Training								
	Number of Positions Closed in 1966	Number Employed in January 1966	New Employees Jan.-Dec. 1966	Replacements Jan.-Dec. 1966	Total Employees January 1967	New Employees 1968	New Employees 1970	New Employees 1972	Replacements 1968	Replacements 1970	Replacements 1972	Total New and Replacement Workers 1968	Total New and Replacement Workers 1970	Total New and Replacement Workers 1972
Assemblers	0	251	36	96	287	20	30	51	29	44	50	49	74	101
Hydraulic Equipment Mechanic	0	24	2	5	26	1	3	5	3	5	6	4	8	11
Industrial Equipment Salesman	0	6	1	1	7	0	0	0	0	0	0	0	0	0
Machine Repairman	0	211	21	50	232	13	17	20	15	20	26	28	37	46
Machinist, Custom	0	33	2	2	35	2	2	3	2	3	2	4	5	5
Machinist, Production	0	225	55	24	280	37	46	67	22	27	37	59	73	104
Moulder-Foundry Worker	0	68	9	63	77	0	0	0	63	62	62	63	62	62
Patternmaker	0	13	0	1	13	0	0	0	0	0	0	0	0	0
Tool and Die Maker	0	93	7	7	100	11	14	18	16	18	19	27	32	37
Welder, Combination	0	232	35	35	267	23	23	24	22	23	23	45	46	47

TABLE XXXIX

NEEDS FOR PART-TIME SUPPLEMENTAL CLASSES IN MERGED AREA DISTRICT I

HYDRAULIC EQUIPMENT MECHANICS

1	Gasoline Engine Tune-up
5	Electric Motor Controls
4	Industrial Hydraulic Controls
2	Electrical Machinery Controls

MACHINE REPAIRMAN, MAINTENANCE

10	Maintenance Welding
8	Industrial Hydraulic Circuits
8	Electrical Motor Controls
8	Machine Tool Operation
5	Use of Machinery's Handbook
4	Other (Specify)

MACHINIST (CUSTOM, JOB SHOP)

1	Blueprint Reading
1	Applied Mathematics
1	Tool Grinding

MACHINIST (PRODUCTION)

10	Applied Shop Mathematics
1	Turret Lathe Set-up
7	Blueprint Reading

MOLDER-FOUNDRY WORKER

1	Non-Ferrous Metallurgy
1	Pattern Repair

TOOL AND DIE MAKER

2	Ferrous Metallurgy
8	Tool and Die Design
2	Fixture Design
1	Electric and Gas Welding
3	Machine Tool Operation
8	Applied Plane Trigonometry
1	Tool Grinding

WELDER, COMBINATION

8	Vertical and Overhead Welding
7	Inert Gas Welding (M.I.G. & T.I.G.)
10	Blueprint Reading for Welders
4	Mathematics for Welders
7	Heat Treatment of Metals
7	Welding of Non-Ferrous Metals
10	Weld Fixture Design
4	Applied Geometric Layout

TABLE XL

NEEDS FOR PART TIME SUPPLEMENTAL CLASSES IN
MERGED AREA DISTRICT II

ASSEMBLERS

1	Use of Measuring Instruments

INDUSTRIAL EQUIPMENT SALESMAN

1	Time and Motion Study
2	Industrial Cost Estimating
1	Specification and Bid Writing

MACHINE REPAIRMAN, MAINTENANCE

21	Maintenance Welding
4	Industrial Hydraulic Circuits
21	Electrical Motor Controls
16	Machine Tool Operation
2	Use of Machinery's Handbook
2	Other (Specify)

MACHINIST (CUSTOM, JOB SHOP)

13	Blueprint Reading
3	Ferrous Metallurgy
6	Applied Mathematics
12	Tool Grinding
13	Welding
3	Use of Measuring Instruments
3	Use of Mechanics' Handbooks

MACHINIST (PRODUCTION)

1	Applied Shop Mathematics
1	Screw Machine Set-up
2	Gear Cutting Machinery Set-up
3	Blueprint Reading

TOOL AND DIE MAKER

5	Ferrous Metallurgy
6	Tool and Die Design
4	Fixture Design
1	Machine Tool Operation
1	Applied Plane Trigonometry
3	Tool Grinding

WELDER, COMBINATION

4	Vertical and Overhead Welding
3	Inert Gas Welding (M.I.G. & T.I.G.)
6	Blueprint Reading for Welders
6	Mathematics for Welders
6	Welding of Non-Ferrous Metals

TABLE XLI

NEEDS FOR PART-TIME SUPPLEMENTAL CLASSES IN MERGED AREA DISTRICT III

ASSEMBLERS

42	Blueprint Reading
42	Applied Mathematics
45	Use of Measuring Instruments
4	Industrial Hydraulic Circuits

HYDRAULIC EQUIPMENT MECHANICS

2	Gasoline Engine Tune-up
2	Industrial Hydraulic Controls
4	Electric Motor Controls

INDUSTRIAL EQUIPMENT SALESMAN

3	Industrial Cost Estimating
6	Industrial Electrical Circuits
1	Industrial Hydraulic Circuits
2	Specification and Bid Writing
1	Salesmanship Principles
3	Machine Tool Operation

MACHINE REPAIRMAN, MAINTENANCE

11	Maintenance Welding
3	Electrical Motor Controls
13	Machine Tool Operation
14	Use of Machinery's Handbook

MACHINIST (CUSTOM, JOB SHOP)

5	Blueprint Reading
2	Ferrous Metallurgy
5	Applied Mathematics
3	Tool Grinding
4	Welding
3	Use of Measuring Instruments
3	Use of Mechanics' Handbooks

MACHINIST (PRODUCTION)

34	Applied Shop Mathematics
14	Screw Machine Set-up
18	Turret Lathe Set-up
3	Gear Cutting Machinery Set-up
30	Blueprint Reading

TOOL AND DIE MAKER

6	Ferrous Metallurgy
10	Tool and Die Design
10	Fixture Design
8	Use of Mechanics' Handbooks
7	Electric and Gas Welding
11	Machine Tool Operation
5	Applied Plane Trigonometry
8	Tool Grinding

WELDER, COMBINATION

10	Vertical and Overhead Welding
10	Inert Gas Welding (M.I.G. & T.I.G.)
5	Blueprint Reading for Welders
6	Mathematics for Welders
3	Applied Geometric Layout
7	Heat Treatment of Metals
13	Welding of Non-Ferrous Metals
6	Weld Fixture Design

TABLE XLII

NEEDS FOR PART-TIME SUPPLEMENTAL CLASSES IN MERGED AREA DISTRICT IV

ASSEMBLERS

3	Blueprint Reading
3	Applied Mathematics
3	Use of Measuring Instruments
4	Industrial Hydraulic Circuits

HYDRAULIC EQUIPMENT MECHANICS

2	Electrical Machinery Controls

INDUSTRIAL EQUIPMENT SALESMAN

4	Time and Motion Study
4	Industrial Cost Estimating
3	Industrial Electrical Circuits
4	Industrial Hydraulic Circuits
4	Salesmanship Principles
4	Specification and Bid Writing
4	Machine Tool Operation
6	Other (Specify)

MACHINE REPAIRMAN, MAINTENANCE

3	Maintenance Welding
4	Industrial Hydraulic Circuits
4	Electrical Motor Controls
14	Machine Tool Operation
13	Use of Machinery's Handbook

MACHINIST (CUSTOM, JOB SHOP)

40	Blueprint Reading
40	Applied Mathematics
20	Tool Grinding
20	Use of Measuring Instruments

MACHINIST (PRODUCTION)

56	Applied Shop Mathematics
27	Screw Machine Set-up
12	Turret Lathe Set-up
4	Gear Cutting Machinery Set-up
71	Blueprint Reading

TOOL AND DIE MAKER

7	Tool and Die Design
4	Fixture Design
8	Use of Mechanics' Handbooks
11	Electric and Gas Welding
8	Machine Tool Operation
6	Applied Plane Trigonometry
6	Tool Grinding

WELDER, COMBINATION

14	Vertical and Overhead Welding
20	Inert Gas Welding (M.I.G. & T.I.G.)
14	Blueprint Reading for Welders
14	Mathematics for Welders
14	Applied Geometric Layout
2	Heat Treatment of Metals
16	Weld Fixture Design
7	Welding of Non-Ferrous Metals

TABLE XLIII

NEEDS FOR PART-TIME SUPPLEMENTAL CLASSES IN MERGED AREA DISTRICT V

ASSEMBLERS

14	Blueprint Reading
2	Applied Mathematics
14	Use of Measuring Instruments

FORGE PRESS OPERATORS

7	Blueprint Reading
5	Ferrous Metallurgy
5	Applied Mathematics
5	Use of Measuring Instruments

HYDRAULIC EQUIPMENT MECHANICS

3	Industrial Hydraulic Controls
1	Electric Motor Controls
3	Electrical Machinery Controls

INDUSTRIAL EQUIPMENT SALESMAN

1	Time and Motion Study
1	Industrial Cost Estimating
6	Industrial Electrical Circuits
2	Industrial Hydraulic Circuits
2	Specification and Bid Writing
2	Salesmanship Principles
2	Machine Tool Operation
1	Other (Specify)

MACHINE REPAIRMAN, MAINTENANCE

12	Maintenance Welding
13	Industrial Hydraulic Circuits
17	Electrical Motor Controls
11	Machine Tool Operation
8	Use of Machinery's Handbook
2	Other (Specify)

MACHINIST (CUSTOM, JOB SHOP)

5	Blueprint Reading
5	Ferrous Metallurgy
6	Applied Mathematics
3	Tool Grinding
6	Welding
2	Use of Measuring Instruments
4	Use of Mechanics' Handbooks
3	Other (Specify)

MACHINIST (PRODUCTION)

99	Applied Shop Mathematics
20	Screw Machine Set-up
89	Turret Lathe Set-up
1	Gear Cutting Machinery Set-up
13	Blueprint Reading
3	Other (Specify)

MOLDER-FOUNDRY WORKER

2	Non-Ferrous Metallurgy
1	Pattern Repair
1	Cupola Operating Theory
3	Welding

PATTERNMAKER

7	Plastic Patternmaking
1	Applied Solid Geometry
1	Machine Tool Operation
1	Gas and Electric Welding
1	Applied Geometric Layout
1	Blueprint Reading

TOOL AND DIE MAKER

7	Ferrous Metallurgy
13	Tool and Die Design
11	Fixture Design
7	Use of Mechanics' Handbooks
3	Electric and Gas Welding
8	Machine Tool Operation
5	Applied Plane Trigonometry
12	Tool Grinding
2	Other (Specify)

WELDER, COMBINATION

28	Vertical and Overhead Welding
26	Inert Gas Welding (M.I.G. & T.I.G.)
27	Blueprint Reading for Welders
5	Mathematics for Welders
6	Applied Geometric Layout
13	Heat Treatment of Metals
22	Welding of Non-Ferrous Metals
19	Weld Fixture Design

TABLE XLIV

NEEDS FOR PART-TIME SUPPLEMENTAL CLASSES IN MERGED AREA DISTRICT VI

ASSEMBLERS

2	Blueprint Reading
1	Applied Mathematics

HYDRAULIC EQUIPMENT MECHANICS

1	Industrial Hydraulic Controls
1	Electric Motor Controls
1	Electrical Machinery Controls

INDUSTRIAL EQUIPMENT SALESMAN

9	Time and Motion Study
2	Industrial Cost Estimating
10	Industrial Electrical Circuits
5	Industrial Hydraulic Circuits
3	Specification and Bid Writing
2	Salesmanship Principles
7	Machine Tool Operation

MACHINE REPAIRMAN, MAINTENANCE

10	Maintenance Welding
19	Industrial Hydraulic Circuits
21	Electrical Motor Controls
12	Machine Tool Operation
10	Use of Machinery's Handbook

MACHINIST (CUSTOM, JOB SHOP)

4	Blueprint Reading
2	Ferrous Metallurgy
1	Tool Grinding
5	Welding
18	Use of Mechanics' Handbooks

MACHINIST (PRODUCTION)

231	Applied Shop Mathematics
4	Screw Machine Set-up
331	Turret Lathe Set-up
4	Gear Cutting Machinery Set-up
142	Blueprint Reading

MOLDER-FOUNDRY WORKER

10	Ferrous Metallurgy
3	Non-Ferrous Metallurgy
2	Pattern Repair
3	Cupola Operating Theory
3	Welding

TOOL AND DIE MAKER

7	Ferrous Metallurgy
39	Tool and Die Design
32	Fixture Design
12	Use of Mechanics' Handbooks
30	Electric and Gas Welding
5	Machine Tool Operation
6	Applied Plane Trigonometry
4	Tool Grinding

WELDER, COMBINATION

6	Vertical and Overhead Welding
11	Inert Gas Welding (M.I.G. & T.I.G.)
1	Blueprint Reading for Welders
2	Mathematics for Welders
11	Applied Geometric Layout
29	Heat Treatment of Metals
30	Welding of Non-Ferrous Metals
4	Weld Fixture Design

TABLE XLV

NEEDS FOR PART-TIME SUPPLEMENTAL CLASSES IN MERGED AREA DISTRICT VII

ASSEMBLERS

216	Blueprint Reading
112	Applied Mathematics
157	Use of Measuring Instruments
87	Industrial Hydraulic Circuits

FORGE PRESS OPERATORS

2	Blueprint Reading
1	Use of Measuring Instruments

HYDRAULIC EQUIPMENT MECHANICS

1	Gasoline Engine Tune-up
28	Industrial Hydraulic Controls
7	Electric Motor Controls
4	Electrical Machinery Controls

INDUSTRIAL EQUIPMENT SALESMAN

7	Time and Motion Study
5	Industrial Cost Estimating
2	Industrial Electrical Circuits
5	Industrial Hydraulic Circuits
2	Specification and Bid Writing
22	Machine Tool Operation
2	Other (Specify)

MACHINE REPAIRMAN, MAINTENANCE

23	Maintenance Welding
60	Industrial Hydraulic Circuits
23	Electrical Motor Controls
40	Machine Tool Operation
16	Use of Machinery's Handbook

MACHINIST (CUSTOM, JOB SHOP)

41	Blueprint Reading
3	Ferrous Metallurgy
41	Applied Mathematics
12	Tool Grinding
5	Welding
3	Use of Measuring Instruments
62	Use of Mechanics' Handbooks

MACHINIST (PRODUCTION)

835	Applied Shop Mathematics
10	Screw Machine Set-up
27	Turret Lathe Set-up
1	Gear Cutting Machinery Set-up
554	Blueprint Reading

MOLDER-FOUNDRY WORKER

44	Ferrous Metallurgy
3	Non-Ferrous Metallurgy
2	Pattern Repair
14	Cupola Operating Theory
18	Welding

PATTERNMAKER

17	Plastic Patternmaking
3	Applied Solid Geometry
4	Machine Tool Operation
2	Gas and Electric Welding
4	Applied Geometric Layout
4	Blueprint Reading

TOOL AND DIE MAKER

5	Ferrous Metallurgy
28	Tool and Die Design
24	Fixture Design
45	Use of Mechanics' Handbooks
20	Electric and Gas Welding
35	Machine Tool Operation
19	Applied Plane Trigonometry
13	Tool Grinding

WELDER, COMBINATION

27	Vertical and Overhead Welding
30	Inert Gas Welding (M.I.G. & T.I.G.)
52	Blueprint Reading for Welders
30	Mathematics for Welders
12	Applied Geometric Layout
6	Heat Treatment of Metals
20	Welding of Non-Ferrous Metals
11	Weld Fixture Design

TABLE XLVI

NEEDS FOR PART-TIME SUPPLEMENTAL CLASSES IN MERGED AREA DISTRICT VIII

ASSEMBLERS

5	Blueprint Reading
4	Use of Measuring Instruments

HYDRAULIC EQUIPMENT MECHANICS

3	Gasoline Engine Tune-up
6	Industrial Hydraulic Controls
3	Electric Motor Controls
4	Electrical Machinery Controls

INDUSTRIAL EQUIPMENT SALESMAN

4	Time and Motion Study
4	Industrial Cost Estimating
10	Salesmanship Principles

MACHINE REPAIRMAN, MAINTENANCE

8	Maintenance Welding
9	Industrial Hydraulic Circuits
10	Electrical Motor Controls
9	Machine Tool Operation
10	Use of Machinery's Handbook

MACHINIST (CUSTOM, JOB SHOP)

7	Blueprint Reading
3	Ferrous Metallurgy
6	Applied Mathematics
7	Tool Grinding
2	Welding
6	Use of Measuring Instruments
12	Use of Mechanics' Handbooks

MACHINIST (PRODUCTION)

4	Applied Shop Mathematics
14	Screw Machine Set-up
19	Turret Lathe Set-up
26	Blueprint Reading

PATTERNMAKER

3	Plastic Patternmaking
2	Applied Solid Geometry
3	Applied Geometric Layout

TOOL AND DIE MAKER

14	Tool and Die Design
6	Fixture Design
6	Use of Mechanics' Handbooks
2	Electric and Gas Welding
4	Machine Tool Operation
10	Applied Plane Trigonometry
8	Tool Grinding

WELDER, COMBINATION

16	Vertical and Overhead Welding
2	Inert Gas Welding (M.I.G. & T.I.G.)
21	Blueprint Reading for Welders
7	Mathematics for Welders
6	Applied Geometric Layout
7	Heat Treatment of Metals
10	Welding of Non-Ferrous Metals
6	Weld Fixture Design

TABLE XLVII

NEEDS FOR PART-TIME SUPPLEMENTAL CLASSES IN MERGED AREA DISTRICT IX

ASSEMBLERS

48	Blueprint Reading
18	Applied Mathematics
19	Use of Measuring Instruments
8	Industrial Hydraulic Circuits

FORGE PRESS OPERATORS

15	Blueprint Reading
15	Use of Measuring Instruments

HYDRAULIC EQUIPMENT MECHANICS

3	Gasoline Engine Tune-up
7	Industrial Hydraulic Controls
5	Electric Motor Controls
1	Electrical Machinery Controls

INDUSTRIAL EQUIPMENT SALESMAN

2	Time and Motion Study
6	Industrial Cost Estimating
5	Industrial Electrical Circuits
2	Industrial Hydraulic Circuits
15	Specification and Bid Writing
21	Salesmanship Principles
4	Machine Tool Operation
1	Other (Specify)

MACHINE REPAIRMAN, MAINTENANCE

39	Maintenance Welding
20	Industrial Hydraulic Circuits
25	Electrical Motor Controls
77	Machine Tool Operation
28	Use of Machinery's Handbook
1	Other (Specify)

MACHINIST (CUSTOM, JOB SHOP)

31	Blueprint Reading
9	Ferrous Metallurgy
25	Applied Mathematics
16	Tool Grinding
14	Welding
22	Use of Measuring Instruments
5	Use of Mechanics' Handbooks

MACHINIST (PRODUCTION)

126	Applied Shop Mathematics
8	Screw Machine Set-up
78	Turret Lathe Set-up
26	Gear Cutting Machinery Set-up
144	Blueprint Reading
26	Other (Specify)

MOLDER-FOUNDRY WORKER

1	Ferrous Metallurgy
1	Non-Ferrous Metallurgy
3	Pattern Repair
3	Cupola Operating Theory

PATTERNMAKER

2	Plastic Patternmaking

TOOL AND DIE MAKER

5	Ferrous Metallurgy
44	Tool and Die Design
46	Fixture Design
29	Use of Mechanics' Handbooks
8	Machine Tool Operation
14	Applied Plane Trigonometry
24	Tool Grinding

WELDER, COMBINATION

13	Vertical and Overhead Welding
20	Inert Gas Welding (M.I.G. & T.I.G.)
23	Blueprint Reading for Welders
16	Mathematics for Welders
13	Applied Geometric Layout
5	Heat Treatment of Metals
16	Welding of Non-Ferrous Metals
6	Weld Fixture Design

TABLE XLVIII

NEEDS FOR PART-TIME SUPPLEMENTAL CLASSES IN MERGED AREA DISTRICT X

ASSEMBLERS

25	Industrial Hydraulic Circuits
80	Blueprint Reading
45	Applied Mathematics
64	Use of Measuring Instruments

FORGE PRESS OPERATORS

3	Blueprint Reading
6	Use of Measuring Instruments

HYDRAULIC EQUIPMENT MECHANICS

5	Gasoline Engine Tune-up
9	Industrial Hydraulic Controls
6	Electric Motor Controls
1	Electrical Machinery Controls

INDUSTRIAL EQUIPMENT SALESMAN

2	Time and Motion Study
1	Industrial Cost Estimating
1	Industrial Electrical Circuits
1	Industrial Hydraulic Circuits
1	Specification and Bid Writing
1	Salesmanship Principles
2	Machine Tool Operation

MACHINE REPAIRMAN, MAINTENANCE

23	Maintenance Welding
36	Industrial Hydraulic Circuits
23	Electrical Motor Controls
28	Machine Tool Operation
33	Use of Machinery's Handbook
3	Other (Specify)

MACHINIST (CUSTOM, JOB SHOP)

35	Blueprint Reading
4	Ferrous Metallurgy
6	Applied Mathematics
4	Tool Grinding
16	Welding
27	Use of Measuring Instruments
16	Use of Mechanics' Handbooks
3	Other (Specify)

MACHINIST (PRODUCTION)

143	Applied Shop Mathematics
22	Screw Machine Set-up
89	Turret Lathe Set-up
10	Gear Cutting Machinery Set-up
159	Blueprint Reading
15	Other (Specify)

TOOL AND DIE MAKER

2	Ferrous Metallurgy
5	Tool and Die Design
3	Fixture Design
1	Use of Mechanics' Handbooks
2	Machine Tool Operation
7	Applied Plane Trigonometry
3	Tool Grinding

WELDER, COMBINATION

77	Vertical and Overhead Welding
54	Inert Gas Welding (M.I.G. & T.I.G.)
69	Blueprint Reading for Welders
39	Mathematics for Welders
26	Applied Geometric Layout
5	Heat Treatment of Metals
16	Welding of Non-Ferrous Metals
15	Weld Fixture Design

TABLE IL

NEEDS FOR PART-TIME SUPPLEMENTAL CLASSES IN
MERGED AREA DISTRICT XI

ASSEMBLERS

58	Blueprint Reading
56	Applied Mathematics
54	Use of Measuring Instruments
7	Industrial Hydraulic Circuits
6	Other (Specify)

HYDRAULIC EQUIPMENT MECHANICS

3	Gasoline Engine Tune-up
9	Industrial Hydraulic Controls
5	Electric Motor Controls
4	Electrical Machinery Controls

INDUSTRIAL EQUIPMENT SALESMAN

3	Time and Motion Study
3	Industrial Cost Estimating
6	Industrial Electrical Circuits
1	Industrial Hydraulic Circuits
7	Specification and Bid Writing
5	Salesmanship Principles
2	Machine Tool Operation

MACHINE REPAIRMAN, MAINTENANCE

56	Maintenance Welding
29	Industrial Hydraulic Circuits
36	Electrical Motor Controls
29	Machine Tool Operation
10	Use of Machinery's Handbook

MACHINIST (CUSTOM, JOB SHOP)

20	Blueprint Reading
9	Ferrous Metallurgy
15	Applied Mathematics
15	Tool Grinding
12	Welding
12	Use of Measuring Instruments
9	Use of Mechanics' Handbooks

MACHINIST (PRODUCTION)

51	Applied Shop Mathematics
8	Screw Machine Set-up
29	Turret Lathe Set-up
2	Gear Cutting Machinery Set-up
63	Blueprint Reading
1	Other (Specify)

MOLDER-FOUNDRY WORKER

8	Ferrous Metallurgy
6	Non-Ferrous Metallurgy
7	Pattern Repair
9	Cupola Operating Theory
6	Welding
6	Other (Specify)

TOOL AND DIE MAKER

15	Ferrous Metallurgy
24	Tool and Die Design
10	Fixture Design
1	Use of Mechanics' Handbooks
3	Electric and Gas Welding
9	Machine Tool Operation
12	Applied Plane Trigonometry
5	Tool Grinding

WELDER, COMBINATION

96	Vertical and Overhead Welding
88	Inert Gas Welding (M.I.G. & T.I.G.)
134	Blueprint Reading for Welders
75	Mathematics for Welders
30	Applied Geometric Layout
21	Heat Treatment of Metals
28	Welding of Non-Ferrous Metals
25	Weld Fixture Design

TABLE I

NEEDS FOR PART-TIME SUPPLEMENTAL CLASSES IN MERGED AREA DISTRICT XII

ASSEMBLERS

15	Blueprint Reading
5	Applied Mathematics
6	Use of Measuring Instruments
5	Industrial Hydraulic Circuits

FORGE PRESS OPERATORS

3	Blueprint Reading
3	Ferrous Metallurgy
2	Applied Mathematics
2	Use of Measuring Instruments

HYDRAULIC EQUIPMENT MECHANICS

2	Gasoline Engine Tune-up
7	Industrial Hydraulic Circuits
2	Electric Motor Controls
3	Electrical Machinery Controls

INDUSTRIAL EQUIPMENT SALESMAN

16	Time and Motion Study
14	Industrial Cost Estimating
15	Industrial Electrical Circuits
11	Industrial Hydraulic Circuits
8	Specification and Bid Writing
22	Salesmanship Principles
16	Machine Tool Operation

MACHINE REPAIRMAN, MAINTENANCE

7	Maintenance Welding
12	Industrial Hydraulic Circuits
10	Electrical Motor Controls
12	Machine Tool Operation
14	Use of Machinery's Handbook
1	Other (Specify)

MACHINIST (CUSTOM, JOB SHOP)

8	Blueprint Reading
6	Ferrous Metallurgy
6	Applied Mathematics
11	Tool Grinding
12	Welding
6	Use of Measuring Instruments
8	Use of Mechanics' Handbooks

MACHINIST (PRODUCTION)

16	Applied Shop Mathematics
18	Screw Machine Set-up
28	Turret Lathe Set-up
9	Gear Cutting Machinery Set-up
28	Blueprint Reading

MOLDER-FOUNDRY WORKER

12	Ferrous Metallurgy
2	Non-Ferrous Metallurgy
5	Pattern Repair
6	Cupola Operating Theory
2	Welding

PATTERNMAKER

4	Plastic Patternmaking
2	Applied Solid Geometry
2	Machine Tool Operation
2	Gas and Electric Welding
2	Applied Geometric Layout
4	Blueprint Reading

TOOL AND DIE MAKER

5	Ferrous Metallurgy
10	Tool and Die Design
11	Fixture Design
12	Use of Mechanics' Handbooks
12	Electric and Gas Welding
7	Machine Tool Operation
5	Applied Plane Trigonometry
10	Tool Grinding

WELDER, COMBINATION

17	Vertical and Overhead Welding
17	Inert Gas Welding (M.I.G. & T.I.G.)
13	Blueprint Reading for Welders
5	Mathematics for Welders
7	Applied Geometric Layout
6	Heat Treatment of Metals
13	Welding of Non-Ferrous Metals
16	Weld Fixture Design

TABLE LI

NEEDS FOR PART-TIME SUPPLEMENTAL CLASSES IN
MERGED AREA DISTRICT XIII

ASSEMBLERS

46	Blueprint Reading
36	Applied Mathematics
35	Use of Measuring Instruments
5	Industrial Hydraulic Circuits

HYDRAULIC EQUIPMENT MECHANICS

2	Gasoline Engine Tune-up
2	Industrial Hydraulic Controls
2	Electric Motor Controls

INDUSTRIAL EQUIPMENT SALESMAN

2	Time and Motion Study
3	Industrial Cost Estimating
11	Industrial Electrical Circuits
10	Industrial Hydraulic Circuits
3	Specification and Bid Writing
1	Salesmanship Principles
14	Machine Tool Operation

MACHINE REPAIRMAN, MAINTENANCE

19	Maintenance Welding
13	Industrial Hydraulic Circuits
3	Electrical Motor Controls
26	Machine Tool Operation
11	Use of Machinery's Handbook

MACHINIST (CUSTOM, JOB SHOP)

12	Blueprint Reading
11	Tool Grinding
15	Welding
12	Use of Measuring Instruments
12	Use of Mechanics' Handbooks

MACHINIST (PRODUCTION)

13	Applied Shop Mathematics
2	Screw Machine Set-up
1	Turret Lathe Set-up
1	Gear Cutting Machinery Set-up
15	Blueprint Reading
8	Other (Specify)

MOLDER-FOUNDRY WORKER

4	Ferrous Metallurgy
2	Non-Ferrous Metallurgy
2	Pattern Repair
3	Cupola Operating Theory
1	Welding

TOOL AND DIE MAKER

1	Ferrous Metallurgy
17	Tool and Die Design
16	Fixture Design
9	Use of Mechanics' Handbooks
8	Electric and Gas Welding
20	Machine Tool Operation
11	Applied Plane Trigonometry
13	Tool Grinding

WELDER, COMBINATION

5	Vertical and Overhead Welding
5	Inert Gas Welding (M.I.G. & T.I.G.)
9	Blueprint Reading for Welders
2	Mathematics for Welders
1	Applied Geometric Layout
7	Heat Treatment of Metals
3	Welding of Non-Ferrous Metals
6	Weld Fixture Design

TABLE LII

NEEDS FOR PART-TIME SUPPLEMENTAL CLASSES IN MERGED AREA DISTRICT XIV

ASSEMBLERS

7	Blueprint Reading
3	Applied Mathematics
3	Use of Measuring Instruments

INDUSTRIAL EQUIPMENT SALESMAN

1	Time and Motion Study
1	Industrial Cost Estimating
1	Industrial Electrical Circuits
1	Industrial Hydraulic Circuits
1	Machine Tool Operation

MACHINE REPAIRMAN, MAINTENANCE

4	Maintenance Welding
6	Industrial Hydraulic Circuits
2	Electrical Motor Controls
5	Machine Tool Operation
6	Use of Machinery's Handbook

MACHINIST (CUSTOM, JOB SHOP)

6	Blueprint Reading
4	Ferrous Metallurgy
4	Applied Mathematics
7	Tool Grinding
5	Welding
7	Use of Measuring Instruments
6	Use of Mechanics' Handbooks

MACHINIST (PRODUCTION)

3	Applied Shop Mathematics
6	Screw Machine Set-up
8	Turret Lathe Set-up
4	Blueprint Reading

MOLDER-FOUNDRY WORKER

10	Non-Ferrous Metallurgy
20	Cupola Operating Theory

TOOL AND DIE MAKER

2	Ferrous Metallurgy
6	Tool and Die Design
10	Fixture Design
6	Use of Mechanics' Handbooks
4	Electric and Gas Welding
6	Machine Tool Operation
11	Applied Plane Trigonometry
13	Tool Grinding

WELDER, COMBINATION

2	Vertical and Overhead Welding
1	Inert Gas Welding (M.I.G. & T.I.G.)
2	Blueprint Reading for Welders
2	Mathematics for Welders
6	Applied Geometric Layout
3	Heat Treatment of Metals
5	Welding of Non-Ferrous Metals
2	Weld Fixture Design

TABLE LIII

NEEDS FOR PART-TIME SUPPLEMENTAL CLASSES IN
MERGED AREA DISTRICT XV

ASSEMBLERS

27	Blueprint Reading
27	Applied Mathematics
28	Use of Measuring Instruments
3	Industrial Hydraulic Circuits

FORGE PRESS OPERATORS

1	Blueprint Reading

HYDRAULIC EQUIPMENT MECHANICS

3	Industrial Hydraulic Controls
1	Electric Motor Controls
1	Electrical Machinery Controls

INDUSTRIAL EQUIPMENT SALESMAN

2	Salesmanship Principles

MACHINE REPAIRMAN, MAINTENANCE

21	Maintenance Welding
14	Industrial Hydraulic Circuits
19	Electrical Motor Controls
14	Machine Tool Operation
7	Use of Machinery's Handbook

MACHINIST (CUSTOM, JOB SHOP)

3	Blueprint Reading
1	Ferrous Metallurgy
3	Applied Mathematics
5	Tool Grinding
9	Welding
3	Use of Measuring Instruments
2	Use of Mechanics' Handbooks

MACHINIST (PRODUCTION)

149	Applied Shop Mathematics
6	Screw Machine Set-up
35	Turret Lathe Set-up
145	Blueprint Reading

MOLDER-FOUNDRY WORKER

21	Ferrous Metallurgy
8	Non-Ferrous Metallurgy
5	Pattern Repair
11	Cupola Operating Theory
4	Welding

PATTERNMAKER

4	Plastic Patternmaking
2	Applied Solid Geometry
5	Machine Tool Operation
1	Gas and Electric Welding
2	Applied Geometric Layout
3	Blueprint Reading

TOOL AND DIE MAKER

15	Tool and Die Design
15	Fixture Design
4	Use of Mechanics' Handbooks
2	Electric and Gas Welding
2	Machine Tool Operation
3	Applied Plane Trigonometry
7	Tool Grinding

WELDER, COMBINATION

38	Vertical and Overhead Welding
36	Inert Gas Welding (M.I.G. & T.I.G.)
46	Blueprint Reading for Welders
36	Mathematics for Welders
36	Applied Geometric Layout
1	Heat Treatment of Metals
2	Welding of Non-Ferrous Metals
9	Weld Fixture Design

TABLE LIV

NEEDS FOR PART-TIME SUPPLEMENTAL CLASSES IN
MERGED AREA DISTRICT XVI

ASSEMBLERS

26	Blueprint Reading
4	Applied Mathematics
4	Use of Measuring Instruments
11	Industrial Hydraulic Circuits

HYDRAULIC EQUIPMENT MECHANICS

8	Gasoline Engine Tune-up
17	Industrial Hydraulic Controls
11	Electric Motor Controls
7	Electrical Machinery Controls

INDUSTRIAL EQUIPMENT SALESMAN

1	Industrial Cost Estimating
2	Industrial Electrical Circuits
2	Industrial Hydraulic Circuits
4	Specification and Bid Writing
4	Salesmanship Principles
1	Machine Tool Operation

MACHINE REPAIRMAN, MAINTENANCE

27	Maintenance Welding
25	Industrial Hydraulic Circuits
30	Electrical Motor Controls
34	Machine Tool Operation
30	Use of Machinery's Handbook
4	Other (Specify)

MACHINIST (CUSTOM, JOB SHOP)

14	Blueprint Reading
4	Ferrous Metallurgy
6	Applied Mathematics
1	Welding
8	Tool Grinding
8	Use of Measuring Instruments
17	Use of Mechanics' Handbooks

MACHINIST (PRODUCTION)

11	Applied Shop Mathematics
6	Screw Machine Set-up
5	Turret Lathe Set-up
2	Gear Cutting Machinery Set-up
10	Blueprint Reading

MOLDER-FOUNDRY WORKER

2	Ferrous Metallurgy
1	Pattern Repair
1	Cupola Operating Theory
1	Welding

PATTERNMAKER

1	Plastic Patternmaking
1	Applied Solid Geometry
1	Blueprint Reading

TOOL AND DIE MAKER

6	Ferrous Metallurgy
23	Tool and Die Design
16	Fixture Design
14	Use of Mechanics' Handbooks
6	Electric and Gas Welding
8	Machine Tool Operation
20	Applied Plane Trigonometry
26	Tool Grinding

WELDER, COMBINATION

13	Vertical and Overhead Welding
26	Inert Gas Welding (M.I.G. & T.I.G.)
28	Blueprint Reading for Welders
15	Mathematics for Welders
5	Applied Geometric Layout
7	Heat Treatment of Metals
12	Welding of Non-Ferrous Metals
9	Weld Fixture Design

Merged area needs in other occupations. The employers responding to this survey had the opportunity to report occupations in which they were experiencing shortages in skilled workers beside the eleven for which they were specifically requested to respond. Many firms capitalized on this opportunity. Tables LV through LXX report these occupations and the need for trained workers by Merged Area District for the six year period from 1968 through 1972. These needs are shown for a six year projection period since, in the majority of cases, the needs are small.

TABLE LV

NEEDS IN MERGED AREA DISTRICT I FOR WORKERS TRAINED IN VOCATIONAL CURRICULA IN OCCUPATIONS OTHER THAN THOSE COVERED BY STANDARD QUESTIONNAIRES IN THIS SURVEY

Foreman and Supervisors	13
Mechanical Technicians	5
Production Control	1
Sheetmetal Worker	32

TABLE LVI

NEEDS IN MERGED AREA DISTRICT II FOR WORKERS TRAINED IN VOCATIONAL CURRICULA IN OCCUPATIONS OTHER THAN THOSE COVERED BY STANDARD QUESTIONNAIRES IN THIS SURVEY

Carpenters and Cabinetmakers	110
Electrician, Industrial	7
Purchasing Agent	2
Cost Accountant	2

TABLE LVII

NEEDS IN MERGED AREA DISTRICT III FOR WORKERS TRAINED IN VOCATIONAL CURRICULA IN OCCUPATIONS OTHER THAN THOSE COVERED BY STANDARD QUESTIONNAIRES IN THIS SURVEY

Auto Mechanics	11
Mechanical Technician	12
Painter, Spray	15
Sheetmetal Worker	6
Tool Design Technician	9

TABLE LVIII

NEEDS IN MERGED AREA DISTRICT IV FOR WORKERS TRAINED IN VOCATIONAL CURRICULA IN OCCUPATIONS OTHER THAN THOSE COVERED BY STANDARD QUESTIONNAIRES IN THIS SURVEY

Foreman and Supervisors	3

TABLE LIX

NEEDS IN MERGED AREA DISTRICT V FOR WORKERS TRAINED IN VOCATIONAL CURRICULA IN OCCUPATIONS OTHER THAN THOSE COVERED BY STANDARD QUESTIONNAIRES IN THIS SURVEY

Foreman	13
Mechanical Technician	7
Printer	6
Refrigeration Mechanic	2

TABLE LX

NEEDS IN MERGED AREA DISTRICT VI FOR WORKERS TRAINED IN VOCATIONAL CURRICULA IN OCCUPATIONS OTHER THAN THOSE COVERED BY STANDARD QUESTIONNAIRES IN THIS SURVEY

Air Conditioning and Heating Mechanic	5
Retort Operator	6

TABLE LXI

NEEDS IN MERGED AREA DISTRICT VII FOR WORKERS TRAINED IN VOCATIONAL CURRICULA IN OCCUPATIONS OTHER THAN THOSE COVERED BY STANDARD QUESTIONNAIRES IN THIS SURVEY

Draftsman	4
Foreman and Supervisors	7
Mechanical Technicians	1
Metal Spinner	18
Painter, Spray	5
Tool Design Technician	2

TABLE LXII

NEEDS IN MERGED AREA DISTRICT VIII FOR WORKERS TRAINED IN VOCATIONAL CURRICULA IN OCCUPATIONS OTHER THAN THOSE COVERED BY STANDARD QUESTIONNAIRES IN THIS SURVEY

Flask Builders (Foundry)	3
Foreman and Supervisors	36
Instrument Repairman	3
Mechanical Technician	1
Tool Design Technician	6

TABLE LXIII

NEEDS IN MERGED AREA DISTRICT IX FOR WORKERS TRAINED IN VOCATIONAL CURRICULA IN OCCUPATIONS OTHER THAN THOSE COVERED BY STANDARD QUESTIONNAIRES IN THIS SURVEY

Awning Installer	3
Chemical Technician	24
Electrician (Maintenance)	51
Electroplaters	2
Foreman and Supervisors	8
Gas and Diesel Engine Mechanic	3
Instrument Repairman	18
Machine Repairman (Printing)	2
Mechanical Technician	30
Pipefitter, Maintenance	9
Printer, Offset	54
Refrigeration Mechanic (ammonia)	3
Sewing Machine Operator	6
Sheetmetal Worker	2
Small Engine Mechanic	6

TABLE LXIV

NEEDS IN MERGED AREA DISTRICT X FOR WORKERS TRAINED IN VOCATIONAL CURRICULA IN OCCUPATIONS OTHER THAN THOSE COVERED BY STANDARD QUESTIONNAIRES IN THIS SURVEY

Automotive Machinist	2
Carpenters	161
Chemical Technician	1
Electro Plater	2
Electronic Technician	3
Mechanical Draftsman	7
Refrigeration Mechanic (ammonia)	2
Sales Correspondent	6
Sewing Machine Operator	20
Sheetmetal Workers	4
Spray Painter	5
Stenographers and Secretaries	2
Truck Mechanic	3
Upholsterer	12

TABLE LXV

NEEDS IN MERGED AREA DISTRICT XI FOR WORKERS TRAINED IN VOCATIONAL SCHOOLS IN OCCUPATIONS OTHER THAN THOSE COVERED BY STANDARD QUESTIONNAIRES IN THIS SURVEY

Carpenter Cabinetmaker	12
Draftsman, Electrical	6
Draftsman, Mechanical	6
Draftsman, Structural	62
Electrician, Maintenance	6
Instrument Repairman	22
Mechanical Technician	6
Metal Polisher	18
Sewing Machine Operator	61
Spray Painter	4
Structural Steel Fitter	6

TABLE LXVI

NEEDS IN MERGED AREA DISTRICT XII FOR WORKERS TRAINED IN VOCATIONAL CURRICULA IN OCCUPATIONS OTHER THAN THOSE COVERED BY STANDARD QUESTIONNAIRES IN THIS SURVEY

Accountant	7
Electrician, Maintenance	6
Foreman and Supervisors	3
Inventory Control	26
Mechanical Technician	21
Truck Body Builder	26
Truck Mechanic	9

TABLE LXVII

NEEDS IN MERGED AREA DISTRICT XIII FOR WORKERS TRAINED IN VOCATIONAL CURRICULA IN OCCUPATIONS OTHER THAN THOSE COVERED BY STANDARD QUESTIONNAIRES IN THIS SURVEY

Spray Painters	1
Structural Steel Fabricator	21

TABLE LXVIII

NEEDS IN MERGED AREA DISTRICT XIV FOR WORKERS TRAINED IN VOCATIONAL CURRICULA IN OCCUPATIONS OTHER THAN THOSE COVERED BY STANDARD QUESTIONNAIRES IN THIS SURVEY

Sheetmetal Worker	3

TABLE LXIX

NEEDS IN MERGED AREA DISTRICT XV FOR WORKERS TRAINED IN VOCATIONAL CURRICULA IN OCCUPATIONS OTHER THAN THOSE COVERED BY STANDARD QUESTIONNAIRES IN THIS SURVEY

Carpenters and Cabinetmakers	4
Diesel Mechanic	12
Foreman and Supervisors	1
Printer, Offset	24
Sheetmetal Worker	4

TABLE LXX

NEEDS IN MERGED AREA DISTRICT XVI FOR WORKERS TRAINED IN VOCATIONAL CURRICULA IN OCCUPATIONS OTHER THAN THOSE COVERED BY STANDARD QUESTIONNAIRES IN THIS SURVEY

Chemical Technician	6
Electrician, Maintenance	2
Electronic Technician	10
Mechanical Technician	3
Upholsterer	24

CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This chapter consists of the restatement of summations made earlier in this paper as well as conclusions drawn from selected tables. Recommendations are based on the findings of the study.

I. SUMMARY

Scope of the study. The study involved surveying by mail 823 metalworking manufacturing firms in Iowa plus 189 firms not classed as metalworking manufacturers that employed 100 or more persons. The number of firms included in the survey represented the total number listed in the Directory of Iowa Manufacturers[17] in each classification. The population of this study involved 1012 firms. Four hundred and forty firms or 45.6% returned questionnaires. This study requested information from the industrial firms about eleven job classifications which included number of workers employed, number of positions closed, number of new positions, and number of replacement workers employed during 1966. In addition, the firms surveyed were requested to estimate their needs for new and replacement workers in 1968, 1970 and 1972 and specify how they would prefer to fill these needs. A third major phase of this study included responses to a question which identified needs for part-time classes to upgrade workers presently employed in the occupations surveyed.

Two blank questionnaire forms were sent to each firm which were to be completed for any job classification, other than the eleven specifically surveyed, in which the firm was experiencing a shortage of skilled help.

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[17] Iowa Development Commission, loc. cit.

Method of the study. Data processing equipment was used to extract names and addresses of firms included in the study. Questionnaires were mailed to the firms. A maximum of one reminder was sent to firms not responding to the mailing of the questionnaire. Data processing equipment was also used to compile all data except for those not included in the eleven metalworking occupations. Responses were received on blank questionnaire forms for approximately 22 additional job classifications.

II. CONCLUSIONS

Employers responding to the questionnaires expressed desire to hire most of their new and replacement employees from those who will graduate from preparatory vocational-technical curricula. The need for new and replacement employees in 1968, 1970 and 1972 is nearly equal, in all eleven occupations, to the number the firms employed in 1966. Since only limited vocational and technical training was available in 1966 from which vocational graduates could be employed, one might conclude that the 440 firms in Iowa feel that public education should provide more occupational education. These 440 firms will need 3,560 metal tradesmen trained annually in the eleven occupations included in this survey. The greatest need for training occurs in the Machinist (Production) category and in the Molder-Foundry Worker category.

The number of positions closed in each of the eleven job classifications during 1966 ranged from 0% to 1.5%. In all cases it appeared that in Iowa the number of job closures was insignificant.

Needs as identified in Tables XXXIX through LIV for supplemental classes are greater than are being satisfied by area and local schools in the State at the present time. Some of the less populous merged areas show less need for supplemental classes. Efforts will need to be expanded to broaden

the offering of part-time supplemental classes. This might be accomplished by area schools employing persons with a broad industrial background to work with industry in developing classes.

III. RECOMMENDATIONS

The following recommendations, based on the findings of this study, appear to be appropriate for the improvement of the industrial climate in Iowa.

1. Where a Merged Area District finds insufficient need to justify economically offering a particular type of training to develop skilled and semi-skilled metal tradesmen the administrators and board should study Tables X through XX. Adjacent Merged Area Districts should combine needs so that one Merged Area District will provide training based on multi-merged area district need.

2. Training content for preparatory vocational programs should be developed by an advisory committee made up of equal representation of key workers employed in the occupation and foremen of workers in the occupation. The job descriptions used in this study were approved by a group of knowledgeable industrialists. Some variation from these job descriptions may be needed to tailor the training content to the needs of manufacturers in the Merged Area District. School administrators and boards should not misconstrue the preceding statement, however, to mean that one can train a person to set-up a multiple spindle automatic screw machine by using an engine lathe for training.

3. Additional State, Federal and Area funds will need to be expended in order to expand present offerings so that the industrial training needs of the State may be met. Once facilities are equipped it will be necessary to schedule multiple shifts for training in order to make efficient use of the equipment and facilities.

4. Further research should be done to more accurately determine the state-wide and area-wide training needs in the twenty, plus, occupations listed in Table IX and Tables LV through LXX. Needs reported in this study would provide justification for a limited number of training programs in each occupation. A study including each of these occupations may uncover a greater need.

5. Expanded offerings of part-time supplemental classes should occur in most areas of Iowa. Based on findings of this study some area schools should employ personnel competent in industrial education to work with industry in developing and implementing part-time supplemental classes.

6. Part-time supplemental classes should be offered during any hour of the day when persons are available for this training and sufficient interest is shown through enrollment.

7. An extensive advertising program should be developed with the cooperation of industrial management and organized labor to encourage enrollment in supplemental training. Some industries may wish to implement a tuition refund plan to encourage workers to upgrade themselves.

8. Some Merged Area Districts do not have sufficient industrial development to serve all workers and industries in their Merged Area District. More industrialized Merged Area Districts should organize short duration, full-time workshops to provide supplemental training for employees from industries located in other Merged Area Districts.

APPENDIX

EXHIBIT 1

Metalworking Survey on Jobs, Skills Begins

Manpower and specialized training needs for Iowa metalworking industries will be inventoried in a survey beginning this month among 995 metalworking manufacturers and 330 other Iowa industries employing 101 or more.

The survey is being conducted by Harlan E. Giese, state consultant, Trade and Industrial Education, Division of Vocational Education, Department of Public Instruction.

Cooperating in the survey are the Iowa Department of Public Instruction, Iowa Manufacturers Association, Business & Industry magazine and State College of Iowa, Cedar Falls.

The purpose of the survey will be to determine present and future educational needs for new and veteran metalworking employees. The results will enable the 16 new area vocational-technical schools and community colleges to provide occupational training to meet employment demands in metal fabrication occupations.

Metalworking and large industries will receive two mail pieces in the survey. The first will be a postcard seeking information on industrial usage of four fabrication processes: casting, welding, machining and forming and forging. A more detailed questionnaire will follow asking specifics on 11 skilled or semi-skilled occupations. These include welders, machinists (custom), machinists (production), patternmakers, molders and foundry workers, tool and diemakers, machinery repairmen, forging operators, hydraulic equipment mechanics, assemblers and industrial equipment sales.

The study will provide information on what types of occupations are in short supply, what basic training is required and what retraining or upgrading is needed.

60

EXHIBIT 2

ESIDENT HAROLD S. BOWN
ARMSTRONG RUBBER CO. DES MOINES
CE PRESIDENT LLOYD WINGER
WINGER CONTRACTING CO. OTTUMWA
EASURER BRUCE VAN DRUFF
THE THOS. D MURPHY CO. RED OAK
CRETARY E. A. McCARDELL
WINPOWER MFG. CO. NEWTON

OWA MANUFACTURERS ASSOCIATION

ECUTIVE VICE PRESIDENT
JAMES S. CRAIGER
MINISTRATIVE ASSISTANT
DONALD G. HAUSER
FICE MANAGER
FRANCES REICHOW

November 21, 1966

Dear Manufacturer:

Presently most Iowa manufacturers are experiencing shortages of skilled and semi-skilled workers in many occupations.

Training to be established in the area vocational-technical schools and community colleges now in the process of being organized should help alleviate some of these labor market shortages.

Mr. Harlan Giese of the Iowa Department of Public Instruction is conducting a survey to determine the training needs for skilled and semi-skilled metal tradesmen in Iowa. The findings of this survey will ascertain the need on which occupational training classes may be established in communities across the state.

We heartily endorse this survey and would encourage you to take the time to complete the short questionnaires to follow.

Sincerely,

J. S. Craiger

Executive Vice President

J. S. Craiger/s

611 CENTRAL NATIONAL BUILDING ■ DES MOINES, IOWA 50309 ■ 515 244-6144

EXHIBIT 3

A FEW DIRECTIONS

Multi-Plant Operations - If you are answering for one of Iowa's manufacturers that has plants located in several cities in the state, answer the following questionnaires for your specific plant location only.

Insufficient or Confusing Information - If the questions on these questionnaires are phrased in such a way that you think your response may be confusing or you are not allowed to provide enough information, please feel free to write needed comments on the reverse side of the questionnaire.

Shortage Occupations Not Covered - In the event you are experiencing shortages of skilled or semi-skilled metal tradesmen in job classifications not covered in the questionnaires enclosed, use the blank white forms to provide information on these occupations. Be sure to provide title of job at top of form. Write a description of the responsibilities or skills of the worker on the lines provided.

Definitions

Estimate - Certain questions use phrases like ESTIMATE your needs, etc.....Do so in terms of present economic conditions. We are not asking you to predict the future.

New Positions - means positions added because of new products, increased sales, etc.....Where estimating new positions for which you will employ workers assume that economic conditions will remain as they are today.

Replacement - means the hiring of new workers for existing jobs that have been vacated due to death, retirement, firing or quitting.

Exhibit 4

Which of the following process(es) are, or will be used by your firm to manufacture the products or services you sell?

_____ Casting _____ Machining

_____ Forming & Forging _____ Welding

Your Name _____

EXHIBIT 5

State of Iowa
Department of Public Instruction
217 - SEVENTH STREET
Des Moines, Iowa 50309

PAUL F. JOHNSTON
SUPERINTENDENT

W. T. EDGREN
ASSISTANT SUPERINTENDENT
ADMINISTRATION

DAVID H. BECHTEL
ADMINISTRATIVE ASSISTANT

L. N. JENSEN
ASSISTANT SUPERINTENDENT
INSTRUCTION

November 30, 1966

Metalworking Survey on Jobs, Skills Begins

Manpower and specialized training needs for Iowa metalworking industries will be inventoried in a survey beginning this month among 995 metalworking manufacturers and 330 other Iowa industries employing 101 or more.

The survey is being conducted by Harlan E. Giese, state consultant, Trade and Industrial Education, Division of Vocational Education, Department of Public Instruction.

Cooperating in the survey are the Iowa Department of Public Instruction, Iowa Manufacturers Association, Business & Industry magazine and State College of Iowa, Cedar Falls.

The purpose of the survey will be to determine present and future educational needs for new and veteran metalworking employees. The results will enable the 16 new area vocational-technical schools and community colleges to provide occupational training to meet employment demands in metal fabrication occupations.

Metalworking and large industries will receive two mail pieces in the survey. The first will be a postcard seeking information on industrial usage of four fabrication processes: casting, welding, machining and forming and forging. A more detailed questionnaire will follow asking specifics on 11 skilled or semi-skilled occupations. These include welders, machinists (custom), machinists (production), patternmakers, molders and foundry workers, tool and diemakers, machinery repairmen, forging operators, hydraulic equipment mechanics, assemblers and industrial equipment sales.

The study will provide information on what types of occupations are in short supply, what basic training is required and what retraining or upgrading is needed.

Dear Personnel Director:

You have an opportunity to help solve the manpower shortage of metal tradesmen in Iowa.

The article at the left appeared in the October issue of Iowa Business and Industry. That magazine and the Iowa Manufacturer's Association are cooperating with the State College of Iowa and the Iowa Department of Public Instruction in conducting a survey to determine the training needs for skilled and semi-skilled metal tradesmen.

The results of the survey will provide valuable information which will serve as a guide in the establishment of occupational training programs. Needed occupational training programs will be established in the new area vocational-technical schools or area community colleges in Iowa.

Industries responding to the enclosed questionnaires will be provided a summary of this state-wide survey. This will give you information about twelve occupational classifications of metal tradesmen. These survey summaries will also be provided to area school administrators, representatives of the Bureau of Apprenticeship and Training, Iowa State Employment Service, and any other interested persons or organizations.

This survey should be of real value to you! We need a 100% return. Please do your part by completing and mailing the enclosed simple forms.

Sincerely,

Harlan E. Giese

Harlan E. Giese, Consultant
Trade and Industrial Education
DIVISION OF VOCATIONAL EDUCATION

HEG/s

EXHIBIT 6

State of Iowa

Department of Public Instruction

217 - SEVENTH STREET

Des Moines, Iowa 50309

PAUL F. JOHNSTON
SUPERINTENDENT

W. T. EDGREN
ASSISTANT SUPERINTENDENT
ADMINISTRATION

DAVID H. BECHTEL
ADMINISTRATIVE ASSISTANT

L. N. JENSEN
ASSISTANT SUPERINTENDENT
INSTRUCTION

November 28, 1966

Dear Manufacturer:

One week ago a letter and reply post card were mailed to you which provided an opportunity for you to assist in solving your manpower shortages.

You may have misplaced this letter since we have not received your completed reply post card. We are including a second card with this letter.

This card is part of a survey which will eventually guide the vocational director in your area vocational-technical school or community college in establishing occupational training programs to serve your needs.

Now is the time to provide confidential information for a future solution to your manpower and training problems. Invest a few seconds now in an effort to alleviate some of your problems.

Sincerely,

Harlan E. Giese

Harlan E. Giese, Consultant
Trade and Industrial Education
DIVISION OF VOCATIONAL EDUCATION

HEG/s

EXHIBIT 7

State of Iowa
Department of Public Instruction
217 - SEVENTH STREET
Des Moines, Iowa 50309

PAUL F. JOHNSTON
SUPERINTENDENT

W. T. EDGREN
ASSISTANT SUPERINTENDENT
ADMINISTRATION

DAVID H. BECHTEL
ADMINISTRATIVE ASSISTANT

L. N. JENSEN
ASSISTANT SUPERINTENDENT
INSTRUCTION

November 30, 1966

Metalworking Survey on Jobs, Skills Begins

Manpower and specialized training needs for Iowa metalworking industries will be inventoried in a survey beginning this month among 995 metalworking manufacturers and 330 other Iowa industries employing 101 or more.

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Cooperating in the survey are the Iowa Department of Public Instruction, Iowa Manufacturers Association, Business & Industry magazine and State College of Iowa, Cedar Falls.

The purpose of the survey will be to determine present and future educational needs for new and veteran metalworking employees. The results will enable the 16 new area vocational-technical schools and community colleges to provide occupational training to meet employment demands in metal fabrication occupations.

Metalworking and large industries will receive two mail pieces in the survey. The first will be a postcard seeking information on industrial usage of four fabrication processes: casting, welding, machining and forming and forging. A more detailed questionnaire will follow asking specifics on 11 skilled or semi-skilled occupations. These include welders, machinists (custom), machinists (production), patternmakers, molders and foundry workers, tool and diemakers, machinery repairmen, forging operators, hydraulic equipment mechanics, assemblers and industrial equipment sales.

The study will provide information on what types of occupations are in short supply, what basic training is required and what retraining or upgrading is needed.

Dear Personnel Director:

You have an opportunity to help solve the manpower shortage of metal tradesmen in Iowa.

The article at the left appeared in the October issue of Iowa Business and Industry. That magazine and the Iowa Manufacturer's Association are cooperating with the State College of Iowa and the Iowa Department of Public Instruction in conducting a survey to determine the training needs for skilled and semi-skilled metal tradesmen.

The results of the survey will provide valuable information which will serve as a guide in the establishment of occupational training programs. Needed occupational training programs will be established in the new area vocational-technical schools or area community colleges in Iowa.

Industries responding to the enclosed questionnaires will be provided a summary of this state-wide survey. This will give you information about twelve occupational classifications of metal tradesmen. These survey summaries will also be provided to area school administrators, representatives of the Bureau of Apprenticeship and Training, Iowa State Employment Service, and any other interested persons or organizations.

This survey should be of real value to you! We need a 100% return. Please do your part by completing and mailing the enclosed simple forms.

Sincerely,

Harlan E. Giese

Harlan E. Giese, Consultant
Trade and Industrial Education
DIVISION OF VOCATIONAL EDUCATION

HEG/s

EXHIBIT 8

State of Iowa

Department of Public Instruction

217 - SEVENTH STREET

Des Moines, Iowa 50309

PAUL F. JOHNSTON
SUPERINTENDENT

W. T. EDGREN
ASSISTANT SUPERINTENDENT
ADMINISTRATION

DAVID H. BECHTEL
ADMINISTRATIVE ASSISTANT

L. N. JENSEN
ASSISTANT SUPERINTENDENT
INSTRUCTION

Metalworking Survey on Jobs, Skills Begins

Manpower and specialized training needs for Iowa metalworking industries will be inventoried in a survey beginning this month among 995 metalworking manufacturers and 330 other Iowa industries employing 101 or more.

The survey is being conducted by Harlan E. Giese, state consultant, Trade and Industrial Education, Division of Vocational Education, Department of Public Instruction.

Cooperating in the survey are the Iowa Department of Public Instruction, Iowa Manufacturers Association, Business & Industry magazine and State College of Iowa, Cedar Falls.

The purpose of the survey will be to determine present and future educational needs for new and veteran metalworking employees. The results will enable the 16 new area vocational-technical schools and community colleges to provide occupational training to meet employment demands in metal fabrication occupations.

Metalworking and large industries will receive two mail pieces in the survey. The first will be a postcard seeking information on industrial usage of four fabrication processes: casting, welding, machining and forming and forging. A more detailed questionnaire will follow asking specifics on 11 skilled or semi-skilled occupations. These include welders, machinists (custom), machinists (production), patternmakers, molders and foundry workers, tool and diemakers, machinery repairmen, forging operators, hydraulic equipment mechanics, assemblers and industrial equipment sales.

The study will provide information on what types of occupations are in short supply, what basic training is required and what retraining or upgrading is needed.

November 21, 1966

Dear Sir:

The article to the left appeared in the October issue of Iowa Business and Industry.

This article tells of a labor market survey. The findings of this survey will be used to guide area school administrators in establishing occupational training programs for skilled and semi-skilled metal tradesmen. These training programs will help provide a reservoir of trained persons with metalworking skills for your manufacturing operations.

In addition, the findings of this survey will be used to strategically locate supplimental classes to upgrade your presently employed workers.

The first step in gathering this information is for you to complete and mail the enclosed post card. After we receive the enclosed post card, questionnaires will be sent to you which will pertain specifically to your manufacturing operations. You will not be bothered with unnecessary questions. The questionnaires have been reviewed by a group of well known Iowa industrialists. The questionnaires have been modified according to their recommendations.

Take the first step now in solving your labor shortages by completing the enclosed card and placing it in the mail today.

Sincerely,

Harlan E. Giese

Harlan E. Giese, Consultant
Trade and Industrial Education
DIVISION OF VOCATIONAL EDUCATION

HEG/s

Exhibit 9

Code No. _____

CONFIDENTIAL SURVEY TO DETERMINE THE IOWA TRAINING NEEDS FOR:

_____
(Write Job Title Here)

(Write job skills or responsibilities below.)

_____
_____
_____
_____
_____
_____

1. How many positions in the above job classification do you have in your operation at this time? _____

2. How many replacement workers did you employ for positions in this job classification during the past 12 months? _____

3. How many new positions did you fill in this job classification during the past 12 months? _____

4. How many positions in the above job classification were permanently closed down during the past 12 months because of a decline in need? _____

5. Estimate the number of new positions you will have and the number of replacement workers you will need in this job classification in each of the following two year periods.

	New Positions	Replacements Needed
1968		
1970		
1972		

6. For positions in this job classification, would you employ graduates of vocational-technical programs possessing the skills listed above?

Yes _____ No _____

7. If you answered NO to item 6 but needed workers in this job classification, check the method(s) you would use to fill your future job vacancies.

Promotion from lower skilled jobs _____
Apprenticeship training of new employees _____
Employing persons from other firms _____
Other (specify) _____

8. List evening classes which your present workers in this job classification should attend. Estimate the number who should attend.

_____ _____ _____ _____
_____ _____ _____ _____
_____ _____ _____ _____
_____ _____ _____ _____

4500

ASSEMBLERS

Assembles machinery from blueprints and other specifications by locating frames and main sections in assembly area. Positions gears, aligns shafts, installs bearings and clutches. Installs electric motors or gasoline engines, and hydraulic equipment. Fastens with bolts and installs piping, hoses and wires. Uses hoists, hand tools, torque wrenches, calipers, feeler gauges, rulers and squares to complete work.

FORGE PRESS OPERATOR

Sets up and operates closed die power presses according to specifications using hand tools and measuring instruments. Sets dies on ram and anvil using squares, shims, feelers and hand tools. Adjusts pressure of press. Heats stock and places on dies with tongs. Compresses metal by release of ram with foot treadle.

HYDRAULIC EQUIPMENT MECHANIC

Installs, tests, adjusts and repairs hydraulic units and systems following blueprints, schematic drawings, or verbal or written instructions. Uses test panels, supplementary equipment and electrical meters to check operation of hydraulic system and electrical and electronic controls. Identifies cause of malfunctions and makes necessary repairs.

INDUSTRIAL EQUIPMENT SALESMAN

Sells mechanical or electrical equipment, supplies or services which require technical knowledge. Makes judgements involving mechanical, electrical or economic principles and calculations. Persuades potential buyers or leasees of practical value of an item or service. Prepares financial and operational estimates from blueprints, plans or other information supplied by potential customers.

MACHINE REPAIRMAN, MAINTENANCE (any industry)

Repairs and maintains production machinery such as lathes, drill presses, milling and screw machines, conveyors and other machinery; realigns spindles, adjusts clutches, replaces bearings, and welds broken parts. Diagnoses and repairs hydraulic and electrical problems. Welds and/or machines replacement parts. May set up new machinery for operation.

MACHINIST (CUSTOM) (JOB SHOP)

Sets up and operates machine tools such as engine lathe horizontal and vertical milling machines, shaper, planer and grinder. Machines parts from blueprints, defective parts, or other specifications. Heat treats parts where necessary and uses handbooks. Uses hand tools and precision measuring instruments. May use welding processes to fabricate or repair items.

MACHINIST (Production)

Sets up and operates screw machines, die casting machines, turret lathes, broaching machines, production milling machines, brakes and punch presses, drill presses, grinders, gear cutting machines, and other metalworking machinery. Installs cutting tools, die sets, gears and cams. Completes set-ups according to part prints, job tickets and verbal directions. Produces proper number of parts. Feeds stock to machines.

MOLDER-FOUNDRY WORKER

Forms sand molds for metal castings. Charges furnaces and melts ferrous and non-ferrous metals. Reconditions cupolas, furnaces and ladles. Positions wire reinforcing, applies parting compounds, cuts runners and sprues. Cleans, chips and grinds the castings.

PATTERNMAKER

Builds and repairs foundry patterns, core boxes, and match plates, made of wood, plaster, metal and plastic. Completes layout of parts on rough stock and makes allowances for metal shrinkage. Sets up and operates wood and metal-working machine tools. Builds up and reinforces plaster or plastic molds. Uses hand tools to finish wood, metal or plastic patterns. Uses templates and measuring instruments to check pattern configuration. Casts metal pattern in plastic or sand cavity.

TOOL AND DIE MAKER

Builds punch press cutting and forming dies, milling and clamping fixtures, drill jigs, gauges and weld fixtures. Uses hand tools and precision instruments to layout work from blueprints and specifications. Machines component parts on engine lathes, milling machines, drill presses, shapers and planers, jig boring machines, and grinders. Heat treats to specifications. Uses handbooks as references to complete work.

WELDER COMBINATION

Joins metal parts by use of all gas and electric welding processes. Grinds and cuts metal. Uses blueprints and work orders to make layout, and fabricate items. Repairs broken or worn metal parts.

Exhibit 11

8. Assuming that the following evening classes were offered in or near your community, how many of your present work force in this job classification should attend to upgrade their skills and technical knowledge? (give number)

ASSEMBLERS

_____ Blueprint Reading
_____ Applied Mathematics
_____ Use of Measuring Instruments
_____ Industrial Hydraulic Circuits
_____ Other (Specify) _____

FORGE PRESS OPERATOR

_____ Blueprint Reading
_____ Ferrous Metallurgy
_____ Applied Mathematics
_____ Use of Measuring Instruments
_____ Other (Specify) _____

HYDRAULIC EQUIPMENT MECHANIC

_____ Gasoline Engine Tune-Up
_____ Industrial Hydraulic Controls
_____ Electrical Motor Controls
_____ Electronic Machinery Controls
_____ Other (Specify) _____

INDUSTRIAL EQUIPMENT SALES

_____ Time and Motion Study
_____ Industrial Cost Estimating
_____ Industrial Electrical Circuits
_____ Industrial Hydraulic Circuits
_____ Specification and Bid Writing
_____ Salesmanship Principles
_____ Machine Tool Operation
_____ Other (Specify) _____

MACHINE REPAIRMAN (Maintenance)

_____ Maintenance Welding
_____ Industrial Hydraulic Circuits
_____ Electrical Motor Controls
_____ Machine Tool Operation
_____ Use of Machinery's Handbook
_____ Other (Specify) _____

MACHINIST (Custom) (Job Shop)

_____ Blueprint Reading
_____ Ferrous Metallurgy
_____ Applied Mathematics
_____ Tool Grinding
_____ Welding
_____ Use of Measuring Instruments
_____ Use of Mechanics Handbooks
_____ Other (Specify) _____

MACHINIST (Production)

_____ Shop Mathematics
_____ Screw Machine Set-Up
_____ Turret Lathe Set-Up
_____ Gear Cutting Machinery Set-Up
_____ Blueprint Reading
_____ Other (Specify)

MOLDER-FOUNDRY WORKER

_____ Ferrous Metallurgy
_____ Non-Ferrous Metallurgy
_____ Pattern Repair
_____ Cupola Operating Theory
_____ Welding
_____ Other (Specify) _____

PATTERNMAKER

_____ Plastic Patternmaking
_____ Applied Solid Geometry
_____ Machine Tool Operation
_____ Gas and Electric Welding
_____ Applied Geometric Layout
_____ Blueprint Reading
_____ Other (Specify) _____

TOOL AND DIE MAKER

_____ Ferrous Metallurgy
_____ Tool and Die Design
_____ Fixture Design
_____ Use of Machinery's Handbook
_____ Electric and Gas Welding
_____ Machine Tool Operation
_____ Applied Plane Trigonometry
_____ Tool Grinding
_____ Other (Specify) _____

WELDER, COMBINATION

_____ Vertical and Overhead Welding
_____ Inert Gas Welding (M.I.G. - T.I.G.)
_____ Blueprint Reading for Welders
_____ Mathematics for Welders
_____ Applied Geometric Layout
_____ Heat Treatment of Metals
_____ Welding of Non-Ferrous Metals
_____ Weld Fixture Design
_____ Other (Specify) _____

EXHIBIT 12

State of Iowa
Department of Public Instruction
217 - SEVENTH STREET
Des Moines, Iowa 50309

PAUL F. JOHNSTON
SUPERINTENDENT

W. T. EDGREN
ASSISTANT SUPERINTENDENT
ADMINISTRATION

DAVID H. BECHTEL
ADMINISTRATIVE ASSISTANT

L. N. JENSEN
ASSISTANT SUPERINTENDENT
INSTRUCTION

December 13, 1966

Dear Manufacturer:

About two weeks ago you received a series of questionnaires to determine what your employment needs will be for skilled and semi-skilled metal tradesmen. To date we have not received your completed questionnaires.

Possibly you feel that this is another effort to gather information which will only be placed in some file and not be used. This is not the case. The information from this survey will be disseminated to agencies that are organized to provide training to meet your employment demands. You will also receive a copy of the findings from this survey if we receive your completed questionnaires. The summary of the findings from this research will show demands for skilled and semi-skilled metal tradesmen in your section of the state and for the state as a whole.

Naturally the degree of accuracy of this study is dependent on the number of manufacturers that respond by returning their questionnaires. Since you have not responded, the training needs in your geographic area will be biased. It may even inhibit the establishment of training programs.

Your response is important. Be sure to complete the enclosed questionnaires and mail today.

Sincerely,

Harlan E. Giese

Harlan E. Giese, Consultant
Trade and Industrial Education
DIVISION OF VOCATIONAL EDUCATION

HEG/s

VT 005 126
Weber, Earl M.
The Role of Industrial Arts in Tomorrow's Schools. Bulletin Number 9.

American Industrial Arts Association, Washington, D.C.
MF AVAILABLE IN VT-ERIC SET.
Pub Date - 12p.

*INDUSTRIAL ARTS; *GENERAL EDUCATION; *STUDENT DEVELOPMENT; *SKILL DEVELOPMENT; *EDUCATIONAL OBJECTIVES

Certain fundamental skills are needed by everyone who aspires to become a truly educated man and to find the place or job in which he can be most effective. The skills which are needed by the liberally educated person of tomorrow are the skills of (1) being flexible, (2) being creative, (3) making wise choices, (4) learning to know one's self, (5) understanding others, and (6) knowing how to learn. Education for flexibility should include the application of broad principles and not narrow mechanistic operations. While creativity as a skill probably cannot be taught, we can at least provide an environment in which it can be developed. Discerning teachers can advise and encourage, help analyze decisions which have been made, and provide opportunities for decision making. The importance of self knowledge is self evident and its attainment must be the concern of teachers. Understanding of others should imply not only comprehension but also tolerance, sympathy, and indulgence, and it should be used to eliminate decisions and action based on bias, prejudice, hatred, and ignorance. Learning how to learn should stem from self-educative experiences and teacher models. Senior high industrial arts programs in the future should have three emphases, i.e., preprofessional, pretechnical, and individual curriculums. (EM)

VT005126

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The Role of Industrial Arts in Tomorrow's Schools

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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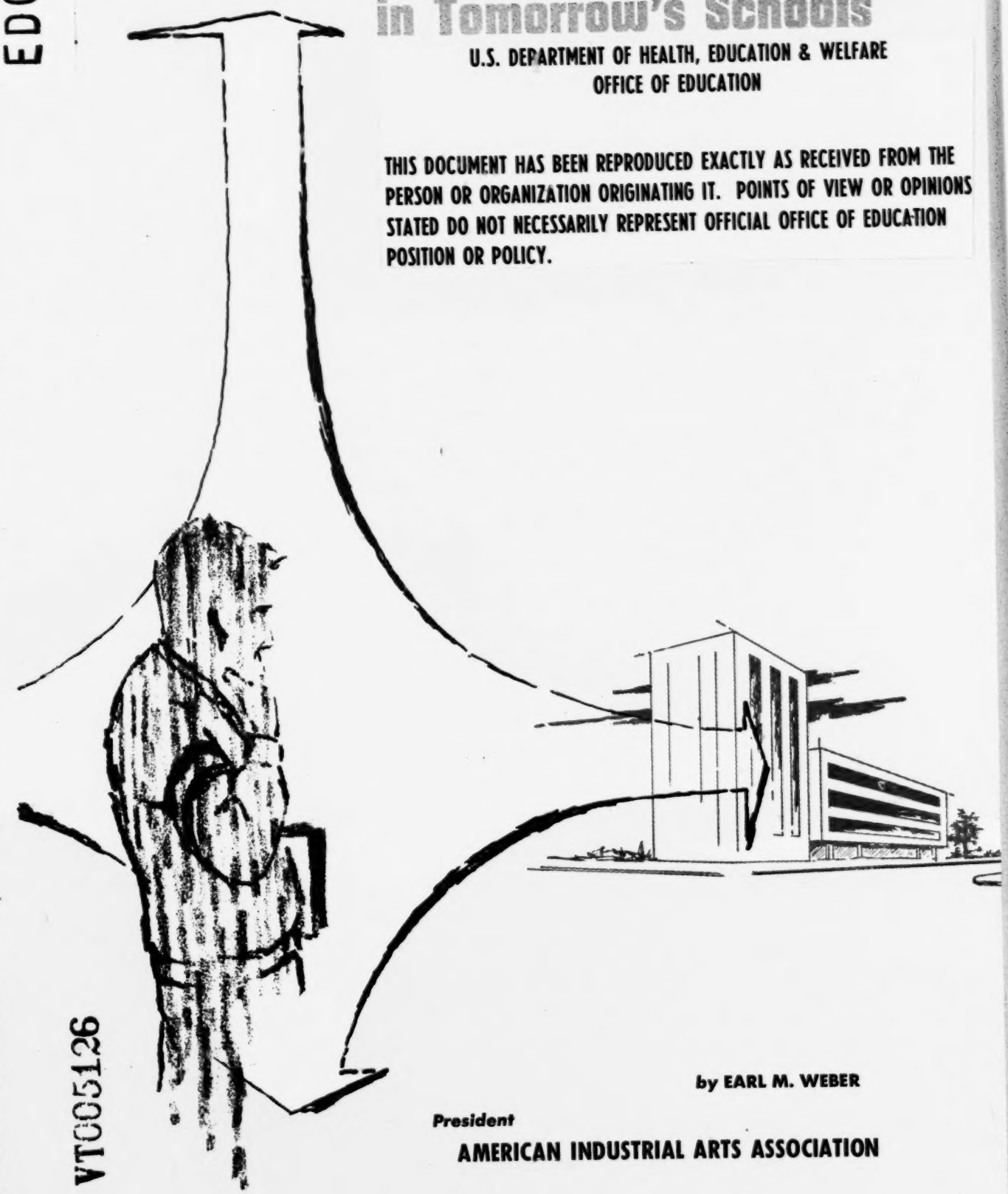
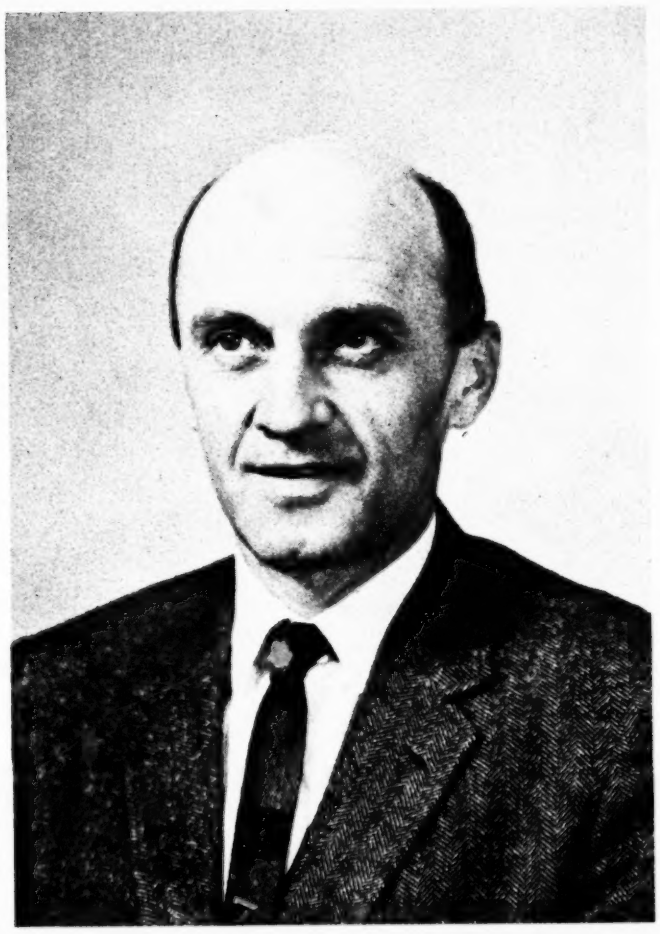


VT005126

by EARL M. WEBER

President

AMERICAN INDUSTRIAL ARTS ASSOCIATION



Earl M. Weber

Dr. Earl M. Weber is President of the American Industrial Arts Association and Director of Industrial Arts Education, Millersville State College, Millersville, Pennsylvania. He was formerly Editor of *The Industrial Arts Teacher* and Director of AIAA Publications.

The Role of Industrial Arts in Tomorrow's Schools discusses industrial arts as imperative to the student's development for flexibility, creativity, making wise choices, and in learning to know one's self in relation to others.

Anyone who in the second half of the twentieth century has the audacity to restate that very tired phrase that "industrial arts is general education" ought probably to be run out of town. Nevertheless, let's examine this tired old idea and find out, if we can, what's wrong with it. Now I am not going to try to define *general education* for you—this has been done too many times and you can have your pick of a dozen different definitions. Let me simply state here that the current vogue of substituting the word *liberal* is equally bootless. Whether in politics or education this word "liberal" has lost all power and anyone can use it to express his own special meaning, with very little chance that he will convey that same meaning to others. So it is of no use to us to substitute *liberal* for "general" in our discussion.

It isn't in particularly good taste to define a concept in negative terms, but I think we will understand each other if I speak of two kinds of education: Vocational and non-vocational. I am using these words in a generic sense with no bias or prejudice intended. There is nothing inherent in the words that implies federal aid or Smith Hughes Act or trade and industrial training. Vocational education is simply teaching people those things—skills and ideas—that will aid them in earning a living and this is the avowed and foremost purpose of vocational education. What I have for our purposes dubbed "non-vocational education" (and you may substitute general or liberal or anything else you wish) is education which is intended to have people learn *how to live.*

Not how to earn a living but how to live. How to live! How to live more effectively; how to find more meaning in life; how to come closer to living what has been called the "full life." Of course, at this point one has to decide what kind of education will enable a person to find this full life. What should be the outcomes of a general or liberal or non-vocational education? What is it that a liberally educated person ought to know *and be able to do?* If a person has read the classics, has a smattering of two or three foreign languages, plus an assortment of courses in the sciences, social sciences, and mathematics, he is then supposed to have what is commonly called a liberal education. In contrast, if a person has learned certain skills (saleable skills they are sometimes called) such as typing, or cosmetology, or auto repair, or cooking, or teaching, or the practice of law or medicine, then he is said to have a vocational or a professional education and is presumably prepared to earn a living by practicing these learned skills.

From this one might conclude that the difference between a vocational and a non-vocational education is determined by whether or not any skills are developed. It would appear to me that such a differentiation is too narrow.

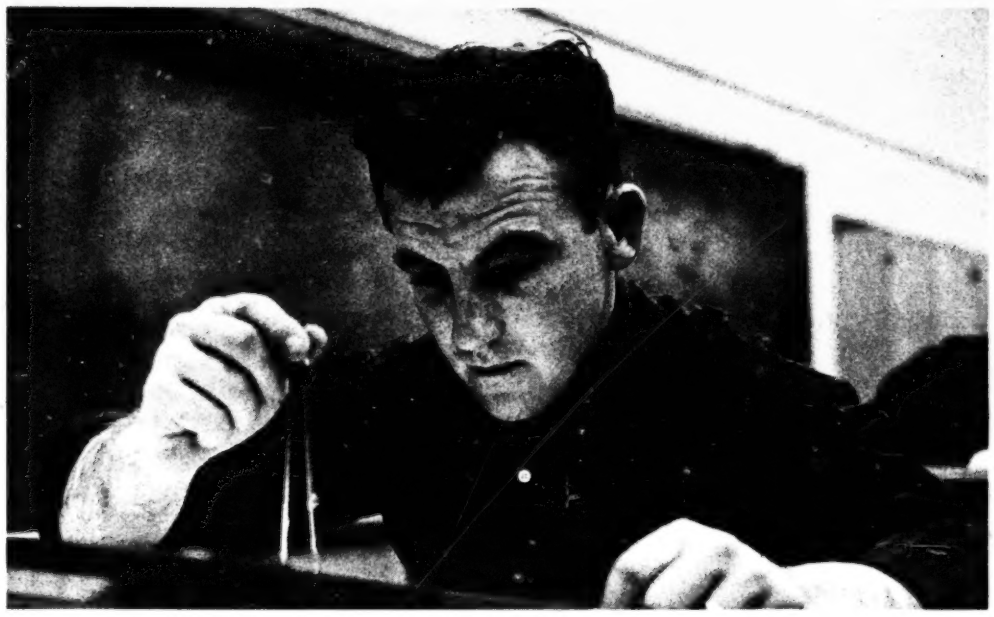
Regarding the non-vocational or *general* education—we are still faced with the question "general education for what?" The main point of my thesis today is that certain fundamental skills are needed by everyone who aspires to become a truly educated man and to find the place or job in which he can be most effective. Let me hasten to add that I am not talking about such pedestrian skills as knowing how to hammer a nail straight or repairing a worn out washer in a leaky faucet—(new faucets don't have washers in them anymore)—Too often we in industrial arts have attempted to put our foundations on this kind of sand. The skills which are needed for the liberally educated person of tomorrow are, I believe:

1. The skill of being flexible
2. The skill of being creative
3. The skill of making wise choices
4. The skill of learning to know one's self
5. The skill of understanding others
6. The skill of knowing how to learn.

These skills have of course always been important. They are important today and they will become increasingly and vitally important to the citizen of tomorrow. I shall discuss very briefly what I mean by each of these six skills.

THE SKILL OF BECOMING FLEXIBLE

Over 500 years before Christ, the Greek philosopher Heraclitus said, "You cannot step twice into the same river," and ever since we



The truly educated man must be flexible, creative, imaginative, and must have sufficient background for making wise choices. The industrial arts classroom can provide the incentive and the opportunity for developing the individual's powers of imagination.

Photo by NEA—Carl Purcell

have been reminded that we live in a world of flux so that today it is almost trite to say that we are exposed to constant change and that the rate of change in today's society is unprecedented. All of us have heard such thought expressed in a vast variety of media on numerous occasions. Examples are legion to document this notion that change is everywhere, that it is inevitable, that it is occurring at a tremendous rate. We know that skills become obsolete almost overnight, we know that what we hold as fact today may well be fallacy tomorrow. Whitehead said, "Knowledge does not keep any better than fish." And in education we have said to ourselves that it is our responsibility to teach people in such a way that they will be prepared to live in and adapt to a changing world. But it would appear on the surface at least that not very many educational programs are planned to develop this skill or attitude of flexibility. In an editorial in *The News Letter,* Edgar Dale writes, "To develop the flexible man we must favor those learning experiences which have high transfer value to varied life situations. We must learn how to teach skills, attitudes and concepts so that they may not only meet current needs, but have generalization value as well."

A very simple illustration of this principle might be shown in the field of Graphic Arts. Consider two different laboratories. In the one a boy is learning how to operate a modern offset press; in the other,

a student is printing stone lithographs. The first is typical of mid 20th century printing; the second is an example of a very primitive and outmoded means of printing (though it is still common in the fine arts). At first glance we are tempted to say that a boy on the offset press is in a much better educational program than the one printing from a stone. A closer look might reveal that the controls on the offset press have various numbers and settings and that the directions for making these adjustments are either stamped on the press or have been supplied by the instructor. "Before starting press move lever A to position 3 as shown in diagram" — and "if copy is to dark shift lever C to medium position" etc. A boy learning to operate such a press is *not being educated; he is being trained.* If a new model of the press comes out next year, or if a press from a different manufacturer is purchased the boy must be retrained to operate the new press. The student doing stone lithography, on the other hand, comes face to face with some very basic facts and principles. He can hardly avoid it. One could defend the claim that there is more transfer to varied life situations in the stone printing than in the offset press operation. Please don't interpret this as meaning we should throw all the offset presses out of industrial arts—though perhaps we shouldn't be quite so hasty in discarding the old stones either—but it does mean that we must re-examine our teaching to ascertain that we are teaching the application of broad principles rather than the narrow mechanistic operation of machines. This is the difference between a narrow limited training and *education for flexibility.*

SKILL OF BEING CREATIVE

This word creativity is another joy word in educational jargon. There has been much fuzzy thinking and frothy writing about the creative child, the creative environment, creative teaching *ad infinitum.* But when all the froth is blown away the fact remains that the *complete* individual—the truly educated man—must know how to be inventive. He must know how to innovate. He must see new possibilities for applying old principles. He will be faced with new problems and the old answers will no longer be appropriate. He must develop his powers of imagination.

Creativity does not necessarily mean a discovery of the unknown. For an individual it may be a personal rediscovery of what is already known by someone else. The results so far as development of the individual are the same in either case.

The implications for teaching are obvious. Situations must be provided which foster the development of this quality we call creativity. This means that we must make an agonizing reappraisal of much of our teaching methods and content. Simply building things from predigested, tried and true project books hardly fosters creativity. Rote memorization becomes highly questionable.

The liberally educated person of tomorrow must know himself and be able to understand others. He can receive foundation for these goals in the industrial arts laboratory. Here junior high school students share with others the findings recently made in industrial arts activities.

Photo by NEA—Carl Purcell

Creativity as a skill probably cannot be taught. John Ciardi wrote in the *Saturday Review* "The truly creative whether in art or science or philosophy is always and precisely that which cannot be taught. And yet thought it seems paradoxical, creativity cannot spring from the untaught. Creativity is the imaginatively gifted recombination of old elements into new. And so it may seem there is no real paradox. The elements of an invention or a creation can be taught; but the creativity must be self discovered and self disciplined."

If we cannot teach creativity, at least we can provide an environment in which it can be developed by individuals. Such an environment will provide many opportunities for exploring, for experimenting, and for making decisions. Such an environment doesn't just happen — it must be planned.

THE SKILL OF MAKING WISE CHOICES

Having this skill or not having it is the difference between drifting through life or charting a course and living a purposeful life. Life is really a continuous series of decisions to be made. Some decisions seem relatively small and insignificant and others are vitally important: "To read a book or watch a TV program"—"which book"—or "which program." "What to cook for supper," "which tie to wear today."

Or again, "What do I want to do after graduation from high school?" "What do I plan to accomplish in the next five years?" "What *are* the *really* important issues to which I should devote my main energy?"

All of these and many more call for responses, and the ability to make the wise choice or what Edgar Dale calls the "discriminating response" is a skill which must be learned and developed.

The inertia of tradition tends to help us make many of these decisions but it also helps to put us and keep us in a hopeless rut. The question should not be "How have we done this in the past?"—nor should it be "What is the newest, most modern way" but rather what is the best, the most appropriate choice. The matter of when it is best to conform and when it is wisest to break with tradition is a choice to be made.

Just as one cannot teach the skills of being flexible or creative, he cannot teach a person how to make discriminating and wise choices. But like a good coach he can advise and encourage, help to analyze decisions that have been made and the discerning teachers can provide many opportunities for the student to make choices.

SKILL OF KNOWING ONE'S SELF

"To thine own self be true" is sound advice—but it is also a rare achievement among men. We generally do not have the gift "to see ourselves as others see us." Rather we see ourselves in a mirror of self-deception. One of the skills most sorely needed by an individual if he is to live a happy, well-adjusted and useful life is the skill of being completely honest with himself and of seeing himself as he really is.

This inability or reluctance to see ourselves as we really are exists in two directions. Not always do we deceive ourselves by assuming a superiority which does not exist. Many people fall far short of realizing their potential because they underestimate their abilities and capacities.

Certainly one of the functions of education must be to help people realize honestly what they can do well and what they can't do; what they are; and what they are not; when they have succeeded and when they have failed. In short, in order to be a mature member of society, a person must learn to know himself. This capacity, or skill as I have termed it, is sometimes referred to as self fulfillment or self realization. Whatever it is called, its importance is self evident and its attainment must be the concern of those who would be worthy of the title *teacher.*

THE SKILL OF UNDERSTANDING OTHERS

This word *understand* implies a great deal more than its users frequently intend. In addition to comprehension, understanding implies a tolerant, sympathetic, and indulgent attitude.

In the skill I spoke of previously—that of getting to know one's self—the idea was presented that it is very difficult for people to see themselves as others see them. It might be added that complete attainment of this ability is impossible. But there is a compensation here if we try to see others as they see themselves. What causes them to think and act as they do; what are their fears and anxieties, their needs and desires. This is what is meant by understanding others. And of course in this sense the group of people we call others includes our friends, family, colleagues, pupils, other races, other religions—in fact, everyone else.

To understand means to comprehend and to have a sympathetic attitude—but it does not mean to condone. The implication for education in the need for understanding others is to eliminate decisions and action based on bias, prejudice, hatred and ignorance. It is of course to be hoped that an understanding of others would enable mankind eventually to substitute love for hate, tolerance for bigotry, and peace for war.

Even if this utopian ideal is not realized (as it probably won't be for sometime to come) and men continue to disagree with other men on many issues (as they probably always will) the need for developing the skill of understanding is still valid. Mature people who disagree must learn to separate the issue in question from the personality of the opponent. The Biblical precept which admonishes one to love his enemy does not say that he must agree with his enemy's viewpoint. It also does not relieve him of developing the skill of understanding others. Educated people must develop this skill!

LEARNING TO LEARN

This final skill is so simple and yet so profund that its real significance is easily missed. The skill of learning how to learn might be expressed in another way. It is the development of an insatiable curiosity and the means of satisfying that curiosity. Children are naturally curious What makes it go? Why is it black? How does a bird fly? Where do babies come from? Rather than capitalizing on this native curiosity, formal education too often quenches it, so that by the time a child is in junior high school, he knows better than to ask "too many foolish questions." And after a while he even stops being curious. It seems evident that the role of education is to keep this curiosity alive—to develop it further, and to provide the child with the ability to find the answers himself.

The assumption of course is that to live the full life we have referred to, one must be equipped to keep on learning from the cradle to the grave. It is further assumed that the bulk of important learning goes on after one has finished his formal education. Even while in school it is probable that the most significant education is self education.

This skill of learning how to learn implies that the desire or motivation and the ability or knowhow must all be self contained. Disciplined habits of reading, thinking and working must be developed by the individual. He must become self winding.

The role of the teacher is to provide the student with opportunities for having self-educative experiences and also to serve as a model. These six skills do not exclude the importance of such subject matter as history, verbal skills, mathematics and science. In fact they are not content fields *per se.* They have to do more with methods of teaching than with content. But one who has not mastered them cannot be an educated person in the fullest sense. A good program of general education will provide for the development of these skills. And that is the kind of education I am talking about when I say industrial arts is a part of general education. And even though the phraseology may be a bit tired as I conceded at the outset—the concept is still quite fresh.

But how does this relate specifically to our topic of the day? What should industrial arts programs of the future look like?

The implications for industrial arts in the development of the six skills I have briefly outlined exist in all levels—from kindergarten to post high school education. However, in the present discussion I shall limit the consideration to the senior high school—grades 10, 11 and 12. It is at this level, I believe, that the greatest confusion exists as to the nature and purpose of good industrial arts programs. It is at this level where some see a conflict between vocational and non-vocational education; between vocational-technical education and industrial arts education. Such conflict need not—and indeed should not exist — if we keep clearly in mind the purposes of each type of education.

In the senior high school of tomorrow there should be, as I see it, an industrial arts program which has three major phases or emphases. These are not mutually exclusive and there may be a certain amount of overlapping but all three phases should exist for three categories of high school students.

PRE-PROFESSIONAL

The first of these phases might be called pre-professional. This is intended to be for students who have decided rather definitely that they are going on to colleges to prepare for such professions as architecture, engineering, dentistry, medicine, physics and the like. For such pupils there should be well organized courses in industrial arts subjects designed to support and strengthen the regular college preparatory curriculum. Though there is no reason why such courses should not represent most industrial arts areas, I believe the most

Field trips to modern industries bring real-life experiences to students. These high school students touring a large steel plant can add to their verbal knowledge the feel, smell, and other in-plant experiences needed for full development in this area of technology.

Photo by George Campbell

needed and most popular would be courses in electronics and in drafting or engineering graphics as it is now called. Such courses should be full unit, sequential courses meeting one period daily five times a week, just as courses in foreign languages or mathematics. Oh, I know that some administrators will say that such a program is impossible because the college preparatory curriculum is already overcrowded with too many academic subjects. Such an excuse is simply not factual in light of the number of forward looking new educational programs which are already offering the kind of courses I have just described. However, it might be well to emphasize at this point that the need for real quality, well planned and organized course content, and superior teaching is imperative if these programs of industrial arts are to succeed. (Parenthetically I should add that these same considerations are equally important for all industrial arts programs—and indeed for all education.)

PRE-TECHNICAL

The second *phase* of industrial arts for the senior high school I have termed pre-technical. There is possible overlapping between this and the pre-professional phase I have outlined but there are also some distinct differences. The breadth of courses available in this phase might well be greater than the pre-professional phase. Courses here would be designed to accommodate pupils who have definite interest

in technical areas but who are still undecided about their future education, or college career, or their vocational choice. Such pupils are frequently found in the "General Curriculum" in our high schools. The exploratory function of the junior high school should be extended for such pupils, though certainly the courses in industrial arts should be intensified in scope and depth over the junior high program.

INDIVIDUALIZED PROGRAM

The third phase of industrial arts for the senior high school of tomorrow is one that probably needs a new name. The name if one could be found or coined, should embody the idea that it is a general education (non-vocational) elective; that it is closely allied to (and hopefully integrated with) other disciplines in school—particularly art and science; that there is not pre-determined content but that each pupil has the privilege of planning his own program. As I envision it, such a program should be designed with flexibility sufficient to accommodate pupils of various grades and ability levels and students with widely varying interests.

What I am advocating here is not just a face-lifting of the old general shop concept—though a well equipped general shop-laboratory combination—or a series of them—will be needed for this program.

Whereas one boy or girl might become involved in a highly technical problem in electronics or rocketry, another may choose to develop the degree of craftsmanship necessary to do fine silversmithing. The program should be broad enough in concept and extensive enough in facilities to allow for individual study, and group projects; research and experimentation, and skilled craftsmanship; the solution of technical problems, and the creation of beautiful objects; an enlarged understanding of scientific concepts and a heightened appreciation of things aesthetic.

The possibilities of such a program of industrial arts is limited only by the imagination of the teacher. This would truly be industrial arts for general education. Such a program would surely help considerably to develop in each pupil the

Skills of:
1. Flexibility
2. Creativity
3. Making wise choices
4. Learning to know one's self
5. Understanding others
6. And the skill of *learning*

BULLETIN Number 9

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Occupational Information Conference Report (Oxnard, California, October 11, 1967).

Ventura County Vocational Resources Committee, Calif.
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*OCCUPATIONAL GUIDANCE; OCCUPATIONAL INFORMATION; *LABOR MARKET; SCHOOL INDUSTRY RELATIONSHIP; DEMAND OCCUPATIONS; *COUNSELOR ROLE; *CONFERENCE REPORTS; EMPLOYMENT SERVICES; EMPLOYMENT OPPORTUNITIES *VENTURA COUNTY VOCATIONAL RESOURCES COMMITTEE OCCUPATIONAL INFORMATION CONFERENCE, OXNARD, CALIFORNIA, OCTOBER 11, 1967

This 2-day conference, sponsored by the Vocational Resources Committee, included these speeches: (1) "Economics of Labor Market," by Odessa Dubinsky, related economic and employment factors to occupational education, (2) "How Education and the State Employment Service Work Together," by Mack Stoker, presented examples of problems and cooperation relative to vocational offerings, student selection, employment opportunities, competency levels, and student placement and evaluation, (3) "Emerging and Declining Occupations," by Anne Lewis, described the use of the "Dictionary of Occupational Titles" and the concepts of demand and declining occupations, (4) "Future of Vocational Guidance," by Al Powell, described trends in vocational guidance in California, and (5) "What Should a Counselor Know About Industry," by Norman Nicholson, discussed seven counselor characteristics desired by employers. Also included are summaries of four small group discussions with the first four speakers. The participants were school counselors and representatives of the Vocational Resources Committee. (EM)

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REPORT

OCCUPATIONAL INFORMATION CONFERENCE

Sponsored By

VENTURA COUNTY

VOCATIONAL RESOURCES COMMITTEE

Wednesday

October 11, 1967

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Oxnard Community Center

Oxnard, California

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1968

REPORT

OCCUPATIONAL INFORMATION

CONFERENCE

Sponsored By

VENTURA COUNTY

VOCATIONAL RESOURCES COMMITTEE

Wednesday

October 11, 1967

Oxnard Community Center
800 South H Street
Oxnard, California

Preface

Education: A Practical Matter

Over the past several years educators have come to realize that the American education system, often criticized for being too pactical, has not been practical enough.

It took an alarming dropout rate and a narrowing market for unskilled labor to convince the skeptics, but now remedial action is rapidly being taken.

The Occupational Information Conference sponsored this week by the Ventura County Vocational Resources Committee provides an insight into the sort of adjustments that are being made and the reasons why they have been deemed necessary.

As one industrialist pointed out at the conference, the unemployment rate among American youths is now higher than it was during the depression — yet more than 4 million jobs are unfilled because qualified persons are not available.

Unless the educational system makes the appropriate adjustments, the situation will get worse.

Unskilled labor is generally the first to be eliminated by machines; more sophisticated automation adds to the problem by displacing skilled workers who find themselves in need of retraining.

These facts are now indisputable and accepted by educators and most of the general public. As a result, vocational education has become fully respectable.

Economic necessity has a way of eliminating stigma, and it is no longer a social handicap if a student pursues a vocational course rather than a straight academic course.

High schools and junior colleges are tailoring special curricula for the vocational student, recognizing that the standard woodshop or auto mechanics class of a decade ago is no longer sufficient.

And retraining is being emphasized in the night schools and special courses sponsored by public agencies outside the regular educational system.

The ultimate lesson is that education must be an open-end affair. Four years in high school or college no longer add up to a diploma that forever after entitles a man to call himself well qualified.

Whether he be a physician or a machinist, the chances are a student will some day need retraining or schooling in new techniques.

The necessary answer to the "leisure time" problem of the future 30-hour week may prove to be schooling.

Whether the philosophers like it or not, the American society is a practical one, and demands a practical educational system. This does not mean an end to the arts, for a practical education can produce an Eric Hoffer as well as a Bertrand Russell.

The answer to many of our urban, economic and racial problems will depend on whether the Eric Hoffers of the future can earn a living. We can be thankful that our educational system is adapting itself to meet the challenge.

Editorial
The Press-Courier
October 12, 1967
Oxnard, California

ABOUT THE SPONSOR

Many have asked the question, "Just what kind of an organization is this sponsoring group, 'The Vocational Resources Committee'?" A concise explanation of its function and its membership composition follows:

Who belongs? Over 125 persons representing industry, business, service occupations such as hospitals and restaurants, as well as agri-service personnel and representatives from county, city, state and federal governments are members of the Vocational Resources Committee. Perhaps that state agency that is most actively involved is the California Department of Employment.

What is the purpose of this organization?

.... To assist individual schools in establishing advisory committees for business, industrial, agricultural, and homemaking education.

.... To assist school administrators, supervisors, curriculum directors, and teachers develop occupationally centered courses of study.

.... To assist counselors in occupationally counseling high school, junior college, and adult students to the world of work.

.... To organize panel discussion groups, to provide students and parents with knowledge concerning entry training requirements for all occupations.

.... To help relate to educators, students, and parents up-to-the-minute information concerning job opportunities not only in Ventura County, but in all of California.

.... To assist school administrators in the placement of vocationally trained students into permanent jobs at the time of their graduation from high school.

.... To provide technical assistance for individual teachers who wish to relate programs of instruction and/or courses of study to the needs of industry, business, agriculture, and service occupations.

Who coordinates the activities of the Vocational Resources Committee?

There are elected officers and committee chairmen who meet once a month for lunch to discuss problems concerning Ventura County Vocational Education matter affecting youth and adults.

The committee's work schedule is coordinated by its permanent secretary, Charles Brady, Ventura County Schools.

Marvin Berson, President
VOCATIONAL RESOURCES COMMITTEE

PROGRAM
OCCUPATIONAL INFORMATION CONFERENCE
October 11, 1967

OCCUPATIONAL INFORMATION

CONFERENCE

Sponsored By

VENTURA COUNTY

VOCATIONAL RESOURCES COMMITTEE

Wednesday

October 11, 1967

Oxnard Community Center
800 South H Street
Oxnard, California

8:30-8:45	REGISTRATION - Conference Hall ....Mrs. Dorothy Costello Employment Service Supervisor Department of Employment, Ventura ....Mrs. Lois Shaffer, Counselor Fillmore Senior High School
8:45-9:00	OPENING REMARKS ....Francis Bawden, Manager Department of Employment Ventura, California ....Marvin Berson, President of Ventura County Vocational Resources Committee and Sawyer College, Schools of Business ....Charles Brady, Secretary Vocational Resources Committee
9:00-9:30	TOPIC: "Economics of Labor Market" ....Odessa Dubinsky, Southern Area Labor Market Analyst, Department of Employment, Santa Ana
9:30-10:00	TOPIC: "How Education and the State Employment Service Work Together" ....Mack Stoker, Regional Coordinator, Vocational Education, Department of Education, Los Angeles
10:00-10:30	BREAK
10:30-11:00	TOPIC: "Emerging and Declining Occupations" ....Anne Lewis, Supervising Job Analyst Department of Employment, Field Center, Los Angeles
11:00-11:30	TOPIC: "Future of Vocational Guidance" ....Dr. Al Powell, Special Consultant Bureau of Personnel Services State Department of Education
11:30-12:00	BREAK

12:00-1:00	BUFFET LUNCHEON
1:00-1:30	LUNCHEON SPEAKER ....Norman Nicholson, Vice President The Talley Corporation Newbury Park TOPIC: "What Should A Counselor Know About Industry?"
1:30-3:30	SECTION MEETINGS The aforementioned speakers will be present at the section meetings for further discussion concerning their topics. Each half-hour section meeting will have a moderator and a recorder. (Vocational Resources Committee Members)
Group I	Conf. Room 1 Resource Person: Odessa Dubinsky Discussion Leader: LeRoy Andrews Recorder: Charles Brady
Group II	Conf. Room 2 Resource Person: Mack Stoker Discussion Leader: Harriet Woolley Recorder: John Van Zant, Vocational Education Consultant Ventura County Schools
Group III	Conf. Room 3 Resource Person: Anne Lewis Discussion Leader: Harold Johnson Technical Support Facilities, Pt. Mugu Recorder: John Stead
Group IV	Conf. Room 4 Resource Person: Dr. Al Powell Discussion Leader: Madeline Miedema Recorder: Lois Shaffer

Comments

No one denies that our youngsters need an education before they can function in this society which we helped create.

We appreciate the cogent view of many who hold that general education is the best approach in preparing youngsters for this task. Similarly, we appreciate the view of many others who present a strong case for vocational education as a method of preparation.

A remarkable point is that these views are not mutually exclusive.

The political, economic and social factors and words which have deluged us would convince anyone that there is merit in both viewpoints. The problem, if any, is one of recognizing the need for and respect of mutuality of interest, priority and coordinated effort.

The papers which follow represent the oral proceedings which took place during the occupational conference.

Much remains to be done, which will be done, in the field of vocational education, especially the identification of specific jobs and related characteristics of the local labor market.

The ideas expressed in the conference are those of the speakers. The errors, if any, in recording those ideas are ours and we apologize in advance.

We wish to acknowledge Francis Bawden, Chairman, who first suggested this conference and Mrs. Lois Shaffer, Co-chairman, whose efforts contributed substantially to the overall success of the program. We also acknowledge the fine clerical work performed by Mrs. Audrey Tracy, secretary to the County Coordinator of Vocational Education, and we express appreciation to the workshop discussion leaders and recorders for their able assistance.

Co-editors:

Charles C. Brady
Coordinator of Vocational Education
Ventura County Schools

A. J. Capritto
Job Analyst
Department of Employment
Ventura, California

TABLE OF CONTENTS

	Pages
Economics of Labor Market. . . . . Odessa Dubinsky	3 - 8
How Education and the State Employment Service Work Together. . Mack Stoker	9 - 14
Emerging and Declining Occupations. .Anne Lewis	16 - 24
Future of Vocational Guidance. . . . . Dr. Al Powell	26 - 32
What Should a Counselor Know About Industry. . . . . Norman Nicholson	32 - 42
SECTION MEETINGS	
Group I	45 - 46
Group II	47 - 48
Group III	49 - 50
Group IV	51 - 52
EVALUATION	53 - 55

The speeches presented by each of the participants are reproduced and presented in the following pages.

OPENING REMARKS

OPENING REMARKS—Industry, the schools system and the state employment agency will be represented by these men who will welcome Ventura County school counselors to an occupational information conference, Oct. 11, at the Oxnard Community Center. They are, from the left, Francis Bawden, manager of the Ventura office of the California Department of Employment, Charles Brady, coordinator of Vocational Education for Ventura County schools and Marvin Berson, president of Sawyer College Schools of Business and president of the Ventura County Vocational Resources Committee, sponsors of the daylong conference.

The Occupational Information Conference was opened by Francis Bawden, Manager of the Ventura office, California Department of Employment, who welcomed the audience and who indicated that the conference was sponsored by the Ventura County Vocational Resources Committee. The Committee is composed of business, agriculture and industry leaders of Ventura County who take an active role in providing resources whereby vocational education can be offered in the schools.

Mr. Bawden introduced Marvin Berson, President of the Ventura County Vocational Resources Committee, who briefly addressed the assembly.

Mr. Berson introduced Charles Brady, Secretary of the Vocational Resources Committee and Coordinator of Vocational Education, Ventura County Schools. Mr. Brady pointed out that the conference would not provide all the answers to questions about vocational education and employment, but the skills, knowledge, abilities and resources of each of the 125 members of the Ventura County Vocational Resources Committee were at the disposal of the school counselors and administrators. He urged school representatives to use this vast source of power and potential.

"ECONOMICS OF LABOR MARKET"

Speaker:

Odessa Dubinsky
Southern Area Labor Market Analyst

Department of Employment
Santa Ana, California

"ECONOMICS OF LABOR MARKET"

Speaker: Odessa Dubinsky

The subject given me, "Economics of Labor Market", is of multiple complexity, for the labor market is in itself an economic fact, and the economics of the labor market amy be approached from any or all directions. An appreciation of the importance of economic philosophies on our lives may be insinuated from the very derivation of the word itself. For those of you whose "Latin is few", as indeed mine is, the noun economics (and not the adjective) comes from the Latin oeconomicus -- "of or relating to a divine dispensation".

The divinity of economics depends on one's point of view - as a verb divine means to conjecture or guess, and what else do economists do. The heavenly aspect is somewhat more suspect, but there are a lot of people who have made a religion of the subject.

A dispensation is a distribution in this case of the economic resources or wealth of a nation - there is certainly an unequal distribution of the good jobs, the high incomes, and the decent living conditions.

The history of the world has been determined by economic change; indeed economic determinism or the economic interpretation of history presents the theory that in the last analysis economic factors, including especially the level of technology attained by a particular society, and the economic relations into which men enter on the basis of that technology, exert a decisive influence on the course of political, social, and intellectual evolution.

The classical concept of the economic man as an individual behaving rationally, regularly, and predictably in his economic activities ascribes to him motives that are egoistic, acquisitive, and short-term in outlook.

There are many in our country to whom these tenets remain gospel; who hold to the classical economics as the one and only choice. To them and to you, I refer to that final adjectival phrase in the last statement--"short-term in outlook." This is perhaps a euphemistic phrase for short-sighted. We can no longer afford uncorrected myopia in dealing with the economics of the labor market. Economics is a social science, studying the production, distribution, and consumption of commodities, and if manpower is a commodity (despite Mr. Wirtz's abhorrence of that connotation) we who deal in some aspect of manpower had better be hip about the interactions and interrelations of people in the labor market, as well as amount of and trends in the gross national product. The latter has become the all engrossing, all ecompassing subject of the day. John Kenneth Galbraith, in his latest book, "The New Industrial State", quips that St. Peter is assumed to ask applicants only what

they have done to increase the G. N. P., and says that we are becoming servants in thought as in action to the machines we have created to serve us.

The demand for and supply of labor together comprise the labor market, and all our efforts should be directed toward the best production of skillful manpower and its most effective utilization. The revolution of technology which has come to fruition in recent years in this county especially, requires a commitment of resources to education and vocational training on a massive scale. Every individual must be given the opportunity for education to the limit of his ability. A special effort must be made to remove the artificial barriers blocking the development of Negroes and other victims of poverty and discrimination, and to compensate for the damage already done to them.

Buckminster Fuller speaks of the ultimate revolution that is now crossing the threshold of human consciousness and moving to ultimate popular support; this is the revolution that will not only result in the successful sustaining of human life but will also permit man henceforth to participate consciously in his prosperous continuance on earth. It will eliminate the now untenable assumption that survival can be justified by elimination--on the battlefield or at the slums' lower-velocity rot-rate--of the "unsupportable excess" of human population. Mr. Fuller believes the world's prime, vital problem is how to triple swiftly, safely, and satisfyingly the overall performance realizations per pound, kilowatt, and man-hour, of the world's comprehensive resources. This will render those resources, which can now support only 44% of the world's humanity, capable of supporting 100% of the population at higher standards of living than any human minority or individual has every known or dreamed of.

Performance upgrading, capability, determination, and realization, and complete and full utilization of manpower along with the world's other resources will be essential to the attainment of this goal.

The nation has already taken important steps along the road to greather educational opportunity with the passage of the Vocational Education Act and the Elementary and Secondary Education acts. But all the bills passed by all the congresses that ever were or will be will not suffice if action, intelligent action is not taken.

Cynthia Parsons, education editor of the Christian Science Monitor, was writing as recently as last June that "schooling for skills is in trouble." She said "thousands of youngsters have been misdirected into purely academic programs when at least half of them should have been guided into direct preparation for employment. In a recent survey conducted in the east, 70% of all parents and pupils asked that vocational education be given at the high school

level or before. But 90% of the youngsters in high school were being pushed towards college, and only 1 out of 6 of those who graduated from high school actually entered a college.

But Miss Parsons went on to say that while much remains to be done, more and more school officials and systems have been responding to the need to do it, and that by and large, vocational educators are working together in a new climate of interest to bring schooling for skills into the 20th century.

The important point therefore seems to be what skills? ? and how can the information about the needed skills be dispersed to the educators, the counselors, the planners for education and training needs? For much more information is required to provide a smoother transition from classroom to job.

John K. Folger and Charles B. Nam, writing on "Trends in Education in Relation to the Occupational Structure", comment that most persons who enter the labor force are prepared to occupy only jobs that are suitable for the amount of education they have received, and that there is, of course, a direct association between level or scope of education and occupation. If, therefore, training or education has been inadequate or faulty, young workers will be unable to find satisfactory or satisfying jobs.

To realize the full potential of the nation's workers, to satisfy personal needs for income and self-respect, to meet the enormous public needs that accumulate over the years, to meet the demands for a productive and effective labor force; training, education, counseling, and area rehabilitation programs must have and use a continuous running account of impending and already experienced technological changes, and reasonably accurate forecasts of the impact of such changes on jobs, skills, the location of industry, training needs, etc.

To use the subject word in its other sense, it is hardly economical to permit the suffering and waste involved in training people for jobs which may be eliminated by machines before the training is completed or soon after or for which demand is minimal, or for which the job specifications have changed completely. For example; from 1956 to 1962, white collar occupations, jobs in the service industries, and unskilled work generally held to long term trends established after World War II. In the last five years, however, sustained economic expansion has produced definite variations and shifts in these groups. The number and proportion of professional workers have grown at a steady pace; blue-collar workers have been most vulnerable to down-swings, and while increasing in number, have lost considerable ground in their share of the total. Service jobs have increased sharply, both in volume and proportionately. Whereas, blue-collar workers represented the largest percentage of all jobs in 1946, now white-collar workers have taken over the top spot, and indeed comprise 45% of

the total. The best the factory workers ever did was 41% in 1946.

Changes in industry employment size and growth result from the combination of three factors: (1) final demand; (2) employment--output relationships, or unit labor requirements; and (3) inter-industry relationships. Jobs, therefore, are an intrinsic extrusion of those economic factors primary to the overall prosperity and well-being of an area, state, or country. Knowledge and understanding of industry trends, what foments changes, and what is to be expected in the future are all essential to the leading or directing of the pre-labor force participant into those occupational fields of most advantage, satisfaction, and potential.

It is surely not enough to know or discuss just the right college; it is essential that the youth counselor be familiar with and knowledgeable about the economics of his community, his state, and his country. He should know and be able to relate information concerning the industrial and occupational structures of the labor market; to recognize the capabilities and capacities of the counselee in the work-world; to help the youngster to find his place in the job market. Perhaps time spent thusly would be better spent than in recording grades, setting up schedules, or even on disciplinary problems. Perhaps there are other employees who could be used to advantage in these tasks, while the trained counselor helps youngsters prepare themselves for that real and earnest life that almost always includes working for a living.

I strongly suspect that this was not the tack you expected this discussion to take. Usually, I talk about industry and occupational trends; but we are in a state of revolution in this nation, and I have in this small way rebelled against the accepted pattern. If you have questions to ask about occupational and industrial trends, I'll be available during this afternoon's workshop. Manpower and employment problems are of high significance and import in these days of fast labor force growth, when a high rate of unemployment coexists with persistent shortages of certain types of workers. The level of technology attained by this nation has brought its own paradox; it is a national phenomenon and poses an equal threat to the Mississippi cotton picker and the Illinois steel worker; it brings the advantage of growing employment potential in areas of activity almost unknown short years ago.

Young workers will provide almost half the additional labor supply in the present decade; the amount and quality of their education and training will be important to them and the nation. Proper counseling can guide young people into preparing for those occupations for which they have aptitude and in which they can reasonably expect to obtain employment.

And there's no capsule education available to train the counselor; no Reader's Digest of palliatives nor ten easy lessons in economics or in labor market analysis available. The answers I might give today could be obsolete tomorrow and you might find them a placebo instead of a specific. The point I hope

I have made is that you are dealing with our most valuable economic resource - the worker of tomorrow. All education is truly vocational education. It is our business to work together in this new climate of interest and understanding to help the coming work force enter the world of work with marketable skills, with appreciation for the labor market, and with a good opinion of themselves.

"HOW EDUCATION AND THE STATE EMPLOYMENT SERVICE WORK TOGETHER"

Speaker:

Mack Stoker
Regional Coordinator
Vocational Education

Department of Education
Los Angeles, California

"HOW EDUCATION AND THE STATE EMPLOYMENT SERVICE WORK TOGETHER"

Speaker: Mack Stoker

Ladies and gentlemen, I feel a little foolish coming to Ventura County and talking about cooperation, because some of the finest cooperation in the state has been going on here in Ventura County. You are doing a beautiful job. I am supposed to talk about the cooperation between the State Employment Service and the educational institutions that carry out the programs that the Vocational Resources Committee identifies.

Through the years, we have reached the point where we indulge in a lot of mutual trust. The mutuality of interest of education and employment is so close that we could not do anything other than work together, because we are all working at one point or another toward similar goals. We have to cross each other's paths and once in awhile we cross each other up, but this happens very seldom.

It took a while for us to recognize ways in which we could support each other. At one time there were some employment people who swore the schools were doing a lousy job turning out people who couldn't be placed on the job after training, and a few school people said, and I quote, "The Department of Unemployment is more interested in paying dividends than they are in placing our graduates."

But through the years we have come to help each other in the placement problem. When the Department of Employment pushed into testing, particularly as related to the selection for apprentices, there were quite a few school people who felt that their realm of counseling was being violated. But time wore on and fears wore down and we found new ways in which we could help each other.

In the past employment placement officers have worked with the schools and in a good many schools; high schools and junior colleges, a full time or part time Department of Employment employee was actually present on the campus, working with the school people and placing students, graduates and dropouts into job opportunities.

Then as employment extended its capability in identifying occupational trends and development, the schools found that an analysis of the results of school training programs was necessary in developing vocational curricula. As she worked into this analytical job, Odessa Dubinsky became known among educators almost as well as she was and is in employment.

Now, I suppose, no school in Ventura County certainly, and not in California, would think of starting a new program until they had conferred with the

Department of Employment to see what jobs are open, what the trend is, and so on.

Then the next big shock to our getting along with each other came about when MDTA came along. As you know, in MDTA the Department of Employment identifies the need, writes a prescription in a way, assures the school that trainees will be available and the school prepares a training program to do the training.

The idea that the Department of Employment would select trainees and send them over to our schools was positively revolting. Nobody sends students into our courses unless we select them, and we fought that battle up and down the State. Some of these battles were not a total loss. I can think of one that took ten days, involved two of my bosses, two legislators and I don't know how many telephone conversations, meetings, interviews, and finally was resolved.

There has never been any difficulty working between the regional office and the area office of employment. In employment there is a state office and area offices. There are two areas in Southern California. The one for this area is headquartered in Santa Ana. The other is in Los Angeles. In our office for vocational education we cover eight southern counties.

In all the time we were having our Donnybrooks there was never any problem in getting together with the area office. This was easy, but what took a little doing once in awhile was to sell our respective co-workers in the local districts on the solution. This took quite a bit of time and again it was pretty much an educational process. The local people finally realized that they had to work together. They are interested in the same thing and in a good many cases the employment people leaned over backward to placate the fears of the school people who did not want them to select trainees and refer them. Cooperative approaches were set up and in a few cases I think the trainees were sent out to the school to take a look at the facility to be sure that was what they wanted to be a part of, and the school people felt under these circumstances that they did interview these trainees and so they did accept them.

Now I know of no case in recent years where we have had any difficulty in this area or field. Let us now talk about how we work together. We do it in several ways and on so many levels that we have to over-simplify in order to make a short speech about it.

Starting at the local level, the local school and the local employment office, we will talk about MDTA first since it is more complicated and more involved but it illustrates more intensively what may happen.

The Department of Employment local office identifies a need. Maybe some industry tells them about it. Maybe they run a check and do a job survey

and decide twenty electronic assemblers should be trained. Interview enough people, watch the people at work, find out what they need to do and then write out this prescription which calls for twenty workers who can do this job upon graduation. We estimate a time that it might take to do it. The form (MT1) goes through channels of course; always to the area employment office where it is reviewed and approved. It then goes to the Sacramento office where it is reviewed and approved. Then it goes across the street through one of my several bosses where it is reviewed and approved. The form then comes back to the regional educational office and the regional office assigns it to some school to do the work. They might call John Stead, Coordinator of Vocational Education, Ventura Unified School District and ask him if he can train these twenty people. The program will take about so long and we ask him to make a budget to see how much it will cost. In a way that may seem a little silly because that piece of paper went all the way to Sacramento and back, which took about three weeks, and maybe the school is just across town somewhere. This is the way it has to work apparently.

The school makes out a training plan, writes a budget and sends it back to us and it then goes back through channels to Sacramento and is approved along the way. There is an approval team composed of Department of Labor and Department of Health, Education and Welfare people who must approve the project and then it is ready to start.

Employment identifies the need, determines the competency level needed, the school writes the training plan and then we are in business. Of course the school makes reports because their work has to be checked for the training and also for payment of training allowance to the trainees. The school has to report frequently on how many people they have, if any have dropped out, and so forth, so that the Department of Employment manages to get the allowance to each trainee regularly though I still don't see how they do it. It seems impossible.

At the regional area level, and the county is always a confusing element here, except Ventura County, sometimes the county school office is in on the original. A good number of the projects here originated in the county working with the Department of Employment. They then come back through channels. Sometimes the county schools office works directly with the area office and sometimes they work directly with our regional office in education.

They get in on the program on two levels. The regional office where Ed Roberts the assistant regional supervisor of Industrial Education, and I work in Los Angeles, works with the local employment offices, also with the area offices and most of our operations there are on committees. There is a committee for everything and usually these coming programs are discussed in committee before they get to official action. This committee might be one formed by our office or it might be set up by the local employment office or by the area

employment office. The committee meets informally on the call of the chairman. The programs are discussed there.

At the state level, again we cooperate with employment in a number of ways. We work together at the state level in major training needs, changes in industry that look as if they may affect everybody in the state, semi-political problems, not usually partisan politics but manuevering politics. We have two or three committees to handle these. In recent years I don't know of any serious disagreement that has come out of these committees. There have been some minor disagreements, yes, mostly a matter of operations or tactics rather than long term or policy, but when a decision is made it is passed on through channels.

Nearly always, strange enough, the memo the employment people get says about the same thing as the memo which we get and in this way we avoid confusion. In fact, it is about to get to the point now where it is not much fun in this business anymore because we don't have any good fights. It gets kind of dull if all you do is get a memo and read it and initial it and the work is completed on that job for the day.

Getting back to the selection of trainees just briefly, this is one of the places where we had trouble earlier. This was because the school people and the employment people did not work together closely enough. For example; suppose we have a training job to do and employment people are able to recruit high school graduates. This would be a different training job than if employment could not recruit high school graduates. Obviously if a youngster or an adult is going to have to learn a little arithmetic or science or whatever and he doesn't know the basics of it, the training job will be longer than otherwise. That is why employment people and the school people get together and talk. It is essential that each party understands the problem and what we are going to have to do with it.

We had one or two cases in which some of our boys would call up about a program and indicate they could not handle the program. The reason was they expected all students to be high school graduates and they actually got only three graduates in the entire class. What was the story? Well, there were just no high school graduates who could be recruited for that job. Here, again, maybe we slipped in our communications system just a bit but it took a few cases like this to work out patterns of successful operating procedures.

Once the trainees are selected now I guess the operation is almost faultless. I don't hear any complaints regarding this matter.

The other place in which we had to beef up our operations a little was in training to a designated job competency. How do you spell this out. How specific can you get. More and more those job description are more and more definitive and soon it became possible from the job description for the

instructor to know what he had to do. Sometimes the instructor visited two or three plants and saw the people at work. He then knew what had to be done. All he had to do was train to that job competency, refer the trained people back to the Department of Employment and they were placed. Placement has been good in most cases.

As school people, one of the knotty points we are concerned with is with evaluations and follow-up. Anything that you can do and work out here in Ventura County to improve your follow up of students, the graduates, and see what they are doing, how well they are getting along, would be appreciated. Feed that back into the training program and it will be helpful. This is one of the places, I believe, where we need more time and money spent than we have been doing. We would certainly like to know of any development here in that direction and as I said in the beginning, if anybody gets a good answer, it probably will come from Ventura County. Let us just leave it at that until the workshop this afternoon.

"EMERGING AND DECLINING OCCUPATIONS"

Speaker:

Anne Lewis
Supervising Job Analyst

Department of Employment
Field Center
Los Angeles, California

"EMERGING AND DECLINING OCCUPATIONS"

Speaker: Anne Lewis

I can't tell you how delighted I am to have the opportunity to talk to counselors. First of all, I rarely have the opportunity to talk to any group of people so this is kind of a new and novel experience for me. Secondly, in our little isolated way we are concerned entirely with employers and in new jobs and old jobs and so on, and almost never have the opportunity to talk with people who are instrumental in getting younger people into these jobs. For me this is grand. I have been looking forward to it.

I have expanded the topic somewhat by request. Initially I was going to talk about new jobs coming in and old jobs declining in the economy, but it has occurred to several of us that high school counselors are faced with a unique and difficult problem in this youngster who is not going on to college. I was thinking to myself that if I were a counselor with the pressures that counselors have, and I have a couple of good friends who are counselors so I am aware of the administrative pressures, there is always somebody waiting, you're late, and there are all the interruptions, I would know that 9 out of 10 youngsters are being prepared for college and I would know that 1 out of 6 would go. So what am I going to do about it? This is the problem.

You see I am wondering how it would feel to be one of the people who has to struggle with these problems. I would think that there would be a lot of kids in my office that I really didn't know what to tell them. As Odessa pointed out, it is a placebo. You say something and hope that maybe they will go in the right direction and hope for the best. This is hard on everybody. It occurred to me, too, if not in your office, certainly nearby there may be a kind of Aladdin's lamp to solve just this problem that we are talking about. The genie really comes out of the bottle, and this is what I want to talk to you about. It is called the Dictionary of Occupational Titles. You're familiar with this, I know, but I doubt very much if you have ever had occasion to really use it. If you have ever gotten so far as to have read the instructions, you may have given up. They are deadly. There are instructions as to how to use it. But Volume II of the DOT was designed especially for counselors. This is not generally known. I am so enthused about this volume and what you can do with it in five seconds flat that this is what I have decided to talk about. We felt that you might find this interesting. The short cuts used in Volume II that will help you with this youngster who you are trying to help.

Let me tell you then that the Department of Labor, for some background, is charged by Congress with keeping the country completely up-to-date on what is happening with the economy. As the kids say, "What's happening." It is

part of our job to keep the country posted and one of the ways we do this is to study industries in the United States. There are eight field centers. Headquarters is in Washington and field stations are around and about in the United States and there are from 10 to 15 job analysts in each one. Washington has simply parceled out the industries. There are about 250 of them. In the Los Angeles office we have 65 industries and it is our job to know what is going on in these industries all the time, from top to bottom.

We get our information by going to these industries and by studying the job and talking with the workers, but going to two or three companies in the same industry so that we are sure our information is accurate. Then we write about it. In your packet which has a wonderful collection of material, you will find what we call a complete job description which I thought would interest you because it's about a Maitre 'D. I just went through our files to see what might be of interest to you. Rather than ask you to plow through a machinist job description or something like that I picked a job that everybody knows. The Maitre 'D at the plush hotel. This information consists of a complete job description for him.

You will see that it goes on for several pages. All of it is occupational information and all of it goes to Washington and from this the material that is in the Dictionary of Occupational Titles is extracted. This is how they do it. Just look at the first page. Just glance at it. It is long, 250 to 300 words or so. In the dictionary it is much shorter.

You will also note that some of the other pages are not reflected in the dictionary definition. The other pages turn up in Volume II which is what I want to talk to you about.

For all of the thousands and thousands of jobs in the DOT, there are at least two sets of job information like this. For example; there will be two Maitre 'D's. One from Los Angeles and one from another part of the country and these are consolidated in Washington so that the job definition reflects the way things really are across the country. This is not anybody's effort to set standards. It is the effort to report things accurately and up-to-date. That's how each of the definitions is obtained.

Now as you go on into the back of the DOT you'll see something called physical demands and codes and all sorts of things that are involved in our ratings of jobs. This material is used in Volume II.

Let me read something from Volume II. See what you think of it. These are the worker requirements for a job cluster and it says, "An occupationally significant combination of sympathetic attitudes toward the welfare of others; capacity to absorb training and apply knowledge to the solution of diverse problems; verbal facility to relate to people of all levels; organizational ability in order to plan and direct guidance programs; tact, poise,

and general demeanor tend to inspire confidence and esteem." Those are the worker requirements that we say are essential to counseling. There is nothing here about training, nothing here about high school courses or college courses or on-the-job experience.

These are the traits we're concerned with in Volume II and this is essentially what you are concerned with. Your youngsters may not have had any experience or training. It would seem to me that you have various tests that can be administered and a counselor's own judgment is simply supported by the tests and you can get by without them. Your problem would be to identify their traits. You can tell at about the 10th grade about a child. Is he mechanically inclined or not? In which way, generally, is he going. This part isn't hard but this is a worker requirement that you are thinking about and it is not a personality trait. It is not abilities.

When you are thinking about jobs, this kind of thing becomes a worker requirement. The worker must have this ability to do the job. Volume II is loaded with dozens and dozens of worker requirements. Suppose someone comes in who has different kinds of abilities from the kind you are familiar with. Some of them are not as easy to recognize but there must be some way to evaluate them. A very good way to evaluate is found in Volume II. Volume I is also broken down by description, but in Volume II there is a coding system. . . a short cut. Every job in the DOT has six numbers or digits, three numbers, then a decimal and then three more numbers.

These last three numbers to the right of the decimal with the use of the DOT, Volume I, can give you a world of information once you have the key, and the key is in Volume II. Of these last three numbers, each stands for a point in a hierarchy of three different kinds of ability. You might think of it as being columns instead of numbers.

In the first column is a kind of ability we happen to call "Data." A more familiar phrase may be "abstract ability", the ability to handle concepts. The next number or column would be "People." There are different social skills and I equate that with social ability in the psychological sense. The third number of course we call "Things", but it is broadly equated not by any system. We did no research on this but we are talking about how to use the DOT. The third one is broadly equated with mechanical intelligence or concrete intelligence as it used to be called. These are very broad but what you're after are these three numbers.

Any number there from 0 through 7 has some meaning. The higher the number, the less the ability. In the back of the book, Volume II, you will find definitions for each of these numbers through number 9.

If you want to put your own number, just for an example, under data or the abstract the first number would be 1. This means "coordinating" and by our definition this means determining time, place and sequence of events

and determining courses of action and so on. The second number would be 0 for counselors and this is as high as we can go. We define it as "mentoring" which means professionally you give advice. The third column is 8. Nothing significant there. The third column is mechanical intelligence, mechanical ability, things that you actually handle in your job. This doesn't mean that you don't have the ability, but things you handle physically in your job.

Remember mechanical is a physical thing. You and I speak of handling this or that problem. In the DOT when you handle something it means pick it up. All you ever pick up, and this is enough, is pencil and paper, books, reports and telephones. It's what goes from what's in your hand into your head that matters. You are rated high on coordinating and high on working with people. From our point of view, a high school counselor could have one hand. He could do a beautiful job. Remember, the third column is concrete, tangible. The top level there just for information is precision working and this would be a top flight machinist. You can see he is very busy with all sorts of gauges and tools, and machines, and you'd have to go with him to find out what he does. The three columns and their definitions can be so useful. If you have access to Volume II, use it.

I would suggest that you get a 3"x5" card and write down the meanings of Volume II codes. I could read them to you but that is probably not feasible, and it is tiresome.

Let's say you wish to look up a job in Volume I DOT. Someone comes in and asks you what is a turkey inseminator. Something impossible and which you have never heard of, after all, there are 30,000 titles. Someone wants to know about a job and with your little 3"x5" card you turn to Volume I and find that you are using it as a regular dictionary. If you want a carpenter look up "C" and you will find carpenter. You read the definition, find out what it is. Now you have your 3"x5" card which tells you what kind of worker traits are involved in this job. There are the six numbers and you have the code system for the last three which is what you want to know about.

So here is someone with no mechanical ability coming to talk about a job. You can see from the way it is rated it requires real mechanical skill and you can point this out. You may not always get this from the definition but you will always get it from the rating. This is sort of instant do-it-yourself evaluation of the job and for high school counselors I should think this would be invaluable.

For counselors in the local office this would be a horrifying way to do anything but for high school where you are just trying to get the general idea, this is extremely useful. It may seem as if I am almost selling it but I feel so strongly about this that I do urge that if your schools do not

have this, then they should get it. You can get it from the Government Printing Office and I think the total cost is $9.75 for both volumes.

With the way it is arranged with the worker traits, Volume II has an entire set up by industry, also. If you want to know what's in the plastics industry, which is a new one here in Ventura County, you look and see the various job titles in the plastic industry. Frequently, just from seeing what the titles of the jobs are, you can get a very good idea of what's going on and it might be pertinent to some youngster that you have. You can make a list of titles in 20 seconds. So there you are. You don't have to call anybody. You don't have to say go here and go there. So much for the DOT.

Now in the emerging occupations the new jobs that you hear about - one of the most interesting things to me is that 99.5% of them are not new to the economy. They may be new to the industry where you see them. They may be new to the West Coast. They may be modifications of old jobs. But the skills and duties involved are not new and there is certainly nothing magic about the talents needed in today's market.

There is a difference, for example in the medical industry. In the entire medical field now there is a tremendous emphasis on computor related abilities. This is new to medicine but it has been going on in banks as everybody knows and in insurance companies and so on. The skills here in medicine are not the same as those needed in let us say a clerical job in the medical field. They are not the same as the skills needed in a bank for reasons which I'll get into later if I have time. But the actual skills such as running a teletypewriter or coding the information are exactly the same. Nothing new. There's nothing new about coding itself. It goes back in time.

So when we hear of these new jobs, we think so much of the glamour jobs, the rocket going off into space, the electronic marvels and so on. But from an occupational standpoint of what it takes to do this kind of work there is very little of what is really new.

What we have are new combinations so if any of you ever feel apprehensive about this brand new whatever it is that is coming on the market, or a new kind of a job, I think you can find what you are looking for in a counseling problem if you remember the elements of this job, whatever they are, are probably not new. The overall picture itself, may be, but not the job. As pointed out, the profile, if you think of all 30,000 jobs as being on a scale, there are now not so many buggy whip makers, but there are some. There are! Disneyland is one for example. So this has not died away.

As far as I know, there is no rumble seat upholsterer but I wouldn't really say this job has gone because sure enough here would come a renovated Cord or something like this. But instead of having alot of rumble seat

upholsterers now we have only one or two.

Instead of having only one or two programmers 30 to 40 years ago in electronic data processing, now we need thousands. Same job, more people. Same job, fewer people. This is generally how it goes for the entire profile, not so much the jobs but the profile. So when I speak of emerging jobs I don't mean brand new that have just been crystalized out of some powder somewhere. These are jobs that are on the increase in the economy and there are quite a few of them.

An example is the electronic data processing field which is not unfamiliar to a lot of people I know. I am speaking only of high school graduates. I have eliminated anything beyond that. We all know the cry for systems analysts and engineers is tremendous. But this is not your problem at all. The data typist people and the computor operators and the coding clerks and the tape librarians and the various data processing trainees are in considerable demand. Now these jobs require people who are good with details. Now I leave you with that problem. How can you tell whether a 17 year old is going to be good with details on the job. I don't know. But this is one of the worker requirements. Certainly the ones I know are not good with details around the house but what they would be like in a job setting is something else again.

Most employers in the medical field will train their own people and this is really important. The medical field as you know is expanding tremendously, what with Medi-Care and every one having more insurance and so on. Other companies are not so active. So you can keep your eyes and ears open about such things and keep checking with Mr. Capritto over at the Department of Employment office. The local needs for keypunch operators, should some students develop an interest in this area or not depends on where this person is going. In some areas there is quite a need for keypunch operators and not in others. Some high schools will train for it and some won't. I think really your best bet is to stay away in your thinking from specific jobs training. If the youngster has clerical ability you can help him find this out. You can tell the youngster where to go for training. This is all you can do except check curricula. If there are office courses available this youngster should enroll in these courses.

I was to touch on the service representatives. There is increasing demand for these people. This is like the telephone company. Business service representative. The utilities have them, too. Manufacturers have them. There are quite a number of them in these areas. And these require youngsters with more of a sales or promotional ability. Office manager trainees.. here again just the same thing. Picking this youngster up at about the 10th grade and checking into the possible office courses available. Sales trainees and warehousemen... believe it or not, warehousemen are coming back. Maybe you didn't realize that they had been away but they had. The entire

materials handling industry has changed enormously. It used to be that everything was loaded and unloaded by muscle. Not anymore, this is all mechanical now. But now it takes a combination stock clerk and dispatcher and they generally call this job now warehouseman. I'm giving you a very rough run down on that. They are in demand. In many of these fields, the promotional possibilities are good.

I don't want to be too specific because I think this would just obscure the things that you can really do. Also, because it may be different within six months anyway. The revolution is going so fast that it is hard to keep up with specific changes, only trends. But for a youngster who is not going on to college, promotional opportunities are excellent in many areas. The utilities are very good about this... the gas company, electric company, phone company and so on.

I would like to point out here and stress an aspect of these promotional possibilities. One thinks of everyone as becoming at least vice president, and if he is sort of lazy maybe only sales manager, or whatever. This never happens. I think it is very helpful to be realistic about this. No job is necessarily a dead end job for anyone and no job is necessarily going to lead to a promotion by itself. It is much better with your youngsters to think of them in a field where they belong and leave the rest of it up to them, once they get in. We get some pressure on us and justifiably so.

People ask what is the promotional line to general foreman, or to being superintendent of schools. This is a good example. You are not superintendent of schools and to establish my point, without being flippant, I would say well why not. Didn't you get your bachelor's in education. Don't you have a teacher's certificate. You have your counseling credential. No administrative credential? Well, you can get that. If you really want it. You see, this is what happens to everyone on a job. Either you are where you are now because that is exactly where you want to be - you don't want to be superintendent; you're not interested in promotional possibilities - or there are any number of excellent reasons for stopping right where you are or for changing fields altogether.

Your students are going to do this too. I would not be at all concerned about anybody who you organized for a job which is apparently a dead end job. If it's the right field for him, he will be all right. Don't worry about it. And if it's the wrong field it's going to be a dead end job for him. This is the way it works.

In addition to the industries I've touched on, insurance is booming. Insurance jobs now are mostly electronics data processing related. Medical health science is expanding enormously. I have spent all year until the first of

October writing a small book getting all the information, a fascinating assignment, on the application of computors in the medical health sciences. I am certainly up-to-date on what is happening there. I had a marvelous series of experiences. I went to some 40 different firms that were busy manufacturing parts and what not and all the universities and hospitals nearby. We have isolated 19 new jobs. These are really new combinations, ranging from a lab aide who requires an 8th grade education, to the much in demand junior college graduate or college graduate systems analyst. The computer has really arrived in medicine.

This business of diagnosis by computer is nonsense. I mention this in passing because it is so overrated and over-talked. The computer is a calculating machine and a giant file, and that is all it is, really. One can do marvels with the calculator if you happen to know advanced mathematics. So when you hear of a diagnosis being made by a computer what happens is that certain symptoms are given to a computer and quick as a wink it compares these symptoms against thousands and thousands of other diagnosed cases and out pops the anwers. It really does seem like magic. Your symptoms may or may not match. That is all that happens. It has nothing to do with occupational analysis or high school counseling, but it is an interesting point and I thought you might care for it.

I am running overtime and I am sorry. I am looking forward to any questions you might have.

School Counselors at Labor Talks

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Students 'Most Valuable Economic Resource'

OXNARD — Over 125 county high school counselors were told Wednesday that they "are dealing with our most valuable economic resource – the worker of tomorrow."

Odessa Dubinsky, a labor market analyst with the State Department of Employment, said that young workers will provide "almost half the additional labor supply in the decade . . . and the amount and quality of their education will be important to them and the nation."

Miss Dubinsky was one of the speakers at the day-long Occupational Information Conference sponsored by the Ventura County Vocational Resources Committee at the Community Center.

It was the first conference of its kind ever held in the county.

Miss Dubinsky said manpower and employment problems are of high significance in these days of fast labor force growth.

"A high rate of employment co-exists with an existing shortage of certain types of workers," she saidd.

"The level of technology attained by this country has brought about its own paradox" and "it is a national phenomenon that poses an equal threat to the Mississippi cotton worker and to the Illinois steelworker in his possible loss of job."

Miss Dubinsky said that "knowledge and understanding of industry trends, what foments changes and what is expected in the future are all essential to the directing of the prelabor force into those oocupational fields of most advantage satisfaction and potential."

She told the counselors that "it is our business to work together in this new climate of interest and understanding to help the coming workforce enter the world of work with marketable skills, with appreciation of the labor market and with a good opinion of themselves."

Mrs. Anne Lewis, a supervising job analyst with the Department of Employment, Los Angeles, said that 99.5 per cent of the new jobs "you hear about are not new to the economy."

"They may be new to the industry where you see them," she said, "they may be new to the West Coast but the skills and duties are not new and there is certainly nothing magic about the talents needed in today's market."

The conference also included a number of sectional meetings and workshops.

A. J. Capritto, speaking for the Vocational Resources Committee, said, "The motive for the conference was to show the school counselors in the county an authentic view of work opportunities."

He said the conference was "especially timely because the county is now shifting to a broader industrial base — we have new industries, new job requirements and there is a rebirth of interest in vocational education."

The Press-Courier
October 12, 1967

"FUTURE OF VOCATIONAL GUIDANCE"

Speaker:

Dr. Al Powell
Special Consultant
Bureau of Pupil Personnel Services

State Department of Education
Sacramento, California

"FUTURE OF VOCATIONAL GUIDANCE"

Speaker: Dr. Al Powell

To dedicated believers in a Supreme Being, nothing is more earth-shaking than publicity given to the concept that "God is dead." Such concepts rock the boat. Boat rockers by-and-large are unwelcome in stable institutions; if you don't think so, try being one.

To dedicated believers in vocational guidance nothing has been more earth shaking than the numerous articles and books that purported to write "The Epitaph for Vocational Guidance." The idea that vocational guidance might be dead has rocked the boat. The boat rockers have forced many believers to take a closer look at vocational guidance. A current national and statewide trend can be documented: Vocational guidance programs are being revitalized, the birth rate of vocational guidance programs is increasing and more attention is being paid to vocational guidance than ever before. It is only Frank Parsons that is dead.

Trends must have at least two different places in time in order to plot the direction and the speed of growth. I have chosen three points in time: (1) The status of vocational guidance in California two years ago as reported in A Study of Counselor Education in California; (2) current attempts to revitalize vocational guidance that are being tried in various places in California today; and (3) a projection to the year 2000.

By mandate of the California Legislature, the Bureau of Pupil Personnel Services was requested to "conduct a study of alternative methods of expanding programs for training vocational counselors..." Five recommendations resulted from the findings of the study:

Recommendation 1: Additional funds should be provided by the legislature to the public schools. These funds should be earmarked for the following purposes: (a) to improve the ratio of counselors and students; (b) to improve and extend physical facilities and materials for guidance and counseling; (c) to provide released time for counselors to work in the local community for the purpose of studying the labor market; (d) to provide for the assignment of a credentialled counselor in each secondary school as a full time specialist in vocational guidance; and (e) to provide counselor aides or guidance information technicians to assist the regular counselors.

Recommendation 2: The State Department of Education, specifically the Bureau of Pupil Personnel Services, should develop and conduct regional

inservice workshops for school counselors which focus upon local labor market information and career planning activities. The cooperation of the California State Department of Employment should be enlisted in these activities. Workshops might deal with such specific topics as educational planning (including a description and in-depth study of junior college and trade school offerings), entry employment (a description and in-depth study of entry jobs in a given geographical region), theory and procedures of vocational choice (study of recent research on career development theory and of the use and application of occupational information).

Recommendation 3: At the state government level, an interdepartmental committee on vocational guidance should be established. Departments such as education, employment industrial relations, rehabilitation, and social welfare employ counseling personnel who deal with vocational guidance. The need for expanded training programs would be an appropriate subject for consideration by such an interagency committee.

Recommendation 4: Local school districts should expand their vocational guidance activities, such as by: (a) increasing the time available for counselors to study the business and industrial community; (b) conducting inservice education programs to assist counselors to become better informed about the importance and the techniques of vocational guidance in the school counseling program; (c) encouraging youth opportunity center counselors and other agency counselors (social welfare, rehabilitation, etc.) to participate in the school vocational guidance program.

Recommendation 5: The colleges and universities which prepare counselors should: (a) evaluate their course offerings in the area of vocational and career planning and extend and strengthen them as needed; (b) work cooperatively with the State Department of Education on the development of programs at the bachelor's level or below to prepare counselor aides who would deal essentially with information - its collection, collation and transmission; (c) establish, if an emergency exists, a short term (6-8 weeks) full-time program for counselors of out of school youth, e.g., Job Corps counselors, followed by weekly, continuous inservice training at the completion of the basic course of study.

Many of the recommendations have already become evident in various programs throughout the state. What then are a few of the promising programs that seem to be revitalizing vocational guidance?

(1) Project Search in Stanislaus and Santa Clara counties has provided data of graduates over a period of five years. This continuous and intensive follow-up has supplied data which has pointed out and justified changes in curriculums and in counseling and guidance programs: (a) the increased use of the General Aptitude Test Battery; (b) activity

units rather than more traditional "text-book" units; (c) industry adopting a school; (d) inservice training for school counselors; (e) an improvement in the use of student records.

(2) Project VIEW in San Diego and the use of 16mm cartridge loop films in San Mateo have revolutionized the presentation and use of occupational information.

(3) Palo Alto and San Diego have utilized the games approach to career decision making.

(4) Planned programs of vocational guidance from kindergarten through 14th grade are appearing.

(5) Vocational counselors are increasingly prevalent and their role is more clearly defined.

(6) Interagency resources are cooperating in total guidance efforts which encompass whole communities - for example Project ACCENT in San Bernardino.

(7) Career Guidance Summer schools are being established. A very successful one the last summer was operated at Mt. Diablo.

(8) Considerable effort is being placed by some school districts on "Employment Readiness" - notably the Oakland Unified School District.

(9) Federal monies are being supplied through various titles to improve vocational guidance: (a) VEA and NDEA are jointly funding several projects; (b) ESEA, both Title I and Title III, is making possible innovative vocational guidance programs; (c) OEO in many projects has provided career information and retraining opportunities.

The new emphasis on vocational guidance is exciting. And now, what of the year 2000? I take my data from a report entitled Summary of the Working Papers of the Commission on the Year 2000. I shall mention only a fraction of the projections this study makes and some of the implications for vocational guidance:

(1) People will go through career cycles. The use of leisure will involve vocational education and retraining. There will be a need for accommodating the people to a career sequence. There will also be the need for education for enjoyment of the finer things of life as illustrated by good literature, artistic creations, craft work, athletics, and so forth. There will also be the need for further education in civic participation.

(2) Indecisiveness about what to educate for will increase.

(3) In the western world the typical worker will work 1, 100 hours per year. This will be a 30-hour week with 13 weeks vacation.

(4) We shall develop measures of educational status rather than school completion.

(5) The most distinctive character of our society is, and will become even more so, its education. Within fifteen years two-thirds of the metropolitan population will have attended college. The experienced professional will go back to school for advanced training every two or three years. The survival of a firm will depend upon proper exploitation of brain power. There will be increasing job mobility. Participants will be shifted from job to job and even from employer to employer with little concern for roots.

(6) People will be more intellectually committed to their jobs and will require more involvement, participation, and autonomy in their work. Jobs will become more rather than less involving. Man is a problem solving animal and the tasks of the future guarantee a full agenda of problems.

(7) By the year 2000 education of many kinds at many different levels for human beings at all stages of life and from all over the world will become the central activity of people in the United States.

(8) The very probable growth of adult education can take place within some rubric such as vocational rehabilitation, but it might be more positive if developed within (a) more vividly established patterns of alternatives between periods of productive labor and periods of education, (b) development of meaningful patterns of social and civic participation, and (c) enrichment of leisure time activity.

The future of vocational guidance seems assured. I am not sure just what form vocational guidance will take as an adult - I have dealt with enough people in enough agencies and school districts to know that by the year 2000 everyone will not have agreed as to the ideal vocational guidance program.

I feel as though I am speaking to an audience of only vocational counselors. If you call yourself a teacher, the application of what you teach to whatever the future might hold for the youngsters in your classes is in essence vocational guidance. Teaching will become even more practical and applicable. If you call yourself a counselor you do vocational counseling whether you recognize it as that or not for every educational decision and many personal decisions influence vocational decisions. If you call yourself an administrator you are participating in a vocational guidance program as long as you continue to evaluate the success of your school

in terms of the success of your product, the youngsters themselves, in either school or on the job or both. Any follow-up study will show the influence of parents on the vocational decisions youngsters make. So even as parents you are involved in vocational guidance. Those of you in placement, rehabilitation and personnel work know that you are intimately involved in vocational guidance, directly so. All of you serve as adult models and in that respect you are part of a vocational guidance program.

In view of what vocational guidance has been, is, and shall inevitably be, I have a plead: Recognize that vocational guidance is as much an attitude as a fact. I urge you all to hasten to recognize that you are all vocational counselors; it is an inevitable role that you must play. There is both a great need and current movement to improve vocational guidance practices. With this particular group it seems safe to bet that vocational guidance does have a brilliant future.

"WHAT SHOULD A COUNSELOR KNOW ABOUT INDUSTRY"

Luncheon Speaker:

Norman Nicholson
Vice President

The Talley Corporation
Newbury Park, California

"WHAT SHOULD A COUNSELOR KNOW ABOUT INDUSTRY"

Speaker: Norman Nicholson

Ladies and Gentlemen. I want you to know that I am proud and honored to be here with you today because in my opinion through these portals have just passed the sculptors of America's future - the Michaelangelos of America's tomorrow. Truly our future is in your hands. Are they strong hands? What are you going to do with this great responsibility?

First, we all know that the greatest counselor of all was Jesus Christ. The basics which he laid down must be your guide as a counselor. Love of people. You must have faith in people. You must have the desire to help them. You are your brother's keeper. Above all, you must believe in young people--really believe. If you don't feel this way, you're dead--as a counselor forget it. Other attributes of a counselor called for by the State of California Department of Employment in their occupational guidance descriptive bulletin: "Vocationa Counselor #381" are summarized as follows:

Vocational counselors serve people of all ages and conditions, helping them select and develop career goals. They deal with a more varied group than other counselors, and require the widest possible knowledge of people, community needs, job requirements, and industrial trends. This field is expected to expand greatly within the near future as a systematic program is undertaken to find income producing occupations for the many individuals who either have never found an opening in the current labor market, or who have been displaced from their jobs by the mechanized and/or automated processes which have eliminated many simple, heavy labor, or repetitive jobs.

School counselors help pupils still in the educational process in making and carrying out plans for their education and training for work. This has come to be such a widely accepted practice that nearly all schools provide at least a part-time counselor. However, the school counselor's time for each pupil may be limited, and up to the present time much school counseling has been college-oriented. This must be changed.

The basic objective of all vocational counseling is to help the individual seeking counsel to obtain enough knowledge about himself, his abilities and how they relate to the community and industry, that he may make his own decisions regarding work and plans for the future. The counselor is concerned not with giving advice but with giving information and identifying pertinent facts and conditions for the counselee to consider.

Much of the counselor's time is spent interviewing, both to get and to

give information. In public agencies the counseling objective may be to get the individual into productive employment as soon as possible, and the interviews are unusually limited in time and scope. In private agencies the focus is more often on a long-term goal pointed toward a life-time career, and extensive analysis and counseling may be involved, and a long look into the future is required.

The counselor helps the person seeking counsel to evaluate his capacities and preferences, and discusses with him the types of work suited to his qualifications. Places where such jobs may be found are pointed out, and the usual way of preparing for or applying for such work is indicated. If a long-range plan is sought by the counselee, he may return for subsequent interviews as long as he feels a need for further information. If immediate employment is the goal, the counselor tries to help the individual locate an opening for work.

Although a counselor must be understanding, he should strive to keep emotion, sentiment, and personal bias out of his work. He recognizes, evaluates, and, when necessary, points out, but does not criticize or recommend. Among qualities desirable in a counselor are tact, patience, and the ability to meet difficult or startling situations impersonally and matter-of-factly. He needs to be able to speak and express himself easily and effectively, and to write concise reports.

Second, you should know that industry now needs hundreds of thousands of vocationally trained personnel. Harold Johnson and I were talking and we decided many other industries should also be here today, such as 3-M, ABEX, the oil companies, supermarkets, Statham. They all need help in your orienting youth toward work in their companies.

U. S Steel Corporation's capital spending program is lagging far behind schedule. Reason: Lack of skilled employees.

Boeing and Douglas aircraft companies have been forced to delay jet deliveries. Reason: Suppliers can't find enough trained manpower to turn out engines on time.

Job openings for 2,050 electricians, machinists and tool-and-die workers which were opened last June in Bridgeport, Connecticut, according to the Wall Street Journal, were still open after June had come and gone. Reason: Only 287 men in the area had completed the necessary training.

Talley has gone to Europe and Canada on hiring missions.

These are just a few examples of how the current, severe shortage of skilled craftsmen is affecting the nation's industries. The labor department estimates that by 1975 four million workers with new skills will be

needed; only 255,000 are being trained right now. Yet, ironically, men are losing their jobs daily because their skills are obsolete. An the high incidence of unemployment in many of the nation's pockets of poverty is holding steady.

This is why the coming revolution in vocational education is, to borrow former U. S. Commissioner of Education, Francis Keppel's phrase, "a necessary revolution." Inspire them for this revolution.

These trends make the role of the vocational counselor more essential. Make your students feel needed. Make them feel wanted, they are important. Make them feel that way.

Third, you should know industry expects the public school system to do the vocational education job.

Manpower Research Council, Milwaukee, Wisconsin, has made a report compiled from information furnished by 930 companies throughout the United States. The participating companies had a total of 4,375,665 employees, an average of 4,705 per company. It is the feeling of the respondents that numerous institutions are at work in the community to provide skill training, but 60% feel that this training falls short of their company needs. This remissness is most serious in public high schools and public vocational schools, where many are not offering courses at all and many who are offering courses are not tailoring them to present-day business needs. This occurs despite the fact that local institutions are being provided with specific educational requisites. Participants in the survey expressed great willingness to serve on advisory boards to correct the situation. About 50% said they feel their universities lack adequate vocational training facilities and recommended public high school and in-plant training only as an emergency. An overwhelming percentage (over 85%) are in favor of development of public vocationally oriented technical colleges on a two-year basis.

Fourth, you should be knowledgeable on all matters about personnel industry needs, job descriptions, rates and trends of jobs and rates for the future.

Counselors must keep current with labor market information--both general information covering national needs and changing trends, and local information on existing jobs and probable future needs of the area. He needs to know the requirements and duties of all common jobs, and where to get authoritative information on the more unusual ones. He must be informed on labor laws and regulations--city, county, state, and federal. Many kinds of work require special licenses, health guarantees, and the counselor must be able to furnish all this information.

Counselors must be prepared to spend a great deal of time either talking or listening. They may be occasionally required to make visits to employers, and to attend meetings of civic, educational, and other groups.

Membership in professional societies is not a job requirement, but many counselors belong to the American Personnel and Guidance Association, or the International Association of Personnel in Employment Security.

The State Employment Service is a treasury of information--rely on Francis Bawden, Dorothy Castello and Tony Capritto.

Get in touch with Chuck Brady, Coordinator of Vocational Education, Ventura County Schools. Lean on him hard. If he doesn't know, he can tell you where to get the answers.

Industry wants to cooperate with you, to serve on committees to help you determine jobs to fill, jobs to sell your students.

Industry wants to help you build the stature of your job in Vocational Counseling and to pay you commensurate with your efforts. School administrators must get this message.

Fifth, industry wants you to know the nature of the multitude of vocations, trades and jobs it offers so well that you can relate the results of your student's aptitude tests directly to the logical jobs fitted to their aptitudes. The Dictionary of Occupational Titles by the U. S. Department of Labor is invaluable to acquaint you with job requirements. Industry wants you to know these backwards and forwards. Also skilled aptitude testing is a must.

Tests are a major tool of the counselor. A variety of tests have been developed by psychologists and educators to measure many characteristics which an individual may possess. Counselors must be familiar with all types commonly used tests in order to be able to interpret and evaluate the test results. Those most often used include intelligence tests (principally used by the schools), preference tests, aptitude tests, and physical performance tests (most often used by vocational counseling agencies). Private agencies frequently offer comprehensive tests, including types which explore personality factors as well as general intelligence and specialized abilities. Test results may indicate to a counselee the level of complexity at which he is best qualified to work, and fields where his natural endowments would help him succeed.

Counselors are responsible for the records kept on each counselee. These usually begin with a vocationally significant appraisal of the individuals seeking counsel--his background, education, work experience if any, physical abilities or limitations, and hobbies and preferences if any. If tests are administered, the test results are included

in the record and progress reports are added until the case is closed. The counselor may need to contact other agencies--schools, parole offices, medical clinics, or past employers--for information on the counselee's capacities and the extent of his employability. A young man with a history of asthma, for instance, regardless of other physical abilities or preference, should avoid work bringing him into contact with dust or fumes. A young woman on parole after a conviction for theft has no likelihood of obtaining work as cashier, regardless of her abilities, past experience, or preference.

One thing we know for sure about students--most of them need someone to talk with, someone to listen. We are good at that. It is a missing element in too many districts. Plenty of time for the bright articulate students. "No time for the Dummies."

So in counseling, listening and talking is important. Can't you just see your own desk with the stacks of folders on it. . .with all those lost identities in them and no time to handle them. What can be done about this? What can you do to bring this to the attention of your superintendent and board and get something constructive done to help this stack of lost souls? Industry wants to help you.

In the Portland Community College everyone is an advisor. The director is an advisor. The business manager is an advisor. The coach is an advisor. And still they say their biggest problem is to develop better skills in advising students, especially when they enroll so many dropouts in the area. These people have to have practice, and you can't let them practice without observation and guidance. It is guidance, guidance and counseling and advising, from before they come here, if they were in high school, until they finish a training program here, and then it might even continue after that.

Sixth, industry expects the vocational counselor to be a real manager. You have to be a self starter, a spark plug managing the cause of vocational education and selling it from the bottom to the top, inside and out. You have to get everybody for you: The school superintendent; the principal and staff; the students; parents; civic groups; the press. Yours is a great responsibility. You must keep the eternal fire of vocational education burning brightly at both ends of the candle. The eternal fire of Mt. Olympus is in your hands.

We live in a world which is changing at a startling rate. For a period of time spanning some 3,000 years, from King Solomon to George Washington, change was virtually imperceptible. The oil lamp provided light, the wood stove--heat, and the horse--transportation. About 150 years ago there began a ferment in discovery and technology, but it is the last two decades that have witnessed changes in science, technology but it is the last two decades that have witnessed changes in science, technology, and population multiplication in geometric progression.

In the single decade 1950-60 the population increased by 28 million. This is more than the total population of the nation at the time of the civil war. The year 1965 alone produced a million new eighteen year olds, ---and in 1966 we had more 18 and 19 year olds than we had during the entire 15-year period from 1950 up to 1965. It is predicted that during the present decade of the 60's, 26 million youth will enter the labor force and that 19 million of them will have no college experience.

What of the other side of the picture? Today, 92% of all the scientists who ever lived are alive and working. The lag between discovery and application is ever shortening. It took 20 years from the discovery of the vacuum tube to its application, 5 years for the transistor, and 2-1/2 years for the laser beam. Furthermore, we know full well from recent experiences that realization of the benefits of scientific discovery is contingent on the availability of a skilled and competent work force.

How can we reconcile a dichotomy where the unemployment rate among young people in their late teens and early twenties is higher than it was during the depression years, yet 4-1/2 million jobs go begging for lack of qualified applicants?

Recent national studies as well as those conducted in California indicate that, of every ten youngsters entering high school, approximately seven will graduate; of the seven only four will go on to some form of higher education, including the junior college; of this four, two will graduate from a four year institution.

It should be obvious that these two are the exceptional, not the usual, as you in education so often assume. What of the 80%, the unexceptional, these students of whom it is said, are in an educational system oriented toward someone else's college degree rather than their own work needs? These are the workers of tomorrow--the people who will carry a great proportion of the burden for the production and processes by which society maintains itself. Yet our major emphasis even now seems to be toward the needs of the exceptional 20%.

What has happened in this equalitarian society of ours that has led us to act and speak as if the only educational goal worthwhile is a college degree? Why do we imply that to fall short of this goal is to land on the trash heap? Why do we resist accepting the reality that <u>most</u> of the students will go directly into the world of work? What has happened to that which has made America GREAT--working with our hands and being proud of our hand skills. John Gardner, Secretary of Health, Education and Welfare, is quoted as say, "It is not the goal of a democracy that every citizen be the equivalent of a grand surgeon or a top executive; it is the goal of a democracy that every individual fulfill his own potentiality."

Also attributed to Dr. Gardner, if I may paraphrase it, is the statement that--"In a society where its philosophy permits a low esteem for plumbers and a high regard for philosophers, neither its plumbing nor its philosophy will hold water."

Now, I am not even remotely suggesting that vocational education is the panacea by which all of our social problems may be solved, but I am convinced that vocational education can play a significant role in preparing many of our young people for gratifying and rewarding careers which will contribute to the welfare of society.

Historically the status of vocational education has been permitted to diminish and has been generally demeaned in educational circles to be revived only when problems reach proportions of national crisis. This may be attested by such headlines as last week's L. A. Times cried out.. "Private industry asked to join U. S. job effort"; or, look at the whole reasoning behind the great society's Job Corps program--that was an emergency.

Oh, there is now a tremendous volume of verbiage directed toward vocational education, especially since the infusion of considerable federal funds, but there appears to be more lip service than substance to the support and real commitment to the objectives of vocational education. There is this subconscious classification of educational programs according to some previously conceived notion as to their respectability. By what rationale, for example, does a junior college feel compelled to maintain a class in engineering which can attract less than a half-dozen students, yet is reluctant to introduce a needed program in mechanical technology or one in cosmetology for which there is a demonstrated demand by students and employers. There is even a "respectability classification" among vocational education programs. We seem to be far more inclined toward instituting the more highly esteemed electronics or engineering technology courses, but frown a little at such plebeian programs as welding or typewriter repair.

On the other hand, some of our smarter thinking vocational people have upgraded their trade schools with stature inspiring titles: Seattle Community College and Portland Community College are two good examples of this forward thinking.

Portland Community College is truly a pace setter in the vocational education field. Highly individualized programs are the rule there, which means intensive counseling--a continuous guidance program. Keyed into this action the Portland schools have started a program of continuous counseling so that students will be ready for Portland Community College. They have a comprehensive guidance plan which continues from junior high thru grades 13 and 14.

Portland Community College has a full time person on its staff who keeps

the schools and students fully informed on the college's program. Their watchword is that "We will stick with a student through hell and high water." We'll see him through every course we have, if need be, to help him find something he wants and can do. We want to train this person to work for himself. We want to give him a sense of dignity, of usefulness, of purpose. The skills we teach are in demand today and will be in demand for awhile yet. We work at this, we know the labor market is changing and we change with it. We try to persuade students to not just concentrate on learning a single solitary skill, but to gain some understanding of an entire field, so they are able to move around in that field if their particular skill begins to go out the window.

Now, it is my opinion, that educational programs, be they college transfer, college preparatory, general, or vocational education, must be able to stand or fall on their own merits as to need, value and significance to our individual students.

What of these individuals and their needs? If it may be assumed that the eighteen year old of today will retire at the age of 65 (probably sooner); he will have worked until the year 2012, a 47-year span in the work force. This period will have seen many changes that will have affected his life. It is now estimated that he will have to be trained and retrained at least three and possibly five times during his working life. New developments in materials, methods, equipment, processes, and products hardly imaginable today, will affect all areas of industry and commerce and have tremendous implications for his education. It will become ever more imperative that students in vocational programs be provided with a broad, basic, and fundamental technical education, yet consisting of sufficient formal structure that will afford them the ability to "roll with the punches" as occupations, industry, and society changes. It will be necessary to provide these students with a basic kit of tools that will remain reasonably functional until the year 2012. We must take the long-range planning view point.

The realization that changes in technology will take place with increasing acceleration has caused some educators to consider <u>any specific</u> training as suspect. Exaggerated and distorted predictions have caused them to be fearful of teaching <u>anything</u> specific. Predictions such as were expressed by a recent banquet speaker that soon 2% of the population would produce all the needs of society have resulted in some highly erratic program planning. Incidentally, that speaker was nonplussed when asked how soon he thought he himself could dispense with the services of a plumber. You will recall the predictions during World War II. After the war there would be a helicopter in every garage, we would live in plastic houses, and prepared food would be delivered through a pneumatic tube from central kitchens. The war has been over for nearly a quarter of a century, and how basically different do you live?

There are several important factors in program selection and development

but there are two which are of paramount importance. The first of these requires the assistance, advice, council, and cooperation of the industrial and business community. The other entails a detailed occupational analysis of the contemplated field of training.

The arbitrary introduction of a new program based solely on the guesswork or best of intentions of school people or because it may have a prestigious sounding title is a sure path to failure. No one knows the demands for and requirements of a given occupation as do the practitioners, managers, employers, and community leaders. Therefore, the first step in program development is the organization of an advisory committee composed of such individuals. If after appropriate study the feasibility and support for a program is established--only then, and with the continuing advice and cooperation of an established advisory committee, should the school proceed.

Course content cannot be established by what we think the student should know. If we are really concerned with the welfare of students, we will be careful not to develop curricula based on what we think is good for him. I have seen the requirement of calculus imposed on students preparing for an occupation where algebra was more than adequate; and where no mathematics was required of a student preparing to be a die maker. The development of content and course requirements must be based on intensive study and analysis of the skills and knowledge required of successful practitioners in the fields. To encourage students to take still higher levels of course work is highly laudable, but to require it as a condition of participation is unrealistic, unfair and contrary to the objectives of vocational education. No vocational program will succeed unless it attracts students in sufficient numbers, and to attract students it will have to provide a reasonable probability of employment upon completion.

In the final analysis the primary evaluative criteria of vocational programs will inevitably be based on employability and placement of students. This is, after all, our main reason for "being in business." The day is long past where we can just "think" we are doing a good job. Those in vocational education have long been remiss in the follow-up of our students and a day of reckoning is not far off. From my observations the lack of placement, employment, and other exit data indicates a critical need for the development of systematized methods of gathering and cataloging such information. In order to maintain continuing evaluation and curriculum updating which is necessary to a dynamic program such information will have to be readily available for periodic studies.

Seventh, actually, industry's end requirements of you are simple--Give us people who are: First of all - Honest. We want an honest, truthful man. Second, they must possess that rare quality--the desire and will to work--that affirmative attitude and desire to work--they must have a good spirit. I recall my own experience with my Dad when I first was looking for a job--after some unsuccessful attempts, he advised me to merely tell them, "I just want to work." Third, they must know the rudiments of a trade or

vocation and these are the things we have been talking about for the past thirty minutes. They don't have to be the most brilliant boys in the world, just honest, and a good attitude and a great spirit for work and some measure of proven aptitude.

TOUGH!? I don't think so. But it is in your hands. You can do it. Industry is betting on you, and I think that is probably the most important thing a counselor should know about industry.

Ladies and Gentlemen, I thank you very much for your patience in listening to our story.

News media keep community informed about events and trends of key issues such as education and employment.

Industrialist Sees Vocational Education as Boon to Future

OXNARD — A leading industrialist told a group of county school counselors today, "that vocational education can play a significant role in preparing many of our young people for gratifying and rewarding careers which can contribute to the welfare of our society."

Norman Nicholson, vice president of Talley Corp., was one of the speakers at the day-long Occupational Information Conference sponsored by the Ventura County Vocational Resources Committee.

The conference, held at the Community Center, was attended by about 125 county high school counselors and representatives from county high school districts.

The Press-Courier
October 11, 1967

Nicholson said that the Labor Department estimates that by 1975 four million workers with new skills will be needed "and only 255,000 are being trained right now."

"Ironically," he said, "men are losing their jobs daily because their skills are obsolete."

"These trends make the role of the vocational counselor more essential," Nicholson said.

He said counselors should be knowledgeable on all matters dealing with industry personnel, — "job descriptions, rates and trends on jobs and rates for the future."

Nicholson said that the unemployment rate among young people "in their late teens and early twenties is higher than it was during the depression, yet 4.5 million jobs go begging for lack of qualified applicants."

First of its Kind

The conference, the first of its kind to be held in the county, is aimed at acquainting counselors with new trends in industry and occupations.

Dr. Al Powell, special consultant with the State Department of Education, predicted a 30-hour week with 13 weeks of vacation in the year 2000 "for the typical worker in the western world."

He said that within 15 years, two-thirds of the metropolitan population will have attended college, that "the experienced professional will go back to school for advanced training every two or three years, the survival of a firm will depend upon proper exploitation of brain power and that there will be increasing job mobility."

Dr. Powell said that a racent study of alternative methods of expanding programs for training vocational counselors revealed that additional funds should be provided by the legislature to public schools for these purposes:

—To improve the ratio of counselors and students.

—To improve and extend physical facilities and materials for guidance and counseling.

—To provide released time for counselors to work in the local community for the purpose of studying the labor market.

Specialist

—To provide for the assignment of a credentialled counselor in each secondary school as a full time specialist in vocational guidance.

—To provide counselor aides or guidance information technicians to assist the regular counselors.

Other speakers at the conference were:

Odessa Dubinsky, southern area labor market analyst with the Department of Employment, Los Angeles; Anne Lewis, supervising job analyst with the Department of Employment, Los Angeles; and Mack Stoker, regional coordinator, vocational education with the Department of Education, Los Angeles.

Francis Bawden, manager of the Department of Employment in Ventura, and Marvin Berson, president of the Ventura County Resources Committee, welcomed the group.

SECTION MEETING

GROUP I:

Resource Person:	Odessa Dubinsky
Discussion Leader:	LeRoy Andrews
Recorder:	Charles Brady

Some important points of this meeting:

A large number of new workers are entering the labor market. Many are women who are re-entering and youth who are entering for the first time. The shortage of experienced workers will become critical. We might be pushed into training these new workers at a more rapid rate and we might have more automation.

The returning veteran will create additional problems. He is a serious, conscientious individual who will probably return to school.

Occupational orientation should begin at an earlier age. Motivation appears to be a problem. This is difficult but made easier if the schools can go beyond the four walls and develop some attitudes through outside sources. Making a living is part of the life process.

If we train for job clusters, a worker who becomes unemployed in one job will move with less difficulty to another job within the cluster. He must have received substantial instruction in the basic skills and knowledge, however.

Industry regardstheir employees not so much as trade workers but as specialists. For example, because of the types of machines with which he works and the judgment and skills used, a machinist is considered to be a professional worker by industry. This is the motivation which can be used to influence youngsters. The machinists, pattern makers, precision metal workers and others like them keep the world turning.

If a youngster is not going to college, train him for jobs which do not require a college education. The Dictionary of Occupational Titles is a helpful tool which should be used in Scheduling and curriculum planning to indicate some of these jobs. Counselors must point out these facts to administrators.

Most schools are not doing what the Ventura County schools are doing in vocational education and guidance. Counselors must keep in touch with industry. In this way the schools will know the proper way of doing things.

More field trips to industry for teachers, counselors and youngsters were suggested by several participants.

One way to improve a vocational curriculum is to create an active and knowledgeable advisory committee of industrialist or similar people who can review the course content and make recommendations.

SECTION MEETING

GROUP II:

Resource Person: Mack Stoker
Discussion Leader: Harriet Woolley
Recorder: John Van Zant

Some important points of this meeting:

Programs can be developed in the high schools which can prepare students for immediate employment in a manner similar to the programs of the junior colleges. Examples of successful programs were cited. Discussion dealt with required interaction between the high school and the junior college for a successful vocational program in any community. In addition to this needed cooperation, another problem is scheduling of students.

Within the past year, 350 special credentials have been issued to industrial arts teachers who have completed a special vocational orientation program. Some schools have brought in businessmen and skilled workers to teach or advise some of the vocational classes. To be a successful teacher, a teacher must use many methods of teaching, sometimes all at once or in other combinations.

The Vocational Education Act of 1963 provides up to 25% of a teacher's salary and up to 50% of other costs of a vocational program.

Counselors and other school people need to know more about combinations of tasks and the skill levels for different jobs. They should also know the employers. And this information should be passed on to the students.

Some vocational education programs can be combined with work experience. Someone stated vocational education does not start soon enough. Mr. Stoker suggested that a follow-up be conducted on the 6th grade graduates. He also suggested that a comprehensive study of dropouts should be conducted with a limited number of factors which might indicate clues to prevent or reduce the dropout rate in the future.

Some shortage occupations in Ventura County were cited such as machine operator, nurse aide and other medical service jobs. A question yet unanswered is how directive can a counselor be in vocational guidance, especially since 99% of the student body truly believe they are college bound when in fact probably less than 40% will actually enter college.

Other problems discussed were extensions of the high school graduate who goes to work immediately after graduation, the returning veteran who

will return to school, training conducted in industry, demands by industry on the public school system, the one million people enrolled in vocational education in California, the role private schools are playing in providing vocational training and ways of attracting the attention of school administrators to the area of providing occupational orientation to students at an earlier grade.

The successful teacher is one who knows his youngsters intimately and who knows his community. The school system must get better acquainted with industry.

SECTION MEETING

GROUP III:

Resource Person: Anne Lewis
Discussion Leader: Harold Johnson
Recorder: John Stead

Some important points of this meeting:

Miss Lewis reviewed general and specific test development procedures including supervisorial evaluations and correlations. She also reviewed the Dictionary of Occupational Titles and the coding system. She expressly pointed out the worker traits section in Volume II.

Most youngsters have very little real and functional information about themselves and work. Perhaps we should start with counselors in the elementary grades and have them explore work in more detail. Require a student to set some goal, something specific for one year, then five years and as high as he wants to or believes he can go.

Job development for a specific student or a group of students and filling known job vacancies and the differences in these two situations were discussed.

Testing by employers is common place although the tests may or may not be valid and passing the test is no guarantee to either the employer or the worker. Employers must take a realistic view. Teachers and counselors should visit employers and get to know them and their policies. New industries are coming into the area which will create job opportunities within their own establishments and also in many supporting businesses and services. Education should do some fact finding about these plans and requirements of new industries and then do some planning to handle any educational needs which are recognized.

There are far more jobs than there are people who can fill them even though many people are unemployed. There is a gap between the job requirements and worker ability. Some of the traditional general education courses can be modified to the point where content will still satisfy administrative requirements but will be vocationally oriented such as in the fields of the physical sciences and math.

Women and their place in the labor market and the need for more job opportunities for them were subjects also discussed. More work must be done in this area as well as in the area of emerging and declining occupations. By using worker traits, counselors can automatically

eliminate some occupational fields and aim a youngster in other fields. A problem in the comprehensive high school is to motivate the student so that he wants to learn. Unless he is given a realistic occupational goal he may be lost.

Communications in industry-education-employment must be improved. Educators and counselors must get out more into the community. Education should place specific demands on industry and employment.

SECTION MEETING

GROUP IV:

Resource Person:	Dr. Al Powell
Discussion Leader:	Madeline Miedema
Recorder:	Lois Shaffer

Some important points of this meeting:

Suggestion that more vocational education can and should be offered at the junior high school level.

Dr. Powell reviewed in more detail several of the programs to which he referred in his speech, such as Life Career Games, interagency cooperation and Employment Readiness.

Discussion centered around meeting requirements of the state and local districts and at the same time including some of these special programs in the curriculum.

Though there seems to be some correlation between the Differential Aptitude Test and the General Aptitude Test Battery, there has never been any validation with the DAT on the basis of success on the job. This has been done with the GATB. Dr. Powell believes the GATB for use by school people is an excellent tool and he believes there is nothing better though he feels it is expensive and requires some appreciable time. He further believes in selective use rather than wholesale application. The Department of Employment has trained Ventura County school counselors in the use of the GATB.

Find time in the curriculum for giving a youngster a planned program. As a pilot, try summer school. Another possibility is a Guidance Club which includes vocational guidance but is not necessarily limited to that area.

Youngsters need guidance. Fifty percent (50%) of those who enter the 7th grade will enter the labor market immediately after leaving school, either because of graduation or dropping out, and these terminal students will change jobs seven (7) times before hitting upon their line of work.

One way to get career and guidance information into the schedule is to work it into such classes as English and typing. Research indicates much of what youngsters type rubs off on them unless it is meaningless nonsense.

An example of a vocational education class with substance is one which used a Briggs and Stratton engine, probably 2 h. p., one engine for each two students, each engine cost $31. Students learned about the electrical and fuel systems and other parts of an internal combustion engine. Another example was a class in electricity which used ten small home appliances as training aids.

Counselors should do more planning and identify the important points of a program and then prepare a calendar for a year. Industrialists should be invited to speak to classes and counselors and students should go into the field and visit the industrial community.

A statewide GATB maturation study is now in the fifth and last year and the results will be released soon.

EVALUATION

Conference participants were asked to evaluate the conference in terms of whether the information presented met their needs. Sixty-three persons responded to the evaluation questionnaire sent to them. The questions asked of them and their answers appear below:

1. Do you think the conference was worthwhile?

   49 answered yes; 8 answered no; 6 answered yes with reservation

2. What was the most valuable aspect of the conference?

   Comments and number of similar answers appear below:

   8 answered: "Information presented by the morning speakers."

   8 answered: "Afternoon section meetings where individual school counseling problems could be discussed with speakers."

   4 answered: "Information relevant to the use of the Dictionary of Occupational Titles."

   12 answered: "Dr. Powell's lecture concerning the hows and whys of vocational counseling."

   9 answered: "Opportunity to evaluate the opinions of business and industry relating to the school's and counselor's role in preparing the student to enter the 'world of work'."

   9 answered: "The participants became more aware of the importance of vocational training in preparation to live in today's world."

   6 answered: "Information pertaining to the role of the California State Department of Employment in Vocational Education."

3. Do you have any suggestions which could be used in formulating plans for any future occupational information conferences?

   Comments and number of similar responses appear below:

   6 suggested: "More time should be allotted for small group meetings."

7 suggested: "Information of a more realistic nature should be given to participants as to just exactly what the counselor can do within the framework of his or her school to improve his or her image as a 'vocational counselor'."

1 suggested: "Next year let's stage a role playing activity, such as a new employer moving into the area, or an existing employer who has a new job skill need. Schools officials would demonstrate curriculum development. A narrator could then review the entire operation and point out that this is an example of direct vocational education combined with general education."

7 suggested: "Arrange for Dr. Powell to spend half a day with county counselors. In this way he would be given enough time to discuss with conference participants vocational guidance projects throughout the state."

4 suggested: "Provide rebuttal time for school counselors to reply to business and industrial leaders' demands."

1 suggested: Next time include teachers as participants."

2 suggested: "Next time invite administrators as well as counselors."

8 stated: "Occupational information as to numbers and kinds of job openings available to high school and junior college graduates in Ventura County should be given to counselors. The conference provided general information only."

2 stated: "Most of the information presented in this conference was high school oriented. Next time the junior college's role in vocational guidance should also be presented."

4 suggested: "Give the luncheon speaker more time to deliver his speech."

1 suggested: "Present a picture of what is being done in vocational counseling at present in schools of Ventura County."

1 suggested: "Present information on what the junior high school counselor can do for the potential school dropouts."

1 stated: "Apprenticeship information should be made available to conference participants."

2 suggested: "Speakers should be given an orientation tour of schools before they make up the individual content of their speeches."

Final Evaluation Conclusions

For a first effort, in terms of providing counselors information about the world of work, apparently the Vocational Resources Committee was successful, however many suggestions were made, as the reader notes above, for improvement. The next Occupational Information Conference planning committee will consider these suggestions and will endeavor to plan a more informative day for Ventura County school counselors.

Charles Brady, Secretary
Ventura County Vocational
Resource Committee

Occupational Information Conference
Planning Committee

Mr. Francis Bawden, Chairman
Manager, Department of Employment
Ventura, California

Mrs. Dorothy Castello
Employment Service Supervisor
Department of Employment
Ventura, California

Mrs. Lois Shaffer, Co-Chairman
Counselor
Fillmore Senior High School

Miss Harriet Woolley, Facilities Chairman
Supervisor of Vocational Instruction
Ventura School for Girls

Mr. A. J. Capritto, Publicity Chairman
Occupational Analyst
Department of Employment
Ventura, California

Miss Madeline Miedema
Curriculum Director
Oxnard Union High School District

Mr. John Stead
Coordinator of Vocational Education
Ventura Unified School District

Mr. Charles Brady
Coordinator of Vocational Education
Ventura County Schools

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Lebo, Charles F.
A Manual for Planning and Conducting an Agricultural Mechanics Fair. Teacher Education Series, Volume VIII, Number I.

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*PROGRAM GUIDES; *VOCATIONAL AGRICULTURE; *AGRICULTURAL ENGINEERING; *COCURRICULAR ACTIVITIES; STUDENT PROJECTS; *EXHIBITS; HIGH SCHOOLS
*AGRICULTURAL MECHANICS PROJECT FAIRS

Developed by an area agricultural education advisor for use by teachers of vocational agriculture in planning and conducting an agricultural mechanics fair, this activity guide may be used to promote a high school agricultural production or agricultural mechanics program. The content includes sections relating to: (1) fair plan development, (2) obtaining approval, (3) selecting the superintendent, (4) time and place, (5) rules, (6) budget, (7) class description and premium schedule, (8) publicity, (9) conducting the fair, (10) special features, (11) selecting judges, (12) score card, (13) entry blank, (14) entry tag, (15) record keeping system, and (16) evaluation. The appropriate student occupational focus is agricultural mechanics in an area of comprehensive high school in the northeast United States. (DM)

VT005 175

ED0 31587

A MANUAL FOR PLANNING AND CONDUCTING AN AGRICULTURAL MECHANICS FAIR

by

Charles F. Lebo

Teacher Education Series
Volume VIII Number 1
1967

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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VT005175

Mr. Charles F. Lebo, Area Advisor of Dauphin-Schuylkill Counties, prepared this Manual for Planning and Conducting an Agricultural Mechanics Fair in the Ag. Ed. 422v course under the direction of Dr. Frank Anthony, Associate Professor of Agricultural Education, The Pennsylvania State University.

An Agricultural Mechanics Fair provides competitive activities which reflect special abilities and areas of emphasis needed in the education of a successful agriculturalist.

It is our hope that this publication will aid you in promoting educational activities like this in your school and county.

Dr. D. R. McClay, Head
Department of Agricultural Education

M E M O R A N D U M

TO: The ERIC Clearinghouse on Vocational and Technical Education
The Ohio State University
980 Kinnear Road
Columbus, Ohio 43212

FROM: (Person) Samuel M. Curtis (Agency) Department of Agricultural Education

(Address) The Pennsylvania State University, University Park, Pennsylvania

DATE: August 23, 1968

RE: (Author, Title, Publisher, Date) A Manual for Planning and Conducting an Agricultural Mechanics Fair. Vol. 8, No. 1. (1968) Charles Lebo

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Student Selection Criteria

Time Allotment

Supplemental Media --
Necessary ____)
Desirable ____) (Check Which)

Describe

Source (agency)
(address)

TABLE OF CONTENTS

Introduction to the Manual 1

Sponsoring FFA Agricultural Mechanics Project Fairs. 1

Developing the Fair Plan 2

Obtaining Board of Education and Administration Approval 2

Selecting the Superintendent or Fair Committee 3

Selecting a Time and Place 3

Developing Fair Rules. 4

Preparing a Budget 5

Suggested Class Description and Premiums Schedule. 5

Prepare Publicity for Students and the Public. 7

Conducting the Fair. 8

Planning Special Features for the Fair 8

Selecting Judges 8

Vocational Agricultural Mechanics Judging Score Card 10

Project Fair Entry Blank 11

Entry Tag. 11

Developing a Record Keeping System for Entries and Premiums. 12

Preparing Publicity on Results 12

Paying Premiums. 12

Evaluate the Fair. 12

INTRODUCTION TO THE MANUAL

This manual has been prepared to assist in the planning, development and operation of an agricultural mechanics project fair for students studying vocational agriculture and members of the Future Farmers of America.

Vocational agriculture students have constructed and repaired many types of agricultural mechanics projects as a part of their training and development while studying vocational agriculture. Few people have had an opportunity to see their fine work and craftmanship. These students should have an opportunity to display their projects and enter them in a competition with other vocational agriculture students.

Youth Activities Groups and FFA Agricultural Societies have funds to promote this type of activity. This manual is designed to assist these groups in organizing and conducting agricultural mechanics projects fairs in their respective counties and local FFA Chapters. This activity conducted as a fair will provide opportunities for FFA members to develop leadership, cooperation and provide inspiration for those who compete. This activity will provide an opportunity for the entire community to observe the work of the students.

SPONSORING FFA AGRICULTURAL MECHANICS PROJECT FAIRS

A County Youth Activities Group or an FFA Agricultural Society have the financial resources and the responsibility for providing competitive activities for Future Farmers of America which promotes Agriculture and Agribusiness. By sponsoring an agricultural mechanics project fair, farm and business interests are served.

A large portion of vocational agriculture instructional time is devoted to agricultural mechanics. All students have the opportunity to construct and repair numerous items used in the farm, in a business or in the home. All FFA members could participate in this activity.

When an agricultural society decides to sponsor this fair activity many objectives could be listed for supporting the function. The following lists of objectives or benefits may serve as a guide for sponsoring the event:

1. To provide a plan for the students to exhibit their agricultural mechanics projects.

2. To develop students interest and pride in their agricultural mechanics work.

3. To help the community to better understand the vocational agriculture mechanics program and the achievements of the students.

4. To develop better school and community understanding.

5. To provide opportunities for students to develop their leadership abilities.

6. To promote interest of prospective pupils in vocational agriculture.

7. To advance vocational agriculture.

8. To promote desirable parent and son relationships.

9. To provide opportunities for exhibitors to exchange ideas and plans.

This list may not meet every situation and need. Societies are encouraged to develop their own objectives, using those listed above as a guide.

DEVELOPING THE FAIR PLAN

Before proceeding directly into administrating an agricultural mechanics project fair, an outline of operation should be developed to plan the fair. This outline will include many or all of the following items:

1. Obtain board of education and administrative approval.

2. Select a superintendent or fair committee.

3. Select a time and place.

4. Prepare a budget and fair rules.

5. Develop a class description and premium schedule.

6. Prepare a list of fair rules.

7. Prepare publicity for students and the public.

8. Conduct the fair.

9. Plan special features for the fair.

10. Select judges.

11. Prepare score card and judging rules.

12. Develop Entry Blanks and Entry Tags.

13. Develop record keeping system for entries and premium.

14. Prepare publicity on results.

15. Pay premiums.

16. Evaluate the fair.

This manual provides information for planning and conducting an agricultural mechanics project fair for each area listed above.

OBTAINING BOARD OF EDUCATION AND ADMINISTRATION APPROVAL

All Future Farmers of America Chapters that plan to have their members compete in the agricultural mechanics project fair should notify their local school administrator of their intentions to participate in the fair and

obtain his approval. All information available pertaining to the fair should accompany the request to the administrator, so he will be fully informed relative to the purpose and value of the fair. The administrator will inform the local board of education and others concerned with the final approval.

Schools selected to act as hosts for the fair should prepare a special request, since the school facilities, school personnel and students will be involved in conducting and operating the fair.

SELECTING THE SUPERINTENDENT OR FAIR COMMITTEE

It will be necessary to have a superintendent or fair committee selected to plan and conduct the fair. Usually the chairman of the fair committee acts as the superintendent for the project fair. This committee is responsible for developing fair rules, planning the class and premium schedule, and conducting the fair. After the committee developes the fair plan, they should report their action to the sponsoring organization for final approval and adoption.

The host school's vocational agriculture instructor is an excellent choice for fair superintendent because of his availability to the facilities. His duties will include: making local arrangements, receiving entries, keeping entry records and general fair control. Other specific assignments can be added to this list or delegated to other fair committees. A smooth operating fair depends largely upon the time and efforts of these persons.

SELECTING A TIME AND PLACE

Because of school and community differences no one can say just when a Future Farmers of America agricultural mechanics project fair should be held. However, since the fair involves the agricultural mechanics projects which have been completed in the vocational agriculture shop, April or May would be the most desirable months in order to have the best selection of project exhibits.

For best results the project fair should be scheduled with a Future Farmers of America activity or school function where the public is invited. A spring open house of a high school would be an excellent time to exhibit and have a competition for the students. Many schools have this event to show the public the work of the students. If only one high school has an open house in the county, project exhibits from other schools could be transported into this school for the competition. Arrangements should be made to have the larger projects exhibited and judged at the school in which they were constructed or repaired. The judges could complete the judging of these larger projects in the morning, moving from school to school and in the afternoon, judge the smaller projects entered in the school designated as the fair location.

Modifications can be developed to supplement this plan based upon the local situation. However, all agricultural mechanics projects completed during the year should be given consideration for this project fair.

DEVELOPING FAIR RULES

The following list of rules and regulations is provided for the development of a smooth operating agricultural mechanics project fair:

1. Competition is limited to vocational agriculture students of_____ County unless specified otherwise.

2. Any active member of the Future Farmers of America shall be allowed to exhibit as long as he holds membership in the Future Farmers of America.

3. All exhibits are entered free.

4. Every exhibitor shall give the class, name and other information pertaining to his exhibit to the committee or person in charge upon entering the exhibit.

5. An exhibitor shall not receive more than one premium in any particular class or subdivision of a class except as otherwise specified in the official rules.

6. No identification marks shall be left on any article exhibited in competition until after judging. Exhibit tags shall be furnished.

7. All articles on exhibition must be respected as private property and any person detected in purloining or injuring them will be dealt with according to law.

8. The project exhibited must be done by the exhibitor in the school shop. Entries must be actual projects.

9. The sponsoring agency assumes no responsiblity in case of loss or damage to any exhibit. Exhibitors must conduct their business or exhibit in such a way that the public shall not be liable to injury.

10. Exhibits shall be entered and placed from_____ a.m. or p.m. to _____ a.m. or p.m. on_____ (day or week),_____ (month), _____ (date).

11. Exhibits will be judged on _____ (day and time).

12. All exhibitors shall call for their exhibits on or before _____ (time and date).

13. All entries will be judged on quality. If there is no competition, premiums will be decided by the judges.

14. Judges will not award prizes to an unworthy exhibit.

PREPARING A BUDGET

A very worthwhile and successful agricultural mechanics project fair must be adequately financed. Funds provided by the society or group depend largely upon their attitude toward the importance of this particular fair function. This fair provides an opportunity for all boys completing projects in a vocational agriculture shop program to compete. Participation could be relatively high and competition keen. Premiums should be paid for the competition and ribbons awarded and placed on the judged exhibits.

Consideration must be given to the number of entries, classes and the judging system to be used. If the Danish System is used the premium cost may be higher than if the exhibits are placed in a decending numerical order. The fair committee should make recommendations for premiums. The cost of judges and other administrative expenses should also be considered. Societies presently conducting agricultural mechanics project fairs should budget between two and four hundred dollars for the event.

SUGGESTED CLASS DESCRIPTION AND PREMIUM SCHEDULE

This schedule has been developed as a guide for planning agricultural mechanics project fairs. Classes should be designed for local situations and agricultural mechanics instructional emphasis.

CLASS I Construction of large agricultural equipment. Examples: Wagons, trailers, elevators feed bunks, range shelters and other large farm equipment.

1st	2nd	3rd	4th	5th	All Others
$14.00	12.00	10.00	8.00	6.00	4.00

CLASS II Repair of large agricultural equipment. Examples: Tractors, harvesting, tillage, seeding, and other large farm equipment.

1st	2nd	3rd	4th	5th	All Others
$14.00	12.00	10.00	8.00	6.00	4.00

CLASS III Construction of small agricultural equipment.

1st	2nd	3rd	4th	5th	All Others
$6.00	5.00	4.00	3.00	2.00	1.00

CLASS IV Repair of small agricultural equipment.

1st	2nd	3rd	4th	5th	All Others
$6.00	5.00	4.00	3.00	2.00	1.00

CLASS V Construction, maintenance and repair by welding.

Division A - Steel
Division B - Hardsurfacing
Division C - Cast Iron
Division D - Brazing

Premiums awarded in each division.

1st	2nd	3rd	4th	5th	All Others
$5.00	4.00	3.00	2.00	1.00	1.00

CLASS VI Tool Fitting.

1st	2nd	3rd	4th	5th	All Others
$5.00	4.00	3.00	2.00	1.00	1.00

CLASS VII Sheet Metal Work.

1st	2nd	3rd	4th	5th	All Others
$5.00	4.00	3.00	2.00	1.00	1.00

CLASS VIII Cold Metal Work.

1st	2nd	3rd	4th	5th	All Others
$5.00	4.00	3.00	2.00	1.00	1.00

CLASS IX Wood Lathe Work.

1st	2nd	3rd	4th	5th	All Others
$5.00	4.00	3.00	2.00	1.00	1.00

CLASS X Metal Lathe Work.

1st	2nd	3rd	4th	5th	All Others
$5.00	4.00	3.00	2.00	1.00	1.00

CLASS XI Rope Work.

1st	2nd	3rd	4th	5th	All Others
$5.00	4.00	3.00	2.00	1.00	1.00

CLASS XII Painting, Glazing and Refinishing.

1st	2nd	3rd	4th	5th	All Others
$5.00	4.00	3.00	2.00	1.00	1.00

CLASS XIII Plans, Drawings, Designs, Cost Estimates.

1st	2nd	3rd	4th	5th	All Others
$5.00	4.00	3.00	2.00	1.00	1.00

CLASS XIV Concrete Work.

1st	2nd	3rd	4th	5th	All Others
$5.00	4.00	3.00	2.00	1.00	1.00

CLASS XV Construction of Household Equipment.

1st	2nd	3rd	4th	5th	All Others
$5.00	4.00	3.00	2.00	1.00	1.00

CLASS XVI Miscellaneous Agricultural Projects.

1st	2nd	3rd	4th	5th	All Others
$5.00	4.00	3.00	2.00	1.00	1.00

Premiums must be based upon the budget established for the event and the estimated participation. This suggested premium will cost over $350.00 if all classes are filled with no amount included for the "All Others" category. Ribbons, judging and other operational cost must also be considered.

The "All Others" category for awarding premiums is included to provide additional awards to worthy exhibits. This category should provide an added incentive to the exhibitors. The premium schedule is designed to recognize the work students undertake in constructing and repairing large agricultural equipment. The fair committee or superintendent is responsible for developing a plan for placing the exhibits in particular classes in which they are eligible to compete.

PREPARE PUBLICITY FOR STUDENTS AND THE PUBLIC

Early in the school year the students should be informed that an agricultural mechanics project fair will be held for their participation. Students may then plan their project work to meet the scheduled fair. The students should discuss the fair at home and with friends or neighbors. Early publicity and promotion of the fair will net a larger number of projects, exhibits and a larger attendance.

Several weeks before the project fair, publicity should be prepared about the fair and distributed to the various news media in the area. This publicity should be designed to inform the public of the forthcoming fair and encourage students to prepare their projects for exhibit.

CONDUCTING THE FAIR

This manual is designed to provide information for the development and operation of an agricultural mechanics project fair. The various areas of fair administration are outlined in the manual to provide the sponsoring organization with a guide to follow in administering the fair.

The success of the agricultural mechanics project fair depends largely upon the time and effort devoted in planning and arranging the event. All persons in charge of the fair should be briefed on their duties and their responsibilities for carrying out the assignments. The persons in charge of the exhibits should be on hand before the exhibits arrive to prepare the facilities for the exhibits.

After the exhibits are in place and judged FFA members should be available to greet the people attending the fair and to answer questions pertaining to the activity. Special features which were planned should be available to add to the total program.

The facilities should be kept neat and clean and the exhibits should be displayed to develop a desirable impression for the department and the Future Farmers of America.

PLANNING SPECIAL FEATURES FOR THE FAIR

A fair organization may find it convenient to plan special entertainment or other activities during the fair. This list may include:

1. Window exhibits
2. Agricultural displays
3. Agricultural demonstrations
4. Motion pictures
5. Short rides for the children
6. Special musical entertainment
7. Agricultural guessing contests
8. Special drawings
9. Refreshment stand
10. Machinery exhibits
11. Nail driving contest
12. Log sawing contest

Many other events may be planned to supplement the project fair based upon the local situation. For successful special fair features a special committee should be selected to insure a successful program. If special features are planned, costs of these events must be included in the budget.

SELECTING JUDGES

Judging the project exhibits is a very important part of the fair, especially to the exhibitors. Individuals selected to judge the exhibits should have a knowledge of agricultural mechanics and the various aspects of the vocational agriculture instruction in agricultural mechanics. The following list of persons may serve as a guide for the fair committee:

1. Vocational agriculture instructors who have no students in competition.

2. Area advisors of vocational agriculture.

3. Electric power company representatives.

4. Industrial arts instructors.

5. Lumbermen.

6. Agricultural machinery and equipment dealers.

7. Educators who have a knowledge of agricultural mechanics.

8. School Directors.

9. Area vocational directors.

10. Farmers.

This list is by no means complete. However, it is recommended that the fair committee secure at least two judges for the event and possibly three.

The superintendent should brief the judges on their assignment and review the class and premium schedule to avoid confusion while judging. The score cards should be reviewed and explained to them. The fair rules should also be discussed at this time. All other administrative details concerning the judging of the event such as: preparing travel vouchers, breaking ties, awarding premiums, and other important considerations should also be discussed.

A clerk should accompany the judges while they are judging the exhibits to keep records of the placings.

VOCATIONAL AGRICULTURE MECHANICS JUDGING SCORE CARD

Class Name_____ Class No._____

Judge's Name_____

JUDGING CATEGORIES	VALUE	ENTRY NUMBERS									
Type and Condition of Material	10										
Degree of Difficulty	10										
Plan and Dimension Followed. (Construction Projects)	10										
Finish	5										
Workmanship	15										
Total Scores	50										
Final Placings											

EXPLANATION

TYPE AND CONDITION OF MATERIAL - Includes correct materials used, quality of material used and free of defects for the project.

DEGREE OF DIFFICULTY - Consideration is given to the amount of work and number of different skills used in completing the project.

PLAN AND DIMENSION FOLLOWED - Used in construction projects where plans are submitted with the project. There is evidence that plans have been followed.

FINISH - Consideration is given to the correct finish, degree of finish and the appearance of the finish of the project.

WORKMANSHIP - Consideration is given to the quality of the project or the professional appearance of the work.

PROJECT FAIR ENTRY BLANK

Name_____
Address_____
School_____

I HEREBY MAKE THE FOLLOWING ENTRIES:

CLASS NUMBER	CLASS DESCRIPTION	ARTICLE

Exhibitors Number_____
Filled in by Superintendent
Entry Date_____

ENTRY TAG

Exhibitor's No._____
Class No._____
Exhibitor's Name_____
School_____
_____
Name of Exhibit

PROPERTY CHECK

Exhibitor's No._____
Class No._____
_____
Name of Exhibit

DEVELOPING A RECORD KEEPING SYSTEM FOR ENTRIES AND PREMIUMS

The law governing the use of fair funds requires the organization sponsoring these activities to keep records. A permanent record of all entries and premiums awarded to each exhibitor must be kept. The information secured from the entry blanks should be copied into this book for the permanent record. After the judges have completed placing the exhibits the final results may be entered into the book for each exhibitor. Entries in the record book may be made by classes or by exhibitor's name and number. Each exhibitor should be paid by check from sponsoring agencies fund.

PREPARING PUBLICITY ON RESULTS

During and immediately after the fair pictures and news of worthy activities should be compiled by the fair committee. Local newspapers, large circulation newspapers, state publications and other news media are eager to provide coverage for these activities. A complete list of winners should be developed with photographs taken of the students or their projects. This information should be gathered for distribution immediately after the fair. Good news articles help to stimulate the interest of the students and also serves as a means to inform the public of the work of the vocational agriculture department.

PAYING PREMIUMS

Premiums and other expenses incurred by the sponsoring organization should be paid no later than two weeks after the project fair. Payment should be done by check to facilitate final auditing and record keeping.

Ribbons awarded the exhibits should be attached to the exhibit after it is judged. The exhibitors will then have their ribbon when they call for the exhibit. Students receiving premium checks should be encouraged to cash their checks immediately after they receive them to avoid confusion later in the year.

EVALUATE THE FAIR

Immediately after the project fair, the fair committee should meet and and evaluate all aspects of the fair. Successful activities should be noted and recommended to be included in the next project fair. Activities that need to be improved should be noted also. The various phases of the fair which need to be reviewed should include the following:

1. The number and quality of the exhibits.
2. The budgeting of funds.
3. The class and premium schedule.
4. The function of the superintendent and fair committee.
5. The attendance by the public.
6. The value and effect of the publicity before and after the project fair.

7. The methods of judging.

8. The facilities and the local preparation.

9. The special features program.

10. The time and place of the fair.

All of these areas should be reviewed in planning for next year's fair.

It is hoped that more FFA Agricultural Societies will help to sponsor and support an Agricultural Mechanics Project Fair for the students in vocational agriculture in their area.

Fairs of all types need careful planning for desirable results. By using this manual, a successful agricultural mechanics project fair may be conducted for the benefit and satisfaction of all.

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Loomba, R. P.
A Study of the Re-Employment and Unemployment Experiences of Scientists and Engineers Laid Off from 62 Aerospace and Electronics Firms in the San Francisco Bay Area during 1963-1965.

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A summary of the complete study by the same title available as VT 004 106 (ARM Fall 1968) is given. (HC)

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c.1

EXECUTIVE SUMMARY

A STUDY OF THE RE-EMPLOYMENT AND UNEMPLOYMENT EXPERIENCES OF SCIENTISTS AND ENGINEERS LAID OFF FROM 62 AEROSPACE AND ELECTRONICS FIRMS IN THE SAN FRANCISCO BAY AREA DURING 1963-65

R. P. LOOMBA

FEBRUARY, 1967

MANPOWER RESEARCH GROUP
Center for Interdisciplinary Studies
SAN JOSE STATE COLLEGE
SAN JOSE, CALIFORNIA 95114

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SUMMARY

of

A STUDY OF THE RE-EMPLOYMENT AND UNEMPLOYMENT EXPERIENCES OF SCIENTISTS AND ENGINEERS LAID OFF FROM 62 AEROSPACE AND ELECTRONICS FIRMS IN THE SAN FRANCISCO BAY AREA DURING 1963-65

to

THE OFFICE OF MANPOWER POLICY, EVALUATION, AND RESEARCH
U. S. DEPARTMENT OF LABOR

by

R. P. LOOMBA

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MANPOWER RESEARCH GROUP
CENTER FOR INTERDISCIPLINARY STUDIES
SAN JOSE STATE COLLEGE
SAN JOSE, CALIFORNIA 95114

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INTRODUCTION

The primary objective of this research project is to examine the unemployment and re-employment experiences of the population of 1,184 engineers and scientists who were laid off by 62 defense-oriented firms in the San Francisco Bay Area during the 18-month period ending March 31, 1966. This study, in addition to describing the magnitude of the layoff problem, analyzes (a) the job search activities of laid off engineers and scientists, (b) adequacy of income sources during the period of unemployment, (c) problems of transferring from defense to commercial jobs, and (d) impact of age, education, pre-layoff salary, etc. on re-employment.

The preliminary data consisting of names, addresses, telephone numbers, age, salary, area of specialization, and educational background of the subjects were derived from company files, files of the California State Department of Employment, Technical Placement Co-op files, and friends of laid off engineers and scientists. The major data for this study were obtained by means of a pretested mail questionnaire. A net response rate of 74 percent was obtained.

PREFACE

The material in this report was prepared under a contract with the Office of Manpower Policy, Evaluation, and Research, U. S. Department of Labor, under the authority of Title I of the Manpower Development and Training Act of 1962, as amended. Researchers undertaking such projects under government sponsorship are encouraged to express freely their professional judgement. Therefore, points of view or opinions stated in this document do not necessarily represent the official position or policy of the Department of Labor.

This study, which was started in April 1965, has been conducted under U. S. Department of Labor Contract No. 81-04-27 and guided by Mr. Robert E. Manifold, Chief, Manpower Research Contracts Group, and Mr. Richard L. Fogarty of the Manpower Research Contracts Group, who gave continuous direction to all phases of this study.

This author is indebted to many individuals, in the Department of Labor, in the California State Department of Employment, and in the companies studied, for their active support and interest. He is particularly grateful to Dr. George S. Roche, Chief of Research and Statistics, California State Department of Employment for his assistance in obtaining the preliminary data for this study.

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R. P. Loomba, Director
Center for Interdisciplinary Studies
and Professor of Electrical
Engineering

MAJOR FINDINGS

The analysis presented in the main report has brought to the forefront many facts, which, heretofore, either were not known or had remained unsubstantiated. The following is a list of the major findings.

1. Transfers from Defense to Commercial Work

Shifts from defense to commercial work are quite common among engineers and scientists. On the average, 38 percent of those who change jobs transfer to commercial work. Subsequent to the most recent layoffs, 54 percent of the respondents shifted to commercial work. The median duration of commercial jobs, as of November 30, 1965, was 13.5 months. Engineers and scientists who transferred to commercial jobs were working on assignments involving industrial gear design, medical electronics, industrial process control, automotive engineering, etc. Respondents who received salary increases had been on their commercial jobs for a longer period of time than those who received salary cuts.

A comparison of the personal characteristics shows that engineers and scientists who transferred to commercial work are relatively less educated, younger, and receive lower prelayoff salaries than those who did not transfer. Moreover, the transferred group read fewer technical magazines, take fewer courses offered at work, and are members of fewer professional societies than the not-transferred group.

2. Age and Re-employment

The hiring policies of employers appear to be discriminatory towards older engineers and scientists. Irrespective of their educational background, pre-layoff salary, technical publications, patents, readership in technical magazines, and membership in professional societies, older engineers and scientists remained unemployed for a much longer period of time. Moreover, the influence of age on the period of unemployment increases as the educational level of the respondents goes down.

For respondents with different educational background, step-wise regression analyses were carried out with period of unemployment as the dependent variable and age, industrial experience, and salary as independent variables. The results show the regression coefficients for age for the non-degree, B.S. degree holders, and M.S. degree holders are .497, .138, .042 respectively. The first two coefficients are significant at the .01 level. In the case of M.S. degree holders, the highest regression coefficient (-.607) is obtained for salary. This coefficient is significant at the .01 level. It appears that obtaining an advanced degree is one of the ways of counteracting the dysfunctional effects of old age.

3. Duration of Unemployment

Subsequent to their layoff, engineers and scientists remain unemployed for a considerably long period of time. For the San Francisco Bay Area, the median period of unemploy-

ment for the laid off engineers and scientists is 12 weeks. Approximately one-third remained unemployed for 18 weeks or longer, and 6 percent were without a job for more than one year.

The period of unemployment is independent of educational background, publications, patents, readership of technical magazines, courses taken at place of work, adult education and/or workshop courses completed in engineering or science, and membership in professional societies.

4. Company Layoff Policies

4.1 Layoff Criteria

Defense-oriented firms in the San Francisco Bay Area appear to have laid off engineers and scientists primarily on the basis of their age. For example, 33 percent of the laid off engineers and scientists are 45 years of age or older. In view of the estimate that 17 percent of the industry's engineers and scientists are 45 years of age and above, proportionately twice as many engineers and scientists who are in the 45 years plus category were laid off. When educational background, technical publications, patents, membership in professional societies, and number of engineering and scientific courses completed at work are considered, there is no statistically significant difference between laid off and working engineers and scientists.

4.2 Length of Advance Notice

The defense employers do not give a reasonable advance notice of pending layoffs to engineers and scientists. One-

half of the engineers and scientists who were laid off by 62 defense companies in the San Francisco Bay Area received advance notices of 7.58 working days or less. Fourteen percent did not receive any advance notice whatsoever of their forthcoming layoff.

Seniority of the respondents had no influence on their time of layoff. Subjects who had been with their employers for five years or longer were laid off at approximately the same rate as those who had been with their firms for two years or less.

5. Job Search Methods

Sending direct applications to companies is the most efficient method of obtaining engineering and scientific jobs. Friends and personal contacts and newspaper advertisements are the second and the third most efficient methods of seeking re-employment.

Out placement services offered by employers is not a commonly used method. However, it is the fourth most efficient method of obtaining jobs. Private employment agencies, State of California Department of Employment, services of professional societies, and trade and professional magazines are less efficient than the outplacement services of the employers.

A large majority (61 percent) of the unemployed engineers and scientists normally visit the State of California Department of Employment for the purpose of seeking jobs. However, only a few of these individuals are successful in obtaining jobs by this method.

6. Sources of Financial Assistance

Unemployment insurance is the most commonly used and the most important source of financial support for unemployed engineers and scientists. Approximately 74 percent of those who remained unemployed used this source of financial assistance. Even though unemployment insurance is the most commonly used, and the most important source of financial support, it is not an adequate source. For instance, 51.4 percent of the engineers and scientists who remained unemployed for four weeks or less, had to liquidate their savings and investments.

The fact that an individual receives unemployment insurance does not make his job search activities inferior. On the contrary, engineers and scientists who used unemployment insurance were more active in their job search efforts than those who did not use unemployment insurance.

7. Non-degree Respondents

Attending college and/or a university and completing pertinent courses is the most commonly used method (46%) by non-degree engineers and scientists for achieving technical competence. Self-motivated reading and on-the-job practical experience are the second and the third most important means of achieving engineering and scientific competence.

8. Geographical Mobility

Massive defense layoffs normally result in sizeable out-migration of engineers and scientists from the general area. For instance, subsequent to their recent layoffs, 38 percent of the laid off engineers and scientists left the San Francisco Bay Area, and 21 percent left the State of California.

The engineers and scientists who left California were younger, had obtained higher levels of education, and had received their formal degrees more recently than those who did not leave the state.

Since the 1964 layoffs, the in-migration of scientists and engineers to California has slowed down and the out-migration has accelerated.

9. Salary and Job Changes

The most common reason for which engineers and scientists change jobs is higher salary. More interesting work and layoffs are reported to be the second most frequent and the third most frequent reasons for job changes. In general, 45 percent of those who change jobs receive salary increases. Under poor business conditions, this proportion drops to 21 percent. The proportion of those receiving salary cuts varies from a low of 10 percent under good business conditions, to a high of 28 percent, under poor business conditions.

OBSERVATIONS AND RECOMMENDATIONS

The findings presented in the first ten chapters of the main report are based on the analysis of the 876 questionnaires completed by engineers and scientists who were laid off by 62 defense companies located in the San Francisco Bay Area. In addition to the computations reported in this study, the author has analyzed the detailed comments submitted by these respondents on several open-ended questions. He has also conducted personal interviews with 150 laid off engineers and scientists.

Furthermore, the author has interviewed personnel managers and key executives of 53 of the 62 defense firms involved. This constitutes interviews with the management of 86 percent of the defense companies which had engineering and scientific layoffs. Moreover, he has interviewed personnel managers and key executives of 22 commercial firms.

Observations on Causes of Defense Layoffs

On the basis of the above mentioned interview efforts, as well as the data collected by the 876 questionnaires, the author has compiled the following list of reasons for the instability of defense-oriented engineering and scientific employment.

1. One of the main reasons for engineering layoffs is the periodic cutbacks and shifts in defense spending. It was reported by many interviewees that some of the major shifts in defense spending, to some extent, have been political. One individual commented:

> The government has no regard for the stability of engineers. Each political party and each president have their own idea as to which part of the country will get big government contracts. This causes hardships, unemployment, layoffs, and a constant movement of personnel.

When asked to provide evidence in support of this feeling, the interviewees presented copies of several daily newspapers giving news of layoffs in the San Francisco Bay Area in the first section and giving large advertisements for engineers and scientists in Alabama, Louisiana, and Texas in the want-ad section.

2. Personnel managers from several companies pointed out that, at times, the Department of Defense has cancelled large defense contracts involving thousands of workers at unreasonably short notice. It was maintained that the companies cannot absorb such large scale cancellations without mass layoffs unless the companies themselves receive a reasonable advance notice.

3. Poor manpower planning on the part of certain company managements is another reason which leads to engineering and scientific unemployment. Some interviewees felt that a company should not accept a large contract, if the manpower and the facilities available are inadequate. They cited examples of companies which accepted extensive contracts and then hired workers to the extent of establishing a growth rate of more than 100 percent. Such growth rates, in the opinion of some executives, are too excessive and lead to instability both for the company, the community in general, and the engineers and scientists involved.

It was pointed out that there are companies, both small and medium sized, in which the managements emphasize the "oversold" position of their companies' manpower and facilities. In such cases, once the company's resources are committed for one year or longer on certain contracts, the management would not accept additional work. Furthermore, these companies hire professional engineers with great care and with a view of providing them with permanent employment. The growth rates for such companies are between 10 and 15 percent per year.

4. Some of the existing practices in the defense industries are important factors in creating engineering employment instability. As an illustration, consider project "P", with estimated cost of $900,000,000, for which the Department of Defense has asked for bids from throughout the country. For the sake of argument, let us assume there are four companies named B, C, D, and E bidding for project "P".

As one of the company managers explained, in order to show to the contracting agency that the company has the manpower and the facilities available to do the job, company B hires 300 engineers and scientists, company C does likewise, and company D recruits 300 engineers and scientists to prove its capabilities to complete the project. Company E hires 300 engineers and, in addition, spends a million dollars on a new building to show its capabilities and interest in project "P".

In the end, only one of these four companies would be awarded the contract and the other three companies would not need the 300 engineers and scientists that each of them hired. When these four companies recruit these engineers and scientists, they do not inform the persons involved as to the possible temporary nature of the job. The individual describing this example stated that the solution for the 900 not-needed engineers and scientists is simple. He replied that the company receiving the contract would contact the personnel managers at the other three companies and would ask them to send their 900 recently

hired engineers and scientists to them. Practices such as this do cause short-term instability in engineering employment and result in serious dislocation problems for individuals and their families.

The origin of the above-mentioned practice, it was reported is in the fact that very often the Department of Defense requires that before a contract can be awarded, the company show that it has manpower and facilities already waiting to do the work. These requirements, in the opinion of some interviewees, are unreasonable, especially for large contract awards involving thousands of workers.

5. One of the reasons for the recent layoffs is the change in contracting policies of the Department of Defense--from cost-plus fixed fee contracts to cost-plus incentive type contracts. Whereas, under the old contracting policies, the company could earn at most 7 percent of the total sales, under the cost-plus incentive type contracts, the profits can go up to 14 percent of the net sales. Under the previous arrangements, therefore, it was beneficial for a company to have a large number of engineers work on a contract, because 7 percent of the larger payroll is better for the corporate earnings of the organization. Under the new system, the companies can earn higher profits if they do the work with the help of fewer but highly efficient engineers and scientists. This recent change in the contracting policies has forced defense companies to become more efficient and as a result many marginal and inefficient engineers and scientists were discharged.

6. Another important reason for engineering and scientific unemployment is the fact that technical talent is concentrated in a few geographical locations. Such locations are the Pacific Coast, the North East, and the South East regions. The problem arises because at any particular time either most of the companies in each of these regions are laying off engineers and scientists or they are doing intensive hiring simultaneously. Because of lack of diversification in these regions, there are no cushioning effects in the event defense cutbacks and/or shifts occur.

Observations on Manpower Policy

There are individuals who believe that layoffs are an essential part of the free enterprise system and that they can never be avoided. These individuals claim that business organizations cannot be efficiently run if management cannot resort to layoffs. The author agrees that there are times when because of poor business conditions layoffs are absolutely necessary. However, in the case of defense industries, layoffs have occurred during years of record profits for the companies involved. For example, in the case of one defense contractor, net earnings after taxes rose by more than 100 percent during the year the company had mass layoffs. Another defense employer had record earnings during the year it laid off large numbers of engineers and scientists.

An important feature of layoffs by defense firms is that they are periodic. Within six-months to a year after the previous layoff, defense companies usually have extensive

recruitment programs. For instance, the most recent layoffs affected 30,000 engineers and scientists. It appears that within a one-year period more than 90 percent of these laid off individuals were able to locate jobs. If it is assumed that approximately 50 percent of them found re-employment with defense employers, it meant a net loss of $35 million to the Department of Defense. The loss is computed by adding the severence pay, recruitment expenses, and relocation allowances--all of which come out of the overhead charged to the Department of Defense.

Recommendations to the Agencies of the Federal Government

1. The Bureau of Employment Security, in conjunction with State Departments of Employment and through its Labor Inventory Communications System (LINCS), has at its disposal a network which can improve the job-information process for engineers and scientists seeking employment.

This study has shown that 60 percent of the laid off engineers and scientists submitted work applications at various offices of the California State Department of Employment. However, only 3 percent of these individuals obtained re-employment by this method. The main difficulty is that employers do not normally list professional job vacancies with these departments.

It is recommended that:

(a) The Bureau of Employment Security publish regional lists of engineers and scientists who are looking for jobs. These lists should be issued at regular intervals, say bi-monthly, and mailed to major employers in the region. A brief

resume of the available engineers and scientists should be included in the list.

(b) The Department of Defense should require all contractors to list every job vacancy with the local State Departments of Employment.

(c) The Department of Defense should reduce the reimbursement to its contractors for job advertisements and for fees paid to private employment agencies. Such a step would encourage defense contractors to use the facilities of the Bureau of Employment Security.

2. This research has indicated that employers' hiring policies are discriminatory towards older engineers and scientists. If an individual is over 45 years of age, his technical capabilities--measured in terms of educational background, professional activities and orignal contributions--are completely ignored. As pointed out in a recent publication of the U. S. Department of Labor, "if employment age restrictions persist, artificial manpower shortages will be created and a manpower squeeze will result. Even more important, America will be deprived of an invaluable resource, the experience and production sense of older workers."[1]

In order to assist the older engineers and scientists, the Department of Labor should:

(a) Institute special job-placement services for older workers.

(b) Provide retraining and updating facilities with special emphasis on obtaining advanced degrees.

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[1] U. S. Department of Labor, Ability is Ageless, Washington, D. C., U.S.G.P.O. (1960), p. 8.

3. The length of advance notices given to engineers and scientists were unreasonably short. Fourteen percent of the respondents did not receive any advance notice whatsoever of their forthcoming layoff; some of these respondents had worked for their company for five years or more. Fifty percent of the subjects received advance notice of 7.58 working days or less.

It is recommended that the Department of Labor sponsor national legislation establishing reasonable standards of advance notice based on an employee's length of service with the company.

4. As has been shown in this report, shifts from defense to commercial work are quite common among defense engineers and scientists. An average of one-third of the defense engineers who change jobs shift to commercial work.

Subsequent to their layoff, 54 percent of the defense engineers and scientists in the San Francisco Bay Area transferred to commercial work. These respondents made the shift apparently without any retraining. Evidence of large scale transference to commercial work was also noted by the Boston layoff study.[2]

The present study shows that respondents who received salary increases or no change in salaries at their commercial jobs had a longer tenure than those who received salary cuts. Furthermore, it was found that a higher proportion of respondents with lower pre-layoff salaries transferred to commercial

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[2] Joseph D. Mooney, Displaced Engineers and Scientists: An Analysis of the Labor Market Adjustment of Professional Personnel, Ph.D. Thesis, Massachusetts Institute of Technology, p. 137 (June, 1965).

work. It appears that if salary structures for commercial jobs are raised, even a larger number of defense engineers would shift to commercial work.

Thus, in planning for the impacts of disarmament and defense cutbacks, transferability of engineering and scientific skills does not appear to be a problem. The mutual transference between defense and commercial work would become even more widespread, if the commercial industries were to offer opportunities as attractive as the defense industries. This would be possible only when extensive R & D programs are established in the commercial industries.

The Arms Control and Disarmament Agency should sponsor legislation which will encourage commercial R & D spending and would raise the level of engineering and scientific opportunities offered by commercial companies.

5. If it is true that the Department of Defense has, in the past, cancelled large contracts without giving a reasonably long advance notice to the companies, then the Federal Government itself is a party to creating mass unemployment among engineers and scientists.

It is recommended that, in order to help stabilize engineering and scientific employment, the Department of Defense take another look at its policy of short-notice cancellations and try to avoid such actions in the future.

Recommendations to Agencies of the State Government

1. This research has revealed that unemployment insurance is the most commonly used and the most important source of fi-

nancial assistance to unemployed engineers and scientists. However, this source does not provide adequate financial support.

It is suggested that the unemployment insurance benefits be increased to the extent that the individual can obtain approximately one-half of his pre-layoff salary.

2. As has been pointed out earlier, 21 percent of the laid off engineers and scientists left California. Furthermore, the respondents who left California were younger, had obtained higher levels of education, and had received their formal degree more recently.

It is estimated that, as a result of recent layoffs, 250 engineers and scientists left the State of California. This out-migration has meant a net business loss of approximately 10 million dollars to the State. This means that the State has lost all of the income tax on this sum. Moreover, because of multiplier effects, losses to real estate and other businesses have been enormous. A constructive action to counteract this out-flow of highly trained talent, therefore, is in the financial interest of the State of California.

The author urges that an Agency for the Conservation of Engineering and Scientific Resources (ACER) be established. This agency could either be a State financed semi-autonomous organization or it could be a non-profit organization funded by the State and private foundations.

As soon as a qualified engineer or scientist is laid off, he should be free to join the proposed agency and receive 50% of his pre-layoff salary for putting in a 40-hour work-week. The individual would be given every fourth week off to look for

a job. During the work-weeks, he would be engaged in solving problems such as smog control, mass transportation, waste management, etc., etc. Seventeen percent of his salary would be paid by the company from which he was laid off, another 17 percent by the Department of Defense, and the remaining 16 percent by the State.

The engineers and scientists would be permitted to work in the proposed agency until they obtain full-time jobs. Since the engineers and scientists would be receiving only one-half of their regular salaries, and because they would be free every fourth week for their job-search activities, this would encourage them to locate a job as soon as possible. It is estimated that the proposed agency would not cost the State of California more than $3 million per year. Furthermore, the State would not be paying unemployment insurance to these engineers and scientists who elected to join ACER.

In addition to conserving engineering and scientific resources, and being in the financial interests of the State, the proposed agency would have several advantages.

(a) Because the companies would be required to pay 17 percent of the engineers' salary as long as he remains unemployed, the management will be more careful in laying off such individuals.

(b) The employers in need of engineers and scientists would know where the available men are. The personnel managers of such companies could be invited to the proposed agency for the purpose of interviewing the available engineers and scientists.

(c) Many of the State's technical problems would be solved at less than one-sixth of the cost.

Recommendations to Defense-Oriented Companies

1. The out-placement services arranged by some employers were the fourth most efficient method by which laid off engineers and scientists located jobs. However, only 25 percent of the respondents were provided such services. This means that a large majority of the defense firms did not make any arrangements to help their employees locate other jobs.

It is recommended that in the event of future layoffs, defense firms should provide out-placement services. These services could be either in the form of inviting other prospective employers to the plant and arranging interviews with individuals scheduled to be laid off, or in the form of mailing brief resumes of the individuals involved to other companies.

2. The study has shown that the respondents were not given a reasonably long advance notice of their forthcoming layoffs. One-half of the individuals involved received advance notices of 7.58 working days or less; 14 percent did not receive any advance notice.

A reasonably long advance notice would ameliorate the hardships caused by massive layoffs and would facilitate the re-employment process. It is urged that engineers and scientists, who have worked for their employer six months or longer, be given at least a four-week advance notice of their involuntary terminations.

3. Severence pay was the second most important source of financial assistance for the unemployed engineers and scientists. However, severence pay coupled with unemployment insurance was not an adequate source of financial support. Even the respondents who remained unemployed for four weeks or less had to depend upon liquidation of their savings and investments.

Furthermore, only 54.6 percent of the subjects were given severence pay. During the personal interviews with engineers and scientists, it was pointed out that one large employer later unsuccessfully tried, by a suit, to get back the severence pay from the employees who were laid off.

In order to alleviate individual financial problems caused by layoffs, it is recommended that employers institute liberal severence pay policies.

4. The results of this research make it evident that the hiring policies of the employers are discriminatory towards older engineers and scientists. Apparently the employers disregard educational background and other technical capabilities of older individuals. Some of these older engineers and scientists are undoubtedly above-average individuals and could contribute a great deal to the activities of defense employers.

It is advocated that the firms not discriminate against older workers and utilize this reservoir of experienced well educated technical manpower.

5. Approximately 60 percent of the laid off engineers and scientists reported that their technical talents had not been utilized to the fullest extent. The more competent and the highly educated respondents reported relatively more under utilization. Such large scale under-utilization is not only a waste of highly trained manpower, it is not in the best interests of the firms involved. Under the cost-plus incentive type contracts, a reduction in under-utilization of technical talent would mean higher profits for the companies.

It is proposed that the defense firms institute appropriate programs for the purpose of avoiding under-utilization of technical manpower. An example of such a program would be to periodically request engineers and scientists to complete anonymous questionnaires designed to detect under-utilization and its causes. If it is determined that the firm's engineers and scientists feel under-utilized, then corrective steps based on the reported causes could be taken.

6. Some of the personnel managers and executives maintained that an excessive rate of growth on the part of some companies is another reason for engineering and scientific employment instability. It was pointed out that a growth of between 10 to 15 percent is a healthy one.

It is, therefore, recommended that the managements of defense companies plan reasonable growth rates compatible with long range stability of employment for its employees.

7. During the process of bidding for contracts, it appears that defense companies sometimes hire engineers and scientists on a temporary basis. However, the engineers and scientists involved are normally not told that, in the event the company is not awarded the contract, their jobs will be terminated. Furthermore, if the contract in question is a large one, numerous engineers and scientists are affected.

It was remarked by many interviewees that companies should be honest and frank with engineers and scientists. The individuals should be told in advance that the continuation of their jobs depends upon the award of a particular contract.

It was observed that if the engineers and scientists knew their jobs depended upon the acceptance of a particular company proposal, these individuals would put a special effort into preparing the proposal. Moreover, in the event the company is not awarded the contract, indviduals would not be faced with an emotional shock at an early termination.

It is recommended that in case of temporary appointments, defense companies should be candid with engineers and scientists and should inform them of the uncertain nature of the job.

8. The report has revealed that the four most commonly used methods by engineers and scientists for the purpose of locating jobs are:

(a) Direct applications to companies

(b) Newspaper advertisements

(c) Friends and personal contacts

(d) State Department of Employment

Of the four methods above, companies have used the State Departments of Employment the least. This study shows that 61 percent of the respondents visited various offices of the California State Department of Employment.

It is urged that the defense companies list all engineering and scientific vacancies with the State Departments of Employment.

Recommendations to Commercial Companies

1. From this study, it can be concluded that shifts from defense to commercial work are quite common among defense engineers and scientists. Apparently the engineers and scientists who transferred to commercial work have done so without any

prior retraining. It appears, therefore, that alleged shortcomings of defense engineers and scientists, such as inability to work in jobs requiring broad technical background, lack of cost consciousness, etc., are unfounded.

It is suggested that commercial companies not discriminate against defense engineers and scientists.

2. In analyzing the shifts from defense to commercial work, it was found that commercial companies hired respondents who are relatively less educated, read fewer technical magazines, and take fewer courses at their place of employment. This was because commercial firms were able to attract lower-salaried respondents only. Such a trend will in the long run hurt the efficiency, the growth rate, the innovativeness, and hence the competitiveness of commercial industries.

This trend could probably be reversed if commercial companies would offer more attractive salaries and more challenging work. One of the ways to create more challenging jobs in the commercial firms is to increase the commercial R & D spending. It is thus urged that commercial firms:

(a) raise the level of their engineering and scientific salary structures, and

(b) expand their R & D programs

3. Just as the defense firms have avoided hiring older engineers and scientists, commercial companies have done likewise. A large reservoir of the nation's technically trained and experienced manpower is consequently being wasted.

It is recommended that commercial firms not reject well educated, competent engineers and scientists simply because of old age.

Recommendations to Engineers and Scientists

1. One of the ways in which engineers and scientists can help stabilize the employment market is by using discretion in selecting their future employers. They should avoid firms which have had periodic mass layoffs. It was reported to the author by many interviewees that, as a result of the recent layoffs, many engineers and scientists are now accepting job offers not on the basis of salary alone. They are presently taking into account the growth pattern and the past record of employment stability of the firm. One of the national magazines commented on the situation as follows:

> Probably the one bright spot in this picture is that many engineers are examining these tantalizing offers carefully, and then rejecting them. There is not the mobility there once was. Too many engineers remember the layoffs of 24 months ago. Out on the West Coast, personnel managers complained that many eastern engineers won't even listen to their blandishments because of the reputation the industry out there has earned for severe ups and downs.[3]

It is urged that engineers and scientists, before accepting employment, examine the past record of the company in terms of employment stability.

2. The results of this study show that engineers and scientists who became victims of recent layoffs were given unreasonably short advance notice. One out of every seven of the respondents did not receive any advance notice. One-half of them received advance notice of 7.58 working days or less. Furthermore, 45 percent of the respondents did not receive any

[3] "Help Wanted Maybe," editorial, Electronics (March 1965), p.23.

severence pay.

In order to alleviate hardships caused by sudden and massive layoffs, engineers and scientists should ask for guarantee of a reasonably long advance notice (a minimum of four-weeks advance notice after six-months service) or four weeks severence pay in lieu of advance notice. Such requests could be made to the companies through engineering professional societies or by individual engineers and scientists at the time of their employment.

A few of the engineering societies have taken positive actions toward finding solutions to the problem of periodic engineering unemployment. For instance, the National Society of Professional Engineers has shown its concern for this problem. The State of California Chapter of this society arranged a two-day symposium entitled "Engineering Employment--Can We Meet the Challenge?" and came up with several recommendations. Engineers and scientists should support professional societies which look after their economic interests.

3. The three most important methods of job search, according to this report, are:

(a) Direct applications to companies

(b) Friends and personal contacts

(c) Newspaper advertisements

While looking for a job, engineers and scientists are urged to concentrate on the three above-mentioned methods.

Recommendations for Further Research

On the basis of experience gathered from conducting this study, the author would like to recommend that further research be conducted in the following areas.

1. Diversfication of defense industries has been suggested for a considerable number of years as one of the solutions for overcoming the effects of periodic defense cutbacks and shifts in defense spending. It has been proposed that all firms doing business with the Federal Government be required to keep their net defense sales below a certain designated percentage of their total sales. A figure of 50 percent defense and 50 percent commercial sales has been advocated by some observers.

According to a recent study of the impacts of defense cutbacks on electronics industries, conducted by the Battelle Memorial Institute of Columbus, Ohio, many diversification attempts among larger companies have been less than vigorous. Aggressive diversification efforts among some medium-sized companies ($2 million-$100 million net sales) have been highly successful over a three-to-five year period.[4]

The findings of the study show that as far as defense engineers and scientists are concerned, shifts from defense to commercial work have been quite common. Apparently, transferability of skill and experience of defense engineers and scientists is not an obstacle towards diversification of defense-oriented firms. During the interviews, it was pointed out to the author, that some of the defense companies do not wish to specialize in anything but defense work, because the chief executives of these companies are either mostly aircraft and missile designers or they are retired military officers, or both.

---

[4] Peck, Charles S., A Study of Implications of Reduced Defense Demand for the Electronics Industry, Battelle Memorial Institute, Columbus, Ohio (July 1965), p. 40.

It was indicated that these individuals are not capable of leading their companies successfully into commercial markets.

It is thus proposed that a study of the problems faced by executives of defense companies in shifting their firms successfully into commercial markets be conducted.

2. Under the sponsorship of the Department of Defense, the Department of Labor, and the Arms Control and Disarmament Agency, several studies dealing with defense-oriented layoffs have been conducted. However, as has been shown in this study, defense layoffs normally result in subsequent commercial layoffs.

It is urged that a study dealing with the unemployment and re-employment experiences of engineers and scientists laid off by non-defense companies be conducted. A comparison of such a study with the already completed defense layoff studies could lead to some very useful results.

TABLE OF CONTENTS
FOR THE MAIN REPORT

Chapter No.		Page No.
I.	INTRODUCTION	1
1.1	Objectives of the study	1
1.2	Definitions	2
1.3	The companies involved	4
1.4	The individuals involved	6
1.5	The sources of population data	7
1.6	Collection of major data	9
1.7	The response rate	9
1.8	Summary	11
II.	THE MAGNITUDE OF THE PROBLEM	12
2.1	Engineering and scientific layoffs	12
2.2	Engineers and scientists currently unemployed in the San Francisco Bay Area	15
2.3	The nature of the engineering and scientific employment	16
2.4	Total employment in aerospace and electronics industries	19
2.5	Impact of defense layoffs	20
2.6	Summary	22
III.	PERSONAL CHARACTERISTICS OF THE RESPONDENTS	23
3.1	Educational background	23
3.2	Educational and professional activities after graduation	25
3.3	Age	28
3.4	Areas of specialization	29
3.5	Salary	31
3.6	Non-degree individuals	31
3.7	Summary	36
IV.	THE LAYOFF EXPERIENCE	37
4.1	Nature of the pre-layoff job	37
4.2	Company layoff policies	40
4.3	Under-utilization of technical capabilities	45
4.4	Summary	46

Chapter No.		Page No.
V.	THE UNEMPLOYMENT EXPERIENCE	48
5.1	Length of the unemployment period	49
5.2	Effect of age on unemployment	51
5.3	Effect of job search methods and home ownership on unemployment	53
5.4	Sources of financial support	54
5.5	Summary	57
VI.	JOB SEARCH ACTIVITIES	59
6.1	Intensity of job search	59
6.2	Unemployment insurance and job search efforts	60
6.3	Methods used to obtain post-layoff job	62
6.4	Factors helpful in obtaining re-employment	65
6.5	Factors which restricted job search activities	67
6.6	Summary	71
VII.	THE POST-LAYOFF EMPLOYMENT	74
7.1	Nature of the post-layoff job	74
7.2	Out-migration of engineering and scientists from California	77
7.3	Engineers and scientists currently unemployed	78
7.4	Summary	80
VIII.	JOB HISTORY: JANUARY 1961 TO NOVEMBER 1965	81
8.1	Job changes during 1961 - 65	81
8.2	Reasons for job changes	84
8.3	Salary changes	85
8.4	Geographical mobility	86
8.5	Summary	89
IX.	OCCUPATIONAL CONVERSION: DEFENSE TO COMMERCIAL WORK	91
9.1	Nature of the problem	91
9.2	Shifts from defense to commercial work during the January 1961 to November 1965 period	93
9.3	Shifts from defense to commercial work subsequent to the most recent layoffs	94
9.4	Comparison of personal characteristics: Transferred versus not-transferred respondents	96
9.5	Summary	100

Chapter No. Page No.

X. SUMMARY OF FINDINGS 102

10.1 Transfers from defense to commercial work 102
10.2 Age and re-employment 102
10.3 Duration of unemployment. 103
10.4 Company layoff policies 103
10.5 Job search methods. 103
10.6 Sources of financial assistance 104
10.7 Non-degree respondents. 104
10.8 Geographical Mobility 104
10.9 Salary and job changes. 105

XI. OBSERVATIONS AND RECOMMENDATIONS. 106

11.1 Observations on causes of defense layoffs 106
11.2 Observations on manpower policy 108
11.3 Recommendations to agencies of the federal government. 109
11.4 Recommendations to agencies of the State government. 111
11.5 Recommendations to defense-oriented companies . . 112
11.6 Recommendations to commercial companies 114
11.7 Recommendations to engineers and scientists . . . 115
11.8 Recommendations for further research. 116
11.9 Assessment of the research methodology. 117

BIBLIOGRAPHY. 119

APPENDIX A. A.1

APPENDIX B. A.11

APPENDIX C. A.14

APPENDIX D. A.15

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Tentative Work Material for Occupational Home Economics Programs.

South Carolina State Dept. of Education, Columbia. Home Economics Education Section
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*TEACHING GUIDES; *PROGRAM GUIDES; *OCCUPATIONAL HOME ECONOMICS; *SERVICE OCCUPATIONS; CHILD CARE WORKERS; FOOD SERVICE WORKERS; MAIDS; CLOTHING MAINTENANCE SPECIALISTS; POST SECONDARY EDUCATION; INTERIOR DECORATOR; ADULT VOCATIONAL EDUCATION; SECONDARY EDUCATION; RESOURCE MATERIALS; TEACHING TECHNIQUES

These materials are for teacher use in planning occupational home economics programs to prepare high school, post high school, and adult groups to be child care workers, homemakers' assistants, food service workers, clothing maintenance and interior design aides. They were developed during workshop at the South Carolina State College in July, 1967. Objectives are suggested for each program area. Generalizations, learning experiences, teaching materials, and evaluation techniques are listed in tabular form beneath each objective. Approximate time is suggested. The appendix includes: (1) purposes of instrumental programs in home economics, (2) differences in homemaking and occupational home economics, (3) using the community survey, (4) job analysis, (5) job related work experience, (6) observation - child care aides, (7) teachers - basic competencies, (8) follow-up of graduates, and (9) visual aid suggestions. (FP)

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FOR

OCCUPATIONAL HOME ECONOMICS

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DATE: September, 1968

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FOREWORD

The programs for occupations related to home economics developed during the past three years have been most interesting and successful. The in-service workshops and conferences have provided opportunities for teachers to share ideas and to develop tentative work materials for classes. These tentative unit plans for several areas in occupations related to home economics were prepared by the teachers attending the occupational workshop at South Carolina State College, Orangeburg, South Carolina, in July, 1967.

We are very grateful to Mrs. Mattie P. Jackson, Head, Home Economics Teacher Education, State College, for serving as coordinator of the workshop; and, to Miss Joyce Terrass, Purdue University, Lafayette, Indiana and Mrs. Flora Conger, Coordinator of Child Development, Hoke-Smith Technical School, Atlanta, Georgia, for serving as consultants. Special appreciation is expressed to Mrs. Estoria Jones and Mrs. Georgia Elam, Home Economics teachers at the C. A. Johnson High School, Columbia, South Carolina, for serving as librarian, secretary, and leaders for special areas, and helping in the overall planning and securing of teaching materials. Miss Ella Wyman and Miss Edith Williams, District Supervisors of Home Economics Education, also assisted in the overall planning and the securing of teaching materials and helped in making the workshop successful. Special recognition is expressed to Mrs. Carriebelle Gregory, Home Economics teacher at the Matthew E. West High School, Hardeeville, South Carolina; Mrs. Ethel D. Malloy, Home Economics teacher, Eastside High School, Bennettsville, South Carolina; and, Mrs. Dorothy I. Way, Home Economics teacher at Orangeburg High School, Orangeburg, South Carolina. We are also grateful that other teachers of home economics occupational programs in different areas attended the workshop and shared ideas from their experience: Mrs. Helen C. Epting, Mrs. Myraline Hicks, Mrs. Katherine Stone, and Mrs. Mabel Thomson. Mrs. Mabel Johnston, District Supervisor, Home Economics Education, also attended the workshop for several days and to her we express gratitude.

Special appreciation is expressed to Miss Edna Page, Home Economist with the Vocational Education Media Center at Clemson University, Clemson, South Carolina, for editing the material and making copies available.

These materials are suggestive for the teachers in the local schools and, of course, will need to be adapted and changed to meet the local needs. It is hoped that each teacher will keep copies of her own plans and/or copies of changes made in these unit plans so that revisions can be made next summer.

Alma Bentley, State Supervisor
Home Economics Education
September, 1967

TEACHERS ATTENDING OCCUPATIONAL WORKSHOP
Orangeburg, South Carolina

Name	Address
Barnwell, Mrs. Queen H.	Box 505, Holly Hill, South Carolina
Barton, Mrs. Rosa R.	Fairforest, South Carolina
Bellamy, Mrs. Annie E.	Route 1, Box 128, Longs, South Carolina
Blake, Miss Eliza	Mullins, South Carolina
Brooks, Mrs. McPhine	69 Woodward Street, Bishopville, South Carolina
Elam, Mrs. Georgia J.	1909 McFadden Street, Columbua, South Carolina
Hunter, Mrs. Elizabeth M.	Greeleyville, South Carolina
Johnson, Mrs. Ollie R.	3 King Street, Sumter, South Carolina
Jones, Mrs. Estoria T.	Route 2, Box 385-A, Columbia, South Carolina
Luckey, Mrs. Helen H.	38 Albert Street, Bishopville, South Carolina
Marshall, Mrs. Mary A.	Georgetown, South Carolina
Ruff, Mrs. Orangelow M.	Box 549, Union, South Carolina
Sheppard, Mrs. Veronica C.	1121 Gunn Avenue, Charleston, South Carolina
Talford, Mrs. Beulah A.	Box 115, Walterboro, South Carolina
Thomas, Mrs. Mary S.	Elliott, South Carolina
Threatt, Miss Carrie R.	RFD 2, Box 228, Pageland, South Carolina

TABLE OF CONTENTS

	Page No.
Foreword	i
Participating Teachers	ii
Table of Contents	iii
Suggested Program for Child Care Worker	1
Suggested Program for Homemaker's Assistant	17
Suggested Program for Clothing Maintenance Aide	29
Suggested Program for Food Service Workers	34
Food Service Training for Lunch Room Workers	53
Suggested Program for Interior Design Aide	61
Appendix	
Purposes of Instructional Programs in Home Economics	73
Differences in Homemaking and Occupational Home Economics	74
Using the Community Survey	75
Job Analysis	76
Job Related Work Experience	78
Observation - Child Care Aides	79
Teachers - Basic Competencies	81
Cues for the Teacher	83
Follow-up of Graduates	84
Visual Aid Suggestions	85

SUGGESTED PROGRAM FOR CHILD CARE WORKER

Introduction

The child care worker is prepared for service in several different establishments--day care centers, nursery schools, children's hospitals, children's homes, and individual family homes. Class experiences and on-the-job experiences are designed to help develop abilities and understanding needed when assuming the responsibility of caring for children.

The approximate number of hours given for each objective is only a suggestion. Requirements for class and work experiences will vary for high school, post high school, and adult groups. Class requirements will also be dependent upon the previous experiences of the class members and the level of child care service the students wish to enter.

Objectives

To develop awareness and understanding of characteristics and qualities of a good employee in child care service.

To develop awareness of various types of child care services and jobs within these services.

To understand young children and develop warm relationships with them.

To gain some understanding of children's behavior.

To help children develop good self-help habits.

To become aware of the importance of food to young children.

To develop awareness and understanding of the use and care of equipment and supplies.

To develop some concern and responsibility for children's safety.

OBJECTIVE: TO DEVELOP AWARENESS AND UNDERSTANDING OF CHARACTERISTICS AND QUALITIES OF A GOOD EMPLOYEE IN CHILD CARE SERVICE

Approximate time -- 2 weeks

GENERALIZATIONS	LEARNING EXPERIENCES	TEACHING MATERIALS	EVALUATION
A. A good employee 1. is clean and neat, 2. holds a current health card, 3. dresses appropriately, 4. speaks properly, 5. has a good attitude toward work, 6. is cooperative, 7. is punctual, 8. has a sense of responsibility.	A. 1. Discuss good grooming as an essential for employment.		Interest shown in being well-groomed and appropriately dressed at all times
	2. View and discuss the film, "The 90% of You," on body care and good grooming.	Film: "The 90% of You"	Film evaluation
	3. Discuss good health. Have a resource person from the Health Department to lead the discussion. Have each student secure a health card.	Resource person from Health Department	
	4. Demonstration by class members as to correct and incorrect grooming, posture, and dress on the job.		
	5. Discuss the effect one's attitude has on the quality of work and the ability to get along with fellow workers.		
	6. Make a list of positive attitudes toward work and a list of negative attitudes toward work. Discuss ways in which the negative attitudes could develop into positive attitudes.		Participation in discussion
B. Employee etiquette is an important part of a job.	B. 1. Have an employer in child care service come in and lead a discussion on the importance of employee etiquette.	Resource person	

GENERALIZATIONS	LEARNING EXPERIENCES	TEACHING MATERIALS	EVALUATION
	2. Compile a list of employee etiquette rules to be observed at all times.	Prospective employers	
	3. List a group of don'ts while on the job.		
	4. Role play proper etiquette (a) in using the phone, (b) in addressing your employer, (c) in introducing visitors.		Evaluation of role playing situations
C. Knowledge of job policies facilitates better job performance.	C. 1. Discuss policies of child care centers in regard to (a) tardiness, (b) sick leave, (c) vacations.		
D. Establishing good working relationships is necessary for job happiness and success.	D. 1. Study materials on relationships.	Berry, Mary, Guide to Good Manners, Chicago, Science Research Associates Wrenn, Gilbert A., How to Increase Your Self Confidence, Chicago, Science Research Associates	
	2. Discuss types of relationships a child care aide may encounter, such as: (a) Director-employer (b) Employee-employer (c) Parent-employer (d) Parent-employee (e) Employer-child Role play some of these situations.		Evaluation of role playing

GENERALIZATIONS	LEARNING EXPERIENCES	TEACHING MATERIALS	EVALUATION
	3. Interview several child care employers as to what they expect of their employees regarding relationships.		
	4. Child care employees tell how they maintain good working relationships with their co-workers.	Resource persons	
	5. Write a paper on the importance of harmonious relationships between employees.		Written work

OBJECTIVE: TO DEVELOP AWARENESS OF VARIOUS TYPES OF CHILD CARE SERVICES AND JOBS WITHIN THESE SERVICES

Approximate time -- 2 weeks

GENERALIZATIONS	LEARNING EXPERIENCES	TEACHING MATERIALS	EVALUATION
A. Various types of jobs are available within the area of child care services.	A. 1. Show film, "Children of Change" and discuss needs for child care centers.	Film: "Children of Change"	Film evaluation
	2. Read Hammond-Dales, Good Schools for Young Children to show the different types of schools available to young children.	Hammond, Dales, Skipper & Witherspoon, Good Schools for Young Children	
	3. Conduct a survey to determine the kinds of child care services available in the area. Discuss purposes of each of the services. Identify ways in which they are alike and ways in which they are different. Prepare bulletin board on each of the kinds of child care services. Use with the discussion.		Evaluation of visual aids
	4. Show film: "Little World." Discuss a good day center using the ideas from the film.	Film: "Little World," Health Welfare Materials Center Child Welfare Journal, Child Welfare League of America, Inc. Vol. XLI, No. 1	
	5. Analyze the jobs available in child care services to see what competencies are needed for the job.		Job analysis

OBJECTIVE: TO UNDERSTAND YOUNG CHILDREN AND DEVELOP WARM RELATIONSHIPS WITH THEM

Approximate time -- 2 weeks

GENERALIZATIONS	LEARNING EXPERIENCES	TEACHING MATERIALS	EVALUATION
A. Understanding one's self is the first step toward understanding children.	A. 1. Develop guides for one's own behavior with children. 2. Relate an early childhood experience which established a warm relationship with an adult. 3. Develop specific suggestions for guiding children, giving directions, and giving help when needed. 4. Practice giving directions in a positive way. Tape and listen to tone of voice. Practice to improve tone of voice.	Booklets: "Exposing Your Personality" "Self-Understanding-A First Step to Understanding Children"	Class participation
B. Persons who guide and care for children need to possess emotional maturity.	B. 1. Observe adults working with children--identify desirable characteristics they have.		Observation reports
	2. Show and discuss film, "Control Your Emotions."	Film: "Control Your Emotions"	Film evaluation
	3. Discuss goals that should be considered when guiding children.		
C. Qualities desirable in establishing a warm relationship with children are: 1. communication, 2. honesty,	C. 1. Role play each quality needed by child care aide to help establish a warm relationship with children.	Hurlock, Child Development, Chapter 10.	
	2. Make posters and prepare bulletin boards on "Desirable Qualities of the Child Care Aides."	Posters and bulletin boards	Evaluation of visual aids

GENERALIZATIONS	LEARNING EXPERIENCES	TEACHING MATERIALS	EVALUATION
3. fairness, 4. understanding.	3. Tape an interview with a nursery school supervisor or director on desirable qualities of a child care worker. Use tape for class discussion. 4. Role play situations when poor communication techniques are used with children. 5. Compile a list of desirable techniques in communicating with children.	Taped interview	
	6. Write a paper: "The Kind of People Little Folk Love."		Written assignment

OBJECTIVE: TO GAIN SOME UNDERSTANDING OF CHILDREN'S BEHAVIOR

Approximate time -- 6-8 weeks

GENERALIZATIONS	LEARNING EXPERIENCES	TEACHING MATERIALS	EVALUATION
A. There are a number of factors which influence children's behavior.	A. 1. Discuss children's behavior in general, using agree and disagree statements to begin the discussion and keep it in progress.	Agree and disagree statements	Observe students during discussion for knowledge and understanding of children.
	2. Show film, "He Acts His Age." After film have students list the behavior levels of different age groups.	Film: "He Acts His Age"	Show film once. Before second showing give students questions for looking for specific information.
	3. Discuss factors of heredity and environment that cause children to display different behavior.	Hurlock, Elizabeth, The Developing Child	
	4. Have students explain the statement: We are the sum total of our experiences."		
B. A child's feelings are expressed through his actions.	B. 1. Describe different ways that children express anger, fear, love, and hate.	Hurlock, Elizabeth, The Developing Child	
	2. Discuss the statement: "A child acts the way he feels." Give examples to illustrate the statement.		
C. Each child is is an individual; it is necessary to	C. 1. Show films: (a) "Individual Differences" (b) "Meeting Emotional Differences in Children"	Films: "Individual Differences" "Meeting Emotional Differences in Children," S. C.	Evaluation of film discussion

GENERALIZATIONS	LEARNING EXPERIENCES	TEACHING MATERIALS	EVALUATION
meet and understand individual differences.	Discuss the differences seen in (a) emotional development, (b) intellectual development, (c) physical development, (d) social development.	Mental Health Assoc., Columbia, S. C.	
	2. Role play different ways to meet and handle behavior problems.		
D. Observation is a valuable technique in learning about children.	D. 1. Have a panel discussion on the value of observation. Include a mother, nurse, doctor, and nursery school or kindergarten teacher on the panel.	Panel members "Observation: A Valuable Tool," Forecast, May, 1960	Discuss what was learned from the panel discussion.
	2. Discuss and role play the proper techniques used to observe children.	Read, Katherine, The Nursery School	
	3. Set up some guidelines for observing children.		
	4. Develop observation sheets for class to use in observing.	Evaluation sheets	
	5. Have students practice techniques of observation.	Observations	Application

OBJECTIVE: TO HELP CHILDREN DEVELOP GOOD SELF-HELP HABITS

Approximate time -- 2 weeks

GENERALIZATIONS	LEARNING EXPERIENCES	TEACHING MATERIALS	EVALUATION
A. Proper equipment is needed to develop self-help habits and routines.	A. 1. List some self-help habits desirable for children to form.	Read, K., The Nursery School	Individual assignment
	2. Discuss the relationship of good food, clothing, and toilet habits to the use of proper equipment.	Langlord, Louise M., Guidance of the Young Child, John Wiley & Sons, Inc., New York	Class participation
	3. Study the storage areas in the child care center. Discuss how the proper arrangement of room and equipment can encourage children to put away their toys, clothing, etc.		Written reports
	4. Observe children in a nursery school or kindergarten and note their toilet, sleep, and mealtime habits and routines.		Observation reports
B. Establishing routines helps to develop self-reliance and independence.	B. 1. Make a list of the various ways children can be taught to put away toys and equipment when they have been used.	Hurlock, Elizabeth, Child Growth and Development, McGraw-Hill Book Co., N. Y.	
	2. Explain how self-help features in clothing can be a tool in developing self-reliance.		
	3. List finger foods that would be easy for children to eat.		
	4. View and discuss film, "Mealtime Can Be a Happy Time."	Film: "Mealtime Can Be a Happy Time"	Film evaluation

GENERALIZATIONS	LEARNING EXPERIENCES	TEACHING MATERIALS	EVALUATION
	5. Plan ways to help children do things for themselves.		

OBJECTIVE: TO BECOME AWARE OF THE IMPORTANCE OF FOOD TO YOUNG CHILDREN

Approximate time -- 2-3 weeks

GENERALIZATIONS	LEARNING EXPERIENCES	TEACHING MATERIALS	EVALUATION
A. Good nutrition is important for the growth and development of the child.	A. 1. Divide class into groups for reports: (a) Nutritional needs of growing children (b) How food affects growth, development, and behavior of children (c) Preparing essential disliked foods so children will like them (d) Importance of a schedule and how schedules promote good eating practices (e) Special holiday meals (f) Introducing new foods to children (g) Planning a balanced diet for children (h) Color texture and flavor combinations in children's food Discuss thoroughly each topic after the report.		Class reports
	2. Plan one day's meals and two snacks for a pre-school child. Place on board and analyze for nutritive values using food nutrient chart and basic four chart.	Food nutrient chart Basic four chart	Menus
	3. Cook and serve meals suitable for young children. Be aware of high seasoning and amounts to serve. Invite a group of children in and serve them.		Evaluation of preparation and serving of meals

OBJECTIVE: TO DEVELOP AWARENESS AND UNDERSTANDING OF THE USE AND CARE OF EQUIPMENT AND SUPPLIES

Approximate time -- 2 weeks

GENERALIZATIONS	LEARNING EXPERIENCES	TEACHING MATERIALS	EVALUATION
A. The choice, use, and care of equipment and supplies for children demands much attention. Equipment and supplies are important elements in the child's development and growth.	A. 1. Show film, "A Good Day in Kindergarten." Look for the various types of equipment and supplies used in the film.	Film: "A Good Day in Kindergarten," Helen Hefferman, narrator	
	2. Visit a child care center and observe and record names and use of equipment and supplies.	Field trip	
	3. Compare equipment in center with that in film and discuss.		
	4. Read selected references on equipment for child center. Compare criteria with that of State Department. Set up a criteria for your class to use.	Hammond, Dales, Skipper, Witherspoon, Good Schools for Young Children	Quiz on correct names for equipment and supplies
	5. Show films, "Starting Nursery School," and "A Pre-Kindergarten Program in New Haven." Discuss (a) what equipment and supplies were lacking, and (b) what equipment and supplies were on hand.	Films: "Starting Nursery School" "A Pre-Kindergarten Program in New Haven"	
	6. Compare improvised equipment with commercial equipment.		
	7. Practice using the supplies and equipment commonly seen in child care centers.	Supplies in laboratory	Check list indicating level of performance
	8. Discuss the basic needs of children that are met with each piece of equipment.		

GENERALIZATIONS	LEARNING EXPERIENCES	TEACHING MATERIALS	EVALUATION
	9. Practice storing and cleaning equipment and supplies	Storage center Cleaning supplies	Self-evaluation
	10. Using supply and equipment catalogues, set up the equipment and supplies for an imaginary specified child care center.		Evaluation of equipment and supply plans

OBJECTIVE: TO DEVELOP SOME CONCERN AND RESPONSIBILITY FOR CHILDREN'S SAFETY

Time -- 1 week

GENERALIZATIONS	LEARNING EXPERIENCES	TEACHING MATERIALS	EVALUATION
A. Many accidents among children can be prevented by eliminating hazards to the child's safety.	A. 1. Make a bulletin board display of magazine and newspaper clippings which relate children's accidents. Discuss these accidents. Add to discussion personal childhood experiences of class members.	Magazine and newspaper clippings	
	2. Observe a child or group of children in school or on a playground. Note the safety hazards you find in the child's surroundings.		Observation reports
	3. Make a list of the most common safety hazards found in a child's surroundings. Point out ways to eliminate these hazards.		
	4. Show filmstrip, "Safety at Home on the Playground." Make a list of safety rules for children on the playground using the ideas brought out in the film.	Filmstrip: "Safety at Home on the Playground"	Filmstrip evaluation
B. Good play materials do not present hazards to the child's safety.	B. 1. Make a display of children's toys. Discuss each toy pointing out the safe features and the hazardous features.	Toys	Test: Identifying safe and hazardous toys
	2. Demonstrate the proper use of certain play tools, such as saws, scissors, etc.		
	3. Study children's equipment used on the inside and outside. Discuss the safe		Evaluation of safety of pieces of equipment

GENERALIZATIONS	LEARNING EXPERIENCES	TEACHING MATERIALS	EVALUATION
	and unsafe features of common equipment used with children.		
C. Knowledge of first aid is necessary for emergencies.	C. 1. List accidents which may occur during a child's day. Have student demonstrations on first aid techniques.	Student demonstrations	Evaluation of demonstrations
	2. Have a nurse to talk on childhood accidents and procedures to follow when they occur.	Resource person	

SUGGESTED PROGRAM FOR HOMEMAKER'S ASSISTANT

Introduction

The homemaker's assistant carries on various responsibilities required for maintaining family life in a pleasant, orderly environment. A person trained as a homemaker's assistant may be employed either in the home or an institution (hospital, nursing home, child care center); under the direction of a homemaker if employed in the home, or a housekeeping supervisor if employed in an institution. Employment may be on a full time or part time basis.

The length of the class will vary according to the ability of the students and members in the class. A work experience of 40-50 hours is recommended.

Objectives

To develop some understanding of the nature of the job and its responsibilities.

To develop some ability in establishing good relationships with people.

To develop some ability in understanding and caring for children when the mother is away from home.

To develop some skill in cleaning all rooms in the house using suitable manual and electric equipment and appropriate cleaning materials.

To develop increased ability to plan, purchase, prepare, and serve simple nutritious meals.

To keep simple records of costs for foods and maintenance of the home.

To develop some ability in caring for the sick in the house.

To develop some understanding of how to prevent hazards that may cause accidents in the home.

To develop increased ability in handling emergencies and meeting people outside the home.

OBJECTIVE: TO DEVELOP SOME UNDERSTANDING OF THE NATURE OF THE JOB AND ITS RESPONSIBILITIES

Approximate time -- 4 hours

GENERALIZATIONS	LEARNING EXPERIENCES	TEACHING MATERIALS	EVALUATION
A. The homemaker's assistant is able to perform basic homemaking activities.	A. 1. Discuss the responsibilities of the homemaker's assistant: (a) Kinds of work homemakers in the community expect of a full-time or a part-time homemaker's assistant.	List of the responsibilities of the homemaker's assistant	Observation of the participation and interest of the group
	(b) Practices in the community concerning workers in the home.	A report of a study	
	(c) How the homemaker's assistant makes important contributions to family life.	1960 Handbook on Women Workers, U. S. Dept. of Labor, Women's Bureau, Bulletin 275	
B. Training improves skills which increase the worker's employability and wages.	B. 1. Discuss training as a factor for job success: (a) Training develops skills for jobs. (b) The importance of training for the job. (c) Skilled workers get the better jobs. (d) Skilled workers can expect higher pay. (e) Work agreements - working hours and hourly wages. (f) Mutual agreements of employer-employee before employment. (g) Agreement concerning the nature of work of the employee.	"How to Get That Part-Time Job"	
	2. Discuss the importance of understanding one's self.		

GENERALIZATIONS	LEARNING EXPERIENCES	TEACHING MATERIALS	EVALUATION
	3. Use a check sheet to get a rating of yourself as an employee.	"How to Get That Part-Time Job," a chart for young adults - rate yourself, p. 13.	Use check sheet
C. Respect for other people builds a better concept of self by gaining respect from other individuals and groups.	C. 1. Discuss the ways in which we develop self-respect: (a) Manners (b) Morals (c) Cleanliness (d) Truthfulness (e) Cheerfulness (f) Conduct in public places (g) Promptness (h) Honesty (i) Consideration of others (j) Ability to communicate with others (k) Cooperative attitude (l) Acceptable behavior on the job	Berry, Mary. "A Guide to Good Manners," Science Research Assoc., 1951 Berry, Mary. Manners Made Easy, McGraw-Hill Company, N. Y., 1957 Peterson, Eleanor M. Successful Living, Allyn & Bacon, Inc., 1961 Carson, Byrta. How to Look and Dress, McGraw-Hill Company, N. Y., 1960	Dramatize meeting a homemaker for the first time. List ways to improve personal qualities.
	2. Role play desirable and undesirable personal qualities.		
D. Health includes the physical, mental, and emotional aspects of being able to face and solve problems of success or failure and adjust to new or unfamiliar situations.	D. 1. A talk by a physician or nurse on: (a) The importance of good health. (b) The importance of good health for the protection of the worker and family members. (c) Health examination as a protection for the worker, his family, and the employer. (d) Mental and emotional health.	A physician or a registered nurse	
	2. Write a paper on, "Why My Good Health is Important."		Individual papers on health

GENERALIZATIONS	LEARNING EXPERIENCES	TEACHING MATERIALS	EVALUATION
E. Social Security and labor laws influence one's job and wages.	E. 1. A talk by a person from the Social Security Office. (a) Social Security and labor laws (b) Social Security - an employee benefit (c) Social Security deductions (d) Social Security at retirement	A person from the Social Security Office	Participation in the discussion after the talk

OBJECTIVE: TO DEVELOP SOME ABILITY IN UNDERSTANDING AND CARING FOR CHILDREN WHEN THE MOTHER IS AWAY FROM HOME

Approximate time -- 20 hours

GENERALIZATIONS	LEARNING EXPERIENCES	TEACHING MATERIALS	EVALUATION
A. No two children are alike in their general development even if they are the same size and the same age, but all children have the same basic needs.	A. Discussion: Understanding children 1. Individual differences (a) habits (b) attitudes (c) skills (d) experiences		
	2. Show and discuss filmstrip: "Special Day Time Problem."	Filmstrip: "Special Day Time Problem," McGraw-Hill Book Company	Filmstrip evaluatio
	3. Basic needs of children: (a) adequate amount of nutritious food (b) wholesome exercise for growth and development (c) proper rest and sleep (d) love and affection (e) a feeling of being wanted (f) a chance to explore new things (g) opportunity to be creative	Harriet and Shaw. Health Education	Quiz: What do you know about children?
B. The child is a developing human being. What he sees, hears, and feels affects his total development.	B. 1. Discuss helpful hints when caring for children: (a) Play, laugh and talk with the child at his level of experience. (b) Speak in a quiet tone of voice. (c) Expect obedience without nagging or making threats. (d) Be consistent in requests.		Observe children in a nursery school or kindergarten.

GENERALIZATIONS	LEARNING EXPERIENCES	TEACHING MATERIALS	EVALUATION
	(e) Do not use fear as a means of control. (f) Respect the child as a person. (g) Keep an affectionate, pleasant attitude in dealing with children. (h) Encourage the child to do things for himself as far as possible. (i) Keep a record of perplexing situations and discuss with parents.		
	2. Develop a check sheet of do's and don't's when caring for children.	Check sheet of do's and don't's when caring for children.	Check results of check sheet
	3. Show and discuss filmstrip, "Keeping Children Happy."	Filmstrip: "Keeping Children Happy," McGraw-Hill Book Company	Evaluation of filmstrip
	4. Select a problem and role play solving that problem with a 2-year-old, a 4-year-old, and a 6-year-old child.		
	5. Observation and participation in a kindergarten or nursery school.		Performance on the job and observation reports
C. Household cleaning materials, medicines, and sharp-edged objects should be stored out of the reach of children.	C. Precautions when caring for children 1. Discuss and demonstrate: (a) storing household cleaning materials (b) storing medicine supplies (c) storing sharp-edged and other unsafe objects		
	2. Discuss and demonstrate: Keeping children safe from harm (a) in the home, (b) outside the home,		Objective test on child safety

[illegible]	LEARNING EXPERIENCES	TEACHING MATERIALS	EVALUATION
	(c) at the playground, (d) in the park.		
	3. Discuss safe and unsafe toys.	Display of children's toys, safe and unsafe	Participation in discussion
	4. Discuss observation of children's play activities, emphasizing the safe or unsafe features of play materials and equipment.		Observation reports

OBJECTIVE: TO DEVELOP SOME SKILL IN CLEANING ALL ROOMS IN THE HOUSE USING SUITABLE MANUAL AND ELECTRIC EQUIPMENT AND APPROPRIATE CLEANING MATERIALS

Approximate time -- 120 hours

GENERALIZATIONS	LEARNING EXPERIENCES	TEACHING MATERIALS	EVALUATION
A. Some cleaning jobs need to be done daily, others weekly, monthly, or once in a while.	A. Discussions and demonstrations: 1. Sequence of daily cleaning jobs.		
	2. Sequence of weekly cleaning jobs: (a) Kitchen (b) Bedrooms (c) Bath (d) Living areas (e) Floors	Johnson Wax, "How to Make Housecleaning Easy," Education Department, Racine, Wisconsin Valentine, Bertha. A Guide to Cleaning House, Philadelphia Friends, Neighborhood House, 1962	Develop a chart for daily, weekly, and occasional cleaning jobs.
	3. Occasional cleaning: (a) Windows (b) Doors (c) Floors		
B. Adequate cleaning equipment and sufficient materials of the correct type are necessary when cleaning the house.	B. 1. Discuss and show equipment and materials needed for cleaning: (a) Clean dust cloths (b) Broom (c) Dust mop (d) Wet mop (e) Vacuum cleaner (f) Pail for water - cleaning agents	Craig, Hazel. Thresholds to Adult Living Cleaning equipment and materials	
	2. Trainees identify equipment for difficult jobs and study equipment needed for each.		Identification of equipment
	3. Discuss and demonstrate how to care for cleaning equipment.		
	4. Exhibit and discuss different types of soaps.	Soaps and detergents	

GENERALIZATIONS	LEARNING EXPERIENCES	TEACHING MATERIALS	EVALUATION
	5. Exhibit and discuss different types of detergents used for cleaning.		
C. The actual cleaning of furniture, fixtures, and surfaces in the different areas of the home develops a concept of each cleaning job.	C. 1. Discuss the procedures and methods of cleaning.		
	2. Clean living area in the home economics department. (a) Assemble equipment and cleaning materials. (b) Dispose of all trash. (c) Dust walls with a vacuum brush or a clean cloth over a broom. (d) Dust pictures, tops of windows. (e) Dust drapes, upholstered furniture, lamps, books, window sills, and venetian blinds. (f) Vacuum rugs or carpet and clean uncarpeted floor with dust mop or vacuum brush. (g) Remove finger marks from doors. (h) Remove spots from upholstered furniture or rugs. (i) Dust and polish wood part of furniture.	Moore, Alma C. How to Clean Everything, New York: Simon and Schuster, 1952. Department of Community Colleges, State Board of Education, Raleigh, North Carolina, "A Guide to Housekeeping" "Remove Stains from Fabrics," C-62, Washington, D. C., U. S. Government Printing Office, 1961	Performance test
	3. Discuss and demonstrate cleaning the bedroom. (a) Air bedding, mattress, and pillows. (b) Clean springs with vacuum cleaner. (c) Turn mattress. (d) Make bed with fresh linen. (e) Clean mirror. (f) Clean closet: Hang everything in place and dust shelves and floor.		Competencies developed

GENERALIZATIONS	LEARNING EXPERIENCES	TEACHING MATERIALS	EVALUATION
	(g) Clean walls, floor, and furniture same as living area.		
D. The kitchen is the heart of the house where food is prepared and served--keep the kitchen clean and attractive.	D. 1. Discuss daily cleaning of the kitchen. (a) Wipe all surfaces with a clean, damp, soft cloth or sponge. Use warm, soapy water. (b) Use ordinary soap and water on stainless steel surfaces; dry thoroughly after washing. (c) Remove accumulated grease from all surfaces with a mild abrasive cleaner. (d) Wipe up immediately foods spilled on vinyl plastic floor covering. (e) Dust tables, chairs, and other accessories. (f) Check refrigerator--wipe inside and outside surface where food may be spilled. (g) Wipe range. (h) Clean the sink. (i) Remove trash and garbage. (j) Clean floor as needed; sweep, mop, or vacuum.	Starr, Mary C. Management for Living, D. C. Heath & Company, 1963 Valentine, Bertha L. A Guide to Cleaning the House, 1962 Moore, Alma C. How to Clean Everything, Simon and Schuster, 1952.	Develop and use an evaluation check list for daily, weekly, and occasional cleaning jobs.
	2. Discuss weekly cleaning of the kitchen. (a) Defrost refrigerator and clean. (b) Mop and wax floor. (c) Dust woodwork and wipe all fingerprints from doors and woodwork. (d) Clean venetian blinds. (e) Clean mops, dust cloths, pails, and stove properly.		Competencies developed on the job.

GENERALIZATIONS	LEARNING EXPERIENCES	TEACHING MATERIALS	EVALUATION
	3. Make a work schedule and clean the kitchens in the department, or find a homemaker who will cooperate in allowing you to demonstrate correct procedures for cleaning the kitchen in her home.	A selected home and a cooperative homemaker	Evaluation of cleaning
E. Good supplies and equipment make dishwashing easier and more sanitary.	E. 1. List and discuss the things that would be of chief help in making dishwashing easier: (a) Plenty of hot soft water. (b) A good soap or a good cleaning agent: (1) granulated soap (2) synthetic soap (3) a detergent (c) A sturdy scraper, as a rubber spatula. (d) Loose-mesh dishcloth, a sponge, or a dish mop or a round brush. (e) A single or double bowl sink. (f) Draining racks. (g) Dish towels. (h) A dish washer.	Starr, Mary C. Management for Better Living, D. C. Heath and Company, 1963, p. 161	Competencies developed
	2. Demonstrate washing dishes correctly by hand and by dishwasher.	Barclay, Marion and Champion, Frances. Teen Guide to Homemaking, McGraw-Hill Book Company, 1961	Performance on the job
	3. Demonstrate and discuss: (a) Storing china, glassware, silverware, linen. (b) Small equipment. (c) Large equipment.	China, silverware, glassware, linen, small equipment, large equipment	
F. A clean bathroom has a pleasant odor and it is	F. 1. Discuss steps in cleaning the bathroom: (a) Remove rugs and soiled towels. (b) Clean and disinfect toilet seat,	Mimeograph sheets with steps or directions for cleaning a bathroom.	Observation of interest that trainees have in

GENERALIZATIONS	LEARNING EXPERIENCES	TEACHING MATERIALS	EVALUATION
free from dirt and finger-prints.	basin, and tub; use brush or small mop only for this purpose. (c) Wash all equipment carefully inside and out. (d) Put disinfectant in the stool and let stand for awhile. (e) Clean mirror and light fixtures. (f) Dust wood work. (g) Clean walls and window sills with a damp cloth. (h) Polish faucets. (i) Put out clean towels. (j) Mop floor and rinse thoroughly. (k) Flush toilet to wash down disinfectant. (l) Clean windows and venetian blinds if needed.	"A Suggested Training Program," The Homemaker's Assistant, U. S. Department of Health, Education, and Welfare, Office of Education	developing skills in cleaning jobs.
	2. Each trainee thoroughly cleans a bathroom following directions in a selected house.		Report from cooperating homemaker

SUGGESTED PROGRAM FOR CLOTHING MAINTENANCE AIDE

Introduction

This course is designed for high school students who have an interest in occupational training in the field of clothing maintenance. Foundation courses in basic home economics and advanced home economics or basic preparatory home economics are recommended as pre-requisites to this course for high school pupils whenever this is possible. In some schools only basic home economics or basic preparatory home economics may be required as pre-requisites. This course may be offered without pre-requisites to pupils who have specified occupational objectives in this field.

Occupations in clothing maintenance range from simple repetitive tasks to those requiring both technical and scientific knowledge. The objective of the educational program at the high school level is centered around developing personal competencies for entry into the labor market in jobs requiring less than technical knowledge.

Objectives

To understand the causes of fitting problems and be able to correct them.

To develop skills in repairing clothing.

To develop some skills in clothing maintenance.

To understand desirable personal qualities for job success.

To become familiar with the factors which affect individuals in the world of work.

OBJECTIVE: TO UNDERSTAND THE CAUSES OF FITTING PROBLEMS AND BE ABLE TO CORRECT THEM

GENERALIZATIONS	LEARNING EXPERIENCES	TEACHING MATERIALS	EVALUATION
A. Identification of fitting problems is the first step toward a comfortable and attractive dress.	A. 1. Try various types of ill-fitted garments on standard dress forms. Have students identify the fitting problems.	Dress forms and garments	Check list of characteristics of a well-fitted garment
	2. Show and discuss the filmstrip, "Fashion Fit." Emphasize the relationship between fashion and fit.	Filmstrip: "Fashion Fit," McCall's Corp., Dept. SS, Dayton 1, Ohio	
B. Fitting problems are corrected by identifying their causes and changing the garment accordingly.	B. 1. Have students try on basic shells. Identify fitting problems and discuss the causes of these problems. Use transparencies to point out other problems and their causes.	Allen, H. Unit Method of Clothing Construction, Iowa State University Press, Ames, Iowa Transparencies	
	2. Demonstrate the construction techniques for correcting common fitting problems: (a) irregular waist length, (b) irregular bust size, (c) low or high bust, (d) shoulders - round, broad, square, (e) gapping neck line, (f) irregular arm size, (g) irregular hip size.	Bishop, E. The Bishop Method of Clothing Construction, J. B. Lippincott Company, New York	
	3. Have students correct fitting problems through alteration of a personal garment.		Finished product

GENERALIZATIONS	LEARNING EXPERIENCES	TEACHING MATERIALS	EVALUATION
	4. Demonstrate the alteration techniques commonly needed on children's clothing: (a) lengthening shoulders, bodices, and skirts, (b) lengthening boys' pants and sleeves, (c) shortening a slip.		
	5. Have students alter a child's garment.		Finished product
	6. Demonstrate alteration techniques commonly needed on men's clothing: (a) cutting trousers, (b) adjusting waistline, (c) adjusting sleeve length, (d) adjusting coat length.		
	7. Have students practice the common alterations for men's clothing.		Finished product

OBJECTIVE: TO DEVELOP SKILLS IN REPAIRING CLOTHING

GENERALIZATIONS	LEARNING EXPERIENCES	TEACHING MATERIALS	EVALUATION
A. The life of garments can be extended through skills in repairing clothing.	A. 1. Students will give class demonstration on one of the following mending problems: (a) broken zippers, (b) ripped seams, (c) replacing hooks and eyes, (d) repairing belt loops, (e) replacing lining, (f) sewing on buttons.	Demonstrations "Mending," Coop. Ext. Service, Iowa State University, Ames, Iowa, H. D. 24	Observation with check sheet for demonstration
	Each student will prepare a step-by-step guide to distribute to the class. Individual help will be given to student before demonstration is given.	Written guide	
	2. Assign altering problems to students in order to develop skills.	"Mending Men's Suits," U.S.D.A. Home and Garden Bulletin, No. 39.	Job performance
	3. Discuss and evaluate garments altered, including appearance, and amount of time required for making alterations.	"Mending Clothes and Household Fabrics," N. Y. State College of Home Economics, Cornell Ext. Bulletin 871	

OBJECTIVE: TO DEVELOP SKILLS IN CLOTHING MAINTENANCE

GENERALIZATIONS	LEARNING EXPERIENCES	TEACHING MATERIALS	EVALUATION
A. Proper clothing maintenance extends clothing life.	A. 1. Discuss, using transparencies, the kinds of storage found in dry cleaning establishments and department stores: closets, shelves, drawers, hanging, cold storage. Continue discussion by identifying the types of clothing most suitably stored in each place and why.	Transparencies	
	2. Arrange field trips to a department store and a dry cleaning establishment to study their methods of storage.	Field trips	Written evaluation of field trip
	3. Display stained fabrics to enable students to recognize common stains. Discuss significance of removing stains before laundry so stain will not be set permanently.	Display of fabrics "Removing Stains from Fabrics," U.S.D.A. Home and Garden Bulletin No. 62.	
	4. Have person from dry cleaners and/or person from coin operated dry cleaner to demonstrate how spots are removed - materials and procedures used.	Resource Person Home Laundry Association, "End Spots and Stains"	Objective test
	5. Practice removal of common stains.	Cleaning agents, charts, bulletins	
	6. Demonstrate some procedures in pressing. Students will practice using press cloths, mits, steam and dry irons, and other pressing equipment. Have students evaluate appearance, time, and motion in pressing garments.	Nicholas, Florence W. and McDermott, Irene E. Homemaking for Teenagers, Bk. II, Chas. A. Bennett Co., Inc., Peoria, Illinois	Checklist on ironing skills Evaluation of practice session

SUGGESTED PROGRAM FOR FOOD SERVICE WORKERS

Introduction

Food service workers need to be prepared for employment in different types of businesses. Some of the jobs available in the area of food service are waiter or waitress, pantry worker, cook's helper, and lunch counter service worker. Places of employment vary from hotels and restaurants to hospitals and individual homes.

The content of the class will vary according to the students' abilities and the jobs for which the students are training. The program can be adapted to high school students, post-high school students, or adults. The length of the class will depend upon the number in the class and previous experience. In addition to classroom training, at least 40 hours of work experience is recommended as a minimum requirement.

Suggested Objectives

To become acquainted with different types of food service establishments, their organizational structure and functions.

To develop personal qualities needed for job success.

To develop some understanding of health and sanitary practices in food service occupations.

To develop some understanding of the safe use and care of different types of equipment.

To develop fundamental knowledge and skills needed to be a waitress.

To develop fundamental skills and knowledge in quantity food preparation and service.

To develop some appreciation of appearance, flavor, and nutritional value of food.

To develop some ability to adapt knowledge and skills to different types of businesses employing food service workers.

OBJECTIVE: TO BECOME ACQUAINTED WITH DIFFERENT TYPES OF FOOD SERVICE ESTABLISHMENTS, THEIR ORGANIZATIONAL STRUCTURE AND FUNCTIONS

Approximate time -- 2 weeks

CONCEPTS	LEARNING EXPERIENCES	TEACHING MATERIALS	EVALUATION
A. Careers in food service*	A. 1. Show and discuss film, "New Horizons in Food Service Careers."	Film: "New Horizons in Food Service Careers," H. J. Heinz Company	Class participation
	2. Discuss various careers in food service and give advantages and disadvantages of each.		
	3. Invite representatives from a variety of food service organizations and establishments to speak to class about their work.	Resource persons	
	4. Students make trips to various institutions for observation of people on the job in food service careers. Report to class and discuss observations.	Field trips	Field trip evaluation
B. Employment opportunities - jobs available	B. Make survey to determine what need the area has for food service workers. (a) Interview managers of food service institutions. (b) Use want-ad section of newspaper. (c) Consult employment agencies.	Field trips Survey blanks Food service managers Newspapers Employment agencies	Brief summary telling why you chose this area as an opportunity for a career.
C. Employment benefits (a) Insurance (hospitalization and compensation) (b) Social security	C. 1. Discuss employment benefits. (a) Invite an insurance representative to discuss the various types of insurance. (b) Have a resource person from the Social Security Office to discuss social security and retirement. (c) Compute a wage-earning scale.	Resource person from (1) Insurance company (2) Social Security Office Various forms - wage earning, annual leave, etc.	Application test - filling out various forms correctly.

CONCEPTS	LEARNING EXPERIENCES	TEACHING MATERIALS	EVALUATION
(c) Retirement (d) Annual leave (e) Salary (f) Hours of work (g) Sick leave	(d) Discuss labor laws and how they affect the worker. 2. Secure forms and apply for social security cards.		
D. Kinds of work and work situation	D. Make a job-analysis of the different food service jobs available. Compare and contrast (a) Qualifications (b) Employment benefits (c) Responsibilities (d) People serviced	"Supervised Food Service Worker": U. S. Department of Health, Education, and Welfare West, Wood, and Harger. Food Service in Institutions, John Wiley & Sons, Inc. Food Service Industry, U. S. Department of Health, Education, and Welfare Job analysis for various jobs	Job analysis

*Desirable as pre-requisite and/or for background information.

OBJECTIVE: TO DEVELOP PERSONAL QUALITIES NEEDED FOR JOB SUCCESS

Time -- 2 weeks

CONCEPTS	LEARNING EXPERIENCES	TEACHING MATERIALS	EVALUATION
A. Personal grooming	A. 1. Observe and analyze the grooming of employees in food service.		Evaluation of observations
	2. Show filmstrip, "You and Your Appearance." (a) Make a list of characteristics expressed in the filmstrip which are important to job success. (b) Study improvements you might need to make.	Filmstrip: "You and Your Appearance"	
	3. Show filmstrip, "Through the Looking Glass to Grooming." Relate the ideas of the film to the grooming of food service employees.	Filmstrip: "Through the Looking Glass to Grooming," Proctor and Gamble Co. (Accompanied by booklet to give to members of class.)	Filmstrip evaluation
	4. Discuss the grooming techniques that help one to look attractive. Prepare a list of grooming techniques and select from the list those techniques which are most important to food service workers.	Booklet: "Through the Looking Glass - A Girl's Guide to Good Grooming," Proctor and Gamble Co.	
	5. Have a resource person from a food service occupation talk on personal cleanliness as related to food service.	Resource person	
	6. Develop a personal grooming check list and make a check on your own personal grooming.		Personal grooming check list

CONCEPTS	LEARNING EXPERIENCES	TEACHING MATERIALS	EVALUATION
	7. Appropriate dress (a) Visit stores that sell uniforms to: (1) observe the different styles and types, (2) compare construction techniques, (3) compare laundering qualities. (b) Discuss the factors that lend to the comfort of a uniform. (c) Discuss factors that would influence selection for specific uniforms. (d) Collect pictures depicting appropriate dress for the job in food service. (e) Demonstrate proper care and handling of uniforms for durability.	Field trip Magazines	Objective test Class participation
B. Personal relations on the job	B. 1. List and discuss various qualities which are desirable in getting along with customers, fellow workers, and employer, such as: courtesy, tolerance, consideration, manners, sense of humor, good attitude toward work, punctuality, dependability, and able to follow directions.	Booklets: "Exploring Your Personality," "Your Personality and You"	
	2. Panel discussion: "What is Expected of a Food Service Employee." Panel consists of teachers, two members of class, and two food service employers.	Booklet: "What Employers Want"	Written summary of what employers expect
	3. Make a list of things the trainees think they are supposed to do and compare with list of things employer may expect.	Booklets: "What Employees Want," "Employer-Employee Relationship"	

CONCEPTS	LEARNING EXPERIENCES	TEACHING MATERIALS	EVALUATION
	4. List qualities to help keep a job; also ways to lose a job.	Booklet: "How to Get and Hold the Job"	
	5. Analyze yourself to discover the personal qualities you possess which will be an asset to you as an employee and those which are liabilities and need to be improved.		Analyzing of self
	6. Dramatize a conflict in a work situation that might develop on a job. Then role-play a way of avoiding the development of the situation.		Observation

OBJECTIVE: TO DEVELOP SOME UNDERSTANDING OF HEALTH AND SANITARY PRACTICES IN FOOD SERVICE OCCUPATIONS

Approximate time -- 1 week

CONCEPTS	LEARNING EXPERIENCES	TEACHING MATERIALS	EVALUATION
A. Safe handling of food	A. 1. Discuss state and local food service regulations. Have resource person from Health Department to lead discussion.	"Rules and Regulations Governing Food Service Establishments," South Carolina State Board of Health, Columbia, S.C. Representative from Health Department	Pretest on knowledge of health practices
	2. Discuss the importance of having a health card. Have students secure health cards.		
	3. Discuss and develop safety rules for food service workers.	Pamphlets: "Here's How," Health Department	Oral discussion
	4. Demonstrate and discuss personal health habits used to protect customers and self.	"From Hand to Mouth," Health Department	
	5. Discuss ways germs are transmitted from one person to another through food.	Film: "Germs Take Pot-Luck," County Health Department	
	6. View film: "Safe Food - Safe Health," County Health Department. Discuss and evaluate the film.	Film: "Safe Food - Safe Health," County Health Department	Film evaluation
	7. Discuss sanitary practices related to tasting food, dishwashing, food storage, and care of work area.	Food Service Industry and Sanitation, U. S. Department of Health and Welfare	
	8. Make a collection of news items concerning violations of food handling regulations.	Newspapers and magazines	

CONCEPTS	LEARNING EXPERIENCES	TEACHING MATERIALS	EVALUATION
B. Keeping food at the proper temperature	B. 1. Discuss, using bulletin boards, safe storage temperatures for food. Experiment with some foods to see what the safe storage temperature is and what happens to the food when not stored at the correct temperature.	Bulletin boards: Food poisoning Food-borne diseases Halls, Betty C. Food Poisoning and Food Hygiene, New York, St. Martins	Oral discussion
	2. Have students observe hot and cold storage facilities in a lunchroom or restaurant and evaluate the use of the facilities.	School cafeteria or restaurant	Evaluation of storage facilities
	3. Discuss food service regulations concerning hot and cold storage.	"Inspection Food Service Establishment Sheet," South Carolina State Board of Health	Oral discussion
	4. Show film, "Food Storage." Discuss proper and improper techniques of storing food.	"Food Storage" (T F8-1503) MP So V.W. 13 Min. U. S. Army Headquarters, Film Library	Film evaluation
	5. Make list of do's and don't's on proper storage of food.		
C. Sanitation through good housekeeping	C. 1. Discuss the danger insects and rodents present to household sanitation. Discuss the methods for controlling insects and rodents.	Sanitary Follies list Public Health Department	Check list
	2. Field trip to hospital to observe food sanitation. Write an evaluation of the hospital's methods of food sanitation.	Field trip	Written field trip evaluation
	3. Determine the various housekeeping jobs for maintaining safety and sanitation in food service establishments.		

CONCEPTS	LEARNING EXPERIENCES	TEACHING MATERIALS	EVALUATION
	4. Set up an imaginary food service establishment. Outline a plan for maintaining a safe level of sanitation.		Case problem

OBJECTIVE: TO DEVELOP SOME UNDERSTANDING OF THE SAFE USE AND CARE OF DIFFERENT TYPES OF EQUIPMENT

Time -- 3 weeks

CONCEPTS	LEARNING EXPERIENCES	TEACHING MATERIALS	EVALUATION
A. Use and care of equipment as related to job	A. 1. Using transparencies, identify major and small kitchen equipment. Point out the purpose of each piece of equipment.	Transparencies. Equipment catalog, National Restaurant Association, Chicago, Illinois	Identification quiz
	2. Demonstrate the use of major kitchen equipment. Have resource person from appliance company to carry out some of the demonstrations. Allow students to practice using the equipment.	Resource person Kitchen equipment	Check sheet to evaluate self on practice in using equipment
	3. Demonstrate the use of various pieces of small kitchen equipment. Emphasize using the correct piece of equipment for each job, such as french knife for chopping vegetables and slicing or utility knife for cutting large vegetables. Allow students to practice using the small equipment.	Kitchen equipment	Test - matching task to equipment used to perform that task
	4. Make a field trip to a food service institution and observe the techniques used in operating the equipment. Evaluate the techniques observed.	Field trip	Field trip evaluation
	5. Have each student prepare demonstrations on the care of one major piece of equipment and one minor piece of equipment. (Individual conferences will need to be held previous to giving the demonstrations.) Prepare leaflets on each demonstration to give to all class members.	Equipment leaflets	

CONCEPTS	LEARNING EXPERIENCES	TEACHING MATERIALS	EVALUATION
	6. Examine plans of food service institutions and discuss the storage facilities for each. Discuss special techniques which can be used to get maximum use of available storage space.	West, Wood, and Harger. Food Service in Institutions, John Wiley and Sons, Inc., New York New York	Classroom participation
	7. Adjustment and repair of equipment. (a) Discuss the importance of reading the manufacturer's manual for all equipment before operating it. Examine several manuals to see what information they contain. (b) Discuss the importance of reporting needed repairs quickly.	Kitscheva and Ternell. Care of Food Service Equipment	
B. Accident prevention	B. 1. Using a bulletin board with clippings, point out accidents common to food service areas. Discuss how each of the accidents in the clippings could be prevented.	Pamphlets: "Home Safety," S. C. Extension Service, Clemson University "Kitchen Sense," The Equitable Life Insurance Co., New York "Your Responsibility for Safety"	Check list on safe and effective work habits
	2. Point out through role-playing, precautions in operating equipment for worker and equipment protection. Discuss wage cost of the injured to the employer and and employee: (a) Cost of repair (b) Cost of working time (c) Cost of wages paid to others to do work		
	3. Show and discuss the filmstrip, "Safety in the Kitchen."	Filmstrip: "Safety in the Kitchen"	Filmstrip evaluation

CONCEPTS	LEARNING EXPERIENCES	TEACHING MATERIALS	EVALUATION
	4. Have a nurse or qualified person in first aid to demonstrate treatment of burns, cuts, bruises, scalds, electric shock, and fainting.	Resource person	Situation test (State a type of accident which has occurred and ask student what procedure would be followed.)
	5. Discuss causes of accidents: carelessness, hurrying, mechanical malfunction, incorrect use of equipment, etc. Alert students to hazards such as damp or highly polished floors, broken glass, etc. Discuss how to avoid these hazards. Use posters to illustrate.	Safety posters, National Safety Council, 425 N. Michigan Avenue, Chicago, Illinois	

FOOD SERVICE TRAINING FOR COOKS

OBJECTIVE: TO DEVELOP FUNDAMENTAL SKILLS AND KNOWLEDGE IN QUANTITY FOOD PREPARATION AND SERVICE

Approximate time -- 9 weeks

CONCEPTS	LEARNING EXPERIENCES	TEACHING MATERIALS	EVALUATION
A. Time, energy, and space management	A. 1. Demonstrate how different arrangements of equipment can save time required for a job. Follow demonstrations with students practicing simple tasks in arranging equipment.	Kinder, Faye. Meal Management, The MacMillan Company, New York, N. Y., 1962	Observation of practices of saving time and energy
	2. Demonstrate and direct students in practicing correct hand motions in performing food preparation tasks.		
	3. Demonstrate assembling equipment for job to be done. Have students practice.		
	4. Discuss the value of a work plan for space and time. Have students plan a meal and set up a time and space plan.		Evaluation of plans
B. Preparing foods in quantity 1. Using standardized recipes	B. 1. (a) Study standardized quantity recipes to understand symbols, abbreviations, weights, measurements, equipment, temperatures, and cooking time.	Fowler, West, Schwgart. Food for Fifty, John Wiley & Sons, Inc., New York, N. Y.	
	(b) Adjust recipes to halves and fourths and prepare simple recipes which have been adjusted.	U. S. D. A. Standardized Recipe Files. Oklahoma School Lunch File, School Lunch Room	Recipe adjustment and preparation
	(c) Panel discussion on reasons for standardized recipes.		
2. Principles of vegetable cookery	2. (a) Illustrate preparation of vegetables at high temperatures.	Holliday, Evelyn and Noble, Isabel. Hows and Whys of Cooking, University of Chicago	Check list on products of food prepared by students

CONCEPTS	LEARNING EXPERIENCES	TEACHING MATERIALS	EVALUATION
		Press, 1959	
	(b) Compare vegetable cookery with and without a cover.		
	(c) Study time guide for vegetable cookery. Have class members prepare various types of soups: meat, vegetable, and clear.		Food preparation
3. Preparation of meats, meat substitutes and meat extenders	3. (a) Have students compile cookery terms related to meats to better understand protein cookery.	Recipe book	
	(b) Discuss principles of protein cookery. Prepare some examples of protein foods which have been prepared correctly and others which have been prepared incorrectly. Compare and contrast these according to: (1) flavor, (2) texture, (3) appearance, and (4) nutritive value.	Food Service in Institutions, John Wiley & Sons, Inc., New York, N. Y.	Written evaluation on principles of protein cookery
	(c) Discuss the use of meat substitutes to: (1) provide variety in meals, (2) lower the cost of meals. Have students plan menus using meat substitutes.		
	(d) Discuss the use of meat extenders. Have each student bring in a recipe of a meat extender dish. Compile recipes.	Recipes	Menu plans

CONCEPTS	LEARNING EXPERIENCES	TEACHING MATERIALS	EVALUATION
	(e) Demonstrate the preparation--scaling, deveining, etc.--of various types of seafoods. Scan recipe books to gain understanding of the variety of ways in which seafood can be prepared.	Recipe books	
C. Serving food	C. 1. Discuss methods of keeping food at correct serving temperature, and the safe length of time for keeping food at correct temperature for serving.	Food Service in Institutions, John Wiley & Sons, Inc., New York, N. Y.	
	2. Demonstrate arranging food (a) on a steam table, (b) on trays, (c) on plates. Give students several menus and have them plan pleasing arrangements for each of these different types of serving.		Evaluation of arrangements
	3. Discuss suitable serving portions.		

FOOD SERVICE TRAINING FOR WAITRESSES

OBJECTIVE: TO DEVELOP FUNDAMENTAL KNOWLEDGE AND SKILLS NEEDED TO BE A WAITRESS

Time -- 9 weeks

CONCEPTS	LEARNING EXPERIENCES	TEACHING MATERIALS	EVALUATION
A. Sanitary methods in handling food and tableware	A. 1. Demonstrate the correct methods of handling silverware, glassware, dinnerware, and food: (a) When setting a table. (b) When serving food. (c) When storing tableware. (d) When cleaning tableware. (e) When clearing a table. Allow students to practice these methods.	McDermott and Nicholas. Homemaking for Teenagers, Revised Edition, Book I	
	2. Show film, "Waiter-Waitress Training," and evaluate the methods of handling food and tableware shown in the film.	Tableware film: "Waiter-Waitress Training," Associate Films	
B. Table setting	B. 1. Demonstrate different types of table settings.	Tableware	
	2. Evaluate, using opaque projector, several table settings found in magazines.	Opaque projector Magazines	
	3. Observe when and how condiments are placed on tables in several restaurants. Discuss observations.		
	4. Create attractive restaurant table settings.		Evaluation of table settings
	5. Use a score card for checking practices in setting a table.		

CONCEPTS	LEARNING EXPERIENCES	TEACHING MATERIALS	EVALUATION
C. Procedures and techniques of waiting on a table	C. 1. Discuss courteous ways of greeting customers. Role play some of these.		Observation
	2. Demonstrate: (a) taking orders, (b) giving orders to cook, (c) serving various types of foods, (d) placing of food and beverages on the table, (e) waitress checking with customer for satisfaction, (f) taking dessert orders, (g) clearing the table, (h) correct way to use trays, (i) techniques of arm service. Follow each demonstration with a practice session.		Observation of practice
	3. Make a glossary of menu terms, such as "a la carte," and study them.	Cookbooks, menus, etc.	Objective test on menu terms
	4. Collect samples of food checks to see the techniques used in writing orders. Make a checklist for accuracy in taking orders. Practice taking and writing orders.	Check list Order pads	
	5. Study the sequence and techniques in serving meals of several food courses. Practice serving a meal with several courses.	Tableware	Evaluate practice of meal service
	6. Develop a list of attributes which "sell" customers. Include: (a) checks for completeness of service,		

CONCEPTS	LEARNING EXPERIENCES	TEACHING MATERIALS	EVALUATION
	(b) writes sales check legibly, (c) pleasant facial expression, (d) pleasant manner of speaking, (e) efficient in handling food, (f) serves correctly.		
D. Preparation of salads	D. 1. Show and evaluate filmstrip, "Preparation of Salad."	Filmstrip: "Preparation of Salad"	
	2. Demonstrations on washing, scrubbing, scraping, peeling, sorting, chopping, slicing, quartering, cubing, shredding, and dicing salad materials with use of proper equipment. Practice after demonstrations.		Observe students in performing these skills.
	3. Make a field trip to a restaurant and observe the methods used to store salad materials. Discuss why these methods are used.		
	4. Discuss the proper methods of opening canned materials for salads.		
	5. Discuss, using transparencies, the appearance of salads. Emphasize (a) how and when to combine tossed salads to preserve fresh appearance, (b) the use of color in salads, (c) the relationship of proper refrigeration to appearance of salads, (d) arranging of salads to create a good appearance.	Transparencies	Written evaluation of the appearance of several salads from magazines

CONCEPTS	LEARNING EXPERIENCES	TEACHING MATERIALS	EVALUATION
	6. Show filmstrip, "Song of the Salads." Evaluate, as film is shown, the salads in the film. List ways in which their appearance might be improved.	Filmstrip: "Song of the Salad," H. J. Heinz Company	Evaluate filmstrip
	7. Discuss the principles involved in making salad dressings.		
	8. Prepare a variety of salad dressings.	Recipes	
	9. Demonstrate preparation of congealed salads, removing congealed salads from containers, and serving them.		

FOOD SERVICE TRAINING FOR LUNCH ROOM WORKERS

Objectives

To gain a better understanding of the safe handling of food and its relationship to personal health practices and sanitary housekeeping methods.

To gain a better understanding of the importance of following tested recipes in preparing a lunch.

To learn more about the Type A School Lunch.

To develop increased ability in selecting and arranging the proper equipment to use for various tasks.

To realize that proper use of equipment can prevent accidents.

To develop increased ability to apply the principles of nutrition in the maintenance of good health.

To develop increased awareness of the nutritional needs of children and teenagers.

OBJECTIVE: TO DEVELOP INCREASED ABILITY IN ARRANGING AND USING EQUIPMENT

CONCEPTS	LEARNING EXPERIENCES	TEACHING MATERIALS	EVALUATION
A. The value of work schedules and proper arrangement of equipment	A. 1. Discussion: Good and poor working habits.	Cronan. Foods in Homemaking	Interest shown by trainees
	2. List job responsibilities of each person in the lunchroom.	Cronan. The School Lunch	
	3. Tour of kitchen: Study the methods used in storing equipment and food.	The school lunchroom	
	4. Have trainees suggest changes in arrangement of storage areas to save time and energy.		
	5. Show filmstrip, "Organizing and Preparing Meals." Discuss how planning helps save time and energy.	Filmstrip: "Organizing and Preparing Meals," McGraw-Hill	
	6. Make a work schedule that can be used in preparing a simple lunch.	"Palmetto Lunches," March, 1965	Observation of trainees at work
	7. Plan, prepare and serve a simple lunch, following the work schedule, which will illustrate how proper planning and arrangement of tools can speed up work and save time and energy.		Meal evaluation

OBJECTIVE: TO GAIN A BETTER UNDERSTANDING OF THE SAFE HANDLING OF FOOD, AND ITS RELATIONSHIP TO PERSONAL HEALTH PRACTICES AND SANITARY HOUSEKEEPING METHODS

CONCEPTS	LEARNING EXPERIENCES	TEACHING MATERIALS	EVALUATION
A. Sanitary procedures	A. 1. Discuss essential health practices of lunchroom workers. (a) Personal cleanliness and good grooming (b) Care of hair (wearing a hair net) (c) How to avoid spreading a cold (d) Sanitary practices related to tasting foods, dishwashing, food storage, and care of work area (e) Importance of physical examination and testing (f) Health card	Personal sanitation checklist for lunchroom workers Cronan. The School Lunch S. C. laws relating to food service in boarding houses, hotels, and motels	Observation of participation in the discussion
	2. Discuss the importance of strict sanitary control in handling foods. Have a resource person from the local health department lead the discussion. (a) Prevention of spoilage and contamination (b) Temperatures for safe refrigeration (c) Care of food in the refrigerator and storeroom	Resource person - local health department S. C. State Board of Health Inspection, "Report of Food Service Establishments" "Sanitation Follies," Public Health Committee of the Paper Cup and Container Institution Booklet: "Palmetto Lunches," March, 1965	
	3. Show and discuss chart on types of food poisoning. Give an illustrated lecture on how food poisoning spreads.	Chart from: Cronan. Foods in Homemaking, "The Spread of Food-Borne Diseases"	Objective test

OBJECTIVE: TO GAIN A BETTER UNDERSTANDING OF THE SAFE HANDLING OF FOOD, AND ITS RELATIONSHIP TO PERSONAL HEALTH PRACTICES AND SANITARY HOUSEKEEPING METHODS

CONCEPTS	LEARNING EXPERIENCES	TEACHING MATERIALS	EVALUATION
A. Sanitary procedures	A. 1. Discuss essential health practices of lunchroom workers. (a) Personal cleanliness and good grooming (b) Care of hair (wearing a hair net) (c) How to avoid spreading a cold (d) Sanitary practices related to tasting foods, dishwashing, food storage, and care of work area (e) Importance of physical examination and testing (f) Health card	Personal sanitation checklist for lunchroom workers Cronan. The School Lunch S. C. laws relating to food service in boarding houses, hotels, and motels	Observation of participation in the discussion
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	3. Show and discuss chart on types of food poisoning. Give an illustrated lecture on how food poisoning spreads.	Chart from: Cronan. Foods in Homemaking, "The Spread of Food-Borne Diseases"	Objective test

OBJECTIVE: TO GAIN A BETTER UNDERSTANDING OF THE IMPORTANCE OF FOLLOWING TESTED RECIPES IN PREPARING A LUNCH

CONCEPTS	LEARNING EXPERIENCES	TEACHING MATERIALS	EVALUATION
A. Understand and follow recipes	A. 1. Discuss the importance of following a recipe in quantity cookery.	Cronan. Foods in Homemaking Cronan. The School Lunch	
	2. Analyze recipes according to: (a) Abbreviations (b) Cooking terms - Show and discuss filmstrip, "Understanding Cooking Terms," McGraw-Hill (c) Measurements (1) Liquid (2) Dry Show and discuss filmstrip,"Measuring Accurately," McGraw-Hill	Recipe file Standard abbreviations Filmstrip: "Understanding Cooking Terms," McGraw-Hill Filmstrip: "Measuring Accurately," McGraw-Hill	Objective test on parts of a recipe. Cooking term cross-word puzzle, Evaluation in Home Economics, The Indiana Home Economics Association, 1964
	3. Demonstrate how to multiply or divide a recipe. Give students some practice problems.	Recipe file	Evaluation of practice problems
	4. Discuss standard substitutions in a recipe and learn the most common substitutions.	Cronan. Foods in Homemaking Handbook of Food Preparation, American Home Economics Assoc.	

OBJECTIVE: TO LEARN MORE ABOUT THE TYPE A SCHOOL LUNCH

CONCEPTS	LEARNING EXPERIENCES	TEACHING MATERIALS	EVALUATION
A. Planning the Type A lunch for the school lunch-room	A. 1. Discuss what is included in a Type A lunch.	Chart of Type A lunch	Question and answer session
	2. Discuss the nutritional advantages of the Type A lunch.	Cronan. The School Lunch	
	3. Discuss the use of U.S.D.A. commodities in meal planning.	Cronan. The School Lunch	
	4. List several ways to use U.S.D.A. commodities in Type A menus.	Group participation	
	5. Have class work out new recipes using U.S.D.A. commodities.	Group participation	Observation of group participation
	6. Have groups test new recipes.	U.S.D.A. commodities	Testing new dishes prepared
	7. Plan Type A menus using as many U.S.D.A. commodities as possible.	Menu forms for Type A lunch	Evaluation of menus
	8. Have a lunchroom supervisor demonstrate how the cost of a menu is determined. Give class menus and have them work out the cost.	Resource person - lunchroom supervisor	Evaluation of menus
	9. Plan, prepare, and serve a Type A menu using as many U.S.D.A. commodities as possible.	Group participation U.S.D.A. commodities	Evaluation of meal
	10. Select and use proper equipment for serving a Type A lunch.	Kitchen equipment	

OBJECTIVE: TO DEVELOP INCREASED ABILITY IN SELECTING AND ARRANGING THE PROPER EQUIPMENT TO USE FOR VARIOUS TASKS

TO REALIZE THAT THE PROPER USE OF EQUIPMENT CAN PREVENT ACCIDENTS

CONCEPTS	LEARNING EXPERIENCES	TEACHING MATERIALS	EVALUATION
A. The care and use of equipment	A. 1. Have resource person demonstrate use and care of major equipment used in the lunch rooms.	Representative from power company.	
	2. Demonstrate use and care of miscellaneous equipment.	Cutlery and other small equipment	
	3. Demonstrate precautions in operating equipment. (a) Protection of worker (b) Protection of equipment	Cronan. The School Lunch	
B. Prevention of accidents	B. 1. Discuss common accidents that may occur in the school lunch room.	Filmstrip: "Safety in the Kitchen," McGraw-Hill	
	2. Show and discuss filmstrip, "Safety in the Kitchen."		
	3. Discuss causes of accidents.	Cronan. The School Lunch	
	4. Discuss and list several safety precautions for lunchroom workers.		
	5. Demonstrate precautions in operating equipment.	Cronan. The School Lunch	
	6. Discuss what to do in case of an accident.	Red Cross, First Aid Handbook	

OBJECTIVE: TO DEVELOP INCREASED ABILITY TO APPLY THE PRINCIPLES OF NUTRITION IN THE MAINTENANCE OF GOOD HEALTH

CONCEPTS	LEARNING EXPERIENCES	TEACHING MATERIALS	EVALUATION
A. Principles of nutrition and their relationship to good health	A. 1. Discuss health and how it affects personal appearance.	Cronan and Atwood. Foods in Homemaking Rathbone, Bacon, Keene. "Health in Your Daily Living"	Participation in the discussion
	2. Discuss the main factors which have contributed to longevity of life.	Better Homes and Gardens, Family Medical Guide	Evaluating personal health habits
	3. List evidences of good and poor nutrition.	Charts - characteristics of good and poor nutrition	Question and answer session
	4. Study and discuss the food nutrients in relation to good health.	Lewis. Family Meals and Hospitality	Oral discussion
	5. Study and discuss food fads and fallacies.	Peyton. Practical Nutrition	Student participation
	6. Discuss the importance of breakfast and its relationship to the development of desirable work habits.	Peyton. Practical Nutrition Howe. Nutrition for Practical Nurses	
	7. Discuss the nutritional needs of the trainee and her family.	Chart: Basic four evaluation check sheets	
	8. Plan menus, using food models, to meet the nutritional needs of the families. Evaluate this planning after seeing the filmstrip, "Planning Meals for Nutrition."	Flannel board display of food models, National Dairy Council Filmstrip: "Planning Meals for Nutrition," McGraw-Hill	Menus planned

63

CONCEPTS	LEARNING EXPERIENCES	TEACHING MATERIALS	EVALUATION
	9. (a) Show filmstrip, "Serving Meals More Attractively." (b) Plan, prepare, and serve a well-balanced day's diet, incorporating the film ideas (breakfast, dinner, and supper).	Filmstrip: "Serving Meals More Attractively," McGraw-Hill	Performance
B. Dietary requirements for various stages of growth and development	B. 1. Discuss the nutritional needs of elementary children.	Howe. Nutrition for Practical Nurses	Observation of interest shown by questions asked
	2. Discuss the nutritional needs of teenagers.	Cronan. Foods in Homemaking	Question and answer session
	3. Plan menus to meet the needs of growing boys and girls.	Cronan. The School Lunch	Evaluation of menus

SUGGESTED PROGRAM FOR INTERIOR DESIGN AIDE

Introduction

The following course outline has been prepared for use in teaching students to become interior design aides. Specific types of skills needed will be influenced by the students' abilities, job opportunities, and facilities available. The learning experiences in this material are only suggestions and should be adapted to the local program. For high school classes, a one hour class meeting per day for thirty-six weeks, or 180 hours, with 40 or 50 additional hours of work experience is suggested. For adults who have ability in sewing, perhaps 120-130 hours of class meetings, with 30 or 40 hours of work experience, could be planned.

Objectives

To develop personal characteristics needed in getting and holding a job.

To develop good work habits.

To become aware of vocational opportunities in the community.

To develop an understanding of the services provided by interior designers and home furnishing departments in department stores, furniture stores, and specialty shops.

To develop some ability in the use, care, and storage of equipment.

To become familiar with the materials used in drapery-making.

To develop skills needed in making draperies.

To be able to construct curtains.

To be able to construct bedspreads.

To develop some ability in accurately reading and following directions and making decisions for adaption to unusual window treatments.

OBJECTIVE: TO DEVELOP PERSONAL CHARACTERISTICS NEEDED FOR JOB SUCCESS

Time -- 1 week

CONCEPTS	LEARNING EXPERIENCES	TEACHING MATERIALS	EVALUATION
A. Personal characteristics needed for job employment	A. 1. List desirable characteristics needed in a worker. 2. Discuss reasons why the listed characteristics are needed. 3. Consult references on characteristics of workers and add to list.	Bulletins: "Your Personality and Your Job" "Exploring Your Personality" Film: "How to Get a Job" Filmstrip: "At Home and in Public"	Rating scale on personal qualities
	4. Discuss each of the personal qualities of a good worker in terms of: (a) What is meant by this quality? (b) How can one develop this quality? (c) How can one improve this quality? (d) How can one maintain and keep this quality?	Bulletin: "What is Honesty?" Films: "Personal Qualities for Job Success" "Am I Trustworthy?	Self-evaluation by trainee Keep anecdotal record of strong and weak characteristics. Keep for files and records.
	5. Have groups identify ways these qualities must be practiced in carrying out the responsibilities of an interior design aide.		
	6. Have trainees write a paper on "The Kind of Person I Want to be as an Interior Design Aide."		Written report

OBJECTIVE: TO BECOME AWARE OF THE VOCATIONAL OPPORTUNITIES IN THE COMMUNITY

Time -- 3 weeks

CONCEPTS	LEARNING EXPERIENCES	TEACHING MATERIALS	EVALUATION
A. Changing role of women	A. 1. Discuss and read about the changing roles of women in society. Buzz groups: Subject - "Combination Homemaker and Wage Earner."	Bulletin: "Keys to Fulfilling the Dual Role of Women"	Question and answer period Checklist: "Role of Women"
B. Job opportunities	B. 1. List possible jobs within the interior design area.		Checklist: "Job Opportunities"
	2. Have interview with person in interior design on job opportunities in her profession. Report findings to class.	Personal interview	
	3. View and discuss film, "Choosing Your Occupation."	Film: "Choosing Your Occupation"	Film evaluation
C. Job application	C. 1. Skit: "Who Gets the Job?"	Bulletins: "How to Get a Job" "A Job for You" "How to Get and Hold a Job"	
	2. Study procedures used in job interview. Have a mock interview to illustrate the procedures used in an interview.	"Your Job Interview"	Evaluation of mock interview
	3. Symposium: "Applying for a Job."		
D. Employer-employee relations	D. 1. Resource person: Employer's report on "What is Expected of an Employee."	Resource person	Question and answer period
	2. Role play relationship problems which may occur on a job. Discuss the problems and solutions to them.		

CONCEPTS	LEARNING EXPERIENCES	TEACHING MATERIALS	EVALUATION
E. Work experience	E. 1. Plan work experience: Prepare personnel data sheets for employer, student, and parent. 2. Teacher-student conferences in preparation for work experiences.	Bulletin: "Job Guidance for Your Workers"	Personnel data sheets Student-teacher conference

OBJECTIVE: TO DEVELOP SOME ABILITY IN THE USE, CARE, AND STORAGE OF EQUIPMENT

Approximate time -- 1 week

CONCEPTS	LEARNING EXPERIENCES	TEACHING MATERIALS	EVALUATION
A. Use, care, and storage of equipment	A. 1. Review through demonstrations: (a) Parts of the sewing machine (b) Threading upper and lower machine (c) Machine stitching Allow students to practice individually after the demonstrations.	Parts diagram, threading charts - Singer Company	Performance test
	2. Working individually, practice cleaning the sewing machine.	Cleaning equipment: machine oil, dust cloth, brush, and screw driver	Evaluation of practice session
	3. Demonstrations: (a) Types of storage (1) sewing boxes (2) tote trays (3) adjustable shelves (4) closets (b) Pressing equipment (c) Small equipment - yard stick, scissors, needles, pins, etc.	Materials needed in demonstrations	How well equipment is kept and stored
	4. Readings on machine safety	Pamphlets: Safety booklets - National Safety Council	Self-evaluation
	5. Buzz session on safety		

OBJECTIVE: TO BECOME FAMILIAR WITH THE FABRICS USED IN DRAPERY MAKING

Time -- 4 weeks

CONCEPTS	LEARNING EXPERIENCES	TEACHING MATERIALS	EVALUATION
A. Fabrics used in making draperies and their characteristics	A. 1. Exhibit of swatches of drapery material.	Swatches from J. C. Penny Company and Sears Roebuck and Co.	Buzz session Question and answer period
	2. Define kinds of drapery fabrics and discuss characteristics of each.	Books: Wingate, I. Textile Fabrics and Their Selection, Prentice Hall, Inc., 1964 Craig, Hazel & Rush, Ola. Homes With Character, D. C. Heath & Company, 1962 Pamphlet: "Window Beauty," Kirsch Co.	Group participation
	3. Visit fabric house to see the different kinds of fabrics. Have resource person from fabric house point out the distinguishing characteristics of the different types of drapery fabrics.	Resource person Field trip	Questions and answers
	4. Collect sample swatches to illustrate the various types of drapery fabrics.		Identification quiz

OBJECTIVE: TO DEVELOP SKILLS NEEDED IN MAKING DRAPERIES

Approximate time -- 12 weeks

CONCEPTS	LEARNING EXPERIENCES	TEACHING MATERIALS	EVALUATION
A. How to take measurements and determine yardage	A. 1. Practice measuring windows in department, home, and lounge at school and work out the yardage for the windows measured.	Windows: 1001 Decorating Ideas, Conso, Inc. How to Make Draperies, Singer Company The Wise Encyclopedia of Modern Sewing, Wm. H. Wise & Company, Inc.	Group participation
B. Basic construction processes	B. 1. Demonstrate the methods of construction used to make the different types of draperies. Use transparencies to show how they differ in appearance. 2. Practice work - laboratory or community. 3. Discuss standards for construction.	Materials purchased by school for classroom and/or teachers' lounge Transparencies of different types of draperies	Performance test
C. Construct lining for draperies. Seams and finishes for draperies.	C. 1. Practice skills: (a) How to cut lining (b) Seams and finishes for draperies 2. Make miniature draperies which illustrate construction and lining processes learned.	Materials for making draperies and linings Miniature draperies made by class members	Performance test

CONCEPTS	LEARNING EXPERIENCES	TEACHING MATERIALS	EVALUATION
D. How to add trimmings to draperies	D. 1. Discuss, using transparencies, the kinds of trimmings and how they are used: (a) Headings (b) Scallops (c) Cordings (d) Fringe	Demonstration kit by Conso, Inc. Transparencies	Self-evaluation Work sheet to follow outline of jobs
	2. Demonstrate procedure for adding various types of trimming to draperies.	Books: Craig, Hazel and Rush, Ola. Homes With Character, D. C. Heath and Company, 1962 Singer Home Decorating Sewing Book	Questions and answers
	3. Examine samples of each type of trimming. Add trimming to the miniature draperies made.	Miniature draperies	Short answer test
E. How valences are made	E. 1. Discussion: How to make valences		
	2. Demonstration on valences by resource person	Resource person and materials for demonstration	
	3. Class participation and practice work	Miniature valence	Performance

OBJECTIVE: TO BE ABLE TO CONSTRUCT CURTAINS

Time -- 6 weeks

CONCEPTS	LEARNING EXPERIENCES	TEACHING MATERIALS	EVALUATION
A. Processes involved in making curtains	A. 1. Individual class members give demonstrations one one of the following processes used in making curtains. (Arrange for individual conferences to help plan and prepare demonstrations.) Encourage use of visual aids such as posters, transparencies, etc., to accompany demonstrations. (a) How to buy material (b) Cutting (c) Basting (d) Stitching (e) Lining (f) Trimming (g) Hemming	Demonstrations	Checklist on techniques used in demonstration Product examination
	2. Discuss the different types of curtains. Use the opaque projector to illustrate the different types as found in magazines, catalogues, etc.	Pictures of different types of curtains	Identification of types of curtains
	3. Compare and contrast correctly made curtains with commercially made curtains which students bring from home. Identify the construction processes used and evaluate them.	Tailored and commercially made curtains	Analysis of processes and their quality

CONCEPTS	LEARNING EXPERIENCES	TEACHING MATERIALS	EVALUATION
	4. Set up an exhibit of the commercially made products which help to give curtains a professional look, such as: cording, fringe, heading materials, pleater tape, weights, etc. Explain the purpose of each product, giving actual examples or using the overhead projector with transparencies.	Exhibit products used in making curtains with examples of their use or transparencies illustrating their use	Use of products in experience

OBJECTIVE: TO BE ABLE TO CONSTRUCT A BEDSPREAD

Time -- 6 weeks

CONCEPTS	LEARNING EXPERIENCES	TEACHING MATERIALS	EVALUATION
A. Steps involved in making a bedspread	A. 1. Give demonstrations on the processes used in making a bedspread. Include: (a) Measuring (b) Estimating material (c) Basting (d) Stitching (e) Trimming (f) Lining	Demonstrations	Illustrative materials
	2. Have question and answer session after each demonstration.		
	3. Students make samples to illustrate each of the processes in making a bedspread.		Samples

APPENDIX

HOME ECONOMICS INSTRUCTIONAL PROGRAMS SERVE TWO MAJOR PURPOSES

Preparation for Homemaking

These programs

- are broad in scope, including all areas of home and family living.
- are based on individual and family needs.
- are appropriate in every secondary school.
- include supervised home experiences.
- are open to all interested students.
- are provided in grades 7 through 12, and for post-high school.
- are evaluated in terms of use being made in personal and home life of students.

Preparation for Occupational Employment

These programs

- are focused on a specific occupation.
- are based on a job analysis of occupations.
- are established only when evidence shows employment opportunities exist.
- include supervised work experience.
- are offered only to students who have interest and aptitude for a specific occupation.
- are offered to students who will be of legal age at completion of course(s).
- are evaluated in terms of student's performance on job.

DIFFERENCES IN TWO ASPECTS OF HOME ECONOMICS PROGRAM

Home Economics for Homemaking	Home Economics for Employment
Total curriculum is broad in scope and content.	Curriculum is based on the job analysis of a specific occupation.
Attitudes and behavioral development necessary for strengthening family well-being are stressed.	Emphasis is placed on the development of attitudes and behavior necessary to secure and hold a job.
All students are accepted because of the belief that they can benefit from the program.	Qualities and aptitudes are the bases for selecting enrollees in a specific job-oriented program.
Marriage and maintaining a home are common to practically everyone, so programs are justifiable in all communities.	Programs are established only when evidence shows sufficient job opportunities are available for placement of trainees.
Counseling is most valuable in development of personal and family values.	Vocational counseling service is necessary to help the teacher in determining needs, employment opportunities, and placement of students in the most satisfactory program.
Advisory committees have been "recommended" but not required.	The establishment of a local advisory committee helps to determine work available and to advise and evaluate the specific emphasis of the training program.
Immediate evaluation of programs in home economics is difficult.	Evaluation is in terms of performance and the ability to get and hold jobs.

Taken from the National Conference on Contemporary Issues in Home Economics Education, University of Illinois, May 9-11, 1965.

CRITERIA TO USE IN DRAWING IMPLICATIONS FROM FINDINGS OF A SURVEY OF LOCAL COMMUNITY

1. Is there evidence that there is a need for a training program using home economics knowledge and skill which would possess the potential of making a contribution: to the decreasing of unemployment, to raising economic status of individuals in low-income groups; to reducing dropouts; and/or to increasing the employability of some youth and adults?

2. Will employment be available for those who successfully complete the course?

3. Are there enough prospective students who are interested in taking the course to meet the standards of the local school and the state requirements?

4. Can specific implications be drawn from findings in relation to curriculum development:

   a. Competences - Have the specific skills, knowledge, understandings, attitudes, and levels of performance for each been identified?

   b. Factor for selection of students - Have the personal characteristics and abilities desired by employers of prospective employees been identified?

   c. Learning experiences - Can a job analysis be developed so that learning experiences, teaching methods, and evaluation procedures can be effectively planned?

   d. Resources - Has it been possible to identify the resources needed--reference materials, audio-visual aids, equipment, and facilities--and the availability of such?

   e. Work experiences - Can there be adequate work experiences provided?

   f. Length of course - Is it realistic to expect that the desired competences can be developed in the amount of time suggested for the duration of the training program?

   g. Evaluation - Will it be possible to cooperatively evaluate progress throughout the training program?

Taken from a study made by June Cozine, Oklahoma State University, entitled "Approaches to Use in Assessing Needs for, Content of, and Certain Factors to be Considered in Offering Home Economics Courses Preparing for Gainful Employment, Project No. OE-5-85-088."

JOB ANALYSIS

"The typical vocational education program in the high school, regardless of its organizational pattern, is designed to achieve certain goals and is organized and scheduled accordingly. Since the purpose of vocational education is to prepare individuals for entry into an occupation, course content is determined by an analysis of what the worker must know and be able to do to be successful in that occupation."[1] This job analysis serves as a basis for program planning in helping to identify the objectives, understandings, skills and abilities to be acquired by the individual to be successful on the job.

An analysis is a cooperative venture. It is made by means of observations, interviews with workers, managers, and supervisors. It may be prepared by a teacher, manager, worker, or by occupational specialists and qualified professional personnel.

In making an analysis the job is first specifically defined. The definition includes the answers to these three questions:[2]

1. What is done?
   An analysis of what the worker does identifies the duties, tasks, or functions performed by the worker.
2. How is it done?
   A description of how a job is done includes the skills and abilities needed by the worker.
3. Why is it done?
   An answer to this question identifies the knowledge, understandings, principles, attitudes required for successfully performing the job.

A careful study of a job definition or description will also help determine:

1. The qualifications of enrollees as to

   - the minimum educational background necessary for trainees.
   - the maturity level of enrollees. This is influenced by amount of responsibilities to be carried by the worker, the probability and effect of mistakes which might be made on job in terms of added costs, customer relations, and human development.
   - the aptitude, interests, and temperament needed by workers. This will be helpful in setting up criteria for selection of enrollees.

2. The length of the training course

   - the number of weeks or months of training that is necessary for enrollee to learn the job.

3. The equipment needed

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[1]Ohio State University, Theory into Practice, Vol. III, No. 5, p. 174.

[2]Employment Security Review, "The New Dictionary of Occupational Titles," February, 1963, by A. B. Eckerson.

JOB RELATED WORK EXPERIENCE

Some Prerequisites for a Successful Work Experience Program

A. The school administration and the total faculty understand the objectives of the work experience program and are supporters of the program.

B. The objectives of the program are educational in nature.

C. The teacher-coordinator visualizes the objectives broadly.

D. The school curriculum is flexible so that students in the work experience program can participate fully in all of the school's activities.

E. Parents of high school students thoroughly understand the purpose of the program.

F. The teacher-coordinator makes careful plans with cooperating businesses so that there is thorough understanding of the undertaking.

G. The businesses providing work opportunities are carefully selected as places where students will get constructive types of experience.

H. Students are provided with a thorough orientation to work in the modern business community.

I. The teacher has some independent check on the effectiveness of the student in the work situation.

J. The teacher provides direction for the experience on the job and is able to integrate the work experience with classroom learnings.

K. The teacher is fully aware of what is happening on the jobs and is able to integrate the work experience with classroom learnings.

L. Careful attention is given to the development of self-evaluation on the part of student workers.

M. The teacher-coordinator is allowed sufficient time to visit students, to talk with them in personal conferences, and to talk with their work supervisors.

N. The teacher-coordinator evaluates the total program periodically to determine the extent to which objectives are met.

Excerpts taken from American Vocational Journal, January, 1961.

OBSERVATION - CHILD CARE AIDES

Observation can be done in:

1. Sunday schools
2. Hospitals
3. Churches
4. Child development centers
5. Head Start program
6. Institutions for people with special needs

The observation should be made of groups of children of 10-15 per group. Single observation of one child is not desirable.

The ideal situation is to use the laboratory already set up as a teaching and learning situation, as in a college.

Observation may be made in both good and poor situations for discussion purposes before students have actual practice and teaching experiences.

How to Visit

Report to the office or director or manager when you arrive at school, institute, or business. Be prompt.

If there are written instructions for visitors, read them carefully and observe the rules.

Sit or stand out of the way of workers or other personnel.

Do not talk to the workers or to each other if you go in a group. If a person addresses you, reply courteously, but do not engage him in conversation.

Keep your purse and personal belongings with you, or leave them in a designated place.

Do not handle or touch things unless asked to do so.

Write down any questions you may wish to discuss with the director during the time allotted for this.

Leave promptly when the visit is supposed to end.

Procedures

Since observation of the pre-school, institution, or organization should neither interfere with routine of the school nor upset the children or workers, careful planning is necessary.

1. The number of observers should be limited so that their presence will not interfere with the normal routine.

2. The observers should be placed where they will not in any way interfere with activity. (The most desirable location is behind a one-way vision screen when possible.)

3. Preparation for observation should include:

   a. Permission from the school in advance of the visit.

   b. A statement of what is expected of the observer and of what he may expect.

   c. An observation form may be provided to help the observer note specific things.

   d. Provision for time at the close of the observation for observer and staff member to discuss what has been seen.

   e. A simple explanation to the workers or children about observers if the observer must be in the room with the children. Presence of visitors may tend to excite children and to make them self-conscious.

SELECTION OF TEACHERS - BASIC COMPETENCIES NEEDED*

Horn listed four (4) competencies for teachers in emerging programs:

1. Utilization of the most up-to-date techniques required to do the job.
2. Possession of a thorough foundation in the knowledge and skills involved in the job.
3. Ability to identify concepts and to generalize.
4. Cooperation with the administration, employment agencies, and potential employers in the development of the course.

Technical competencies which seem reasonable to expect of the teacher engaged in occupational education include:

1. Integrates philosophy of life, philosophy of education, and philosophy of occupational education as a basis for thought and action.[1]
2. Possess up-to-date knowledge regarding technical matters related to the practice of a specific occupation or cluster of occupations.
3. Visualizes the relationship between the cognitive and manipulative elements of specific occupations or clusters of occupations and bridges the gap.
4. Possesses basic skills required to perform effectively in the occupation(s).
5. Structures the teaching-learning situation in a manner as to enhance the acquisition of cognitive and manipulative elements of the occupation.
6. Advises and stimulates students to develop to their fullest capacity.
7. Communicates with and relates to people--student, vocational leaders, industry representatives and others--whose cooperation and assistance facilitate program planning and implementation.
8. Builds a close liaison between industry and other potential employees and the individuals who ultimately will assume some responsibilities for fulfilling their personal needs.
9. Demonstrates an understanding of the concept of culture as "an attitude" rather than an attribute of a specific vocation.

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*From a paper presented at the Seminar for Home Economics Leaders, Columbus, Ohio, by Dean Flossie M. Byrd, School of Home Economics, Prairie View A & M College, Texas.

[1]This competence taken from the University of Nevada Seminar. Material has been revised in a manner appropriate for teachers who are not home economics oriented who may be employed in the program. It is to be expected that for home economics education graduates the competence could remain as stated in the original materials.

Personal competencies include:

1. Exemplifies a quality of feeling about her work--a commitment to her role and the objectives of the program--personal involvement.
2. Recognizes the dignity of work to students--any work which prepares for salable skills at the secondary, post-high school or adult level.
3. Transmits respect for the dignity of work to students.
4. Possesses the capacity for empathy and openmindedness.
5. Possesses a passion for ordering, knowing and creating reality for oneself and the individuals being taught.
6. Maintains psychic resiliency.

CUES FOR THE TEACHERS

It has been said that "success" is being able to do what one can do well with pride and enjoyment.

Helping students to explore paths that enable them to make choices ultimately leading to "success" could well be the overall objective of the teacher who will bring this resource unit to life for the learner.

Following are some "cues" that can be helpful in planning an implementation:

1. Keep informed as to needs of the community and surrounding area market for job opportunities.
2. Develop a cumulative resource person file with evaluative notations.
3. Plan learning experiences that will stimulate students' interest and desire to do further individual exploration.
4. Make use of Advisory Committee members representing various kinds of jobs and careers, to learn more about the realities of specific aspects of work and as resources for students.
5. Be alert to differences in abilities of students and provide information about opportunities that might be appropriate for each individual.
6. Grow in understanding and knowledge of students' social, economic and home backgrounds. Plan approaches, methods and evaluation of progress in relation to their undertakings and knowledge.
7. Provide some first hand experiences whenever possible in "work" situations such as assisting a skillful chef, manager in the school lunchroom, dressmaker or nursery school teacher.
8. Plan for individual or group observations of people on the job in the clothing production and food processing plants, nursing homes, pediatric wards, child care centers, etc.
9. Have field trips for whole class when new job possibilities and nature of work and conditions can be best observed and evaluated.
10. Provide for "success promoting" laboratory experiences in the Home Economics Department for the purpose of exploration of basic skills, understanding and attitudes needed in various aspects of home economics employment.

From State of New Jersey, Department of Education, Vocation Division, Trenton.

FOLLOW-UP OF GRADUATES

A carefully planned follow-up on each graduate can be helpful in evaluating and revising the program.

Graduates can judge:

1. Quality of training they received.
2. Appropriateness of training they received.

Kinds of evaluations:

1. Interviews
2. Questionnaires

Frequency of follow-up:

1. Depends on help available.
2. Contacts should be made one year following graduation, then five years later.

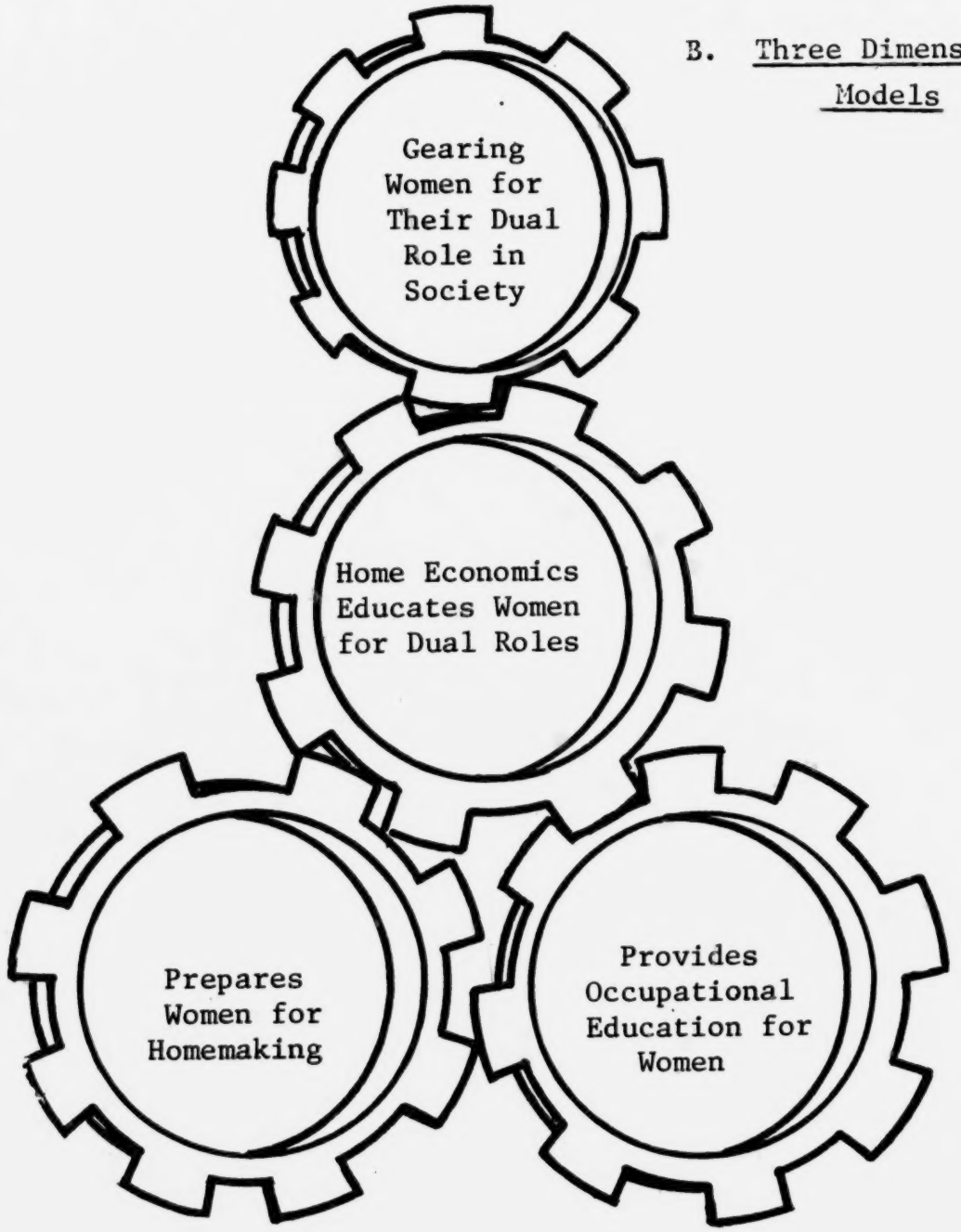
The questionnaire includes:

1. Name
2. Address
3. Marital status
4. Number of children
5. Employment status
6. Plans for work if not employed
7. Name and address of employer
8. Job title
9. Length of employment
10. Description of specific duties involved in the job
11. Courses or types of experiences not included in the training program
12. Evaluation of length and quality of participation experiences
13. Evaluation of equipment used during training program
14. Evaluation of sequence of course presentation

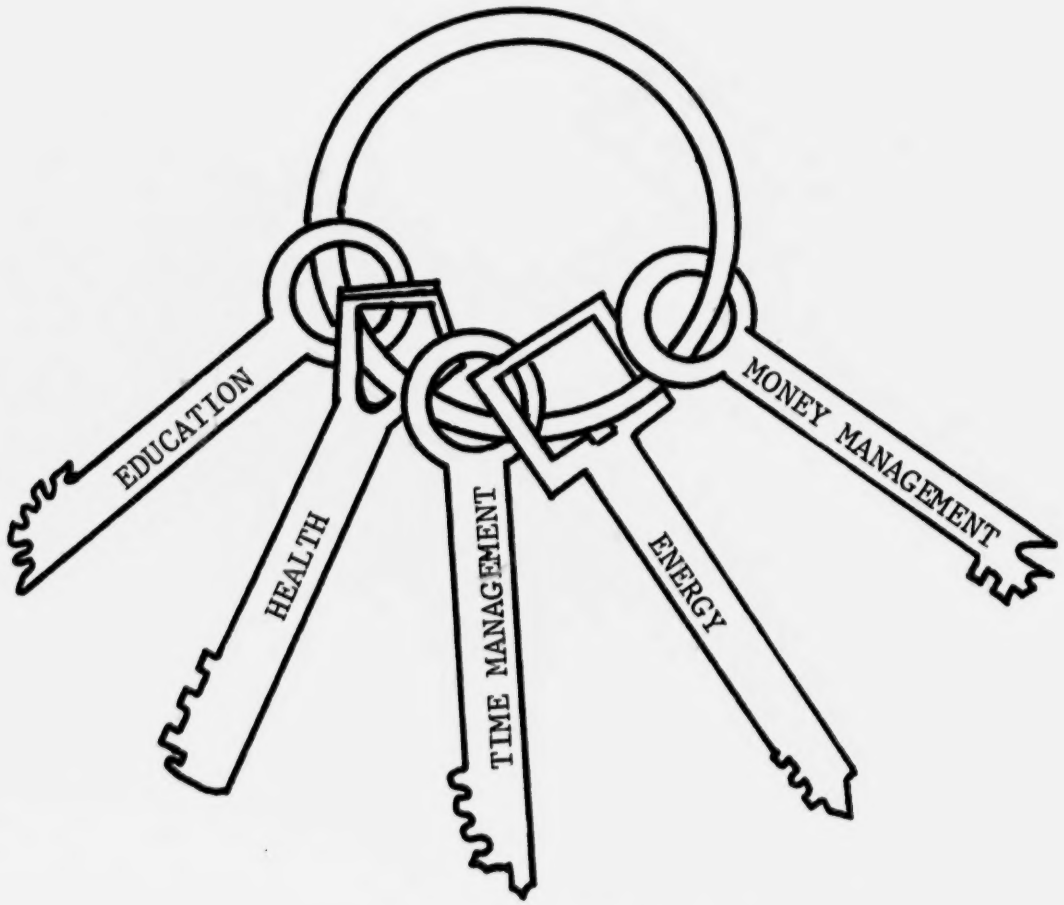
VISUAL AID SUGGESTIONS*

A. Flannel Boards and Magnetic Boards

B. Three Dimensional Models



*(Taken from: Illinois Teacher of Home Economics, "Visual Aids for the New Dimension in Home Economics," Vol. 8, No. 6, 1964-65, pp. 358-370.)



C. The Bulletin Board

Use the bulletin board as a developmental device through action methods, such as adding one key at a time when discussing: "Keys to Fulfilling the Dual Role of Women."

D. Posters, Charts, Flip Charts, and Flash Cards

A B C's of an interview:

Ask questions needed for job information.

Be relaxed and alert.

Consider the interviewer's time.

Dress appropriately.

Express interest in the work.

Find ways to express appreciation for interview.

VT 005 250
Computerized Vocational Information System (CVIS).

Willowbrook High School, Villa Park, Ill.
Illinois Research and Development Coordinating Unit, Springfield
MF AVAILABLE IN VT-ERIC SET.
Pub Date - 67 10p.

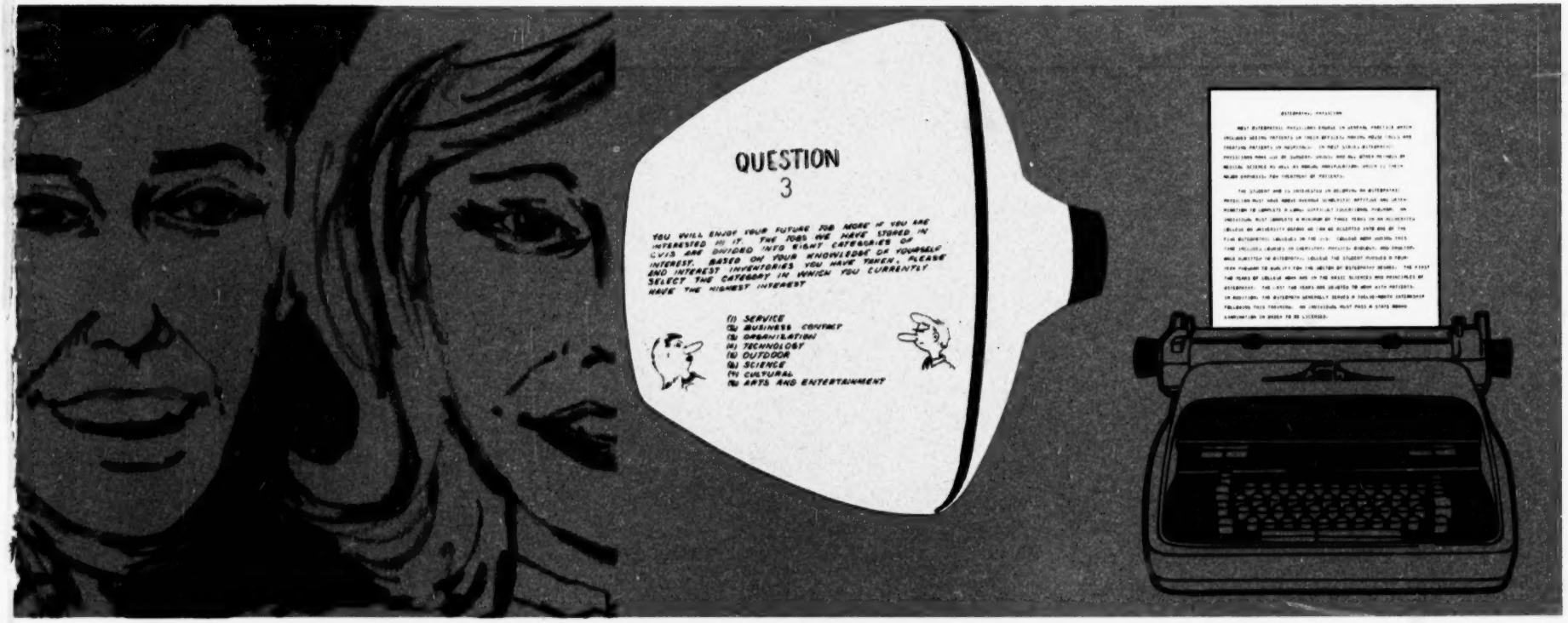
*ELECTRONIC DATA PROCESSING; *CAREER PLANNING; *OCCUPATIONAL GUIDANCE; *EDUCATIONAL GUIDANCE; COMPUTERS; HIGH SCHOOL STUDENTS; OCCUPATIONAL INFORMATION
*PROJECT COMPUTERIZED VOCATIONAL INFORMATION SYSTEM; PROJECT CVIS; WILLOWBROOK HIGH SCHOOL; VILLA PARK ILLINOIS

The project described in this report is designed to use computer technology as a tool to do a better job of systematizing, retrieving, and applying masses of information for the purpose of helping high school students make better-informed career and educational choices. The information gathered includes student personal data, occupational briefs, college information, trade-technical-school-apprenticeship data, and local job opportunities. The system is viewed as an automated library of information and provides for the student a model for decision-making. A two-dimensional job classification system, developed by Dr. Anne Roe, and explained in her book "The Psychology of Occupations," will be used to divide occupations into six levels, according to amount of training required and degree of responsibility assumed by the worker, and into eight categories of interest. Objective data about every student will be related to the job classification system and put in computer storage. By means of an automatic typewriter, students and counselors can recall information about 650 occupations, over 3000 colleges, scholarships, local technical and trade schools, local entry jobs, and the student's total school record. The system should be in operation in January, 1969. (PS)

VT005250

EDO 31587

Ill. Rev



COMPUTERIZED VOCATIONAL INFORMATION SYSTEM

CVIS

VT005250

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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Summary of a Project

for

Computerization of Vocational Information

being developed at

Willowbrook High School
Villa Park, Illinois

Supported by a grant from the Research Coordinating Unit of the State of Illinois Board of Vocational Education and Rehabilitation.

PERSONNEL

Dr. R. Bruce Allingham, Superintendent
Mr. William E. Herbster, Principal

Project Committee:

Miss JoAnn Harris, Director
Mr. Robert Austin
Mr. James Boyd
Mr. Willis Farnham
Miss Lorraine Foster

ACKNOWLEDGMENTS

The Project Committee is particularly grateful for the work being donated by the J. G. Ferguson Publishing Company of Chicago in the preparation of occupational briefs.

The Committee is also indebted to Dr. Anne Roe, formerly of Harvard Graduate School, for her job classification system. The permission of her publisher, John Wiley and Sons of New York, is likewise appreciated.

I INTRODUCTION

Willowbrook is a large, comprehensive high school of approximately 3200 students. It is located fifteen miles west of metropolitan Chicago, and it is one of three high schools in District 88. Approximately 60% of Willowbrook's graduates attend two and four-year colleges, and the remainder enters the local job market. The school, therefore, places a strong emphasis on trade, technical, and business courses as well as on its college preparatory curriculum.

The Guidance staff consists of eleven full-time counselors, including the Director, and a half-time psychologist. An increasing effort is being made to get vocational information to the students in a variety of ways and to acquaint both the counseling staff and the students with the excellent local job opportunities. We recognize that helping students make a good and successful vocational choice is one of the most difficult and complex facets of our work.

The project which will be described in the remainder of this report is designed to use computer technology as a tool to do a better job of systemetizing, retrieving, and applying masses of information for the purpose of helping the student make better-informed career and educational choices. The masses of information that will be harnessed are student personal data, occupational briefs, college information, trade-technical school-apprenticeship data, and local job opportunities. The system should be viewed as an automated library of information rather than as a decision-making mechanism. The system is also intended to provide for the student a model for decision-making which can be applied later in life. There is no intent to replace the counselor or to take away the personal touch. Rather the intent is to make accurate, updated, organized information readily available for human, professional consideration.

The major goals of the Project Committee are as follows:

1. To present to students expanded horizons of occupational possibilities.
2. To teach students valid methods of making decisions about vocational and educational choices.
3. To aid students to choose out of the vast number of possibilities those areas of work which best fit their abilities and interest.
4. To do the above in a unique way which will capture and hold student attention by developing personal involvement.
5. To make occupational information, including training opportunities, readily available to counseling and teaching staff.
6. To provide research data on factors involved in vocational decisions and job satisfaction.
7. To provide information about the range of local job opportunities.

II THE CLASSIFICATION OF OCCUPATIONS

After consideration of numerous systems of job classification, the Committee decided to use the two-dimensional classification system developed by Dr. Anne Roe, formerly of Harvard Graduate School of Education, and explained in her book *The Psychology of Occupations* (John Wiley & Sons: New York, 1956). Roe's classification divided occupations into six levels by amount of training required and degree of responsibility assumed by the worker. Briefly, the six levels are as follows:

Level 1: **Professional and Managerial 1.** This level requires high-level policy-making decisions and independent, varied responsibilities. If education is a relevant factor, it is at the doctoral level or equivalent.

Level 2: **Professional and Managerial 2.** The distinction between this level and the above is one of degree. These jobs may have autonomy, but the responsibility is less than in Level 1. These occupations normally require policy interpretation and education at or above the bachelor level, but below the doctoral.

Level 3: **Semi-Professional and Small Business.** These jobs have a low degree of responsibility for other people and application of policy or determination for self only. Education is normally high school plus technical school or the equivalent.

Level 4: **Skilled.** This and the following levels are classic subdivisions. Skilled occupations require apprenticeships or other special training experience.

Level 5: **Semi-skilled.** These occupations require some training and experience but markedly less than the occupations in Level 4. In addition, there is much less autonomy and initiative permitted in these occupations.

Level 6: **Unskilled.** These occupations require no special training or education and not much more ability than is needed to follow simple directions and to engage in simple repetitive actions.

Further, Roe divided occupations into eight categories of interest which are to some extent contiguously arranged. The eight interest categories are as follows:

1. **Service.** These occupations are primarily concerned with serving and attending to the personal tastes, needs, and welfare of other persons. Included are occupations in guidance, social work, domestic and protective services.

2. **Business Contact.** These occupations are primarily concerned with the face-to-face sale of commodities, investments, real estate, and services. Also included are such occupations as demonstrator, auctioneer, and some kinds of agents. A distinction is made in sales occupations between those in which the job is personal persuasion, which belong here, and those in which the selling is routine, and the person-to-person relation relatively unimportant, which belong in the next group.

3. **Organization.** These are the managerial and white collar jobs in business, industry, and government, the occupations concerned primarily with the organization and efficient functioning of commercial enterprises, and of government activities.

4. **Technology.** This group includes occupations concerned with the production, maintenance, and transportation of commodities and utilities. Here are occupations in engineering, crafts (including repair work), and the machine trades, as well as transportation and communication. Whether a physical scientist belongs in this group or in group 6 depends upon the setting in which he is working.

5. **Outdoor.** This group includes agricultural, fishery, forestry, mining and kindred occupations: the occupations primarily concerned with the cultivation, preservation and gathering of crops, of marine or inland water resources, of forest products, and other natural resources, and with animal husbandry.

6. **Science.** These are the occupations primarily concerned with scientific theory and its application under specified circumstances, other than technology.

7. **General Cultural.** These occupations are primarily concerned with the preservation and transmission of the general cultural heritage. The group embraces occupations concerning the subject usually called the humanities in college catalogues, but is broader than these. It includes occupations in education, journalism, jurisprudence, the ministry, linguistics, and so on. All elementary and high school teachers are included in this group. At higher levels teachers of science and art are placed in Groups 6 and 8.

8. **Arts and Entertainment.** These occupations include those primarily concerned with the use of special skills in the creative arts and in the field of entertainment. Both creators and performers are included.

At the time Roe published her book, she classified approximately 350 occupations in this way. In 1966, Dr. Roe and her associates at Harvard reworked the list of occupations in accordance with the new *Dictionary of Occupational Titles*, and the new list consists of 650 occupations. An example of the classification system follows:

LEVEL	SERVICE	BUSINESS CONTACT	ORGANIZATION	TECHNOLOGY	OUTDOOR	SCIENCE	GENERAL CULTURAL	ARTS & ENTERTAINMENT
I	PSYCHIATRIST PSYCHOLOGIST					ANTHROPOLOGIST OCEANOGRAPHER	ECONOMIST LAWYER	ARCHITECT
II	SOCIAL WORKERS COUNSELORS	PUBLIC RELATIONS WORKER	HOSPITAL ADMINISTRATOR, C.P.A.	AIRPLANE PILOT ENGINEER	SURVEYOR, LANDSCAPE ARCHITECT	NURSES, R.N. PHARMACISTS	CLERGYMEN, TEACHERS, H.S. & ELEM.	ACTOR ACTRESS DESIGNER
III	POLICE CHIEF, RECREATION WORKER	SALES, AUTO, INSURANCE	HOTEL MANAGER, STENOGRAPHER	DRAFTSMAN, FLIGHT ENGINEER	FOREST RANGER, COUNTY AGENT	DENTAL HYGIENIST, X-RAY TECHNICIAN	RADIO ANNOUNCER, T-V ANNOUNCER	INTERIOR DECORATOR, PHOTOGRAPHER
IV	POLICEMEN, PRACTICAL NURSES	DRIVER-SALESMAN	BOOKKEEPER SALESCLERKS	ELECTRICIAN JEWELER	FORESTRY TECHNICIAN, MINER	LAB TECHNICIAN, OPTICIAN		LETTERER, PASTE-UP MAN
V	TAXI DRIVER, WAITER		TYPISTS, CASHIERS	TRUCK DRIVER PLASTERER	CHAINMAN, RODMAN			
VI	ORDERLY, BELLMAN		MAIL MACHINE OPERATOR, SORTING MACH. OP.	BULLDOZER OPERATOR, CEMENT MASON	ROUSTABOUT, LUMBERJACK			PINBOY

III RELATIONSHIP OF THE STUDENT RECORD

Given this two-dimensional classification system, the Willowbrook Committee began to study the ways in which objective data available about every student could be related to it. It was decided to put student permanent records in computer storage, so that parts of the record can be used in helping a student make realistic vocational choices. In beginning operation, the committee decided to make use of cumulative class rank, composite score on a battery of tests, and an interest inventory, possibly the Kuder Preference Record. After data are gathered over years of experience, other items on the student record, such as grades in specific courses and personality ratings, may be used. The battery of tests which will be administered to sophomores yields a verbal and non-verbal ability score and six achievement scores (mathematics, science, reading, English, Social Studies, Solving Everyday Problems). The relationship of data to Roe's six levels will be as follows:

CUMULATIVE RANK IN CLASS		1	2	3	4	5	6	7	8	COMPOSITE TEST BATTERY SCORE (%)
TOP ONE QUARTER	I									TOP QUARTILE (76-99%)
1ST-2ND QUARTER	II									1ST-2ND QUARTILE (51-99%)
2ND-3RD QUARTER	III									2ND-3RD QUARTILE (26-75%)
2ND-3RD QUARTER	IV									2ND-3RD QUARTILE (26-75%)
3RD QUARTER	V									3RD QUARTILE (26-50%)
4TH QUARTER	VI									4TH QUARTILE (1-25%)
KUDER		SOCIAL SERVICE	PERSUASIVE	CLERICAL COMPUTATIONAL	SCIENTIFIC MECHANICAL COMPUTATIONAL	OUTDOOR	SCIENTIFIC	LITERARY	ARTISTIC MUSICAL LITERARY	

The computer will be instructed to use the higher of the two criteria (rank or composite score) for its reactions, which will be explained later, in case of discrepancy. Should the test score be considerably higher than rank in class, the computer will call this to the attention of the student.

IV THE STUDENT EXPERIENCE

Before the student comes to the computer equipment, he will have orientation to the classification system in a vocational unit in sophomore English classes. The six levels of training will be described to him in detail. The meaning of the eight interest categories will be explained and supplemented by audio-visual aids and guest speakers.

Sophomores, juniors and seniors will be invited to use the computer system on a voluntary basis during their free time. The student terminals will consist of a cathode ray tube and an automatic typewriter. A third-generation computer system will allow as many as 16-20 such student terminals on one central processing unit.

When the student comes to this terminal equipment, he will first be asked to type in his student number. When he does so, the computer recalls for its use the student's permanent record. Messages to the student which should be kept by him will be typed to him on the typewriter, which types at 180 words per minute. The "conversation" will be flashed on the cathode ray tube, and the student will respond by selecting multiple choice answers.

CVIS

In order to acquaint the student with the use of the gadgetry, the computer will invite the student to a game of tic-tac-toe. It will then carry on a conversation with the student in which the following four questions are asked:

1. Choice of occupation is related to your ability to learn. How do you rate yourself on ability to do school work compared to the rest of your class?

   1. Top Quarter
   2. Second Quarter
   3. Third Quarter
   4. Bottom Quarter

Computer reaction to Question 1.

1. *Information in your record agrees with your self-rating.*

2. *Information in your record indicates that you are in the _____ quarter of your class at Willowbrook. You may wish to discuss this rating with your counselor. The computer will proceed on the basis of the information in your record.*

2. Grades in school are also related to your vocational choices. Think about your semester grades in all subjects since you entered Willowbrook, and indicate where you think you stand in relation to the rest of your class on grade average.

   1. Top Quarter
   2. Second Quarter
   3. Third Quarter.
   4. Bottom Quarter

Computer reaction to Question 2.

1. *Information in your record agrees with your self-rating.*

2. *Information in your record places you in the _____ quarter of your class based on your grade point average at the end of last semester. The computer will proceed on the basis of information stored in your record.*

3. You will enjoy your future job more if you are interested in it. The jobs we have stored in CVIS are divided into eight categories of interest. Based on your knowledge of yourself and interest inventories you have taken, please select the category in which you currently have the highest interest:

   1. Service
   2. Business contact
   3. Organization
   4. Technology
   5. Outdoor
   6. Science
   7. Cultural
   8. Arts and Entertainment

Computer reaction to Question 3.

1. *The results of the interest inventory which you have taken agree with your choice.*

2. *The interest inventory which you have taken indicates that your highest areas of interest are _____ , _____ , and _____ . You may, however, look at the occupations in the interest area which you just chose.*

4. Keeping in mind your abilities and interests, you must now make some decisions about your plans after high school. The kind of occupation you will be able to pursue depends largely upon the amount of education or training you are willing to get. Please indicate the category which best describes your present educational plans:

   1. No further training after high school.
   2. Some training (2-6 months) after high school.
   3. Trade school (6-18 months) or apprenticeship.
   4. Technical school (6-18 months) or junior college technical program (2 years)
   5. Four years of college.
   6. Advanced degrees beyond college.

Computer reaction to Question 4.

O.K. message: The level of education which you have chosen seems realistic in the light of your record.

Minor discrepancy: Your record indicates that you could undertake a higher level of education than you have chosen. You may wish to discuss this with your counselor. You may, however, look at the jobs in the category you have chosen.

OR

The level of education you have chosen may be quite difficult for you unless your grades begin to improve in high school. You may want to discuss this with your counselor. You may, however, look at the jobs in the category you have chosen.

Major discrepancy: Your choice isn't realistic in the light of your present record. Please see your counselor. After a conference with him or her you may use this system again.

The script for the computer "conversation" is longer than quoted here. The Project Director tested the script with a group of students and altered it in accordance with their reactions to it. The computer's reactions are based on the decision table below:

QUARTER	O.K.	MINOR DISCREPANCY	MAJOR DISCREPANCY
1	I & II	III & IV	V & VI
2	I, II, III	IV & V	VI
3	III, IV, V	II & VI	I
4	IV, V, VI	III	I & II

Once the student has made a selection of interest category and training level, the computer chooses a "box" of occupations for him. The number of occupations in that box varies from none to as many as one hundred fifteen. The typewriter types out this list of occupations for the student. At this point the student may choose to explore occupations on that list or to go back and make different decisions about interest and education, which will produce a new list for him. If he chooses to explore occupations on the list he has, he is asked to type in the number of the first occupation. As soon as he does so, a fifty word definition of the occupation flashes on the screen. He may then ask for further information about that same occupation, begin to explore another on his list, or go back and make different decisions about education and interest. If he chooses to request additional information about the same occupation, the typewriter types a 250-300 word description. The format of these descriptions will be standard, including job duties, training requirements, recommended high school courses, working conditions, beginning salary range, and employment outlook. At the end of each description, reference will be made to sources of further information. The fifty-word definitions will be those which appear in the *Encyclopedia of Careers*, published in 1967 by the J. G. Ferguson Publishing Company of Chicago. This same company is preparing the 300-word job descriptions for Willowbrook without charge.

The student may then continue this process as long as he has time and interest. After the student has used the system once, he will not again play the game of tic-tac-toe or go through the self-evaluation. Rather, the computer will respond, "The last time you used CVIS (Computerized Vocational Information System) you were exploring jobs in the area of Science (flashing list on the screen). Do you want to continue exploring this list, or do you wish to make different decisions about interest and training?" The student may also recall any single job description by typing in the code number of that occupation.

V FURTHER DEVELOPMENTS

In another phase of development other types of information will be stored in the data bank to be accessed by students in the same conversational mode. This information would be primarily intended for juniors and seniors. The following is a summary of plans for future developments:

For students exploring occupations in:	Computer System will provide:
Levels I & II	1. Decision-making conversations about college (cost, distance from home, size, major fields, control, etc.).
	2. List of suggested colleges for investigation, based on the above decisions, student record, and testing information.
	3. Sources of scholarship aid if needed, based on student record.
Levels III & IV	1. Information about technical programs in local College of Du Page.
	2. Information about trade and technical schools within 100 mile radius.
	3. Information about local apprenticeships.
Levels V & VI	1. Information about how to choose your first job – gaming approach.
	2. List of companies in Du Page County which hire high school graduates (or leavers) in the field of interest specified by the student.

VI COUNSELOR BENEFITS

By means of a terminal hook-up to the computer, counselors and other pupil personnel workers can have access to any information stored in the data bank. By typing in specified code numbers, the counselor can recall information about the 650 occupations, over 3000 colleges, scholarships, local technical and trade schools, local entry jobs, and any student's total school record. We are currently expanding our traditional student permanent record to include such items as health disabilities, discipline record, record of work skills and experience, and information about the student gained from one and five-year follow-up studies. The counselor will also be able to recall the path of decision-making followed by each of his counselees. Part of this student record will be printed out for transcripts and other purposes. Some blocks of it will never be printed out, and only designated professional personnel will have access to it.

Also the computer will print out for counselors daily a list of counselees who have received minor and major discrepancy messages on the system during that day.

VII EVALUATION AND RESEARCH

A block of computer storage space will be set aside for data which will provide evaluation of the project. Such data as the following will be stored:

1. The number of times a student makes different decisions about level of education and interest area during his high school career.

2. The number of minor and major discrepancy messages given.

3. The result of these messages, ie, do they cause students to move toward more realistic goals?

4. The last 10 occupations explored in depth by each student. This can be compared with results of one and five-year follow-up studies to see to what degree the system is helping students to choose an occupation.

5. The number of times each occupation is explored by students.

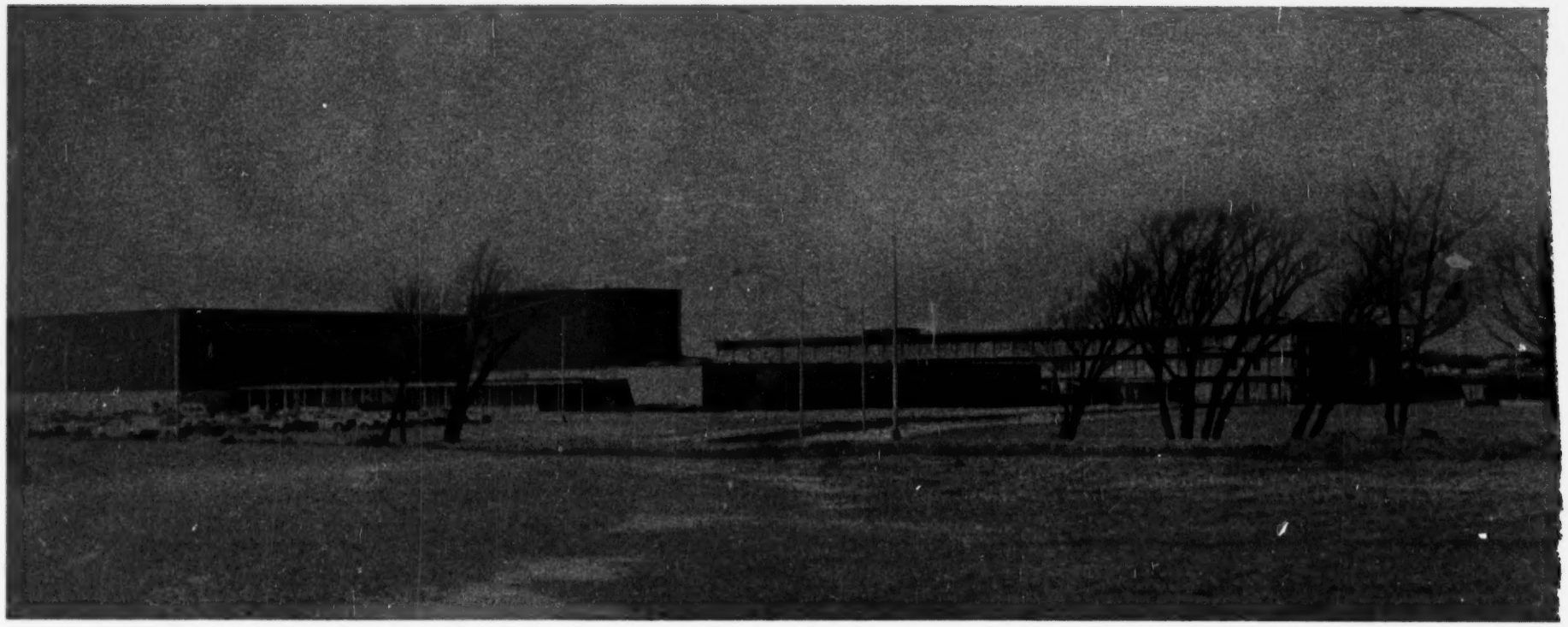
6. The number of times each student uses the system.

The Committee has given much thought to the inclusion of the kinds of data which will be needed for evaluation and research. A consultant will be engaged to design a plan for evaluation. The evaluation will include:

1. Student reaction questionnaire.
2. Student interviews.
3. Counselor reaction questionnaire.
4. Control group approach.
5. Short and long-term follow-up studies.

The Willowbrook Committee hopes to have its vocational information system ready for beginning operation with students in January, 1969. Additional programs for college, technical school, and job selection will be added for the school year 1969-70.

WILLOWBROOK HIGH SCHOOL VILLA PARK, ILLINOIS



VT 005 251
Tonkin, William J.
Vocational Guidance Through Videotaping and Television.

Sterling Township High School, Ill.
MF AVAILABLE IN VT-ERIC SET.
Pub Date - 66 6p.

*VIDEO TAPE RECORDINGS; *CLOSED CIRCUIT TELEVISION; *OCCUPATIONAL GUIDANCE; *HIGH SCHOOL STUDENTS; *CAREER PLANNING; DEMONSTRATION PROJECTS; OCCUPATIONAL INFORMATION; PROGRAM DESCRIPTIONS
STERLING TOWNSHIP HIGH SCHOOL; ILLINOIS

A 3-year project at Sterling Township High School has the objective of producing a series of video programs of occupational opportunities in the community and surrounding areas. The videotaped programming is designed for use with students in grades 7 to 12. Tapes of workmen on their jobs, which demonstrate the various occupational processes and work opportunities, are transmitted to the students in the classroom through closed circuit television. The equipment to produce these programs includes: (1) two television cameras and mounts, (2) a mobile panel truck equipped with Conrac video and sound controls, a Miratel monitor, television accessories, and an Ampex videotape recorder, and (3) a television studio in the high school equipped with an Emcee MA 2500 transmitter and modulator. It is hoped that the project will have some success in motivating young people to stay in school and to think about and prepare themselves for their life's work. (PS)

VT005251

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VOCATIONAL GUIDANCE THROUGH VIDEOTAPING AND TELEVISION

Prepared by:
William J. Tonkin, Director
Research and Development

INTRODUCTION

Specialization on a massive scale has led to an extremely affluent American Society. Such an economy holds vast potential for opportunity or for disaster for American Youth. The opportunity for youth to realize their potentials and interests is the goal of vocational guidance and career planning.

Recognition by Sterling Township High School of the complexity of the problem of career planning, led to the formulation of a research study project in vocational guidance. In 1965, the resultant proposal was presented to and accepted by the Research Coordinating Unit, Office of the Superintendent of Schools, State of Illinois, Springfield, Illinois. The project is Vocational Guidance Through Television and Videotaping.

The unique factor of this project is that it combines vocational guidance with educational television facilities. Videotaping crews are mobilized to go into the working world, make tapes of workmen in the

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performance of their jobs, demonstrating the various occupational processes and work opportunities. The videotapes are later transmitted to the student in the classroom through closed circuit television. It is hoped that television, a familiar and accepted friend of this generation, will bridge the communications' gap that seems to exist between youth and the working community.

RESPONSIBILITIES

As developers of this project, we are charged with the responsibility of producing, over a three year period, a series of video programs of occupational opportunities in this community and the surrounding areas. It is hoped that, through the vehicle of television, vocational information will be presented to a student early enough in his school career to help him see the value of staying in school in preparation for his life's vocation. Additionally, it is hoped that this vocational information will assist him in planning his school program effectively and will give him a first-hand experience of what to expect of an occupation.

One wonders how many students drop out of school because they can see no connection between school and real life. Through vocational information and guidance, it is hoped that the student will see that school is pertinent to life, that he can have a sense of pride in his vocational choice, whatever it may be.

Through these programs, the school anticipates assisting students to see where they can fit into our economy and our community, what jobs are and will be available in this area and in the nation as a whole. Our entire industrial system is being revised continuously. There is no place in today's society for those who have no skills.

STUDENTS INVOLVED

Our students are more than casually involved in the complex industrial system of the world of work. These students in just a few years are the employees in these industrial and business concerns. Are they being groomed for their place in society? We hope, through these videotaped programs, to assist in the preparation of these students to meet their specialization needs in our modern industrial society.

Our videotaped programming is geared to boys and girls in the seventh through the twelfth grades. Project findings have pointed out that vocational guidance should be started earlier than high school. Many seventh graders have been thinking about vocations and careers - this is the point in their lives that direction should be given to this thinking. It is our premise that a visual program of many vocational opportunities should be presented to the students through their secondary school years - programs to assist their thinking whatever their vocational interests may be.

This project is directed primarily at the great percentage of students who will not graduate from college, although vocational guidance is valuable to the student who one day will be a college graduate. For all students, whether they be terminal students, high school graduates, or college graduates, it is hoped that the vocational information and guidance will help them choose an occupation intelligently, not fall into a job in a 'happenstance' manner.

EFFECTIVE PROGRAMMING

Since these programs are not geared to a specific age or interest group, the effectiveness of the TV programs must be imaginative and attractive to hold the interest of the overall seven to twelve grade group. At the same time they must be educational and valid as far as the information is concerned. Programming is being scheduled to cover the many types of occupational choices for both girls and boys in meeting their needs and interests.

Videotapes of occupational opportunities can accomplish what no other single medium can do in explaining the facets of vocational guidance - even a personal visit to the business or industry. A tour of a business could possibly get the same information. But what industry or business would or could take the time to conduct many tours. The TV program is the answer to this problem. It can be a distillation of many visits and much investigation and research. Moreover, the information may be presented to several individuals at one time, and, being on tape, it can be repeated to many different groups.

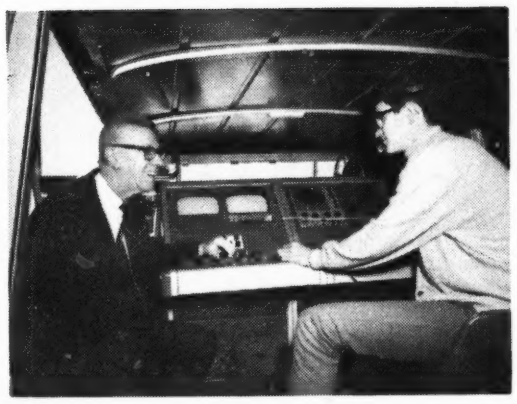
EQUIPMENT INCLUDED

To produce these television programs certain items of equipment are required. Sterling Township High School is most fortunate in having the necessary equipment for this project. The following equipment which permits our personnel to travel to the industries and businesses for the videotaping processes includes, basically:

1. Two television cameras and mounts

2. A mobile panel truck equipped with Conrac video and sound controls, a Miratel monitor, the necessary television accessaries, and an Ampex videotape recorder.

In addition, this school district has a well equipped television studio in the high school available for the use of this project and an Emcee MA 2500 transmitter and modulator.



PROJECT'S MAJOR OBJECTIVES

Through the use of this equipment and with the assistance of the personnel at Sterling Township High School who have the desire to serve the vocational interests of these students, the five main objectives of this project may be attained.

The first of these objectives is to examine the effect that vocational counseling services have in retaining young people in formal school programs. Sterling Township High School secured the services of Dr. Marshall Sanborn, University of Wisconsin, as a consultant to attempt to determine identification factors contributing to the student dropout situation. It is hoped that through the identification of the dropout factors, an intensive guidance program, a concerted effort to establish meaningful programs for students, and positive vocational counseling services, the number of student dropouts will be minimized.

Secondly, the project personnel hope to evaluate the effectiveness of a vocational counseling program in retaining students who have returned to a formal school training program after having been a 'dropout'. We hope to determine, through the project, reasons for dropouts and possible ways of bringing them back into a learning situation.

Another important objective of the project is to institute a follow-up program covering the employment records, salaries, and employers' evaluation to determine if participants in vocational education can find employment and successfully remain and advance in the field for which training was received.

The fourth objective of the project is to bring vocational guidance services to all youths of school age. Recent research indicates that two out of three dropouts exit from school before most occupational and other guidance facets begin to function. The traditional school program is geared to the ability to read and comprehend what he reads. This is important in his fulfillment as an indivudal and his usefulness in society. But it is equally important that the student who is not talented academically live a meaningful and fruitful life. There

is a great need for guidance services and for the development of practical courses that will prepare these students. Further, it is significant to note that the non-intellectual good traits that are essential to the work world, such as cooperation, self-discipline, and dependability, can be fostered in a vocational guidance program.

Probably the major objective is the establishment of the demonstration and research center - the collection and dissemination of information pertaining to vocational guidance through closed circuit television and other media of communication. The students at Sterling Township High School have access to a variety of existing sources for vocational guidance right now: the guidance counselors at Sterling High School, the vocational guidance counselor in the Whiteside Area Vocational Center*, guidance materials in the school and public libraries, and current national, state and local economic and occupational information that is being gathered by the project staff. Adding television to this, as a communicative medium, the student may have the ultimate in vocation guidance sources. Television is certainly the 'display-window' portion of this project. The programs, in addition to being interesting and attractive, must be meaningful and, we hope, fruitful in demonstrating the world of work and its many aspects to the school student.

THE COMMUNITY'S PART

What part has the community taken in this project? Community resources have played and will continue to play a most important role in this project. Local industrial and business concerns have been very instrumental in helping to provide the television equipment. Further assistance will be gained by forming an advisory council to assist in determining the various areas and sequences of study, review the requirements of job descriptions, assist the project members in selecting the personnel to appear in the videotapes and to preview tapes for accuracies.

What should not be left unnoticed in the Community's role is their general interest in the project. An adult class is being organized to instruct interested individuals in both the production and teachnical phases of television. An area TV station has offered the services of its staff in this instruction phase. Following the study phase, the members of the class will serve as members on TV crews.

SUMMATION

In summary, Sterling Township High School felt the growing need for a

* The Whiteside Area Vocational Center is a vocational school serving eleven high schools in the Whiteside County area, State of Illinois. It is located with and administered by Sterling Township High School.

more intensive and extensive vocational guidance program. This need is incorporated in a project for a functional and feasible school vocational program with the establishment of a demonstration and research center for vocational guidance. The research phase included the examination and study for school students in preparation for their vocational opportunities. The demonstration phase is the medium of videotaping of vocational processes. Sterling Township High School is fortunate in having the educational television facilities available in order to execute the plans.

By the establishment of this demonstration and research center, it is hoped that the project will have some success in motivating young people to stay in school and to think about and prepare themselves for their life's work.

VT 005 266
Report on New York State Data from a National Followup Study of High School Level Trade and Industrial Vocational Graduates; An Abstract of the Study.

New York State Education Dept., Albany. Bureau of Occupational Education Research
MF AVAILABLE IN VT-ERIC SET.
Pub Date - Jul67 21p.

*VOCATIONAL FOLLOWUP; *HIGH SCHOOL GRADUATES; *TRADE AND INDUSTRIAL EDUCATION; EMPLOYMENT EXPERIENCE; POST SECONDARY EDUCATION; VOCATIONAL ADJUSTMENT; NATIONAL SURVEYS; STATE SURVEYS; GRADUATE SURVEYS; COMPREHENSIVE HIGH SCHOOLS; VOCATIONAL HIGH SCHOOLS; ENROLLMENT INFLUENCES; JOB SATISFACTION; JOB PLACEMENT; PROGRAM ATTITUDES; OCCUPATIONAL MOBILITY; WAGES
NEW YORK

This is a summary of the original report which is available as VT 005 267 (ARM Summer 1969). (HC)

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REPORT ON NEW YORK STATE DATA FROM A NATIONAL FOLLOW UP STUDY OF HIGH SCHOOL LEVEL TRADE AND INDUSTRIAL VOCATIONAL GRADUATES

An Abstract of the Study

VT005266

THE UNIVERSITY OF THE STATE OF NEW YORK
THE STATE EDUCATION DEPARTMENT
BUREAU OF OCCUPATIONAL EDUCATION RESEARCH
JULY 1967

THE UNIVERSITY OF THE STATE OF NEW YORK
THE STATE EDUCATION DEPARTMENT
ALBANY, NEW YORK 12224

ROBERT S. SECKENDORF
ASSISTANT COMMISSIONER
FOR OCCUPATIONAL EDUCATION

July 27, 1967

TO: Persons Concerned with Vocational, Industrial and Technical Education

FROM: Robert S. Seckendorf

This is an abstract prepared by the staff of the Bureau of Occupational Education Research (New York State's Research Coordinating Unit) from the report on New York State data in a nationwide study by the American Institute for Research in 1963: The Process and Product of T & I High School Level Vocational Education in the United States.

The New York State Education Department supported the writing of the New York State Report, prepared by Max U. Eninger of the Educational Systems Research Institute and completed in May 1967. The study was designed to direct the attention of administrators and teachers to the needs of graduates from our trade and technical courses in making adjustments to post high school experiences.

The abstract is meant to convey to the teacher, supervisor, and administrator the study's implications and interpretations for direct application to today's school environment in New York State. An abstract of the National study is available upon request.

Limited copies of the entire New York State report are available on a loan basis, by writing to the New York State Education Department, Bureau of Occupational Education Research, Albany, New York 12224.

An Abstract of the Study

REPORT ON NEW YORK STATE DATA FROM A NATIONAL FOLLOWUP STUDY OF HIGH SCHOOL LEVEL TRADE AND INDUSTRIAL VOCATIONAL GRADUATES

The University of the State of New York
The State Education Department
Bureau of Occupational Education Research

July 1967

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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1978	Alexander J. Allan, Jr., LL.D., Litt.D.	Troy
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Carl E. Wedekind

Chief, Bureau of Occupational Education Research
Louis A. Cohen

SUMMARY OF FINDINGS

Influences on Course Selection

Compared with U. S. graduates, New York graduates are less influenced by job opportunities, friends, and teachers; more by counselors, books and magazines.

Where They Went After Graduation

Over the 3 study years, there is a decrease in the numbers going directly to work, an increase in the numbers going to college. It seems likely that the educational opportunities offered by the New York Junior College system have influenced the fact that proportionally twice as many New York vocational graduates attended a college directly after high school graduation.

Placement Time and Method of Obtaining First Job

The level of the economy appears to influence the time required to find a job. Both New York and U. S. figures indicate that vocational graduates get jobs more quickly than noncollege-bound academic graduates.

In methods used to obtain the first job, the top two categories for both New York and U. S. graduates were "help of relative or friend," and "help of school teacher."

Relatedness of First Job to Vocational Training; Adequacy of Training

The high percentage of graduates who enter neither the occupations they were trained for nor a highly related occupation, represents, in a sense, a loss of trained manpower. The problem is most acute in New York in the two extreme categories: the percentage going into the same occupation is less than a third of the graduates and decreasing; while the percentage going into completely unrelated occupations is more than a third and increasing.

Of the New York graduates who entered the occupation for which trained, 45 percent reported they were exceptionally well prepared and 48 percent said they were well prepared on the whole. Only 6.5 percent regarded themselves as poorly prepared.

Comparability of Tools, Equipment, Work Methods and Materials Between Training and Employment

Students seem readily able to overcome difficulties of unfamiliar methods and equipment.

Starting Hourly Earnings

New York starting hourly rates are consistently higher than U. S. rates. The general trend seems to be that vocational graduates have come from behind, caught up with, and surpassed the academic graduates.

Job Satisfaction

Vocational graduates for both New York and the U. S. are consistently more satisfied with their first job than academic graduates. The mean satisfaction for vocational graduates who entered the same or a highly related job was considerably higher than the mean for those who entered a slightly related or unrelated one.

Reason for Leaving First Job

The four principal reasons for leaving the first job were lack of work, better position, military service, and job dissatisfaction.

The Present Job: Two, Six, and Eleven Years Later

Of those who take their first job in the field for which trained, there is a gradual loss to unrelated occupations over the years. The loss exceeds the gain by those who enter the field after holding jobs in unrelated occupations.

Number of Jobs Held

Almost 80 percent of the 1953 graduates had held four or less than four fulltime jobs since graduation, and 24 percent had held only one fulltime job.

Employment Security

Vocational graduates as a group show a high level of employment security, especially considering the layoff potential of some of their occupations such as the building trades.

Geographic Mobility

Data imply that vocational education ought to base occupational course offerings primarily upon forecast of manpower requirements of the communities and the surrounding areas.

Adequacy of High School Skills Training

A smaller number of New York than U. S. graduates report a need for additional training in mathematics and communications skills. It is to be expected that with increased experience and responsibilities, graduates will feel a need for additional training. The percentage of 1953 graduates who indicate needs for additional training is greater than the percentage of 1958 and 1962 graduates.

Attitude Toward Former High School

The majority of graduates gave a rating of "good" or "excellent" to each of the ten factors. Some significant "poor" ratings are "help given to students to find jobs," "vocational counseling," and "general physical condition of school."

Kinds of Post High School Education

Relatively few vocational graduates continue with public or private vocational education. New York and U. S. data are essentially the same, except that the percentage of vocational graduates from New York who attend college (32.9 percent) is greater than that of U. S. graduates (20.2 percent).

TABLE OF CONTENTS

		Page
Summary of Findings		i
I.	Introduction	1
II.	Influences on Course Selection	2
III.	Where They Went After Graduation	3
IV.	Placement Time and Method of Obtaining First Job	3
V.	Relatedness of First Job to Vocational Training; Adequacy of Training	4
VI.	Comparability of Tools, Equipment, Work Methods, and Materials Between Training and Employment	6
VII.	Starting Hourly Earnings	7
VIII.	Job Satisfaction	8
IX.	Reason for Leaving First Job	8
X.	The Present Job: Two, Six, and Eleven Years Later	8
XI.	Number of Jobs Held	9
XII.	Employment Security	9
XIII.	Geographic Mobility	10
XIV.	Adequacy of High School Skills Training	11
XV.	Need for Additional Skills Training	11
XVI.	Attitude Toward Former High School	12
XVII.	Kinds of Post High School Education	13
Conclusion		13

I. INTRODUCTION

The national followup study of high school T & I vocational graduates set itself three objectives: (1) To describe the post high school educational and vocational experience of a group of T & I vocational course graduates from the classes of 1953, 1958, and 1962; (2) To compare vocational course graduates from comprehensive high schools with those from vocational high schools; (3) To compare vocational with academic course graduates in terms of relevant post high school occupational and nonoccupational variables.

The national study selected 100 schools from the 667 offering three or more trade and industrial vocational courses, in eight geographic regions of the U. S. The schools were distributed in enrollment among small (less than 500), medium (500-1500), and large (more than 1500). The participating high schools in New York State were: Saunders Trades and Technical High School in Yonkers, Mount Vernon High School in Mount Vernon, Philip Schuyler High School in Albany, Sewanhaka High School in Floral Park, Hutchinson-Central Technical High School in Buffalo, McKinley Vocational School in Buffalo, Linton High School in Schenectady, and William Grady Vocational High School in New York City.

In general, the New York sample is a close approximation of the structure of the national sample--the percentage of large-enrollment high schools is rather disproportionately large, but the 50-50 national split between vocational and comprehensive high schools is identical in New York.

Graduates from each participating school were chosen on the basis of available programs. Where the graduating classes were smaller than 50, all graduates were selected for the followup study; where they exceeded 50, a random sample of 50 graduates was selected. The study was limited to male graduates only.

All the schools were visited by the research team, and a questionnaire was developed and administered to graduates. Multiple contact procedures were followed to ensure a high percentage of returns. The 51.6 percent returns for New York was very slightly higher than the total national percentage. In New York, 363 vocational school graduates and 188 comprehensive school graduates returned the questionnaire.

II. INFLUENCES ON COURSE SELECTION

The most important influences on choice of vocational courses acknowledged by New York graduates are: job opportunities (36.2 percent); parents (29.1 percent); books and magazines (20.5 percent); school counselor (17.5 percent); friend of same age (15.6 percent); relative (13.8 percent); school teacher (12.4 percent). Compared with U. S. graduates, New York graduates are less influenced by job opportunities, friends and teachers; more by school counselors and books and magazines. Comparison of the 3 graduation years reveals that the influence of job opportunities, parents, teachers, counselors, books, and magazines is increasing. New York figures are generally consistent with U. S. figures. The 3-year percentages for influence of counselors in New York--9.3, 17.3, 21.7--show a slightly faster rate of increase as well as a higher general percentage than the national percentages (7.8, 10.7, 15.4).

As the single most important influence on the type of course selected, 19.9 percent of New York graduates named job opportunities, as compared with 26.8 percent of U. S. graduates. More New York graduates (10.4 percent) named school counselors than U. S. graduates (5.7 percent).

In New York 18.3 percent of the comprehensive school vocational graduates, but only 6.3 percent of vocational school graduates, acknowledged the school counselor as the most important source of influence on course

selection. Such a considerable difference suggests that serious attention should be given to the quality and effectiveness of vocational guidance in New York vocational schools. In New York as well as in the nation, academic graduates are substantially more influenced by counselors and parents than vocational graduates; vocational graduates are more influenced by job opportunities than academic graduates.

III. WHERE THEY WENT AFTER GRADUATION

For the combined New York graduating classes, 70.2 percent went directly to work after graduation, while 75.7 percent of U. S. graduates did so. In New York 17.4 percent of the graduates went directly to college, while only 9.4 percent of U. S. graduates did so. New York and national figures are comparable for the small numbers of graduates who went into military service (New York, 10.9 percent) or continued in a trade or technical school (New York, 1.5 percent). Over the 3 years, there is a suggestion of a decrease in the numbers going directly to work, an increase in the numbers going to college.

New York vocational students who attended college did not necessarily continue to a baccalaureate or even an associate degree. But it seems likely that the educational opportunities offered by the New York Junior College system have influenced the fact that proportionally twice as many New York vocational graduates attended a college directly after high school graduation.

IV. PLACEMENT TIME AND METHOD OF OBTAINING FIRST JOB

Of New York graduates from all 3 class years who went from school directly to a job, 70.1 percent obtained their first full-time job within one month of graduation. The mean time to obtain the job was 1.0, 2.3, and 1.6 months respectively for the graduates of 1953, 1958, and 1962.

The level of the economy appears to be an influence on the time required to find a job: the class of 1953, a boom year, required the shortest time; the class of 1958, a recession year, required the longest time. These New York findings are not significantly different from the national findings; but they do differ in the comparison of vocational graduates from comprehensive and vocational schools. While U. S. figures indicate that graduates from vocational schools find jobs in slightly less time than graduates from comprehensive schools, New York figures show the reverse. The small number of schools in the New York sample, however, suggests caution in accepting the difference in significant (difference in community job opportunities might account for it).

Both New York and U. S. figures indicate that vocational graduates from either kind of school get jobs faster than noncollege bound academic graduates--a mean of 1.7 months for New York vocational graduates, 2.8 months for New York academic graduates.

In methods used to obtain the first job, the top two categories for both New York and U. S. graduates were "help of relative or friend," and "help of school teacher." New York graduates used school placement services less (8.1 percent) than U. S. graduates (9.6 percent). More New York vocational graduates (32.2 percent) than comprehensive graduates (24.1 percent) acknowledged some form of placement help from school which may be accounted for by evidence that vocational school graduates are somewhat more likely to enter the occupation for which they were trained than comprehensive school graduates.

V. RELATEDNESS OF FIRST JOB TO VOCATIONAL TRAINING; ADEQUACY OF TRAINING

How many New York vocational graduates find their first full-time employment in the job for which their high school training prepared them?

Over the years, about 28 percent of New York graduates entered the same occupation for which trained, 18 percent entered a highly related occupation, 18 percent entered a slightly related occupation, and 36 percent entered a completely unrelated occupation. Moreover, the percentage who entered the same occupation decreased from 35.6 percent in 1953 to 25.3 percent in 1962, while the percentage who entered a completely unrelated occupation increased from 28.9 percent to 40 percent during the same period.

The high percentage of graduates who enter neither the occupations they were trained for nor even a highly related occupation, represents, in a sense, a loss of trained manpower. The problem is most acute in New York in the two extreme categories: the percentage going into the same occupation is less than a third of the graduates and decreasing; while the percentage going into completely unrelated occupations is more than a third and increasing.

The problem is easy to trace back into the high schools. The student who comes to realize that the trade he has selected is not what he is suited for, whether for reasons of ability or interest, is under considerable pressure to continue in the course selected. Schools tend to discourage switching from one course to another. Many parents are inclined to do the same. Even when these pressures are not present, there may be a reluctance to change to another course because change means leaving old classmates, starting all over again, admitting defeat, or other deterrents. For many who realize they have made the wrong choice, there is no solution but to continue in the course chosen until graduation. After that, they can always go into something else. So they may reason, and so many do. Under these circumstances, the extreme importance of careful course selection in the first place, and adequate vocational guidance toward that selection, become apparent.

In the comparisons between vocational graduates from vocational and comprehensive schools, the differences between graduates placed in slightly related or completely unrelated occupations are negligible. Almost 32 percent of graduates from vocational schools, but only 21 percent of graduates from comprehensive schools entered the occupation for which their high school training prepared them. It would appear, then, that though students in vocational schools may be less influenced by vocational guidance in the selection of courses than are their counterparts in comprehensive schools, yet the vocational school students are more likely to carry their vocational training into full-time employment. Mean relatedness scores show that in New York, vocational schools do slightly better than comprehensive schools in placing graduates into jobs related to training. U. S. scores concur. U. S. vocational schools did slightly better than New York vocational schools; U. S. comprehensive schools did slightly worse.

Of New York graduates who entered the occupation for which trained, 45 percent reported they were exceptionally well prepared; 48 percent said they were well prepared on the whole; and only 6.5 percent regarded themselves as poorly prepared. U. S. graduates had a slightly but consistently higher regard for the vocational training they had received.

VI. COMPARABILITY OF TOOLS, EQUIPMENT, WORK METHODS, AND MATERIALS BETWEEN TRAINING AND EMPLOYMENT

In this category, New York figures are in close agreement with U. S. figures.

About 50 percent of the New York combined graduates found the tools and equipment on their first job almost identical to what they had had in school. Forty percent reported there was little real difference. Only 11 percent felt there was a substantial difference; and of these, about 69 percent reported that it took from a few weeks to less than 3 months to learn or relearn what was so very different.

Work methods on the job were found to be almost identical to those used in school by 29 percent of the New York combined graduates. Forty-nine percent reported little real difference. About 22 percent said the work methods were very much different; but of these, about 63 percent claimed it took less than 3 months to learn the new procedures.

About 46 percent of the New York combined graduates found the work materials used on their first job almost identical to what they had had in school. Thirty-seven percent reported little real difference. Only 17 percent felt there was a substantial difference; and of these, 65 percent learned to make up the difference in less than 3 months.

Altogether, students seem to be easily able to overcome difficulties of unfamiliar methods and equipment.

VII. STARTING HOURLY EARNINGS

New York vocational school graduates start with slightly higher hourly earnings than vocational graduates from comprehensive schools. U. S. data agree except that New York starting hourly rates are consistently higher than U. S. rates. The comparison of vocational and academic graduates is difficult to interpret, since the 1958 recession affected starting rates. The general trend seems to be that vocational graduates have come from behind, caught up with, and surpassed the academic graduates. In 1953, vocational graduates started at a mean of $1.36 per hour; academic graduates at $1.42. In 1962, vocational graduates started at $1.60; academic graduates at $1.50.

The combined years' mean starting rate for vocational graduates who entered the same occupation for which trained or a highly related one ($1.40) was lower than the mean rate for those who entered a slightly related or unrelated occupation ($1.56). U. S. data show the same proportion. The 3-year differences of 21, 17, and 12 cents per hour in favor

of those who entered slightly related or unrelated jobs indicate that this gap is being closed.

VIII. JOB SATISFACTION

Graduates rated their job satisfaction on a four point scale: 4= very satisfied, 3= satisfied, 2= dissatisfied, and 1= very dissatisfied. There is no consistent or substantial difference in mean job satisfaction between the graduates of comprehensive and vocational schools in New York. U. S. results slightly favor the vocational schools, but the difference is probably not significant. Vocational graduates for both New York and the U. S. are consistently more satisfied with their first jobs than academic graduates. The mean satisfaction for vocational graduates who entered the same or highly related jobs was considerably higher than the mean for those who entered slightly related or unrelated ones. The satisfaction rating may be at least as important in long-range occupational success as starting hourly earnings. A graduate who is highly satisfied with his job over the years will work harder and progress faster than the graduate who may jump from job to job in search of one he can like, each time returning to an entry-level wage.

IX. REASON FOR LEAVING FIRST JOB

New York graduates reported four principal reasons for leaving the first job: lack of work, 23.7 percent; better position, 22.9 percent; military service, 16.2 percent; and job dissatisfaction, 15.4 percent. U. S. graduates reported the same four, with slight percentage variations.

X. THE PRESENT JOB: TWO, SIX AND ELEVEN YEARS LATER

About 98 percent of the 1953 New York graduates were employed at the time of this study. The percentage employed for other class years was lower because of the numbers in college or military service.

The percentage of New York graduates who held their present job in the field for which trained was: 1953--35 percent; 1958--35 percent; 1962--43 percent--figures closely approximating the U. S. ones. A higher percentage of vocational school graduates than comprehensive school graduates had their present job in the field for which trained. Of those who take their first job in the field for which trained, there is a gradual loss to unrelated occupations over the years. This loss exceeds the gain by those who enter the field after holding jobs in unrelated occupations.

The present hourly earnings of vocational school graduates at the time this survey was made were slightly higher than those from comprehensive schools. The present hourly earnings of all vocational graduates were higher than those of noncollege academic graduates. Vocational graduates in the field for which trained had higher earnings than those in unrelated fields.

The New York pattern is confirmed by national data.

XI. NUMBER OF JOBS HELD

The New York vocational graduates of 1953, 1958, and 1962 held a mean of 3.1, 2.5, and 2.0 jobs in the 11, 6, and 2 years they were out of school at the time the survey was made. Thus, almost 80 percent of the 1953 graduates had held four or less than four jobs since graduation, and 24 percent had held only one full-time job. The combined New York mean of 2.4 jobs agrees very closely with the combined U. S. mean.

XII. EMPLOYMENT SECURITY

The employment security measure expresses a graduate's total number of months of employment since leaving high school as a percentage of his total number of employable months. Excluded from the total employable months are those spent in military service, full-time school attendance, or incapacitating illness. Part-time jobs are converted to equivalent full-time months.

Allowance must be made for the fact that a recent graduate would have had a smaller total of employable months, and thus that any time of unemployment before securing a first job would weigh disproportionately in the calculation. Given this allowance, it can be said that vocational graduates as a group show a high level of employment security, especially considering the layoff potential of some of their occupations; e.g., building trades. Many vocational graduates, in fact, had more than 100 percent employment security by virtue of having held a second part-time job during much of their working history.

Comprehensive school vocational graduates had a 3 percent higher level of employment security than vocational school graduates. In all other findings for this section, New York and U. S. figures agreed; but in this they were reversed. This difference, however, may easily be attributable to the smallness of the New York sample.

New York vocational graduates are 2.7 percentage points higher in employment security than are New York academic graduates; U. S. vocational graduates are 4.1 percentage points higher.

XIII. GEOGRAPHIC MOBILITY

For the years 1953, 1958, and 1962, the percentages of New York vocational graduates who had never moved to a different city were 76.5, 84.4, and 93.1. This high degree of stability is slightly greater than the total U. S. samples. More than half of all moves made by New York graduates involve distances of less than 150 miles. These figures imply that vocational educators ought to base their occupational course offerings primarily upon forecasts of manpower requirements of their own communities and the surrounding areas.

XIV. ADEQUACY OF HIGH SCHOOL SKILLS TRAINING

Graduates were asked how much they had learned of nine basic occupationally related skills in high school. The categories were: (1) manual job skills, (2) practical job knowledge, (3) theoretical job knowledge, (4) mathematical skills, (5) communications skills, (6) reading and interpretive skills, (7) clerical skills, (8) personal relations skills, (9) supervisory skills. New York graduates reported that they had learned most of their skills in high schools, with the exception of clerical skills, personal relations skills, and supervisory skills, of which the great majority of graduates claimed to have learned "almost nothing" or "some, but not much" in high school. Compared with the other six, these skills are not normally emphasized in high school curricula, and so the figures are understandable. But 41.5 percent of New York graduates claim to have acquired similarly little of practical job knowledge in high school. Since these are the graduates working in the same occupation for which trained, or a highly related one, the high figure is significant. It suggests the need for a reassessment of the "practicality" of high school programs' practical job training.

In every category, the U. S. graduates attribute a greater amount of skill learning to their high schools. Graduates of vocational and comprehensive schools attribute about the same amount of skill acquisition to the high schools, in New York and on the national scale.

XV. NEED FOR ADDITIONAL SKILLS TRAINING

A need for additional training in the nine kinds of skills and knowledge was reported by the combined New York graduates, in percentages ranging from 47 to 65. All these graduates were employed in fields closely related to their high school training. For each class year, a smaller number of New York than U. S. graduates report a need for additional training in mathematics and communication skills.

In the interpretation of these data it should be remembered that high school vocational training aims primarily to develop entry-level occupational skills. It is to be expected that with increased experience and responsibilities, graduates will feel a need for additional training. The expectation is supported by evidence that the percentage of 1953 graduates who indicate needs for additional training is greater than the percentages of 1958 and 1962 graduates.

XVI. ATTITUDE TOWARD FORMER HIGH SCHOOL

All vocational graduates were asked to rate ten selected characteristics of their former schools. They were: (1) quality of instruction from shop instructors, (2) quality of instruction from academic teachers, (3) condition of shop facilities and equipment, (4) general physical condition of school, (5) vocational counseling given to students, (6) help given to students to find jobs, (7) opportunity for extra-curricular activities, (8) teacher's interest in student problems, (9) school's reputation in the community, (10) school's strictness in maintaining discipline.

The majority of graduates gave a rating of "good" or "excellent" to each of the ten factors. Some significant "poor" ratings are as follows: "help given students to find jobs"--27.8 percent; "vocational counseling"--24.1 percent; "general physical condition of school"--21.1 percent. Only 2.9 percent rated the quality of academic instruction as poor; and only 2 percent so rated the quality of shop instruction. This last, in fact, was rated good or excellent by over 85 percent of the graduates.

<u>In comparison with U. S. figures, New York schools were rated lower in (1) condition of shop facilities and equipment, (2) general physical condition of the school, (3) vocational counseling, (4) help given to students to find jobs, (5) teacher interest in student problems, (6) school's reputation in community, and (7) school's strictness in maintaining discipline</u>.

XVII. KINDS OF POST HIGH SCHOOL EDUCATION

Relatively few vocational graduates continue with public or private vocational education. The most frequently cited sources of post high school education for New York graduates are: Military specialist school (24.1 percent), 4-year college (16.9 percent), 2-year college (16.0 percent), company course (10.2 percent), and correspondence course (10.2 percent). New York and U. S. data are essentially the same, except that the percentage of vocational graduates from New York who attend college (32.9 percent) is greater than that of U. S. graduates (20.2 percent).

CONCLUSION

Any conclusions based upon the data presented in this report must be qualified by the realization that the study was not specifically tailored to New York State; thus there exists the possibility of error caused by an insufficient number of schools in the New York sample. The many areas in which New York and U. S. statistics are comparable in quantity or trend direction, however, suggest that implications may be drawn from the data with some confidence.

The importance of job opportunities as an acknowledged influence on course selection could be turned to advantage by vocational counselors in planning their programs of guidance. Up-to-date information about hiring needs of local businesses and industries should be a part of the counselor's preparation for conferences with students.

On the other hand, the large numbers of graduates who never work in the specific occupations for which their schools trained them, suggests a possible overemphasis on the needs of employers and an under emphasis on the needs of the student. No matter how much in demand a particular speciality may be, the student who does not want to work in it after graduation will have wasted his training.

The very small number of graduates who obtain their first jobs through school placement services says little for the success of these programs. Only about 8 percent of New York graduates said they had been helped by the placement services; while about 16 percent said they had been helped by a school teacher. Guidance personnel might do well to draw upon and coordinate the private resources of teachers in gathering information about job openings.

There is an odd discrepancy in the responses relating to curriculum and inschool job preparation. Large percentages of graduates working in the field for which they were trained claimed to have learned little or nothing in school of such things as practical job knowledge, clerical skills, and supervisory skills. However, when these same graduates were asked a general question about how well their vocational course had prepared them for work in their trade, 93 percent of them said either that they were "exceptionally well prepared," or "well prepared on the whole."

It would appear that graduates carry away with them from school an illusory general impression of good training and satisfactory preparation. However, when the graduates are forced to assess their training in terms of specific skills called for by working circumstances, they discover that the training is not adequate. In the planning and administration of vocational curricula, great care must be taken to prevent the curricula from becoming closed systems, complete and sufficient in themselves, and yet irrelevant or inapplicable to the practical job situations that must be encountered in the working world beyond the school doors.

The picture of New York State vocational courses drawn by this report offers information on the strong and weak aspects of the State's programs, and provides terms for comparison and evaluation of individual courses. Its findings should be useful to administrators, counselors, and teachers in these fields; and, through them, ultimately useful to the vocational student himself.

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Division of the
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SELECTED LIST OF AQUISITIONS

Vol. I No. 1

Contents

Adult Education..... 1
Advisory Committees..... 1
Aging..... 1
Apprenticeship..... 2
Area Redevelopment -
Depressed Areas..... 2
Automation - Economic
and Social Aspects.....3
Automation - Technical
Aspects..... 6
Business Education..... 7
Career Choice..... 7
Community - Junior College..... 9
Developing Areas.....10
Drop-Outs.....10
Education - Economics..... 12
Education - Legislation..... 12
Education - Level of..... 13
Employment - Agricultural..... 13
Employment - Legislation..... 13
Employment - Non-Agricultural.... 13
Employment - Statistics..... 13
Employment - Women..... 14
Guidance Counseling..... 14
Health Occupations - Education... 15
High School -
Post Graduation.....15
Labor Force.....16
Labor Market.....18
Labor Mobility..... 21
Low Achievers..... 21
Migrant Workers..... 21
Minorities..... 22
Negros..... 22
Occupational Surveys..... 22
Poverty..... 23
Programmed Instruction..... 23
Teacher Training..... 24
Technical Education..... 24
Trade and Industry Education..... 26
Training and Retraining..... 26
Unemployed - Long Term..... 28
Unemployment..... 29
Unemployment Insurance..... 30
Vo-Agricultural Education..... 31
Vocational Education - General... 31
Vocational Rehabilitation..... 34
Vocational Schools - Area..... 34
Vocational Schools -
Post-Graduation..... 35
Vocational Training Needs
Survey..... 35
Work - Sociology..... 35
Work - Philosophy of..... 36
Youth..... 36

5296

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CENTER FOR STUDIES IN
VOCATIONAL AND TECHNICAL EDUCATION
University of Wisconsin
Madison, Wisconsin 53706

Division of the
Industrial Relations
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Social Science
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SELECTED LIST OF AQUISITIONS

Vol I

No. 2

Contents

Adult Education..... 1
Advisory Committees..... 1
Aging..... 1
Apprenticeship 2
Area Redevelopment - Depressed
Areas..... 4
Area Skills..... 5
Automation - Economic and Social
Aspects..... 9
Automation - Technical Aspects.....10
Business Education..... 11
Career Choice..... 11
Community Economic Surveys..... 12
Community - Junior College..... 12
Curriculum Development..... 12
Developing Area..... 13
Distributive Education..... 13
Drop-Outs..... 14
Economic Opportunity..... 15
Education - Economics..... 15
Education for a Changing World
of Work..... 15
Education - Gifted..... 15
Education - Legislation..... 16
Education - Level of..... 16
Education - Self..... 16
Employment - Agricultural..... 16
Employment - Legislation..... 17
Employment - Non Agricultural..... 18
Employment - Part Time..... 19
Employment - Self..... 19
Employment Service..... 19
Employment - Statistics..... 20
Employment - White Collar..... 21
Guidance Counseling..... 21
High School - Secondary Education. 21
High School - Post Graduation..... 22
Labor Market..... 24
Labor Mobility..... 26
Manpower Planning..... 27
Manpower Reports..... 27
Migrant Workers..... 27
Moonlighting..... 28
Minorities..... 28
Maturation..... 28
Negroes..... 29
Peace Corps..... 29
Population - Estimates..... 29
Poverty..... 30
Practical Arts Education..... 31
Programmed Instruction..... 31
Skills - Military to Civilian... 31
Social Security..... 31
Teacher Training..... 31
Technical Education..... 32
Testing..... 33
Trade and Industry Education.... 33
Training and Retraining..... 33
Unemployed - Long Term..... 35
Unemployment..... 36
Unemployment Insurance..... 37
Vo-Agricultural Education..... 38
Vocational Curricula - General.. 38
Vocational Education - General.. 39
Vocational Education - Penal.... 41
Vocational Schools - Areas..... 41
Vocational Rehabilitation..... 42
Vocational Schools - Post
Graduation..... 42
Women - Employment of..... 42
Work -Sociology..... 43
Work-Study Program..... 43
Workers - Marital and Family
Status..... 43

Contents

Home Economics Education..... 23
Junior High School..... 23
Labor Force.....23
Youth..... 43

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CENTER FOR STUDIES IN
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University of Wisconsin
Madison, Wisconsin 53706

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SELECTED LIST OF ACQUISITIONS

Vol I

No. 3

Contents

Adult Education..... 1
Advisory Committee..... 1
Aging..... 2
Apprenticeship..... 6
Area Redevelopment-Depressed Areas..... 7
Automation-Economic & Social Aspects..... 8
Automation-Technical Aspects..... 12
Business Education..... 13
Career Choice..... 14
Community Economic Surveys..... 17
Community-Junior College..... 21
Curriculum Development..... 21
Distributive Education..... 22
Drop-Outs..... 25
Education for a Changing World of Work..... 26
Education-Legislation..... 26
Education-Level of..... 28
Educational Planning& Programs... 29
Education-Research..... 29
Education-Statistics..... 30
Employment Agricultural..... 30
Employment-Blue Collar..... 30
Employment-Legislation..... 31
Employment-Non-Agricultural..... 32
Employment Service..... 32
Employment-Statistics..... 33
Employment-Women..... 34
Guidance Counseling..... 34
Health Occupations-Education..... 36
High School:Post Graduation..... 38
High School-Secondary Education.. 40
Higher Horizons..... 40
Home Economics-Education..... 41
Labor Mobility..... 41
Low Achievers..... 41
Manpower Policies..... 42
Manpower Resources-Labor Force-Employment-Unemployment..... 43
Manpower-Skill Requirements... 42
Migrant Workers..... 50
Minorities..... 52
Moonlighting..... 52
Negroes..... 52
Population; Characteristics and Estimates..... 53
New Horizons..... 53
Occupational Outlook..... 53
Occupational Surveys..... 54
Poverty..... 55
Programmed Instruction..... 56
Teacher Training..... 56
Teaching Aids..... 57
Technical Education..... 58
Testing..... 60
Trade & Industry Education.... 60
Training & Retraining..... 62
Unemployed-Long Term..... 65
Unemployment..... 65
Unemployment Insurance..... 66
Vo-Agricultural Education..... 67
Vo-Ed Courses, Other..... 68
Vocational Curricula-General.. 69
Vocational Education-General.. 69
Vocational Education-Penal.... 71
Vocational Education-Research. 71
Vocational Rehabilitation..... 71
Vocational Schools-Area..... 72
Vocational Schools-Post Graduation..... 74
Work Study Programs..... 75
Youth..... 75

To be checked

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CENTER FOR STUDIES IN
VOCATIONAL AND TECHNICAL EDUCATION
University of Wisconsin
Madison, Wisconsin 53706

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Vol I

No. 4

Contents

Adult Education 1
Aging 2
Apprenticeship 2
Area Redevelopment-Depressed Areas. 3
Automation-Economic and Social Aspects 3
Automation-Technical Aspects . . 5
Business Education 7
Career Choice 8
Community Economic Surveys . . . 11
Community-Junior College. 14
Curriculum Development 14
Distributive Education 14
Drop Outs 15
Education For A Changing World of Work 15
Education-Legislation 17
Education-Level of 22
Educational Planning & Programs . 22
Education-Research 24
Education-Statistics 28
Employment-Agricultural 32
Employment-Blue Collar 33
Employment-Legislation 33
Employment-Non-Agricultural . . . 34
Employment Service 34
Employment Statistics 36
Employment-Women 39
Gifted Children 40
Guidance Counseling 41
Handicapped 44
Health Occupations-Education . . 46
High School-Post Graduation . . . 47
High School-Secondary Education . 47
Industrial Relations 48
Labor Market 50
Labor Mobility 50
Low Achievers 51
Manpower Policies 51
Manpower Resources-Labor Force-Employment-Unemployment . 52
Manpower-Skill Requirements. 55
Migrant Workers 56
Minorities 56
Negroes 57
Occupational Outlook 57
Occupational Surveys 58
Population-Characteristics And Estimates 64
Poverty 64
Programmed Instruction . . . 65
Teacher Training 65
Teaching Aids 69
Technical Education 69
Testing 72
Trade and Industry Education 72
Training & Retraining . . . 73
Unemployed-Long Term 78
Unemployment 79
Unemployment Insurance . . . 80
Vo-Ed Courses, Other 80
Vocational Education-General 81
Vocational Education-Research 83
Vocational Education-Teacher Training. 84
Vocational Rehabilitation. . 85
Vocational School-Area . . . 86
Work Study Program 87
Youth 87

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VT 005 401
Knox, Ghernot L.
Massachusetts Vocational Education Research Coordinating Unit, Second Report for the Period October 1 to December 31, 1967.

Massachusetts Vocational Education Research Coordinating Unit, Woburn
MF AVAILABLE IN VT-ERIC SET. OEG-1-062733-2078
Pub Date - 67 9p.

*RESEARCH COORDINATING UNITS; *PROGRAM DESCRIPTIONS; *EDUCATIONAL RESEARCH; *VOCATIONAL EDUCATION; *STATE PROGRAMS
*MASSACHUSETTS VOCATIONAL EDUCATION RESEARCH COORDINATING UNIT

Unit activities during the reporting period included: (1) continuing work on establishin a Vocational Educational Information System, (2) mailing a bulletin to all vocational schools inquiring about staff member interest in working cooperatively with the Unit, (3) continuing the advisory Council State Vocational Education Study, (4) participating in conferences to determine what technical education should be provided in community colleges, (5) developing an occupational interest survey, (6) developing and disseminating a brochure of objectives and services of the Unit, (7) publishing articles about the Unit in the Massachusetts Teachers' Association Journal, and (8) providing information to researchers and other persons on various subjects related to vocational education. Lists of 20 Unit activities planned for the near future and of Massachusetts vocational education research projects are included. (MM)

VT005 401

ED0 31587

Second Report

Massachusetts Vocational Education Research Coordinating Unit
Research and Development Division
Massachusetts Department of Education

For the period October 1 to December 31, 1967

United States Office of Education
Grant No. OEG-1-062733-2078
Project No. 6-2733

Research and Development Division
Department of Education
Olympia Avenue
Woburn, Massachusetts 01801

Ghernot L. Knox
Director
Research Coordinating Unit

Tel: 617-935-4350

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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VT005401

Vocational Educational Information System

Work is continuing on one of the major assignments of the Massachusetts Research Coordinating Unit, the establishment of VEIS-a Vocational Education Information System. As part of the Massachusetts Research and Development Division, the Research Coordinating Unit is assigned responsibility for the collection of data needed for federal reporting requirements in vocational education.

Fall enrollment data has been collected and plans are progressing for reporting this data through a special booklet. Computer programs are written and tested to make available to special vocational area supervisors state wide data for their areas. Further data will be taken from the report by Congressional Districts and forwarded to each Congressman to give him a complete and detailed picture of vocational education enrollments in his district.

Forms and directions have been written for the collection of vocational education teacher data.

A pilot program testing follow-up reporting instruments is nearly completed. Materials were mailed to representative schools and evaluations were requested. The directions now will be adjusted before final printing and distribution.

Financial reporting forms and guidelines are being prepared by the Accounting Staff of the Research and Development Division. These materials will be part of the forty regional training conferences conducted each spring for local school department office personnel.

Work permit report data is being collected from all the cities and towns to be reported to the United States Department of Labor, Bureau of Labor Standards.

Research Advisory Committees are being established in the following areas: Agriculture, Distribution, Vocational Guidance, Home Economics, Health, Office Occupations, Technical, and Trades and Industry.

Suggestions have been received for membership and contacts are being made. The first responsibilities of these committees will be to recommend areas of research and to establish priorities.

I B M School

The Research Coordinating Unit Director attended the I B M School Executives School in Poughkeepsie, New York in November.

United States Office of Education Representative Conference

Dr. Urwin Rowntree and Dr. Richard McCann of the United States Office of Education Regional Office in Boston conferred with several Massachusetts Research and Development and Research Coordinating Unit personnel. Of particular interest was a research institute, services of the Regional United States Office of Education, a research seminar and educational research for correctional institutions.

Graduate degree research papers

A special bulletin was mailed to all vocational schools inquiring about staff members who might be interested in working cooperatively with the Massachusetts Research Coordinating Unit. The Research Coordinating Unit is interested in

1. initiating vocational education studies
2. helping vocational educators with their studies for advanced degrees.

The memorandum suggested help that the Research Coordinating Unit and its Research and Development Division could give.

A number of school directors have responded and have met with Mr. Knox and one director with Mr. Richard McCann of the Regional United States Office of Education for Exploratory discussions.

The Advisory Council State Vocational Education Study work is continuing. Visits to vocational schools have started. The Research Coordinating Unit has worked on the survey instruments going to graduates, non-public vocational schools and to 2,500 selected industries in eleven areas of manufacturing.

Technical Schools and Community Colleges

A problem of concern in Massachusetts is what technical education shall be provided by the community colleges. Several conferences have been held and a working position paper is now being written by Dr. Fox of the Massachusetts Advisory Council in Education.

The Research Coordinating Unit participated in these conferences and recommended regional vocational technical representatives for these conferences.

Occupational Interest Survey

An occupational interest survey program is being developed by the Research Coordinating Unit staff. Several Committees and Regional Vocational School Supervisors-Directors are interested in using this. It will be designed to reflect present offerings in vocational schools and community colleges as well as areas of manpower needs in Massachusetts, etc..

Research Coordinating Unit Brochure

A two-color brochure giving the objectives and services of the Massachusetts Research Coordinating Unit and a Memorandum from Education Commissioner Owen B. Kiernan was mailed to all Superintendents of Schools, Vocational School Directors and Superintendent Directors and Research Coordinating Unit Directors.

A copy of this brochure and the cover letter is included with this report.

Thirty-day labor report bulletin

Arrangements have been made with Research Department Director, Miss Charlottee Meisner, of the Massachusetts Division of Employment Security to have mailed to all vocational school directors copies of the Division of Employment Security's quarterly report of job openings unfilled thirty days or longer. The first of these reports has already been received by the school directors.

A request has been sent to the Massachusetts Department of Employment Security concerning the development of a special manpower report in the areas of office occupations, distributive education and home economics to be sent to Massachusetts high schools.

Vocational Program Brochure

The Blue Hills Regional Vocational-Technical School, Mr. William Dwyer, Superintendent-Director, requested samples of public relations and information materials now in use in the various states. A bulletin was mailed to all Research Coordinating Unit Directors requesting samples of materials.

The response has been excellent and the materials delivered to Mr. Dwyer.

Summer Research Institute possibilities were explored with the Regional United States Office of Education and Dr. Dethy of Northeastern University. Because of funding allocations, this has now been postponed until next fall or winter.

Magazine articles have been suggested and published in the Massachusetts Teachers' Association Journal telling about the Research Coordinating Unit and about the state wide vocational education study.

Correctional Institutions

Directors of Research Coordinating Units in all states were asked for vocational education and other education research in the area of Correctional Institutions. The materials received in response to this request are being forwarded to Mr. Gerald O'Laughlin, Massachusetts Supervisor of Education for the Correctional Institutions.

Educational Research Information Center Vocational-Technical Education Clearinghouse information Accessibility Seminar

Notices and information about this December 2 and 3 Cleveland, Ohio, seminar were sent to all vocational school directors.

Materials and briefings

Nancy Atwood of the Massachusetts Executive Office for Administration and Finance and Patricia Allen of Elementary and Secondary Education of the State Department of Education were sent vocational education information materials and were given several briefings about vocational education.

Lexington Project

Mr. Knox, Research Coordinating Unit Director, participated in a meeting with a special ciitzens committee sanctioned by the Lexington School Committee to study and bring in recommendations concerning programs for non-college high school students.

Research projects in this area and other data was later referred to Mr. Eaton, Chairman of the committee.

Regional Vocational-Technical School Financial Data

Regional vocational-technical school financial data was supplied for a school planning committee. These data included operational costs for some schools and costs for schools in the planning stage.

Tool and Die-makers

Machine shop and tool and die-maker instructional program enrollments data were requested from several states for a study being done by Northeastern University.

University of Massachusetts Workshop

As part of a program presented to three-hundred school secretaries at the University of Massachusetts in October, the Research-Coordinating Unit Director discussed its reporting needs and was available to answer questions.

Near Future Plans

1. Publication and distribution of Massachusetts Vocational Education Enrollments.

2. Distribution of Fall Enrollments to Congressmen by Congressional Districts.

3. Distribution of collection of number of Vocational Education Teachers.

4. Distribution of Follow-up forms and guidelines to prepare school administrators for this report as of the October 15, 1968 status of enrollees completing program.

5. End of Year Enrollment forms and Guidelines. This should not be difficult because Fall Enrollment materials were purposely designed to be almost identical.

6. Evaluation of Follow-up Pilot responses, final design of forms and guidelines and distribution in preparation for next fall collection.

7. Public relations consultations with the Lynn Shoe School Director.

8. Distribution of Manpower Reports to high schools.

9. Conference with Dr. Schaefer and Mr. Hammond, President of Fitchburg State College, concerning vocational education teacher training.

10. Lexington non-college committee work.

11. Visits to 15-20 vocational schools as part of the vocational education study.

12. Greenfield is doing a vocational education planning study. The Research Coordinating Unit Director will be meeting with this study committee January 17 to present answers and ideas.

13. A news and information bulletin.

14. A summer education research institute as a cooperative venture between Northeastern University and Research and Development.

15. Occupational guidance conference in Manchester, New Hampshire, January 23 and 24.

16. National Conference on the Diffusion of Educational Ideas, Michigan State University, March 26, 27, 28.

Near Future Plans (cont'd)

17. Albany, New York, Research Coordinating Unit conference, February 27, 28.

18. Research Advisory Committees will be organized for each major vocational area and for vocational guidance. The first duties of these committees will be to define areas needing research and to set priorities for action.

19. Research and curriculum materials information dissemination system.

20. Information and guidance materials for the writing of research proposals.

Ghernot Knox, Director
Massachusetts Research Coordinating Unit

GK/cp

Massachusetts Vocational Education Research Projects

Greenfield:
Title 111. "Establishment of an Exemplary Approach to Vocational Education"

Quincy:
"Development and Evaluation of an Experimental Curriculum for the New Quincy (Massachusetts) Vocational-Technical School"

Guidance Directors:
Vocational Counsellors' Association: "Defining the Role of the Vocational Counsellor"

Achievement testing in Vocational Schools: "Occupational and Academic"

Framingham:
Planning project: "A Vocational Training Program for Trainable Mentally Retarded Youth Sixteen Years of Age and Over"

Harvard:
"An Information System for Vocational Decisions"

Massachusetts Research Coordinating Unit:
"Development of a Machine Scoring Occupational Interest Survey"

Massachusetts Advisory Council on Education:
"Study of Massachusetts Vocational-Technical Education"

VT 005 405

Kosaki, Richard H.; Lynn, David R.

Quarterly Technical Progress Report. Sixth, October 1, 1967-December 31, 1967.

Hawaii Vocational Education Research Coordinating Unit, Honolulu OEG-4-6-062761-2145 08

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Pub Date - 67 9p.

*RESEARCH COORDINATING UNITS; *PROGRAM DESCRIPTIONS; *VOCATIONAL EDUCATION; *EDUCATIONAL RESEARCH; STATE PROGRAMS

*HAWAII VOCATIONAL EDUCATION RESEARCH COORDINATING UNIT

The major activities of the reporting period were: (1) compiling a research project titled "A Survey of Educational Activities Within Business-Industry and Expectations Concerning Public Education" for the State Commission on Manpower and Full Employment, (2) planning and developing plans for secondary vocational-education programs in the State, (3) continued exploring of problem areas to warrant proposal development for Small Project Research funding out of Region IX, (4) developing research problem statements contained in portions of "A State Master Plan for Vocational Education," (5) maintaining working relationships with other organizations concerned with employment, human resources, and education, and (6) disseminating vocational-technical education materials and completing a third bibliography of research reports, pamphlets, and other documents in the Unit's resource library. (MM)

VT005 405

ED0 31587

QUARTERLY REPORT

PROJECT NO. 6-2761

GRANT NO. OEG4-6-062761-2145

SIXTH QUARTERLY TECHNICAL PROGRESS REPORT

OCTOBER 1, 1967 - DECEMBER 31, 1967

HAWAII VOCATIONAL EDUCATION RESEARCH COORDINATING UNIT

COMMUNITY COLLEGE SYSTEM, UNIVERSITY OF HAWAII

HONOLULU, HAWAII

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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VT005405

Quarterly Technical Progress Report

OE Bureau of Research No. 6-2761 Grant No. OEG4-6-062761-2145

Period: October 1, 1967 - December 31, 1967

Date of submission: February 1, 1968

Name of institution: Community College System, University of Hawaii

Title of project: Hawaii Vocational Education Research Coordinating Unit

Names of project directors: Dr. Richard H. Kosaki/David R. Lynn

Introduction

The Hawaii Vocational Technical Education Research Coordinating Unit was established with a direct grant from the Bureau of Research, Division of Comprehensive and Vocational Education Research, June 27, 1966, under the Research Section 4(c) of the Vocational Education Act of 1963. The project was approved in the amount of $113,338 and covered the three (3) year period from June 27, 1966 through June 30, 1969, to pay part of the cost of the program authorized.

This Sixth Technical Progress Report lists highlights and major activities of the reporting period. However, most activities are of a continuing nature and many of these have been described in detail in previous reports.

1. Major activities

The highlights of major activities of this reporting period are as follows:

The Hawaii RCU undertook an "in-house" research project to provide data and information desired by the State Commission on Manpower and Full Employment. The Commission provided supplementary funds and support services in formulating and critiquing the study. This study titled, "A Survey of Educational Activities Within Business-Industry and Expectations Concerning Public Education" has been completed and the final report is in the process of being edited and reproduced.

The survey consisted of two phases: Phase I, on-site interviews with personnel and industrial relations officers of 23 selected firms known to be conducting in-plant training programs; Phase II, obtaining similar data from a larger sampling by a mail questionnaire. Respondents reported a total of 50,000 employees--16 percent of the State's labor force.

The findings are expected to provide supplementary data regarding vocational-technical education for the forthcoming legislative session.

Staff assisted in the planning and the developing of a plan for secondary vocational-technical education programs in the State by acting as resource persons to the Coordinating Committee mandated to develop "A State Master Plan for Vocational Education."

Representing the Hawaii RCU were David Lynn who served on the advisory committee and Samson Shigetomi who was a member of the operational staff. These persons brought into the discussions research findings and other related reports presently available locally through nationwide RCU activities.

Staffing was increased by the addition of the services of John Nothom, former director of the Honolulu Community College. Local funding provided the support for this staffing addition to the RCU. In addition to being a co-author to the Business-Industry Training Survey, Mr. Nothom has initiated surveys to provide data and information to improve articulation between secondary and post-secondary occupational education programs in the State.

Staff has continued probing and exploring significant problem areas to warrant proposal development for Small Project Research funding out of Region IX. The College of Education, Department of Educational Psychology, has worked cooperatively with the RCU in exploring proposal possibilities. One formal meeting was scheduled. Those attending included Donald Leton, Chairman, Department of Educational Psychology; Marvin Poyzer, Teacher Trainer, Vocational-Technical Education; Teruo Ihara, Director, Foreign Contracts Office; and David R. Lynn, Hawaii RCU. At this time, the possible role vocational-technical education in Hawaii could play in serving the economic needs and development of the Pacific Basin was explored.

There has been continuous effort to stimulate research and development by instructional staff. Efforts to date in this direction have not been effective. However, with the expansion of the community college system and the building of staff with more degree personnel, several with doctorates, it is expected that interest in research activity will increase.

2. Problems

Problems relating to the effectiveness of the RCU in the State of Hawaii have been discussed in previous quarterly progress reports. The Fourth Quarterly Progress Report in particular dealt with some of the inhibiting issues. These are basically concerned with the administrative structure of vocational education in the State and funding practices. The Fifth Legislative session of the State of Hawaii convening this spring may resolve some of these issues by establishing a new State Board for Vocational Education.

Under present circumstances, for the Hawaii RCU to be effective, a funding structure is needed and the staff endorses proposals emerging at the national level for providing the RCUs with some permanent 4(c) funding support for research and development at the local level.

There have been no major departures from the Proposal Plan.

3. Significant findings and events

Significant in the State this quarter was the preparation of "A State Master Plan for Vocational Education" in response to Senate Concurrent Resolution 43 adopted during the 1967 regular session of the Fourth Hawaii State Legislature. The Senate Concurrent Resolution mandated "A coordinating committee of the Board of Education and the Board of Regents of the University of Hawaii to develop a comprehensive State master plan for vocational education in close consultation with the Commission on Manpower and Full Employment and other agencies." The operational staff consisting of Theodore Ruhig (Commission on Manpower and Full Employment), Samson Shigetomi (University of Hawaii/

Community College System), and Irwin Tanaka (Department of Education) did the actual work in preparing the plan.

The plan is presently being edited and published and will serve as a resource guide to the Fifth Legislative Session convening February 21, 1968. The U. S. Office of Education, RCUs and other agencies are being provided copies by the Hawaii RCU.

The "Master Plan" supports and endorses the concept of the RCU and emphasizes the need for fiscal provisions for research and evaluation. The varied research problems suggested in the "Proceedings Report" of the joint Manpower-Vocational Education Research Seminar are included in the appendix of the "Master Plan." The Hawaii RCU was instrumental in the development of these research problem statements.

4. Dissemination activities

Dissemination of research reports and related material has been limited and selective. Although previous quarterly reports have indicated greater emphasis on this area, implementation activities have been meager because of limited staff.

Dissemination has been limited to the duplication or abstracting of pertinent materials for the information of those specifically concerned with the improvement and development of vocational-technical education programs in the State. Information has been, for the most part, directed to the Chamber of Commerce of Hawaii, Commission on Manpower and Full Employment, State Council for Vocational-Technical Education, University of Hawaii's College of Education, and to "key" vocational educators at the operating level.

Educators and others have been encouraged to draw upon the accumulation of research reports, pamphlets and other documents relating to vocational-technical education in the RCU resource library. Bibliography No. I was published early last year; Bibliography No. II was published in June; Bibliography III has been completed and will be released early this next quarter.

5. Capital equipment acquisitions

Acquired during the quarter with Federal funds was an IBM Selectric typewriter. This piece of equipment supplements the one existing electric typewriter of the RCU. The typewriter is being used in particular for the typing of reports and other documents which are then duplicated through the University reproduction services. The Selectric provides a variety of type sizes and styles for report preparation.

6. Forms

No forms were developed or used during the reporting period.

7. Other activities

The RCU maintains working relationships with several agencies, institutions and organizations which are concerned with employment, human resources and education.

The RCU director regularly attends meetings of the Hawaii Chamber of Commerce Occupational Education Committee; College of Education Vocational Teacher Education Committee; Community College Central Office Staff meetings.

Meetings of the State Commission on Manpower and Full Employment, Hawaii State Vocational Rehabilitation Plan and Advisory Committee, State Vocational Education Master Plan were other intermittent meetings attended.

The RCU director also served as resource person during the quarter as lecturer on vocational education curriculum classes scheduled by the College of Education.

The Hawaii RCU has provided other RCUs in the nationwide network with quarterly reports and other pertinent material developed during the quarter. Requests for information by other RCUs have been promptly answered and provided when possible.

8. Staff summary

The following is a staff status summary for the reporting period:

Name	Title	Funds Fed./Local	Period Employed	Percent of Time
R. H. Kosaki	Director	x	9/67-12/67	5%
D. R. Lynn	Director of Operations & Coordinator	x	9/67-12/67	100%
S. S. Shigetomi * (*Temporarily assigned to State Master Plan)				
J. W. Nothom	Research Assistant	x	9/67-12/67	100%
F. S. Kakazu	Stenographer	x	9/67-12/67	100%

9. Activities planned for the next reporting period

Request has been made for the services of Lawrence Zane, former occupational instructor at Honolulu Community College, who has recently completed his doctorate at the University of Maryland. It is anticipated that the request will be approved. Lawrence Zane will be assigned the specific task of report publication and other dissemination activities.

During the next quarter emphasis will be placed on the preparation of final reports of several projects completed during the last two quarters. These projects have been reported in previous quarterly reports and are "in-house" research projects of the Hawaii RCU. More specifically, priority will be given to the following:

Completion of final reports of the following projects:

"Survey of Training Activities of Business-Industry and Expectations for Public Education"

"Development of Single Concept 8 mm Film-Loops"

"Profile Study of Industrial Education Teachers in the State of Hawaii"

"Concepts of Career Field Held by 11th Grade Students"

Continue with efforts to identify a research and development project containing the necessary significance for Federal funding through Small Project Research out of the Region IX office.

Increase dissemination activity.

Continue with efforts to identify instructional staff with research interests and capabilities; and, encourage these persons to engage in limited action research contributing to the improvement of existing programs of vocational-technical education.

10. Certification

Signature of Contract Officer

February 1, 1968
Date

Signature of Project Director

February 1, 1968
Date

VT 005 406

Price, Joel W.

New Mexico Research Coordinating Unit. Progress Report, December 1, 1967-February 29, 1968.

New Mexico Occupational Research and Development Coordinating Unit, Santa Fe OEG-7-063028-1591 08

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Pub Date - 15Mar68 9p.

*RESEARCH COORDINATING UNITS; *EDUCATIONAL RESEARCH; *VOCATIONAL EDUCATION; *STATE PROGRAMS; *PROGRAM DESCRIPTIONS *NEW MEXICO OCCUPATIONAL RESEARCH AND DEVELOPMENT COORDINATING UNIT

Activities and accomplishments during the report period include the: (1) completion of the statewide recurring manpower survey of towns over 2,000 population, (2) completion of a survey to determine priorities of activities of vocational agriculture teachers, (3) funding of six position papers to be used by the Eight-State Designing Education for the Future Project, (4) continuation of the policy of encouraging the expanded use of the ERIC microfilm library, (5) work with committees in projecting an area vocation school, (6) collection of data for writing a state plan for vocational education with emphasis on post-secondary vocational education, (7) initiation and funding of three followup studies at Hobbs Junior College, Roswell Campus of Eastern New Mexico University, and Albequerque Technical-Vocational Institute, (8) completion of the mobile laboratories experimental facility for engineering technology project and use of the equipment to teach basic electricity and electronics at two rural high schools, (9) completion of the waitress and food handling occupations training program evaluation projects, (10) and cooperation with the U.S. Office of Education and Eastern New Mexico University to provide a summer workshop for teachers of office occupations. (MM)

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PROGRESS REPORT

OE Bureau of Research No. 6-3028
Grant No. OEG-4-7-063028-1591

NEW MEXICO
RESEARCH COORDINATING UNIT

Period

December 1, 1967 - February 29, 1968

Date of Submission:
March 15, 1968

State Department of Education
State Capitol Building
Director, Vocational Education Division
Santa Fe, New Mexico 87501

Dr. Joel W. Price, Director

Title of Project:
The Continuation of the Research Coordinating Unit
for the State of New Mexico

VT005406

TABLE OF CONTENTS

	Page
MAJOR ACTIVITIES AND ACCOMPLISHMENTS DURING THIS PERIOD	3
PROBLEMS	5
SIGNIFICANT FINDINGS AND EVENTS	6
DISSEMINATION ACTIVITIES	6
CAPITAL EQUIPMENT ACQUISITIONS	6
FORMS	6
OTHER ACTIVITIES	6
STAFF SUMMARY	7
FUTURE ACTIVITIES PLANNED FOR NEXT REPORTING PERIOD	7
CERTIFICATION	8
APPENDIX A	9

I. MAJOR ACTIVITIES AND ACCOMPLISHMENTS DURING THIS PERIOD

A. Statewide Recurring Manpower Survey

The staff of the Research Coordinating Unit has designed a yearly recurring manpower survey in New Mexico. The yellow pages of telephone directories were used to obtain the names and addresses of all business establishments in towns and cities with population of 2,000 or over. The survey for the year 1967 has been completed in all but two cities, and the major portion of the data has been processed by the Statistical Division of the State Department of Education. The staff will start publishing a report as soon as the data is received from the remaining two cities. Payments to coordinators conducting the survey total $4,092.05 during this reporting period.

B. A Survey to Determine Priorities of Activities of Vocational-Agriculture Teachers

This survey, described in earlier progress reports, was completed on January 9, 1968. The study revealed sufficient differences existing between priorities of activities in the instructional areas to cause concern between the agricultural education program and the administrators interviewed. Additional in-depth research was recommended. Data was compiled by the staff of the Research Coordinating Unit.

C. Designing Education for the Future

The Research Coordinating Unit is funding six positon papers to be used by the Eight-State Designing Education for the Future Project. These papers should be completed in the late summer of 1968 at a total cost of $600. The papers will be forwarded to Dr. William Runge, Professor of Education, University of New Mexico, for the purpose of extracting excerpts to include in the State Plan for Vocational Education.

D. ERIC

The Research Coordinating Unit has continued its policy of encouraging the expanded use of its microfiche library. The staff has stimulated interest in this available research in several public schools and colleges. The staff has also cooperated with the Instructional Division of the State Department of Education in disseminating information on the microfiche library to public school personnel.

E. Development of Area Vocational Schools

The staff has been working with various committees in San Juan County in New Mexico in projecting an area vocational school. The Director has been working with the planning committee and

with the curriculum committee. Definite plans for an area vocational school should be complete with the next month and ready for presentation to the New Mexico State Board of Education.

The El Rito Area Vocational School has been expanded to include Rio Arriba County; the branch area vocational school will be located at Espanola, New Mexico. The State Legislature appropriated $190,000 for buildings and equipment for the Espanola Branch of El Rito. The Department of Economic Development has allocated approximately $800,000 to match the legislative appropriation.

F. State Plan for Vocational Education

The Unit is in the process of collecting data for the purpose of writing a state plan for vocational education. This report will concern itself mainly with post-secondary vocational education and, more particularly, with the location of area vocational schools in New Mexico.

G. Post-Secondary Vocational Student Follow-up

During the reporting period, the Research Coordinating Unit initiated and funded follow-up studies of persons graduating from vocational training programs at the following vocational schools:

1. Hobbs Junior College, Hobbs, New Mexico - Cost $42.00
2. Roswell Campus, Eastern New Mexico University, Roswell, New Mexico - Cost $150.00
3. Albuquerque Technical-Vocational Institute, Albuquerque, New Mexico - Cost $2,070.00

H. Mobile Laboratories

An experimental mobile instructional facility for engineering technology project, initiated by Louis W. Kleine at New Mexico State University, ended January 31, 1968. The final report on this project will be disseminated by the end of March.

The same bus and equipment that was used in the Kleine project at NMSU has been refitted and is being used as a mobile laboratory for teaching basic electricity and electronics at two remote rural school districts, Mosquero and Roy, New Mexico. The Department of Vocational Education and the Research Coordinating Unit cooperated with Superintendent Perrin and Superintendent Riddle of Mosquero and Roy in initiating the project. Twenty-four high school students are enrolled in these courses. This project is a cooperative effort between the Vocational Education Division and Simpson Educational Systems, Inc.

I. Waitress and Food Handling Occupational Training Program

The Waitress and Food Handling Project at Rio Grande High School has been completed under the direction of Mrs. Jan Dillon, Home Economics Instructor. The purpose of the study was to determine the value of the food handling project, both to the student and to the employer. Cost of the project was $2,459.55.

J. Summer Workshop for Vocational Teachers

A summer training program for teachers of office occupations will be conducted at Eastern New Mexico University, July 7 through July 20, 1968. The objectives of the training program will be:

1. To educate and orient instructors who will be teaching the simulated office program next year for the first time.
2. To develop guides for simulated office occupations with a workable plan for their first year of teaching the simulated method.
3. To provide teachers of office occupations with a workable plan for their first year of teaching the simulated method.
4. To create an awareness in the teachers of research in office occupations and of the importance of research.
5. To create an understanding by the teachers of the need for office occupations education.
6. To provide the teachers with an understanding of the simulated method, work experience, and cooperative education.

The Research Coordinating Unit worked with Mr. Elmer Schick of the U. S. Office of Education in Dallas and Dr. Becky Sharp of Eastern New Mexico University in initiating this project.

K. Proposed Research Project

A proposal was submitted to the Research Coordinating Unit for a study of the comparison of basic beliefs of Distributive Education Coordinators and Office Education Coordinators in New Mexico. The Evaluation Committee for Vocational Research reviewed this project and concluded that the proposal would not be of sufficient benefit to vocational education to justify funding.

II. PROBLEMS

The staff of the Research Coordinating Unit has determined that if the Statewide Manpower Survey is to be a continuing project, significant changes need to be made in procedures and personnel. The instrument used would need to be altered to remedy the diversity that became

apparent while processing the questionnaires. Additional problems were encountered in conducting the survey.

Funds for research were committed too early in the fiscal year; therefore, the research committee were unable to fund projects that were conceived in the latter part of the fiscal year. This may cause qualified researchers, colleges and universities, and public schools to lose interest in research in the future.

III. SIGNIFICANT FINDINGS AND EVENTS

The results of the particular studies funded by the Unit were published in the individual project reports.

IV. DISSEMINATION ACTIVITIES

A. Copies of the quarterly progress report covering the period September 1, 1967, through November 30, 1967, were mailed to addresses on the regular mailing list of the Research Coordinating Unit. A report on a research project entitled, "Pre-Vocational Orientation in Vocational Education for Junior High School Students in New Mexico", which was previously reported as completed, was also disseminated.

B. Copies of newspaper publicity relative to Manpower Needs Survey are attached. See Appendix A.

C. A large volume of correspondence and requests for publications and research material was handled during the quarter.

V. CAPITAL EQUIPMENT ACQUISITIONS

None

VI. FORMS

None

VII. OTHER ACTIVITIES

The professional staff attended the following conferences during the reporting period:

A. December 11-12, 1967, Curriculum Committee, Area Vocational School, Farmington, New Mexico
B. January 11-12, 1968, Evaluation Team, Vocational Education, Gallup, New Mexico
C. February 5-8, 1968, Conferences on Manpower Survey, Hobbs, Lovington, and Clovis, New Mexico
D. February 12, 1968, Conference on Area Vocational School and Survey, Farmington, New Mexico
E. Conferences on Vocational Rehabilitation and State Plan for Vocational Education in Santa Fe and Albuquerque, New Mexico

VIII. STAFF SUMMARY

Name	Title or Function	Funds Federal	Funds Local	Period Employed	Percent of Time
Dr. Joel W. Price	Director,RCU	x		12/1/67-2/29/68	100%
W. J. Barnes, Jr.	Assistant	x		12/1/67-1/19/68	100%
Margaret A. Fegan	Secretary	x		12/1/67-2/29/68	100%
Barbara A. Thomas	Secretary	x		1/16/68-2/29/68	100%
Helen Maestas	Stenographer	x		12/1/67-2/29/68	100%

Consultants on individual studies paid as per project agreement shown in Section I above.

IX. FUTURE ACTIVITIES PLANNED FOR NEXT REPORTING PERIOD

A. Finalize work on the Statewide Manpower Needs Survey

B. Continue dissemination of ERIC Research

C. Continue study on the State Plan for Vocational Education

D. Further work on Development of Area Vocational Schools

E. New Mexico Designing Education for the Future Project

F. Tape Recorded Occupational Information

G. Home Economics Study

H. Survey of Female Vocational-Technical Education Students in Southeastern New Mexico

I. Hobbs Vocational Follow-up Study

New Studies Proposed:

A. The Assistant Director of the Research Coordinating Unit will compile information obtained from the follow-up studies conducted at the four area vocational schools in New Mexico and incorporate this into one complete report for the existing area vocational schools. This report, a comprehensive follow-up, will provide such information as salaries, area of mobility, employment in area of training, salary (before and after training), and number of promotions.

B. The Research Coordinating Unit is funding a Vocational-Technical Education Seminar to be held March 30, 1968, at New Mexico Junior College, Hobbs, New Mexico. The theme: "How can post-high school vocational-technical education serve the higher education needs of youth in our area?"

C. The publication entitled "Vocational-Technical Education in New Mexico" is being revised and updated to include current information on all area vocational schools in New Mexico. When the study has been completed, the publication will be reprinted and disseminated.

D. The Research Coordinating Unit is cooperating with the School of Education and Psychology at Eastern New Mexico University in submitting a proposal for study and research in the area of using typewriters for the teaching of reading in the elementary school.

X. CERTIFICATION

M G Hunt

Dr. M. G. Hunt, Contract Officer

March 15, 1968

Joel W Price

Dr. Joel W. Price,
Principal Investigator

March 15, 1968

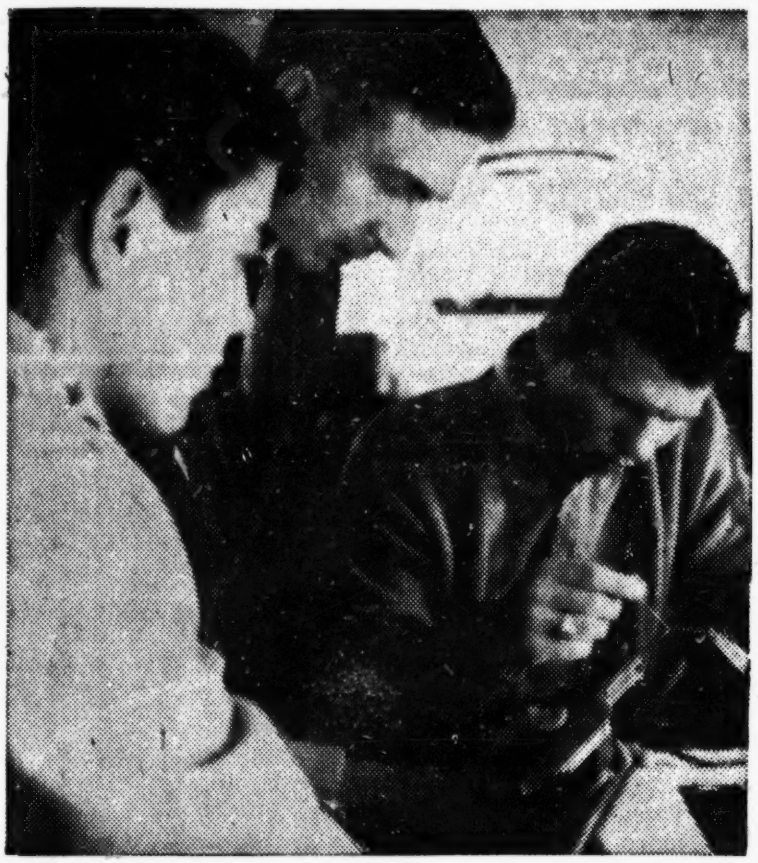
89

APPENDIX A

The Albuquerque Tribune

FEB -9 1968

New Mexico Press Clipping Bureau
Albuquerque, N. M.



MOBILE CLASSROOM: A converted military ambulance bus is taking vocational education to rural students in Roy and Mosquero high schools. The bus is equipped with electronics equipment and a driver-instructor, Harry Chase (center). The traveling lab is a joint project of the State Education Department, the school districts and Simpson Educations Systems Inc. 9

Page Four - The Raton Daily Range - Wednesday, Jan. 31, 1968

Mobile Classroom Helps Students In Electricity At Roy, Mosquero 9

SANTA FE — A classroom on wheels is not too common to New Mexico education, but it is an imprtant factor in a cooperative educational project being conducted by the Roy and Mosquero school systems, Simpson Educational Systems, Inc. and the Vocational Education division of the State Department of Education.

Basic electricity and electronics are being taught in a mobile classroom to 24 Mosquero and Roy High School students. This is an experimental project which will provide students in remote rural areas a chance to learn about electricity and electronics.

Each class day, the teacher, Harry Chase, holds a three-hour theory and laboratory session at the Mosquero High School. After lunch, he drives the mobile classroom (a reconditioned military ambulance bus) 19 miles to Roy High School for another three-hour afternoon session. This activity takes place each school day.

According to Lee Palmer, director of trade and industrial education for the Education Department, the mobile classroom provides educational opportunities for students who, under ordinary conditions, would not be able to study electricity and electronics

The bus also enables two school districts to have technical classes which they could not individually afford to provide for their students.

Although only 24 students are enrolled in the course this semester, this is a large enrollment for these two small schools and each class has an excellent teacher-pupil ratio of 1:12

Plans are being made to locate jobs for these students in Raton, Las Vegas, Santa Fe, Albuquerque and Trinidad, Colorado

VT 005 428
Ely, Vivien King
Five Year Follow-Up Survey of Distributive Education; Part-Time Cooperative Training Students, 1957-1961.

Richmond Professional Inst., Va. School of Distribution
Virginia State Dept. of Education, Richmond. Distributive Education Service
MF AVAILABLE IN VT-ERIC SET.
Pub Date - Jul64 44p.

*FOLLOWUP STUDIES; *DISTRIBUTIVE EDUCATION; HIGH SCHOOLS; STUDENT ATTITUDES; *GRADUATE SURVEYS; PROGRAM EVALUATION; EMPLOYMENT EXPERIENCE; EDUCATIONAL EXPERIENCES; QUESTIONNAIRES
VIRGINIA

This follow-up survey of high school distributive education graduates in 79 Virginia high schools was conducted in 1963 by questionnaire. From the total enrollment of 9,352 for the years 1957-61 the number of returns was 2,903 or 31.2 percent. The data obtained were compared with the results of four former surveys. Some of the findings were: (1) 1,921 of the 2,903 who returned questionnaires are working, (2) Of those working 84 percent are working full time, (3) 61 percent are working in distributive occupations, (4) The unemployment figure of one percent can be considered negligible, (5) Almost 54 percent of 1957-61 graduates are employed in the same establishments where they received their cooperative training, (6) More than 30 percent attended school beyond the high school level, (7) 33 percent left the field of distribution for which they were trained, and (8) Graduates' suggestions for improvement indicate the need for improved instruction. (MM)

VT005 428

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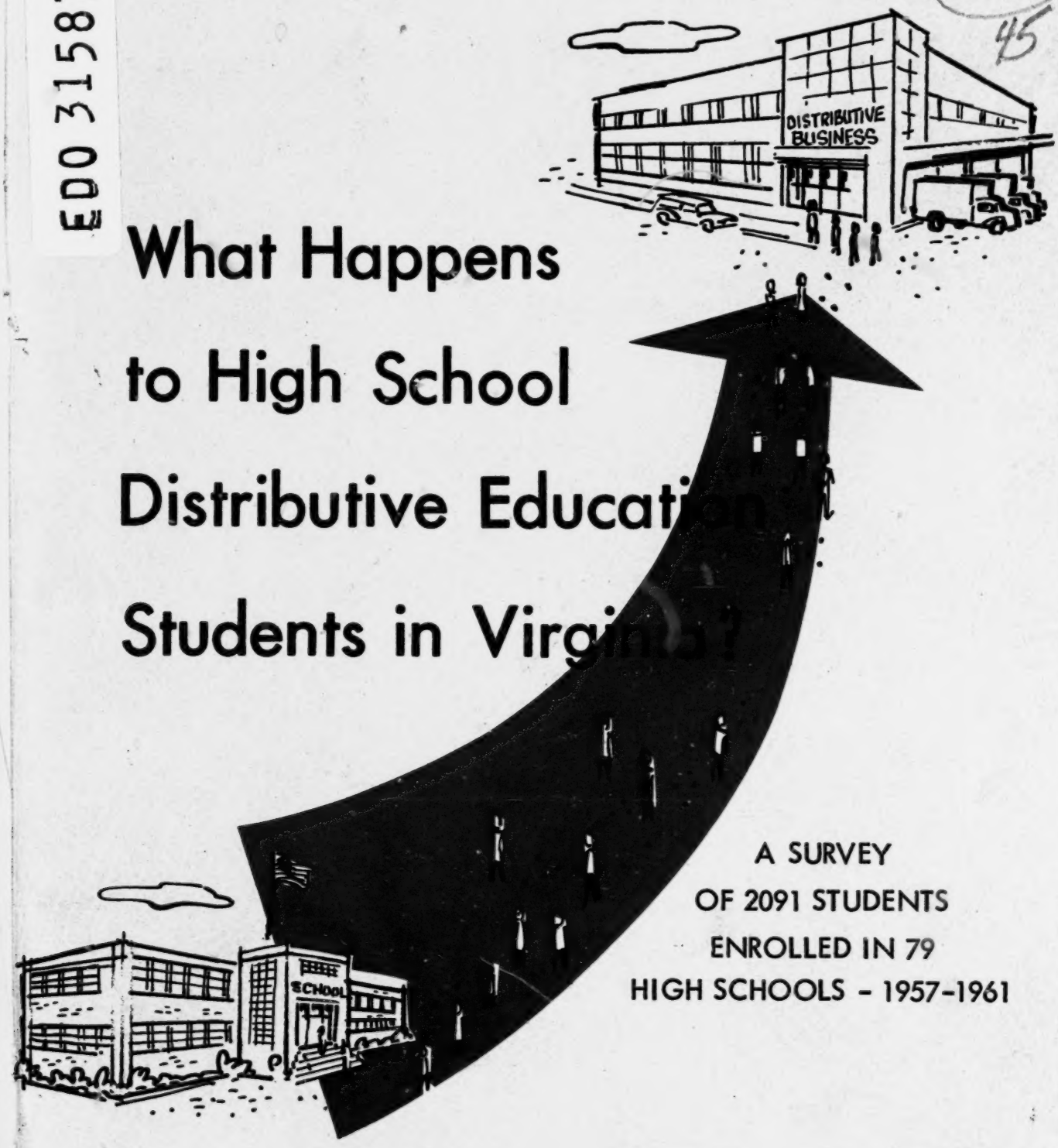

What Happens to High School Distributive Education Students in Virginia?

A SURVEY
OF 2091 STUDENTS
ENROLLED IN 79
HIGH SCHOOLS - 1957-1961

JULY 1964

SCHOOL OF DISTRIBUTION
RICHMOND PROFESSIONAL INSTITUTE
RICHMOND, VIRGINIA

VT005428

FIVE YEAR FOLLOW-UP SURVEY

of

DISTRIBUTIVE EDUCATION

Part-Time Cooperative Training Students

1957-1961

Under the Direction of

Vivien King Ely
Research and Training Consultant
School of Distribution
Richmond Professional Institute

for the

Distributive Education Service
Division of Vocational Education
State Department of Education
Richmond, Virginia

July, 1964

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION
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CONTENTS

	Page
TABLES and FIGURES	iv
CAPSULE SUMMARY	1
I. INTRODUCTION	3
Virginia DE Follow-Up Surveys - 1941 to 1961	3
High School Representation in Follow-Up Surveys	3
Purposes of 1957-1961 Survey	4
II. SUMMARY OF FINDINGS	5
Employment High Among DE Graduates	5
Profile of the Unemployed	6
Nature of Employment	6
Over 1/3 of DE Graduates Still Employed with Firm Where They Received High School Training	6
Over 60% of DE Graduates Still Employed in Distribution	7
Permanent Placement in Service and Wholesale Businesses Increasing	8
Other Employment Findings	8
Over 30% of DE Graduates Continue Their Education Beyond High School	9
Length of Enrollment	9
Type of School Attended	10
Major Fields of Study	11
Other Findings	11
Armed Forces and Homemaking	11
Marital Status	12
Graduates Asked to Rate DE Program	12
Opinion Concerning Effectiveness of DE	12
How DE Helped Graduates	12
DE Activities Recalled with Pleasure	14
How DE Could Have Been of More Value	15
III. CONCLUSIONS AND RECOMMENDATIONS	18
Purposes of the Survey	18
The Methodology	18
The Findings	19
Full Time and Part-time Employment Ratios	19
Unemployment	19
Training Station Placement	20

(continued on next page)

The Findings (continued) Page
Careers in Distribution 20
Graduates' Suggestions for Improvement 20
Education of Graduates 20
Retailing-Wholesaling-Service Employment 21
Transfers to Other Fields 21
Student Benefits 21
Coordinator Performance 22
Future Research 22

IV. ACKNOWLEDGMENTS 23

V. APPENDIX 25
Appendix A - Survey Procedure 27
Appendix B - Participating Schools 28
Appendix C - The Questionnaire 31
Appendix D - Follow-Up Survey Card 35
Appendix E - Coordinator Checklist 36
Appendix F - DECA Project "Operation Manhunt" Check Sheet 38
Appendix G - Letter to DECA Club Members for "Operation Manhunt" 40
Appendix H - Agent's Report Form for DECA "Operation Manhunt" 42

TABLES AND FIGURES

Tables

		Page
Table 1	Participation of Virginia High Schools in Distributive Education Follow-Up Surveys, 1941-1961	3
Table 2	Types of Distributive Businesses Employing 1957-1961 Distributive Education Graduates	8
Table 3	1957-1961 Distributive Education Graduates Enrolled in School	9
Table 4	1957-1961 Distributive Education Graduates Engaged in Other Activities	11
Table 5	1957-1961 Distributive Education Graduates' Suggestions for Improvement of Course - Grouped by Responsibility for Improvement	16

Figures

Figure 1	Activities of 1957-1961 Distributive Education Graduates	5
Figure 2	Employment of 1957-1961 Distributive Education Graduates in High School Training Agencies	6
Figure 3	Types of Organizations Employing 1957-1961 Distributive Education Graduates	7
Figure 4	Length of Post-High School Enrollment for 1957-1961 Distributive Education Graduates	10
Figure 5	Types of School Attended by 1957-1961 Distributive Education Graduates	10
Figure 6	Major Fields of Post-High School Study for 1957-1961 Distributive Education Graduates	11
Figure 7	Marital Status of 1957-1961 Distributive Education Graduates	12
Figure 8	Benefits of Distributive Education to 1957-1961 Graduates	13
Figure 9	Activities Recalled with Pleasure by 1957-1961 Distributive Education Graduates	15
Figure 10	1957-1961 Distributive Education Graduates' Suggestions for Improving the Value of the Course	17

CAPSULE SUMMARY

This five-year follow-up survey has been made to assist in evaluating the effectiveness of the Distributive Education high school program in Virginia in terms of the job stability of former students, numbers of DE graduates who continue their education after high school, and the impact of the program in later years on graduates.

The survey, begun in late spring of 1963, was conducted by Distributive Education coordinators in seventy-nine Virginia high schools. Some coordinators were assisted by Distributive Education students as a part of the activities of the local chapter of the Distributive Education Clubs of America. The survey was directed by Vivien King Ely, Research and Training Consultant, School of Distribution, Richmond Professional Institute and represents responses from 2903 Distributive Education students who graduated between 1957 and 1961.

Some of the more interesting findings of the study:

A total of sixty-six per cent of DE graduates are employed in the labor force. Of those employed, eighty-four percent are working full time and sixteen per cent part-time.

Of the total working, 10.6 per cent are attending school and working part-time.

Over one-third of DE graduates are still employed by the organization where they received their high school cooperative training.

Retailing is employing a decreasing percentage of DE graduates, while the percentage employed permanently in service and wholesale agencies is steadily growing.

More than thirty per cent of Distributive Education graduates continue their education beyond high school.

More students who continue education beyond high school major in general business than in distribution.

One per cent of Distributive Education graduates are unemployed.

Sixty-one per cent of DE graduates are still employed in distribution.

Thirty-three per cent of DE graduates have left the field of distribution for other employment.

Sixty-eight per cent of DE graduates are conscious of benefits which they received from the course.

Three-fourths of the graduates recall their DE work experience with pleasure; sixty-five per cent recall classroom instruction pleasantly and almost half recall with pleasure the personal help of the DE coordinator.

Although forty-one per cent of the graduates made suggestions for various improvements, the suggestions were widely scattered, with less than ten per cent mentioning improved classroom instruction and all other suggestions totaling below six per cent.

I. INTRODUCTION

Virginia DE Follow-Up Surveys --- 1941 to 1961

Studies to determine the effectiveness of the high school Distributive Education cooperative program have been a part of the research efforts in Virginia since 1950. During this time a ten-year study, a five-year study and two one-year studies have been made.

A ten-year study made in 1950 covered the years from 1941 to 1950 and included questions to determine the present occupation of Distributive Education graduates, their employment history, reasons for change in store or position and training since graduation. The survey also recorded responses from coordinators concerning student and graduate placement and from merchants concerning employment practices in relation to Distributive Education graduates.

The five-year follow-up study for the years 1951-1955 and two subsequent one-year surveys in 1956 and 1957 used a different questionnaire from the ten-year study and surveyed only graduates who had completed one or two years of Distributive Education in high school. The same questionnaire was used for each of these three studies. It inquired about present occupation, type of position held, and nature of schooling, if presently enrolled.

High School Representation in Follow-Up Surveys

Table 1 below shows the extent to which these follow-up surveys have represented the Distributive Education enrollment in the state.

TABLE 1
Participation of Virginia High Schools in
Distributive Education Follow-up Surveys, 1941-1961

Year	Total Enrollment	Number High Schools Represented	Total DE Programs in State	Number of Returns	Percentage of Returns
1941-50	4736	31	34	815	17.2
1951-55	5733	31	59	1167	20.4
1956	1650	52	73	720	43.6
1957	1848	56	67	828	44.8
1957-61	9352	79	95	2903	31.2

Purposes of 1957-1961 Survey

The following are the primary purposes of this follow-up survey:

1. To discover the present occupation of high school students enrolled in Distributive Education between 1957 and 1961.
2. To determine to what extent these students have remained in distributive occupations.
3. To discover any noticeable changes from the pattern established in former state-wide follow-up studies.
4. To spot any weak links in the Distributive Education instructional program.

The survey was also concerned with several secondary purposes:

1. To determine the proportion of former Distributive Education students now holding supervisory positions.
2. To determine what proportion of Distributive Education students have remained in the same agency in which they were employed when enrolled in Distributive Education.
3. To discover how often these students have changed jobs since leaving high school.
4. To discover why some students left the field of Distributive Education.
5. To determine what proportion of the 1957-1961 Distributive Education students continued their education after high school.
6. To give former students the opportunity to express in their own words:
   a. The ways in which they think Distributive Education helped them.
   b. How in their opinion Distributive Education could have been of more value to them.

II. SUMMARY OF FINDINGS

EMPLOYMENT HIGH AMONG DE GRADUATES

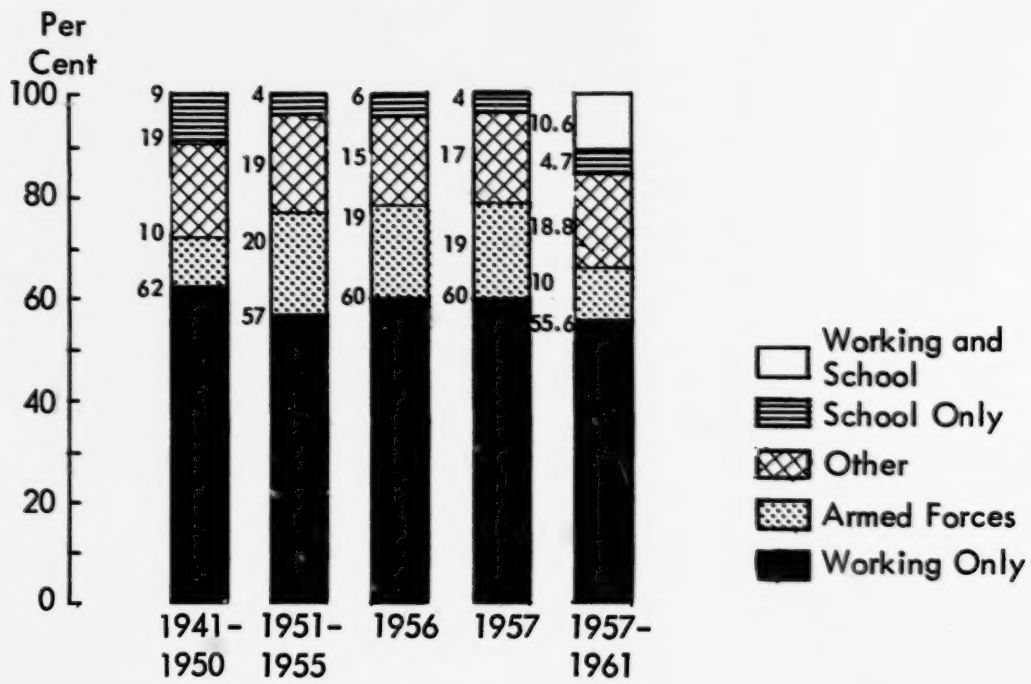

FIGURE 1
Activities of 1957-1961 Distributive Education Graduates

Figure 1 shows the proportion of students engaged in each activity, as compared with the findings of each previous survey.

The column which shows the percentages by activity for 1957-1961 shows one category which was not determined in previous studies. The category accounts for 10.6 per cent of former students who are going to school and working part-time. If this figure were added to the percentage for the "working only" category, the per cent working would rise from 55.6 per cent to 66.2 per cent. If it were added to the "school only" category, this percentage would rise from 4.7 per cent to 15.3 per cent. In order to present a more accurate picture of a student's activities, a separate category "working and school" has been added to the column for the 1957-1961 survey.

An appreciable decrease in the number of former students serving in the armed forces is noted, from close to 20 per cent to 10.3 per

cent in 1957-1961, thus making more persons available for the labor market or for school. The "other" category includes housewives primarily, but also includes 46 students who are unemployed.

Profile of the Unemployed

A total of 46 former students, 2.2 per cent of the total returns, classified themselves as unemployed; but of this number, only 34, or 1.6 per cent, indicated that they are actively seeking employment. Of the 34 seeking employment, 13 were seeking work outside the field of distribution, including office, factory or mechanical work.

When the 13 persons not seeking employment in distribution are subtracted, an unemployment figure of 21, or 1 per cent of the total, is left.

Nature of Employment

Of the 1921 graduates working, 84 per cent are working full time and 16 per cent part time. The percentage of students working full time is 10 per cent below the same figure in the last five-year study. However, the percentage working part time has grown from 7 per cent in the 1951-1955 study to 16 per cent in this study. These figures emphasize that increasing numbers of Distributive Education students are continuing their education beyond high school -- a point which will be expanded later in this report.

OVER ONE-THIRD OF DE GRADUATES STILL EMPLOYED WITH FIRM WHERE THEY RECEIVED HIGH SCHOOL TRAINING

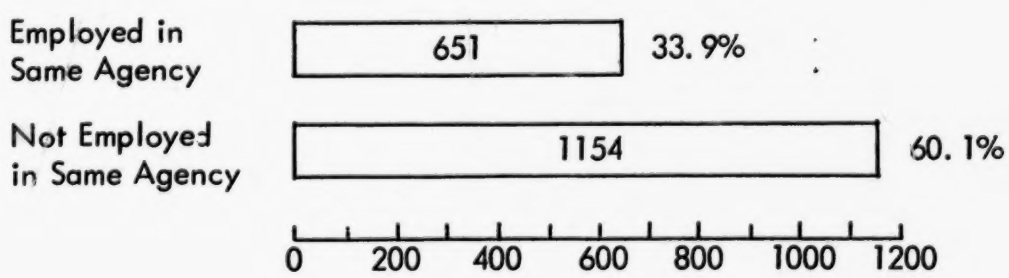

FIGURE 2
Employment of 1957-1961 Distributive Education Graduates in High School Training Agencies

The percentage of graduates working in the same establishments in which they received their high school cooperative training increased over all previous surveys. The percentage of 33.9 shown in Figure 2 is almost twice as large as the 19 per cent employed in the same agency in the 1951-1955 survey. This question was not asked in the 10 year survey.

OVER 60 PER CENT OF DE GRADUATES STILL EMPLOYED IN DISTRIBUTION

Figure 3 shows a majority of former students presently employed in distributive businesses. Sixty-one per cent of the respondents are employed in distributive organizations, more than six per cent higher than the percentage for the 1951-1955 survey. The fact that this figure for 1957-1961 is also higher than the 1956 and 1957 surveys made one year after the respondents left high school further emphasizes the trend.

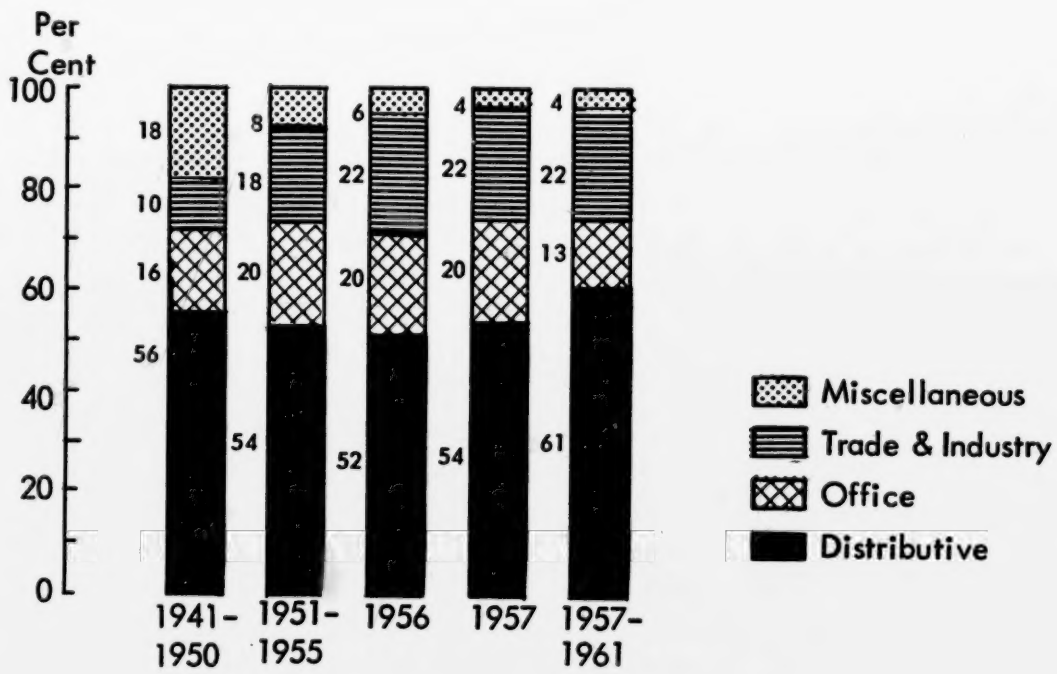

FIGURE 3
Type of Organizations Employing 1957-1961 Distributive Education Graduates

PERMANENT PLACEMENT IN SERVICE AND WHOLESALE BUSINESSES INCREASING

Table 2 shows an increasing number of permanent placements in service and wholesale agencies and consequently, a decrease in the number finding permanent employment in retail jobs. The ten-year study did not classify distributive jobs by type, but the 1951-1955 survey showed 72 per cent employed in inside selling, 5.5 per cent in outside selling and 22.5 per cent in service selling. A look at the breakdown of these percentage figures for the 1951-1955 survey indicates that most of the 20 classified in outside selling were definitely retail salesmen. But even if the 5.5 per cent classified in outside selling in the 1951-1955 survey are left unclassified, the percentage changes are appreciable, as can be seen in Table 2.

TABLE 2
Types of Distributive Businesses Employing
1957-1961 Distributive Education Graduates

	1951-1955 Per Cent	1957-1961 Per Cent
Retail	72.0	54.3
Wholesale	----	8.3
Service	22.5	37.4
Unclassified	5.5	----

OTHER EMPLOYMENT FINDINGS

The 16 per cent who have moved into supervisory positions since leaving the high school Distributive Education program is exactly the same percentage as in the 1951-1955 survey.

The stability of the respondents is indicated by the fact that 41.7 per cent have held only one job since leaving high school and only 8 per cent have held more than two jobs.

Of the 963 (33 per cent) who have left the field of distribution for employment in another field, 16 per cent preferred other employment, 52 per cent preferred another field because it offered a better opportunity and 12.9 per cent left for all other reasons.

OVER THIRTY PER CENT OF DE GRADUATES CONTINUE THEIR EDUCATION BEYOND HIGH SCHOOL

Table 3 shows that a greater number of Distributive Education graduates are attending school beyond the high school level than in any previous study. Although the ten- year survey and the two five-year surveys were not uniform in the phrasing of the questions concerning post-high school education, all included at least one question related to the subject.

The ten-year study determined the number of graduates who were or had been enrolled in additional training or courses; the 1951-1955 survey determined the number enrolled in school at the time of the survey; and the 1957-1961 survey inquired both about present enrollment and about enrollment since leaving high school.

Table 3 shows the comparative findings of the three surveys:

TABLE 3
1957-1961 Distributive Education Graduates
Enrolled in School

	1941-1950 Per Cent	1951-1955 Per Cent	1957-1961 Per Cent
Presently Enrolled	9.0	7.0	11.5
Have Been Enrolled	12.6	---	19.2
Totals	21.6	7.0	30.7

Length of Enrollment

Neither of the previous surveys attempted to determine the length of post-high school enrollment. The 1957-1961 survey did attempt to determine the extent to which students pursue education after high school. In reading Figure 4, however, it must be realized that the percentages shown here would represent a minimum length of enrollment, since only the 1957 high school graduates would have had the opportunity to complete college when this survey was made.

In order for this part of the report to be completely accurate, therefore, it would be necessary to restudy the respondents' education

patterns in 1965. It is nevertheless true that of the 896 (30.7 per cent) who attended school after high school graduation, more than half have continued for one or more years.

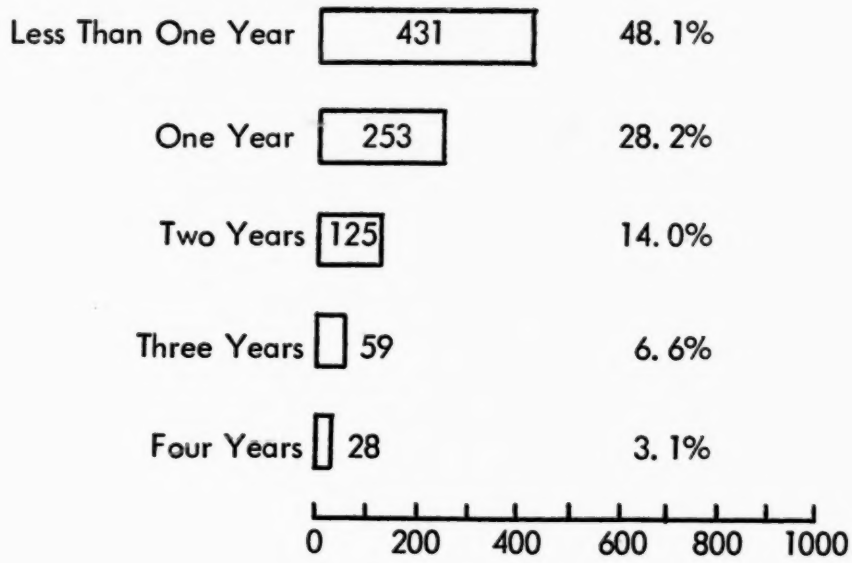

FIGURE 4
Length of Post-High School Enrollment
for 1957-1961 Distributive Education Graduates
(896 Enrollees)

Type of School Attended

Figure 5 shows that almost half of those who continued their education after high school attended junior college or technical school, with 18.4 per cent of this number attending business college. Colleges most frequently attended are: Richmond Professional Institute - 7.6 per cent; Old Dominion - 4.6 per cent; Virginia Polytechnic Institute - 3.2 per cent; and the University of Virginia Extension - 3.1 per cent.

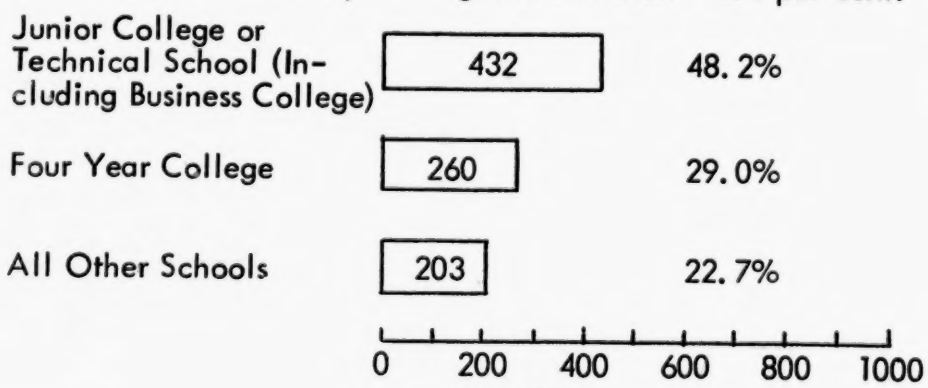

FIGURE 5
Type of School Attended
By 1957-1961 Distributive Education Graduates

Major Fields of Study

Figure 6 shows that most DE students who continue their education after high school are majoring in areas of study other than distribution.

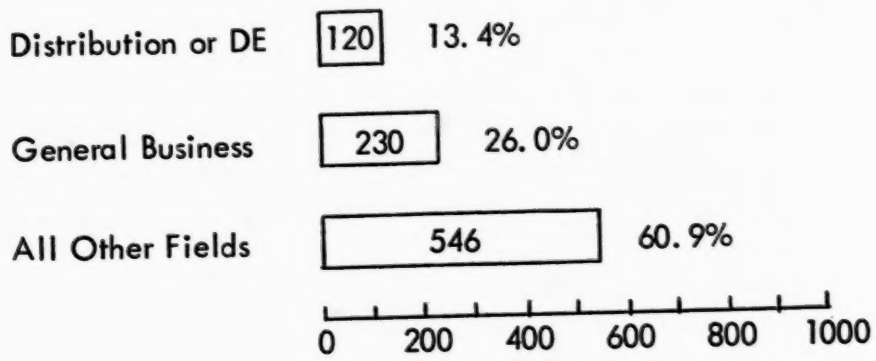

FIGURE 6
Major Fields of Post-High School Study
For 1957-1961 Distributive Education Graduates

OTHER FINDINGS

Armed Forces and Homemaking

The number of DE graduates in the armed forces has declined from 20 per cent in the last five years to 11.4 per cent in the present study. Table 4 shows also that the percentage of women engaged only in the occupation of housewife has been steadily decreasing since the 1941-1951 survey.

TABLE 4
1957-1961 Distributive Education Graduates
Engaged in Other Activities

	1941-1950 Per Cent	1951-1955 Per Cent	1957-1961 Per Cent
Armed Forces	10.0	20.0	11.4
Homemaking	19.0	18.0	15.1
Totals	29.0	38.0	26.5

Marital Status

Figure 7 shows that of those responding to this question, 45.6 per cent are married. This figure is only slightly higher than the 44 per cent reported in the last five-year study and the 43 per cent reported in the ten-year survey.

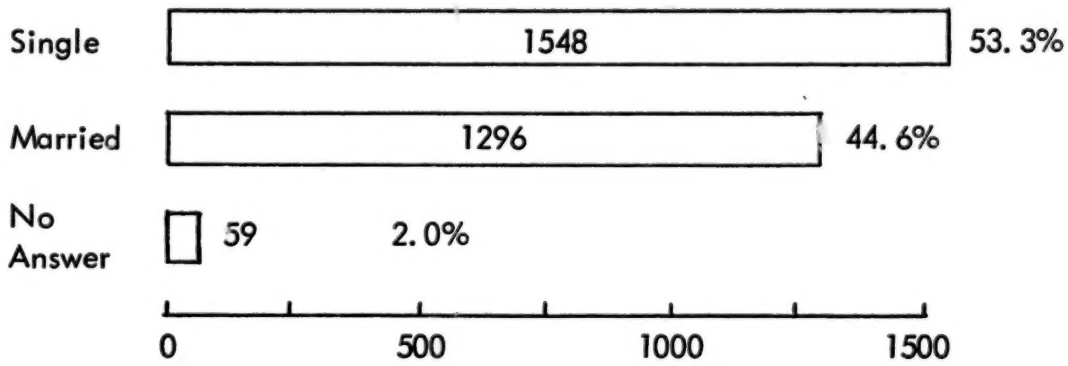

FIGURE 7
Marital Status of 1957-1961 Distributive Education Graduates

GRADUATES ASKED TO RATE DE PROGRAM

Opinion Concerning Effectiveness of DE

In an effort to determine the graduates' estimate of the effectiveness of the Distributive Education program, respondents were asked to express their opinions freely in response to several evaluation questions.

It should be recognized that the information which the survey attempted to develop here is difficult to get at "fairly". The respondent tends to remember what he was "supposed to get out of the course" and not be a good judge of his own experience. On the other hand, the former student has brought to mind the Distributive Education experience at least one year after having completed it and should be able to determine whether he has been using the training or not. Therefore, what he believes he gained is likely to be among the outstanding benefits and if he gained nothing, he should be fairly sure of this fact by now.

How Distributive Education Helped Graduates

Since 551 respondents did not answer this question, it can be said

that 19 per cent of the students were not aware of the benefits of the course, or received little benefit. To this number should be added 46 respondents who replied that Distributive Education did not help them in any way. The addition of the two figures reveals that 31. 4 per cent of the students believe that they received little or no benefit from the course.

In the opinion of two-thirds of the students who benefitted in some way from the course, the objectives of Distributive Education are closely related to the benefits which most students receive. Figure 8 below shows a breakdown of student opinion. The figure represents 2370 responses, reflecting more than one answer from some respondents.

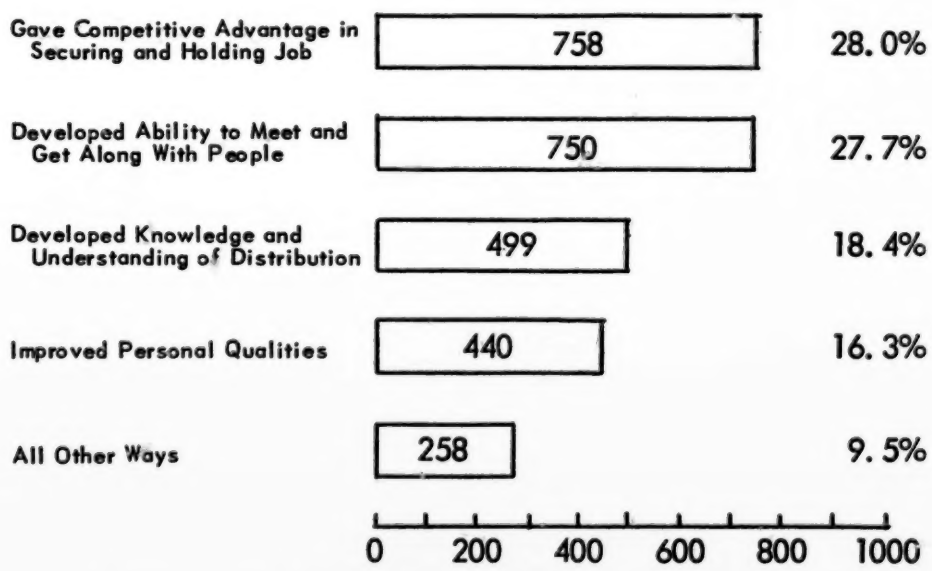

FIGURE 8
Benefits of Distributive Education
to 1957-1961 Graduates

The following quotations are expressions in the DE graduates' own words of ways in which Distributive Education helped them.

- "DE shaped my career, my personality, my self-confidence. It opened my eyes to the moving world around me and showed me what I could do in life. My studies, my work and my club activities did more for me than anything ever has."

- "It was a great help in putting competitive spirit in me. It helps to understand yourself and the business man."

•"I think I am a wiser consumer . . . "

•" . . . helped me develop into a useful as well as dependable worker . . . "

•" . . . taught me to be honest with the buyer . . . "

•" . . . I cannot think of any subject which could have helped me more . . . "

•" . . . placed me in a job where I was forced to meet people . . . helped me and countless other young people to start coming out of their shells and act like men. "

•" . . . I wouldn't have gone to college if I hadn't taken D. E. "

•" . . . Wonderful subject and experience never to be forgotten. "

•" . . . gave me that extra step needed to get ahead of the rest of the world. "

•" . . . More than anything else, it helped me to stand on my own two feet. "

•" . . . showed many the many varied opportunities in distribution that are open to young people who are willing to apply themselves. "

•"I learned better management of an income, how to deal with the problems of the public, how to develop my personality and how to become a more rounded individual. "

•" . . . opportunity to meet different situations and learn from experience how to handle them . . . "

•" . . . DE gives one a sort of "sneak preview" of a career in distribution. "

•" . . . I can better understand how our economic system works. "

Distributive Education Activities Recalled with Pleasure

Almost all respondents recall some phase of their Distributive Education experience pleasantly and Figure 9 shows that a large percentage

recall several activities with pleasure. It is worthy of note that almost half the students recall the personal help which they received from the coordinator and that half recall their participation in the Distributive Education Clubs of America with pleasure.

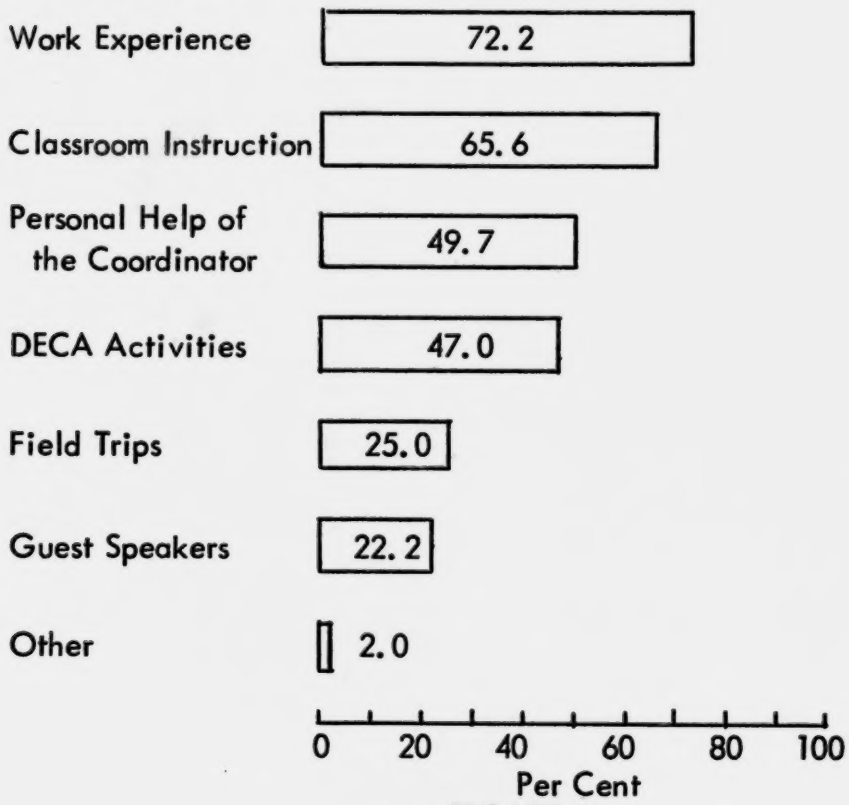

FIGURE 9
Activities Recalled with Pleasure
By 1957-1961 Distributive Education Graduates

How Distributive Education Could Have Been of More Value

21.5 per cent of the respondents replied that no improvement is needed in the Distributive Education course, and 30 per cent did not reply, but the suggestions of 51.7 per cent could be considered for making the training of more value to the students enrolled. The suggestions are grouped in Table 5 according to responsibility for such improvement.

TABLE 5
1957-1961 Distributive Education Graduate Suggestions for Improvement of Course
Grouped According to Responsibility for Improvement

	Per Cent	Per Cent
No response		48.3
No improvement needed		11.1
Coordinator's responsibility		
Classroom	9.7	
Work Experience	6.4	
Field Trips and Guest Speakers	2.8	
DECA Activities	2.0	
Improved Coordination	.9	21.8
Student's responsibility		
Accept opportunity to learn	10.0	
Taken more DE	3.1	
Continued in field	4.2	17.3
Other		
Better community acceptance	.5	
All other	.9	1.4
		99.9

On the next page Figure 10 shows the same information expressed graphically. This figure points out the relative insignificance of any one of the suggestions taken singly.

	Per Cent
No Response	48.3
Could Not Have Been of More Value	11.1
Could Have Been of More Value if:	
Student had taken the opportunity to learn	10.0
Classroom instruction had been better	9.7
Work experience had been better	6.4
Student had continued in the field	4.2
Student had taken more Distributive Education	3.1
There had been more field trips and guest speakers	2.8
DECA activities had been better	2.0
Coordination had been better	.9
Community acceptance had been better	.5
Other	.9
Total	99.9

FIGURE 10
1957-1961 Distributive Education Graduates' Suggestions for Improving the Value of the Course

III. CONCLUSIONS AND RECOMMENDATIONS

Purposes of the Survey

This five-year follow-up survey of 2093 high school Distributive Education graduates in 79 Virginia high schools was conducted during the summer and fall of 1963 to determine:

1. The percentage of Distributive Education students who remain in the field of distribution after high school graduation.

2. Noticeable changes in employment or post-high school educational patterns established in previous state-wide follow-up studies.

3. Any weak links in the Distributive Education instructional program.

Secondary purposes of this study included determining the stability of students in retaining employment in the firm which provided their high school cooperative training, and to discover why some graduates have left the field of distribution for employment elsewhere.

The survey also offered the opportunity to solicit the opinions of Distributive Education graduates concerning the values which they received from Distributive Education and indications as to how they believe the course could have been of more value to them.

The Methodology

Wherever information is gathered by questionnaire, all of those queried do not respond. This always brings up the question as to whether the entire group can be represented by only those who answered. The data obtained in this survey has been examined for bias by comparing the results with the findings of all former surveys, particularly the ten-year and the five-year studies which preceded this survey.

This comparison showed that the results of the studies do not vary greatly except to show gradual changes which can be verified in fields other than the field of distribution. This evidence has led to the conclusion that the total group of Distributive Education graduates does

not differ too greatly from those who returned the questionnaire.

Since the reliability of the findings can be increased through greater uniformity in conducting the survey, it is recommended that a standard annual follow-up report form be adopted which can be machine tabulated and that Distributive Education coordinators receive special instruction in the conducting of the survey and careful editing of the returns before tabulation.

The questionnaire, except for the changes noted in Appendix A, is the same one in use for similar follow-up surveys since 1951. Because of continuous use and appropriate modification, the questionnaire has become more suitable with each use.

There are certain revisions necessary, however, in order to adapt the questionnaire for machine tabulation and these changes should be incorporated before the next survey is conducted.

The Findings

The findings of this study give cause for pride in the contribution which Distributive Education is making to the students who enroll in it, and to the distributive businesses of Virginia. Some of the findings show the need for strengthening the Distributive Education program and this section records both the accolades for past accomplishments and the challenges for the future.

Full Time and Part-Time Employment Ratios

The total number of graduates working full time has varied only slightly during the past twenty-five years, but the number working part-time has grown steadily until the present survey shows a growth from seven per cent to 16 per cent. This growth in part-time employment reflects the increased number of graduates attending school and working part time.

Unemployment

The unemployment figure of one per cent can be considered negligible, since the unemployment figure for Virginia is three per cent and for the United States as a whole, slightly above five per cent.

Training Station Placement

Considerable progress has been made by coordinators in obtaining work-experience placements which are true training stations for future full-time employment. Almost thirty-four per cent of 1957-1961 graduates are employed in the same establishments where they received their cooperative training. This percentage figure has doubled in the past five years.

Careers in Distribution

It is likewise reason for pride that sixty-one per cent of these graduates have remained in the field of distribution -- a growth of 6 per cent in the past five years.

Graduates' Suggestions for Improvement

The suggestions for improvement in Distributive Education are worthy of note, because criticism at this point indicates, at least in part, the need for improved instruction. Even though most students recall their classroom and work experience with pleasure, a very small percentage do not do so and the effective coordinator will want to be aware of such dissatisfaction in the future and strive to make the course as profitable as possible for each student enrolled.

Education of Graduates

More than thirty per cent of DE graduates attend school beyond the high school level. In 1965, an additional study should be made of this same group of graduates to determine the length of this post-high school enrollment. By this time most students will have had time to complete a four-year college course if attending full time and a clearer picture can be shown of the extent of education beyond high school.

With the study showing that more and more students are attending college, emphasis on continuing education in distribution should not be overlooked in any program. It should be of concern that only 13 per cent of those who continue their education are majoring in distribution. This figure emphasizes the need for the coordinator to spend more time in showing the career possibilities in the field. Students who show

promise while enrolled in high school Distributive Education should be shown that the possibilities for advancement and satisfaction in distribution and Distributive Education are great.

Retailing - Wholesaling - Service Employment

Permanent employment in retailing for Distributive Education graduates has been declining in the past five years -- from seventy-two per cent of all employment in distribution to fifty-four per cent -- while service selling organizations now employ thirty-seven per cent of DE graduates as compared with twenty-two per cent five years ago. The wholesaling field is now employing eight per cent of the Distributive Education graduates in Virginia. These findings indicate that coordinators will want to interest more service and wholesaling organizations in providing cooperative training placements for students while they are enrolled in Distributive Education in high school.

Transfers to Other Fields

The discovery that thirty-three per cent of the 1957-1961 DE graduates have left the field of distribution for which they were trained gives reason for concentration by the coordinator on pointing out the career possibilities and opportunities for advancement in distribution. Many students will not become aware of their potential contribution to the field and the resulting benefits which are commonplace among successful distributors unless the coordinator assumes this responsibility.

Student Benefits

It is discouraging to find that one third of the students enrolled in Distributive Education can recall no particular benefit that they received from taking the course. This information should prompt the coordinator to expend extra effort in seeing that each student progresses as far as he is able. Perhaps an evaluation period at the end of the Distributive Education course would help students to crystallize in their minds just what progress they have made while enrolled.

Coordinator Performance

It is evident that for the most part Distributive Education coordinators are performing commendably and this performance is evidenced in the findings of this survey. It should be adequate compensation to be among that select group of coordinators -- almost fifty per cent -- whose personal help former students recall with pleasure. And it is a fitting goal toward which the remaining fifty per cent might well aspire.

Future Research

The results of this survey could serve as the basis for additional studies related to the improvement of instruction - the goal of every conscientious Distributive Education coordinator, supervisor and teacher-educator in Virginia.

Although the criticism of the instructional program was not widespread, additional study in this area might offer suggestions for strengthening the weaknesses. As long as any graduate feels that his time in a course was wasted, the instructor of that course should be concerned that future graduates not experience the same weaknesses.

Additional study concerning the post high school education of Distributive Education students is needed. This research should be designed to discover the extent of such study and the success of DE students enrolled in higher education.

IV. ACKNOWLEDGMENTS

This report would be incomplete without further acknowledgment of the assistance of Distributive Education coordinators and students who conscientiously performed the field work involved in this study.

The director is indebted for advice and editorial assistance to Louise Bernard, Lucy C. Crawford, Leonard F. Maiden and James Horan, Jr. of the Virginia State Distributive Education Staff; to Dr. Thomas C. Sanders of the Fifth Federal Reserve Bank and John D. Lambert of Richmond Professional Institute for critical reading and statistical advice; to Leroy M. Buckner of Richmond Professional Institute for serving as advisor, and to a number of students and graduate assistants who assisted in tabulation.

V. APPENDIX

Appendix A

SURVEY PROCEDURE

The names of students enrolled in each high school Distributive Education program for the five-year period under study were taken from the November 1 coordinator's Monthly Cooperative Report submitted to the State Distributive Education office. These lists of students were sent from the State office to the local high school coordinators. The coordinators were instructed to check their local records and to complete the follow-up survey cards (Appendix D) by entering each student's name, address and years enrolled in Distributive Education. These names and addresses were to be verified before mailing or delivering the questionnaire forms to the former students. Instructions were given for personal follow up on questionnaires not returned by June 7, 1963. Coordinators were urged to make individual efforts to secure missing responses during the summer months of 1963. Notations concerning efforts to follow-up questionnaire forms, corrected addresses and other pertinent information were entered on the appropriate survey cards. Each coordinator was instructed to return the completed questionnaires and the survey cards by November 1, 1963. Since past surveys have shown that ours is a mobile population, and that it is often difficult to locate a student who has been out of high school for more than 2 or 3 years, an effort was made to locate former students by telephone or personal visit before the follow-up questionnaire was sent to the student for completion. (Instructions to coordinators appear in Appendix E.)

The follow-up survey procedure was planned so that the local high school chapter of Distributive Education Clubs of America, if desirable, could be used to assist in the early stages of the follow-up survey. The DECA project was titled "DECA Operation Manhunt". Specific instructions (Appendixes F, G, H) were given for using teams of students, to be known as agents, working in each school under the supervision of student captains and a student colonel, in turn supervised by the local DE coordinator-club sponsor. Essentially the same procedure as that given above was suggested for the use of high school students. Clubs which participated in the "Operation Manhunt" project earned points toward honor club awards.

Appendix B

PARTICIPATING SCHOOLS SHOWING NUMBER AND PERCENTAGE OF RETURNS

School	Total Enrollment 1957-1961	Number of Responses	Percentage of Responses
Albemarle Co., Albemarle H. S.	96	43	44.8
Appomattox Co., Appomattox H. S.	47	20	42.6
Arlington Co., Wakefield H. S.	113	47	41.6
Washington-Lee H. S.	152	35	23.0
Yorktown High School	26	19	73.1
Augusta Co., Wilson Memorial H. S.	106	14	13.2
Bristol, Virginia High School	146	28	19.2
Campbell Co., Altavista H. S.	62	28	45.2
Carroll Co., Hillsville H. S.	76	64	84.2
Clarke Co., Clarke County H. S.	68	1	1.5
Covington, Covington H. S.	103	53	51.5
Danville, George Washington H. S.	306	78	25.5
Dickenson Co., Clintwood H. S.	109	107	98.2
Essex Co., Tappahannock H. S.	52	32	61.5
Fairfax Co., Annandale H. S.	179	37	20.7
Fairfax H. S.	113	12	10.6
James Madison H. S.	56	17	30.4
Franklin Co., Franklin H. S.	67	65	97.0
Frederick Co., James Wood H. S.	152	97	63.8
Fredericksburg, James Monroe H. S.	92	32	34.8
Galax, Galax High School	80	57	71.3
Giles Co., Giles High School	86	32	37.2
Narrows High School	75	29	38.7
Halifax Co., Halifax County H. S.	182	28	15.4
Hampton, Hampton High School	110	61	55.5
Harrisonburg, Harrisonburg H. S.	23	6	26.1
Henry Co., Fieldale High School	75	20	26.7
Bassett High School	115	13	11.3
Isle of Wight Co., Smithfield H. S.	76	61	80.3
Lancaster Co., Lancaster H. S.	55	32	58.2
Lee Co., Pennington H. S.	58	16	27.6
Lynchburg, E. C. Glass H. S.	217	82	37.8
Martinsville, Martinsville H. S.	138	89	64.5
Montgomery Co., Blacksburg H. S.	66	54	81.8
Christiansburg H. S.	98	38	38.8

Appendix B (continued)

School	Total Enrollment 1957-1961	Number of Responses	Percentage of Responses
Newport News, Newport News H. S.	91	21	23.1
Warwick H. S.	42	28	66.7
Norfolk, Granby High School	157	40	25.5
Maury High School	123	35	28.5
Norview High School	203	53	26.1
Norfolk Co., Churchland H. S.	108	28	25.9
Deep Creek H. S.	75	40	53.3
Norton, J. J. Burton H. S.	45	25	55.6
Page Co., Luray H. S.	84	39	46.4
Petersburg, Petersburg H. S.	72	17	23.6
Portsmouth, Woodrow Wilson H. S.	200	45	22.5
Princess Anne Co., Princess Anne H. S.	339	113	33.3
Richmond City, Armstrong H. S.	133	18	13.5
George Wythe H. S.	47	44	93.6
John Marshall H. S.	121	34	28.1
Thomas Jefferson H. S.	151	25	16.6
Richmond Co., Warsaw H. S.	22	6	27.3
Roanoke City, Jefferson H. S.	220	103	46.8
Patrick Henry H. S.	21	16	76.2
William Fleming H. S.	59	35	59.3
Roanoke Co., Andrew Lewis H. S.	164	53	32.3
Rockbridge Co., Lexington H. S.	24	11	45.8
Natural Bridge H. S.	6	4	66.7
Rockingham Co., Broadway H. S.	96	26	27.1
Turner Ashby H. S.	31	9	29.0
Shenandoah Co., Stonewall Jackson H. S.	31	16	51.6
Smyth Co., Marion High School	78	26	33.3
Saltville High School	32	14	43.8
Staunton, Robert E. Lee H. S.	149	68	45.6
Suffolk, Suffolk H. S.	119	26	21.8
Tazewell Co., Graham H. S.	76	68	89.5
Richlands H. S.	75	33	44.0
Tazewell H. S.	34	22	64.7
Warren Co., Warren Co. H. S.	129	89	69.0
Washington Co., John S. Battle H. S.	21	5	23.8
Waynesboro, Waynesboro H. S.	129	14	10.9
Westmoreland Co., Washington and Lee H. S.	36	13	36.1

Appendix B (continued)

School	Total Enrollment 1957-1961	Number of Responses	Percentage of Responses
Williamsburg, James Blair H. S.	102	36	35.3
Wise Co., Appalachia H. S.	61	18	29.5
Coeburn High School	48	26	54.1
Pound High School	49	9	18.4
Powell Valley H. S.	63	24	38.1
Wythe Co., George Wythe H. S.	88	60	68.2
York Co., York H. S.	92	21	22.8
TOTALS	7621	2903	38.1

TOTAL SCHOOLS PARTICIPATING 79

Appendix C

THE QUESTIONNAIRE

The questionnaire form used in the previous three Distributive Education follow-up surveys was used as a basis for developing the questionnaire for the 1957-1961 study (Appendix C). The following questions appear on the new form, which were not included in former follow-up surveys:

1. How many full-time jobs have you held since leaving high school?

2. What is the longest period during which you were employed in one organization since leaving high school?

3. If your present job is not in distribution, please tell why you left this field of employment.

4. Have you been in school since leaving high school? What was your major subject? What is the name of the school?

5. How did DE help you?

6. Which of the following DE activities did you find of most value?

DE classroom instruction	Guest speakers
DE work experience	Personal help of coordinator
DE club activities	Other
DE field trips	

7. How could your DE experience have been of more value to you?

Questions added to the questionnaire were approved by an advisory committee composed of the State Supervisor of Distributive Education, Area Supervisors and Teacher Educators.

Appendix C

QUESTIONNAIRE FORM

Student Name_____
DE Junior only__Senior only__2 years__

Please return this form to: (School_____
(
(Town_____

Year of Survey_____ Survey Card Number_____

Dear Former DE Student:

We are interested in you and want to know what you have been doing since you left the DE program. This questionnaire represents an effort to locate every DE student enrolled in Distributive Education in Virginia between 1957 and 1961.

We invite you to return to your former school and to participate in the DE Club alumni activities. The present members of DECA in this school would welcome a visit from you.

At this very moment, we urge you to take a few minutes to complete the form below and return it in the enclosed envelope. Your prompt reply will contribute to the success of this project.

We appreciate your cooperation and look forward to hearing from you.

Cordially yours,

_____
DE Coordinator

---

*PRESENT NAME Mr. Miss Mrs. _____ *Single _____ Married _____

PRESENT ADDRESS _____ Telephone Number _____
(St. and City) (State)

*1. ARE YOU NOW WORKING? Yes____ No____

*If No, are you actively seeking employment? Yes____ No____

*If Yes, Regular full time____ Regular part time____
Special periods ____(Such as vacations, sales, holidays)

In what type of organization?_____
Example: grocery, drug store, restaurant, doctor's office, etc.

Is it the same organization you were working for when you left high school? Yes____ No____

What position do you now hold?_____

*How many full time jobs have you held since leaving high school?_____

*What is the longest period during which you were employed in one organization since leaving high school?_____

If your present job is not in distribution (selling or non-selling job in retail, wholesale or service business), please tell why you left this field of employment.

_____

_____

*2. ARE YOU GOING TO SCHOOL? Yes____ No____

*If Yes, Part time day____ Part time evening____ Full time day____

Other_____

What is the name of the school?_____

What are you studying or majoring in?_____

How long have you been enrolled?_____

*If No, have you been in school since leaving high school? Yes____ No____

What is the name of the school?_____

What did you study or major in?_____

How long were you enrolled?_____

Did you complete the course?_____

3. WHAT ARE YOU DOING AT PRESENT, if neither 1 nor 2 applies to you?

_____

_____

4. HOW DID DE HELP YOU?

The effectiveness of Distributive Education can only be measured in terms of how useful its former students have found it. Tell in your own words, of what value your high school DE class has been to you. Please express your opinion freely, for your comments might indicate changes which could benefit future DE students.

_____

_____

_____

_____

*WHICH DE ACTIVITIES DID YOU FIND OF MOST VALUE?

Check below each of the activities which you still recall with pleasure.

_____ DE classroom instruction
_____ DE work experience
_____ DE club activities
_____ DE field trips
_____ Guest speakers
_____ Personal help of
_____ Other_____

HOW COULD YOUR DE EXPERIENCE HAVE BEEN OF MORE VALUE TO YOU?

_____

_____

_____

* Indicates questions which were machine tabulated.

Appendix D

FOLLOW-UP SURVEY CARD

DISTRIBUTIVE EDUCATION SERVICE
State Department of Education
Richmond 16, Virginia
1957-61 High School Follow-Up Survey

Name _____ Year Enrolled _____

Corrected Name _____

Address from DE Records _____

Correct Address _____

Telephone No. _____ Correct Telephone No. _____

School _____

City _____

Signature _____

Appendix E

COORDINATOR CHECKLIST

DISTRIBUTIVE EDUCATION SERVICE
State Department of Education
Richmond 16, Virginia

CHECKLIST FOR CONDUCTING HIGH SCHOOL FOLLOW-UP SURVEY SPRING AND SUMMER, 1963

Check with your school administrator for approval of this activity. Division superintendents and principals received copies of Miss Bernard's April 22 memo.

1. Familiarize yourself with this and other pink forms establishing procedure for conducting the survey.

2. Study blue forms which include plan and sample forms for making this survey a club project.

3. Make a preliminary check of the OCTOBER COOPERATIVE REPORT for each of the survey years (1957-58 through 1961-62) during which DE has been in operation in your school, to determine the total number of students enrolled during this period.

4. Determine what method you wish to use in conducting the survey and make a planning calendar with deadline dates for completion of various phases of the survey. For example:

	Deadline Date
a. Preliminary completion of survey cards	May 15
b. Verification of survey card information	May 22
c. Questionnaire mailing	May 24
d. Questionnaire return	May 31
e. Follow up for late questionnaire return	June 7
f. Individual efforts to secure missing responses	June 10-July 15
g. Final check for completion and return of forms and notations on survey cards	July 22
h. Return questionnaires and survey cards to area supervisor	August 1

5. Present your proposed plan with deadline dates to your school administrator for approval.

6. By this time you will have received your pack of survey cards with names of students for each year entered from the October reports on file in the State office.

   Complete these survey cards, adding from your DE files the following items:

   a. Last known address and telephone number
   b. Last known name
   c. Town
   d. School
   e. Parent's name (WRITE IN THIS ITEM ON SURVEY CARD)

7. Verify and correct information on survey cards

   a. By telephoning number on survey card
   b. By telephoning parents
   c. By checking with relative, employer or friend

8. On back of survey card, make notation to indicate each effort made to determine present location of former student.

9. By May 23, you will have received your supply of questionnaire forms. After student is located, fill out questionnaire and mail or deliver the form to the former student for completion.

10. Enter date questionnaire sent on back of survey card.

11. Check one week after mailing to determine whether completed questionnaire has been returned and make entry on back of survey card.

12. Follow up by telephone, mail or personal call to secure completed questionnaire if not yet returned. Make note of this action on back of survey card.

13. Return completed questionnaire forms and all survey cards with notations of action on the back by AUGUST 1 to your area supervisor.

Appendix F

DECA PROJECT "OPERATION MANHUNT" CHECK SHEET

DISTRIBUTIVE EDUCATION SERVICE
State Department of Education
Richmond 16, Virginia

COORDINATOR'S CHECK SHEET FOR DECA PROJECT

"DECA OPERATION MANHUNT"
Spring 1963

1. Appoint or have your club members select the club members who will be the leaders in this operation.

   You will need:

   a. A COLONEL who will be the CHIEF AGENT in charge of overseeing and directing the entire project with the coordinator as advisor.

   b. Several team CAPTAINS or SPECIAL AGENTS, each to oversee and direct the activities of a small group of club members in getting the survey cards and questionnaires completed.

   c. Remainder of club membership will be AGENTS assigned to a specific team and responsible for following up a small number of survey cards and securing completed questionnaires.

2. Duplicate letter to DECA members.

3. On or about May 15, you will receive a package of cards containing the names of students enrolled in your program for each of the survey years. Each card will carry a number to assist you in keeping track of it and checking to see that all cards are returned to Richmond in August.

4. Schedule a meeting of the Colonel and Team Captains to divide survey cards equally and assign to teams.

5. Allow team captains to secure addresses, telephone numbers and parents' names from your records and enter such information, with name of school and town on each survey card.

   Be sure that the complete plan is understood and that each team captain realizes his responsibility for checking on his assigned team members (agents) regularly to see that they set their goals and complete the assignment quickly. If the project is allowed to drag, it will never be completed.

   Go over each step of the procedure and each form with the team captains.

   Copies of the Agent's Report Form will arrive around May 15. A sample of this form is included here to let you see what this form looks like.

6. Allow time for careful training in procedure and conduct with all student agents.

7. Check pink coordinator's checklist and set up a calendar for completion of each stage of "MANHUNT". Allow for regular team reports to entire membership to keep interest high.

8. Remember that this personal follow-up method by agents, with the help and guidance of captains, is essential. If the forms are just mailed out to the last address in the DE files, many will never be returned.

9. District contest awards will be based on percentage of completed questionnaires as well as on thoroughness of search for former students, as based on the agent's report forms.

10. Send agent report forms to your area supervisor by June 20, with a status report giving the following information about your survey:

    a. Number of survey cards declared "dead" (unable to reach).

    b. Number of questionnaire forms completed and returned.

    c. Number of questionnaire forms sent but not returned.

Appendix G

LETTER TO DECA CLUB MEMBERS FOR "OPERATION MANHUNT"

Dear DECA Members:

Between May 15 and the end of school in June, every DE Club in Virginia is invited to participate in "DECA OPERATION MANHUNT" -- an attempt to track down and communicate with every student who was enrolled in DE during the school years 1957-58 through 1961-62.

These former DE students can supply information to help the DE coordinators make DE more helpful to each student who takes it. These former DE'ers can be an excellent source of publicity for your local DECA chapter and many of them would like to work with you as alumni members.

You will be competing with other DECA chapters in your district for a cash award to be made to the club conducting the most successful "MANHUNT". Here is your opportunity to locate these former students and at the same time, earn project points and perhaps money for your club while making a significant contribution to DE in Virginia.

The procedure described below can serve as your operation check sheet, as well as a form to keep a record of your "MANHUNT" activities. This report form will be turned in to your coordinator according to the instructions given to you in your own club. It is important that you record every thing you do to locate a person because the final awards will be based on your efforts, as well as on how many returned questionnaires you secure.

PROCEDURE FOR DECA OPERATION MANHUNT

1. Your team captain will give you a number of survey cards containing names, addresses and telephone numbers of DE students enrolled in DE here since 1957-58.

2. You should first call the telephone number or go by the address to determine if the person is still living at the address which you have. If the name, address or telephone number has been changed, make the correction on the card which was given you, and list date and what you did on the back of the card.

3. If you cannot locate this person through the address in the coordinator's file then try one of the following methods to "get your man":

   a. Try to locate student through the parent, whose name has been written in on the card.

   b. Check coordinator or school records for the name of a relative who may know the whereabouts of the former student.

   c. Use the city directory and check with neighbors to secure a forwarding address for parent or student.

   d. When you have secured a correct address, make arrangements to interview student or to send him the survey form for his completion. Record this activity on your survey card.

   e. If possible, get a definite commitment from him to return the form to the coordinator by a certain date or to pick it up yourself. Be sure you keep the appointment, if you are to pick up the form.

   f. Indicate on the survey card whether the coordinator is to mail the form or to give it to you for personal delivery.

   g. Enter the student's name on your report form, and check the appropriate columns.

   h. When you have carried out the plan, complete the report form and return completed survey card to your team captain or coordinator.

4. If you locate a correct out of town address:

   a. Write the correct address on the survey card, write "MAIL SURVEY FORM" on the back of the card and return to your coordinator for mailing.

   b. Write this name on your survey card. Fill in the appropriate columns on your Agent's Report Form.

(Signed)_____

Colonel
Chief Agent for
"DECA OPERATION MANHUNT"

Appendix H

AGENT'S REPORT FORM FOR "DECA OPERATION MANHUNT"

Spring 1964

(DE High School Follow-Up Survey 1957-61)

School _____ Coordinator _____

Town _____ DECA Agent _____

Team Number _____ Team Captain _____

Complete the columns below by entering names of former DE students assigned to you from survey card and make checks on entries in appropriate columns to record each thing you do to locate this person and get a completed questionnaire form from him. THIS FORM SHOULD BE RETURNED TO AREA SUPERVISOR BY JUNE 20.

Name of Former DE Student	Years Enrolled in DE	Survey Card Number	Entered last known address & tel. no. on survey card. (Check mark in column when completed.)	Entered parents' name on survey card. (Check mark in column when completed.)	Calls or contacts made to verify address & tel. no. (Enter number of calls made.)	Entered correct address, name and tel. no. on survey card. (List date entered.)	Questionnaire delivered or mailed. (Indicate which.)	Questionnaire pick-up or follow-up date. (One week after delivery or mailing.)	Checked to determine whether completed questionnaire returned. (List date checked)	Followed up to secure return. (List dates followed-up.)	Questionnaire returned. (Enter date.)

VT 005 477
New Horizons in Vocational Technical Occupational Education.

Bucks County Public Schools, Doylestown, Pa.
Pennsylvania Univ., Philadelphia
MF AVAILABLE IN VT-ERIC SET.
Pub Date - 65 42p.; Summary of a Pennsylvania Conference.

*CONFERENCE REPORTS; *VOCATIONAL EDUCATION; OCCUPATIONAL GUIDANCE; EDUCATIONAL PHILOSOPHY; *SOCIAL CHANGE; SOCIAL PROBLEMS; *ADMINISTRATIVE PROBLEMS; *EDUCATIONAL COORDINATION; EDUCATIONAL PLANNING
*SOUTHEASTERN PENNSYLVANIA REGIONAL SEMINAR FOR SECONDARY PRINCIPALS AND COUNSELORS, JUNE 28-30, 1965

The conference was organized in response to the interests and needs of the region and to national and state re-examination of the role and functions of vocational education. Approximately 180 secondary administrators and counselors from 15 counties participated. The focus was on current and future challenges facing educational leadership. Four assumptions served as a framework for the conference: (1) Emerging scientific, technological, social, political, and economic conditions are changing the nature of life itself, (2) These conditions are to be understood and planned for in current educational programs, (3) Local, area, regional, and interstate planning will be necessary to provide top vocational education programs, and (4) Secondary schools of an area or region may devise vocational, technical, occupational, and special interest programs to meet the need of all students by pooling their resources. Summary responses to the assumptions presented were, respectively, (1) "Meeting Man's Destiny--The Future Now," (2) "How Education Should Fit a Person for the Life He Pursues," (3) "New Designs for Administration," and (4) "Implications for Administrators and Counselors." A list of promising ideas and suggestions from the participants is included. Names and positions of the participants are also given. (EM)

VT005 477

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VT005477

Summary of a Pennsylvania Conference sponsored by Bucks County Public Schools with the cooperation of University of Pennsylvania

VT005477

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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A REPORT OF A PENNSYLVANIA CONFERENCE/BUCKS COUNTY PUBLIC SCHOOLS, STATE OF PENNSYLVANIA

New Horizons in Vocational-Technical-Occupational Education

A Report of a Southeastern Pennsylvania Regional Seminar for Secondary Principals and Counselors, June 28–30, 1965. Sponsored by Bucks County Public Schools with the Cooperation of the Vocational Education Division of the University of Pennsylvania. Published by Bucks County Public Schools, Doylestown, Pennsylvania. Copyright © 1965, all rights reserved, printed in United States of America.

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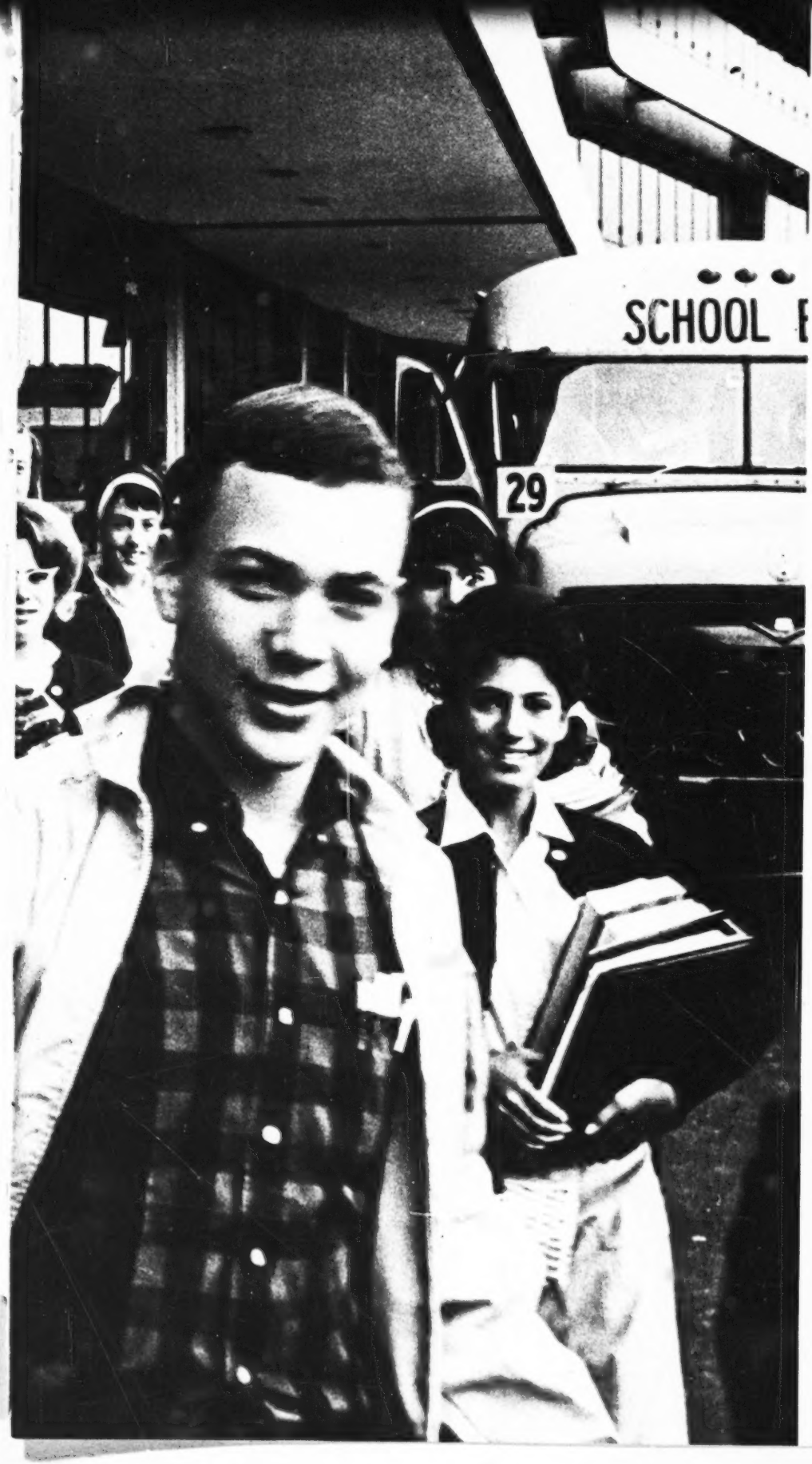


preface

Two premises are basic to the fulfillment of educational goals in contemporary American culture: one, the discovery of improved methods for bringing the potential gifts and interests of youth and adults, the changing demands of society, and the resources of the school into a harmonious relationship; two, increased emphasis on educational training for a world of work which will lead to self-sustaining individuals and a dynamic society.

Only under these circumstances can educational institutions fulfill their major purpose—the development of citizens who are able to understand, adjust to, and modify the cultural environment in which they live and to which they must respond.

It is our hope that the report of this conference will contribute to a clearer understanding of these premises.

GEORGE E. RAAB—Superintendent, Bucks County Public Schools

The Why And How Of The Conference

3 Goals
Expectations of Other Leaders
5 Origin And Growth

New Horizons As Seen By Educational Leaders

6 Lifting Our Horizons To Meet Our Goals
10 A Framework For Conference Thinking — Four Assumptions
11 *Assumption I* — The Great Emerging Conditions Of Life
Response: Meeting Man's Destiny — The Future Now
14 *Assumption II* — Educating A Person For The Life He Will Pursue
Response: How Education Should Fit A Person For The Life He Pursues
17 *Assumption III* — New Designs For Administration Of Vocational Educational Progress
Response: New Designs For Administration
19 *Assumption IV* — Implications Of A New Design For Administrators And Counselors
Response: Implications For Administrators And Counselors
22 Continuity Through Cooperation

Looking Ahead To New Horizons In Pennsylvania

23 Patterns For Providing Vocational Education
Making The Local High School Comprehensive Through Area Vocational-Technical Education
Extending The High School Curriculum Through Area Cooperation
24 Responsibilities For Leadership In Area Cooperation
26 Cooperative Machinery To Organize Area Programs
27 In Vocational-Technical-Occupational Education, Who Is The Learner?
Devising Curricula Experiences At Three Instructional Levels
Organizing Curricula Offerings For Students
28 Can We Afford Area Cooperative Vocational-Technical Education?
Re-educating Professionals About Vocational Education
Keeping Up-to-Date Professionally In Vocational Education

Bridging The Gap Between New Horizons And Present Practices

29 The Conference As A Springboard
30 Promising Ideas As Seen By Participants
31 Promising Suggestions For Action By Participants
32 Following Up The Outcomes Of The Conference By Its Sponsors

Acknowledgements

34 County Superintendents And Seminar Participants
38 Sponsors Of The Conference
39 Planning Committee Of The Conference

The Why and How of The Conference

Goals

To better understand the forces in society helping to shape our educational programs.

To better understand the purposes of schools in responding to these forces.

To develop new insights in providing, improving, and extending programs for our students.

To identify procedures which facilitate vocational-technical-occupational programs for local schools.

To develop procedures to help students identify and use their talents.

Expectations Of Other Leaders

FROM THE NATION'S CAPITOL

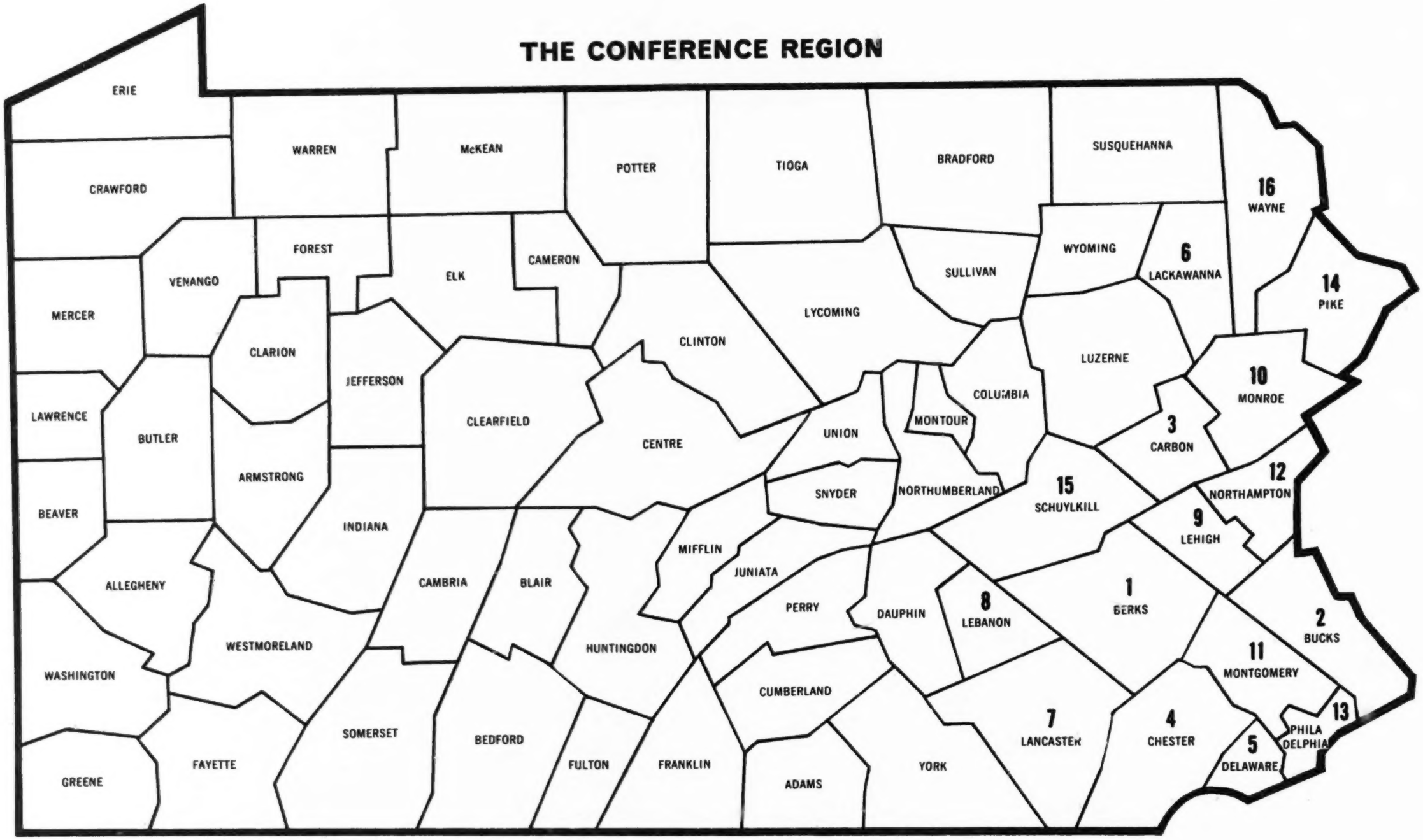
United States Commissioner of Education Keppel "... we must assure every child the opportunity ... of an education commensurate with the highest level of his ability ... (that) is relevant to the realities of life in this half of the twentieth century. High school principals and counselors have a primary responsibility in this task."

United States Secretary of Labor Wirtz "Whether our nation ... is able to progress and to fulfill its promise will depend on the education and training that our young people acquire. The importance of vocational-technical education to prepare young people in today's jobs cannot be too heavily stressed."

President American Association of School Administrators Brain "... can create public understanding and stimulate leadership essential for the support of programs ... responsive to emerging local and national needs."

Executive Director American Personnel Guidance Association Hitchcock "No more urgent topic ... of greatest importance ... since... state and

THE CONFERENCE REGION



local school systems . . . now have the responsibility to carry through a national mandate for action . . . as to how this program can be most effective."

FROM THE STATE CAPITOL

Superintendent of Public Instruction Hoffman "The conference (and discussions of your mutual problems) can be the vehicles to transmit knowledge and understanding . . . to the administrators and counselors. . . ."

Secretary of Labor and Industry Young "The invaluable experience from pioneer efforts . . . should contribute much to the conference. There is no doubt as to the role of the vocational-technical school in the community and the vital contribution it makes to both the worker and industry."

Lieutenant Governor Schafer "Pennsylvania takes pride in having an environment which is conducive to business, industry, and everyday living. Our state has gained a prominent industrial reputation through the cooperative efforts of the state government, the schools, and the community. This conference is a further indication of our commitment to the educational opportunities in the vocational-technical-occupational fields of endeavor."

Origin And Growth

THE REGION

Eastern Pennsylvania lies in the heart of a vast megalopolis stretching from Boston to Washington, D.C. Cities are ringed by suburbs and beyond the suburbs is the land, the mountains or the ocean.

The region has been described as a typical crossroads of the United States. Talent, success, poverty, unemployment—all the human conditions are here. Densely populated in its industrial sections, it represents a melting pot of newcomers from a variety of backgrounds and races. Beyond its congested complexes and cultural and educational centers are farms, small boroughs, isolated areas.

Within the boundaries of the region are the counties of Berks, Bucks, Carbon, Chester, Delaware, Lackawanna, Lancaster, Lebanon, Lehigh, Monroe, Montgomery, Northampton, Philadelphia, Pike, Schuylkill, Wayne. In the southeastern portion of the region is Philadelphia, the historic fourth largest city of the United States. West of the region is the state capitol, Harrisburg.

THE INTERESTS AND NEEDS OF ITS PEOPLE

The region comprised of sixteen counties represents about one-half of the resources of the state of Pennsylvania, including **46** percent population of the state, **52** percent workers of the state live in this region, **50** percent market value of real estate is contained in this region, **55** percent of the state's business and industry located in this region, and **50** percent value of the products produced in the state come from this region.

The needs of the youth of the region and the state in the field of vocational training are diversified and self-evident.

Pennsylvania ranks 45th in the United States in providing vocational education according to the President's Commission.

Thirty-five percent of its secondary students do not finish high school, and 35 percent of its high school graduates seek no further training.

THERE ARE MANY EVIDENCES OF EDUCATIONAL ACCOMPLISHMENTS

The first area vocational technical school to be built in Pennsylvania was opened in 1958 in lower Bucks County. Originally constructed to provide for 750 students, its facilities have now been expanded to provide for 1500 student enrollment. Its graduates have a ninety percent rate of employment.

The total region is now actively engaged in planning, building, and operating such schools. Within seven years, 26 area schools have been approved for this region, the majority of the counties having more than one school. Within Bucks County currently one area school is in operation, another is under construction, and a third has been approved for construction, thereby assuring the availability of educational opportunities to young people in each of the three sections of the county.

Educational leadership has characterized the region. Experienced principals and trained counselors operate its secondary schools. New community colleges are underway to provide continued training for all students. Collaboration with institutions of higher learning in this area has enhanced cooperative projects and planning.

WHY A VOCATIONAL EDUCATION CONFERENCE NOW?

This conference was organized in response to the interests and needs of the region and in response to national and state re-examination of the role and functions of vocational education.

Approximately 180 leading secondary administrators and counselors of the region participated in a three-day intensive discussion of goals, practices and procedures. A series of discussions was led by outstanding educators and vocational specialists. Emphasis was given to meeting the challenge of Today and Tomorrow. The conference was made possible through a grant from the United States Office of Education through the cooperation of the Pennsylvania State Department of Public Instruction.

New Horizons as seen by Educational Leaders

Lifting Our Horizons To Meet Our Goals

A summary of presentation by
Dr. GEORGE E. RAAB, *Superintendent*
Bucks County Public Schools

UNDERSTANDING THE FORCES WHICH SHAPE OUR EDUCATIONAL PROGRAMS

The major issues facing society today are potent forces which must be taken into account as we shape our educational aspirations for tomorrow. The population explosion, the reality of civil rights, the Communist threat, poverty, and unemployment are social challenges, and each of these has significance for educational purposes, school curriculum, and classroom methodology.

Of special relevance to vocational education are the following three factors.

Our population is highly mobile and is concentrated in big cities and suburbs. One out of five Americans changes addresses each year. One out of four lives in a state other than his home state. One out of 37 pupils attends school in New York City.

Our labor force by 1970 will be drastically changed. It will increase to 81 million workers, increasing 67 per cent in positions requiring 16 years of education. Two million new jobs will involve technical skills; 2 million unskilled jobs will become obsolete.

The positive correlation between education, employment, and income will increase. About 2/3 of school pupils complete high school. About 2/3 of unemployed have less than a high school diploma. Six out of 10 earning $15,000 or more have some college training. Seven out of 10 earning $3,000 or less have not completed high school.

UNDERSTANDING THE PURPOSES OF THE SCHOOLS IN RESPONSE TO THESE FORCES

If the school curriculum is to be kept modern, administrators and counselors must continue to interpret the cultural, economic, and occupational life of contemporary society. Knowledge doubled in the civilized world by 1750, again by 1950, and again by 1960. This accelerated trend will continue.

The purpose of education is to develop and perfect the qualities of each individual so that he may make a useful contribution to society. Neither business nor education is an end in itself. Materialism without purpose is meaningless and education solely for the sake of education is no better than preparation to live in a vacuum. Zest for learning must be tied to the practical web as well as the academic web, lest the total human fabric be weakened. Continued emphasis must be placed on social, moral, ethical, human, and decision-making values for all people. In the interest of pragmatism we must not lose sight of humanism. Therefore, nursery school, kindergarten, high school, and college must continue to instill in human beings moral, ethical, spiritual, and self-educative values brought about by thorough exposure to the humanities.

School attendance and drop-out attitudes must be dealt with at a time when a difference can be

made. For those children yet to come to our schools, increased emphasis must be placed on their early years as an integral part of the total educational spectrum. This means increased use of psychological services for diagnostic and educational planning rather than for remediation. A meaty comprehensive exploratory program should be planned for the early school years. Nursery school and kindergarten programs should be built in as the first rung of an integrated thirteen or fifteen year educational ladder. Constructive attitudes for school drop-outs should be reclaimed, restoring their self-confidence, and redesigning their purposes in life by the provision of an educational menu that whets their appetites.

Public responsibility for education beyond the twelfth grade must be expanded to include a community or junior college program and to include full-fledged post secondary thirteenth and fourteenth grades which place emphasis on human values as well as skills for earning a living. Pennsylvania with thirty-six community colleges and junior colleges ranks low in its current capacity for enrollment, whereas Florida, Illinois, Michigan, New York, Texas, and Wisconsin are at least twice as well off. The addition of specialized collegiate courses in subject matter areas does not eliminate the need for any of the present courses at high school levels. Rather, it demands the addition of new courses and a coordination of current courses in such a way as to complement changes at the collegiate level. Likewise, the establishment of a community college does not eliminate the need for discharging responsibilities for vocational-technical education at the secondary level. It demands that expanded efforts be taken at all public school levels.

The area vocational-technical school must be seen as a department of each of the participating home high schools, thereby extending the comprehensive scope of participating schools. The AVTS should be designed to broaden opportunities which would be unavailable to our students otherwise. Such expansion of the education program provides better education for those students remaining in the home high school and provides a more comprehensive opportunity for all students.

DEVELOPING INSIGHTS IN PROVIDING, IMPROVING, AND EXTENDING PROGRAMS

Vocational education in secondary schools will be systematically tied to strong elementary guidance programs, to high school internships, and to adult schools, community colleges, and collegiate offerings. The administrator must respond with maximum sensitivity and with prudent haste to the changing social, cultural, technical, and emotional currents of his day. The administrator must find ways to excite the total educational hierarchy (teachers, parents, school directors, community, and teacher-training institutions) to respond to its important role. The success of any enterprise depends upon the quality of its personnel. Special emphasis must be put on the selection and retention of top-notch personnel who are more adequately compensated for the important services they render. Educational programming (not tax millage or costs) with adequate provisions for vocational-technical-occupational training is the priority consideration for the initial location and continuation of businesses and industry in any one section of the country.

IDENTIFYING PROCEDURES FOR FOSTERING TALENTS

The best educational program in the years ahead will lead to self-educating, self-starting, self-esteeming, and self-sustaining citizens. Excellence in education will be based on our ability to provide for the uniqueness of each individual's potential so that he may become productive as a worker, as a citizen, and as a human being. Every student must be encouraged to get as much education as he has the ability to consume and every counselor and principal must see to it that he is consuming what is appropriate for him. Educators must invent and develop new tools to challenge the student to excitement in learning and to self-educating ideals.

IDENTIFYING PROCEDURES WHICH FACILITATE PROGRAMS

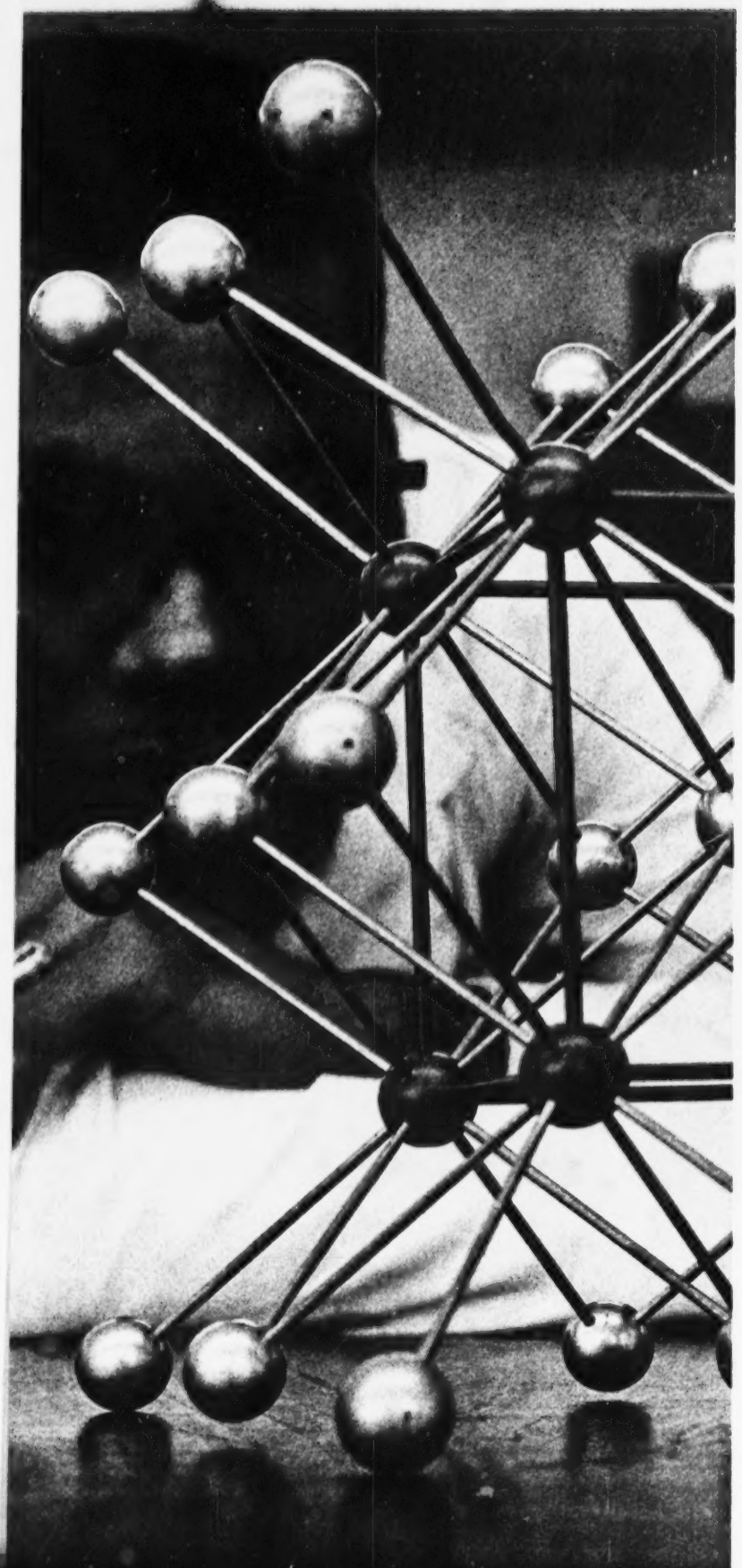
The focus of guidance and administration will be to shape new programs to match unique talents and abilities. Superintendents, principals, and counselors must make administratively possible those practices which we have come to believe are educationally desirable. We must stop making education the slave of administrative convenience (scheduling classes, transporting pupils, and all the minutia). Educational convenience for youth must be our watch-word and administrators must serve this purpose.

Administrators must make certain that teachers are abreast of the rapid expansion of knowledge

in order that methodology and curriculum do not become obsolete through teacher obsolescence. We must build into the teacher's explicit responsibility a time for self-growth and retraining so that his time spent on instruction of youth is most fruitful. We must expand industrial arts into the elementary school as part of our general education and expand industrial arts at the junior and senior high school level to become an integral part of student's general education and career exploration. We must find ways of utilizing our existing school and community resources whether it be adult evening classes, occupational training, summer industrial training, or the twelve month use of the school.

Let's lift our horizons. In the process let us not lose sight of the people for whom our horizons were lifted. Have we lifted the horizons of students, have we really opened the eyes and ears and hearts and minds of youth to new doors of learning, to new self-respecting ideals, to new attitudes? Is each student educationally fitted to his own talents, does he become master of his own destiny, can he help create a productive, beautiful, and peaceful world in which to live?

We will find ways of dignifying the process of preparing to earn a living. In order to accomplish this, we must understand and respect the integrity of each individual and his chosen career. We must accept that the vocational process goes on all during our lives. We must accept that a major effort must be exerted to fit school experiences to students' unique gifts. Whether these gifts be large or small, this is our charge.



A Framework For Conference Thinking—Four Assumptions

Prepared by
Dr. FINIS E. ENGLEMAN,
Executive Secretary Emeritus,
American Association of School Administrators
Dr. LUCY T. DAVIS, *Research Associate,*
Educational Research Council of Greater Cleveland

PURPOSE OF ASSUMPTIONS

These Assumptions were developed for outstanding educators in southeastern Pennsylvania who are responding to current forces and values which are pushing the thinking of educational leadership today. The conference provided for an examination of issues that transcend geographical, physical, and mental limitations. It is hoped that such examination will serve as a springboard for actions by conference participants.

THE ISSUES AT STAKE

The issues in the world of work demand a regional, national, and international view due to the relationship of population expansion and mobility to our economy, invention, and discoveries. Employment, education, the pursuit of the good life offer opportunities for local action on important issues. Leadership in southeastern Pennsylvania can testify that the nation's ill fed, ill housed, ill educated have direct reference to local affairs.

To identify with the world of work is to swim in the stream of Life itself. Work is one of the three commonalities of human life—as characteristic as birth and death to the twentieth century American man and woman. Through his work, Man achieves his human potential. It has been said, "Work is love made visible", and also, "Bake not your bread with bitterness".

The world of work, so relevant to the purposes of secondary education, seems somewhat removed to many school people. Somehow, with our interest in book learning, graduation points, grade averages, college scholarships, we have become more isolated from the great resurgence of national energy and productivity, currently surpassing the efforts of World War II.

THE RESPONSE OF SECONDARY SCHOOL LEADERSHIP

Secondary leadership has a tradition of executing its responsibilities. Never before has it had the opportunity to be such a gatekeeper. Who else has the challenge to educate all the youth in the largest democratic program under public jurisdiction? No other educational unit is so charged, not only that the individual is educated to pursue a calling, but also that he has the motivation and the spirit to pursue. How? When? Under what conditions? This was the job of the conference.

It is our belief that, if we as educators do not join hands in conviction and action, we will be like the sleeping giants. Other forces in our society, acting on an idea whose time has come, will institute types of parallel public systems, not now incubated, to fulfill the dreams and the commitment of the American people.

Assumption I

THE GREAT EMERGING CONDITIONS OF LIFE

Great emerging conditions (scientific, technological, social, political, economic, etc.) are changing the nature of life itself.

Adequate vocational skills and knowledge in a given occupation today will be obsolete ten years hence, thus requiring continuous retraining by the schools.

New occupations requiring new competencies will multiply during this generation while many present vocations will disappear.

Service type occupations will tend to increase rapidly while material production jobs will decrease.

The rate of production will increase as automation and technology improve. Drastic revisions may be necessary in our concept of full-time employment and full-time production due to shifts in work weeks, etc. Man's image of himself as a producer and consumer accordingly will be revised greatly.

Education for leisure or non-compensatory occupations may transcend in importance education for compensatory work for more human beings and for the national welfare.

The current spending pattern of the USA suggests that national defense or social welfare require higher expenditures than education.

Preparation for citizenship becomes much more difficult as society's problems become more com-

plex. The incompetence of the citizen on social issues requiring depth thinking may invalidate the principle that a just government gets its powers from the consent of the governed.

The extent to which we provide for diversity and uniqueness in our educational programs may determine our national power and survival, even that of the entire world.

In a world of turbulent change, more and more attention will be focused on what is unchangeable.

A Response To Assumption I: Meeting Man's Destiny—The Future Now

A summary of presentation by
Dr. SHIRLEY COOPER,
Associate Executive Secretary,
American Association of School Administrators

Our hopes, our goals, our beliefs, our recreation are shaped in great measure by the life about us, the circumstances in which we live and try to get along in the world.

The deep-seated and almost universal desire of people to get along in the world has meant: food to appease hunger, clothing and shelter for comfort, a home and family, a job that claims the approbation of one's associates, a measure of self respect, compatible relationships with other people, and a chance to be somebody of worth, importance, and dignity.

The values that people have, the accents, the appreciations, the criteria of moral behavior are derived and evolved in the milieu of environmental forces. To abstract human beings by some technological process from their functional relationship to the world about them with all of its creative persistence would be to abstract them from life itself. They would be robots—automatons—empty shells. The forces around people—children and youth in particular—enter their philosophies, mold their natures, and make them what they are—confident, strong, high-minded, proud, compassionate, and trustworthy—or cruel, treacherous, lazy, unreliable, rebellious, dishonest. The compelling forces of life as they touch individuals on farms, in mines, in suburbs, and in the slums are among the greatest teachers. It is the massive aggregations of cultural forces—economic, psychological, social, physical—sunlight and shadows, beauty and ugliness, frustrations and satisfactions that grasp people and mold them to their likenesses.

Almost suddenly we are in a new age in which values are shifting, an age characterized by new forces—an age in which old and familiar opportunities are wiped out and new ones emerge—an age in which the strong back is much less important than the sharp mind—an age in which people live literally stacked on top of each other in high-rise apartments.

The forces that affect and shape men's lives, that determine how and the extent to which they get along in the world, have become highly complicated, technical, rapidly moving, and efficient. They demand a degree of skill, alertness, and understanding. If these new and powerful forces are to be harnessed and managed to the best interests of all people, integrity and high purpose must be deeply imbedded in the commitments and the actions of all people. Perhaps the greatest challenge to people in this new age is to learn how to manage the creatures of their inventive genius rather than let them become unmanageable forces that crush the lives and spirits of great groups of people.

For a generation school people have estimated the alertness of young people in the schools by an index of intelligence. In a simpler society there was opportunity for people in the lower limits of the intelligence distribution to make a place for themselves in the world. It was these people who provided the strength and stability of neighborhood and community life. They were people of importance. They had a place in the world. They made some contribution to the well-being of the total community.

Through long tradition, American people have been energetic people. Pride in work, in an honest day's labor, is deeply imbedded in the mores of this country. Pride in being master of our own destiny is deeply imbedded in our tradition. Pride in being able to have a home, rear a family, and see our children do better than ourselves has been deeply imbedded in our national purpose.

The United States was founded and has been developed on the basic premise that everybody is important, that everybody has a contribution to make and a fighting chance to develop the best that is in him. Now we are placing great groups of people in circumstances where forces beyond their control overpower them, crush them—deal them out. The people of the country as a whole are aware of it. The action of the Congress in recent years clearly shows the nationwide concern for this awesome problem.

Now in this age, due to forces that are emerging in the total culture, these purposes, traditions, and deep-seated desires for many people are being shaken, trampled, and pushed into the background. The end is not in sight.

The one great hope in dealing with this problem that has emerged from the culture is education. The challenge has been extended to school people throughout the land. How to meet the challenge still remains a question.

The solutions to this great problem will not be found through legislation. They must come out of the creative and imaginative thought of the men and women of this country who are deeply sensitive to the needs of people; who know the feelings, the aspirations, and the disappointments of young people; who understand better than anyone else the processes and factors that are involved in teaching and learning.

This is a wonderful age—an exciting age—an age in which the seed bed is fully prepared for creative thought and new developments. It is impregnated with the spirit that brings a wide opinion of choices and a feeling that human capacities heretofore untouched may be awakened and used for fruitful purposes. The energies which machines have put at the service of man do not and should not strangle him or deprive him of freedom at any point. There is nothing good or bad about a machine; it has no moral qualities. It is only in the manner through which this machine is used or the purposes to which its energies are directed that has moral consequences. These decisions rest with the people. These decisions depend upon widespread understanding, high purposes, and full integrity.

Within the next generation, one could well believe the fact that the earth will literally be made over. Schools will have new structures and a new look. Challenges and opportunities will emerge in greater proportions. Cities will be rebuilt. Production and distribution methods will change.

But there are eternal verities which cannot be grossly violated. Man is an integral part of the wondrous workings of all nature, the water, the air, the land, and all growing things. The inner spirit, deeply implanted in the hearts and minds of all people by the powers of knowledge and reason, which insistently calls for social justice cannot and must not be crushed. If history has taught us anything, it has taught that when injustice is harshly imposed upon people for a long period of time, undercurrents of emotion build up and inevitably erupt in violent explosion. This is a corrective measure that is built into the great processes of all life. It may be the upsurge of a minority group. It may be the rebellious acts of juveniles in the slum sections of a big city or on the university campus. Or it may be the revolt of an individual boy who feels injustice in a classroom of a country school.

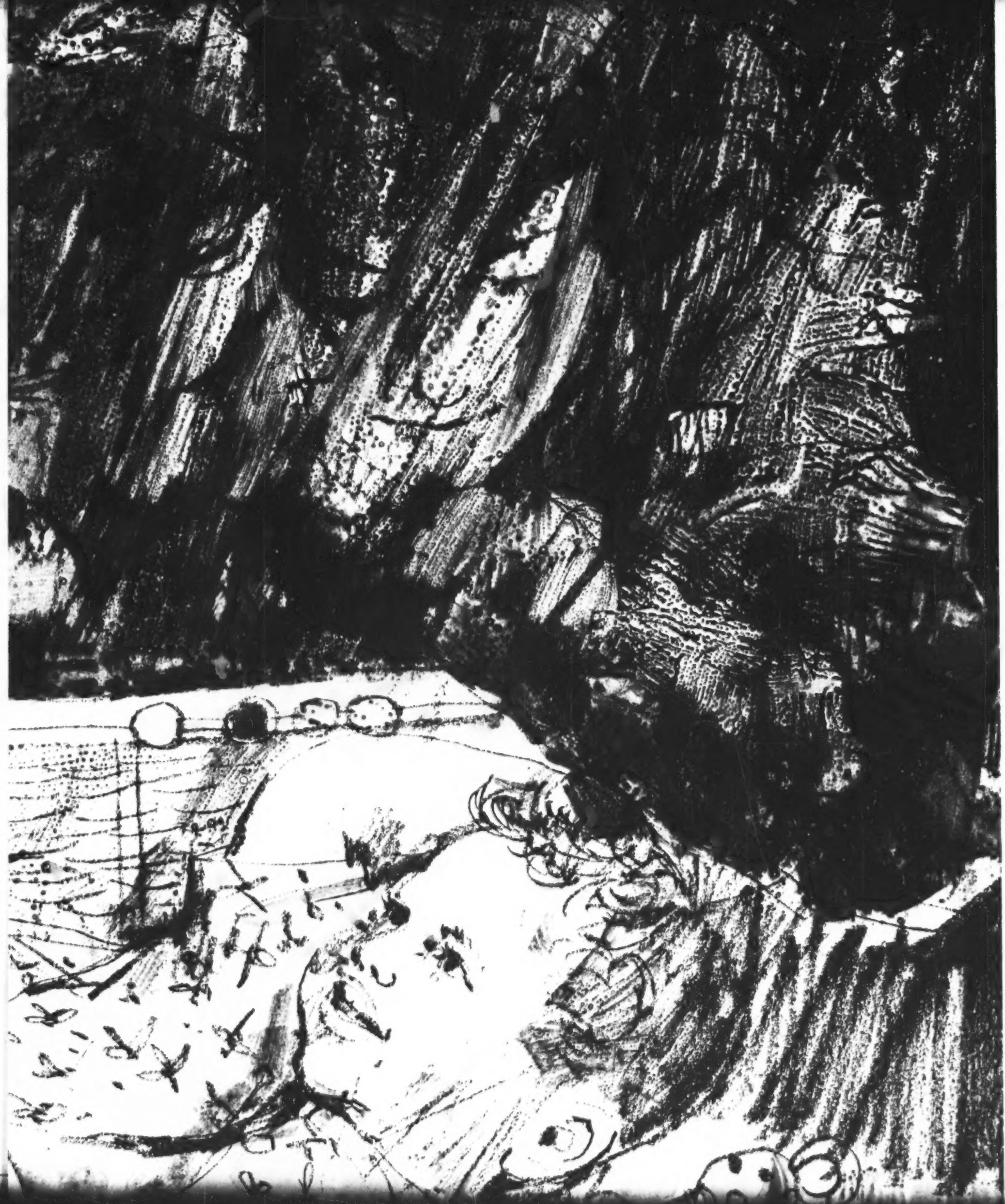
In the great symbiotic relationships of all life and all nature, compensating penalties must be paid for violations of the eternal verities. If man mars the landscape, he is deprived of its beauty. If he pollutes the rivers, he must endure the stench. If he fouls the air with noxious gasses, he must breathe its impurities and pay an awful price in discomfort and disease. If he creates conditions that make living on the face of the earth too hazardous, he must build his habitat beneath the ground. And if the forces of society strip the mantle of human dignity from great groups of people and deprive them from playing useful and meaningful roles in life, corrective measures must and will be taken. If man is to be master of his own destiny, he must accept and carry the responsibility for his actions.

The wondrous change that holds so much promise always seems on the point of getting out of hand. Forces are generated which chafe against the fragile banks of cultural discipline. And there is no assurance that the powerful implements placed in the hands of all leaders for molding public opinion will always be in the hands of well-meaning conscientious people.

One needs only think of how a relatively small group of people, marching along a country roadside near Selma, Alabama, with the eyes of America—and the world—focused on them by radio, television, and daily newspapers, moved the national Congress to enact legislation to safeguard the voting rights of Negro people. No thoughtful and seriously minded person can conscientiously object to the purposes for which this powerful implement was used at this time.

The cultural forces that man has created are for the most part neither good nor bad. They have moral consequences only as they are related to the eternal verities of all life. It is the inward impulse, related to the basic rightness of the use that is made of these cultural forces, that really has significance.

The true destiny of man in this age, as it was in the long ago, is to be sought in how he uses his possessions and his tools and his equipment in a cooperative alliance with the great forces, the Eternal Verities, of all life.



Assumption II

EDUCATING A PERSON FOR THE LIFE HE WILL PURSUE

The Great Emerging Conditions of Life are to be understood and planned for in our current educational program.

A youth's educational program is a **total experience for him,** although it is composed of many experiences including academic and vocational.

Each youth's program should have some common denominators with all other youths' programs. It should have some uniqueness due to diversity in the depth of human skills, abilities, and interests, and due to the diverse and complex needs of society in which the youth lives.

The best educational programs in the years ahead will specialize in providing for the uniqueness of each individual's potential to be a productive person as a worker, as a citizen, as a human being.

As new knowledge multiplies, educators must find new ways to classify, new approaches to discovering basic principles and generalizations, and faster methods of transmitting knowledge and perfecting skills.

Population increases will require significant increases in school staff, school resources, and budgetary support.

Vocational preparation including the performing arts, the humanities, etc., will be as important as the technical courses leading to expert auto repairmen, dental technicians, or stenographers.

This generation may be characterized as "learning a living" throughout a life span.

This learning is related to the whole man—his self-sufficiency, his productivity, his mental health, his well-being, his compassion. His academic and vocational learnings are developmental and are interrelated in the unity of his outlook and actions.

Since the average person will work in three distinct occupations during his lifetime, non-specific vocational learnings may be more important than specific training.

We are woefully ignorant about the points at which unemployability is reversible, and how and when education can reverse this process in a person.

The survival of our democracy—the liberty of free men—may depend more on our massive ability to educate the minorities with deficits—the economically depressed, the culturally deprived, the physically handicapped, the mentally limited, etc. —than on the minority of the intellectually elite.

A Response To Assumption II: How Education Should Fit a Person For The Life He Pursues

A summary of presentation by

Dr. LESTER NELSON, *Educational Consultant, Formerly Associate Program Director, Education Division, Ford Foundation*

In a free society public education is primarily concerned with the individual. In our free society even more than earlier societies, the individual does not live in isolation from society. The character of society is determined by the effect which education has on the individual's attitudes and action, on his motivation to be a learner.

What is done well in the classroom and the laboratory or, perchance left largely undone, profoundly affects the entire quality of personal and social life, the values by which man lives, the things we cherish most, the ends for which men strive.

It cannot be over-emphasized that the primary purposes of our schools, of education, is nothing less than the achievement of free persons in a free society. Decisions affecting education should be firmly tested against this major purpose.

By what criteria is education to make the decisions so urgently demanded by society and by individuals caught up in change?

CRITERION NUMBER ONE

Does the proposed decision or action promise significant extension of equal opportunity for individuals to gain more, better, or more appropriate education?

Extended opportunity for education of higher quality and greater relevance to the individual should be an indivisible concept, resting on the prime educational commitment to the individual as a free man in a society.

The criterion must be applied with flexibility and imagination, not used as a blueprint or bill of particulars. The exercise of judgment in decision-making and action becomes a primary test of skill rather than a simple demonstration of will. The professional challenge, therefore, is to our will and our skill rather than merely our insights and our sympathies.

CRITERION NUMBER TWO

Does the proposed decision or action hold the promise of long-term support for individual motivation toward continued learning as well as more immediate rewards to the individual from current learnings?

A minimum education must combine two complementary levels of achievement and competence. It must include an individual level of developed intelligence and acquired skills requisite for some kind of useful, acceptable and gainful employment. It must also include the development of abilities and motivations requisite for upgrading of initial skills or the acquisition of new skills.

The blight of ignorance and low human aspirations is to be found everywhere. Lack of insight or prejudice are no less a manifestation of ignorance than the lack of knowledge in its more academic form.

The individual who lacks motivation to learn the skills for gainful employment is not a free man in our modern, technological society. In the life-spans of those now in our elementary and secondary schools, the vast majority is most likely to embrace three or more vocational commitments. Each change of this vocational commitment will require additional learnings and new kinds of skill or modifications of existing skills.

CRITERION NUMBER THREE

Does the proposed decision or action maintain a desirable balance between those learnings and skills required by one's vocational commitments and those from which one derives understanding and insights required of the intelligent and contributing citizen in a free society?

All learning seems to be many-sided. Differences in method, timing, content organization, individual backgrounds and a hundred other variables, each unique in a unique situation, support such an assumption.

The balance called for is more than that of equating course labels, one against another, or parceling out time, or the determination of "credits." It involves all of this but it also involves other equally important matters the methodology and quality of faculty, the institutional culture, the degree of homogeneity of the faculty and student body, and others. Desirable balance cannot be established by formula and flexibility is essential.

CRITERION NUMBER FOUR

Does the proposed decision or action move in the direction of tomorrow's probabilities rather than merely today's immediate pressures?

One does not quarrel with the desire of technical education to meet immediate needs but programs limited to this spectrum fail to look ahead as they should.

Just as we have been engaged in distinguishing between vocational, occupational and technical education, we need to take a long, hard look at technical education itself, and arrive at a significantly broader definition and perception. If a technician is properly described as one who works with a professional, then one may ask whether future technicians may not be in greater demand in such fields as teaching, health services and so on, than will be true in the areas of production?

Is it not relevant to ask whether two-year programs for educational technicians may not offer a promising new approach to the problem of professional under-supply in the years ahead?

Three clear implications should be recognized for educating free men in a free society.

A free man must enjoy opportunity for employment as a general condition for economic independence.

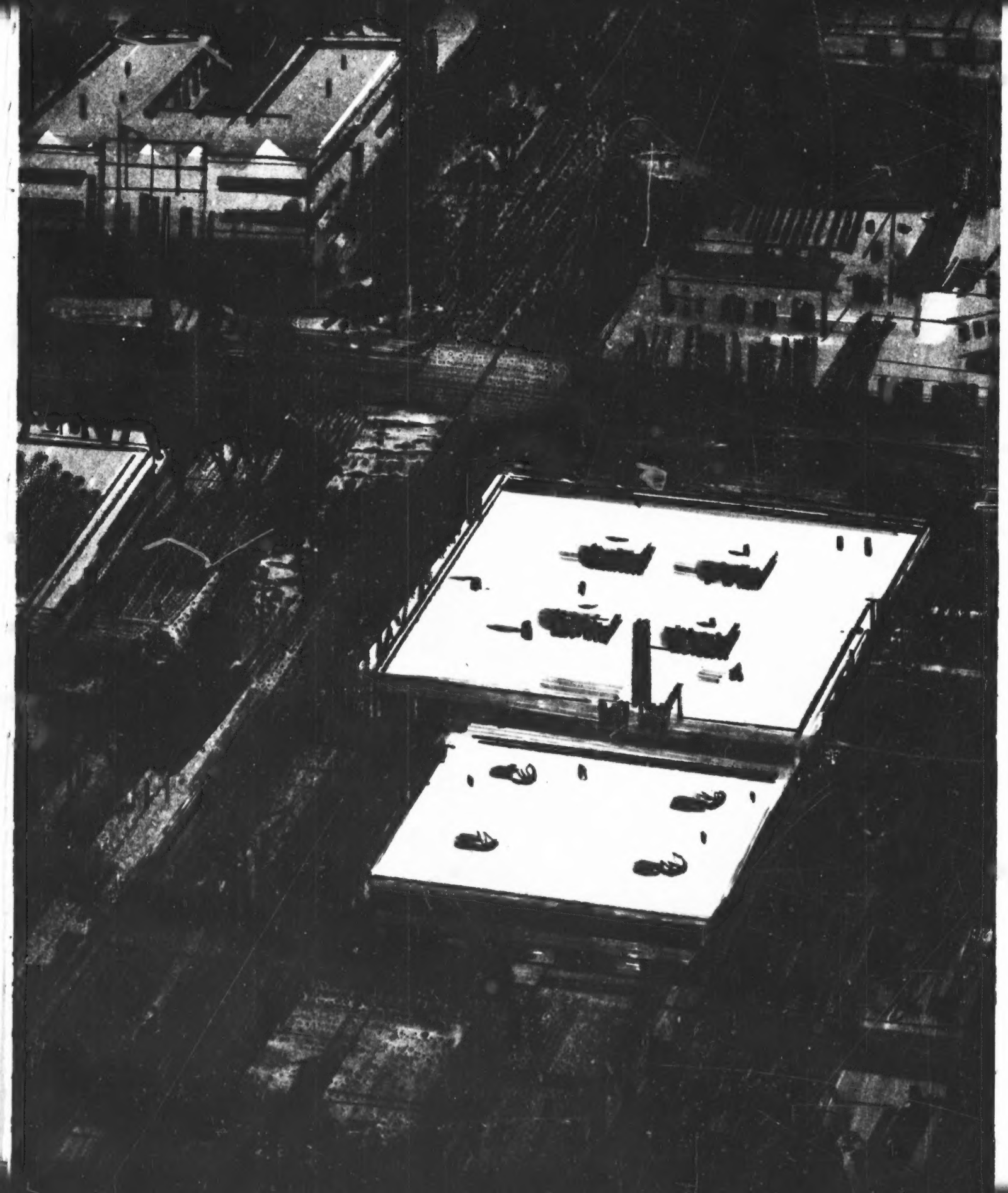
Increasingly the opportunities for employment will be related to new types of activities, especially in providing services.

It is incumbent on those who are responsible for educational actions to test such decisions against the criterion of future probabilities rather than by today's pressures alone.

Better and more appropriate educational opportunities must exist if our youth are to be fitted to pursue a life of individual fulfillment, continuous learning, civic competence and personal freedom in a free society.

Upon the presence or absence of appropriate learning experiences will hang the issue of the individual's educational fitness. The responsible educator may not subscribe to a doctrine of resigned acceptance of what exists. Nor can he satisfy his sense of responsibility or his emotional needs merely by protest. He cannot escape making decisions and engaging in the action. In so doing, perspective is essential. Criteria to guide his thinking and buttress his judgment are required.

Neither individually nor collectively do the criteria listed here provide any answers. Their application will substantially enhance the role of redefinition in education as compared with the role of endless refinement.



Assumption III

NEW DESIGNS FOR ADMINISTRATION OF VOCATIONAL EDUCATIONAL PROGRAMS

Local, area, regional, interstate planning will be necessary to provide top educational programs of vocational preparation.

Communication between local, regional, state and federal officials will be more necessary as a means of transmitting information, creating awareness of changes, and mutual action for improvement.

The structure of regional relationships will be characterized by sensible, economical and practical arrangements.

Administration of such programs will require cooperative relationships, interdependence, extensions of local concerns and responsibilities.

The good school will insure the relatedness of educational and vocational offerings so that correlation of teaching will facilitate the learner's integration of his learning.

The most important vocational courses, grades 1–12, are the basic skills of reading, writing, and arithmetic based on competence to interpret and communicate.

The most important vocational learnings of the school program are those which are transferrable from one job to another or from one level of competence to another of competence within the same job classification.

Vocational education in secondary schools will

be systematically articulated with strong elementary guidance programs, with secondary internships, field work, and with post secondary offerings (adult schools, community colleges, collegiate offerings).

The focus on selecting students for vocational programs will shift to devising programs for students—that is, assisting a student in creating a work-study program for his particular talents and abilities.

The top priority of the administration of programs will be to organize, execute and create schemes for providing conditions of learnings which do not become obsolete.

Continuous re-education of a professional staff to meet the changing conditions of people, occupations, knowledge will be the chief job of the secondary principal.

Of all the occupational groups in the USA, the one in greatest need of re-training is the teacher.

The counselor will be deeply involved in the devising of curriculum programs to fit people, and to use his resources to help teachers assist students in making wise vocational choices.

The curricula program of modern secondary education should be sufficiently diversified and specialized as to satisfy the intellectual and occupational interest and aptitudes of all pupils.

Although many youth should postpone specific education for work until after high school graduation, there are many who can profit most by developing competence in an occupation prior to graduation.

It is unlikely that the ordinary secondary school can meet the unique and diversified interests and aptitudes of all pupils; an area special school can economically and more feasibly meet these needs for some pupils.

The area special school may function best as a subsidiary or a service unit for the several feeder high schools and not as an entity in itself.

The primary over-riding goal of the local and area schools is to release the potentialities of each student, and of similar consequence to relate the special educational enterprise to the educational programs of the home high school.

A Response To Assumption III: New Designs For Administration

A summary of presentation by
Dr. C. TAYLOR WHITTIER, *Superintendent Philadelphia Public Schools*

Education Has A Tradition Of Facing Up To Problems

No longer are problems purely local, nor are they limited to the borders of the state. Education is a national concern. Patterns of cooperation for problem solving extend throughout local and regional areas and the nation.

Leadership And Training Are Essential To The Progress And Development Of Vocational Education.

Leadership is a public function, and should be exercised by the public schools. It is not limited to leadership of higher education seeping down to public schools. Leadership is characterized by a desire and willingness to question what is being done and how to improve it. Changing patterns of education are necessary due to the great increase in knowledge and the number of talented people available to improve things. We should seek answers to what children need rather than defend what we are already doing.

The Most Important Leadership Is Concerned With The Human Element, And A Creative Approach To Releasing The Potentials Of People.

How can we involve our people so they are really able to work creatively?

How can we apply the principles of learning that we already know?

How can we come up with ideas worth trying rather than emphasizing why they won't work?

How can we start early enough with attitudes of children in ways that make a difference? Towards work? Towards people? Towards aspirations?

What kinds of research activities can we learn from? What about the teacher researcher, cooperative training programs, opening doors to invention rather than closing them?

What kind of gatekeepers are needed in education? How do we serve new opportunities and new needs?

Real leadership will respond to the issues in vocational education and will organize training programs to do the job. Such programs will develop through cooperation, not isolation, and through continuous, not sporadic, efforts.

Assumption IV

IMPLICATIONS OF A NEW DESIGN FOR ADMINISTRATORS AND COUNSELORS

Secondary schools of an area or region by pooling their resources may devise vocational, technical, occupational, special interest programs to meet the needs of all students.

These needs may range from one course for a very unique talent or interest to a unified program for the special talents of many whose education may be best provided in one location (due to facilities, machines, specialized instruction).

Extended programs in languages, creative arts, higher mathematics are as necessary for a few as extended programs in mechanics, computers, etc.

The idea of regional cooperation to meet the diverse needs not easily met under the single secondary roof requires team imagination and leadership. It may or may not require the construction of a centralized facility.

If economical or feasible, a program specialization, developed in a local high school could serve all students of the area or region. If more economical or feasible, local students may attend an area facility.

The criterion for the establishment of courses in an area facility should be the needs and interests of the local schools best served by a course or program in that facility. In this sense the area school

truly serves a community; it avoids the stratification of non-college bound youth and it enlarges its services to the total community.

For whatever courses are taught in a separate service unit away from the secondary school, such teaching should be in collaboration with teaching in home high schools. The exchange of faculty ideas, the growth of mutual respect and trust can only be achieved through some working knowledge of each other.

The comprehensive goals of area cooperation should be developed cooperatively among all staff members teaching general education or vocational subjects.

Where an area special school exists, the principals and faculties of all cooperating schools have grave responsibilities for developing flexible schedules, inventing techniques for cooperation, writing and adopting a philosophy that sets goals, roles, relationships, and machinery.

In the larger context of area cooperation, new roles are assumed by principals, counselors, teachers of the home school and the area school, students, and parents.

What is educationally desirable for students should be made administratively possible.

Geographical distance should not create educational separation.

A Response To Assumption IV: Implications For Administrators And Counselors

A summary of presentation by
Dr. NATT BURBANK, *Professor of Education, Lehigh University, Bethlehem, Pennsylvania*

A principal and his staff face some specific assignments as they move forward in the vocational field. First in importance is the necessity to build understanding on the part of the superintendent and the school board. The challenge to the principal and his faculty leaders is to envision and implement a pattern of secondary education which provides sound college preparation and a respected program of pre-employment or pre-technical training for all others.

The principal needs to learn how to use the vast resources available at local, state, and national levels to help in the formulation of this program. Industry, labor, business and government can be of important assistance. The advice of industrial leaders will give clues as to the types of training and re-training needed, and to kinds of training undertaken by industry.

COUNSELING WILL CHANGE

The attitudes and understandings of counselors are basic to success in this educational undertaking. Counselors will need to learn more about vocational education, its changing philosophy, its methods, and its requirements. It will be necessary to know about other training agencies, several of which may not be under public school direction. There are broader responsibilities for junior high school guidance counselors as well as senior high counselors. Students are entitled to unity in counseling and we should see that they get it. Every principal and counselor will be emersed in placement activities. Job placement is as related to the aims of guidance as college placement.

SECURING QUALIFIED TEACHERS

The search for well qualified teachers is likely to provide as much concern as any of the administrative problems. The rapid extension of technological change into the school curriculum has outstripped in quantity many of the teacher education programs in this field. Many industries are so interested in this movement that they will loan professional and technical personnel to the schools. Colleges and universities will need to provide superior preparation so that their product can carry out the program which vocational leaders envision for them.

BROADER EMPHASIS IN CURRICULUM

As teachers, counselors, administrators, school board members and resource people work on this vast educational pattern, a change of emphasis will certainly take place. We will move forward into the "cluster of occupations" approach, where broad group lines will be drawn. Work-study programs will be a part of any good vocational curriculum.

There will also be a place for top students to studv courses which can hardly be afforded in individual schools. It is not beyond reason to envision classes in Chinese and Swahili, advanced placement groups, or reading improvement studies for good students who want to read faster and better.

There are numerous curriculum issues to be met. New subject matter is required at every turn. The Carnegie Unit raises its head as the time allotments are laid out. New methods will be needed

to measure student competency. Other administrative issues to be met include scheduling, transportation, and co-curricular activities.

COORDINATION WITH OTHER EDUCATIONAL OFFERINGS

There is a great need for close coordination of the high school vocational program with the community college, the technical institute, and other agencies involved in the preparation of youth for employment. It is incumbent upon all parties in the field of vocational education to work closely and cooperatively with one another so that there may be no necessary and crippling duplication of facilities or programs.

EARLY NEED FOR FACILITIES

Of greatest importance is the question of planning facilities for new programs. It is imperative that those who lead the way be fully aware of the new dimensions of vocational education. Resources from within and outside the community are indispensable at this stage. It is fortunate to have an architect who is full of creative imagination and who will be champing at the bit to move ahead.

ADULT EDUCATION

Much of the training and re-training of adults and out-of-school youth will be done in day school vocational facilities. Such instructional spaces and equipment should be used as intensively as possible. Community interest and welfare demand that the needs of all citizens be served in the structures which have been financed by all taxpayers.

HELP FROM PUBLIC AGENCIES

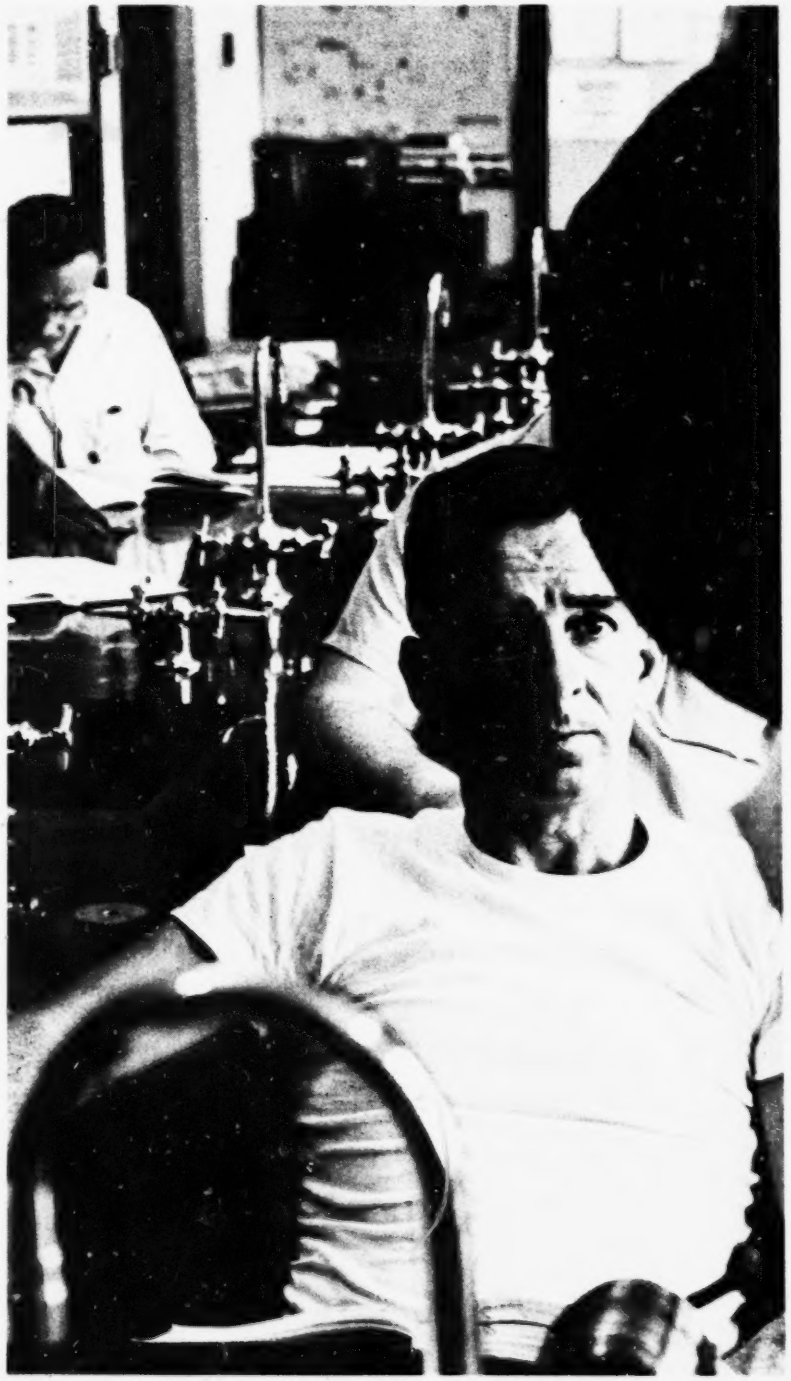
Government agencies at all levels, both inside and outside public education, can help school authorities in the formulation of a vocational program. The United States and State employment services provide helpful analyses of the labor market and job placement. The school must be more externally oriented, so that it can respond quickly and accurately to conditions which change with greater and greater rapidity.

MORE RESEARCH NEEDED

Among the considerations governing long-range objectives is the need for more and better research in the field of vocational education. Money is available in substantial amounts for this purpose.

COOPERATION IS ESSENTIAL

New vocational education is going to be one of the major threads of our American educational system. The daily working cooperation between the high school and the vocational school must be complete and pervasive at all echelons of responsibility. For example, regular planning sessions should be scheduled for all principals and the top personnel of the vocational school to which they send their students. The essence of this relationship is found in the joint responsibility for the students. All are serving and should govern their actions accordingly. We have faced staggering problems in the past and solved them. We can do it again, so that the waves of youth flowing through our schools in the coming years can be well prepared for productive and satisfying employment in a vastly different kind of work world.



Continuity Through Cooperation

A summary of presentation by
Dr. CHARLES ROLLINS, *President*
Bucks County Community College

In addition to a population explosion and a knowledge explosion, we are experiencing an education explosion. No longer can we ignore continuity in and coordination of the various segments of our total educational system. Our children are now going to school at an earlier age and staying in school longer. During 1910 to 1960 the enrollment of five and six year olds almost doubled, the enrollment of 16 and 17 year olds doubled, and the enrollment of 18 and 19 year olds more than doubled. By 1970, the average American adult will have received a high school education. In the decade from 1950 to 1960, there was an increase of 25 percent in the number of college graduates in our nation.

The problems we face in education are great enough, and the demands placed upon our educational system are of such magnitude that it is imperative for us to evaluate what we are doing. We dare not consider the various phases of education as discrete or as segments of educational systems. Rather than assigning lowest value to the beginning school experiences and top stature to collegiate preparation, we face one overriding imperative—that of quality in all portions of our educational endeavor. Quality cannot be segmented; we cannot concentrate on providing only an outstanding community college program. We must concentrate on excellence throughout our educational program.

In teaching on all educational levels, effectiveness is achieved neither through chance nor magic. Effectiveness in teaching results from a happy combination of common sense, knowledge of subject, teaching skill, enthusiasm, force of personality, artful judgment, and much hard work. Superior teaching dwells not in the things of education but rather in its spirit. Great teachers have always enjoyed giving service to others. We are on the growing edge of knowledge and we must bend every effort to transmit this knowledge to the younger generation as efficiently as possible—which means we must cooperate and coordinate our efforts. We must function as an educational team for on the results of our efforts rests the future welfare of our nation.

Looking Ahead to New Horizons in Pennsylvania

Patterns For Providing Vocational Education

From comments by
Dr. JOHN W. STRUCK, *Director*
Bureau of Technical and Continuing Education
Pennsylvania Department of Public Instruction

Vocational education begins in the elementary school when pupils explore job families, and the work of their parents and their neighbors. Emerging interests and talents individualize each pupil.

In secondary schools, several patterns for providing vocational education include the comprehensive high school, and the Area Vocational Technical School. Community colleges, post-secondary courses, technical institutes, adult schools offer further continuity to vocational education. All of these institutional arrangements contribute offerings for the diverse interests of students and the diverse needs of society. They shorten the distance between the boy and the job.

Making The Local High School Comprehensive Through Area Vocational-Technical Education

From comments by
Dr. CARL MANONE, *Assistant Superintendent*
Abington Schools
Abington, Pennsylvania

Increasingly schoolmen are thinking of the comprehensive school in broad terms. They perceive the area technical school as a part of their own educational park or campus. The fact that several miles or a twenty or thirty minute bus ride is involved does not violate their philosophy of presenting a unified program for the student's total development. Many of these schoolmen feel that the area technical school is a rich and available "off-campus" resource that allows their own schools to be truly comprehensive — to provide for the non-college student a specific program of study and shop experience that prepares him more fully to take a productive place in the community where he will work and live. An area program can provide for larger enrollments, more course offerings, better scheduling, more specialized and up-to-date equipment, a more competent staff, and lower per pupil costs.

Extending The High School Curriculum Through Area Cooperation

From comments by
Dr. DIMITRO BOURANDAS,
Assistant Superintendent
Mr. RICHARD HOWARD,
Assistant Senior High Principal
Neshaminy High School, Langhorne, Pennsylvania

Gone are the days when a school was merely judged by the number of students it was sending on to college. Today, in greater accord with the Constitution of our country, the criterion of our time is how well we are achieving the maximum development of each child, regardless of IQ, motivation, behavior, race, religion or sex.

In 1964 Neshaminy became a participating member in the joint venture between certain high schools in this area and the Lower Bucks Technical School. A pattern of district cooperation has been

fostered in Bucks County through the regional film library, exceptional children programs, etc. Neshaminy Senior High School has a student body of 2300 in grades 10 through 12. Neshaminy initiated its program with 45 sophomores; over 200 senior high students desire to participate next year. Curricula offerings are available in such areas as automotive repair or mechanics, beauty culture, building trades, technical electricity, drafting, industrial chemistry, printing, machine shop, restaurant practice and welding. Students are admitted to trade and technical courses by virtue of their interest, ability, and aptitude as well as their previous academic record. Students may choose to be in the technical and vocational curricula starting in the 10th grade. Some openings in certain areas occur in the 11th grade and a few in the 12th grade.

In Neshaminy the four teachers who initiated this program were from the science, English, social studies and math departments. These classroom teachers accepted their pupils as individuals, all different, all important. The feeling of the teacher for inividual pupil is the keystone to guidance (and the subsequent success of a technical-vocational program). If such a value is not present, the administration might as well save its investment in the program.

Staff members who initiated the program met with a counselor and an assistant principal during the school year. They spent a day at the Technical School. They visited most of the classes at the Technical School, talked with their own students and their teachers. They lunched in the cafeteria where they were served food prepared by their students. At the Technical School, Neshaminy teachers were surprised to see how absorbed and how self-directed their students were.

In these meetings for Neshaminy teachers many curricula problems were discussed. Their solutions constitute the strength from this experience. Does a welder need to read Macbeth? Do we evaluate students' progress in terms of achievement or effort? With encouragement teachers have devised flexible course guides in the different subject areas which give common direction to many Tech students. The teachers mentioned that many Tech students felt neglected in aspects of school life, such as pep rallies, assemblies, class meetings. Steps are underway to improve this situation.

Neshaminy hopes that its cooperation with the Area Vocational-Technical program will establish with each student a genuine feeling of social responsibility, instill a genuine respect for the dignity of work, help each student acquire a saleable skill, and encourage each student to complete high school. Neshaminy's participation is based on the premise that its local industrial arts and home arts programs have been extended and amplified. It is based on the premise that our youngsters are receiving learning experiences designed to fulfill their special needs, learning experiences which we could not provide at our home school without a vast investment program in special staff, additional facilities, and costly equipment.

Responsibilities For Leadership In Area Cooperation

From comments by

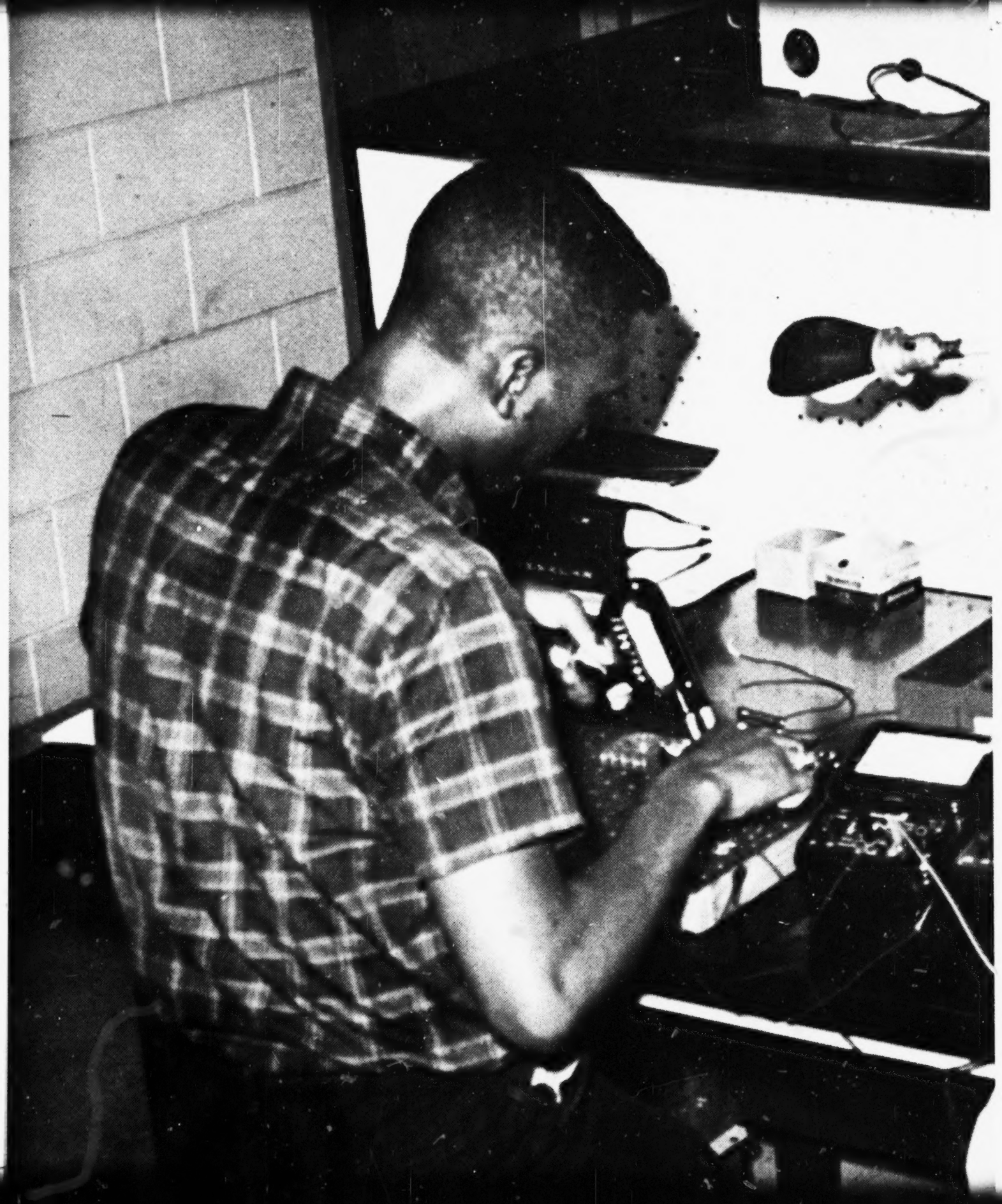
Dr. HALLECK SINGER, *Director*
Vocational Teacher Education
University of Pennsylvania

What seems to be needed is preparation for the long-haul demands for occupational education not by a few school systems but rather by all school districts in all states. The overwhelming academic desire to prepare for college, which doomed the "academy" and has limited the high school in achieving its broad objectives, must make room for vocational education. A high school curriculum which meets the need of only one third of the population does not meet the needs of a nation. Broad vocational programs in secondary and in post secondary schools should prepare eight of ten pupils for the world of work.

What basic convictions should principals and counselors hold toward vocational education? Here are six convictions.

The honest work of the world **is honorable** and the preparation for such work must be honorable also. Vocational education is an **integral part** of the total education program. Vocational education is a **sound investment** in people. **Comprehensive programs** of vocational education should be available for all students who would benefit. **A broad spectrum** of offerings in vocational education is needed in order to provide for students' talents. Vocational education should **foster diverse talents** of students who will enter the emerging diversity of jobs in the world of work.

Vocational-technical programs must provide for a wide variety of occupational skills. Any vocational program of fewer than ten activities is probably inadequate. A more desirable number would be twenty, and large programs have fifty or more activities. When possible, each vocational course should be offered on more than one level of difficulty. All vocational students should have a good background in English and social studies. The length and depth of the courses should be flexible. Technical level subjects may need depth in mathematics and science while operative subjects do



not require as much general knowledge and skill in such subjects.

Cooperative Machinery To Organize Area Programs

From comments by
Mr. ROBERT JACOBY, *Supervisor*
Technical and Industrial Education
Pennsylvania Department of Instruction

Although certain types of vocational education have functioned well in individual high schools, other types of programs have functioned better with an area base for enrollment and curriculum development.

The characteristics of a successful area program are listed below.

> A well-designed attendance area outlines the geographical area of school districts and pupils to be served. An Area School should be planned to accommodate a minimum of five hundred pupils, so that a minimum of 12 shop-laboratory courses can be provided to accommodate boys and girls. A comprehensive shop and laboratory curriculum should provide for the varied interest and ability levels of pupils. Courses should be provided on three instructional levels. One of the main differentiating characteristics of the three levels of courses is the degree of mathematics, science, and technology involved in the occupation.

As of 1965, the Pennsylvania State Board for Vocational Education has approved 69 Attendance Areas in 51 counties. Of 12 recently approved programs, eight are in the eastern, one in the central, and three in the western sections of Pennsylvania.

Nine programs are planned for part-time service centers, and three programs are planned for full time schools.

In Vocational-Technical-Occupational Education, Who Is The Learner?

From comments by
Dr. CARL MANONE, *Assistant Superintendent*
Abington Schools

The learner is a young man or woman, generally of high school age, who by interest and aptitude can profit from a particular program offered by a vocational-technical school. The learner is interested in a specialized and saleable skill that will balance his general education, and which at the same time will give him the specific skills and knowledge needed to find employment in the world of work. The learner may be a person of very high intelligence who prefers a two, three, or four year technical education rather than a four-year degree program. He may, by virtue of interest or aptitude, be interested in pursuing an occupation where the academic requirements are less demanding. In any event, the learner is not a stereotype or simply defined individual. Rather, he is as diverse as humanity on the one side, and the wide array of jobs that invite his head and hands on the other.

From comments by
Mr. GEORGE M. SCHAFFER, *Principal*
Lower Bucks County Area
Vocational-Technical School

The learner may be an adult who wants to upgrade or update his working skills. Experience shows that adult enrollment in classes equals or exceeds that of secondary classes. The adult learner may be unemployed and need a short intensive retraining period in operative work. The learner may be retraining for skills which are currently required in his work. The learner may be a high school dropout who wants to obtain a skill and to gain a diploma. The adult learner profits from close cooperation between the area school and training in industrial facilities, and apprentice programs, etc.

From comments by
Dr. DONALD DIFFENBAUGH,
Assistant Superintendent
Montgomery County

Dr. N. DEAN EVANS, *Assistant Superintendent*
Delaware County

Mr. WILLIAM E. KEIM, *Principal*
Pennridge Senior High School

Do students desire this type of vocational education? County wide surveys indicate that in some counties 69 per cent of high school students desire some type of occupational training. Great opportunities now exist in planning programs to meet the needs of each individual learner. Learners are developing techniques which will help them with lifelong plans and decisions. With renewed impetus, educators are building curriculum programs with more flexibility and diversity.

Devising Curricula Experiences At Three Instructional Levels

From comments by
Mr. HAROLD B. ALBRIGHT
Director of Vocational Education
Montgomery County Schools, Pennsylvania

Instruction in the automotive trades may be offered at three levels.

The **technical** level is directed towards determining electronically the mechanical malfunction of the various parts of a car.

The **skilled** level provides training in the repair and maintenance of the engine, ignition and braking system, or training in auto body repair, the rebuilding and refinishing of automotive bodies.

The **operative** level provides training in maintaining automobiles, cleaning, balancing, checking, lubricating, etc.

A student through cooperative guidance and instruction can move through automotive training on the level which interests him and in which he can be successful. As basic interests are satisfied, new interests are developed and he takes the next step up the stairway of vocational preparation.

Organizing Curricula Offerings For Students

From comments by
Mr. REX E. WRIGHT, *Area Coordinator*
Industrial Education
University of Pennsylvania

Four types of curricula organization are underway in 13 new schools in southeastern Pennsylvania. These types of organizations include: part time half day for shop-lab or general education, part time week for shop-lab or general education, modified full time vocational school, modified academic school, full time vocational school or full time academic school.

Organizational arrangements should be supportive of educational objectives. An instrument for rating advantages and disadvantages of various arrangements is available through University of Pennsylvania.

Can We Afford Area Cooperative Vocational-Technical Education?

From comments by

Mr. FRED H. GLANDING, *Senior Coordinator Vocational Education University of Pennsylvania*

Pennsylvania Act 463 and Federal Law 88-210 have added many incentives. This legislation provides resources to assist in organizing a program, building and equipping a facility, and school operation. Cost figures from five buildings currently under construction indicate that local costs are 20 to 25 percent, while state and federal resources provide the remaining funds. For additional information, see a study listing state and national benefits to local schools published by Bucks County Board of School Directors, 1965.

Re-educating Professionals About Vocational Education

From comments by

Dr. THEODORE J. COTE, *Program Specialist Division of Vocational Technical Education United States Office of Education*

Vocational education is an investment in future taxpaying citizens.

Area cooperation insures broader offerings supported by a larger tax base.

Job placement is as important an outcome of education as college placement.

Talents and interests of students and needs of society provide the basis for program development. Teachers can see vocational choice as one aspect of general education.

Guidance helps pupils act on their obvious gifts and discover their latent ones. Many avenues of assistance are available to communities through federal and state legislation.

Keeping Up-To-Date Professionally In Vocational Education

From comments by

Dr. EDWIN L. RUMPF, *Assistant Deputy Director Division of Vocational and Technical Education, United States Office of Education*

Can we rediscover America — its purposes, its dreams, its promises for every human being? Much depends on what we believe in. Leadership in vocational education takes many forms on many levels. Professionals will find the following sources and surveys helpful in examining goals and programs.

Conant, James Bryant, *Shaping Educational Policy;* New York: McGraw-Hill Book Co., 1964.

Harbison, F. & Meyers, C. A., *Education, Manpower and Economic Growth;* New York: McGraw-Hill Book Co., 1964.

Harbison, F., *Manpower and Education;* New York: McGraw-Hill Book Co., 1965.

Okun, Arthur M., *The Battle Against Unemployment;* New York: W. W. Norton & Co., 1965.

Venn, Grant, *Man, Education and Work;* Washington, D.C.: American Council on Education, 1964.

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American Vocational Journal, "The Role of Advisory Committees in Strengthening Vocational Education"; Washington, D.C., May 1965.

American Vocational Journal, "Preparing Youth for Jobs in Industry"; Washington, D.C., April 1965.

Bucks County Public Schools, *Vocational-Technical Education in Perspective;* Doylestown, Pa., 1965.

Bucks County Public Schools, *School Board Seminar Proceedings on The Study of Vocational Needs in Central Bucks County;* Doylestown, Pa., 1965.

Bucks County Public Schools, *Board of School Directors and Local School District Joint Study to Determine Philosophy, Program and Cost for An Area School;* Doylestown, Pa., 1965.

Bulletin of the National Association of Secondary School Principals, "Education and Automation, the Coming World of Work and Leisure"; Washington, D.C., November 1964.

Bulletin of National Association of Secondary School Principals, "Vocational Education, Time for Decision"; Washington, D.C., May 1965.

Phi Delta Kappan, "The Swing to Vocational-Technical Education"; Spencer, Indiana, April 1965.

Bridging the Gap Between New Horizons and Present Practices

The Conference As A Springboard

The conference offered many opportunities for each participant to examine the paths by which his school district might be more successful in achieving its goals for vocational education. As practical schoolmen, participants were concerned with closing the gap between knowledge and action, commitment and accomplishment. One of the conference experiences which demonstrated a way to close the gap was a field trip to a home high school and its area vocational technical school.

Throughout the conference, seminar discussions provided participants with opportunities to examine the ideas presented in the conference sessions. Group chairmen and recorders who provided leadership and continuity for the seminars are recognized below.

Group I — *Chairman,* Mr. George Elison
Director of Vocational Education
Allentown Public Schools
Recorder, Mr. Raymond Gutekunst
Area Coordinator
Industrial Education
University of Pennsylvania

Group II — *Chairman,* Mr. Clair Fitz
Senior Area Coordinator
Industrial Education
Pennsylvania State University
Recorder, Mr. Clyde Messinger
Area Coordinator
Industrial Education
University of Pennsylvania

Group III — *Chairman,* Mr. Merrill I. Hughes
Director
Vocational-Technical Education
Delaware County Public Schools
Recorder, Mr. Bryan V. Fluck
Principal
Area II Vocational-Technical School
Montgomery County Schools

Group IV — *Chairman,* Mr. Charles F. Middleton
Assistant Director
Vocational-Technical Education
Delaware County Public Schools
Recorder, Mr. Daniel I. Farren
Principal
Lehighton Area High School
Carbon County Public Schools

This section of the Conference Report presents a summary of participants' promising suggestions regarding key ideas and actions. The suggestions came from discussions of the field trip, from reports of seminar recorders, from written suggestions from more than half of the participants, and from many informal comments.

The Conference Sponsors have also provided a statement regarding the followup of conference outcomes.

Promising Ideas As Seen By Participants

The Importance of a Point of View Regarding Vocational Education —

the dignity of any job essential to Man's welfare, any useful work is honorable if well done.

Vocational Education as a Common Goal for All Students —

as developing talents of each student,

as personal fulfillment of the student,

as adequate preparation for life's work (including college preparation),

as developing employable skills.

Equality of Opportunity for Vocational Preparation —

the broadening of the curricula offerings,

the need for effective counseling,

the importance of the goals and attitudes of students.

The Changing Role of Vocational Education as a Challenge to Educational Leadership —

the common search of school districts for principles and practices,

building support by working with the power structure of the community,

interpreting the new image of vocational education,

the re-education of the teachers (academic and vocational) and their need to be informed.

The Area Vocational-Technical School — A Service to Youth and Adults —

evidence that it can and does work,

a function of the home high school, extended into another facility,

a response to the adult's need to have further training,

not a panacea for all problems.

Research Needed —

identification of choices made by students at various ages regarding occupational interests,

a re-examination of the role of testing (talents, aptitudes, etc.),

more knowledge about student's goals and motivations,

more evidence about outcomes of various administrative designs and arrangements.

Promising Suggestions For Action By Participants

Local school leaders should from a "New Horizons" point of view —

re-evaluate programs of vocational education,

secure qualified assistance in assessing present programs,

involve principals and counselors and teachers of home high schools in shaping area programs of vocational education,

visit effective programs so that local teams can see how programs work,

investigate how school youth feel about preparation for work, their aspirations and their goals,

re-examine systems of awards (marks, cups, emblems) regarding successful school work,

re-examine scheduling of students and courses to provide maximum flexibility,

develop strong programs of guidance including interpretation to parents,

re-examine vocational aspects of elementary programs and re-evaluate the role of the junior high school in occupational preparation,

re-evaluate teaching of the academic subjects (English, mathematics, reading, writing) as key vocational courses,

improve instruction in academic areas and relate them to vocational preparation,

assist professional growth of teachers in educating all youth,

examine relationship of school offerings to job opportunities on the local level and throughout the state.

Regional and state school leaders should —

foster workshops for principals and counselors regarding motivation and talents of students,

foster workshops for academic subject teachers regarding correlation of teaching with vocational preparation,

assist in the development of secondary curriculum programs on three levels of difficulty, with special attention to the low average student, the needs of girls,

assist in training local leaders to interpret to the community the new role of vocational education, to change the image of the "second class" school,

assist in the sharing of practices re: student selection, schedule flexibility, a series on "How We Did It" by experienced administrators,

re-examine state mandates such as teacher certification and preparation for emerging vocations,

assist in fostering needed legislation to enable all pupils to have equal opportunities,

foster regional cooperation with training programs of universities and training and research activities of industry to assure forefront thinking in vocational education.

Following Up The Outcomes Of The Conference By Its Sponsors

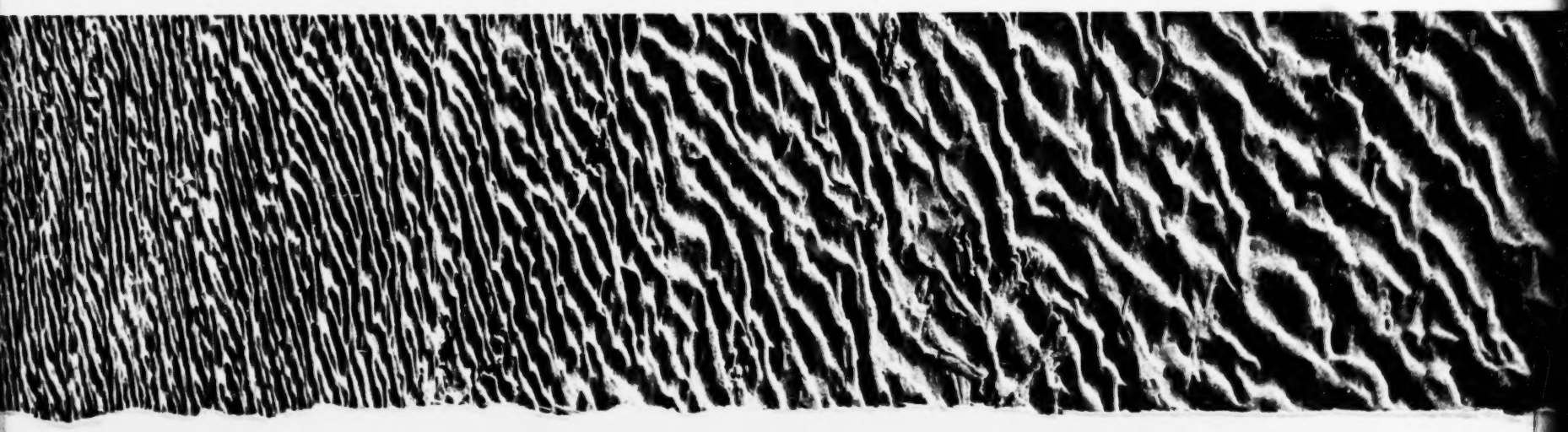
The Sponsors of the Conference pledge their cooperation in implementing in as many ways as possible the ideas and suggestions of the conference participants. Plans are underway for three specific actions during 1965.

The development of a publication showing a profile of the idea of area vocational-technical education. Such a pamphlet will show the relevance of general and vocational education to each other from kindergarten through the university, the institutional arrangements which foster such education, and techniques and methods used to establish such programs. The pamphlet will serve as a useful tool for communicating with various leadership groups.

Regional followup by the Department of Public Instruction with local school personnel regarding questions of local interest raised during the conference. Area coordinators of vocational-technical education plan to follow up questions of long range interest with local personnel. Through close cooperation local administrators can extend their horizons with local and regional planning.

A followup conference regarding the deeper meaning of vocational education, obstacles to progress, the continuity of education kindergarten through the university for the world of work, and leadership roles which facilitate opportunities for all youth.

How far will you cast your influence?



County Superintendents And Seminar Participants

NAME OF PARTICIPANT	POSITION	SCHOOL DISTRICT
William B. Herbein (Dr.)	Superintendent	Berks County
John W. Ebling	Principal	Hamburg Area Jt.
Laura L. Lannon (Mrs.)	Guidance Counselor	Kutztown Area
Leroy K. Lauck	Asst. Superintendent	Berks County
John H. Schrack	Guidance Counselor	Governor Mifflin Jt.
W. T. Shannon	Principal	Governor Mifflin Jt.
Jane M. Yoder (Mrs.)	Guidance Counselor	Hamburg Area Jt.
George E. Raab (Dr.)	Superintendent	Bucks County
Jacob Azain	Principal	Centennial Jt.
Orphia C. Chelland (Miss)	Guidance Counselor	Bensalem Twp.
M. Carlton Chew	Guidance Counselor	Neshaminy Jt.
Gerald E. Detwiler	Chairman, Dept. of Industrial Education	Central Bucks Jt.
Paul R. Detwiler	Guidance Counselor	Pennridge Jt.
James H. Fischer	Principal	New Hope-Solebury
Willard H. Fluck	Guidance Counselor	Palisades Jt.
Richard Hagele	Guidance Counselor	Bristol Twp.
Eugene Harris	Guidance Counselor	Centennial Jt.
W. Donald Henry	Principal	Pennsbury Jt.
Richard R. Howard	Asst. Principal	Neshaminy Jt.
John Koleser	Guidance Counselor	Bensalem Twp.
Mae L. Light (Miss)	Guidance Counselor	Central Bucks Jt.
R. Kenneth Pierce	Principal	Bristol Twp.
Thomas H. Ramsay	Asst. Principal	Bensalem Twp.
John E. Reed (Dr.)	Asst. Superintendent	Bensalem Twp.
Carl F. Richter	Guidance Counselor	New Hope-Solebury
Joseph W. Rohrbaugh	Principal	Council Rock Jt.
Robert Rosenkrance	Reg. Superintendent	Pennridge Jt.
Robert K. Shafer	Superintendent	Bensalem Twp.
Russell C. Struble	Principal	Bensalem Twp.
Blaine A. Strunk	Principal	Pennridge Jt.
Donald Tosh	Guidance Counselor	Pennsbury Jt.
Harry Verdier	Guidance Counselor	Council Rock Jt.
Stuart E. Prutzman (Dr.)	Superintendent	Carbon County
Michael A. Bonner	Guidance Counselor	Lansford Boro
R. Newton Davenport	Asst. Superintendent	Carbon County
R. F. Dubs	Principal	Jim Thorpe Area
Thomas Foley	Guidance Counselor	Jim Thorpe Area
Ernest G. Koegel	Guidance Counselor	Lehighton Area Union
George W. Pyle	Principal	Palmerton Area
Reid Rahn	Principal	Weatherly Area
James O. Tule	Director, Vocational-Technical Education	Carbon County
John D. Williams	Principal	Lansford Boro
Webster C. Herzog (Dr.)	Superintendent	Chester County
Paul J. Bove	Guidance Counselor	Avon-Grove Area
Robert Bowman	Guidance Counselor	Coatesville Area

NAME OF PARTICIPANT	POSITION	SCHOOL DISTRICT
Walter E. Funk	Principal	Coatesville Area
James E. Johnson	Principal	Avon-Grove Area
Lawrence F. Nelson	Guidance Counselor	Oxford Area Jt.
Robert I. Rentz	Principal	Octorara Area
Meade W. Shuman	Guidance Counselor	Octorara Area
Edward V. Topping	Principal	Oxford Area Jt.
G. Baker Thompson (Dr.)	Superintendent	Delaware County
John K. Barrall	Principal	Media Boro
Mary H. Carter (Mrs.)	Principal	Radnor Twp.
Bruce B. Dimmick	Guidance Counselor	Marple-Newton Jt.
Martha Donaldson (Mrs.)	Guidance Counselor	Sharon Hill Boro
Peter Flaga	Guidance Counselor	Media Boro
David Heckman	Asst. Principal	Haverford Twp.
Margaret G. Janson (Mrs.)	Guidance Counselor	Radnor Twp.
George Leute	Guidance Counselor	Haverford Twp.
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William Nye (Dr.)	Principal	Marple-Newton Jt.
Joseph Piorkowski	Guidance Counselor	Rose Tree Union
Henry L. Rosse	Guidance Counselor (Eddystone Voc.-Ind. Ed.)	Lansdowne-Aldan Jt.
Louis Scott	Principal	Rose Tree Union
Linford Werkheiser	Principal	Sharon Hill Boro
Peter M. Mensky (Dr.)	Superintendent	Lackawanna County
Edward S. Helcoski	Guidance Counselor	Taylor-Moosic Jt.
Gerard F. Joyce	Principal	Scranton City
Patrick McCabe	Guidance Counselor	Scranton City
Robert D. Muzzi	Vocational Advisor	Lackawanna County
Patrick C. Riviello	Principal	Taylor-Moosic Jt.
Harry K. Gerlach (Dr.)	Superintendent	Lancaster County
C. Daniel Biemesderfer	Asst. Superintendent	Lancaster County
A. Landis Brackbill	Principal	Penn Manor
George F. Broske	Guidance Counselor	Hempfield Union
John D. Day, III	Guidance Counselor	Donegal Union
Paul C. Ehrhart	Guidance Counselor	Penn Manor
John A. Greer	Guidance Counselor	E. Lancaster Co. Jt.
John G. Hart	Principal	Donegal Union
Kenneth W. Hoover	Principal	Ephrata Union
C. Wendell Hower	Principal	Manheim Twp.
Mary S. Kammerer (Mrs.)	Guidance Counselor	Lampeter-Strasburg Union
S. Ernest Kilgore	Director of Guidance	Lancaster City
Paul Lauderman	Guidance Counselor	Manheim Twp.
Leroy M. Nissley	Principal	Hempfield Union
Joan L. Riehl (Miss)	Guidance Counselor	Warwick Union
Robert W. Rill	Principal	Conestoga Valley
Kenneth J. Samdra	Guidance Counselor	Ephrata Union
Donald E. Sheaffer	Principal	E. Lancaster Co. Jt.
Richard D. Sherr	Guidance Counselor	Conestoga Valley

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Marlet E. Springer	Vocational Director	Lancaster City
Harold W. Swisher	Principal	Warwick Union
Paul B. Wilson	Principal	Lampeter-Strasburg Union
Foster G. Ulrich (Dr.)	Superintendent	Lebanon County
Frederick C. Bomberger	Guidance Counselor AVTS	Lebanon County
Frank E. Brenner	Asst. Superintendent	Lebanon County
Elvin Fake	Guidance Counselor	Annville-Cleona
Russell S. Fornwalt	Guidance Counselor	Lebanon City
Charles E. Gaskins	Principal	Lebanon City
Richard H. Gingrich	Principal	Annville-Cleona
Frederick W. Lantz	Guidance Counselor	E. Lebanon Co. Jt.
Edwin J. Larson	Director, AVTS	Lebanon County
George O. Ritchey	Guidance Counselor	Palmyra Area
Ross W. Watts	Principal	Palmyra Area
Walter W. Wertz	Principal	E. Lebanon Co. Jt.
Frank A. Leidich (Dr.)	Superintendent	Lehigh County
Paul J. Frantz	Principal	East Penn Union
Joseph J. Gereneser	Guidance Counselor	Parkland Union
Joseph P. Harakal	Guidance Counselor	Catasauqua Union
Donald J. Hershey	Principal	Parkland Union
Joseph Lesak	Guidance Counselor	S. Lehigh Union
Evan Richards	Guidance Counselor	East Penn Union
Stanley F. Schneck	Principal	S. Lehigh Union
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Allen C. Harman (Dr.)	Superintendent	Montgomery County
John H. Althouse	Guidance Counselor	Abington Twp.
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Robert Cunningham	Guidance Counselor	Cheltenham Twp.
Joseph Falco	Guidance Counselor	Bridgeport Boro
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William E. Maxwell	Principal	Souderton Area Jt.
Sarah E. McIlvaine (Mrs.)	Guidance Counselor	Plymouth-Whitemarsh
Vincent F. Miraglia	Principal	Bridgeport Boro
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William J. Tidey	Guidance Counselor	Souderton Area Jt.
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Ralph Wetzel	Guidance Counselor	Hatboro-Horsham Jt.

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Hannah E. Chadwick (Mrs.)	Guidance Counselor	Pottsville Area
L. A. Daub	Principal	Ashland Area
Allen Greenawalt	Guidance Counselor	Blue Mountain Jt.
Charles W. Guditus (Dr.)	Superintendent	Frackville Boro
Abraham Hassan	Guidance Counselor	Tamaqua Area
Robert J. Hawkins	Principal	Schuylkill Haven Area
Helen McGrew (Miss)	Guidance Counselor	Mahanoy Area
Lloyd G. Nelson	Principal	Porter-Tower Jt.
S. John Price	Guidance Counselor	Ashland Area
Thomas J. Quigley	Principal	St. Clair Area Jt.
Mary E. Reid (Mrs.)	Asst. Principal	Pottsville Area
James A. Romberger	Principal	Blue Mountain Jt.
Kenneth L. Schneck	Guidance Counselor	Minersville Area Jt.
Stephen J. Starkey	Guidance Counselor	Frackville Boro
Ambrose M. Starr	Guidance Counselor	Tri-Valley Jt.
Curtis J. Steigerwalt	Principal	Tamaqua Area
Norman L. Stein	Principal	Ringtown Union
Elbur A. Techentin	Principal	Mahanoy Area
William J. Wingert	Principal	Tri-Valley Jt.
Frank R. Winsheimer	Principal	Pine Grove Area
Dale L. Wolfinger	Guidance Counselor	Pine Grove Area
Paul T. Ryder (Dr.)	Superintendent	Wayne County
Gerard J. Adams, Jr.	Guidance Counselor	Wallenpaupack Area
Daniel A. Callaghan	Principal	Wallenpaupack Area
Charles Russell	Supervising Principal in charge of Guidance	Damascus Twp.

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Dr. Edwin L. Rumpf, Assistant Deputy Director
Division of Vocational-Technical Education

Dr. Louis W. Bender, Conference Coordinator
Bucks County Public Schools

Dr. Morton Botel, Editorial Assistant
Assistant Superintendent, Bucks County Public Schools

Dr. Lucy T. Davis, Consultant, Editor Conference Report
Educational Research Council of Greater Cleveland

Dr. Finis E. Engleman, Consultant
Bucks County Public Schools

Mr. Fred H. Glanding, Senior Area Coordinator, Vocational Education
University of Pennsylvania

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VT 005 515

Robertson, Alan G.

Color Perception and Color Blindness. A Review of Selected Problems In Color Perception With Special Emphasis For School Personnel in Occupational Education.

New York State Education Dept., Albany. Office of Research and Evaluation

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*VISUALLY HANDICAPPED; *VOCATIONAL EDUCATION; VISUAL DISCRIMINATION; STUDENT CHARACTERISTICS; *STUDENT PROBLEMS; *STUDENT TESTING; AMETROPIA; EVALUATION CRITERIA; *OCCUPATIONAL GUIDANCE

Color discrimination problems of cosmetology students led to this review of selected medical literature dating from 1946 to 1965. The practical application of the findings to student screening and instruction in vocational education is stressed. Some findings from the literature were: (1) corrected astigmatism often improved color perception, (2) reasonably normal central vision is necessary for good color discrimination, (3) a lack of adequate accomodation may be significant for some with subtle, congenital color perception problems, (4) eight percent of white males have defective color vision, and (5) female carriers of color blindness may have abnormalities in color perception revealed by a sensitive test such as the Farnsworth-Munsell One Hundred Hue Test. It was recommended that all vocational teachers who teach subjects or safety where color is a key factor make a special effort to notice visual defects and make the appropriate referrals. Research variables which were suggested include age, the degree of visual acuity, the status of binocularity, the date and kind of latest correction, the age at which the first visual impairment was noticed, evidence of squinting, and the incidence of color blindness and refractive errors in the family. (EM)

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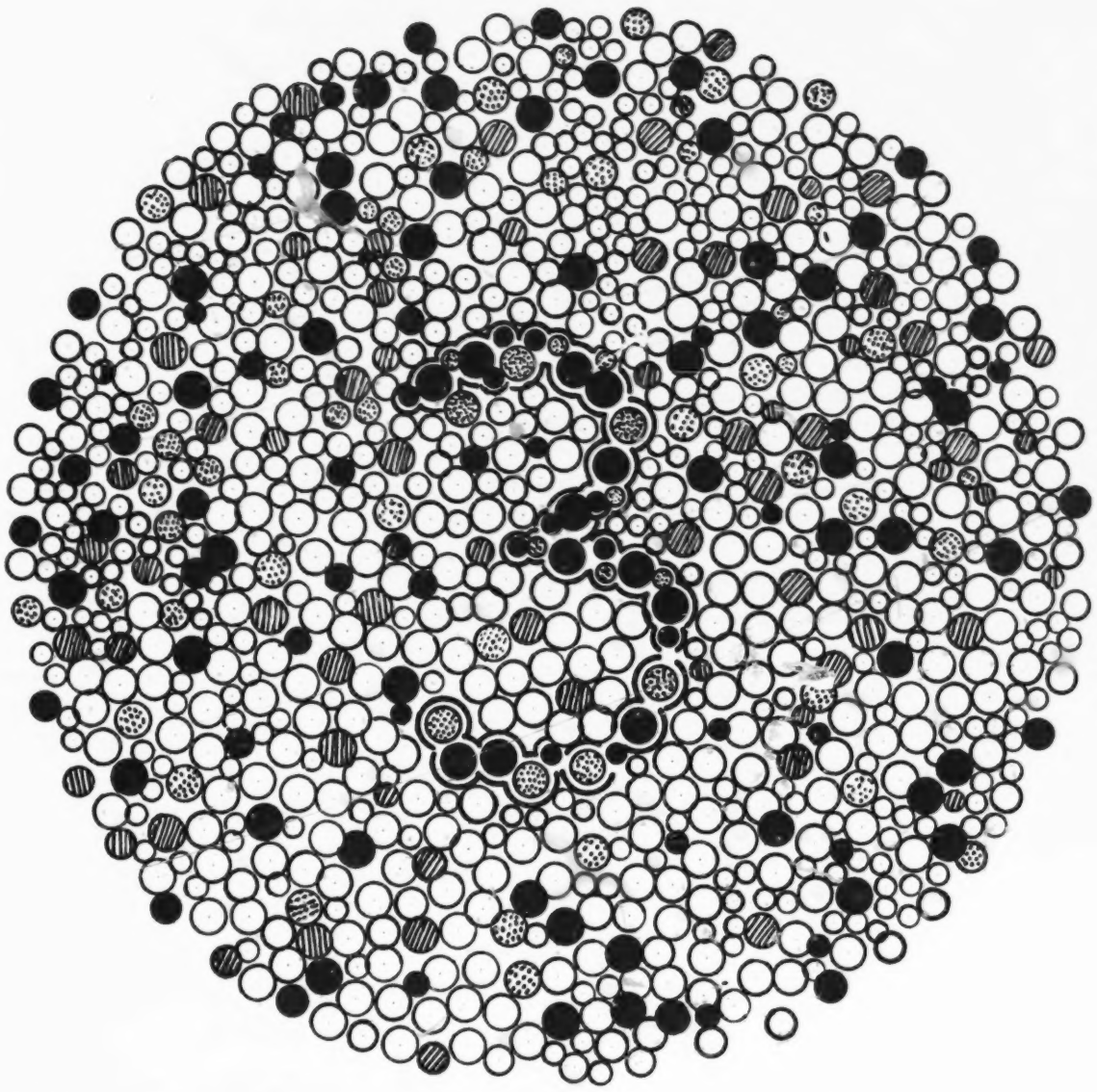
COLOR PERCEPTION AND COLOR BLINDNESS



A REVIEW OF SELECTED PROBLEMS IN COLOR PERCEPTION WITH SPECIAL EMPHASIS FOR SCHOOL PERSONNEL IN OCCUPATIONAL EDUCATION

VT005515

The University of the State of New York
THE STATE EDUCATION DEPARTMENT
Office of Research and Evaluation
Albany, New York 12224

November 1967

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FOREWORD

With the increase of automation in industry, many of the occupational areas which formerly required workers able to make fine color discriminations no longer depend on the fallible human eye. Sorting, grading, and matching processes which involve color criteria are increasingly performed by machines.

However, there are certain occupations which still require human ability to discriminate among colors; designing and merchandising in such fields as textiles, interior decoration, and cosmetology, hair tinting, and makeup blending are illustrations. Perhaps most vitally in need of workers with good color discrimination are the fields of electrical and electronic equipment assembly and repair, where complex circuits are colorcoded for matching, and in the printing industries.

Color vision is a subject of some importance to occupational educators because students entering programs, and ultimately jobs, where accurate color discrimination is vital will be severely handicapped if they suffer from undiscovered defects in color perception. As early as 1946, a Report on Defective Colour Vision in Industry was issued by a committee of the Colour Group of the Physical Society of London, investigating the need for accuracy of color perception in various industrial jobs, and evaluating the tests available for determining defects.

This problem was discussed informally during the New York State Association of Vocational Industrial Education Organizations professional conference held in October, 1966, at Monticello, New York. At that time, a number of teachers and supervisors in secondary and adult cosmetology programs expressed an interest in research in this area to Dr. Alan Robertson, who was then Chief of the Bureau of Occupational Education Research.

It was observed, but without any formal validation, that students who seemed to have problems in color discrimination, color recognition, shade discrimination of the same color, etc., upon investigation also seemed to have often had case histories of astigmatism, both corrected and uncorrected. Students with this color perception and color matching problem seemed to be affected by the direction of the source of light hitting the object. In other words, if the light source struck the object directly, making an obtuse angle with the light reflected into the eye, a more acute problem seemed to arise than if the light struck the object from the rear of the student resulting in a more acute angle of incidence. Again, this was an observation without many cases and strictly theoretical.

A related problem, that of the measurement of variables in hue discrimination ability, had been discussed and developed in preliminary form in 1962 by Dr. Robertson and the late William A. Holst, Jr., Director of Technical Services, National Aniline Division, Allied Chemical and Dye Corporation; both experiences led to this investigation.

Accordingly, the Bureau of Occupational Education Research engaged G. Stewart Ray, M.D., Chief Resident in Ophthalmology at Albany Medical Center Hospital, to survey recent medical literature for studies linking vision defects and color perception. The Bureau also invited Dr. Ray's and his professional colleagues' opinions as to what in the theory of vision and the physiology of the eye might account for the empirically-observed connection between defects in vision and defects in color discrimination ability.

This report incorporates Dr. Ray's investigation and its application to the screening and instruction of students in industrial education program where skill in color perception and discrimination is called for. The theoretical and scholarly aspects of the subject have been subordinated to the practical applications.

The Office of Research and Evaluation is indebted to Leo V. Feichtner, M.D., Chief, and Mrs. Jane MacCallum, Assistant, Vision Conservation, Bureau of Health Service, State Education Department, for their review of this manuscript. We suggest to the reader that the Health Service Bureau publications, Testing the Vision of School Children, A Position Paper, and The School Eye Health Program, be consulted for the broader aspects of this color perception problem.

It is hoped that this report will assist vocational educators and guidance counselors in establishing one of many criteria in selecting students for vocational education programs, and suggest a possible cause of student low achievement in courses requiring color discrimination skills. Finally, this research survey illustrates that vocational classroom teachers, through reflection and observation, can be an important source of research stimulation and ideas which have practical application to program and instruction.

Alan G. Robertson, Director
Division of Evaluation

COLOR PERCEPTION AND COLOR BLINDNESS

Actually, "color blindness" is a misleading term. People with abnormal color perception are not truly blind to certain colors, in the sense that objects of those colors are invisible to them. Rather, the people whom we call "color blind" are suffering from defective color vision, the defect being that they cannot tell certain colors apart. In a relatively severe form of defective color vision, the subject will look at a red light and a green light and think that they are brown and gray or gray and gray-green respectively.

There are many degrees of impairment in color perception, ranging from monochromatism, which is seeing everything as nearly one color with differences only in brightness (similar to a black-and-white photograph), to very slight defects, such as anomalous trichromatism* which is usually the inability to differentiate hues that are close together on the spectrum--for example, shades of red and red-orange. A person with one of the mild varieties of color perception defect may never know it if he never has occasion to sharply discriminate among colors. An adult who consults an ophthalmologist for an eye examination may be astonished to be told that he has been going through life with defective color vision.

Refractive errors are the commonest visual defects, and are usually corrected by glasses. In the normal eye, parallel rays of entering light are refracted, or bent, by the lens and the other refracting media of the eye to focus at a point on the rear surface of the eyeball, the retina. The retina converts light energy into electrochemical messages which are sent to the brain and interpreted as the object seen.

Medical researchers have discovered high incidences of disturbed color vision accompanying uncorrected ametropia. Ametropia is the general name for

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*See explanatory footnote in Appendix.

certain defects, including those commonly known as nearsightedness and farsightedness. Another form of ametropia, called astigmatism, is due to an uneven curvature in the surface of one of the refractive media of the eye, with the result that rays of light entering the eye will form a line of focus rather than a point of focus.

One study (Kyliev) showed that in some cases, a poor ability to differentiate colors with the uncorrected eye was improved when the subject wore spectacles for his near or farsightedness. The only explanations suggested for the beneficial effect that the refractive correction had upon color perception were that the generally diminished sharpness of the uncorrected vision impaired the patient's ability to distinguish color, and that the use of both eyes together improved color perception.

One medical study described the decrease of color sensitivity due to amblyopia of "squint" (Pagor). This type of amblyopia is dimness of vision without any detectable organic changes in the eye itself. It results from the disuse of an eye which is turned abnormally, as in "crossed eyes" or "wall-eyes", and customarily appears in young children. This serves to confirm the observations that reasonably normal central vision is necessary for good color discrimination. If vision is poor, enlarging the size of the colored test object will often allow accurate discrimination if the patient has a normal hereditary capability.

The color of light is determined by its wavelength. A pure color is composed of only one wave length, and therefore is called monochromatic. Light which contains more than one wavelength is polychromatic, as white light which contains the wave lengths of all the visible colors. In the normal eye, polychromatic light is slightly broken up when it passes through the refracting surfaces, so that images on the retina have fringes of color about them. This phenomenon is known as <u>chromatic aberration</u>.

In most cases, the aberration is never so significant as to be noticeable, except in such extraordinary circumstances as extreme dilation of the pupil or an extremely oblique angle of light entering the eye or the eyeglasses as observed by the cosmetology teachers who encouraged this study. However, these color fringes are involved in accommodation, or the automatic adjustment of the eye for seeing at different distances.

Certainly, the angle at which the light strikes the object is important in correct color perception. These circumstances raise the possibility of a significant relationship between the color of an object and the amount of the accommodation which is stimulated. Because clarity of vision is important in matching colors, and accommodation is important for seeing small objects at close range, a lack of adequate accommodation may be significant for some individuals with marginal vision, or subtle congenital color perception abnormalities. Unfortunately, no investigations are known which test this possibility.

An extremely complicated aspect of abnormal color perception is the heredity of "color blindness." It is well known that seven to eight percent of white males have defects in color vision. It is usually inherited by males through the mother, as a sex-linked characteristic. What is not so well known is that the female carriers of color blindness traits may be found to have abnormalities in color perception when tested properly by sensitive tests, although they themselves do not appear to be color blind.

Advances in the science of human genetics have shown that many hereditary diseases can exist in a lesser state among carriers; that is, carriers will actually have some degree of demonstrable abnormality in spite of outwardly normal function on gross tests or superficial observation.

In a 1964 study of 13 carriers (Krill and Schneiderman), all of whom showed entirely normal responses to the color charts used in the Ishihara

Pseudoisochromatic Test, it was found that 11 of the 13 had some degree of abnormality when tested by the more sensitive Farnsworth-Munsell One Hundred Hue Test.

External Illumination in Occupational Education

In planning certain vocational education classrooms and equipment, "correct" lighting for color perception is a must. The intensity of the light, the source of the light, and the angle from which it arrives at the eye from the illuminated object can markedly affect ability to discriminate colors. Wall colors are also important as they reflect light which is incident on the object.

The perception of color depends (partly) on a mechanism in the eye which does not function effectively below a certain intensity of light. After twilight, for example, objects appear to lose color and turn shades of gray. Blue and yellow hues in particular become much less distinguishable in decreased illumination. An individual's ability to distinguish colors may also be diminished when he views an object out of the side of his eye. The reason for this is that the color sensors are located mainly in the very center of the retina. The receptor cells in the retina function best when light strikes them parallel to their long axis, a situation impossible with oblique viewing.

The mixture of colors in a beam of white light has a major effect on the color of objects appearing in it. A bunch of buttercups in daylight appears yellow because the flowers absorb all but the yellow component of the light. In reflecting back the yellow to the eye, the flowers take on their characteristic hue. But if put in a pure blue light, with no yellow to reflect back, the flowers would appear to be black. Natural daylight contains all colors, and so reveals the true colors of objects; but certain kinds of artificial light lack some of the colors. Thus, the modern mercury-vapor streetlights will turn

reds to purples and greens to blues, and to a lesser extent blue-white flourescent tubes do the same thing. In vocational programs where color discrimination is a necessary skill, it is important not only that the human visual system be accurate in perceiving color, but also that external lighting conditions make it possible to discriminate colors accurately. Indeed, the flourescent light can cause some of the most annoying color differentiation problems in industry.

Safety Factors

On the job and in the school shop facility, an individual's inability to discriminate among colors and variations in color may constitute a potential health and safety hazard. Color code painting of live steam, gas, hot and cold water lines, and electrical conduits is a common practice, while color painting of walls, floors, and equipment to indicate hazardous areas is ineffective unless the colors are fully distinguishable to the worker or student. Failure to distinguish color codes and signal lights in production control may lead to waste and possible machine damage.

SUMMARY AND RECOMMENDATIONS

All this information can be of practical use to guidance counselors and vocational educators. Ordinarily, a counselor or teacher would not think of questioning a student's ability to distinguish colors if he does not show any marked abnormalities. But a student who expresses interest in an occupational field which requires accurate color discrimination may not be aware that he has defective color vision. Therefore, a teacher or counselor who observes the student to have one of the visual impairments (nearsightedness, astigmatism, poor accommodation, or monocular vision) often accompanied by a color perception defect should arrange to have the student's color vision tested very carefully since a slight color perception defect could radically affect his

success in the desired occupational program. Of course, accurate periodic testing of visual acuity for distance and nearness is a prerequisite of great importance.

Illustrative of other vocational education instructional programs, in addition to cosmetology, in which poor color discrimination may affect student performance, are the following:

(1) making up electrical harnesses using different colored wires of varying lengths

(2) wiring, according to color coded diagrams and prints, and inspecting or "trouble-shooting" hand wired and printed circuits

(3) ink matching in presswork, particularly browns and greens in general letter press, lithographic and color machine pressman training

(4) building trades instruction in painting, decorating, staining, terracotta, brick and stone masonry

(5) distributive education skills involving display work, stock buying, etc.

(6) raising of food, flower crops, and the identification of plant diseases and insect pests

(7) metal fabrication trades; a student with poor color perception may do such things as mix similar hardware items of different materials and consistently confuse nonferrous metals such as copper, brass, and phosphor bronze stocks until he observes their properties with cutting or forming tools or machines. This may also show up in the making of visual estimates of temperature in heat treatment processes by the color of the metal.

(8) commercial food preparation, apparel industries, and automotive trades such as body repair

Color vision testing should be conducted on each student interested in a vocational curriculum where accurate color discrimination is essential. Because of ease of administration and good reproductability, a properly administered Farnsworth D-15 screening test is recommended. (The H-R-R pseudoisochromatic test is slightly less desirable). If the D-15 indicates the possibility of defect, then the more time consuming but more quantitative and definitive Farnsworth-Munsell 100 hue test should be given. The results of such a test should be revealed to the prospective student.

Knowing that some color blind individuals learn to match materials using their reference colors, and since it has been empirically observed that individuals often do better in the shop than on the test, they should be advised as follows: "You appear to have a form of color blindness. Many people with this problem, however, are competent in jobs requiring color perception. If you are very eager to take a specific course, you will have to be prepared to change your plans if your color vision problem proves to be too much of a handicap." The student should be offered an alternative, but not initially directed to change his plans.

It goes without saying that counselors and advisors assisting youth and adults with occupational choices should carefully review all of the personnel requirements of these occupational fields and relate them to the physical, emotional, and aptitude characteristics of the counselee. The above situation applies especially to mild defects such as the anomalous trichromats. The more severe dichromats and the monochromats should be guided into a field which does not require precise color discrimination. Difficult or borderline cases should be referred to a specialist interested in the problems of color perception.

This investigation has established that abnormalities in color perception may be related to uncorrected refractive errors, to hereditary defects, both overt and occult, and to monocular as opposed to binocular vision. It also has established a relationship between good visual acuity and accurate color perception, especially for small objects. It has concluded that there are no adequate studies reported in the recent medical literature which can prove or disprove the empirical observations of the conditions which prompted this review. The most likely cause for these observations remains unsuspected, hereditary defects in color perception. Methods to separate these from other causes are available but complex.

To obtain further information on this subject it would be necessary to design a study that would minimize the number of variables involved, a difficult task because it is so hard to separate refractive errors from many of the other problems in the physiology of color vision that are poorly understood. There is little public consciousness of color vision problems--ophthalmologists observed that many patients are totally unaware that they have a defect in color vision until told of it--and even then for the most part it is the gross red-green defects that are discovered. Often this is due to inadequate testing, since the profession is not stimulated to test for this comparatively innocuous defect in an unselected population.

If it is decided to undertake a detailed study of the problem, a questionnaire should be designed for students who evidence any significant abnormalities in color perception. Information about personal and family history should be supplied for analytic investigation, including at least the following:

(a) age

(b) degree of visual acuity with and without correction at a distance and at close range

(c) status of binocularity

(d) most recent correction and date

(e) age at which any visual impairment was first noticed

(f) any previous history of squinting

(g) incidence of color blindness and refractive errors in the family

Teachers who have observed problems of color perception in their students are encouraged to report them to:

Dr. Alan G. Robertson, Director
Division of Evaluation
State Education Department
Albany, New York 12224

APPENDIX

*The terms mono-, di-, and trichromat refer to the results obtained on a special test for color vision. The machine used is called an anomaloscope and has three knobs, one for controlling the intensity of each of the three primary stimuli--red, green, and blue. An anomalous trichromat uses all three of the knobs to match a standard color but in different relative intensities than the normal. Normals use all three dials and are therefore "normal trichromats." The dichromat (who has a more severe defect) uses only two of the color intensity control knobs to attain his match. He does not use the color to which he is insensitive. The monochromat "matches" colors using only brightness and therefore uses only one of the knobs. It is important to realize that when we say that the subject makes a "match" of the colors we are talking about his subjective sensation that he has made one color as nearly identical to the standard as possible. The results of the test are taken from the readings on the dials of the anomaloscope and what the patient calls the color is of no significance.

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Public Health Service, Washington, D.C. Publication 1302
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Division of Research Grants, Public Health Service, Bethesda, Maryland 20014.
Pub Date - 1Jul67 49p.

*HEALTH OCCUPATIONS EDUCATION; *FEDERAL AID; *ADMINISTRATIVE POLICY; RESPONSIBILITY; PROGRAM BUDGETING; *EDUCATIONAL PROGRAMS; FINANCIAL POLICY; *STANDARDS; STUDENT SELECTION

The statement is intended to cover all Public Health Service training grants to non-profit institutions for establishing, expanding, or improving training opportunities for individuals interested in careers in the health sciences and related fields. Grantee responsibilities are explained generally and in relation to civil rights legislation, patents and inventions, copyright, investigations involving human subjects, animal procurement and care, and conflict of interest. Policies and forms of funding are discussed. Policies governing project changes are presented in relation to changes in project period, training objectives, and grantee institution, as well as temporary absence and withdrawal of the project director. Policies with regard to trainees relate to eligibility, citizenship, terms of appointment, support, concurrent awards, holidays and vacations, obligations to the Public Health Service, and services required. Other policies presented govern the publication of project information, direct and indirect costs, rebudgeting of funds, refunds, and accounting. A section on reports discusses the statement of trainee appointment, report of expenditures, progress reports, and invention reports. A listing of related public health service documents and guides is included. (JK)

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ıblic Health Service

;RANTS for TRAINING PROJECTS

POLICY STATEMENT

Revised July 1, 1967

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

Public Health Service

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DISCRIMINATION PROHIBITED—Title VI of the Civil Rights Act of 1964 states: "No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance." Therefore, the grant and award programs of the Public Health Service, like every program or activity receiving financial assistance from the Department of Health, Education, and Welfare, must be operated in compliance with this law.

PREFACE

The reorganization of the Public Health Service, effective January 1, 1967, assigns to the Office of the Surgeon General additional central responsibilities for management of grant and contract activities. The reorganization also realigns the past Bureau structure of the Public Health Service to fulfill a changed Federal role in meeting the Nation's changing health needs. Under the new plan, five Bureaus, the National Library of Medicine, and the Office of Comprehensive Health Planning and Development will have responsibility for financing training grants to support training conducted in facilities located in the United States and in several foreign countries. The respective components that will be concerned with grant activities are shown below.

BUREAU OF DISEASE PREVENTION AND ENVIRONMENTAL CONTROL

- National Center for Air Pollution Control
- National Center for Chronic Disease Control
- National Communicable Disease Center
- National Center for Radiological Health
- National Center for Urban and Industrial Health

BUREAU OF HEALTH MANPOWER

- Division of Allied Health Manpower
- Division of Dental Health
- Division of Health Manpower Educational Services
- Division of Nursing
- Division of Physician Manpower

BUREAU OF HEALTH SERVICES

Division of Community Health Services
Division of Direct Health Services
Division of Hospital and Medical Facilities
Division of Medical Care Administration
Division of Mental Retardation

NATIONAL INSTITUTE OF MENTAL HEALTH

Division of Extramural Research Programs
Division of Field Investigations
Division of Manpower and Training Programs
Division of Mental Health Service Programs
Division of Special Mental Health Programs

NATIONAL INSTITUTES OF HEALTH

Division of Environmental Health Sciences
Division of Research Facilities and Resources
Division of Research Grants
National Cancer Institute
National Heart Institute
National Institute of Allergy and Infectious Diseases
National Institute of Arthritis and Metabolic Diseases
National Institute of Child Health and Human Development
National Institute of Dental Research
National Institute of General Medical Sciences
National Institute of Neurological Diseases and Blindness

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The Office of Extramural Programs in the Office of the Surgeon General is the principal staff advisor to the Surgeon General on administrative policies governing all extramural programs, including the development and issuance of policies governing the training grant programs.

This Policy Statement is the source of the basic policy requirements under which all Public Health Service training grants are administered.

Under the terms of a training grant, the institution and the program director enter into a special relationship with the Public Health Service for the utilization of grant funds. This relationship results from the basic nature of the grant as a conditional gift in response to a request for support of a project in which there is a substantial measure of public interest. A grant, therefore, represents a mutual joining of interests on the part of the grantor and the grantee in the pursuit of a common objective. In this relationship, the grantee assumes with the grantor the obligation to act in the public interest in achieving a common purpose. This is a relationship of trust which imposes upon the grantee the responsibility to assure that the grant funds are utilized for the purpose for which they were awarded, and to exercise the same probity and prudence in their expenditure that is extended to the use of the grantee's own funds.

These are the broad obligations that a recipient of a Public Health Service training grant accepts. This Policy Statement is not intended to specify the full extent of the considerations that engage the grantee. The Public Health Service is also concerned with assessing the adequacy of administrative practices and the prudence exercised by the grantee to assure conformity with the terms of this Policy Statement. Examination of the administrative processes utilized in the expenditure of grant funds is a continuing responsibility of the Public Health Service in the administration of these programs.

This Policy Statement pertains only to grants for training projects and is effective for all actions on and after July 1, 1967. It supersedes the previous Statement dated July 1, 1965. Separate policy statements deal with other grant and award programs of the Public Health Service and are available upon request.

DIRECTOR, OFFICE OF EXTRAMURAL PROGRAMS
OFFICE OF THE SURGEON GENERAL
PUBLIC HEALTH SERVICE

JULY 1, 1967

CONTENTS

	Page
PREFACE	iii
PURPOSE AND SCOPE	1
GRANTEE RESPONSIBILITIES	3
Civil Rights	
Patents and Inventions	
Copyright	
Investigations Involving Human Subjects, Including Clinical and Behavioral Sciences Research	
Animal Procurement and Care	
Conflict of Interest	
FUNDING	8
Continuation Support	
Supplemental Funds	
Renewal of Support Beyond the Project Period	
Early Termination of Grants	
PROJECT CHANGES	11
Change in Project Period	
Change in Training Objectives	
Temporary Absence of Program Director	
Withdrawal of Program Director	
Change of Grantee Institution	
TRAINEES	12
Eligibility	
Citizenship	
Trainee Appointments	
Support	
Stipend Allowance	
Supplementation	
Dependency Allowance	
Travel Allowance for Trainees	
Tuition and Fee Allowance	
Concurrent Awards	
Holidays and Vacations	
Obligations of Trainees to the Public Health Service	
Services Required	
PUBLICATION AND PUBLICITY	19
Reporting Project Accomplishments	
Release of Information by the Public Health Service	
COSTS	21
Direct Cost Expenditures Other than Trainee Costs	
Indirect Cost	

REBUDGETING OF FUNDS 33

REFUNDS 34
Interest or Other Income
Royalties and Profits
Refund at Termination of Project Period

ACCOUNTING, RECORDS, AND AUDIT 35
Accounting
Financial Records
Audit
Obligations or Expenditures
Equipment—Title and Accountability

REPORTS 38
Statement of Appointment of Trainee
Report of Expenditures
Interim Progress Report
Terminal Progress Report
Invention Report
Annual Invention Statement

MISCELLANEOUS 39
Safety Precautions
Federal Income Tax
Military Service
Visa Status of Non-United States Citizens
Visa Status of Non-United States Citizen Trainees

RELATED PUBLIC HEALTH SERVICE DOCUMENTS AND GUIDES 40

Statement of Policy

GRANTS FOR TRAINING PROJECTS

Purpose and Scope

The Public Health Service provides support, through training grants, to assist public and other nonprofit institutions in establishing, expanding, or improving training opportunities for individuals interested in careers in research, teaching, administration, and services in the health sciences and related fields.

This general policy statement is intended to cover all Public Health Service training grant programs. For certain programs additional policy and program statements will be issued by individual awarding organizational units of the Public Health Service (Bureaus, Institutes, Divisions, Centers, and offices of the Public Health Service).* These individual statements will not repeat items contained in this Statement of Policy; rather, they will specify any variations from policies stated herein and any additional program requirements.

While the details of the review process for training grant applications may vary with statutory requirements and with specific procedures of the awarding units, the recommendations are based on assessment of the application from standpoints of merit, training capability, program relevance, and consonance with public policy.

To facilitate the review process in most areas of training, the Public Health Service utilizes panels of qualified individuals recruited from universities and other public

*Hereinafter referred to as awarding units.

264-144 O - 67 - 2

and nonprofit institutions to advise on the merit of proposals.

The award of grants and the administration of grant funds are subject to the applicable provisions of basic statutory authorities, appropriation acts, and pertinent Public Health Service regulations. It is not the purpose of this document to summarize or restate these requirements, but to delineate the operating policies which govern the administration of training grant programs by the awarding units of the Public Health Service.

To facilitate understanding of this policy statement, certain key words are defined below.

Grantee (*Applicant institution*)—that institution or organization which is awarded funds on the basis of an approved application, and which assumes legal and financial responsibility and accountability for use and disposition thereof.

Program director—the individual designated by the grantee and approved by the Public Health Service to be responsible for the conduct of the training project.

Trainee—an individual who receives financial support for training (stipend, dependency allowance, tuition, or travel) from a Public Health Service training grant.

Project—the identified training activity approved for support by the awarding unit.

Project period—the time, not exceeding 7 years, for which support for a project has been approved for payment.

Budget—the amount of funds approved by the awarding unit for services, materials, trainee expenses, and other items.

Budget period—the interval of time (usually 12 months) into which the project period is divided for budgetary purposes. Applications, notices of grant awarded, and reports of expenditures are prepared on this basis.

Grant—an award of funds based on an approved budget in support of a project and awarded for the remaining project period.

Prior approval—written permission by the awarding unit of the Public Health Service to use grant funds for certain purposes not included in the approved budget. The request for such approval must be initiated by the program director, signed by an authorized institution official, and approved by the awarding unit before the performance of the act which requires the expenditure of funds.

GRANTEE RESPONSIBILITIES

In applying for a training grant the applicant institution agrees to administer the grant in accordance with the governing Public Health Service regulations and policies in effect at the time of award. Where the grantee has a policy not covered by Public Health Service policy, or where the grantee policy is more restrictive than Public Health Service policy, the grantee policy prevails. Administration of a grant-supported training project is a joint undertaking by the grantee and the program director. The grantee assumes responsibility for fiscal and administrative management and fulfillment of any special conditions which may be prescribed for the conduct of the project. The program director and the grantee share responsibility for the conduct of the training and for using grant funds prudently for the purposes set forth in the approved application and notice of grant awarded.

Civil Rights

Public Health Service grants and awards must be administered in conformance with the Civil Rights Act of 1964; the regulation (45 CFR, Part 80) issued pursuant thereto by the Department of Health, Edu-

cation, and Welfare; and the grantee's Assurance of Compliance (Form HEW–441) on file with the Public Health Service.

Patents and Inventions

Policy

In accordance with Department of Health, Education, and Welfare Regulations (45 CFR, Subtitle A, Parts 6 and 8), all inventions made in the course of, or under, any Public Health Service grant shall be promptly and fully reported to the Assistant Secretary (Health and Scientific Affairs), Department of Health, Education, and Welfare.

The grantee and the program director shall neither have nor make any commitments or obligations which conflict with the requirements of this policy.

Determination

Determination as to ownership and disposition of invention rights, including the determination of whether a patent application shall be filed, and if so, the manner of obtaining, administering, and disposing of rights under any patent application or patent which may issue, shall be made either:

a. By the Assistant Secretary (Health and Scientific Affairs), whose decision shall be considered as final, or

b. By the grantee, in accordance with an existing formal institutional agreement with the Public Health Service or the Department.

Patent applications shall not be filed on inventions under (a) above without prior written consent of the Assistant Secretary (Health and Scientific Affairs), or his representative. Any patent application filed by the grantee on an invention made in the course of, or under, a Public Health Service

grant shall include the following statement in the first paragraph of the specification:

> "The invention described herein was made in the course of, or under, a grant from the U.S. Public Health Service, Department of Health, Education, and Welfare."

Reports and Other Requirements

A complete written disclosure of each invention in the form specified by the Assistant Secretary (Health and Scientific Affairs) shall be made by the grantee promptly after conception or first actual reduction to practice, and, in any event, prior to publication. Upon request, the grantee shall furnish such duly executed instruments (prepared by the Government) and such other papers as are deemed necessary to vest in the Goverment the rights reserved to it under this policy statement to enable the Government to apply for and prosecute any patent application, in any country, covering each invention where the Government has the right to file such application.

The grantee shall furnish interim reports (annual invention statements) prior to the continuation of any grant, listing all inventions made during the budget period, whether or not previously reported, or certifying that no inventions were made during the applicable period. Upon completion of the project period, the grantee shall furnish a final invention report, listing all inventions made during performance of work on the supported project or certifying that no inventions were made during that work.

Supplementary Patent Agreements

The grantee shall obtain appropriate patent agreements to fulfill the requirements of this provision from all persons who perform any part of the work under the grant, except such clerical and manual labor personnel as will have no access to

technical data, and except as otherwise authorized in writing by the Department.

The grantee shall insert in each subcontract or agreement having experimental, developmental, or research work as one of its purposes, a clause making this provision applicable to the subcontractor and its employees. Agreements shall also be obtained by the grantee to govern disposition of rights to inventions resulting from screening of compounds synthesized under the grant.

Definitions Relating to Patent Matters

As used in this provision, the stated terms relating to patent matters are defined as follows for the purposes hereof:

1. "Invention" or "invention or discovery" includes any art, machine, manufacture, design, or composition of matter, or any new and useful improvement thereof, or any variety of plant, which is or may be patentable under the Patent Laws of the United States.

2. "Made" when used in relation to any invention or discovery means the conception or first actual reduction to practice of such invention in the course of the grant.

Copyright

Except as otherwise provided in the conditions of the award, when publications, films, or similar materials are developed from work supported by the Public Health Service, the author is free to arrange for copyright without approval. Any such copyrighted materials shall be subject to a royalty-free, nonexclusive, and irrevocable license to the Government to reproduce them, translate them, publish them, use and dispose of them, and to authorize others to do so.

Investigations Involving Human Subjects, Including Clinical and Behavioral Sciences Research

Safeguarding the rights and welfare of human subjects involved in investigations supported by Public Health Service grants or awards is the responsibility of the grantee. This responsibility includes assurance of adherence to the laws of the community in which the investigations are conducted and due consideration to pertinent ethical issues. Appropriate groups of associates within the institution, and outside consultants if needed, are to be utilized to provide the necessary review. Grantees may designate separate groups in order to assure competence and independence of review for particular areas.

The grantee is responsible for the clarification and resolution of all ethical and other pertinent issues. The appropriate mechanism for this purpose is the utilization of groups of associates established at the institution to provide competent, independent review. Based on its knowledgeable scrutiny of the specifics of the investigation involved, such a review group shall decide which issues are germane and, where they are germane, ascertain the adequacy of provisions for protecting the rights and welfare of human subjects, the appropriateness of the methods used to secure informed consent, and the risks and potential benefits of the investigation.

No application for support of investigations involving human subjects will be accepted for review unless an institution-wide assurance has been accepted from the applicant institution. More detailed information concerning investigations involving human subjects and assurances is provided in the Surgeon General's memoranda of July 1, 1966, December 12, 1966, and January 24, 1967 (see Related Public Health Service Documents and Guides, page 40).

Animal Procurement and Care

It is the responsibility of each person assigned or appointed to a project receiving Public Health Service support to exercise every precaution to assure proper care and humane treatment of animals, with particular reference to Public Law 89–544 and to criteria established in the "Guide for Laboratory Animal Facilities and Care."

Conflict of Interest

Each grantee receiving Public Health Service training grant funds is urged to have written guides for staff members (administrators, faculty members, professional staff, or employees) which explain the conditions under which outside activities are proper and which require notification of such activities to a responsible representative of the institution.

FUNDING

Funding of an approved project includes a determination of support for the authorized project period. Grants to support the project are made on a budget period basis subject to the appropriation of funds by the Congress. The initial grant reflects the determination of funds approved for the conduct of the project for the first budget period (usually 12 months), but the funds are made available for the full project period. The notice of grant awarded indicates the allocation of Public Health Service funds by budget categories, the additional support recommended and expected to be made available for the remainder of the project period, and any special conditions which attend the award.

Continuation Support

Funds for subsequent years within the project period must be requested on the application form for continuation support, which is routinely mailed to the program director well in advance of the beginning

date of the next budget period. It is the responsibility of the program director to request this application form if it has not been received. The level of funding for the ensuing grant period will be determined from review of the application within the framework of the support previously recommended for the remainder of the project period. The award may include funds in the amount of an approved budget, or funds to be added to those funds remaining from a previous grant to provide an amount equal to the approved budget. (Separate procedures govern the use of Health Professions Basic Educational Improvement grants.)

Supplemental Funds

If additional funds to conduct the project are required within any portion of the project period over those budgeted and approved and such funds are not available within the institution receiving support for the project, a supplemental request may be submitted. If awarded, the additional amount becomes a part of the grant to which it is a supplement.

1. Expansion funds: Supplemental applications for expansion of a project are subject to the same deadlines and processed in the same manner as new applications and must compete for available funds.

2. Administrative increases: Requests for supplemental funds to meet impending increased administrative costs, such as fringe benefits or institution-wide or other salary increases, may be included in the application for continuation support. Administrative increases which take effect during a current budget period may be requested in a letter, signed by an authorized institution official. A supplemental *research* training grant, however, will not be made for administrative increases which take effect during a current budget period when the organizational component where

264-144 O - 67 - 3

the project is located is receiving a General Research Support or Biomedical Sciences Support grant from the Public Health Service.

Renewal of Support Beyond the Project Period

If additional support is desired to continue the project beyond the approved project period, an application for renewal must be submitted in accordance with the deadline dates and accompanying instructions. This application will be reviewed in the same manner as a new application and will compete for available funds with other applications. If approved and awarded, an initial grant for a new project period will be made.

Early Termination of Grants

By the Grantee.—A grant may be terminated or canceled at any time by the grantee upon written notification to the awarding unit.

By the Public Health Service.—A grant may be revoked or terminated at any time within the project period whenever it is determined by the Surgeon General of the Public Health Service that the grantee has failed to comply with the terms and conditions of the grant.

Upon any early termination, the grantee shall submit a report of expenditures. If in the judgment of the Surgeon General the termination is due to no fault of the grantee, credit shall be allowed for the amount required to settle at minimum costs any noncancellable obligations properly incurred by the grantee prior to receipt of notice of termination.

Reports Required Upon Early Termination.—When early termination occurs, a progress report (see page 38), a report of expenditures, and an annual invention statement must be submitted.

PROJECT CHANGES

Change in Project Period

Where additional time is required to assure adequate completion of a project, the project period may be extended up to 12 months if requested by the grantee before the end of the project period and approved by the awarding unit. In no event, however, shall the project period exceed 7 years.

Change in Training Objectives

Prior written approval of the awarding unit is required when the grantee wishes to make changes which would alter the approved objectives for which the grant was made.

Temporary Absence of Program Director

Where absence of the program director is anticipated to exceed 3 months, plans for the conduct of the project during his absence, including designation of the acting program director, must be approved by the awarding unit. A request for such approval must be signed by an administrative official of the institution and submitted as soon as it is known that he will be absent.

Withdrawal of Program Director

If the program director relinquishes or expects to relinquish active direction of the project, the awarding unit must be notified immediately. The grantee may request that the grant be terminated, in which case a terminal progress report, a report of expenditures, and a final invention statement must be submitted. The grantee may request that the project be continued under the direction of another program director. A biographical sketch describing his qualifications should be submitted to the awarding unit for reevaluation of the project in the light of the change.

Change of Grantee Institution

Training grants may not be transferred from one institution to another.

TRAINEES

The following statements are applicable to training grants that are activated July 1, 1967, and thereafter:

Eligibility

Trainees to be supported under a grant must meet the general eligibility requirements set by the awarding unit for that particular program. Also, they must meet any additional institution requirements set by the grantee.

Grant funds may not be used (*a*) for the support (stipend, tuition, or travel) of any trainee for whom a statement of appointment has not been submitted to the awarding unit; (*b*) for the support of any trainee who because of age, physical or mental condition, or other relevant factor, would not in the judgment of the program director be able to use the training or meet the institution's minimum qualifications for the training involved in the project; (*c*) for the continuation support of a trainee who has failed to demonstrate satisfactory participation; (*d*) for support of candidates for degrees of M.D., D.D.S., D.O., D.V.M., or similar degrees, except as provided under *Stipend Allowance* (*Medical and Other Health Professions Students,* see page 14) and *Tuition and Fee Allowance* (see page 17); or (*e*) for residency training, unless specifically approved by the Surgeon General and announced by the awarding unit.

Citizenship

Trainees who are United States citizens or nationals and trainees who are foreign nationals lawfully admitted to the United States for permanent residence may be appointed by the grantee without prior approval by the Public Health Service. Foreign nationals admitted to the United States on a visa for temporary residence may be appointed as trainees by the grantee only with prior approval of the awarding

unit. Only United States nationals may receive stipends from grants to foreign institutions.

Trainee Appointments

An appointment or a reappointment may not exceed 12 months without prior approval by the awarding unit. The amount of the stipend, dependency allowance, and tuition for each full period of appointment must be obligated from funds available at the time the individual begins his training unless other instructions are furnished by the awarding unit.

A new appointment is the first appointment for a trainee. A reappointment is a subsequent appointment for the same trainee under the same project.

A statement of appointment of trainee must be submitted to the awarding unit for each appointment or reappointment of a trainee receiving stipend, tuition costs, or travel expenses from a Public Health Service training grant. For each appointment, or reappointment, the statement must be submitted at the time the training period of the individual begins.

If there are changes in the terms of the appointment, an amended appointment statement is required.

Support

Unless other rates have been approved for a particular program of the Public Health Service and announced by the awarding unit concerned, stipends and allowances paid from Public Health Service training grant funds may not exceed the following established rates for a 12-month period of training. Trainees appointed for shorter training periods will be supported at the appropriate stipend level on a pro rata basis. Trainees at the same level of education and training should receive comparable stipends.

Support of a full-time Federal employee as a trainee is allowable only when the em-

ployee is (*a*) on leave without pay and (*b*) reimbursement is in accordance with terms mutually acceptable to the Federal Government agency and to the awarding unit.

Stipend Allowance

Predoctoral Level.—Requirements:

Bachelor's degree or equivalent training

Stipends:	First year	$2,400
	Second year	$2,600
	Third and subsequent years	$2,800

Postdoctoral Level.—Requirements:

Doctor's degree or equivalent training

Stipends:	With no relevant postdoctoral experience	$6,000
	With 1 year of relevant postdoctoral experience	$6,500
	With 2 or more years of relevant experience	$7,000

Special Stipends.—The amounts for special stips (including allowances) are to be determined on an individual basis between the program director and the awarding unit.

Medical and Other Health Professions Students.—Institutions that have established stipend levels applicable to medical and other health professions students for summer and "off quarter" training that have been approved by the awarding unit may pay stipends to these students without reference to above rates established for predoctoral trainees. Those institutions that do not have applicable stipend schedules will observe the above listed predoctoral rates on a pro rata basis or will observe rates established by the Public Health Service for particular programs.

Supplementation

As used in all Public Health Service policy statements and procedural guides dealing with training stipends, "supplementation" means the provision of funds by a *grantee* to a trainee *in addition* to his grant-supported stipend, in a combination

which then exceeds established Public Health Service stipend ceilings.

Trainees are expected to devote their entire professional effort to the achievement of their training objectives. Unless otherwise indicated by the Public Health Service awarding unit, the grantee may not provide funds to trainees for any reason, including employment, where the combination of such funds and the Public Health Service stipend exceeds established Public Health Service stipend ceilings. Loans are excluded from this general prohibition and special conditions for supplementation are applicable at the predoctoral level as indicated below.

Predoctoral Level.—Institutions may supplement the stipend of a predoctoral trainee only if all of the following conditions are met:

1. No *services* are to be required of the trainee in order to receive the supplemental funds.
2. The source of funds for supplementation must be non-Federal, except that Public Health Service General Research Support or Biomedical Sciences Support grants may be used for this purpose.
3. The decision to supplement the stipend of a predoctoral trainee must be made at the institution level, rather than at any lower level. Records indicating names, amounts, dates, and reasons for supplementation must be maintained by the institution and made available upon request from the awarding unit.

Under no circumstances may supplementation be used for purposes of recruitment.

No more than $1,000 per 12-month period (prorated for shorter periods) may be provided as supplementation without prior Public Health Service approval.

Postdoctoral Level.—No supplementation is permitted.

(Not applicable to residency and postresidency training programs. In those programs where residency training is supported, the supplementation policy for these programs will be determined by the individual Bureaus of the Public Health Service.)

Dependency Allowance

Dependency allowances may be awarded for trainees at predoctoral and postdoctoral levels in the amount of $500 for a dependent spouse, each dependent child, and each dependent relative, provided that during the trainee appointment the dependent receives more than one-half of total support from the trainee. A dependency allowance may *not* be claimed for any person who during the trainee's appointment period will be receiving a fellowship or traineeship stipend under any U.S. Government educational assistance program (other than loans), or for whom an allowance will be made as a dependent of any other person during that period.

Travel Allowance for Trainees

To the Training Institution.—The cost of the trainee's travel to the training institution may be allowed only for the purpose of, and at the time of, entering the training program. The allowance is payable only once to any one trainee from any one training project.

A travel allowance of 8 cents per mile, as computed by standard mileage charts, may be paid from grant funds for travel to the training institution from the trainee's last place of residence prior to the beginning of his training. In the case of individuals whose last place of residence is outside the United States, as defined under domestic travel (see page 31), travel may be paid only from the port of entry into the United States.

No allowance is made for (*a*) per diem expenses during travel, (*b*) travel at conclusion of training, (*c*) travel distances of less than 50 miles, (*d*) transportation of dependents, or (*e*) shipment of personal effects or household goods.

The policy governing the use of funds for travel relating to short-term training—less than a normal academic period—will be as provided by the awarding units. Grantees are responsible for ascertaining the policy on this matter before charging such expenditures to grant funds.

Travel During Period of Training.—Grant funds may be used for transportation and per diem for travel of trainees during the period of the grant when included in the terms of the original award or with prior approval. The rate of per diem or other allowance and the type of travel accommodations shall be in accordance with institution policy. (See *Travel*, page 32.) Such travel and per diem costs are payable only to full-time trainees who have received formal appointments and for whom the statements of appointment have been forwarded to the awarding unit.

Foreign Travel.—The grantee should contact the particular awarding unit regarding provisions which apply.

Tuition and Fee Allowance

When allowable, only the same resident or nonresident tuition and fees charged to regularly enrolled non-Federally supported students may be charged for trainees. Instructions of certain programs show that tuition and fees may be paid only for trainees receiving a stipend from a Public Health Service grant.

Tuition and fees for courses which satisfy requirements related exclusively to the M.D., D.D.S., D.O., D.V.M., or similar degrees may not be charged to a grant. (Not applicable to the Medical Scientist Training Program of the National Institute of

General Medical Sciences, or the Experimental Training Grant Program of the National Institute of Arthritis and Metabolic Diseases.) When the courses are creditable to satisfying Ph. D. degree requirements in combination with any of the aforementioned degree requirements, however, tuition and fees may be charged for those courses within the combined degree program that are required specifically for the attainment of the Ph. D. degree.

Concurrent Awards

Stipends under Public Health Service training grants may not be received concurrently with any other Federal educational award (fellowship stipend, traineeship stipend, Educational Assistance under Veterans' Readjustment Benefits Act of 1966 (P.L. 89–358), or similar award). Loans from Federal funds are not considered Federal awards.

Holidays and Vacations

Trainees in academic institutions are not entitled to vacations as such. They are, however, entitled to the normal short student holidays observed by their training institutions.

Trainees in nonacademic institutions are entitled to the holiday and vacation schedule applicable to all trainees at the institution.

Additional payment for leave not taken may not be claimed.

Obligations of Trainees to the Public Health Service

Trainees are not required to work for the Public Health Service at the conclusion of their training. Conversely, the Public Health Service assumes no responsibility for employing or placing such persons.

Services Required

Trainees receiving full-time support from a Public Health Service grant shall

not be required to perform any work which is not an integral part of the training project.

PUBLICATION AND PUBLICITY

Reporting Project Accomplishments

Program directors are encouraged to make the results and accomplishments of their activities available to the public. Since prior Public Health Service approval is not required for reporting the results of any activity under a training grant, responsibility for direction of the activity should not be ascribed to the Public Health Service. Acknowledgment of Public Health Service support must, however, carry the following or comparable footnote:

> "This investigation was supported by PHS Training Grant No. ..... from ....."
> (awarding unit).

Surveys and questionnaires must include a positive statement clearly setting forth that the contents are in no way the responsibility of the Public Health Service.

In the event that the institution wishes to join with the Public Health Service in a simultaneous news release announcing the results of a project, the information officer of the awarding unit will carry out the necessary coordination.

Six reprints of publications resulting from work supported in whole or in part by a Public Health Service grant must be submitted to the awarding unit.

Release of Information by the Public Health Service

Public Health Service policy requires that certain information requested on individual training grants shall be released to recognized information media and—to

the extent that the Public Health Service deems it appropriate—to an individual member of the public.

Pending Applications

An application for training grant support is considered privileged information. Until such time as an application is approved and a grant awarded, no information is disclosed.

Grant Awards

The Public Health Service makes available each year to members of the press and other interested persons a report listing the training projects awarded in the preceding fiscal year. Information made available includes the title or area of training of the project, name and institution affiliation of the program director, and amount of the award. In addition to the annual listing, the following information is available upon request:

1. A general description of the approved project.
2. The approved budget as shown in the notice of grant awarded.
3. Details of grant expenditures in total sums only for each major category of expenditures.
4. Information describing the nature of the training project may be obtained from the Science Information Exchange, 1730 M Street NW., Washington, D.C. 20036.

Information Not To Be Released

1. Details of estimated budgets or of actual expenditures.
2. Any reports unless specifically agreed to by the program director and the grantee.
3. Discussions of applications by advisory bodies.

COSTS

Unless otherwise indicated in the notice of grant awarded, allowable costs are those permitted under this policy statement, applicable Public Health Service regulations, special instructions by the awarding units, and Bureau of the Budget Circular A–21 (or other appropriate cost principles current at the time of award). The cost of a training project comprises the allowable direct cost expenditures incident to its performance, plus the allocable portion of allowable indirect cost of the institution. (Provisions of authorizing legislation or applicable regulations prohibit the payment of an indirect cost allowance for some grant programs.)

Expenditures must be accorded consistent treatment, including the allocation between direct and indirect costs, through application of established institution policies and practices applicable to all work of the institution for purposes of cost finding.

Within the limits of allowable costs and the total direct cost budget approved by the Public Health Service, the grantee may charge Public Health Service grant funds only for expenditures which are required to carry out the approved project.

Costs incurred by a cooperating or affiliated organization of the grantee, which are otherwise allowable, may be charged to the grant account only to the extent that the grantee has actually paid for such costs. Thus, when a university is the grantee and costs are incurred by an affiliated hospital, the university must reimburse the hospital for such costs if they are charged to Public Health Service grant funds.

Direct Cost Expenditures Other Than Trainee Costs

Prior written approval by the Public Health Service is required for certain items and for transfer of funds between certain

categories of cost, as indicated in the list below. Restricted direct cost categories of the budget may be decreased, unless otherwise indicated, but not increased without prior approval. In all other respects, the grantee may transfer funds from one category of direct cost to another. The inclusion of a specific description of the proposed item or cost category and the proposed amount in the grant application, followed by receipt of the notice of grant awarded containing no exception, constitutes prior approval. When a subsequent need arises for an item requiring prior approval or for an increase in a restricted cost category, the request for approval must be initiated by the program director and must be signed by an authorized institution official.

The list below includes allowable and unallowable expenditures most frequently encountered as direct costs in connection with training grants. Failure to mention a particular item of cost is not intended to imply that it is either allowable or unallowable as a direct cost; rather, determination as to allowability in each case shall be based on the treatment or standards provided for similar or related items in accordance with the institution's policies and procedures.

Alterations and Renovations.—Allowable to provide modifications necessary for the training project provided that (*a*) the aggregate cost to the Public Health Service of any single alteration and renovation project does not exceed $50,000, regardless of the number of years over which the funds might be needed or the number of separate grants into which such costs might be spread; (*b*) the grantee is not a foreign institution; (*c*) the structure was not constructed, remodeled, or equipped with other Public Health Service funds within the preceding 6 months; and (*d*)

prior Public Health Service approval has been obtained for any charge during a budget period for alterations and renovations in excess of $250.

If grant funds are to be used to pay any part of the cost of any contract for alterations and renovations where the total contract exceeds $10,000, the grantee must agree to the conditions in the Equal Employment Opportunity Statement required under Executive Order 11246.

Animals.—Charges for the acquisition, care, and use of experimental animals are allowable.

Bonus Payments.—Not allowable.

Books and Periodicals.—Allowable where required for the conduct of the project.

Communications.—Extraordinary or unusual costs resulting from local and long distance telephone calls, telephone surveys, telegrams, postage, etc., necessary to the project, and not treated as indirect costs, are allowable.

Construction of Buildings (Including Additions or Extensions).—Not allowable.

Consultant Services (Fees and Supporting Costs).—Allowable except that a consultant fee may not be paid to (*a*) an individual otherwise employed by the grantee except in unusual circumstances and with prior Public Health Service approval, or (*b*) a U.S. Government employee.

Contingency Funds or Reserves.—Not allowable.

Contracts for Services.—Allowable. (Note requirements relating to Patents and Inventions, page 4; Civil Rights, page 3; and *Alterations and Renovations,* page 22.)

Customs and Import Duties.—Allowable, except for grants made to foreign institutions.

Dependency Allowance (Trainees).—See page 16.

Depreciation or Use Allowance.—Not allowable for real or personal property (buildings and equipment). This restriction does not apply to centralized facilities operated by the grantee, such as computer centers or motor pools, providing the charge is applied proportionately to all users and is designed to recover only actual costs. (See *Rental of Space,* page 28.)

Donors.—Payments to individuals who contribute blood, urine samples, and other body fluids or tissues used for the project are allowable.

Drugs.—Allowable. Grantees are encouraged to purchase drugs under their nonproprietary names whenever practicable.

Dues.—Not allowable except when incurred because membership in professional organizations or societies is required to obtain publications necessary to the project.

Entertainment.—Costs of amusement, social activities, entertainment, and incidental costs related thereto, are not allowable.

Equipment.—Allowable. Prior Public Health Service approval is required for (*a*) items over $1,000; (*b*) printing equipment; and (*c*) equipping offices, conference rooms, and similar space.

Equipment may be rented but not purchased from grants in support of conferences. (See *Equipment Rental,* page 25.)

A grantee may be reimbursed for an item of equipment already owned by the institution only when it is in the institution's central purchasing department and held in a central stockroom for issuance and sale to a using activity.

For purposes of charging Public Health Service grants, the cost of a single unit or piece of equipment includes necessary accessories, duty, excise, and sales taxes (unless the institution is exempt from such taxes). If the institution policy provides

that charges for transportation, protective in-transit insurance, and installation are a part of the cost of equipment, such charges must be included in the equipment costs if they are to be charged to Public Health Service grants.

Equipment Maintenance and Repairs.—Allowable on equipment used on the Public Health Service supported project.

Equipment Rental.—Allowable provided the equipment is not owned by the grantee. Rental charges to a grant must be made in conformance with institution policies and in the same manner that similar charges are made to any account.

Equipment—Federal Surplus and Excess Property.—Costs are allowable for acquiring surplus property through the Surplus Property Utilization program. Such acquisition is encouraged in order to conserve public funds. For information, contact Regional Representative, Division of Surplus Property Utilization, Department of Health, Education, and Welfare, or the State Agency for Surplus Property.

Transfer to the grantee of property excess to the needs of the Public Health Service, not declared "surplus," is not permitted.

Equipment—Foreign Grants.—Single items of equipment costing $2,000 or more (excluding transportation, delivery, and installation charges) purchased by foreign grantees must be of United States manufacture unless prior Public Health Service approval is obtained.

Federal (U.S. Government) Employees.—The following rules apply to payments made to full-time Federal employees:

Consultant Fees.—Not allowable.

Outpatient or Subject Costs.—Allowable when employee is a patient or subject

70

undergoing study in connection with the training project supported by the grant.

Salaries.—Allowable only when employee is on leave without pay and reimbursement is in accordance with terms mutually acceptable to his Federal Government agency and to the awarding unit concerned.

Support of Federal Employees as Trainee.—See page 13.

Travel.—Allowable for an employee on leave without pay when the travel is essential to fulfillment of his role in the training project.

The above limitations do not apply to individuals who are part-time Federal employees.

Fringe Benefits.—The employer's share is allowable to the extent that such payments are made under formally established and consistently applied institution policies, uniformly charged as a direct cost on an actual rather than an estimated basis, and charged in proportion to salary charged to the grant. The employee's share is part of the gross salary and included therein. Not allowable for trainees.

Honoraria.—Not allowable. (An honorarium is considered a payment or reward where the primary intent is to confer distinction on, or to symbolize respect, esteem, or admiration for, the recipient. A consultant fee, on the other hand, e.g., fee for a visiting lecturer, is compensation for services rendered and is allowable.)

Hospitalization Costs.—Allowable with prior Public Health Service approval in accordance with negotiated rates. Not allowable for foreign grants.

Insurance.—Allowable for premiums on hazard, malpractice, and other liability insurance to cover personnel directly connected with projects supported by Public

Health Service grants. Not allowable for premiums on equipment.

Land or Buildings.—Purchase costs not allowable.

Leave.—Allowable when earned on the project which the grant is supporting and prorated in accordance with the salary charged to the grant. Not allowable for trainees except as provided on page 18.

Library Support.—Not allowable. (See *Books and Periodicals,* page 23.)

Meals.—Allowable for patients under study, or when an institution customarily provides for meals to employees working beyond the normal workday, or as a part of the salary arrangement. Guest meals are not allowable.

Outpatient or Subject Costs.—Allowable with prior Public Health Service approval, including travel with escort, if required.

Overtime.—See *Salaries and Wages,* page 29.

Publication.—

Page Costs.—Allowable to assure effective publication of results of work supported by grant provided that charges imposed by scientific journals are equitably applied, regardless of the sources of support. Prior approval required for additional charges for immediate or accelerated publication.

Books.—Prior approval required for the cost of publishing books, monographs, pamphlets, brochures describing training activities, and dissertations and theses prepared by trainees.

Recruitment Costs for Trainees.—Costs of descriptive brochures or other costs directly related to the recruitment of trainees are allowable. Grant funds may not be used, however, to pay prospective trainees for transportation, per diem, or other related recruiting costs.

Relocation of Employees.—Allowable for costs to an individual recruited for full-

time employment on a Public Health Service supported project. Costs may include moving him, his family, dependents, and household goods if payment of such costs is normally made by the grantee, regardless of the source of funds. If the employee resigns for reasons within his control within 12 months after employment, the grantee must credit the grant account for the relocation costs. Relocation costs are not allowable for personnel employed to work part time on a training project.

Rental of Equipment.—See *Equipment Rental*, page 25.

Rental of Space.—Allowable when charges are made in conformance with institution policies and in the same manner that similar charges are made to any account. No rental charge may be made for space owned or controlled (managed or administered) by the grantee or a collaborating institution, except that a charge may be allowed equivalent to the cost of ownership; e.g., depreciation or use allowance, taxes, and normal maintenance and operating costs. Also, when a grantee transfers a facility to a third party through sale, lease, or otherwise, and then leases the facility back from that third party, the lease cost which may be charged to Public Health Service grants may not exceed the equivalent of the "cost of ownership."

Sabbatical Leave.—Salary, as such, not allowable, but sabbatical leave costs to the institution may be included in a composite fringe benefit rate.

Salaries and Wages.—Allowable for time or effort spent on a grant-supported project. Rate must be consistent with salaries paid from institution funds. No supplementation of base salary is permitted; however, when the individual's full-time base salary is for a period of less than 12 months, the salary may be charged to the

grant for periods not covered in the employment contract.

"Full time" may include such activities as (*a*) scholarly writing, (*b*) service on advisory groups, or (*c*) participation in a seminar or symposium or similar activity related to the training, provided these activities remain incidental and are undertaken within the policy of the grantee.

Where the individual is part time (including "geographic full time"), the base salary for determining charges to the grant will be the salary which he would have earned if he had been full time. Where a grantee provides a guaranteed salary plus an additional amount dependent on such things as the total income of a group clinic operated by the grantee, full-time salary may be considered as the guaranteed amount, or as the combination of the guaranteed amount and the additional amount not to exceed a formally established ceiling, or the amount that reflects the individual's most recent full year's experience, whichever is the smaller.

Where less than a full year of experience has been gained by the individual, an amount comparable to that received by some other individual with similar duties would be used. Time or effort on the grant could therefore be prorated against the total of the guaranteed and the additional salary.

When all of the salary of nonprofessional personnel is charged to projects supported only by grants and contracts, *overtime* may be charged to any Public Health Service grant for which the overtime was worked. When the salary is charged partly to institution funds and partly to either grant or contract funds, the total of the salary (both regular rate amount and premium rate amount) must be prorated in accordance with the time spent on the Public Health Service project. On the other hand, where

the grantee has a policy of charging premium overtime to the indirect cost pool, no premium overtime can be charged directly to the grant.

Salary and wage rates must be in conformity with those permitted by the institution's wage/salary scales and policies.

Grant funds budgeted for an individual's salary but released as the result of transfer of support of an individual to the Public Health Service research career program may not be used without prior Public Health Service approval.

Time or effort reports are not required for personnel whose full-time activity is devoted to one Public Health Service supported project.

For nonprofessional staff, charges for salaries and wages will be supported by time and attendance and payroll distribution records.

For members of the professional staff, current and reasonable estimates of the percentage distribution of their total effort may be used in the absence of actual time records. The term *professional staff* includes professors, instructors, research associates and assistants, graduate students, and other persons performing professional work. In order to qualify as current and reasonable, estimates must be made no later than 1 month (though not necessarily a calendar month) after the month in which the services were performed. On the other hand, in the case of *professorial staff* at educational institutions and of any others whose compensation is chargeable in part to instruction and in part to "organized" research, the estimates of effort expended must be made at appropriate time intervals, but in no case less frequently than once each quarter. Estimates determined before the performance of services, such as budget estimates on a monthly, quarterly, semester, or yearly

basis, do not qualify as estimates of effort spent.

The percentage reported need not be the same for each period reported. The total for the entire budget period, however, must equal or exceed the percentage of the salary charged to the grant. When the awarding unit has waived requirements for prorating professional salaries (see page 35) one report may cover the time or effort an individual has expendend on projects supported by separate grants.

Except for grants made to foreign institutions, time or effort reports are not to be sent to the awarding unit but must be retained by the grantee and made available for inspection by Federal auditors and Public Health Service staff. Time or effort reports must be included with the audit documents supplied to the awarding unit by foreign institutions.

Stipends (Trainees).—See page 14.

Subgranting.—Not allowable. The grantee may not, in whole or in part, delegate or transfer responsibility for the use of grant funds to any other institution, organization, or person. This ruling does not preclude contracts related to the conduct of the project.

Supplies.—Allowable.

Taxes.—Only those taxes which an institution is required to pay as they relate to employment, services, travel, renting, or purchasing for a training project are allowable. Property taxes on land, buildings, equipment, or supplies are not allowable.

Travel.—Domestic travel is that travel (including local travel) which is performed within the grantee's own country, except that travel between the United States (including Guam, American Samoa, Puerto Rico, the Virgin Islands, the Canal Zone, and the Trust Territory of the Pacific Islands) and Canada, is also considered domestic travel for grants made to institu-

tions within the United States or Canada. Other travel performed to, between, or within a country other than the grantee's own country is defined as foreign travel.

The policies of the grantee will govern travel by staff paid from grant funds, except that less than first class air travel must be used when available. U.S. Standard Government Travel Regulations must be followed if the grantee has no established policy.

Grants exclusively for travel to meetings or conferences are not awarded as training grants.

Travel (Employees).—Allowable, where such travel will provide direct benefit to the project being supported, including attendance at meetings. Prior approval required (*a*) for domestic travel if the total required for the travel category exceeds the amount approved by the awarding unit, or (*b*) for any foreign trip.

Travel (Trainees).—See page 16.

Tuition and Related Costs (Employees).—Allowable with prior Public Health Service approval when specialized training is required for the project. Other tuition costs not allowable unless treated consistently as a fringe benefit. Tuition remission for members of the families of employees allowable only when included in a composite fringe benefit rate.

Tuition (Trainees).—See page 17.

Indirect Cost

Policy.—Unless otherwise stipulated by the awarding unit an indirect cost allowance may be provided. The indirect cost allowance for each grant will be computed at the rate of 8 percent of allowable direct costs.

Definition.—Indirect costs are those which because of their nature are normally identified with common or joint objectives and are not readily identified with specific or individual projects. The general types of

indirect costs include general administration expenses, administration expenses which apply to training activities administered in whole or in part by a separate organization or an identifiable administrative unit, operation and maintenance expenses, and library expenses.

Not Allowable.—Indirect costs will not be allowed on the following direct cost expenditures:

1. Alterations and renovations of any type.
2. Cost of any item of equipment in excess of the first $2,500.
3. Hospitalization or hospital bed costs.
4. Tuition or related fees.
5. Grants to institutions or organizations outside the territorial limits of the United States.

To Be Negotiated.—Indirect costs on the following direct cost expenditures are subject to individual agreements between the grantee and the awarding unit:

1. Rental of space.
2. Contracts for services related to the conduct of the training project.
3. Grants to institutions where the training project is to be conducted fully or partially in Federal installations.
4. Conference grants.
5. Limited services furnished by the grantee to support a project in which the major part of the work is to be performed off-campus.

REBUDGETING OF FUNDS

The Public Health Service permits the grantee to depart from the approved budget and use grant funds for other permissible items required for the project, except that prior approval of the Public Health Service (see definition, page 3) is required for the following purposes:

1. Increase or decrease in amount for trainee stipends.
2. Use for any purposes disapproved as a condition of the award.
3. Alteration and renovation costs in excess of $250.
4. Changes in approved budgets for grants in support of conferences.
5. Equipping or furnishing of offices, conference rooms, reception rooms, or similar space.
6. Items of equipment or accessories costing in excess of $1,000.
7. Patient care costs (hospitalization or outpatients).
8. Printing equipment.
9. Publication of books, monographs, pamphlets, dissertations, or theses.
10. Travel in excess of the total amount approved for the travel category or for any foreign trip.
11. Consultant fees to individuals otherwise employed by the grantee.
12. Purchase by foreign grantees of non-U.S. manufactured equipment costing $2,000 or more.
13. Tuition and related costs for employees.

REFUNDS

During the project period, refunds and rebates should be credited to the account. Credits received after the termination of the project period shall be refunded to the awarding unit. Checks should be made payable to Public Health Service, Department of Health, Education, and Welfare, Bethesda, Md. 20014.

Interest or Other Income

Interest or other income earned on grant funds must be forwarded to the awarding unit.

Royalties and Profits

When the costs of publications, films, or similar materials are provided from Public Health Service grants, any royalties or profits up to the amount charged to the grant for publishing or producing the material shall be refunded to the Public Health Service.

Refund at Termination of Project Period

At the end of the project period the final report of expenditures will show any unexpended balance. Refund to the Public Health Service will be made in accordance with instructions.

ACCOUNTING, RECORDS, AND AUDIT

Accounting

Accounting of grant funds will be in accordance with institution accounting practices, based on generally accepted accounting principles, consistently applied regardless of the source of funds. Itemization of all supporting records of grant expenditures must be recorded in sufficient detail to show the exact nature of expenditures. Where personnel costs apply to two or more research and/or training projects, proration of costs to each grant involved will be made except that professional salaries need not be prorated in those instances where the awarding unit agrees that two or more separate grants are concurrently supporting projects that constitute one identified activity or program. In such instances, the total allowable salary may be charged to any one of the grants involved.

Financial Records

The financial records, including all documents to support entries on the accounting records and to substantiate charges to each

grant, must be kept readily available for examination by personnel authorized to examine Public Health Service grant accounts in an institution. All such records must be maintained for 5 years after the end of each budget period; and if questions still remain, such as those raised as a result of audit, related records should be retained until the matter is completely resolved.

Audit

Public Health Service grants are subject to inspection and audit by representatives of the Department of Health, Education, and Welfare to (*a*) verify financial transactions and determine whether funds were used in accordance with applicable laws, regulations, and procedures; (*b*) ascertain whether policies, plans, and procedures are being followed; (*c*) provide management with objective and systematic appraisals of financial and administrative controls, including information as to whether operations are carried out effectively, efficiently, and economically; and (*d*) determine reliability of financial records and reports. The audit activity is not intended to review scientific or technical aspects of the conduct of the project. The audit is performed in accordance with generally accepted auditing practices in determining that there is a proper accounting and use of grant funds. Failure of a grantee to appeal a proposed audit disallowance within 30 days after receipt of written notification will make the action of the Public Health Service conclusive.

Grantees located outside the United States shall supply the awarding unit with certified true copies of the necessary fiscal documents, including time or effort reports, to support the expenditures charged to the grant. The documents supplied will be returned to the grantees upon completion of the audit.

Obligations or Expenditures

Obligations, encumbrances, or expenditures normally will be made within the budget period indicated on the notice of grant awarded. Except for certain programs which, under existing legislation, specifically provide otherwise, grant funds may not be used to reimburse obligations or expenditures made prior to the beginning date of an initial grant for a new or renewal project. Prior to the beginning date of a continuation award, the grantee may at its own risk incur expenditures which exceed Public Health Services authorization but which are considered essential to the conduct of the project. The awarding unit will allow reimbursement of such expenditures from the continuation grant when awarded, provided that the items concerned are incorporated in the approved budget of the continuation grant and that, where required for restricted categories, prior approval was obtained.

Equipment—Title and Accountability

Title to equipment purchased with grant funds resides with the grantee, but the equipment must be accounted for during and after the end of the project period. Accountability may be satisfied by continued use during its useful life in the same or other projects related to objectives of the Public Health Service. If the equipment is disposed of or transferred during its useful life to a use outside the scope of the Public Health Service objectives, an amount equal to the value at the time of disposal must be deposited in the grant account if still open, or refunded to the Public Health Service. The Public Health Service, however, reserves the right in unusual situations to transfer the equipment and the title thereto either to some other grantee or to the Public Health Service.

REPORTS

Statement of Appointment of Trainee

A statement of appointment or reappointment is required for each trainee at the time the training period of the individual begins. No training stipend may be paid until a statement of trainee appointment has been submitted to the awarding unit. (See page 13.)

Report of Expenditures

A report of expenditures for each budget period is required within 120 days after the end of the budget period. The report forms are routinely mailed to the grantee before the end of the budget period and should be completed in accordance with the instructions on the form. Continuation grants will not be awarded if required expenditures reports have not been received.

Interim Progress Report

Interim progress reports must be submitted to the awarding unit with all applications for continued support in accordance with the instructions accompanying the application forms or received from the awarding unit. All interim reports will be treated as restricted information.

Terminal Progress Report

A final progress report is required within 90 days after the terminal date of the project. The report should identify the grant number, period covered, program director, institution, and title or area of training. Instructions will be furnished by the awarding unit concerning the detailed information needed and the number of copies.

Invention Report

Immediate and full reporting of all inventions to the Assistant Secretary (Health and Scientific Affairs), Department of Health, Education, and Welfare is required.

Annual Invention Statement

In addition to the immediate reporting of inventions, an annual invention statement is required with each continuation and renewal application.

A final invention report is required within 30 days after completion of a project period. Also, when a program director ceases to direct a project, a special invention report should be filed to cover the activity of that program director.

MISCELLANEOUS

Safety Precautions

The Public Health Services assumes no responsibility with respect to accidents, illnesses, or claims arising out of any work undertaken with the assistance of a Public Health Service grant. The grantee is expected to take necessary steps to insure or protect itself and its personnel.

Federal Income Tax

Determination of the tax status of an individual receiving compensation in any form from a Public Health Service grant is the responsibility of the Internal Revenue Service.

Military Service

The Public Health Service will not intercede in behalf of an individual in relation to military status. A trainee stipend may be continued for a period not to exceed 15 days of military active duty training in any one Public Health Service appointment period.

Visa Status of Non-United States Citizens

The Public Health Service will not intercede in behalf of non-United States citizens who may be program directors or who may otherwise be participating in a project, and whose stay in the United States may be limited by their visa status. For this reason the grantee should determine, and the ap-

plication should indicate, that the individual's visa will allow him to remain in the country a sufficient length of time to be productive on the project.

Visa Status of Non-United States Citizen Trainees

For citizenship requirements for trainees, see page 12.

RELATED PUBLIC HEALTH SERVICE DOCUMENTS AND GUIDES

(Copies are available usually in administrative offices of the grantee institution but are obtainable from any of the awarding units listed in the Preface, or from the Division of Research Grants, Public Health Service, Bethesda, Md. 20014.)

Guide to Public Health Service Grants and Awards (PHS Publication No. 1067).
Training Grant Programs of the Public Health Service (March 1966—PHS Publication No. 1467).
Public Health Service Regulations.
Surgeon General's memoranda, dated July 1, 1966, December 12, 1966, and January 24, 1967—Investigations Involving Human Subjects.
BOB Circular A-21, Principles for Determining Costs Applicable to Research and Development under Grants and Contracts with Educational Institutions, March 3, 1965.
Time or Effort Reporting—A Guide to Compliance, March 1967.
Special Information and Instructions on Public Health Service Grant Support of Conferences, April 1, 1966.
Guide for Laboratory Animal Facilities and Care (PHS Publication No. 1024).
Payment of Hospitalization Service Charges in Support of Clinical Research, September 1, 1964.
DHEW Regulations Governing Inventions and Patents (Parts 6 and 8, Title 45, Code of Federal Regulations).
DHEW Regulations Effectuating the Provisions of Title VI of the Civil Rights Act of 1964 (Part 80, Title 45, Code of Federal Regulations).
Executive Order 11246, Equal Employment Opportunity.

U.S. GOVERNMENT PRINTING OFFICE : 1967—O-284-144

VT 005 555

Hailes, Charles W.; Very, Philip S.
Establishment of an Occupational Research and Development Coordinating Unit for the State of Rhode Island.
Progress Report, January 1, to March 31, 1968.

Rhode Island Occupational Research and Development Coordinating Unit, Providence OEG-1-6-062776-2142 08
MF AVAILABLE IN VT-ERIC SET.
BR-6-2776

Pub Date - 26Apr68 4p.

*RESEARCH COORDINATING UNITS; *STATE PROGRAMS; *VOCATIONAL EDUCATION; *EDUCATIONAL RESEARCH; *PROGRAM DESCRIPTIONS; INFORMATION DISSEMINATION
*RHODE ISLAND OCCUPATIONAL RESEARCH AND DEVELOPMENT COORDINATING UNIT

The Research Coordinating Unit (RCU) continued to emphasize the dissemination function, especially of research finding accumulated at the Educational Resources Information Center, by mailing monthly RCU bulletins to all interested individuals throughout the state and providing assistance and information at the Unit's facilities. In addition, the Unit continued to perform its duties of stimulating, encouraging, and aiding vocational research by meeting with interested persons and offering advice on research proposals. Although there is a problem of support for localized research, a transfer of federal funds was approved to finance a small research project to evaluate teacher training in vocational education throughout the State. A complete report should be available by August 1968. The Unit is submitting a research project for studying the interpretation of drawings during the guidance process in occupation selection and has also been given the responsibility for preparing the vocational section of an all-college proposal to be submitted under the Professional Practices Act. In addition to the usual local meetings the RCU has attended, a member of the Unit attended the (1) Vocational Guidance Information Systems conference in Manchester, New Hampshire, (2) The American Vocational Education Research Conference in Chicago, (3) the Regional Conference for RCU's in Albany, New York, (4) the American Institute for Research in Pittsburgh, and (5) the National Diffusion Conference on the Diffusion of Educational Ideas. (MM)

VT005555

PROGRESS REPORT

OE Bureau of Research No. BR 6-2776 Grant No. OEG 1-6-062776-2142

Period January 1, 1968 to March 31, 1968 Date of submission April 26, 1968

Name of institution: Rhode Island College

Title of project: Establishment of an Occupational Research and Development Coordinating Unit for the State of Rhode Island

Name of project director(s): Charles W. Hailes, Director
Philip S. Very, Associate Director

1. Major activities and accomplishments during this period--

In keeping with the need for increased dissemination of the wealth of research findings accumulated at the ERIC Center, the Rhode Island Research Coordinating Unit continued to emphasize dissemination functions. Monthly RCU bulletins were mailed to all interested individuals throughout the State. Further remarks on this aspect occur in category four of this report.

In addition to dissemination activities, this unit continued to perform its duties of stimulating encouraging and aiding vocational research in the state. As examples, early in January the staff met with Mr. McKenna and Mr. Davey of the State Department regarding the writing of a proposal dealing with Social and Economic Disadvantaged students, with Mr. Wiggin of the Speech Department at Rhode Island College regarding research on students' attitudes, with Dr. George Estabrooks of the Psychology Department to discuss the possibility of establishing a hypno-analysis institute for counseling students, with the Dean and Vice President regarding the writing of an all-college policy on research on human subjects, with Dr. Lee DeLucia of the Psychology Department at Rhode Island College regarding indentification of aptitudes of children throughout the state and with Mr. O'Shea, Mr. Laurel and Mr. Frisk of Mount Pleasant High School regarding research using 4 c's funds. In the middle of January the unit staff visited Miss Cullen of the Cumberland High School Department, Dr. King of Industrial Arts at Rhode Island College, Dr. Harshman of Special Education and Mr. John Salvatore, all with respect to possible research projects in vocational education. On January 15, a conference between the staff of the unit, the college dean and members of the State Department of Education discussed research projects and possible funding. The following day members of the unit spoke with Mr. Francis Charland, of Rhode Island School for the Deaf, who is interested in writing a research proposal.

The above gives some idea of the type of contact being made by the unit and is presented here as an example. The period described was only sixteen days, a typical period experienced by the unit. During the remaining two and one-half months of this quarterly period, many of the above were revisited and many new people received advice and information from the unit.

2. Problems--

We do have a problem of support for localized research; however, it is hoped that this can be overcome in the near future.

ED031587

VT005555

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3. Significant findings and events--

Due primarily to the fact that no monies were forthcoming from the state department of education to finance several worthwhile research projects of state interest, this unit was forced to either seek funds for interested researchers from other sources or utilize the funds from the college and Federal Government. In spite of the fact that the state department of education has not found it feasible to finance a small research project to evaluate teacher training in vocational education throughout the state, it was felt the project was of sufficient importance that a request was submitted and approved by the U.S. Office of Education to transfer funds to make this research possible. In February a research associate, Mr. Richard Prull, took a year's leave of absence from his doctoral studies in psychology and came to Rhode Island to work full-time in the unit on the Teacher Training Evaluation Project. After surveying ERIC documents and contacting various sources, a questionnaire was constructed and is presently being administered to supervisory teachers and young teacher education graduates of all vocational education programs in the state and to business and industrial leaders. By August a complete report of the present status of teacher education in vocational education together with suggestion for improvement of present programs and development of new programs will be made available to interested individuals. The research is going very well; all contacted individuals have been most cooperative.

The unit is also submitting a research project to be conducted by Mr. Marusic of the counseling department at the University of Rhode Island. Mr. Marusic will be studying interpetation of young people's drawings in the guidance process toward selecting an occupational area.

The unit has also been given the responsibility for preparing the vocational section of an all-college proposal to be submitted under the Professional Practices Act. Several innovations in vocational education programs are being prepared.

4. Dissemination Activities--

As the unit begins its second year of operation, the fruits of its labor are already appearing. Telephone calls from individuals throughout the state seeking information and guidance continue to increase. Personal visits to the unit's facilities also are rapidly growing, to the point that there are often more than one individual seeking advice from the staff at a given moment, and occasionally as many as six visiting people in the office at once, speaking with the staff members, or surveying the ERIC documents or the AIM and ARM pamphlets.

Although the unit's main intent was not to purposely broaden its dissemination field beyond the major area of vocational education, the unit has begun to be known as a center for all individuals seeking information in educational research. The staff is constantly being consulted by researchers and, administrators in education desirous of obtaining information regarding research studies underway and completed, availability of various federal, state and local funds and similar questions. Requests for microfiche are steadily accelerating.

Favorable comments on this units monthly bulletin of dissemination continue to be received. Individuals are requesting more information on articles printed in the bulletin and this unit is glad to either supply the information or refer them to the source of the original complete article.

Finally, in addition to the bulletin and individual contact with teachers, researchers, administrators, and members of business and industry, this unit continues to demonstrate its desire to disseminate information about the unit and vocational education research by speaking to various civic groups public school groups and college and university classes regarding ERIC, writing research in vocational education and related subjects. Throughout the state, the staff of this unit finds people eager to learn of ERIC and vocational education research, most of them being deficient in their knowledge of this area.

5. Capital equipment acquisitions--NONE

6. Forms--NONE

7. Other Activities--

In addition to the usual local meetings the RCU has attended, a member of the unit was present at the Vocational Guidance Informations Systems Conference in Manchester, New Hampshire, at the American Vocational Education Research Conference in Chicago (where one of the staff members presented a research paper) at the Regional Conference for Research Coordinating Units in Albany, New York, at the American Institute for Research in Pittsburgh, at the Conference in Montpelier, Vermont regarding a New England and New York RCU regional research proposal and at the National Diffusion Conference on the Diffusion of Educational Ideas. Finally, trips were made to the regional RCU Center in Boston.

8. Staff summary--

Name	Title	Funds Federal	Funds Local	Period	Percent of time
Charles Hailes,	Dir.	$3500.00	None	12/27/66	100%
Philip S. Very,	Assoc.Dir.	295.00	$1,122.00	9/1/67	50%
Richard Prull,	Research Associate	1289.00	None	2/1/68	100%
Geraldine Boscalia,	Secretary	1098.00	None	1/30/67	100%

9. Future activities planned for next reporting period--

The major thrust of this office will continue to be dissemination activity, which is steadily increasing in volume. The unit will continue to collect data on its teacher training evaluation and will continue to encourage and stimulate vocational education research projects. This past year has seen a greater awareness of the college and state wide community of the purpose and functions of this office. It is expected that in the months to come even more individuals will call or come to this office to obtain general information, microfiche, grant proposal information and the like.

10. Certification

Mr. Ernest L. Overbey Vice President & Treasurer, and Administrative Grants Officer Rhode Island College Providence, Rhode Island	Mr. Charles W. Hailes Director Rhode Island College
Date	Date

VT 005 563
Model State Emergency Health Service Plan. Health Mobilization Series A-5.

Public Health Service (DHEW), Washington, D.C. Div. of Health Mobilization
MF AVAILABLE IN VT-ERIC SET.
Division of Health Mobilization, U.S. Public Health Service, 6935 Wisconsin Avenue, Chevy Chase, Maryland, 20015.
Pub Date - 66 56p.

EMERGENCY PROGRAMS; *PUBLIC HEALTH; *STATE PROGRAMS; POLICY; COMMUNICATION; *MODELS; *PROGRAM ADMINISTRATION; STATE AGENCIES; AGENCY ROLE; CIVIL DEFENSE; HEALTH NEEDS; FEDERAL PROGRAMS; STAFF ROLE
*HEALTH MOBILIZATION PROGRAM

Designed to assist state health officers in preparing for effective emergency health service operation during periods of national or major natural disaster, the document consists of three major sections followed by a series of sample emergency operating documents. "Preparedness Actions" covers normal situations and conditions which require a substantial increase in readiness. Organization and Administration presents general information and covers activation and relocation. Functions describes the roles of the state health officer, the administrative officer, the health manpower division, the material and facilities division, the medical division, and the public health division. Examples of memorandums are (1) delegation of authority by the governor to the state health officer, (2) policies governing emergency health service and resource management operations from state officer to heads of local government, civil defense directors, and local health officers, and (3) licensure requirements and liability from governor to state officer. Other sample documents cover the emergency alerting system, the emergency operating center, essential records, inventory of essential operating records, anticipated post-attack health situation, emergency mobile field teams, and damage assessment and resource evaluation. (JK)

VT005563

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MODEL State Emergency Health Service PLAN

U.S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE
Public Health Service
Division of Health Mobilization

1966

CONTENTS

	Page
PURPOSE AND USE OF MODEL PLAN	1
INTRODUCTION	3
I. PREPAREDNESS ACTIONS	
A. Normal Situation	5
B. Increase-Readiness Condition	5
II. ORGANIZATION AND ADMINISTRATION	
A. General	7
B. Activation	7
C. Relocation	7
D. EHS Organization	8
III. FUNCTIONS	
A. Office of the Chief	9
B. Administrative Office	9
C. Health Manpower Division	10
D. Materiel and Facilities Division	10
E. Medical Division	12
F. Public Health Division	12
SUPPLEMENTS	
1. Delegation of Authority	15
2. EHS Staffing Table	16
3. Emergency Health Service Assignment	19
4. EHS Alerting System	20
5. EHS Emergency Operating Center (EOC)	21
6. EHS Essential Operating Records	22
7. Inventory of EHS Essential Operating Records	23
8. Anticipated Postattack Health Situation	24
9. Policies Governing EHS Operations	25
10. EHS Mobile Field Teams	27
11. Damage Assessment and Resource Evaluation	28
12. Agreements With Other Organizations	30
13. Resource Inventories	34
14. Report to Federal EHS	36
15. Requests for Federal EHS Assistance	37
16. Licensure Requirements and Liability	38
17. Reporting for EHS Duty	39
18. Requisition for Health Manpower	40

CONTENTS

	Page
19. Retail Sale and Distribution of Drugs	41
20. Report of Health Items in Retail Establishments	42
21. Assignment of Destinations for Frozen Stocks	43
22. Estimate of EHS Resource Requirements	44
23. Request for State EHS Assistance (Health Items)	45
24. Procurement of Health End-Item Supplies	46
25. Request for State EHS Assistance (Operating Supplies)	47
26. Procurement of Supporting Materials and Services	48
27. Application for Construction	49
28. Health Service Construction Report	50
CHECKLIST OF CHANGES AND ADDITIONS	51

PURPOSE AND USE OF MODEL PLAN

This model State plan is designed to assist State health officers in preparing for effective emergency health service operation during periods of national or major natural disaster.

If each State health department develops and maintains an emergency operating plan and readiness, it will be prepared to initiate emergency policies, standards, and procedures rapidly, and to assist local governments in meeting and overcoming unprecedented disaster medical care and public health problems.

This plan illustrates some of the types of emergency operating documents and procedures which should be developed to meet disaster needs of each State. Though some preparedness actions are described, the plan is primarily concerned with post-attack operations of the State health department. The Table of Contents indicates the scope and coverage of the plan. The sample documents and orders suggest how a State health agency might accomplish its emergency functions.

Food and drug safety activities are included, even though in some States they are the responsibility of other State agencies. Emergency public water supply activities are included by reference only; water supply is not within the scope of this model plan.

Though a written plan may reflect readiness, it does not in itself assure emergency operating capability. It is tested at the community level during a disaster. It is here that direct health services will be provided and the effectiveness of preparations will be proved. The State health department should set the preparedness example for local governments.

PHS Health Mobilization Program representatives assigned to State health departments and DHEW regional offices are available for consultation, advice, and assistance in translating this model plan into an effective emergency operations plan tailored to the unique needs and existing capabilities of each State.

STATE EMERGENCY HEALTH SERVICE PLAN

INTRODUCTION

This State Emergency Health Service Plan prescribes the policies, procedures, organization, functions, staffing, and other factors governing emergency operations of the State Health Department.

The Plan is intended for application during a national civil defense emergency. Portions of the Plan, however, may be utilized during a major natural disaster.

The Health Mobilization Program Director is responsible for maintaining the Plan and for preparing and distributing revised rosters, listings, and other materials as required and appropriate.

This Plan and subsequent revisions and additions are issued to, and shall be maintained by, all health officers within the State, all personnel assigned to the State Emergency Health Service, and other officials and organizations concerned.

This Plan supersedes the Health annex to the State Operational Survival Plan (1957).

/s/ STATE HEALTH OFFICER

EXAMPLE

I. PREPAREDNESS ACTIONS

	See Supplement Number
The primary objective of preparedness actions is to increase and maintain agency readiness to activate and operate the State Emergency Health Service (EHS). Actions which shall be accomplished during peacetime and during an Increase-Readiness Condition.* are specified below.	
A. NORMAL SITUATION	
The State Health Department shall routinely maintain:	
1. Current information on, and review and implementation of, Federal and State policies, laws and regulations pertaining to Emergency Health Services	
2. Alternate site for EHS operations (Emergency Operating Center - EOC)	5
3. Basic data on the location and inventories of health and water resources	13
4. Estimates of anticipated postattack emergency requirements and available health and water resources	8
5. Specific preparedness and emergency mission assignments for existing organizational units	
6. Current roster of EHS assignees	2
7. EHS alerting system	4
8. Periodic training and orientation in disaster practices and emergency duties of EHS assignees	
9. Mutual aid pacts with health departments of adjoining States	12
10. Formal agreements and working relationships with assisting agencies and professional societies	12
11. Radio communication capability, linking EHS EOC and State EOC	5
12. Essential operating record and reference materials pre-positioned at EHS EOC	6,7
13. Periodic EHS tests, exercises, evaluation, and revision of EHS Plan	
14. Guidance and consultation to assist local health officers and governments in developing and maintaining emergency health services capability	
B. INCREASE-READINESS CONDITION	
Arrangements have been made with the State Civil Defense Director to assure that the State Health Officer will be notified of an Increase-Readiness Condition, which will require a substantial increase in readiness to activate and operate the EHS and maximum	

*See Federal Civil Defense Guide, Part G, Chapter 5, for description of Increase-Readiness Condition.

EXAMPLE

	See Supplement Number
readiness to take action upon attack warning. The State Health Officer shall immediately:	
1. Initiate the EHS alerting system	4
2. Restrict EHS assignees' annual leave and travel	
3. Transfer accumulated essential operating records to the EHS EOC	6
4. Require EHS assignees to review EHS Plan	2
5. Inspect EHS EOC and pre-positioned supplies and equipment	5
6. Correct PDH deficiencies	13-A
7. Conduct EHS test exercise	
8. Relocate EHS assignees to (1) State EOC, or (2) EHS EOC, as directed	2,3

EXAMPLE

II. ORGANIZATION AND ADMINISTRATION

See Supplement Number

A. GENERAL

The peacetime structure of the State Health Department is not appropriate to anticipated emergency program needs and responsibilities. Extraordinary actions must be taken to cope with unprecedented postattack health problems. Health resources management responsibilities will be greatly increased. Regular programs not concerned with disaster needs will be modified or suspended. The State Health Department will be reorganized and expanded, becoming the State Emergency Health Service (EHS). Its primary mission will be to assist communities to meet the postattack civilian health needs. 8 1

B. ACTIVATION

The EHS shall be activated by the State Health Officer upon:

1. Attack on the United States,
2. Presidential or Congressional declaration of a national civil defense emergency, or
3. Direction by the Governor.

EXAMPLE

C. RELOCATION

1. State Emergency Operating Center (EOC)

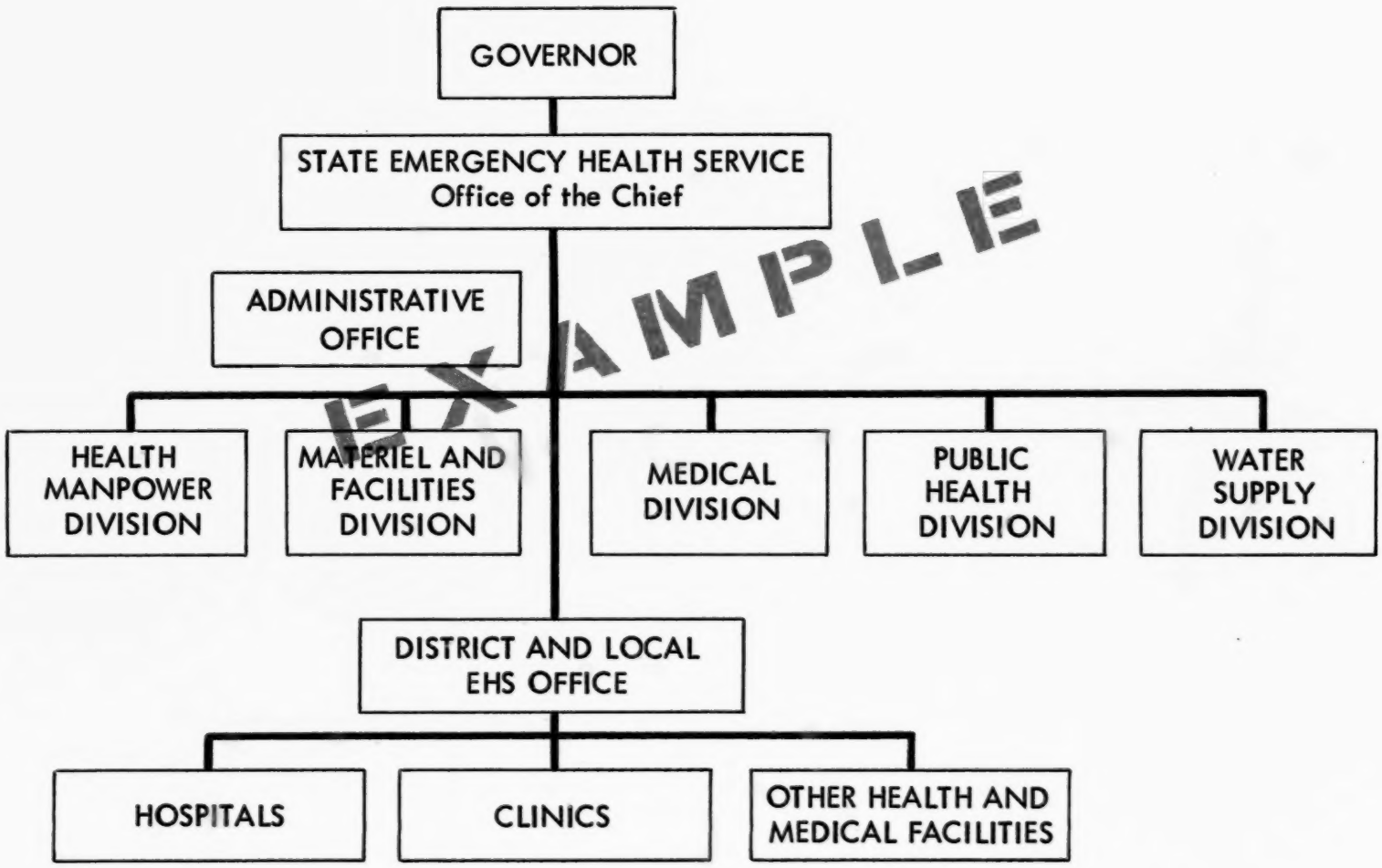
   Assuming that the State Office Building is in a high-risk location, the State has established a protected alternate site for emergency operations at the_____ _____. According to the State Operational Survival Plan, the State Health Officer and_____employees of the State Health Department shall relocate to the State EOC upon an Increase-Readiness Condition. They shall advise the Governor and act as liaison with other State officials during the fallout pindown period. 2

2. EHS Emergency Operating Center

   The State Health Department has established an alternate site for EHS operations at the_____(a low-risk location____ miles from the capital). It supplements limited EHS capability at the State EOC and provides facilities for full-scale EHS operations. _____EHS assignees shall relocate to this site during an Increase-Readiness Condition (the total number is based on shelter capacity). If the State Health Department building is destroyed, damaged, or otherwise unusable, additional surviving health department employees, nongovernment EHS assignees, and reservists shall report to the EOC for duty when fallout radiation level permits. 5 2

D. EHS ORGANIZATION

In the immediate postshelter period the EHS shall be organized as shown in the diagram below.



EXAMPLE

III. FUNCTIONS

See Supplement Number

A. OFFICE OF THE CHIEF

The State Health Officer (Chief, EHS) directs and coordinates all EHS activities, advises the Governor on the health situation and needs, and represents the Governor in all dealings with the DHEW Regional Health Director (Chief, Federal Regional EHS). Specific duties: 1

1. Immediately postattack (as soon as intelligence data and communications permit)

   a. Performs damage assessment and resource evaluation 11

   b. Determines most effective utilization (including redistribution) of State-controlled health resources 23

   c. Issues public announcements pertaining to major health hazards, protection, and treatment

   d. Issues to local governments policy and guidance directives pertaining to major health hazards, defensive actions, and health resource controls 9

   e. Provides requested consultation and assistance to local health and medical authorities

2. Postshelter

   a. Re-establishes and maintains communications and working relationships with State agencies, local health authorities, EHS field offices, and Federal Regional EHS

   b. Re-establishes liaison with health agencies of adjoining states

   c. Implements and assures conformance to Federal EHS and State directives and policies

   d. Reports health situation, major problems, and needs to the Federal Regional EHS 14

   e. Recommends needed State legislation affecting public health 15

   f. Directs EHS reorganization based on changing program needs

   g. Re-establishes inoperative local health and medical agencies 10

B. ADMINISTRATIVE OFFICE

This office provides centralized administrative, personnel, fiscal, communications, and other office services. Specific duties:

1. Arranges billeting and subsistence for relocated personnel 2

2. Places job orders with local State Employment Service office 2

3. Secures transportation for employees involved in field travel 10

EXAMPLE

	See Supplement Number
C. HEALTH MANPOWER DIVISION	
This division directs all EHS activities pertaining to health manpower mobilization and management and necessary to carry out health and medical programs. Specifically, this division:	16
1. Assesses requirements and determines location and numbers of surviving health manpower	13
2. Issues news releases requiring all health manpower to report to one of the following:	
(a) emergency assignment	17
(b) nearest health facility	
(c) local emergency manpower organization for health service assignment	
3. Issues standards and ratios for assignment of health manpower to achieve the most effective balance between resources and requirements	
4. Requisitions and transfers health manpower according to need	18
5. Requests assistance from State emergency manpower organization in locating and referring health and supporting manpower	
6. Reports additional health manpower requirements to DHEW Regional EHS	15
D. MATERIEL AND FACILITIES DIVISION	
This division provides health materiel management policies and guidance consistent with State and Federal objectives; directs all EHS activities pertaining to requirements, procurement, distribution and use of health supplies and facilities; and claims and allocates essential supporting services, supplies and controlled materials.	
The following functions are arranged in approximate order of priority.	
1. Requirements and Distribution Branch	
a. Assesses damage to and losses of health facilities (e.g., hospitals, clinics, blood banks, laboratories)	11 13
b. Assesses damage to and losses of health end-item inventories at producers, wholesalers, retailers, hospitals, etc.	11 13
c. In cooperation with State Production Agency, assesses health supplies and equipment production and distribution capabilities	11 13
d. Issues priorities and instructions for the controlled distribution of health supplies (including narcotics) and equipment to individual consumers	19 23
e. Issues instructions for controlled distribution of health supplies and equipment required by health facilities	20,21 24,25

EXAMPLE

	See Supplement Number
f. Issues procurement procedures--according to Department of Commerce (BDSA) and other resource agency emergency instructions--for maintenance, repair, and operating supplies and equipment.	26 25
g. Prepares time-phased estimates of requirements for essential health survival items, health materiel resources, and supporting goods and services	
h. Determines surpluses and deficiencies by geographic area	22
i. Regulates distribution of State-controlled health resources	
j. Issues instructions freeing allocations of primary health end-items in accordance with Federal policy and procedures	
k. Prepares reports on end-item inventories and health facilities	
l. Requests recovery and salvage of medical supplies, equipment, and facilities	
2. Claimancy Branch	
a. Determines quantities and types of health end-items available for public consumption through the wholesale and retail system	
b. Claims resources and assists communities to obtain health and supporting resources	
c. Issues application instructions for controlled materials	27
d. Issues instructions supplementing agency directives on supporting resources	
e. Prepares and coordinates instructions to production and resource agencies for allocation of health resources	
3. Supply and Transportation Office	
a. Submits estimates of transportation requirements to State Transportation Control Agency	
b. Arranges for the intercommunity movement of patients, supplies, Packaged Disaster Hospitals, retail health stocks, and supporting materials	
4. Producer and Wholesaler Liaison Office	
a. Establishes working relationships with wholesalers and retailers and with State agencies controlling essential survival resources and services	
b. Assists in expediting deliveries of materials to health supply producers	
c. Assists in expediting drug wholesaler orders for health-end items	
d. Coordinates specifications and provides guidance for item substitution	

EXAMPLE

See Supplement Number

E. MEDICAL DIVISION

This division directs all EHS activities pertaining to civilian medical care and treatment. Specific duties:

1. Issues diagnostic and treatment guides for unusual illnesses and injuries (e.g., burns, radiation illness, exotic communicable diseases)

2. Issues guidance on expedient, improvised, and substitute treatment techniques and therapeutic agents

3. Provides guidance and standards relevent to external radiation exposures significant in medical care and treatment

4. Provides professional consultation and advice on mental health, maternal and child health, nutrition, radiology, etc.

5. Provides guidance and standards for hospital expansion, casualty management, emergency ambulance services and outpatient care

6. Issues directives establishing or revising hospital admission and discharge policies

7. Directs and coordinates interarea (intrastate) transfers of patients

8. Prepares and maintains vital statistics, casualty and health situation reports

9. Establishes and expands physical rehabilitation centers and services

10. Provides guidance and assistance in the establishment or expansion of blood banks and bleeding stations, and the procurement and use of whole blood, plasma, and volume expander

F. PUBLIC HEALTH DIVISION

This division directs EHS activities pertaining to public health services. Specific duties:

1. Assembles and dispatches teams to investigate and assist in overcoming severe local health problems and to establish or re-establish local public health agencies

10

2. Maintains epidemic intelligence, health hazard reporting and analysis

3. Prepares and revises public health situation statistics and summary reports

4. Re-establishes and expands laboratory service facilities

5. Investigates and determines nature and causes of outbreaks of unusual or exotic diseases

6. Expands epidemic prevention, control, and immunization activities

EXAMPLE

	See Supplement Number
7. Issues guidance and provides consultation and assistance on reconstruction of sewerage facilities and prevention of overloading waste disposal facilities	
8. Re-establishes and expands milk and food sanitation and food and drug safety programs	
9. Evaluates and controls internal radiation exposure hazards associated with contaminated water, milk, and foods	
10. Provides professional consultation and advice on such matters as disposal of the dead, decontamination, drug salvage, expedient and improvised facilities and techniques, and the usual environmental and public health services	

EXAMPLE

DELEGATION OF AUTHORITY

TO : State Health Officer

FROM : Governor

SUBJECT: DELEGATION OF AUTHORITY

Authority for Delegation. [Cite Emergency Powers of the Governor]

Authorized to:

1. Direct and coordinate all civilian emergency health activities in the State

2. Suspend all health programs and activities which do not directly and immediately contribute to the saving of lives, prevention of illness, and prevention and control of serious health hazards

3. Reorganize the State Health Department as necessary

4. Assume direct operational control over emergency health functions anywhere within the state in the event of disaster beyond local control

5. Perform the following functions in the mobilization and management of the State's health manpower, facilities, supplies and equipment:

   a. Activate control procedures imposed by [Cite Order Directing Compliance with Consumer Rationing of Health Supplies]

   b. Requisition health facilities, claim and allocate supplies and equipment, and assign health manpower

   c. Enter into contracts and incur obligations necessary to protect the public health and provide emergency health services

Redelegation. This authority is conferred with authority to redelegate.

/s/ GOVERNOR

EXAMPLE

EHS STAFFING TABLE

Organizational Unit	Position Title	Assignee #
A. OFFICE OF THE CHIEF		
	1. *Chief (State Health Officer) - Order of Succession - a. Deputy Chief b. Chief, Public Health Division c. Chief, Medical Division	
	2. + Deputy Chief 3. + Public Information Officer 4. + Secretary 5. + Clerk-Typist	
B. ADMINISTRATIVE OFFICE		
	1. + Administrative Officer 2. + Administrative Assistant 3. + Secretary 4. + Messenger 5. Fiscal Officer 6. Fiscal Accounting Clerk 7. Personnel Officer 8. Personnel Clerk 9. + Communications Officer	
C. MANPOWER DIVISION		
	1. + Chief 2. + Deputy Chief 3. + Manpower Statistician 4. Health Educator 5. Statistical Clerk 6. Secretary 7. Clerk-Typist	

EXAMPLE

* Relocates to State EOC (_____ shelter spaces)
\+ Relocates to EHS EOC (_____ shelter spaces)
\# Address given for Executive Reservists not normally employed by State Health Department

Organizational Unit	Position Title	Assignee #
D. MATERIEL AND FACILITIES DIVISION		
	1. + Chief 2. + Deputy Chief 3. + Chief, Requirements and Allocation Branch 4. + Chief, Claimancy Branch 5. + Supply and Transportation Officer 6. + Producer and Wholesaler Liaison Officer 7. + Statistician 8. Statistical Clerk 9. Architect 10. Engineer, Structural	
E. MEDICAL DIVISION		
	1. *Chief 2. + Deputy Chief 3. + Surgery Consultant 4. + Nursing Consultant 5. + Hospital Administration Consultant 6. + Radiology Consultant 7. Psychiatry Consultant 8. Rehabilitation Consultant 9. Nutrition Consultant 10. Pediatric Consultant 11. Obstetric-Gynocology Consultant 12. Anesthesiology Consultant 13. Otolaryngology Consultant 14. Opthalmology Consultant 15. Dental Consultant 16. + Medical Record Librarian 17. + Statistician	

EXAMPLE

* Relocates to State EOC (_____ shelter spaces)
\+ Relocates to EHS EOC (_____ shelter spaces)
\# Address given for Executive Reservists not normally employed by State Health Department

Organizational Unit	Position Title	Assignee #
F. PUBLIC HEALTH DIVISION		
	1. *Chief 2. + Deputy Chief 3. + Epidemiologist 4. + Public Health Administration Consultant 5. + Public Health Nursing Consultant 6. Mortuary Services Consultant 7. + Sanitary Engineer 8. Sanitarian 9. + Food and Drug Inspector 10. Food Bacteriologist 11. Medical Bacteriologist 12. Public Health Bacteriologist 13. + Statistician 14. + Radiological Health Consultant	

EXAMPLE

* Relocates to State EOC (_____ shelter spaces)
\+ Relocates to EHS EOC (_____ shelter spaces)
\# Address given for Executive Reservists not normally employed by State Health Department

EMERGENCY HEALTH SERVICE ASSIGNMENT

TO : _____

FROM : State Health Officer

SUBJECT: EMERGENCY HEALTH SERVICE ASSIGNMENT

You are hereby directed and authorized to report for emergency duty at:

☐ EHS Emergency Operating Center
_____

☐ State Emergency Operating Center
_____

☐ Immediately upon receipt of "Relocate" notification

☐ Immediately postshelter, as soon as radiation levels permit

You are assigned to the position of _____, _____, State Emergency Health Service.

The attached State Emergency Health Service Plan provides information about preparedness and emergency actions. Become especially familiar with the functions of the unit to which you are assigned and with the pertinent reference documents. Review the Inventory of Essential Operating Records and send to the Administrative Officer any additional record or reference items which you would require during an emergency.

EXAMPLE

The attached identification card may help to expedite travel; carry it in your wallet.

Know the alerting system and carry the attached alerting diagram in your wallet. Notify the Mobilization Officer if there is any change in your telephone numbers.

I suggest that you prepare and practice a family survival plan. The attached kit of pamphlets will be of assistance to you.

If you wish further information, contact the Mobilization Officer.

/s/ STATE HEALTH OFFICER

Attachments:
State EHS Plan
Civil Defense Identification Card
Family Survival Guides Kit

EHS ALERTING SYSTEM

ALERTING PROCEDURE

1. Upon receipt of an "Increase-Readiness" notice, the State Health Officer immediately initiates the alerting call-down system, relaying the message verbatim to the personnel listed immediately to the right of his name on the alerting diagram.

2. In turn, each employee receiving the message relays it to persons named.

3. The first number is the office extension; the second is the home telephone.

4. If an employee can not be contacted, the caller must make the additional calls. THE CHAIN MUST NOT BE BROKEN.

PREPAREDNESS ACTIONS

Upon receipt of an "Increase-Readiness" message, each designated relocatee shall immediately:

1. Stand by for subsequent alert calls

2. Curtail travel and leave

3. Leave telephone number where he can be reached when he must be away from office or home

4. Test and rehearse his family survival plan

5. Prepare for relocation

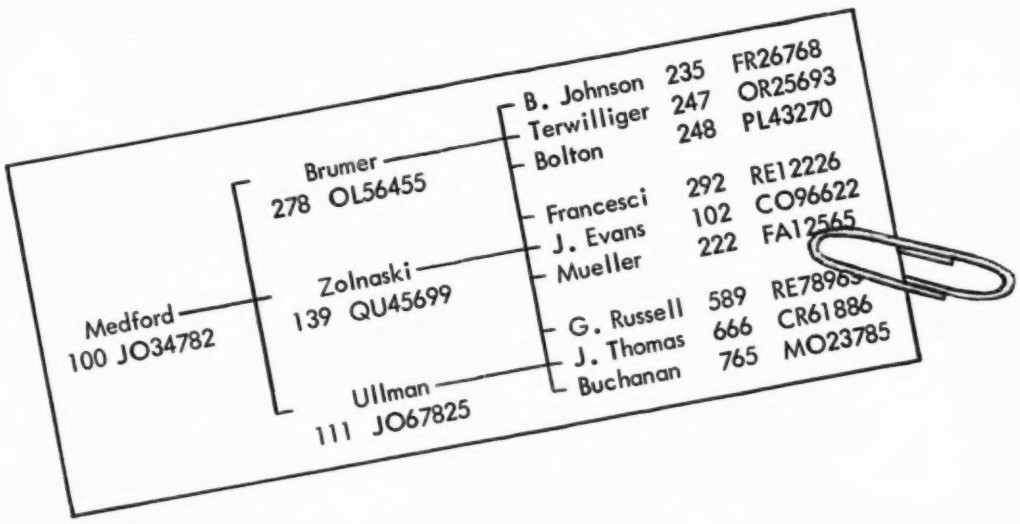
EXAMPLE

MAINTENANCE OF ALERTING DIAGRAM

1. Carry the attached card in your wallet

2. If there is any change in your phone numbers, immediately inform the Health Mobilization Director and the person who would call you

3. Discard old diagram upon receipt of revised diagram



EHS EMERGENCY OPERATING CENTER (EOC)

GENERAL

The EHS EOC is established at _____, (a low-risk location____miles from the capital) to assure an emergency operating capability. The EOC shall be activated by the State Health Officer if the State health department office building is destroyed, damaged, or made unusable by an attack or local disaster. It supplements the limited EHS representation at the State EOC and provides facilities for full-scale EHS operations.

PROTECTION

The reinforced concrete EOC structure is estimated to be resistant to a blast overpressure of at least 3 psi. The basement fallout shelter area has a rated capacity of _____ persons. It provides a protection factor of at least 100. Several interior rooms on the first floor provide a protection factor of at least 40.

EXAMPLE

FACILITIES

Food, water, and medical and sanitation supplies and equipment, sufficient to maintain an austere level of subsistence for____persons for 14 days shelter occupancy, are stored in the shelter area and the protected rooms on the first floor. An emergency generator and fuel are sufficient to meet minimum electric power requirements in case of local service failure. A two-way short-wave radio assures communication with the State EOC and, through it, with local governments.

MAP

The following map shows the EHS EOC location and alternate travel routes.

FLOOR PLAN

The following floor plan shows space assignments for work, quarters, and shelter supplies.

EHS ESSENTIAL OPERATING RECORDS

RESPONSIBILITY

Essential record and reference materials for emergency operations are pre-positioned and maintained by the State Health Department Administrative Officer at the State and EHS Emergency Operating Centers. Each division chief is responsible for reviewing the records inventory periodically and selecting new or revised materials for transfer to the EOC's.

CLASSIFICATION

A specific organizational filing system has been established. Each record item is coded (upper right corner) with a subject classification and serial number derived from the EHS Staffing Table (Supplement 2). Example:

EXAMPLE

EHS Subunit or staff official

F-9.4 Civil Defense Information for Food and Drug Officials (FDA)

EHS Division Fourth record item transferred

INVENTORY

Supplement 7 lists the current inventory of EHS pre-positioned essential operating records.

INVENTORY OF EHS ESSENTIAL ORERATING RECORDS

Pre-positioned at the State EOC and EHS EOC

A-1.1 National Plan for Emergency Preparedness (OEP)
A-1.2 Regional Emergency Health Service Plan (DHEW)
A-1.3 State EHS Plan (1965) (100 copies)
A-1.4 State Survival Plan (1964)
A-1.5 Directory of City and County HealthDepartments
A-1.6 Federal Civil Defense Guide (OCD)
A-1.7 Effects of Nuclear Weapons (AEC/Army)
A-1.8 State Plan for Emergency Management of Resources

B-1.1 Inventory of State Health Department Property
B-7.1 Roster of State Health Department Employees

C-2.1 Directory of State and Local Employment Security Offices
C-2.3 Directory of Health Professional Schools
C-2.4 Directory of Health Professional Societies

D-1.1 Modern Drug Encyclopedia
D-1.2 The Merck Index
D-1.3 Remington's Practice of Pharmacy
D-1.4 Directory of Federal Health Facilities
D-1.5 Chemical Week: Buyers Guide Issue
D-1.6 Hospitals - Guide Issue (AHA)
D-1.7 Effects of Nuclear Weapons (AEC/Army)
D-1.8 Maps and templates for damage assessment
D-1.9 Directory of Federal Food and Drug District Offices
D-1.10 Defense Mobilization Order 8500.1A. (OEP)
D-2.1 List of essential health survival items
D-2.2 List of health facilities under construction or planned
D-2.3 The Defense Materials System and Priorities (DOC/BDSA)
D-3.1 Transportation Reference Guides
D-3.2 List of principal shipping points for health supplies
D-3.3 Distribution plan for servicing operating health facilities

E-1.1 Summary Report on National Emergency Medical Care (AMA)
E-1.2 Mass Casualties - Principles Involved in Management (Assoc. Military Surgeons)
E-1.3 Emergency War Surgery (NATO)
E-1.4 Medical Aspects of Radiation Accidents - A Handbook (AEC)
E-1.5 Treatment of Radiation Injury (NAC-NRC)
E-1.6 Hospitals - Guide Issue (AHA)
E-1.7 Directory of Blood Transfusion Facilities and Services (JBC)
E-1.8 Role of the Pharmacist in National Disaster (PHS)
E-1.9 Role of the Veterinarian in National Disaster (PHS)
E-1.10 Role of the Dentist in National Disaster (PHS)

F-1.1 Control of Communicable Diseases in Man (APHA)
F-1.2 Exposure to Radiation in an Emergency (Natl. Comm. on Radiation Production and Measurements)
F-1.3 Procedures for Determination of Stable Elements and Radionuclides in Environmental Samples (PHS)
F-9.4 Civil Defense Information for Food and Drug Officials (FDA)

EXAMPLE

ANTICIPATED POSTATTACK HEALTH SITUATION

PLANNING BASIS

The State Plan is sufficiently flexible to apply to contingencies ranging from a single local disaster to widespread devastation caused by thermonuclear attacks. While the State EHS must be prepared to cope with any contingency, a single base is helpful for resources management planning. The following narrative illustrates a possible Statewide situation which could exist under the casualty and damage levels selected.

MEDICAL WORKLOAD

If casualty level of _____ % is applied, _____ of the State's population of _____ could become casualties. Of this number approximately _____ % (_____) would be expected to die before or after only minimal treatment, leaving an equal number who would require definitive treatment. Two-thirds (_____) of this latter group would require hospitalization some time during the first 30 postattack days, and one-third (_____) would require self, neighbor, or outpatient care.

RESOURCES

_____ percent (_____) of the peacetime total of _____ permanent hospital beds would survive an attack resulting in a casualty level of the magnitude described above. In addition, _____ % (_____) of the _____ Packaged Disaster Hospital beds pre-positioned in the State would be available for early use.

Approximately, _____ % of preattack stocks of health supplies located at wholesale drug warehouses, chain drug store warehouses, surgical supply houses, general and special short-term hospitals and drug stores would remain after such an attack. Of illustrative health supplies, _____ billion units of the preattack total of _____ billion units of penicillin, _____ of the _____ gauze pads, and _____ of the _____ doses of narcotics would remain.

As an index of professional health manpower availability, _____ % (_____) of the _____ physicians (M.D. and D.O.) might survive.

REQUIREMENTS

Estimated gross requirements for the first 30 postattack days could be for as many as _____ physicians and _____ hospital beds. However, as estimated above, only _____ physicians and _____ (permanent and PDH) beds are expected to be available. Because physician availability is the major limiting factor in the effective utilization of health material and facilities, and because it is not likely that additional physicians will be available from out-of-State sources for an extended period of time, it is necessary to derive a set of more realistic requirements. If it is assumed that each physician in good health (_____) can take care of an average of 15 hospital beds per day in a postattack situation, then _____ (_____ X 15) hospital beds can be effectively used. This means that a total of _____ additional beds could be utilized during the early postattack period.

Estimated 30-day postattack requirements for illustrative health supplies would be as follows: penicillin, _____ billion units; gauze pads, _____ ; and narcotics, _____ doses. Comparison of these required quantities with surviving State-controlled stocks (excluding PHDs, State and locally owned stockpiles, producer inventories, and Federal depots and stockpiles) indicates that the State will have available a _____ day supply of penicillin (a deficiency of _____ billion units); less than a _____ day supply of gauze pads (a deficiency of _____ pads); and about a _____ week supply of narcotics (a deficiency of _____ doses).

EXAMPLE

POLICIES GOVERNING EMERGENCY HEALTH SERVICE OPERATIONS

TO : All Heads of Local Government, Civil Defense Directors, and Local Health Officers

FROM : State Health Officer

SUBJECT: POLICIES GOVERNING EMERGENCY HEALTH SERVICE AND RESOURCE MANAGEMENT OPERATIONS

In the management, coordination, and provision of emergency health services and resources, you are hereby ordered to comply with the following policy directives.

A. ADMINISTRATION

1. Officially designate and authorize a single official, preferably a public health physician, as responsible for over-all direction and coordination of emergency health services and resources.

2. Immediately suspend the private practice of medicine and all health programs and activities which do not directly and immediately contribute to the saving of lives, prevention of illness, and prevention and control of serious health hazards.

3. Promptly report uncontrollable or unidentifiable communicable disease outbreaks to the State Health Officer.

4. Request health services and resources support and assistance from commanders of local military posts, if any, and request assistance from the State Health Officer only if and when all local sources of supply are nearing depletion and after all reasonable substitutions and improvisations have been employed.

EXAMPLE

B. SERVICES

1. In coordinating patient and casualty distribution among hospitals and clinics, include Federal nonmilitary and State medical care installations, if any, and prohibit non-medical criteria for patient admission, (e.g., race, sex, religion, residence, ability to pay).

2. Cancel elective treatment and surgery and limit hospital admissions, during the casualty overload period, to those whose survival depends upon hospital care.

3. Discharge all inpatients whose survival does not depend upon hospital services.

4. Immediately increase hospital bed capacities and establish all Packaged Disaster Hospitals in anticipation of increased admissions.

C. MANPOWER

1. Call all civilian health manpower, including retired, unemployed, unaffiliated, and refugee health manpower, to emergency health service duty at essential health facilities.

2. Promptly release military ready reservists and Public Health Service Commissioned Corps reserve officers ordered to active duty.

D. RESOURCES

1. Utilize, salvage, conserve, and control health resources on the assumption that outside assistance may not be available for as many as 30 postattack days.

2. Preserve and protect Public Health Service Medical Stockpile Depots, and Veterans Administration Medical Supply Depots, if any, until Federally-directed distribution is completed.

3. Quarantine, inspect, and decontaminate and salvage, or condemn and destroy, all health and medical supplies exposed to, or suspected of, contamination.

4. Quarantine and inspect all food exposed to, or suspected of, contamination, and assure that contaminated food is destroyed, or decontaminated and salvaged under guidance of responsible food authorities.

5. Invoke antihoarding regulations limiting essential health facilities to 14-day operating inventories.

6. Distribute retail and wholesale stocks of health and medical supplies and equipment only to essential health facilities and to individual patients having refillable prescriptions for life-saving drugs required for chronic serious medical conditions.

EXAMPLE

BY ORDER OF THE GOVERNOR /s/ STATE HEALTH OFFICER

EHS MOBILE FIELD TEAMS

PURPOSE

EHS Mobile Field Teams are required to re-establish inoperative community health offices, and make on-the-spot investigations of serious health hazards and problems.

FUNCTIONS

_____ teams are available to travel to specific areas to perform one or more of the following functions:

1. Re-establish inoperative community health organizations at the request of local authority
2. Investigate unusual or exotic disease outbreaks
3. Determine extent and character of local health situation and requirements as a basis for justifying requests for State or Federal assistance
4. Survey disaster areas at the request of State CD director to advise on re-entry timing, radiation exposure, health hazards, and health resource requirements
5. Provide direct personal consultation and advice to local health officials dealing with severe health management problems
6. Provide direct health services (e.g., epidemic control, mass immunization, vector and rodent control)

EXAMPLE

COMPOSITION

Team membership shall be drawn from available personnel at the EHS EOC. Depending upon the nature of the particular mission, each team may be supplemented by professional and technical specialists selected to deal with specific problems. Each basic team shall be composed of: 1 public health physician (Team Leader), 1 sanitary engineer, 1 public health nurse, 1 radiological health specialist, 1 epidemiologist, and 1 clerk (or staff assistant).

SUPPLIES AND EQUIPMENT

The following special items are pre-positioned at the EHS EOC for placement in mobile laboratory, other vehicles, or helicopters.

Quantity	Item
_____	Tape recorder and spare batteries
_____	Typewriter
_____	Radiological monitoring instruments
_____	Large-scale topographic maps
_____	Camera and (radiation proof) films
_____	Flashlights and spare batteries
_____	Binoculars
_____	Subsistence supplies and medical kit

Additional supplies and equipment requirements will depend upon the particular mission of each team.

DAMAGE ASSESSMENT AND RESOURCE EVALUATION

A. DAMAGE ASSESSMENT

1. Attack Analysis *(determining extent and character of attack)

   (a) Receive strike data (time of attack, kind of weapon)

   (b) Plot strikes

   (c) Plot fallout (based on weather and strike analysis)

   (d) Plot fire damage information

   (e) Receive reports of damage to transportation, communication, utilities, medical stockpiles, water impoundments, health facilities, etc.

2. Casualty Estimation *(determining effect on population)

   (a) Estimate number killed

   (b) Estimate number injured

   (c) Determine time-phased recovery characteristics

   (d) Estimate number unaffected

3. Resource Assessment **(determining effect of material resources)

   (a) Estimate amount of each health resource destroyed

   (b) Estimate amount of surviving resources temporarily inaccessable (determine re-entry time based on fallout conditions)

   (c) Estimate amount and location of resources listed in areas unaffected by attack

   (d) Review reports of losses in transportation, power, water supply, and accessibility of surviving supporting resources of concern to EHS

4. Prepare, as required, summary reports on damage effects and status of surviving resources, fallout maps, graphs, and other devices to illustrate the changing postattack health and water supply situation. Conduct staff briefings as required.

EXAMPLE

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*Functions may be performed by a centralized damage assessment team at the State EOC; arrangements must be made to forward findings to EHS.

**Further guidance available in Health Materiel and Facilities Planning Guide for Emergency Management, (PHS Publication No. 1071-A-4).

B. RESOURCE EVALUATION

As local health officers' reports are received, and the situation becomes more clearly known, the various EHS program specialists will analyze what the losses in health resources, facilities, and manpower mean to EHS programs, and will determine to what extent the surviving accessible resources will meet the needs of the surviving population.

Evaluation includes:

1. Determination of time-phased quantitative requirements for health resources

2. Determination of time-phased quantitative requirements for supporting services and resources (transportation, manpower, fuel, communications) in consultation with State agencies responsible for them

3. Analysis of availability and adequacy of surviving health and supporting resources (supply-requirements analysis and determination of geographic imbalances)

EXAMPLE

AGREEMENTS WITH OTHER ORGANIZATIONS

In order to utilize the resources and capabilities of health and related organizations most effectively, the State Health Agency has negotiated formal agreements specifying the disaster mission, working relationships, and other applicable policy and procedures with each of the following organizations. As additional agreements are made, they shall be included in this plan.

A. American National Red Cross

Public Law 4, approved January 5, 1905, (33 Stat. 599) and as amended, imposes upon the American National Red Cross a responsibility ". . . to continue to carry on a system of national and international relief in time of peace; and to apply the same in mitigating the suffering caused by pestilence, famine, fire, floods and other great national calamities; and to devise and carry on measures for preventing the same."

It is essential, therefore, that in time of natural disaster the State Emergency Health Service should coordinate its activities with those of the American Red Cross.

EXAMPLE

B. State Health Departments of adjoining States

C. State University, Medical College (usage of space for EOC)

D. State Medical Society

E. State Hospital Association

F. State Dental Society

G. State Osteopathic Society

H. State Optometric Society

I. State Nursing Society

J. State Pharmaceutical Association

K. State Funeral Directors Association

L. State Podiatric Association

M. State Veterinarian Association

N. State Labor Department

MEMORANDUM OF UNDERSTANDING BETWEEN THE STATE CHAPTER OF THE AMERICAN OPTOMETRIC ASSOCIATION AND THE STATE HEALTH DEPARTMENT PERTAINING TO THE EMERGENCY ROLE OF OPTOMETRISTS

In recognition of the knowledge and skills which optometrists can contribute, and to assure unified effort in providing emergency health services, this agreement, based on the Association's Optometric Mobilization Plan, is published for the information and guidance of all concerned.

MOBILIZATION PLANNING

An optometrist representative will participate in the development of Emergency Health Service plans, especially as they pertain to the procurement, pre-positioning, and controlled issuance of optical equipment and supplies, and preassignment of optometrists to emergency health activities.

EXAMPLE

EMERGENCY OPERATIONS

Optometrists will:

1. During the shelter period--assist other health personnel in the care and treatment of shelter occupants

2. During the immediate postshelter period--assist in the emergency medical care program

3. When released from the latter assignment, and until more normal operations can be resumed, establish and operate Visual Care Sections where persons referred for priority treatment can have their eyes examined and receive corrective glasses from an emergency optometric kit or similar supply source.

/s/ PRESIDENT, STATE CHAPTER
AMERICAN OPTOMETRIC ASSOCIATION

/s/ STATE HEALTH OFFICER

COOPERATIVE AGREEMENT BETWEEN THE STATE LABOR DEPARTMENT AND THE STATE HEALTH DEPARTMENT

(Adapted from the Illinois Agreement)

This cooperative Agreement is entered into by the State Labor Department (hereinafter referred to as the State Manpower Service) and the State Health Department (hereinafter referred to as the Emergency Health Service) in order to assure the orderly mobilization, training, distribution and use of civilian health manpower in periods of national emergency.

I. GENERAL PROVISIONS

During a period of national emergency, the recruitment and referral of civilian health manpower will be the joint responsibilities of the State Manpower Service and the Emergency Health Service.

II. ASSIGNMENT OF RESPONSIBILITIES

A. The Emergency Health Service will have primary responsibility for organization, training, and utilization of the civilian manpower as identified in the attachment to this Agreement titled "List of Health Manpower Occupations."* Health authorities at the District Office levels will develop and maintain inventories of these health skills.

B. State Manpower Service will be responsible for the recruitment, assignment, and allocation of health skills not included in the "List," plus supporting occupational classifications, such as clerical, food, engineering, custodial, and laundry service, which are also closely coordinated with the health mission. Personnel possessing skills in these categories will remain in the general manpower pool unless assigned to health service by the State Manpower Service.

EXAMPLE

III. EMERGENCY REFERRAL PROCEDURES

Emergency procedures for referring persons whose classifications are contained in the attachment** to this Agreement are as follows:

A. Requests for health manpower will be made through local, State, and Federal health channels.

B. Hospitals, laboratories, and other organizations using health manpower at the local level will notify the responsible local health official of their requirements. If he is unable to meet the requirements by reassignment of available health manpower, he will place (or authorize the operating organizations to place) orders with the local manpower office and report remaining shortages to the Emergency Health Service.

C. The Emergency Health Service will identify areas of potential health manpower supply and notify health officials of those areas to arrange reassignment of needed numbers and categories. Simultaneously, EHS will request the State Manpower Service to use its interarea

*"List of Health Manpower Occupations" is not attached to this Model Plan; it is published in "Community Emergency Health Manpower Planning," PHS Publication No. 1071-I-1.
**Not attached to this Model Plan.

recruitment machinery to obtain the needed personnel and complete the referral arrangements with the community(ies) requesting manpower. EHS will report remaining shortages to the Regional Emergency Health Chief, DHEW.

D. The State Manpower Service will use its resources to assist in locating and mobilizing health manpower and will provide supporting manpower as necessary and possible in accordance with existing priorities.

EXAMPLE

APPROVED:

/s/ DIRECTOR, STATE LABOR DEPARTMENT

/s/ DIRECTOR, STATE HEALTH DEPARTMENT

RESOURCE INVENTORIES

LIST A. PACKAGED DISASTER HOSPITAL

COUNTY	STORAGE LOCATION ADDRESS	PLANNED OPERATING SITE	CUSTODIAN	RESPONSIBLE PHYSICIAN	SERIAL NO.

LIST B. INPATIENT FACILITIES (General hospitals, specialized hospitals, nursing homes, sanitariums, etc.)

COUNTY	NAME AND ADDRESS	NORMAL BED CAPACITY	FALLOUT SHELTER CAPACITY	

LIST C. LABORATORIES (Clinical, State and local health departments, medical schools, large hospital)

COUNTY	NAME AND ADDRESS	DESCRIPTION OF TYPE(S) OF LABORATORY SERVICES PROVIDED	

LIST D. OTHER HEALTH FACILITIES (Clinics, domiciliaries, rehabilitation centers, public health centers, etc.)

COUNTY	NAME AND ADDRESS	DESCRIPTION OF TYPE OF SERVICE PROVIDED		

LIST E. BLOOD BANKING FACILITIES (Red Cross, AABB)

COUNTY	NAME AND ADDRESS	OTHER DATA	

SAMPLE

LIST F. HEALTH END-ITEM PRODUCERS (Pharmaceutical items, biological, chemical, and botanical drug items, surgical and medical instruments and apparatus, orthopedic, prosthetic and surgical appliances and supplies)

COUNTY	NAME AND ADDRESS	PRODUCTS	AVERAGE INVENTORIES	

LIST G. HEALTH END-ITEM WHOLESALE AND RETAIL DISTRIBUTORS

COUNTY	NAME AND ADDRESS	PRODUCTS	AVERAGE INVENTORIES	

LIST H. HEALTH MANPOWER

COUNTY	PHYSICIANS (MD & DO)	VETERI-NARIANS	DENTISTS	REGISTERED NURSES		MEDICAL TECHNICIANS	PHARMACISTS	SANITARY ENGINEERS	SANI-TARIANS
				ACTIVE	INACTIVE				

LIST I. HEALTH PROFESSIONAL SCHOOLS (Medical, osteopathic, nursing, dental, veterinarian, public health, medical technician, pharmacy)

COUNTY	NAME AND ADDRESS	TYPE OF SCHOOL	FULL-TIME FACULTY	AVERAGE ENROLLMENT

EXAMPLE

REPORT TO FEDERAL EMERGENCY HEALTH SERVICE

An initial health situation report, and subsequent reports of situation changes, shall be submitted by the State Health Officer to the Federal Emergency Health Service Regional Office (DHEW Regional Health Director). Reports may be submitted by any available communication method. It is mandatory that the data code be included with each reported item; the descriptive headings, however, may be omitted. Compliance with this reporting procedure will help to expedite Federal assistance.

Data Code	Description	Estimated Current Total Number
A1	Sick and injured requiring: hospital inpatient care	
A2	outpatient care	
	Inpatient conditions:	
A1.1	traumatic injuries	
A1.2	infections	
A1.3	burns	
A1.4	radiation illness	
A1.5	communicable diseases	
A1.6	others	
B	Available hospital beds (including temporary and improvised facilities)	
C	Available physicians (MD & DO)	
D	Brief narrative description, including prevalence, of major health and medical problems (e.g., epidemic, undiagnosed disease) _____ _____	

EXAMPLE

REQUESTS FOR FEDERAL EMERGENCY HEALTH SERVICE ASSISTANCE

GENERAL

The effectiveness of emergency preparations and plans will be tested at the local level. During the crucial first postattack month the numbers of lives saved and health hazards eliminated will depend largely upon individual, local, and State actions and available resources. As rapidly as postattack conditions permit, the Federal Emergency Health Service will be established and expanded at relocated regional offices. Though Federal EHS programs are most likely to be concerned with long-term national recovery, the primary mission is to provide assistance to State Health Departments. State requests for Federal EHS assistance shall be directed by the State Health Officer only to the Federal EHS Regional Office (DHEW Regional Health Director) having jurisdiction.

ASSISTANCE

Following are some of the types of assistance to be made available to the States.

1. Allocation of Federally-controlled civilian health resources (producer inventories and new production of health and medical supplies and equipment; stockpiled medical supplies and equipment)
2. Assignment of personnel to assist in re-establishment of State Health Departments
3. Establishment of regional specialized treatment and rehabilitation centers
4. Financial assistance (training and reconstruction grants)
5. Assistance in obtaining essential supporting services and resources
6. Assistance in resolving interstate conflicts and problems
7. Requisitioning and interstate movements of health resources
8. Professional and technical consultation and advice

EXAMPLE

Requests for military assistance should be directed to the State Adjutant General. Federal legislative needs should be brought to the attention of members of Congress and the Surgeon General of the PHS.

PROCEDURE

State Health Officer requests for Federal EHS assistance may be transmitted to the DHEW Regional Health Director by any available method of communication. Response to such requests will be facilitated if full information is provided on:

1. Specific assistance needed
2. Amount
3. Location of need (if other than State Health Office)
4. Magnitude of problem
5. Relative urgency
6. Justification (estimate of remaining available supply)

Information previously reported to DHEW in health situation reports need not be repeated; additional details, however, should be provided.

LICENSURE REQUIREMENTS AND LIABILITY

TO : State Health Officer

FROM : Governor

SUBJECT: WAIVING LICENSURE REQUIREMENTS AND CONFERRING IMMUNITY FROM LIABILITY FOR HEALTH PERSONNEL PERFORMING EMERGENCY HEALTH SERVICES

By virtue of the emergency powers vested in me as Governor of the State of_____, it is hereby ordered as follows:

Section 1. Scope. This order applies to Health Manpower as listed in Defense Mobilization Order 8540.1 Health Manpower Occupations, and published in the Federal Register of March 18, 1964.

Sec. 2. Waiver of Licensure Requirements. Any requirement for a State license to practice a health or allied skill shall not apply to a practitioner duly licensed by any other State, territory, possession, the District of Columbia, Federal government, or any neighboring country and performing emergency health services in this State subject to the order, or control of, or pursuant to a request of the State government, or any political subdivision thereof.

Sec. 3. Immunity. No person within the scope of this order performing emergency health services in this State shall be liable for the death of or injury to persons or damage to property as the result of such activity, except in cases of willful misconduct, gross negligence, or bad faith. The provisions of this Section shall not affect the right of any person to receive benefits to which he would otherwise be entitled under the Workmen's Compensation Law, or under any pension law, nor the right of any such person to receive any benefits of compensation under any Act of Congress.

/s/ GOVERNOR

EXAMPLE

REPORTING FOR EHS DUTY

TO : All Civilian Health Manpower

FROM : State Health Officer

SUBJECT: REPORTING FOR EMERGENCY HEALTH SERVICE DUTY

All civilians classified as health manpower* - regardless of present occupation - are hereby directed and authorized to report, to one of the following as soon as radiation levels permit:

1. Their emergency assignments
2. The nearest hospital, laboratory, or city, county, or state health officer
3. The nearest State Employment Service office for a health service assignment.

In localities where there are no extraordinary health or medical problems, health personnel will stand by either to receive sick and injured from hard-hit areas or to go, when directed to do so, to localities where health skills are critically needed.

This Order is issued because it is necessary to centralize health services activities and to coordinate, control, and conserve health resources to deal effectively with effects of the attack.

*If you are not sure whether or not you are classified as being in a health manpower occupation, contact the local health officer or employment service, both of whom have the official List of Health Manpower Occupations.

EXAMPLE

BY ORDER OF THE GOVERNOR /s/ STATE HEALTH OFFICER

Distribution: To all public information media (newspapers, radio stations) for immediate release, local health officers, and State Employment Service offices.

REQUISITION OF HEALTH MANPOWER

TO : Mayor of Metro City
Attention: Health Officer

FROM : State Health Officer

SUBJECT: REQUISITION FOR HEALTH MANPOWER

You are hereby directed to select and dispatch the following health manpower:

No. and Type:	Five (5) Bacteriologists (preferred: 3 medical, 2 food)
Send to:	Health Officer, Farnsworth
Via:	Helicopter, departs Metro City Heliport, Sept. 2, 19-- 8:00 a.m.
Duration of Duty:	About two months
No. and Type:	Five (5) Physicians (M.D. or D.O.) (Preferred specialties: 2 orthopedists, 2 surgeons, 1 psychiatrist) Ten (10) Registered Nurses One (1) Medical Record Librarian
Send to:	Health Officer, St. Vincent
Via:	MATS flight, departs Metro City Airport, Gate 5, Sept. 2, 19-- 9:15 a.m.
Duration of Duty:	About two weeks

EXAMPLE

This order is issued because an adjustment in the distribution of health manpower is imperative to deal with the effects of attack upon this State and upon the nation. To be effective and as equitable as possible, redistribution is based on established utilization standards and ratios, and will be accomplished by imposing quotas on each political subdivision able to contribute health manpower.

BY ORDER OF THE GOVERNOR /s/ STATE HEALTH OFFICER

Distribution: 30 copies to addressee; 2 copies to Health Officer, Farnsworth; 2 copies to Health Officer, St. Vincent; 11 copies to Transportation Office; 6 copies to Health Manpower Branch.

RETAIL SALE AND DISTRIBUTION OF DRUGS

TO : Pharmacists, Local Health and Civil Defense Officers, Retail Establishments, and General Public

FROM : State Health Officer

SUBJECT: REGULATIONS GOVERNING RETAIL SALE AND DISTRIBUTION OF DRUGS AND MEDICAL ITEMS

PURPOSE

This Order regulates the sale and distribution of drugs and medical supplies by retail establishments. It is effective immediately upon issuance of a General Freeze Order by the Governor.

EXAMPLE

REPORTING FROZEN STOCKS

Stocks of health survival items in food stores, department stores, and other retail establishments which do not employ a licensed pharmacist, or other acceptable health professional, shall be immediately frozen and reported to the local health officer.

DRUGS

Retail establishments employing a licensed pharmacist, or other health professional, may sell life-saving drugs (e.g., insulin, hydrocortisone, digitalis, isoproterenol) to patients normally under the care of a physician if:

(1) denial of such drug may jeopardize the patient's life,

(2) request is for a prescription drug and the person has a refillable prescription, or

(3) quantity sold is limited to one-week supply, except where the smallest unit is more than one-week supply (e.g., injectables), in which case the smallest unit may be dispensed.

BY ORDER OF THE GOVERNOR /s/ STATE HEALTH OFFICER

REPORT OF ESSENTIAL HEALTH SURVIVAL ITEMS IN RETAIL ESTABLISHMENTS AND NOT UNDER SUPERVISION OF A PHARMACIST

TO : Chief, Local Emergency Health Service

FROM: Department Store

EXAMPLE

In accordance with the Governor's general rationing order and Emergency Health Service Order No._____, requiring a registered pharmacist or other health professional to distribute essential health survival items, the items listed below have been frozen and will be made available from this location for redistribution on receipt of your instructions.

Description of Item	Unit of Measure	Total Quantity
Aspirin	Btle 25's	100
Aspirin	Btle 100's	50

/s/ MANAGER

LOCAL ASSIGNMENT OF DESTINATIONS FOR FROZEN STOCKS OF ESSENTIAL HEALTH SURVIVAL ITEMS

TO : Food Store or Department Store, etc.

FROM: Chief, Local Emergency Health Service

CONTROL NUMBER 102

The health survival items reported below as frozen and available are allocated to the following destinations in the quantities indicated:

Ship to: Charity Hospital, 42 State Street, Centerville.

Description of item	Unit of measure	Quantity
Aspirin	Bottle 25's	50

EXAMPLE

Priority has been assigned to this shipment. Transportation for movement will be furnished by the Red Ball Express Co., May 18 at 9:00 a.m. Have the supplies ready for movement at that time.

Standard commercial bill of lading will be used for shipment. Submit accomplished bill of lading to the Emergency Transportation Office for reimbursement. A copy of this order must be retained and presented with the consignee's signed statement of receipt to claim reimbursement.

/s/ COUNTY HEALTH OFFICER

cc: Red Ball Express Co.
Charity Hospital

ESTIMATE OF EMERGENCY HEALTH SERVICE RESOURCE REQUIREMENTS

TO : Federal Regional Emergency Health Service

FROM : State Emergency Health Service

SUBJECT: ESTIMATE OF EMERGENCY HEALTH SERVICE RESOURCE REQUIREMENTS

Following are this State's estimated net requirements for health supplies and equipment and other essential survival items necessary for the provision or support of civilian emergency health services during the 90-day period beginning_____. The listing is arranged in accordance with OEP Defense Mobilization Order 8500.1A.

Item	Unit of Measure	Estimated Net Requirement		
		30 days	60 days	90 days
(1)	(2)	(3)	(4)	(3) + (4)

EXAMPLE

I. HEALTH SUPPLIES AND EQUIPMENT*

1. Pharmaceuticals
2. Blood Collecting and Dispensing Supplies
3. Biologicals
4. Surgical Textiles
5. Surgical Instruments and Supplies
6. Laboratory Equipment and Supplies

II. FOOD

III. BODY PROTECTION AND HOUSEHOLD OPERATIONS

IV. ELECTRIC POWER AND FUELS

V. SANITATION AND WATER SUPPLY

VI. EMERGENCY HOUSING AND CONSTRUCTION MATERIALS AND EQUIPMENT

VII. GENERAL USE ITEMS

*Estimate military requirements, if any, separately.

LOCAL REQUEST FOR STATE EHS ASSISTANCE IN OBTAINING HEALTH END-ITEMS FOR PUBLIC CONSUMPTION

TO : State Emergency Health Service

FROM : Chief, Local Emergency Health Service

SUBJECT: HEALTH END-ITEM REQUIREMENTS FOR PUBLIC CONSUMPTION

Inventories of health end-items in this county have been depleted to the point at which they are inadequate to meet present and anticipated public consumption requirements for the maintenance of personal health and home sanitation.

There are six operational pharmacies with a licensed pharmacist on duty at each. They are normally supplied by two wholesale warehouses, one of which has been damaged beyond repair.

We request the following essential survival items be made available to this county. Quantities represent a 14-day operating supply.

EXAMPLE

Item	Unit of Issue	Quantity
Insulin	Box	
Bandage, Conpress 6X6	Pkg	
Antibiotics		

Ship to Central Wholesale Warehouse, 22 Peachtree Street, Centerville.

/s/ COUNTY HEALTH OFFICER

cc: Central Wholesale Warehouse

PROCUREMENT OF HEALTH END-ITEM SUPPLIES

TO : Health Facility Operators, Health End-Item Wholesalers and Retailers, Local Health and Civil Defense Officers

FROM : State Health Officer

SUBJECT: REGULATIONS GOVERNING ESSENTIAL HEALTH FACILITY PROCUREMENT OF HEALTH END-ITEM SUPPLIES

PURPOSE

This regulation authorizes and prescribes procedures for the procurement of health end-item supplies by essential health facilities.

AUTHORIZATION

Any person who operates an essential health facility may certify purchase orders for health survival items required to maintain essential emergency health services for 14 days.

EXAMPLE

CERTIFICATION

Purchase orders shall be certified as follows:

> "Certified for use in essential health survival activity under State Emergency Health Service Order No._____."
>
> /s/ Purchaser

SUPPLIERS

Purchase orders shall be placed with regular retail or wholesale supply sources. Delivery orders for supplies allocated from new production, or from producer inventories, shall bear the allocation number and the above certification statement.

RECORDS

Each person involved in any transaction covered by this regulation shall make and preserve records in sufficient detail to permit later determinations of compliance and reimbursement.

BY ORDER OF THE GOVERNOR /s/ STATE HEALTH OFFICER

LOCAL REQUEST FOR STATE EHS ASSISTANCE IN OBTAINING EMERGENCY OPERATING SUPPLIES

TO : State Emergency Health Service

FROM : Chief, Local Emergency Health Service

SUBJECT: REQUEST FOR EMERGENCY OPERATING SUPPLIES

Inventories of health end-items are inadequate to meet present and anticipated hospital needs. —— burn and —— orthopedic inpatients are now in critical condition. The following items are urgently requred to maintain a 14-day operating capability.

Item	Unit of Issue	Now On Hand	Quantity Required
Blankets			
Penicillin			
Dressings			
Insulin			
Morphine			
Sterilizer			

EXAMPLE

Supporting supplies (specify)
Dietary equipment
Refrigeration equipment
Fire Prevention equipment
Motorized equipment
Housekeeping equipment
Office equipment
Laboratory equipment
Sterilizing equipment
Laundry equipment
X-ray and photographic equipment
Food and water

Ship to Sussex County Memorial Hospital, 312 West Street, Centerville.

/s/ COUNTY HEALTH OFFICER

cc: Sussex County
Memorial Hospital

PROCUREMENT OF SUPPORTING MATERIALS AND SERVICES

TO : Health Facility Operators, Local Health and Civil Defense Officers, Supporting Supplies and Equipment Wholesalers and Retailers

FROM : State Health Officer

SUBJECT: REGULATIONS GOVERNING ESSENTIAL HEALTH FACILITY PROCUREMENT OF SUPPORTING MATERIALS AND SERVICES

PURPOSE

This regulation authorizes and prescribes procedures for the procurement of maintenance, repair, and operating supplies; installation materials, capital equipment, controlled materials, and supporting services required to maintain continuity of essential health service operations.

EXAMPLE

AUTHORIZATION

Essential health facilities may certify purchase orders for materials and services covered by this regulation as follows:

> "Certified for use in essential health services facility under State Emergency Health Service Order No._____."
>
> /s/ Purchaser

DELIVERIES

Any delivery order for materials and services shall bear the above certification statement.

RECORDS

Each person involved in any transaction covered by the regulation shall make and preserve records in sufficient detail to permit later determination of compliance and reimbursement.

BY ORDER OF THE GOVERNOR /s/ STATE HEALTH OFFICER

APPLICATION FOR HEALTH FACILITY CONSTRUCTION, REPAIR, AND MODIFICATION

TO : State Emergency Health Service

FROM : Chief, Local Emergency Health Service

SUBJECT: APPLICATION FOR HEALTH FACILITY CONSTRUCTION, REPAIR, AND MODIFICATION

The attached applications for health facility construction, repair, and modification have been reviewed and approved as required to maintain health and medical care operations in this jurisdiction for the next 90 days.

EXAMPLE

JUSTIFICATION

The present population of this jurisdiction is about _____, compared to a preattack population of _____. The total number of postattack deaths is about _____. We are currently serving a casualty population of about _____ sick and injured persons (of which _____ require inpatient care and _____ outpatient care). Of the preattack total of _____ beds, only _____ hospital beds are now available. Other health facilities included among the attached applications are _____ Public Health Clinics required to provide minimum preventive health services. Hospital construction requirements are based on 75 square feet per inpatient bed (food and laundry facilities excluded).

Locally available and controlled resources required for accomplishment of these projects have been exhausted. State assistance is required.

/s/ COUNTY HEALTH OFFICER

Attachments:

10 projects

71

HEALTH SERVICE ESSENTIAL FACILITY CONSTRUCTION REPORT

TO : State Emergency Construction Agency

FROM: State Emergency Health Service

Attached is a list of the construction, repair and modification of health facility projects required to maintain an approved level of health and medical care operations during the 90-day period commencing today.

Locally available materials have been committed for essential services projects. There are no materials available in this area for these projects.

/s/ STATE HEALTH OFFICER

HEALTH FACILITY CONSTRUCTION REQUIREMENTS REPORT

EXAMPLE

Project Number	Name of Facility	Location	Type	No. of Beds	Schedule of Construction	
					Started	Completion
1	(Repair) Brown Memorial Hospital	1121 Vortex Street, Illiad	General	100	4/10/65	7/18/65
2	(Conversion) Mercer County Health Center	25 Main St. Mercer	Outpatient Clinic	2	5/4/65	7/5/65

Attachments (for each project):

1. Statement of need (medical workload)
2. Summary bill of materials
3. Time-phased material requirement (proposed accelerated construction, repair, or modification)
4. Special problems and assistance required to accomplish item 3 above
5. Construction contract (if project has been started)

CHECK LIST OF CHANGES AND ADDITIONS TO STATE EMERGENCY HEALTH SERVICE PLAN

This Plan is issued in loose-leaf form to facilitate maintenance and insertion of subsequent changes and additions. Supplementary materials will be issued by numbered transmittal notice. Each notice will describe the new material being transmitted, old material superseded, and other actions required for maintenance of the Plan. Upon receipt of a transmittal notice, check its number against the number of the last previous notice to assure that no notices are missing, make the specified changes and insertions, and post the number and date of the transmittal notice on the following check list. When kept current, this check list enables to the Plan holder to determine quickly if any transmittals are missing.

Transmittal		Entered By	Transmittal		Entered By	Transmittal		Entered By
Number	Date		Number	Date		Number	Date	

EXAMPLE

☆ U.S. GOVERNMENT PRINTING OFFICE : 1966—O-210-753

Publications in the Health Mobilization Series are keyed by the following subject categories:

A—Emergency Health Service Planning

B—Environmental Health

C—Medical Care and Treatment

D—Training

E—Health Resources Evaluation

F—Packaged Disaster Hospitals

G—Health Facilities

H—Supplies and Equipment

I—Health Manpower

J—Public Water Supply

VT 005 567

Essentials and Requirements for Reimbursable Office Education Programs, Parts I-V. Series B, Bulletin No. 182, Revised.

Illinois State Board of Vocational Education and Rehabilitation, Springfield. Div. of Voc. and Tech. Educ.
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ILLINOIS

This bulletin outlines the minimum requirements for organizing and establishing reimbursable vocational office education programs derived from the Vocational Education Act of 1963 and the Illinois State Plan for the Administration of Vocational Education. Length of courses, teacher qualifications, student requirements, and application procedures are given for in-school programs, cooperative programs, and adult office education programs. (PS)

VT005567

ED0 31587

BUSINESS AND DISTRIBUTIVE EDUCATION

ESSENTIALS AND REQUIREMENTS FOR REIMBURSABLE OFFICE EDUCATION PROGRAMS

Part I General Information

Part II Vocational In-School Programs

Part III Vocational Cooperative Part Time Programs

Part IV Vocational Adult Programs

Part V Reporting and Reimbursement Forms

Series B - Bulletin No. 182 - Revised

January 1, 1966

State of Illinois
Board of Vocational Education and Rehabilitation
Vocational and Technical Education Division
405 Centennial Building
Springfield, Illinois 62706

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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VT005567

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MARKETING AND OFFICE OCCUPATIONS

Springfield Office:
405 Centennial Building
Springfield, Illinois 62706

Robert F. Kozelka, Chief
Bernard M. Ohm, Supervisor

Telephone: Area Code 217 -(525-4872) (525-4877) (525-4878)

Chicago Office:
Room 1804, 160 N. LaSalle Street
Chicago, Illinois 60601

Gerald R. Tapp, Supervisor

Telephone: Area Code 312 -(346-2000,(Ext.484)(Ext.485)

PREFACE

This bulletin is designed to assist school board members, school administrators and other educators who are interested in the preparation of students seeking education for careers in office occupations. The Vocational Education Act of 1963, and, subsequently, the State Plan for the Administration of Vocational Education under the Vocational Education Acts, have provided many new opportunities for broadening Vocational Education, including Business and Office Education programs in the State of Illinois. This bulletin outlines the minimum requirements which are derived from the above Act and State Plan.

Illinois Public School districts responsible for the administration of secondary and adult education desiring additional information regarding the Vocational Office Education programs and the requirements as set forth in this bulletin should direct their inquiry to Business and Distributive Education Service, State Board of Vocational Education and Rehabilitation, 405 Centennial Building, Springfield, 62706.

This publication supersedes the following:

Bulletin No. 142 September 1953 - How to Organize and Establish Part-Time Business Occupations Programs

Bulletin No. 182 - September 1961 - Suggested Minimums for an Office Occupations Program

Interim Bulletin "Vocational Business Education Programs in the Secondary Schools". Expiration date June 30, 1965

Interim Bulletin "Adult Vocational Business Education Programs". Expiration date June 30, 1965

PART I

GENERAL ADMINISTRATIVE INFORMATION [1]

Objective of Instruction - Vocational Office Education programs under the State Plan shall be designed to meet the needs of persons over 14 years of age, (a) who have entered or are preparing to enter business and office occupations, or (b) who have entered or are preparing to enter an occupation for which instruction in business and office education subjects will make a contribution to employability.

Office Occupations means those occupations pursued by individuals in public or private enterprises or organizations which are related to the facilitating functions of the office and includes such activities as recording and retrieval of data, supervision and coordination of office activities, internal and external communication, and reporting of information.[2]

Vocational Office Education classes at the 11th and 12th grade level, either cooperative part-time or in-school (non-cooperative), may be established in any recognized public secondary school. Classes in a vocational business education program may consist of the following, but not limited to: Cooperative Office Occupations, Secretarial-, Clerical-, Office-Practice, Business Data Processing, Typewriting, Shorthand, Bookkeeping, and Office Machines. All classes for which reimbursement from vocational funds is claimed will be evaluated mainly on the basis of course work, supervised practical experiences, time requirements, teacher and pupil qualification and equipment and facilities. Not more than 10% of the enrollment of any of the classes for which reimbursement is requested may consist of students who can be expected to attend college to obtain a baccalaureate degree.

Non-Reimbursable Classes - Reimbursement from vocational funds is not available for instruction of classes considered as general education, or leading to an occupation requiring a baccalaureate or higher degree.

The Career Objective of the student is to be recorded in terms of the Dictionary of Occupational Titles, D.O.T. number (see appendix) for Office Education In-School and Cooperative Office Occupations programs.

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[1] This page revised January 1, 1966

[2] Part 104 - Administration of Vocational Education: Federal Allotments to States. Rules and Regulations, U. S. Department of Health, Education and Welfare, Office of Education Federal Register August 28, 1964.

Schools which may be approved for reimbursement - Any recognized public secondary school may be approved to organize a vocational office education program and be eligible for reimbursement provided the school meets the requirements of the State Plan.

Requirements for Equipment and Facilities - Provision shall be made for classroom facilities, equipment and reference materials suitable to the needs of the students and to the requirements of those office occupations for which they are preparing. Equipment and facilities will be re-approvable each year, on the basis of changes in the occupational standards and opportunities.

Instructional Equipment and Durable Teaching Aids - The State Board may use surplus monies to reimburse up to 50% on purchases of any new instructional equipment and durable teaching aids necessary for a program. Items of equipment costing over $100 per unit are not reimbursable except by special action of the State Board.

Special programs - Research, Pilot, Experimental or Demonstration, Work-Study or Interrelated Instructional Programs involving vocational office education are especially planned and administered, and because of their limited number are not included in this bulletin. Inquiry concerning these programs should be made to the Chief of Business and Distributive Education Service.

Vocational Youth Organizations shall be an integral part of the instructional program. The activities of the local vocational office education youth organizations are to complement the vocational instruction and shall be supervised by the approved vocational teacher. The allocation of time for the program of youth activities shall be the responsibility of the local school administration.

Approved Travel for teachers and teacher-coordinators is to be reported on Form Bus. 38. Transportation expenses will be reimbursed on the total amount of actual expenditures paid by the school, necessary in carrying out the program of vocational education. Mileage shall not exceed 8¢ per mile or the actual cost of transportation by public conveyance. Lodging (not to exceed $8.00 per night), and transportation will be reimbursed for meetings called by the State Office and approved by the State Director, and for the annual meeting of the Illinois Vocational Association.

A copy of the Monthly Report of Coordination Activities, Form Bus.24 is to be submitted to this office by each approved teacher-coordinator of Cooperative Office Occupations programs. Forms are available from this office.

MINIMUM REQUIREMENTS - APPLICABLE TO ALL REIMBURSABLE OFFICE EDUCATION PROGRAMS

Organization and content
The program of instruction will be based on a consideration of the skills and knowledge required in the occupation for which the instruction is being provided, and will include a planned logical sequence of those essentials of education and/or experience deemed necessary for the individual to meet his occupational objective.

Counsel and advice
The program of instruction will be developed and conducted in consultation with potential employers and other individuals or other groups of individuals having skills in and substantive knowledge of the occupation or occupational field representing the occupational objective.

Up-to-date instruction
The program of instruction will include the most up-to-date knowledge and skills necessary for competencies required in the occupation or occupational field in which the individual is being prepared, or upgraded, or updated.

Duration and intensity of instruction
The program of instruction will be sufficiently extensive in duration and intensive within a scheduled unit of time to enable the student to develop competencies necessary to fit him for employment in the occupation or occupational field for which he is being trained.

Supervised practical experiences, which are a mandatory feature of all vocational educational programs, are to be included in the course outline. Simply stated, supervised practical experiences are the application of skills and knowledges in a shop, laboratory, classroom or on the job. Individual, team, or group projects related to the skills and knowledges involved in the occupation may be used.

PART II

I. VOCATIONAL IN-SCHOOL OFFICE EDUCATION PROGRAMS

(1) Instruction. The program of instruction shall be based on the skills and knowledges required in the occupation for which the instruction is being provided. Vocational in-school class instruction shall provide for supervised practical experiences.

(2) Time Requirements:

A. Courses of two or more years in length shall have 275 minutes per week scheduled for class group instruction.

B. Courses of less than two years in length shall have 550 minutes per week scheduled for class group instruction, OR

275 minutes per week if the students have had previous experience in the occupational field, or class instruction related to the occupational field, OR

550 minutes per week of which 275 minutes may be in a concurrent class related to the occupational field.

QUALIFICATIONS OF IN-SCHOOL OFFICE EDUCATION TEACHERS

Basic Education: He shall hold a valid teaching certificate.

Technical Subject Matter Courses in Office Education. He shall have completed (20) semester hours of college credit in technical courses in the field of office education, 12 hours of which are to be in GROUP 1-A or 1-B, and eight semester hours in GROUP 2 divided, with a minimum of one course in each area, as follows:

GROUP 1-A: Secretarial or Stenographic Emphasis

12 semester hours	) - Typewriting	one course
	) - Business Machines	one course
	) - Shorthand	one course

(and eight of which are in at least two of the subject matters of GROUP 2 below OR,

GROUP 1-B: Clerical or Office Machines Emphasis

12 semester hours	) - Typewriting	one course
	) - Business Machines	one course
	) - Data Processing	one course

AND,

GROUP 2:

8 semester hours	) - Accounting) - Business Law) - Personnel Relations	(a minimum of two subject matter areas to be represented)

Professional Office Education:

He shall have completed 8 semester hours of college credit in approved office education courses. Such courses emphasize the organization and administration of vocational office education courses.

Experience in Office Occupations:

He shall have two years of accumulative experience as an employee in one or more office occupations, OR

He shall have one year of accumulative experience as an employee in one or more office occupations, AND,

one course of college grade in office education taken in conjunction with a directed occupational program, OR

He shall have six months of accumulative experience as an employee in one or more office occupations, AND

one course of college level in office education taken in conjunction with a directed occupational experience program, AND

an approved research project directly related to education for office occupations.

Teachers seeking approval as a vocational qualified office education teacher or teacher-coordinator should arrange to have an official transcript of record sent to the Chief, Business and Distributive Education, Vocational and Technical Education Division, State Board of Vocational Education and Rehabilitation, 405 Centennial Building, Springfield, Illinois, 62706, Social Security number to be included.

In addition, the teacher will need to supply a statement pertaining to his experience in office occupations. Names and addresses of establishments, owners or managers, duties and responsibilities and dates of employment, inclusive, are to be included. (Part-time employment is to be expressed in hours per week or month.)

CONDITIONAL APPROVAL OF INSTRUCTIONAL PERSONNEL

Conditional approval of qualifications may be granted for instructional personnel who indicate a definite plan for meeting requirements for full approval. Such approval may be granted for a period not to exceed 3 years in length. Teachers seeking conditional approval are requested to submit a statement as to their intentions for meeting the above requirements.

PART III

I. VOCATIONAL COOPERATIVE OFFICE OCCUPATIONS PROGRAM

1. The Cooperative Part-Time Office Occupations Program is a program in vocational education preparing secondary school youth for successful employment in office occupations. Office Occupations include, but are not limited to: secretarial, stenographic, and clerical positions, records management, business machine operations, accounting and bookkeeping, and office supervision and management.

The term "cooperative," as used here, defines the working agreement between the school and the local business establishments providing learning experiences for each program student-learner through part-time employment. Under this arrangement, planned and supervised occupational experiences in an authentic office environment are supplemented with in-school daily classroom instruction directly related to the part-time office occupation chosen by each student learner.

Cooperative Office Occupations programs are those in which all students shall identify realistic and relevant career objectives and shall receive on-the-job training for not less than 15 hours per week, half of which must be during the regularly scheduled school day OR during added time when the qualified teacher-coordinator is assigned the responsibility for supervision.

A teacher-coordinator of a cooperative program is the approved teacher who teaches the class and also coordinates the class work of the student-learner with his on-the-job experiences. A cooperative office occupations program may be one or two years in length.

2. Time Requirements - Cooperative Office Occupations Programs

A. Two year Program - 200 minutes per week scheduled for class group instruction by teacher-coordinator

B. Program of less than two years in length consisting of 200 minutes per week scheduled for class group instruction by teacher-coordinator, AND

previous experience in occupational field, OR

previous class instruction related to the occupational field, OR

200 minutes per week in a concurrent class related to the occupational field.

MINIMUM REQUIREMENTS - COOPERATIVE OFFICE OCCUPATIONS PROGRAMS

A. Minimum age requirements

Enrollees shall be of legal age for employment. The employment shall comply with State and Federal employment regulations and shall consist of a minimum of 15 hours per week of on-job training.

Agreement between school and employer

There shall be a training memorandum between the local school and the employing establishment which shall include the interrelationship and responsibilities of the student-learner, teacher-coordinator and the training establishment.

On-the-job training program

The course of instruction for each student-learner on the job is to be in the form of a step by step training plan which is in turn derived from a realistic analysis of the tasks, duties and responsibilities of the student-learner and his part-time occupation. The step by step training plan shall indicate what is to be learned and whether it is to be taught in the classroom or on the job.

Nonexploitation for private gain

The student-learner shall be paid a beginning wage comparable to that paid other learners in similar occupations, and all phases of employment shall be in conformity with applicable Federal and State regulations. The amount of time spent in school and on the approved job by the student-learner shall not exceed 40 hours per school week. The responsibility for the welfare of the student-learners rests in the hands of the local school administration.

Related Instruction

The content of the instructional material is to be selected on the basis of the objectives of the program and is the joint responsibility of the local board of education, the school administrator, and the teacher-coordinator. Periodic evaluations of the progress of the program are to be made by a State Supervisor.

Credit - Credit shall be given in recognition of both parts of the program, that is, for successful completion of the step-by-step training plan, (1) in the school, and (2) at the training station. The amount of credit to be given shall be determined by the school but it shall be comparable to the credit given for similar courses achieving similar standards and developing similar responsibilities.

QUALIFICATIONS OF A TEACHER-COORDINATOR OF COOPERATIVE OFFICE OCCUPATIONS PROGRAMS

Basic Education: He shall hold a valid teaching certificate.

Technical Subject Matter Courses in Office Education.

He shall have completed (20) semester hours of college credit in technical courses in the field of office education, 12 hours of which are to be in GROUP 1-A or 1-B, and eight (8) semester hours in GROUP 2 (with a minimum of one course in each area, divided as follows:

GROUP 1-A: Secretarial or Stenographic Emphasis

12 semester hours	- Typewriting	one course
	- Business Machines	one course
	- Shorthand	one course

(and eight of which are in at least two of the subject matters of Group 2 below)

OR, GROUP 1-B: Clerical or Office Machines Emphasis

12 semester hours	- Typewriting	one course
	- Business Machines	one course
	- Data Processing	one course

AND, GROUP 2:

8 semester hours	- Accounting	(a minimum of two subject matter areas to be represented)
	- Business Law	
	- Personnel Relations	

Professional Office Education

He shall have completed 8 semester hours, of which one course shall be in the field of cooperative office education methods.

Experience in office occupations:

He shall have two years of accumulative experience as an employee in one or more office occupations.

B. Qualifications of Cooperative Office Occupations Program Enrollees

Students may apply for enrollment in their school's Office Occupations program when:

a. They have indicated a career goal in the field of office occupations.

b. They have an aptitude for the type of office occupation they wish to enter.

c. They can profit from classroom instruction and supervised practical experiences.

d. They have satisfactorily completed all work for entrance into the last two years of high school.

e. They are at least sixteen years of age.

f. They have an acceptable attendance record.

g. They have acceptable character and personality traits.

h. They are physically fit to undertake an office occupation.

PART IV.

VOCATIONAL ADULT OFFICE EDUCATION CLASSES.

1. The objectives of the Adult Office Education program of courses (or the single course) are to provide the adult with a combination of skills and knowledges which will make him employable. Vocational Adult Office Education classes may be organized for persons over 16 years of age who are interested in business and office occupations. The sizes of classes are the responsibility of the local school administration.

Types of classes:

Preparatory classes are for those adults who (1) are unemployed, (2) are capable of profiting from instruction as indicated by aptitude tests or a demonstration of ability, and (3) who can be expected to complete the program of instruction which leads to employment. (Preparatory instruction is the first of a sequence of courses.) Skill courses such as typewriting and shorthand must consist of a minimum of 40 clock hours.

Supplemental classes are for those adults who (1) have had adequate preparatory instruction, (2) are employed or self-employed and are seeking improvement, and (3) who can profit from instruction. (Supplementary courses may be the intermediate or terminal courses of a sequence or they may be isolated courses, such as "refresher" or specialized courses developed for a particular need.)

Supervised practical experiences, which are a mandatory feature of all vocational educational programs, are to be included in the course outline. Simply stated, supervised practical experiences are the application of skills and knowledges in a shop, laboratory, classroom or on the job. Individual, team, or group projects related to the skills and knowledges involved in the occupation may be used.

2. HOW TO REPORT VOCATIONAL ADULT OFFICE EDUCATION CLASSES

The instructor is to be selected on the basis of educational and occupational achievements, and recommended for the position by the local department chairman, supervisor, director or administrator.

The Adult Teacher's Record and Approval Form, B-14 (see appendix) is to be completed in duplicate. An approved copy will be returned to the school. An instructor may be approved to teach more than one course.

Approved Adult classes are to be reported on Form Bus. 26 Adult Course Plan and Membership List. Two copies of Form Bus.26 are to be completed and forwarded to this office within 10 days following the first class meeting.

The enrollees of adult classes are to be recorded on Form. Bus.26 according to their career objectives, as well as their place of employment, and job title, if employed. Adult classes are to be "homogeneous," i.e., all adults with office career objectives in one class.

Office Education classes are to be reported according to the system used in the Dictionary of Occupational Titles (D.O.T. number).

3. REIMBURSEMENT OF VOCATIONAL ADULT OFFICE EDUCATION PROGRAMS

The instructional costs of Adult classes will be reimbursed on the basis of the salary submitted and approved on Form Bus.26. (Any travel of instructors of adult classes which is directly related to the program or career must be estimated and added to Form Bus. 26).

The reimbursement of the Vocational Adult Office Education Programs will be made at the end of the 1965-66 school year on forms which will be sent to participating schools at a later date.

PART V

APPLICATION AND REIMBURSEMENT PROCEDURES
(Vocational Office Education)

A. SECONDARY SCHOOL PROGRAMS (Cooperative or In-School)

	Originating Source:	Title and number	Copies	Due Date
1.	Local Board of Education (Forms sent to Superintendents approximately September 15 or on request)	Application for Approval of Vocational Education Programs (Form VE-1) (white)	(2)	October 15
2.	A local administrator or teacher candidate	(a) Teacher's transcript of Record (loaned) (b) Statement of occupational wage-earning experience	(1)	Before any program begins
3.	A local administrator (Forms sent to Superintendent approximately September 15 or on request)	Annual Information Report Form VE-2 Bus. (pink)	(2)	October 15 (July 1 for summer schools)
4.	Teacher-Coordinator (Forms available from State Office)	Monthly Report of Coordination activities Form Bus. 24 (pink)	(1)	10th of following month
5.	Teacher-Coordinator	Letter pertaining to atypical placements of cooperative student-learners	(1)	Before placement is made
6.	School Superintendent (Forms sent approximately May 15)	Financial Report Form Form VE-33 Bus. O. E. (pink)	(2)	Approximately June 1
7.	School Superintendent (Forms sent to schools of record, approximately May 15)	Vocational Business Education Travel Reimbursement (Form Bus.38) (pink)	(1)	Approximately June 1
8.	School Superintendent (Forms sent approximately May 15)	Annual Application for Reimbursement Form VE-3 Bus. O.E. (pink)	(2)	Approximately June 1
9.	School Superintendent (Forms sent approximately May 15)	Annual Report for Reimbursement for Instructional Equipment and Durable Teaching Aids Form VE-30 (white)	(2)	Approximately June 1

B. ADULT EDUCATION PROGRAMS (Preparatory or Supplementary)

	Originating Source	Title and Number	Copies	Due date
1.	Local Board of Education (Forms sent to Superintendents approximately September 15 or on request)	Application for Approval of Vocational Education Programs Form VE-1 (white)	(2)	Beginning of school year
2.	A local administrator or teacher candidate	Adult Teacher's Record and Approval Form Form Bus.14 (pink)	(2)	Before classes begin
3.	Local administrator of Adult Education (Forms sent on request)	Adult Course Plan and Membership List Form Bus.26 (pink)	(2)	10 days after class begins

4. See item #6 of Section A of Part V

5. See item #7 of Section A of Part V

6. See item #8 of Section A of Part V

7. See item #9 of Section A of Part V

ANNUAL INFORMATION REPORT

DISTRIBUTIVE EDUCATION ☐

OFFICE EDUCATION ☐

For Cooperative part-time class ☐

For Non-cooperative class ☐

Please return TWO copies to:
Board of Vocational Education and Rehabilitation
Vocational and Technical Education Division
405 Centennial Building
Springfield, Illinois 62706

DATE: _____ 19__

Name of School _____ District No. _____
Address of School _____
Name of Principal _____

1. Teacher or teacher-coordinator's name: _____
   Social Security No. _____
   a. The regular school year is _____ months in length. Periods per day: _____
   b. The salary of $_____ is for a contract _____ months in length.
   c. Salary breakdown:
      Basic Teaching salary $_____
      Special duties $_____ _____
      (Please identify duties) _____ (_____
      TOTAL $_____ (_____
   d. Extra for travel - Rate per mile _____ (_____

2. Total activity schedule of teacher or teacher coordinator.

Period No.	Starting time	Minutes in class	Subject or Activity	Please "x" proper spaces x - single period xx - double period Mon.	Tues.	Wed.	Thurs.	Fri.

3. Vocational courses listed above

3(a). Enrollments by grade

Period No.		10th M.	10th F.	11th M.	11th F.	12th M.	12th F.

Teacher or Teacher-Coordinator (OVER) Official Reporting

VE-2 Bus.....

VOCATIONAL BUSINESS EDUCATION ENROLLMENT REPORT

Secondary

INSTRUCTOR _____

COURSE TITLE _____

SCHOOL _____
(Attendance Center)

1st Semester ☐

2nd Semester ☐

Total School year ☐

Summer School ☐

				For Cooperative Students, please complete these two columns	
Name of Pupil	S.I.C.# or D.O.T.#	Grade Level	Sex	Name of Training Station	Job Title

MONTHLY REPORT OF COORDINATION ACTIVITIES

COOPERATIVE PART-TIME
BUSINESS EDUCATION PROGRAMS

Send to:
Board of Vocational Education and
Rehabilitation
405 Centennial Building
Springfield, Illinois 62706

☐ Distributive Education Program ☐ Office Occupations Program

Name of School _____ Month _____ 19___

DATE	ACTIVITIES	DATE	ACTIVITIES

Form Bus.24 (Complete the month on reverse side)

DATE	ACTIVITIES	DATE	ACTIVITIES
COMMENTS:			

Signed by_____
Coordinator

Signed by_____
Superintendent, Principal, or
Director of Vocational Education

ADULT TEACHER'S RECORD AND APPROVAL FORM

OFFICE EDUCATION ☐

DISTRIBUTIVE EDUCATION ☐

Please return TWO copies to:
State Board of Vocational Education and Rehabilitation
405 Centennial Building
Springfield, Illinois 62706

School Name _____

School Address: _____

Teacher's Name: _____ Social Security No. _____

Male ☐ Female ☐

1. Educational Background: Indicate below (a) the highest diploma or degree earned, (b) the institution where earned, (c) the year, and (d) the major and/or minor field of study relative to the adult courses to be taught, (e) type of teaching certificate (f) Type of teacher -(Secondary-Post Secondary- From Business, industry, etc.)

a. _____ d. _____

b. _____ e. _____

c. _____ f. _____

2. Occupational Experience, other than teaching:

Name of company	Title or Nature of Duties	DATES From:	To:

Present employment or teaching assignment _____

3. Adult Vocational Courses to be taught:

1. _____ 3. _____

2. _____ 4. _____

Recommended by: _____
Superintendent, Principal, Supervisor, Director Chairman

_____
(Chairman - local consultant committee or employers' group, if any)

APPROVED: _____
State Supervisor, Vocational, Business and Distributive Education

DATE: _____

ADULT COURSE PLAN AND MEMBERSHIP LIST

State of Illinois
Board of Vocational Education and Rehabilitation
Vocational and Technical Education Division

Distributive Education ☐

Business and Office Education ☐

Name of School _____ City _____

1. Course Title _____ 2. Teacher _____

3. Class meets on M T W Th F (Circle) Enrollment: M _____ F _____ Total _____

4. (a) First class meeting _____ (Date) (b) Last class meeting _____ (Date)

5. Class meets from _____ (a.m. / p.m.) to _____ (a.m. / p.m.)

6. Total number of meetings in this course _____

7. Teacher's salary per hour $ _____ 8. Total salary for this class $ _____

9. Tuition per student $ _____ Registration fee per student $ _____

10. Other State or Federal reimbursement recieved for this course $ _____

11. Other reimbursement or sponsorship _____ $ _____
(Company, person, etc.) (Amount)

	Enrollee	S.I.C. # or D.O.T. #	M	F	Place of Employment	Job Title
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
		Total:				

Submit two copies within 10 days after date appearing on line 4(a) above to 405 Centennial Bldg., Springfield, Illinois 62706

B-26

(over)

ADULT EDUCATION

Course Objective(s) Preparatory ☐ Supplementary ☐

Meeting Dates Subject or topic of meetings

Supervised Practical Experiences

_____ Date _____ 19____
Signed by Evening School Principal or Director

_____ Date _____ 19____
APPROVED: State Supervisor, Business and Distributive Education.

The information contained herein is compiled from information supplied by the U. S. Office of Education. The code system supersedes all previous coding systems and numbers and will be used for reporting all vocational-technical student enrollments.

NOTE: This sheet, dated July 1, 1967, is inserted for discussion purposes only, in order that those who attend these conferences or classes may have the information before school begins in the fall.

The procedures to be followed in reporting curricula, classes, and enrollees will be developed at a later date, and instructions will be available either in bulletin form or in connection with the relevant reporting forms.

OFFICE OCCUPATIONS

14.0000

.0100	Accounting and Computing
.0200	Business Data Processing Systems
.0300	Filing, Office Machines, and General Office Clerical
.0400	Information Communication
.0500	Materials Support Occupations: Transporting, Storing, and Recording
.0600	Personnel, Training, and Related
.0700	Stenographic, Secretarial, and Related
.0800	Supervisory and Administrative Management
.0900	Typing and Related
.1000	Miscellaneous Office
.9900	Other, NEC

OFFICE OCCUPATIONS

14.0000

The body of subject matter, or combinations of courses and practical experience, organized into programs of instruction to provide opportunities for pupils to prepare for and achieve career objectives in selected office occupations. In the instructional process substantive content frequently is comprised of subject matter drawn from other subject matter areas. Learning experiences are designed to lead to employment and/or advancement of individuals in occupations in public or private enterprises or organizations related to the facilitating functions* of the office. Included is a variety of activities, such as recording and retrieval of data, supervision and coordination of office activities, internal and external communication, and the reporting of information. Under this heading are the items of information which identify categories of career objectives in office occupations, and around which courses and practical experiences are developed.

0100 Accounting and Computing -- Planned learning experiences which include a combination of courses and practical experiences concerned with systematizing information about transactions and activities into accounts and quantitative records, and paying and receiving money. Career objectives are identified with a variety of occupational groups and specialization, (as indicated in the Dictionary of Occupational Titles), such as Junior Accountants, Bookkeepers, Cashiers, Machine Operators, Tellers, and Other Accounting and Computing occupations.

0200 Business Data Processing Systems -- Planned learning experiences which include a combination of courses and practical experiences concerned with business data processing systems and operations. Career objectives are identified with a variety of occupational groups and specialization, (as indicated in the Dictionary of Occupational Titles), such as Computer and Console Operators, Peripheral Equipment Operators, Programmers, Systems Analysts, and Other Business Data Processing Systems Occupations.

0300 Filing, Office Machines, and General Office Clerical -- Planned learning experiences which include a combination of courses and practical experiences concerned with the recording and retrieval of data, including classifying, sorting, filing, correspondence, records, and other data.

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* "Facilitating function", as used in Office Occupations Education, refers to the expediting role played by office occupations as the connecting link between the production and distribution activities of an organization.

Career objectives are identified with a variety of occupational groups and specialization (as indicated in the Dictionary of Occupational Titles), such as Duplicating Machine Operators, File Clerks, General Office Clerks, and Other Filing, Office Machines, and General Office Clerical Occupations.

0400 Information Communication -- Learning experiences which include a combination of courses and practical experiences concerned with the distribution of information, e.g., by mail, telephone, telegraph, and in person. Career objectives are identified with a variety of occupational groups, (as indicated in the Dictionary of Occupational Titles), and specialization such as Communication Systems Clerks and Operators, Correspondence Clerks, Mail and Postal Clerks, Mail-preparing and Mail-handling Machine Operators, Messengers and Office Boys and Girls, Receptionists and Information Clerks, and Other Information Communication Occupations.

0500 Materials Support Occupations: Transporting, Storing, and Recording -- Planned learning experiences which include a combination of courses and practical experiences concerned with (1) receiving, storing, issuing, shipping, requisitioning, and accounting for stores of material or material in use; (2) assigning locations and space to items, including verification of quality, identification, condition and value; (3) the physical handling of items, including binning, picking, stacking, and counting; (4) preparing or committing stocks for shipment; (5) inventorying stock; (6) replenishing depleted items; and (7) filling orders, and issuing tools, equipment, or materials to workers. Career objectives are identified with a variety of occupational groups and specializations, (as indicated in the Dictionary of Occupational Titles), such as Planning and Production Clerks, Shipping and Receiving Clerks, Stock and Inventory Clerks, Traffic, Rate, and Transportation Clerks, and Other Transporting, Storing, and Recording Occupations.

0600 Personnel, Training, and Related -- Planned learning experiences which include a combination of courses and practical experiences concerned with personnel administration of an organization and the facilitating functions of scheduling and conducting clerical work and management and operations of organizations. Career objectives are identified with a variety of occupational groups and specialization (as indicated in the Dictionary of Occupational Titles), such as Educational and Training Assistants, Interviewers and Tests Technicians, Personnel Assistants, and Other Personnel, Training, and Related Occupations.

0700 Stenographic, Secretarial, and Related -- Planned learning activities which include a combination of courses and practical experiences concerned with making, classifying, and filing records, including written communications. Career objectives are identified with a variety of occupational groups and specialization, (as indicated in the Dictionary of Occupational Titles), such as Executive Administrative Secretary, Secretaries, Stenographers, and other Stenographic, Secretarial, and Related Occupations.

0800 Supervisory and Administrative Management -- Learning activities and experiences concerned with a variety of responsibilities such as (1) studying policies, organizational structures, and administrative practices of such organizations as governmental units, industrial firms, and nonprofit groups; (2) reviewing periodic budgets submitted by operations personnel; (3) preparing reports summarizing findings and recommending changes in policy, organization, and administration to line management; (4) consolidating the budget estimates and preparing financial reports for consideration and action by upper echelons of management; and (5) supervising and coordinating activities, determining work procedures, and assigning duties.

0900 Typing and Related -- Planned learning activities which include a combination of courses and practical experiences concerned with recording data, supervising and administering typing staffs and typing, and managing offices. Career objectives are identified with a variety of occupational groups and specialization, (as indicated in the Dictionary of Occupational Titles), such as Clerk Typists, Key Punch and Coding Equipment Operators, Typists, and Other Typing and Related Occupations.

1000 Miscellaneous Office -- Planned learning experiences (not elsewhere classified) which include a combination of courses and practical experiences concerned with the facilitating functions, e.g., public contact such as registering hotel and motel guests, examining claims and records, and collecting and tracing accounts. Career objectives are identified with a variety of occupational groups and specialization, (as indicated in the Dictionary of Occupational Titles), such as Collectors, Hotel Clerks, Clerical Technicians, Credit Clerks, and other occupations and areas of specialization concerned with office occupations not listed or classifiable in the above categories, including emerging office occupations not classifiable in the above categories.

9900 Other, NEC

VT 005 572
Turner, Robert E. ; Hunter, Bill
Manpower in Oklahoma, State Summary. Preliminary Release, April 1968.

Oklahoma Employment Security Commission, Oklahoma City. Labor Market Information Section
Oklahoma State Dept. of Vocational-Technical Education, Oklahoma City
MF AVAILABLE IN VT-ERIC SET.
Pub Date - Apr68 18p.

*OCCUPATIONAL SURVEYS; *EMPLOYMENT PROJECTIONS; *STATE SURVEYS; INDUSTRY; EMPLOYMENT PATTERNS
OKLAHOMA

A state-wide study of about 300 occupations was initiated to determine current and future manpower needs by industry division, major occupational group and selected occupation. A sample of 2,881 firms with 341,596 workers were selected for the study with over 70 percent responding. Data, when expanded to represent the universe, indicated that nonfarm wage and salary employment in the state should reach 758,700 by June 1969, an increase of 54,500 jobs, or 7.7 percent from the June 1967 level, and that such employment should reach 815,500 by 1972. The largest gains were forecast to occur in manufacturing followed by wholesale-retail trade and service. The greatest numerical gains for the major occupational groups should occur in the professional-technical managerial category. The largest single occupation surveyed was that of sales clerk followed by clerk general office, salesman and salesperson, nurse aide-orderly, teachers, waitress or waiter, secretary, cook, and clerk typist in rank order. The rank should remain about the same over the 5-year period. More detailed findings were to be released later in the year. (MM)

VT005572

EDO 31587

Manpower in Oklahoma

State Summary

Preliminary Release

April 1968

OKLAHOMA EMPLOYMENT SECURITY COMMISSION
OKLAHOMA STATE EMPLOYMENT SERVICE
RESEARCH AND PLANNING DIVISION
WILL ROGERS MEMORIAL OFFICE BUILDING
OKLAHOMA CITY, OKLAHOMA

YT005.72

OKLAHOMA EMPLOYMENT SECURITY COMMISSION
OKLAHOMA STATE EMPLOYMENT SERVICE

Affiliated With

UNITED STATES EMPLOYMENT SERVICE

A. Francis Porta, *Chairman*

Members

Representing Employers	Representing Employees
T. C. "Ted" Knoop	W. R. Griggs
Edward R. Patterson	Orval A. Siler

Bruton Wood
Executive Director

Morris Leonhard
Employment Service Director

The following is a list of public employment offices of the Oklahoma State Employment Service:

LOCATION	MANAGER	LOCATION	MANAGER
ADA 114 East Twelfth Street	*Edward E. Redpath*	McALESTER 100 North 5th Street	*Darel L. Carter*
ALTUS 312 West Cypress	*Samuel C. O'Neal*	MIAMI 100 "A" Avenue, N.E.	*D. Wendell Prentice*
ARDMORE 201 "A" Street, S.W.	*Richard Riggs*	MUSKOGEE 704 East Side Boulevard	*George W. Henry*
BARTLESVILLE 316 South Shawnee	*Davis W. Hunsucker*	OKLAHOMA CITY 900 Hales Building	*Newton Rose*
CHICKASHA 126 Chickasha Avenue	*S. Dewey Reeves, Jr.*	OKMULGEE 108 West Fifth Street	*Virgil E. Mehlig*
CLINTON 1120 Frisco Avenue	*Boyd E. Cabaniss*	PONCA CITY 602 North First Street	*W. David Frankier*
DURANT 124 West Cedar	*William G. Rains*	POTEAU 305 Clayton	*J. T. Shoemake*
ENID 215 Kenwood Boulevard	*Novy R. Woolbright*	PRYOR 18 South Adair Street	*Ralph W. Agnew*
GUYMON 707 North Main Street	*Harold A. Duvall*	SEMINOLE 111 North Fourth Street	*Henry T. Crossett*
HOLDENVILLE 115 N. Rodgers Dr.	*Jon M. Hooley*	SHAWNEE 127 North Park	*Bill G. Yost*
HUGO 402 East Jackson	*Bobby E. Scott*	TULSA 500 Mid-Continent Building	*James R. Woods*
LAWTON 811 "D" Avenue	*Mrs. Virginia Kidson*	WOODWARD 1007-A Main Street	*James E. Burkey*

M A N P O W E R I N O K L A H O M A

STATE SUMMARY

Preliminary Release - April 1968

This release was prepared by the Labor Market Information Section under the supervision of Robert E. Turner. Bill Hunter was responsible for editing schedules and compiling the data.

Oklahoma State Employment Service
Research and Planning Division
W. J. Bowman, Chief

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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MANPOWER IN OKLAHOMA - SUMMARY
Preliminary Release

The Oklahoma State Employment Service, recognizing the need for future occupational requirements information, initiated in May 1967 in cooperation with the State Department of Vocational-Technical Education, a detailed study of almost 300 occupations. The primary objective of the project was to determine current and future manpower needs by industry division, major occupational group and selected occupations. Data were compiled for the metropolitan areas of Oklahoma City and Tulsa together with nine other geographical regions. This preliminary report summarizes the statewide analysis and follows a series of releases for the eleven regional studies.

A sample of 2,881 Oklahoma firms with 341,596 workers were selected for this study. Usable information was received from 2,021, or 70.1 percent, of these establishments accounting for 285,351 jobholders, some 83.5 percent of all the employment sample. The figures on Table V reveal response by industry division on both the number of firms and employment.

Data received from the responding firms, when expanded to represent the universe, indicated that nonfarm wage and salary employment in Oklahoma should reach 758,700 by June 1969, an increase of 54,500 jobs, or 7.7 percent from the June 1967 level. Moreover, the analysis revealed that such employment should climb by 111,300 jobs, or 15.8 percent, to reach 815,500 five years after the date of the study. According to participating employers, all industry divisions should experience growth over both the two- and five-year spans. The largest numerical and percentage gains are forecast to occur in manufacturing. Here, employment, which in 1966 surpassed the record World War II levels, will climb by 30,600 jobs from 114,700 in June 1967 to 145,300 five years hence. Significant expansion is also anticipated for several other divisions including wholesale-retail trade and service.

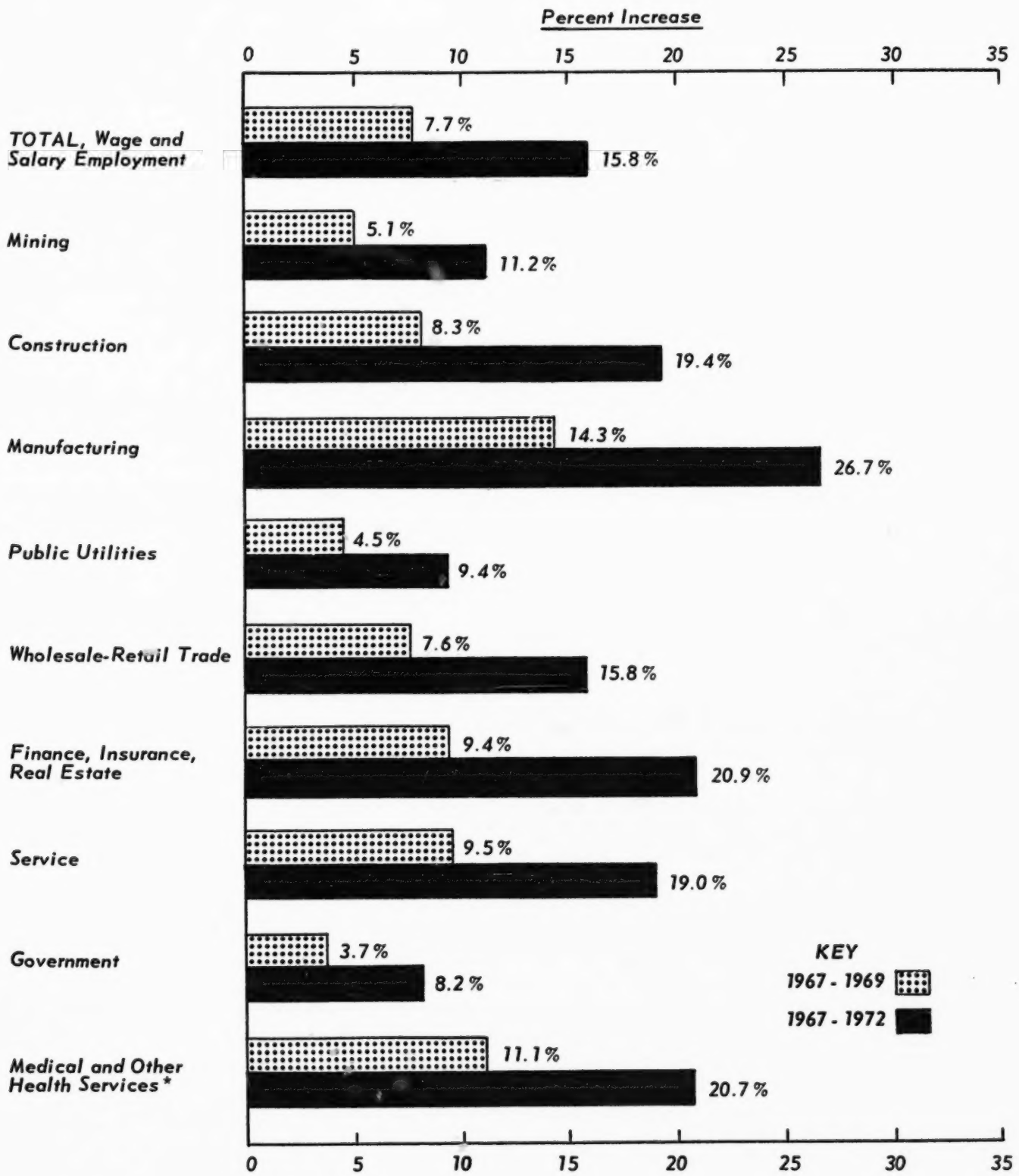
Substantial growth is forecast for several of the major occupational groups. For example, the greatest numerical gains should occur in the professional-technical-managerial category. This component is expected to add 25,556 workers through expansion alone in the next five years to retain almost one-fourth of Oklahoma's nonfarm wage and salary employment. Proportionately, large advances are anticipated in the bench work category, for machine trades occupations, in sales, processing and structural work. Gains in the first two mentioned of these categories could be traced directly to new job opportunities in Oklahoma's manufacturing concerns.

The largest single occupation surveyed was that of sales clerk, with 25,002 jobholders. Following that classification, ranked in order by size, were clerk general office; salesman and salesperson, commodities; nurse aide-orderly; teacher, elementary school; teacher, secondary school; waitress or waiter; secretary; cook, including institutional cook; and clerk typist. For the most part, forecast information from the surveyed employers indicated substantial growth for each of these occupations with the ranking to remain approximately the same over the next five years.

More detailed findings from this study will be released later in the year. The final publications will incorporate further information concerning employers needs by industry, replacement requirements, and match these against anticipated training output to get a picture of net requirements by occupation.

FIGURE I

ANTICIPATED EMPLOYMENT GROWTH BY INDUSTRY DIVISION



* *Data shown as Medical and other Health Services are also included in the overall categories of Service and Government.*

FIGURE II

ANTICIPATED EMPLOYMENT GROWTH BY MAJOR OCCUPATIONAL GROUP

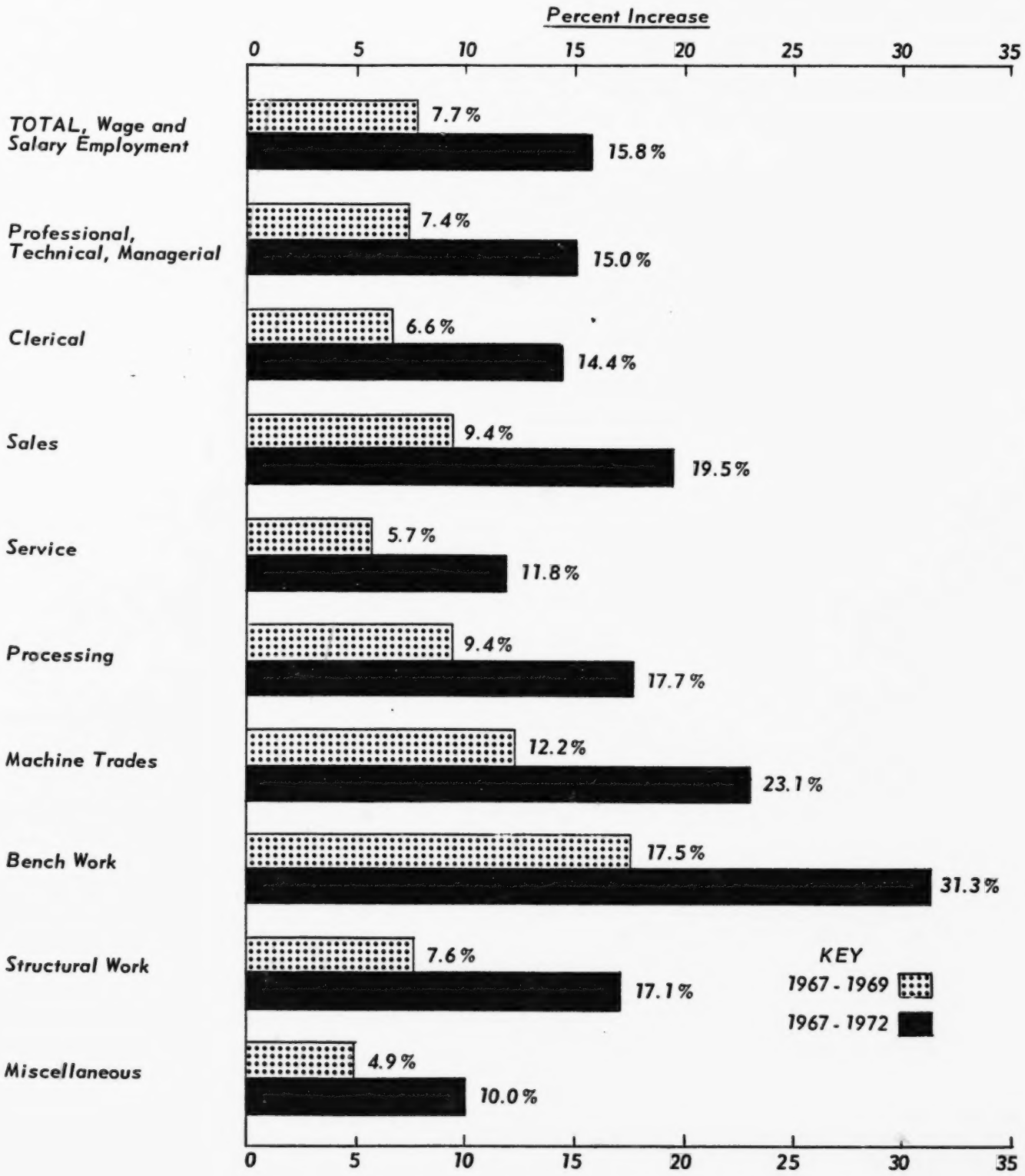


FIGURE III

NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT DISTRIBUTION BY INDUSTRY DIVISION

JUNE 1967

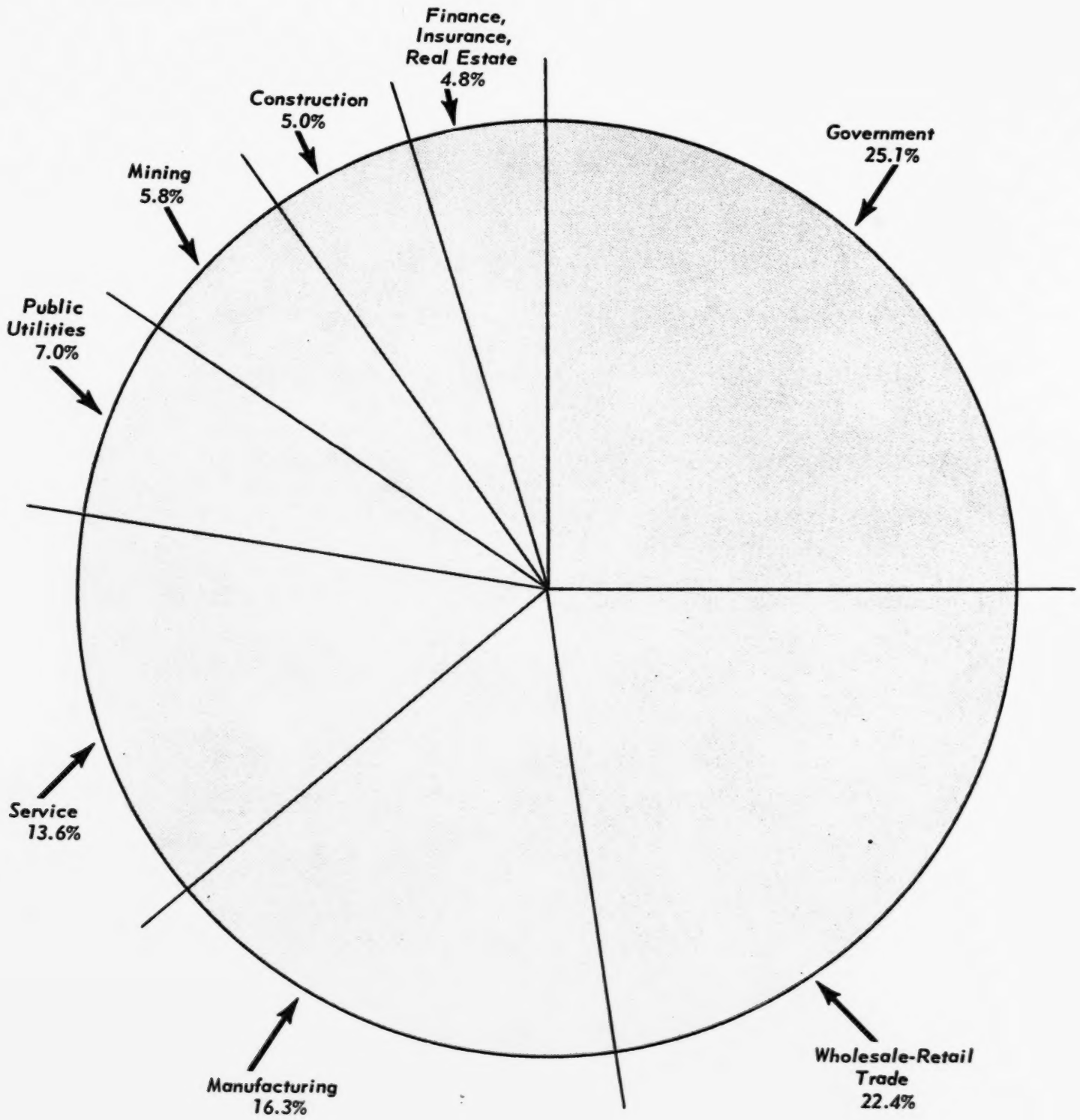


TABLE I
EMPLOYMENT BY NONFARM WAGE AND SALARY INDUSTRY DIVISION
JUNE 1967 AND FORECAST PERIODS

Industry Division	June 1967	June 1969	June 1972	Percent Change From June 1967 to -- June 1969	June 1972
Total Wage & Salary Employment	704,200	758,700	815,500	7.7	15.8
Mining	41,100	43,200	45,700	5.1	11.2
Construction	35,100	38,000	41,900	8.3	19.4
Manufacturing	114,700	131,100	145,300	14.3	26.7
Public Utilities	48,900	51,100	53,500	4.5	9.4
Wholesale-Retail Trade	157,500	169,500	182,400	7.6	15.8
Finance-Insurance-Real Estate	34,000	37,200	41,100	9.4	20.9
Service	95,900	105,000	114,100	9.5	19.0
Government	177,000	183,600	191,500	3.7	8.2
Medical & Other Health Services*	57,400	63,800	69,300	11.1	20.7

* Data shown as Medical and Other Health Services are also included in the overall categories of Service and Government.

TABLE II
EMPLOYMENT OF NONFARM ESTABLISHMENTS BY MAJOR OCCUPATIONAL GROUP
JUNE 1967 AND FORECAST PERIODS

Occupational Group	June 1967	June 1969	June 1972	Percent Change From June 1967 to -- June 1969	June 1972
Total	704,200	758,700	815,500	7.7	15.8
Prof., Tech., Mgr. Occupations	170,190	182,756	195,746	7.4	15.0
Clerical Occupations	125,615	133,909	143,737	6.6	14.4
Sales Occupations	65,957	72,129	78,795	9.4	19.5
Service Occupations	97,742	103,357	109,243	5.7	11.8
Processing Occupations	22,499	24,617	26,490	9.4	17.7
Machine Trades Occupations	45,805	51,372	56,380	12.2	23.1
Bench Work Occupations	29,088	34,167	38,201	17.5	31.3
Structural Work Occupations	68,491	73,729	80,204	7.6	17.1
Miscellaneous Occupations	78,813	82,664	86,704	4.9	10.0

TABLE III

DISTRIBUTION OF EMPLOYMENT BY MAJOR OCCUPATIONAL GROUP WITHIN INDUSTRY DIVISION
JUNE 1967 AND FORECAST PERIODS

Industry	Total	Prof. Tech. Mgr.	Clerical	Sales	Service	Processing	Machine Trades	Bench Work	Struc. Work	Misc.
1967										
Total	704,200	170,190	125,615	65,957	97,742	22,499	45,805	29,088	68,491	78,813
Mining	41,100	13,886	9,513	564	515	1,857	1,235	329	1,932	11,269
Construction	35,100	3,417	2,144	486	220	72	1,173	36	24,858	2,694
Manufacturing	114,700	13,758	11,168	5,821	2,561	17,020	20,149	20,624	11,464	12,135
Public Utilities	48,900	8,590	11,868	1,935	1,577	348	3,385	748	7,663	12,786
Wholesale-Retail Trade	157,500	20,693	22,168	50,313	21,447	2,498	9,573	2,825	4,231	23,752
Finance-Insurance-Real Estate	34,000	8,991	18,035	3,832	2,115	--	35	5	709	278
Service	95,900	26,646	14,455	2,359	41,980	221	1,249	2,497	2,422	4,071
Government	177,000	74,209	36,264	647	27,327	483	9,006	2,024	15,212	11,828
Medical & Other Health Services*	57,411	18,699	7,675	68	28,149	170	56	870	1,017	707
1969										
Total	758,700	182,756	133,909	72,129	103,357	24,617	51,372	34,167	73,729	82,664
Mining	43,200	14,755	9,921	598	543	1,870	1,320	373	2,055	11,765
Construction	38,000	3,539	2,350	576	231	101	1,244	36	27,060	2,863
Manufacturing	131,100	15,176	12,704	6,649	2,842	18,800	23,742	24,755	12,895	13,537
Public Utilities	51,100	8,749	12,069	2,061	1,604	356	3,722	784	8,154	13,601
Wholesale-Retail Trade	169,500	22,050	23,863	54,784	22,037	2,759	11,083	3,037	4,746	25,141
Finance-Insurance-Real Estate	37,200	9,808	19,555	4,462	2,300	--	36	5	756	278
Service	105,000	30,483	15,820	2,346	44,993	240	1,297	3,214	2,637	3,970
Government	183,600	78,196	37,627	653	28,807	491	8,928	1,963	15,426	11,509
Medical & Other Health Services*	63,800	21,445	8,510	71	30,688	175	55	973	1,092	791
1972										
Total	815,500	195,746	143,737	78,795	109,243	26,490	56,380	38,201	80,204	86,704
Mining	45,700	15,783	10,562	626	589	1,878	1,376	418	2,198	12,270
Construction	41,900	3,760	2,475	614	240	129	1,346	38	30,316	2,982
Manufacturing	145,300	16,798	14,174	7,421	3,079	20,433	26,783	27,769	14,224	14,619
Public Utilities	53,500	8,999	12,432	2,183	1,633	364	3,963	822	8,667	14,437
Wholesale-Retail Trade	182,400	23,287	25,939	59,514	22,772	2,917	12,702	3,244	5,319	26,706
Finance-Insurance-Real Estate	41,100	10,775	21,432	5,123	2,606	--	36	5	832	291
Service	114,100	33,871	17,160	2,626	47,833	266	1,369	3,974	2,818	4,183
Government	191,500	82,473	39,563	688	30,491	503	8,805	1,931	15,830	11,216
Medical & Other Health Services*	69,300	23,659	9,229	73	32,927	178	62	1,134	1,170	868

* Data shown as Medical and Other Health Services are also included in the overall categories of Service and Government.

TABLE IV
NONFARM WAGE AND SALARY EMPLOYMENT IN SURVEYED OCCUPATIONS
JUNE 1967 AND FORECAST PERIODS

Job Title	June 1967	June 1969	June 1972
PROFESSIONAL, TECHNICAL & MANAGERIAL OCCUPATIONS			
Architect	246	258	272
Draftsman, Architectural	375	409	449
Electrical Engineer	723	772	826
Electronic Engineer	709	732	769
Electrical Technician	452	476	528
Electronic Technician	1,306	1,432	1,571
Systems Engineer, Electronic Data Processing	113	147	184
Draftsman, Electrical	133	142	157
Draftsman, Electronic	96	118	143
Instrumentation Technician	167	202	222
Civil Engineer	1,540	1,688	1,738
Civil Engineering Technician	1,824	1,921	2,063
Draftsman, Civil	657	681	710
Mechanical Engineer	2,198	2,439	2,702
Tool Designer (Die Designer)	149	195	231
Mechanical Engineering Technician	386	432	462
Draftsman, Mechanical	1,196	1,420	1,604
Chemical Engineer	408	436	486
Petroleum Engineer	1,177	1,228	1,331
Core Analyst	31	30	32
Draftsman, Geological	316	372	431
Director, Quality Control	139	145	151
Industrial Engineer	534	600	648
Industrial Engineering Technician	162	195	202
Draftsman, Map	131	139	156
Surveyor	611	683	760
Quality-Control Technician	1,160	1,260	1,372
Mathematician	182	196	214
Project Director, Business Data Processing	247	267	300
Programmer, Business	791	960	1,163
Programmer, Engineering & Scientific	590	624	660
Statistician	245	299	367
Chemist	1,004	1,092	1,179
Physicist	64	68	75
Geologist	1,260	1,327	1,403
Laboratory Technician (Tester)	1,018	1,096	1,178
Agronomist	114	122	122
Economist	164	176	195
Director, Nursing Service	242	251	257
Nurse, Head or Supervisor	1,610	1,787	2,043

TABLE IV (Continued)
NONFARM WAGE AND SALARY EMPLOYMENT IN SURVEYED OCCUPATIONS
JUNE 1967 AND FORECAST PERIODS

Job Title	June 1967	June 1969	June 1972
PROFESSIONAL, TECHNICAL & MANAGERIAL OCCUPATIONS (Cont.)			
Nurse, General Duty or Office	4,151	4,776	5,501
Nurse, Industrial Staff (Occupational)	70	83	92
Dietitian	301	342	365
Medical Technologist, Chief	167	173	182
Medical Technologist or Biochemistry Technologist	641	741	826
Electrocardiograph Technician and Electro-encephalograph Technician	138	165	183
Radiologic Technologist	306	361	435
Medical Laboratory Assistant	376	450	545
Tissue Technologist	26	33	47
Occupational Therapist	39	63	78
Medical Assistant	303	333	357
Occupational Therapy Aide	121	139	161
Nurse, Licensed Practical	3,398	4,298	4,920
Physical Therapist	141	200	234
Surgical Technician	485	534	620
Faculty Member, College or University	3,995	4,442	4,988
Teacher, Secondary School	13,657	14,208	15,005
Teacher, Elementary School	15,392	16,007	16,914
Librarian	412	461	528
Medical-Record Librarian	195	230	250
Abstractor	146	168	176
Copy Writer	134	139	146
Reporter	692	705	745
Copy Reader	92	92	92
Writer, Technical Publications	236	266	294
Illustrator	137	143	156
Lay-Out Man (Printing & Publishing)	334	336	358
Cameraman or Photographer	192	200	213
Accountant	6,143	6,471	6,970
Cost Estimator	840	941	1,028
Buyer	726	824	882
Purchasing Agent	1,210	1,271	1,352
Title Clerk	123	122	122
Public Relations Man	600	627	671
Special Agent (Insurance)	472	610	737
Manager, Credit & Collection	1,049	1,091	1,129
Safety Man	226	226	226
Building Inspector	66	68	78
Claim Examiner	121	132	141
Estate Planner	80	93	111

TABLE IV (Continued)
NONFARM WAGE AND SALARY EMPLOYMENT IN SURVEYED OCCUPATIONS
JUNE 1967 AND FORECAST PERIODS

Job Title	June 1967	June 1969	June 1972
PROFESSIONAL, TECHNICAL & MANAGERIAL OCCUPATIONS (Cont.)			
Park Ranger	56	65	80
Underwriter	417	448	478
Customer Service Engineer	55	55	56
Manager, Traffic	386	399	420
Manager, Parts	553	564	617
Bank Cashier	315	319	327
Manager, Property	52	54	54
Loan Officer	2,100	2,213	2,390
Superintendent, Hospital (Administrator)	249	255	259
Business Broker	92	92	98
Leaseman	219	219	219
Credit Analyst	135	147	165
Appraiser	210	210	222
Air-Traffic Control Specialist, Station or Tower	116	115	114
Social Worker or Case Worker	2,284	2,431	2,646
Airplane Pilot, Commercial	256	290	350
Urban Planner	36	47	55
Radiographer (Industrial X-ray Operator)	34	46	51
CLERICAL OCCUPATIONS			
Secretary	12,873	14,057	15,390
Stenographer	9,352	10,135	11,104
Personnel Clerk	915	1,032	1,189
Records Custodian	25	23	23
Clerk-Typist	11,208	12,292	13,268
Statement Clerk	340	362	404
Title Searcher	27	27	27
Bookkeeper (Hand)	7,105	7,423	7,848
Cashier	4,185	4,364	4,649
Teller, Bank	2,145	2,316	2,484
Card-Tape-Convertor Operator	155	181	217
Digital-Computer Operator	586	663	771
Key-Punch Operator	2,515	2,883	3,261
Data Typist	103	132	198
Tabulating-Machine Operator	1,001	1,072	1,153
Bookkeeping-Machine Operator	3,660	4,072	4,529
Pay-Roll Clerk	1,547	1,696	1,846
Transit Clerk	274	286	304
Account Analyst	56	56	56
Actuarial Clerk	13	14	16

TABLE IV (Continued)
NONFARM WAGE AND SALARY EMPLOYMENT IN SURVEYED OCCUPATIONS
JUNE 1967 AND FORECAST PERIODS

Job Title	June 1967	June 1969	June 1972
CLERICAL OCCUPATIONS (Cont.)			
Clearing House Clerk	98	91	91
Clerk, General Office	24,476	25,668	27,048
Ward Clerk	638	851	994
Interest Clerk	147	176	183
Programmer, Detail	220	290	347
Rater	51	63	75
Sorting Clerk	591	591	609
Currency Sorter	45	45	45
Accounting Clerk	5,726	6,035	6,536
Insurance Checker (Policy Checker)	74	84	108
Parts Clerk, Automotive	1,227	1,297	1,382
Post Office Clerk	4,462	4,819	5,175
Mail Carrier	3,979	4,151	4,445
Telephone Operator (PBX Operator)	5,377	5,499	5,607
Claim Adjuster	269	310	418
Room Clerk	853	858	860
Claim Examiner (Claim Auditor)	46	57	59
Credit Clerk (Loan Application)	140	156	136
Claim Clerk	249	311	342
New Account Clerk	733	772	813
Loan Closer	132	139	152
Medical Record Clerk	548	611	672
SALES OCCUPATIONS			
Salesman, Insurance	1,908	2,075	2,286
Salesman or Broker (Real Estate)	327	368	424
Salesman, Services	2,097	2,333	2,500
Salesman, Securities	286	296	307
Salesman and Salesperson, Commodities	19,006	20,817	22,968
Sales Clerk	25,002	26,858	29,053
Routeman	4,842	5,174	5,614
Auctioneer	87	87	89
Manager, Department (Retail)	3,149	3,355	3,571
Pest-Control Representative	80	98	118

TABLE IV (Continued)
NONFARM WAGE AND SALARY EMPLOYMENT IN SURVEYED OCCUPATIONS
JUNE 1967 AND FORECAST PERIODS

Job Title	June 1967	June 1969	June 1972
SERVICE OCCUPATIONS			
Hostess, Restaurant or Coffee Shop	846	846	949
Waitress or Waiter	13,131	13,672	14,133
Chef	375	379	398
Cook (and Institutional Cook)	12,234	12,847	13,496
Meat Cutter or Butcher	2,194	2,392	2,573
Food Service Supervisor	301	309	323
Housekeeper	2,844	3,012	3,244
Airplane Stewardess	*	*	*
Nurse Aide - Orderly	17,059	18,837	20,393
Psychiatric Aide	559	701	858
Fireman (Fire Department)	1,536	1,632	1,726
Policeman or Detective	2,102	2,289	2,435
Sheriff or Baliff	477	500	531
Exterminator	239	307	376
Grounds Keeper	3,061	3,222	3,506
PROCESSING OCCUPATIONS			
Plater (Electroplating)	399	410	430
Heat Treater	234	274	282
Caster	447	454	454
Grinding Mill Operator	125	131	146
Coremaker (Foundry)	75	88	100
Molder (Foundry)	84	95	102
Dough Mixer	71	75	78
Feed Mixer	80	82	83
Grinder Operator (Grain & Feed Mills)	79	82	82
Butcher, All-round	1,022	1,159	1,218
Grader, Meat	41	48	56
Boner or Skinner (Meat)	387	402	428
Baker	930	1,011	1,073
Stillman (Petroleum Refining)	1,088	1,124	1,174
Pumpman (Petroleum Refining)	102	107	118
Batch and Furnace Man (Glass)	139	139	143
Concrete-Stone Fabricator	43	45	48
Bottle-Machine Operator (Glass)	278	280	294
Brick-and-Tile Making Machine Operator	51	51	51
Concrete-Pipe Making Machine Operator	26	26	26

TABLE IV (Continued)
NONFARM WAGE AND SALARY EMPLOYMENT IN SURVEYED OCCUPATIONS
JUNE 1967 AND FORECAST PERIODS

Job Title	June 1967	June 1969	June 1972
MACHINE TRADES OCCUPATIONS			
Machinist (All Around)	2,598	3,175	3,689
Instrument Maker	71	80	93
Machine Builder	22	24	27
Lay-Out Man (Machine Shop)	287	356	425
Tool and Die Maker	621	778	836
Template Maker	151	187	223
Machine Set-up Operator	1,107	1,321	1,549
Precision Grinder	596	708	797
Machine Tool Operator, Production	3,861	4,453	5,156
Forging-Press Operator	59	73	95
Die Setter (Forging)	419	461	531
Shear Operator,Power	306	350	414
Punch-Press Operator	922	1,241	1,401
Press Operator (Heavy Duty)	135	154	171
Brake Operator, Power	150	175	195
Metal Fabricator (Structural Fitter)	895	1,115	1,308
Roll Operator, Sheet Metal	67	79	102
Mechanic, Air Conditioning (Automobile)	491	534	602
Mechanic, Automobile	5,812	6,569	7,202
Flight Engineer	131	134	138
Mechanic, Aircraft & Engine	1,605	1,643	1,692
Mechanic, Aircraft Jet Engine	1,350	1,387	1,431
Mechanic, Aircraft Accessories	3,189	3,290	3,365
Mechanic, Farm Equipment	332	410	539
Mechanic, Diesel	1,241	1,367	1,526
Office Machine Serviceman	986	1,136	1,357
Mechanic, Air Conditioning or Refrigeration	1,316	1,398	1,505
Mechanic, Maintenance	3,432	3,711	3,969
Millwright	461	453	482
Linotype Operator	565	573	579
Cylinder-Press Man	467	495	525
Offset-Press Man	824	884	949
Cabinetmaker	218	378	415
Millman	114	626	671
Cutting-Machine Operator (Glass)	31	33	33

TABLE IV (Continued)
NONFARM WAGE AND SALARY EMPLOYMENT IN SURVEYED OCCUPATIONS
JUNE 1967 AND FORECAST PERIODS

Job Title	June 1967	June 1969	June 1972
BENCH WORK OCCUPATIONS			
Bench Grinder	299	357	436
Assembler, Product	4,650	5,363	6,137
Instrument Man	871	951	997
Radio and Television Repairman	417	435	446
Electric Motor Repairman	135	136	145
Electronics Assembler	1,895	2,379	2,620
Painter, Spray	942	1,091	1,210
Tire Technician	*	*	*
Tire Builder (Automobile or Truck)	*	*	*
Furniture Finisher	349	451	469
Furniture or Hardware Assembler	62	289	353
Furniture Upholsterer	346	353	355
Cutter, Hand or Machine	304	368	405
Seamstress	523	552	605
Sewing-Machine Operator	6,839	8,404	9,338
STRUCTURAL OCCUPATIONS			
Structural Steel Worker	1,029	1,225	1,353
Sheet Metal Worker	1,054	1,173	1,329
Assembler, Aircraft Structures & Surfaces	2,488	2,657	3,967
Automobile Body Repairman	1,372	1,576	1,807
Assembler, Subassembly (Aircraft)	1,072	1,200	1,220
Lay-Out Man (Structural)	585	723	835
Welding Machine Operator	559	638	728
Welder	5,207	5,937	6,722
Flame Cutting Machine Operator	165	223	266
Flame Cutter, Hand	227	245	260
Lineman	3,494	3,641	3,906
Radio Mechanic	126	133	144
Electrician	4,006	4,242	4,441
Aircraft Mechanic, Electrical	911	924	955
Appliance Repairman, Household	592	648	718
Electronics Mechanic	1,303	1,382	1,515
Painter or Paperhanger	861	904	956
Plasterer	287	287	305
Dry-Wall Applicator	122	122	122
Cement Mason or Concrete Finisher	1,121	1,208	1,399

TABLE IV (Continued)
NONFARM WAGE AND SALARY EMPLOYMENT IN SURVEYED OCCUPATIONS
JUNE 1967 AND FORECAST PERIODS

Job Title	June 1967	June 1969	June 1972
STRUCTURAL OCCUPATIONS (Cont.)			
Painter, Automobile	478	536	576
Heavy Equipment Operator	4,485	5,129	5,346
Carpenter	5,590	5,910	6,256
Bricklayer	1,412	1,540	1,651
Tile Setter or Terrazzo Worker	321	374	475
Plumber or Pipefitter	2,172	2,264	2,383
Floor Layer	306	318	340
Roofer	473	484	507
Maintenance Man	975	1,125	1,216
Maintenance Man, Building	4,624	5,014	5,378
MISCELLANEOUS OCCUPATIONS			
Stationary Engineer	1,405	1,444	1,515
Power Plant Operator	337	354	392
Transmitter Operator	61	61	61
Photolithographer	80	83	95

* Indicates employment level in occupation was less than five or that figure was omitted in order to avoid revealing identity of an individual firm. Also included are a few categories of which data were inconclusive.

TABLE V - RESPONSE ANALYSIS
Sample Size, Number Responding and Percent Return

Item	Establishment Data			Employment Data		
	Number of Firms In Sample	Number Responding	Percent Return	Total Employment of Sample	Employment of Responding Firms	Percent Return
Total	2,881	2,021	70.1	341,596	285,351	83.5
Mining	187	129	69.0	21,707	16,555	76.3
Construction	170	104	61.2	6,461	4,997	77.3
Manufacturing	408	286	70.1	80,694	60,867	75.4
Public Utilities	196	154	78.6	28,509	23,865	83.7
Wholesale-Retail Trade	715	432	60.4	35,558	23,996	67.5
Finance-Insurance-Real Estate	143	105	73.4	8,496	6,840	80.5
Service	337	237	70.3	24,893	20,988	84.3
Government	388	337	86.9	135,278	127,243	94.1

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*INDUSTRIAL ARTS; *EDUCATIONAL PHILOSOPHY; EDUCATIONAL PLANNING; *TECHNOLOGICAL ADVANCEMENT; *EDUCATIONAL OBJECTIVES; *TEACHER EDUCATION

Technological developments during and after World War II altered our civilization in many and diverse ways, and attitudes toward these developments crystalized in October of 1957 with the orbiting of Sputnik. Such international events often affect education specifically. Because national goals are molded thrugh education, an effective educational program depends greatly on our "preferred values" or upon our philosophy of life for these serve as a basis for educational programs. In addition to national goals, there are at least three building blocks from which an educational program is constructed: (1) new knowledge, (2) new findings in behavioral sciences and (3) the creative function of education. Against such a bakcground of change, industrial arts has arole in the expanding function of education for fulfilling our national mission. It should pursue the more sophisticated techniques which are basic to our industries. Moreover, pre-service and inservice teacher education in industrial arts should be remodeled and basic standards established; for of the several new horizons teacher education is primary. (EM)

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R. LEE HORNBAKE

NEW HORIZONS IN INDUSTRIAL ARTS

VT005594

AMERICAN INDUSTRIAL ARTS ASSOCIATION

This statement was originally presented by Dr. Hornbake as a speech to the American Council on Industrial Arts Teacher Education, March 30, 1964, at the 26th Annual Convention of the American Industrial Arts Association, in Washington, D.C.
Dr. Hornbake is vice president of academic affairs for the University of Maryland at College Park, Maryland. Previously, he was head of the Industrial Arts Education Department at the University.
He is a frequent speaker on industrial arts and has written a great many articles on the subject for educational journals.

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1

Technological developments during and after World War II altered our civilization in many and diverse ways. Our attitude toward these developments crystallized in October of 1957 with the orbiting of Sputnik.

When an atomic bomb fell on Hiroshima on August 6, 1945, the explosion signalled the end of one epoch and announced the beginning of another, yet unformulated, way of life. For everyone the proximate result was the end of a world-wide conflict. Man looked hopefully toward restoring what was regarded as normalcy. Families could be reconstituted, physical damage would require much rebuilding, and the passage of time should help to mend the millions of broken hearts. The dead, of course, could only be mourned, but this is as it always had been. Certain aggressors had been brought to heel and, when the war was considered in its totality, good had triumphed over evil. A new international effort at peace, now called the United Nations, had an auspicious and optimistic start acknowledging the principle that, since wars begin in the minds of men, enduring peace must likewise originate in the minds and hearts of men.

But it soon became evident that the world refused to go back together in a manner which nostalgic memories regarded as normal. Of course there were certain features which should not be restored. Unemployment, for example, had plagued the civilized world after World War I, and there was renewed anxiety about post-war job opportunities. And, of course, we did not want new aggressor nations to arise. The U.N. should be the safeguard here, so we thought, as we fired a *coup de grace* into the shattered minds of the war criminals.

The pre-war world with all of its problems and conflicts was a relatively simple world. It was simple in terms of national goals and purposes. Hitler, for example, gave the world a major outline of what he planned to do, and his subsequent actions fell into place like parts in a jig-saw puzzle. Economics was relatively unsophisticated in terms of how goods and services were produced and exchanged. Technological developments seemed remarkable when placed against the backdrop of 1900, but the developments were straight-line extensions of known principles. A very large part of the world's population had no influence at all on events, not even those events which related to their own well being.

But new nations were forming even during the war and soon there were 49 additional nations, with a population of one billion people.

The United States came out of the war experiencing no physical damage within the continental boundaries. All of our European and Asiatic allies and enemies had suffered severe to heavy devastation, and some nations experienced a great human loss as well. There was a brief period when we felt quite secure, and our attention turned to the humanitarian tasks of helping friend and foe alike to get back onto their feet. Meanwhile, on the domestic scene, we debated whether Henry Wallace was sincere in advocating 60 million jobs; we made much ado over whether we should lay to rest the O. P. A.; and the Republican Party thought the way was really clear now for the election of Tom Dewey. In our naive manner we sought to restore a world of obvious simplicity—a world in which good men wear white hats and the bad men wear black hats as they do in western movies. But every time we managed to place a few old pieces of the world together other parts came unglued.

There were early indications that in the political world all was not well. Winston Churchill told us so in Fulton, Missouri, in 1946. Then the blockade of Berlin, resulting in the airlift, put the world on notice that two different ways of life were still in existence and in competition. The Korean nightmare followed in close order. On the technological front the Russians exploded their first atomic bomb in 1949—well ahead of our expectations. But we attributed this achievement to their obtaining our scientific knowledge through espionage. Then, in October, 1957, when the Russians placed an object in orbit and preempted the terminology of outer space with the word "sputnik," we stood appalled. At first we were assured we had not lost the race for outer space since we had never entered the race. One well-intentioned senator urged that we shoot down the orbiting sputniks but he never identified the missile we had available to do the job. However, as correctional lenses brought our myopia into better focus, we began to realize the world of reality differed considerably from the model we had created in our minds.

2

International events affect education, generally, and industrial arts education, specifically. Since national goals are molded through education, an effective educational program depends greatly upon our "preferred values" or upon our philosophy of life.

The world of international events of the sort just reviewed in a very abbreviated form might appear to be far removed from the educational scene and only very remotely connected with industrial arts education, if connected at all. But, actually, relationships do exist and they are important. This is especially so when it is realized that beneath the manifest and well-advertised national and international events there are fundamental changes in technology, and hence in the economy, and fundamental changes in the expectations of people.

National goals, national perspective, the competencies of the people are molded by or evolve *through education*. Any dictator knows this to be true and his first move is to gain control over all educational media. While in a democracy the ends or purposes are different from those of an authoritarian state, and so, too, are the educational means, the relationship between national goals and educational programs is even more important for a democracy than it is for an authoritarian state. Much of what we have achieved as a nation we have realized through the type and amount of educational opportunity we have provided. Conversely, in many of the places where we fall short of our national goals we can trace the root cause back to an educational shortage or to an improper education. The unwarranted occurrence of poverty and our neglect of basic research in many areas, are cases in point.

The education of a people should always be viewed within the cultural setting. Education can be a creative force, if the culture is aware of and accepts the premise of progress, and if the society can conceptualize the role which education can play in the forward progress of the people. Once the force of education is loosened to serve its creative role, a cyclical pattern is established whereby the greater accomplishments of educated people result in more demand for education of a higher order, and at the same time provide the capability for yielding more and better education.

An educational program is always postulated to be one which meets the needs

of the people, or at least as the dominant group within a society postulates these needs. Of course the diagnosis of needs might be invalid, and it frequently is; if so, however, the educational program is correspondingly inappropriate. There is no other way to account for the Latin American proclivity for educating lawyers in superabundance and for neglecting other forms and types of education.

An effective educational program depends very greatly upon a reasonably valid assessment of cultural needs and expectations and, of course, the analysis eventually gets back to preferred values or to a philosophy of life. The Russians, for example, are explicit with respect to their educational goals. From all indications their instructional content and their administrative procedures are consistent with these goals. However, no defensible evaluation of their educational procedures can be made unless purposes are brought into consideration. It should be apparent to all that Russian education has paid off well, but the pay-off has been in terms of Russian goals and objectives. And to their credit it should be said that in the darkest days of their transition—in the early 1930's—they invested heavily in education. During the bleakest moments of World War II they did their best to maintain an educational program. Their success in selected scientific fields is testimony to their dedication to education as an instrument of national policy.

3

In addition to national goals, there are at least three building blocks from which an educational program is constructed: (1) new knowledge. (2) new findings in the behavioral sciences, and (3) the creative function of education.

National goals and national purposes do not represent all of the building blocks from which an educational program is constructed. There are at least three additional considerations. The first is the development of new knowledge. There is documentation[1] to the effect that since World War II new scientific knowledge has doubled in approximately an eight-year interval. Almost entirely new areas of mathematics have emerged. There are new fields of applied mathematics and science such as the computer science field. There are developments in the social sciences, the behavioral sciences, and in the humanities also. Any educational program which develops or operates without an awareness of emerging knowledge is presently ineffective or is destined to become ineffective. As a complement to the first development, we can return to new findings in the behavioral sciences. Over the centuries philosophers, principally, have been concerned with learning and with approaches to instruction. Now the behavioral scientists are coming along with substantial explanations and refinements of learning theory and of human capabilities. A recent issue of the *Review of Educational Research* reports that of the "nearly 60 dimensions of the mind discovered to date, more than 50 should now be described as nonintelligence intellectual dimensions." [2] The ferreting out and development of these talents

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[1] Walter R. Brods. "Planning for a National Science Program." Paper presented at Southern Regional Science Seminar for College Public Relations Officers, University of Florida, February 19, 1961.

With this continuing growth of 10 percent more each year and a doubling in the annual growth every eight years it is obvious that more has been published in the past ten years in science, than was published in science in all preceding time. Another way of indicating this compounding growth effect in science is the oft quoted phrase that 90 percent of all scientists who have ever existed are alive today.

[2] Calvin W. Taylor and John L. Holland. "Development and Application of Tests of Creativity," *Review of Educational Research*, 32:1::93; p. 93. Citing C. W. Taylor (editor). *The Second* (1957) *University of Utah Research Conference on the Identification of Creative Scientific Talent.*

requires an educational setting as broad or as comprehensive as the range of human talents to be encouraged.

Third, there is the creative function of education previously mentioned. It is of interest to note that through recent refinements in econometrics it is possible to get at least an approximate measure of the contribution of education to the general economy. A recent study of the sources of economic growth in the United States attributes 42 per cent of the increase in output per worker in recent decades to education, and 36 per cent to advances in knowledge; and for the decades 1960-80, the share of education is pojected at 40 per cent while that of advances in knowledge rises to 46 per cent of the increase in output per worker.[3]

In a similar vein, Barbara Ward reports that "Recent studies suggest that between sixty and fifty per cent of the gains in production made in the West in the last half-century spring from better trained minds, from more research, and more systematic use of the economy's brain-power . . ." [4]

Walter Lippmann, in a news column, discussed the recently declared war on poverty. Lippmann commented that: "A generation ago it would have been taken for granted that a war on poverty meant taking the money from the 'haves' and turning it over to the havenots.' For until recently it was always assumed that there was only so much pie and the social question was how to divide it." [5]

Continuing, Lippmann elaborates: "But in this generation, one might say in the past thirty years, a revolutionary idea has taken hold on the advanced countries of the world. The size of the pie to be divided can be increased by invention, organization, capital investment, and fiscal policy, and then a whole society, not just one part of it, will grow richer." [6]

Turning his attention specifically to the reason for poverty in the United States, Lippmann reports: "The modern studies of poverty have demonstrated—I think beyond dispute—that the greatest of all causes of poverty is a lack of education . . ." [7]

Of course, the creative contribution of education always works through people —more competent people—even though the manifestations of the improvements take the form of better production techniques, wonder drugs, an extended life span, better music, more responsible government, and better schools. In addition, appropriate measures of progress should include the direct influence on the individual person such as his feeling of accomplishment, of self-respect, of personal adequacy.

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[3] Edward F. Denison. *The Sources of Economic Growth in the United States,* Committee for Economic Development, Supplementary Paper, No. 13, 1962.

[4] Barbara Ward. *The Rich Nations and the Poor Nations.* New York: W. W. Norton and Company, Inc., 1962, p. 145.

[5] Walter Lippmann. "The War on Poverty," *The Washington Post,* 1964.

[6] Ibid.

[7] Ibid.

4

With this background of change, consider three major areas or highways along which industrial arts may flow. The first is the role of industrial arts as a part of the expanding function of education for fulfilling our national mission.

In light of the accelerated man-made developments which have come to affect the subject matter we teach—which affect the understandings we have of the learner and of the learning process and which in turn change man's relationships with man throughout the world—we should not expect industrial arts education to exert much influence on the future unless we can envision the unique approaches and unique contributions we can make to the education of the present and future generations. The old world—the pre-war world—has passed. Do we want to become relics in the museum, or do we want to have some part in shaping the world of the future?

No single paper can identify and elaborate upon the educational needs of the future, or cite all of the highways along which industrial arts education should travel. The best service I can render lies in pointing out a few broad avenues which will, in turn, suggest a route or direction for those of you who work in industrial arts laboratories day-by-day.

I shall confine my efforts to three major areas:

1. Industrial arts as a part of the expanding function of education for fulfilling our national mission.
2. The pursuit of more sophisticated techniques basic to our industries.
3. The essential remodeling of teacher education.

Perhaps the simple enumeration of these major headings would be adequate for you to draw your own conclusions. But, for the sake of getting the consideration underway, I shall elaborate by making reference to a few of the more obvious implications.

First, let us look at education and the fulfillment of our national mission which is, as I see it, the opportunity for each person to become the best person he can possibly become. The basic component of the free-enterprise system is the development of unique abilities coupled with the opportunity to employ or use these abilities.

Recently much has been said by our national leaders about the elimination of poverty. For the first time in the long history of the world it is possible to eliminate poverty in this one great nation. It is possible also to raise the general standard of living in 12 to 15 years once again as much as it was improved in the 25 year span between 1920 and 1945. The syndrome of poverty and lack of education have already been cited in the Walter Lippmann reference.

The most obvious need in the immediate future in the United States is to provide *more* education to *more* people—children, youth, and adults. As a statement of policy it sounds very simple indeed. But if we are to be successful in keeping more children and adolescents in school longer—and do not choose simply to have schools become socialized babysitting—we must develop a more comprehensive program beginning with the elementary school. If there are 50 or more non-intelligence intellectual dimensions, certainly many of these intellectual dimensions relate to competencies which society desperately needs. The unwarranted emphasis on verbal competence in our schools must be shifted into a better balance.

It is of passing interest to note that one city recently made national headlines by rounding up high school dropouts during the summer and by persuading these dropouts to return to school. The more important component of an appropriate educational program never reached the threshold of consideration and so the students returned to substantially the same educational menu that they had already found unappetizing.

But there is considerably more to a broadened curriculum than the retention of dropouts, important as is retention, socially and economically. *Quality* or *excellence* is another dimension. At the simplest level, has it occurred to the critics who say "Johnny can't read" to wonder whether just more of the same reading instruction or whether some technique, such as phonics, is going to make the difference? If the problem were this simple, it would have been resolved long ago. Reading is the sharing of experience, and the reader must take something to the sharing process. Motivation is an important second side of the same coin. The dry pages of the reader, no matter how well illustrated in multicolored pictures, have reached saturation in the number of students who will learn to read and in the level of attainment the pupils will reach. If we really want to get more children and youth to obtain greater amounts of formal education and to have those who persist reach higher levels of achievement, we must turn to a wider range of educational experiences. Certainly the expressional arts will appear in the expanded program and industrial arts will be prominent among them.

Now there is no grand scheme of education already in existence to provide larger amounts of education of greater excellence. The essential education remains to be developed. And whether industrial arts education is in or out of this new forward march will be determined by our direct participation at the national level, at the state level, and at the local level.

We shall need to approach the problem with new ideas and with new instructional materials. This is essentially a creative area, quite as much for industrial arts as it has been for mathematics and the physical sciences. One new direction for industrial arts must certainly be to travel the course of expanding educational opportunity for American children and youth.

5

The techniques of automated factories, space ships, etc., have evolved recently, while the approaches of industrial arts have grown from a completely different and older order. We need a new focus on the relationship of knowledge and skill . . . and the level of technology we select for teaching.

My second concern relates to techniques, an essential component of the industrial arts program. I think it is clear to all by now that automated factories, space ships, ray guns, digital computers, and heart pacers have evolved from knowledge and techniques which are recent in their development. In contrast, nearly all industrial arts instructional materials and approaches have grown out of a completely different and older order. The quick review of any text in industrial arts, chosen at random, will serve as documentation.

Knowledge and performance are now closely related in the sciences and there is practically no skill of significance which is unrelated to a substantial body of knowledge. This fact should give us pause in industrial arts. For lo these many years, we have been contented with dragging in a bit of related information, either essential to learning a skill or to give dignity to the skill once it has been learned.

But, in addition to this relationship between knowledge and skill, there should be even greater concern for the level of the technology we select for teaching.

It is certainly reasonable now to assume that we are not limited to the years associated with the junior high school or with selected years within the junior high school, such as grades 7 and 8. As an aside, let me comment that it is an unfortunate historical accident for industrial arts education that it has been so closely associated with the junior high school movement. The influence has been so pervasive that most *high school* industrial arts programs have tended to be just more difficult junior high school offerings, and *elementary industrial* arts programs have been simplified junior high school offerings.

We can now expect to have students in greater percentages throughout the high school period and, with the rapid rise of community colleges, a significant number of students can benefit from continuing their industrial arts instruction at this level as well, provided we develop suitable programs. This forecast as-

sumes a much higher level of instruction than we now offer. No part of the industrial arts program can escape this trend toward greater sophistication, if we are to move at all. For example, the conventional drafting course cannot be further improved by insisting upon squarer corners, neater lettering, better line delineation, and sharper arrow heads. The new drafting must become what the preface of drafting books have said for years—namely, a means of formulating and communicating ideas. The emphasis must move to space relationships, to principles of mechanics, electricity, and materials, and to qualities of design. Practically everything designed must *do* something and the criterion for the design is compatibility between expectation and performance. Other examples, some of them more dramatic, could be chosen to identify the new high-level ground we must strive to reach. For the moment, however, the vision is much more important than the next steps.

6

Any forward thrust in industrial arts depends greatly upon the quality of teacher education. Laboratories in our teacher-education institutions continue to be manipulative-skill oriented. The time is overdue for the profession to establish basic standards in teacher education.

By this time I think we shall acknowledge generally that any forward thrust in industrial arts education depends greatly upon the quality of teacher education. This generalization should not come as a shock any more than to say that medical schools of today determine the medical practice of tomorrow. We cannot wait for an entirely new crop of industrial arts teachers or for a new generation of industrial arts teacher educators. Strenuous in-service effort must be exerted just as has been true for physics and mathematics. But there is no sensible reason for compounding the inertia by turning out more of the same teachers as were graduated in the pre-war years.

Shops and laboratories in our teacher-education institutions continue to be manipulative-skill oriented. And they will remain so (1) until the students meet much more strenuous math and science requirements and (2) until the teacher educators build up their own technical backgrounds in very substantial ways. If we are to make the minimal essential changes in industrial arts teacher education, these minimal changes will be extensive. I make this comment to leave no doubt about the extent of change I have in mind. Many of our teacher-education programs are in serious difficulty and others will join in the dilemma unless constructive changes are made in their curriculums in the near future.

The time is already overdue for the profession to establish a few basic standards in industrial arts teacher education. A poorly prepared teacher is a liability to the students he, in turn, tries to teach, to the college he represents, and to the entire profession. His diploma is a lifetime certificate to do a poor job of teaching, and to ruin the potentials of thousands of students. There is no organized body other than this professional group to look out for the public welfare in industrial arts education. It is the business of the profession to state what shall be the minimum competencies of the industrial arts teacher. Siwash State Col-

lege should no longer be permitted to label one of its graduates an industrial arts teacher if that person lacks college-level courses in physics, math, and chemistry, or if that person lacks laboratory experiences in the phenomena of modern industrial techniques.

No good college will be affected adversely by being asked to provide a much more rigorous industrial arts curriculum. A college that is led to close out its industrial arts program through an inability to provide what is needed, by its very act of closing will be adding to educational excellence. A poor or mediocre college program is an indefensible professional liability.

Of the several new directions industrial arts should travel, the teacher education route is primary and it will likely be the most difficult to traverse. Traditions die hardest in higher education.

Cliches die hard in education. If we fear we are getting too far out onto the educational frontier, let us realize that our students of today will reach their "zenith" in the year 2002.

Cliches also die hard in education. There are those who prefer the "tried-and-true-education" without ever having put the education to the test; there are those who take the "middle-of-the-road" without asking where the road leads; there are those who cling to the "basic skills" without ever questioning how long these skills have been extinct. If, at any time we get the impression that we might get too far out onto the educational frontier, we should remind ourselves that, in education, we are always at a serious time disadvantage. Simply stated, the children we now have entering the elementary schools will not make their initial contributions to society until 1980, and most of them will not reach their zenith until the year 2002. Does anyone here think that we, today, in 1964, can get far enough ahead in our thinking to anticipate the lives of these children as they take over our responsibilities in 2002?

The historians of the future will say whether we used our knowledge and resources to perpetuate in vain a world which has ceased to exist, or whether we used our imagination and wisdom to build boys and girls who, in turn, created a better world. Each one of you has a part in this important decision.

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The Historical Development of A Post High School Distributive Education Program with Implications for Teacher Education. CDTE Study Number 12.

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A person with a background in post high school distributive education programs was interviewed to ascertain his opinion and feelings concerning his experiences in the organization, operation, and development of the programs. Specific conclusions are not drawn, but the purpose of the study was to present information from which the reader might identify implications and issues that could be used in improving teacher education programs in distributive education. Some of the 26 questions asked in the interview were: (1) Did you have any specific professional preparation to be a post high school coordinator, (2) How did you feel about working with post high school students, (3) What was the nature of the post high school program that you operated in your first year at that school, (4) Did you know what you were going to teach, (5) Describe one or two of the teaching methods that seemed to work best for you at the time, (6) What did you do to make the program known, (7) How would you summarize your early experience as a post high school teacher-coordinator, and (8) Do you feel that a teacher education program which is preparing teacher-coordinators for high school positions can give sufficient background to qualify a person as a post high school coordinator instructor. (MM)

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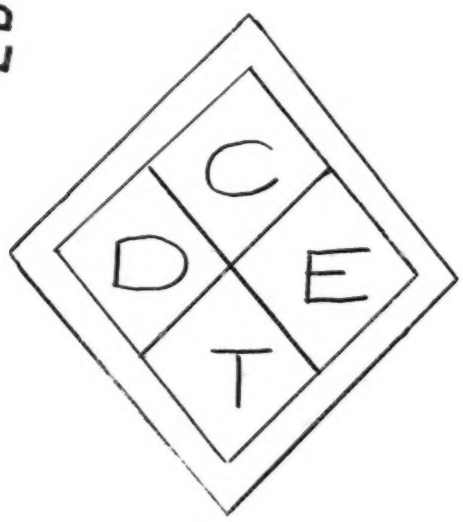

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THE HISTORICAL DEVELOPMENT OF A POST HIGH SCHOOL DISTRIBUTIVE EDUCATION PROGRAM WITH IMPLICATIONS FOR TEACHER EDUCATION

Wayne G. Little, Chairman
Division of Business
University of Minnesota
Technical Institute
Crookston, Minnesota

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U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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FOREWORD

The Council for Distributive Teacher Education was organized in 1961. Membership in the organization consists of teacher educators and other distributive education personnel with an interest in advancing distributive teacher education. The primary interests of the Council are research and publication.

This study is concerned with the organization, operation, and development of the post high school program in distributive education. The interview plan of presentation is a pleasant departure from the usual style of documentation.

The author has deliberately avoided drawing specific conclusions concerning the solution of the problems involved. Rather, it is hoped that teacher educators will study the issues involved in an effort to improve their own programs. The study is especially timely in this period of rapid expansion of programs at the post high school level.

The Historical Development of a Post High School Distributive Education Program with Implications for Teacher Education was prepared by Wayne G. Little, Chairman, Division of Business, University of Minnesota Technical Institute. It was published through the courtesy of the Division of Business, University of Minnesota Technical Institute, Crookston, Minnesota. Requests for copies should be addressed to Mr. Little.

Reno S. Knouse
Charter President, Council for
Distributive Teacher Education
State Teacher Educator for
Distributive Education
School of Business
State University of New York at Albany

December 1967

TABLE OF CONTENTS

Introduction 1

Interview. 3

Question No:

1. How long have you been a post high school coordinator? 3
2. When did you first become interested in teaching at the post high school level? 3
3. Did you have any specific professional preparation to be a post high school coordinator? 3
4. Knowing your background, how did you feel about being involved in a post high school program with no previous experience? 4
5. How did you feel about working with post high school students? 4
6. In What kind of school did you begin your teacher-coordination experience? 5
7. Was the post high school distributive education program established before you began your assignment? 6
8. Did the school administration understand the operation of a distributive education program at the post high school level? 6
9. What was the nature of the post high school program that you operated in your first year at that school? 7
10. Did you know what you were going to teach? 7
11. Before I ask you how you developed the curriculum in terms of the courses that were taught, will you give us some idea of what you did about getting students for the post high school program? 8
12. Did you seek help from other faculty members in solving some of the problems that you were facing? 9
13. What was your teaching schedule during that first year? 9

Question No:

14. After determining the kind of students you were going to have, what basis did you use for selecting the courses that were taught? 10
15. Will you describe one or two of the teaching methods that seemed to work best for you at the time? 11
16. What were the capabilities of the students in your classes? 13
17. What was your relationship with the students outside of the classes? 14
18. What did you do to make the post high school distributive education program known? 15
19. Will you recall some of the things that you experienced during your first coordination calls? 17
20. What kind of facilities did you have for the post high school program? 19
21. Did you have club activities for your students? . . 19
22. You have mentioned that you were involved in the adult education program. Will you briefly explain your activities in this area? 20
23. Would you comment on the second post high school program that you started? 23
24. How would you summarize your early experiences as a post high school teacher-coordinator? 24
25. Do you feel that a teacher education program which is preparing teacher coordinators for high school positions can give sufficient background to qualify a person as a post high school coordinator instructor? 25
26. If you had it to do all over again, would you choose post high school distributive education as your field? 26

General Implications for Teacher Education 27

THE HISTORICAL DEVELOPMENT OF A POST HIGH SCHOOL DISTRIBUTIVE EDUCATION PROGRAM WITH IMPLICATIONS FOR TEACHER EDUCATION

INTRODUCTION

". . .I disagree. Our teacher education program does not need revision in order to meet the requirements of those few students who have decided to teach at the post high school level. . ."

". . .I'm not so sure. I've just returned from a distributive education conference and one of the presentations dealt specifically with problems faced by post high school coordinators. . ."

". . .Is there a problem? One of my recent graduates developed a very successful high school distributive education program before moving into post high school distributive education this last year He is having as much success with his post high school program and we do not include post high and adult distributive education instruction in our teacher education curriculum. . ."

". . .That's interesting because I have a young man who began his teaching career in a post high school program four years ago and this fall he accepted a position in a larger city as a high school distributive education coordinator. He is doing very well. . ."

". . .If some slight difference does exist, I'm sure that my staff can develop a complete and current bibliography to meet the challenge of these differences without having to make major changes in our course content. . ."

Disconnected and contrived statement - Yes! Comments such as the above may or may not be unusual. Perhaps there is no real case to be made at this time for the development of post high school and adult distributive education teacher preparation programs or the inclusion of such instruction in existing programs. But if there is no immediate concern, there is seemingly a great deal of interest.

In an attempt to further this interest and possible concern, the author has made use of the informal interview technique as a means of relating the combined experiences of several post high school co-ordinators as voiced through one individual's responses. The reporting technique is contrived, but the questions and answers are not.

In the summary, liberty is taken to identify several broad implications for teacher education programs. Hopefully, however, it will be the desire of the reader to draw meaningful implications for his own teacher education program, based on an individualized interpretation of the interview.

INTERVIEW

QUESTION NO. 1: How long have you been a post high school coordinator?

Answer: I have been in distributive education for ten years. The first six years of my experience dealt specifically with post high school coordination and instruction. During the last four years I have been more involved in the administrative aspects of distributive education.

QUESTION NO. 2: When did you first become interested in teaching at the post high school level?

Answer: I had given it very little thought while I was going through the undergraduate program. I was primarily interested in being certified as a distributive education coordinator and then getting a good job somewhere. Real interest first developed when I read a placement notice announcing a position for an instructor-coordinator in a post high school institution. Although, upon graduation, I had intended to seek a high school position, I decided to apply. It was through the interview with the post high school representative that I really became interested in distributive education at the post high school level. As a result, I decided to accept this position when it was offered to me. After accepting the position, I felt very uncomfortable about the whole thing, because it seemed that I might be getting into something that I knew very little about and that I might not be capable of handling such a program.

QUESTION NO. 3: Did you have any specific professional preparation to be a post high school coordinator?

Answer: Instruction in the teacher-education program was geared primarily to meet the needs of distributive education at the high school level. This made sense at the time because the high school program was where the bulk of distributive education instruction was taking place. Some of the materials introduced in my professional preparation touched on post high school instruction and reviewed various adult education processes. I would not say there was any specific training for post high school instruction and coordination.

QUESTION NO. 4: Knowing your background, how did you feel about being involved in a post high school program with no previous experience?

Answer: Probably the best way to describe my feelings would be to use the word insecure. I wanted to do a good job and really did not know whether I had what it would take to operate a successful program. It would seem natural to be concerned aboutthat first teaching experience, but there may have been more concern on my part because I was not familiar enough with the operation of a post high school program to have a home base from which to work.

Question No. 5: How did you feel about working with post high school students?

Answer: In the beginning I did not think about this. Later as the fall term neared, it struck me that I would be working with an entirely different group of people than I had anticipated and at a different level. Fortunately during my college career I had an opportunity to work both with college students in a teaching capacity

and with high school students in the same capacity. On reflecting back this may have been a major influence in my final decision to take the position that was offered to me. As to my reaction to working with post high school students, it seemed to me then that post high school students would be easier to work with because of the fact that many of them in addition to being more mature would probably have had prior experience in the field of distribution. Of course, this is what I thought at that time, because I did not know how much and what variety of experiences these post high school students would have. I was concerned that I might have people in my class who would probably know a lot more about many of the subject areas in marketing and merchandising than I would. I wondered what I would do if someone pinned me down on a particular topic, and I could not give them a satisfactory answer. To digress for a minute, I might say that in later years with an expanding staff, I found that this concern was one of the greatest problems that I ran into when hiring people for post high school positions. Basically it seemed to me that many prospective distributive education personnel were afraid of getting involved in post high school education for the very same reason that I had, that is the concern with not being able to come up to the level that post high school students would expect and feeling that their background and knowledge would not be sufficient to do a good job.

QUESTION NO. 6: In what kind of school did you begin your teacher-coordination experience?

Answer: This first position was with a technical and adult education school. As I mentioned before, my interest came out of an

interview for an announced position which was at a post high school level. Incidently this position also involved responsibilities in the adult evening school program. The institutional emphasis, of course, was on post high school education during the day, supplemented by an extensive evening school program which offered a variety of courses in the various occupational fields. The whole program was geared to the person who was out of high school.

QUESTION NO. 7: Was the post high school distributive education program established before you began your assignment?

Answer: No, it was not. Distributive education in this particular school had been conducted on a limited basis as part of the evening school program. Before I accepted the position, some indication was given during the interview that ground work had been conducted to prepare the community for the establishment of this program. Post high school distributive education in this school, however, was brand new and it was up to me to make it a success.

QUESTION NO. 8: Did the school administration understand the operation of a distributive education program at the post high school level?

Answer: That is a rather difficult question to answer. I can honestly say that the administration probably knew a great deal about post high school programs and adult education programs in general. They were not, however, familiar with a distributive education program, nor were they aware of the problems that would be involved in a program of this kind. Since the administration had experienced limited contact

with distributive education at the post high school level, it turned into a first time experience for everyone concerned.

QUESTION NO. 9: What was the nature of the post high school program that you operated in your first year at that school?

Answer: Because of this lack of experience and with no guide lines to follow, we agreed, without actually saying so, that the duplication of a high school program plan at the post high school level seemed to be the most logical approach at least for the first year. As I look back on it now, I feel that in many ways this was a mistake, but after all, we are supposed to profit from our mistakes. At the time I had no opportunity to study the curriculums of schools outside of the state in which I was located. Basically our first year's operation was a takeoff on a high school program, that is, one in which the students would attend school in the morning for four class hours and then be employed in the afternoon. This seemed in the beginning to make the most sense to me because after all this was what I was most familiar with. With no point of reference, I felt that I had little choice but to do this, because I do not believe there was another distributive education program at the post high school level at that time anywhere in the state. My first year's teaching experience really amounted to pioneering, and I think you can realize that it involved a great deal of guess work.

QUESTION NO. 10: Did you know what you were going to teach?

Answer: Again, you must remember that I felt I did not have a good frame of reference from which to make specific decisions at that

time. I had very little insight into what subjects I should offer. This seemed to evolve after student contacts were made and I had an idea of what their backgrounds were. I know that this does not sound like a very good approach to the beginning of a new program, but as I have said before, we had to start somewhere, and I guess I started at the beginning.

QUESTION NO. 11: Before I ask you how your curriculum evolved, will you give us some idea of what you did about getting students for the post high school program?

Answer: This experience was a real introduction to the post high school program. When I arrived to take this first position, I found that we had no students. Room schedules, class times, and that kind of thing, had been taken care of. Nothing in a direct way had been done to recruit students for the classes. As a result, a week after the school year had started, I found myself still recruiting students for the program. I think you can understand that I had some rather hectic times and spent quite a few sleepless nights trying to determine how I could go about recruiting students with the school year already under way. I doubt that I was very original in what I did. I went into the business community from door to door in the downtown area soliciting potential students from the places of business for this program. To convince an employer that he should give a full-time employee a half day off to attend school was no easy task. I do not know what would have happened if I had not been able to recruit students for the program. The experience of going from one place to another

without knowing anyone and without knowing the kind of approach to use was cause for a great many disappointments. To sit down with the management of a particular firm and try to explain to them what this program was all about was most difficult, because I was not really sure myself. In addition, I had nothing concrete to point to that would show these employers that this program would be of direct benefit to them and their employees. If I had been promoting a high school program, the task would have been much easier for me, since I was familiar with the direct benefits of a high school program to the student, to the community, to the businessman and to the school. However, I did not know if the same benefits applied in a post high school situation and this was cause for great consternation on my part.

QUESTION NO. 12: Did you seek help from other faculty members in solving some of the problems that you were facing?

Answer: I found the faculty in this school to be very helpful. In fact, in some ways if it had not been for the assistance that I received from them, I am sure that the day program would not have gotten off the ground at all. Various faculty members gave suggestions on whom to see, when to see them, and what kind of philosophy to relate to the employers that I contacted. They also gave me a start on developing a list of the benefits of participating in this kind of program as they affected both the employer and the employee. About fifteen out of the large number of employers that I visited seemed to feel that this program had something to offer to them. As a result, I started my first teaching experience at the post high school level with fifteen students.

QUESTION NO. 13: What was your teaching schedule during that first year?

Answer: In the morning I taught four different classes. There were four classes the first semester and four different classes during the second semester. In the afternoon the students would return to their jobs and I would go out and coordinate the in-school instruction with the experiences that they were having on the job. You realize, of course, that my schedule as we are discussing it here involved only the post high school program during the day. Perhaps we will discuss my responsibility in the adult evening program later.

QUESTION NO. 14: After determining the kind of students you were going to have, what basis did you use for selecting the courses that you taught?

Answer: The basis that I used for selecting the courses that I taught in the final analysis was my own background of experience. In other words, I selected courses that I had either taken myself or I had been oriented to in my undergraduate program. With the students' needs utmost in my mind, I selected for that first semester, Marketing Principles, Salesmanship, Business Math, and a course that I called General Psychology. In the second half of the year, I taught Advertising, Display, Sales Management, and another course called American Institutions. I never felt that I did a good job of teaching that year, because there was just too much to cover and I did not have the background to feel competent in all those subjects. I ran into tremendous problems selecting textbooks and various materials to use.

Most of the texts that were available at that time were either too simple or too difficult, too long, or too short. I hope that I am not creating the impression that I was tied to a textbook, for I found that the textbook worked only as an aid in the classroom. But I did need a frame of reference and I found that where I used a textbook that it did save me a great deal of time in terms of class organization and presentation. In some courses I did not use a text at all, because of the particular objectives that I had drawn up for the class. I initially referred to texts that I had used as an undergraduate student and drew heavily from my own personal experience in presenting material that I felt was pertinent to the needs of the students. Salesmanship, for example, was a course in which I used no textbook at all. I felt that most of the books that were available were written for high school programs and I was not sure that this would fit the bill for that group of post high school students. I chose to develop materials of my own and borrowed from the experiences of an instructor who had taught a salesmanship course for adults in the evening school program. In each course I started out by developing objectives which seemed to be in keeping with the goals that I thought the students had. I found, however, that during the course of the first semester the objectives that I had established changed many times. As you can well imagine, teaching four different subjects a day as well as being involved two or three nights a week in an evening school program, made for rather a busy schedule. In fact as I think back on it now, I feel sorry for those students who had to listen to me four hours a day, five days a week, for a whole year.

QUESTION NO. 15: Will you describe one or two of the teaching methods that seemed to work best for you at the time?

Answer: I was fortunate because my undergraduate teacher education program placed great emphasis on teaching methods. I attempted to make use of a number of these teaching methods with my post high school students, but soon found, however, that in some instances I received different student reactions than when I had used those same methods in my student teaching experience with high school students. Let me give you a specific example of one method. Whenever presenting new material there was a tendency on my part to use the lecture approach. This is one of the methods that I used when I worked with high school students, and of course, I allowed them to participate as a way of building interest. It seemed to me that this would also be a basic method of presenting material to the post high school students. I discovered, however, that by the end of the first week, that the lecture method and participation by the students presented some outcomes that were completely different than what I expected. Because of the kinds of students that I had, with the variety of background experiences they represented, I found that when presenting something in the way of a basic principle or concept in marketing, many of the students in the class had already experienced that concept or principle in a practical way, and what I had intended to be a brief discussion on a particular subject often took up the whole period. This meant that in some cases I had to draw more heavily on my own occupational experience in conducting the class

than what I had done in the way of research to form the content of the notes before me. At times, because I had quite an outgoing group, I had to limit their participation. This "method" of conducting the class ended up as a combination of conference leading, lecture, and group discussion at best, or maybe a method with no specific title at all. Whatever the method was, it seemed to work best for me at the time. Obviously this was not the only way that I conducted classes. It was, however, the machinery out of which other methods evolved. Because of the fact that I had these students four hours a day, the pressure was on me to provide a variety of teaching techniques in the class. I tried a number of things, not really knowing what to expect--role playing, panel discussion, outside speakers, field trips, audio visuals and so-on. In the final analysis I found that when I could relate the classroom instruction to the past occupational experience that the students already had, it seemed easier to accomplish the goals that I had set. One other method that I found extremely successful with these post high school students was the use of case problems. These students were extremely interested in case problems particularly when they related to the experiences of the class and also when a student could take the results of a case problem discussion and make immediate application of that outcome to his work. It is difficult to describe specifically as you have asked, methods that can be used with post high school students successfully. I do not believe that either high school teaching methods or collegiate teaching methods separated or in combination are the best way to reach the student at

the post high school level. It would seem that teaching methods for this group need to be more readily identified and that much more research should be directed to this area in order to meet the needs of the expanded post high school program as we now see it.

QUESTION NO. 16: What were the capabilities of the students in your classes?

Answer: If by capabilities you mean their experience , their ability to learn and to apply, I had as great a range there as I did in terms of age and interest. There were people in my class who had a great deal of management experience and there were people who had no business experience. This then was a group in which the students had an opportunity to learn from one another as well as from the material that was presented in class.

QUESTION NO. 17: What was your relationship with the students outside of the classes?

Answer: My relationship with the students involved much more than teaching the classes and maintaining rapport with them and their employers. These students had problems that were immediate and this made me realize that what I was doing was directly affecting their futures in terms of their career objectives. They expected a great deal out of their classes and they were not there just to put in time. There was no law saying that they had to be in school. These students had many personal problems, which they brought to me. There were always questions about whether or not they were doing the right thing in going to school. They sought continual encouragement which necessitated my being a constant salesman and disciple for the program.

I think that as a person I also benefited a great deal from the experience of that first year. These were people who were wage earners and who were not just thinking about possible careers in this field. They really wanted to do something to improve their situation. On many occasions when I presented material in a class I came away completely dissatisfied with what I had done. I would ask myself, "How are these people going to use what I presented to help them in the career that they have chosen?". Often I could not answer this question. I think that for the new teacher coordinator in a post high school situation, there is a great deal of pressure. You have to deliver everyday and it is not always possible to get by. These students picked up things that I would present in class and would try them out. They would let me know if it did not work. They would want to know why it did not work, and was there something that I could do to help them in terms of a new approach, new techniques, or with a particular problem that they had on the job. I had one student in my class who was in charge of display for a large department store. During the second half of the year when I taught display and showcard lettering, this person was a tremendous asset in the class and I learned not to be afraid of the experience that the students had, but to use it to the advantage of the whole group.

QUESTION NO. 18: What did you do to make the post high school distributive education program known?

Answer: This was an area in which I also had very little background knowledge. One of the first things that I did was to talk individually to each businessman in the downtown area about the program

and its benefits to them. The idea obviously was not original but it seemed like the logical first step. However, to make a cold call on an individual whom you have never met before and to attempt in a short period of time to explain a new program gave me the feeling that I could have used some additional training in the use of professional sales techniques. I did several other things too, some that worked and some that did not work. I was called upon to develop brochures for the distributive education program. I had taken a course in advertising when I was an undergraduate student, but unfortunately this class did not involve practical applications. I also wrote a number of newspaper articles. As with the brochure, my experience in writing was also limited. Eventually I began to get across the message that I wanted to in the shortest number of words necessary. One of the things that also bothered me in the beginning was speaking before many people. I had to speak to groups of people who represented management and executive organizations and in doing so, met them on their own terms and tried to show as best as I could how the program would benefit them from the profit standpoint. An excellent way to learn what to say in these situations, I felt, was by actually doing it. A great deal was revealed to me through this experience. Probably the willingness to take on a number of speaking engagements was one of the big factors in what success we had in getting students the second year. The brochures and the newspaper articles paid dividends later. I found that during those promotional experiences many people, educators in particular, did not have a clear understanding of what this program was all about. They were familiar with distributive education at the high school level,

but were not sure what we were trying to accomplish with a new program at the post high school level. Because of this situation, I went out of my way to make contacts with high school principals and superintendents where possible, and high school counselors in particular. In addition to meeting with these people, I talked before PTA groups, various service club organizations and several library associations who had direct contact with potential students. If someone needed a speaker, I volunteered. In the beginning the school volunteered my services for this, and as time went along, I found it was just a little easier to talk about the program and I was able to answer most of the questions that were asked. In the final analysis the best salesman for the program in terms of recruiting new students were the students that I already had. For example, when I participated in a career day program, I came upon the idea of letting students in my class conduct these career day sessions. I would take the first five minutes and then we would break up into small groups. In each of these small groups one of the students would sit down and informally visit with the high school students explaining the program to them. I found that this was a very effective way of recruiting for the coming year. This approach, as with a few others that Have been mentioned, was a matter of stumbling into it rather than referring to any particular source for assistance. I suspect now that if there had been other post high school programs in the area who were involved in distributive education that I would have contacted them and asked them for suggestions on what to do. At that time there did not seem to be anyone who could serve as a source and so I went out and made the mistakes myself. In addition I found that

I had to do a constant selling job right in the school. Even though all of the staff were involved in post high school education, they were not completely familiar with distributive education, particularly at the post high school level. They asked questions and apparently most of the questions were answered successfully, because as I had said, I gained a great deal of support from the staff as time passed. In the final analysis, I think the individual contact was probably the most effective approach I used. In addition, however, I do feel that what my students did for the program was the best promotional technique that we had available.

QUESTION NO. 19: Will you recall some of the things that you experienced during your first coordination calls?

Answer: In the beginning I expected the same kind of experiences that I had been exposed to during my student teaching, that is sitting down with the employer, talking about student progress, seeking evaluations, and working out mutual problems that we might have had. As time passed, I found that some of the employers began to ask questions which related to problems that they themselves had in their particular business. This, of course, was in some ways gratifying, because apparently they felt that I could help them. I also found that coordination became a vehicle by which not only the post high school program was developed, but also the adult evening school program. Many employers and employees in participating firms later enrolled in classes that were made available by the evening school that year. Let me give you one instance of that. As I recall, one of the students that I had inthe post high school program was assistant dairy department manager in one of the local large

chain stores. On various calls to his training station I had several opportunities to visit with the manager of the establishment. During one of these coordination calls he indicated that he was concerned about a source of supply of experienced cashiers for the store. Through the school we made arrangements to provide an educational program which trained people to become cashiers. Out of this contact a desire was expressed to expose the department heads in all of the food stores in the community to new merchandising techniques that were being developed. We established a seminar program in which experts were brought in and they conducted the program in a very successful manner. Much publicity resulted which also reflected on the development of the post high school program. I suspect that in some ways this coordination experience was different from what I might have experienced had I been involved in a high school program.

QUESTION NO. 20: What kind of facilities did you have for the post high school program?

Answer: There were no specific facilities set up for the distributive education program the first year. I used a standard classroom with movable tables and chairs. At the end of the first year, I made recommendations for the kind of facility that was needed to carry on in a more effective way the distributive education program that I had started during the previous school year. I determined the facility needs on the basis of what I had experienced during both the day and evening program. I felt that there was a definite need to avoid a standard classroom situation and that it was of the utmost importance that the facilities be as flexible as I could make them. Therefore, in the classroom, we used trapezoidal tables, and plastic stacking chairs that

could be moved around. Equipment was arranged so that it could be moved on tables that had casters. In the laboratory, we had counters, a sink, storage, department library and several display areas, all for the purpose of teaching advertising, display and showcard lettering. This was basically what we had available in the second year. Later on, of course, we added several new classrooms and provided a number of display windows and increased the laboratory size. This was done as a result of the growth in enrollments in the program. I could describe our facility as one that reflected flexibility of need as it grew.

QUESTION NO. 21: Did you have club activities for your students?

Answer: If you mean were we affiliated with the Distributive Education Clubs of America organization, I would have to say no. At that time there was no such organization in the state, and so we had no official club activities as such. The students, however, established an organization of their own in which they did such things as invite speakers to the class, arrange field trips, and organize social get-togethers where they invited other students in the school. Most of these activities were tied in with some phase of the classroom instruction. Out of this informal organization grew a student organization for all students in the school who were majoring in business. It was not until three years later when I was involved in starting another new post high school program that the state affiliated with DECA. We were then able to do a great many more things primarily because by then we had a recognized organization, large student enrollments, and the size of our staff had also grown in proportion.

QUESTION NO. 22: You have mentioned that you were involved in the adult education program. Will you briefly explain your activities in this area?

Answer: Adult education in some of the divisions of the school constituted approximately fifty per cent or more of the program. Almost all of the staff were involved in adult education in one form or another. This was quite an experience for me. I had never worked with adults in an evening class, nor had I ever had an opportunity to observe an evening school class in operation. The director of the evening school program was very helpful. I gained some insight into the operation of an evening school program as a result of the inservice training program that was conducted, but I still did not feel prepared to conduct an evening school class that fall semester. One of the faculty members told me that teaching adult classes would be similar to the experience that I was having with my post high school students. That was true for the most part, because I did have a rather unusual group of post high school students that first year. That is, student characteristics in the post high school classes were similar to those found in the adult evening school classes that I conducted. This similarity was not as true in later years, however. The post high school students today seem younger and a great deal less experienced. I think that they probably typify the type of student that is participating in most post high school classes. If I were to start a new post high school program today- the contrast between adult classes and the post high school classes could be more noticab! and might present more problems than I experienced ten years ago. I do not know whether you want me to get specific about these differences, but

perhaps I can summarize by saying that generally the major differences were in the student's occupational experience and the need in an adult class to present material that could be used the next day, rather than sometime after graduation. Instructor occupational experience was extremely important. In later years when I had an expanded staff I usually encouraged a new person on the staff to teach something in the evening school that was his or her strong suit, and if possible to teach something that involved a skill, such as display, showcard lettering, checker or cashier training, something that would take the pressure off in the beginning in order to provide a little bit of orientation for the inexperienced person. I wish, of course, that I had been aware of this when I started, but because I was not, I jumped right into a situation in which I felt that was caught short. My first adult education class came as a result of one of my contacts in soliciting students for the post high school program that year. One of the employers of a large firm in town expressed an interest in the post high school programs and also indicated an interest in a class being offered for his people in the evening school. Since I was anxious to enroll as many students as I could, I indicated that I would be willing to provide this class for him. I later found out that he had in mind something specifically in the area of credit and the problems that go along with credit as they relate to bulk oil sales. My experience in that area was practically nil. Needless to say, I was in a panic prior to this class. My approach with these people was to discuss some of the basic principles of credit as I had experienced them myself, but as the class progressed I realized that I was not meeting the needs of these

because they were concerned with how I could help them solve the problems that they had. Luckily I realized this and changed the whole direction of the class. I found that an adult evening school class is not a matter of presenting what you think the class should have, but rather what they can take away and use in a practical manner to improve their situation in the job that they were involved in, or to give them some background in order to move into a new occupation. I think that in giving these people some direction they actually solved their own problems while I served as a resource person and provided materials and activities directed towards solving their problems. It might be important to mention also that at times it would be easier not to get involved with adult education. I, of course, had no choice. As I look back on this experience, several things came out of it. Because I was fortunate to have had some success in that first class, I completed that first year of my teaching experience by offering several evening school courses. Many of the participants in the evening school program were also parents of prospective students. It seems that there must have been three or four students who enrolled in my post high school program the second year who did so as a direct result of the experience that their parents had the year before in the evening school program.

QUESTION NO. 23: Would you comment on the second post high school program that you started?

Answer: This was three years later and by then I had learned a great deal about post high school programs. The task was easier because I had the experience behind me. The administration in the new school had been part of the administration in the school where I first began teaching

and so they were oriented to distributive education at the post high school level. One of the things that we did not do was to start the program the first year that I was on the job. During that first year I spent my time establishing the curriculum, handling the promotion, and teaching adult education. This, of course, took the pressure off of us when the program actually began. Much of the ground work had been covered by then. That program today has about 250 full-time day students enrolled and I believe around 2,000 students who participate in the evening school program each year. I cannot emphasize enough the importance of having a solid foundation upon which to build a program backed by an understanding administration.

QUESTION NO. 24: How would you summarize your first year's experience as a post high school teacher-coordinator?

Answer: I do not know whether I can summarize it. I have already given some indication of how I felt about what I did. I think that any teacher who comes away with a good feeling about what he did during his first year would say that they had experienced a successful year. I do not know that the experience that I had was unlike the experience that a number of distributive education coordinators at the post high school level have experienced in their first year. In the last ten years, the post high school distributive education program has as you know developed tremendously, both in terms of numbers and in the types of offerings that are being made available. Obviously much more pioneering must be done, but in some ways the task is a little easier because there are people to talk to now. There are resource people, guides, textbooks, and so-on, that are available for the inexperienced person to refer to. There is also more and more interest on the part of teacher education

institutions to provide specific professional training for people who had indicated an interest in becoming post high school instructors or coordinators. I can just go back and say that I thought that I had had a successful year, maybe successful because I got through it. I do not know that I accomplished all that I wanted to accomplish. For that matter, I did not know what I wanted to accomplish, because of my complete unfamiliarity with the situation. At the end of the first year I recommended to the administration that we change our program to a full two-year program in line with all of the other divisions in the school. This was approved and with this approval came the addition of other staff members. This whole situation changed greatly in the second year. We had a small student group during that first year, but with the increase in instructional staff and with revision and improvement of the curriculum, we had about forty students the second year. Fortunately the experience that I had in stepping into a post high school program with very little background proved to be of great benefit to me in later years, because most of the people that have worked with me recently in what has developed into a much larger post high school program have had no post high school education preparation. Therefore, when asked by new distributive education personnel I have related my experiences to them and have left it up to them to pick and choose what they thought might help them. Those years were a terrific experience for me and I learned a lot, but I am not sure that I would want to do it over again.

QUESTION NO. 25: Do you feel that a teacher education program which is preparing teacher coordinators for high school positions can give sufficient background to qualify a person as a post high school coordinator instructor?

Answer: That is an extremely difficult question to answer. AS mentioned before, I was fortunate in that I went through a very fine teacher education program. Obviously if you are prepared for a particular area of education, it would seem logical that you would do a better job. I think I would have really been in trouble if I had not had any teacher preparation at all. As you know, it is possible to get involved in adult education without having had an extensive teacher education program. I can best answer your question by referring again to experiences that I had in later years when I had a greatly expanded staff of distributive personnel. I mentioned earlier that none of these people had any specific preparation in post high school education and I found myself upon their request doing considerable in-service work on an individual basis. I am sure that they would have felt more comfortable if they had received an orientation to post high school instruction and its problems combined with an opportunity to do some practice teaching in that same area.

QUESTION NO. 26: If you had it to do all over again would you choose post high school distributive education as your field?

Answer: I do not think there is any question about that. When I returned to graduate school, I had an opportunity to work with a high school program for one year and this gave me some basis for comparison. I thoroughly enjoyed the high school experiences, but in my case, I just felt that there was more self-satisfaction that comes out of a post high school program. I suspect that if I had started in a high school program I would have felt just the opposite. Post high school education is a tremendous challenge. In some ways it calls for a special kind of individual with a specialized kind of training for that field, just as

is the case with a high school program. With the expansion of distributive education programs at both post high and the high school level, it would seem to me that more and more colleges and universities are going to find themselves involved in meeting the demands of post high school programs by providing the qualified staff that is necessary to operate them. Just from one standpoint, if a post high school program develops at all, more than likely it will require several distributive education personnel to operate. Future programs will place pressure on all of us to do a good job in meeting these demands. It may perhaps require a change of philosophy on the part of some of us who are directly involved in the distributive education teacher-education programs.

GENERAL IMPLICATIONS FOR TEACHER EDUCATION

The title of this section implies the writer's desire to avoid specificity in identifying implications for all distributive education teacher education programs. It would seem that this task is best left to the desires of the reader if in fact the milieu of comments presented can provide a basis for drawing some meaningful implications.

GENERAL IMPLICATIONS:

. . .development of distributive education teacher education programs specifically designed to meet the needs of those persons interested in teaching at the post high school and adult level.

. . .exposure of all distributive education student teachers to post high school and adult education programs.

. . .a need to develop a means whereby individuals can be readily identified as prospects for teaching careers in post high school and adult distributive education programs.

. . .review of the professional and occupational (certification) requirements of both high school and post high school distributive education personnel to determine if meaningful distinctions can be made.

. . .promotion of research for the purpose of developing curriculum content and instructional materials.

. . .documentation of operative curriculums, and occupational specialities within curriculum--accessible to institutions considering the implementation of post high school and adult education programs.

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Coffey, Paul, And Others
D.E. Classroom Layouts.

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*DISTRIBUTIVE EDUCATION; *CLASSROOM ARRANGEMENT; *CLASSROOM FURNITURE; *FACILITY GUIDELINES; CLASSROOM DESIGN; SPACE UTILIZATION; AUDIOVISUAL AIDS

This leaflet was developed by four distributive education teacher coordinators to provide guidelines for those involved in arranging a classroom setting for distributive education (DE) courses. Discussed are: (1) placement factors for a classroom, (2) classroom size, (3) classroom facilities, (4) classroom furniture and fixtures, (5) audio-visual teaching aids, and (6) planning the classroom layout. Three sample classroom layouts that have proven successful in other schools are presented. (MM)

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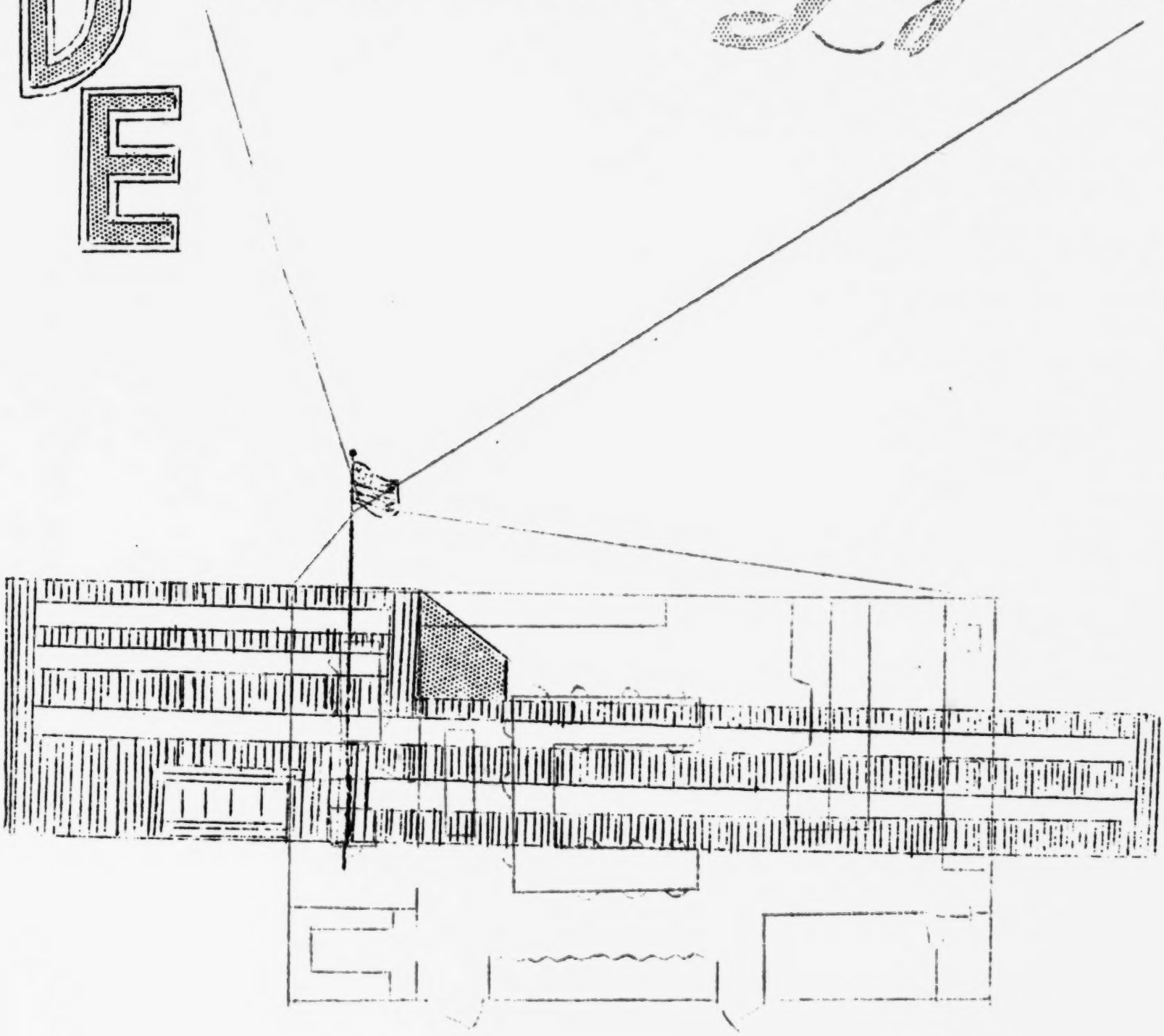


Prepared by the
Division of Distributive Education
Ohio State University

in cooperation with the
Distributive Education Service
Division of Vocational Education
State Department of Education

This material was developed as part of the assignment in Education 780 of the Ohio State University by the following Ohio Coordinators:

Paul Coffey

Wm. Eltywth

Vic Julian

G. E. Patterson

PURPOSE OF REPORT

This leaflet is presented to provide guide lines for the establishment of Distributive Education Classrooms. It is felt this information will be helpful to administrators, architects, distributive education coordinators and others involved in providing an adequate classroom setting for the most effective teaching of distributive education courses.

Because of the nature of distributive education curriculum and the varied teaching methods used, it is desirable that a classroom be specifically designed to fit the special needs of this course. This not being possible, suggestions are made for the conversion of existing classrooms to D.E. needs.

This study is not meant to be neither exhaustive nor restrictive, but rather a functional basis for practical in-the-school planning.

GOALS OF DISTRIBUTIVE EDUCATION

Since most effective planning will come from an understanding of what the distributive education program is, it is desirable that this purpose be made clear.

Distributive Education is a course of instruction to promote training and practical experience in distributive occupations. These include such occupations as are found in the retailing, wholesaling, storing, transportation, risk bearing, customer contact, selling, advertising, display, sales promotion, and management. It involves all the activities of getting a product or service from the producer to the consumer.

D.E. provides a combination of classroom work and paid practical experiences on the job. It relates the classwork to future occupational situations by simulating realistic job experiences in the classroom whenever possible.

The typical Distributive Education curriculum includes salesmanship, display, advertising, merchandising, speech, math, English, job application, grooming, stock keeping and business management.

TEACHING METHODS OF DISTRIBUTIVE EDUCATION

The effectiveness of D.E. teaching leans heavily on activity. The learning by doing situation is stressed. Book learning is followed closely by application of the learning to job use. This is done both in the classroom and on the job. It follows, therefore, that the classroom should serve as a laboratory to provide a true-to-life atmosphere for recreating job situations. As an example: Display work is best learned by allowing the student to apply his knowledge to the making of an actual display. As another example: Store selling is best learned in a store setting. This calls for sales counters, registers, packaging supplies, sales slips, shelving and display fixtures.

A classroom which most closely duplicates the conditions students will encounter on their job stations will serve as the best teaching laboratory for the teacher. The value of such a realistic classroom as a tool to augment the teaching of a good Distributive Education coordinator can hardly be over stressed.

While the ideal classroom situation presented in this report is not mandatory to a good Distributive Education program, it is certainly highly desirable and should be stimulated as nearly as conditions allow.

PLACEMENT FACTORS FOR A D.E. CLASSROOM

The nature of the Distributive Education course makes it one of the most effective public relations factors in a school. It represents an extension of the school into the community and vice versa. The teaching methods and the curriculum

of Distributive Education give it a certain flair that attracts much favorable comment both within the school and from the community. To capitalize on this interest the Distributive Education classroom should be placed near the center of activity of the school. Positions close to the administrative offices of the school, or near the entrance lobby are often thought to be most effective. It is especially good to have a large display window facing unto the most heavily traveled passage of the school as a show case of what practical knowledge Distributive Education students are learning.

Physical considerations that must be taken into account are:

1. Adequate room size
2. Sufficient storage areas
3. Proximity to counseling area
4. Availability of telephone
5. Plumbing facilities for sink
6. Abundant electical outlets and lighting
7. Effective display window visable to corridor

The factors involved in making the above considerations are detailed at appropriate places in the remainder of this report.

CLASSROOM SIZE

The space needed for an adequate Distributive Education program will vary with the number of students enrolled in the classes and the type of curriculum the coordinator follows.

The size of D.E. classes ranges from 15 to 30 students with 20 to 25 usually considered as ideal. Because of the nature of the program, a class of more than 30 should not be permitted.

A good rule of thumb in estimating space needs is to allow approximately 30 square feet of floor space per pupil. Using this guide with a class of 30, we arrive at the need for a classroom of 900 square feet. It is immediately obvious that many multi-purpose classrooms in our present schools are just not adequate. If we are to include storage and counseling areas within the classroom area, a room measuring 25 ft. by 40 ft would probably prove to be sufficient. The suggested floor plans at the end of this report are in keeping with the rule of thumb of 30 sq. ft. per pupil. These should be helpful in seeing the suggested use of space and room layout for most efficient use.

The need for adequate locked storage area and a separate counseling area as part of the Distributive Education classroom planning cannot be over stressed. The amount of display and art materials to be stored is great and the need for placing it under lock and key is obvious. Because of the nature of personal and job problems that arise with teenagers working outside the school, a private place where the counselor and student can confer is a must.

CLASSROOM FACILITIES

One of the extra considerations needing attention is the placement of a sink in the D.E. classroom. The D.E. curriculum is similar to that of the art department

in the use of craft materials and paints. Distributive Education students are badly handicapped by lack of an easy place to wash out paint brushes and lettering pens, to mix pastels, and thin paints. When this is not provided in the classroom, the effect of students going in and out of the classroom can be a disruptive influence on the rest of the school.

Availability of a telephone within the Distributive Education area is highly ideal. The efforts of the coordinator to properly supervise students, and maintain contacts with the students' homes and job stations can hamper the merchants greatly if he must depend on the school office phones. Students are required to personally inform the coordinator by phone of the reason for any school absence. The coordinator in turn must contact the employer to ascertain that he has been informed that the student is unable to go to work that day. There are a great many occasions which arise in D.E. coordination that can be quickly handled by a phone call, but which might build into a more serious problem if a phone is not readily available. In the event that it is not possible to provide a phone within the classroom, it is extremely important that one be close at hand.

The lighting and electrical facilities of the D.E. classroom should be in keeping with conditions found in modern stores. A minimum of forty-foot candle of illumination should be evenly distributed over the room. Florescent fixtures are best as they provide a light most comparable to daylight and tend to be most glare free.

Lack of sufficient electrical outlets is a common fault in D.E. classroom planning. There just never seems to be enough of these, nor at the right places. The D.E. students move equipment, displays and lighting around to duplicate various

store settings and they are hampered by lack of outlets. Set rules on outlet placement cannot be given but a guide would be to place several double receptacles along each wall. In the display areas, an outlet strip the length of the area would be excellent. Provision should be made for adequate overhead lighting in the form of spots and floods in display areas. Outlets must be provided in sales area use of the electrical cash register.

Trying to economize on the amount of lighting and electrical outlets is a false economy since later remodeling to make it usable will prove much more costly.

DISPLAY WINDOW

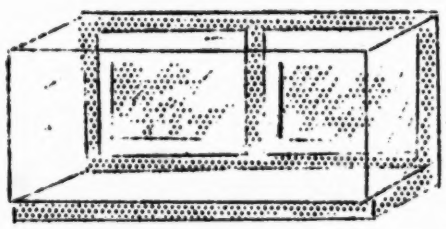
One of the most valuable teaching aids in D.E. is the display window. This should approximate a typical store display window as nearly as possible in both size and facilities. A plate glass area of 7 ft. x 10 ft. with a display depth of 5 ft. would be excellent. Arrangements for overhead lighting and a grill work for suspension of displays is essential. Provision should also be made for easily changing the backgrounds or the display.

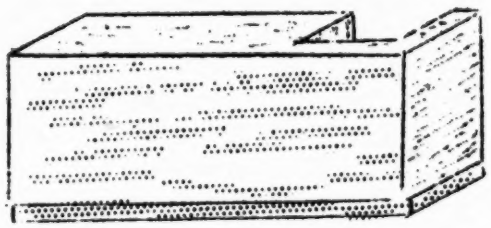
The display window should be located where it will receive the maximum attention in the school. Student displays will be of great interest to other students. Distributive Education students will take much greater pride in making displays that receive maximum viewing by their peers. The display window is often a source of good public relations for the school as a demonstration of the practical modern teaching taking place within the school.

Access into the display window from the storage area of the Distributive Education classroom is a most desirable arrangement; however, it is not always possible.

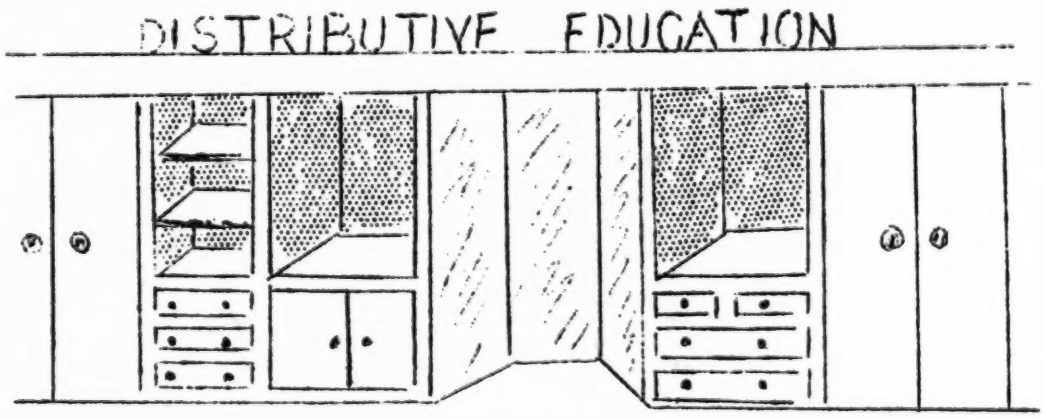
CLASSROOM FURNITURE AND FIXTURES

Of prime concern in establishing the proper D.E. setting is the choice of student furniture. The general concensus of opinion among D.E. educations is that movable student tables are superior to other types of desks for D.E. classes. Typing tables have proven satisfactory. Their flat surface is ideal for such projects as ad layout and poster painting. In addition to the work suface they are easily mobile into varied classroom arrangements. They are readily changed from a formal classroom into a conference arrangement as the occasion demands.





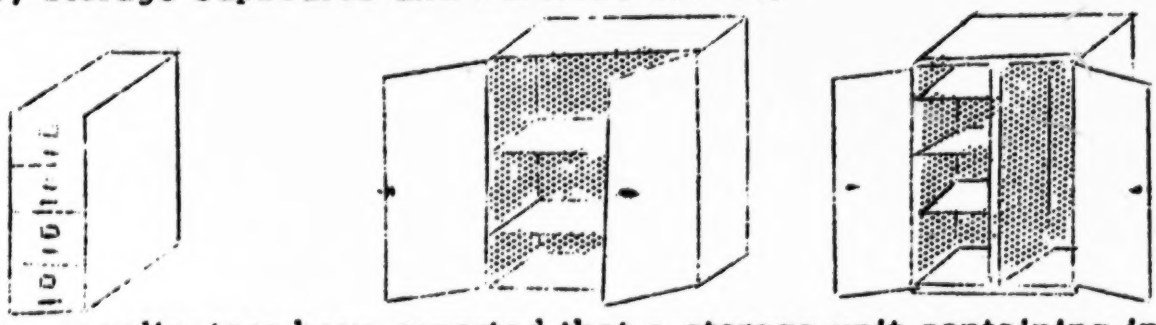
A display case and a sales counter similar to those found in the typical store are essential classroom furniture. Many classrooms are using the Ellinger display unit complete with a 3-way mirror. The combination of a display case, sales counter, and the Ellinger unit at the front of a classroom forms a very realistic store atmosphere.



The above forms the perfect setting for a learning by doing type of instruction.

Chalk board areas equal to other classrooms are necessary. Bulletin board areas, however, need to exceed those normally found in standard classrooms. D.E. students make good use of bulletin space for club news, displays, posters, merchandise information, display schedules, announcements and class related materials.

Administrative equipment should include a teacher's desk and chair, file cabinets, storage cupboards and wardrobe closet.



Many coordinators have reported that a storage unit containing individual tote drawers for each student have proven very useful and might well be considered in setting up the classroom fixtures. These have the advantage of each student being able to maintain his own materials and unfinished projects where they are readily available to him and will not be distrubed by others.

There is much need in Distributive Education project work for large flat surfaces upon which to work. Tables of the type often used in school cafeterias are excellent for this purpose and at least two should be available in each classroom.

Another essential item is the bookcase for the D.E. reference library. D.E. students make many special reports, write essays, and do extra reading to meet their personal interests and the needs of their jobs. The reference library must be readily accessible in the classroom and properly stored in a sturdy bookcase. You also need blinds or drapes to darken the room for movies or films.

To summarize the items discussed as necessary considerations in planning classroom furniture and fixtures the following list may be helpful:

1. Choice of proper student furniture
2. At least one display case
3. A sales counter
4. Store type display unit including 3-way mirror
5. Chalk boards
6. Bulletin boards
7. Teacher's desk and chair
8. File cabinet for records (4 drawers)
9. Storage cupboard with lock
10. Wardrobe closet with lock
11. Student tote drawer storage unit
12. Large tables for work areas
13. Bookcases for reference library
14. Blinds or drapes to darken room

AUDIO-VISUAL TEACHING AIDS'

D.E. coordinators make extensive use of the latest methods in teaching and use appropriate audio-visual aids whenever these will prove valuable in the teaching situation. To make maximum use of the various teaching aid materials available to them and to utilize the most effective learning techniques possible, the following list of items should be readily accessible to the D.E. coordinator.

1. Tape recorder
2. Slide projector (sound) 35mm
3. Movie projector (sound) 16 mm
4. Opaque projector
5. Screen

6. Record player (3 speed)
7. Scales computing
8. Cash register
9. Adding machine
10. Flannel board
11. Display fixtures (various pieces)
12. Male and female mannequins
13. Turntables and motors for motion displays
14. Duplication equipment (Ditto or Mimeo)
15. Silk screen printing outfits

PLANNING THE CLASSROOM LAYOUT

When the needs of the D. E. classroom have been determined as to size, facilities and equipment in accordance with the foregoing discussion, the next step is planning how the room may be most effectively arranged. This is easily done by using a piece of graph paper and drawing a rough line outline of the actual space available. Using pieces of paper cut to represent the proper scale size of the furniture and fixtures to be used, one can get an excellent idea of how the room may be set up. It is possible to move the scaled pieces of paper around until the most satisfactory arrangement is found.

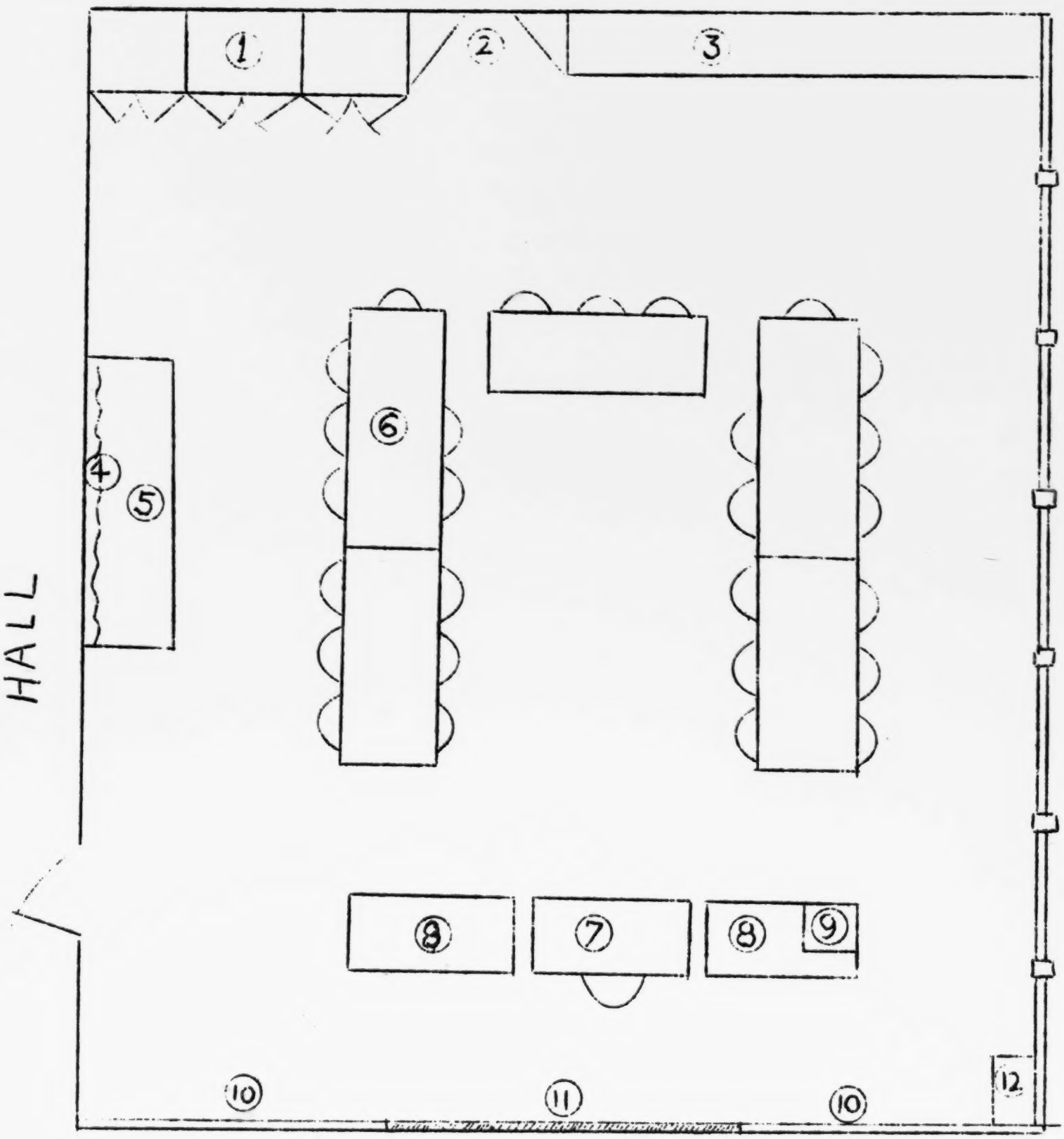
There is no such thing as a perfect D.E. classroom that will fit all situations. The D. E. classroom that is perfect for your school is the one which best meets the needs of your program and best utilizes the available space to serve the needs and interests of your D.E. students.

A group of sample D.E. classroom layouts that have proven successful in other schools are given in the final section of this report to assist you in planning your classroom. It is believed that you will find it valuable to see how other schools have planned their D.E. classrooms.

If further assistance is needed in your planning it is suggested that you contact a member of the D.E. staff of the State Department of Education, or the D.E. Materials Lab at the Ohio State University. These people are expert on this subject and will be glad to be of assistance.

CONVERTED GENERAL CLASSROOM

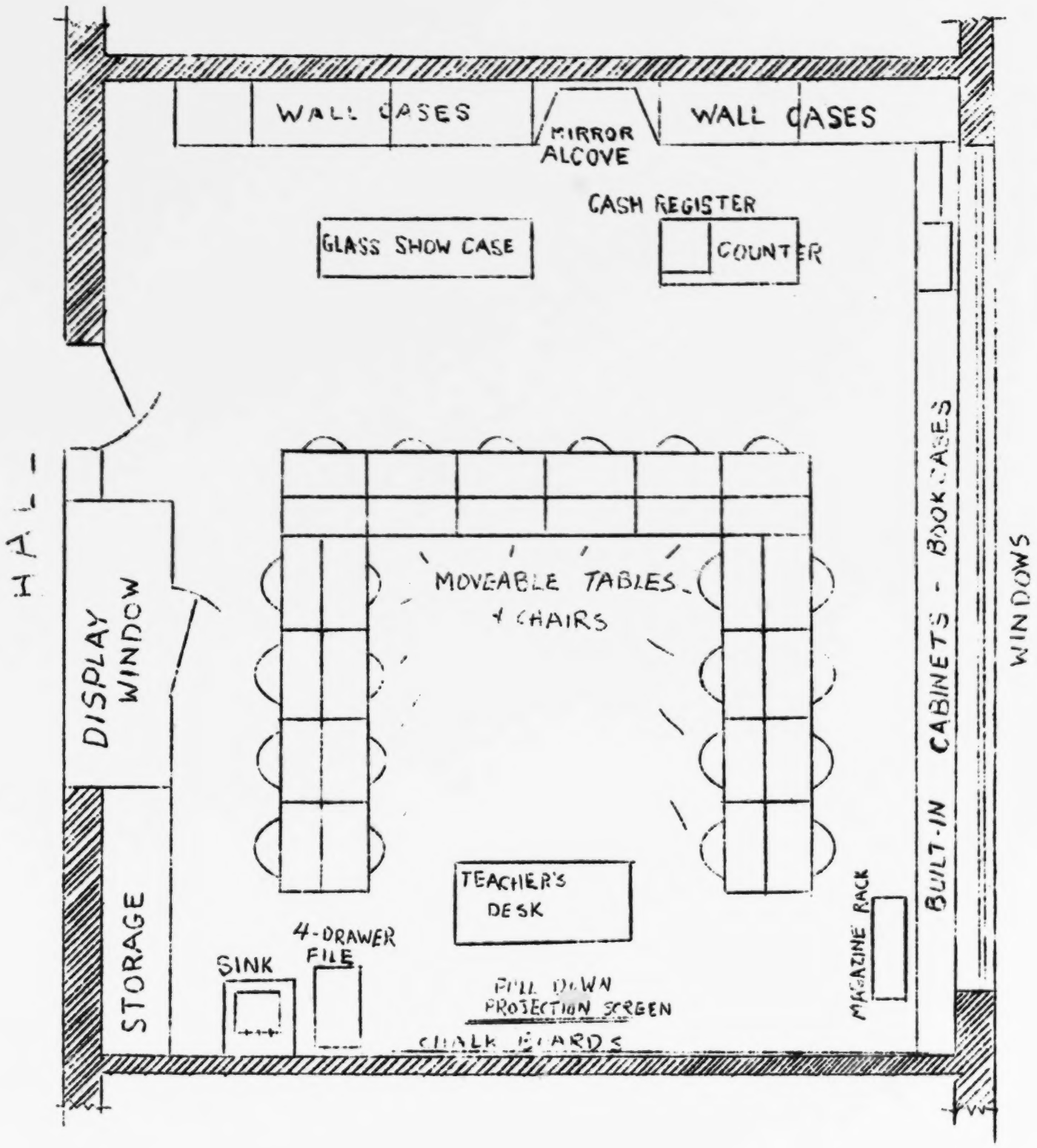
MINIMUM FACILITIES



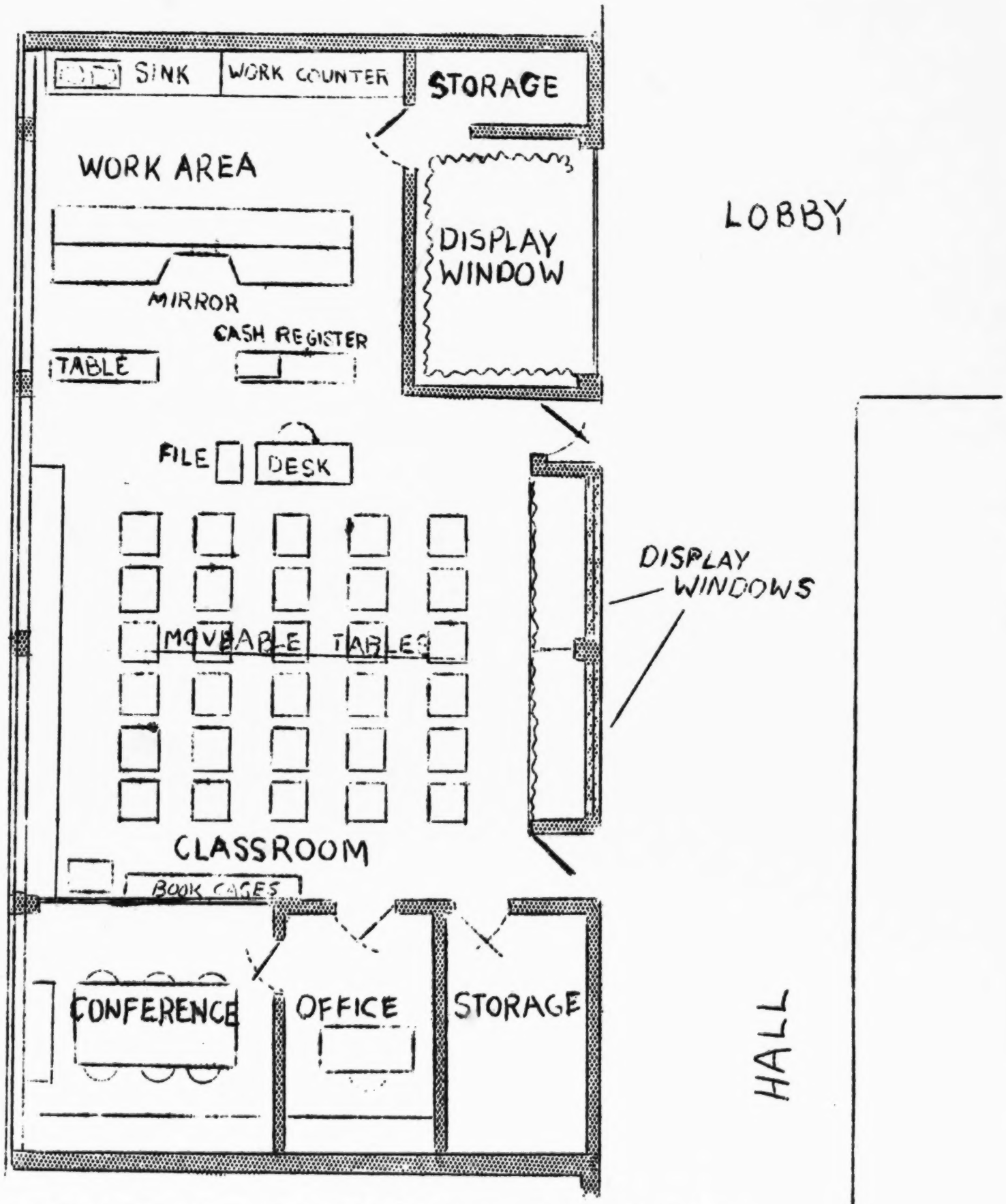
KEY

1 STORAGE
2 MIRROR
3 WORK COUNTER
4 DRAW DRAPE
5 DISPLAY AREA
6 TABLES + CHAIRS
7 DESK
8 DISPLAY COUNTERS
9 CASH REGISTER
10 BULLETIN BOARDS
11 CHALK BOARD
12 FILE CABINET

TYPICAL CONVERTED CLASSROOM



IDEAL CLASSROOM



DISTRIBUTIVE EDUCATION CLASSROOM

VT 005 734
Guidelines for Project Grants for Improvements in Nurse Training.

Public Health Service (DHEW), Arlington, Va. Div. of Nursing
MF AVAILABLE IN VT-ERIC SET.
Pub Date - Sep67 14p.

*EDUCATIONAL IMPROVEMENT; *FEDERAL AID; *NURSING; *POLICY; GUIDELINES; FEDERAL PROGRAMS; FEDERAL LEGISLATION; *PROGRAM ADMINISTRATION
*NURSE TRAINING ACT OF 1964

The booklet provides general information regarding the program of project grants authorized by the Nurse Training Act of 1964. Sections include: (1) Introduction and Purpose, (2) Required Compliances, (3) Nature of Assistance, (4) Budget, (5) Application and Award Procedures, (6) Other Information, (7) Contact in Which Project Grants Are Placed, and (8) Scope of Project Grants. (JK)

VT005734

EDO 31587

Guidelines

for Project Grants for Improvement in Dental Facility

U.S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE
Public Health Service

VT005734

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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DISCRIMINATION PROHIBITED -- Title VI of the Civil Rights Act of 1964 states: "No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance." Therefore, Project Grants for Improvement in Nurse Training under the Nurse Training Act of 1964, like every program or activity receiving Federal assistance from the Department of Health, Education, and Welfare, must be operated in compliance with this law.

September 1967

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Public Health Service - Bureau of Health Manpower - Division of Nursing
800 North Quincy Street, Arlington, Virginia 22203

THE NURSE TRAINING ACT OF 1964

The program of Project Grants for Improvement in Nurse Training was authorized by the Nurse Training Act of 1964, Public Law 88-581, Section 805. The pamphlets listed below contain brief summaries of the Act and its five provisions.

Title	Public Health Service Publication Number
Nurse Training Act of 1964	1154
Professional Nurse Traineeship Program	1154-1
Supplement A -- Schools of Nursing and Public Health Offering Traineeships for Full-Time Academic Study	
Supplement B -- Short-Term Training Courses	
Project Grants for Improvement in Nurse Training	1154-2
Payments to Diploma Schools of Nursing	1154-3
Nursing Student Loan Program: Information for Schools	1154-4
Construction Grants Program for Schools of Nursing	1154-5

CONTENTS

	Page
Introduction and Purpose	1
Required Compliances	2
Nature of Assistance	3
Budget	3
Application and Award Procedures	4
Other Information	6
Context in Which Project Grants Are Placed	7
Scope of the Project Grants	8

INTRODUCTION AND PURPOSE

This booklet provides general information regarding the program of Project Grants for Improvement in Nurse Training. The specific steps in applying for a grant are set forth in "Instructions for the Preparation and Submission of Applications for Project Grants for Improvement in Nurse Training."

Under this program, grant awards are made for the additional costs to schools of nursing of projects designed to improve, strengthen, or expand programs to teach and train nurses. Projects for establishing new courses; exploring curriculum; demonstrating new methods of instruction, increasing student enrollment and better utilization of teachers are examples of the many possible topics that might be developed.

This program operates also under the general Public Health Services policies governing training grants as set forth in the Grants for Training Projects: Policy Statement, Revised July 1, 1967.

Funds are not available under this program for trainee expenses or stipends.

REQUIRED COMPLIANCES

Civil Rights: The training project grant must be administered in conformance with the Civil Rights Act of 1964, the Regulation (45 CFR, Part 80) issued pursuant thereto by the Department of Health, Education, and Welfare, and the Assurance of Compliance (Form HEW 441) filed with the Public Health Service. If an applicant has not previously filed an Assurance of Compliance, the form should accompany the application when submitted.

If the project will involve a contract or other arrangement with another entity or individual to provide services or other benefits under the project, the applicant organization as grantee must obtain an agreement in writing from such individual or entity that he or it will carry out its functions under the contract or arrangement with the Federally assisted project in accordance with Title VI of the Civil Rights Act of 1964 and the Regulation.

Safeguarding the Rights and Welfare of Individuals Including Clinical Research and Administration of Personality Tests and Questionnaires: If the project includes, or is likely to include, investigations involving human subjects, including clinical research and the administration of personality tests and questionnaires, the Public Health Service requires that the applicant organization provide prior review of the judgment of the project director by a committee of his institutional associates. This review should assure an independent determination: (1) of the rights and welfare of the individual or individuals involved; (2) of the appropriateness of the methods used to secure informed consent, and (3) of the risks and potential medical benefits of the investigation.

Applicant organizations must be in compliance with this policy before the application can be accepted for processing and review. Applicant organizations which have filed an Institutional Assurance with the Public Health Service and have had the assurance accepted, should make specific reference to this certification in the application. An applicant organization which does not have an accepted institutional assurance on file with the Public Health Service and intends to request support of a project requiring it, should request information for submitting such an assurance with the Division of Nursing of the Public Health Service.

NATURE OF ASSISTANCE

Eligible Applicants: All public or nonprofit private diploma, collegiate (undergraduate or graduate), or associate degree schools of nursing are eligible to apply if the program in nursing is accredited or has received reasonable assurance of becoming accredited by the time the project is completed. The Commissioner of Education has designated the National League for Nursing as the accrediting body.

Grant Duration and Amount: The length of time for project grant support will vary from 1 to 5 years depending upon the objectives and methodology of the project plan and the justification given for the time requested. Under no circumstance will Federal support exceed 5 years.

Allowable Project Costs: The applicant may request grant funds for those direct costs necessary to the conduct of the project, and an allowance for indirect costs. Refer to the Policy Statement for examples of allowance for direct costs.

BUDGET

The budget request should be appropriate for the project proposal. The items included should be directly related to the project plan and must be for additional costs incurred by the school to carry out the project over and above the normal and expected operating expenses of the school. Examples of additional costs might be:

1. Salaries for project personnel who are not currently on the staff of the applicant organization but have to be hired as "new" personnel.

2. Salaries for staff already employed by the applicant institution if they are reassigned to the project and it is shown how this results in an additional cost to the school.

Salaries for project staff already employed on the staff of the applicant institution are not eligible if the person's previous functions are merely distributed among other staff members without increasing costs to the school. In order for salaries to be eligible in this situation, the personnel would need to be replaced. The project proposal should contain a statement explaining plans for replacement.

3. Consultation fees. (Excluding persons employed by the applicant institution.)

4. Technical services.

5. Equipment not already available in the institution but essential to carry out the project.

APPLICATION AND AWARD PROCEDURES

Applications for Improvement in Nurse Training project grants must be submitted on Form 4885-1 and prepared in accordance with the instructions attached thereto. An original copy and two carbon copies of the application should be submitted directly to the Division of Nursing of the Public Health Service.

All applications are subject to review by the Improvement in Nurse Training Project Review Committee which makes recommendations to the National Advisory Council on Nurse Training with respect to the applications. The Council generally meets three times a year -- March, June, and November.

Deadlines for receipt of applications are as follows:

Applications Should Be Postmarked No Later Than	For Projects To Be Reviewed In	Earliest Starting Date for Project
February 1	May	August 1
July 1	November	February 1
November 1	March	June 1

Schools are encouraged to submit applications as much in advance as possible to expedite the process of review.

Review Process: Improvement in Nurse Training project grant applications are initially reviewed by appropriate Public Health Service staff for completeness and compliance with grant policies. They then are referred to the Project Grant Review Committee, an expert advisory group comprised of professional members outside the Public Health Service, for review as to educational soundness, technical competency, project content and for recommendation to the National Advisory Council on Nurse Training. The Council makes a final recommendation to the Surgeon General based on the criteria listed below. All applications recommended for approval are rated as to priority for funding.

Review Criteria: In reviewing project applications, consideration is given to (1) the extent to which the project will contribute to general improvement in teaching and training nurses of the kind involved; (2) the extent to which the project will aid in attaining a wider geographical distribution throughout the United States of high quality schools of the type involved and (3) the relative need in the area in which the school is situated for nurses of the type trained in the school.

In addition, the following factors will be considered:

1. Degree to which project objectives are clearly established, are attainable, and can and will be measured.

2. Availability and adequacy of the personnel, facilities, and other resources needed to carry out the project.

3. Potential contribution of the project to improving the teaching program in the school of nursing submitting the application.

4. The organization's plans to continue the activity as an ongoing part of the educational program after termination of Federal assistance, if such continuation seems advisable.

5. Plans for evaluating outcomes of the project.

6. Arrangements for communicating findings.

Approval: Improvement in Nurse Training project grant applications are approved by the Surgeon General or his designee, taking into consideration the recommendations of the National Advisory Council on Nurse Training. Determination as to which approved projects are to be funded is made on the basis of the total grant funds available and the priority rating of each of the applications recommended for approval.

The applicant will be notified in writing of the approval or disapproval action taken on the application.

OTHER INFORMATION

Award: Approved applicants will receive a Notice of Project Grant Awarded, the formal award document, which sets forth the beginning and ending dates of the project period, the amount of the award for the current grant period, the approved budget by category amounts, and the general level of support recommended for the remainder of the project period.

Grant Payments: If the grantee organization has received awards from other Public Health Service grant programs which are being paid under a letter of credit system or other cash control system, the payment for Improvement in Nurse Training project grants will be incorporated into the same system. For other projects, payment will be made quarterly.

Project Continuations: Schools with grants approved for Federal support for periods of more than 1 year must submit a continuation application for each successive 12-month period. These applications must be submitted approximately 90 days prior to the end of each 12-month portion of the project period. Grantees will be contacted some time before this deadline and provided with the necessary

continuation application forms and instructions. A report on project accomplishments to date is an integral part of the application for continued support of a project. Contingent on the satisfactory development of the project, continuation applications have first claim on available funds.

Revisions: Public Health Service approval must be secured to revise a project which has been approved. Approval by letter may be sought for such items as a change in project director, a change in the project period, or a limited change in the scope, character, or activities of a project.

Extensive changes in the project's scope or activities require submission of a revised application, to be processed and reviewed as the initial application was reviewed.

Other Governing Policies: Refer to Policy Statement for patent requirements, accounting and auditing, reports, etc.

Additional Information: Further information and consultation concerning project grants and copies of applications and other forms may be obtained from the Division of Nursing of the Public Health Service.

CONTEXT IN WHICH PROJECT GRANTS ARE PLACED

The purpose of the Nurse Training Act of 1964 is to increase the supply of well qualified nurses in the United States by a variety of approaches -- construction grants, payments to diploma schools of nursing, professional nurse traineeships, loans to nursing students, and project grants for improvement in nurse training. The first four of these approaches include provisions related to increasing the number of nursing students, increasing and improving the facilities in which nursing education programs are carried out, providing financial assistance to carry out an educational program, and increasing the number and the level of preparation of teachers, administrators, and leaders for schools of nursing services. The fifth approach is through the Nursing Education Program, and it is in this context that the project grants for the improvement in nurse training occur.

SCOPE OF THE PROJECT GRANTS

President Johnson, in his message to Congress on February 10, 1963, stated that he recognized the need for increasing nursing school enrollments "...but larger enrollments are not enough. The efficiency of nursing schools must be improved. I recommend authorization of grants to ... help the schools perfect new teaching methods."

The broad objectives of this section of the Nurse Training Act -- improving, strengthening, and expanding nursing education programs -- are accomplished by projects directed toward specific and clearly delineated goals. The grants provide schools of nursing with funds to meet the additional costs of these goals.

The objective in making these grants available is to encourage nursing educators to develop projects that will promote better learning, better teaching, and better utilization of teaching personnel by such methods as:

> Incorporating more widely into nursing education programs the results of experimentation relating to the education process in such areas as general education, psychology of learning, physical science, social science, humanities, and nursing.
>
> Improving methods currently being used to help students learn more effectively and efficiently.
>
> Trying out different ways to utilize the time and talents of teaching personnel more effectively and efficiently.
>
> Developing new approaches to nursing education.

The following statements, which were brought out in the Congressional committee hearings on the project grants section of the Nurse Training Act, help further to clarify the scope of project grants for improvement in nursing education:

> Considerable experimentation with methods that promote better teaching and better use of teaching personnel has been going on in the field of education. These methods need to be more widely incorporated into teaching of nursing. The project grants offer opportunities to schools to improve their methods and thereby enhance quality of instruction.

Many newer teaching concepts and methods could be applied advantageously to nursing education. Both teacher time and learning time would be reduced. This is of utmost importance in view of the shortage of teachers and the tremendous increase in the body of knowledge necessary for modern nursing.

Schools of nursing must be encouraged to experiment with new and better ways of preparing students.

Efforts to develop new approaches to nursing education should be fostered.

The project grants section of the law provides grants for developing new and improved methods of training.

Project grants would support a movement toward improving the quality of nursing education. Increasing enrollment should not be considered as sole criterion of Federal assistance.

The projects submitted would require, if they were to be approved, a major improvement in the program of nurse training. It would not be a substitute for the normal and expected operating expenses of the school.

The Nature of the Proposal -- Content and Form: These grants are intended primarily to support projects that answer questions or solve problems concerned with improving the effectiveness and efficiency of learning and teaching and with improving the utilization of teaching personnel. The project proposal, therefore, should delimit and discuss in some depth the question(s) or problem toward which work will be directed, should discuss the reasons for selecting the project (the nature and significance of the question(s) or problem, and the related work already accomplished or in progress at the time the project proposal is written).

The proposal should contain specific aims being worked toward, a plan for carrying out the work necessary to accomplish the aims and a plan for determining to what extent the aims are achieved.

The Institutional Orientation and Environment: Factors in the institution in which the project is to be carried out affect the success of the project; that is, the way the project fits into the philosophy and objectives of the institution as a whole; the interest, degree of involvement, qualifications and provision for adequate time of the personnel, other than the project director, who must carry out the work of the project; and the support of the administrative personnel. The application should contain a brief statement on these and any other pertinent factors.

Facilities, equipment, and other supporting services which will be furnished to the project, as well as the availability of consultation in the institution to the project director and personnel, should be indicated.

VT 005 746
Chadderdon, Hester, And Others
Estimating the Clothing Construction Ability of 8th, 9th, 10th, and 11/12th Grade Pupils.

Iowa State Dept. of Public Instruction, Des Moines. Div. of Vocational Education
Iowa Agriculture and Home Economics Experiment Station, Ames.
MF AVAILABLE IN VT-ERIC SET.
Iowa State University Bookstore, Iowa State University, Ames, Iowa 50010 ($.45).
Pub Date - Aug66 28p.

*HOME ECONOMICS EDUCATION; *STUDENT EVALUATION; *CLOTHING INSTRUCTION; TESTING; JUNIOR HIGH SCHOOLS; HIGH SCHOOLS; *TEST CONSTRUCTION; *ACHIEVEMENT TESTS

Guidelines for teacher use in evaluating student knowledge of clothing construction were developed through research projects and trial use in Iowa schools by heterogeneous school groups. Appropriate versions of materials listed according to grade level are: (1) the Finger Dexterity Questionnaires, (2) Survey of Object Visualization, and (3) Clothing Construction Pre-Tests. Directions and tables for conversion and interpretation of the combined test scores in order to classify students according to ability are given. The Finger Dexterity Questionnaire and both the Senior and Junior High School Clothing Construction tests are included in the document. Sources of the Miller Object Visualization tests are listed. Other evaluation materials for home economics areas, all using similar formats, are available as VT 005 746-VT 005 757 (ARM Summer 1969). (FP)

VT005746

ED0 31587

Estimating the Clothing Construction Ability of 8th, 9th, 10th, and 11/12th Grade Pupils

Prepared by

Hester Chadderdon
Assisted by Joyce Croft and Carol Hatch

HOME ECONOMICS RESEARCH
IOWA STATE UNIVERSITY
of Science and Technology

Ames, Iowa

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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1961
Reprint 1962
A cooperative project between the Division of Vocational Education, State Department of Public Instruction of Iowa, and the Iowa Agricultural and Home Economics Experiment Station (Project 1415)

Reprinted April 1963
Reprinted July 1964
Reprinted May 1965
Reprinted August 1966

VT005746

SUGGESTIONS FOR USING

One of the most difficult decisions a homemaking teacher has to make in teaching clothing construction is that of the level of ability of each pupil, particularly if she has not had the pupil in class before. Yet so much depends on the wisdom of this decision. If the garment chosen by the pupil is fitted to her ability level, she is more likely to have a greater sense of achievement and, hence, a greater liking for sewing. Also the pupil will learn more if the pattern and fabric chosen are neither too difficult nor too easy to use. In addition the teacher is more likely to enjoy teaching the unit.

This material will help the teacher, too, in dividing her class into ability groups in clothing construction and adapting her teaching to the needs of the group.

This material was developed as part of a research project and the results are based on the abilities of over 400 high school pupils in six Iowa schools. The classification system for each grade level is designed to place pupils in ability group like those of pupils in the sample of schools taking part in the study. Hence in a given class they may not be divided so that 1/4 are in the upper, 1/2 in the middle, and 1/4 in the lower group. As teachers know, classes vary from year to year in their mental ability, so also they may vary in their construction ability.

The materials to use at each grade level are as follows:

8th grade	-	Finger Dexterity Questionnaire Survey of Object Visualization Clothing Construction Pre-test,	(Junior High)
9th grade	-	Finger Dexterity Questionnaire Clothing Construction Pre-test	(Junior High)
10th grade	-	Finger Dexterity Questionnaire Clothing Construction Pre-test	(Senior High)
11/12th grade	-	Finger Dexterity Questionnaire Clothing Construction Pre-test	(Senior High)

M E M O R A N D U M

TO: The ERIC Clearinghouse on Vocational and Technical Education
The Ohio State University
980 Kinnear Road
Columbus, Ohio 43212

[redacted]

FROM: (Person) Alberta D. Hill (Agency) Iowa State University

(Address) Head, Home Economics Education Dept., Ames, Iowa 50010

DATE: April 3, 1968

RE: (Author, Title, Publisher, Date) Chadderdon, Hester. Estimating the Clothing Construction Ability of 8th, 9th, 10th, and 11/12th Grade Pupils Iowa State University. 1966 reprint.

Supplementary Information on Instructional Material

Provide information below which is not included in the publication. Mark N/A in each blank for which information is not available or not applicable. Mark P when information is included in the publication. See reverse side for further instructions.

(1) Source of Available Copies:
Agency University Book Store, Iowa State University
Address Ames, Iowa 50010
Limitation on Available Copies none Price/Unit $ .45
(quantity prices)

(2) Means Used to Develop Material:
Development Group Heterogeneous school groups
Level of Group
Method of Design, Testing, and Trial Developed through research projects and trial use in Iowa schools. Cooperative project between the Division of Vocational Education, State Dept. of Public Instruction and Iowa Agriculture Experiment Station (Project 1215),

(3) Utilization of Material:
Appropriate School Setting Comprehensive high school
Type of Program High school classes
Occupational Focus Homemaking
Geographic Adaptability
Uses of Material Models for test items and evaluation devices
Users of Material Home economics teachers

(4) Requirements for Using Material:
Teacher Competency Background in testing and evaluation
Student Selection Criteria

Time Allotment

Supplemental Media --
Necessary ____)
Desirable ____) (Check Which)

Would not be used in present form but adapted by teacher for use in particular classes.

Describe

Source (agency)
(address)

FINGER DEXTERITY QUESTIONNAIRE *

_____
Name

1. Do you play the piano or organ? _____
   How many years have you played it? _____

2. Do you play a string instrument like a violin, guitar, cello? _____
   How many years have you played it? _____

3. Do you play a wind instrument like a flute, clarinet, bassoon? _____
   How many years have you played it? _____

4. Do you type? _____ What is your best typing speed in words per minute? _____

5. Do you knit? _____
   How many years have you been knitting? _____

6. Do you crochet? _____
   How many years have you been crocheting? _____

7. Did you make doll clothes? _____
   Often? _____
   Sometimes? _____
   Rarely or never? _____

8. List the garments (aprons, skirts, blouses, dresses, etc.) in these columns that you have made for yourself or others. If you have made <u>more</u> than 1, give the number.

Garments at School	Number	Garments as a 4-H Project	Number	Garments at Home	Number

*Method of Scoring - see back side of sheet

KEY FOR SCORING FINGER DEXTERITY QUESTIONNAIRE

	Junior High School (8 & 9)		Senior High School (10 & 11/12)	
	No. of years	Score	No. of years	Score
1. Playing the piano, organ, or accordian	0	0	0	0
	1 - 2	1	1 - 2	1
	3 - 4	2	3 - 4	2
	5 - 6	3	5 - 6	3
	7 or more	4	7 or more	4
2. Playing a string instrument	0	0	0	0
	1 - 2	1	1 - 2	1
	3 or more	2	3 or more	2
3. Playing a wind instrument	0	0	0	0
	1 - 2	1	1 - 2	1
	3 or more	2	3 - 4	2
			5 or more	
4. Typing	Responses		Words per minute	
	No	0	0	0
	Yes	1	Under 20	1
			20 - 39	2
			40 - 59	3
			60 or more	4
5. Knitting	No. of years		No. of years	
	0	0	0	0
	1 - 3	1	1 - 3	1
	4 or more	2	4 or more	2
6. Crocheting	0	0	0	0
	1 - 3	1	1 - 3	1
	4 or more	2	4 or more	2
7. Making doll clothes	Responses		Responses	
	No	0	No	0
	Rarely or never	1	Rarely or never	1
	Sometimes	2	Sometimes	2
	Often	3	Often	3
8. Previous sewing *				
Garments	No. of times made		No. of times made	
a. Slippers, collars, handbag, scarf, hat or cumberbund, toga, belt	0	0	0	0
	1 - 2	1	1 - 2	1
	3 or more	2	3 or more	2
b. Apron, skirt, blouse, shorts, slacks, duster, pajamas, half slip, night gown	0	0	0	0
	1 - 2	2	1 - 2	2
	3 - 4	4	3 - 4	4
	5 or more	6	5 or more	6
c. Jumper, dress, coat, jacket	0	0	0	0
	1 - 2	3	1 - 2	3
	3 or more	6	3 or more	6

*The score for item 8 (a+b+c) is determined by the number of times garments were made in each group regardless of whether they were made in school, in 4-H or at home. The scores for items are summed to secure the total score.

Weighted Scores to be used in Estimating Clothing Construction Ability of 8th Grade Pupils

Table of Weighted Scores

Clothing Construction Pretest (Junior High) (Raw score x .0613 = weighted score)		Survey Test by Miller * (Raw score x .0283 = weighted score)		Finger Dexterity Questionnaire (Raw score x .0387 weighted score)	
Raw Scores	Weighted Scores	Raw Scores	Weighted Scores	Raw Scores	Weighted Scores
1	.0613	1	.0283	1	.0387
2	.1226	2	.0566	2	.0774
3	.1839	3	.0849	3	.1161
4	.2452	4	.1132	4	.1548
5	.3065	5	.1423	5	.1935
6	.3678	6	.1698	6	.2322
7	.4291	7	.1981	7	.2709
8	.4904	8	.2264	8	.3096
9	.5517	9	.2547	9	.3483
10	.6130	10	.2830	10	.3870
11	.6743	11	.3113	11	.4257
12	.7356	12	.3396	12	.4644
13	.7969	13	.3679	13	.5031
14	.8582	14	.3962	14	.5418
15	.9195	15	.4245	15	.5805
16	.9808	16	.4528	16	.6192
17	1.0421	17	.4811	17	.6579
18	1.1034	18	.5094	18	.6966
19	1.1647	19	.5377	19	.7353
20	1.2260	20	.5660	20	.7740
21	1.2873	21	.5943	21	.8127
22	1.3486	22	.6226	22	.8514
23	1.4099	23	.6509	23	.8901
24	1.4712	24	.6792	24	.9288
25	1.5325	25	.7075	25	.9675
26	1.5938	26	.7358	26	1.0062
27	1.6551	27	.7641	27	1.0449
28	1.7164	28	.7924	28	1.0836
29	1.7777	29	.8207	29	1.1223
30	1.8390	30	.8490	30	1.1610
31	1.9003	31	.8773	31	1.1997
32	1.9616	32	.9056	32	2.2384
33	2.0229	33	.9339		
34	2.0842	34	.9622		
35	2.1455	35	.9905		
		36	1.0188		
		37	1.0471		
		38	1.0754		
		39	1.1037		
		40	1.1320		
		41	1.1603		
		42	1.1886		
		43	1.2169		
		44	1.2452		

*See over for address of company selling the Survey Test by Miller

(over)

DIRECTIONS for classifying 8th grade pupils into three ability groups:

Use the table to convert the raw scores to weighted scores for the three tests. Add the weighted scores and subtract 1.8541. This number tells you, when compared to the classification system below, whether a pupil is like that of the upper 1/4, middle 1/2 or lower 1/4 of 8th grade pupils.

Classification System

high (Upper 1/4) = above + .3605

medium (1/2) = - .3605 through + .3605

low (lower 1/4) = below - .3605

For example, a pupil received these raw scores: Clothing Construction Pretest 15, Survey Test by Miller 8, and Finger Dexterity Questionnaire 3. The weighted scores are .9195, .2264, and .1161 respectively. The total of these scores is 1.2620. 1.2620 - 1.8541 = -.5921. By consulting the classification system you see that -.5921 falls within the low range of ability. Therefore, you would encourage this pupil to choose a construction project which is simple for an 8th grade pupil.

DIRECTIONS for securing the Survey Test

The Survey of Object Visualization by Miller can be obtained from the California Test Bureau, 110 South Dickinson Street, Madison 3, Wisconsin. Their catalog contains prices of the Manual, Tests, and Answer Sheets.

DIRECTIONS for administering and scoring the tests.

The three devices (Clothing Construction Pretest, Junior High; the Survey Test by Miller, and the Finger Dexterity Questionnaire) can be administered separately any time before the unit on clothing construction. The amount of time pupils will need to react to these is approximately 30 minutes, exactly 25 minutes, and approximately 10 minutes respectively.

The Clothing Construction Pretest, Junior High, is scored by counting the number of correct responses.

See the back side of the Finger Dexterity Questionnaire Sheet for Scoring Key.

Weighted Scores to be Used in Estimating Clothing Construction Ability of 9th Grade Pupils

Table of Weighted Scores

Clothing Construction Pretest (Junior High) (Raw Score x .0738 = weighted score)		Finger Dexterity Questionnaire (Raw Score x .0542 = weighted score)	
Raw Scores	Weighted Scores	Raw Scores	Weighted Scores
1	.0738	1	.0542
2	.1476	2	.1084
3	.2214	3	.1626
4	.2952	4	.2168
5	.3690	5	.2710
6	.4428	6	.3252
7	.5166	7	.3794
8	.5904	8	.4336
9	.6642	9	.4878
10	.7380	10	.5420
11	.8118	11	.5962
12	.8856	12	.6504
13	.9594	13	.7046
14	1.0332	14	.7588
15	1.1070	15	.8130
16	1.1808	16	.8672
17	1.2546	17	.9214
18	1.3284	18	.9756
19	1.4022	19	1.0298
20	1.4760	20	1.0840
21	1.5498	21	1.1382
22	1.6236	22	1.1924
23	1.6974	23	1.2466
24	1.7712	24	1.3008
25	1.8450	25	1.3550
26	1.9188	26	1.4092
27	1.9926	27	1.4634
28	2.0664	28	1.5176
29	2.1402	29	1.5718
30	2.2140	30	1.6260
31	2.2878	31	1.6802
32	2.3616	32	1.7344
33	2.4354		
34	2.5092		
35	2.5830		

(over)

DIRECTIONS for classifying 9th grade pupils into three ability groups:

Use the table to convert the raw scores to weighted scores for the two tests. Add the weighted scores and subtract 1.8586. This number tells you, when compared to the classification system below, whether a pupil is like that of the upper 1/4, middle 1/2 or lower 1/4 of 9th grade pupils.

Classification System

High (upper 1/4)	= above + .3868
Medium (1/2)	= -.3868 through + .3868
Low (lower 1/4)	= below -.3868

For example, a pupil received these raw scores: Clothing Construction Pretest 15, and Finger Dexterity Questionnaire 3. The weighted scores are 1.1070 and .1626 respectively. The total of these scores is 1.2696. 1.2696 - 1.8586 = -.5890. By consulting the classification system you see that -.5890 falls within the low range of ability. Therefore, you would encourage this pupil to choose a construction project which is simple for a 9th grade pupil.

DIRECTIONS for administering and scoring the tests.

The two devices (Clothing Construction Pretest, Junior High, and the Finger Dexterity Questionnaire) can be administered separately any time before the unit on clothing construction. The amount of time pupils will need to react to these is approximately 30 minutes, and 10 minutes respectively.

The Clothing Construction Pretest, Junior High, is scored by counting the number of correct responses.

See back side of the Finger Dexterity Questionnaire Sheet for Scoring Key.

Weighted Scores to be Used in Estimating Clothing Construction Ability of 10th Grade Pupils

Table of Weighted Scores

Clothing Construction Pretest (Senior High) (Raw Score x .0521 = weighted score)				Finger Dexterity Questionnaire (Raw Score x .0699 = weighted score)	
Raw Scores	Weighted Scores	Raw Scores cont.	Weighted Scores	Raw Scores	Weighted Scores
1	.0521			1	.0699
2	.1042	31	1.6151	2	.1398
3	.1563	32	1.6672	3	.2097
4	.2084	33	1.7193	4	.2796
5	.2605	34	1.7714	5	.3495
6	.3126	35	1.8235	6	.4194
7	.3647	36	1.8756	7	.4893
8	.4168	37	1.9277	8	.5592
9	.4689	38	1.9798	9	.6291
10	.5210	39	2.0319	10	.6990
11	.5731	40	2.0840	11	.7689
12	.6252	41	2.1361	12	.8388
13	.6773	42	2.1882	13	.9087
14	.7294	43	2.2403	14	.9786
15	.7815	44	2.2924	15	1.0485
16	.8336	45	2.3445	16	1.1184
17	.8857	46	2.3966	17	1.1883
18	.9378	47	2.4487	18	1.2582
19	.9899	48	2.5008	19	1.3281
20	1.0420	49	2.5529	20	1.3980
21	1.0941	50	2.6050	21	1.4679
22	1.1462	51	2.6571	22	1.5378
23	1.1983	52	2.7092	23	1.6077
24	1.2504	53	2.7613	24	1.6776
25	1.3025	54	2.8134	25	1.7475
26	1.3546	55	2.8655	26	1.8174
27	1.4067	56	2.9176	27	1.8873
28	1.4588	57	2.9697	28	1.9572
29	1.5109	58	3.0218	29	2.0271
30	1.5630	59	3.0739	30	2.0970
				31	2.1669
				32	2.2368
				33	2.3067

(over)

DIRECTIONS for classifying 10th grade pupils into three ability groups:

Use the table to convert the raw scores to weighted scores for the two tests. Add the weighted scores and subtract 2.6012. This number tells you, when compared to the classification system below, whether a pupil is like that of the upper 1/4, middle 1/2 or lower 1/4 of 10th grade pupils.

Classification System

High (upper 1/4)	=	above +.3935
Medium (1/2)	=	-.3935 through +.3935
Low (lower 1/4)	=	below -.3935

For example, a pupil received these raw scores: Clothing Construction Pretest 32 and Finger Dexterity Questionnaire 9. The weighted scores are 1.6672 and .6291 respectively. The total of these scores is 2.2963. 2.2963 - 2.6012 = -.3049. By consulting the classification system above you can see that -.3049 falls within the medium range of ability of 10th grade pupils. Therefore you would encourage this pupil to choose a construction project of average difficulty for 10th grade pupils.

DIRECTIONS for administering and Scoring the tests.

The two devices (Clothing Construction Pretest, Senior High, and the Finger Dexterity Questionnaire) can be administered separately anytime before the unit on clothing construction. The amount of time pupils will need to react to this is approximately 35 minutes and 5 minutes respectively.

The Clothing Construction Pretest, Senior High, is scored by counting the number of correct responses.

See the back side of the Finger Dexterity Questionnaire Sheet for Scoring Key.

Weighted Scores to be Used in Estimating Clothing Construction Ability of 11/12th Grade Pupils

Table of Weighted Scores

Clothing Construction Pretest (Senior High) (Raw score x .0599 = weighted score)				Finger Dexterity Questionnaire (Raw score x. 0907 = weighted score)	
Raw Score	Weighted Score	Raw Score cont.	Weighted Score	Raw Score	Weighted Score
1	.0599			1	.0907
2	.1198	31	1.8569	2	.1814
3	.1797	32	1.9168	3	.2721
4	.2396	33	1.9767	4	.3628
5	.2995	34	2.0366	5	.4535
6	.3594	35	2.0965	6	.5442
7	.4193	36	2.1564	7	.6349
8	.4792	37	2.2163	8	.7256
9	.5391	38	2.2762	9	.8163
10	.5990	39	2.3361	10	.9070
11	.6589	40	2.3960	11	.9977
12	.7188	41	2.4559	12	1.0884
13	.7787	42	2.5158	13	1.1791
14	.8386	43	2.5757	14	1.2698
15	.8985	44	2.6356	15	1.3605
16	.9584	45	2.6955	16	1.4512
17	1.0183	46	2.7554	17	1.5419
18	1.0782	47	2.8153	18	1.6326
19	1.1381	48	2.8752	19	1.7233
20	1.1980	49	2.9351	20	1.8140
21	1.2579	50	2.9950	21	1.9047
22	1.3178	51	3.0549	22	1.9954
23	1.3777	52	3.1148	23	2.0861
24	1.4376	53	3.1747	24	2.1768
25	1.4975	54	3.2346	25	2.2675
26	1.5574	55	3.2945	26	2.3582
27	1.6173	56	3.3544	27	2.4489
28	1.6772	57	3.4143	28	2.5396
29	1.7371	58	3.4742	29	2.6303
30	1.7970	59	3.5341	30	2.7210
				31	2.8117
				32	2.9024
				33	2.9931
				34	3.0838
				35	3.1745

(over)

DIRECTIONS for classifying 11/12th grade pupils into three ability groups:

Use the table to convert the raw scores to weighted scores for the two tests. Add the weighted scores and subtract 3.7890. This number tells you, when compared to the classification system below, whether a pupil is like that of the upper 1/4, middle 1/2 or lower 1/4 of 11/12th grade pupils.

Classification System

High (upper 1/4)	=	above +.4995
Medium (1/2)	=	-.4995 through +.4995
Low (lower 1/4)	=	below -.4995

For example, a pupil received these raw scores: Clothing Construction Pretest 33, and Finger Dexterity Questionnaire 13. The weighted scores are 1.9767 and 1.1791 respectively. The total of these scores is 3.1558. 3.1558 -3.7890 = -.6332. By consulting the classification system you see that -.6332 falls within the low range of ability. Therefore, you would predict that this pupil should choose a construction project which is simple for a 11/12 grade pupil.

DIRECTIONS for administering and Scoring the tests.

The two devices (Clothing Construction Pretest, Senior High, and the Finger Dexterity Questionnaire) can be administered separately anytime before the unit on clothing construction. The amount of time pupils will need to react to this is approximately 35 minutes and 5 minutes respectively.

The Clothing Construction Pretest, Senior High, is scored by counting the number of correct responses.

See the back side of the Finger Dexterity Questionnaire Sheet for Scoring Key.

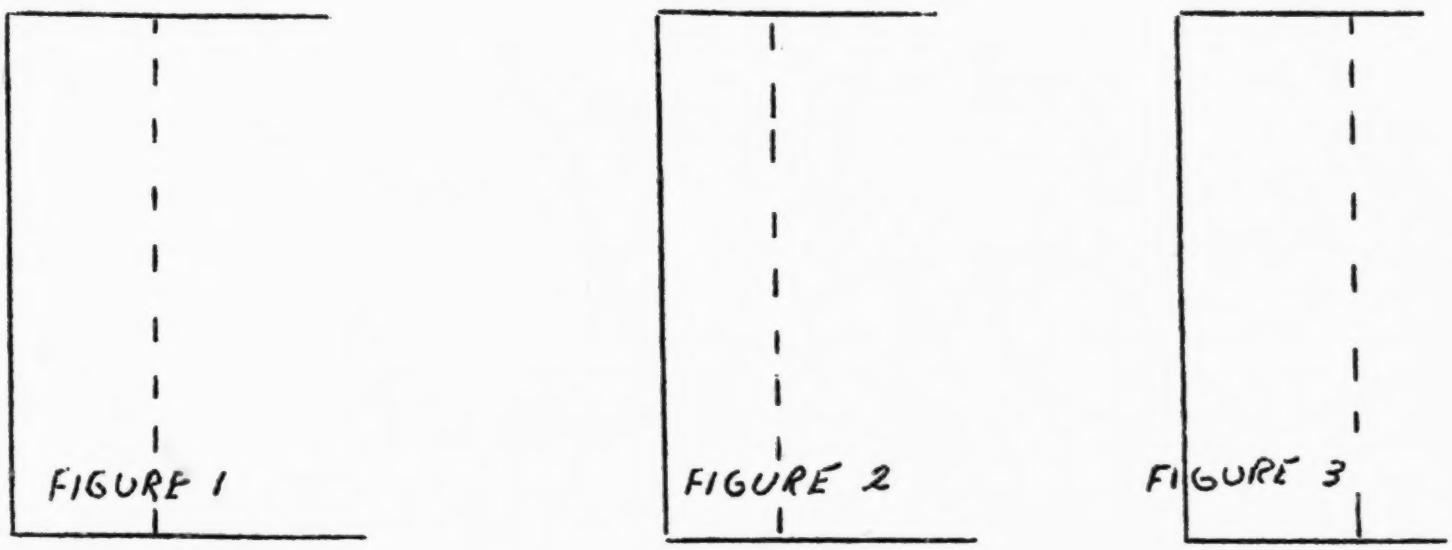
CLOTHING CONSTRUCTION PRE-TEST
(Junior High)

This test is being given to find out what knowledge and skill you now have in sewing. It will not affect your grade in any way.

On the following pages are questions about sewing. Answer these questions on the answer sheet which accompanies this test. Choose the phrase which <u>best</u> completes the statement or answers the question, and mark (x) on the answer sheet beside the letter of this phrase. Be sure the number on the answer sheet is the same as the number of the test question.

This is no time limit, but you probably will be able to finish in this class period. If you do not understand any part of the test, ask your teacher for help.

WHICH SEAM WOULD YOU USE?

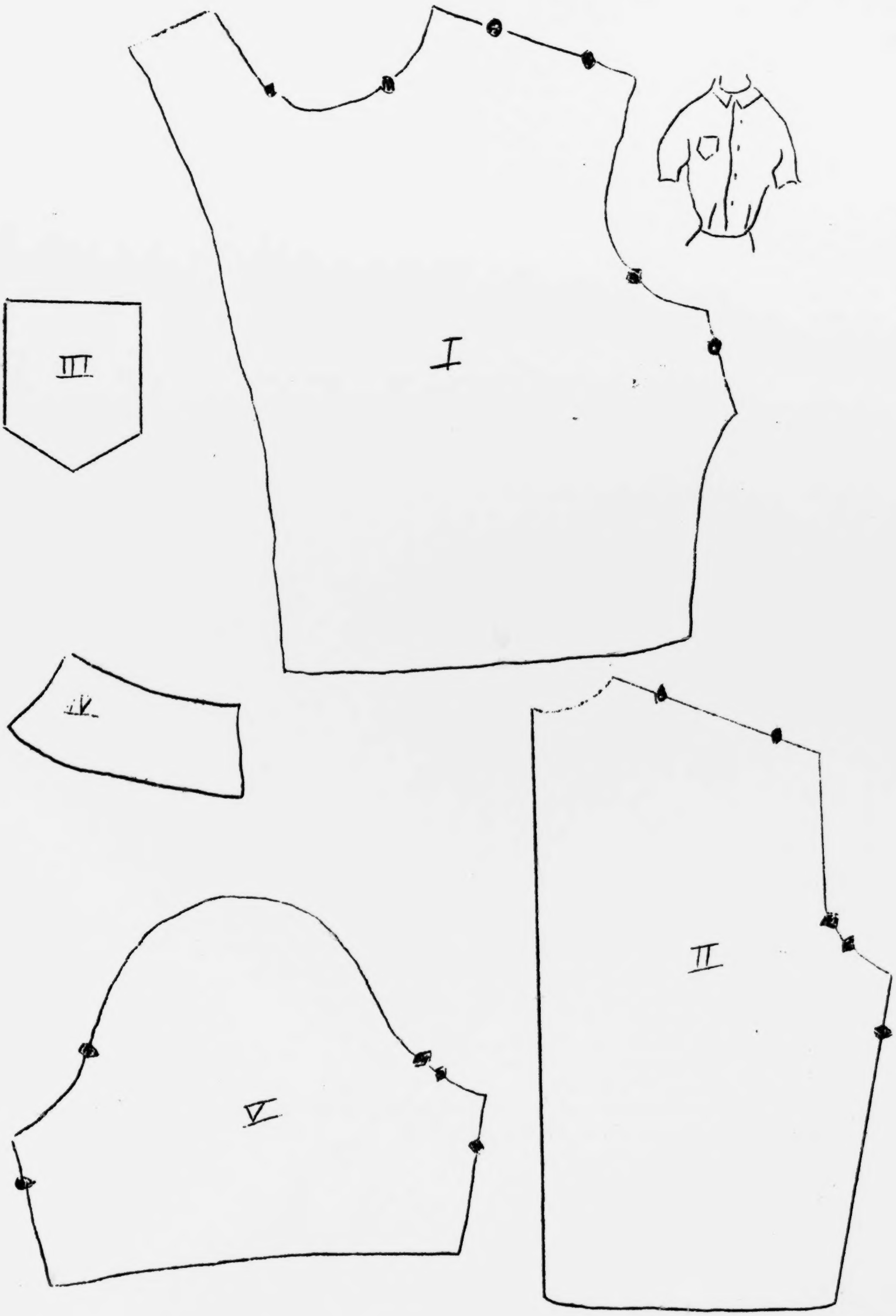


1. If you were asked to sew a 5/8 inch seam in your skirt, judging with your eyes you would make it the same width as the seam in:

   a. figure 1 above
   b. figure 2 above
   c. figure 3 above

2. If you were asked to sew a 3/4 inch seam, judging with your eyes you would make it the same width as the seam in:

   a. figure 1 above
   b. figure 2 above
   c. figure 3 above


III
I
IV
II
V

WHAT ARE THE FOUR PATTERN PIECES SHOWN

Look at the blouse pattern on the opposite page to answer questions 3 to 6.

3. Pattern piece I is the:
   a. blouse front
   b. blouse back
   c. sleeve

4. Pattern piece II is the
   a. blouse
   b. blouse back
   c. sleeve

5. Pattern piece III is the:
   a. collar
   b. pocket
   c. cuff
   d. sleeve

6. Pattern piece IV is the:
   a. collar
   b. pocket
   c. cuff
   d. sleeve

HOW SHOULD YOU TRIM AND CLIP SEAMS?

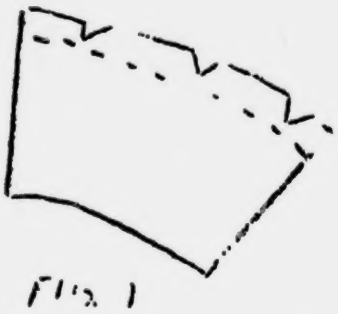


FIG. 1

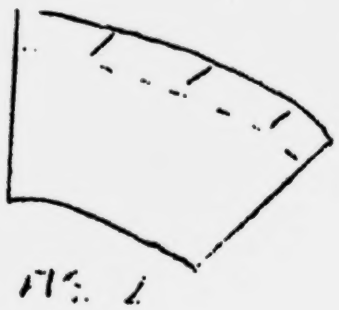


FIG. 2

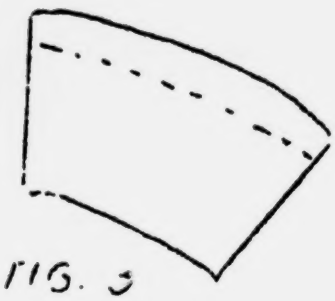


FIG. 3

7. Before turning the collar the seam should be:
   a. notched as in Fig. 1 above
   b. slashed as in Fig. 2 above
   c. left as in Fig. 3 above

WHICH WOULD YOU DO FIRST?

In making a garment it is usually desirable to perform certain processes before others, but sometimes it does not matter which order is followed. In making a blouse, which of the 3 processes should be done first?

8. a. Mark darts and buttonholes.
   b. Pin on pattern and cut out blouse.
   c. Remove pattern from fabric.

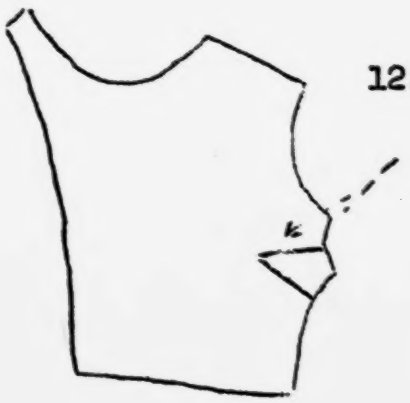
9. a. Stitch side seams together before sewing in bust darts.
   b. Stitch bust darts before sewing the side seams.
   c. It makes no difference.

10. a. Select the pattern you are going to use.
    b. Decide how much fabric to buy.
    c. It makes no difference.

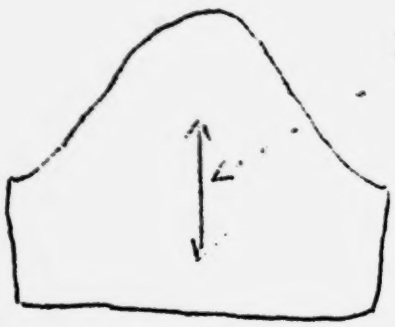
11. a Stitch the bust darts.
    b. Stitch the front waist darts.
    c. It makes no difference.

WHAT DOES A PATTERN MARKING MEAN?

Look at each diagram and select the answer which correctly identifies the marking on the pattern.



12. This marking is for:
    a. a tuck
    b. a dart
    c. a notch for matching

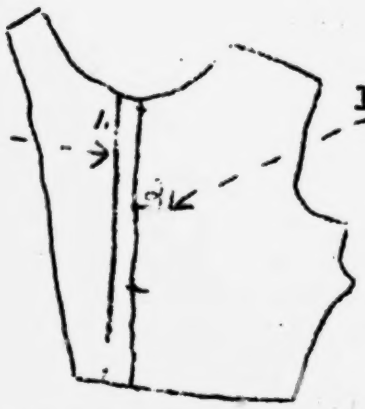


13. This marking tells you to:
    a. place line on grain of fabric
    b. tuck on this line
    c. pleat on this line
    d. fold on this line
    e. place on fold of fabric

14. This marking means:
    a. it is the seam allowance
    b. place on fold of fabric
    c. gather between arrows
    d. pleat between arrows
    e. leave open for placket between arrows

15. This marking shows:
    a. the natural waistline
    b. where to lengthen or shorten the pattern
    c. where to join the blouse and skirt
    d. the opening on side seam
    e. where to attach the belt

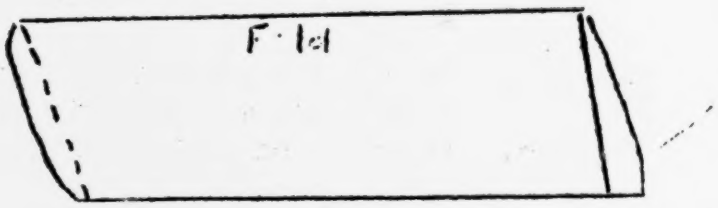
16. Line 1 is
    a. the center front
    b. the front fold
    c. a tuck
    d. a pleat



17. Line 2 is:
    a. the center front
    b. the front fold
    c. a tuck
    d. a pleat

WHICH ANSWER BEST COMPLETES EACH STATEMENT?

18. You have a piece of cotton fabric with uneven ends. Both ends were torn when it was taken from the bolt. How can it be straightened?
    a. stretch fabric by pulling the short corner of each end.
    b. stretch fabric along both selvages.
    c. trim the ends so that they are even.
    d. press with an iron.



19. When fabric is cut on the bias it will:
    a. stretch more easily
    b. tear more easily
    c. ravel more easily

20. The best way to hem a cotton gathered skirt is:
    a. Turn raw edge under and stitch by machine, then blind stitch hem in place by hand.
    b. Machine stitch seam tape to cover raw edge, then blind stitch tape in place.
    c. Turn raw edge under and stitch hem by machine.
    d. None of these methods.
    e. Turn the raw edge under, then blind stitch hem in place by hand.

21. The best way to gather an apron would be to:
    a. use regular machine stitches.
    b. use lengthened machine stitches.
    c. use long basting stitches made by hand.

22. When placing the pattern and cutting the garment pieces:
    a. place all the pattern pieces on the fabric before cutting.
    b. place all large pattern pieces on fabric before starting to cut, cut smaller pieces later.
    c. cut each piece as it is needed.
    d. place all the pattern pieces on a double fold of cloth to save time in cutting.

23. Notches in the pattern should be indicated on the garment piece by:
    a. cutting in (into the seam allowance).
    b. cutting out (away from seam allowance).
    c. it makes no difference.

24. When cutting out the garment:
    a. cut on cutting line of pattern.
    b. allow 1/2 inch for seams.
    c. cut 1/4 inch from edge of pattern.

25. Staylining (Staystitching) is:
    a. marking the seam allowance on pattern pieces with machine stitching.
    b. stitching with the grain through a single thickness of fabric.
    c. making belt loops by hand.
    d. decorative stitching on the right side of garment.

26. Markings which are transferred from the pattern piece to the garment by using a tracing wheel should:
    a. show on the right side of the fabric.
    b. show on the wrong side of the fabric.
    c. show on both sides of the fabric.

27. When pinning on pattern pieces after they have been laid on the fabric:
    a. pin the corners of the pattern down first, then put pins along all edges.
    b. place the first pins on the arrow which indicates the grainline, then pin along edges of pattern.
    c. it makes no difference which part of the pattern is pinned first.

HOW WOULD YOU TAKE BODY MEASUREMENTS FOR A PATTERN?

28. The person who is <u>being measured</u> should:
    a. stand very straight with stomach flat.
    b. have arms straight at sides and feet together.
    c. stand with usual posture, comfortable.

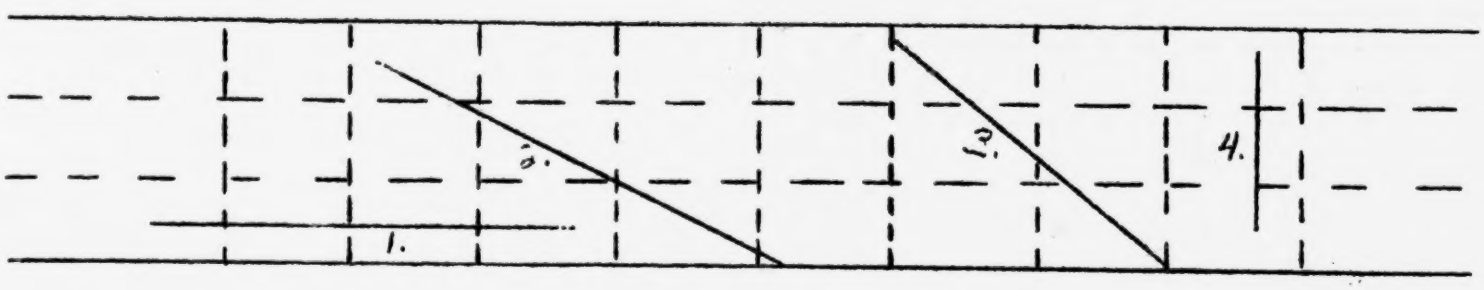
29. The person <u>doing the measuring</u> should hold the tape measure:
    a. loose enough to allow for growth.
    b. snug, but not tight.
    c. tight, then add an inch to it.
    d. loose enough to allow for shrinkage.

30. The <u>hip</u> measurement should be taken:
    a. wherever the fullest part of the hip comes.
    b. in the middle of the hips.
    c. seven inches below the waist.
    d. lower in back than in front.

31. If a skirt pattern is 3 inches too short, the best method of lengthening is:
    a. put a 1 1/2 inch pleat in the material before laying the pattern on.
    b. cut the top part of the pattern, then move it down 3 inches and cut the remainder of the skirt.
    c. cut the pattern straight across, into 2 pieces and add a 3 inch piece of paper between.
    d. make the pattern longer at the waistline.

TO WHAT DOES EACH NUMBERED LINE REFER?

This diagram represents a piece of fabric. The broken lines indicate the design in the fabric. Select the phrase which best describes each <u>heavy</u> line.



32. Number 1 refers to:
    a. crosswise grain
    b. lengthwise grain
    c. garment bias
    d. true bias

33. Number 2 refers to:
    a. crosswise grain
    b. lengthwise grain
    c. garment bias
    d. true bias

34. Number 3 refers to:
    a. crosswise grain
    b. lengthwise grain
    c. garment bias
    d. true bias

35. Number 4 refers to:
    a. crosswise grain
    b. lengthwise grain
    c. garment bias
    d. true bias

J. H. 7

NAME _____

GRADE _____

ANSWER SHEET AND KEY

CLOTHING CONSTRUCTION PRE-TEST

(Junior High)

1. a X*
   b
   c

2. a
   b
   c X

3. a X
   b
   c

4. a
   b X
   c

5. a
   b X
   c
   d

6. a X
   b
   c
   d

7. a X
   b
   c

8. a
   b X
   c

9. a
   b X
   c

10. a X
    b
    c

11. a
    b
    c X

12. a
    b X
    c

13 a X
   b
   c
   d
   e

14. a
    b X
    c
    d
    e

15. a
    b X
    c
    d
    e

16. a
    b X
    c
    d

17. a X
    b
    c
    d

18. a X
    b
    c
    d

19. a X
    b
    c

20. a X
    b
    c
    d
    e

21. a
    b X
    c

22. a X
    b
    c
    d

23. a
    b X
    c

24. a X
    b
    c

25. a
    b X
    c
    d

26. a
    b X
    c

27. a
    b X
    c

28. a
    b
    c X

29. a
    b X
    c
    d

30. a
    b
    c X
    d

31. a
    b
    c X
    d

32. a
    b X
    c
    d

33. a
    b
    c X
    d

34. a
    b
    c
    d X

35. a X
    b
    c
    d

*X indicates correct response

CLOTHING CONSTRUCTION PRE-TEST

(Senior High)

This test is being given to determine the knowledge and skills you now have in sewing. It will not affect your grade in any way.

On the following pages are questions about sewing. Answer these questions on the answer sheet which accompanies this test. Choose the phrase which best completes the statement or answers the question, and mark (x) on the answer sheet beside the letter of this phrase. Be sure the number on the answer sheet is the same as the number of the test question.

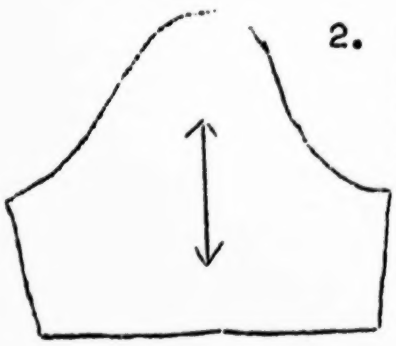
There is no time limit, but do as many as you can in this one period. If you do not understand any part of the test, ask your teacher for help.

WHAT DOES A PATTERN MARKING MEAN?

Look at each diagram and select the answer which correctly identifies the marking on the pattern.

1. This marking is for:
   a. a notch
   b. a center front dart
   c. a bust dart
   d. an elbow dart

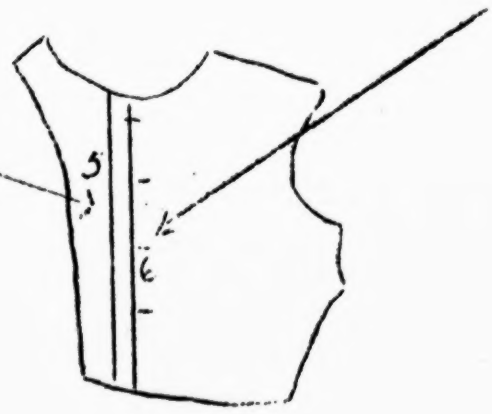
3. This marking means:
   a. it is the seam allowance
   b. place on fold of fabric
   c. leave open for placket between arrows
   d. a cutting line
   e. trim should be stitched here



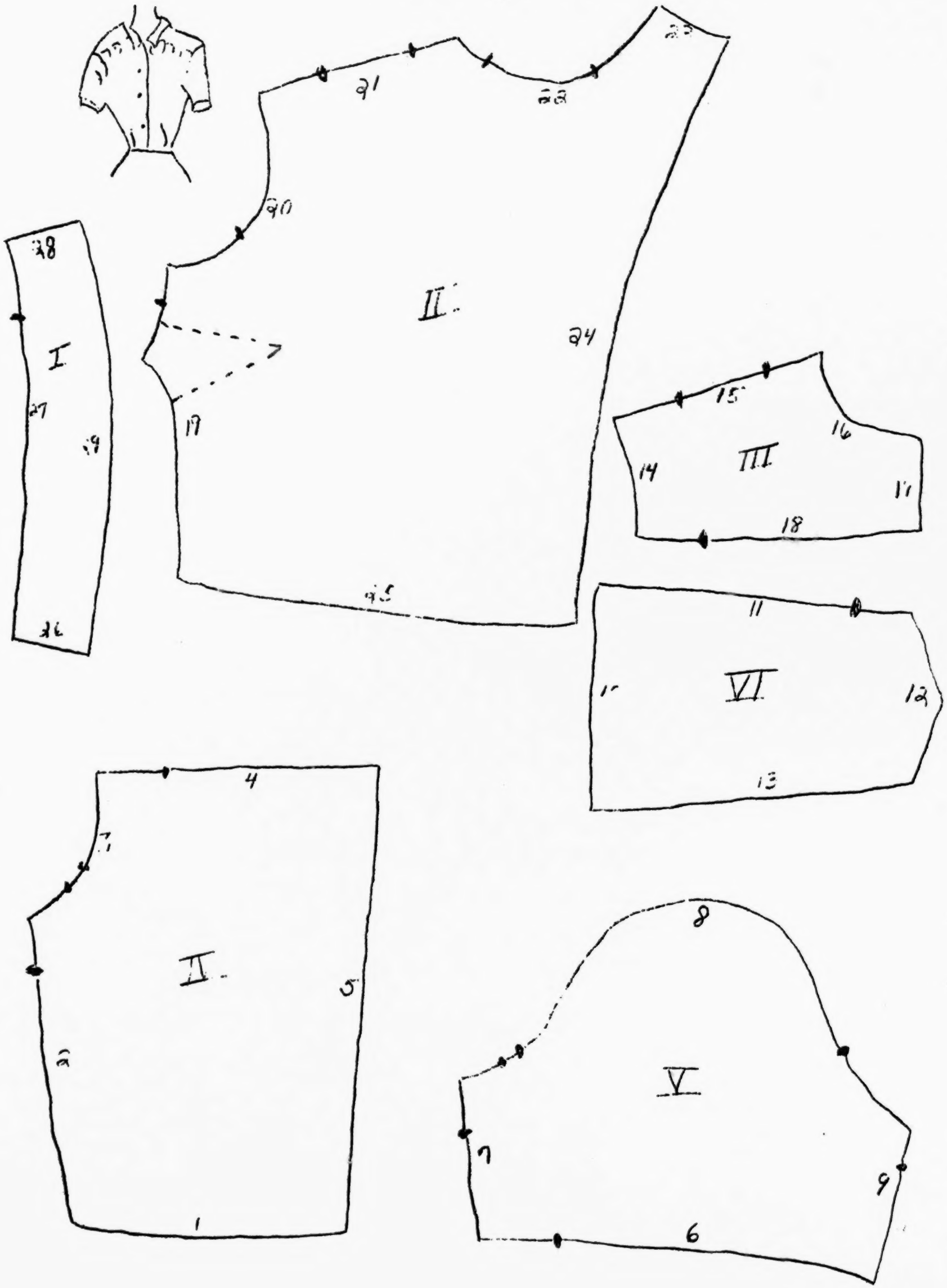
2. This marking tells you to:
   a. tuck on this line
   b. fold on this line
   c. place on fold of fabric
   d. place on lengthwise grain
   e. place on crosswise grain

4. This marking shows:
   a. the natural waistline
   b. where to lengthen or shorten the pattern
   c. where to join the skirt and blouse
   d. where to attach the belt

5. Line 5 is:
   a. the center front
   b. the front fold
   c. a tuck
   d. a pleat



6. Line 6 is:
   a. the center front
   b. the front fold
   c. a tuck
   d. a pleat


I
II
III
IV
V
VI

WHAT ARE THE SIX PATTERN PIECES SHOWN ON THE OPPOSITE PAGE?

7. Pattern piece I is the:
   a. cuff
   b. yoke
   c. collar
   d. sleeve

8. Pattern piece II is the:
   a. front
   b. back
   c. sleeve

9. Pattern piece III is the:
   a. cuff
   b. yoke
   c. collar
   d. sleeve

10. Pattern piece IV is the:
    a. front
    b. back
    c. sleeve

11. Pattern piece V is the:
    a. front
    b. back
    c. sleeve

12. Pattern piece VI is the:
    a. cuff
    b. yoke
    c. collar
    d. sleeve

WHICH OF THE FOLLOWING EDGES SHOULD BE STITCHED TOGETHER?

13. On pattern piece I:
    a. stitch edge 27 to edge 24
    b. stitch edge 27 to edge 2
    c. stitch edge 27 to edge 25
    d. stitch edge 27 to edge 6

14. On pattern piece III:
    a. stitch edge 15 to edge 21
    b. stitch edge 15 to edge 4
    c. stitch edge 17 to edge 23
    d. stitch edge 16 to edge 3

15. On pattern piece V:
    a. stitch edge 8 to edges 16 and 22
    b. stitch edge 8 to edges 20 and 3
    c. stitch edge 8 to edges 20, 14, and 3
    d. stitch edge 8 to edge 24

16. On pattern piece VI:
    a. stitch edges 13 and 11 to edges 22 and 16
    b. stitch edges 10 and 12 to edges 22 and 16
    c. stitch edge 13 to edge 4
    d. stitch edge 11 to edge 6

WHICH ANSWER BEST COMPLETES EACH STATEMENT?

17. When cutting out a garment:
    a. cut 1/4 inch from edge of pattern to allow for growth.
    b. allow 1/2 inch for seams.
    c. cut on cutting line of pattern.
    d. leave 5/8 inch outside the cutting line for seams.

18. You have a piece of cotton fabric with uneven ends. Both ends were torn when it was taken from the bolt. How can it be straightened?
    a. stretch the fabric by pulling the short corner of each end.
    b. stretch the fabric by pulling one long corner of each end.
    c. pull a thread and trim the cloth evenly.
    d. press until fabric goes back into shape.

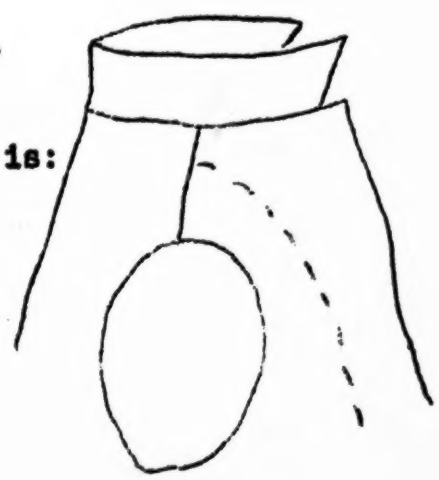
19. Staylining (staystitching) is:
    a. Marking the seam allowance on pattern pieces with machine stitching.
    b. Stitching with the grain through a single thickness of fabric.
    c. Decorative stitching on the outside of the garment.
    d. Stitching with the grain using contrasting thread.

20. A blouse pattern is 1 inch too long. What would be the best method for shortening the pattern?
    a. Folding a 1 inch pleat at the waistline.
    b. Folding a 1/2 inch pleat in the pattern between the armseye and waistline, keeping the underarm seamline straight.
    c. Folding a 1/2 inch pleat in the pattern between the armseye and waistline, keeping the lengthwise grainline straight.

21. If a skirt pattern is 3 inches too short, what is the best method of lengthening it?
    a. Use a tape measure and chalk and measure down 3 inches from the bottom of the pattern at several points, then connect these points with a line to get the new bottom edge.
    b. Put a 1 1/2 inch pleat in the material before laying the pattern on.
    c. Cut the top part of the pattern, then move it down 3 inches and cut the remainder of the skirt.
    d. Cut the pattern straight across, into 2 pieces and add a 3 inch piece of paper between.
    e. Make the pattern longer at the waistline.

22. When a gathered edge is stitched to an edge which is not gathered:
    a. Stitch with gathered side up.
    b. Stitch with gathered side on the bottom.
    c. Either way is all right.

23. To finish a facing down the front of a cotton blouse (shown by dotted line in drawing) so that it will not be conspicuous on the right side:
    a. Turn edge of facing under once and machine stitch, tack facing at the shoulder seams.
    b. Turn edge of facing under once and hand hem in place.
    c. Pink edge of facing and tack at the shoulder seams.
    d. None of these.



24. When buying a zipper for a dress placket, buy one that is:
    a. Closed at both ends.
    b. Closed at one end.
    c. Open at both ends.

25. Make button holes:
    a. As long as the button is wide.
    b. As long as the button is wide, plus the thickness of the button.
    c. 1/4 inch longer than the button width.

26. Staylining (staystitching) is important because it:
    a. Prevents raveling while making the garment.
    b. Prevents stretching while making the garment.
    c. Prevents the seams from raveling when garment is worn.
    d. Keeps the fabric from puckering while stitching the seams.

27. What will happen if a blouse is cut off grain?
    a. The pieces of the blouse will not fit together.
    b. The blouse pieces may stretch out of shape.
    c. It makes no difference.

HOW DO YOU PRESS OR IRON?

28. Which would be the better kind of heat to use on a wool fabric?
    a. High heat and no moisture.
    b. Moderate heat and moisture.
    c. High heat and moisture.

29. Mark (x) under P the results produced by pressing. Mark (x) under I the results by ironing. Both pressing and ironing may produce some of the results.

    a. Smooth the fabric
    b. Keep original texture of fabric
    c. Shrink out the fullness
    d. Keep the fabric grain lines
    e. Square up grain lines
    f. Develop luster

WHICH WOULD YOU DO FIRST?

In making a garment it is usually desirable to perform certain processes before others, but sometimes it does not matter which order is followed. In making a dress with a circular skirt, what processes should be done first?

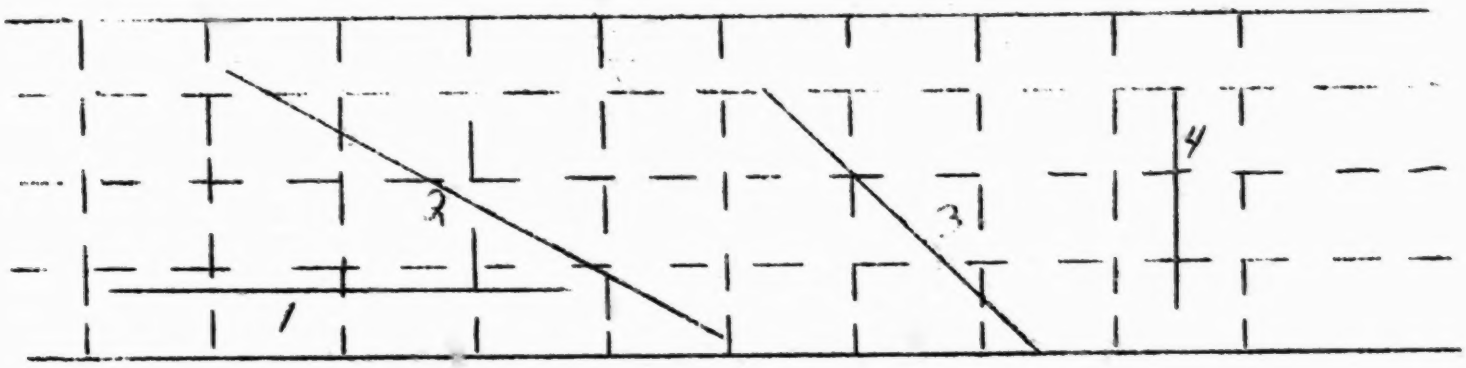
30. a. Allow skirt to hang before marking for length.
    b. Mark skirt for length before allowing it to hang.
    c. It makes no difference.

31. a. Make buttonholes on blouse before stitching blouse to skirt.
    b. Stitch blouse to skirt before making buttonholes.
    c. It makes no difference.

32. a. Stitch the side seams together before putting in the bust darts.
    b. Stitch the bust darts before the side seams.
    c. it makes no difference.

TO WHAT DOES EACH NUMBERED LINE REFER?

This diagram represents a piece of fabric. The broken lines indicate the design in the fabric. Select the phrase which best describes each heavy line.



33. Number 1 refers to:
    a. crosswise grain
    b. lengthwise grain
    c. garment bias
    d. true bias

34. Number 4 refers to:
    a. crosswise grain
    b. lengthwise grain
    c. garment bias
    d. true bias

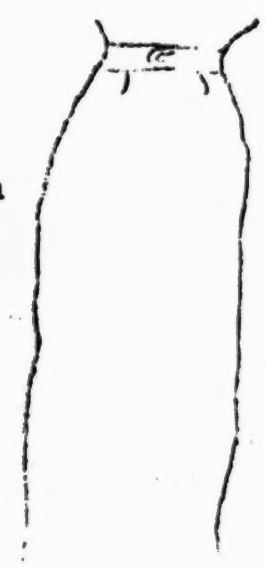
35. Number 2 refers to:
    a. crosswise grain
    b. lengthwise grain
    c. garment bias
    d. true bias

36. Number 3 refers to:
    a. crosswise grain
    b. lengthwise grain
    c. garment bias
    d. true bias

HOW WOULD YOU HEM THESE TWO GARMENTS

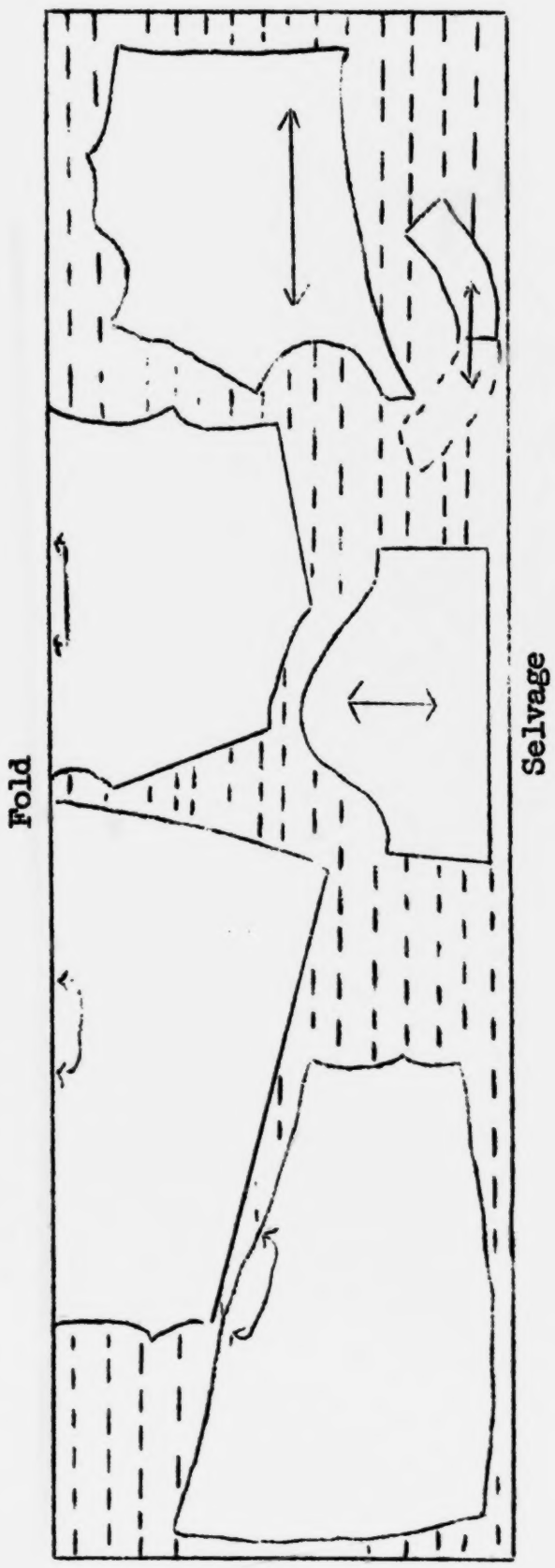
37. A cotton print dress with the pictured skirt:
    a. Turn raw edge under and stitch by machine, then blind stitch hem in place by hand.
    b. Stitch seam tape to cover raw edge, then blind stitch tape in place.
    c. Turn raw edge under and stich hem by machine.
    d. None of these methods.

38. A wool flannel dress with a skirt like the one pictured:
    a. Turn raw edge under and stitch by machine, then blind stitch hem in place by hand.
    b. Stitch seam tape to cover raw edge, then blind stitch tape in place.
    c. Stitch 1/2 inch from bottom edge, pink, then blind stitch hem.
    d. None of these methods.



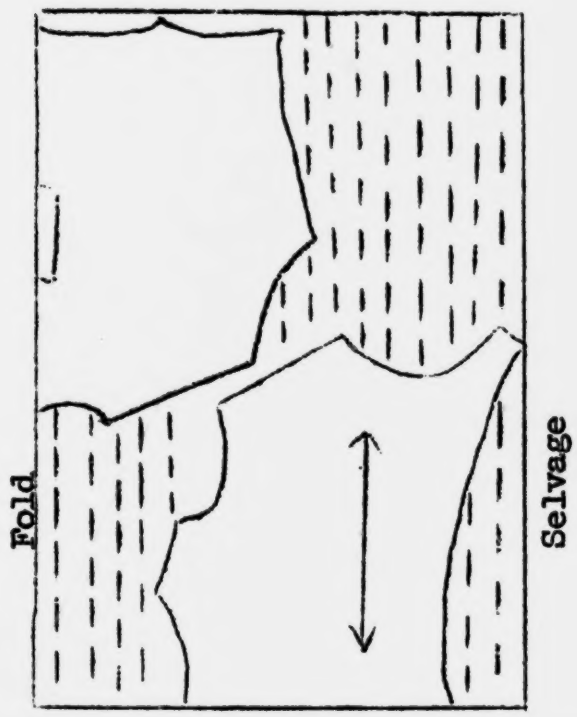
S. H. 7

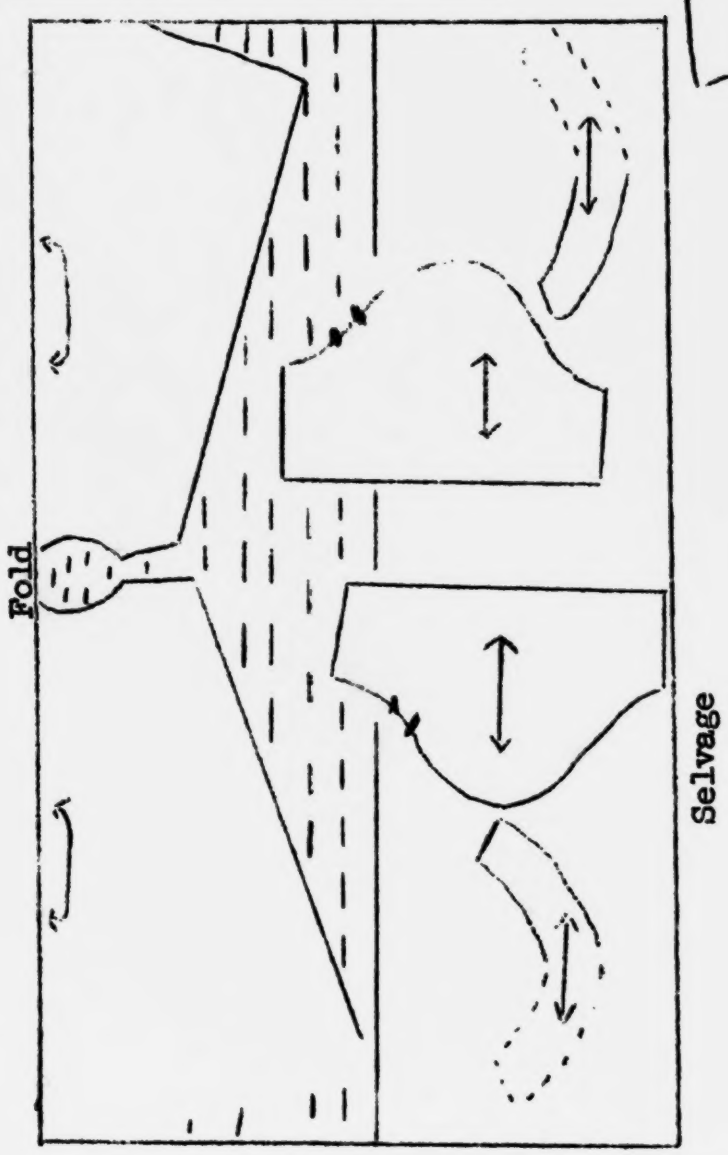
Double Thickness



Double thickness of fabric without nap

I





One thickness of fabric without nap

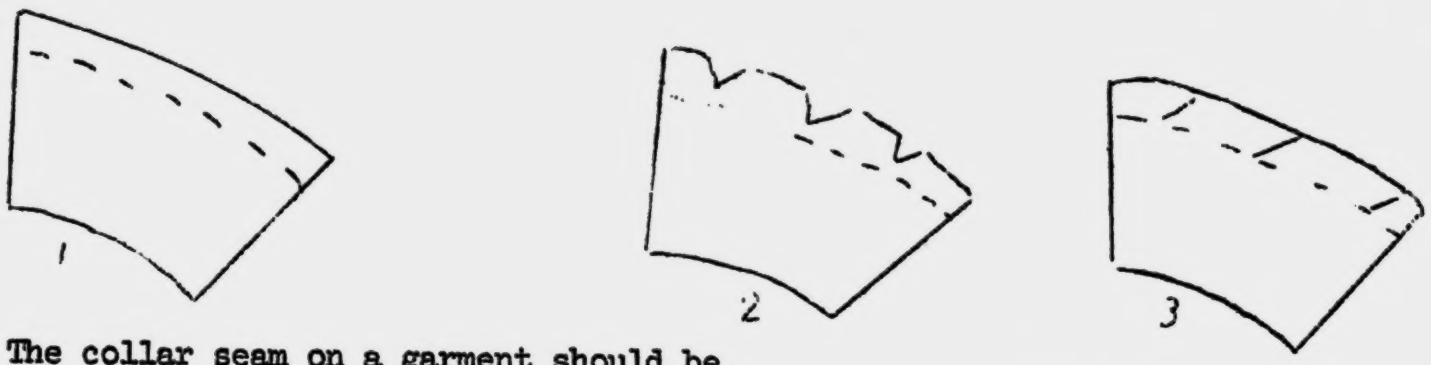
II

ARE THE PATTERN PIECES ON THE OPPOSITE PAGE PLACED CORRECTLY?

Below are several statements about the two pattern layouts on the opposite page. Mark Yes on answer sheet if statement is correct. Mark No if statement is not correct. A picture of the completed dress may be found on the opposite page.

39. In layout I both skirt pattern are correctly placed.
40. Layout I provides for a skirt of three pieces instead of only two as shown in the skirt pictured.
41. In layout I, the sleeve is placed on thr right grain.
42. In layout I the blouse front is correctly placed.
43. In layout II the skirt patterns are correctly placed.
44. Layout II provides for too many collars.
45. In layout II both sleeves are for the same arm.

HOW SHOULD YOU TRIM AND CLIP SEAMS?



46. The collar seam on a garment should be
    a. left as in Figure 1 above.
    b. notched as in Figure 2 above.
    c. slashed as in Figure 3 above.

HOW SHOULD MACHINE STITCHING LOOK IF THE TENSION IS GOOD? (see diagrams below for questions 47-49)

47. Figure 1 shows:
    a. good machine tension
    b. upper thread too tight
    c. lower thread too tight

48. Figure 2 shows:
    a. good machine tension
    b. upper thread too tight
    c. lower thread too tight

49. Figure 3 shows:
    a. good machine tension
    b. upper thread too tight
    c. lower thread too tight

ANSWER SHEET AND KEY
CLOTHING CONSTRUCTION PRE- TEST
(SENIOR HIGH)

Name _____

Grade _____

1.	a	
	b	
	c	X*
	d	
2.	a	
	b	
	c	
	d	X
	e	
3.	a	
	b	X
	c	
	d	
	e	
4.	a	
	b	X
	c	
	d	
5.	a	
	b	X
	c	
	d	
6.	a	X
	b	
	c	
	d	
7.	a	X
	b	
	c	
	d	
8.	a	X
	b	
	c	
9.	a	
	b	X
	c	
	d	
10.	a	
	b	X
	c	
11.	a	
	b	
	c	X
12.	a	
	b	
	c	X
	d	
13.	a	
	b	
	c	
	d	X
14.	a	X
	b	
	c	
	d	
15.	a	
	b	X
	c	
	d	
16.	a	X
	b	
	c	
	d	
17.	a	
	b	
	c	X
	d	
18.	a	X
	b	
	c	
	d	
19.	a	
	b	X
	c	
	d	
20.	a	
	b	
	c	X
21.	a	
	b	
	c	
	d	X
	e	
22.	a	X
	b	
	c	
23.	a	X
	b	
	c	
	d	
24.	a	X
	b	
	c	
25.	a	
	b	X
	c	
26.	a	
	b	X
	c	
	d	
27.	a	
	b	X
	c	
28.	a	
	b	X
	c	
29.	P	I
	a X	X
	b X	X
	c X	X
	d X	X
	e X	X
	f	X
30.	a X	
	b	
	c	
31.	a X	
	b	
	c	
32.	a	
	b X	
	c	
33.	a	
	b X	
	c	
	d	
34.	a X	
	b	
	c	
	d	
35.	a	
	b	
	c X	
	d	
36.	a	
	b	
	c	
	d X	
37.	a X	
	b	
	c	
	d	
38.	a	
	b X	
	c	
	d X	

	Yes	No
39.		X
40.	X	
41.		X
42.	X	
43.	X	
44.		X
45.		X
46.	a	
	b X	
	c	
47.	a X	
	b	
	c	
48.	a	
	b	
	c X	
49.	a	
	b X	
	c	

*X indicates correct response

VT 005 747
Chadderdon, Hester
Evaluation Materials in Family Relations, Tenth Grade.

Iowa State Dept. of Public Instruction, Des Moines. Div. of Vocational Education
Iowa Agriculture and Home Economics Experiment Station, Ames
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*HOME ECONOMICS EDUCATION; *STUDENT EVALUATION; *FAMILY RELATIONSHIPS; *TEST CONSTRUCTION; *ACHIEVEMENT TESTS; PERSONAL ADJUSTMENT; TESTING; PROBLEM SOLVING; GRADE 10

Models for test items and evaluation devices are provided for adaption by home economics teachers to meet the needs of specific tenth grade family relations classes in the comprehensive high school. Evaluation materials were developed through research projects and trial use in Iowa schools by heterogeneous school groups. The materials are based on subject matter areas: developmental tasks, individual differences, family relationships, values, interests, and roles. Included are: (1) objectives to which the evaluation materials relate, (2) suggestions for introducing and interpreting the results of the tests, and (3) the problems, presented as capsulated experiences, illustrating generalizations which require the student to give not only the answer but also justification for the answer. Other evaluation materials for home economics areas, all using similar formats, are available as VT 005 746-VT 005 757 (ARM)Summer 1969). (FP)

VT005747

ED0 31587

Evaluation Materials

in

Family Relations

Tenth Grade

Prepared by

Hester Chadderdon

Home Economics Research
Iowa State College
Ames, Iowa

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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A cooperative project between the Division of Vocational Education, State Department of Public Instruction of Iowa, and the Iowa Agricultural Experiment Station (Project 1215)

T005747

M E M O R A N D U M

TO: The ERIC Clearinghouse on Vocational and Technical Education
The Ohio State University
980 Kinnear Road
Columbus, Ohio 43212

[redacted]

FROM: (Person) Alberta D. Hill (Agency) Iowa State University

(Address) Head, Home Economics Education Dept., Ames, Iowa 50010

DATE: April 3, 1968

RE: (Author, Title, Publisher, Date) Chadderdon, Hester. Evaluation Materials in Family Relations - Tenth Grade. Iowa State University.

Supplementary Information on Instructional Material

Provide information below which is not included in the publication. Mark N/A in each blank for which information is not available or not applicable. Mark P when information is included in the publication. See reverse side for further instructions.

(1) Source of Available Copies:
Agency University Book Store, Iowa State University
Address Ames, Iowa 50010
Limitation on Available Copies none Price/Unit $ .40
(quantity prices)

(2) Means Used to Develop Material:
Development Group Heterogeneous school groups
Level of Group
Method of Design, Testing, and Trial Developed through research projects and trial use in Iowa schools. Cooperative project between the Division of Vocationa Education, State Dept. of Public Instruction and Iowa Agriculture Experiment Station (Project 1215),

(3) Utilization of Material:
Appropriate School Setting Comprehensive high school
Type of Program High school classes
Occupational Focus Homemaking
Geographic Adaptability
Uses of Material Models for test items and evaluation devices
Users of Material Home economics teachers

(4) Requirements for Using Material:
Teacher Competency Background in testing and evaluation
Student Selection Criteria
Time Allotment

Supplemental Media --
Necessary ____)
Desirable ____) (Check Which)

Would not be used in present form but adapted by teacher for use in particular classes.

Describe

Source (agency)
(address)

INDEX TO GENERALIZATIONS AND TEST ITEMS FOR USE IN EVALUATING LEARNING IN FAMILY RELATIONS: 10th GRADE

A. Family practices result from differences in values.
   Test Item XII

B. As the culture changes, the family is affected and acts to make satisfactory adjustments.
   Test Item VI

C. What one person thinks is desirable and best is not necessarily what someone else thinks is desirable and best.
   Test Item II

D. Some conflict is normal in any close relationship.
   Test Items V, VIII

E. Decisions are more apt to be strongly supported when they are arrived at through the participation of group members to the extent that their maturity allows.
   Test Items III, XI

F. In order to become a more mature person, one must work toward being accepted by others.
   Test Item IX

G. Being friendly is a complex skill which we can all learn.
   Test Item IV

H. The social group of which you are a part influences not only what you do, but also your ideas.
   Test Item X

I. If we are wise, we accept other people's decisions until we can or are able to make adequate decisions for ourselves.
   Test Item XIII

J. While conflicts cannot be eliminated, they can be controlled and handled more smoothly and harmoniously if both parents and children are aware of each other's point of view.
   Test Item I

K. Being able to use good judgment in the selection of our friends is a part of growing up.
   Test Item VII

OBJECTIVES AND DEVELOPMENT AND USE OF TEST ITEMS

I. Objectives: These evaluation materials relate to the following objectives

1. To recognize sequence and variations within normal adolescent development.
2. To understand and accept individual differences in people.
3. To recognize their own motives and develop a sense of values that will aid growth toward maturity.
4. To acquire sensitivity to the problems of themselves and other people.
5. To recognize that families are different and expect each of their families to do some things differently than other families do them.
6. To contribute to the growth of others.
7. To recognize the satisfactions from relationships with siblings.
8. To recognize reasons why people have different interests and points of view.
9. To determine and fulfill one's role in the family.

II. Development of Test Items: The items in this packet are based on the above objectives and the generalizations given at the top of the page containing a test item. The solutions and reasons for the problems include misconceptions collected from Iowa pupils.

III. Selection of items to combine into a test: Choose the items which involve the generalizations on which you wish to determine where your pupils are at any stage of learning (pre-test, during unit, at the end of unit, or as a part of semester test).

IV. Provision of a setting and directions: Here are a few suggestions which might be used with family relations tests.

Getting Along

Do you ever say to yourself Why did he do that? Why did she say that? What would I do if I were in that situation?

We all want to get along successfully with other people (children, friends, teachers, parents, etc.). As we know what makes others act and feel as they do, we are better able to get along with them.

Several situations are described in the following pages. After studying each carefully, check (x) the answer(s) you think <u>best</u> and the reason(s) <u>why</u> you have selected the answer(s).

In order to force pupils to consider each solution and/or reason, do not indicate the number of statements they are to check.

V. Scoring the test: To obtain a score for each girl check and total <u>only</u> the correct solutions and/or reasons. (See key on mimeographed copy of each item). It is better <u>not</u> to make deductions for incorrect choices because some of the problems are of such a nature that some of the reasons could conceivably be true under certain circumstances. The key provides for determining only those which make use of the particular generalization(s) listed at the top of each page. Also research on these items indicates that deducting for guessing has little effect on the relative size of the scores unless a student checks an unreasonably large number of responses.

VI. Interpreting the results of the test: The results can be looked at several ways to determine how well your pupils can apply the generalizations involved in the test.

(1) The size of the scores in relation to the total possible score gives a general idea of the class as a whole. Individual scores indicate which pupils have achieved most and which need more experiences. A look at the responses of individual pupils, particularly those whose scores are low, will indicate places where special help is needed.

(2) If the test has been given before and also after the unit has been taught, you can see the extent of progress, provided the particular problems have not been discussed in class.

(3) Tabulating the total number of pupils who selected each solution and reason gives you clues to needs for learning, whether the test is used as a pre-test or after some instruction. Noting the generalizations which they failed to apply and the misconceptions (incorrect responses), you have a basis for planning experiences. Below is an illustration of an item that was administered to 119 tenth-grade pupils.

Mabel, 15, and Hazel, 16, are sisters and both are in the tenth grade. They are friends of Elsie, who is a very popular member of their class. Usually the three girls go to the movies on Wednesday afternoons after school, but yesterday Mabel and Elsie dodged Hazel and went to the movie. Hazel has refused to talk to Mabel since the incident and their mother is alarmed. Although the girls have argued, they have never before stopped speaking to each other.

Do you think there is reason for alarm on the part of the mother? Check (x) the answer you think <u>better</u>.

45 A. Yes
X 74 B. No

Check (x) the reason or reasons for choosing your answer.

33 1. The problem should be solved before it gets worse.
X 62 2. Sisters frequently have disagreements because they are together so often.
15 3. Hazel needs help to overcome her jealousy.
24 4. The whole family will be affected by their actions, if they are allowed to continue.
45 5. Jealousy is a trait of teenage girls which they overcome as they become older.
6 6. The sisters are stubborn.

Although almost two-thirds of these pupils checked the correct solution (B), fewer were able to apply the generalization when they selected a reason (2): Some conflict is normal in any close relationship. Many see it as a serious problem (1) or attribute it to jealousy (3 and 5). More than half need help in understanding the generalization.

Generalization D: Some conflict is normal in any close relationship.

V. Mabel, 15, and Hazel, 16, are sisters and both are in the tenth grade. They are friends of Elsie, who is a very popular member of their class. Usually the three girls go to the movies on Wednesday afternoons after school, but yesterday Mabel and Elsie dodged Hazel and went to the movie without her. Hazel has refused to talk to Mabel since the incident and their mother is alarmed. Although the girls have argued, they have never before stopped speaking to each other.

Do you think there is reason for alarm on the part of the mother?

Check with an x the answer you think better.

_____A. Yes
__x__B. No

Check with an x the reason or reasons for choosing your answer.

_____1. The problem should be solved before it gets worse.
__x__2. Sisters frequently have disagreements because they are together so often.
_____3. Hazel needs help to overcome her jealousy.
_____4. The whole family will be affected by their actions, if they are allowed to continue.
_____5. Jealousy is a trait of teen-age girls which they will overcome as they become older.
_____6. The sisters are stubborn.

Generalization E: Decisions are more apt to be strongly supported when they are arrived at through the participation of group members to the extent that their maturity allows.

III. Mr. Johnson has asked all members of the family to stay home Thursday evening to help decide what kind and color of new car to purchase. Sam and Sylvia (14 and 16) said they had something else planned. Mr. Johnson urged them to be with the family group.

Why do you think Mr. Johnson wanted Sam and Sylvia to help with the decisions?

Check with an x the answer or answers you think <u>best.</u>

_____1. They would learn to cooperate.
_____2. Mr. Johnson was an unselfish person and wanted everyone's idea.
_____3. This would make the family feel closer.
_____4. It's nice to have a family together once in a while.
_____5. The children would learn how to make decisions.
_____6. The children will feel as if they have some responsibility.
__x__7. Everyone is more likely to be satisfied if each helps make decisions.

Generalization A: Family practices result from differences in values.

XII. Bertha Anderson, 16, visited a cousin for the week-end. When she returned home she told her mother that the cousins had a beautiful home and they had just purchased a television set, instead of having running water put in their home. The Anderson home is comfortable and not as pretty as that of the cousins, but it has running water. Both families live on a farm and have about the same amount of money.

Which family is spending its money more wisely?

Check with an x the answer you think best.

_____A. Anderson family
_____B. Cousins's family
__x__C. Both families

Check with an x the reason or reasons which explain your answer.

_____1. Beautiful surroundings help to make life more interesting.
_____2. People need running water before they need television.
_____3. Pleasure is important for every family.
__x__4. Families have different ideas of the things they want.
_____5. It is important for families to consider what other people think about what they have in their houses.

Generalization G: Being friendly is a complex skill which we can all learn.

IV. Joseph, 15, needed a date for the class party because all of the other fellows had dates. He had not been friendly with girls very much before and because of this had difficulty getting a date for the party. Several of the fellows in Joseph's class decided to help him with this problem.

Do you think Joseph's friends were right in wanting to help him learn how to be more friendly with girls?

Check with an x the answer you think better.

__x__ A. Yes
_____ B. No

Check the reason or reasons for choosing your answer.

_____ 1. He would be missing a lot without dates.
_____ 2. Because everyone else had a date is no sign Joseph needed one.
_____ 3. He can't always depend on friends to get a date and should help himself.
_____ 4. If Joseph doesn't like girls he might as well stay home.
_____ 5. Joseph is only fifteen and has lots of time to be interested in girls.
_____ 6. He should be acquainted with members of the opposite sex because he later will have to choose a mate.
__x__ 7. Everyone can learn to be friendlier.

Generalization H: The social group of which you are a part, influences not only what you do, but also your ideas.

X. Beverly, age 18, asked Pat, 17, to go with her group to the next town to attend a basketball game. Beverly's group kept very late hours. Pat asked her mother if she should go, but her mother encouraged her to make her own decisions. Pat thought it over and decided to go to a show with her own friends instead.

Why do you think Pat turned down Beverly's invitation?

Check with an x the answer or answers you think <u>best</u>.

_____1. Pat didn't want to be talked about.
_____2. She realized that she would have felt out of place because Beverly's friends were older.
_____3. Her mother trusted her and she wanted to keep her own friends.
_____4. Pat knew that she would have more fun with her own friends.
__x__5. Pat realized that this group might influence her ideas of how to act.
_____6. Pat was afraid she might lose her friends.

Generalization I: If we are wise, we accept other people's decisions until we can or are able to make adequate decisions for ourselves.

XIII. Sandra, age 16, told her parents that she thought she was old enough to make most of her own decisions. Several nights later when Sandra went out with friends, her parents did not tell her what time to return home, but agreed that she would make the decision. It was very late when Sandra arrived home. The next morning her parents told her that she would not be allowed to make this decision again for a while.

How do you think Sandra should have felt about her parents' choice of a solution to this problem?

Check with an x the answer or answers you think <u>best</u> explain Sandra's feelings.

_____A. Have expected her parents not to let her make this decision for a while
_____B. Have felt her parents were wrong
_____C. Been ashamed that she did not make a better decision
__x__D. Have felt her parents were wise
_____E. Be glad her parents cared what she did
_____F. Have felt her parents were too hasty

Check with an x the reason or reasons for choosing your answer or answers.

_____1. She is too young to know what is best for her.
__x__2. She proved that she was not yet mature enough to make this decision.
_____3. She has to learn responsibility.
_____4. A girl sixteen is old enough to make her own decisions.
_____5. She took advantage of her parents' decision to let her make a choice.

Generalization J: While conflicts cannot be eliminated, they can be controlled and handled more smoothly and harmoniously if both parents and children are aware of each other's point of view.

I. Judy, 16, and Marcia, 17, are friends and are together frequently. Recently, however, Judy has noticed that her parents seemed to disapprove of Marcia although they haven't said anything about them being together. Judy decided to ask her parents how they really felt about Marcia and why. She also decided to tell them why she likes Marcia.

Do you think Judy made a wise decision?

Check with an x the answer you think better.

x* A. Yes
_____ B. No

Check with an x the reason or reasons for choosing your answer.

_____ 1. Judy has a right to know her parent's reasons for their actions.
_____ 2. Judy may be able to help Marcia if she knows why her parents disapprove of her.
_____ 3. Teen-agers should be able to choose friends without parents interfering.
x* 4. Disagreements often can be worked out if family members know how the other feels about things.
_____ 5. Judy would have a chance to prove to her parents that Marcia was all right.
_____ 6. Judy is old enough to have the responsibility of choosing her own friends.

*x indicates best response for this generalization

Generalization E: Decisions are more apt to be strongly supported when they are arrived at through the participation of group members to the extent that their maturity allows.

XI. There is a quarrel almost every evening at the Taylor's. The two boys, Bob (age 12) and John (age 10) want to hear one TV program at 7 P.M.; Martha (age 16) wants a different program. Their mother thinks that the children should work out a plan so each can see a program he likes some evenings. Martha says that since she is the oldest of the three children, she should make the plan.

Whom do you think should make the plan?

Check with an x whom you think should make the plan.

_____A. Martha
_____B. The parents
__x__C. The three children
_____D. The parents and the three children

Check with an x the reason or reasons which <u>best</u> explain your answer.

_____1. After all, the parents bought the TV set.
_____2. Martha has had more experience in making plans.
_____3. Martha needs to learn that she can't have her own way all the time.
* x 4. They will be more satisfied with the plan.
_____5. The younger ones in a family are just as important as the older ones.
_____6. The plan probably would be more fair.
_____7. The brothers are capable of helping to make the plan.
_____8. As you get older your interests are more important.
* x 9. The plan will be followed better.

---

*Flexible Key 4 or 9

Generalization C: What one person thinks is desirable and best is not necessarily what someone else thinks is desirable and best.

II. Jani, 16, was chairman of the committee which was to make suggestions to the "Teen Club" on places to hold the annual dance. She failed to call a committee meeting so instead she picked out the places she believed were best and made her report. She thought that it shouldn't make much difference to the others anyway.

Was Jani right?

Check with an x the answer you think better.

__x__ A. No
____ B. Yes

Check with an x the reason or reasons for choosing your answer.

____ 1. Jani probably knew the places they all liked to go.
____ 2. She will lose friends by taking things in her own hands.
__x__ 3. Others may have ideas which differ from hers.
____ 4. Since Jani was chairman, she was going to give suggestions anyway.
____ 5. Jani will get a reputation for wanting to do everything herself and others will not want to be on committees with her.

Generalization B: As the culture changes the family is affected and acts to make satisfactory adjustments.

VI. Rita's aunt was visiting with them for a few days. On the second day of her visit, Rita, who is sixteen, went to the movies with Roger, 18. She was told to be home by 10:30. Rita's aunt said that she was shocked at Rita's parents for letting her run around and stay out like that, because Rita's mother and she certainly hadn't grown up that way.

What reason might account for the difference in the two families?

Check with an x the reason or reasons you think best.

_____1. Rita's mother understands teen-agers better.
_____2. When Rita's aunt was that age, there were not as many places to go.
_____3. Rita's mother wants her to be able to do things she wasn't allowed to do when she was that age.
__x__4. Rita is living in a different age and family living has changed.
_____5. Some older people seem to forget how things really were when they were young.
_____6. One family was much stricter than the other.

Generalization K: Being able to use good judgment in the selection of our friends is a part of growing up.

VII. Marian, 16, told her mother that she was bringing a new friend home from school the next day. "She is a very nice girl and I'm sure you'll like her," said Marian. Mrs. Taylor wondered what the new friend would be like since Marian had often chosen friends very poorly. The next afternoon when Mrs. Taylor met Marian's friend she felt that Marian had used good judgment.

What might explain Marian's increased ability in selecting a friend?

Check with an x the answer or answers you think best.

_____1. Marian realized she needed to choose friends carefully since she'd soon be choosing them for a lifetime.
_____2. She chose more carefully because she wanted the approval of her mother.
__x__3. She was older and more mature in her thinking.
_____4. Marian realized her name wouldn't be very good if she kept choosing poor friends.
_____5. She chose more carefully because of former criticism.

Generalization D: Some conflict is normal in any close relationship.

VIII. Ruby, 16, saw a very pretty off-the-shoulder dress in the window of one of the department stores, as she was coming home from school. She decided that she would ask her mother for the dress. Upon arriving home she found that her mother had just returned from shopping. Ruby described the dress and asked her mother if she had seen it. Her mother said, "Yes, I saw it and I think that it is very pretty, but it's much too old for you." Ruby resented this and wasn't very happy all evening. Her father noticed it and asked her what the trouble was. When she explained what had happened, he said, "But you two are never supposed to argue."

Do you think Ruby's father should have expected Ruby and her mother never to have serious arguments?

Check with an x the answer you think <u>better</u>.

_____A. Yes
__x__B. No

Check with an x the reason or reasons for choosing your answer.

_____1. Teen-agers are inclined to argue.
_____2. Disagreements don't get you anywhere.
_____3. Her mother probably knows best and Ruby shouldn't argue with her.
__x__4. When people spend a lot of time together, they are likely to disagree some of the time.
_____5. They must learn to agree.
_____6. Ruby should have more respect for her mother than to argue with her.

Generalization F: In order to become a more mature person, one must work toward being accepted by others.

IX. Edith, a tenth-grade student, is very shy and has little confidence in her ability to do things well. She never volunteers to take part in any classroom activities, but makes high marks on her tests and individual projects. Edith seldom attends school parties or other social affairs. Velma, Edith's friend, thinks Edith acts more as an eighth-grade student than as a tenth-grade one.

Can Edith become more like a tenth-grader?

Check with an x the answer or answers you think best.

__x__ 1. Yes, if she works toward being more friendly with others.
____ 2. No, her nature is to be shy.
____ 3. Yes, if she would gain more confidence in herself.
____ 4. No, it is too late to change her disposition.
____ 5. Yes, if other people would make her join in activities more.

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valuation Materials in Family Relations, Eleventh and Twelfth Grade.

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wa Agriculture and Home Economics Experiment Station, Ames
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HOME ECONOMICS EDUCATION; *FAMILY RELATIONSHIP; PROBLEM SOLVING; *STUDENT EVALUATION; *TEST CONSTRUCTION; ACHIEVEMENT TESTS; GRADE 11; GRADE 12; PERSONAL ADJUSTMENT; TESTING

odels for test items and evaluation devices are provided for adaption by home economics teachers to the needs f specific eleventh and twelfth grade family relations classes in the comprehensive high school. Evaluation aterials were developed through research projects and trial use in Iowa schools by heterogeneous school roups. The materials are based on subject matter areas: developmental tasks, individual differences, family elationships, values, interests, and roles. Included are (1) objectives to which the evaluation materials elate, (2) suggestions for introducing and interpreting the results of the tests, (3) the problems, presented s capsulated experiences, illustrating generalizations which require the student to give not only the answer ut also justification for the answer. Other evaluation materials for home economics areas, all using imilar formats are available as VT 005 746-VT 005 757 (ARM Summer 1969). (FP)

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Evaluation Materials

in

Family Relations

Eleventh and Twelfth Grade

Prepared by

Hester Chadderdon

Home Economics Research
Iowa State University
Ames, Iowa

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A cooperative project between the Division of Vocational Education, State Department of Public Instruction of Iowa, and the Iowa Agricultural Experiment Station (Project 1215)

M E M O R A N D U M

TO: The ERIC Clearinghouse on Vocational and Technical Education
The Ohio State University
980 Kinnear Road
Columbus, Ohio 43212

[redacted]

FROM: (Person) Alberta D. Hill (Agency) Iowa State University

(Address) Head, Home Economics Education Dept., Ames, Iowa 50010

DATE: April 3, 1968

RE: (Author, Title, Publisher, Date) Chadderdon, Hester. Evaluation Materials in Family Relations - Eleventh and Twelfth Grade. Iowa State University. 1967.

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Provide information below which is not included in the publication. Mark N/A in each blank for which information is not available or not applicable. Mark P when information is included in the publication. See reverse side for further instructions.

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Method of Design, Testing, and Trial Developed through research projects and trial use in Iowa schools. Cooperative project between the Division of Vocationa Education, State Dept. of Public Instruction and Iowa Agriculture Experiment Station (Project 1215),

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Type of Program High school classes
Occupational Focus Homemaking
Geographic Adaptability
Uses of Material Models for test items and evaluation devices
Users of Material Home economics teachers

(4) Requirements for Using Material:
Teacher Competency Background in testing and evaluation
Student Selection Criteria

Time Allotment

Supplemental Media --
Necessary ____)
Desirable ____) (Check Which)

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OBJECTIVES AND DEVELOPMENT AND USE OF TEST ITEMS

I. Objectives: These evaluation materials relate to the following objectives

1. To recognize sequence and variations within normal adolescent development.
2. To understand and accept individual differences in people.
3. To recognize their own motives and develop a sense of values that will aid growth toward maturity.
4. To acquire sensitivity to the problems of themselves and other people.
5. To recognize that families are different and expect each of their families to do some things differently than other families do them.
6. To contribute to the growth of others.
7. To recognize the satisfactions from relationships with siblings.
8. To recognize reasons why people have different interests and points of view.
9. To determine and fulfill one's role in the family.

II. Development of Test Items: The items in this packet are based on the above objectives and the generalizations given at the top of the page containing a test item. The solutions and reasons for the problems include misconceptions collected from Iowa pupils.

III. Selection of items to combine into a test: Choose the items which involve the generalizations on which you wish to determine where your pupils are at any stage of learning (pre-test, during unit, at the end of unit, or as a part of semester test).

IV. Provision of a setting and directions: Here are a few suggestions which might be used with family relations tests.

Getting Along

Do you ever say to yourself Why did he do that? Why did she say that? What would I do if I were in that situation?

We all want to get along successfully with other people (children, friends, teachers, parents, etc.). As we know what makes others act and feel as they do, we are better able to get along with them.

Several situations are described in the following pages. After studying each carefully, check (x) the answer(s) you think <u>best</u> and the reason(s) <u>why</u> you have selected the answer(s).

In order to force pupils to consider each solution and/or reason, do <u>not</u> indicate the number of statements they are to check.

V. Scoring the test: To obtain a score for each girl check and total <u>only</u> the correct solutions and/or reasons. (See key on mimeographed copy of each item). It is better <u>not</u> to make deductions for incorrect choices because some of the problems are of such a nature that some of the reasons could conceivably be true under certain circumstances. The key provides for determining only those which make use of the particular generalization(s) listed at the top of each page. Also research on these items indicates that deducting for guessing has little effect on the relative size of the scores unless a student checks an unreasonably large number of responses.

VI. Interpreting the results of the test: The results can be looked at several ways to determine how well your pupils can apply the generalizations involved in the test.

(1) The size of the scores in relation to the total possible score gives a general idea of the class as a whole. Individual scores indicate which pupils have achieved most and which need more experiences. A look at the responses of individual pupils, particularly those whose scores are low, will indicate places where special help is needed.

(2) If the test has been given before and also after the unit has been taught you can see the extent of progress, provided the particular problems have not been discussed in class.

(3) Tabulating the total number of pupils who selected each solution and reason gives you clues to needs for learning, whether the test is used as a pre-test or after some instruction. Noting the generalizations which they failed to apply and the misconceptions (incorrect responses), you have a bases for planning experiences. Below is an illustration of an item that was administered to 119 tenth-grade pupils.

Mabel, 15, and Hazel, 16, are sisters and both are in the tenth grade. They are friends of Elsie, who is a very popular member of their class. Usually the three girls go to the movies on Wednesday afternoons after school, but yesterday Mabel and Elsie dodged Hazel and went to the movie. Hazel has refused to talk to Mabel since the incident and their mother is alarmed. Although the girls have argued, they have never before stopped speaking to each other.

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45 A. Yes
x 74 B. No

Check (x) the reason or reasons for choosing your answer.

33 1. The problem should be solved before it gets worse.
x 62 2. Sisters frequently have disagreements because they are together so often.
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6 6. The sisters are stubborn.

Although almost two-thirds of these pupils checked the correct solution (B), fewer were able to apply the generalization when they selected a reason (2): Some conflict is normal in any close relationship. Many see it as a serious problem (1) or attribute it to jealousy (3 and 5). More than half need help in understanding the generalization.

(Suggestions to Teachers)

SONGS WE SING

You may find this device helpful in learning some of the ideals for family living which the pupils have. These will help you in planning part of the unit in family relations. It is very important for pupils to be frank, so you may need to tell them not to sign their names.

The following statements taken from papers written by twelfth-grade pupils in a preliminary trial of this device indicate the ideas which they held:

1. "We'll find perfect peace where joys never cease and let the rest of the world go by."
   a) "You can't expect to attain perfect peace in marriage."
   b) "Without social contact with others you become self-centered and life is apt to be boring."

2. "Through the years, I'll take my place beside you."
   a) "You are supposed to share the troubles, grief, happiness and joys."
   b) "Beside your husband you can help and work things out together."

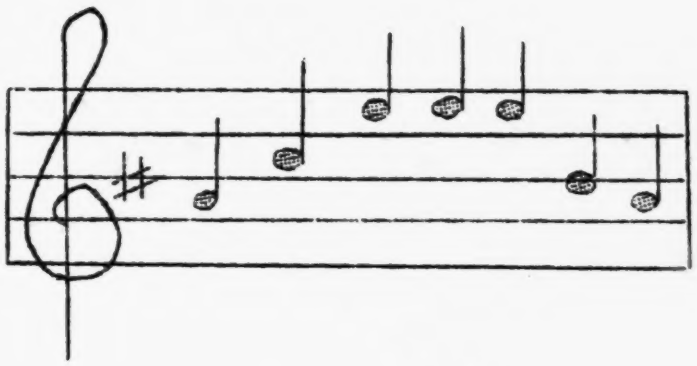
3. "I want a diamond ring, bracelets. . . everything."
   a) "These things don't make a happy marriage."
   b) "A marriage should be filled with love and happiness, not jewels and money."
   c) "This is certainly a selfish attitude to take."

4. "A home is our castle where all our treasures are stored."
   a) "This is an excellent description. Our treasures will be the children and the love we have for each other."
   b) "A home will be a castle in a matter of speaking. It will be peaceful, have as nice things as the family can afford and above all, have happiness and love."

Note that in this last statement there is a failure to indicate that all will not be peaceful and happy. This pupil may need to be helped to see that some conflict is inevitable and desirable in families; that one should not expect peace at all times.

If you find this device useful, you could prepare others similar to it, using excerpts from different songs in effort to learn other ideas which the pupils have.

SONGS WE SING



Song writers often express sentiments about marriage. Parts of four songs are listed below. Read each one and then in the space beneath write down whether the song agrees with your idea of marriage.

1. "We'll find perfect peace where joys never cease and let the rest of the world go by."

2. "Through the years, I'll take my place beside you."

3. "I want a diamond ring, bracelets, -- everything."

4. "A home is our castle where all our treasures are stored."

INDEX TO GENERALIZATIONS AND ITEMS FOR EVALUATION
IN FAMILY RELATIONS: 11 and/or 12TH GRADES

A. The way a family uses its resources depends upon what the family believes is important, even though they don't know or recognize the fact.
Test Item V

B. There are many ways of keeping the avenues of communication open.
Test Item II

C. The quality of relationships is more important than the quantity.
Test Item I

D. Family practices result from differences in cultural heritages.
Test Item III

E. Some conflict is normal in any close relationship.
Test Item X

F. Each individual can make a contribution to activities of a group.
Test Item VII

G. The people with whom we work and play prefer us to "let off steam" in socially acceptable ways and in appropriate places.
Test Item IX

H. A mature person accepts himself, recognizing his potentialities and his limitations.
Test Item VI

I. The attitudes of those with whom a person associates affect the way he feels about himself.
Test Items IV, VII

J. Girls in most cases mature earlier than boys.
Test Item XII

K. Skills in developmental tasks are related to readiness (previous learning and present opportunities).
Test Item VIII

L. Individuals differ in rate of growth.
Test Item XV

M. Problems can be worked out better if you understand how others feel.
Test Item I

N. Parents as well as adolescents have cultural pressures.
Test Item XI

O. An adequate home acts as a sounding board for feelings--where each family member can "get things off his chest" and still be accepted.
Test Item XIV

P. Parents cannot do the whole job of helping children grow to maturity; communities must help.
Test Item XI

Generalization C: The quality of relationships is more important than the quantity.

I. Mr. and Mrs. Fisher have five children ranging in age from eight to sixteen. Thurdsay night has always been "family fun" night for them. Now James, 12, has a Boy Scout meeting on Thursday night which is the only free night in the week when the other members of the family can get together. Mr. Fisher said, "James knew this was the night we got together before he started going to Boy Scout meetings, so we'll go on without him."

The Harris family had a problem similar to that of the Fishers. However, they have done away with "family fun" night but try to do things together as often as they can. Sometimes the older children come into their parent's room at bedtime so that they can talk over the day's happenings. Mrs. Harris often packs picnic dinners and, when the family comes home in the evening, they ride out and find a pretty spot to eat.

Which family do you think has the better plan?

Check with an x the answer which you think <u>better</u>.

___A. Fisher family
x* B. Harris family

Check with an x the reason or reasons which explain your answer.

___1. The plan used by the Harris family doesn't leave anyone out.
___2. It is more interesting to do different things at different times.
___3. Every family should have a "family fun" night.
___4. As children grow older they need to break family ties a little.
___5. The smaller children need to have fun just as much as the older ones.
___6. James may draw away from his family and get into trouble.
x* 7. It's more important how much a family enjoys getting together than how often they get together.

x* indicates best responses for this generalization

Generalization B: There are many ways of keeping the avenues of communication open.
M: Problems can be worked out better if you understand how others feel.

II. Mr. and Mrs. Evans and Donald, age 14, have usually talked over the day's events during dinner. Recently, Donald has not joined in the conversations and, if he is asked what happened at school, he doesn't answer or he says, "Nothing" or "Gosh, why do you want to know?"

What should Donald's family do about his not joining the conversations?

Check with an x the answer you think best.

___A. Try to get him to join in the conversations.
*x B. Find out why he doesn't join in.
*x C. Let him alone.

Check with an x the reason or reasons which explain your answer.

____1. Every family member should take an active part in the activities.
____2. Donald may feel neglected.
**x 3. He probably needs help with some problems.
**x 4. He may be at a stage where he wants to keep things to himself.
**x 5. You don't have to tell everything that happens to be a good member of a family.
**x 6. His family may be able to help if they know how he feels.

---

* Flexible Key B or C
** Flexible Key 3 and 6 or 4 and 5

Generalization D: Family practices result from differences in cultural heritages.

III. Christine is going steady with Jack. She wants to invite him over for Christmas dinner, knowing that they will be having lutfisk (a Swedish fish) as they always do. She is afraid that Jack will think they are queer celebrating Christmas as her parents did in Sweden.

Do you think Christine should invite Jack?

Check with an x the answer you think <u>better</u>.

_x_ A. Yes
____ B. No

Check with an x the reason or reasons which explain your answer.

____ 1. Jack might not like lutfisk since it is such a strong-flavored fish so he wouldn't enjoy the dinner.
_x_ 2. He should be able to understand that families have different customs depending on their background.
____ 3. Christine should not be ashamed of things her family does.
____ 4. He might think her family did odd things.
____ 5. He might enjoy celebrating Christmas a different way.

Generalization I: The attitudes of those with whom a person associates affect the way he feels about himself.

IV. Dan, 16, was much slower doing his work than many others in his classes. Because he usually got poor marks, he was sure that he was dumb. Recently, Mrs. Edwards, his teacher, discovered that he was very good in art and suggested that he help design the costumes for the Shakespearean play the English class was presenting. Dan's classmates began to think differently about his ability when they saw his costume designs.

How do you think Dan felt after he began to do well in art?

Check with an x the answer or answers which you think <u>best</u> explain how he felt.

____A. More friendly toward his classmates
____B. Conceited
_x_C. More sure of himself
____D. More like the others in his class

Check with an x the reason or reasons for your answer or answers.

_x_1. His classmates thought more of him.
____2. He proved he could do something well.
____3. He knew he was useful.
____4. Suddenly getting a lot of attention sometimes makes a person think he can do anything.

Generalization A: The way a family uses its resources depends upon what the family believes is important, even though they don't know or recognize the fact.

V. Mr. Beck and Mr. Brown both work as tinsmiths at the local railroad shops and each have received a $200 bonus. Neither family has a TV set. Both families have a washing machine that is not automatic. Mr. Beck took his bonus and bought a TV set, while Mr. Brown bought an automatic washing machine. Each family has four children from 6 to 15 years of age.

Why do you think they spent their money for different things?

Check with an x the reason or reasons you think <u>best</u> explain why these men spent their bonus money differently?

____1. Mr. Beck thought entertainment was more important than Mr. Brown did.
____2. Mr. Beck wanted his children to have what other children have.
____3. Mr. Brown was more considerate of his wife than Mr. Beck.
_x_4. Families have different interests and desires.

Generalization H: A mature person accepts himself, recognizing his potentialities and his limitations.

VI. Paul and Floyd attend a high school which goes "all out" for basketball. They both love basketball but are too short to be on the team. Paul spends a great deal of his time with the team, however, and the coach has decided to make him a student manager. Floyd resents not being able to play and sits on the side of the visiting team at games and sometimes routs against his school.

What might explain the difference in Paul's and Floyd's behavior?

Check with an x the reason or reasons which <u>best</u> explain why Paul and Floyd act differently.

____1. Floyd is spoiled.
____2. Paul has more school spirit.
____3. Their home life and the attitude of their parents could be different.
* x 4. Paul is more like a man and accepts things as they are.
____5. Floyd is thinking too much of himself and not of the team.
____6. Floyd is the type who gives up before trying.
* x 7. Floyd has not yet learned to accept things he can't help.
____8. Paul is not so selfish.

* Flexible Key 4 or 7

Generalization F: Each individual can make a contribution to the activities of a group.

I: Attitudes of those with whom a person associates affect the way he feels about himself.

VII. Charlotte, 17, was chairman of the program committee for the senior class assembly program.. When she presented the program to the class for their approval, Mrs. Anderson, class adviser, noticed that Jacqueline was the only student not contributing to the program. After the meeting, Mrs. Anderson asked Charlotte about the omission. Charlotte said, "The program is to be dramatized and Jacqueline has little dramatic ability."

Do you think the plans should be changed so Jacqueline can contribute?

Check with an x the answer you think <u>better</u>.

____A. No.
_x_B. Yes

Check with an x the reason or reasons for choosing your answer.

____1. All members of a class should participate in a class assembly.
____2. If Jacqueline is broad-minded, she can adjust to this situation.
_x_3. Jacqueline may feel that she can do nothing well, if she is left out.
_x_4. A whole program shouldn't be changed for one person.
____5. Jacqueline can be included by allowing her to use some other abilities she has.
____6. It is not fair to leave one person out.

Generalization K: Skills in developmental tasks are related to readiness (previous learning and present opportunities).

VIII. Juanita, 16, is very pretty and the boys at school want dates with her. She prefers not to date but to go to the movies or "Teen Center" with some of her girl friends on their dateless nights.

What might explain why Juanita was not interested in dating?

Check with an x the reason or reasons which <u>best</u> explain Juanita's lack of interest.

____1. She may be shy and doesn't want the boys to know it.
_x_2. She may not be interested in boys yet.
____3. She may like to get good grades and knows that dating will interfere.
____4. She may not know how to act with a boy.
____5. She may be "stuck up."
____6. It may be that she has had an unpleasant experience with a boy.

Generalization G: The people with whom we work and play prefer us to "let off steam" in socially acceptable ways and in appropriate places.

IX. In play practice, when Miss Taylor told John to come on stage through a different door and to say his lines differently, John pounded the table causing a vase to fall off and break. Miss Taylor said she didn't care if he showed his anger, but he should be more careful of other people's property.

What was Miss Taylor trying to help John do after he broke the vase?

Check with an x the reason or reasons which you think best explain what she was trying to do.

____1. Calm him down.
____2. Make him feel sorry for what he did.
____3. Be more thoughtful of other people.
____4. Help him learn to control his temper.
____5. Let him know that he wasn't bothering her by losing his temper.
*x 6. Tell him there are ways of letting off steam that are all right.
____7. Make him ashamed of himself.
____8. Teach him to respect others' property.
*x 9. Let him know there are good and poor ways to show his feelings.

* Flexible Key 6 or 9

Generalization E: Some conflict is normal in any close relationship.

X. Vera, 19, and Raymond, 20, have gone steady for several years and plan to be married soon. Vera came home quite upset several nights ago, however, because they had a misunderstanding. It was their first serious disagreement and Vera thinks that they don't understand each other very well. She has decided that they should wait a while longer before marrying to be sure that all matters on which they disagree can be worked out so they won't have any serious disagreements after they marry.

Do you agree with Vera's decision?

Check with an x the answer you think <u>better</u>.

_x_ A. No
____ B. Yes

Check with an x the reason or reasons for choosing your answer.

____ 1. Vera has to live with him and she doesn't enjoy disagreements.
____ 2. Disagreements should be worked out before marriage or they may lead to unhappiness and a broken home.
_x_ 3. It's natural to disagree at times with someone you spend a lot of time with.
____ 4. This disagreement could lead Vera to find out a lot about Raymond that she doesn't know.
____ 5. If they love each other, one misunderstanding won't matter.
____ 6. They need time to see if they will have any more misunderstandings.

Generalization N: Parents as well as adolescents have cultural pressures.

XI. One of Mr. Miller's neighbors told him that his daughter, Helen, 15, had been seen talking to Tom Evans, who has just returned from the boys' reformatory. Mr. Miller discussed this with Helen and told her that he'd rather she didn't talk to Tom again.

Why do you think Mr. Miller suggested that Helen stop talking to Tom?

Check with an x the answer or answers you think <u>best</u>.

____1. Tom might be a bad influence on Helen.
____2. Girls need to be guided to keep the right kind of acquaintances.
____3. Tom was not the right kind of guy to talk to.
____4. Helen is a bit young to be talking to a fellow with such a background as Tom has.
_x_5. Since Tom has not yet been accepted by the community, people would criticize the Millers.

Generalization J: Girls in most cases mature earlier than boys.

XII. Cynthia was in the seventh grade Home Economics class when the teacher brought up the idea of inviting the seventh grade Industrial Arts class to a party the next day, when they would be baking cookies and making lemonade. Cynthia said, "Oh, those boys won't know how to act and they'll be so silly." The teacher said, "We could have the party so well planned that they will be sure to know how to act." "Well," said Cynthia, "I'd just as soon have the party without those boys."

What might have caused Cynthia to act as she did?

Check with an x the answer or answers you think best.

_x_1. Cynthia is more mature than the boys in her class.
____2. She may not be able to get along with boys.
____3. Cynthis has formed an opinion of all boys from having associated with a few who didn't know how to act.
____4. She is bashful and shy around boys.
____5. Cynthia is not used to being around boys.
____6. She is just spoiled and usually gets her way.
____7. She thought the boys would pay more attention to some of the other girls than to her.

Generalization P: Parents cannot do the whole job of helping children grow to maturity; communities must help.

XIII. In the town of Friend, with a population of 10,000, a gang of boys comes to the recreation center every night and "beats up" one or two boys who are there. The fights always take place outside the recreation center so the chaperones of the center have no control over them. Some people feel that the community should take action.

What do you think should be done?

Check with an x the answer or answers you think best.

____A. The parents of the gang should be responsible for what their children are doing.
_x_B. The community should take some responsibility for these boys.
____C. Both groups of boys should get together and find out what is causing the fights.

Check with an x the reason or reasons which best explains your answers.

____1. The community has no control over other people's children.
____2. Parents should take care of making their children behave.
____3. The recreation center will get a bad reputation.
____4. The boys in the gang could become criminals.
____5. Boys understand each other better than older people do.
_x_6. Parents need help from the community in raising their children.

Generalization O: An adequate home acts as a sounding board for feelings--where each family member can "get things off his chest" and still be accepted.

XIV. Mrs. Martin told four-year-old Janice that she couldn't go outside without her boots because it was muddy. Janice said, "I don't like you." This is always her response whenever she can't do as she wishes.

Should Janice's mother let her say this?

Check with an x the answer you think better.

_x_ A. Yes
____ B. No

Check with an x the reason or reasons which explain your answer.

____ 1. Children think more of their parents, if they are made to do as they are told.
____ 2. Janice needs to learn right from wrong.
____ 3. If she is ignored, she will soon stop because she is doing it to get attention.
____ 4. She will say this to other people and they will not like her.
____ 5. She will grow out of it, if her mother doesn't pay any attention to her saying this.
_x_ 6. It is better to let children express their feelings at home.
____ 7. Janice is going through a stage that most four-year-olds go through.
____ 8. She will have a hard time breaking this habit, if it isn't broken soon.

Generalization L: Individuals differ in rate of growth.

XV. Jim and Bill attended the Junior-Senior Prom, but did not bring dates. Most of the fellows went with dates but a few didn't. These fellows spent the evening playing cards and watching the dancers. When the affair ended, Jim suggested that Bill and he take balloons from the decorations, so they jumped for them. This brought most of the decorations down over the heads of those who were leaving. The principal was furious with them and said they would have to see him the next day.

What might explain Jim's and Bill's actions?

Check with an x the answer or answers you think <u>best</u> explains their actions.

_x_1. They were not as mature as the other students.
____2. They wanted attention.
____3. They felt left out of the prom.
____4. It is natural for boys to act that way.
____5. They wanted the others to think they were having fun even though they didn't have dates.
____6. They had not been trained properly at home.
____7. They were bored and wanted to create excitement.
____8. They hadn't had the attention and love that they needed in childhood.
____9. They were show-offs.

VT 005 749
Chadderdon, Hester
Evaluation Materials in Housing, Ninth Grade.

Iowa State Dept. of Public Instruction, Des Moines. Div. of Vocational Education
Iowa Agriculture and Home Economics Experiemnt Station, Ames
MF AVAILABLE IN VT-ERIC SET.
Iowa State University Bookstore, Iowa State University, Ames, Iowa 50010 ($.45).
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*HOME ECONOMICS EDUCATION; *STUDENT EVALUATION; GRADE 9; DESIGN PREFERENCE; *TEST CONSTRUCTION; FURNITURE ARRANGEMENT; *ACHIEVEMENT TESTS; HOME FURNISHINGS; HOME MANAGEMENT; TESTING

Models for performance and problem solving test items and evaluation devices are provided for adaption by home economics teachers to the needs of specific ninth grade housing classes in the comprehensive high school. The evaluation materials were developed through research projects and trial use in Iowa schools by heterogeneous school groups. The materials are based on subject matter areas: safe, functional, and attractive interior designs, art and design principles, the aesthetic values of design, relationships between occupants, management techniques, and storage facilities. Included are: (1) objectives to which the evaluation materials relate, (2) suggestions for introducing and interpreting the results of tests, and (3) the problems presented as capsulated experiences, illustrating generalizations which require the student to give not only the answer but also justification of the answer. Line drawings illustrate the test problems. Other evaluation materials from home economics areas with similar formats are available as VT 005 746-VT 005 757 (ARM Summer 1969). (FP)

VT005749

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Evaluation Materials

in

Housing

Ninth Grade

Prepared by

Hester Chadderdon

Home Economics Research
Iowa State University
of Science and Technology
Ames, Iowa

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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M E M O R A N D U M

TO: The ERIC Clearinghouse on Vocational and Technical Education
The Ohio State University
980 Kinnear Road
Columbus, Ohio 43212

[redacted]

FROM: (Person) Alberta D. Hill (Agency) Iowa State University

(Address) Head, Home Economics Education Dept., Ames, Iowa 50010

DATE: April 3, 1968

RE: (Author, Title, Publisher, Date) Chadderdon, Hester. Evaluation Materials in Housing - Ninth Grade. Iowa State University.

Supplementary Information on Instructional Material

Provide information below which is not included in the publication. Mark N/A in each blank for which information is not available or not applicable. Mark P when information is included in the publication. See reverse side for further instructions.

(1) Source of Available Copies:
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Address Ames, Iowa 50010
Limitation on Available Copies none Price/Unit $ .45
(quantity prices)

(2) Means Used to Develop Material:
Development Group Heterogeneous school groups
Level of Group
Method of Design, Testing, and Trial Developed through research projects and trial use in Iowa schools. Cooperative project between the Division of Vocationa Education, State Dept. of Public Instruction and Iowa Agriculture Experiment Station (Project 1215),

(3) Utilization of Material:
Appropriate School Setting Comprehensive high school
Type of Program High school classes
Occupational Focus Homemaking
Geographic Adaptability
Uses of Material Models for test items and evaluation devices
Users of Material Home economics teachers

(4) Requirements for Using Material:
Teacher Competency Background in testing and evaluation
Student Selection Criteria

Time Allotment

Supplemental Media --
Necessary ____)
Desirable ____) (Check Which)

Would not be used in present form but adapted by teacher for use in particular classes.

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OBJECTIVES

1. Desire to make the bedroom as attractive, safe, and convenient as possible with the resources which we possess.

2. Recognition that attractive, well-arranged bedrooms which afford opportunities for varied activities can add pleasure to daily living.

3. Ability to share a room successfully.

4. Ability to apply art principles in decorating and arranging rooms.

5. Ability to maintain a clean and orderly bedroom without excessive expenditure of time and money.

6. Ability to plan, make, and use satisfactory storage space in our bedrooms.

7. Recognition of the many enjoyable possibilities for creating and renovating furnishings and accessories for our bedrooms.

DEVELOPMENT OF TEST ITEMS

The items in this packet are based on the above objectives and the generalizations given at the top of each page containing a test item. The solutions and reasons for the problems include misconceptions collected from Iowa high school pupils. The key has been approved by subject matter specialists.

USE OF TEST ITEMS

1. Selection of items to combine into a test: Choose the items which involve the generalizations on which you wish to determine where your pupils are at any stage of learning (pre-test, during unit, at the end of unit, or as a part of semester test).

2. Directions: The directions accompany each item. In order to force pupils to consider each solution and reason, the number of correct responses is not indicated.

3. Scoring the test: To obtain a score for each girl total only the correct solutions and/or reasons. (See key on copy of each item). It is better not to make deductions for incorrect choices because some of the problems are of such a nature that certain of the reasons could conceivably be true under some circumstances. The key provides for determining only those which make use of the particular generalization(s) listed at the top of each page. Also research indicates that deducting for guessing has little effect on the relative size of the scores unless a pupil checks an unreasonably large number of responses.

4. Interpreting the results of the test: The results can be looked at several ways to determine how well your pupils can apply the generalizations.

   (1) The size of the scores in relation to the total possible score gives a general idea of the class as a whole. In-

dividual scores indicate which pupils have highest achievement and which need more experiences. A look at the responses of individual pupils, particularly those whose scores are low, will indicate places where special help is needed.

(2) If the test has been given before and also after the unit has been taught, you can see the extent of progress, provided the particular problems have not been discussed in class.

(3) Tabulating the total number of pupils who selected each solution and reason gives you clues to needs for learning, whether the test is used as a pre-test or after some instruction. Noting the generalizations which they failed to apply and the misconceptions (incorrect responses), you have bases for planning experiences. Below is an item that was administered to 134 ninth-grade pupils.

Jean, a ninth-grade student, was permitted to move into her older sister's bedroom a few weeks ago, as the sister had recently married. Her parents are allowing her to change the color scheme. Her room has one large window which faces the south and one which faces the west. Below are listed two groups of colors which she likes.

Which group of colors do you think she should choose?

Group A	Group B
yellow	blue off-white
grey	grey
red	green
various shades and brightnesses of these colors	various shades and brightnesses of these colors

Check with an x the group of colors you think better.

39 ____ Group A
95 _x_ Group B

Explain your choice by checking (x) one or more of the reasons below.

24 ____ 1. There are fewer colors, and too many colors should be avoided in a bedroom.
36 ____ 2. The room needs to seem warmer, and these colors will give it a feeling of warmth.
25 ____ 3. Blues and greens are better together than reds and yellows.
27 ____ 4. These are better colors for a girl's bedroom.
81 _x_ 5. Colors with blue in them tend to be cool.
32 ____ 6. This group of colors would make the room look brighter.
19 ____ 7. Reds and yellows go together better than blues and greens.
81 ____ 8. These colors are more restful.
93 _x_ 9. The room needs cool colors since it has south and west windows.
31 ___ 10. The room needs some gay colors to go with the light from the two windows.

It is evident from the figures that although a large number (95 of 134) selected the better answer, many were still unable to do so. Also, a sizeable number believed that one should not use many colors in a bedroom and that the room needed warm, bright, and gay colors; they failed to see that colors with blue in them would be better than warm colors like red and yellow. The ideas that blues and greens or reds and yellows go together better indicate need for more experience in combining colors.

INDEX TO GENERALIZATIONS AND ITEMS FOR EVALUATION IN HOUSING: 9TH GRADE

A. Darker values advance; lighter values recede. Test Item I

B. Colors with a quantity of blue, particularly if they are near middle value, tend to be cool. Test Item II

C. Colors which are cool are best suited to south, west, or southwest exposures. Test Item II

D. Observation of traffic lanes within a room and consideration of furniture groupings for their uses and spatial appearance add to the convenience and orderly appearance of the room. Test Items III and V

E. Placing the darkest value on the floor gives a feeling of stability to the room. Test Item IV

F. Furniture arrangement is more pleasing when large pieces are placed parallel or at right angles to the structural lines of the room. Test Items V and XII

G. Vertical lines create an effect of height. Test Item VI

H. A pleasing arrangement of accessories is one which has a focal point; allows the eye to travel easily from one part of the arrangement to another; is in good proportion to the space in which it is to be placed. It also holds the objects together as a nice mass interest in shape. Test Item VII

I. A room which expresses the personality of those living in it will be more homelike. Test Item VIII

J. The choice of window treatment is determined in part by the character of the furniture. Test Item VIII

K. Intense or bright colors advance, dull or greyed colors recede. Test Item IX

L. Darker values advance; lighter and medium values tend to recede. Medium values are restful and give a feeling of spaciousness to a room. Test Item IX

M. People who share a room need to plan together for its furnishings, care, and use for maximum harmony in living. Test ItemX

N. Storage space can be used to better advantage if articles are grouped which are used together, if articles used most frequently are placed in the most convenient places, and if articles are arranged so they can be obtained without moving another article. Test Item XI

O. Energy is saved if furniture is placed where it is convenient to use. Test Item XII

P. A restful feeling is created when the furniture is arranged so that each side of the room has equal attraction and feeling of weight. Test Item XII

Q. Proportions of a room can appear to be altered by arrangement of furnishings. If furniture is placed at right angles to long walls, the room will appear shorter; however, the spaces will be more interesting if the room is not divided into two equal parts. Test Item XII

Generalization (A): Darker values advance; lighter values recede.

I. Janice is to have her bedroom painted. Because the ceiling of her room is very low, she feels it will be much more attractive if she can make the ceiling appear higher. She has already decided on the main color for the walls of her room.

Would you suggest that she paint the ceiling a lighter or a darker shade of the wall color?

Check with an x the answer you think better.

_x_ A. Lighter ceiling
____ B. Darker ceiling

Explain your choice by checking (x) one or more of the reasons below.

____ 1. Dark colors make things look larger, so the darker ceiling would make it look higher.
____ 2. Since there are two windows, there will be lots of light and too many light colors wouldn't look right.
_x_ 3. Light colors will make the ceiling look higher because light colors tend to appear farther away.
____ 4. Lighter colors will set off the other colors better than the dark.

Generalization (B): Colors with a quantity of blue, particularly if they are of middle value, tend to be cool.

(C): Colors which are cool are best suited to south, west, or southwest exposures.

II. Jean, a ninth-grade student, was permitted to move into her older sister's bedroom a few weeks ago, as the sister had recently married. Her parents are allowing her to change the color scheme. Her room has one large window which faces the south and one which faces the west. Below are listed two groups of colors which she likes.

Which group of colors do you think she should choose?

Group A	Group B
yellow	blue
grey	grey
red	green
various shades and brightnesses of these colors	off-white
	various shades and brightnesses of these colors

Check with an x the group of colors you think better.

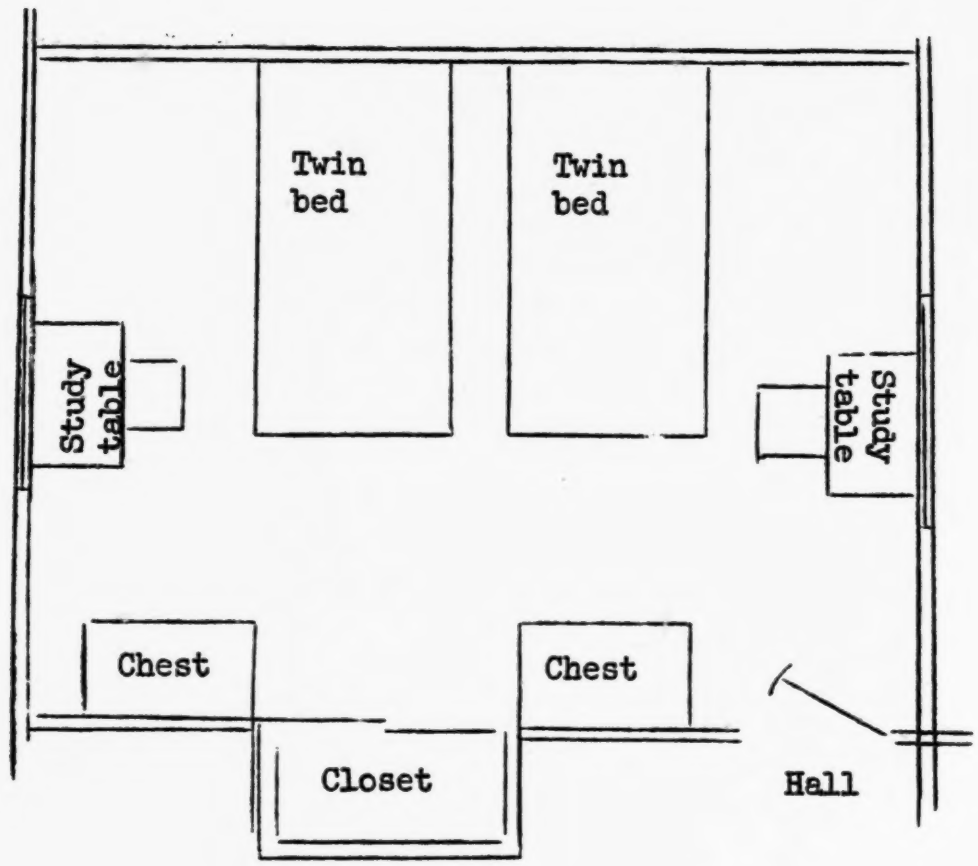
____Group A
_x_ Group B

Explain your choice by checking (x) one or more of the reasons below.

____1. There are fewer colors, and too many colors should be avoided in a bedroom.
____2. The room needs to seem warmer, and these colors will give it a feeling of warmth.
____3. Blues and greens are better together than reds and yellows.
____4. These are better colors for a girl's bedroom.
_x_5. Colors with blue in them tend to be cool.
____6. This group of colors would make the room look brighter.
____7. Reds and yellows go together better than blues and greens.
____8. These colors are more restful.
_x_9. The room needs cool colors since it has south and west windows.
____10. The room needs some gay colors to go with the light from the two windows.

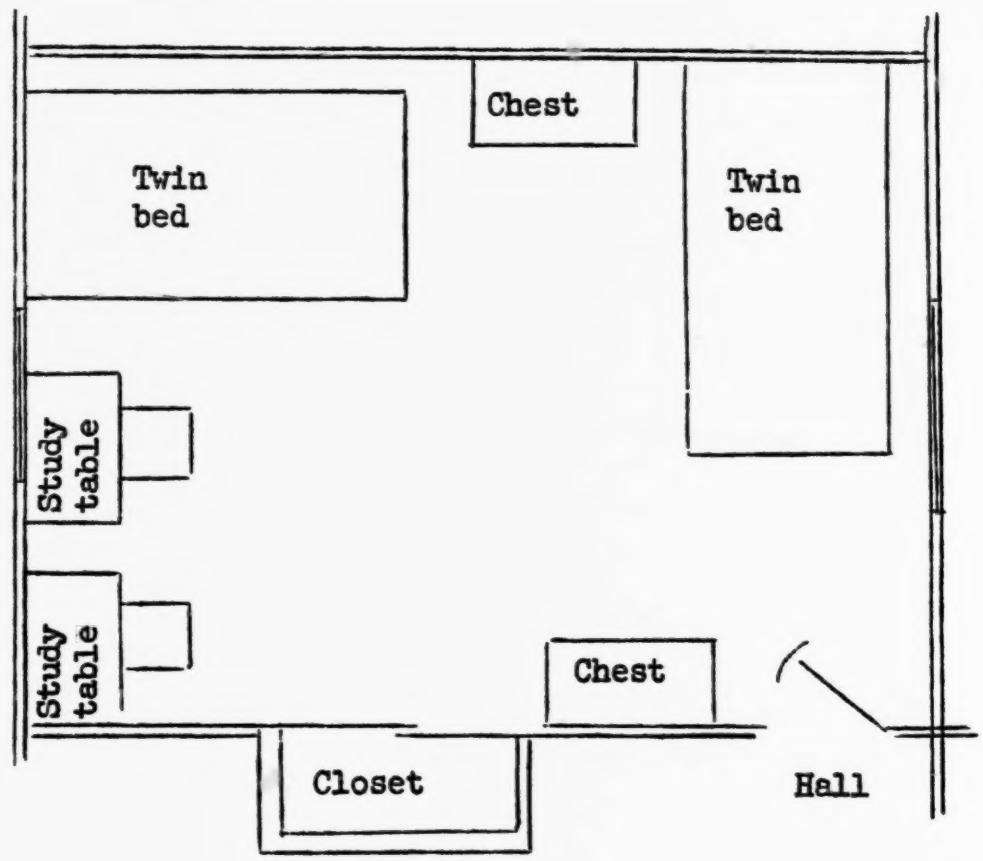
ITEM - III

A



A

B



B

Generalization (D): Observation of traffic lanes within a room and consideration of furniture groupings for their used and spatial appearance add to the convenience and orderly appearance of the room.

III. Bernice, 14, and Juanita, 15, are sisters and share the same bedroom. They have seen pictures of two room arrangements which they think they could use in their room. They have the same pieces of furniture that are pictured and the size of the rooms seems to be about the same as theirs.

Study the diagrams on the opposite page and decide which you think is better.

Check with an (x) the answer you think better.

_x_ A
___ B

Explain your choice by checking (x) one or more of the reasons below.

_x_ 1. The arrangement makes a better balanced room.
_x_ 2. Having the chest of drawers near the closet is more convenient.
___ 3. Each girl has a part of the room for her own.
___ 4. There is more space to entertain friends.
_x_ 5. Grouping the furniture into units makes a better design.

Generalization (E): Placing the darkest value on the floor gives a feeling of stability to the room.

IV. Sally is to have new rugs in her bedroom and is ready to choose them.

Should the color of the rugs be a lighter or darker shade than the ceiling and walls?

Check with an (x) the choice you think better.

_x_ A. Darker than ceiling and walls.
___ B. Lighter than ceiling and walls.

Explain your choice by checking (x) one or more of the reasons below.

___ 1. The rugs should be a contrast to the walls and ceiling.
___ 2. The darker rugs will make the floor seem larger.
_x_ 3. Darker rugs will give the room a feeling of being held in place.
___ 4. The lighter rugs would attract less attention.
___ 5. Darker rugs will tone down the rest of the room.

Generalizations (F): Furniture arrangement is more pleasing when large pieces are placed parallel or at right angles to the structural lines of the room.
(D): Observation of traffic lanes within a room and consideration of furniture groupings for their uses and spatial appearance add to the convenience and orderly appearance of the room.

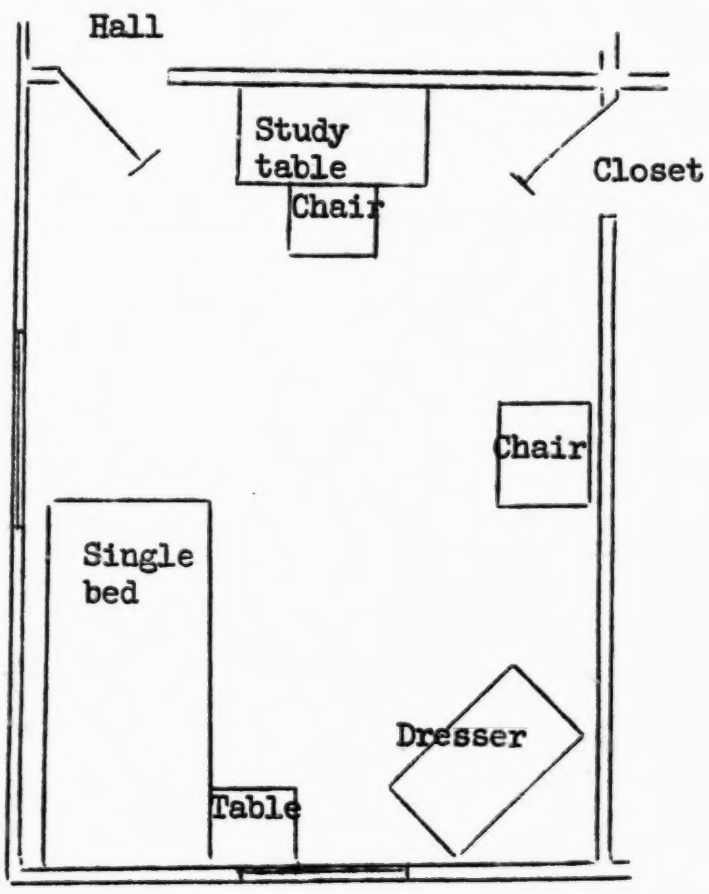
V. Ann, a ninth-grade pupil, has been experimenting with the arrangement of her bedroom. She has tried the two different arrangements which are pictured below. Study the pictures and decide which is better.

Check with an (x) the arrangement you think is better.

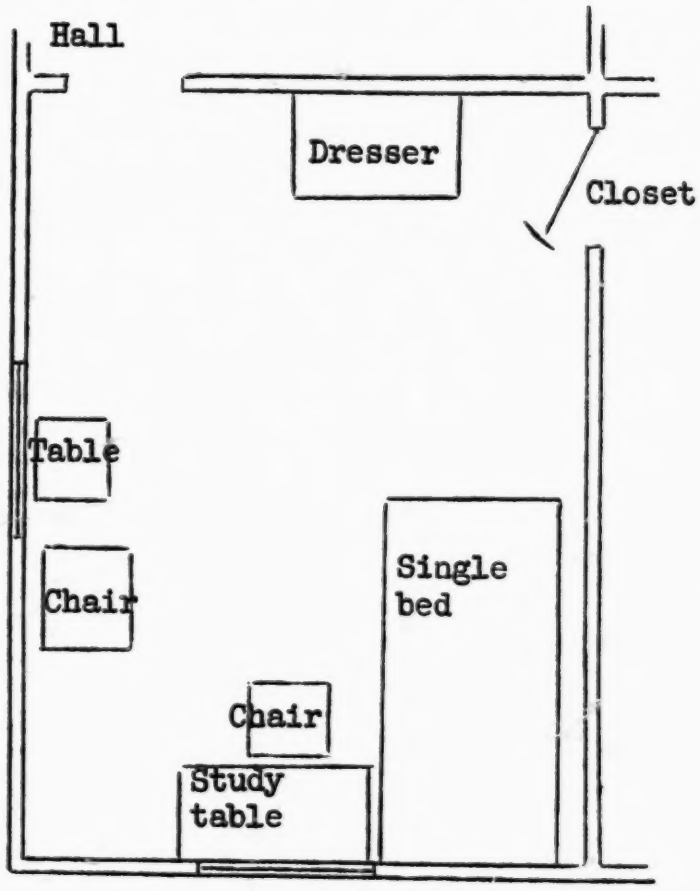
___ Room A
_x_ Room B

Explain your choice by checking (x) one or more of the reasons below.

___ 1. All corners of the room are filled.
_x_ 2. Furniture is grouped according to use.
___ 3. Furniture is more evenly spread around the room.
___ 4. Makes room seem larger.
_x_ 5. Furniture is placed to repeat the lines of the room.

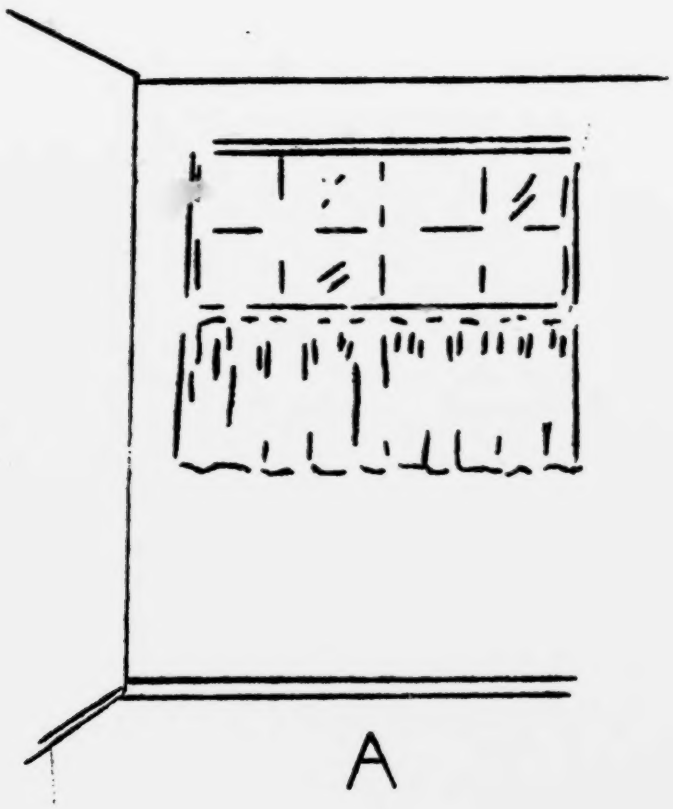


A



B

ITEM - VI



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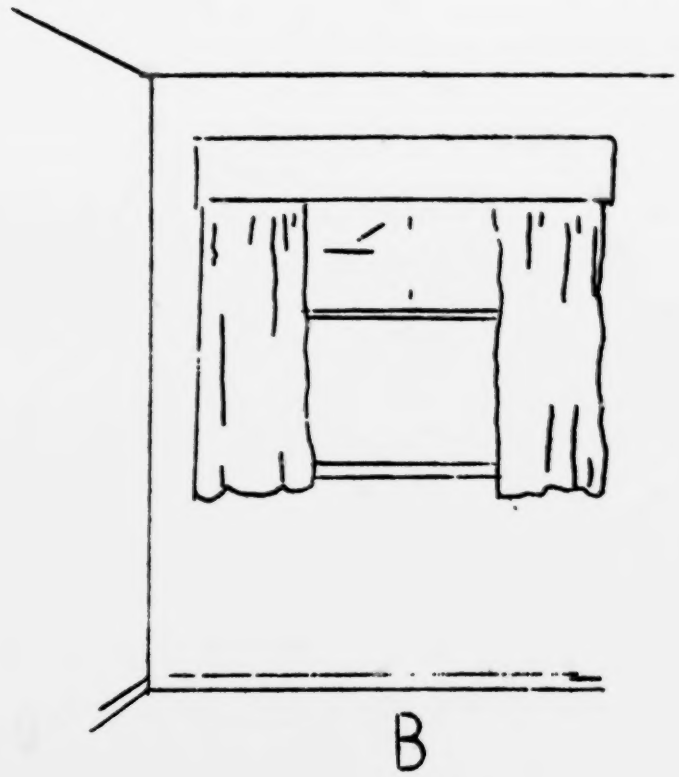

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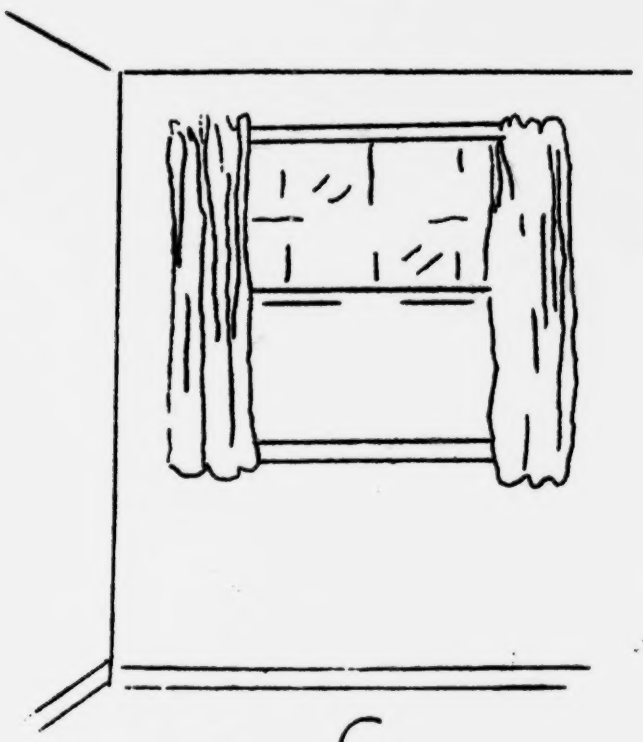
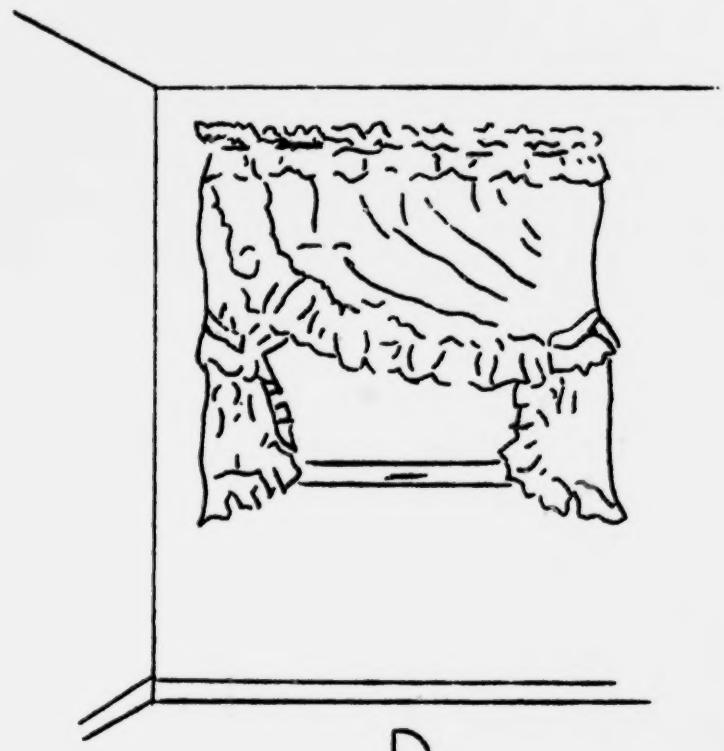


C



D

Generalization (G): Vertical lines create an effect of height.

VI. The windows in Karen's bedroom are short and wide. She is choosing curtains and wonders what kind of window treatment would look best at these windows.

Choose from the window treatments pictured on the opposite page the <u>one</u> you think best.

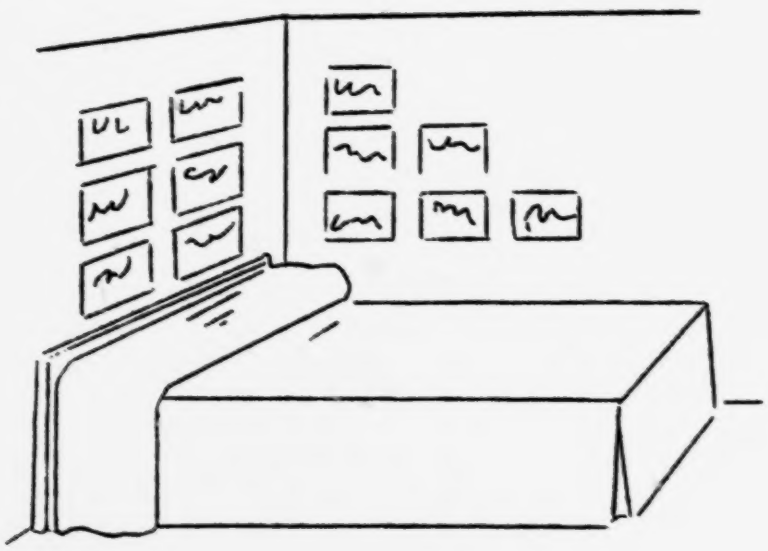
Check with an (x) the curtain you think best.

___ A x C
___ B ___ D

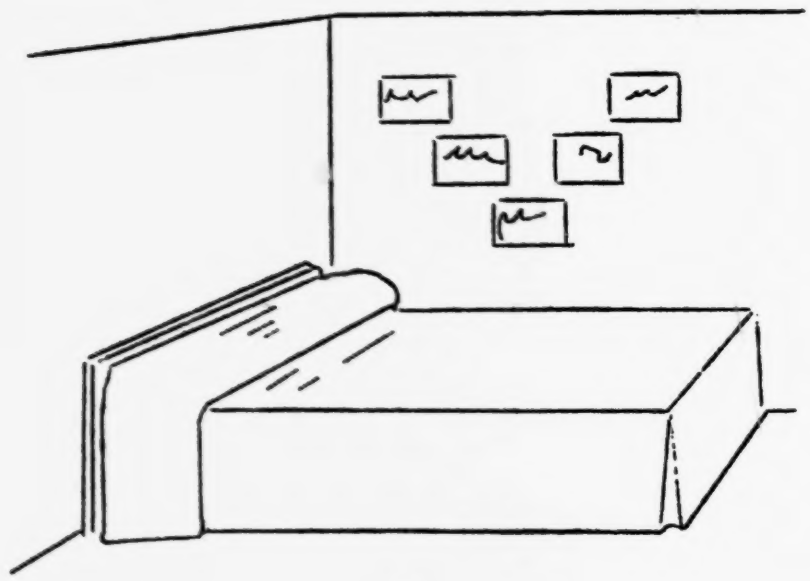
Explain your choice by checking (x) one or more of the reasons below.

___ 1. Makes window look smaller because only part of it shows.
x 2. Up and down lines give the effect of height.
___ 3. Looks more like a bedroom window.
___ 4. More like a girl's room.
___ 5. Window doesn't look so bare.
___ 6. Diagonal lines make things seem higher.
___ 7. Lets more light in.
___ 8. Curtain on bottom part only makes window seem longer.

ITEM - VII



A



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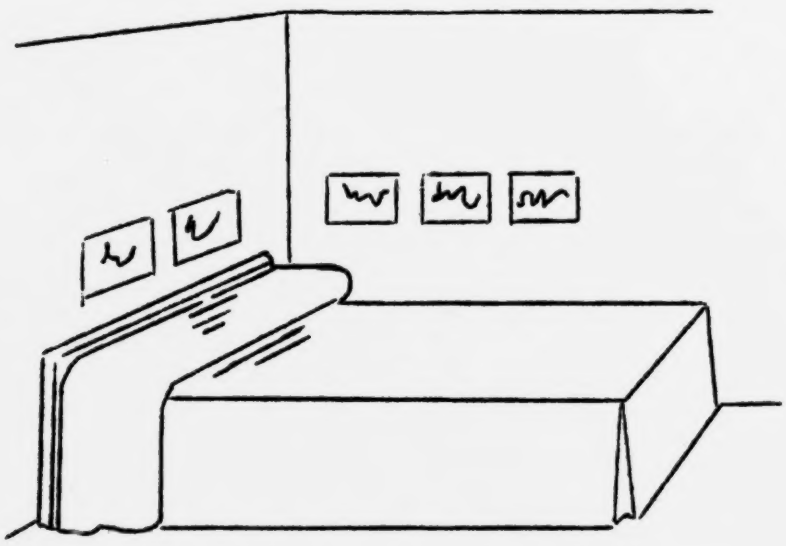
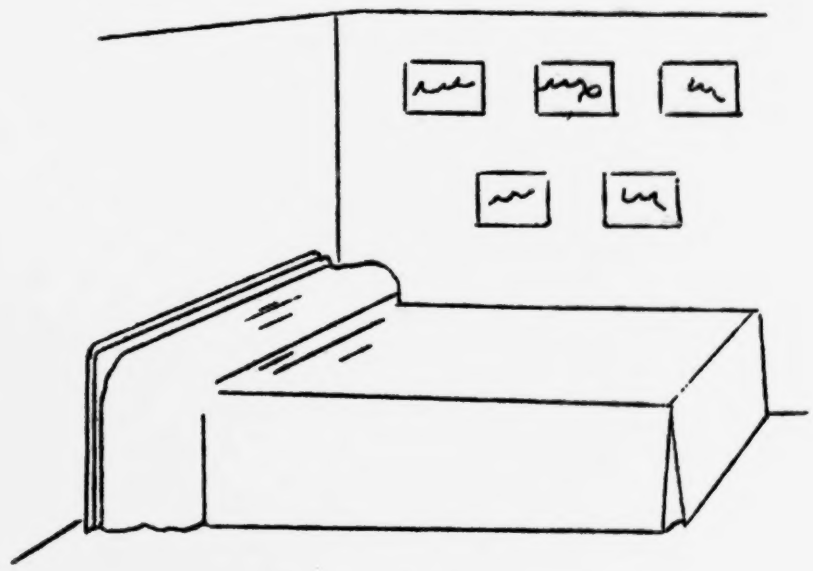


C



D

Generalization (H): A pleasing arrangement of accessories is one which has a focal point; allows the eye to travel easily from one part of the arrangement to another; is in good proportion to the space in which it is to be placed. It also holds the objects together as a nice mass interest in shape.

VII. Marian, 14, collects pictures of movie actors. She decided to frame the pictures of her favorite stars and hang them on her bedroom walls. On the opposite page are four arrangements that she has considered placing over her bed.

Check with an (x) the one or ones you think are pleasing arrangements.

x A
___ B

x C
___ D

Explain why you chose the arrangement(s) you did by putting the numbers listed at the right beside the letter of that arrangement.

Arrangement	Numbers of reasons for choosing arrangement(s)
A	5, 7, 8
B	
C	5, 7, 8
D	

Reasons

1. Makes the room look bigger.
2. Arrangement more unusual.
3. Eye follows pictures easily.
4. Makes the ceiling look higher.
5. Repeats the lines of the bed.
6. Pictures fit the space.
7. Well-balanced.
8. Bed and pictures hold together as a unit.

Explain why you did not choose each of the other arrangements by putting the numbers of the reasons beside the letter of the arrangement.

Arrangement	Numbers of reasons for not choosing arrangements
A	
B	1, 2
C	
D	1

Reasons

1. The effect is not balanced.
2. The lines lead the eye toward the ceiling rather than to the center of interest.
3. Too plain, uninteresting arrangement.
4. Too many pictures.
5. Too few pictures.

Generalization (I): A room which expresses the personality of those living in it will be more homelike.
(J): The choice of window treatment is determined in part by the character of the furniture.

VIII. Alma is an athletic girl and enjoys outdoor sports very much. She is on the girls' basketball team although she is only a freshman. Alma brings her girl friends home with her quite frequently. Recently she has become conscious of the appearance of her room and would like to improve it. The furniture in her room consists of a Hollywood bed made by cutting down the head and foot boards from an old bed, a dressing table made from boxes, a chest of drawers, a straight chair, and a rocking chair.

Which of the materials listed below would be good choices for her bedspread and a skirt for her dressing table?

x A. Plaid Gingham
___ B. Dotted Swiss
___ C. Organdy
___ D. Taffeta
x E. Denim

Explain why you chose the material(s) by putting the numbers of the reasons listed beside the letter of the material(s).

Materials	Numbers of reasons for choosing material
A.	1, 4
B.	
C.	
D.	
E.	1, 4

1. Seems more like the type of furniture.
2. Pretty and frilly.
3. Will dress the room up a lot.
4. Fits her personality.
5. Will draw attention away from her furniture.

Explain why you did not choose each of the other materials by putting the numbers of reasons beside the letters.

Materials	Numbers of reasons for not choosing material
A.	
B.	1, 2, 4
C.	1, 2, 4
D.	1, 2, 4
E.	

Reasons

1. Too fine a material for the furniture.
2. Too delicate a fabric for her.
3. Too plain; room needs to be more feminine.
4. Too fancy for the furniture.

Suggestion to Teachers

Some pupils may not be familiar with all of these fabrics, particularly if the item is used as a pre-test. It would be helpful if swatches of each were displayed on the bulletin board for them to see and feel.

Generalizations (K): Intense or bright colors advance; dull or greyed colors recede.

(L): Darker values advance; lighter and medium values tend to recede. Midium values are restful and give a feeling of spaciousness to a room.

IX. Marilyn is going to have the walls of her bedroom painted this year. It is a very small room so she wants to choose colors to make it appear larger. She has decided to have the walls painted blue but is not sure what blue to choose.

Check with an (x) the blue she should select.

_____ A. A dark blue
_____ B. A medium blue which is bright
_x_ C. A medium blue which is dull
or _x_ D. A light blue

Explain why you chose the color you did by putting the numbers of the reasons listed beside the letter of the color.

Color	Numbers of reasons for choosing color
A.	
B.	
C.	4, 6
D.	6

Reasons

1. Dark colors give depth.
2. Bright colors make things look larger.
3. A better color for a bedroom.
4. A restful color gives spacious feeling.
5. Will attract attention and so make the room appear larger.
6. This color tends to fade into the background.

Explain why you did not choose each of the other colors by putting the number of the reasons beside the letters.

Color	Numbers of reasons for not choosing color
A.	3
B.	3
C.	
D.	

Reasons

1. Too bright for a bedroom.
2. More like a boy's choice.
3. Will attract attention to walls and make them seem to close in.
4. Sad and morbid.
5. Make it look like a baby's room.
6. Make a drab room.

* Flexible key, may be either C or D.

Suggestion to Teachers

Since some pupils may not visualize these colors well, it probably would be well to display on the board colored papers illustrating each of these colors.

Generalization (M): People who share a room need to plan together for its furnishings, care, and use for maximum harmony in living.

X. Betty, 14, and Laura Jean, 17, share a bedroom and quite often find that there are differences about who should do what in that room. If they decide they are going to rearrange the furniture, they can't agree on how to change it. Betty thinks Laura Jean doesn't do her share of cleaning and Laura Jean is sure Betty more often leaves her things lying around the room.

What suggestions can you give the sisters for settling these arguments?

Suggestions to the teachers on how to score this item

1. Give the highest score of 4 to a response which indicates that the pupil sees the need for the two girls planning together to arrange and/or clean their room. Examples given by ninth grade girls: "They should try to divide up their work among themselves." "They should make a list of their ideas and put them together."

2. Give a score of 1 to a response which does not suggest joint planning but only a "taking turns" in cleaning up or in deciding how to arrange the room. Examples given: "Each should clean the room for a week." "Arrange it the way Betty wants it awhile, then change it to the way Laura wants it."

3. Give a score of 1 to a response which suggests that they separate the room into two parts and each girl arrange hers and keep it clean. Examples: "Each have separate parts of the room". "One of them put their furniture on one side of the room and the other on the other side and each one of them clean their own."

4. Give a zero score for a suggestion that the mother or some other member of the family do the planning for cleaning and arrangement. Examples: "They could have their mother make a list of things to do." "Have the mother arrange the room for them."

Generalization (N): Storage space can be used to better advantage if articles are grouped which are used together, if articles used most frequently are placed in the most convenient places, and if articles are arranged so they can be obtained without moving another article.

XI. Mary Sue is in the high school orchestra which practices at 8 o'clock two mornings a week. These days she has to hurry to make it because she hates to get up early. Her older sister suggested that if she would arrange her clothes where she could get them easily, it wouldn't take her so long to dress.

What ideas could you give Mary Sue to use in arranging things in her closet, chest of drawers, and dressing table drawers that would help her to dress quickly?

Suggestion to teachers on how to score this item

Give a score of 1 for each of the three parts of the generalization: (1) articles are grouped together which are used together; (2) articles used most frequently are in most convenient places; (3) articles arranged so can be obtained without moving other articles.

Generalizations (O): Energy is saved if furniture is placed where it is convenient to use.

(P): A restful feeling is created when the furniture is arranged so that each side of the room has equal attraction and feeling of weight.

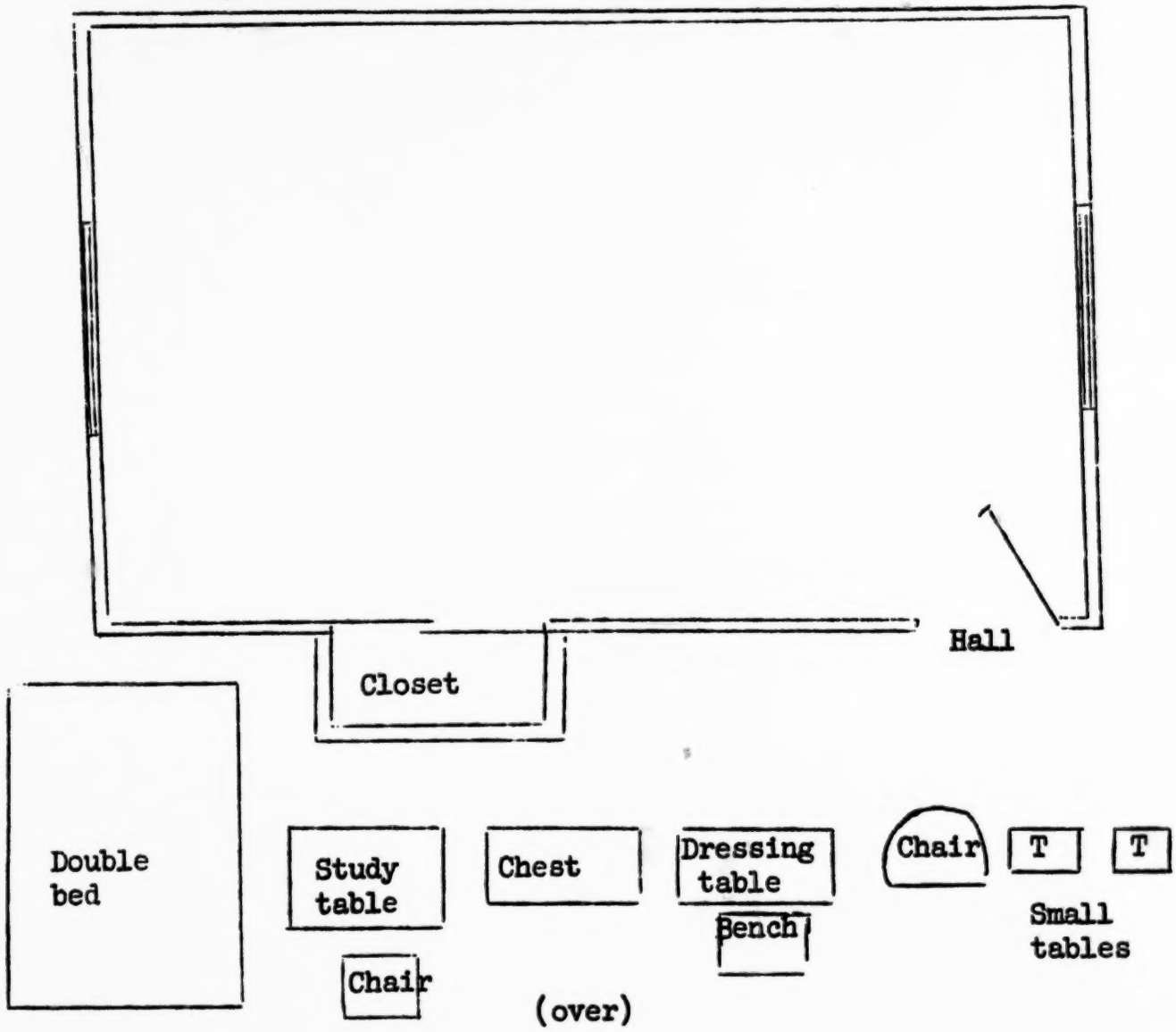
(F): Furniture arrangement is more pleasing when large pieces are placed parallel or at right angles to the structural lines of the room.

(Q): Proportions of a room can appear to be altered by arrangement of furnishings. If furniture is placed at right angles to long walls, the room will appear shorter; however, the spaces will be more interesting if the room is not divided into equal parts.

XII. The Morgans have just moved to a different house and Diane has to decide the best way to arrange the furniture in her bedroom. It is a story-and-half house with one room on the second floor, Diane's bedroom. It is a long room with windows only at the ends. The bathroom is on the first floor.

Below are drawings of her flor plan and the pieces of furniture.

Cut out the pieces of furniture and place them on the floor plan in different arrangements. When you have decided the best way, paste the pieces of furniture on the floor plan to show how you would place them.



(over)

Suggestions to teachers:

In scoring this essay-type item, give a value of 1 to each of the four generalizations applied in arranging the furniture. For example, generalization 0 requires that both the dressing table and chest be placed near the closet.

VT 005 750
Chadderdon, Hester; Tennison, Patsy
Evaluation Materials in Housing, Tenth Grade.

Iowa State Dept. of Public Instruction, Des Moines. Div. of Vocational Education
Iowa Agriculture and Home Economics Experiment Station, Ames
MF AVAILABLE IN VT-ERIC SET.
Iowa State University Bookstore, Iowa State University, Ames, Iowa 50010 ($.45).
Pub Date - Aug66 24p.

*HOME ECONOMICS EDUCATION; *STUDENT EVALUATION; GRADE 10; DESIGN PREFERENCES; *HOME FURNISHINGS; HOME MANAGEMENT; TESTING; *TEST CONSTRUCTION; *ACHIEVEMENT TESTS

Models for performance and problem solving test items and evaluation devices are provided for adaption by home economics teachers to the needs of specific tenth grade housing classes in the comprehensive high school. The evaluation materials were developed through research projects and trial use in Iowa schools by heterogenous school groups. The materials are based on subject matter areas: safe, functional, and attractive interior designs, art and design principles, the aesthetic values of design, relatiobships between occupants, and management techniques and storage facilities. Included are: (1) objectives to which the evaluation materials relate, (2) suggestions for introducing and interpreting the results of tests, and (3) the problems presented as capsulated experiences, illustrating generalizations which require the student to give not only the answer but also justification of the answer. Line drawings illustrate the problems. Other evaluation materials from home economics areas with similar formats are available as VT 005 747-VT 005 757 (ARM Summer 1969). (FP)

VT005750

ED0 31587

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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EVALUATION MATERIALS

IN

HOUSING

TENTH GRADE

Prepared by

Hester Chadderdon
Assisted by Patsy Tennison

Home Economics Research
Iowa State University
of Science and Technology
Ames, Iowa

Reprinted October 1959
Reprinted November 1960
Reprinted August 1961
Reprinted November 1962

A cooperative project between the
Division of Vocational Education,
State Department of Public Instruction of Iowa and
the Iowa Agricultural Experiment Station (Project-1215)

Reprinted November 1964
Reprinted August 1966

VT005750

MEMORANDUM

TO: The ERIC Clearinghouse on Vocational and Technical Education
The Ohio State University
980 Kinnear Road
Columbus, Ohio 43212

[redacted]

FROM: (Person) Alberta D. Hill (Agency) Iowa State University

(Address) Head, Home Economics Education Dept., Ames, Iowa 50010

DATE: April 3, 1968

RE: (Author, Title, Publisher, Date) Chadderdon, Hester. Evaluation Materials in Housing - Tenth Grade. Iowa State University. 1966.

Supplementary Information on Instructional Material

Provide information below which is not included in the publication. Mark N/A in each blank for which information is not available or not applicable. Mark P when information is included in the publication. See reverse side for further instructions.

(1) Source of Available Copies:
Agency University Book Store, Iowa State University
Address Ames, Iowa 50010
Limitation on Available Copies none Price/Unit $ .45
(quantity prices)

(2) Means Used to Develop Material:
Development Group Heterogeneous school groups
Level of Group
Method of Design, Testing, and Trial Developed through research projects and trial use in Iowa schools. Cooperative project between the Division of Vocational Education, State Dept. of Public Instruction and Iowa Agriculture Experiment Station (Project 1215),

(3) Utilization of Material:
Appropriate School Setting Comprehensive high school
Type of Program High school classes
Occupational Focus Homemaking
Geographic Adaptability
Uses of Material Models for test items and evaluation devices
Users of Material Home economics teachers

(4) Requirements for Using Material:
Teacher Competency Background in testing and evaluation
Student Selection Criteria

Time Allotment

Supplemental Media --
Necessary ____)
Desirable ____) (Check Which)

Would not be used in present form but adapted by teacher for use in particular classes.

Describe

Source (agency)
(address)

HOW DO YOU FEEL ABOUT THE HOUSE OR APARTMENT IN WHICH YOU AND YOUR FAMILY LIVE?

Most of us probably feel at times like we would like to have a new house and all new furnishings in it. But not many families can do this. We all can, however, do some things to make our homes more attractive and comfortable, if we look carefully at what we have and find ways to improve even a few things.

Take a good look at your living room. The examples may help you start thinking. Do not sign your name.

How do you feel about the living room?

Examples: It is comfortable. The furniture is old but I like it. All of the family uses it, so there is no place to entertain my friends. I am ashamed to bring my friends home to see it.

Suggestions to Teachers

This device can be used to discover how pupils in Homemaking II react to the living room in their homes. Their attitudes and the problems which they recognize will be helpful in planning for and motivating a unit on housing.

Here are examples of responses given by pupils:

"Our living room has an air of friendliness about it."

"There isn't too much place for entertainment but it works."

"Our living room is too long and narrow."

"Some of our furniture is old. The davenport has just about seen its day."

OBJECTIVES

1. Recognition of factors which make rooms seem livable to different family members and the effect of surroundings upon them.

2. Ability to arrange rooms which are convenient, attractive, and safe.

3. Ability to select furniture and furnishings for maximum satisfaction.

4. Desire and ability to care for and renovate household furnishings.

5. Ability to choose appropriate backgrounds for family living.

6. Ability to choose and arrange functional and decorative accessories.

7. Understanding of one's own values and those of others which determine their choices of furnishings.

DEVELOPMENT OF TEST ITEMS

The items in this packet are based on the above objectives and the generalizations given at the top of each page containing a test item. The solutions and reasons for the problems include misconceptions collected from Iowa high school pupils. The key has been approved by subject matter specialists.

USE OF TEST ITEMS

1. Selection of items to combine into a test: Choose the items which involve the generalizations on which you wish to determine where your pupils are at any stage of learning (pre-test, during unit, at the end of unit, or as a part of semester test).

2. Directions: The directions accompany each item. In order to force pupils to consider each solution and reason, the number of correct responses is not indicated.

3. Scoring the test: To obtain a score for each girl total <u>only</u> the correct solutions and/or reasons. (See key on each item). It is better <u>not</u> to make deductions for incorrect choices because some of the problems are of such a nature that certain of the reasons could conceivably be true under some circumstances. The key provides for determining only those which make use of the particular generalization(s) listed at the top of each page. Also research indicates that deducting for guessing has little effect on the relative size of the scores unless a pupil checks an unreasonably large number of responses.

4. Interpreting the results of the test: The results can be looked at several ways to determine how well your pupils can apply the generalizations.

   (1) The size of the scores in relation to the total possible score gives a general idea of the class as a whole. Individual scores indicate which pupils have highest achievement and which need more experiences. A look at the responses of individual pupils, particularly those whose scores are low, will indicate places where special help is needed.

(2) If the test has been given before and also after the unit has been taught, you can see the extent of progress, provided the particular problems have not been discussed in class

(3) Tabulating the total number of pupils who selected each solution and reason gives you clues to needs for learning, whether the test is used as a pre-test or after some instruction. Noting the generalizations which they failed to apply and the misconceptions (incorrect responses), you have bases for planning experiences. Below is an item that was administered to 149 tenth-grade pupils.

The Smith's have a small living room with walls painted a soft, medium blue-green. The floor is covered with a gray rug. Mrs. Smith and Jane are planning new drapes for this room. They are trying to decide between a blue-green and a bright rose-red material. Both colors are good with their furnishings.

Which of these would you recommend to them to make the room seem larger?

Check with an x the color you think would be better.

84 _____ A. Rose-red
65 __x__ B. Blue-green

Explain your choice by checking (X) one or more of the reasons below.

24 _____ 1. A brighter color will make room seem larger.
51 _____ 2. The room would seem brighter.
75 _____ 3. Contrasting color will add interest to the room.
69 __X__ 4. It will blend in with walls and rug, so room will seem larger.
10 _____ 5. When drapes are same color as walls, a room is more attractive.
56 __X__ 6. Close-harmony color schemes are less spotty and add to appearance of spaciousness.

It is evident that many of these pupils were unable to apply the generalization: Draperies that blend with or match the wall color will make a room appear larger. Since Reasons 2 and 3 were often checked, they seem to have been more concerned with adding interest and making the room brighter than in increasing the apparent size. This suggests that many of these pupils need additional help in learning to apply this generalization.

Index to Generalizations and Items for Evaluation in Housing: 10th Grade

A. Price does not determine the beauty or functional value of accessories. Test Item I

B. The taller the lamp, the farther the light will be spread. Test Item I

C. A well-designed lamp has a pleasing proportion between the shade and the base. Test Item I

D. Adequate care of equipment aids in maintaining efficiency of operation. If the bag becomes clogged with dirt, a cleaner will not operate efficiently. Test Item II

E. Balance implies an approximately equal distribution of weight on either side of a central point. Test Item III

F. Good balance is necessary in order to produce a feeling of stability and repose. Test Item III

G. Furniture and accessories will be more harmonious if they are similar in scale. Test Item III

H. Observation of traffic lanes, consideration of furniture groupings for their use, placing large pieces of furniture parallel or at right angles to the structural lines of the room all add to the comfort, convenience, safety, and orderly appearance of the room. Test Item IV

I. Well-designed furniture has good proportions, suitable fittings, and structural lines which are appropriate for the function of the piece. Test Item V

J. Main backgrounds are more satisfying if consideration is given to the exposure. Test Item VI

K. Colors with a quantity of yellow, unless greyed, are hot. Test Item VI

L. Colors with a quantity of blue, particularly if they are light in value or greyed, tend to be cool. Test Item VI

M. Proportions of a room can appear to be altered by the arrangement of furniture. If furniture is placed at right angles to the long walls, the room will appear shorter; however, the spaces will be more interesting if the room is not divided into two equal parts. Test Item VII-a

N. If bold, bright designs are used on the end walls and the side walls are plain, the room will appear shorter because bold designs and bright colors appear to advance. Test Item VII-b

O. Draperies that blend with or match the wall colors will make a room larger. Test Item VIII

P. Using greyed or neutral colors for the large areas and bright colors for the small areas or accents provide a feeling of balance, if they are placed around the room so as to appear balanced. Test Item IX

Q. A feeling of support is created when a horizontal picture is mounted with the top and sides equal and the bottom margin slightly wider. Test Item X

R. Satisfactory window curtains reflect the character of the room. Test Item XI

S. A pleasing arrangement of accessories is one which combines objects that have the same feeling and scale and is in good proportion to the space in which it is placed. Test Item XII

T. A lamp is most effective when placed in such a relationship to the activity which it is to light that shadows are avoided. Test Item XIII

U. Choice of furnishings and equipment will be determined by the region, cleanliness of location, family resources (including furniture they have), size of family, ages of its members, stage in family life cycle, activities of members, and importance to them of such values as beauty, social status, comfort, security, health, sentiment, and tradition. Test Item XIV

V. A room which expresses the personality and tastes of those living in it will be more homelike. Test Item XIV

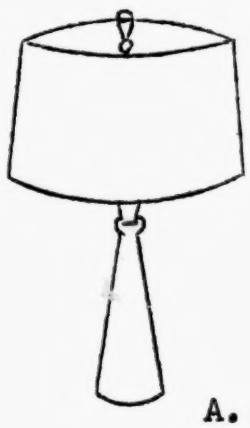
W. Talents, skills, time, desire, and creative ability of family members are factors which affect planning and furnishing. Test Item XV

Generalization (A): Price does not determine the beauty or functional value of accessories.

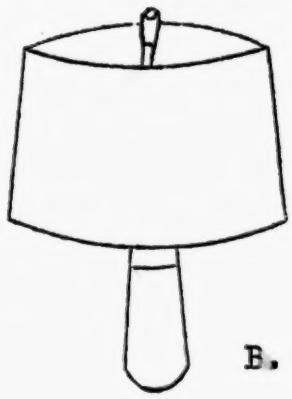
(B): The taller the lamp, the farther light will be spread.

(C): A well-designed lamp has a pleasing proportion between the shade and the base.

I. Jane and her mother have been shopping for a lamp to put on a table beside father's reading chair. Below are two lamps which they are considering. Both have a three-way switch and use the same size light bulb. Lamp A costs $9.95 and Lamp B costs $14.95.



A.



B.

Which of these do you think would be the better choice?

x A
____ B

Explain your choice by checking (X) one or more of the reasons below.

x 1. It has a better proportion between the shade and base.
____ 2. Expensive lamps last longer than cheaper ones.
____ 3. Low table lamps are more attractice.
x 4. The taller lamp will spread light over broader area.

Generalization (D): Adequate care of equipment aids in maintaining efficiency of operation. If the bag becomes clogged with dirt, a cleaner will not operate efficiently.

II. Jean's Saturday job at home is to clean the living room. One Saturday she noticed that the upright vacuum cleaner she was using was not cleaning the rug as well as it should. Her mother told her the dirt bag, which is not a disposable one, might need to be emptied so she checked the bag and found it was about 3/4 full. Jean said she would empty it because she thought it worked better when the bag was emptied. Her mother told her that she usually doesn't empty it until it is almost full and she thinks it works just as well.

Do you agree with Jean or her mother about emptying the bag?

Check with an x the one you think is right.

__x__ A. Jean
_____ B. Jean's mother

Explain your choice by checking (X) one or more of the reasons below.

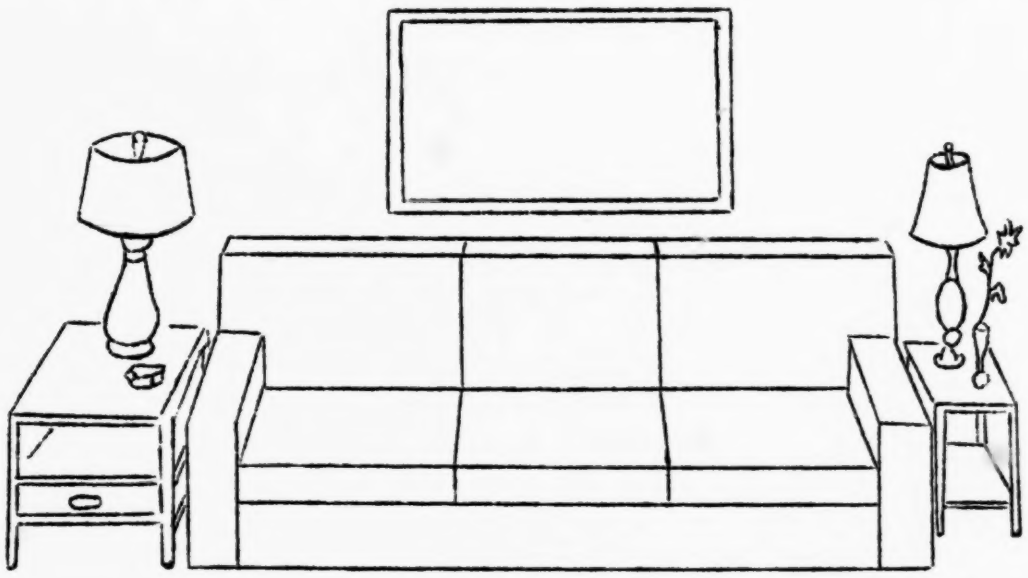
__x__ 1. The cleaner will pick up more dirt if the bag is emptied before it is nearly full.
_____ 2. It will save time, if bag is only emptied when nearly full.
__x__ 3. If emptied frequently, the bag will not become clogged with dirt.
_____ 4. The cleaner works just as well when the bag is nearly full of dirt.

Generalization (E): Balance implies an approximately equal distribution of weight on either side of a central point.

(F): Good balance is necessary in order to produce a feeling of stability and repose.

(G): Furniture and accessories will be more harmonious if they are similar in scale.

III. Mary Lou had studied in her home furnishings class the principles of room arrangement. She planned the arrangement sketched below for one end of her family's living room.



Do you think her arrangement is good or poor?

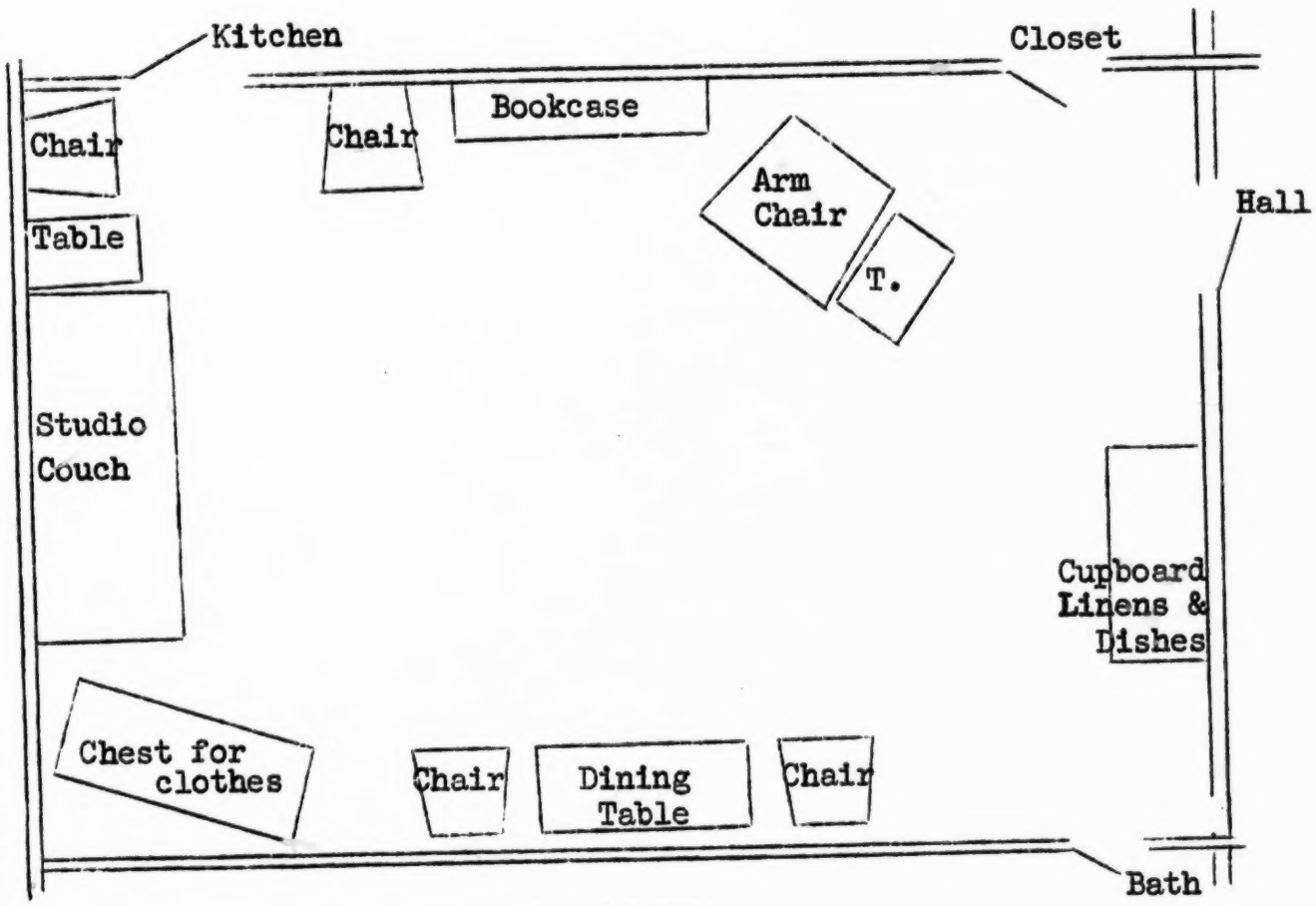
Check with an x whether you think the arrangement is good or poor.

____A. Good
_X_B. Poor

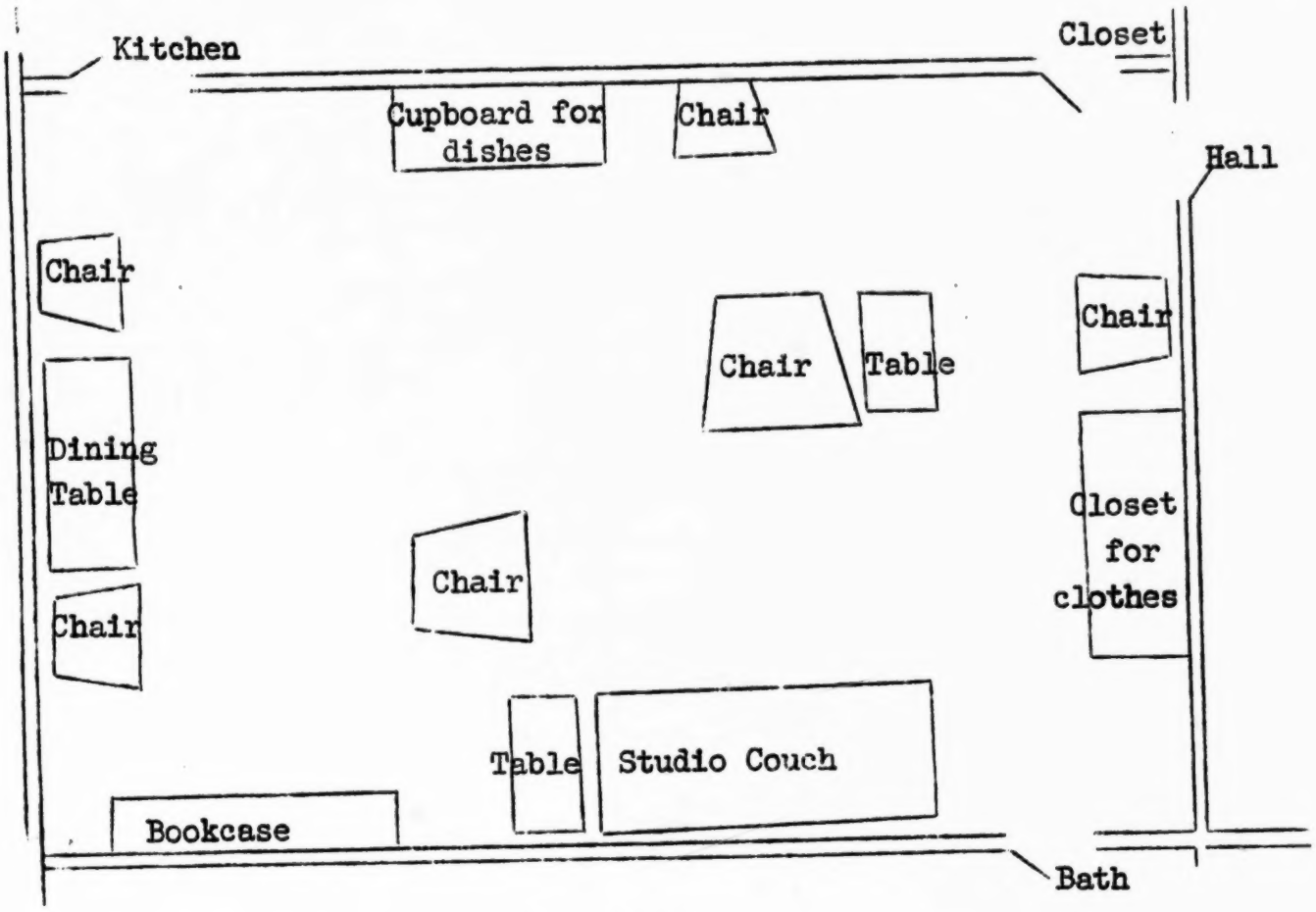
Explain your answer by checking (X) one or more of the reasons below.

_X_1. The table and accessories on the right seem too light to balance those at the left.
____2. The arrangement creates a restful and stable effect.
____3. Tables placed at the ends of a sofa should be the same size.
____4. The furnishings are in proportion to each other.
_X_5. The table and lamp on the right are too small to harmonize with the pieces at the other end.
____6. A table and lamp at each end of sofa makes this arrangement well balanced.

Item IV



A. BEFORE



B. AFTER

Generalization (H): Observation of traffic lanes, consideration of furniture groupings for their use, placing large pieces parallel or at right angles to the structural lines of the room all add to the comfort, convenience, safety, and orderly appearance of a room.

IV. Jean's sister who has a job in the city, has just moved into a furnished apartment with a living room, kitchen and bath. Jean helped her move in and rearrange the furniture in the apartment. The apartment is shown on the opposite sheet.

Do you like the apartment better before or after they rearranged the furniture?

Check with an x your choice of arrangement.

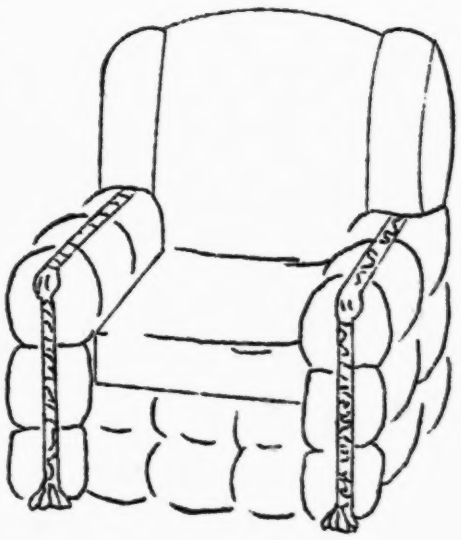
____A. Before
_x_B. After

Explain your choice by checking (X) one or more of the reasons below.

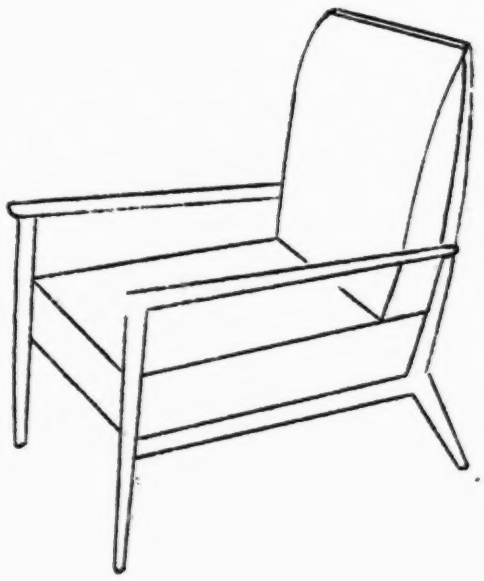
____1. The room seems larger with no furniture in the center of the room.
_x_2. The pieces of furniture are placed close to where they're used.
____3. Having some of the furniture at an angle gives a feeling of coziness to the room.
____4. The room seems less crowded.
_x_5. The paths from door to door are clear of furniture which adds to the convenience.
____6. The dining area is separated from the living area.
_x_7. The room seems more orderly with pieces of furniture parallel to the walls.
_x_8. The room is better arranged for conversation.

Generalization (I): Well-designed furniture has good proportions, suitable fittings, and structural lines which are appropriate for the function of the piece.

V. Which of these chairs has the better design?



A.



B.

Check with an x the chair you think is better designed.

____ A
_x_ B

Explain your choice by checking (X) one or more of the reasons below.

_x_ 1. The lines are simple and harmonious.
____ 2. It looks softer and more comfortable.
____ 3. The repetition of curved lines is pleasing.
_x_ 4. The chair is graceful.
_x_ 5. It has good proportion.
_x_ 6. It isn't overly decorated.

Generalizations (J): Main backgrounds are more satisfying if consideration is given to the exposure

(K): Colors with a quantity of yellow, unless greyed, are hot.

(L): Colors with a qunatity of blue, particularly if they are light in value or greyed, tend to be cool.

VI. The Swanson's are going to redecorate their living room which has a large picture window on the south. Jean, the 16 year old daughter, suggests using soft yellow for the walls, since that is one of her favorite colors. The others in the family like greyed-blue.

Which color do you think would be better?

Check with an x the color which would be better.

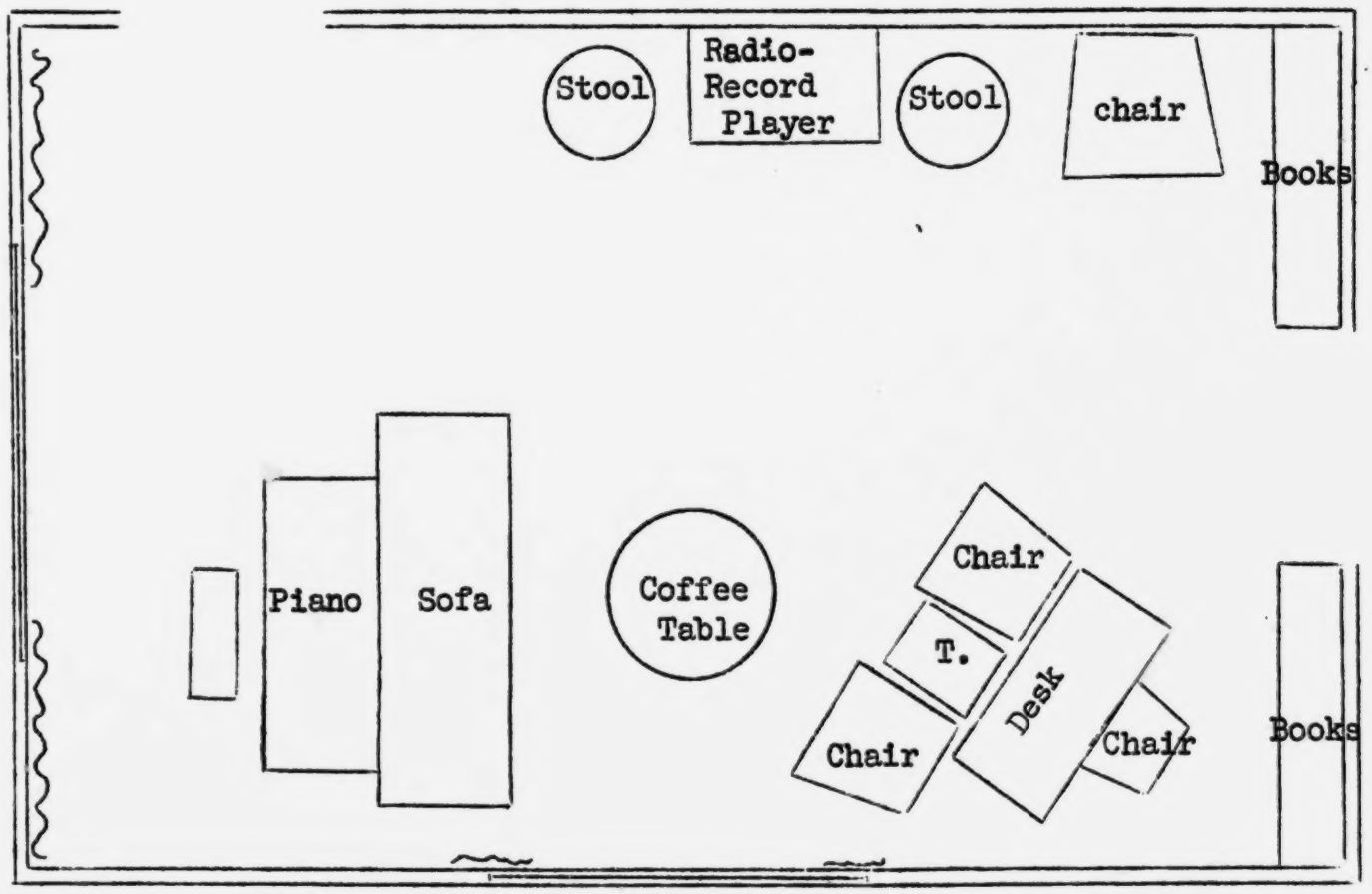
__x__ A. Greyed-blue
_____ B. Soft yellow

Explain your choice by checking (X) one or more of the reasons below.

_____ 1. Yellow will make the room seem lighter.
_____ 2. Greyed-blue is a better color to use in a living room.
_____ 3. The room will seem more cheerful.
__x__ 4. Greyed-blue will make the room seem cool.

Generalization (M): Proportions of a room can appear to be altered by the arrangement of furniture. If furniture is placed at right angles to the long walls, the room will appear shorter; however, the spaces will be more interesting if the room is not divided into two equal parts.

VII-a. The Johnson's are moving into a new house. The living room is a long room. Mrs. Johnson would like it to appear less long. From the illustration below, what effect do you think Mrs. Johnson's plan for the arrangement of her furniture will have on the apparent length of the room?



Which one of these helps most to make the room seem shorter?

Check with a x the one you think helps most.

____1. Placing the desk across a corner helps to shorten the room.
____2. The room seems shorter because the furniture is arranged into groups.
__x__3. The piano and sofa form lines which are at right angles to the long wall.
____4. The arrangement provides a comfortable conversation area.
____5. Books across the end of the room seem to decrease the length.

Generalization (N): If bold, bright designs are used on the end walls and the side walls are plain, the room will appear shorter because bold designs and bright colors appear to advance.

VII-b. Mrs. Johnson is also considering the hanging of draperies across the north end of her living room. She's trying to decide between a large floral pattern in bright colors and a plain soft green fabric which matches the color of her walls. Either one would go with her other furnishings.

Which do you think would help to make her room look shorter?

Check with an X the draperies which would help to make the room look shorter.

__x__ A. Large floral pattern in bright colors.
_____ B. Plain soft green.

Explain your choice by checking (X) one or more of the reasons below.

__X__ 1. The bright floral pattern would seem nearer to you.
_____ 2. Soft, plain colors make things look smaller.
_____ 3. Plain colors seem to bring things closer together.
_____ 4. Bright colors make things look larger.

Generalization (O): Draperies that blend with or match the wall color will make a room appear larger

VIII. The Smith's have a small living room with walls painted a soft, medium blue-green. The floor is covered with a gray rug. Mrs. Smith and Jane are planning new drapes for this room. They are trying to decide between a blue-green and a bright rose-red material. Both colors are good with their furnishings.

Which of these would you recommend to them to make the room seem larger?

Check with an x the color you think would be better.

____A. Rose-red
_x_B. Blue-green

Explain your choice by checking (X) one or more of the reasons below.

____1. A brighter color will make room seem larger.
____2. The room would seem brighter.
____3. Contrasting color will add interest to the room.
_X_4. It will blend in with walls and rug, so room will seem larger.
____5. When drapes are same color as walls, a room is more attractive.
_X_6. Close-harmony color schemes are less spotty and add to appearance of spaciousness.

Generalization (P): Using greyed or neutral colors for the large areas and bright colors for the small areas or accents provides a feeling of balance, if they are placed around the room so as to appear balanced.

IX. The Homemaking II class is studying home furnishings. One of the committees in the class is looking at the living area in the homemaking department to see if the class can improve the color combination. These are the colors in use now:

Rug - light green
Wall - light grey
Sofa - light grey
Two arm chairs - dull green print
One arm chair - bright red
Pillows on sofa - several bright colors

Their budget will only allow <u>one</u> improvement this year. Here are the suggestions for improving the rooms which the members of the committee made.

Check with an x the <u>one</u> suggestion which you think is best.

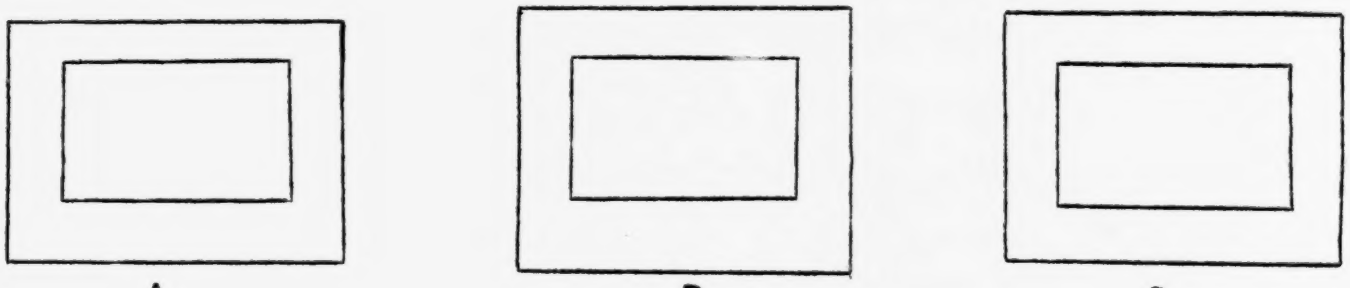
_____A. Mary suggested that they cover the sofa in a light, rose-colored fabric.
_____B. Sue thought the walls should be painted light green.
__x__C. Helen wanted to cover the red chair in dusty rose.
_____D. Judy said she'd like to cover the two arm chairs in bright red.
_____E. Betty wanted to cover the dull green chairs in bright green.

Explain your choice by checking (x) one or more of the reasons below.

_____1. All of the chairs should be the same color
_____2. The room needs more bright colors for accents.
_____3. The room has too much grey in it.
_____4. Light green walls will make the room seem lighter.
__x__5. The bright colors need to be used in small amounts.
_____6. The amount of bright and dull colors should be the same.

Generalization (Q): A feeling of support is created when a horizontal picture is mounted with the top and side margins equal and the bottom margin slightly wider.

X. Helen's mother had a picture she wanted to hang in her living room. She asked Helen to mount it on a background for her. Helen experimented until she found what she thought was the most suitable mounting for the picture.



A. B. C.

Which of these three mountings do you think is best?

Check with an x the mounting you would select.

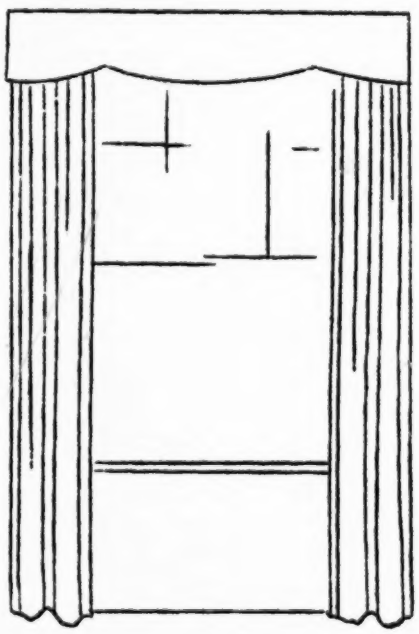
____A
_x_B
____C

Explain your choice by checking (x) one or more of the reasons below.

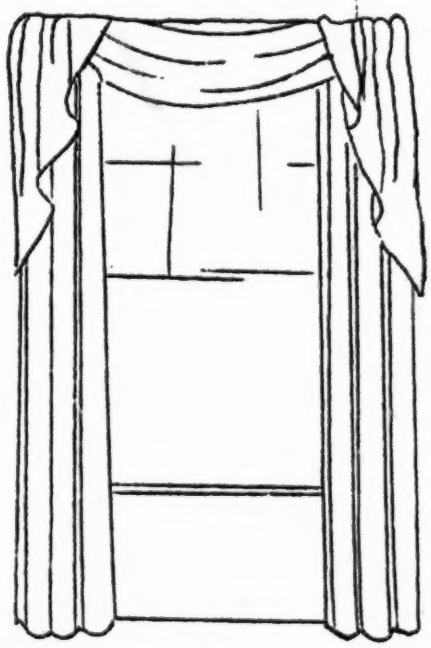
____1. The effect is more restful if all margins are even.
____2. When bottom and side margins are the same width and wider than the top, the picture seems larger.
____3. A picture seems balanced if the margins are the same.
_x_4. A picture seems to be supported when the bottom margin is wider and top and side margins equal.

Generalization (R): Satisfactory window curtains reflect the character of the room.

XI. Mrs. Brown asked her daughter Carol to go shopping with her to select new curtains for their living room. The living room has several antique pieces of Early American furniture, such as the Windsor chair sketched at the right, and is a comfortable, cozy, informal room.



A.



B.

C.

Which of these three types of window treatments do you think would be best for their living room?

Check with an x the one you think is best.

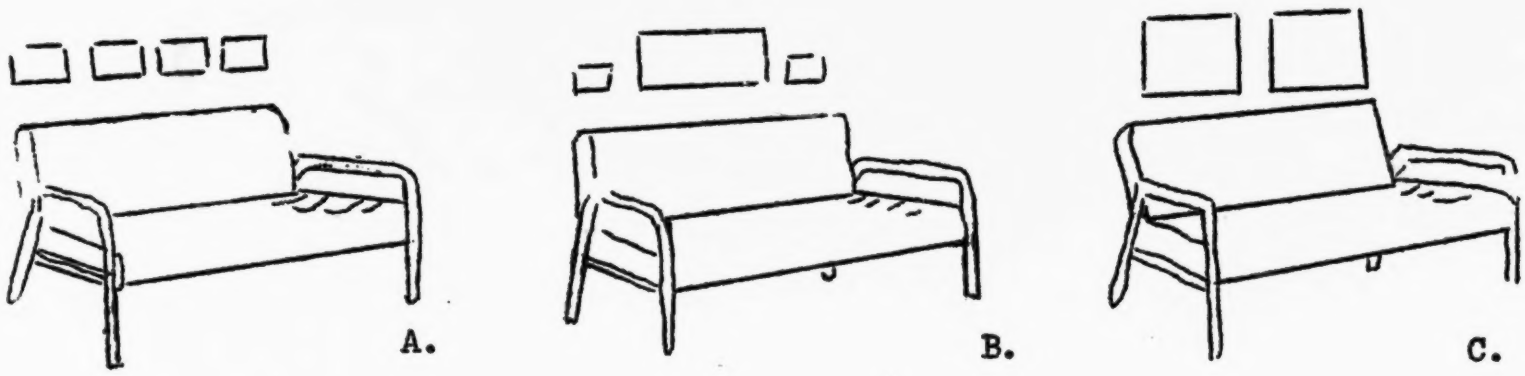
____A
____B
_x_C

Explain your choice by checking (x) one or more of the reasons below.

____1. The simple lines will not compete with the furniture for attention.
____2. It looks more like a living room curtain.
_x_3. This style is informal, so is more in keeping with feeling of the room.
____4. This style will make the room look more modern.
____5. It is plain and so will match the chair.

Generalization (S): A pleasing arrangement of acessories is one which combines objects that have the same feeling and scale and is in good proportion to the space in which it is placed.

XII. The Homemaking II Class has been experimenting with the arrangement of pictures above a sofa. Here are three different arrangements they made.



Which arrangement is most interesting?

Check with an x the arrangement you think is most interesting.

____A
____B
_x_C

Explain your choice by checking (X) one or more of these reasons.

____1. A contrast in size of pictures creates an interesting arrangement.
_x_2. The group of pictures is in good proportion to the sofa.
____3. An uneven number of pictures is more interesting.
____4. The lines of the pictures repeat the lines of the sofa.
_x_5. The sofa and pictures are more related in size.

Now explain why you did <u>not</u> choose the other arrangements by putting the letter in the space.

_A_1. The arrangement is monotonous and uninteresting.
_A_2. The group of pictures is too small for the sofa.
____3. The arrangement has too many pictures.
_B_4. The pictures are out of scale with each other.
_A_5. Straight lines of pictures make sofa seem too long.
____6. Lacks interest because pictures are all the same size.

Generalization (T): A lamp is most effective when placed in such a relationship to the activity which it is to light that shadows are avoided.

XIII. Here is a sketch of Jane's study desk.

If this were your study desk, what changes, if any, would you make in the lighting arrangement?

Write below any changes you would make and give the reason for each of them.

Suggestions to teachers on how to score this item

Give a score of 1 to these solutions: (1) place lamp at the left or middle, (2) put a lamp on both sides. Give only 1/2 score for these solutions: (1) move lamp closer to paper, and (2) use taller lamp. Give a score of 1 to each of these reasons: (1) the center area of the desk needs to be well lighted, and (2) shadows from her right hand should be avoided.

Generalization (U): Choice of furnishings and equipment will be determined by the region, cleanliness of location, family resources (including furniture they have), size of the family, ages of its members, stage in family life cycle, activities of members, and importance to them of such values as beauty, social status, comfort, security, health sentiment, and tradition.

(V): A room which expresses the personality and tastes of those living in it will be more homelike.

XIV. The Peterson family is beginning to make plans for redecorating their house. They have decided to start this year with the living room and have budgeted some money for it. When they went to talk with the woman in a store who had been recommended to them, they took along a sketch of the floor plan of the room showing windows, doors, etc. But she said she would need to know several things about their family before she could make suggestions about the new pieces of furniture, floor covering, and wall treatment.

List below 4 of the things you think she would need to know about the Peterson family before making suggestions for redecoration.

Explain why you think <u>each</u> of the <u>first</u> <u>two</u> things you listed is important to consider in furnishing a living room.

Generalization (W): Talents, skills, time, desire, and creative ability of family members are factors which affect planning and furnishing.

XV. Mr. and Mrs. Jones and their two teen-agers are making a recreation room in their basement. They need a table and chairs for games and eating. The price at a local furniture store for a new kitchen-type table and four chairs is $39.95. Mr. Jones thinks they should buy the used table and chairs which they found at a used-furniture store. They would cost $36.00 and could be refinished for about $3.00. They are in good condition and of good design.

What things should they consider before deciding whether to buy new table and chairs or to refinish used ones? Write your answer below.

VT 005 751
Chadderdon, Hester; Kundel, Lavonne
Evaluation Materials in Foods, Tenth Grade.

Iowa State Dept. of Public Instruction, Des Moines. Div. of Vocational Education
Iowa Agriculture and Home Economics Experiment Station, Ames
MF AVAILABLE IN VT-ERIC SET.
Iowa State University Bookstore, Iowa State University, Ames, Iowa 50010 ($.90).
Pub Date - 67 49p.

*HOME ECONOMICS EDUCATION; *STUDENT EVALUATION; *FOODS INSTRUCTION; NUTRITION INSTRUCTION; TESTING; GRADE 10; *TEST CONSTRUCTION; *ACHIEVEMENT TESTS

Models for performance and problem solving test items and evaluation devices are provided for adaption by home economics teachers to the needs of specific tenth grade foods classes in the comprehensive high school. The evaluation materials were developed through research projects and trial use in Iowa schools by heterogenous school groups. The materials are based on subject matter areas: nutrition, food selection and habits, fallacies and misconceptions about foods and diets, relationship of nutrition to appearance, nutrient retaining preparation techniques, and the planning, buying and storing of foods. Included are (1) objectives to which the evaluation materials relate, (2) suggestions for introducing and interpreting the results of tests, (3) forms and check lists, and (4) the problem situation, illustrating generalizations each requiring the student to give not only the answer but also justification of the answer. Other evaluation materials from home economics areas using a similar format are available as VT 005 747-005 757 (ARM Summer 1969). (FP)

VT005751

ED0 31587

Evaluation Materials

in

Foods

Tenth Grade

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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Prepared by

Hester Chadderdon
Assisted by Lavonne Kundel

Home Economics Research

Iowa State University
of Science and Technology

Ames, Iowa

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VT005751

M E M O R A N D U M

TO: The ERIC Clearinghouse on Vocational and Technical Education
The Ohio State University
980 Kinnear Road
Columbus, Ohio 43212

[redacted]

FROM: (Person) Alberta D. Hill (Agency) Iowa State University

(Address) Head, Home Economics Education Dept., Ames, Iowa 50010

DATE: April 3, 1968

RE: (Author, Title, Publisher, Date) Chadderdon, Hester. Evaluation Materials in Foods - Tenth Grade. Iowa State University. 1967.

Supplementary Information on Instructional Material

Provide information below which is not included in the publication. Mark N/A in each blank for which information is not available or not applicable. Mark P when information is included in the publication. See reverse side for further instructions.

(1) Source of Available Copies:
Agency University Book Store, Iowa State University
Address Ames, Iowa 50010
Limitation on Available Copies none Price/Unit $.90
(quantity prices)

(2) Means Used to Develop Material:
Development Group Heterogeneous school groups
Level of Group
Method of Design, Testing, and Trial Developed through research projects and trial use in Iowa schools. Cooperative project between the Division of Vocationa Education, State Dept. of Public Instruction and Iowa Agriculture Experiment Station (Project 1215),

(3) Utilization of Material:
Appropriate School Setting Comprehensive high school
Type of Program High school classes
Occupational Focus Homemaking
Geographic Adaptability
Uses of Material Models for test items and evaluation devices
Users of Material Home economics teachers

(4) Requirements for Using Material:
Teacher Competency Background in testing and evaluation
Student Selection Criteria
Time Allotment

Supplemental Media --
Necessary _____)
Desirable _____) (Check Which)

Would not be used in present form but adapted by teacher for use in particular classes.

Describe

Source (agency)
(address)

OBJECTIVES

1. Enjoyment of a variety of foods in order to provide more adequate personal nutrition.
2. Establishment of food habits that will result in optimum health and apparance.
3. Recognition of fallacies in commonly held conceptions about foods and diets.
4. Understanding of why an adequate diet is essential for maximum development and maintenance and recognition of valuable sources of the foods nutrients.
5. Understanding of the relationship between food nutrients and how one feels and looks.
6. Ability to prepare some products in all food groups giving consideration to retention of nutrition value.
7. Understanding of terms used in cookery.
8. Understanding of functions of ingredients in a product.
9. Ability to buy foods in the form that is most economical and nutritious, at different seasons.
10. Ability to care for and store meats, fish, and cereal products to prevent spoilage and change of flavors.
11. Ability to plan, prepare, and serve the three meals of the day with menus including more complex dishes and managerial skills (than in 9th grade) and considering limitations.
12. Ability to organize work and make decisions with a group of individuals having different abilities.
13. Appreciation of differences in family food customs.

Development of the Evaluation Materials

The check sheets and test items are based on the above objectives and on generalizations from the curriculum guide developed for use in Iowa high schools. The key has been approved by subject-matter specialists.

Uses of Evaluation Materials

1. These materials were designed for use in stimulating pupils to change their food habits and in determining where pupils are at any stage of learning: pre-test, during unit, at end of unit, or as part of a semester test.
2. In selecting the paper-and-pencil test items to use at a particular time, choose those which involve the generalizations that you are concerned with in your teaching. When using these items <u>do not</u> give the generalizations listed at the top of each sheet to the pupils.
3. The directions for responding to the paper-and-pencil test items accompany each one. In order to force pupils to consider each solution and reason, the number of correct responses is usually not indicated. If an answer sheet (see example) is used, the directions for recording responses will need to be changed accordingly.
4. To obtain a score for each girl, total <u>only</u> the number of correct responses, (See key on copy of each item), because research indicates that deducting for guessing has little effect on the relative size of the scores unless a pupil checks an unreasonably large number of responses. It appears that the pupils are checking a large number of responses in the hope of "hitting" the right one, you may want to (1) deduct one point for each incorrect response or (2) set a limit on the number of checks they may use. (If this is done, set the limit slightly above the number of correct responses, however.)
5. In interpreting the responses of your pupils
   (1) Look at the size of the scores in relation to the possible total score to obtain a general idea of the class as a whole and to determine which pupils need special help.
   (2) Tabulate the number of pupils who selected each response and see which generalizations they failed to apply and which misconceptions they hold. These suggest points at which additional learning experiences are needed.

Suggestions to Teachers for Using the check sheet, HOW AM I DOING? and the Progress Record, LEARNING TO ENJOY A VARIETY OF VEGETABLES.

Since many girls eat very few vegetables other than potatoes, it is important to help them learn to increase variety. The following suggestions are based on research about how to get persons to change their practices.

1. Before you teach the lessons on vegetable cookery, have the class fill out the checksheet, HOW AM I DOING?

2. During one of the early lessons on vegetables have them discuss the value of eating a variety of foods from the standpoints of enjoying foods, being a better guest, of improving appearance through better nutrition. Help them reach a decision to learn to enjoy three new vegetables and have them record this decision on the sheet entitled LEARNING TO ENJOY A VARIETY OF VEGETABLES. Avoid forcing them to make this decision; it should be their decision.

3. Provide opportunities during the lessons on vegetable cookery to taste vegetables which they have checked in column Have Never Eaten. Also encourage the lunchroom manager to serve a variety of vegetables.

4. Two weeks after the signing of the agreement, check up on how many trials they have recorded and encourage them to take advantage of every opportunity to try the three vegetables they selected. Remind those who have made few trials of their agreement to try to learn to enjoy them.

5. Three weeks later, check up again and give their efforts support, commending those who have arrived at the "enjoy" stage on at least one vegetable. Let them tell the others how they learned to enjoy it and report to the class the satisfaction of accomplishment.

6. For those who need to continue learning to enjoy one or more of the vegetables selected, check up every month, commending progress and encouraging those who are lagging to continue to try.

HOW AM I DOING?

Most people could enjoy their food more if they liked a wide variety of foods; then, too, they could be better guests if they ate everything served them. Learning to like many foods is an important part of really growing up, of acting more like an adult.

Below is a list of vegetables to use in checking how well you are progressing toward eating a variety of foods. Check (x) in the column or columns which best describes where you are now. If you prefer some other method of preparing any of the vegetables, add it and check in the columns.

Food	Eat it when offered		Need to learn to eat	Have never eaten; need chance to taste
	Enjoy	Do not enjoy		
Asparagus creamed				
Beans, green buttered				
Beans, lima buttered				
Beets, buttered				
Broccoli, Buttered				
Brussel sprouts buttered				
Cabbage				
salad				
slaw				
buttered				
Carrots				
raw in strips				
buttered				
Cauliflower				
raw in salad				
buttered				
Celery				
raw, stalks				
creamed				
Chinese Cabbage raw in salads				
Corn, buttered				

(over)

Foods	Eat it when offered		Need to learn to eat	Have never eaten; need chance to taste
	Enjoy	Do not enjoy		
Cucumbers raw in salads				
Egg plant, fried				
Endive raw in salads				
Kohlrabi, buttered				
Lettuce raw in salads				
Onions raw in salads				
buttered				
Parsnips, buttered				
Peas, buttered				
Peppers, green raw in salads				
Potatoes, sweet baked				
candied				
Radishes, raw				
Rutabagas, buttered				
Spinach buttered				
Greens (Kale, mustard, Swiss chard, etc.) buttered				
Squash (acorn, Hubbard, etc.) baked				
mashed & buttered				
Tomatoes raw				
soup				
juice				
Turnips, buttered				

Learning to Enjoy a Variety of Vegetables

Record of Progress

I agree to try to learn to enjoy three new vegetables .

_____

Name

A. After you have checked the list of vegetables on HOW AM I DOING?, select three that you checked Do Not Enjoy, Need to Learn to Eat, or Need Chance to Taste. Write the three selected in the table below.

B. Use every opportunity you have to taste these vegetables, eat them in small quantities, or to eat them in combination with foods you like.

C. Record (x) below each time you eat some of each vegetable until you can check Enjoy. If you need more trials, extend the table in the space below it.

Vegetable	Trials								Enjoy
	1	2	3	4	5	6	7	8	
1.									
2.									
3.									

OPINIONS ABOUT FOOD 10th

These statements are expressions of opinions which many people have. Read each statement carefully before checking (x) in the column which best indicates your belief. Do not sign your name.

Check "True" if you agree with the statement.
"Doubtful" if you doubt the truth of the statement.
"False" if you disagree with the statement.
"I don't know" if you have no idea whether the statement is true or false.

Statements	True	Doubtful	False	I don't know
1. Girls of the same age and size need about the same amount of food.	X*			
2. Vitamin pills should be taken by people who dislike many foods.		X		
3. Protein and starchy foods should not be eaten at the same meal.			X	
4. There are no shortcuts to reducing weight.	X			
5. A person who eats enough food will always be healthy.			X	
6. A person who is never sick probably has a balanced diet.		X		
7. An easy way to reduce is taking exercise.			X	
8. Some vitamins are destroyed by light.	X			
9. Vitality depends largely on the food eaten.	X			
10. Skipping breakfast is a good way to reduce.			X	
11. Drinking water with meals is bad for the digestion.			X	
12. Desserts often help to make meals more satisfying.	X			
13. A food allergy is an intense dislike for a food.			X	
14. Milk is a perfect food.			X	
15. Margarine is harder to digest than butter.			X	

* x indicates key which has been approved by specialists in Department of Food and Nutrition.

(over)

	True	Doubtful	False	I don't know
16. Eating between meals is harmful if the appetite is spoiled for meals.	X			
17. If a diet contains enough calories, it will be adequate.			X	
18. The amount of potato included in a reducing diet should be limited.	X			
19. Fish is better brain food than beef.			X	
20. Pasteurization destroys much of the food value of milk.			X	
21. Milk is fattening.			X	
22. Eating many acid fruits makes the stomach too acid.			X	
23. In general the darker the color of the food the higher the food is in vitamins.	X			
24. People who have reached physical maturity require very little milk.			X	
25. Some people are irritable because of bad eating habits.	X			
26. It is all right to skip breakfast provided the other meals meet the day's food requirements.			X	
27. Some vitamins are destroyed when exposed to air.	X			
28. Breakfast is an especially important meal.	X			
29. Butter should be limited in amount in a reducing diet.	X			
30. Foods that contain a lot of fat digest slowly.	X			
31. A high meat diet is harmful to the kidneys.			X	
32. Fatigue is one cause of poor appetite.	X			
33. Blemishes on the face may be caused by a person's diet.	X			

	True	Doubt-ful	False	I don't know
34. The texture and quality of hair depend largely upon the nutritional condition of the individual.	X			
35. Persons who are underweight often are irritable.	X			
36. There should be less meat in a reducing diet than in a normal diet.			X	
37. Diet has very little effect on vision			X	
38. Skim milk has very little nutritive value.			X	
39. A person who wants to gain weight should avoid much exercise.			X	
40. Beef is a better source of protein than chicken.			X	
41. Margarine and butter are equal in a calorie content.	X			
42. Milk and fish if served at the same time cause indigestion.			X	
43. Teenagers whose growth spurts ahead early will be taller than most of their friends for the rest of their lives.		X		
44. An overweight person should try to reduce rapidly to avoid getting discouraged.		X		
45. Adults need little protein since they have passed the growth stage.			X	
46. Milk is largely for children; little is needed by teenagers.			X	
47. Iodine is likely to be low in the diet unless a person eats much seafood or uses iodized salt.	X			
48. Gelatine (Jello will keep nails from splitting.)		X		
49. The best insurance for good nutrition is the eating of a wide variety of foods.	X			
50. A person needs to eat only if he is hungry.			X	
51. If teeth are kept clean, they won't decay.			X	
52. Rapid increase in height during adolescence may be due to eating too much food.			X	
53. Teen-aged boys usually eat more adequately than girls of that age group.	X			
54. Adding soda to vegetables when cooking causes loss of vitamins.	X			

(over)

Suggestions to Teachers

This device is designed to be used for two purposes: (1) to determine what misconceptions a class has at the beginning of a unit on foods as a basis for planning what to emphasize and (2) to determine how effective the teaching has been in eliminating misconceptions. It is not planned for use in assigning marks or grades. In order to encourage pupils to be frank in their reactions, the directions say "Do not sign your name." Instead of scoring the papers, tabulate the frequencies of the responses to find the most common misconceptions of a class.

Performance Test

This test consists of preparing a luncheon meal of creamed protein-food (chipped beef, eggs,tuna), fruit salad, (apple, celery, raisins), drop biscuits, and floating island dessert.

Data are collected through observation as the luncheon is prepared and served. Half of the class prepares the meal while the other half observes, using the Observer's Record Sheets. The following day the procedure is reversed so that all pupils will have had both experiences.

Four pupils work together in a unit kitchen. Prior to the laboratory periods, distribute the plan and record sheets so that pupils may study and discuss them. When this is used as a pretest, pupils need some experience prior to taking the pretest: working in the unit kitchens to get acquainted with arrangement of equipment and supplies, and with working partners. For this reason, two days of practice lessons before taking the pretest are recommended.

The questions on the record sheets test the pupil's ability to apply the work simplification generalizations listed below. A summary sheet is given to suggest a form to use when tabulating individual and class scores. The generalizations are coded according to the listing. Pupils' names are to be filled in on the left hand column according to the responsibilities assumed. The key for each girl indicates the number of the question(s) on the record sheets which would require application of the generalization coded above in order to be answered correctly.

Have pupils check the answers on the record sheets. The forms, as provided, suggest acceptable answers (these should be omitted when sheets are reproduced). Give one point for each question answered correctly. If any item(s) is/are checked or underscored in question five, score item zero. Each pupil can total her own scores for each generalization. These totals, when compared with the potential scores, indicate which generalizations pupils are able to apply successfully and which ones need to be worked on further.

WORK SIMPLICATION GENERALIZATIONS

A. Eliminating unnecessary steps,stooping,bending, and reaching saves energy.
B. Assembling all materials for a particular kind of work before beginning saves time and avoids confusion.
C. Selecting and using properly the best equipment available for the purpose saves time and money.
D. Stacking and cutting together food of same size and shape saves time.
E. Unpeeled vegetables and fruits add attractive color to a salad and save time and motion in preparation.
F. Routing work from right to left (right-handed person) makes more efficient motions possible and reduces time and energy.
G. Dividing tasks so all members of the group are busy but not rushed throughout the preparation and clean-up periods saves time and avoids confusion.
H. Time is saved by doing a task when or where it is easiest to perform and when it makes later tasks easier.
I. Time is saved when one uses smooth, circular motions and works continuously with both hands at the same time.
J. Using both hands to perform a task reduces motions and saves time.
K. Combining jobs which can logically be done together may save time in food preparation and clean-up.

WORK PLAN FOR PERFORMANCE TEST

Girl 1 (Salad)	Girl 2 (Creamed Protein)	Girl 3 (Drop Biscuits)	Girl 4 (Floating Island)
Get all aprons out	Put on apron and arrange equipment and supplies		
PREPARATION DUTIES			
Prepare fruit for salad	Make white sauce	Measure dry ingredients mixed previously	Mix stirred custard
Add dressing to salad	Cut, tear or separate pieces of dried beef or other protein food	Mix ingredients for biscuts	Cook stirred custard cool in refrigerator
Place lettuce on plates		Place drop biscuits on baking sheet	Beat egg whites--add sugar. Drop this meringue as islands on custard in serving dish.
Place fruit on lettuce	Add protein food to white sauce	Rinse and/or soak dishes used in preparation	
Place salad plates on table		Set table	Rinse dishes used in preparation
		Cut one biscuit in half and place on plate for creamed protein food	
		Put creamed food on opened drop biscuit, and soak or rinse pan	Serve chilled dessert
Rinse dishes used in preparation	Wash & rinse all preparation dishes placed at sink	Place any additional biscuits on plate and take to table	Dry preparation dishes
	Put away preparation dishes		
Eat			
CLEAN-UP DUTIES			
	Place silver & glasses on tray & take to sink	Take plates and serving dishes to the sink	Get dishwater ready
			Wash dishes
Put linen or cloth mats and napkins away	Put away dishes	Arrange chairs	Clean sink
Dry dishes		Wipe off surfaces	Hang up dishcloth
Put towel on rack			
Put all aprons away			

OBSERVER'S RECORD SHEET - Girl 1

PREPARATION PERIOD _____ TIME STARTED _____ TIME FINISHED
_____ TOTAL MINUTES USED

1. What did she use to get supplies outside the unit?
   x* tray or x cart ____ neither
2. How many trips outside the unit did she take to get supplies? _____
3. How many trips outside the unit did she make other than to get supplies? 0
4. Check (x) utensils which she placed on counter before she began to work.
   - x rubber scraper
   - ____ metal spatula
   - ____ measuring spoons or
   - ____ measuring cups
   - ____ wooden spoon
   - x cutting board
   - x knife, French
   - x knife, paring
   - ____ knife, table
   - ____ casserole dish
   - x mixing bowl
   - x salad plates
   - x metal mixing spoon
   - Others: paper towel, custard cup
5. Check (x) utensils which she got after starting to work
   - ____ rubber scraper
   - ____ metal spatula
   - ____ measuring spoons
   - ____ measuring cups
   - ____ wooden spoon
   - ____ cutting board
   - ____ knife, French
   - ____ knife, paring
   - ____ knife, table
   - ____ casserole dish
   - ____ mixing bowl
   - ____ salad plates
   - ____ metal mixing spoon
   - Others: _____
6. Check (x) utensils she used for cutting apples and celery.
   - Apples: x knife, French; or x knife, paring; ____ knife, table; ____ kitchen, shears
   - Celery: x knife, French; or x knife, paring; ____ knife, table; ____ kitchen shears
7. Where did she cut apples and celery?
   x on cutting board ____ on counter ____ above counter surface
8. Did she pare apples? ____ Yes x No
9. Did she place lettuce on all plates before adding fruit and dressing?
   x yes ____ no
10. Where did she stack utensils she used in making salad? x right of sink; ____ left of sink; ____ in sink
11. Did she rinse preparation dishes before sitting to eat? x yes ____ no
12. Did she complete her preparation period duties so she could begin eating at same time as Girls 2, 3, and 4? x Yes ____ no
13. Did the jobs assigned her keep her busy? x all of time; or x most of time; ____ little of time

EATING PERIOD _____ TIME STARTED _____ TIME FINISHED
_____ TOTAL MINUTES USED

CLEANING-UP PERIOD _____ TIME STARTED _____ TIME FINISHED
_____ TOTAL MINUTES USED

14. Did she use smooth circular motions in drying dishes? x yes ____ no
15. Did she stack dishes of same kind together after drying them? x all; ____ some; ____ none
16. Which hand did she use to get dishes out of the rinsing water? ____ right; x left
17. Did the jobs assigned her keep her busy? x all of time; or x most of time; ____ little of time

* Key

OBSERVER'S RECORD SHEET - Girl 2

PREPARATION PERIOD _____TIME STARTED _____TIME FINISHED
_____TOTAL MINUTES USED

1. What did she use to get supplies outside unit?
   __x__ tray or __x__ cart _____ neither
2. How many trips outside the unit did she take to get supplies? __1__
3. How many trips outside the unit did she make other than to get supplies? __0__
4. Check (x) utensils which she placed on counter before she began to work.

__x__	measuring cups	_____	hotpad holder	_____	knife, French Others: ____
__x__	measuring spoons	_____	mixing bowl	_____	knife, paring _____
_____	metal mixing spoon	_____	paper towel	_____	knife, table _____
__x__	wooden spoon	_____	cutting board	__x__	custard, cup _____
__x__	sauce pan	_____	plates, dinner	_____	metal spatula _____
_____	skillet	_____	pie pan	_____	flour sifter or strainer
__x__	double boiler	_____	kitchen shears	__x__	rubber scraper

5. Underline utensils in question 4 she got after starting to work.
6. If she used a double boiler, was water heated in bottom while she measured the ingredients for the white sauce? __x__ yes _____ no
7. How did she cut the dried beef?
   _____ cut with knife on counter _____ pulled apart with fingers
   __x__ cut with knife on cutting board __x__ cut with kitchen shears
   _____ cut with knife above counter
8. Did she rinse and stack cooking dishes and utensils she used for preparing creamed beef?

rinsed:	Stacked:
_____ all	__x__ all
__x__ some	_____ some
_____ none	_____ none

9. Where did she stack them? _____ in sink
   _____ left of sink
   __x__ right of sink
10. How many preparation dishes did she wash before eating? __x__ all
    _____ some
    _____ none
11. Did the jobs assigned her keep her busy? __x__ all of time
    or __x__ most of time
    _____ little of time

EATING PERIOD _____TIME STARTED _____TIME FINISHED
_____TOTAL MINUTES USED

CLEANING-UP PERIOD _____TIME STARTED _____TIME FINISHED
_____TOTAL MINUTES USED

12. Did she carry glasses to the sink on a tray? __x__ yes _____ no
13. Did she group glasses at right of sink? __x__ yes _____ no
14. Did she place silver on tray and take to sink? __x__ yes _____ no
15. Did she use both hands to place dishes and utensils in cupboard? __x__ Yes _____ no
16. Did the jobs assigned her keep her busy? __x__ all of time
    or __x__ most of time
    _____ little of time

OBSERVER'S RECORD SHEET - Girl 3

PREPARATION PERIOD _____TIME STARTED_____TIME FINISHED
_____TOTAL MINUTES USED

1. What did she use to get supplies outside the unit?
   __x__ tray or __x__ cart _____ neither
2. How many trips outside the unit did she take to get supplies? __1__
3. How many trips outside the unit did she make other than to get supplies? __0__
4. Check (x) utensils which she placed on counter before she began to work.
   __x__ measuring cups __x__ fork __x__ rubber scraper _____ board
   _____ measuring spoons __x__ tablespoon _____ paper towel _____ rolling pin
   _____ metal mixing spoon _____ knife, paring _____ tray Others: _____
   _____ wooden spoon _____ knife, table _____ wax paper _____
   __x__ mixing bowl _____ metal spatula __x__ baking sheet _____
5. Underline utensils in question 4 she got after starting to work.
6. When did she heat the oven?
   __x__ before starting to mix biscuits _____ not at all
   _____ when partly mixed _____ after putting biscuits in oven
   _____ just before putting biscuits in oven _____ just before eating
7. When did she rinse mixing dishes?
   __x__ after putting biscuits in oven
   _____ just before eating
   _____ not at all
8. Where did she stack her preparation dishes for Girl 2 to wash?
   _____ right of sink
   _____ left of sink
   _____ in the sink
9. Did she complete her preparation period duties so she could begin eating at same time as Girls 1, 2, and 4? _____ yes _____ no
10. Did the jobs assigned her keep her busy? { __x__ all of time / or __x__ most of time / _____ little of time }

EATING PERIOD _____TIME STARTED_____TIME FINISHED
_____TOTAL MINUTES USED

CLEANING-UP PERIOD _____TIME STARTED_____TIME FINISHED
_____TOTAL MINUTES USED

11. Did she use a tray to take plates and serving dishes to sink? __x__ yes _____ no
12. She took __1__ trip(s) to take dishes to sink.
13. Where did she stack dishes?
    __x__ right of sink
    _____ left of sink
    _____ in the sink
14. Did she stack dishes of same kind together by the sink? __x__ yes _____ no
15. Did she use both hands in wiping off surfaces? __x__ yes _____ no
16. Did she use smooth circular motions in wiping work surfaces? __x__ yes _____ no
17. Did the jobs assigned her keep her busy? { __x__ all of time / or __x__ most of time / _____ little of time }

OBSERVER'S RECORD SHEET - Girl 4

PREPARATION PERIOD _____ TIME STARTED _____ TIME FINISHED
_____ TOTAL MINUTES USED

1. What did she use to get supplies outside unit?
   __x__ tray or __x__ cart _____ neither
2. How many trips outside the unit did she take to get supplies? __1__
3. How many trips outside the unit did she make other than to get supplies? __0__
4. Check (x) in list below utensils which she placed on counter before she began to work.

__x__	measuring cups	__x__	sauce pan	_____	knife, table	____	egg beater
__x__	measuring spoons	__x__	double boiler	_____	knife, paring	Others:	_____
_____	metal mixing spoon	__x__	mixing bowl	_____	metal spatula		_____
__x__	wooden spoon	__x__	sauce dishes	__x__	rubber scraper		_____
_____	tablespoon	_____	fork	_____	hotpad holder		

5. Underline utensils in question 4 she got after starting to work.
6. Did she use smooth circular motions in stirring custard? __x__ yes _____ no
7. If she used double boiler for making custard, was the water heated in bottom of double boiler while she measured ingredients for the custard? __x__ yes ___ no
8. What utensils did she use to get all custard out of cooking utensils?
   _____ tablespoon __x__ rubber scraper _____ metal spatula
9. What utensils did she use to place meringue on custard? metal mixing spoon
10. In setting table she took 1-2 trip(s) to table to bring glasses, plates, silver, placemats, napkins and centerpiece.
    _____ trips around table to place silver
    _____ trips around table to place glasses
    _____ trips around table to place plates
    _____ total trips around table to set it.
11. What did she use to carry dishes, silver, and glasses to table?
    __x__ tray or __x__ cart _____ neither
12. Did she wipe dishes that had been washed before starting to eat?
    _____ some _____ none __x__ all
13. Did she complete her preparation period duties so she could begin eating at same time as Girls 1, 2, and 3? __x__ yes _____ no
14. Did the jobs assigned her keep her busy? { __x__ all of time / or { __x__ most of time / _____ little of time

EATING PERIOD _____ TIME STARTED _____ TIME FINISHED
_____ TOTAL MINUTES USED

CLEANING-UP PERIOD _____ TIME STARTED _____ TIME FINISHED
_____ TOTAL MINUTES USED

15. In which direction did she wash dishes? __x__ right to left
    _____ left to right
16. Did she use smooth circular motions? __x__ yes _____ no
17. Were dishes washed __x__ in washing water
    _____ 1-2 inches above water level
    _____ 3-4 inches above water
18. Which hand did she use to place dishes in rinsing water? __x__ right _____ left
19. Did the jobs assigned her keep her busy? { __x__ all of time / or { __x__ most of time / _____ little of time

SUMMARY SHEET

Pupils	Work Simplification Generalizations											Total Indiv. Score
	A	B	C	D	E	F	G	H	I	J	K	
Girl 1 (Key)	1,2,3	4,5	6	7	8	10,16	11,12 13,17	15	14			Potential Score-16
Girl 2 (Key)	1,2,3, 12,14	4,5		7		9,13	10,11	8,9 14		15	6	Potential Score-17
Girl 3	1,2,3, 11,12	4,5				8,13	9,10 17	6,7 14	16	15		Potential Score-17
Girl 4 (Key)	1,2,3, 11,12	4,5	8,9			15,18	12,13 14	17	6,16		7	Potential Score-19
Class Total Score												Total Potential Score - 69

INDEX TO GENERALIZATIONS AND ITEMS FOR EVALUATION
FOR FOODS:

A. Freezing tends to tenderize meat slightly. High temperatures and/or long cooking toughen proteins. Test Item I.

B. Decrease in weight of meats in the cookery process is in direct proportion to the increase in temperature. Test Item I.

C. Cooking in liquid may increase tenderness by softening the connective tissue. Test Item I.

D. In batters and doughs sugar affects flavor, assists in the even distribution of fat, and tenderizes. Test Item II.

E. In batters and doughs liquids release the carbon dioxide, dissolve sugar, salt, and baking powder; add food value (if milk or fruit juice); and add flavor (if fruit juice). Test Item II.

G. In batters and doughs eggs effect flavor, give rigidity to cell walls, increase lightness due to foaming qualities. Test Item II.

H. In batters and doughs leavening agents give porosity to the mixture, influence flavor and tenderness to some extent. Baking powders and soda release carbon dioxide in the presence of heat and moisture. Text Item II.

I. When a food is blanched it is dipped in boiling water and rinsed in cold water. Test Item III.

J. Boiling is cooking a food in a liquid so bubbles rise continually and break on the surface. Test Item III.

K. Broiling a food is cooking it by direct heat either with the flame directly on the food or in a pan or on a grill. Test Item III.

L. To braise or fricassee a food is to brown it in a small amount of fat, then simmer in a covered utensil in a small amount of liquid. Test Item III.

M. Parboiling is boiling a food until partially cooked. Test Item III.

N. Stewing is simmering in enough liquid to cover the food. Test Item III.

O. Sauteing is browning quickly in a small amount of fat with frequent turning. Test Item III.

P. A pie crust that is tough or leathery may be caused by too much flour on rolling board, too much handling, too much liquid, too little shortening, or underbaking (too slow an oven or too short a time). Test Item IV.

Q. A pie crust that is thin, brittle, and burns easily may have too much shortening or have been rolled too thin. Test Item IV.

R. When an unfilled pie shell puffs or blisters in the pan, it may not have been pricked enough. Test Item IV.

over

S. An unfilled shell may shrink if it is stretched when being placed in the pan. Test Item IV.

T. Fruit pie that is soggy in the bottom may have been baked in an oven that was cool at the beginning of the baking period, not baked immediately, baked in too slow an oven, or the fruit filling was not thickened before putting in crust. Test Item IV.

U. Too much shortening may cause a pie crust to be greasy and mealy. Test Item IV.

V. A butter cake is done when it is delicately browned, the surface springs back leaving no indention when pressed lightly with the finger. A toothpick or cake tester should come out dry and clean when inserted into the center of the cake. When a cake shrinks from the side of the pan, it is overdone. Test Item V.

W. An angel food cake is done when it will spring back when indented by your finger and is delicately browned. Test Item V.

X. A baked custard is done when a silver knife comes out clean after being inserted halfway between the center and the custard cup and $\frac{1}{2}$ inch below surface. Test Item V.

Y. A vegetable is done when it is easily cut with fork. Test Item V.

Z. When the crust of a butter cake is cracked or peaked in the center, the cause may be too hot an oven at first, too long a baking period, over-mixing, too much flour, too little shortening or sugar. Test Item VI.

AA. A cake that is dry may have been baked too long or have been beaten too much with an electric mixer; may have too much flour or baking powder, too little shortening and or liquid. Test Item IV.

AB. A cake with a heavy and rubbery texture may not have enough leavening, may have too much or too little sugar; too much shortening or liquid or may have been under-mixed for the richness of the batter. Test Item VI.

AC. If the crust or crumb of a cake is tough, it may have been caused by too little shortening or sugar, too much flour, over-mixing, or being baked too long. Test Item VI.

AD. Too much shortening and/or sugar for amount of stirring, too much baking powder, too little flour; or too slow an oven will cause a cake to fall or collapse. Test Item VI.

AE. A cake will be coarse if the batter is insufficiently mixed, too much baking powder is used, or oven temperature is too low. Test Item VI.

AF. Many vitamins dissolve in water and can be destroyed when exposed to light and oxygen, or when heated. Test Item VII.

AG. Nutritive values of vegetables are conserved by quick cooking in small amounts of water. Test Item VII.

AH. Fruits and vegetables, such as apples and potatoes, lose much of their vitamin C content when sieved or mashed as contact with the oxygen of the air decreases their vitamin C content. Test Item VII.

AI. Using cooked vegetables in salads is better than reheating them because reheating may cause change in color and flavor and loss of vitamins. Test Item VII.

AJ. Green vegetables become yellow-green if cooked in a covered pan. Test Items VII and VIII.

AK. Since some vitamins and minerals dissolve in water, it is better not to cut vegetables in small pieces before cooking. Test Item VII.

AL. Tunnels in muffins can be prevented if they are stirred only enough to moisten the flour. They also will be lighter, more tender, and have a better taste. Test Item VIII.

AM. Eggs foam more readily when beaten at room temperature. Test Item VIII.

AN. If butter cakes are allowed to stand in pans after baking long enough for gluten to become rigid, they are more likely to retain their shape. Test Item VIII.

AO. To prevent sweating and sogginess of crust, bread and rolls need to be removed from the baking pans immediately. Test Item VIII.

AP. The larger the amount or the more expensive the processing of a food, the higher the price as a rule. Test Item IX and XI.

AQ. Yellow vegetables are excellent sources of vitamins and minerals. Test Item X.

AR. Meat and eggs are excellent sources of protein, minerals (iron), and vitamins. Test Item X.

AS. Most fruits are valuable for their minerals and vitamins. Test Item X.

AT. Whole-grain or enriched cereals are carbohydrate-rich foods and are at the same time economical sources of protein, minerals (iron), and vitamins. Test Item X.

AU. Candy is a carbohydrate-rich food with little or no other nutrients. Test Item X.

AV. Nuts are useful sources of incomplete protein and of minerals and vitamins. Test Item X.

AW. Milk is an excellent source of minerals (calcium), protein, and vitamins. Test Item X.

AX. Butter is useful source of vitamin A. Test Item X.

AY. Salad oil contains only fat. Test Item X.

AZ. Cuts of meat from the loin or steak areas of the animal are more expensive than those from the organs or from less tender cuts of meat, yet they are no more nutritious. Test Item XI.

BA. Foods which are more perishable are more expensive than those that can be shipped and held more easily. Test Item XI.

BB. Dark Green, and deep yellow vegetables and deep yellow fruits contain more of the protective nutrients than other vegetables and fruits. Test Item XI.

BC. Dark green, and deep yellow vegetables are excellent sources of vitamins and minerals. Other vegetables supplement the minerals and vitamins furnished by these green, and yellow vegetables. Test Item XII.

BD. Meals recommended for people who need to gain weight include liberal use of fats, whole-grain or enriched cereals, sugars, meats, eggs, cheese and whole milk and plenty of fruits and vegetables. Test Item XIII.

BE. For good nutrition, reducing diets need to include adequate amount of meat, eggs, vegetables, fresh fruits, and skim or whole milk but the amounts of sugars, breads, and cereals need to be limited. Test Item XIV and XVI.

BF. When food contains too little protein, minerals, and vitamin C, the red blood cells do not have a normal amount of their red coloring matter and the skin of the individual may be pale in color. Citrous fruits are excellent sources of vitamin C but all fresh fruits make some contribution to the vitamin C content of the diet. Test Item XV.

BG. Dark Green, and deep yellow vegetables are excellent sources of vitamins, minerals, especially vitamin A and iron. Test Item XV.

BH. Meat, poultry, fish, and eggs are excellent sources of protein, and iron. Edible organ meats such as heart, kidney, liver are valued for their protein and iron contributions. Test Item XV.

BI. To maintain health it is necessary to have an adequate intake of essential nutrients. These will be supplied when a variety of foods from the four food groups is eaten each day.

The minimum recommended amounts are:

1. Milk (or equivalent) - adults 2 cups; adolescents 4 cups; children 3 to 4 cups.
2. Meat (or alternates) - 2 servings.
3. Vegetables and fruits - 4 servings, 1 citrous daily and 1 dark-green or deep yellow at least every second day.
4. Bread and cereals - 4 servings of whole grain, enriched, or restored. Test Item XVI.

BJ. Tasks are usually more effectively accomplished with satisfaction for all, if each person contributes to the extent of his ability to the making of plans, accepts responsibility for carrying out these plans, and develop skills necessary to do his job. Test Item XVII.

BK. Each individual can make a contribution to the activities of a group. Test Item XVII.

BL. Because protein, minerals, and vitamins are used for building tissues such as muscle and bone and for the formation of the constituents of blood, these needs are highest in periods of rapid growth. Protein is also important for the formation of regulating substances and the B-complex vitamins are needed to release energy from foods. Test Item XVIII

BM. Boys and girls engaging in strenuous exercise need more of the energy-rich foods, such as sugars, fats, and breads than do less active people of the same age. Test Item XVIII.

BN. Since fats provide about twice as many calories as the same weight of carbohydrates or proteins, the caloric value of foods increase as the amount of fat in the foods increases. Text Item XVIII.

BO. When children, including adolescents, receive too small a supply of protein, calcium, phosphorus, and vitamins C and D, there is danger that the growth of bones will be stunted and that the bones will be improperly shaped. Test Item XVIII.

BP. Families are alike in many ways, and yet different in many ways. Test Item XIX.

BQ. Family practices result from differences in goals, beliefs, values, cultural heritages and expectations, resources available, age of family members, occupations. Test Item XIX.

Example of an answer sheet that could be used to record responses and hence avoid having to reproduce the test items each time they are used. Can be adapted for any combination of items.

Answer Sheet: Foods 10th Grade

I. Treatments

_____A.
_____B.
_____C.

II. _____A.
_____B.
_____C.
_____D.
_____E.

III. Descriptions

_____A.
_____B.
_____C.
_____D.
_____E.
_____F.
_____G.
_____H.

IV. Reasons

_____A.
_____B.
_____C.
_____D.
_____E.
_____F.

V. Tests

_____A.
_____B.
_____C.
_____D.

VI. Reasons

_____A.
_____B.
_____C.
_____D.
_____E.
_____F.

VII. Practices Reasons

A.___ 1 _____
___ 2
B.___ 1 _____
___ 2
C.___ 1 _____
___ 2
D.___ 1 _____
___ 2
E.___ 1 _____
___ 2
F.___ 1 _____
___ 2
G.___ 1 _____
___ 2

VIII. Choices Reasons

A.___ 1 _____
___ 2
B.___ 1 _____
___ 2
C.___ 1 _____
___ 2
D.___ 1 _____
___ 2

IX. A._____1.
_____2.
B._____1.
_____2.
C._____1.
_____2.
D._____1.
_____2.
E._____1.
_____2.
F._____1.
_____2.

X. Nutrients

_____Milk
_____Butter
_____Eggs
_____Meat
_____Fruit
_____Vegetables
_____Candy
_____Salad Oil
_____Nuts
_____Cereals

XI. Choices

A._____1
_____2
B._____1
_____2
C._____1
_____2
D._____1
_____2
E._____1
_____2
F._____1
_____2

G._____1
_____2
H._____1
_____2
I._____1
_____2

XII. Choices

_____1
_____2
_____3
_____4
_____5
_____6
_____7
_____8
_____9

XIII. Additions_____

_____

_____

_____

_____

Substitutions_____

_____

_____

_____

_____

(over)

XIV. Small servings — Leave out

A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P
Q
R
S

XV. Substitutions

A. 1
2
B. 1
2
C. 1
2
D. 1
2
E. 1
2

F 1
2
G 1
2
H 1
2

XVI. Choices

A
B
C
D

E
F

XVII. Ideas 1.

2.

XVIII. Nutrients — Reasons

A — A.

B — B.

C — C.

D — D.

E — E.

XIX. Reasons

75

Generalizations:*

A. Freezing tends to tenderize meat slightly. High temperatures and/or long cooking toughen proteins.

B. Decrease in weight of meats in the cookery process is in direct proportion to the increase in temperature.

C. Cooking in liquid may increase tenderness by softening the connective tissues.

I. How we care for and cook meat affects it in several ways. Below is a list of treatments and list of results. Place the number or numbers of the treatment that corresponds to the result in the blank in front of the result. Some results can be expected from more than one treatment, also the treatments can be used more than once.

Results		Treatments
1, 3, 4**	A. Makes more tender	1. Freezing
2, 5	B. Makes tougher	2. High cooking temperatures
2	C. Decreases weight (shrinks)	3. Low cooking temperatures
		4. Cooking in liquid
		5. Long cooking period

*When duplicating the items for use by pupils, delete the generalizations. They are listed for each item to help you in deciding whether to select it for the test.

**In all items the key is indicated by numbers or checks. The key has been approved by specialists in the Department of Food and Nutrition.

Generalizations:

D. In batters and doughs sugar affects flavor, assists in the even distribution of fat, and tenderizes.

E. In batters and doughs fat tenderizes, helps to blend flavors, and permits incorporation of air in the mixture.

F. In batters and doughs liquids release the carbon dioxide; dissolve sugar, salt, and baking powder; add food value (if milk or fruit juice); and add fruit juice.

G. In batters and doughs eggs affect flavor, give rigidity to cell walls, increase lightness due to foaming qualities.

H. In batters and doughs leavening agents give porosity to the mixture, influence flavor and tenderness to some extent. Baking powders and soda release carbon dioxide in the presence of heat and moisture.

II. The ingredients in a batter such as muffins affect the product in several ways. Place the number or numbers of the effects which it produces beside the ingredient.

2,5	A. Sugar
2,3,4	B. Eggs
5	C. Fat
2,4,5	D. Baking powder
1,6	E. Milk

1. Releases the carbon dioxide in the baking powder.
2. Changes flavor
3. Helps to make cell walls more rigid.
4. Increases lightness
5. Makes product more tender
6. Dissolves sugar

Generalizations:

I. When a food is blanched it is dipped in boiling water and rinsed in cold water.

J. Boiling is cooking a food in a liquid so bubbles rise continually and break on the surface.

K. Broiling a food is cooking it by direct heat either with flame directly on the food or in a pan or on a grill.

L. To braise or fricassee a food is to brown it in a small amount of fat, then simmer in a covered utensil in a small amount of liquid.

M. Parboiling is boiling a food until partially cooked.

N. Stewing a food is simmering in enough liquid to cover the food.

O. Saute'ing is browning quickly in a small amount of fat with frequent turning.

III. Recipes use many terms relating to the applying of heat to foods. See if you can match the descriptions in the column on the right with the correct term on the left. Place the number of the description in the blank in front of the term. The description may be used more than once.

TERMS	DESCRIPTIONS
5 A. Blanch	1. To brown meat or vegetables in a small amount of fat, then simmer in a covered utensil in a small amount of liquid.
3 B. Boil	2. To simmer in liquid to cover.
4 C. Broil	3. To cook in a liquid so the bubbles rise continually and break on the surface.
1 D. Braise	4. To cook by direct heat either with the flame directly on the food or in a pan or on a grill.
1 E. Fricassee	5. Dip in boiling water and rinse in cold water.
6 F. Parboil	6. To boil until partially cooked.
2 G. Stew	7. Brown quickly in small amount of fat with frequent turning.
7 H. Saute'	

P. A pie crust that is tough or leathery may be caused by too much flour on rolling board, too much handling, too much liquid, too little shortening, or under-baking (too slow an oven or too short a time).

Q. A pie crust that is thin, brittle, and burns easily may have too much shortening or have been rolled too thin.

R. When an unfilled pie shell puffs or blisters in the pan, it may not have been pricked enough.

S. An unfilled shell may shrink if it is stretched when being placed in the pan.

T. A fruit pie that is soggy in the bottom may have been baked in an oven that was too cool at the beginning of the baking period, not baking immediately, oven too slow, or not thickening the fruit filling before putting in crust.

U. Too much shortening may cause a pie crust to be greasy and mealy.

IV. A good pie crust is essential for a successful pie but many things can prevent a crust being tender, light, and flaky. Mary Alice is learning to cook and is having trouble with crusts. What would you tell her causes each of these difficulties?

Place the number of the reasons which explain the failure in the blanks at the left of each failure.

	Failures	Reasons
4,5,7,12,13,15	A. Crust is tough and leathery.	1. Oven too cool at beginning
8,14	B. Crust is thin, brittle, burns easily.	2. Oven too hot
10	C. An unfilled shell that is puffed and blistered.	3. Baked too long
6,15,16	D. A fruit pie that has a soggy lower crust.	4. Not baked enough
11	E. An unfilled shell that shrinks	5. Oven too slow
14	F. A crust that is greasy and mealy.	6. Not baked immediately
		7. Too much handling of dough
		8. Dough rolled too thin
		9. Dough not rolled thin enough
		10. Shell not pricked enough
		11. Stretched too much when put in pan
		12. Too much flour
		13. Too much liquid
		14. Too much shortening
		15. Not enough shortening
		16. Fruit filling not thickened

Generalizations: 10th

V. A butter cake is done when it is delicately browned, the surface springs back leaving no indentation when pressed lightly with the finger. A toothpick or cake tester should come out dry and clean when inserted into the center of the cake. When a cake shrinks from the side of the pan, it is overdone.

W. An angel food cake is done if it will spring back when indented by your finger and is delicately browned.

X. A baked custard is done when a silver knife comes out clean after being inserted halfway between the center and the custard cup and $\frac{1}{2}$ inch below surface.

Y. A vegetable is done when it is easily cut with fork.

V. When learning to cook, one of the most common difficulties is knowing when a product has been baked or cooked enough. For these 4 products place the numbers of the best ways to test doneness in the blanks at the left of each.

Products	Cake is done when
2,4,5,8 A. Butter Cake	1. it pulls away from the side of the pan. 2. a toothpick inserted into center of cake comes out clean. 3. a fork inserted into center of cake comes out clean. 4. a cake tester inserted into center of cake comes out clean. 5. the cake is delicately browned on top. 6. cake is cracked on top. 7. cake is raised the full amount. 8. the cake springs back when indented by finger.
5,8 B. Angel Food Cake	
	Custard is done when
4 C. Baked Custard	1. it has light or golden brown crust. 2. does not stick to finger when touched. 3. silver knife comes out clean after being inserted into middle of custard. 4. silver knife comes out clean after being inserted between center and side of custard cup. 5. it is stiff.
	Frozen green beans are done when
3 D. Frozen green beans	1. they have thawed and started to boil. 2. they no longer stick together. 3. they cut easily with a fork. 4. they steam.

Z. When the crust of a butter cake is cracked or peaked in the center, the cause may be too hot an oven at first, too long a baking period, over-mixing, too much flour, too little shortening or sugar.

AA. A cake that is dry may have been baked too long or have been beaten too much with an electric mixer; may have too much flour or baking powder, too little shortening and/or liquid.

AB. A cake with a heavy and rubbery texture may not have enough leavening; may have too much or too little sugar; too much shortening or liquid; or may have been under-mixed for the richness of the batter.

AC. If the crust or crumb of a cake is tough, it may have been caused by too little shortening or sugar, too much flour, over-mixing, or being baked too long.

AD. Too much shortening and/or sugar for amount of stirring, too much baking powder, too little flour or too slow an oven will cause a cake to fall or collapse.

AE. A cake will be coarse if the batter is insufficiently mixed, too much baking powder is used, or oven temperature is too low.

VI. Making a good butter cake is a science. A cook needs to know why her cakes are not as good as they could be, if she is to improve her ability. Below are some common causes of cake failures. Place the numbers of the reasons which explain the failure in the blanks at the left of each.

Failures		Reasons
3,4,7,9,10,12	A. Cake falls	1. Cake baked too long
3,9,10	B. Cake is coarse	2. Oven was too hot at first
4,9,11,12,13,14	C. Texture is heavy and rubbery.	3. Oven too slow
1,5,6,8,10,15	D. Cake is dry.	4. Too much shortening
2,5,6,8,13	E. Crust is cracked or peaked in center	5. Too little shortening
1,5,6,8,13	F. Crust or crumb is tough.	6. Too much flour
		7. Too little flour
		8. Over-mixing
		9. Under-mixing for richness of batter
		10. Too much baking powder
		11. Not enough baking powder
		12. Too much sugar
		13. Too little sugar
		14. Too much liquid
		15. Too little liquid

Generalizations:

AF. Many vitamins dissolve in water and can be destroyed when exposed to light and oxygen or when heated.

Ag. Nutritive values of vegetables are conserved by quick cooking in small amounts of water.

AH. Fruits and vegetables, such as apples and potatoes, lose much of their vitamin C content when sieved or mashed as contact with the oxygen of the air decreases their vitamin C content.

AI. Using cooked vegetables in salads is better than reheating them because reheating may cause change in color and flavor and loss of vitamins.

AJ. Green vegetables become yellow-green if cooked in a covered pan.

AK. Since some vitamins and minerals dissolve in water, it is better not to cut vegetables in small pieces before cooking.

VII. The Hanson family has to live on a very low income, so they have trouble getting food that meets all of their nutritional requirements. They try to buy foods which are inexpensive yet have high nutritional values. If they would use the best methods of caring for and preparing foods, they would conserve more of the food values.

Which one of each of these pairs of practices would be better for them to use? Check (x) at the left the better practice and place the numbers of the reasons which explain your selection in the blank at the right.

Practice	Numbers of Reasons
A. Preparing potatoes by	
x 1. baking	2,3
2. mashing	
B. Using left-over cooked vegetables	
1. in soups	1,2,3,4
x 2. in salads	
C. Cutting carrots for cooking into	
1. small pieces	2,3
x 2. larger pieces	
D. Cooking carrots in	
1. large amount of water	2,3,4
x 2. small amount of water	
E. Cooking green beans	
1. an hour	1,2,3,4,5,6
x 2. 15 to 20 minutes	
F. Cooking green beans in	
x 1. uncovered pan	1
2. covered pan	
G. Keeping celery crisp until served by	
1. putting in cold water	2,3
x 2. putting in tight container in refrigerator	

Reasons

1. Less change in color
2. Less loss of vitamins
3. Less loss of minerals
4. Less change in flavor
5. Save fuel
6. Texture better

Generalizations:

AL. Tunnels in muffins can be prevented if they are stirred only enough to moisten the flour. They also will be lighter, more tender, and have a better taste.

AM. Eggs foam more readily when beaten at room temperature.

AN. If butter cakes are allowed to stand in pans after baking long enough for gluten to become rigid, they are more likely to retain their shape.

AO. To prevent sweating and sogginess of crust, bread, and rolls need to be removed from the baking pans immediately.

VIII. Below are several pairs of statements about preparing food. Select the best one in each pair and check (x) your choice in the blank at the left. Place the numbers of the reasons which explain your choice in the blank at the right.

Choices		Number of reasons	Reasons
When making muffins			
A. _____	1. Mix until batter is smooth	1,2,3,5	A. 1. Will be lighter 2. Will taste better 3. Will be more tender 4. Will not be lumpy 5. Will not have tunnels
x	2. Leave batter somewhat lumpy		
When beating eggs for a cake			
B. _____	1. Have them very cold	1	B. 1. Will beat better 2. Will blend better with other ingredients. 3. Cake will be better flavor
x	2. Have them room temperature		
After cakes are baked			
C. _____	1. Remove from pans immediately	4,5	C. 1. Less apt to stick to pan 2. Will cool faster 3. Less apt to fall 4. Less apt to break up 5. Gluten will become rigid
x	2. Allow to cool before removing from pan		
After bread is baked			
D. x	1. Remove from pans immediately	3,4	D. 1. Less apt to stick to pan 2. Less apt to fall 3. Prevents sweating 4. Prevents sogginess of crust 5. Will cook more quickly
_____	2. Allow to cool before removing from pan		

Generalization: 10th

AP. The larger the amount or the more expensive the processing of a food, the higher the price as a rule.

IX. If a family has to live on a low income, which one of these pairs of foods should they choose during the winter months, considering nutrition as well as cost.

Check the one which is usually lower in cost but not lower in nutritional value. If they are equal in cost and nutrition, do not check either.

A. __x__ 1. Corn, canned
____ 2. Corn, frozen

B. __x__ 1. Tomatoes, canned
____ 2. Tomatoes, fresh

C. ____ 1. Cake from a mix purchased in the store
__x__ 2. Cake mixed at home

D. __x__ 1. Dried skim milk for cooking
____ 2. Fresh skimmed milk for cooking

E. ____ 1. Orange juice from fresh oranges
__x__ 2. Canned orange juice

F. ____ 1. Pancakes from mix purchased in store
__x__ 2. Pancakes mixed at home

Generalizations: 10th

AQ. Deep Yellow vegetables are excellent sources of vitamins and minerals.

AR. Meat and eggs are excellent sources of protein, minerals (iron), and vitamins.

AS. Most fruits are valuable for their minerals and vitamins.

AT. Whole-grain or enriched cereals are carbohydrate-rich foods and are at the same time economical sources of protein, minerals (iron), and vitamins.

AU. Candy is a carbohydrate-rich food with little or no other nutrients.

AV. Nuts are useful sources of incomplete protein and of minerals and vitamins.

AW. Milk is an excellent source of minerals (calcium), protein, and vitamins.

AX. Butter is a useful source of vitamin A.

AY. Salad oil contains only fat.

X. In order to plan meals we need to know what foods are especially good sources of the food nutrients. Below is a chart of foods and nutrients. Check (x) in the blank the nutrients which each of these foods contain in <u>important amounts</u>.

Foods		NUTRIENTS			
	Carbohy-drates A	Proteins B	Minerals (1 or more) C	Vitamins (1 or more) D	None of these E
Milk		x	x	x	
Butter				x	
Eggs		x	x	x	
Meat		x	x	x	
Fruit			x	x	
Vegetables, deep yellow			x	x	
Candy	x				
Salad oil					x
Nuts		x	x	x	
Cereals, whole grain and enriched	x	x	x	x	

Generalizations: 10th

AP. The larger the amount or the more expensive the processing of a food, the higher the price as a rule.

AZ. Cuts of meat from the loin or steak areas of the animal are more expensive than those from the organs or from less tender cuts of meat yet they are no more nutritious.

BA. Foods which are more perishable are more expensive than those that can be shipped and held more easily.

BB. Dark green, and deep yellow vegetables and deep yellow fruits contain more of the protective nutrients than other vegetables and fruits.

XI. When we go to the grocery we have many choices to make between foods and most families need to make these choices wisely to keep food costs down. Which one of the following pairs of foods is the better choice from the standpoint of cost and food value? Check (x) the better one.

Foods

A. x 1. Broccoli
_____ 2. Asparagus

B. _____ 1. Round steak
x 2. Hamburger

C. _____ 1. Corn flakes
x 2. Oatmeal

D. x 1. Celery
_____ 2. Olives

E. x 1. Liver
_____ 2. Steak

F. x 1. Carrots
_____ 2. Canned Corn

G. x 1. Cabbage
_____ 2. Lettuce, head

H. _____ 1. Canned pears
x 2. Canned peaches

I. _____ 1. Canned apricots
x 2. Dried apricots

Generalizations:

BC. Dark green, and deep yellow vegetables are excellent sources of vitamins and minerals. Other vegetables supplement the minerals and vitamins furnished by these green, and yellow vegetables.

XII. The nutritive values of foods vary among foods in a group. Research indicates that we can classify vegetables as high or low in the amounts of protective nutrients: vitamins and minerals. For example, carrots have more of these nutrients than turnips.

Which of these vegetables would you put in a list of those high in protective nutrients? Place an x in the blanks in front of the 4 or 5 which are highest.

_____ 1. Peas

__x__ 2. Cabbage, raw

_____ 3. Celery

_____ 4. Lettuce, head

__x__ 5. Winter squash (such as Hubbard, acorn or butterfly)

_____ 6. Cauliflower

__x__ 7. Cantaloupe

__x__ 8. Sweet potatoes

_____ 9. Corn

__x__ 10. Greens such as kale, spinach, beet greens.

Generalization: 10th

BD. Meals recommended for people who need to gain weight include liberal use of fats, whole-grain or enriched cereals, sugars, eggs, cheese and whole milk and plenty of fruits and vegetables.

XIII. Sara is very thin and needs to gain some weight so she will be more attractive. She ate an average sized serving of these foods yesterday.

Breakfast

Orange Juice

Toast Butter

Milk

Lunch

Hamburger Sandwich

Coke

Supper

Minute Steak Boiled Potatoes

Creamed Corn

Cabbage Salad

Bread Butter

Fruit Jello

Milk

Snacks

Apple

What foods could Sara add to these or what substitutions could she make in order to gain weight?

1. Add foods to these menus that would help Sara gain weight.

2. Cross out the foods and write substitutes beside them that would be better foods for her to help her gain weight.

(See back side of sheet for suggestions on scoring.)

When scoring Item XIII, the following types of foods could well be added to the menus:

Breakfast - bacon, egg, cereal
Lunch - cake, pie, cookies, pudding
Snacks - milk
Dinner - gravy

Foods which might be substituted are:

Boiled potatoes - French Fried potatoes
Fruit jello - cake, pie, cookies and fruit, pudding
Coke - milk

Generalization: 10th

BE. For good nutrition, reducing diets need to include adequate amounts of meat, eggs, vegetables, fresh fruits, and skim or whole milk, but the amounts of fats, sugar, breads, and cereals need to be limited.

XIV. Marilyn is a little overweight and wants to reduce. She ate one average size serving of the foods in these meals and snacks yesterday.

Breakfast

Tomato Juice
Bacon Egg
Buttered Toast
Milk

Snacks

Strawberry pop (1 bottle)
Chocolate Cake

Lunch

Boiled Potatoes
Creamed Dried Beef
Bread Butter
Apricot Sauce
Milk

Supper

Fried Chicken Gravy
Mashed Potatoes Peas
Bread Butter
Apple Pie
Milk

In the blanks at the left of the foods below, mark x those she should eat only small servings. In the blanks at the right, mark those she should leave out of her diet. Do not check a food in both columns.

Small servings		Leave out
	Breakfast	
____	A. Tomato Juice	____
x	B. Bacon	____
____	C. Egg	____
x	D. Buttered toast	____
____	E. Milk	____
	Lunch	
x	F. Boiled potatoes	____
____	G. Creamed dried beef	____
x	H. Bread	____
x	I. Butter	____
____	J. Apricot Sauce	____
____	K. Milk	____

Small servings		Leave out
	Snacks	
____	L. Strawberry pop	x
____	M. Chocolate cake	x
	Supper	
____	N. Fried Chicken	____
____	O. Gravy	x
x	P. Mashed potatoes	____
____	Q. Peas	____
____	R. Apple Pie	x
____	S. Milk	____

Generalizations:

BF. When food contains too little protein, minerals, and vitamin C, the red blood cells do not have a normal amount of their red coloring matter and the skin of the individual may be pale in color. Citrous fruits are excellent sources of vitamin C but all fresh fruits make some contributions to the vitamin C content of the diet.

BG. Deep green, and deep yellow vegetables are excellent sources of vitamins, minerals, especially vitamin A and iron.

BH. Meat, poultry, fish and eggs are excellent sources of protein and iron. Edible organ meats such as heart, kidney, and liver are valued for their protein and iron contributions.

XV. Sally has little color in her skin and wants to improve her meals so she will have more color. Yesterday she ate these meals and snacks.

<u>Breakfast</u>
Tomato Juice
Toast Butter
Cereal

<u>Lunch</u>
Potato Chips
Cup cake
Milk

<u>Snacks</u>
Coke
Candy Bar

<u>Supper</u>
Minute Steak Potatoes
Canned Peas
Lettuce Salad
Chocolate Donut
Milk

Below are listed some foods that Sally might substitute for certain foods. Check (x) the substitution that would help to improve the color in her skin. If neither of the two is better than the food in the menu, do not check either substitute.

Breakfast	Substitutes
A. Cereal	____1. Bacon _x_2. Egg
Lunch	
B. Cup Cake	_x_1. Orange slices ____2. Pears
C. Potato Chips	_x_1. Meat Sandwich ____2. Jelly Sandwich
Snacks	
D. Coke	____1. Apple _x_2. Milk
F. Candy Bar	____1. Cookies _x_2. Banana

Supper	Substitutes
F. Minute Steak	____1. Hamburger _x_2. Liver
G. Head Lettuce	_x_1. Cabbage and green pepper salad ____2. Celery Sticks
H. Chocolate Donut	____1. Cake _x_2. Baked Custard

Generalization:

BI. To maintain health it is necessary to have an adequate intake of essential nutrients. These will be supplied when a variety of foods from the four food groups is eaten each day.

The minimum recommended amounts are:

1. Milk (or equivalent) - adults 2 cups; adolescents 4 cups; children 3 to 4 cups.
2. Meat (or alternates) -2 servings.
3. Vegetables and fruits - 4 servings, 1 citrous daily and 1 dark-green or deep yellow at least every second day.
4. Bread and cereals - 4 servings of whole grain, enriched, or restored.

XVI. Linda is a little over weight and she thinks it is because she eats too much between meals. Here are the meals she ate yesterday:

<u>Breakfast</u>

Egg Toast
Milk

<u>Lunch</u>

Hamburger on Bun
Buttered Green Beans
Chocolate Cake
Milk

<u>Supper</u>

Broiled Ham Gravy Mashed Potatoes
Asparagus
Cookies Milk

Here are some foods that she might eat between meals. Mark x the ones that she needs to make her day's food meet the Basic Four food requirements but <u>not</u> add to her weight?

_x_ A. Orange
____ B. Candy Bar
____ C. Lettuce sandwich
____ D. Malted Milk
____ E. Cookie
_x_ F. Milk

For good nutrition reducing diets need to include adequate amounts of meat, eggs, vegetables, fresh fuits, and skim or whole milk, but the amount of fats, sugar, bread, and cereals need to be limited.

Generalizations:

BJ. Tasks are usually more effectively accomplished with satisfaction for all, if each person contributes to the extent of his ability to the making of plans, accepts responsibility for carrying out these plans, and develops skills necessary to do his job.

BK. Each individual can make a contribution to the activities of a group.

XVII. The four girls working in one kitchen in their food laboratory are having some difficulties in getting along together. Mary Alice has had more expierence in preparing food so she usually decides what each girl should do when they are planning the preparation of their meal in the laboratory. Sometimes Ruth doesn't do all she is supposed to and when they evaluate the success of their meal, she says she was given only routine jobs to do.

Suggest at least two ideas which might help the group to have fewer difficulties.

(See back side of sheet for suggestions for scoring Item XVII.)

When scoring Item XVII, give a point of 1 for each of these ideas:

1. Each girl can and needs to contribute to the making of plans for the group (do not accept the idea of "taking turns" in making the plans.)

2. Each girl needs to accept responsibility for carrying out these plans.

3. Each girl needs to develop the skills necessary to do her job.

Generalizations: 10th

BL. Because protein, minerals, and vitamins are used for building tissues such as muscle and bone and for the formation of the constituents of blood, these needs are highest in periods of rapid growth. Protein is also important for the formation of regulating substances and the B-complex vitamins are needed to release energy from foods.

BM. Boys and girls engaging in strenuous exercise need more of the energy-rich foods, such as sugars, fats, and breads than do less active people of the same age.

BN. Since fats provide about twice as many calories as the same weight of carbohydrates or proteins, the caloric value of foods increases as the amount of fat in the foods increases.

BO. When children, including adolescents, receive too small a supply of protein, calcium, phosphorus, and vitamins C and D, there is danger that the growth of bones will be stunted and that the bones will be improperly shaped.

XVIII. Phillis' brother, Mark, 13, wants to make the high school basketball team. He is growing very rapidly, so he thinks he will be tall enough. He practices basketball every evening. Mark has asked Phyllis to help him with his diet so he can be active and grow strong. His daily diet meets the Basic Four food requirements.

Mark x the nutrients which he should be especially careful to include in generous amounts. Explain your choice in the blanks at the right.

Nutrients	Reasons
x A. Carbohydrates	A. _____
x B. Fats	B. _____
x C. Minerals	C. _____
x D. Proteins	D. _____
x E. Vitamins	E. _____

(See back side of sheet for suggestions for scoring Item XVIII.)

When scoring the reasons for Item XVIII, give a point of 1 for:

A. Carbohydrates	-	needs energy-rich foods
B. Fats	-	needs energy-rich foods and fats are the highest energy giving nutrients
C. Minerals	-	needs to develop bones, to form blood, and to build muscles
D. Proteins	-	needs to build tissues during growth and to replace worn tissue
E. Vitamins	-	needs to build tissue

Generalizations: 10th

BP. Families are alike in many ways, and yet different in many ways.

BQ. Family practices result from differences in goals, beliefs, values, cultural heritages and expectations, resources available, age of family members, occupations.

XIX. The Larson family and the Mayfield family are alike in many ways and very different in others. They have about the same income and their houses are the same size, but some of the foods and the way they eat are very different. The Larsons eat more fish and cheese than the Mayfields do. The Mayfields have their dinner at night and Mr. Mayfield serves the food at the table while the Larsons have their dinner at noon and the food is put into serving dishes which are passed to each member of the family.

What may be the reason why these two families do these things differently?

(See back side of sheet for suggestions on scoring both of these items.)

When scoring Item XIX, give a point of 1 for each of the following:

1. Cultural heritages such as different nationalities, customs in parents' homes.

2. Resources available such as time available due to work and school schedules of family members.

3. Beliefs, such as religious practices, likes and dislikes.

4. Goals and values such as status and community acceptance of certain practices as "good".

VT 005 752
Chadderdon, Hester
Evaluation Materials in Clothing, Tenth Grade.

Iowa State Dept. of Public Instruction, Des Moines. Div. of Vocational Education
Iowa Agriculture and Home Economics Experiment Station, Ames
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*HOME ECONOMICS EDUCATION; *STUDENT EVALUATION; *CLOTHING INSTRUCTION; TESTING; *TEST CONSTRUCTION; GRADE 10; TEXTILES INSTRUCTION; *ACHIEVEMENT TESTS

Models for performance and problem solving test items and evaluation devices are provided for adaption by home economics teachers to the needs of specific tenth grade clothing classes in the comprehensive high school. Evaluation materials were developed through research projects and trial use in Iowa schools by heterogenous school groups. The materials are based on subject matter areas: fiber characteristics and their care, use of the sewing machine, garment construction and alterations, consumer education, and pattern, fabric, and clothing selection. Included are: (1) objectives to which the evaluation materials related, (2) suggestions for introducing and interpreting the results of tests, and (3) the problems presented as capsulated experiences, illustrating generalizations which require the student to give not only the answer, but also justification of the answer. Other evaluation materials from home economics areas, all using similar formats, are available as VT 005 747-VT 005 757 (ARM Summer 1969). (FP)

VT005752

ED0 31587

Evaluation Materials

in

Clothing

Tenth Grade

Prepared by

Hester Chadderdon

Home Economics Research

Iowa State College

Ames, Iowa

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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A cooperative project between the Division of Vocational Education, State Department of Public Instruction of Iowa, and the Iowa Agricultural Experiment Station (Project 1215)

VT005752

M E M O R A N D U M

TO: The ERIC Clearinghouse on Vocational and Technical Education
The Ohio State University
980 Kinnear Road
Columbus, Ohio 43212

[redacted]

FROM: (Person) Alberta D. Hill (Agency) Iowa State University

(Address) Head, Home Economics Education Dept., Ames, Iowa 50010

DATE: April 3, 1968

RE: (Author, Title, Publisher, Date) Chadderdon, Hester. Evaluation Materials in Clothing - Tenth Grade. Iowa State University.

Supplementary Information on Instructional Material

Provide information below which is not included in the publication. Mark N/A in each blank for which information is not available or not applicable. Mark P when information is included in the publication. See reverse side for further instructions.

(1) Source of Available Copies:
Agency University Book Store, Iowa State University
Address Ames, Iowa 50010
Limitation on Available Copies none Price/Unit $ .60
(quantity prices)

(2) Means Used to Develop Material:
Development Group Heterogeneous school groups
Level of Group
Method of Design, Testing, and Trial Developed through research projects and trial use in Iowa schools. Cooperative project between the Division of Vocational Education, State Dept. of Public Instruction and Iowa Agriculture Experiment Station (Project 1215),

(3) Utilization of Material:
Appropriate School Setting Comprehensive high school
Type of Program High school classes
Occupational Focus Homemaking
Geographic Adaptability
Uses of Material Models for test items and evaluation devices
Users of Material Home economics teachers

(4) Requirements for Using Material:
Teacher Competency Background in testing and evaluation
Student Selection Criteria
Time Allotment

Supplemental Media --
Necessary ____)
Desirable ____) (Check Which)

Would not be used in present form but adapted by teacher for use in particular classes.

Describe

Source (agency)
(address)

Objectives

1. Ability to select and alter patterns.
2. Ability to construct garments using good management practices.
3. Recognition of good fit in garments.
4. Ability to store and arrange sewing equipment for efficient work.
5. Understanding of terms used in construction, textiles, and design.
6. Ability to select patterns, fabrics, and garments considering line, color, texture, purpose, proportions of figure.
7. Ability to plan a wardrobe.
8. Understanding of characteristics of fibers and fabrics in relation to care.
9. Understanding of labels.

Development of the Evaluation Materials

The paper-and-pencil test items and the crossword puzzle are based on the above objectives and on generalizations from curriculum guides developed for use in Iowa high schools. The keys have been approved by subject-matter specialists.

Use of Evaluation Materials

1. These were designed for use in determining where pupils are at any stage of learning: pre-test, during unit, at end of unit, or as part of a semester test.

2. In selecting the paper-and-pencil test items to use at a particular time, choose those which involve the generalizations which you are concerned with in your teaching. When using these items do not give the generalization listed at the top of each sheet to the pupils.

3. The directions for responding to the paper-and-pencil test items accompany each one. In order to force pupils to consider each solution and reason, the number of correct responses is not indicated. If an answer sheet (see example) is used, the directions for recording responses will need to be changed accordingly.

4. To obtain a score for each girl, total only the number of correct responses (See key on copy of each item) because research indicates that deducting for guessing has little effect on the relative size of the scores unless a pupil checks an unreasonably large number of responses. If it appears that the pupils are checking a large number of responses in the hope of "hitting" the right one, you may want to (1) deduct one point for each incorrect response or (2) set a limit on the number of checks they may use. (If this is done, set the limit slightly above the number of correct responses, however).

5. In interpreting the responses of your pupils

   (1) Look at the size of the scores in relation to the possible total score to obtain a general idea of the class as a whole and to determine which pupils need special help.

   (2) Tabulate the number of pupils who selected each response and see which generalizations they failed to apply and which misconceptions they hold. These suggest points at which additional learning experiences are needed.

ACROSS

1. To make a temporary stitch (baste)*
2. Red, yellow, blue (colors)
3. Strongest method of fastening ends in machine sewing (backstitching)
4. Direction of fabric yarns (grain)
5. Type of stitch used on hems (blindstitch)
6. One who makes clothing (tailor)
7. Gliding of motion of iron (ironing)
8. V-shaped markings on pattern (notches)
9. Thin ribbon used to finish raw edges (tape)
10. Diagram on pattern guide (layout)
11. To stitch (sew)
12. Opening in garment (placket)
13. Edge of woven fabric (selvage)
14. Up-and-down motion of iron (pressing)
15. Metal fasteners (snaps)
16. To fold and sew down the edge of (hem)
17. Difference between body measurements and the measurements of the pattern pieces at a given point as provided by the designer (ease)
18. Instrument used for transferring pattern markings (tracing wheel)
19. To change a pattern (alter)

DOWN

(1). Vertical yarns of fabric (lengthwise)
(2). Piece of material sewed to and used to finish raw edge (facing)
(3). Used to indicate construction details (markings)
(4). Slanting line off the straight grain (bias)
(5). Top of sleeve (cap)
(6). Distance from cut edge to stitching line of garment piece (seam allowance)
(7). Line found on both pattern and fabric (grainline)
(8). Fold of material stitched to give shape (dart)
(9). Piece of equipment used in hand stitching (thimble)
(10). Characteristics or forms, outlines, or shapes of garments (styles)
(11). Type of buttonhole (bound)
(12). Machine part that holds fabric steady (presser foot)
(13). Stitch to prevent stretching (staystitch)
(14). Type of seam (plain)
(15). To cut slits (slash)
(16). Equipment used in sewing (needle)

*Words in parentheses indicate key to crossword puzzle. Delete these when giving the puzzle to pupils to solve.

Example of an answer sheet which could be used to record responses and, hence, avoid having to reproduce the test items each time they are used. Can be adapted for any combination of items.

Answer Sheet for Clothing: 10th Grade

I. Solutions

A
B

Reasons

1 4
2 5
3 6

II. Lines

1 4
2 5
3 6

III. Results

1 5
2 6
3 7
4

IV. Statements

1 4
2 5
3 6

V. Marking-Reasons

A
B

VI. Solutions

A
B

Reasons

1 4
2 5
3 6

VII. Hem Finish - Reasons

A
B
C

VIII. Methods

A D
B E
C

Reasons

1 4
2 5
3 6

IX. Ideas for arranging supplies & Equipment

_____
_____
_____
_____

X. Seams-Reasons

A
B
C

XI. Seam Finishes

A D
B E
C F

XII. Fabrics

A
B

Reasons

1 4
2 5
3

XIII. A. Before

_____
_____
_____
_____

B. After

_____
_____
_____
_____
_____

XIV. Solutions

A
B

Reasons

1 4
2 5
3 6

XV. Solutions

A
B
C

Reasons

1 4
2 5
3 6

XVI. Colors

A
B

Reasons

1 3
2 4

XVII. Solutions

A
B

Reasons

1 6
2 7
3 8
4 9
5

XVIII. Colors

A
B

Reasons

1 4
2 5
3 6

XIX. Colors-Descriptions

A
B
C
D

XX. Characteristics

1 6
2 7
3 8
4 9
5

XXI. Statements

1 5
2 6
3 7
4 8

XXII. Fabrics

A
B

Reasons

1 4
2 5
3

XXIII. Phrases-Samples

A
B
C
D

XXIV. Fabrics

A
B

Reasons

1 3
2 4

XXV. Solutions

A
3

Reasons

1 4
2 5
3 6

XXVI. Solutions

A
B

Reasons

1 4
2 5
3

INDEX TO GENERALIZATIONS -- FOR CLOTHING: 10th GRADE

A. Since reducing a pattern piece is easier than enlarging it, it is better to choose the larger size if your bust or hip measurement comes between two sizes of a blouse or skirt pattern. Test Item I.

B. The waist and hemline of a well fitted garment appear to be parallel to the floor unless the design requires that they be otherwise. Test Item II.

C. The lengthwise grain of the material in a well-fitted garment appears to be perpendicular to the floor at center front and back unless the design requires that they be otherwise. Test Item II.

D. In a basic, one-piece sleeve the lengthwise grain hangs perpendicular to the floor from the top of the shoulder to the elbow, and the crosswise grain in the sleeve cap is parallel to the floor. Test Item II.

E. Pressing is most satisfactory when an up-and-down motion is used which retains the original texture of the fabric and keeps grain lines at right angles except when shaping the fabric. Test Item III.

F. A gliding motion with the iron is used only when it is desirable to smooth fabric, square up grain lines, and develop luster. Test Item III.

G. If a pattern grainline is laid on the fabric grainline, there is less danger of fabric stretching, the garment can hang as the designer planned, and it is more likely to fit well. Test Item IV.

H. A method of marking is satisfactory if it can be accomplished accurately, will not show on the completed garment, and will remain long enough for use but can be removed easily.
   (1). Snipping into the seam allowance weakens the fabric in the seams
   (2). Wax chalk disappears under heat on wool fabrics, but is likely to make oily stains on synthetic and cellulose fibers.
   (3). Markings made by a tracing wheel can be transferred accurately because the pattern does not have to be removed.
   (4). Lead pencil is seldom used for marking except on interfacings because it is difficult to remove from the finished garment. Test Item V.

I. Applying moderate heat and moisture to wool makes a garment easier to shape. High, dry heat results in scorching and harshness of the wool. Test Item VI.

J. The kind and condition of the fabric and the style of the garment determines the kind of hem finish to use.
   (1). Fullness is shrunk from wool to keep hem inflared skirt from puckering
   (2). Transparent fabrics require hem stitches that show as little as possible
   (3). Edge stitching provides a durable finish.
   (4). Seam tape prevents raveling. Test Item VII.

K. The design of the pattern is more apt to be retained if pattern alterations preserve the pattern outline wherever possible, but when an alteration changes the outline of the pattern, new lines need to be drawn so that adjacent sections fit. Test Item VIII.

L. Time and energy are saved and confusion lessened when items are stored near where they are first used, grouped with items with which they are used, and stored so they can be removed from storage without moving another article; items used most frequently need to be stored in the most accessible place. Test Item IX.

M. Seams will be more durable and have a better appearance if they are appropriate for the fabric and design of the garment.
(1). French seams are used on transparent or light-weight fabrics because they eliminate raw edges and prevent raveling.
(2). Flat-felled seams are used on garments that receive rough wear because they are durable, flat, smooth, easily ironed, and prevent raveling.
(3). Plain seams create the least amount of bulk.
(4). Lapped seams are used to make curved or pointed seams where stitching inside is difficult. Test Item X.

N. Seam finishes will be more durable and have a better appearance if the finish to be used is appropriate for the fabric and design of the garment.
(1). A raw edge seam finish is adequate if a fabric is not sheer, does not ravel easily, and will not receive hard washing or wear. It is also adequate for enclosed seams as in collars and cuffs.
(2). A selvage edge cannot ravel and needs no finish, so is suitable for straight side seams.
(3). Raw edges stitched together $\frac{1}{4}$" from the seamline are suitable for firm fabrics at the armhole and waistline seams because they are easy to do, save time, and are not too bulky. Test Item XI.

O. A garment is most attractive when the texture of the fabric does not compete with the lines of the pattern. Test Item XII.

P. When you make a plan of your resources, you are more likely to get the clothing most important to you. Test Item XIII.

Q. If a new garment combines well with colors, textures, lines, and purpose of garments on hand, it can be worn more often. Test Item XIII.

R. Line may be used to comouflage or improve unattractive proportions in a figure,
(1). Oversized pockets, belts, buttons, or accessories emphasize shortness.
(2). Vertical panels will slenderize the figure if they are smaller at the waistline than shoulder or hipline. Test Item XIV.

S. Fabric textures can reveal, increase, or camouflage the natural lines of your figure and make you appear more nearly the size you want to be.
(1). Stiff, crisp, or bulky fabrics increase or build out the figure.
(2). Soft, clinging fabrics reveal the figure. Test Item XV.

T. Colors with a quantity of red or yellow, unless greyed, tend to be warm. Colors with a quantity of blue, particularly if they are middle value, tend to be cool. Test Item XVI.

U. Warm colors are usually becoming to the warm type and cool colors to the cool type. Test Item XVII.

V. A feature can be accented by wearing colors that repeat or contrast the color or value of the feature. Test Item XVIII.

W. Becoming colors are those which give your complexion a natural, healthy appearance. Test Item XVIII.

X. Specific combinations of color may be identified by their proper names.
   (1). A monochromatic color harmony is composed of different values and intensities of the same color.
   (2). An analogous color harmony is composed of related colors lying next to each other on the color wheel. Because related colors create a blended effect, they combine harmoniously together.
   (3). Colors included in a complementary scheme come from opposite sides of the color wheel.
   (4). A triad color harmony is composed of colors which, when joined, form an equilateral triangle on the color wheel. Test Item XIX.

Y. Because woolens are made of short fibers (lying at all angles) they are thick, soft, and spongy with a slight nap which increases the warmth and softness of the fabric, but causes them to soil easily. Test Item XX.

Z. Because worsteds are made of long fibers, laid parallel as they are spun, they are firm, resilient with little nap or fuzz. Worsteds hold their shape and retain creases well, but develop a shine with wear. Test Item XX.

AA. Durability of color in any fabric cannot be judged and must be guaranteed by label. Test Items XXI, XXV.

AB. Fabrics with a crease resistant finish will resist wrinkles during wear. Test Item XXI.

AC. The amount of shrinkage in any fabric cannot be judged and must be guaranteed by label. Test Items XXI, XXV.

AD. If a garment must be hand washed, the label needs to give this information. Test Item XXI.

AE. Fabrics with woven designs usually show wrinkles less than fabrics woven without designs. Test Item XXII.

AF. Heavy fabrics wrinkle less than light-weight fabrics. Test Item XXII.

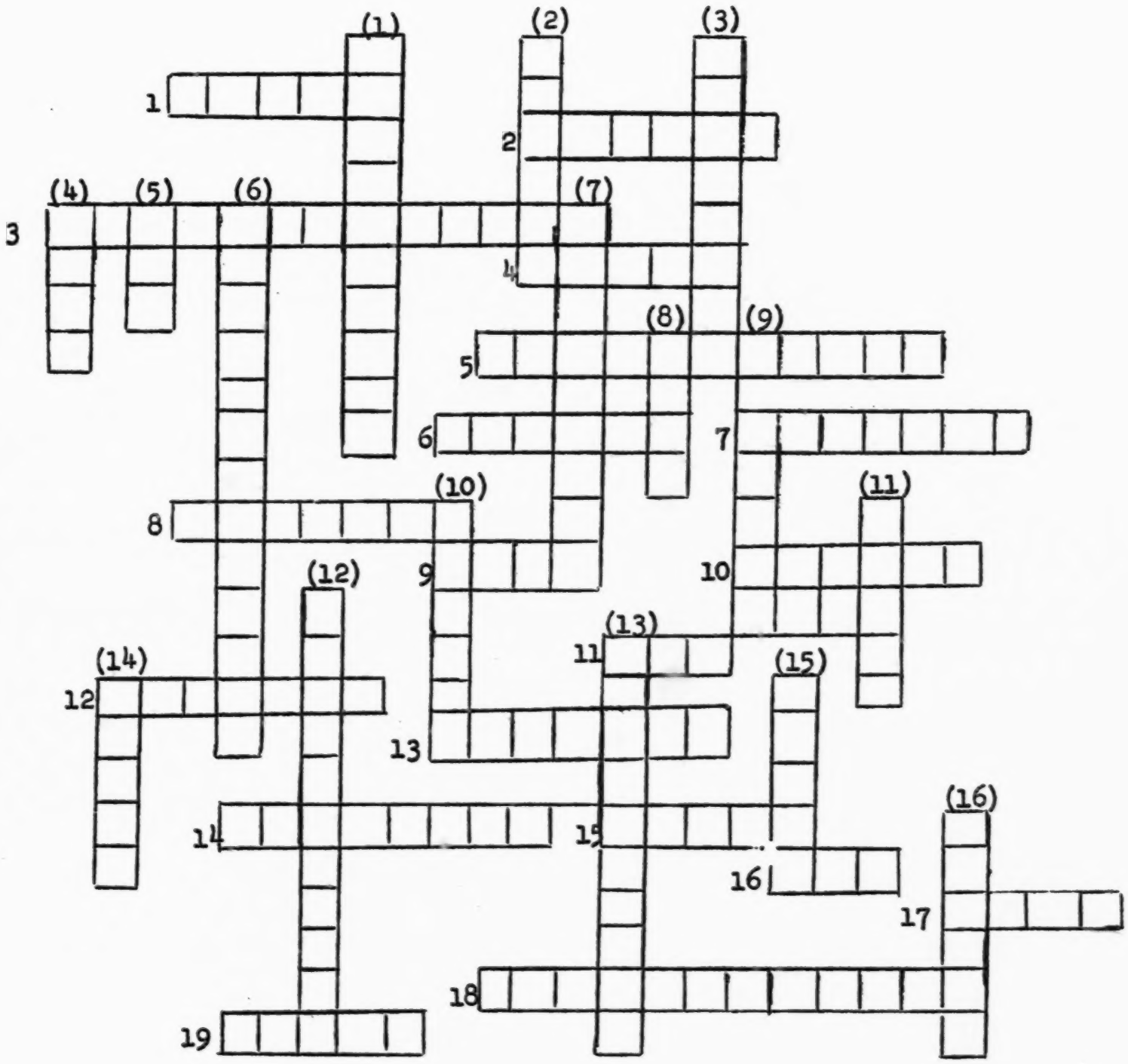
AG. It is important to recognize the weave of the fabric.
   (1). Twill weave produces a diagonal effect.
   (2). Satin weave produces a smooth, lustrous fabric.
   (3). Pile weave produces a soft, deep surface effect. It has an up and down
   (4). In plain weave every yarn interlaces with every other yarn. Unless it is printed or has a surface finish, it has no right or wrong side. There is also good balance between warp and filling. Test Item XXIII.

AH. Loosely woven fabrics tend to shrink. Test Item XXIV.

AI. Twill weave is often used on work clothes because it can have more yarns per square inch and so will be stronger than plain weave. Test Item XXVI.

AJ. Soil shows most on smooth, plain surfaces. Test Item XXVI.

Crossword Puzzle



Generalization*A: Since reducing a pattern piece is easier than enlarging it, it is better to choose the larger size if your bust or hip measurement comes between two sizes of a blouse or skirt pattern.

I. Evelyn is selecting a skirt pattern and her hips measure 34 inches. The pattern that she has selected is available only in sizes 33 and 35. Which size should she buy?

Check (x) the size which is better for her to buy.

____A. Size 33
x** B. Size 35

Check (x) the reason(s) that explains your choice

_x_1. It is easier to reduce a pattern piece than to enlarge it.
____2. It is better to buy size 35 so the skirt will fit loosely rather than fit tightly over the hips.
____3. It is easier to enlarge a pattern piece than to reduce it.
____4. It is better to take smaller seams than to alter the pattern.
____5. If she buys size 35, she can make larger seams and darts.
____6. Evelyn might still be growing and she would need an extra inch.

* Do not give the pupils the generalizations. They are listed at the top of each item to help you in deciding whether to select the item for your test.

** Indicates response approved by specialists in textiles and clothing in this and subsequent items.

Generalization B: The waist and hemline of a well-fitted garment appear to be parallel to the floor unless the design requires that they be otherwise.

C: The lengthwise grain of the material in a well-fitted garment appears to be perpendicular to the floor at center front and back unless the design requires that they be otherwise.

D: In a basic, one-piece sleeve the lengthwise grain hangs perpendicular to the floor from the top of the shoulder to the elbow, and the cross-wise grain in the sleeve cap is parallel to the floor.

II. According to present style, how do the lines of a well-fitted garment appear to be in relation to the floor?

Mark with an (O) the lines that appear to be perpendicular (at right angles,1) to the floor.
Mark with an (x) the lines that appear to be parallel to the floor.

Lines

O 1. Center front
O 2. Lengthwise grain in a basic one-piece sleeve
x 3. Hemline
O 4. Center back
x 5. Waist line
x 6. Crosswise grain in sleeve cap

Generalization E: Pressing is most satisfactory when an up-and-down motion is used which retains the original texture of the fabric and keeps grain lines at right angles except when shaping the fabric.

F: A gliding motion with the iron is used only when it is desirable to smooth fabric, square up grain lines, and develop luster.

III. Mary is teaching a younger sister how to use the iron correctly when ironing or pressing her clothes and when making garments. Would she tell her to iron (a gliding motion of the iron) or press (up-and-down motion of the iron) to get each of the results listed below?

Indicate with an I the results produced by ironing. Indicate with a P the results produced by pressing. Some results may be produced by both ironing and pressing.

	Results
P-I	1. Square up grain lines
P-I	2. Retain original texture of fabric
P-I	3. Retain fabric grain lines
P-I	4. Smooth the fabric
I	5. Develop luster
P	6. Shrink out fullness
P	7. Shape points of a dart

Generalization G: If a pattern grainline is laid on the fabric grainline, there is less danger of fabric stretching, the garment can hang as the designer planned, and it is more likely to fit well.

a

IV. Shirley is going to make a sleeveless cotton blouse at home using a pattern that her sister has used. The pattern guide has been lost. However, Shirley has studied the pattern pieces and is trying to place the pieces on her fabric. She thinks that she won't have enough fabric unless she places the pattern front off grain. How will the finished garment be affected if she places the front off grain?

Check (x) the statement(s) that explains what will happen if she places the front off grain.

___1. The pieces of the blouse will not fit together
_x_2. The garment will not hang as the designer planned
_x_3. The blouse may not fit properly
___4. The fabric will ravel easier
_x_5. The blouse pieces may stretch out of shape
___6. The garment will not iron as well.

Generalization H: A method of marking is satisfactory if it can be accomplished accurately, will not show on the completed garment, and will remain long enough for use but can be removed easily.

(1). Snipping into the seam allowance weakens the fabric in the seams
(2). Wax chalk disappears under heat on wool fabrics, but is likely to make oily stains on synthetic and cellulose fibers.
(3). Markings made by a tracing wheel can be transferred accurately because the pattern does not have to be removed.
(4). Lead pencil is seldom used for marking except on interfacings because it is difficult to remove from the finished garment.

V. Marty is making a yellow pique blouse and Charlotte is making a gray wool flannel skirt. Marty is ready to mark a dart in her blouse and Charlotte is ready to mark a pleat in her skirt.

Which is the best for <u>each</u> girl to use in marking?

1. Wax chalk
2. Tracing wheel and tracing paper
3. Lead pencil
4. Snipping (with scissors) into seam allowance

In the blanks at the <u>left</u> place the number of the best marking for <u>each</u> girl to use.

2 A. Dart in Marty's blouse 5,8,9
1 B. Pleat in Charlotte's skirt 3,7,8

In the blanks at the <u>right</u> place the number(s) of the reason(s) that explains each choice. Any reason may be used more than once.

1. Tracing wheel and tracing paper give marks that will show up on any fabric during construction.
2. Heavy fabric should be snipped because markings are easier to see.
3. Heat will make the markings disappear.
4. Best color of tracing paper can be chosen for each color of fabric.
5. Markings can be transferred accurately because the pattern does not have to be removed.
6. Markings are permanent.
7. Markings are easily removed when the garment is completed.
8. Markings will remain long enough for use.
9. Fastest and easiest method.

Generalization I: Applying moderate heat and moisture to wool makes a garment easier to shape. High, dry heat results in scorching and harshness of the wool.

VI. Doris and Judy are pressing the hems in the woolen skirts that they are making. Doris thinks that they should use moderate heat and moisture and Judy thinks they should use dry, high heat. Which would be the better kind of heat to use on the woolen skirts?

Check (x) the kind of heat to use on the woolen skirts.

____A. Dry and high heat
_x_B. Moderate heat and moisture

Check (x) the reason(s) that explains your choice.

_x_1. The wool will be less apt to scorch
____2. Wool absorbs heat quickly
____3. Moisture will mat the wool fibers
____4. Moisture makes wool shiny
_x_5. Moderate heat and moisture are less apt to make the wool fabric harsh.
_x_6. Heat, moisture, and pressure make the fabric crease easily.

Generalization J: The kind and condition of the fabric and the style of the garment determine the kind of hem finish to use.

(1). Fullness is shrunk from wool to keep hem in flared skirt from puckering
(2). Transparent fabrics require hem stitches that show as little as possible
(3). Edge stitching provides a durable finish
(4). Seam tape prevents raveling.

VII. Macky needs to put hems in these garments

2	A. Flared wool flannel skirt	1,3
1	B. Cotton print housedress	9
3	C. Organdy gathered skirt	6

In the blanks at the <u>left</u> of each garment above, place the number of these hem finishes which is <u>best</u> for that garment.

<u>Hem Finishes</u>

1. Turn raw edges under and stitch by machine, then blind stitch hem in place
2. Gather edge, shrink out fullness, stitch seam tape flat to cover raw edge, and hem.
3. Turn raw edge under, then blind stitch the turned edge
4. Turn edge under and stitch in place by machine.

In the blanks at the <u>right</u> of each garment, place the number (s) of these statement(s) which explains the reason(s) for each choice.

1. Fullness needs to be shrunk out to keep the hem from puckering
2. Garments look more expensive when the hem is put in by hand.
3. Seam tape prevents raveling
4. Hems look neater when put in by hand
5. Stitching by hand is more secure
6. Transparent materials require hem stitches that show as little as possible
7. Loosely woven fabrics need to be machine stitched
8. Hems stay in better when machine stitched
9. Edge stitching provides a durable finish

Generalization J: The kind and condition of the fabric and the style of the garment determine the kind of hem finish to use.

(1). Fullness is shrunk from wool to keep hem in flared skirt from puckering
(2). Transparent fabrics require hem stitches that show as little as possible
(3). Edge stitching provides a durable finish
(4). Seam tape prevents raveling.

VII. Macky needs to put hems in these garments

2	A. Flared wool flannel skirt	1,3
1	B. Cotton print housedress	9
3	C. Organdy gathered skirt	6

In the blanks at the left of each garment above, place the number of these hem finishes which is best for that garment.

Hem Finishes

1. Turn raw edges under and stitch by machine, then blind stitch hem in place
2. Gather edge, shrink out fullness, stitch seam tape flat to cover raw edge, and hem.
3. Turn raw edge under, then blind stitch the turned edge
4. Turn edge under and stitch in place by machine.

In the blanks at the right of each garment, place the number (s) of these statement(s) which explains the reason(s) for each choice.

1. Fullness needs to be shrunk out to keep the hem from puckering
2. Garments look more expensive when the hem is put in by hand.
3. Seam tape prevents raveling
4. Hems look neater when put in by hand
5. Stitching by hand is more secure
6. Transparent materials require hem stitches that show as little as possible
7. Loosely woven fabrics need to be machine stitched
8. Hems stay in better when machine stitched
9. Edge stitching provides a durable finish

Generalization K: The design of the pattern is more apt to be retained if pattern alterations preserve the pattern outline wherever possible, but when an alteration changes the outline of the pattern, new lines need to be drawn so that adjacent sections fit.

VIII. Ann is making a dress with set-in sleeves and her shoulders measure $\frac{1}{2}$ inch longer than her pattern. Which of the methods below would you advise her to use so the dress will fit her shoulders?

Check (x) the best method for her to use

____A. Alter back and front pattern pieces by extending armseye end of shoulder seam with $\frac{1}{2}$ inch of paper, tapering to notches of armseye, and redrawing the shoulder lines.

____B. When cutting out the dress, add $\frac{1}{4}$ inch to both front and back armseye and $\frac{1}{4}$ inch to top of sleeve.

_x_C. Slask back and front pattern pieces through the shoulder seam to the notch at armseye seam. Spread slash $\frac{1}{2}$ inch at shoulder seam, tapering toward the armseye, insert paper, and redraw shoulder lines.

____D. Place the center back and center front of the pattern away from fold far enough to enlarge it $\frac{1}{2}$ inch.

____E. Cut pattern back and front pattern pieces in half lengthwise, insert $\frac{1}{2}$ inch paper, and redraw shoulder lines.

Check (x) the reason(s) for your choice.

____1. Ann should use A because only the shoulders need to be longer. The underarms or sleeves should remain as they are.

_x_2. The pattern design will more likely be the same if the alterations preserve the pattern outline.

____3. It is easy and quick because there are few steps to follow.

_x_4. New lines need to be drawn so that all sections will fit together if alterations change the pattern outline.

____5. Method E will add the desired length without changing the outline of the armseye.

____6. Method B will make only the sleeves longer. It will not change the size of the bodice of the dress.

Generalization L: Time and energy are saved and confusion lessened when items are stored near where they are first used, grouped with items with which they are used, and stored so they can be removed from storage without moving another article; items used most frequently need to be stored in the most accessible place.

IX. Peggy has decided to sew one hour each evening. She has discovered that she does not get very much sewing done because she has to spend so much time assembling the equipment. Her mother has suggested that if she would arrange her pieces of equipment where she could get them easily, it would not take her so long.

List all ideas you could give Peggy to use in arranging her supplies and equipment.

Suggestions for scoring

Give a score of 1 for each of the following ideas:

1. Store items near where they are first used.
2. Group all items together that are to be used together.
3. Store items so they can be removed without moving another article.
4. Items most frequently used need to be stored in the most accessible place.

Generalization M: Seams will be more durable and have a better appearance if they are appropriate for the fabric and design of the garment.

(1). French seams are used on transparent or light-weight fabrics because they eliminate raw edges and prevent raveling.
(2). Flat-felled seams are used on garments that receive rough wear because they are durable, flat, smooth, easily ironed, and prevent raveling.
(3). Plain seams create the least amount of bulk.
(4). Lapped seams are used to make curved or pointed seams where stitching inside is difficult.

X. Dora's class has been studying types of seams. The teacher has given them a list of garments and asked them what kind of seam is appropriate for that garment. Which of these four seams is most appropriate for each of the garments listed below?

In the blanks on the left of each garment, place the number (1,2,3,4) of the seam which is most appropriate for that garment.

Garments	Seams
1 A. Seams in an organdy blouse 3,7	1. French seam
4 B. Seam joining pointed yoke to back of blouse made of cotton broadcloth 8	2. Flat-felled seam
2 C. Inside seam of denim pedal pushers 5,7	3. Plain seam
	4. Lapped seam

In the blanks on the right of each garment, place the number(s) of the reason(s) that explain the choice for that garment.

Reasons

1. Used only for sports clothing
2. Used on everyday clothes rather than dressy ones
3. Used on transparent or light-weight fabrics because it doesn't leave raw edges
4. Plain seams are usually used on cotton garments
5. Used on garments that will receive rough wear
6. French seams are used on heavy materials
7. Prevents raveling
8. Used to make curved or pointed seams where stitching from inside in difficult
9. Makes least amount of bulk

Generalization N: Seam finishes will be more durable and have a better appearance if the finish to be used is appropriate for the fabric and design of the garment.

(1). A raw edge seam finish is adequate if a fabric is not sheer, does not ravel easily, and will not receive hard washing or wear. It is also adequate for enclosed seams as in collars and cuffs.
(2). A selvage edge cannot ravel and needs no finish so is suitable for straight side seams.
(3). Raw edges stitched together $\frac{1}{4}$" from the seamline are suitable for firm fabrics at the armhole and waistline seams because they are easy to do, save time, and are not too bulky.

XI. Listed below are 6 ways of finishing a plain seam.

1. Raw edge
2. Selvage
3. Raw edges stitched together $\frac{1}{4}$" from seamline
4. Pinked
5. Each raw edge turned under and stitched
6. Raw edges overcast

For what kind of fabric would it be best to use each of these seam finishes?

In the blanks, place the number of the seam finish for each fabric. A finish may be used more than once.

Description of fabrics

5 A. Light-weight, ravelly fabric that will not press mark
6 B. Ravelly, thick fabric for a skirt
1,2,4 C. Straight side seam of a gathered skirt made of firm dress-weight fabric
1 D. Fabrics that do not ravel or will not be washed often or hard
3,6 E. Used at armhole and waistline seams on firm fabrics.
1,4 F. Closely woven wash fabrics or those for dry cleaning only.

Generalization O: A garment is most attractive when the texture of the fabric does not compete with the lines of the pattern.

XII. Frances is looking for fabric suitable for this pattern with a tucked bodice.

She has found these two fabrics that she likes and of similar price. Which of the two fabrics shown on the Bulletin Board* would be most suitable for her pattern?

Check (x) the most suitable material for her pattern.

x A. Wool jersey
___ B. Corduroy

Check (x) the reason(s) that explains your choice.

___ 1. B is the more durable fabric
___ 2. The vertical lines of the corduroy emphasize the vertical lines of the tucks.
___ 3. B will hold its shape better than A
___ 4. Bulky fabrics are best for full skirts because they will stand away from the body
x 5. The fabric texture does not compete with the lines made by tucks in the blouse

Description of illustrative material needed.
Display on Bulletin Board these two fabric samples: a wool jersey sample designated as A and a corduroy sample designated as B. These samples should be the same color, if possible.

Generalization P: When you make a plan of your resources, you are more likely to get the clothing most important to you.

Q: If a new garment combines well with colors, textures, lines, and purpose of garments on hand, it can be worn more often.

XIII. Yvonne has a very limited budget. She needs to make her decisions very carefully so that she gets maximum use from each garment that she chooses. She can purchase <u>one</u> new garment this season.

A. <u>Before</u> she goes shopping, what should she do to help her decide what she needs most?

B. After she has decided what garment she needs, what factors should she consider in selecting this garment at the store?

Suggestions for scoring

Give a score of 1 for each of these five ideas

A. Make a plan of present wardrobe

B. She should consider whether the new garment combines well with what she has on hand from the standpoint of

1. Color
2. Texture
3. Lines
4. Purpose

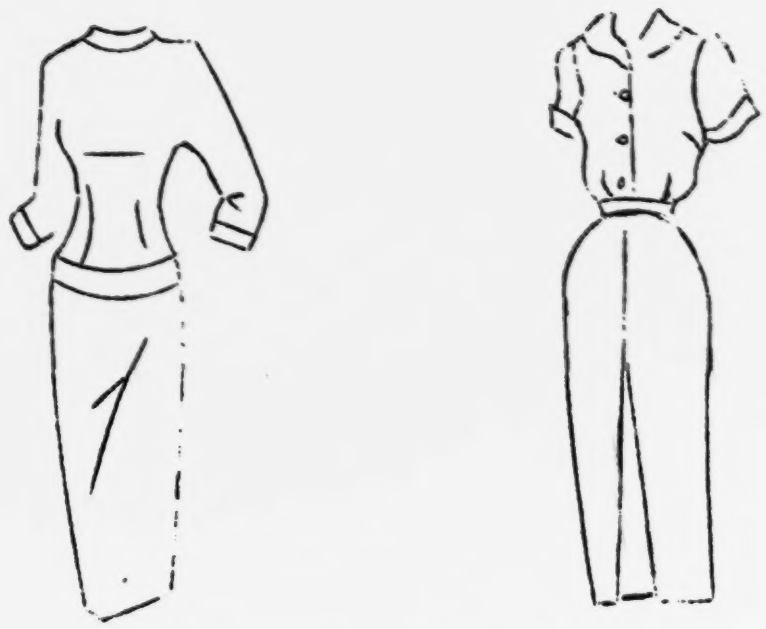
Generalization R: Line may be used to cemouflage or improve unattractive proportions in a figure.

(1). Oversized pockets, belts, buttons, or accessories emphasize shortness.
(2). Vertical panels will slenderize the figure if they are smaller at the waistline than shoulder or hipline.

XIV. Each girl in class was asked to select one illustration of a girl wearing garments attractive for one of the figure types. She was then to select another illustration of a girl wearing garments unattractive for this figure.

Pat chose the short, plump figure type and these are the illustrations she plans to use.

Which dress should be labeled "more attractive for a short, plump girl?"



A B

Check (x) the better choice for this figure type

___ 1. Figure A
x 2. Figure B

Check (x) the reason(s) that explains your choice.

___ 1. A dropped waistline would give her a longer look
x 2. The vertical lines will slenderize the figure.
x 3. A small belt will call less attention to her waistline than the fitted waistline.
x 4. The pleat which tapers toward the waistline will slenderize the figure.
___ 5. A will conceal her stomach better than B.
___ 6. The straight skirt will be more slenderizing than the skirt with the big pleat.

Generalization S: Fabric textures can reveal, increase, or camouflage the natural lines of your figure and make you appear more nearly the size you want to be.

(1). Stiff, crisp, or bulky fabrics increase or build out the figure.
(2). Soft, clinging fabrics reveal the figure.

XV. Buying a dress presents problems for Valerie. Being thin, she wants a dress that will not emphasize her thinness. She has found three dresses that she likes and all are similarly styled. One is corduroy, another jersey, and the third is taffeta.

Check (x) the fabric that is <u>least</u> suitable for Valerie, using texture as the basis for your choice.

____A. Corduroy
_x_B. Jersey
____C. Taffeta

Check (x) the reasons that explain why these fabrics would be good or poor choices for Valerie.

_x_1. Bulky fabrics build out the figure.
_x_2. Soft, clinging, fabrics reveal the figure.
_x_3. Corduroy will make her seam larger because it is bulky.
____4. Corduroy would stay close to her body and emphasize her thinness.
_x_5. Crisp fabrics would make her look heavier because they would stand out more than soft, clinging fabrics.
____6. Crisp fabrics emphasize her shape.

Generalization T: Colors with a quantity of red or yellow, unless greyed, tend to be warm. Colors with a quantity of blue, particularly if they are middle value, tend to be cool.

XVI. Barbara is selecting a play suit that she can wear next summer. Her mother has suggested that she choose a color that is cool. She has found two at the same price that she likes. Both suits would be equally becoming to Barbara.

Which of the two colors shown on the Bulletin Board* would be the better choice for summer?

Check (x) the color that is better for Barbara to choose for summer.

x A. Blue
___ B. Yellow

Check (x) the reason(s) that explain(s) your choice.

x 1. This blue is a cool color
___ 2. Yellow is a brighter color than blue
___ 3. Yellow is a cool color
___ 4. Darker colors are cooler than light ones

Description of illustrative material needed.

Color illustrations for this and subsequent test items requiring color illustrations may be made from outdated paint chips or wallpaper swatches that might be supplied by your local dealer or from swatches of plain fabrics.

The two illustrations to be displayed on the Bulletin Board for this test item should be a cool blue designated as A and a warm yellow designated as B.

Generalization U: Warm colors are usually becoming to the warm type and cool colors to the cool type.

XVII. Mrs. BcBride has a rose colored sweater that she wants to give to one of her nieces. Carolyn has peach colored skin, brown hair, and brown eyes. Kay is very fair, has blue-black hair, and blue eyes. The rose sweater would be a better gift for which girl?

Check (x) the name of the girl for which the rose sweater will be a better choice.

x A. Carolyn
___B. Kay

Check (x) the reason(s) that explains your choice.

____1. Kay's coloring is the warm type
____2. Rose blends better with black hair than brown
____3. Warm colors are usually becoming to people with cool coloring.
x 4. Carolyn's coloring is the warm type.
____5. Kay needs to wear bright colors that will bring out the color of her complexion.
____6. Carolyn's coloring is the cool type.
x 7. Warm colors are usually becoming to people with warm coloring.
x 8. Rose blends better with brown eyes than blue
____9. Rose blends with fair skin better than peach colored skin.

Generalization V: A feature can be accented by wearing colors that repeat or contrast the color or value of the feature.

W: Becoming colors are those which give your complexion a natural, healthy appearance.

XVIII. After receiving an invitation to the school party, Dana has begun to think about what color she would like to have for her new dress. When buying clothing, Dana has to keep in mind that she has a sallow complexion (contains yellow). In the local store there are two dresses, one yellow and the other rose, that she likes. Which of the two colors shown on the Bulletin Board* would be a better choice for Dana?

Check (x) the color that is better for Dana.

____A. Yellow
_x_B. Rose

Check (x) the reason(s) below that explains your choice.

____1. Yellow will brighten her complexionl
____2. Light colors look best on people with sallow complexion.
____3. Darker colors will bring out the color of her complexion.
____4. Yellow will avoid emphasizing the rose in her complexion.
_x_5. Rose will bring out the pink in her skin.
____6. Darker colors look best on people with sallow complexionx.

Description of illustrative material needed.

The two illustrations to be displayed on the Bulletin Board: A pale yellow designated as A and a rose designated as B. See suggestion on Item XVI.

Generalization X: Specific combinations of color may be identified by their proper names.

(1). A monochromatic color harmony is composed of different values and intensities of the same color
(2). An analogous color harmony is composed of related colors lying next to each other on the color wheel. Because related colors create a blended effect, they combine harmoniously together.
(3). Colors included in a complementary scheme come from opposite sides of the color wheel.
(4). A triad color harmony is composed of colors which, when joined, form an equilateral triangle on the color wheel.

XIX. In the blank at the left of each color harmony place the number of the color combination shown on the Bulletin Board* that it illustrates.

	Color combination	
4	A. Monochromatic	7
3	B. Complementary	3
1	C. Triad	1
2	D. Analogous	4

Listed below are descriptions of color combinations. In the blank at the right of each color harmony place the number of the description below which fits it best.

Descriptions of color combinations

1. Colors, which, when joined, form an equilateral (equal-sided) triangle on the color wheel.
2. Only the three primary colors
3. Colors that are opposite on the color wheel.
4. Colors that lie next to each other on the color wheel.
5. All bright colors
6. Different colors that go well together.
7. Different values and intensities of the same color.
8. Contrasting colors that go together.
9. Any three colors on the color wheel.

Description of illustrative material needed.

Suggested colors for the color harmonies to be displayed on the Bulletin Board

1. Triad - red, yellow, and blue
2. Analogous - yellow, yellow - green, green
3. Complementary - pink, green.
4. Monochromatic - blues

To help pupils gain appreciation of pleasing color proportion, the illustrations of these colors should be shown in varying amounts.

Color combinations are more beautiful when the amounts of color are varied rather than equal. Too much repetition in proportion results in monotony.

Generalization Y: Because woolens are made of short fibers (lying at all angles) they are thick, soft, and spongy with a slight nap which increases the warmth and softness of the fabric, but causes them to soil easily.

Z: Because worsteds are made of long fibers, laid parallel as they are spun, they are firm, resilient with little nap or fuzz. Worsteds hold their shape and retain creases well, but develop a shine with wear.

XX. Betty and Eileen are trying to decide whether to purchase a worsted or a woolen fabric for the fitted skirts they are planning to make. What characteristics of each should they consider in making a choice?

Check with an x the characteristics of woolens. Check with an O the characteristics of worsteds.

__O__ 1. Has little or no nap or fuzz
__x__ 2. Fabric is soft and thick
__O__ 3. Closely woven
__x__ 4. Warmer
__O__ 5. Fabric is smooth
__x__ 6. Becomes baggy unless lined.
__O__ 7. Retains creases
__O__ 8. Wrinkle resistant
__x__ 9. Made of short fibers

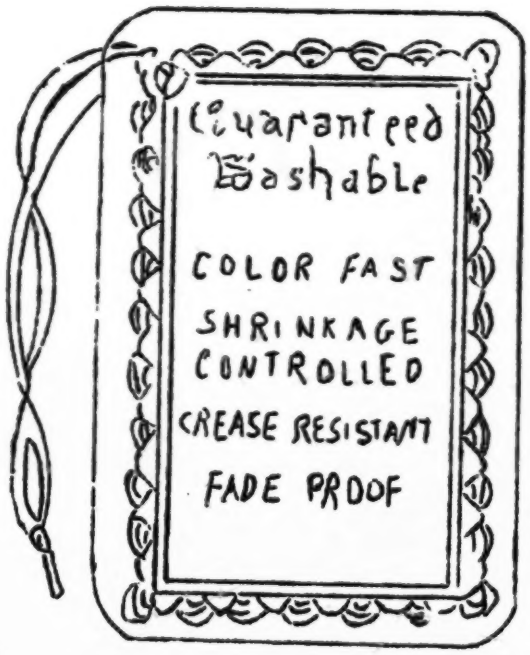
Generalization AA: Durability of color in any fabric cannot be judged and must be guaranteed by label.

AB: Fabrics with a crease resistant finish will resist wrinkles during wear.

AC: The amount of shrinkage in any fabric cannot be judged and must be guaranteed by label.

AD: If a garment must be hand washed, the label needs to give this information.

XXI. Ruth is buying a blouse and has decided on one made of cotton. Shown below is the label that is attached to the blouse. According to this label, what can Ruth expect of the blouse?



Check (x) the statements which describe what Ruth can expect.

____1. Will not shrink
_x_2. Color will not bleed when washed.
_x_3. No ironing necessary after washing.
____4. Will shrink less than 2 per cent.
_x_5. Light will not cause color to fade.
_x_6. Is machine washable
_x_7. Perspiration will not cause fading.
_x_8. Will resist wrinkles during wear.

Generalization AE: Fabrics with woven designs usually show wrinkles less than fabrics woven without designs.

AF: Heavy fabrics wrinkle less than light-weight fabrics.

XXII. Hildy and her family are planning a trip for this summer. She wants to make a dress from a fabric that will show wrinkles less. The cotton fabrics that Hildy likes are shown on the Bulletin Board*. Which of these two would be a better choice for the trip?

Check (x) the fabric that will show wrinkles less.

_x_ A.
___ B.

Check (x) the reason(s) that explains your choice.

_x_ 1. Heavy fabrics show wrinkles less than light-weight fabrics
_x_ 2. Fabrics with woven designs show wrinkles less than fabrics without
___ 3. Light-weight fabrics show wrinkles less than heavy fabrics.
___ 4. Fabrics without woven designs show wrinkles less than fabrics with designs.
_x_ 5. Wrinkling would be less noticeable because the fabric already has lines on it.

Description of illustrative material needed.

Display on Bulletin Board a pique fabric sample designated as A and a plain percale fabric sample designated as B. These samples should be of similar color.

Generalization AG: It is important to recognize the weave of the fabric.

(1) Twill weave produces a diagonal effect.
(2) Satin weave produces a smooth, lustrous fabric.
(3) Pile weave produces a soft, deep surface effect. It has an up and down.
(4) In plain weave every yarn interlaces with every other yarn. Unless it is printed or has a surface finish, it has no right or wrong side. There is also good balance between warp and filling.

XXIII. Listed below are 4 types of weaves and the phrases that describe these weaves.

In the blank at the left of each weave place the number(s) of the phrase(s) which best describe it.

Descriptions		Samples
2,5,7	A. Plain	3
1	B. Twill	2
3	C. Satin	1
4,6	D. Pile	4

Descriptions

1. Produces a diagonal effect
2. Has no right or wrong side
3. Produces a smooth, lustrous fabric
4. Produces a soft, deep surface effect
5. Each yarn interlaces with every other yarn
6. Has an up and down
7. Good balance between warp and filling yarns.

Shown on the Bulletin Board* are 4 fabric samples. Each sample illustrates one of the 4 weaves listed above.

In the blanks at the right, place the number of the fabric sample that illustrates each weave.

Description of illustrative material needed.
The fabric swatches illustrating these four weaves should be displayed on the Bulletin Board

Satin weave, designated as 1
Twill weave, designated as 2
Plain weave, designated as 3
Pile weave, designated as 4

Generalization AH: Loosely woven fabrics tend to shrink.

XXIV. Cynthia is buying a cotton housedress for her mother. Since it will have to be washed often, she wants a dress that will not shrink. Cynthia has found only two in the correct size made of the cotton fabrics shown on the Bulletin Board. As she reads the labels on the dresses in the store, she discovers that neither label tells her anything about shrinkage.

Shown on the Bulletin Board* are fabric samples of the two cotton housedresses. Which fabric probably has less tendency to shrink?

Check (x) the fabric which probably has less tendency to shrink.

_x_ A.
____ B.

Check (x) the reason(s) that explain your choice.

_X_ 1. Fabric is more closely woven.
____ 2. B is a heavier fabric than A because it has more yarns.
____ 3. A is woven of finer yarns than B
____ 4. B has been heavily starched in finishing

Description of illustrative material needed.

The fabric samples to be displayed on the Bulletin Board for this test item should be a firmly woven cotton designated as A and a loosely woven cotton designated as B. These samples should be as similar in design as possible.

Generalization AA: Durability of color in any fabric cannot be judged and must be guaranteed by label.

AC: The amount of shrinkage in any fabric cannot be judged and must be guaranteed by label.

XXV. Ruth is helping her father select a blouse for her mother's birthday. They want a blue rayon blouse that will neither shrink nor fade. At the store they have found two blouses that they like. One has a label and one does not. However, the clerk has told them that neither blouse will shrink or fade. From the clerk's statement, can they be sure that neither of these things will happen to either blouse?

Check (x) whether they can be sure that the blouse will neither shrink nor fade.

____ A. Yes
_x_ B. No

Check (x) the reason(s) that explains your choice.

____1. Most clerks know their merchandise well enough to tell whether it will shrink or fade.
_x_ 2. The amount of shrinkage can only be determined by the label.
_x_ 3. Color fastness in any fabric can only be determined by the label.
____4. Now almost all colors are colorfast.
____5. They can tell only by trying it themselves.
____6. Blue will usually fade.

Generalization AI: Twill weave is often used on work clothes because it can have more yarns per square inch and so will be stronger than plain weave.

AJ: Soil shows most on smooth, plain surfaces.

XXVI. Kay wants to make summer shorts for her three-year-old brother. She is anxious to get a durable fabric because his playclothes have not been wearing well. Also, she wants a fabric that will not show soil quickly.

Which of the two fabrics shown on the Bulletin Board* will be better for Kay to buy?

Check (x) the choice which is better.

___A.
_x_B.

Check (x) the reason(s) that explains your choice.

_x_1. Twill woven fabrics are stronger than plain woven fabrics because they can have more yarns per square inch.
_x_2. Soil will show less on B because it is figured (has stripes)
___3. A is more durable than B because it is a heavier, sturdier material.
___4. A solid color won't show soil as much as a figured fabric.
___5. Plain woven fabrics can have more yarns per square inch, and so will be stronger than twill woven fabrics.

Description of illustrative materials needed.
The fabric samples to be displayed on the Bulletin Board for this test item should be:

A. Indianhead fabric, no design, dark color
B. Cotton twill fabric, striped design.

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Chadderdon, Hester
Evaluation Materials in Clothing, Ninth Grade.

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*HOME ECONOMICS EDUCATION; *STUDENT EVALUATION; *CLOTHING INSTRUCTION; GRADE 9; TEXTILES INSTRUCTION; TESTING; *TEST CONSTRUCTION; *ACHIEVEMENT TESTS

Models for performance and problem solving test items and evaluation devices are provided for adaptation by home economics teachers to the needs of specific ninth grade clothing classes in the comprehensive high school. Evaluation materials were developed through research projects and trial use in Iowa schools by heterogeneous school groups. The materials are based on subject matter areas: fiber characteristics and their care, use of the sewing machine, garment construction and alterations, the relation of nutrition and cleanliness to health and grooming, and pattern, fabric, and clothing selection. Included are (1) objectives to which the evaluation materials relate, (2) suggestions for introducing and interpreting the results of tests, and (3) the problems presented as capsulated experiences, illustrating generalizations which require the student to give not only the answer but also justification of the answer. Other evaluation materials from home economics areas, all using similar formats are available as VT 005 747-VT 005 757 (ARM Summer 1969). (FP)

VT005 753

ED0 31587

Evaluation Materials

in

Clothing

Ninth Grade

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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Prepared by

Hester Chadderdon

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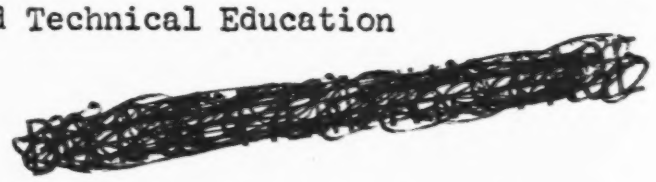

FROM: (Person) Alberta D. Hill (Agency) Iowa State University

(Address) Head, Home Economics Education Dept., Ames, Iowa 50010

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RE: (Author, Title, Publisher, Date) Chadderdon, Hester. Evaluation Materials in Clothing - Ninth Grade. Iowa State University. 1966.

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Development Group Heterogeneous school groups
Level of Group
Method of Design, Testing, and Trial Developed through research projects and trial use in Iowa schools. Cooperative project between the Division of Vocational Education, State Dept. of Public Instruction and Iowa Agriculture Experiment Station (Project 1215),

(3) Utilization of Material:
Appropriate School Setting Comprehensive high school
Type of Program High school classes
Occupational Focus Homemaking
Geographic Adaptability
Uses of Material Models for test items and evaluation devices
Users of Material Home economics teachers

(4) Requirements for Using Material:
Teacher Competency Background in testing and evaluation
Student Selection Criteria
Time Allotment

Supplemental Media --
Necessary _____)
Desirable _____) (Check Which)

Would not be used in present form but adapted by teacher for use in particular classes.

Describe

Source (agency)
(address)

Objectives

1. Ability to select patterns and to make simple alterations.
2. Ability to select fabrics which are attractive and fitted to their skill.
3. Ability to thread a sewing machine.
4. Ability to construct simple garments using good management practices.
5. Ability to select clothing which is becoming in color and design.
6. Understanding of characteristics of different fibers and their care.
7. Understanding of relation of nutrition and cleanliness to health and grooming.

Development of the Evaluation Materials

The performance tests, check sheets, and paper-and-pencil test items are based on the above objectives and generalizations from curriculum guides developed for use in Iowa high schools. An attempt was made to illustrate a variety of ways of evaluating learning. The key for the test items has been approved by subject matter specialists.

Use of Evaluation Materials

1. These were designed for use in determining where pupils are at any stage of learning: pre-test, during unit, at end of unit, or as part of a semester test.

2. In selecting the paper-and-pencil test items to use at a particular time, choose those which involve the generalizations which you are concerned with in your teaching. When using these items do not give the generalization listed at the top of each sheet to the pupils.

3. The directions for responding to the paper-and-pencil test items accompany each one. In order to force pupils to consider each solution and reason, the number of correct responses is not indicated. If an answer sheet (see example) is used, the directions will need to be changed accordingly.

4. To obtain a score for each girl, total only the number of correct responses (See key on copy of each item) because research indicates that deducting for guessing has little effect on the relative size of the scores unless a pupil checks an unreasonably large number of responses. If it appears that the pupils are checking a large number of responses in the hope of "hitting" the right one, you may want to (1) deduct one point for each incorrect response or (2) set a limit on the number of checks they may use. (If this is done, set the limit slightly above the number of correct responses, however.)

5. In interpreting the responses of your pupils, (1) Look at the size of the scores in relation to the possible total score to obtain a general idea of the class as a whole and to determine which pupils need special help. (2) Tabulate the number of pupils who selected each response and see which generalizations they failed to apply and which misconceptions they hold. These suggest points at which addtional learning experiences are needed.

6. Copies of the rating sheets can be filled in by teacher and pupils and a comparison made of their ratings from time to time in order to help pupils learn to rate themselves objectively.

Performance Test

Objective: Ability to alter a pattern by extending it.

Generalization: In enlarging a pattern piece to avoid changing its outline, slash and spread the piece rather than add to its outer edges.

Directions for administering this test. See that each girl has the following supplies:

1. A pattern piece which illustrates the type of garment they have been making* For example, if the class has completed a straight skirt, use a front or back pattern piece of a skirt. These pattern pieces could be old patterns or could be cut from wrapping paper.

2. Piece of paper large enough to extend the pattern.

3. Scissors

4. Pins

5. Ruler

6. A copy of a problem to solve, such as this:

   You have purchased a skirt pattern which fits your hip measurement, but you find that it is 3 inches too short for you. Using the pattern piece given you, make the alteration which is needed so the skirt will be 3 inches longer.

If your class is large and space for laying out pattern pieces for alteration is limited, you could divide the class into two groups and administer the test to each group separately.

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*This test could also be used as a pretest, especially if the class had previously had help on alteration of patterns and you wanted to see how well they could recall and apply the generalizations relating to alteration of patterns.

Possible Difficulties

1. Unable to place bobbin in winding mechanism
2. Thread not put through tension regulator
3. Thread not put through tension regulator correctly
4. Thread not put through take up
5. Threaded through take up before tension regulator
6. Thread not put through thread guide
7. Needle threaded in wrong direction
8. Bobbin unevenly wound
9. Bobbin placed in backward
10. Thread not placed in slot on bobbin case
11. Bobbin thread not brought to surface

Difficulties in Winding a Bobbin and Threading a Machine

Name	1	2	3	4	5	6	7	8	9	10	11

Performance Test

Objective: Ability to wind a bobbin and thread a machine

If the girls in your class have had little previous instruction in sewing at school, home, or in 4-H club, you might want to determine what help each will need on learning how to wind the bobbin and thread the sewing machine.

Directions: To administer this test, place a spool of thread and an empty bobbin at each machine. Place the machines far enough apart and in such a position that each girl can work without being affected by the actions of the others taking the test. Divide the girls in your class into groups based on the number of sewing machines you have in the laboratory and have each of them wind the bobbin and thread the machine as best they can.

When each has finished, check (x) her difficulties on the chart on the back side of sheet, so that you will have a record of those needing help and can divide them into groups in terms of what you need to emphasize in teaching them how to wind the bobbin and thread the machine.

(over)

How Am I Doing in Selection, Alteration, and Use of a Pattern?

	yes	no
1. In my selection of a pattern for my blouse*, I chose one that was		
a. well suited to my sewing skill		
b. well suited to the fabric		
c. best suited to my body measurements in size and type		
2. In making alterations on my blouse pattern (leave blank if no alterations needed) I was able to		
adjust it to my body measurements		
3. In my use of the pattern		
a. I laid it on fabric as the guide sheet indicated		
b. I laid it on fabric smoothly		
c. I laid it on grainline of fabric		
d. I pinned it securely to the fabric		
e. I cut the fabric with long, even strokes		
f. I cut from wide to narrow parts of pattern pieces		
g. I transferred all markings		

*If the term garment were used instead of blouse, this check sheet could be used at any grade level for any type of garment.

Am I a Good Manager When I Sew?

	always		usually		seldom	
	1	2	1	2	1	2
1. I begin work when laboratory period starts.						
2. I have materials and equipment at school when I need them						
3. I save my time and energy by						
a. keeping work surfaces uncluttered						
b. taking needed equipment (pins, etc.) to machine and ironing board						
c. following guide sheet or group plan						
d. hanging or folding garment pieces to avoid unnecessary pressing						
4. I share equipment with others by						
a. pinning garment pieces at table rather than at ironing board or machine						
b. planning the use of sewing machine with my partner or group.						
5. I share teacher's time with others by						
a. watching demonstrations carefully						
b. using illustrative material for help						
c. keeping up with my group						
d. helping others who are behind the group						

(Suggestions to teachers: two columns are provided to allow for checking at two different times to determine improvement)

How Am I Doing in Learning to Sew and Press?

	always	usually	seldom
1. In staylining bias and curved edges are stitched with grainline			
2. In machine stitching a. bobbin and top threads are pulled back of presser foot before stitching			
b. fabric is guided, not pulled, from presser foot			
c. stitching is straight			
d. stitching is with grainline of the fabric			
e. seams and darts are secured at both ends			
f. I sit like this			
3. In pressing a. each seam is pressed before seams which cross it are stitched			
b. press marks are avoided			
c. grainlines still appear unchanged			
4. In hand sewing a. I use my thimble to push needle through fabric			
b. My needle is held one of these ways when I am holding my work in my hands			
c. I hold my sewing high enough so that my back is straight			
d. I sit so the light falls on my sewing			

Index to Generalizations and Items

A. Measurements for pattern selection are most accurate if the person is standing naturally and at ease and the tape measure is adjusted snugly, but not tightly. Test Item I.

B. Horizontal measurements are most accurate if the tape is kept parallel to the floor. Test Item I.

C. If the hip measurement is taken 7 inches below the waistline, it will correspond to the location of the hip line on the pattern. Test Item I.

D. It is more difficult to make alterations at the bust line than at waist, hip, shoulder, and hemline of a pattern; therefore time is saved when a dress pattern is selected which most closely fits the bust measure. Test Item II.

E. Patterns vary in type and the types vary in proportions of the figure:
   (1) Girls' patterns are designed for growing girls whose figures are still immature.
   (2) Teens' patterns are for the less mature figure than the Misses.
   (3) Juniors' patterns are for the fully developed figure that is shorter than the Misses.
   (4) Misses' patterns are for the fully developed figure.
   (5) Half size patterns are shorter, narrower in shoulder and larger in the waist and hip than the Misses. Test Item III.

F. Pattern companies vary in the amount of ease allowed in patterns. Test Item IV.

G. In altering a pattern piece slashing and spreading the piece results in fewer changes in the outline (outer edges) than does adding to the outer edges of a pattern piece. Test Item V.

H. A fabric is a wise choice for a beginner if it is easy to handle and needle holes from removed stitches do not show.
   (1) Fabrics which are stiff or heavy are difficult to handle in sewing.
   (2) Needle holes from stitching may show more on a dark than on a light background. Test Item VI.

I. A fabric is more likely to keep its shape if it is cut and handled carefully, staylined (staystitched), and pressed with the grain. Test Item VII.

J. If staylining (staystitching) proceeds from the wide to the narrower part of the garment piece (or so the fabric threads lie flat rather than ruffled up) the garment piece will remain on grain. Test Items VII and IX.

K. If the grainline of the pattern is laid on the grain of the fabric, the garment can hang as the designer planned. Test Item VII.

L. Time is saved and results are more likely to be successful if small pieces of a garment are completed before they are joined to larger units. Test Item VIII.

M. To lessen the chance of stretching, necklines are finished before armseyes. Test Item VIII.

N. The necklines can be more easily finished while the garment is flat. Test Item VIII.

O. Staylining (staystitching) with the grain prevents stretching of bias and curved edges during fitting and stitching and holds the grain in correct position. Test Item IX.

P. A feature can be emphasized by wearing colors which repeat or contrast the color of the feature. Test Item X.

Q. Colors which repeat but are brighter than a person's coloring will tend to dull her coloring. Test Item X.

R. Intense or bright colors advance; dull or greyed colors recede; darker values advance; lighter values recede. Test Item XI.

S. Advancing colors and large designs call attention to size. Test Items XI & XIII.

T. Contrasts of color can be used to emphasize a center of interest. Since the costume is less important than the person, the face is usually made the center of interest. Test Item XII.

U. A costume appears better unified when one of the colors is used in more than one area of the costume. Test Item XII.

V. Clothing can be used to emphasize attractive features and de-emphasize unattractive features. Emphasis of a feature is created by repetition. Test Item XIII.

W. If a color is so intense that it dulls one's personal coloring by comparison, the garment rather than the person will be emphasized. Test Item XIV.

X. Very intense colors cause a neutral, fair, or delicate skin to appear pale by contrast. Test Item XIV.

Y. Plant fibers resist moths, tend to wrinkle easily, and, with the exception of rayon, are usually machine washable. Test Item XV.

Z. Animal fibers and vicara tend to be resilient, elastic, and absorbent. Test Item XV.

AA. Man-made, synthetic fibers tend to be wrinkle resistant, to melt at high ironing temperatures, dry quickly, and resist moths. Test Item XV.

AB. Nails that chip and peel in layers may indicate that there is lack of sufficient calcium and protein in the diet. Test Item XVI.

AC. Keeping the teeth clean is essential, but it will not replace the need for vitamins, minerals, and protein to protect them from decay. Test Item XVI.

AD. When the supply of protein, minerals, and vitamins is poor, the hair becomes dull, dry, harsh, and difficult to manage. Test Item XVII.

AE. Although the acne of adolescence may be unrelated to nutrition, a good all-round diet, together with cleanliness, may be expected to help combat it. Test Item XVII.

AF. Cleaning the skin regularly is essential to keep the pores open and clean, as clogged pores develop blackheads. Test Item XVII.

Example of an answer sheet which could be used to record responses and, hence, avoid having to reproduce the test items each time they are used. Can be adapted for any combination of items.

Answer Sheet for 9th Grade

A. Statements
____1
____2
____3
____4
____5
____6

B. Statements
____1
____2
____3
____4
____5
____6

C. Statements
____1
____2
____3
____4
____5
____6

II. Measurements
____A
____B
____C

Reasons
____1 ____5
____2 ____6
____3 ____7
____4 ____8

III. Types
_____1
_____2
_____3
_____4

IV. Reasons
____1
____2
____3
____4

V. Statements
____1 ____5
____2 ____6
____3 ____7
____4 ____8

VI. Fabrics
____A
____B
____C
____D

Reasons
____1
____2
____3
____4
____5
____6

VII. Points for Corine to follow:

1. _____

2. _____

3. _____

4. _____

VIII. Plans
____I
____II

Reasons
____1
____2
____3
____4
____5

IX. Sketches
____A
____B

Directions
____1
____2
____3
____4
____5

Reasons
____1
____2
____3
____4
____5

X. Colors
____A ____E
____B ____F
____C ____G
____D ____H

Reasons
____1
____2
____3
____4
____5
____6

XI. Colors & designs
____1 ____5
____2 ____6
____3 ____7
____4

Reasons
____1 ____4
____2 ____5
____3 ____6

XII. Accessories
____A
____B

Reasons
____1
____2
____3
____4
____5
____6
____7
____8

XIII. Effects
_____Wide belts_____
_____Vertical lines_____
_____Bright colors_____
_____Horizontal lines_____
_____Large designs_____

XIV. Colors
____A
____B

Reasons
____1 ____4
____2 ____5
____3 ____6

XV. Qualities
____1
____2
____3
____4
____5
____6
____7
____8

XVI. Difficulties
_____A
_____B
_____C

XVII. Suggestions
____1 ____7
____2 ____8
____3 ____9
____4 ____10
____5 ____11
____6 ____12

Explanations_____

_____

_____

_____

_____

_____

_____

Generalization* A: Measurements for pattern selection are most accurate if the person is standing naturally and at ease and the tape measure is adjusted snugly, but not tightly.

Generalization B: Horizontal measurements are most accurate if the tape is kept parallel to the floor.

Generalization C: If the hip measurement is taken 7 inches below the waistline, it will correspond to the location of the hip line on the pattern.

I. Marilyn is getting ready to buy a pattern for a dress she is to make in class, and Frances is going to take her measurements.

A. Check (x) in the blank beside the number of these statements which best describe the way Marilyn <u>should stand</u>.

____ 1. Very erect		x** 4. Her usual posture	
____ 2. Abdomen flat	or	____ 5. Arms straight at sides	
____ 3. Feet together		x 6. Relaxed, comfortable	

B. Check (x) in the blank beside the number of these statements which best describe how tightly Frances should <u>hold the tape measure</u>.

____ 1. So it feels comfortable.	x 4. Snug, but not tight.
____ 2. As tightly as the garment should fit.	____ 5. Loose enough to allow for growth.
____ 3. Loose enough to allow for shrinkage.	____ 6. Tight, then add an inch to it.

C. Check (x) in the blank beside the number of these statements which best describe how Frances should <u>take the hip measurement</u>.

____ 1. Wherever the fullest part of the hips comes.	x 4. Seven inches below the waist.
____ 2. Six inches below the waist.	____ 5. Lower in back than in front.
____ 3. In the middle of the hips.	____ 6. Parallel to the floor.

*Do not give the pupils the generalizations. They are listed at the top of each item to help you in deciding whether to select the item for your test.

**Indicates response approved by specialists in textiles and clothing in this and subsequent items.

Generalization D: It is more difficult to make alterations at the bust line than at waist, hips, shoulder, and hemline of a pattern; therefore time is saved when a dress pattern is selected which most closely fits the bust measure.

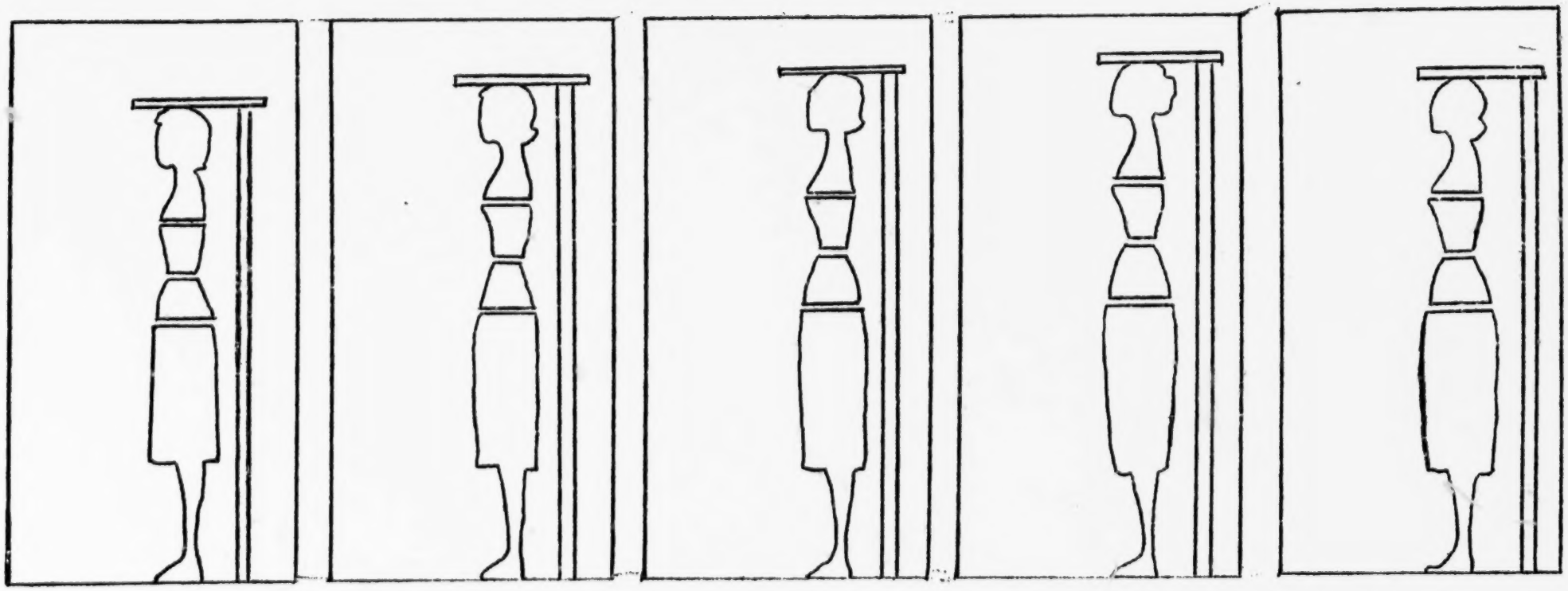
II. Marilyn has the measurements Frances made for her and is deciding what size dress pattern to buy. Which of these should she use?

Check (x) the best one to use.

_____A. hip measurement, if it is a fitted skirt.
_____B. waist measurement
__x__C. bust measurement

Why do you think the one you selected is best? Check (x) the reason(s) which explain your choice.

_____1. If it fits at the waist, it will usually fit the hips and bust because they are in proportion.
_____2. It is easier to alter a pattern at the waist line than at the bust or hip line.
_____3. It is more important for the dress to fit at bust than at the waist or hips.
_____4. The dress won't hang right, if the waist does not fit.
_____5. The fit at the hips is very important on a fitted skirt.
_____6. It is more difficult to alter a pattern at the hips than at the waist or bust lines.
__x__7. It is easier to alter a pattern at the hip and waist line than at the bust line.
_____8. The pattern companies use the waist as the basis for size.



Girl Teen Junior Miss Half-size

Generalization E: Pattern vary in type and the types vary in proportions of the figure.

(1) Girls' patterns are designed for growing girls whose figures are still immature.

(2) Teens' patterns are for the less mature figure than the Misses.

(3) Juniors' patterns are for the fully developed figure that is shorter than the Misses.

(4) Misses' patterns are for the fully developed figure.

(5) Half size patterns are shorter, narrower in shoulder and larger in the waist and hip than the Misses.

III. On the opposite page are sketches of the five figure types used by most pattern companies. What pattern type would be best for <u>each</u> of the four girls whose figure types are described below?

In the blank write the name of the pattern type which would be most likely to fit <u>each</u> girl.

<u>Jr. or Miss*</u> 1. Barbara's figure is fully developed and she is about 5 feet, 5 inches tall.

<u>Half-size</u> 2. Marilyn is fully developed, but a little shorter than Barbara and has narrower shoulders and larger waist and hip than Barbara.

<u>Teen</u> 3. Marcia is a little shorter than Barbara and her hips and bust are not fully developed.

<u>Girl</u> 4. Cynthia's bust has not developed and she is much shorter than Barbara.

*Indicates responses approved (flexible key for 1)

Generalization F: Pattern companies vary in the amount of ease allowed in patterns.

IV. Marilyn finds the same dress design in the Simplicity and McCall's pattern books. If she tries the same size in the same pattern type from the two companies, she may find they do not fit the same. Why not?

Check (x) the reason(s) why these patterns may not fit the same.

_____1. The two companies base their patterns on different sets of measurements.
_____2. The seam allowances may be different.
__x__3. The amount of ease allowed may be different.
_____4. The measurements of one company may not be as accurate as the other company's measurements.

Generalization G: In altering a pattern piece slashing and spreading the piece results in fewer changes in the outline (outer edges) than does adding to the outer edges of a pattern piece.

V. After Marilyn had purchased her pattern, she found that the skirt pattern was 3 inches short for her. Which one of these statements best describe what she should do to the pattern so the skirt will be long enough for her?

Check (x) the best way.

_____1. Use a tape measure and chalk and measure down 3 inches from the bottom of the pattern at several points, then connect these points with a line to get new bottom edge.
_____2. Put a $1\frac{1}{2}$ inch pleat in the material before laying the pattern on.
_____3. Cut the top part of the pattern, then move it down and cut the remainder of the skirt.
__x__4. Cut the pattern into two pieces and add a 3-inch piece of paper between.
_____5. Put a 3-inch piece of paper on the bottom of the pattern.
_____6. Make the pattern longer at the waistline.
_____7. Add $1\frac{1}{2}$ inches at the top and at the bottom when cutting out the skirt.
_____8. Put in a smaller hem.

Generalization H: A fabric is a wise choice for a beginner if it is easy to handle and needle holes from removed stitches do not show.

(1) Fabrics which are stiff or heavy are fifficult to handle in sewing.

(2) Needle holes from stitching may show more on a dark than on a light background.

VI. Corine wants to select a fabric for her dress which will be easy to sew. Here are samples* of four cotton fabrics she is considering. Which one do you think she would be wise to choose because it would be easiest to sew?

Dark colored fabric	Stiff fabric	Heavy fabric	Light colored fabric
		C	D

Check (x) the cotton fabric which is easiest.

____A ____C
____B x D

Check (x) the reason(s) which best explain your choice of fabric.

____1. A darker color will hide the mistakes better.
x 2. A fabric which is not stiff is easier to handle than a stiff fabric.
____3. This fabric will not ravel as much as the others.
x 4. A light color will be less apt to show needle holes if she has to remove any stitching.
x 5. A light-weight fabric is less difficult to handle than a heavy-weight fabric.
____6. A heavier fabric will not stretch as much as the lighter weight fabrics.

*Description of illustrative material needed:

Fabric A - use a fabric that is light weight, plain, and dark in color, such as dark blue percale.
Fabric B - use a stiff fabric such as one that has a metallic, all-over design, or a stiff, polished cotton.
Fabric C - use a heavy, plain fabric, such as denim.
Fabric D - use a fabric like A, but light in color.

Avoid use of fabrics with a design that must be matched.

Generalization I: A fabric is more likely to keep its shape if it is cut and handled carefully, staylined (staystitched), and pressed with the grain.

J: If staylining (staystitching) proceeds from the wide to the narrower part of the garment piece (or so the fabric threads lie flat rather than ruffled up), the garment piece will remain on grain.

K. If the grainline of the pattern is laid on the grain of the fabric, the garment can hang as the designer planned.

VII. Corine has never done any sewing. She heard a radio program about learning to sew and the statement was made that the grain of the fabric is very important if a garment is to fit well. She has asked you to help her in knowing what to do when she sews so her garment will fit well.

List below four points you would tell her to follow when sewing to be sure that the fabric and garment will remain on grain.

Suggestions for scoring

Give a score of 1 for each of the following ideas:

1. Lay grainline of pattern on grain of fabric.
2. Cut and handle fabric carefully.
3. Stayline (staystitch) garment pieces by stitching from wide to narrow part of piece.
4. Press with the grain.

Generalization L: Time is saved and results are more likely to be successful if small pieces of a garment are completed before they are joined to larger units.

M: To lessen the chance of stretching, necklines are finished before armseyes.

N: The necklines can be more easily finished while the garment is flat.

VIII. The girls in a class have pieces cut out for their sleeveless blouses which button up the front. They are ready to decide on their plan for putting the parts together. Here are plans suggested by two girls.

Plan I

1. Stayline(staystitch) all bias and curved edges.
2. Stitch the shoulder seams. (Fronts to back)
3. Stitch the underarm seams.
4. Press seams.
5. Stitch front facings to blouse fronts.
6. Stitch neck facing to blouse back.
7. Press seams.
8. Stitch facings on armholes.
9. Press seams.
10. Finish bottom of blouse.
11. Press.

Plan II

1. Stayline (staystitch) all bias and curved edges.
2. Stitch the shoulder seams. (Fronts to back)
3. Stitch front and neck facings together.
4. Press seams.
5. Stitch facing on fronts and neck.
6. Press seams.
7. Stitch underarm seams of blouse and of armholes.
8. Press seams open.
9. Stitch facings on armholes.
10. Finish bottom of blouse.
11. Press.

Check (x) the better plan.

____ Plan I
_x_ Plan II

Check (x) the reason(s) which explain your choice.

____ 1. The more frequent the pressing, the better the garment will look.
____ 2. Easier steps should be done first, so the underarm seams need to be stitched before the facings are put on.
____ 3. Time is saved by pressing less frequently.
_x_ 4. Time is saved by joining small pieces before joining them to larger pieces.
_x_ 5. Facings can be put on the neckline easiest when the garment is flat.

Generalization J: If staylining (staystitching) proceeds from the wide to the narrower part of the garment piece (or so the fabric threads lie flat rather than ruffled up), the garment piece will remain on grain.

O: Staylining (staystitching) with the grain prevents stretching of bias and curved edges during fitting and stitching and holds the grain in correct position.

IX. On the Bulletin Board* are two sketches of the back of Marilyn's blouse ready for staylining (staystitching). The dotted lines and arrows (---->) indicate where and in what directions she should stitch for staylining (staystitching) each piece. Which one is the better way?

Check (x) the better way to stitch for staylining (staystitching)

_x_ A
____ B

Check (x) the direction(s) below which describe the way to stitch.

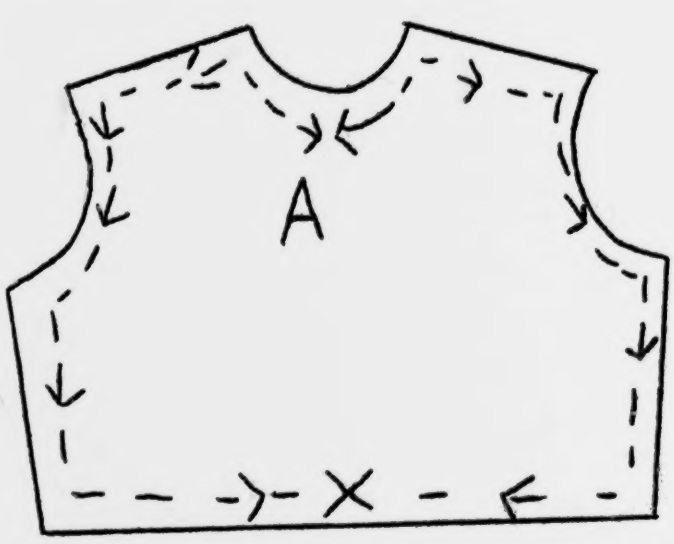
_x_ 1. Stitch with the grain.
____ 2. Work upward.
_x_ 3. Stitch from wide to narrower part.
or _x_ 4. Stitch in the direction that will push down the protruding threads (whiskers).
____ 5. Stitch from width to length.

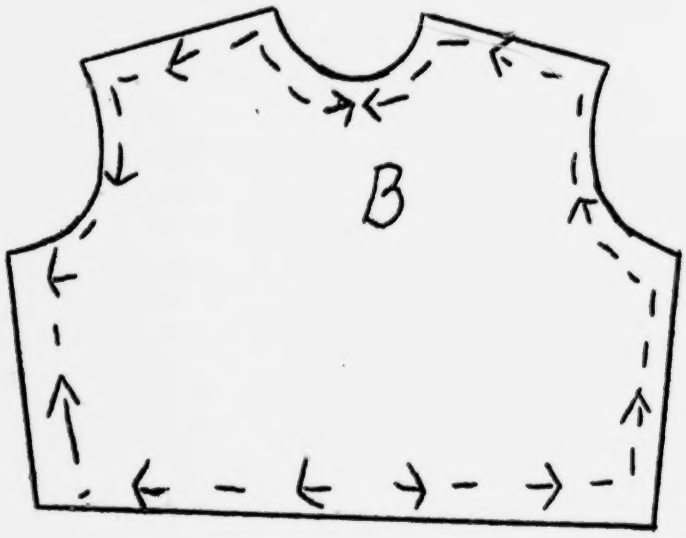
Check (x) the reason(s) which best explain why staylining (staystitching) is needed.

____ 1. To prevent raveling while making the blouse.
_x_ 2. To prevent stretching while making the blouse.
____ 3. To prevent the seams from raveling when the blouse is worn.
____ 4. To keep fabric from pulling out at the seams when the blouse is worn.
____ 5. To keep the fabric from gathering up or puckering while stitching the seams.

*Description of illustrative material needed.

Display on Bulletin Board two copies of the back of a blouse pattern cut from heavy paper and marked with heavy lines as indicated below:





Generalization P: A feature can be emphasized by wearing colors which repeat or contrast the color of the feature.

Q: Colors which repeat but are brighter than a person's coloring will tend to dull her coloring.

X. Phyllis has beautiful "red" hair. It really is almost copper in color and is her best feature, so she wants to choose colors in her wardrobe that will be most becoming with it.

Which of these groups of colors would be the best ones for her to choose? Check (x) the ones that would be best.

x A. Browns	x E. Yellows, dull
x B. Yellow-greens, dull	____ F. Greens, bright
____ C. Reds	x G. Grays
____ D. Blues, bright	x H. Greens, dull

Check (x) the reasons which explain your choices.

x 1. Dull colors are better because they do not compete with her hair for attention.
____ 2. Pale colors are better because she has so much color in her hair.
____ 3. Bright colors are good because they are alive like her hair.
x 4. Contrasting colors will accent her hair coloring.
x 5. Colors which repeat the tones in her hair emphasize its colors.
____ 6. Bright colors will bring out the color of her hair.

Generalization R: Intense or bright colors advance; dull or greyed colors recede; darker values advance; lighter values recede.

S: Advancing colors and large designs call attention to size.

XI. Colors and designs can help to make a person appear larger or smaller. What are the effects of each of the 7 items listed below?

Effects

A. Will tend to make a person look larger.
B. Will tend to make a peron look smaller.
C. Will have little or no effect on the appearance, as far as size is concerned.

Indicate which one of these will result by putting a letter in the blank beside the color or design described below.

Colors and designs

__A__1. Garments of bright colors
__B__2. Fabrics with small designs
__B__3. Garments of dull or greyed colors
__A__4. Fabrics with large designs
__B__5. Garments of dark colors
__A__6. Garments of light colors
__C__7. Fabrics with no design

Check (x) the reason(s) which explain these results

____1. Colors do not affect size, only design makes a person look larger or smaller.
____2. Dull colors emphasize the faults of a larger person.
__x__3. Dark colors do not attract attention, so make a person seem smaller.
____4. All designs make a person seem larger.
__x__5. Dull colors stay in the background, are not so noticeable.
__x__6. Large designs often call attention to size.

Generalization T: Contrasts of color can be used to emphasize a center of interest. Since the costume is less important than the person, the face is usually made the center of interest.

U: A costume appears better unified when one of the colors is used in more than one area of the costume.

XII. Sandra has a new brown dress which she is planning to wear to parties, church, on dates, etc. The predominating colors in her wardrobe are green, brown, and beige (light tan). She wants to select suitable accessories to complete her new costume.

Which group of accessories would be better for her to select?

A	B
Brown hat	Brown hat with beige ribbon trim
Gold gloves	Beige gloves
Brown purse	Brown purse (gold initials
Green pumps	Brown pumps
Gold wooden beads	Yellow-orange silk scarf
Gold lapel pin	

Check (x) the group that is better for Sandra.

____A
_x_B

Check (x) the reason(s) for your choice.

____1. A has better amount of brown, B has too much
_x_2. Generally the face is the center of interest.
____3. The green pumps make A more exciting.
____4. The purse and pumps should match.
_x_5. The contrasting scarf accents her face.
____6. B has fewer colors.
____7. If colors are repeated, the parts of the costume will fit together better.
____8. Gold adds a contrast to the brown.

Generalization V: Clothing can be used to emphasize attractive features and de-emphasize unattractive features. Emphasis of a feature is created by repetition.

S: Advancing colors and large designs call attention to size.

XIII. Kay is very tall and thin, while June is short and plump. They want help in selecting the kinds of designs, colors, and fabrics which would be most becoming.

Place a K in the blanks at the left of the items Kay should avoid.*
Place a J in the blanks at the left of the items June should avoid.

__J__ Wide belts __1__
__K__ Over-emphasis of vertical (up and down) lines __1__
__J__ Bright colors in large areas __2__
__J__ Over-emphasis of horizontal lines __1,4__
__J__ Large designs in fabrics __3__

Place the numbers in the blank at the right of each item to indicate the reasons which best explain why the item should be avoided by Kay or June. The reasons may be used more than once.

1. Repeating a line calls attention to it.
2. Bright colors advance.
3. Large designs attract attention.
4. Horizontal lines cause the eye to follow around.

*Draw the pupils' attention to the word"avoid" so they will be sure to be aware of it.

Generalization W: If a color is so intense that it dulls one's personal coloring by comparison, the garment rather than the person will be emphasized.

X: Very intense colors cause a neutral, fair, or delicate skin to appear pale by contrast.

XIV. Sue needs a new winter coat. She wants a blue one because blue is becoming to her. When she and her mother went shopping for it, they found two blue coats that fit the family budget and would wear well. Sue is rather colorless; her hair is medium brown and her skin is pale. Which of the two blues, A or B, displayed on the Bulletin Board* would she be wise to buy?

Check (x) the better choice.

__x__ A
____ B

Check (x) the reason(s) for your choice.

__x__ 1. A dull blue, A, is better than the brighter blue, because it won't compete with her for attention.
____ 2. B will brighten her up.
____ 3. B will call attention to her coat and make her paleness less noticeable.
____ 4. She needs a lighter blue.
__x__ 5. B will make her seem more colorless by contrast.
____ 6. A is a better color for a coat.

Description of illustrative material needed.

Select from construction paper or fabric two blues of the same value (medium or dark), but differing in intensities. Designate the duller one A and the brighter one B. Display where all can see, but several inches apart so the brighter one will not make the duller one appear uninteresting.

Generalization Y: Plant fibers resist moths, tend to wrinkle easily, and, with the exception of rayon, are usually machine washable.

Z: Animal fibers and vicara tend to be resilient, elastic, and absorbent.

AA: Man-made, synthetic fibers tend to be wrinkle resistant, to melt at high ironing temperatures, dry quickly, and resist moths.

XV. The fibers our clothes are made of have different qualities, depending on their origin. At the right below are the three main groups of fibers. At the left is a list of qualities.

Place in the blank the letter(s) of the fibers which are high in the quality described for each of the 8 qualities.

Qualities	Groups of fibers
C 1. Dry quickly	A. Plant fibers
A 2. Wrinkle easily	B. Animal fibers and vicara
B 3. Elastic (wrinkles hang out)	C. Man-made synthetic
B 4. Absorbent	
A 5. Washable in a machine	
C 6. Melt at high ironing temperatures	
B & C 7. Resilient (good wrinkle recovery)	
A & C 8. Resist moths	

Generalization AB: Nails that chip and peel in layers may indicate that there is a lack of sufficient calcium and protein in the diet.

AC: Keeping the teeth clean is essential, but it will not replace the need for vitamins, minerals, and protein to protect them from decay.

AD: When the supply of protein, minerals, and vitamins is poor, the hair becomes dull, dry, harsh, and difficult to manage.

XVI. Patricia has a very poor appetite and dislikes many foods. This is typical of her day's meals and snacks:

Breakfast	Lunch	Dinner
None	Hamburger Coke	Macaroni & cheese French fried potatoes Apple pie

Snacks
Chocolate ice cream soda
Chocolate candy bar

If she eats this kind of meals and snacks, she can expect that her hair, teeth, and nails will be affected. Which of these nutrients does she need to add to her diet to help prevent these three difficulties?

Place in the blanks the numbers of the nutrients needed to overcome each of the difficulties. The nutrients can be used more than once.

Difficulties	Nutrients
1,3,4 A. Dull hair	1. Vitamin
3,4 B. Nails that chip	2. Carbohydrates
1,3,4 C. Decayed teeth	3. Minerals
	4. Protein
	5. Fat

Generalizations AE: Although the acne of adolescence may be unrelated to nutrition, a good all-round diet, together with cleanliness, may be expected to help combat it.

AF: Cleaning the skin regularly is essential to keep the pores open and clean, as clogged pores develop blackheads.

XVII. Mary Ann, who is 14, is having trouble with her skin. She frequently has pimples and blackheads and wants to know what might help her to clear up her complexion.

Check (x) the three suggestions below that are the best ones for her to try first.

____1. Use a good face cream to cleanse her face daily.
____2. Avoid using cosmetics.
____3. Use alcohol to close the pores after washing or creaming her face.
____4. Avoid eating candy.
____5. Drink lots of water.
____6. Avoid starchy foods.
____7. Squeeze the blackheads and pimples as soon as they are ready to be removed.
_x_8. Eat a balanced diet.
_x_9. Wash her face two or three times a day with soap.
____10. Avoid greasy or fat foods.
_x_11. Keep hands away from face.
____12. Do nothing; they will disappear when she is older.

Write a brief explanation below of why you selected the three you checked.

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*HOME ECONOMICS EDUCATION; *STUDENT EVALUATION; GRADE 9; *CHILD DEVELOPMENT; TESTING; *TEST CONSTRUCTION; *ACHIEVEMENT TESTS

Models for test items and evaluation devices are provided for adaptation by home economics teachers to meet the needs of specific ninth grade child development classes in the comprehensive high school. Evaluation materials were developed through research projects and trial use in Iowa schools by heterogeneous school groups. The materials are based on subject matter areas: developmental tasks, individual differences, and family relationships, values, interests, and roles. Included are: (1) objectives to which the evaluation materials relate, (2) suggestions for introducing and interpreting the results of the tests, and (3) the problems, presented as capsulated experiences, illustrating generalizations which require the student to give not only the answer but also justification for the answer. Other evaluation materials for home economics areas, all using similar formats, are available as VT 005 747-VT 005 757 (ARM Summer 1969). (FP)

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in

Child Development

Ninth Grade

Prepared by

Hester Chadderdon
Assisted by Elois Archer

Home Economics Research
Iowa State University
of Science and Technology

Ames, Iowa

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M E M O R A N D U M

TO: The ERIC Clearinghouse on Vocational and Technical Education
The Ohio State University
980 Kinnear Road
Columbus, Ohio 43212

[redacted]

FROM: (Person) Alberta D. Hill (Agency) Iowa State University

(Address) Head, Home Economics Education Dept., Ames, Iowa 50010

DATE: April 3, 1968

RE: (Author, Title, Publisher, Date) Chadderdon, Hester. Evaluation Materials in Child Development - Ninth Grade. Iowa State University. June 1966.

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Student Selection Criteria

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OBJECTIVES AND DEVELOPMENT AND USE OF TEST ITEMS

I. Objectives: These evaluation materials relate to the following objectives.

1. To accept, enjoy, and be interested in children
2. To grasp the whole range of human development through experiences with a range of ages
3. To develop respect for children as persons
4. To understand himself, including the effects of his behavior on others.

II. Development of Test Items: The items in this packet are based on the above objectives and the generalizations given at the top of each page containing a test item. The solutions and reasons for the problems include misconceptions collected from Iowa high school pupils.

III. Selection of items to combine into a test: Choose the items which involve the generalizations on which you wish to determine where your pupils are at any stage of learning (pre-test, during unit, at the end of unit, or as a part of semester test).

IV. Provision of a setting and directions: Here are a few suggestions which might be used with child development tests. You can think of others.

HOW WELL DO YOU UNDERSTAND CHILDREN AND HOW WELL CAN YOU TAKE CARE OF THEM?

When you have been with children (your brothers, sisters, cousins, nieces) you may often have been surprised at things they did or said and you wondered why they acted that way. Or you may have been responsible for a child and needed to know how to take care of him.

Several situations are described on the following pages which may be like ones you have wondered about. Read each one carefully and then check (x) beside the statement(s) which you believe answer the question best.

In order to force pupils to consider each solution and/or reason, do <u>not</u> indicate the number of statements they are to check.

V. Scoring the test: To obtain a score for each girl total <u>only</u> the correct solutions and/or reasons. (See key on mimeographed copy of each item). It is better not to make deductions for incorrect choices because some of the problems are of such a nature that certain of the reasons could conceivably be true under some circumstances. The key provides for determining only those which make use of the particular generalization(s) listed at the top of each page. Also research on these items indicates that deducting for guessing has little effect on the relative size of the scores unless a student checks an unreasonably large number of responses.

VI. Interpreting the results of the test: The results can be looked at several ways to determine how well your pupils can apply the generalizations involved in the test.

(1) The size of the scores in relation to the total possible score gives a general idea of the class as a whole. Individual

scores indicate which pupils have highest achievement and which need more experiences. A look at the responses of individual pupils, particularly those whose scores are low, will indicate places where special help is needed.

(2) If the test has been given before and also after the unit has been taught you can see the extent of progress, provided the particular problems have not been discussed in class.

(3) Tabulating the total number of pupils who selected each solution and reason gives you clues to needs for learning, whether the test is used as a pre-test or after some instruction. Noting the generalizations which they failed to apply and the misconceptions (incorrect responses), you have bases for planning experiences. Below is an illustration of an item that was administered to 137 ninth-grade pupils.

When Doris, age 14, was taking care of her brother Billie, 2, he picked one of the decorations off the Christmas tree and threw it on the floor where it broke. He looked up at Doris and smiled.

What would you do if you were Doris?

Check the answer(s) you think <u>best</u>.

__74__ A. Explain to him that he must not take the decorations off the tree
__15__ B. Keep him away from the tree
__26__ C. Put the decorations high enough on the tree so that he cannot reach them
__12__ D. Make him clean up the broken glass
__9__ E. Scold him
__20__ F. Spank his hands
__18__ G. Ignore him
X __41__ H. Put less valuable decorations on the lower branches of the tree.

Check the reason(s) for choosing your answer(s)

__35__ 1. He will learn not to bother the tree again
__15__ 2. He may cut himself
__32__ 3. He is too small to understand why he can't do as he pleases
__33__ 4. He will give up if no one is amused but himself
__6__ 5. He'd be afraid to do it again
__51__ 6. He needs to learn to understand right and wrong
X __30__ 7. It is natural for Billie to want to throw things
__30__ 8. He needs to learn that it isn't a joke
__30__ 9. If you act displeased, he'll understand better.

It is evident from the figures that a large number of the pupils need help in understanding small children since more than half of them would solve this problem by merely explaining (Solution A). A fairly large group would punish him (Solutions D, E, & F). Only 41 of the pupils applied the generalization (Solution H): We all learn by experimenting and, therefore, make mistakes.

Thirty pupils realized that it was natural to throw things. More than one-third expected a two-year old to learn right from wrong and an equal number believed that showing displeasure will help him understand.

CAN YOU APPLY WHAT YOU KNOW ABOUT CHILDREN?

A summary is given below of what happened when a ninth grade girl, Alice, stayed with Billie while his parents went to the show. Following are listed some of the things she did and one of the summarizing statements she applied as she took care of Billie. Notice that for two things which Alice did, there are no summarizing statements listed. Will you write them in the proper spaces?

What Happened When I "Baby-Sat" at the Coxes

The Coxes asked me to supper at 5:30 so that I could get acquainted with Billie, age $1\frac{1}{2}$, before they left.

Mr. Cox showed me where to hang my coat and took me in to see Billie. He said, "This is Alice, Billie." I said, "Hello, Billie." Billie smiled and held up his hand to show me his rubber doll. Then he sat and looked at me.

When supper was ready Mr. Cox sat Billie at the table and began to feed him while Mrs. Cox put our food on the table. After supper I watched Mrs. Cox put Billie in his crib and turn off the lights.

When Mr. and Mrs. Cox were ready to leave, they said that they were going to the Rosemount theater; also that because Billie had recently been vaccinated, they were leaving some crushed aspirin in a spoon to give with apple sauce if he cried. They said that he usually fussed a little before he went to sleep.

After they had been gone about an hour Billie began to cry. He was uncovered so I covered him up and let him cry a little, but when he continued to cry I gave him the aspirin with apple sauce and then walked the floor with him until he was asleep.

What Alice Did	Summarizing Statements Alice Applied
Alice said, "Hello, Billie", and then sat down beside him and looked at his doll.	Children adjust slowly to new situations.
Let Billie fuss a little.	
Pick him up and walk the floor with him.	

(Suggestions to Teachers)

CAN YOU APPLY WHAT YOU KNOW ABOUT CHILDREN?

You may find this type of device useful after your pupils have had some opportunity to study about children. Because there is an illustration of what is wanted for an answer, it may prove helpful as one of the first devices used in testing ability to apply what has been learned. This type of device could also be used at the end of the unit.

If you find this helpful, you could develop other devices like this using different situations which would determine the understanding of other generalizations.

The summarizing statements which should be supplied by the pupil are: (1) each baby has his own way of going to sleep and (2) some comforting may bring a relaxing response. You will not, however, expect pupils to give these statements exactly but you will need to decide whether their statements are consistent with these. If not, their statements will indicate need for additional experiences.

MAKING USE OF WHAT YOU KNOW ABOUT CHILDREN

A description is given below of what happened when Marie stayed with children while the parents were gone one evening. Following are a list of some of the things she did and spaces for you to write in the summarizing statements which she applied. One example is given.

Marie's Baby Sitting Experience

Marie was visiting her older sister, Sue, and brother-in-law, Jim, and their two children, Denny 7 and Pamela 5. During her visit, Sue and Jim accepted an invitation to a dinner party and asked Marie to stay with the children.

They left about 5:30 p.m. while Marie was getting supper. After supper, Denny asked to go bicycle riding. Marie told him to come back in one hour. Marie asked Pam to help wash the dishes. While they were doing this, Marie saw Denny across the street with boys about his size who also had bicycles.

When the dishes were done, Pam played in the sandbox but Denny was not in sight when the hour was up. Marie took Pam and walked a block down the street and finally saw the boys bicycles in the next block. She returned to the house and helped Pam get ready for bed.

About thirty minutes later Denny came home. To Marie's comment, "Denny, you're a little late, aren't you?" Denny replied, "Well, I didn't know the time." She said that it was usually hard to keep track of time when a person was having fun.

When Denny was ready for bed, Marie read a story, then each child got into bed and she returned to the living room. She could hear them talking to each other across the hall. After a while they stopped talking.

What Marie Did	Summarizing Statement She Applied
Example Marie asked Pam to help wash dishes.	Example Sharing work helps a child feel that he is an important family member
She helped Pam wash herself and get ready for bed.	
She understood and accepted Denny when he was late.	

(Suggestions to Teachers)

MAKING USE OF WHAT YOU KNOW ABOUT CHILDREN

Objective 5: To help the pupil accept, enjoy and be interested in children.

Objective 2: To help the pupil grasp the whole range of human development.

Generalizations: L Older children can help smaller children form desirable habits.
C There is a mature behavior at any stage of development.

You may find this evaluation device helpful during or at the end of a unit on child development to learn whether students can recognize the application of generalizations. If you find this device useful, you could prepare others similar to it for the purpose of checking on students' ability to apply other generalizations.

Those generalizations which are listed above are your guide in interpreting what students write. The students' statements, however, may not be worded exactly like these. For example, instead of (L) above, the student may write, "She was trying to teach Pam how to do things for herself." One misconception which a pupil gave for generalization (L) in a preliminary trial of this device, was: "Pam had done a good turn for Marie so she did one for Pam."

After looking over the responses of the students, you may wish to discuss the results with the entire class. Doing this would give you an opportunity to show them which generalizations they were able to apply in this situation and to clarify any misunderstandings.

GOOD BABY SITTERS DON'T JUST SIT

Girls and boys in high school sometimes have opportunities to baby sit with young babies. As baby sitters usually have full responsibility for the child, it is necessary for them to be able to do a variety of things for the child. To help you check yourself on your ability to do some of these things, a list of some of them is given. Check them as follows:

Mark with an X those you know how to do well.

For each one which you marked X, write in the last column why you think you can do it well.

Mark with a ✓ those you need to learn to do better.

For each one which you have marked ✓, write in the last column what you could do to learn how to do it better. Example:

Responsibility	Can do well	Need to learn to do better	How can I learn to do it better or Why I think I can do it well
1. Change diapers		✓	Practice doing it on a doll
2. Prepare formula	X		I have prepared the formula for my sister's baby many times

CHECK LIST

Responsibility	Can do well	Need to learn to do better	How can I learn to do it better or Why I think I can do it well
1. Burp a baby			
2. Warm up bottle for feeding			
3. Find out what is making a baby cry			
4. Comfort a baby who is crying			
5. Approach a baby in a friendly manner			
6. Play with a baby in ways which use his abilities			

(Suggestions to Teachers)

GOOD BABY SITTERS DON'T JUST SIT

This type of evaluation device may be used before teaching the unit on child development or after you have begun the unit to help pupils preparing for baby sitting decide what they still need to learn. They may need to have some help in filling in the column "How I Can Learn To Do It Better."

When the pupils have finished checking the device you might tabulate the results and have a discussion with the class to make plans for learning to do better those things which they marked with a ✓. You could also have a short conference with each pupil to discuss her checks.

HOW DO YOU FEEL TOWARD CHILDREN 2 TO 5 YEARS OLD?

Girls in high school usually have young brothers and sisters or have taken care of neighbor's children enough to give them some idea of the way they feel toward children two to five years old. Will you show how you feel about children this age by writing in the spaces below about each of these things. Do not sign your name.

1. How do you feel about their growth (their size, the way they stand, walk and handle themselves)?
   Examples: 1. They bother me because they never sit still.
   2. I like to see them learn to do new things like trying to ride a tricycle.

2. How do you feel about the things they must do regularly such as eating and sleeping?
   Examples: 1. They make too much fuss about going to bed on time.
   2. They learn bad habits of eating very quickly.

3. How do you feel about the way they act toward other children their age?
   Examples: 1. It is fun to see them try to make friends.
   2. Most kids this age are mean to other kids.

4. How do you feel about the way they share toys?
   Examples: 1. They are selfish about their toys.
   2. They are too young to share their things.

5. How do you feel about the questions they ask?
   Examples: 1. They ask too many questions.
   2. Their questions are funny.

6. How do you feel about the way they show affection?
   Examples: 1. One minute I think they like me: the next minute I think they hate me.
   2. I like the ones who will sit on my lap.

7. How do you feel about the way they act when they're mad?
   Examples: 1. There's no sense to the way they kick and yell.
   2. They don't stay mad very long.

Index to Generalizations and Test Items for Use in
Evaluating Learning in Child Development: 9th Grade

A. Individuals differ in rate and pattern of growth. Test item II.

B. Each individual has an urge to grow up and prefer more mature behavior. Test item XIII.

C. There is a mature behavior at any stage of development. Test items X, XI.
   1. At eight, possessions are very important. Test item XVI.
   2. Two-year-olds are very active. Test item XIV.
   3. At seven to ten, an interest in stories, radio, and television is high. Test item VI.

D. The basic needs of adequacy, love, and affection recur at each level of development. Test item XVII. (See also Gen. P)

E. Children adjust slowly to new situations. Test item I.

F. It takes time for children to learn; their memory span is short. Test item XXII.

G. We all learn by experimenting and, therefore, often make mistakes. Test items XV, XX.

H. Exploring is a very important part of a young child's learning. Test items XVIII, XXIII, XXIV.

I. Learning takes place easier and quicker when the learning experience is keyed to the child's level of development. Test item IV.

J. As we become more mature, we find acceptable ways of releasing tensions. Test item V.

K. Sharing work and play helps a child feel that he is an important family member. Test item IV.

L. Older children can help smaller children form desirable habits. See Making Use of What You Know About Children.

M. Emotions in early childhood are intense and transitory. Test item VIII.

N. Older people tend to judge children by their own standards of behavior. Test item IX.

O. Behavior is caused by past and present experiences and inheritance. Test items III, XII, XXI.

P. Every human being need affection, needs to feel adequate, and needs recognition as a worthy person from those he cares about. Test item XIX. (See also Gen. D)

Q. Some of the things that happen to us when we are very young help to determine our concepts and attitudes later in life. Test item VII.

Generalization E: Children adjust slowly to new situations.

I. Because of guests in the house, Ann, age 7, has been told to sleep with Jewell, her 15-year-old sister. Ann, accustomed to going to bed at 8:30 o'clock, stays awake until Jewell gets to bed about 10:00 and then wants to talk.

What might explain why Ann stayed awake?

Check the reason(s) which <u>best</u> explain Ann's behavior.

_____ 1. Ann wants to act grown-up like her sister.
_____ 2. The room is different and that gives Ann more things to stay awake and look at.
_____ 3. Being in a strange bed, she is afraid to go to sleep.
_____ 4. Ann likes to talk to her older sister.
x* 5. Ann is excited by the change in beds and is unable to go to sleep as she usually does.
_____ 6. Ann thought it would be fun to have someone to talk to.
_____ 7. She is curious about her older sister's activities.

* x indicates the best response for this generalization.

Generalization A: Individuals differ in rate and pattern of growth.

II. Geraldine and Josephine are 14-year-old twins. Geraldine is two inches taller and looks as if she were a year older than her sister. She feels self-conscious and clumsy with others when Josephine is around because they repeatedly remark about the difference in size.

What are the reasons why these girls differ in size?

Check the reason(s) you think best explains the difference in size.

____1. Geraldine may eat more than her sister.
____2. Their glands may have acted differently.
x* 3. They are two different people and Geraldine just grew faster.
____4. Geraldine is healthier than Josephine.
x* 5. Geraldine may have gone through her stage of rapid growing earlier than her sister
____6. Geraldine probably was larger when she was born than Josephine was.
____7. This difference was due to the father and mother being different in size.

Generalization O: Behavior is caused by past and present experiences and inheritance.

III. Mr. and Mrs. Lowe believe that children should learn to obey their parents. Their only child, 5-year-old Dean, does what he is told to do but it sometimes takes shouting or spanking to get him to obey. His parents have been worried recently about Dean's play with other children. He yells at them, bosses them, and gets very angry if they refuse to do what he tells them to do.

Why does Dean act this way?

Check the reason(s) which <u>best</u> explain why Dean acted as he did.

____1. The other children may not be nice to Dean.
____2. He is probably a leader by nature.
____3. If his parents treat him that way, he feels he has a right to take revenge on someone.
____4. He may be spoiled.
____5. He thinks he is acting like a grown-up by being bossy.
_x_6. He believes that is the way to act, since his parents treat him that way.
____7. Being bossy is a stage all small children go through.

Generalization I: Learning takes place easier and quicker when the new experience is keyed to the child's level of development.

Generalization K: Sharing work and play helps a child feel that he is an important family member.

IV. As Mrs. Smith washed the dishes she let four-year-old Marcia wipe the pots and pans. Marcia said, "I'm helping Mommy."

Why was Mrs. Smith wise to let Marcia wipe the pots and pans?

Check the reason(s) you think explain best why Mrs. Smith should let her help.

____1. She was teaching Marcia to be a good housekeeper.
_x_2. She knew if Marcia dropped a pan it wouldn't break.
____3. Mrs. Smith wanted to let Marcia think that she was a big girl.
____4. Mrs. Smith wanted to keep Marcia out of mischief.
_x_5. Mrs. Smith wanted to make Marcia feel that she was important.
____6. She was getting Marcia to love her.

Generalization J: As we become more mature, we find acceptable ways of releasing tensions.

V. For several summers while Van was very small he and his mother went to his uncle's for a few days. When he was five he went without his mother for the first time. On his return home he ran to his mother, threw his arms around her skirt, and said, "I'm never going away again."

Three years later when he returned after a visit to the farm, he ran down in the basement to see his dog and check on his toys. As he came up, he asked about his pals. Then he said, "I had a good time, but I'm glad to get home."

Why do you think Van acted differently when he arrived home at the end of these two visits.

Check the reason(s) which best explains why Van acted differently.

___1. As he became older, he was less attached to his mother.
___2. He had learned to adjust to his aunt and uncle and to being on the farm.
___3. As he became older his dogs and friends meant more to him.
___4. He became more adventurous as he became older.
___5. When he was younger, something may have frightened him when he was on the farm.
_x_6. As he became older he expressed his feelings. more like older children.
___7. He became interested in more things, and had a better time.

Generalization C3: There is a mature behavior at any stage of development: At seven to ten an interest in stories, radio, and television is high.

VI. Mrs. Smith told Dorothy to see that she and Connie went to bed while she went to pick up their father. Dorothy was fourteen years of age and Connie was seven. Dorothy went upstairs and got ready for bed and called down to Connie to hurry. Connie, who was looking at a book, said "Oh, I want to finish this story." Half an hour later the mother returned and asked Connie why she had not gone to bed.

Why do you think Connie acted as she did?

Check the answer(s) you think <u>best</u> explain her not going to bed.

____1. She didn't want to obey her older sister.
____2. Connie wanted to see her father before she went to bed.
____3. She wanted to act grown-up.
____4. Most children Connie's age don't like to go to bed, and will think of any excuse they can to stay up.
____5. Connie was spoiled.
_x_6. Connie is at the age when children become very interested in stories.
____7. She wasn't sleepy.

Generalization Q: Some of the things that happen to us when we are very young help to determine our concepts and attitudes later in life.

VII. Mrs. Burns was disturbed when she heard her five-year-old daughter, Sara, and Sue, the eight-year-old neighbor girl, talking. Sue was telling Sara that the stars were holes through which God could look down upon her to see if she were good.

Why did Mrs. Burns have reason to be disturbed about what Sue was telling Sara?

Check the reason(s) you think <u>best</u> explains why Mrs. Burns was disturbed.

____1. She didn't want Sara to think God only watches you at night.
____2. She had neglected to teach her own child about God.
____3. She was afraid Sara would tell these stories to someone else.
_x_4. She thought this might influence Sara's attitudes in later life.
____5. She had taught Sara something else about the stars, and Sue would get her confused.

Generalization M: Emotions in early childhood are intense and transitory.

VIII. Arthur, 11, Nell, 6, and Mary, 17, were cleaning off part of their lake for a skating rink. Arthur and Nell started arguing about whose turn it was to use the snow shovel. Arthur insisted that he hadn't used it long enough and Nell insisted that it was her turn. Nell said, "If I can't have it, I'm leaving." She started for the house, but when half way there she turned around and went back to help finish the job.

Why did Nell turn around and come back to help finish the job?

Check the reason(s) you think <u>best</u> explain why Nell came back?

__x__1. She was very angry for a while, but she soon forgot the argument.
_____2. She wanted to show her brother she would help in spite of the argument.
_____3. She thought her mother might scold her for fighting with her brother.
_____4. She decided it wouldn't do any good to go home.
_____5. She thought Arthur might tease her.

Generalization N: Older people tend to judge children by their own standards of behavior.

IX. Mr. and Mrs. Jones were teaching Joy, age 9, and Jim, age 12 to play canasta. One evening Mr. Jones and Jim played against Mrs. Jones and Joy. Mr. Jones was quite disturbed when Jim looked over at Joy's cards while playing. He said that they would stop playing if Jim continued to cheat.

Why might Mr. Jones have been disturbed by Jim looking at Joy's cards?

Check the reason(s) you think <u>best</u> explain Mr. Jones being disturbed.

___1. Mr. Jones wanted to win the game fair and square.
___2. Mr. Jones thought Joy might follow Jim's example of cheating since she was younger.
_x_3. Mr. Jones was expecting the same thing from Jim as from adults.
___4. Mr. Jones thought Jim might cheat when playing with other children and they wouldn't want to play with him.
___5. Mr. Jones was tired and it made him irritable for Jim to look at Joy's cards.
___6. Mr. Jones doesn't like people who cheat.

Generalization C: There is a mature behavior at any stage of development.

X. Shirley often takes care of her younger brother Dale, a healthy, happy boy, two years old. She and her mother are disturbed because Dale wets the bed. The doctor has told them that there is nothing physically wrong with Dale.

Should Shirley and her mother be disturbed about Dale's bed wetting?

Check the answer you think best.

____A. Yes
_x_B. No

Check the reason(s) for choosing your answer.

____1. He is old enough to stop wetting the bed.
____2. He may be upset emotionally.
____3. Boys wet the bed longer than girls do.
____4. He probably is afraid to go to the bathroom alone at night.
_x_5. When he gets a little older, he probably will stop.
____6. If he isn't stopped, he will get worse.

Generalization C: There is a mature behavior at any stage of development.

XI. One noon Sally's mother asked her to watch her younger brother and sister after school while she called on a friend. When fourteen-year-old Sally came home from school, she found Willis, age 8 and several of his third-grade friends playing baseball in the yard. They were arguing about who would be the next batter. Sally became quite upset about the boys arguing because she thinks they should play together without quarreling.

Should Sally have become upset?

Check the answer you think best.

____A. Yes
_x_B. No

Check the reason(s) for choosing your answer.

____1. Sally should help settle the argument.
____2. The boys must learn to work out disagreements.
_x_3. It is natural for boys this age to quarrel.
____4. The boys could probably settle it all right.
____5. Willis could lose some of his friends because of the argument.
____6. Willis needs to learn how to get along with others.

Generalization O: Behavior is caused by past and present experiences and inheritance.

XII. Tommy, a four-year-old, has seldom played with anyone except his younger sister, age 3. When his 4-year-old cousin John comes with his mother from another town to spend a day, Tommy refuses to play with him. On the rare occasions when Tommy has been with a group of children, he either just watched the others, or he played entirely by himself.

If you were an older sister, what could you do about his social development?

Check the answer(s) you think best.

_x_ A. Give Tommy more opportunities to play with children.
____ B. Encourage Tommy to play with other children by offering him a reward.
____ C. Make him play with other children.
____ D. Explain to Tommy why he should play with other children.
____ E. Leave him alone.

Check the reason(s) for choosing your answer(s)

____ 1. Tommy should be stimulated to play with other children.
____ 2. Tommy needs help to act like a four-year-old.
_x_ 3. Tommy should have experience playing with children.
____ 4. Tommy will learn to play with others if given time.
____ 5. Tommy needs to understand the benefits of playing with others.

Generalization B: Each individual has an urge to grow up and prefer more mature behavior.

XIII. Five-year-old Charlene loves to use her sister Alice's lipstick and does so at every opportunity. Alice, who is fifteen, is disturbed but doesn't know what to do.

What would you do?

Check the answer(s) you think best.

____A. Explain to Charlene that she isn't old enough to wear lipstick.
____B. Spank her when you find her using the lipstick.
____C. Scold her.
_x_D. Give Charlene a tube of lipstick that she can have for her own.
____E. Tell mother and let her take care of Charlene.
____F. Put lipstick away where she can't find it.

Check the reason(s) for choosing your answer(s).

____1. She is old enough to learn to mind.
____2. Older people will make fun of her if they see her wearing lipstick.
____3. Most children go through an age when everything they see they want to try.
____4. Charlene would be happy with her own lipstick and leave Alice's alone.
____5. Charlene will listen more to her mother than to Alice.
_x_6. Charlene likes to imitate Alice because she is older.
____7. Charlene is old enough to know that she should leave other people's things alone.
____8. Five-year-olds are curious.

Generalization C2: There is a mature behavior at any stage of development: Two-year-olds are very active.

XIV. Deborah took her 2-year-old brother, George, with her the other day when she visited an elderly aunt and uncle. George was told before they left home that the aunt and uncle were old and noise would bother them so he would have to sit quietly while Deborah talked. When they arrived, George was very quiet and sat in a big chair for about 5 minutes saying nothing, then he began to wander about the house, and interrupt his sister to ask questions.

If George were your brother, what would you do?

Check the answer(s) which you think best.

_____A. Make George sit down.
_____B. Offer to get him something he liked if he'd be quiet.
_____C. Threaten to punish him.
_____D. Make him respect his aunt and uncle.
_____E. Punish him for disobeying.
__x__F. Give him something to do that won't disturb others.

Check the reason(s) for choosing your answer(s).

__x__1. Two-year-olds are very active.
_____2. George should be taught to mind.
_____3. Two-year-olds can understand promises.
_____4. He would learn right from wrong.
_____5. He can learn to play quietly.
_____6. He wouldn't be running around doing nothing.

Generalization G: We all learn by experimenting and, therefore, often make mistakes.

XV. The Williams were having their house painted and four-year-old Elaine was out in the yard playing. When her fourteen-year-old sister, Mae, called her for lunch, Elaine answered her from the top of the ladder leaning against the house.

Should Elaine be punished for climbing upon the ladder?

Check the answer you think best.

_x_ A. No
____ B. Yes

Check the reason(s) for choosing your answer.

____ 1. Elaine could have fallen and hurt herself.
____ 2. The ladder should have been put away.
_x_ 3. Climbing the ladder was an adventure for her.
____ 4. A four-year-old should know better than to climb a ladder.
____ 5. She would remember not to climb the ladder again.
____ 6. It is natural for Elaine to copy what she sees others do.
_x_ 7. She did not know the danger of high places.

Generalization C1: There is a mature behavior at any stage of development: At eight possessions are very important.

XVI. After Bob, age 8, had seen his first football game he began to save money to buy a football. He worked hard running errands, raking leaves, etc. until he'd saved enough to buy the football. Once he had it in his possession he could not part with it. At meal time he insisted on keeping the football under his chair. Fourteen-year-old Greta had invited a new friend, Betty Jo, for dinner and she wanted her family to make a good impression.

What should Greta do about Robert and his football?

Check the answer(s) you think <u>best</u>

____A. Ask her parents not to let him come to the table.
____B. Take the football away from Bob until after dinner.
_x_C. Let Bob keep the football under his chair.
____D. Tell her parents and let them see that he puts the football away.

Check the reason(s) for choosing your answer(s).

____1. He would not make a fuss and spoil the dinner.
____2. Eight-year-olds should learn to mind.
____3. He would get the football out of his system.
_x_4. Eight-year-olds are proud of new possessions.
____5. Eight-year-olds should know better than to bring a football to the table.

Generalization D: The basic need of adequacy, love and affection recur at each level of development.

XVII. Two neighbor women hire one baby sitter, Helen, to care for their children. Helen notices that every time two-year-old Jane asks for a drink, four-year-old Joe wants one. Also, when Helen picks up Jane, Joe wants to be picked up.

If you were Helen, how would you help Joe act more like a four-year-old?

Check the answer(s) you think best.

____A. Explain to Joe that he is older than Jane.
____B. Tell Joe not to be selfish.
____C. Ignore Joe.
_x_D. Give Joe more attention.
____E. Make Joe wait until you have finished with Jane since she is younger.

Check the reason(s) for choosing your answer(s).

____1. Helen should avoid making Joe jealous.
____2. He should be taught good manners.
____3. Joe will stop acting like a two-year-old if nobody pays any attention to him.
____4. He should understand that Jane needs more attention than he does.
____5. Joe needs to be broken of this habit.
_x_6. Joe will feel important and do more things for himself.

Generalization H: Exploring is a very important part of a young child's learning.

XVIII. Susan, $3\frac{1}{2}$ years, watched her sister, Frances 14, cut out a dress. When Jane left to answer the telephone, Susan picked up the scissors and cut the material.

What would you do if you were Frances?

Check the answer(s) you think <u>best</u>.

____ A. Tell your parents and let them punish her
____ B. Explain that she is never supposed to bother other people's things unless they say she can
____ C. Give her a spanking
____ D. Scold Susan just enough to scare her
_x_ E. Give her some scraps and part of the pattern that you are not using and let her cut out something.

Check the reason(s) for choosing your answer.

____ 1. She is old enough to be punished for things she does wrong
____ 2. Children need to learn to let other people's belongings alone
____ 3. Susan would be afraid to cut material again
_x_ 4. Susan can learn to do things by trying what she sees other doing
____ 5. If Susan had something to work with, she wouldn't bother Frances' things.

Generalization P: Every human being needs affection, needs to feel adequate, and needs recognition as a worthy person from those he cares about.

XIX. Saturday morning Coleen's mother was keeping her appointment with the dentist. Fourteen-year-old Coleen was left in charge of David. Several unfortunate things happened to David, age 8. First he broke the propeller on the model airplane he was building. Then his shoe came untied and when he tried to retie it the shoestring broke. David ran into his bedroom crying, "Everything happens to me."

What should Coleen do?

Check the answer(s) you think <u>best</u>.

____A. Coleen should try to fix the propeller on his airplane and broken shoestring.
__x_B. Coleen should interest David in playing a game with her which he liked and could play well.
____C. Coleen should explain that all through life many things will happen to him that he will not like and he should not let such little things bother him.
____D. Coleen should teach David to be careful and to try not to break his things.

Check the reason(s) for choosing the answer(s) you did.

____1. David is not old enough to work things out by himself.
____2. David should be taught to be more careful with his things.
____3. If you help children when they have problems, they will feel much better and stop crying.
__x_4. David needs to have confidence in himself.
____5. David is going to have to face much harder problems in later life, and he should learn early that he can't run into the bedroom crying every time something happens.
____6. Play helps children forget their problems.

Generalization G: We all learn by experimenting and, therefore, often make mistakes.

XX. When Doris, age fourteen, was taking care of her brother Billie, age two, he picked one of the decorations off the Christmas tree and threw it on the floor where it broke. He looked up at Doris and smiled.

What would you do if you were Doris?

Check the answer(s) you think best.

___ A. Explain to him that he must not take the decorations off the tree.
___ B. Keep him away from the tree.
___ C. Put the decorations high enough on the tree so that he cannot reach them.
___ D. Make him clean up the broken glass.
___ E. Scold him.
___ F. Spank his hands.
___ G. Ignore him.
_x_ H. Put less valuable decorations on the lower branches of the tree.

Check the reason(s) for choosing your answer(s)

___ 1. He will learn not to bother the tree again.
___ 2. He may cut himself.
___ 3. He is too small to understand why he can't do as he pleases.
___ 4. He will give up if no one is amused but himself.
___ 5. He'd be afraid to do it again.
___ 6. He needs to learn to understand right and wrong.
_x_ 7. It is natural for Billie to want to throw things.
___ 8. He needs to learn that it isn't a joke.
___ 9. If you act displeased, he'll understand better.

Generalization O: Behavior is caused by past and present experience and inheritance.

XXI. Hazel, 16, is concerned about the way her sister, 4-year-old Ann, plays with other children. There are few children under 6 in their neighborhood so Ann usually has to play alone. When she does have a chance to play with other children, she refuses to let them use her toys or even to take turns.

What would you think Hazel could do?

Check the answer(s) you think best.

_____A. Make her share her toys when she is with other children
__x__B. Find ways for Ann to be with children her age often
_____C. Play with Ann and teach her to share her toys
_____D. Explain to Ann that she should share her toys
_____E. Take her toys away from her for a little while.

Check the reason(s) for choosing your answer(s).

_____1. She needs to learn that it is fun to share
_____2. Ann will have to share when she is older
__x__3. It will take time for Ann to learn to share
_____4. Other children won't play with Ann if she is "stingy" and refuses to share
_____5. Ann will be spoiled and always want her way, if she continues as she is
_____6. Ann needs to learn to share while she is young so that she will have more playmates.

Generalization F: It takes time for children to learn; their memory span is short.

XXII. Four-year-old Jimmy has been told many times by Mary, the baby sitter, to put his toys away. Jimmy never seems to remember as he must always be reminded.

What do you think Mary should do?

Check the answer(s) you think best.

____A. Pick up the toys herself for him.
____B. Explain to him that if someone steps on his toys they will be broken.
_x_C. Keep on reminding him to put his toys away.
____D. Don't let him do anything he really wants to do, until he picks up his toys.
____E. Help him pick up his things, but let him pick up most of them.
____F. Scold him if he does not pick them up.
____G. Don't do anything, just leave them there.

Check the reason(s) for choosing your answer(s).

____1. Children should learn to take some responsibility.
_x_2. Small children do not remember things very long.
____3. A baby sitter is in charge when the parents are away.
____4. Jimmy is too small to do the job all by himself.
____5. Jimmy likes his toys, and he does not want them broken.
____6. Children disobey deliberately and Jimmy is especially stubborn.
____7. It is handier for the children to have their toys around.
____8. Jimmy learns more slowly than most four-year-olds.

Generalization H: Exploring is a very important part of a young child's learning.

XXIII. Mrs. Brown asked Sally, who is in the ninth grade, to stay with Richard, three, while she went shopping. When Sally arrived Mrs. Brown told her that Richard was making mud pies in the back yard. Sally found him with muddy hands and smudges on his face and clothes.

What should Sally do?

____A. Ask him politely to come in the house and wash his hands and face.
__x B. Let him make mud pies until he is through, and then take him in the house to clean him up.
____C. Take him in the house and clean him up. Tell him he must stay in the house the rest of the afternoon because he has been naughty.

Check the reason or reasons for choosing your answer.

____1. If he has mud on his hands and face, he might rub it into his eyes or get it in his mouth.
__x 2. Children should have a chance to learn about things around them through play.
____3. He was contented and if she tried to make him do something else, he would get cross.
____4. Children need to be taught early not to get dirty.

Generalization H: Exploring is a very important part of a young child's learning.

XXIV. Two-year-old Betsy dropped a spoonful of mashed potatoes on the floor while she was eating her lunch. She looked in surprise at the potatoes on the floor and immediately refilled her spoon and dropped more potatoes in the same place. She listened thoughtfully for a moment and then said, "It didn't make any noise!"

In addition to cleaning the floor, what would you do if you were feeding Betsy?

____A. Give her smaller portions of potatoes.
____B. Explain to her it is bad to throw potatoes on the floor.
____C. Spank her hands lightly. Tell her not to do it again or the potatoes will be taken away.
_x_D. Give her something else; a spoon or hot dish holder to drop.
____E. Take her food away from her.

Check the <u>reason</u> or <u>reasons</u> for choosing your answer.

____1. If she throws potatoes on the floor, it is because she has too many to eat.
____2. When children think they are bad for doing something, they seldom do it again.
_x_3. Small children learn new things by experimenting.
____4. She will know you really wanted her to mind if you spank her hands.
____5. Children can be kept from being naughty by giving them something to play with.
____6. The only way small children learn is by being told.
____7. If you didn't tell her she was naughty, she might keep right on dropping potatoes.
____8. She needs to learn that she should not play with her food.

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*HOME ECONOMICS EDUCATION; *STUDENT EVALUATION; GRADE 11; GRADE 12; TESTING; *TEST CONSTRUCTION; *ACHIEVEMENT TESTS; *CHILD DEVELOPMENT

Models for test items and evaluation devices are provided for adaptation by home economics teachers to meet the needs of specific eleventh and twelfth grade child development classes in the comprehensive high school. Evaluation materials were developed through research projects and trial use in Iowa schools by heterogeneous school groups. The materials are based on subject matter areas: developmental tasks, individual differences, and family relationships, values, interests, and roles. Included are (1) objectives to which the evaluation materials relate, (2) suggestions for introducing and interpreting the results of the tests, and (3) the problems, presented as capsulated experiences, illustrating generalizations which require the student to give not only the answer but also justification for the answer. Other evaluation materials for home economics areas, all using similar formats, are available as VT 005 747-VT 005 757 (ARM Summer 1969). (FP)

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Evaluation Materials

in

Child Development

Eleven and Twelfth Grade

Prepared by

Hester Chadderdon
Assisted by Elois Archer

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Ames, Iowa

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VT005755

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The Ohio State University
980 Kinnear Road
Columbus, Ohio 43212

[redacted]

FROM: (Person) Alberta D. Hill (Agency) Iowa State University

(Address) Head, Home Economics Education Dept., Ames, Iowa 50010

DATE: April 3, 1968

RE: (Author, Title, Publisher, Date) Chadderdon, Hester. Evaluation Materials in Child Development - Eleventh and Twelfth Grade. Iowa State University. 1966.

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OBJECTIVES AND DEVELOPMENT AND USE OF TEST ITEMS

I. Objectives: These evaluation materials relate to the following objectives

1. To accept, enjoy, and be interested in children
2. To grasp the whole range of human development through experiences with a range of ages
3. To develop respect for children as persons
4. To understand himself, including the effects of his behavior on others.

II. Development of Test Items: The items in this packet are based on the above objectives and the generalizations given at the top of each page containing a test item. The solutions and reasons for the problems include misconceptions collected from Iowa high school pupils.

III. Selection of items to combine into a test: Choose the items which involve the generalizations on which you wish to determine where your pupils are at any stage of learning (pre-test, during unit, at the end of unit, or as a part of semester test).

IV. Provision of a setting and directions: Here are a few suggestions which might be used with child development tests. You can think of others.

HOW WELL DO YOU UNDERSTAND CHILDREN AND HOW WELL CAN YOU TAKE CARE OF THEM?

When you have been with children (your brothers, sisters, cousins, neices) you may often have been surprised at things they did or said and you wondered why they acted that way. Or you may have been responsible for a child and needed to know how to take care of him.

Several situations are described on the following pages which may be like ones you have wondered about. Read each one carefully and then check (x) beside the statement(s) which you believe answer the question best.

In order to force pupils to consider each solution and/or reason, do <u>not</u> indicate the number of statements they are to check.

V. Scoring the test: To obtain a score for each girl total <u>only</u> the correct solutions and/or reasons. (See key on mimeographed copy of each item). It is better <u>not</u> to make deductions for incorrect choices because some of the problems are of such a nature that certain of the reasons could conceivably be true under some circumstances. The key provides for determining only those which make use of the particular generalization(s) listed at the top of each page. Also research on these items indicates that deducting for guessing has little effect on the relative size of the scores unless a student checks an unreasonably large number of responses.

VI. Interpreting the results of the test: The results can be looked at several ways to determine how well your pupils can apply the generalizations involved in the test.

(1) The size of the scores in relation to the total possible score gives a general idea of the class as a whole. Individual scores indicate which pupils have achieved most and which need more experiences. A look at the responses of individual pupils, particularly those whose scores are low, will indicate places where special help is needed.

(2) If the test has been given before and also after the unit has been taught you can see the extent of progress, provided the particular problems have not been discussed in class.

(3) Tabulating the total number of pupils who selected each solution and reason gives you clues to needs for learning, whether the test is used as a pre-test or after some instruction. Noting the generalizations which they failed to apply and the misconceptions (incorrect responses), you have a basis for planning experiences. Below is an illustration of an item that was administered to 137 ninth-grade pupils.

When Doris, age 14, was taking care of her brother Billie, 2, he picked one of the decorations off the Christmas tree and threw it on the floow where it broke. He looked up at Doris and smiled.

What would you do if you were Doris?
Check the answer(s) you think best.

74 A. Explain to him that he must not take the decorations off the tree.
15 B. Keep him away from the tree
26 C. Put the decorations high enough on the tree so that he cannot reach them
12 D. Make him clean up the broken glass
9 E. Scold him
20 F. Spank his hands
18 G. Ignore him
X 41 H. Put less valuable decorations on the lower branches of the tree

Check the reason(s) for choosing your answer(s)

35 1. He will learn not to bother the tree again
15 2. He may cut himself
32 3. He is too small to understand why he can't do as he pleases
33 4. He will give up if no one is amused but himself
6 5. He'd be afraid to do it again
51 6. He needs to learn to understand right and wrong
X 30 7. It is natural for Billie to want to throw things
30 8. He needs to learn that it isn't a joke
30 9. If you act displeased, he'll understand better.

It is evident from the figures that a large number of the pupils need help in understanding small children since more than half of them would solve this problem by merely explaining (Solution A). A fairly large group would punish him (Solutions D, E, & F). Only 41 of the pupils applied the generalization (Solution H): We all learn by experimenting and, therefore, make mistakes.

Thirty pupils realized that it was natural to throw things. More than one-third expected a two-year old to learn right from wrong and an equal number believed that showing displeasure will help him understand.

USING IDEAS YOU HAVE LEARNED ABOUT CHILDREN

Think of one idea which you have learned about children. Then describe briefly a situation which will show that you have let it influence you in dealing with children. An example is given. Write yours in the spaces below the example.

Idea	Situation
Example: Approval is a good way to give satisfaction to a child.	Example: My brother, who is 2 years of age, said to me, "Look." Then he put a small bit of potato in his spoon and raised it to his mouth. I said, "That's a nice sized bite, Jimmy."

(Suggestions to Teachers)

USING IDEAS YOU HAVE LEARNED ABOUT CHILDREN

This device may help you to determine what generalizations your pupils have learned well enough to use and where they need help. It may also be useful to the pupils in self-evaluation. Either may be done during the unit or at the end.

When interpreting the pupils' responses see whether the summarizing statements they give correspond to the generalizations you have listed. Also whether their responses indicate misconceptions. These are examples given by pupils in a preliminary trial which indicate understanding of one generalization: The basic needs of security, new experience, response and recognition are recurring needs necessary for each level of development.

1. We should make a child feel important.

2. Affection is one way of showing a child he is wanted.

Statements from the preliminary trial which indicate need for more help on how to guide children are:

1. Bribery is a good way to make a child go to bed.

2. Scaring the child is all right, if not done too often.

If some of your pupils have no opportunity to be around small children, you might suggest that they observe and record how other persons applied or failed to apply summarizing statements in dealing with children.

ENJOYABLE EXPERIENCES I HAVE HAD WITH CHILDREN

Describe in the space below some enjoyable experiences you have had with children. Then explain <u>why</u> you enjoyed these experiences.

(Suggestions to Teachers)

ENJOYABLE EXPERIENCES I HAVE HAD WITH CHILDREN

You could use this type of device in encouraging pupils to analyze their experiences. It may be useful to you in determining whether they accept children.

When interpreting what they have written, statements such as the following indicate an acceptance of children:

1. "Like all children they get to be mischievous at times but it is interesting to help them solve their problems."

2. "I enjoyed showing her how to like water without being scared of it."

3. "My reason for liking this experience was to see how happy these children can be."

Statements such as these may indicate misunderstandings of how children grow and develop:

1. "The four-year old I take care of is a show off."

2. "Smaller children behave better than ten-year-olds."

3. "We had to laugh at the games the children played at the party because they played such dumb games."

You may wish to summarize all of the papers and discuss them with the class to emphasize the many ways of enjoying children and to clear up any misconceptions concerning development of children.

FROM MY NOTEBOOK

It is not only what we are able to write on paper that indicates what we have learned about the care of younger children or how well we understand the way they act. How we use the information when we care for them is the important thing.

One way to check yourself on whether you are able to put to practice what you have learned is to keep a record of what you do and then study it. To do this, write down in a loose-leaf notebook all the things which you do. Then look over carefully what you have written, thinking of each thing you did and deciding the reasons for what you did. Write these down in the spaces below and on the back side, if necessary. Two examples are given.

What I Did	Reasons for What I Did
Examples	
When I arrived to take care of two-year old Jimmie the first time, he cried as if he were afraid of me, so I talked to him and played with him.	Young children adjust slowly to new situations.
When we came home, I showed three-year old Phillip how to hang up his wraps.	Older sisters can help younger children take responsibility for their own things.

(Suggestions to Teachers)

FROM MY NOTEBOOK

You may wish to use this type of device by having pupils describe their experiences with children at the time that they occur, writing down in detail what happened and keeping these results in their notebook. Then at the end of the unit, they could analyze these reports to see if they had used what they had learned in class.

When you interpret their responses, you will want to see if the reasons they give are consistent with the generalizations you have listed. They may be stated differently even though basically they mean the same thing. You will also want to see what misconceptions the pupils have.

After reading their responses then you may wish to summarize the results and discuss them with the entire class to help them see what they have learned and to clear up misconceptions. You might need to have conferences with the pupils who need special help.

Index to Generalizations and Test Items for Use in Evaluating Learning in Child Development: 11 and/or 12 grade

A. Individuals differ in rate and pattern of growth. Test items XXX, XXXI, XXXII, XXXIII.

B. Each individual has an urge to grow up. Test items VI, XVIII.

C. There is a mature behavior at any stage of development: Test items IV, VII.
   1. At eight possessions are very important. Test item VIII.
   2. At three shared play is difficult and parallel play more common. Test item XXIII.

D. The basic needs of security, new experience, response, and recognition are recurring needs necessary for each level of development. Test items IX, XV, XXI. (See also Gen. M).

E. Children adjust slowly to new situations. Test items I, XIV, XXIV.

F. It takes time for children to learn. Test item II.

G. We all learn by experimenting and, therefore, often make mistakes. Test item XIX.

H. Exploring is a very important part of a young child's learning. Test items XXV, XXVI, XXVII, XXVIII, XXIX.

I. Individuals are different; no two individuals are alike. Test items X, XI, XXII.

J. The more accepting we are of the feelings of the child, the more cooperative he will be. Test item XVI.

K. Behavior is most likely to be changed if causes are worked on rather than symptoms. Test items XII, XIII, XVIII, XX.

L. Every human being needs affection, needs to feel adequate, and needs recognition as a worthy person from those he cares about. Test items III, V. (See also Gen. D)

M. Some of the things that happen to us when we are very young help to determine our concepts and attitudes later in life. Test item XVII.

Generalization E: Children adjust slowly to new situations.

I. Mary Alice, a seven-year-old, went with her father and mother to visit Carol, her sister, and Carol's husband Bob. When it was time to go home, Mary Alice said that she wanted to stay over night. Her mother and father said she could. Two hours after her bed time Mary Alice was still awake. She lay in bed a little longer and finally went to Carol and Bob's room and said "I can't sleep."

What reasons might explain why Mary Alice couldn't sleep?

Check the reason(s) which <u>best</u> explains Mary Alice's behavior.

__x*__ 1. The surrounds are unfamiliar to Mary Alice and it is difficult for her to go to sleep as usual
_____ 2. Mary Alice was homesick
_____ 3. Being in a strange place, Mary Alice is afraid to go to sleep
_____ 4. Mary Alice had gotten attention from Carol before she married and was jealous of Bob.

*x indicates best response for this generalization.

Generalization F: It takes time for children to learn.

II. Carolyn, who is just past three, has been given a new tricycle. She rode it under a tree that had low branches and got scratched. Then she tried to ride it into the dog's house and bumped her head. When she turned a corner too sharply, it tipped over.

Why do you think Carolyn is having so much trouble learning to ride her tricycle?

Check the reason(s) you think <u>best</u> explains Carolyn's difficulty.

_____ 1. She hasn't learned to look where she is going
_____ 2. She is trying to imitate some of the things she has seen others do
_____ 3. Carolyn is too young to have a tricycle
_____ 4. Carolyn is too young to judge distances
_x_ 5. The experience is new and it will take time for Carolyn to learn
_____ 6. She is slower to learn than most children her age.

Generalization L: Every human being needs affection, needs to feel adequate, and needs recognition as a worthy person from those he cares about.

III. Mr. D. works some distance from home. He is gone all day and doesn't arrive home in the evening until 6:30 or sometimes later. Mrs. D. usually puts their 11-month old son Kenny to bed before her husband gets home. Kenny often cries during dinner or during the evening but when Mrs. D. checks on him, he is usually dry and comfortable.

What might explain Kenny's crying?

Check the reason(s) which <u>best</u> explains why Kenny cries.

_____1. Maybe Mrs. D. gets cross with Kenny
_____2. He may have developed the habit of wanting his own way
_____3. Mrs. D. makes him stay in bed too much
_____4. He might be afraid in the dark
_____5. He is a "mama's baby" and wants all of her attention
__x__6. He feels left out when he hears them talking
_____7. He could be cutting teeth.

Generalization C: There is a mature behavior at any stage of development.

IV. Mrs. C. is tired of washing so many diapers and has decided to begin to toilet train her 10-month old Diane. Diane has not yet started talking. She does a good deal of creeping but hasn't yet pulled herself to a standing position. Mrs. C. has been putting Diane on the toilet seat at the times when she thinks she might need to urinate. Quite often, however, she fails to "catch" Diane in time and several times lately Diane has urinated just after being taken off the toilet seat.

What might explain Mrs. C's lack of success?

Check the reason(s) which <u>best</u> explains why Mrs. C. was not successful

_____1. Diane was not put on the toilet often enough
_____2. Diane couldn't talk and didn't understand what her mother was saying when she put her on the toilet seat
_____3. Mrs. C. needed to watch Diane more carefully for signs that she wanted to urinate.
__x__4. Diane was too young for toilet training
_____5. Diane may be slow to learn
_____6. Mrs. C. may not have let Diane stay on the stool long enough
_____7. Mrs. C. hasn't explained to Diane what is expected of her.

Generalization L: Every human being needs affection, needs to feel adequate, and needs recognition as a worthy person from those he cares about.

V. Mr. and Mrs. J. have moved to a new neighborhood. Before they moved, their 4-year-old son Dickie had played with the neighborhood children he grew up with. Now, after several weeks in the new home, he spends most of his time alone digging in the back yard, playing with his blocks or playing "Train."

Three other children in the neighborhood of his age play in the yard next door much of the time. When Dickie is outside, he spends part of his time watching them and a few times he has asked if he could come and play but they have told him, "No, we don't want you to."

Why do you think Mrs. J. is disturbed?

Check the reason(s) which <u>best</u> explains why Mrs. J. was disturbed?

_____1. She wonders if the parents in the neighborhood are forbidding their children to play with Dickie
_____2. She wonders if she did wrong by moving to this neighborhood
_____3. She thinks Dickie may become slow and backward
__x__4. She thinks Dickie will feel neglected and unwanted
_____5. She thinks Dickie should know how to make new friends and adjustments.

Generalization B: Each individual has an urge to grow up.

VI. Arthur, seventeen years old, and Harold, nine years old, live on a farm. Both boys help with farm work after school, on Saturdays and vacations. Arthur drives the tractor but their parents won't permit Harold to drive it. Whenever Arthur drives the tractor, Harold teases him continuously to let him drive.

What might explain why Harold is so anxious to drive the tractor?

Check the reason(s) which best explains why Harold wants to drive it.

_____1. Harold is jealous of Arthur
_____2. He thinks he can drive as well as Arthur
_____3. He wants to be as helpful as his brother
_____4. He feels that since he has to do other things on the farm, he should be allowed to drive the tractor
_____5. Boys that age are very interested in machines
_____6. He could tell his friends that he drives a tractor
_x_7. He wants to be considered as grown-up as Arthur
_____8. He wants to get his brother in trouble so his parents won't think Arthur is so mature
_____9. Harold feels that he is being rejected.

Generalization C: There is a mature behavior at any stage of development.

VII. Mr. & Mrs. G. are expecting another baby and have told their three-year-old Susan that she will have a new brother or sister. The other day as Susan was playing with a doll she asked her mother when she was going to have the baby sister. Mrs. G. explained that it would be soon. Susan then asked, "Where is the baby?" Her mother explained that the baby was growing in her body. Susan listened and then turned her attention again to the doll.

Why wasn't Susan interested in knowing more about the baby?

Check the reason(s) which <u>best</u> explains why Susan wasn't interested in knowing more.

____1. The doll attracted her attention.
____2. Susan is not the type of child who asks lots of questions.
_x_3. A child this age is not interested in anything very long.
____4. Susan did not understand what her mother told her.

Generalization C1: There is a mature behavior at any stage of development: At eight, possessions are very important.

VIII. Marie, 8, carried a little red purse with her when she went to visit Alice, 8, one afternoon. Alice was fascinated with the purse and began to hope Marie would forget it when she went home. Marie put the purse on the window sill and Alice thought Marie would be more sure of forgetting it if it were covered, so she put her handkerchief over it. When Marie's father came for her, she forgot the purse. As soon as she left, Alice picked up the purse and said to her older sister, "Oh, look what Marie left. It's mine now."

Why do you think Alice acted this way?

Check the reason(s) which <u>best</u> explains why Alice acted as she did.

_____1. She had never been taught that it is wrong to want what someone else has.
_____2. Children this age are inclined to be very selfish.
__x__3. At this age children like to own things.
_____4. Alice is too used to having everything she wants.
_____5. Most children this age are jealous of what other children have.
_____6. She liked the bright color.
_____7. She has not learned the law of ownership.

Generalization D: The basic needs of security, new experience, response and recognition are recurring needs necessary for each level of development.

IX. Janet Jones, who was staying with her seven-year old brother, Jimmy, realized that all the noise had subsided in the dining room where Jimmy was playing. She opened the door to investigate and saw Jimmy's friend, Johnny also seven, standing on the table. She said "Johnny, I know you don't stand on the dining table at home." He replied, "Yes, I do."

What reasons explain Johnny's reply?

Check the reason(s) which you think <u>best</u> explains Johnny's reply.

_____1. Johnny was afraid of being punished and saw this as a way out.
_____2. Johnny wanted attention
__x__3. Johnny didn't want to be shamed in front of his friend.
_____4. Johnny was acting smart.
_____5. Johnny thought that because he was away from home, he could do anything and they wouldn't say anything to him.

Generalization I: Individuals are different; no two individuals are alike.

X. Mr. and Mrs. S. have a 3½-month-old baby and a 2-year-old daughter, Brenda. They live in an isolated community and are unable to see the doctor often. When Mrs. S. took the baby to the doctor at 3 months, he suggested that the baby might be ready for a change from five to four feedings a day. Mrs. S. has been trying this but the baby cries about 2½ hours after the feedings as though she were hungry. Mrs. S. does all she can to make the baby comfortable. Mr. and Mrs. S. are wondering what they should do. They remember that Brenda was taking only four feedings at 3 months.

What do you think Mr. and Mrs. S. should do?

Check the answer(s) you think <u>best</u>.

____ A. Keep the baby on four feedings a day.
____ B. Let the baby cry.
_x_ C. Feed the baby when she is hungry.
_x_ D. Go back to 5 feedings a day

Check the reason(s) for choosing your answer(s)

____ 1. Doctors usually give sound advice.
_x_ 2. Not all children do things the same way and at the same time.
____ 3. If they give her more food, it may make her sick.
____ 4. Babies should not be spoiled
_x_ 5. Some children need to be fed more often than others.

Generalization I: Individuals are different: no two individuals are alike.

XI. Mr. B. was active in athletics in high school and would like to have his two sons, Jerry (age 4) and Tim (age 6) acquire some athletic skills. Tim learned to throw a baseball and to climb very skillfully by the time he was 4 years old but Jerry isn't doing as well. Jerry sometimes plays ball with his father and Tim but most of the time he prefers to look at books, listen to stories, and build with blocks.

What suggestions would you give Mr. B?

Check the answer(s) you think is <u>best.</u>

_____A. Let athletics rest for a year and then try to interest Jerry again.
_____B. Encourage Jerry to play ball.
_____C. Promise him he can do something he likes if he plays ball.
_____D. Make Jerry play ball.
__x__E. Help Jerry develop the interests he has.

Check the reason(s) for choosing your answer(s).

_____1. Children learn to like sports after they play them awhile.
_____2. Jerry would play much better if he were older.
__x__3. Children are not all alike.
_____4. Books will be more important to Jerry later in life.
_____5. Jerry needs to develop an interest in sports.
_____6. An interest in sports is very important for boys.

Generalization K: Behavior is more likely to be changed if causes are worked on rather than symptoms.

XII. Beth, sixteen years of age, stays with the Coxes while going to high school and earns board and room by helping with housework and taking care of children. Since Christmas four-year-old Douglas has been awakening her two hours before the family gets up to wind his airplane, a Christmas gift. This disturbs her.

What would you do, if you were Beth?

Check the answer(s) which you think best.

_____A. Tell him to go back to bed.
_____B. Talk to his parents and ask them to make Douglas stay in bed until everyone else is up.
_____C. Explain to Douglas that he shouldn't disturb her.
_____D. Ignore him.
__x__E. Put another toy in his bed for him to play with when he wakes up early.
_____F. Tell him he must stop waking her up.

Check the reason(s) for choosing your answer(s).

_____1. He will soon give up and go back to bed.
__x__2. Douglas' attention would be diverted from the airplane.
_____3. Beth needs her sleep.
_____4. He is old enough to learn that he can't have everything done when he wants it.
_____5. He needs to realize that there is always another time to play with his airplane.
_____6. Douglas should have more sleep.

Generalization K: Behavior is more likely to be changed if causes are worked on rather than symptoms.

XIII. Phyllis, 16, and her brother, Bobbie, 5, were spending a weekend with their sister, Marie, who is expecting a baby. During dinner Phyllis refused dessert and said, "I'm watching my waistline and that dessert contains so many calories." Bobbie replied, "Why should you watch your waistline when Marie doesn't?"

What should Phyllis have said or done?

Check the answer(s) you think best.

__x__ A. Tell him why Marie's waistline is large.
____ B. Ignore him.
____ C. Tell him he is too young to understand.
____ D. Tell an older person to explain to Bobbie in private.
____ E. Explain to Bobbie that remarks like those are embarrassing to Marie.

Check the reason(s) for choosing your answer(s).

____ 1. Bobbie needs to learn to be careful about what he says.
____ 2. If you reply to Bobbie's statement you make an issue of it.
____ 3. It would be less embarrassing to everyone.
__x__ 4. Pregnancy should be accepted as natural.
____ 5. Because Phyllis is only 16, Bobbie may resent anything she says or does.
____ 6. Pregnancy should not be talked about in front of small children.

Generalization E: Children adjust slowly to new situations.

XIV. Mr. and Mrs. Hawthorne and Clara, four-years old, were taking a walk on a late Sunday afternoon. On their way home they walked by the home of a friend, a rather elderly woman, and Mrs. Hawthorne suggested that they stop to visit for a little while. As they started to turn in the walk, Clara set up a terrific howl, refused to go in, and shouted, "I want to go home."

What should Mr. and Mrs. Hawthorne have done to prevent Clara acting this way?

Check the answer(s) you think is <u>best</u>.

_____A. Tell Clara that they would give her something for being nice.
__x__B. Explain ahead of time that they were stopping.
_____C. Let Clara visit people often.
_____D. Let Clara know that she must mind.
_____E. Tell Clara how nice the lady is.

Check the reason(s) for choosing your answer(s).

_____1. Clara will learn that if she is good everyone will like her.
_____2. Children can understand a lot if you just reason with them.
_____3. She will learn to respect older people.
_____4. She needs to learn that she can't do just as she wants to.
__x__5. It takes time for Clara to adjust to the idea of stopping.

Generalization D: The basic needs of security, new experience, response and recognition are recurring needs necessary for each level of development.

XV. Mr. and Mrs. H. have a 2-month-old baby, Janet, and a 3-year-old son, Ray. Ray was told about the baby before it was born. Mr. and Mrs. H. have tried to prevent any jealousy by letting Ray help care for the baby and by telling him what a nice baby Janet is. The other evening Mr. H. was in the yard and Ray was playing with Charles, a 2-year-old who lives next door. The boys had a small stuffed doll. Ray said, "This can be a baby and I'll spank it and cut off its ears and push its eyes in."

If Ray were your son, what would you do when you heard him talking about the baby doll?

Check the answer(s) you think best.

_____A. Ask Ray if he'd like to be treated as he wanted to treat the doll.
_____B. Ignore him.
_____C. Explain to him how to treat dolls.
__x__D. Show Ray more love and affection.
_____E. Compare the doll to Ray's baby sister.

Check the reason(s) you choose this answer(s).

_____1. Most three-year-olds don't realize what they are saying.
__x__2. Ray needs to know that you love him as much as you do the baby.
_____3. Ray is old enough to learn to care for his toys.
_____4. Ray must be made to see a likeness between Janet and the stuffed doll.
_____5. Ray needs to stop and think just how it would feel if someone did this to him.

Generalization J: The more accepting we are of the feelings of the child, the more cooperative he will be.

XVI. Ten-year-old Dwight received a one dollar bill for Christmas. This was the amount necessary to buy a pair of guards for his skates. He found a picture of them in the catalogue and insisted that his older brother, Jack, who is 17 years old, drive his father's car a mile and half into town to send a mail order for them. Jack said he thought it was silly and he would not go. Dwight begged but Jack still refused and finally told him, "Just leave me alone."

Do you agree with the way Jack handled this after he told Dwight the letter could not be mailed that night?

Check the answer you think best.

____A. Yes
_x_B. No

Check the reason(s) you chose this answer.

____1. Dwight should learn that he can't get his way all the time.
____2. Children Dwight's age get excited over small things so Jack needed to calm him down.
____3. If Dwight thought he could get his way by merely begging he would do it all the time.
_x_4. If Jack tried to understand how Dwight felt, Dwight might be more cooperative.
____5. At ten-years-old, boys think they are grown and they need to be put in their place.
____6. Dwight may dislike Jack.

Generalization M: Some of the things that happen to us when we are very young help to determine our concepts and attitudes later in life.

XVII. Mrs. Sims had three children: Warren 12, Eileen 9, and Eugene 2 years old. She had a school girl, Ann, who is 17 staying in the house and working for board and room. After Ann left, Mrs. Sims discovered that she had been telling the children there were signs on the wall that God was coming and that, if they didn't behave, they would go to "Hell."

Should Mrs. Sims be disturbed about this situation?

Check the answer you think best.

__x__ A. Yes
____ B. No

Check the reason(s) for choosing your answer.

____ 1. The children might become confused.
____ 2. The children may be frightened away from religion.
____ 3. The children would forget about it in a little while.
__x__ 4. The children may carry this fear with them for a long time.

Generalization B: Each individual has an urge to grow up.

Generalization K: Behavior is most likely to be changed if causes are worked on rather than symptoms.

XVIII. Four-year old Janet is having difficulty going to sleep in the afternoons. Her mother has been used to putting her to bed, tucking her in, and leaving her by herself to go to sleep. Now she is wondering what she should do. For three days Janet hasn't had a nap. She is very irritable when her father comes home and doesn't want to go to bed at night either.

What do you think Janet's mother should do?

Check the answer(s) you think <u>best</u>.

__x__ A. Tell Janet if she wants to stay up to have fun with her dad, she needs a nap.
_____ B. Leave Janet in bed until she goes to sleep.
_____ C. Promise her a surprise if she takes a nap.
_____ D. Deny her some privilege she now has when she fails to take her nap.
_____ E. Make sure she is tired before her nap time.
_____ F. Tell her you will be unhappy if she doesn't go to sleep.
__x__ G. Read her a story.

Check the reason(s) you chose your answer(s).

_____ 1. Janet needs to learn to mind.
_____ 2. Children don't like to hurt their parent's feelings.
_____ 3. Three-year-olds like surprises.
__x__ 4. Children like an explanation because it makes them feel more grown-up.
_____ 5. Fatigue helps a child to relax.
__x__ 6. She needs help in relaxing.

Generalization G: We all learn by experimenting, and therefore often make mistakes.

XIX. Ronald and Susie, eight and five years old respectively, were helping their sixteen-year-old brother, Jim, rake leaves in the back yard, so they could be burned later. While Jim was answering the telephone, the children lighted a match to the leaves and the fire spread quickly over the entire yard, burning the seesaw beyond repair. The neighbors helped put out the fire before more serious damage was done.

What action should be taken with the children?

Check the answer(s) you think best.

_____A. Punish them.
_____B. Make them apologize for the damage and trouble they caused.
_____C. Tell them never to play with fire.
_____D. Make them clean up the mess.
___x___E. Talk over the situation and tell them the dangers of fire.

Check the reason(s) for choosing your answer(s).

_____1. They need to realize what damage they have done.
_____2. They need to learn to be more responsible.
___x___3. They probably have been frightened enough by the incident.
_____4. Punishment helps children this age remember not to repeat their action.
_____5. They must learn right from wrong.
___x___6. They are quite young and didn't understand what would happen.
_____7. They need to realize how much worry they have caused everyone.

Generalization K: Behavior is more likely to be changed if causes are worked on rather than symptoms.

XX. Ellen, a 2½-year-old, is hard to get into bed. The family eats supper at 6:00. She usually naps from 1 to 2:30 and starts to get ready for bed at 7:30 on the dot. Her mother warns her at 7:20 that it is almost time to get ready. Even after a ten-minute warning she doesn't want to stop and her mother often picks her up from her play. After Mrs. Paris gets Ellen into bed, she calls for a drink and wants to go to the toilet.

Which of these things would improve this bedtime procedure?

Check the answer(s) you think <u>best</u>.

____ A. Let her stay up longer.
_x_ B. Read her a story or sing her a song at bedtime.
____ C. Punish her by sending her to bed earlier.
____ D. Take care of all her needs before bedtime.
____ E. Warn her earlier.

Check on the Answer Sheet the reason(s) for choosing your answer(s).

_x_ 1. Children 2½ years old are very active.
____ 2. Ellen wants attention.
____ 3. She will have no excuse for calling out after she is in bed.
____ 4. If she gets very tired, she will go to bed and they won't have any trouble.
____ 5. The change is too abrupt and a longer warning would give her adequate time.
_x_ 6. Ellen needs help in relaxing.
____ 7. She will learn to appreciate being able to stay up until 7:30.

Generalization D: The basic needs of security, new experience, response and recognition are recurring needs necessary for each level of development.

XXI. When Mr. S. goes by the play ground for Mary, 3, he has trouble getting her to go home. She always wants to go down the slide, "just once more", and then "just once more", again and again. Mr. S. has found that one of the quickest ways to get Mary to come when he wants her is to say, "Goodby, Mary", and start to walk away. Or, sometimes he says, "I can't wait any longer. I'm going to leave you here."

Do you think Mr. S. is using a good method of getting Mary to leave the playground?

Check the answer you think best.

____ A. Yes
_x_ B. No.

Check the reason(s) for choosing your answer.

____ 1. Mary should be taught to mind.
____ 2. This will give her a scare and teach her he meant what he said.
____ 3. Three-year-olds don't like to be left behind.
_x_ 4. Mary may think her father will go away and leave her.
____ 5. She is having too much fun to want to come immediately.
____ 6. He should have more patience with her.
____ 7. She will be more willing to cooperate.

Generalization F: Individuals are different; no two individuals are alike.

XXII. You are visiting two neighbors who each have a four-year-old interested in trains. One is a boy and one is a girl. Recently when on a shopping tour each mother bought an attractive take-apart train for their child. The girl's mother said she enjoys her train and spends twenty minutes at a time taking it apart and putting it back together. The mother of the boy said of her son, "He takes it apart all right and tries a few seconds to put it together, but later I find pieces all over the house."

This mother says to you, "What should I do?"

Check the answer(s) you think is <u>best</u>.

_____A. Help him put the train together.
_____B. Let the little girl play with him and show him how to put the train together.
_____C. Read him stories about trains, and let him watch trains at the depot.
__x__D. Put the train away until he is older.

Check the reason(s) you chose your answer(s).

_____1. Some children learn with more difficulty than others.
_____2. Girls are more advanced than boys.
_____3. He needs help to develop an interest in trains.
__x__4. No two children are alike.
_____5. Boys tire of their things a lot easier than girls.

Generalization C2: At three, shared play is difficult and parallel play more common. There is a mature behavior at any stage of development.

XXIII. Mr. and Mrs. J. live in a neighborhood in which there are only a few children and most of them are 8 years or older so their 3-year-old Mike has played alone most of the time. The other day, Mrs. J. took Mike to a birthday party. The 4 children at the party played in the sand pile. Mike wanted all the sand toys. When 2-year-old Tony reached for a spoon Mike screamed, "No! No!".

If you were Mrs. J., what would you have done?

Check the answer(s) you think <u>best</u>.

_____A. Make Mike give Tony the spoon.
_____B. Explain to Mike that he can't have all the toys.
__x__C. Get another spoon for Mike.
_____D. Take Mike home.
_____E. Tell Mike that unless he shares his toy they'll both have to stop playing.

Check the reason(s) for choosing your answer(s).

__x__1. At 3, it is difficult for children to share.
_____2. Mike needs to learn not to be selfish.
_____3. A three-year-old is able to understand that he can't have his way all the time.
_____4. No one likes a selfish person.
_____5. Children understand threats.

Generalization E: Children adjust slowly to new situations.

XXIV. Donna, five years old, has been told by her parents that her dog has been run over by a truck. However, she continues to look in the dog house when she plays in the back yard.

If you were her older sister or brother, what would you do?

Check the answer(s) which you think best.

_____A. Explain to her that the little dog would never come back.
_____B. Explain the meaning of death.
_____C. Tell her the dog went to heaven.
__x__D. Do nothing.
_____E. Remove the doghouse.

Check the reason(s) for choosing your answer(s).

_____1. She will stop looking for the dog.
_____2. It will help her to understand.
__x__3. She'll forget about the dog in a few weeks.
_____4. She will understand death for later in life.
_____5. She will learn that everything must die.
_____6. This would impress upon her that the dog is gone for good.

Generalization H. Exploring is a very important part of a young child's learning.

XXV. Mr. W. enjoys working in the small shop he has built in his basement, and he decided to get some tools for his three-year-old, Billy. When Mr. W. gave Billy a new hammer, Billy experimented with it on an old box in the basement, sometimes using the wrong end of the hammer to pound with, and examing the dents he made in the box. A few days later, Billy began pounding some big nails into a block of thick wood. Mr. W. felt that Billy should be making something, so he got out boards of different sizes and nails and suggested that Billy begin by nailing two boards together. Billy picked up the biggest nail in sight and started pounding it into the thin boards.

If you were Mr. W., what would you do when Billy started to use a nail that was too big? Check one.

____1. Show him how to find the right sized nail.
____2. Give him a smaller nail and explain why it would work better.
__x__3. Let him use the big nail.
____4. Make a box or something for him and use smaller nails.
____5. Explain what the big nail would do, then let him go ahead and use it if he wishes.
____6. Show him the right size of nail for each sized board.

Check the <u>reason</u> or <u>reasons</u> which best explains your answer.

____a. A child learns by being shown the right way to do things.
__x__b. Children learn more effectively if they are allowed to try things and see what happens.
____c. If Billy used the large nail, he might be discouraged if the board broke.
____d. Children learn by imitating adults.
____e. A child needs to be taught how to do wood work.
____f. If Bill's father made something for him, Billy might become more interested in making things.

Generalization H: Exploring is a very important part of a young child's learning.

XXVI. The other day when Mrs. H. was getting ready to bathe her ten-month-old son, Craig, she put him on the bed to play while she got the bath water ready. Craig played with his hands for a while, took hold of his feet and played with them, and then began handling his genitals.

Check the statement which best explains what you would do with Craig if you were Mrs. H.

_____1. Remove his hands.
_____2. Give him something else to play with.
__x__3. Ignore it.
_____4. Put on his diaper.
_____5. Slap his hands.

Check the <u>reason</u> or <u>reasons</u> which best explains your answer.

_____a. It is natural for children to handle their genitals, but they should not be given the opportunity to do so.
_____b. Distracting a child's attention with toys is better than punishment, because punishment would only make him more curious.
_____c. All children go through that stage.
__x__d. Children learn about themselves by exploring their bodies.
_____e. Craig needs to learn that this is wrong.

Generalization H: Exploring is a very important part of a young child's learning.

XXVII. Three year-old Bobby has a new tricycle. The other day when his father was in the yard with him, Bobby rode around the yard and then rode under some low branches which scratched his face. Bobby cried for a minute, then climbed on his tricycle again and started to drive it through a part of the lawn that was very muddy.

Which of these things would you do if Bobby was your son? Check one.

____1. Suggest that he ride on the parts of the lawn that are dry and away from the trees.
____2. Tell him the tricycle is to use only on the sidewalk.
__x__3. Let Bobby find out what will happen in the mud.
____4. Show him how to avoid low branches and muddy spots.
____5. Pay no attention to him.

Check the <u>reason</u> or <u>reasons</u> which best explains your answer.

____a. Bobby needs to be told how to use a tricycle.
____b. Bobby is probably just trying to get attention.
____c. Children need to learn to take care of themselves.
__x__d. Children learn more if they are allowed to find out things on their own and make their own mistakes.
____e. Bobby needs help in avoiding unpleasant situations with the new trike.

Generalization H: Exploring is a very important part of a young child's learning.

XXVIII. Three-year-old Linda Thomas has no brothers and sisters. Mrs. Thomas' sister and her two sons, Allen (two-years-old) and Johnny (five-years-old) have been visiting the Thomas'. Linda has started following Allen and Johnny into the bathroom each time they go in and watching them at the toilet.

If you were Mr. or Mrs. T., which of these things would you do? Check one.

__x__ 1. Let her watch and answer any questions she asks.
_____ 2. Get her away from the bathroom by interesting her in something else.
_____ 3. Explain that boys and girls should go to the bathroom separately.
_____ 4. Explain the differences in the bodies of boys and girls.

Check the reason or reasons which best explains your answer.

__x__ a. Linda is just curious.
_____ b. Diverting her attention is better than forbidding her to watch because that might make her feel that there was something wrong in doing so.
__x__ c. Learning the differences in the bodies of boys and girls is a part of early sex education.
_____ d. Children need to learn that the bathroom is private.
_____ e. Quiet action or explanation can prevent too much curiousity without giving the child the impression that watching is wrong.

Generalization H: Exploring is a very important part of a young child's learning.

XXIX. Mr. and Mrs. T. have a two-year-old son, David. The other day, they visited Mr. and Mrs. L., who have a two-and-a-half-year-old daughter, Judy. David showed little interest in playing with Judy. Most of the time he played alone with some wooden beads, but once he went over to Judy, who was playing with a doll near him, and pushed her and she squealed. David watched her for a few minutes, then went back to his beads. Just as the T.'s. were leaving, David walked up to Judy and hugged her very hard.

If David were your son, which of these things would you do? Check one.

____1. Show him how to pat Judy to show her he liked her.
____2. Separate the two children.
____3. Explain that he should not push or hug Judy so hard.
____4. Give him chances at home to practice greeting other people (saying, "Hello", etc.)
____5. Explain that Judy doesn't like to be pushed or hugged so hard.
_x_6. Let David continue to approach Judy in his own way, as long as neither of the children is hurt.

Check the reason or reasons which explains your answer.

_x_a. Two-year-olds have not yet learned to approach other children.
_x_b. Children need to experiment to find ways of approaching others.
____c. Children need help in learning the right way to do things.
____d. Two-year-olds can understand explanations.
____e. David should be corrected or punished so that he will know that pushing is wrong.

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Evaluation Materials in Family Relations, Ninth Grade.

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*HOME ECONOMICS EDUCATION; *STUDENT EVALUATION; GRADE 9; TESTING; *TEST CONSTRUCTION; *ACHIEVEMENT TESTS; *FAMILY RELATIONSHIP

Models for test items and evaluation devices are provided for adaptation by home economics teachers to meet the needs of specific ninth grade family relations classes in the comprehensive high school. Evaluation materials were developed through research projects and trial use in Iowa schools by heterogeneous school groups. The materials are based on the subject matter areas: developmental tasks, individual differences, and family relationships, values, interests, and roles. Included are: (1) objectives to which the evaluation materials relate, (2) suggestions for introducing and interpreting the results of the tests, and (3) the problems, presented as capsulated experiences, illustrating generalizations which require the student to give not only the answer but also justification for the answer. Other evaluation materials for home economics areas, all using similar formats, are available as VT 005 747-VT 005 757 (ARM Summer 1969). (FP)

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Evaluation Materials

in

Family Relations

Ninth Grade

Prepared by

Hester Chadderdon

Home Economics Research
Iowa State College
Ames, Iowa

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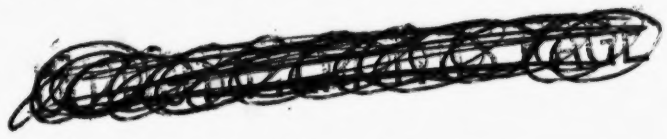

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(Address) Head, Home Economics Education Dept., Ames, Iowa 50010

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INDEX TO GENERALIZATIONS AND TEST ITEMS FOR USE IN EVALUATING LEARNING IN FAMILY RELATIONS: 9TH GRADE

A. Consideration of others is the basis of good manners wherever you are. Test Item VII

B. Decisions are more apt to be strongly supported when they are arrived at through the participation of group members to the extent their maturity allows. Test Item IV

C. Planning saves irritation. Test Items VIII, XVI

D. Tasks are usually more effectively accomplished with satisfaction to all if each person contributes to the extent of his ability to make plans, accepts responsibility for carrying out these plans, and develops skills necessary to do his job. Test Items IX, XV

E. Each individual can make a contribution to the activities of the group. Test Item III

F. The more varied our interest, the more opportunities we have for making friends. Test Item XIII

G. The friends we have may serve different needs. Test Item X

H. There is no set age when all are ready to date. Test Item XIV

I. The more a person maintains an open mind until he has all the facts needed for a decision, the more he is likely to be fair to everyone involved in the decision. Test Item V

J. The people with whom we work and play prefer us to "let off steam" in socially accepted ways and in appropriate places. Test Item XVII

K. The social group of which you are a part, influences not only what you do, but also your ideas. Test Item I

L. Girls in most cases mature earlier than boys. Test Item XVIII

M. Dating customs vary from community to community. Test Item XII

N. Accepting the fact that parents are not always right is part of growing up. Test Item VI

O. When family members are able to talk over with each other things which irritate them, their family life is apt to be more happy. Test Item XI

P. When equipment is to be shared in the home, what one person requires influences what others can use and do. Test Item II

OBJECTIVES AND DEVELOPMENT AND USE OF TEST ITEMS

I. Objectives: These evaluation materials relate to the following objectives

1. To recognize sequence and variations within normal adolescent development.
2. To understand and accept individual differences in people.
3. To recognize their own motives and develop a sense of values that will aid growth toward maturity.
4. To acquire sensitivity to the problems of themselves and other people.
5. To recognize that families are different and expect each of their families to do some things differently than other families do them.
6. To contribute to the growth of others.
7. To recognize the satisfactions from relationships with siblings.
8. To recognize reasons why people have different interests and points of view.
9. To determine and fulfill one's role in the family.

II. Development of Test Items: The items in this packet are based on the above objectives and the generalizations given at the top of the page containing a test item. The solutions and reasons for the problems include misconceptions collected from Iowa pupils.

III. Selection of items to combine into a test: Choose the items which involve the generalizations on which you wish to determine where your pupils are at any stage of learning (pre-test, during unit, at the end of unit, or as a part of semester test).

IV. Provision of a setting and directions: Here are a few suggestions which might be used with family relations tests.

Getting Along

Do you ever say to yourself Why did he do that? Why did she say that? What would I do if I were in that situation?

We all want to get along successfully with other people (children, friends, teachers, parents, etc.). As we know what makes others act and feel as they do, we are better able to get along with them.

Several situations are described in the following pages. After studying each carefully, check (x) the answer (s) you think <u>best</u> and the reason (s) <u>why</u> you have selected the answer (s).

In order to force pupils to consider each solution and/or reason, do <u>not</u> indicate the number of statements they are to check.

V. Scoring the test: To obtain a score for each girl check and total <u>only</u> the correct solutions and/or reasons. (See key on mimeographed copy of each item). It is better <u>not</u> to make deductions for incorrect choices because some of the problems are of such a nature that some of the reasons could conceivably be true under certain circumstances. The key provides for determining only those which make use of the particular generalization (s) listed at the top of each page. Also research on these items indicates that deducting for guessing has little effect on the relative size of the scores unless a student checks an unreasonably large number of responses.

VI. Interpreting the results of the test: The results can be looked at several ways to determine how well your pupils can apply the generalizations involved in the test.

(1) The size of the scores in relation to the total possible score gives a general idea of the class as a whole. Individual scores indicate which pupils have achieved most and which need more experiences. A look at the responses of individual pupils, particularly those whose scores are low, will indicate places where special help is needed.

(2) If the test has been given before and also after the unit has been taught you can see the extent of progress, provided the particular problems have not been discussed in class.

(3) Tabulating the total number of pupils who selected each solution and reason gives you clues to needs for learning, whether the test is used as a pre-test or after some instruction. Noting the generalizations which they failed to apply and the misconceptions (incorrect responses), you have a basis for planning experiences. Below is an illustration of an item administered to 119 tenth-grade pupils.

Mabel, 15, and Hazel, 16, are sisters and both are in the tenth grade. They are friends of Elsie, who is a very popular member of their class. Usually the three girls go to the movies on Wednesday afternoons after school, but yesterday Mabel and Elsie dodged Hazel and went to the movie. Hazel has refused to talk to Mabel since the incident and their mother is alarmed. Although the girls have argued, they have never before stopped speaking to each other.

Do you think there is reason for alarm on the part of the mother?
Check (x) the answer you think <u>better</u>.

45 A. Yes
X 74 B. No

Check (x) reason or reasons for choosing your answer.
33 1. The problem should be solved before it gets worse.
X 62 2. Sisters frequently have disagreements because they are together so often.
15 3. Hazel needs help to overcome her jealousy.
24 4. The whole family will be affected by their actions, if they are allowed to continue.
45 5. Jealousy is a trait of teenage girls which they overcome as they become older.
6 6. The sisters are stubborn.

Although almost two-thirds of these pupils checked the correct solution (B), fewer were able to apply the generalization when they selected a reason (2): Some conflict is normal in any close relationship. Many see it as a serious problem (1) or attribute it to jealousy (3 and 5). More than half need help in understanding the generalization.

Generalization K: The social group of which you are a part influences not only what you do, but also your ideas.

I. Rita and all her friends in the ninth grade wore skirts and sweaters to school. Rita's mother liked to sew and decided to surprise Rita with a dress for her birthday. The dress was of Swedish design and very pretty. Although her mother had spent many hours making the dress, Rita refused to wear it.

What might explain why Rita didn't wear the dress?

Check with an x the reason or reasons you think best explain Rita's refusal.

____ 1. She wanted to wear only the latest styles.
____ 2. She didn't like homemade clothes.
x* 3. Rita didn't want to dress any differently than the other girls.
____ 4. Rita thought dresses were childish.
____ 5. She didn't like the style, color, and other details of the dress.

*x indicates best response for this generalization

Generalization P: When equipment is to be shared in the home, what one person requires influences what others can use or do.

II. Mrs. Barnes told Ada, 14, that others in the family were complaining because of the amount of time she used in the bathroom. Ada said, "I want to look like the other girls when I go places."

Should Ada try to shorten the time she spends in the bathroom?

Check with an x the answer you think <u>better</u>.

____ A. No
_x_ B. Yes

Check with an x the reason or reasons for choosing your answer.

____ 1. Ada is at the age that she needs to learn good grooming.
_x_ 2. Ada should consider the rights of other family members.
____ 3. She needs to learn she can't do as she wishes all the time.
____ 4. Everyone in a family should be treated alike.
____ 5. It is very important for girls this age to be as well groomed as their friends.

Generalization E: Each individual can make a contribution to the activities of the group.

III. Mrs. Nelson is working part-time to help with expenses while Mr. Nelson is in the hospital. This means that the children need to help with some of the work that she usually does around the house. The family immediately decided on jobs for Alice, 10, and Wilbur, 14, but did not decide on a job that four-year-old Jack could help do in the home.

Do you think that Jack should have a job?

_x_ A. Yes
____ B. No

Check with an x the reason or reasons for choosing your answer.

____ 1. Jack will learn that no one gets by without doing a little work.
____ 2. It would help keep him out of mischief.
____ 3. He is too small to do anything that would really help.
____ 4. The other children might feel that their mother was unfair.
____ 5. He needs to spend his time playing so he will develop as he should.
_x_ 6. He would be doing his part even if it is small.

Generalization B: Decisions are more apt to be strongly supported when they are arrived at through the participation of group members to the extent that their maturity allows.

IV. Mildred (age 10), Marlys (age 8), and Alice (age 6), help their mother with Saturday housecleaning. Mrs. Johnson has been telling each of them which tasks to do. Recently she asked them to decide how to divide the tasks.

Who do you think should make the decision of how to divide the tasks?

Check with an x the answer or answers you think best.

____ A. The mother
____ B. Mildred
__x__ C. The three children

Check with an x the reason or reasons which explain your answer or answers.

____ 1. They can each do the jobs they like best.
____ 2. Alice and Marlys are too young to decide such things.
__x__ 3. They will be more willing to do their jobs.
____ 4. The jobs are more apt to be well distributed.

Generalization I: The more a person maintains an open mind until he has all the facts needed, the more he is likely to be fair to everyone involved in the decision.

V. Edward was chairman of the decoration committee for the freshman spring party. When the other members of the committee started to decorate, Edward had not shown up. Oscar said, "I think Edward must be so busy working to get money to buy his date a corsage, he can't do his duty here." Irene said she thought that Oscar should wait to see what had really happened before deciding that Edward was not willing to do his share.

Do you agree with Irene?

_x_ A. Yes
____ B. No

Check with an x the reason or reasons for choosing your answer.

____ 1. Edward agreed to be chairman and he should be there.
____ 2. Oscar could cause hard feelings by his remark.
____ 3. Edward should have notified them if he couldn't be there.
_x_ 4. Edward could be unfairly judged, if he didn't have a chance to explain.

Generalization N: Accepting the fact that parents are not always right is part of growing up.

VI. While making an Algebra assignment, the instructor said that there were several problems which were extremely difficult that he wanted the students to attempt to work. He told them they could get outside help if they liked, and anyone who had them worked correctly by next class period would receive extra points. The next morning Clyde, 14, bragged to all his classmates, "I know my problems are right because Dad helped me with them." In class, Clyde found that several were wrong. That afternoon he stormed into the house and asked his father how he could have been so wrong. Clyde's father said, "I am sorry about the mistakes, but no one is always right." Clyde replied, "But you've never made a mistake before." All evening Clyde worried about the mistake his father made.

Should Clyde have been so much upset about his father's making a mistake?

Check with an x the answer you think <u>better</u>.

_x_ A. No
____ B. Yes

Check with an x the reason or reasons for choosing your answer

____ 1. He may hurt his father by worrying so much about missing the problem.
____ 2. He must learn to accept disappointment.
_x_ 3. He needs to begin to realize that his father isn't perfect.
____ 4. Clyde's father had made him think he was good.
____ 5. The other children would think Clyde's father couldn't work Algebra.

Generalization A: Consideration of others is the basis of good manners wherever you are.

VII. Patty brought several of her friends home after a basketball game for snacks. Her parents were out, but they raided the ice box anyway. The next morning her mother started to prepare breakfast and found the kitchen in a "mess." When Patty came down her mother said, "You can't bring your pals home for a snack unless you clean up the kitchen when you finish."

Was her mother's request reasonable?

____ A. No
_x_ B. Yes

Check with an x the reason or reasons for choosing your answer.

____ 1. Patty is younger and more able than her mother to clean up the kitchen.
____ 2. Patty is only young once so she should have a good time while she can.
____ 3. Patty should have more respect for her mother.
____ 4. Patty's friends will think less of her if she leaves "messes" for her mother to clean up.
____ 5. Patty needs to learn that you usually have to work to get something you want.
____ 6. Patty's mother should not expect her to clean up every time she uses the kitchen.
_x_ 7. Patty should be more thoughtful of others.

Generalization C: Planning saves irritation.

VIII. Elizabeth, age 14, wanted a new outfit to wear to her sister's graduation. The family, after budgeting the income for the month, found that Elizabeth could have $20. She immediately went down town and bought a dress for $18.95. Upon returning home she found that she had no accessories to match the dress. Elizabeth was disgusted with herself. She did not want to return the dress, so she had to choose between an old outfit or her new dress and odd accessories.

What could Elizabeth have done to avoid this difficulty?

Check with an x the answer or answers you think <u>best</u>.

____ A. Shopped around more before buying the dress
____ B. Asked her mother to help decide on the dress
__x__ C. Planned how she would spend her money before she went down town
____ D. Purchased material and made her dress

Check with an x the reason or reasons which explain your answer or answers.

__x__ 1. If she had first decided what she needed, she might have been less irritated with the results.
____ 2. That is more money than she needed to spend for a dress.
____ 3. She is too young to be spending that much money alone.
____ 4. Often you can get more for your money if you look several places before making a definite decision.
____ 5. Ready-made clothes usually cost more than material.

Generalization D: Tasks are usually more effectively accomplished with satisfaction to all, if each person accepts responsibility for carrying out the plans.

IX. Mr. and Mrs. Simmons, Carl, 18, and Evelyn, 12, have planned a three-week vacation trip. There are many jobs to be done at home before the Simmons can leave. They are dividing the tasks and making each person responsible for doing the tasks assigned him.

Why is this a good plan?

Check with an x the reason or reasons why you think this plan is good.

_____1. Much more work can be accomplished in less time.
_____2. The jobs will all get done if everyone does his part.
_____3. The parents won't have to carry all of the burden.
_____4. There will be less confusion.
_____5. The children can learn to take responsibility from the experience.
__x__6. Everyone will feel that he had a part in making the trip possible.

Generalization G: The friends we have may serve different needs.

X. Marie asked her father to take her across town to Betty's house one evening. Her father said, "If you want to visit someone, why don't you visit Alice? She's close by." Marie answered, "But, Father, I can't talk to Alice about dates and things like that. Alice is fun to go to shows with, but Betty is the only one I can talk to about boys."

Why did Marie want to talk to Betty?

Check with an x the reason or reasons which <u>best</u> explain Marie's wanting to talk to Betty.

____1. Betty is more mature than Alice.
____2. Marie likes Betty better.
____3. Some girls can be trusted more than others not to tell what they talk about.
____4. Betty is more friendly than Alice.
_x_5. Teen-agers like to be with different friends for different reasons.

Generalization O: When family members are able to talk over with each other things which irritate them, their family life is apt to be more happy.

XI. Madeline, 15, the youngest of five children, becomes annoyed when her parents introduce her to strangers and mention that she is their "baby." She often gives the family friends a very poor impression of herself with such remarks as "Do I look like a baby?" or "When will you ever stop calling me a baby?"

What should Madeline do?

Check with an x the answer or answers you think best.

____ A. Act as if she is growing up
____ B. Ignore the remarks
____ C. Act as if she is proud to be called the baby
_x_ D. Talk it over with her parents
____ E. Make a joke of it, when her parents say such things

Check with an x the reason or reasons for choosing your answer (s).

_x_ 1. A better understanding would be created between Madeline and her parents.
____ 2. Her parents are probably just expressing their love for her.
____ 3. She needs to prove to her parents that she is no longer a baby.
____ 4. This would prevent a family squabble.
____ 5. Her friends may tease her if they find out she is called a baby.
____ 6. The remarks she makes embarrass her parents.
____ 7. She is too old to be called a baby and made to feel young and embarrassed in public.

Generalization M: Dating customs vary from community to community.

XII. Hilda, 14, was invited to visit her friend Harriett, 14, for the holiday. They had a good time but when Hilda returned home she remarked to some of her friends, "We went to lots of parties, but, gee, it was kid stuff. The fellows didn't ask for dates as they do here. Why, they didn't even walk the girls home from the party."

What might explain why the fellows acted differently in these two towns?

Check with an x the reason or reasons which <u>best</u> explain their acting differently?

____1. The boys thought they were too young to date.
____2. The girls in Harriett's town neglected the boys.
____3. The boys were afraid of being teased if they dated girls.
__x__4. Towns are not all alike in dating practices.
____5. Sometimes girls are so eager, they scare boys away.
____6. The boys are less mature in Harriett's town.

Generalization F: The more varied our interests, the more opportunities we have for making friends.

XIII. Kay, 14, spends much of her free time reading. She has always read a lot and has few other hobbies. Kay's mother thinks her interests should be much more varied, so she is enrolling Kay in a dancing class and is trying to persuade her to join one of the hobby classes at the "Teen Club."

Why do you think Kay's mother wants her to learn to enjoy more than one activity?

Check with an x the answer or answers you think <u>best</u>.

_____1. Kay could do many things to fill her spare time.
_____2. It could lead to a successful career.
_____3. She can talk to other people more intelligently.
_____4. Too much reading isn't good for her.
_____5. She'll know how to do many things for later in life.
_____6. It becomes boring to do one thing all the time.
__x__7. She'll have a chance to make more friends.

Generalization H: There is no set age when all are ready to date.

XIV. Roberta, 14, asked her mother if she could go to the movies with Fred, 16. Her mother asked her if anyone was going with them. Roberta said, "No, but you let Vivian start dating when she was fourteen."

Do you think that because Vivian was allowed to date at fourteen, is a good reason for letting Roberta date at that age?

Check with an x the answer you think better.

_____ A. Yes
__x__ B. No

Check with an x the reason or reasons for choosing your answer.

_____ 1. Roberta will be resentful toward her mother if she can't do as her sister did.
* x 2. All girls are not ready to date at the same age.
_____ 3. Roberta will think her parents favor Vivian.
* x 4. Some girls are more mature at fourteen than others.
_____ 5. Parents should treat all their children alike.
_____ 6. It would be unfair to deprive Roberta of the privileges her sister had at fourteen.

* Flexible Key 2 or 4

Generalization D: Tasks are usually more effectively accomplished with satisfaction to all, if each person accepts responsibility for developing skills necessary to do his job.

XV. Carrie, 14, was responsible for bringing two cakes to the club bake sale. She had not made very many cakes before so she asked her mother to supervise while she made one for the family first.

Why do you think Carrie was wise to do a "practice" cake first?

Check with an x the reason or reasons why you think Carrie should do a "practice" cake first.

_x_ 1. If each club member is skillful, the bake sale will be a success financially.
___ 2. It would not be as expensive to have one cake fail, as to spoil two cakes.
_x_ 3. Her cakes would be more apt to be good and she could be satisfied with them.
___ 4. If the cakes were not good, they might reflect on her club.
___ 5. Her friends could be proud of her success.

Generalization C: Planning saves irritation

XVI. Mr Harris missed a very important telephone call because Nell, 15, was talking on the phone for half an hour. Mr. Harris was quite disturbed, although Nell told him she was sorry and hadn't realized how long she had talked.

What should be done to prevent this happening again?

Check with an x the answer or answers you think best.

____A. Have another telephone installed.
____B. Tell Nell she needs to make her conversations on the phone shorter.
_x_C. Work out a family schedule of when to use the phone.

Check with an x the reason or reasons which explain your answer(s).

____1. Parent's business is more important than children's social calls.
____2. It isn't good manners to talk on the telephone too long.
_x_3. Family quarrels can be prevented.
_x_4. Everyone will have more chance to use the phone.
____5. Nell probably can talk to her friends enough when she sees them.

Generalization J: People with whom we work and play prefer us to "let off steam" in socially acceptable ways and in appropriate places.

XVII. Nancy, 14, went with her parents to the wedding reception of a family friend. While there Nancy met Ester, 16, who suggested that they go to a movie. Nancy's parents refused permission so she stormed away from them saying, "I can't do anything without you." Her father said, "I know you are disappointed, but do you have to act this way in front of everyone?"

Why do you think Nancy's father was concerned about the way she showed her feelings?

Check with an x the reason or reasons you think <u>best</u> explains why Nancy's father was concerned.

____ 1. It was embarrassing to him for her to act that way in front of his friends and relatives.
____ 2. People who didn't know Nancy would get a bad impression of her.
____ 3. It reflected on the family and the way Nancy had been brought up.
____ 4. He didn't want people to think she was spoiled.
_x_ 5. He realized she had not learned that you can't show your feelings anywhere and anytime.
____ 6. Nancy was too old to act that way.
____ 7. He realized Nancy would have few friends if she continued to act that way.

Generalization L: Girls in most cases mature earlier than boys.

XVIII. Bonnie, 15, planned a barbecue in her backyard and invited the ninth-grade class. She thought it should be great fun as she had spent a lot of time finding unusual games that boys and girls could play together. As soon as everyone had eaten, Bonnie began explaining the rules for a game. Richard exclaimed, "We aren't playing any sissy games. Come on fellows, let's play baseball. There is a vacant lot right behind here."

What might explain why Richard acted as he did?

Check with an x the reason or reasons you think <u>best</u> explain Richard's actions.

____1. He didn't have good manners or know how to act.
____2. He didn't like the idea of playing with girls.
____3. Richard wanted attention.
____4. Boys like games which exclude girls and have lots of action.
____5. He could play baseball very well and was afraid he wouldn't play the new games well.
____6. He was spoiled and used to having his way.
_x_7. At this age, most boys aren't as mature as girls.
____8. Boys like to break up a party for meanness.
____9. He thought the games were for children.

VT 005 757
Chadderdon, Hester; Bresina, Bertha
Evaluation Materials in Foods for Ninth Grade.

Iowa State Dept. of Public Instruction, Des Moines. Div. of Vocational Education
Iowa Agriculture and Home Economics Experiment Staton, Ames
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*HOME ECONOMICS EDUCATION; *STUDENT EVALUATION; *FOODS INSTRUCTION; NUTRITION INSTRUCTION; GRADE 9; TESTING; *TEST CONSTRUCTION; *ACHIEVEMENT TESTS

Models for performance and problem solving test items and evaluation devices are provided for adaptation by home economics teachers to the needs of specific ninth grade food classes in the comprehensive high school. The evaluation materials were developed through research projects and trial use in Iowa schools by heterogeneous school groups. The materials are based on subject matter areas: nutrition, food selection and habits, relationship of nutrition to appearance, nutrient retaining preparation techniques, and the planning, buying, storing of foods. Included are (1) objectives to which the evaluation materials relate, (2) suggestions for introducing and interpreting the results of tests, and (3) the problem situations, illustrating generalizations which require the student to give not only the answer but also justification of the answer. Other evaluation materials for home economics areas with a similar format, are available as VT 005 747-VT 005 757 (ARM Summer 1969). (FP)

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Evaluation Materials

in

Foods

for

Ninth Grade

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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Prepared by

Hester Chadderdon
Assisted by Bertha Bresina

Home Economics Research

Iowa State University
of Science and Technology

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M E M O R A N D U M

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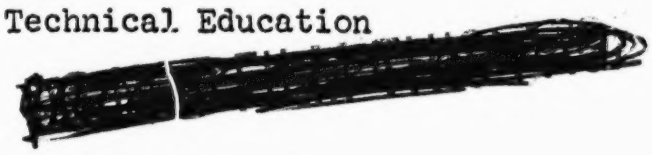

FROM: (Person) Alberta D. Hill (Agency) Iowa State University

(Address) Head, Home Economics Education Dept., Ames, Iowa 50010

DATE: April 3, 1968

RE: (Author, Title, Publisher, Date) Chadderdon, Hester. Evaluation Materials in Foods for Ninth Grade. Iowa State University. January 1967.

Supplementary Information on Instructional Material

Provide information below which is not included in the publication. Mark N/A in each blank for which information is not available or not applicable. Mark P when information is included in the publication. See reverse side for further instructions.

(1) Source of Available Copies:
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Level of Group
Method of Design, Testing, and Trial Developed through research projects and trial use in Iowa schools. Cooperative project between the Division of Vocational Education, State Dept. of Public Instruction and Iowa Agriculture Experiment Station (Project 1215),

(3) Utilization of Material:
Appropriate School Setting Comprehensive high school
Type of Program High school classes
Occupational Focus Homemaking
Geographic Adaptability
Uses of Material Models for test items and evaluation devices
Users of Material Home economics teachers

(4) Requirements for Using Material:
Teacher Competency Background in testing and evaluation
Student Selection Criteria

Time Allotment

Supplemental Media --
Necessary _____)
Desirable _____) (Check Which)

Would not be used in present form but adapted by teacher for use in particular classes.

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(address)

OBJECTIVES

1. Recognition that each food group makes a unique contribution to the nutrition of the body.
2. Understanding of ways to learn to like foods.
3. Awareness of some of the factors influencing cost of foods.
4. Ability to prepare some products in each food group requiring simple manipulative skills and to recognize relationship between techniques used and product obtained.
5. Understanding of terms used in cookery.
6. Ability to plan meals considering nutritive value of foods as well as color, texture, and flavor.
7. Ability to care for foods to retain maximum nutrients and flavor.
8. Ability to select snacks for children.
9. Ability to apply work simplification principles in the preparation and serving of meals.

Development of the Evaluation Materials

The test items are based on the above objectives and on generalizations from the curriculum guide developed for use in Iowa high schools. The key has been approved by subject-matter specialists.

Use of Evaluation Materials

1. These were designed for use in stimulating pupils to change their food habits and in determining where pupils are at any stage of learning: pre-test, during unit, at end of unit, or as part of a semester test.
2. In selecting the paper-and-pencil test items to use at a particular time, choose those which involve the generalizations that you are concerned with in your teaching. When using these items do not give the generalization listed at the top of each sheet to the pupils.
3. The directions for responding to the paper-and-pencil test items accompany each one. In order to force pupils to consider each solution and reason, the number of correct responses is usually not indicated. If an answer sheet (see example) is used, the directions for recording responses will need to be changed accordingly.
4. To obtain a score for each girl, total only the number of correct responses, (see key on copy of each item), because research indicates that deducting for guessing has little effect on the relative size of the scores unless a pupil checks an unreasonably large number of responses. If it appears that the pupils are checking a large number of responses in the hope of "hitting" the right one, you may want to (1) deduct one point for each incorrect response or (2) set a limit on the number of checks they may use. (If this is done, set the limit slightly above the number of correct responses, however.)
5. In interpreting the responses of your pupils
   (1) Look at the size of the scores in relation to the possible total score to obtain a general idea of the class as a whole and to determine which pupils need special help.
   (2) Tabulate the number of pupils who selected each response and see which generalizations they failed to apply and which misconceptions they hold. These suggest points at which additional learning experiences are needed.

INDEX TO GENERALIZATIONS AND ITEMS FOR EVALUATION FOR FOODS: 9TH GRADE

A. To maintain health it is necessary to have an adequate intake of essential nutrients. These w ill be supplied when a variety of foods from the four food groups is eaten each day.

The minimum recommended amounts are:

1. Milk (or equivalent) - adults 2 cups; adolescents 4 cups; children 3 to 4 cups.
2. Meat (or alternates) - 2 servings
3. Vegetables and fruits - 4 servings, 1 citrous daily and 1 dark green or deep yellow at least every second day.
4. Bread and cereals - 4 servings of whole grain, enriched, or restored. Test Items I and XVII.

B. Citrous fruits and vegetables that are dark green or deep yellow are needed in the diet because they are especially good sources of vitamins. The citrous fruits most commonly available are oranges, grapefruit and lemons. Test Item II,

C. Vegetables prepared and placed in crisper in refrigerator save last-minute preparation. If vegetables are kept at room temperatures after slicing or chopping, they may rapidly lose vitamins through exposure to oxygen in air and to light. Test Item III.

D. Serving temperature and length of time required for cooking each food affect the order in which it is placed in a plan for preparing a meal. Test Item III.

E. Most dried fruits and starchy vegetables require about 30 minutes to cook. Stewed fruits are usually allowed to cool before serving. Test Item III.

F. If foods which dry out easily are prepared just before serving, they will be moist. Test Item III.

G. If the table setting is done when there is a lull in the work or when preparation processes do not need close supervision, time can be saved and confusion avoided. Test Item III.

H. Panfrying is cooking a food in a small amount of fat. Test Item IV.

I. When boiling a food, it is cooked in a liquid at a temperature where bubbles form rapidly and break on the surface. Test Item IV.

J. Pan broiling a food is to cook uncovered on a hot surface,usually a frying pan, and pouring off the fat as it accumulates. Test Item IV.

K. Parboiling is boiling a food until partially cooked. Test Item IV.

L. Broiling or grilling a food is to cook it by direct heat. Test Item IV.

M. Sauteing is browning quickly in a small amount of fat with frequent turning. Test Item IV.

(over)

N. To simmer is to cook in a liquid at a temperature about 185°F. Bubbles form slowly and break below surface. Test Item IV.

O. Stewing is simmering in enough liquid to cover the food. Test Item IV.

P. Steaming a food is to cook it in steam with or without pressure. Test Item IV.

Q. A liking for food usually comes after repeated experiences in tasting it. Gradually introducing the disliked food by serving dishes in which the flavor is partially concealed or diluted will help in acquiring a taste for it. Test Item VI.

R. Bland foods like French toast, eggnog, retain some of the egg flavor because no pronounced flavor was added which conceals the original egg flavor. Test Item VI.

S. Foods using milk and egg retain some of the original flavor if kept bland. Test Item VI.

T. In learning to like a new food it is helpful to eat or drink a small serving of the new food w ith other more familiar or favorite foods. Test Item VI.

U. Small servings of a disliked food taken occasionally will gradually overcome the distaste for it. Test Item VI.

V. In dishes where canned fruits or vegetables are used, and shape is not an essential factor, "Standard" quality is more economical to use than "Fancy" or "Choice." This holds true for broken and unbroken nut halves. Test Item VIII.

W. Frozen vegetables are more expensive than canned vegetables. Test Item VIII.

X. Ground beef varies in price depending on quality of meat and amount of suet. The variation from less to more expensive is usually in the following order: hamburger, lean ground beef, ground round steak. Test Item VIII.

Y. Grade A eggs are more expensive than Grade B eggs because they are better quality. Grade A eggs are used where egg flavor only is involved. Grade B eggs are satisfactory to use in combination with other ingredients where egg flavor is not so important. Test Item VIII.

Z. Packaged ready-to-use foods are usually more expensive than the home-made product. Test Item VIII.

AA. Butter is about twice as expensive as margarine. Test Item VIII.

AB. If the success of the finished product is not dependent on the kind of milk, then reconstituted dry milk solids are more economical than evaporated or fresh whole milk. Test Item VIII.

AC. Eggs, dried beans, dried peas, fish and nuts are included in the meat group. Test Item IX.

AD. Well-balanced meals are not necessarily appetizing, since they may lack contrasts in color, flavor, texture, and shape. Test Item X.

AE. Nuts and similar foods are difficult for small children to chew properly and may lodge in the throat. Test Item XI.

AF. Concentrated sweets dull the appetite for more nutritious foods and lead to a demand for more sweets. Test Item XI.

AG. A healthy child requires no stimulants to sharpen his appetite. Test Item XI.

AH. Restraint needs to be used in serving sweets to children because they are highly concentrated fuel foods. Test Item XI.

AI. Simple desserts, as custards, ice cream and cookies will satisfy a child's desire for sweets. Test Item XI.

AJ. There is some difficulty in digestion of concentrated sweets by small children. Test Item XI.

AK. A large intake of concentrated sweets tends to increase the amount of tooth decay. Test Item XI.

AL. Frequent use of cola beverages is likely to replace milk in the diet of children. Test Item XI.

AM. Planning and following a plan of work makes a task easier and saves time. Test Item XII.

AN. Assembling all materials for a particular kind of work before beginning work, saves time and avoids confusion. Test Item XII.

AO. If dry ingredients are measured first and fats next, one measuring cup can be used for both. Test Item XII.

AP. When foods are prepared in advance, time and energy are released for other activities immediately preceding a meal. Test Item XII.

AQ. Using a double boiler prevents food from burning. Test Item XII.

AR. Good planning of work permits dovetailing of jobs. Test Item XII.

AS. When hot water instead of cold is placed in lower part of double boiler, cooking time is shortened. Test Item XII.

AT. Time and energy are saved by rinsing a dish containing a starchy mixture in cold water. Test Item XII.

AU. Time and energy are saved if the table is set by completing one place setting at a time. Test Item XII.

AV. Time and energy are saved if very soiled dishes are soaked immediately after using. Test Item XII.

(over)

AW. When hot water comes in contact with starch, the starch grains which the water reaches first swell, stick together, and surround dry starch grains forming lumps. Test Item XIII.

AX. Chocolate scorches easily because of its starch content. Test Item XIII

AY. The scum which may form from heating the milk, when chocolate and cocoa beverages are made, is retarded if they are kept covered. Test Item XIII.

AZ. When chocolate and cocoa beverages are beaten just before serving, the beating breaks up the scum and the froth delays its formation. Test Item XIII.

BA. Green vegetables become a yellow-green color when cooked in a covered pan. Test Item XIII.

BB. High temperatures and prolonged heating toughen egg proteins, resulting in shrinkage and expression of fluid or curdling. Test Item XIII.

BC. Foods with strong odors require an air tight container if stored in the refrigerator to prevent the odors from being taken up by other foods. Test Item XIV.

BD. Not all foods require the same degree of coldness to prevent spoilage. Test Item XIV.

BE. The more perishable foods as milk, or fish require a lower temperature than fruits and vegetables. Test Item XIV.

BF. Since freezing does not destroy microorganisms and enzymes but only delays development, they become active when food is thawed. Test Item XIV.

BG. Foods containing fat absorb odors more readily than those with low fat content. Bland foods as water, ice cubes, potatoes, orange juice, may also gradually take on flavors of foods with strong odors. Test Item XIV.

BH. Fresh vegetables and fruits, particularly those without protective covering, are kept crisp and plump for a longer time if evaporation is prevented. Test Item XIV

BI. The skillful food manager plans menus in which there is variety in textures, flavor, color and shape. Test Item XV

BJ. A good manager considers the time required to prepare each food so that too many time-consuming dishes are not included in the same day's menu. Test Item XVI.

BK. Dishes which use many ingredients, require several procedures, or are made in various stages (as whipped jellos and some frozen desserts) are usually more time-consuming than those requiring less handling. Test Item XVI.

Example of an answer sheet that could be used to record responses and, hence avoid having to reproduce the test items each time they are used. Can be adapted for any combination of items.

Answer Sheet; Foods 9th Grade

I. Basic Four

_____ 1
_____ 2
_____ 3
_____ 4

II. Foods

_____ A.
_____ B
_____ C
_____ D
_____ E
_____ F
_____ G
_____ H
_____ I
_____ J
_____ K
_____ L
_____ M
_____ N
_____ O

III. Jobs

_____ A
_____ B
_____ C
_____ D
_____ E
_____ F
_____ G

IV. Definitions

_____ A
_____ B
_____ C
_____ D
_____ E
_____ F
_____ G
_____ H
_____ I
_____ J

V. Amounts

_____ A
_____ B
_____ C
_____ D
_____ E
_____ F
_____ G
_____ H
_____ I
_____ J
_____ K

VI. Eggs Milk

	Eggs	Milk
A	_____	_____
B	_____	_____
C	_____	_____
D	_____	_____
E	_____	_____
F	_____	_____
G	_____	_____
H	_____	_____
I	_____	_____
J	_____	_____
K	_____	_____
L	_____	_____

VII. Equipment

_____ A
_____ B
_____ C
_____ D
_____ E
_____ F
_____ G
_____ H
_____ I
_____ J
_____ K
_____ L
_____ M
_____ N
_____ O
_____ P
_____ Q
_____ R
_____ S
_____ T
_____ U
_____ V

VIII. Selections

_____ 1a
_____ 1b
_____ 2a
_____ 2b
_____ 2c
_____ 3a
_____ 3b
_____ 4a
_____ 4b
_____ 5a
_____ 5b
_____ 6a
_____ 6b
_____ 7a
_____ 7b
_____ 8a
_____ 8b

IX. Protein Food

____ A _____
____ B _____
____ C _____
____ D _____
____ E _____
____ F _____
____ G _____
____ H _____
____ I _____
____ J _____
____ K _____

(over)

X. Substitutions Reasons

A. _____

B. _____

C. _____

D. _____

E. _____

F. _____

XI. Foods Reasons

____A. _____

____B. _____

____C. _____

____D. _____

____E. _____

____F. _____

____G. _____

____H. _____

____I. _____

____J. _____

____K. _____

XII. Reasons

A. _____

B. _____

C. _____

D. _____

E. _____

F. _____

G. _____

H. _____

I. _____

XIII. Best Reason

1. _____A.
_____B.
_____C.
_____D.

2. _____A.
_____B.
_____C.
_____D.
_____E.

3. _____A.
_____B.
_____C.
_____D.
_____E.

4. _____A.
_____B.
_____C.
_____D.

5. _____A.
_____B.
_____C.
_____D.
_____E.

6. _____A.
_____B.
_____C.
_____D.
_____E.

7. _____A.
_____B.
_____C.

XIV. Store Reasons

_____A. _____

_____B. _____

_____C. _____

_____D. _____

_____E. _____

_____F. _____

_____G. _____

_____H. _____

_____I. _____

_____J. _____

_____K. _____

XV. Reasons

_____

_____

_____

_____

_____

XVI. Substitute

A. _____

B. _____

C. _____

D. _____

E. _____

F. _____

XVII. Basic Four

Had	Needs
____1.	_____
____2.	_____
____3.	_____
____4.	_____

Generalization:[1]

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3. Vegetables and fruits - 4 servings, 1 citrous daily and 1 dark green or deep yellow at least every second day
4. Bread and cereals - 4 servings of whole grain, enriched, or restored.

I. Jeanne is planning the meals for her family while her mother is in the hospital. Her older sister, who works in an office, helps her prepare them. She wants to be sure the meals meet the nutritional needs of the two girls, their father and brother, Bob, who is 14.

Below are the meals she planned for one day.

Breakfast

Pineapple juice
Omelet Bacon
Toast Jelly
Coffee

Lunch

Chili
Crackers Head Lettuce Salad
Chocolate Cookies
Ice Cream
Milk Coffee

Dinner

Beef Stew Steamed Rice
Whole Kernel Corn Hot Rolls
Apple Sauce
Coffee

Using the Basic Four Guide, mark (x) before food groups where this day's meals fail to meet requirements.

x ** 1. Milk group
____ 2. Meat group
x 3. Vegetable-fruit group
____ 4. Bread-cereal group

[1] When duplicating the items for use, delete the generalizations given at the top of each page. They are given to help you decide which items to select for use.

**The checks, words, and phrases in the blanks indicate the key which has been approved by specialists in the Department of Food and Nutrition.

Generalization:

B. Citrous fruits and vegetables that are dark-green or deep yellow are needed in the diet because they are especially good sources of vitamins. The citrous fruits most commonly available are oranges, grapefruit and lemons.

II. Below is a list of fruits and vegetables some of which are especially good sources of vitamins. Mark x in front of those that are very high in vitamins.

____	A. Potatoes	____	H. Corn
____	B. Tomato juice	____	I. Peaches
x	C. Carrot sticks	____	J. Head lettuce
____	D. Canned peas	x	K. Leaf lettuce
____	E. Pineapple	x	L. Squash (Acorn, Hubbard, etc.)
x	F. Grapefruit	x	M. Green beans
____	G. Apple	____	N. Cauliflower
		____	O. Celery

C. Vegetables prepared and placed in crisper in refrigerator save last-minute preparation. If vegetables are kept at room temperatures after slicing or chopping, they may rapidly lose vitamins through exposure to oxygen in air and to light.

D. Serving temperature and length of time required for cooking each food affect the order in which it is placed in a plan for preparing a meal.

E. Most dried fruits and starchy vegetables require about 30 minutes to cook. Stewed fruits are usually allowed to cool before serving.

F. If foods which dry out easily are prepared just before serving, they will be more moist.

G. If the table setting is done when there is a lull in the work or when preparation processes do not need close supervision, time can be saved and confusion avoided.

III. Cynthia has been learning to prepare meals in class with three other girls. She and her mother have decided it would be good for her to try her skills in preparing lunch at home for her family on Saturday. This is the menu she plans to use.

Potato Soup

Peanut Butter Sandwiches Carrot Sticks

Stewed Prunes

Below are seven jobs for the preparation of this meal. Select from the list the job to be done first, then write number 1 in the blank beside that job. Continue until all seven jobs have been given a number indicating order of performing them.

List of Jobs

2	A. Pare potatoes, dice, and put on stove to cook.	5	D. Make thin white sauce for soup.
3	B. Make sandwiches	1	E. Put prunes on to stew.
4	C. Make carrot sticks	6	F. Set table.
		7	G. Add white sauce to potatoes.

Generalizations: 9th

H. Panfrying is cooking a food in a small amount of fat.

I. When boiling a food, it is cooked in a liquid at a temperature where bubbles form rapidly and break on the surface.

J. Pan broiling a food is to cook uncovered on a hot surface, usually a frying pan, and pouring off the fat as it accumulates.

K. Parboiling is boiling a food until partially cooked.

L. Broiling or grilling a food is to cook it by direct heat.

M. Sautéing is browning quickly in a small amount of fat with frequent turning.

N. To simmer is to cook in a liquid at a temperature about 185F. Bubbles form slowly and break below surface.

O. Stewing is simmering in enough liquid to cover the food.

P. Steaming a food is to cook it in steam with or without pressure.

IV. Careless cooking methods rarely produce good food. One of the factors that contributes to success in cooking is an understanding of cooking terms. Below is a list of terms used in recipes. See if you can identify each one by finding its definition.

In the blank before each term place the number of the definition which matches the term it defines.

Terms

5 A. Boil
2 B. Broil
2 C. Grill
8 D. Pan-broil
3 E. Parboil
1 F. Pan-fry
7 G. Sauté
9 H. Simmer
6 I. Stew
4 J. Steam

1. To cook in small amount of fat.
2. To cook by direct heat.
3. To boil until partially cooked.
4. To cook in a steam with or without pressure.
5. To cook in a liquid at a temperature where bubbles form rapidly and break on the surface.
6. To simmer or boil in enough liquid to cover the food.
7. To brown quickly in a small amount of fat with frequent turning.
8. To cook uncovered on a hot surface, usually a frying pan. The fat is poured off as it accumulates.
9. To cook in a liquid at a temperature about 185° F. Bubbles form slowly and break below surface.

V. Jeanne and Marie were asked by the refreshment committee to furnish chocolate chip cookies for the annual class picnic. They are to prepare for 36 people and plan to have at least three cookies for each person.

They are to use the recipe for chocolate chip cookies which makes about three dozen cookies.

Chocolate Chip Cookies

1/2 cup shortening
1/2 cup sugar
1/2 cup brown sugar, packed
1 egg
1 & 1/8 sifted enriched flour
1/2 teaspoon salt
2/3 teaspoon baking soda
1 teaspoon water
1 teaspoon vanilla
1/2 cup chopped nuts
1 package (7 oz.) chocolate chips

In the blank before the letter write the number (1, 2, 3, 4,) of the column which contains the correct amount for an ingredient.

		1	2	3	4
3	A. Cups fat	4	$1\frac{1}{4}$	$1\frac{1}{2}$	3
1	B. Cups sugar	$1\frac{1}{2}$	2	3	1-3/8
4	C. Cups brown sugar	3	2	$1\frac{1}{4}$	$1\frac{1}{2}$
3	D. Eggs	1	2	3	4
3	E. Cups flour	1-3/8	2-3/8	3-3/8	5
3	F. Teaspoons salt	$1\frac{1}{4}$	3	$1\frac{1}{4}$	4
2	G. Teaspoons baking soda	1	2	3	4
1	H. Tablespoons water	1	2	3	4
1	I. Tablespoons vanilla	1	2	3	4
1	J. Cups chopped nuts	$1\frac{1}{2}$	4	2	3
3	K. Packages choc. chips	1	4	3	2

Generalizations:

Q. A liking for a food usually comes after repeated experiences in tasting it. Gradually introducing the disliked food by serving dishes in which the flavor is partially concealed or diluted will help in acquiring a taste for it.

R. Bland foods like French toast, eggnog, retain some of the egg flavor because no pronounced flavor was added which conceals the original egg flavor.

S. Food using milk and egg retain some of the original flavor if kept bland.

T. In learning to like a new food it is helpful to eat or drink a small serving of the new food with other more familiar or favorite foods.

U. Small servings of a disliked food taken occasionally will gradually overcome a distaste for it.

VI. Barbara dislikes eggs and milk, but wants to overcome these dislikes.

Using the list below indicate whether a food or food practice will help Barbara learn to like eggs or milk. Mark x in column or columns for each food.

Foods and Food Practices	Eggs	Milk
A. Drink one-fourth glass of milk at a meal		x
B. Cheese sandwich		
C. Vanilla pudding	x	x
D. Hot chocolate		
E. Coffee with cream		
F. Baked custard	x	x
G. Eggnog	x	x
H. Eat small servings of egg with favorite breakfast food	x	
I. Cream of pea soup		x
J. Lemon cream pie		
K. Ice cream (Vanilla)		x
L. French toast	x	

VII. Below are listed twenty-five different jobs in food preparation. These can be done by the pieces of equipment on the table.

Each piece of equipment is numbered. In the space before each job write the number or numbers of the pieces of equipment which perform that job well. A piece of equipment may be used more than once.

Jobs done in Food Preparation

3	A.	beat whole eggs
9	B.	cut shortening into flour
3,4	C.	beat egg whites
13	D.	remove core of apple
5	E.	stir cake batter
1,4,16	F.	fold whipped cream into jellow
6,17	G.	dice meat
17	H.	cut several celery stalks at a time
1,4,16	I.	cut & fold beaten egg whites into a cake
5	J.	cream shortening
17	K.	prepare 1 T. minced onion
5	L.	mix soft batters
9	M.	prepare 1 c. minced onion
6,11	N.	pare potatoes
18	O.	slice bread
9,17	P.	chop nuts
10,15	Q.	shred carrots
10	R.	grate lemon rind
3	S.	whip cream
16	T.	remove piece of pie from pie pan
13	U.	core apple
10,15	V.	cut cabbage for salad

*See back of sheet for Directions to teachers.

Direction to Teacher

Test Item VII. Number the pieces of equipment in the order in which they are listed below. Arrange them on a table in this order. If you do not have a French knife or serrated bread knife and cannot borrow the, substitute another sharp, slicing knife. This sharp, slicing knife may substitute for (17) or for (17 and 18).

1. Flexible narrow spatula
2. Rubber scraper
3. Rotary beater
4. Wire whisk
5. Wooden spoon
6. Paring knife
7. Food grinder
8. Pastry blender
9. Hand food chopper
10. Grater (4 sided)
11. Vegetable peeler
12. Strainer
13. Corer
14. Metal tablespoon
15. Single shredder
16. Wide spatula
17. French knife
18. Serrated bread knife

Generalizations:

V. In dishes where canned fruits or vegetables are used, and shape is not an essential factor, "Standard" quality is more economical to use than "Fancy" or "Choice." This holds true for broken and unbroken nut halves.

W. Frozen vegetables are more expensive than canned vegetables.

X. Ground beef varies in price depending on quality of meat and amount of suet. The variation from less to more expensive is usually in the following order: hamburger, lean ground beef, ground round steak.

Y. Grade A eggs are more expensive than Grade B eggs because they are better quality. Grade A eggs are used where egg flavor only is involved. Grade B eggs are satisfactory to use in combination with other ingredients where egg flavor is not so important.

Z. Packaged ready-to-use foods are usually more expensive than the home-made product.

AA. Butter is about twice as expensive as margarine.

AB. If the success of the finished product is not dependent on the kind of milk, then reconstituted dry milk solids are more economical than evaporated or fresh whole milk.

VIII. Betty's home economics class planned a dinner to be served to the teachers. After they decided on a menu, Betty and her girl friend did the marketing. The problem was to keep expenses down and still retain high quality. The girls had to use good judgment. Sometimes the choice was between two purchases, at other times the choice was between making a purchase or making a product.

Menu
Scalloped Corn with Meat Balls
Cherry Jello Mold
Rolls Butter
Chocolate Chip Cookies
Coffee

Below are some of the choices with which the girls had difficulty. Make your selection by placing a mark (x) in the space before your choice.

For the scalloped corn
____ 1a. Frozen whole kernel corn
x 1b. Canned whole kernel corn

For the meat balls
____ 2a. Hamburger
____ 2b. Ground round steak
x 2c. Lean ground beef

For the bread crumbs in the meat balls
____ 3a. Purchase a package of bread crumbs
x 3b. Make bread crumbs from leftover bread in laboratory

For the butter in cookies
____ 4a. Butter
x 4b. Margarine

For milk in rolls and cookies
____ 5a. Fresh whole milk
x 5b. Dry milk solids
____ 5c. Evaporated milk

For cherry Jello mold
____ 6a. "Fancy" grade cherries
x 6b. "Standard" quality cherries

Nuts for cookies
x 7a. Broken pecans
____ 7b. Pecan halves

For eggs in rolls
____ 8a. Grade A eggs
x 8b. Grade B eggs

Generalizations:

AC. When it is necessary to make a substitution for meat as a source of protein, various combinations of milk, cheese, eggs, dried beans, dried peas, and peanuts may be used.

IX. In most families the large meal of the day usually contains meat. For lunch or supper a food other than meat often is used to help supply the protein needed.

Below is a list of prepared dishes. Place a mark (x) in front of those letters where the prepared dish has a generous amount of protein. In the space to the right state the food in the prepared dish which contains the protein.

Prepared Dishes

x	A.	Baked beans	dried beans
	B.	Chicken noodle soup	
	C.	Potato salad	
x	D.	Tuna fish salad	tuna
x	E.	Omelet	eggs
x	F.	Deviled eggs	eggs
	G.	Sliced bananas with cream	
x	H.	Cottage cheese and tomato	cottage cheese
	I.	Jello with pineapple and carrots	
	J.	Lettuce,bacon, and tomato sandwich	
x	K.	Peanut butter sandwiches	peanut butter

Generalization:

AD. Well balanced meals are not necessarily appetizing, since they may lack contrasts in color, flavor, texture, and shape.

X. When Karen attended the annual 4-H Club convention, the meals were served cafeteria style. Karen's selection for one of the dinners is listed below. Her selection is balanced, but it lacks appetite appeal.

Suggest a change in a food or method of preparation which will give the dinner appetite appeal. Not all of her selections need to be changed. On the blank to the left write the suggestion. On the right give a reason for the change.*

Substitutions	Karen's Selection	Reasons
	A. Creamed Chicken	
Baked Potato	B. Mashed Potatoes	adds color, texture, and shape
Broccoli	C. Buttered Cabbage	adds color
Tossed Salad	D. Pear Salad	adds crispness and color
	E. Milk	
	F. Banana Cream Pie	

*See back side of sheet for suggestions on scoring.

This item requires a flexible key for the substitutions because of the variety of suggestions which may be made to improve color, texture, flavor, and shape.

For example: the main dish may be changed in method of preparation as broiled chicken or roast chicken or the kind of meat as rib roast. This same procedure relates to all parts of the menu.

Generalizations:

AE. Nuts and similar foods are difficult for small children to chew properly and may lodge in the throat.

AF. Concentrated sweets dull the appetite for more nutritious foods and lead to a demand for more sweets.

AG. A healthy child requires no stimulants to sharpen his appetite.

AH. Restraint needs to be used in serving sweets to children because they are highly concentrated fuel foods.

AI. Simple desserts, as custards, ice cream and cookies, will satisfy a child's desire for sweets.

AJ. There is some difficulty in digestion of concentrated sweets by small children.

AK. A large intake of concentrated sweets tends to increase the amount of tooth decay.

AL. Frequent use of cola beverages is likely to replace milk in the diet of children.

XI. The FHA chapter sponsored a series of meetings for girls interested in baby sitting. At the second meeting snacks for children were discussed. The girls were asked to check the foods which were suitable to give to small children.

Below is a list of snack foods. Place a mark (x) before suitable food for children between 2 and 4 years of age. On the space to the right state a reason why you did not check the others.

	Snack Foods	Reasons for not checking
x	A. Grapefruit juice (slightly sweetened)	
x	B. Vanilla cookie	
	C. Tea (slightly sweetened)	(see generalization AG for scoring)
x	D. Apple sauce	
	E. Peanuts	(see generalization AE)
x	F. Tomato juice	
x	G. Carrot sticks	
x	H. Lemon milk pudding	
	I. Hershey bar (without nuts)	(see generalizations AF, AH, AJ and AK)
x	J. Ice cream	
	K. Coca Cola	(see generalizations AG, AF, and AL)

Generalizations: 9th

AM. Planning and following a plan of work makes a task easier and saves time.

AN. Assembling all materials for a particular kind of work before beginning work, saves time and avoids confusion.

AO. If dry ingredients are measured first and fats next, one measuring cup can be used for both.

AP. When foods are prepared in advance, time and energy are released for other activities immediately preceding a meal.

AQ. Using a double boiler prevents food from burning.

AR. Good planning of work permits dovetailing of jobs.

AS. When hot water instead of cold is placed in lower part of double boiler, cooking time is shortened.

AT. Time and energy are saved if the table is set by completing one place setting at a time.

AU. Work and time can be saved by rinsing a dish containing a starchy mixture in cold water.

AV. Time and energy are saved if soiled dishes are soaked immediately after using.

XII. Mrs. Jones was so pleased with the way her ninth-grade daughter, Jeanne, prepared the family breakfast Sunday morning that she called the home economics teacher to tell her. The following day the teacher asked Jeanne to summarize for the class what she did. Jeanne mentioned 10 good management procedures but she gave no reasons why they were good. In the blank space write the reason why each is a good practice.

A. I made a plan of work for myself the night before.	A. (See generalizations AM for scoring)
B. I assembled all my supplies and ingredients before I started to prepare the foods.	B. (See generalization AN)
C. I measured dry ingredients in measuring cup, then fat in same cup.	C. (See generalization AO)
D. I made enough cocoa syrup for five more breakfasts.	D. (See generalization AP)
E. I used the double boiler for cocoa.	E. (See generalization AQ)
F. I set the table while cocoa was cooking.	F. (See generalization AR)
G. I placed hot instead of cold water in bottom part of double boiler.	G. (See generalization AS)
H. I set the table by finishing one setting completely before going to the next.	H. (See generalization AT)
I. I rinsed the oatmeal pan in cold water then I soaked it while we ate breakfast.	I. (See generalization AU and AV)

Generalizations: 9th

AW. When hot water comes in contact with starch, the starch grains which the water reaches first swell, stick together, and surround dry starch grains forming lumps.

AX. Chocolate scorches easily because of its starch content.

AY. The scum which may form from heating the milk, when chocolate and cocoa beverages are made, is retarded if they are kept covered.

AZ. When chocolate and cocoa beverages are beaten just before serving, the beating breaks up the scum and the froth delays its formation.

BA. Green vegetables become a yellow-green color when cooked in a covered pan.

BB. High temperatures and prolonged heating toughen egg proteins, resulting in shrinkage and expression of fluid or curdling.

XIII. Mary Lou was telling her father how science is needed to understand food preparation. She started out fine, but later hestitated about the reasons for several preparation practices.

Below are some of these food preparation practices. Place a check (x) next to that letter in each group which is the best reason.

1. When preparing cocoa, mix cocoa with sugar, salt, and a small amount of cold water for the following reason:
   _____ A. so ingredients will blend well.
   __X__ B. hot water will cause starch to swell and become lumpy.
   _____ C. to separate the starch grains and prevent lumping.
   _____ D. so ingredients will dissolve.

2. Melt chocolate by placing pan over hot water rather than on direct heat because:
   _____ A. it will keep its color better.
   _____ B. chocolate would get lumpy.
   __X__ C. chocolate scorches easily.
   _____ D. it will mix more smoothly.
   _____ E. then chocolate won't stick to pan.

3. Cover a chocolate beverage during cooking:
   _____ A. so it will cook faster.
   _____ B. so the flavor will not evaporate.
   _____ C. to prevent loss of nutrients.
   __X__ D. to prevent scum from forming.
   _____ E. so it will keep its' color.

4. In hard cooking eggs keep water just below boiling:
   _____ A. so they will cook through evenly.
   _____ B. so eggs won't crack.
   _____ C. to keep the vitamins and minerals.
   __X__ D. so protein in egg will not become rubbery.

(over)

5. Beat chocolate beverages just before serving:

X A. so froth will delay forming of scum.
_____ B. so flavor will be thoroughly mixed.
_____ C. so chocolate won't settle to bottom.
_____ D. to prevent them from getting stiff.
_____ E. to give them a foamy look.

6. Keep green vegetables uncovered when cooking:

_____ A. to keep natural flavor.
_____ B. so strong flavor will leave.
_____ C. to help cook them faster.
X D. so they won't become a yellow-green color.
_____ E. so steam will not cook out the vitamins.

7. A custard is baked at 350 in a pan of water because:

_____ A. the milk will curdle if it is cooked at a higher temperature.
_____ B. the flour will not be cooked enough to make it thick if temperature is too low.
X C. a higher temperature than 350 can result in a watery custard.

Generalizations: 9th

BC. Foods with strong odors require an air tight container if stored in the refrigerator to prevent the odors from being taken up by other foods.

BD. Not all foods require the same degree of coldness to prevent spoilage.

BE. The more perishable foods as milk, meat, or fish require a lower temperature than fruits and vegetables.

BF. Since freezing does not destroy microorganisms and enzymes but only delays development, they become active when food is thawed.

BG. Foods containing fat absorb odors more readily than those with low fat content. Bland foods as water, ice cubes, potatoes, orange juice may also gradually take on flavors of foods with strong odors.

BH. Fresh vegetables and fruits, particularly those without protective covering, are kept crisp and plump for a longer time if evaporation is prevented.

XIV. Carol offered to clean the refrigerator Saturday morning. When she was ready to return the foods, she had to decide how and where to place them. Below is a list of the foods she needed to place in the refrigerator. Decide how or where it is best to store each food.

1. In the freezing unit
2. Tightly covered container or plastic bag
3. In the hydrator pan (vegetable crisper)
4. In refrigerator nearest the freezing unit.

In the blank at left write the number or numbers of the phrase which best tells how and where to store the food. In the space to the right tell the reason why.

List of Foods

A. Celery
B. Cantaloupe
C. Frozen peas
D. Coffee cream
E. Apples
F. Lettuce
G. Frozen Poultry (to be used 1 week later)
H. Orange juice (ready to drink)
I. Fresh tomatoes
J. Hamburger (to be used following day)
K. Left over ham salad

Reasons

2,3 A. (See generalization BH for scoring)
2 B. (See generalization BC)
1 C. (See generalization BF)
2,4 D. (See generalization BE)
3 E. (See generalization BH)
2,3 F. (See generalization BH)
1 G. (See generalization BF)
2 H. (See generalization BG)
2 or 3 I. (See generalization BH)
4 J. (See generalization BE)
4 K. (See generalization BE)

Generalization: 9th

BI. The skillful food manager plans menus in which there is variety in texture, flavor, color, and shape.

XV. The home economics class is serving a luncheon to faculty members. Mary and Jeanne are in charge of planning the menu. They agree that the three menus they have already planned are nutritious, but they are now trying to make a decision as to which one has the best variety in color, texture, and shape.

Below are three menus. Decide which one menu is the best and write that number in the square below. Explain the reasons why you made your choice. For example: if one of your reasons for choice is good variety in color, then indicate how variety in color has been obtained in the menu you chose.

Menus

1.
Cold Sliced Turkey
Pear & Cottage Cheese Salad
Hot Buttered French Toast
Angel Food Cake Lemon Sherbet
Coffee

2.
Spaghetti with Meat Balls
Tossed Salad
(carrot, celery, green pepper, lettuce)
Hard Rolls
Gold Cake with Butter Icing
Coffee

3.
Creamed Tuna on Biscuits
Cabbage and Pineapple Salad
Relish Plate
(celery sticks, cauliflower, fresh onions)
Coconut Cream Pie
Coffee

[2]

Variety in color - Brown meat, salad has orange, green, yellow.

Variety in texture - in soft spaghetti, crisp salad, hard rolls, soft cake.

Variety in flavor - tart salad, sweet cake, combination in main dish.

Variety in shape - rolls and meat balls and cake have shape.

Generalizations:

BJ. A good manager considers the time required to prepare each food so that too many time-consuming dishes are not included in the same day's menu.

BK. Dishes which use many ingredients, require several procedures, or are made in various stages (as whipped jellos and some frozen desserts) are usually more time consuming than those requiring less handling.

XVI. Stella's mother went to stay with the grandchildren for a weekend. Stella had full responsibility for preparing the meals for her father and two younger brothers. She was going to the school dance this Saturday night and still had to finish her dress and wash and set her hair, therefore, she had to save time wherever she could.

Below are the meals Stella planned. Some of the foods have a letter in front of them. For these suggest a substitute which will take less time to prepare and yet be equal to or higher in nutritional value than the food Stella planned.*

Menus

Breakfast

(A) Grapefruit Half
Oatmeal
Plain Toast
Hot Chocolate

Lunch

(B) Ham Casserole
Lettuce and Tomato Salad
(C) Fruit Jello
Chocolate Chip Cookies
Milk Tea

Dinner

(D) Pork Roast with Dressing
Baked Potatoes
(E) Creamed Green Beans
Cabbage Slaw
(F) Peach Pie

A. Grapefruit juice

B. Ham Sandwich

C. Fresh fruit

D. Pork roast without dressing

E. Buttered green beans

F. Canned peach halves

*See back side of sheet for suggestion on scoring.

The responses to Item XVI require much flexibility because of wide range of suggestions possible. The precaution to heed is that the suggestion requires less time to prepare and yet remains equal to or higher in nutritional value.

Generalization:

A. To maintain health it is necessary to have an adequate intake of essential nutrients. These will be supplied when a variety of foods from the four food groups is eaten each day.

The minimum recommended amounts are:

1. Milk (or equivalent) - adults 2 cups; adolescents 4 cups; children 3 to 4 cups.
2. Meat (or alternates)-- 2 servings.
3. Vegetables and fruits - 4 servings, 1 citrous daily and 1 dark green or deep yellow at least every second day..
4. Bread and cereals - 4 servings of whole grain, enriched, or restored.

XVII. The coach told Gordon Smith that if he intended to be considered for the athletic program he must change his eating habits. Gordon came to you with a list of foods he ate the preceding day and said, "Here is how I eat almost every day. What's wrong with this?"

Breakfast	Snack
Banana 2 Sweet Rolls Coffee--Cream	Pretzel Sticks and Pop

Lunch	Dinner
Potato Chips *2 Hamburgers - 2 buns Pickle Relish Coke Ice Cream	Beef Roast *2 Mashed Potatoes - Gravy Bread - Butter Chocolate Cake Coffee - Cream

Examine the foods Gordon ate for the day.

Place an x in front of food groups for which Gordon meets the daily requirements. For those not checked indicate in the space to the right how much more he needs.

____	1. Milk group	3-3/4 cups of milk
____	2. Vegetable-fruit group	1 citrus fruit
x	3. Meat group	
x	4. Bread-cereal group	

* All servings are single, average size unless more is indicated by a number. All bread and cereals are enriched.

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OHIO

The work of the State Board of Education and of the Department of Education for the year 1967 and pertinent statistics indicating the status of public schools in Ohio as of the school year 1966-1967 are provided to indicate the needs and problems of Ohio schools in developing solutions to issues confronting public education in an era of urbanization, technology and social change. The content includes sections relating to (1) State Board of Education, (2) Department of Education, (3) Department Services, (4) School Administration, (5) Instruction, (6) Vocational Education, (7) Federal Assistance, and (8) Vocational Rehabilitation. Some major accomplishments in vocational education were: (1) organization of 31 joint vocational school districts, (2) development of two residential vocational schools for disadvantaged youths and adults, (3) establishment of six manpower training centers for educational services for the unemployed, (4) an increase of 18,330 students enrolled in vocational education programs, (5) addition of three new vocational high schools in major cities, and (6) establishment of a center for job preparation and vocational rehabilitation in one major city Included are 83 tables and 3 figures illustrating the educational program in the state. (DM)

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State Board of Education

Columbus, Ohio

1967 ANNUAL REPORT

VT005864

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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To the Governor
And the Members
of The 107th
General Assembly

ANNUAL REPORT
1967

State Board of Education
Columbus, Ohio

State Board of Education

Columbus 15, Ohio

The Honorable James A. Rhodes
Governor of Ohio
Members of the 108th General Assembly

Gentlemen:

Pursuant to Section 3301.07, Revised Code, the State Board of Education submits for your consideration its Annual Report for the year 1967.

The information compiled herein summarizes the work of the State Board of Education and of the Department of Education. Pertinent financial and other statistics indicate the status of the public schools as of the school year 1966-67.

It is hoped that these data will be helpful in placing into proper perspective the needs and problems of Ohio schools and in developing solutions to the complex issues confronting public education in an era of urbanization, technology and social change.

Amid the demand for more and better education for an increasing number of boys and girls, grateful acknowledgement is made for the indispensable leadership of the Governor and General Assembly in directing the course of education in our state.

Respectfully submitted,

Edward C. Ames

Edward C. Ames, President
State Board of Education

Martin Essex

Martin Essex
Superintendent of Public Instruction

CONTENTS

Letter of Transmittal..... iii

STATE BOARD OF EDUCATION..... 1
About the State Board of Education..... 2
Major Highlights of 1966-67..... 3

DEPARTMENT OF EDUCATION..... 4
Summary of Departmental Conferences..... 5
Summary of Personnel..... 8

DEPARTMENT SERVICES..... 9
Computer Services and Statistical Reports..... 9
School Lunch..... 25
Property Utilization..... 27

SCHOOL ADMINISTRATION..... 28
School Finance..... 28
Public Law 874..... 31
Transportation..... 36
Field Services..... 41
School Building Assistance..... 43
School District Organization..... 49
State Schools for the Blind and Deaf..... 52
Ohio School for the Deaf..... 52
Ohio School for the Blind..... 53

INSTRUCTION..... 54
Elementary and Secondary Education..... 54
National Defense Education Act, Title III..... 56
General Adult Education..... 57
Guidance and Testing..... 58
Ohio Testing Service..... 58
Other Activities..... 59
Instructional Aids..... 60
Special Education..... 61
Field Services and Program Development..... 61
Statistical Report..... 63
Teacher Education and Certification..... 69

VOCATIONAL EDUCATION..... 73
Veteran's Training..... 81

FEDERAL ASSISTANCE..... 83
Programs for Disadvantaged Pupils..... 84
Public Law 89-313..... 87
Public Law 89-750..... 87
Migrant Children Programs..... 89

Libraries and Instructional Resources..... 90
Innovative Projects..... 94
Strengthening of State Department..... 96
Economic Opportunity Act..... 98

VOCATIONAL REHABILITATION..... 102
Services..... 102
New Vocational Rehabilitation Programs..... 103

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FIGURES

A Department of Education Organization Chart..... 7

B Pupil Transportation Service Regions..... 40

C Estimated Expenditures of Title II Funds by School Districts..... 91

LIST OF TABLES

Number		Page
I	Enrollment by Grades, September 1966.....	10
II	Enrollment by Grade, End of School 1966-67.....	11
III	Total Public School Enrollments by Years.....	12
IV	Trends in Enrollment by Grades.....	13-14
V	Enrollment by Age, September 1966.....	15
VI	Trends in Enrollment by Ages.....	16
VII	Total Aggregate Days of Attendance, Absence, Membership.....	17
VIII	Average Daily Membership.....	17
IX	Average Daily Attendance.....	17
X	High School Graduates, 1967.....	18
XI	June Graduates, Ohio Public High Schools.....	19-21
XII	Graduates Who Plan to Attend College.....	22
XIII	Graduates Unable to Attend in Top 25%.....	22
XIV	Number of Full Time Teachers, 1966-67.....	23
XV	Holding Power of Ohio Public Schools.....	24
XVI	Ohio's Educational Program.....	24
XVII	Educational Level of Ohio's Population.....	24
XVIII	National School Lunch Program, Ohio's Participation.	25
XIX	Special Milk Program.....	26
XX	National School Lunch and Special Milk Programs.....	26
XXI	Value of Surplus Property Transferred to Schools and Institutions, 1958 to 1967.....	27
XXII	Foundation Program Subsidies.....	29
XXIII	Foundation Program Breakdown, 1966-67.....	29
XXIV	Ohio Foundation Program Support to Formula and Non Additional Aid Districts.....	30
XXV	Current Operation Costs Per Pupil in Average Daily Membership.....	30
XXVI	Proportion of Local and State Funds for Current School Operating Expenses.....	30
XXVII	Payments to School Districts Under P.L. 81-874 and P.L. 81-815.....	31-35
XXVIII	Pupils Transported in Districts Providing Transportation Services, 1966-67.....	37

XXIX	School Buses Used in Pupil Transportation, 1966-67...	38
XXX	Miles Traveled in Daily Bus Routes, 1966-67.....	38
XXXI	Other Vehicles Used in Pupil Transportation, 1966-67 (Parents, Public Utilities).....	39
XXXII	Annual Operating Costs for Pupil Transportation, 1966-67.....	39
XXXIII	State-Assisted Buildings under Construction, 1966-67.	43
XXXIV	Status of Building Projects Granted Conditional Approval.....	44
XXXV	Summary of Construction Bids Received Since January 1, 1967 on School Building Projects, Pursuant to Section 3318, Revised Code of Ohio.....	44-46
XXXVI	Status of Building Assistance Funds, June 30, 1967...	48
XXXVII	School Districts by Enrollment Size, Fall 1966.....	50
XXXVIII	Trend in Number of Ohio Districts.....	51
XXXIX	Number of Ohio Schools, 1966-67.....	55
XL	Matching Funds to School Districts Under NDEA Title III.....	56
XLI	Ohio Workshops Funded by NDEA Title III, 1966-67.....	56
XLII	Chartered Evening High Schools in Ohio.....	57
XLIII	Growth of Secondary Guidance Programs in NDEA.....	58
XLIV	Approved Special Education Units and Enrollments, 1966-67.....	63-64
XLV	Growth of Special Education Enrollments.....	65
XLVI	Number of Handicapped Pupils Receiving Individual Services.....	66
XLVII	State Expenditures for Individual Services to Handicapped Children.....	66
XLVIII	Special Education Teacher Training Contract Costs....	66
XLIX	Legal Dismissals from Public School Attendance.....	67
L	Number of Blind Children Receiving Services Through the American Printing House for the Blind.....	68
LI	Annual Teacher Loss from Ohio Public Schools.....	70
LII	Sources of New Certificated Personnel Yearly in Ohio Public Schools.....	70
LIII	Teachers Needed but Unavailable after Start of School Year.....	70
LIV	Degree Status of Certificated Personnel in Ohio Schools.....	71
LV	Teaching Certificates Issued, 1966-67.....	71
LVI	Estimated 1966-67 Enrollments in Ohio Teacher Preparation Institutions.....	71-72
LVII	Supply of Teachers from Ohio Colleges.....	72
LVIII	Summary of Enrollments in Vocational Education Programs.....	75
LVIX	Trend in Vocational Education High School Enrollment.....	76
LX	Trend in Vocational Adult Enrollments.....	76

LXI Technical Education Programs Under the Direction of the State Board of Education, 1966-67..... 77
LXII Vocational Teacher In-service Workshops, 1966-67..... 79-81
LXIII Institutions Approved for Veterans Training..... 82
LXIV Number of School Districts Title I Programs in 1966-67..... 85
LXV Title I Projects for Educational Needs of Handicapped Children in State-Operated Institutions..... 87
LXVI Title I Projects for Educational Needs of Orphaned, Neglected, and Delinquent Children in State-Operated Institutions..... 88
LXVII Non-Title I Migrant Educational Programs..... 89
LXVIII Expenditures for FY 1966 and 1967, Title I..... 89
LXIX Summary of ESEA Title II Grants in Relation to Number of Districts..... 90
LXX Summary of Title II Grants Made During FY 1967 by Districts and Funds..... 91
LXXI Summary of Special Purpose Grants, ESEA Title II, 1966-67..... 92-93
LXXII Title III Projects Approved for Local Education Agencies in Ohio..... 94
LXXIII Title III Grants to Local Education Agencies in Ohio from the Beginning of the Program through July, 1967..... 95
LXXIV Organizational Patterns of Title III Projects in Ohio..... 95
LXXV Adult Basic Education Grants Made During FY 1967..... 99
LXXVI Adult Basic Education Programd During FY 1967..... 99
LXXVII Adult Basic Education Program Cost, Fiscal Year 1967..... 100
LXXVIII Disabled Caseload Data..... 105
LXXIX Characteristics of the 3,172 Disabled Ohioans Rehabilitated in 1966-67..... 107
LXXX Source of Support at Acceptance..... 107
LXXXI Referral Sources..... 108
LXXXII Jobs After Rehabilitation..... 108
LXXXIII Major Disabilities..... 109

STATE BOARD OF EDUCATION ROSTER

1968

Name	Residence	District	Term Expires
	President		
Edward C. Ames	Toledo	9th	12-31-71
	Vice-President		
Jeannette S. Wagner	Chagrin Falls	23rd	12-31-71
Lorin E. Bixler	New Concord	17th	12-31-71
Russell H. Davis	Bratenahl	20th	12-31-69
Donn J. Force	Columbus	15th	12-31-73
Susan D. George	Canton	16th	12-31-71
Robert J. Grogan	Cleveland Heights	22nd	12-31-69
Robert J. Jaskulski	Garfield Heights	21st	12-31-71
William Judd	Cincinnati	1st	12-31-69
Everett L. Jung	Hamilton	24th	12-31-73
Robert A. Lyons, Sr.	Dayton	3rd	12-31-73
John R. Meckstroth	Cincinnati	2nd	12-31-73
Elliott E. Meyers	Ironton	10th	12-31-71
Ward M. Miller	Portsmouth	6th	12-31-69
John M. Scott	Xenia	7th	12-31-69
Wayne E. Shaffer	Bryan	5th	12-31-73
Cecil M. Sims	Piqua	4th	12-31-71
Francis W. Spicer	Akron	14th	12-31-69
Bryon Wade	Youngstown	19th	12-31-73
Jay E. Wagner, Jr.	Sandusky	13th	12-31-69
Paul L. Walker	Bexley	12th	12-31-73
Robert W. Walker	Adena	18th	12-31-71
Bryce L. Weiker	Republic	8th	12-31-69
Alan D. Wright	Mentor	11th	12-31-73

STATE BOARD OF EDUCATION

ABOUT THE STATE BOARD OF EDUCATION

Organized in 1956, the State Board of Education has met almost monthly since its inception in order to keep abreast of the responsibilities and problems confronting it in an era of unprecedented educational demands and developments. Only four meetings a year are mandated.

As the policy making body for public education in Ohio, the State Board of Education's responsibilities include--

- Formulating and administering educational policies relating to instruction, teaching materials, buildings and equipment, transportation of pupils, finance and school district organization;
- Apportioning State and Federal funds to elementary and secondary schools;
- Prescribing minimum school standards;
- Determining who should teach and how they should be prepared;
- Operating the State Schools for the Blind and Deaf;
- Serving as the State Board of Vocational Education and State Board of Vocational Rehabilitation;
- Hearing important issues as a board of review;
- Cooperating with other State and Federal agencies concerning the health and welfare of youth.

Board members are elected directly by the people, on a nonpartisan basis, from each of the 24 Congressional districts. Terms are for six years.

REGULAR MEETINGS OF THE BOARD are on the second Mondays of January, April, July and October. When special meetings are called, they are usually arranged on the second Mondays of other months. Meetings ordinarily begin at 11 a.m.

THE ORDER OF BUSINESS usually followed by the Board is: Call to order, Roll call, Approval of minutes, Public participation, Communications, Report

of the State Superintendent, Old business, New business, Miscellaneous business and Adjournment.

MAJOR HIGHLIGHTS OF 1966-67

During the 1966-67 school year the Board--

Took action toward establishing a Division on Urban Education.

Established the Advisory Council on Teacher Education and Certification that is conducting a comprehensive review of the needs and problems in preparing personnel for classroom service.

Authorized a two-year study of vocational rehabilitation facilities and programs in Ohio by an Advisory Council.

Submitted a Master Plan for School District Organization to the 107th General Assembly.

Completed school district organization studies of 4 counties, acted on 6 requests for transfers of territory; approved proposals for the creation of 4 joint vocational districts; and granted 46 applications for high school charters.

Acted on 112 requests for bond issue elections in excess of 6 per cent but not more than 9 per cent of assessed valuation.

Approved 62 vocational work study programs.

Approved new teacher education programs at Antioch College, Kent State University, University of Cincinnati and Ashland College.

Reviewed 13 sets of plans for state assistance school construction funds and approved 9 sets of plans.

Approved 2,296 vocational education units for state foundation or Vocational Education Act funds reimbursement; an increase of 529 units of the previous year.

Approved contracts for training special education teachers with Bowling Green State University, Kent State University and Western Reserve University.

Approved the budgets of the state's 88 county boards of education.

Expanded special education, providing services to 491 school districts, an increase of 17 districts over the previous year.

Established policy on requirements for vocational education programs to assist school districts in complying with provisions of Revised Code Section 3313.90.

DEPARTMENT OF EDUCATION

Under the direction of the State Board of Education, the State Department of Education is organized to provide leadership, research and service to Ohio schools. Some of the major functions of the Department include:

THE DIVISION OF ELEMENTARY AND SECONDARY EDUCATION administers Board-approved standards for 4,161 public schools and 906 non-public schools.

THE DIVISION OF VOCATIONAL EDUCATION supervises vocational programs serving 85,870 high school students and 149,713 adults.

THE DIVISION OF GUIDANCE AND TESTING provides services to 3,108 school counselors and supports the administration of 870,000 tests in local districts.

THE DIVISION OF SPECIAL EDUCATION administers programs for 180,000 handicapped children in 4,084 teaching units.

THE DIVISION OF TEACHER EDUCATION AND CERTIFICATION supervises the preparation of teachers in 52 institutions graduating approximately 9,500 students annually, and issues 66,570 teaching certificates a year.

THE DIVISION OF SCHOOL FINANCE administers $331,758,897 annually in the State Foundation Program and pupil transportation for 1,049,400 children.

THE DIVISION OF SCHOOL DISTRICT ORGANIZATION assists Ohio's 685 districts in planning for more effective administration of schools.

THE DIVISION OF INSTRUCTIONAL MATERIALS operates an instructional film library of 2,431 titles.

THE DIVISION OF COMPUTER SERVICES AND STATISTICAL REPORTS provides data on Ohio's 685 school districts, 99,000 teachers and 2,319,866 school children.

THE DIVISION OF FEDERAL ASSISTANCE reviews, approves and evaluates projects

under Titles I and II of the Elementary and Secondary Education Act, which are among 31 federal programs bringing approximately $101,515,000 to Ohio schools.

THE SCHOOL FOOD SERVICES SECTION supervises cafeteria programs in 2,443 schools, providing lunches for an average of 725,439 students daily.

THE SCHOOL BUILDING SECTION administers a building assistance program for Ohio schools which has reached a total of $81,000,000 since 1957.

THE BUREAU OF VOCATIONAL REHABILITATION in 1967 assisted a total of 3,698 Ohioans to obtain initial or more suitable employment.

THE STATE SCHOOLS FOR THE BLIND AND DEAF provide a residential educational program for 440 students.

SUMMARY OF DEPARTMENTAL CONFERENCES

Department of Education staff members conducted 1,148 planning conferences and attended 4,308 other conferences throughout the state and nation to assist in developing programs to keep the schools abreast of new educational demands.

The Department conducted or participated in conferences and meetings for the purpose of disseminating information, explanation of new programs, and in-service education of teachers and administrators as follows:

	Conferences	Participants
Local	2,967	116,741
State	4,306	208,683
Regional or National	355	92,868
TOTAL	7,628	418,292

Office consultation was provided to groups and individuals, as follows:

Educators	14,050
Boards of Education	485
Others	5,256
TOTAL	19,791

Department personnel gave 2,248 addresses to groups and organizations throughout Ohio and the nation and spent 16,576 days in the field, including 9,853 visits to schools meeting with educators, conducting conferences and being consultants to educators.

Field consultations were with the following:

Administrators	10,364
Boards of Education	422
Others (school staffs, colleges, lay organizations)	5,366
TOTAL	16,152

Complete school evaluations during the 1966-67 year were accomplished for 172 high schools and 2 elementary schools.

Various school program evaluations numbered 2,110. These included such areas as school lunch programs, transportation programs, vocational and academic programs and others.

The Ohio Department of Education Organizational Chart

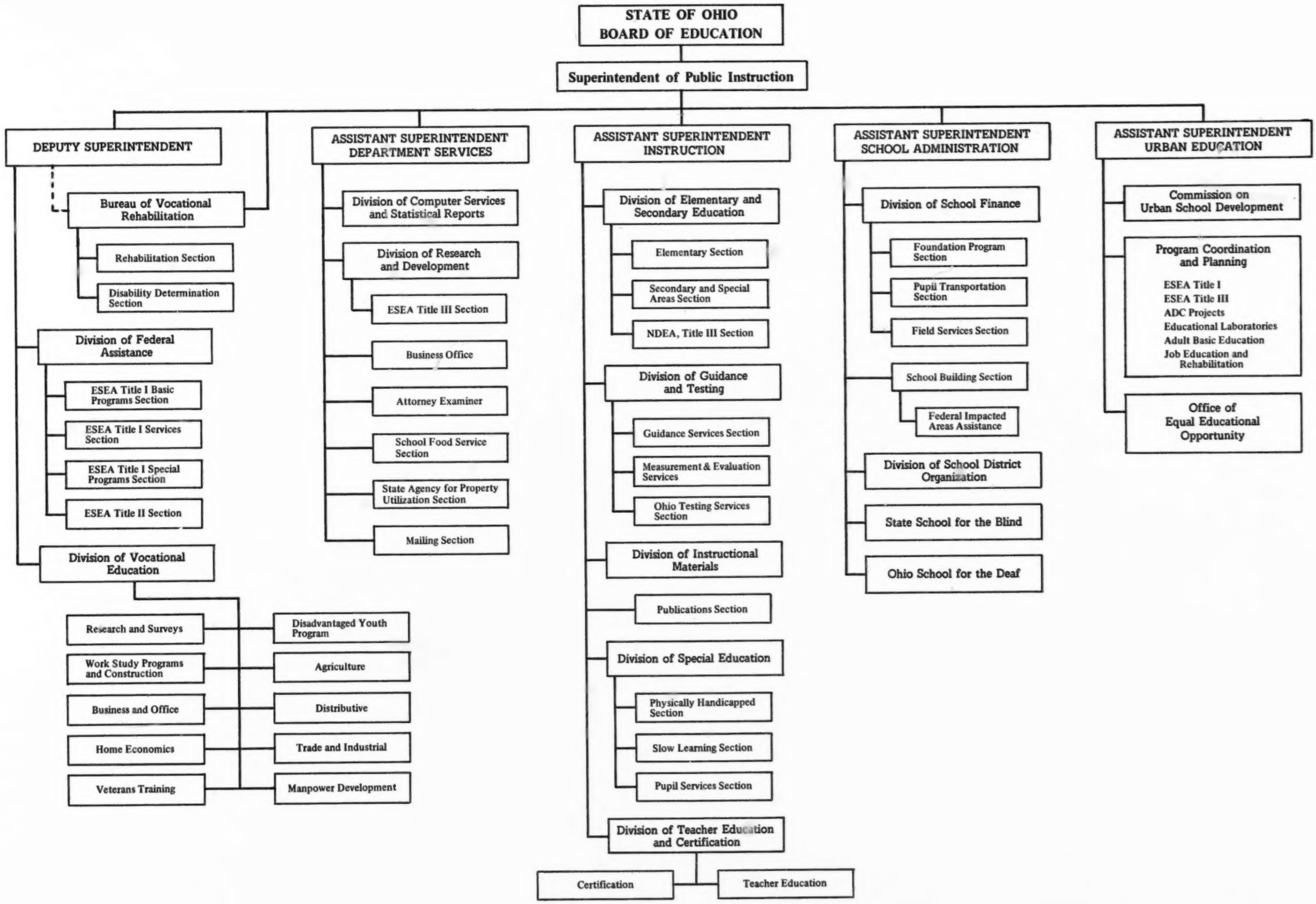

Figure A

DEPARTMENT OF EDUCATION SUMMARY OF PERSONNEL

	Professional	Clerical & Maintenance
General Administration	10	10
Department Services		
Business Office	1	8
Computer Services & Statistical Reports	9	16
Mail Room	0	4
Property Utilization	2	16
School Lunch	9	6
School Administration		
Building Section	5	3
School for Blind	47	48
School for Deaf	62	61
School District Organization	3	0
School Finance	1	1
Field Services	37	31
Foundation Program	3	1
Transportation	4	3
Instruction		
Elementary and Secondary	23	12
Guidance and Testing	15	26
Instructional Aids	4	21
Special Education	18	13
Teacher Education & Certification	4	11
Title III-NDEA	7	4
Vocational Education	22	23
Federal Assistance	20	18
Title III-ESEA	2	1
Vocational Rehabilitation	227	149
Disability Determination	55	42
TOTALS	640	528

DEPARTMENT SERVICES

Department services includes six functional areas: Division of Computer Services and Statistical Reports, Business Office, Department Attorney, School Lunch Program, State Agency for Property Utilization, and Mailing and Duplicating. Information about the three areas of service associated most closely with school operation--statistics, property utilization and school lunch--is reported in the following sections.

Computer Services and Statistical Reports

The Division of Computer Services and Statistical Reports operates mainly with funds from Title V of the Elementary and Secondary Education Act, Title X of the National Defense Education Act, and from the State General Revenue fund. Computer service to the Department of Education is provided by the division in the following areas: school foundation program, pupil transportation, bus maintenance programs, teacher certification, statistical reports from school districts, principal reports, internal accounting, and testing. In addition, services are provided school systems for assistance in the establishment of data processing systems and organizing workshops for school directors of data processing.

The following statistical information is drawn from data compiled by the division.

TABLE I

ENROLLMENT BY GRADES, SEPTEMBER 1966

Grade	Cities	Exempted Villages	Counties	State
1	130,159	9,575	76,472	216,206
2	114,963	9,155	69,778	193,896
3	112,911	8,907	68,683	190,501
4	109,918	9,041	68,808	187,767
5	104,777	8,620	66,300	179,697
6	100,073	8,398	64,248	172,719
7	102,142	8,559	64,253	174,954
8	98,451	8,126	61,831	168,408
Total 1-8	873,394	70,381	540,373	1,484,148
9	104,492	8,981	62,574	176,047
10	100,751	8,002	58,490	167,243
11	87,458	7,205	51,609	146,272
12	78,882	6,800	48,210	133,454
Total 9-12	371,583	30,988	220,883	623,454
Total 1-12	1,244,977	101,369	761,256	2,107,602
Kindergarten	121,162	7,554	43,638	172,354
Special	29,849	969	9,092	39,910
Grand Total	1,395,988	109,892	813,986	2,319,866

TABLE II

ENROLLMENT BY GRADE END OF SCHOOL YEAR 1966-67

Grade	City Total	Exempted Village Total	County Total	State Total		
				Boys	Girls	Total
1	129,471	9,636	76,333	112,817	102,623	215,440
2	114,287	9,110	69,491	99,913	92,975	192,888
3	112,203	8,882	68,817	97,488	92,417	189,907
4	109,425	9,066	68,524	95,190	91,825	187,015
5	104,379	8,612	66,105	91,266	87,830	179,096
6	99,936	8,403	64,003	87,977	84,365	172,342
7	102,064	8,511	63,962	89,360	85,177	174,537
8	97,920	8,019	61,332	85,466	81,795	167,261
Total 1-8	869,690	70,238	538,557	759,477	719,009	1,478,486
9	102,486	8,803	61,194	88,559	83,924	172,483
10	95,827	7,834	56,889	82,029	78,521	160,550
11	83,144	6,974	49,564	71,387	68,295	139,682
12	77,152	6,643	47,243	65,863	65,175	131,038
Total 9-12	358,609	30,254	214,890	307,838	295,915	603,753
Total 1-12	1,228,299	100,493	753,447	1,067,315	1,014,924	2,082,239
Kindergarten	118,453	7,454	43,157	86,542	82,522	169,064
Special	29,760	925	8,357	24,642	14,400	39,042
Grand Total	1,376,512	108,872	804,961	1,178,499	1,111,846	2,290,345

TABLE III

TOTAL PUBLIC SCHOOL ENROLLMENTS BY YEARS
(Fall Enrollments)

Year	Enrollment	Percent Increase
1956-57	1,658,014	4.236
57-58	1,737,298	4.781
58-59	1,797,658	3.474
59-60	1,870,858	4.071
60-61	1,933,511	3.348
61-62	2,001,394	3.510
62-63	2,082,134	4.034
63-64	2,163,443	3.905
64-65	2,230,124	3.082
65-66	2,271,420	1.852
66-67	2,319,866	2.133

TABLE IV

TRENDS IN ENROLLMENT BY GRADES

	September 1954	September 1955	September 1956	September 1957	September 1958	September 1959
1	172,692	176,323	174,445	183,780	178,403	187,544
2	171,346	164,696	166,451	163,305	166,662	175,817
3	141,148	165,716	157,767	185,224	161,044	164,454
4	119,240	136,954	163,451	158,292	158,195	155,668
5	116,604	115,078	135,131	161,213	154,642	156,068
6	121,939	114,918	114,114	133,539	157,639	152,998
7	123,349	126,224	119,330	118,629	136,926	160,872
8	108,644	119,569	122,864	116,931	115,778	133,904
Total 1-8	1,074,962	1,119,478	1,153,553	1,195,913	1,229,289	1,287,325
9	104,938	111,510	122,832	126,713	120,474	119,437
10	91,238	96,290	102,619	115,019	119,673	112,181
11	78,979	80,258	83,619	90,592	102,691	105,000
12	64,955	70,190	70,305	74,111	80,699	91,627
Total 9-12	339,210	358,248	379,375	406,435	423,537	428,245
Total 1-12	1,414,172	1,477,726	1,532,928	1,602,348	1,652,826	1,715,520
Kindergarten	99,991	101,248	112,522	119,937	125,657	132,691
Unclassified	12,728	11,658	12,564	15,013	19,175	22,597
Grand Total	1,526,891	1,590,632	1,658,014	1,737,298	1,797,658	1,870,858

TABLE IV (Continued)

	September 1960	September 1961	September 1962	September 1963	September 1964	September 1965	September 1966
1	191,300	196,585	201,430	208,962	216,005	216,735	216,206
2	175,769	179,679	183,033	187,561	194,663	193,205	193,896
3	170,152	170,843	176,076	179,532	183,942	191,284	190,501
4	163,874	165,918	167,023	172,444	175,799	180,973	187,767
5	156,099	159,858	162,867	165,315	170,372	174,113	179,697
6	155,331	151,661	157,258	161,217	163,244	169,483	172,719
7	157,827	159,276	156,222	161,713	166,138	168,640	174,954
8	158,129	154,924	155,915	154,092	160,471	165,208	168,408
Total 1-8	1,328,481	1,338,744	1,359,824	1,390,836	1,430,634	1,459,641	1,484,148
9	139,587	167,114	164,578	165,803	164,144	171,328	176,047
10	112,167	133,674	159,532	157,744	160,344	160,013	167,243
11	98,940	100,380	120,705	147,162	144,301	146,383	146,272
12	93,850	89,129	89,948	110,995	135,380	131,391	133,892
Total 9-12	444,544	490,297	534,763	581,704	604,169	609,115	623,454
Total 1-12	1,773,025	1,829,041	1,894,587	1,972,540	2,034,803	2,068,756	2,107,602
Kindergarten	140,053	149,055	195,170	159,744	161,020	165,071	172,354
Unclassified	20,433	23,298	28,377	31,159	34,301	37,593	39,910
Grand Total	1,933,511	2,001,394	2,082,134	2,163,443	2,230,124	2,271,420	2,319,866

TABLE V

ENROLLMENT BY AGE, SEPTEMBER 1966

Age	Cities	Exempted Villages	Counties	State
Under 6	121,406	7,458	44,773	173,637
6	115,022	8,813	67,941	191,776
7	111,337	8,922	67,436	187,695
8	110,723	8,737	68,388	187,848
9	112,313	9,173	69,813	191,299
10	108,135	8,826	67,113	184,074
11	105,756	8,505	65,533	179,794
12	104,737	8,742	65,315	178,794
13	100,403	8,200	62,616	171,219
14	105,736	8,858	63,265	177,859
15	103,297	8,286	60,861	172,444
16	96,517	7,780	56,004	160,301
17	78,879	6,370	45,511	130,760
18	17,987	1,008	7,806	26,801
19	3,211	182	1,401	4,794
20	361	22	152	535
Over 20	168	10	58	236
Grand Total	1,395,988	109,892	813,986	2,319,866

TABLE VI

TRENDS IN ENROLLMENT BY AGES

Ages	September 1961	September 1962	September 1963	September 1964	September 1965	September 1966
Under 6	150,940	156,806	163,768	164,263	165,014	173,637
6	181,200	182,928	188,997	192,589	196,092	191,776
7	176,805	176,707	181,089	189,224	184,606	187,695
8	169,380	174,094	176,126	181,535	189,255	187,848
9	166,297	167,959	174,755	177,496	183,442	191,299
10	160,982	165,847	167,585	174,713	177,787	184,074
11	154,106	161,708	166,320	168,402	176,509	179,794
12	157,155	155,741	162,088	166,953	169,749	178,794
13	157,440	159,631	157,003	163,627	170,176	171,219
14	175,765	163,413	165,255	163,970	171,442	177,859
15	131,193	177,963	163,491	166,369	165,292	172,444
16	111,061	127,810	172,547	158,224	161,623	160,301
17	80,291	86,744	102,238	135,320	127,997	130,760
18	22,235	20,289	17,994	23,232	27,481	26,801
19	6,152	3,704	3,431	3,426	4,204	4,794
20	286	529	488	523	492	535
Over 20	106	266	268	258	259	236
Total	2,001,394	2,082,134	2,163,443	2,230,124	2,271,420	2,319,866

TABLE VII

TOTAL AGGREGATE DAYS OF
ATTENDANCE, ABSENCE, MEMBERSHIP

	Cities	Exempted Villages	Counties	Total
Attendance				
Elementary	147,853,015	12,218,384	91,607,441	251,678,840
Secondary	88,076,237	6,324,067	44,735,769	139,136.073
Total	235,929,252	18,542,451	136,343,210	390,814,913
Absence				
Elementary	8,790,407	625,231	4,846,976	14,262,614
Secondary	6,142,904	351,339	2,703,195	9,197,438
Total	14,933,311	976,570	7,550,171	23,460,052
Membership				
Elementary	156,643,422	12,843,615	96,454,417	265,941,454
Secondary	94,219,141	6,675,406	47,438,964	148,333,511
Total	250,862,563	19,519,021	143,893,381	414,274,965

TABLE VIII

AVERAGE DAILY MEMBERSHIP

	Cities	Exempted Villages	Counties	Total
Elementary	867,524.70	71,857.93	540,778.80	1,480,161.43
Secondary	521,123.20	37,346.92	265,823.26	824,293.38
Total	1,388,647.90	109,204.85	806,602.06	2,304,454.81

TABLE IX

AVERAGE DAILY ATTENDANCE

	Cities	Exempted Villages	Counties	Total
Elementary	818,885.70	68,360.62	513,608.50	1,400,854.82
Secondary	487,197.37	35,381.92	250,676.24	773,255.53
Total	1,306,083.07	103,742.54	764,284.74	2,174,110.35

TABLE X

HIGH SCHOOL GRADUATES, 1967

Graduates	Cities	Exempted Villages	Counties	State
Regular				
Boys	33,423	3,316	23,336	64,075
Girls	37,867	3,179	23,494	64,540
Total	71,290	6,495	46,830	128,615
Differentiated				
Boys	729	40	55	824
Girls	721	53	51	825
Total	1,450	93	106	1,649
Evening				
Boys	833	0	13	846
Girls	1,121	1	14	1,136
Total	1,954	1	27	1,982
Equivalent Certificate				
Boys	141	8	32	181
Girls	96	1	8	105
Total	237	9	40	286
Grand Total				
Boys	39,126	3,364	23,436	65,926
Girls	39,805	3,234	23,567	66,606
Total	78,931	6,598	47,003	132,532
Number planning to attend college	33,977	2,774	17,234	53,985
Number in top 25% of class financially unable to attend college*	1,196	171	1,514	2,881

*As reported Statistical Report From 5-A

TABLE XI

JUNE GRADUATES, OHIO PUBLIC HIGH SCHOOLS

Counties	1960	1961	1962	1963	1964	1965	1966	1967
Adams	247	246	257	220	304	317	304	302
Allen	1,055	1,034	1,086	983	1,217	1,421	1,399	1,383
Ashland	507	510	438	458	544	634	589	586
Ashtabula	1,027	1,088	1,032	1,045	1,204	1,485	1,405	1,400
Athens	541	494	512	485	488	663	684	567
Auglaize	409	420	397	391	490	591	596	611
Belmont	945	968	876	859	1,080	1,246	1,164	1,075
Brown	256	274	238	270	277	372	338	348
Butler	1,628	1,701	1,645	1,644	2,163	2,688	2,503	2,567
Carroll	170	189	195	202	187	234	238	215
Champaign	391	416	423	375	462	578	558	485
Clark	1,228	1,281	1,174	1,259	1,675	1,835	1,909	2,050
Clermont	669	742	634	767	852	1,123	1,101	1,231
Clinton	324	427	374	385	477	540	505	546
Columbiana	1,214	1,256	1,169	1,100	1,353	1,633	1,577	1,592
Coshocton	332	340	326	353	379	525	527	512
Crawford	572	597	571	582	633	840	820	765
Cuyahoga	12,539	12,970	12,147	12,787	15,354	19,137	18,885	19,008
Darke	571	573	516	488	606	718	735	711
Defiance	365	404	404	374	438	556	497	534
Delaware	365	406	388	399	493	556	573	538
Erie	663	765	683	659	866	1,072	1,041	1,097
Fairfield	664	738	701	635	819	1,054	1,022	1,042
Fayette	257	242	240	279	314	412	387	381
Franklin	5,555	4,978	4,855	4,931	6,501	8,031	8,410	8,496
Fulton	478	468	456	443	497	593	563	581
Gallia	305	322	264	253	333	371	343	339
Geauga	449	571	516	555	673	794	766	765
Greene	940	976	937	1,028	1,361	1,670	1,648	1,683
Guernsey	407	381	348	305	403	494	436	439
Hamilton	5,224	5,237	5,137	5,200	6,332	8,178	7,845	8,254
Hancock	621	648	633	632	747	900	852	825

TABLE XI (Continued)

Counties	1960	1961	1962	1963	1964	1965	1966	1967
Hardin	444	428	418	409	442	578	569	552
Harrison	269	257	247	241	254	336	306	314
Henry	363	394	341	317	421	429	472	466
Highland	382	374	376	379	390	509	442	447
Hocking	235	197	187	205	256	309	269	260
Holmes	141	161	141	165	161	202	199	210
Huron	569	591	568	605	679	815	755	785
Jackson	342	380	387	316	400	523	495	461
Jefferson	1,148	1,037	995	986	1,234	1,385	1,347	1,474
Knox	447	465	450	395	506	636	620	601
Lake	1,356	1,463	1,477	1,484	1,972	2,463	2,457	2,473
Lawrence	609	603	542	558	699	871	735	812
Licking	843	871	834	886	1,157	1,384	1,362	1,506
Logan	464	408	392	363	476	540	423	517
Lorain	1,956	2,228	1,953	2,038	2,591	3,423	3,302	3,331
Lucas	3,742	3,880	3,719	3,753	4,810	5,683	5,547	5,530
Madison	245	288	305	292	361	427	423	420
Mahoning	3,055	2,975	2,538	2,599	3,342	3,930	3,989	3,972
Marion	687	655	588	606	715	893	865	864
Medina	764	710	729	734	891	1,173	1,168	1,109
Meigs	304	280	268	256	310	340	342	384
Mercer	427	477	396	455	472	585	564	580
Miami	1,183	893	854	828	982	1,163	1,159	1,196
Monroe	184	242	190	229	247	268	278	264
Montgomery	4,196	4,704	4,606	4,698	5,678	7,368	7,191	7,242
Morgan	143	156	153	144	158	221	208	158
Morrow	281	268	267	245	292	342	350	288
Muskingum	776	833	818	783	899	1,155	1,119	1,081
Noble	146	146	118	137	166	189	183	215
Ottawa	440	442	423	425	509	586	616	606
Paulding	238	234	208	220	255	290	310	314
Perry	293	303	319	304	370	430	378	429
Pickaway	344	323	305	330	384	458	436	460
Pike	243	239	266	232	308	328	313	337

TABLE XI (Continued)

Counties	1960	1961	1962	1963	1964	1965	1966	1967
Portage	860	922	858	841	1,122	1,414	1,424	1,378
Preble	423	421	424	405	512	600	593	605
Putnam	396	367	387	388	448	478	538	544
Richland	1,232	1,174	1,076	1,236	1,515	1,838	1,924	1,802
Ross	548	580	565	541	710	805	743	785
Sandusky	649	649	531	652	786	883	868	871
Scioto	920	908	897	903	11067	1,251	1,250	1,216
Seneca	551	556	539	525	642	763	724	733
Shelby	368	360	372	376	447	551	499	548
Stark	3,193	3,627	3,407	3,382	4,410	5,255	5,202	5,287
Summit	4,823	5,071	4,820	5,145	6,658	8,052	7,723	7,656
Trumbull	2,472	2,407	1,995	2,222	2,847	3,407	3,337	3,441
Tuscarawas	946	905	756	737	1,001	1,197	1,079	1,119
Union	256	296	262	258	306	327	329	291
Van Wert	335	308	253	254	330	338	374	384
Vinton	162	148	153	125	160	199	159	155
Warren	559	591	586	676	804	996	976	999
Washington	631	604	560	606	789	943	789	824
Wayne	873	863	785	833	1,000	1,176	1,018	1,211
Williams	387	417	391	393	427	551	463	518
Wood	810	815	780	814	958	1,150	1,057	1,156
Wyandot	332	267	234	232	276	365	351	360
Total	89,903	91,824	86,681	88,506	109,524	133,932	130,832	132,532

TABLE XII

GRADUATES WHO PLAN TO ATTEND COLLEGE

	1960	1961	1962	1963	1964	1965	1966	1967
Number	NA	33,368	31,946	34,224	44,227	54,138	52,806	53,985
Percent of Graduates		36.34	36.85	38.67	40.38	40.42	40.36	40.73

TABLE XIII

GRADUATES UNABLE TO ATTEND IN TOP 25%

	1960	1961	1962	1963	1964	1965	1966	1967
Number	NA	3,853	3,054	2,191	3,443	3,570	3,396	2,881
Percent of Graduates		4.20	3.52	3.30	3.14	2.66	2.60	2.09

TABLE XIV

NUMBER OF FULL TIME TEACHERS 1966-67*

Type of School	Cities	Exempted Villages	Counties	Total
Kindergarten	1,885	111	690	2,686
Elementary				
Men	3,552	352	2,956	6,860
Women	23,599	1,893	14,613	40,105
Total	27,151	2,245	17,569	46,965
Secondary				
Men	12,191	973	7,234	20,398
Women	9,707	687	5,214	15,608
Total	21,898	1,660	12,448	36,006
Special Classes				
Men	834	86	325	1,245
Women	1,554	123	631	2,308
Total	2,388	209	956	3,553
Grand Total				
Men	16,577	1,411	10,518	28,506
Women	36,745	2,814	21,145	60,704
Total	53,322	4,225	31,663	89,210

*Classroom Teachers Only

TABLE XV

HOLDING POWER OF OHIO PUBLIC SCHOOLS

The table below shows the percent of children enrolled in the first grade a given year who graduate from high school twelve years later.

First Grade		High School Graduates		
1938	109,878	1950	58,084	52.8%
1939	102,776	1951	55,206	53.7%
1940	104,078	1952	55,900	53.7%
1941	106,554	1953	57,135	53.6%
1942	109,089	1954	59,683	54.7%
1943	113,894	1955	63,065	55.3%
1944	117,672	1956	67,579	57.4%
1945	116,919	1957	68,653	58.7%
1946	117,647	1958	72,288	61.2%
1947	122,486	1959	78,402	64.0%
1948	132,799	1960	89,902	67.7%
1949	133,366	1961	91,824	68.9%
1950	126,586	1962	86,681	68.5%
1951	125,976	1963	88,506	70.2%
1952	150,340	1964	109,524	72.8%
1953	178,449	1965	133,932	75.5%
1954	172,692	1966	130,832	75.8%
1955	176,323	1967	132,532	75.2%

TABLE XVI

OHIO'S EDUCATIONAL PROGRAM
(Holding Power)

Educational Level	Number of Students
Entering First Grade	100
Entering Ninth Grade	95
Graduating From High School	76
Entering College	32
Returning Second Year	23
Returning Third Year	21
Graduating From College	14

TABLE XVII

EDUCATIONAL LEVEL OF OHIO'S POPULATION

Educational Level	Percentage
Less Than Four Years of High School	56.2
High School Graduates	28.6
One-Three Years of College	8.0
Four or More Years of College	7.2

School Lunch

A major Department of Education service is administering the School Lunch, Special Milk, Additional Assistance, Breakfast, and Non-food Assistance Programs. This includes providing nutritionally adequate, well-planned, low-cost food service for students. A low-cost milk program is offered to accompany the lunch and/or to supplement the child's nutritional intake at other times of the day.

Additional assistance in the School Lunch and Special Milk Programs is provided to aide disadvantaged children attending schools located in economically depressed areas. Reimbursement of 10¢ per lunch and/or the full cost of milk is allowed.

Demonstration programs also have been established in districts located in areas of economic need wherein the rate of reimbursement paid these schools is increased 10¢ per lunch so that the charge to the child can be reduced by a like amount.

Through passage of the Child Nutrition Act of 1966, Breakfast and Non-food Assistance (Equipment) Programs are made available in hard-pressed areas of economic need. Breakfasts improve the nutritional status and educational achievement of children and the equipment makes possible more effective nutritional programs for the participants.

TABLE XVIII

OHIO'S PARTICIPATION IN THE NATIONAL SCHOOL LUNCH PROGRAM

Year	Number Schools	Number Lunches	Federal Funds Ohio Allocation	Total Food Expenditure
1958-59	2,006	77,823,528	$3,372,924	$20,798,651
1959-60	2,096	82,300,585	3,385,981	22,082,112
1960-61	2,146	87,078,758	3,649,285	24,023,479
1961-62	2,192	94,520,383	3,844,417	26,138,879
1962-63	2,267	100,611,043	4,289,840	27,709,745
1963-64	2,290	106,601,992	4,598,621	29,820,750
1964-65	2,405	119,612,799	4,728,156	32,547,570
1965-66	2,427	128,128,391	4,987,057	38,618,940
1966-67	2,443	130,579,072	5,335,655	43,121,290

TABLE XIX

SPECIAL MILK PROGRAM

Year	Number Schools	Number 1/2 Pints Milk	Federal Funds Ohio Allocation
1958-59	3,041	110,014,859	$3,734,585
1959-60	3,186	119,233,521	3,992,532
1960-61	3,267	125,747,713	4,255,532
1961-62	3,317	135,428,840	4,584,562
1962-63	3,368	140,190,204	4,659,394
1963-64	3,453	152,081,956	4,902,058
1964-65	3,512	158,293,264	5,199,134
1965-66	3,635	162,960,429	5,190,025
1966-67	3,691	162,662,237	5,360,923

TABLE XX

NATIONAL SCHOOL LUNCH AND SPECIAL MILK PROGRAMS

Year	Federal Funds Total Ohio Allocation
1958-59	$ 7,107,509
1959-60	7,378,513
1960-61	7,904,817
1961-62	8,428,979
1962-63	8,949,234
1963-64	9,500,679
1964-65	9,927,290
1965-66	10,177,082
1966-67	10,752,612

Property Utilization

Federal surplus real and personal property is transferred to state institutions eligible to participate in the program through the Agency for Property Utilization.

This property, such as desks, chairs, tables, motor vehicles, etc., is made available to many schools at very little cost.

TABLE XXI

VALUE OF SURPLUS PROPERTY TRANSFERRED TO SCHOOLS AND INSTITUTIONS

Fiscal Year	Government Acquisition Costs of Personal Property Received by Division	Government Acquisition Costs of Personal Property Transferred to Institutions	Service Fees Received from Institutions of Personal Property Transferred	Current Appraised Market Value of Real Property Transferred to Institutions
1958	$ 5,558,628	$ 5,089,875	$314,644	$ 21,433
1959	9,069,571	8,292,341	389,283	104,605
1960	12,056,302	8,288,893	365,422	793,218
1961	14,725,800	10,119,997	334,892	115,644
1962	12,857,347	7,939,445	405,257	119,158
1963	11,203,411	8,583,948	317,081	1,202,176
1964	6,550,319	6,490,826	249,945	1,134,129
1965	7,550,319	6,879,393	338,474	1,826,678
1966	8,029,063	6,775,610	298,878	5,132,420
1967	3,599,155	3,775,622	183,485	606,260

SCHOOL ADMINISTRATION

Five units of the Department provide services in the area of school administration--the Division of School Finance, School Building Assistance, School Organization Services, State School for the Blind, and State School for the Deaf.

School Finance

The Division of School Finance provides leadership, service, research and development to assist school districts to formulate and pursue sound management and fiscal principles within the framework of laws and regulations established by the General Assembly and the State Board of Education.

In administering the State Foundation Program, the Division's objectives are to--

- Distribute foundation program funds to school districts in the most efficient manner.
- Conduct research, regarding the foundation program, pertinent to the Department of Education, school districts, and other interested agencies.
- Provide for auditing of foundation program records and reports submitted by school districts.
- Provide consulting service to school officials in foundation program application.
- Conduct seminars, clinics, and workshops that will assist school personnel in foundation program utilization.
- Provide clear channels of communication, regarding the foundation program, through coorespondence, telephone, meetings, publications, and other media of communication.

- Develop and revise necessary forms and reports that will effectively fulfill foundation program requirements and assist school officials in formulating necessary and adequate record keeping procedure.

The following tables show current expenses, source of revenue and financial data related to Ohio school systems, as compiled by the Division.

TABLE XXII

FOUNDATION PROGRAM SUBSIDIES

Fiscal Year	Total State Subsidies
1955-56	$132,862,026
1956-57	162,557,800
1957-58	178,649,110
1958-59	184,697,079
1959-60	195,973,409
1960-61	210,983,446
1961-62	228,513,872
1962-63	241,421,993
1963-64	254,176,704
1964-65	265,952,718
1965-66	312,699,441
1966-67	328,679,561

TABLE XXIII

FOUNDATION PROGRAM BREAKDOWN, 1966-67

Cash to Districts	$223,540,055.72
County Boards of Education	7,224,929.13
School Employees Retirement System	15,473,364.00
Teachers Retirement System	82,441,211.67
TOTAL	$328,679,560.52
Classes for Children of Migrant Workers	65,774.20
GRAND TOTAL	$328,745,334.72

FORMULA GUARANTEE AND NON-ADDITIONAL AID SCHOOL DISTRICTS

Ohio school districts needing more than a minimum amount of financial assistance in order to provide a basic program of education are called formula guarantee or additional aid districts. After local tax money is determined, the State Foundation Program provides funds so that costs of salaries, retirement and sick leave, classroom operation and pupil transportation can be met. Also funds for vocational and special education are provided, according to the programs and needs of the district.

Districts having greater amounts of local tax money receive only a minimum state subsidy and are known as minimum guarantee or non-additional aid districts. Being more able to fully support a basic education program, they do not qualify for as much state funds.

TABLE XXIV

OHIO FOUNDATION PROGRAM SUPPORT
TO FORMULA AND NON ADDITIONAL AID DISTRICTS

Calendar Year	Formula Guarantee	Minimum Guarantee
1962	$164,456,660.82	$55,563,186.00
1963	177,253,418.33	57,715,539.00
1964	178,137,047.09	56,762,811.00
1965	184,651,798.40	58,761,159.38
1966	241,261,787.68	69,945,446.76
1967	251,083,696.09*	71,726,349.00*

TABLE XXV

CURRENT OPERATION COSTS PER PUPIL
IN AVERAGE DAILY MEMBERSHIP

Year	City	Exempted Village	County	State
1955-56	$278.17	$237.72	$234.29	$259.68
1956-57	295.84	260.94	256.20	286.97
1957-58	318.98	284.60	276.44	301.32
1958-59	329.48	292.41	291.71	313.26
1959-60	351.46	311.72	312.92	330.67
1960-61	368.45	340.87	335.06	355.05
1961-62	378.98	350.44	343.39	365.03
1962-63	394.32	360.51	355.69	379.09
1963-64	406.19	376.02	368.07	391.34
1964-65	422.44	389.11	381.78	406.58
1965-66	457.41	420.79	410.46	439.19
1966-67	534.08	457.19	423.69	504.86

TABLE XXVI

PROPORTION OF LOCAL AND STATE FUNDS
FOR CURRENT SCHOOL OPERATING EXPENSES

Fiscal Year	Local Percentage	State** Percentage
1955-56	65.2%	34.8%
1956-57	62.8	37.2
1957-58	63.7	36.3
1958-59	64.6	35.4
1959-60	66.7	33.3
1960-61	67.3	32.7
1961-62	68.6	31.4
1962-63	68.0	31.9
1963-64	68.4	31.6
1964-65	69.3	30.7
1965-66	68.5	31.5
1966-67	69.5	30.5

*Includes federal funds distributed by the State.

PAYMENTS TO SCHOOL DISTRICTS UNDER PUBLIC LAW 81-874, FY 1967

Title I of Public Law 81-874 provides compensating funds to applicant districts for loss in taxable wealth and for educating the children whose parents live or work on federal property. During the fiscal year ending June 30, 1967, 140 school districts in Ohio received this assistance in the amounts shown:

TABLE XXVII

County	District	Amount Received	County Total
Butler	Ross Local	$ 14,303	$ 14,303
Champaign	Mechanicsburg Village	6,854	6,854
Clark	Springfield City	209,716	547,450
	Mad River-Green Local	113,090	
	New Carlisle-Bethel Local	165,442	
	Northeastern Local	12,343	
	Northwestern Local	16,370	
	Springfield Local	30,489	
Clermont	Felicity-Franklin Local	5,651	5,651
Clinton	Wilmington City	95,609	133,726
	Blanchester Local	10,276	
	Clinton Massie Local	11,262	
	East Clinton Local	16,579	
Cuyahoga	Bay Village City	25,082	602,500
	Berea City	162,295	
	Brecksville City	2,244	
	Fairview Park City	41,381	
	North Olmsted City	58,270	
	North Royalton City	20,121	
	Parma City	167,921	
	Rocky River City	39,114	
	Strongsville City	27,340	
	Westlake City	29,408	
	Olmsted Falls Local	29,324	
Delaware	Big Walnut Local	18,150	30,542
	Liberty-Union Local	12,392	
Erie	Huron City	30,145	74.115
	Sandusky City	5,578	
	Berlin-Milan Local	12,825	
	Perkins Local	25,567	

TABLE XXVII (Continued)

County	District	Amount Received	County Total
Fairfield	Lancaster City	$ 38,253	$ 96,468
	Amanda-Clearcreek Local	3,763	
	Blooll Local	17,162	
	Liberty Union-Thurston Local	11,614	
	Pickerington Local	15,446	
	Walnut Local	10,230	
Fayette	Miami Trace Local	25,010	25,010
Franklin	Bexley City	49,259	2,119,402
	Columbus City	1,086,526	
	South-Western City	53,880	
	Westerville City	65,344	
	Whitehall City	142,943	
	Worthington Village	50,886	
	Canal Winchester Local	21,445	
	Hamilton Local	361,941	
	Jefferson Local	90,559	
	Madison Local	51,844	
	Mifflin Local	30,877	
	Plain Local	11,481	
	Reynoldsburg Local	102,417	
Greene	Fairborn City	485,568	935,874
	Xenia City	158,778	
	Yellow Springs Village	41,247	
	Beavercreek Local	202,739	
	Cedar Cliff Local	9,115	
	Greenview Local	12,114	
	Sugarcreek Local	26,313	
Hamilton	Greenhills-Forest Park City	23,722	81,677
	Forest Hills Local	26,637	
	Southwest Local	31,318	
Highland	Fairfield Local	2,598	2,598
Hocking	Laurelville Local	2,903	6,182
	Starr-Washington Local	2,748	
	West Hocking Local	531	
Jackson	Jackson City	23,892	24,426
	Wellston City	534	
Knox	Centerburg Local	4,400	4,400

TABLE XXVII (Continued)

County	District	Amount Received	County Total
Licking	Heath City	$ 89,305	$ 367,701
	Newark City	104,623	
	Granville Village	22,005	
	Johnstown-Monroe Local	25,709	
	Lakewood Local	32,169	
	Licking Heights Local	12,413	
	Licking Valley Local	8,793	
	North Fork Local	20,079	
	Northridge Local	21,587	
	Southwest Licking Local	31,018	
Logan	Bellefontaine City	13,847	13,847
Lorain	North Ridgeville City	3,634	56,464
	Avon Local	4,915	
	Avon Lake Local	38,363	
	Columbia Local	9,552	
Madison	Jefferson Local	534	534
Medina	Brunswick Local	22,256	22,256
Meigs	Eastern Local	10,462	23,247
	Southern Local	12,785	
Miami	Tipp City Village	15,341	35,120
	Bethel Local	18,578	
	Newton Local	1,201	
Montgomery	Dayton City	774,055	2,313,643
	Kettering City	384,716	
	Miamisburg City	38,475	
	Vandalia-Butler City	34,659	
	West Carrollton City	44,065	
	Jefferson Twp. Local	60,087	
	Madison Twp. Local	24,885	
	Mad River Twp. Local	628,000	
	Northmont Local	22,126	
	Northridge Local	17,998	
	Valley View Local	6,801	
	Washington Twp. Local	64,537	
	Wayne Twp. Local	213,239	
Ottawa	Port Clinton City	31,416	48,155
	Benton Twp. Local	3,699	
	Carroll Local	2,480	
	Danbury Twp. Local	1,398	
	Harris-Elmore Local	707	
	Salem-Oak Harbor Local	8,455	

TABLE XXVII (Continued)

County	District	Amount Received	County Total
Perry	Northern Local	$ 7,737	$ 7,737
Pickaway	Circleville City	21,794	86,427
	Logan Elm Local	6,586	
	Teays Valley Local	43,695	
	Westfall Local	14,352	
Pike	Eastern Local	8,487	74,834
	Scioto Valley Local	15,897	
	Waverly Local	46,429	
	Western Local	4,021	
Portage	Windham Village	33,070	61,786
	Southeast Local	28,716	
Ross	Chillicothe City	103,238	181,620
	Adena Local	19,015	
	Huntington Local	12,220	
	Paint Valley Local	7,975	
	Scioto Valley Local	7,292	
	Union-Scioto Local	24,991	
	Zane Trace Local	6,889	
Scioto	Portsmouth City	26,298	68,398
	Clay Local	9,724	
	Minford Local	9,292	
	Valley Local	13,329	
	Washington Local	9,755	
Summit	Bath-Richfield Local	6,839	6,839
Trumbull	Newton Falls Village	3,168	18,509
	Maplewood Local	15,341	
Warren	Franklin City	18,254	60,018
	Lebanon Village	12,805	
	Carlisle Local	15,727	
	Mason Local	3,396	
	Wayne Local	9,836	
Washington	Belpre City	11,251	11,251
TOTALS			
36 Counties	140 Districts	$8,169,564	$8,169,564

TABLE XXVII (Continued)

PUBLIC LAW 81-815

Ohio School Districts which are affected by U. S. Government installations and are receiving federal funds for construction cost assistance (Public Law 81-815) July 1, 1966 to June 30, 1967, inclusive:

County	District	Amount Received	County Total
Clark	Mad River-Green Local	$ 104,180	$ 167,016
	New Carlisle-Bethel Local	62,836	
Franklin	Hamilton Twp. Local	26,673	37,345
	Madison Local	10,672	
Licking	Heath City	23,596	37,512
	Lakewood Local	10,566	
	North Fork Local	3,350	
Montgomery	Jefferson Twp. Local	54,954	67,302
	Wayne Twp. Local	12,348	
TOTALS			
4 Counties	9 Districts	$ 309,175	$ 309,175

Transportation

Functions of the Transportation Section include the following:

- To assist in the development of transportation programs, in the school districts, that will provide for safety, adequacy, efficiency, and economy.
- To provide consulting service to school officials in transportation program application.
- To assist school officials in planning and policy making procedures.
- To provide coordination between public and private school officials and between educational and non-educational agencies.
- To assist in establishing and maintaining a proper relationship between school transportation and the total educational program.
- To provide for organizing and conducting school bus driver training programs and assisting in school bus safety instruction.
- To develop, interpret, and implement the (1) minimum standards of school bus design and construction and; (2) rules and regulations of operation.
- To audit school transportation reports for foundation program calculation and reimbursement.
- To provide assistance to boards of education in school bus purchasing procedures.
- To provide assistance to school officials and the Highway Patrol in organizing school bus inspections.
- To provide assistance to school officials in developing school bus maintenance, routing, and scheduling programs.
- To provide assistance to school officials in the analysis of school transportation finance.
- To conduct research pertinent to the needs of the Department of Education, school districts, and other interested agencies.
- To conduct seminars, clinics, and workshops that will assist school personnel in administering transportation programs.

- To develop and revise necessary forms and reports that will effectively fulfill transportation program requirements and assist school officials in formulating necessary and adequate record keeping procedures.

- To provide clear channels of communication regarding transportation.

- To develop informative publications relating to transportation administration.

The following tables summarize the number of pupils transported, number of vehicles, miles traveled, and operating costs for pupil transportation in the State of Ohio for 1966-67, in both additional aid and non additional aid districts.

TABLE XXVIII

PUPILS TRANSPORTED IN DISTRICTS PROVIDING TRANSPORTATION SERVICES, 1966-67

Number of Districts		Pupils Transported
Additional Aid		
City	120	251,748
Exempted Village	48	58,138
Local	390	551,490
Sub Total	558	861,376
Non Additional Aid		
City	42	66,781
Exempted Village	5	7,284
Local	78	120,686
Sub Total	125	194,751
All Districts		
City	162	318,529
Exempted Village	53	65,422
Local	468	672,176
Grand Total	683	1,056,127

Source: Transportation Form T-2, 1966-67

TABLE XXIX

SCHOOL BUSES USED IN PUPIL TRANSPORTATION, 1966-67

Type of District	Board Owned	Board Owned In Use	"A" Contract In Use	Pupils Per Bus Used	Annual Miles Traveled
Additional Aid					
City	1,788	1,514	254	137	16,979,040
Exempted Village	579	503	16	111	5,195,160
Local	5,695	4,946	178	107	56,010,780
Sub Total	8,062	6,963	448	115	78,184,980
Non Additional Aid					
City	435	394	221	96	5,113,800
Exempted Village	80	67	16	86	770,940
Local	1,148	1,010	89	108	11,207,340
Sub Total	1,663	1,471	326	103	17,092,080
All Districts					
City	2,223	1,908	475	126	22,092,840
Exempted Village	659	570	32	108	5,966,100
Local	6,843	5,956	267	107	67,218,120
Grand Total	9,725	8,434	774	112	95,277,060

TABLE XXX

MILES TRAVELED IN DAILY SCHOOL BUS ROUTES, 1966-67

Type of District	Total Daily Mileage	Average Miles Per School Bus
Additional Aid		
City	94,328	53.4
Exempted Village	28,862	55.6
Local	311,171	60.7
Sub Total	434,361	58.6
Non Additional Aid		
City	28,410	46.2
Exempted Village	4,283	51.6
Local	62,263	56.7
Sub Total	94,956	52.8
All Districts		
City	122,738	51.5
Exempted Village	33,145	55.1
Local	373,434	60.0
Grand Total	529,317	57.5

TABLE XXXI

OTHER VEHICLES USED IN PUPIL TRANSPORTATION, 1966-67
(PARENTS, PUBLIC UTILITIES)

Type of District	Vehicles in Use	Pupils Per Vehicle Used	Miles Traveled
Additional Aid			
City	416	23	1,172,520
Exempted Village	261	2	968,040
Local	670	3	2,453,220
Sub Total	1,347	9	4,593,780
Non Additional Aid			
City	524	14	1,420,200
Exempted Village	8	13	23,580
Local	359	4	1,010,520
Sub Total	891	10	2,454,300
All Districts			
City	940	18	2,592,720
Exempted Village	269	2	991,620
Local	1,029	3	3,463,740
Grand Total	2,238	9	7,048,080

TABLE XXXII

ANNUAL OPERATING COSTS FOR PUPIL TRANSPORTATION, 1966-67

Type of District	Cost Per Pupil	Cost Per Mile	Total Cost	Estimated State Assistance
Additional Aid				
City	$30.35	$ .42	$ 7,641,227	$ 6,386,008
Exempted Village	29.72	.28	1,727,633	1,604,161
Local	31.85	.30	17,565,312	15,872,991
Sub Total	$31.27	$ .33	$26,934,172	$23,863,160
Non Additional Aid				
City	$44.23	$ .45	$ 2,953,706	$ 690,367
Exempted Village	37.98	.35	276,633	36,253
Local	34.83	.34	4,203,356	519,234
Sub Total	$38.17	$ .38	$ 7,433,695	$ 1,245,854
All Districts				
City	$33.26	$ .43	$10,594,933	$ 7,076,375
Exempted Village	30.64	.29	2,004,266	1,640,414
Local	32.39	.31	21.768,668	16,392,225
Grand Total	$32.54	$ .34	$34,367,867	$25,109,014

Pupil Transportation Service Regions

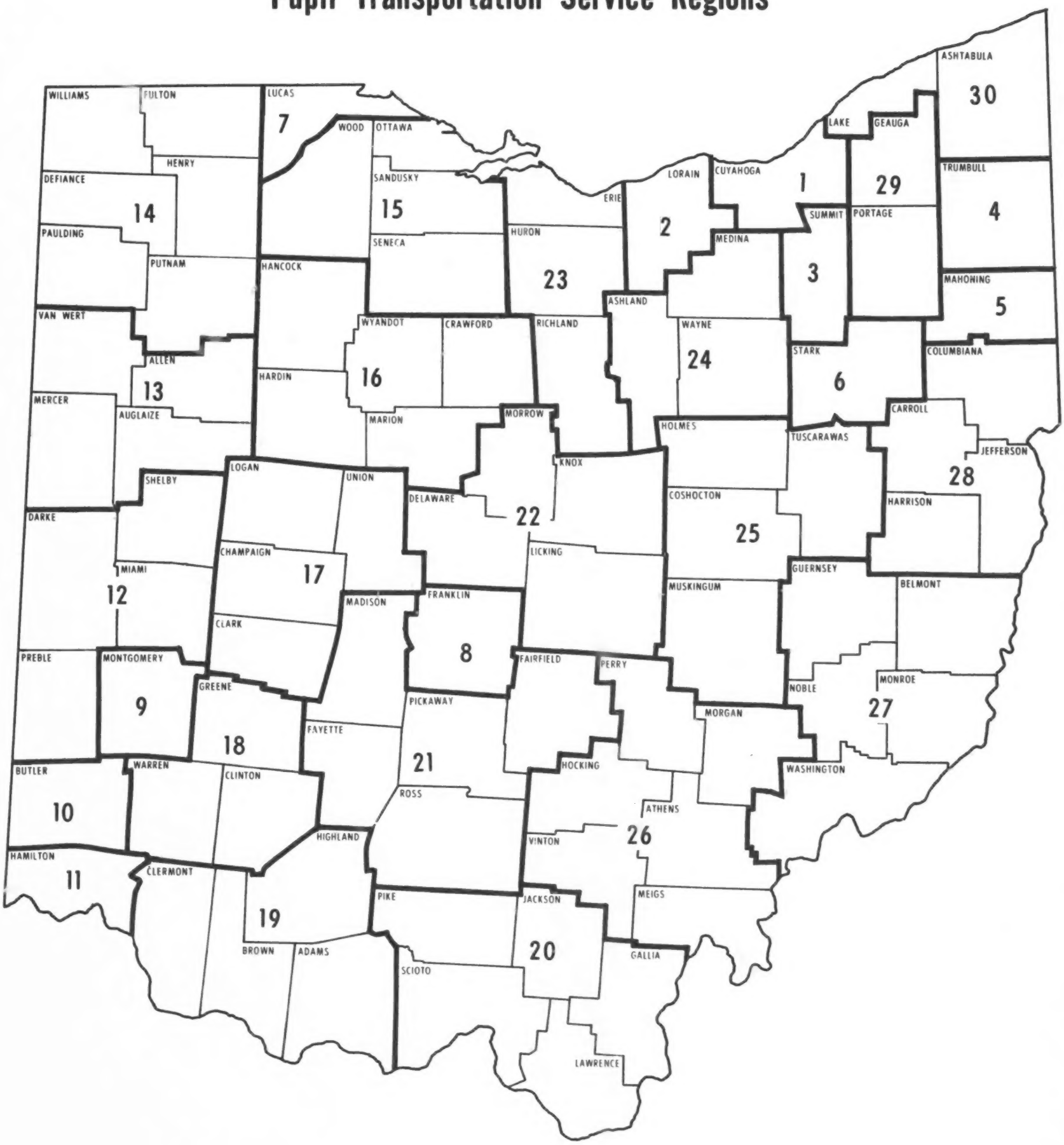

Figure B

Field Services

Since the establishment of the Field Service Section of the Division of School Finance in the spring of 1966 pursuant to enactment of the "Fair Bus Bill" by the 106th General Assembly to provide transportation services to non-public school pupils, the functions of the section have continually expanded.

Major Areas of Service and Program Development

I. Transportation - In cooperation with the Transportation Section

A. Transportation services to non-public school

In school year 1966-67, 126,827 non-public pupils were transported a total of 14,528,880 miles.

B. School bus driver training programs

Assisted in organizing 86 school bus driver training classes with 1,266 drivers completing the course. Field Services Section members taught 28 of these classes.

C. Bus purchasing assistance

In school year 1966-67, assistance was given in purchasing 1,318 school buses.

D. Routing and scheduling surveys

Sixty-one routing surveys were completed in school year 1966-67.

E. Assisted school districts with bus maintenance programs, bus inspection, pupil transportation programs, transportation reports and research.

Summary of Activities and Services for 1967

I. Consultations in Field Service Section offices

A.	Educators	- 2,669
B.	Boards of Education	- 182
C.	Others	- 661

II. Conferences participated in or conducted by Field Service personnel

A.	Local	- 535	(Total of 8,414 participants)
B.	State	- 405	(Total of 28,886 participants)
C.	National or Regional	- 75	(Total of 2,470 participants)

III. Days spent in the field with:

A.	Administrators	- 5,406
B.	Boards of Education	- 106
C.	School Staff Groups	- 182
D.	College or University Groups	- 3
E.	Lay Groups	- 258

IV. A total of 256 addresses were given by Field Service Section personnel

School Building Assistance

The School Building Section of the State Department of Education is responsible for the administration of the state school building assistance program under the provisions of Chapter 3318 of the Revised Code.

This chapter provides that school districts which cannot construct sufficient classroom facilities to house their pupils by bonding themselves to the legal limit of 9% may apply to the State Board of Education for State Assistance in constructing the required facilities in accordance with the provisions of the law and the policies adopted by the State Board of Education.

TABLE XXXIII

STATE-ASSISTED BUILDINGS UNDER CONSTRUCTION, 1966-67

School District	County	Percent of Completion June 30, 1967
Madison Local	Butler	89.40
Bethel-Tate Local	Clermont	96.45
Clermont Northeastern Local	Clermont	78.34
Goshen Local	Clermont	1.97
Blanchester Local	Clinton	82.64
East Liverpool City	Columbiana	18.63
Olmsted Falls Local	Cuyahoga	4.02
Greenhills-Forest Park City	Hamilton	15.53
Springfield Local	Jefferson	72.66
Midview Local	Lorain	8.63
North Ridgeville City	Lorain	87.52
Sheffield-Sheffield Lake Local	Lorain	85.55
Springfield Local	Lucas	87.74
Brunswick Local	Medina	87.67
Jefferson Twp. Local	Montgomery	98.25
Mad River Twp. Local	Montgomery	4.56
Aurora Local	Portage	93.54
Field Local	Portage	61.55
Rootstown Local	Portage	21.56
Streetsboro Local	Portage	7.65
Tallmadge City	Summit	100.00
Deerfield-Union Local	Warren	59.34
Franklin City	Warren	7.43
Mason Local	Warren	44.28
Frontier Local	Washington	30.81

TABLE XXXIV

STATUS OF BUILDING PROJECTS GRANTED CONDITIONAL APPROVAL

District	County	Est. Cost of Project	Est. Dates of Bidding	Phase Status
Wheelersburg Local	Scioto	$ 1,438,187	2/68	Design Development
Minford Local	Scioto	1,848,812	5/68	Schematic
Rock Hill Local	Lawrence	2,271,018	4/68	Schematic
Madison	Montgomery	2,151,714	3/68	Working Drawings
Mad River-Green Local	Clark	1,357,133	3/68	Design Development
New Carlisle-Bethel Local	Clark	3,464,182	6/68	Schematic
Valley View Local	Montgomery	1,705,594	7/68	Litigation
Meigs Local	Meigs	2,861,843	7/68	Schematic
Total Estimate		$17,098,483		

TABLE XXXV

SUMMARY OF CONSTRUCTION BIDS RECEIVED SINCE JANUARY 1, 1967
ON SCHOOL BUILDING PROJECTS PURSUANT TO
CHAPTER 3318. R.C.

Date Bids Opened	School Districts	Amount of Estimated Conditional Approval	Amount of Contracts Awarded	Amount Under Estimated Conditional Approval	Amount Over Estimated Conditional Approval	Percentages Under or Over Estimated Conditional Approval
1/10/67	Midview Local (Lorain County)	$ 1,828,271	$ 1,983,340.33	$	$ 155,069.33	+ 8.48
2/16/67	Rootstown Local (Portage County)	417,306	417,306.00	-0-	-0-	-0-
3/28/67	Streetsboro Local (Portage County)	1,587,301	1,490,251.00	97,050.00		- 6.11
4/4/67	Franklin City (Warren County)	2,774,529	2,774,529.00	-0-	-0-	-0-

TABLE XXXV (Continued)

Date Bids Opened	School Districts	Amount of Estimated Conditional Approval	Amount of Contracts Awarded	Amount Under Estimated Conditional Approval	Amount Over Estimated Conditional Approval	Percentages Under or Over Estimated Conditional Approval
4/25/67	Olmsted Falls Local (Cuyahoga County)	$ 2,617,230	$ 2,831,381.84	$	$ 214,151.84	+ 8.18
5/16/67	Waterloo Local (Portage County)	1,216,896	1,307,042.37		90,146.37	+ 7.40
5/23/67	Goshen Local (Clermont County)	956,859	956,859.00	-0-	-0-	-0-
6/14/67	Garfield Local (Portage County)	1,285,940	1,382,080.46		96,140.46	+ 7.47
7/13/67	West Clermont Local (Clermont County)	2,447,085	2,188,316.00	258,769.00		-10.57
8/22/67	Fairland Local (Lawrence County)	1,633,750	1,822,358.35		188,608.35	+11.54
8/24/67	Scioto-Darby Local (Franklin County)	2,173,681	2,951,445.29		777,764.29	+35.78
8/24/67	Perry Local (Lake County)	977,051	1,198,774.29		221,723.29	+22.69
8/29/67	Mad River Twp. Local (Montgomery County)	4,340,337	3,843,776.00	496,561.00		-11.44
8/30/67	Ross Local (Butler County)	1,585,795	1,585,795.00	-0-	-0-	-0-
8/31/67	Federal-Hocking Local (Athens County)	1,295,170	1,518,585.73		223,415.73	+17.24
9/20/67	Wayne Local (Warren County)	955,524	870,419.18	85,104.82		- 8.91
9/21/67	Greenhills-Forest Park City (Hamilton County)	2,272,369	2,317,489.51		45,120.51	+ 1.98
11/14/67	Columbia Local (Lorain County)	975,071	990,850.03		15,779.03	+ 1.52
11/16/67	Jefferson Local (Madison County)	1,776,899	2,182,693.96		405,794.96	+22.83

TABLE XXXV (Continued)

Date Bids Opened	School Districts	Amount of Estimated Conditional Approval	Amount of Contracts Awarded	Amount Under Estimated Conditional Approval	Amount Over Estimated Conditional Approval	Percentages Under or Over Estimated Conditional Approval
11/21/67	Washington Local (Scioto County)	$ 1,539,670	$ 1,615,981.31	$	$ 76,311.31	+ 4.96
	TOTALS	$34,656,734	$36,229,274.65	$937,484.82	$2,510,025.47	+ 4.54 Average

The average cost of construction is equal to 4.54% over the original approved estimate. Several of the cost estimates were originally determined three to four years prior to the date of the award of contracts. All of the original estimates were based upon 1963 cost figures. Several of the projects had 10% added to the base cost figures, others had 5% and still others no percentage added at all to compensate for increased cost of construction. The average for the twenty projects listed above is 12.79% over the 1963 cost figures. The construction costs in the State of Ohio have increased approximately 20% to 25% since 1963.

The twenty projects listed above will provide 40 new buildings--18 elementary, 4 junior high, and 18 high schools. The new buildings will provide an additional 873 classrooms to house 23,526 additional pupils.

The following School Building Projects Pursuant to Chapter 3318 R.C. for which Construction Bids have not been received.

The dates indicated are on Projects where Bid Dates have been established. Where only the Month is mentioned, that is the Target Date for the Bid Opening.

New Carlisle-Bethel Local, Clark County	June 1968
Minford Local, Scioto County	June 1968
Mad River-Green Local, Clark Coutny	3/21/68
Valley View Local, Montgomery County	July 1968
Wheelersburg Local, Scioto County	2/27/68
Rock Hill Local, Lawrence County	4/30/68
Madison Local, Montgomery County	3/26/68
Meigs Local, Meigs County	4/23/68

The following is a List of State School Building Projects where Loose Equipment must still be Purchased.

Where the Exact Date is listed, that is the Date that has been established for the Bid Opening. All others are Target Dates for the Bid Opening.

East Liverpool City, Columbiana County		Spring 1968
Franklin City, Warren County		Spring 1968
Greenhills-Forest Park City, Hamilton County	(Final)	4/5/68
Federal-Hocking Local, Athens County		Fall 1968
Ross Local, Butler County		Fall 1968
Mad River-Green Local, Clark County		Spring 1969
New Carlisle-Bethel Local, Clark County		Spring 1969
Goshen Local, Clermont County		5/29/68
West Clermont Local, Clermont County		4/11/68
Olmsted Falls Local, Cuyahoga County		3/1/68
Scioto-Darby Local, Franklin County		Spring 1968
Perry Local, Lake County		Spring 1968
Fairland Local, Lawrence County		Spring 1968
Rock Hill Local, Lawrence County		Spring 1969
Columbia Local, Lorain County		Fall 1968
Midview Local, Lorain County		3/7/68
Jefferson Local, Madison County		Summer 1968
Meigs Local, Meigs County		Spring 1969
Madison Local, Montgomery County		Summer 1968
Mad River Local, Montgomery County	(Part)	Spring 1968
Valley View Local, Montgomery County		Spring 1969
James A. Garfield Local, Portage County		Spring 1968
Streetsboro Local, Portage County		4/9/68
Waterloo Local, Portage County		Spring 1968
Minford Local, Scioto County		Spring 1969
Washington Local, Scioto County		Fall 1968
Wheelersburg Local, Scioto County		Fall 1968
Wayne Local, Warren County		Fall 1968

TABLE XXXVI

STATUS OF BUILDING ASSISTANCE FUNDS, JUNE 30, 1967

Appropriations:		
Senate Bill #370 (1963)	$10,000,000.00	
Am. Sub. H.B. #202 (6/26/65)	26,000,000.00	
Am. H.B. #949 (9/2/65)	25,000,000.00	
		$61,000,000.00
Rotary Fund:		
Total Payback as of 6/30/67		2,514,968.86
Total Available Funds.....		$63,514,968.86
Obligated on Conditional Approvals:		
Senate Bill #370	$10,000,000.00	
Am. Sub. H.B. #202	24,563,940.22	
Am. H.B. #949	7,553,152.90	
		$42,117,093.12
Rotary Fund		1,338,497.12
		$43,455,590.24
Total Unobligated Funds as of June 30, 1967...		$20,059,378.62*
Total Estimated Cost of School Projects for which contracts are still to be awarded as of June 30, 1967.....		$37,056,698.79

School District Organization

The State Board of Education gains its primary responsibility for school district organization through Sections 3311.29, 3311.37, and 3311.38 of the Revised Code. These sections of the statutes deal with changes of school district boundary lines, creating and dissolving school districts. Sections 3311.24 and 3311.06 are initiated by the electorate or boards of education throughout the state but final action of the State Board of Education is required before the initiated action can be consummated. The remaining sections of code 3311.22, 3311.231, and 3311.26, which pertain to the change in school district organizations, are designed to permit the citizens or the county boards of education authority to initiate school district reorganization.

Sections 3311.37 and 3311.38 permit the State Board to inaugurate studies of school districts which ultimately lead to a vote of the electorate relative to the formation of a new school district or change in school district boundary lines. An amendment of Section 3311.29 by the 107th General Assembly permits the State Board to dissolve school districts, after July 1, 1968, which do not operate grades one through twelve. Sections 3301.16 and 3301.161 permit the State Board of Education to dissolve a school district and affect a reorganization if the electorate does not seek a petition of referendum when the school district charter is revoked.

At the October, 1966 meeting, the State Board of Education placed a moratorium on the transfer of school district territory as it relates to municipal annexation under Section 3311.06. The moratorium was invoked to give the State Board an opportunity to study the Master Plan for School District Organization in Ohio and permit the 107th Ohio General Assembly time to consider bills which are developed to implement recommendations of the Master Plan.

From July, 1966 through December, 1967, the State Board has acted on six transfer of territory requests which relate to municipal annexation because boards of education involved with the affected territory have not objected to the transfer of territory under Section 3311.06. During the same period of time, the State Board has approved the transfer of three parcels of land in compliance with Section 3311.24. One new school district was created under Section 3311.37.

TABLE XXXVII

SCHOOL DISTRICTS BY ENROLLMENT SIZE, FALL 1966

Enrollment	Number of Districts			
	Cities	Exempted Villages	Counties	Total
25,000 and Over	7			7
20,000-24,999	1			1
15,000-19,999	5			5
10,000-14,999	11		1	12
7,000-9,999	16	1	3	20
5,000-6,999	23	1	14	38
3,000-4,999	60	5	39	104
2,500-2,999	11	3	32	46
2,000-2,499	16	8	43	67
1,500-1,999	8	16	80	104
1,000-1,499	2	16	106	124
500-999	3	4	106	113
Less Than 500	—	—	71	71
	163	54	495	712

There were 731 school districts at the close of the 1965-66 school year and 686 at the close of the school year 1966-67, a reduction of 45 districts.

TABLE XXXVIII

TREND IN NUMBER OF OHIO SCHOOL DISTRICTS

School Year	City Districts	Exempted Village Districts	Local Districts	Total Districts
1935-36	109	62	1,765	1,936
1936-37	109	67	1,592	1,768
1937-38	109	71	1,547	1,727
1938-39	109	77	1,520	1,706
1939-40	109	79	1,502	1,690
1940-41	109	83	1,481	1,673
1941-42	113	83	1,462	1,658
1942-43	113	85	1,446	1,644
1943-44	113	85	1,439	1,637
1944-45	113	86	1,426	1,625
1945-46	113	86	1,423	1,622
1946-47	113	86	1,394	1,593
1947-48	113	87	1,393	1,593
1948-49	113	88	1,339	1,540
1949-50	113	89	1,397	1,509
1950-51	113	87	1,262	1,462
1951-52	135	71	1,222	1,428
1952-53	135	73	1,157	1,365
1953-54	135	74	1,131	1,340
1954-55	135	82	1,093	1,310
1955-56	136	80	1,049	1,265
1956-57	137	78	956	1,171
1957-58	137	78	875	1,090
1958-59	138	77	804	1,019
1959-60	140	77	767	984
1960-61	143	75	668	886
1961-62	153	68	608	829
1962-63	154	68	589	811
1963-64	157	66	577	800
1964-65	159	62	545	766
1965-66	160	61	510	731
1966-67	163	54	469	686

STATE SCHOOLS FOR BLIND AND DEAF

OHIO SCHOOL FOR THE DEAF

Founded in 1829, the Ohio School for the Deaf was for many years located in downtown Columbus. In October, 1953, the school moved to the present location, 500 Morse Road. This is an entirely new plant which occupies 130 acres. The inventoried value of buildings, grounds and equipment is $4,017,984.00.

Deaf children are admitted to the school under procedures adopted by the State Board of Education. The minimum age for admission is a maturity level of five years. Admissions are limited to children whose hearing loss in the speech range exceeds 70 db (ISO) in the better ear. It is required that children be mentally and physically fit and capable of being integrated into the overall program of the school. The Course of Study covers 14 years, including 5 primary grades, 5 intermediate grades, and 4 of high school. Pupils are instructed orally so far as this is practical. Manual instruction is available to those who are held back by oral instruction. Auditory and visual aids are used extensively. In addition to academic instruction, vocational offerings are available in printing, linotyping, and offset; shoe repairing and leather work; foods and clothing, tailoring; baking; business machines; metal work; and driver education.

The health program, based in the school hospital, insures each pupil of the best of care.

The school has an extensive program of extra-curricular activities. In athletics the school participates in basketball and track. During the 1966-67 school year of 180 days (plus 4 additional days for meetings), enrollment included 149 boys and 116 girls, a total of 265 students. They came from 73 counties. The pupils all go home for the summer vacation and also for Thanksgiving, Christmas, and Easter. Many go home for weekends.

Through Title I funds several programs were initiated. These included a work-study program, visual aids assistance, operation of business machines, and orthodontia for several students in need of such.

A Vocational Rehabilitation counselor established an office in the school to serve not only the school but the area and he spent one full day each week at the school.

OHIO SCHOOL FOR THE BLIND

The Ohio State School for the Blind is a residential school for blind children. It was founded July 4, 1847 as the first state supported school for the blind in the U.S.A.

Blind boys and girls of legal school age who are residents of Ohio and who are capable of profiting from the instructional program may be admitted. Admission procedures adopted by the State Board of Education require that all referrals be made by school district of residency of the blind child to the Division of Special Education. The child and parents are next seen by a staff clinic team for evaluation. Recommendations are then made to the local school district for appropriate action.

Enrollment for 1966-67 in grades K-12 was 88 girls and 115 boys.

The Ohio State School for the Blind meets standards adopted by the State Board of Education. School is in session 182 days from September through early June. All pupils are home for the summer months. Most pupils go home frequently for weekends and all pupils must go home for Thanksgiving, Christmas and Easter recesses.

Placement is geared to the needs of each child. Because of the availability of an Educational Clinic Team, Medical Clinic Team, school psychologist, small classes, special classes for slow learners, speech therapists, and a highly skilled staff many adjustments in program can be made as needed. The school has an excellent library and one of the better collection of tactual models in the nation.

Home economics, arts and crafts, industrial arts and typewriting are introduced at fifth grade level.

The school has two teachers of physical education plus a peripatologist who devote full time teaching physical development, games, mobility and independent travel skills.

The school has a bond and a chorus. Piano, organ, voice and instrumental music are taught.

Through the Bureau of Services for the Blind a vocational rehabilitation counselor is available on a full-time basis to counsel students regarding future education and future employment.

INSTRUCTION

Five divisions comprise the area of instruction in the Department of Education. They are Elementary and Secondary Education, Guidance and Testing, Instructional Aids, Special Education, and Teacher Education and Certification.

Elementary and Secondary Education

Among the functions of the Division of Elementary and Secondary Education are the following--

- Evaluation and approval of courses of study submitted by school districts as required by law
- Inspection of high schools for compliance with minimum state standards for chartering of such schools
- Visitation of elementary schools and assistance in the evaluation and development of elementary school programs
- Approval of driver education programs and assistance of higher institutions in developing preparation programs for driver educators
- Consultation to teacher preparation institutions on major and minor programs, particularly in special areas of the curriculum
- Consultative services to schools in the areas of art, humanities, health, physical education, recreation, safety, outdoor education, music, industrial arts, narcotic and alcohol education, conservation, adult education, English, reading, social studies, mathematics and modern foreign languages.

The Division conducted the 12th Annual Conference on Educational Leadership in October 1967 and 510 school supervisors and administrators participating.

The number of schools under the Division's supervision is shown below.

TABLE XXXIX
NUMBER OF OHIO SCHOOLS, 1966-67

	Public	Private & Parochial	Total
High Schools	1,065	167	1,232
Elementary Schools	3,162	754	3,916
Totals	4,227	921	5,148

Number of counties receiving service -- 88

Number and type of systems receiving service

City	304
Exempted Village	66
County Systems	507
Colleges and Universities	47
State Institutions	32
Private and Parochial	23

Days in the field 1,796

Types of Service

Addresses	118
Consultative	492
Demonstrations	34
Evaluation (elementary)	179
Inspections (high schools)	370
North Central Evaluation	95
Planning In-service Programs	67
Workshop Planning	170

OFFICE ACTIVITIES

Incoming Mail	
First Class	21,006
Fourth Class	4,525
Outgoing Mail	
First Class	16,473
Fourth Class	5,392
Bulk Mailings	8,765
Incoming Telephone Calls	13,541
Reports (Special)	76
Visitors	761
Persons doing Research	19

NDEA Title III

The Division's National Defense Education Act Title III Section administered programs which made possible state supervisory services in the critical subjects of arts, civics, economics, English, geography, history, humanities, math, modern foreign languages, reading and science. Workshops for 18,173 teachers in those subjects and $4,411,337 in matching funds to school districts for the purchase of instructional materials.

TABLE XL

MATCHING FUNDS TO SCHOOL DISTRICTS UNDER NDEA, TITLE III, FISCAL 1967

Total applications for fiscal year	1,462
Amount encumbered for fiscal year	$4,411,337.00
SUBJECT AREAS	AMOUNT
Arts	$ 17,623.00
Civics	367,906.00
Economics	107,637.00
English	689,051.00
Geography	642,291.00
History	817,862.00
Humanities	29,101.00
Math	650,231.00
Modern Foreign Language	480,835.00
Reading	1,517,499.00
Science	3,549,362.00
REMODELING	
42 rooms and/or laboratories	$ 75,107.00

TABLE LXI

OHIO WORKSHOPS FUNDED BY NDEA, TITLE III--1966-67

AREA	NUMBER	PARTICIPANTS	COSTS
Civics	19	990	$ 1,075.00
Economics	12	505	535.00
English	155	7,750	7,425.00
Foreign Language	26	820	2,775.00
Geography	3	90	125.00
History	51	2,965	3,870.00
Math	52	2,464	18,025.00
Reading	32	1,318	6,835.00
Science	42	1,271	11,900.00

GENERAL ADULT EDUCATION

The Division estimated that there were 350 programs of general adult education conducted in Ohio schools during 1965-66. A full-time supervisor of adult education in the Division assists schools in developing such programs.

Courses which were usually offered on a self-supporting, or tuition, basis included self-improvement programs (art and music appreciation, creative writing, remedial and speed reading, speech improvement), civic and public affairs, elementary and secondary credit courses, business education (typewriting, shorthand, bookkeeping, data processing and related business courses), industrial arts (woodworking, machine shop, electronics, furniture refinishing and upholstering), and hobby courses (ceramics, knitting, sewing and cooking).

Some school districts offered basic education, both elementary and high-school credit, free of charge or substantially subsidized. A few school districts provide courses free of charge to senior citizens. In most cases, however, such programs are self-supporting through tuition payments.

In addition to the adults who graduated from chartered evening high schools (see below), approximately 175 other persons achieved a high school diploma through general adult education programs.

Chartered high schools have been established at the Lebanon Correctional Institution and the Ohio State Reformatory at Mansfield enabling a total of 111 inmates to graduate in 1967.

TABLE XLII

CHARTERED EVENING HIGH SCHOOLS IN OHIO

Number of Chartered Schools	12
Enrollments, 1966-67	11,881
Graduates, 1966	1,584
Graduates, 1967	1,599

PUBLICATIONS OF THE DIVISION, 1966-67

MULTI-CULTURAL MATERIALS (A Guide to Selection of Curriculum Materials for Schools in a Pluralistic Society)
CURRICULUM GUIDE FOR ELECTRICITY IN OHIO SCHOOLS
CURRICULUM GUIDE FOR INDUSTRIAL CRAFTS IN OHIO SCHOOLS
CURRICULUM GUIDE FOR WOODWORKING IN OHIO SCHOOLS
CURRICULUM GUIDE FOR METALS IN OHIO SCHOOLS
CURRICULUM GUIDE FOR DRAFTING IN OHIO SCHOOLS
CURRICULUM GUIDE FOR POWER MECHANICS IN OHIO SCHOOLS

Guidance and Testing

The Division of Guidance and Testing assists schools in providing services to help boys and girls toward realistic educational and vocational goals, make good educational progress in school, develop skills, and assume responsibility for their self-direction.

The National Defense Education Act of 1958, as amended, Title V-A, which is administered by the Division has given major impetus to the continued expansion and improvement of school guidance and testing programs in Ohio, as indicated in the following table.

TABLE XLIII
GROWTH OF SECONDARY GUIDANCE PROGRAMS
IN NDEA PARTICIPATING SCHOOLS

	1959-60	1966-67
Counselors in NDEA Participating Schools	678	1966
Full-time Counselor Equivalents	323	1724
Percentage Holding Counselor's Certificate	47%	88%
Tests Administered, Grades 7-12	68,794	400,841
Tests Administered, Grades 3-6	0	476,683

In addition to the 1966 counselors in NDEA participating schools, there were 727 counselors in non-NDEA-participating schools, for a total of 2,693.

During 1965-66, NDEA reimbursement was extended to the elementary grades. During 1966-67, seventeen pilot, demonstration and experimental elementary school guidance projects were supported in schools enrolling over 33,000 elementary pupils. These programs should become models for further extension of elementary school guidance services in the state.

Ohio Testing Services

Through Ohio Testing services, the Division has the responsibility for the development and administration of the state testing program. During 1965-66 the Ohio Survey Tests were developed and introduced for use in grades 4, 6, 8 and 10 to measure verbal and numerical ability and achievement in reading, mathematics and English expression. Over 246,000 of these tests were administered in September 1967, an increase of more than 76,000 over the September 1965 administration.

Other test programs included the Preliminary and Final District-State Tests of Scholastic Achievement (21 academic areas), the Ohio History Test, and the Ohio Adult Equivalency Testing Programs (high school equivalence and norms for grades 8, 9 and 10).

Other Activities

Other major activities of the Division during 1966-67 included--

- Distribution of Ohio Guidance News & Views and related materials to 4000 guidance workers bimonthly.

- Conducted the 15th All Ohio Guidance Conference, Seventh Elementary Guidance Conference, and Fifth Junior High School Conference for a total of more than 2000 participants.

- Made 11 vocational and technical education interest surveys involving 18,225 students.

- Published 20 major guidance handbooks and conference reports, approximately 30 minor publications, and produced one sound filmstrip. Major publications included:

  Dictionary of Guidance Terms
  Directory of Counselor Education in Ohio
  Elementary Guidance in Ohio: A compilation of Project Abstracts
  National and State Secondary School Testing Programs
  The Ohio Vocational Education Notebook
  The Ohio Apprenticeship Notebook--Building for a Greater Ohio
  The Fifth Ohio College Notebook for School Counselors
  School Counselor's Guide for the Use of the General Aptitude Test Battery

- Participated in a combined total of 438 educational conferences or workshops on guidance and testing. These conferences were attended by approximately 35,000 teachers, counselors, and administrators.

- Participated in six high school-college articulation conferences serving 830 school counselors and college admissions personnel.

- Eighteen regional workshops were conducted with school counselors on the administration and interpretation of the General Aptitude Test Battery. Each workshop had a duration of three and one-half days. Approximately 277 certificated school counselors participated in this program. In addition, seven one-day retraining programs were conducted for 132 counselors who had been trained previously but who wished to become familiar with new information.

- Materials and procedures were developed for the purpose of assisting schools in conducting guidance program evaluations. Forty schools were assisted in the collection and summarization of student and teacher opinions, beliefs, and understandings about the guidance programs in their schools.

- The state staff participated in consultative or other capacities in the field in presenting the state program and in discussing other guidance topics with 279 school administrator groups, 339 school staff groups, and 129 lay groups.

- Approximately 200 students in counselor education programs visited the offices of the Division of Guidance and Testing and were given individual help. Office conferences were also held with 906 educators and 308 other individuals.

- The state staff made 1,761 visits of one or more days to 1,089* schools throughout the state, consulting with local administrators, guidance directors, or committees regarding the initiation or extension of local school guidance programs. This included consultation on guidance program planning, the initiation of specific aspects of the guidance program, or the evaluation of the existing guidance programs. Program evaluatioons were made in 140 schools.

Instructional Aids

Expansion of its services to schools through its three major units was accomplished during the 1966-67 school year by the Division of Instructional Materials. Professional field services, free-loan film service and production service reached more teachers and pupils than during the previous report year.

Division staff members spent 259 days in the field conducting 266 meetings with educators, participating in 50 conferences and presenting 72 talks on instructional materials. Forty-six conferences were held with district school boards, 42 with college or university groups and 27 meetings with lay organizations. These activities are intended to help teachers and schools do a better job of teaching using, audio-visual aids and materials.

Orders were filled from 81 of the state's 88 counties. These were drawn from the department's library containing 2,375 titles. Total enrollment of students served by the orders was 1,219,233.

In serving the specialists on the department of education staff with visual aids for their presentations in the field, the production services section of the division prepared 1,602 transparencies, 873 title strips, 138 pieces of art, filmstrips, posters and printing and 517 laminated items.

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*Statistical data on numbers of meetings and personnel served include duplications in instances when two or more staff members participated.

Special Education

The primary objective of the Division of Special Education is to aid the public schools of Ohio in providing adequate educational opportunities and services which will enable handicapped children, who deviate to the degree that they cannot receive maximum growth and development in the regular classroom situation, to develop their individual potentialities along with normal children. This objective is accomplished through financial aid, leadership in program development, pre-service and in-service training of teachers, research and demonstration, field service and supervision, and direct services to children and parents.

FIELD SERVICES AND PROGRAM DEVELOPMENT

During the 1966-67 school year, over 171,250 children in Ohio's school districts received services or attended classroom units approved for school foundation support under the administration and supervision of this Division.

Four hundred ninety one of Ohio's school districts had one or more approved units in the various areas of Special Education during the 1966-67 school year. This is an increase of 17 school districts over the preceding school year and represents over 62 per cent of Ohio's school districts.

All areas of special education saw increases in number of children receiving services except in the area of the visually handicapped. The greatest numbers of children being served were in units for slow learning, by school psychologists and speech and hearing therapists. There was a significant increase in children being served in the area of the neurological handicapped.

Major activities of the Division during 1966-67 year included--

- Conducted or participated in 331 conferences or work sessions serving 56,449 persons; delivery of 274 addresses; 1033 1/2 days of field service to schools and 1108 meetings with school, college and lay groups and individuals.

- Evaluation of 251 special education programs and 719 visitations to schools.

- Publication of 19 new program guides, directories and reports and filling 2,486, requests for publications, 934 from outside Ohio including 24 from foreign countries.

- Conducted 26 experimental programs or studies in cooperation with South-Western City District, Mayfield City District, Westerville District, Newark City, Columbus, Canton, Kent, Stark County, Hamilton City, Wadsworth City and others.

- Developed state plan for obtaining federal funds for purposes of expanding and improving efforts to educate handicapped children under Title VI, of Public Law 89-750. Ohio received $116,164 through June 30, 1967 for such planning.

Other Division work is presented as follows:

Statistical Report

This report presents a statistical breakdown of the various programs in the Division by locating the type of school district in which the various units are located, the number of districts, the number of units in those districts, and the total enrollment of students in the approved units.

Also presented is a comparison of the total special education units for the five year period from 1962-1967. Significant to note during this five year period is that all areas of special education increased in the number of approved units except those in physical therapy and the visiting-teacher-counselor program. Most growth can be seen in the areas of slow-learning, neurologically handicapped, school psychology, and speech and hearing therapy. Units for neurologically handicapped children increased 63.3% during the five year period. The total special education unit increase has been 67.6%.

TABLE XLIV
APPROVED SPECIAL EDUCATION UNITS
AND ENROLLMENTS, 1966-67

Type of Program	Type of School District: Co.	Local	City	Ex. V.	Total Units	Total Dist.	Total Enroll.
AUDITORY HANDICAP							
Deaf							1,250
No. of Units	--	1.0	164.3	--	165.3		
No. of Districts	--	1	19	--		20	
Hard of Hearing							236
No. of Units	--	1.0	22.0	--	23.0		
No. of Districts	--	1	8	--		9	
ORTHOPEDIC HANDICAP							
Crippled							1,376
No. of Units	--	1.0	115.8	--	116.8		
No. of Districts	--	1	20			21	
Physical Therapy							--
No. of Units	--	--	17.0	--	17.0		
No. of Districts	--	--	12	--		12	
Occup. Therapy							--
No. of Units	--	--	9.0	--	9.0		
No. of Districts	--	--	7	--		7	
VISUAL HANDICAP							
Blind and Partially Seeing							848
No. of Units	--	1.0	69.5	--	70.5		
No. of Districts	--	1	19	--		20	
MENTAL HANDICAP							
Slow Learning							32,459
No. of Units	3.0	652.0	1417.4	70.4	2142.8		
No. of Districts	2	239	145	30		416	
SPEECH AND HEARING							
Therapists							53,764
No. of Units	36.0	112.4	310.4	13.8	472.6		
No. of Districts	12	111	106	15		244	
CHILD STUDY							
Psychologists							80,000
No. of Units	48.3	19.7	179.3	4.9	252.2		
No. of Districts	31	19	89	8		147	
Interns							
No. of Units	16.0	2.0	35.0	1.0	54.0		
No. of Districts	13	2	27	1		43	
Vis. Tech.-Counsel							
No. of Units	--	--	5.5	--	5.5		
No. of Districts	--	--	3	--		3	

TABLE XLIV (Continued)

Type of Program	Type of School District				Total Units	Total Dist.	Total Enroll.
	Co.	Local	City	Ex. V.			
EMOTIONAL HANDICAP							749
No. of Units	--	6.0	79.0	--	85.0		
No. of Districts	--	2	14	--		16	
NEUROLOGICAL HANDICAP							
No. of Units	1.0	12.0	51.0	2.0	66.0		
No. of Districts	1	6	15	2		24	
TOTAL UNITS	104.3	808.1	2475.2	92.1	3479.7		
TOTAL ENROLLMENTS							171,254
TOTAL DISTRICTS WITH SPECIAL EDUCATION PROGRAMS	34	269	152	36		491	

TABLE XLV

GROWTH OF SPECIAL EDUCATION ENROLLMENTS
BY CLASSROOM UNITS, 1962-63--1966-67

	62-63	63-64	64-65	65-66	66-67	Per Cent Increase or Decrease
AUDITORY HANDICAP						
Deaf	125.9	133.2	145.7	156.9	165.3	31.3
Hard of Hearing	13.0	13.0	17.0	18.5	23.0	76.9
ORTHOPEDIC HANDICAP						
Crippled	82.55	80.8	87.8	92.8	116.8	41.4
Physical Therapy	19.15	19.45	19.85	18.05	17.0	-11.1
Occupational Therapy	6.7	8.5	7.3	7.5	9.0	34.3
VISUAL HANDICAP						
Blind	23.0	21.0	29.0	30.0		
Partially Seeing	45.4	44.5	40.5	41.5	70.5	3
MULTI-HANDICAP					Program phased into that of each pupil's original handicap.	
Slow Learning Crippled	12.0	14.6	14.0	16.0		
MENTAL HANDICAP						
Slow Learning	1202.0	1429.5	1633.9	1906.1	2142.8	78.2
SPEECH AND HEARING						
Therapists	305.6	347.4	404.8	449.8	472.6	54.6
CHILD STUDY						
School Psychologists	154.3	186.4	205.7	235.0	252.2	63.4
Intern Psychologists	38.0	39.0	36.0	55.0	54.0	42.1
Vis. Teacher-Counselor	11.5	6.0	6.5	5.0	5.5	-52.1
EMOTIONAL HANDICAP	32.8	42.7	60.1	72.0	85.0	159
NEUROLOGICAL HANDICAP	9.0	11.0	18.0	36.5	66.0	633
TOTAL	2082.9	2399.05	2728.15	3141.15	3479.7	67.6

TABLE XLVI

NUMBER OF HANDICAPPED PUPILS RECEIVING INDIVIDUAL SERVICES

	62-63	63-64	64-65	65-66	66-67
Home Instruction	2,681	3,059	3,179	3,548	2,943
Transportation	3,787	3,869	3,916	4,341	4,821
Tutoring for Deaf Children	44	28	25	43	39
Reader Service for Blind Children	65	66	88	93	99
Board	101	99	109	79	78
Tutoring for Neuro. Handicapped					688
Tutoring for Emot. Handicapped					15
TOTAL	6,678	7,121	7,317	8,104	8,683

TABLE XLVII
STATE EXPENDITURES FOR SERVICES TO HANDICAPPED CHILDREN

1962-63	$1,243,757.30
1963-64	1,323,605.18
1964-65	1,532,439.38
1965-66	1,483,978.15
1966-67	2,076,643.98

Teacher Training

The Division administers two teacher education programs to assist local districts in obtaining or retraining teachers suitable for special education programs.

State funds have been appropriated to strengthen such programs at institutions of higher learning in the state. Contracts between the Division and teacher preparation institutions totaled $34,067.20 during 1966-67. The increase in the area can be compared to the preceding four years on the table below.

TABLE XLVIII
SPECIAL EDUCATION TEACHER
TRAINING CONTRACT COSTS

Actual Expenditures

1962-63	$57,923.62
1963-64	67,306.62
1964-65	7,360.00
1965-66	20,055.00
1966-67	34,067.20

The Ohio Department of Education, Division of Special Education was allocated $133,320 by the United States Office of Education under Public Law 85-926, as amended, for the 1966-67 award year. This law provides grants to State Educational Agencies to assist in the training of professional personnel involved in the teaching or supervising of handicapped children. Public Law 85-926, as amended, includes the following categories of handicapped children: mentally retarded, speech handicapped, emotionally disturbed, deaf, visually handicapped, crippled and other health impaired.

Upon the recommendation of the Screening Committee chosen from the Advisory Committee of Special Education and using the available funds, the Division of Special Education awarded 15 fellowships to teachers of slow learning, speech and hearing, emotionally disturbed and administration to provide training for leadership personnel. Six in-service special study institutes were held for teachers of deaf, slow learning and other health-impaired, and for administrators of special education. The special study institutes were attended by 265 teachers and administrators.

Legal Dismissal

Two thousand, six hundred, nineteen applications for legal dismissals from school attendance were processed and approved to the schools of Ohio.

TABLE XLIX
LEGAL DISMISSALS FROM PUBLIC SCHOOL ATTENDANCE

1962-63	1,885
1963-64	2,263
1964-65	2,203
1965-66	2,272
1966-67	2,585

Programs for Blind Pupils

The Division of Special Education has developed the following procedures:

- A registration procedure for all school districts in Ohio.
- Instruct all school districts regarding general registration procedures, amounts of quota available and federal laws and regulations.
- A record system has been established to keep an accurate record of registration, amounts of the quota used and the balances for each school district involved.
- A record is kept of all requests for materials requested, loaned or returned.

TABLE L

NUMBER OF BLIND CHILDREN RECEIVING SERVICES THROUGH THE AMERICAN PRINTING HOUSE FOR THE BLIND

Year	Number Children Registered	Quota Administered
1962-63	632	$25,261.22
1963-64	613	26,316.91
1964-65	642	28,342.45
1965-66	653	32,727.76
1966-67	696	34,726.04

Evaluation Clinics for Deaf and Blind Children

The Division of Special Education is responsible for conducting evaluation clinics for deaf and blind children who are referred for entrance to the Ohio Schools for the Deaf and Blind.

There are two types of evaluation clinics:

- Educational Clinic -- All children referred are administered psychological, audiological and educational evaluations.

- Medical Clinic -- Children needing further or specialized medical evaluations before educational recommendations are finalized can be referred and will be evaluated by a neurologist, a pediatrician, an otologist, and an opthalmologist.

Throughout the 1966-67 school year 258 children were seen for evaluation in these clinics.

Academically Gifted Program

The emphasis in the Academically Gifted Program during this year has been placed upon research and demonstration projects within fiscal limitations, stimulation of current programs within local school districts, consultative services, and attendance at regional, state and national conferences concerned with the gifted student.

Experimental projects were partially funded in three school districts:

- A research study of the value of the Suchman method of inquiry training, the value of differential instructional methods, and the use of lay consultants with gifted elementary school children.

- A demonstration project involving the stimulation of creative potential using groups of high creative and low creative students at the elementary level. This operated as a pilot project in an ESEA Title III project which was funded as a planning grant.

- Funding for planning of a senior high school program for gifted students in the scientific and creative areas. This program will eventually place selected students into industry on a part-time basis.

A statewide survey of educational provisions for academically gifted students was begun in February 1967. Data are currently being compiled. Statewide distribution on a publication of these findings will be made in Spring, 1968.

Two publications were reprinted and distributed to districts requesting them due to unprecedented demand.

Several speaking engagements were made to university classes, parent teacher organizations, administrators organizations, teachers' groups, and professional organizations dealing with gifted children.

Further support of school psychologists in Ohio was enlisted in the validation of the Behavioral Rating Scale for twelve fourteen-year-old gifted children.

Teacher Education and Certification

In 1966-67 the Division of Teacher Education and Certification had responsibility for supervision of teacher preparation programs in 52 Ohio colleges and universities. It issued 65,844 certificates of all grades and types for teachers qualified to teach in Ohio classrooms.

During the year the Division participated in or conducted 18 conferences attended by 2,100 persons. In addition to the large volume of business done by mail, office conferences were conducted with 2,819 educators and 933 other visitors seeking advice and information concerning certification requirements.

Standards for teacher education and certification in Ohio are set forth in the Division publication Laws and Regulations Governing the Certification of Teachers, Administrators, Supervisors and School Employees in Pupil Personnel Service. Data concerning the supply and demand for teachers in Ohio schools and the enrollments in teacher preparation institutions are summarized by the Division each year in a report, A Statistical Summary of Teacher Supply and Demand. Some of these statistics are summarized in the following tables.

TABLE LI

ANNUAL TEACHER LOSS
FROM OHIO PUBLIC SCHOOLS

Year	Teachers Lost At End of Year	Percentage of Total Teachers
1961-62	9,313	10.9%
1962-63	10,181	11.4
1963-64	9,186	9.9
1964-65	9,198	9.7
1965-66	10,938	12.3
1966-67	11,604	

SOURCE: October information from Superintendents

TABLE LII

SOURCES OF NEW CERTIFICATED PERSONNEL
YEARLY IN OHIO PUBLIC SCHOOLS

Year	From Ohio Institutions	Per Cent	Institutions Other States	Per Cent	Total
1961-62	7,419	76%	2,274	24%	9,693
1962-63	6,971	73	2,604	27	9,575
1963-64	8,063	76	2,610	24	10,673
1964-65	8,055	72	2,921	28	10,976
1965-66	8,401	74	2,948	26	11,349
1966-67	9,678	75	3,253	25	12,931

SOURCE: October information from Superintendents

TABLE LIII

TEACHERS NEEDED BUT UNAVAILABLE
AFTER START OF SCHOOL YEAR

1961-62	1,008
1962-63	876
1963-64	784
1964-65	667
1965-66	1,034
1966-67	1,079

SOURCE: October information from Superintendents

TABLE LIV

DEGREE STATUS OF CERTIFICATED PERSONNEL
IN OHIO SCHOOLS

Year	Non-Degree	Per Cent	Bachelor Degree	Per Cent	5-Year Training	Per Cent	Master Degree	Per Cent	Total
1962-63	10,366	13.7	35,022	46.4	11,969	15.9	18,100	24.0	75,437
1963-64	9,603	12.2	37,236	47.2	12,854	16.3	19,140	24.3	78,833
1964-65	8,774	10.7	39,973	48.6	13,845	16.8	19,724	23.9	82,316
1964-66	11,934	12.9	45,277	49.0	14,415	15.6	20,786	22.5	92,412
1966-67	10,701	10.8	50,595	51.1	15,653	15.9	22,016	22.2	98,965

SOURCE: Division of School Finance Form SF-12

TABLE LV

TEACHING CERTIFICATES ISSUED, 1966-67

Non-Public Schools	1,020
Duplicate Certificates	668
Temporary	24,048
Provisional	36,697
Professional	4,634
Permanent	1,730
TOTAL	67,797

TABLE LVI

ESTIMATED 66-67 ENROLLMENTS IN
OHIO TEACHER PREPARATION INSTITUTIONS

Institution	Elementary	Secondary	Total
University of Akron	599	749	1,348
Antioch College	68	76	144
Ashland College	311	647	958
Athenauem-Teachers College	0	69	69
Baldwin Wallace College	235	699	934
Bluffton College	131	228	359
Bowling Green State University	1,758	3,806	5,564
Capital University	253	466	719
Cedarville College	160	0	160
Central State College	475	684	1,159
University of Cincinnati	1,161	2,280	3,961
Cleveland State University	140	93	233
University of Dayton	935	987	1,922
Defiance College	129	291	420
Denison University	0	175	175
Findlay	195	351	546
Heidelberg College	164	293	457
Hiram College	109	237	346
John Carroll University	156	119	275

TABLE LVI (Continued)

	Elementary	Secondary	Total
Kent State University	3,905	4,644	8,549
Lake Erie College	124	111	235
Malone College	148	104	252
Marietta College	0	333	333
Mary Manse College	113	40	153
Miami University	2,465	2,968	5,433
College of Mt. St. Joseph	265	64	329
Muskingum College	171	89	260
Notre Dame College	0	118	118
Oberlin College	0	110	110
Ohio Northern University	193	579	772
Ohio State University	2,039	3,588	5,627
Ohio University	1,152	2,374	3,526
Ohio Wesleyan University	217	326	543
Otterbein College	232	498	730
Our Lady of Cincinnati	212	60	272
Rio Grande College	168	592	760
St. John College	610	0	610
St. Mary of the Springs	127	152	279
Steubenville University	258	4	262
University of Toledo	835	1,265	2,100
Ursuline College	0	136	136
Walsh College	0	91	91
Western College	0	62	62
Western Reserve University	91	147	238
Wilberforce University	88	72	160
Wilmington College	28	88	116
Wittenberg University	298	191	489
College of Wooster	0	191	191
Wright State University	995	1,820	2,815
Xavier University	0	182	182
Youngstown	1,876	1,259	3,135
TOTAL	22,467	32,333	58,626

TABLE LVII

SUPPLY OF TEACHERS FROM OHIO COLLEGES

Year	Teachers Graduated
1957	6,671
1959	8,462
1961	8,255
1963	8,032
1965	9,288
1966	9,535

SOURCE: Form II, Biennial NEA Fall Report

VOCATIONAL EDUCATION

With the assistance of federal and state vocational funds, the Division of Vocational Education carries on a wide range of activities to develop and supervise programs for youth and adults, prepare vocational teachers, and plan and develop needed facilities.

As the following tables indicate, significant growth took place during 1966-67. The growth of enrollments in vocational education was unprecedented--an increase in enrollments of youth and adults of 35,059. Enrollments at the high school level increased 18,330, the greatest increase in the history of vocational education.

Plans for area vocational centers and expanded programs in larger cities included organization of seven additional joint districts and plans for expanded facilities in seven metropolitan areas during the year. It brought to 31 the number of joint vocational districts, with five of the districts in operation, seven more had voted construction and operating funds and were in some stage of planning or construction. Four additional Joint Vocational Districts had voted their local funds for equipment and operation and were waiting on matching money from state or federal funds. New vocational units also were in planning stages in Cleveland.

In 1967 Ohio was second ranking state in the nation in the number of Manpower Development and Training Projects with 149 under way. It ranked third in enrollments, with 8,788 students, and fifth in expenditures, with $14,734,043. Over a two-year period, in 1965 and 1966, Ohio invested $12,247,808 in MDTA education, 62% of it in the seven largest cities--26% in Cleveland, the largest city.

Technical education also continued to grow, with full-time enrollments up from 1,812 to 2,646. A new center was added in Cincinnati Public Schools. There also was a total of 73 centers for disadvantaged youth, enrolling 3,229 students.

Outstanding features of the State program:

. As of the close of the fiscal year 1967, the outstanding accomplishments

with regard to the State program show that thirty-one joint vocational school districts have been organized covering 297 school districts in forty-eight counties. Twelve joint vocational school districts have been fully funded. Five of these are in operation; seven are under construction. Four additional districts have voted their local funds and are waiting assistance from State or Federal funds for construction and equipment.

- Two residential vocational schools have been developed for disadvantaged youth and adults with the assistance of funds from the Manpower Development and Training program.

- Manpower training centers for full-time educational services for the unemployed have been established in Cleveland, Columbus, Cincinnati, Akron, Dayton and Youngstown.

- Enrollment of high school youth in Vocational Education programs has increased by more than 18,330 students over a period of one year.

- Our major cities have added three new vocational high schools: one major addition for Vocational Education to an existing high school and remodeled additional facilities in three of the cities for additional expansion in Vocational Education.

- One major city has established a center for job preparation and vocational rehabilitation designed to serve school alienated or disoriented youth.

- A leadership development program designed to train directors and supervisors for Vocational Education including an internship program has been developed.

- A master plan for the establishment of fifty-four joint vocational school districts to serve small cities, suburban and rural areas of Ohio has been developed. This master plan includes the development of vocational centers in the large metropolitan areas so that when implemented it will make it possible for every person in the State of Ohio to have access to a comprehensive program of Vocational Education.

TABLE LXIII

SUMMARY OF ENROLLMENTS BY SERVICES WITH A COMPARISON BETWEEN THE 1964-65, 1965-66 SCHOOL YEARS AND THE 1966-67 SCHOOL YEAR

Vocational Services Within the Division of Vocational Education	Total Enroll. 1964-65	Total Enroll. 1965-66	Total Enroll. 1966-67	1966-67 Preparatory Instruction: High School	Post High Tech.	MDTA Adult	Other Adult Prep.	Adult Upgrading Instruction: Apprentice	Extension
Agriculture Ed.	22,747	24,562	24,484	14,276	134	306			9,768
Business and Office Ed.	6,442	17,957	25,261	10,207	572	1,352	836		12,294
Distributive Ed.	11,561	9,556	12,273	5,058	308	303			6,604
Home Economics Ed.	86,217	86,045	105,563	45,315	113	154			59,981
Health Ed.	N/A	N/A	4,799	694		888	2,565		652
Trade and Industrial Ed.	71,923	77,822	78,621	13,226	1,519	4,391	219	9,152	50,114
Sub-Totals				88,776	2,646	7,394	3,620	9,152	139,413
TOTALS	198,890	215,942	251,001						

TABLE LIX

TREND IN VOCATIONAL EDUCATION HIGH SCHOOL ENROLLMENT

Year	Agriculture	Business & Office	Distributive	Home Economics	Trade and Industrial	Total
1961-62	11,553	380	1,166	23,650	6,881	43,630
1962-63	12,046	572	1,383	26,973	6,266	47,240
1963-64	13,381	665	1,898	31,091	7,721	54,756
1964-65	13,800	970	2,412	35,073	8,347	60,602
1965-66	13,311	5,003	3,509	38,517	11,106	71,446
1966-67	14,276	10,207	5,058	45,315	13,920	88,776
Per Cent of Total						
1966-67	16.08	11.49	5.81	51.04	15.58	100.00

TABLE LX

TREND IN VOCATIONAL ADULT ENROLLMENTS

Year	Agriculture	Business & Office	Distributive	Home Economics	Trade and Industrial	Total
1961-62	9,074		9,432	19,952	44,640	83,098
1962-63	9,036	636	4,084	34,335	44,491	92,582
1963-64	8,906	776	6,864	44,752	56,883	118,181
1964-65	8,947	5,462	9,149	51,144	63,576	138,278
1965-66	11,251	12,954	6,047	47,528	66,716	144,496
1966-67	10,208	15,054	7,215	60,248	69,500	162,225
Per Cent of Total						
1967	6.29	9.28	4.44	37.13	42.86	100.00

SUMMARY OF STAFF ACTIVITIES

Conferences or Meetings	Office	Field Services
Educators	3,371	3,281
Boards of Education	124	138
Others	1,698	
School Staff Groups		1,174
College or University Groups		362
Lay Groups		1,371

Educational Conferences	Local or Area	State Wide	Regional or National
Participated in or conducted by department personnel	1,515	581	154
Approximate number served by conferences	53,333	119,863	70,463
Others	219	1,442	46

School Visitations or Consultations

Program or Area Evaluations	878
Total Visits to Schools	3,775

Miscellaneous

Meetings to plan conferences	843
Days spent in the field	6,294
Addresses given	1,104

Veterans Training and Education Service

Supervisory and Inspection Visits

Private Schools	340
Hospitals	87
Colleges and Universities	55
High Schools	21
TOTAL	503

TABLE LXI

TECHNICAL EDUCATION PROGRAMS UNDER THE DIRECTION OF THE STATE BOARD OF EDUCATION, 1966-67

School	Location
Canton Area Technical School	Canton
Cincinnati Cooperative School of Technology	Cincinnati
Cleveland Technician School	Cleveland
Columbus Area Technician School	Columbus
Dayton Board of Education	Dayton
Lakeland Community College	Mentor
Lorain Community College	Lorain
Mansfield School of Technology	Mansfield
Miami Valley Institute of Technology	Hamilton

Northeast Technical Institute	Ashtabula
Penta-County Technical College	Perrysburg
Salem Academic Center	Salem
Springfield and Clark County Technical Education Program	Springfield

Technical Curricula	School Offering	Enrollment
Accounting	1	56
Aerospace	1	21
Agri-Business	1	49
Agri-Equipment	1	39
Architectural Drafting	1	42
Business and Data Processing	2	128
Chemical	2	39
Chemical Engineering	1	16
Chemical Research	1	18
Civil	1	36
Civil Engineering	2	44
Data Processing	2	153
Data Processing and Computer Programming	2	182
Electrical	3	113
Electrical-Electronics Engineering	1	67
Electrical Engineering	3	103
Electrical Engineering	1	33
Electronic Technology	1	16
Electronics	1	59
Electronics 1	1	29
Electronics 3	1	12
Executive Secretary	1	5
Food Distribution Management	1	49
Food Processing	1	22
Food Service Management	2	41
Graphic Communications	1	30
Industrial	2	66
Industrial Accounting	1	57
Industrial Engineering	2	28
Junior Accountant Technician	1	17
Junior Accounting	1	7

Technical Curricula	School Offering	Enrollment
Mechanical	11	450
Mechanical Design	1	34
Metallurgical	1	7
Nursing	1	61
Retail	1	54
Retail Mid-Management	3	114
Retail-Wholesale Merchandising Management	1	21
Sales-Marketing	1	32
Secretarial Science	1	60
Secretarial Technology	1	12
Tool and Manufacturing Engineering	1	33
Welding Engineering	1	16
Wholesale	1	52

TABLE LXII

VOCATIONAL TEACHER IN-SERVICE WORKSHOPS
1966-67

Topic	Number Participating	Length	University Center
Agricultural Education			
Agricultural Business and Service	27	13 days	Ohio State
Agricultural Business and Service Internship	6	13 days	Ohio State
Animal Reproduction	22	6 hours	Ohio State
Cooperating Instructors Workshop	10	13 days	Ohio State
Farm Business Planning and Analysis	16	13 days	Ohio State
Farm Business Planning and Analysis	21	6 hours	Ohio State
Forestry and Conservation	20	6 hours	Ohio State
Making Quality Concrete	42	6 hours	Ohio State
New Recommendations in Agronomy	57	6 hours	Ohio State
Organization and Administration of Multiple Teacher Departments	16	13 days	Ohio State
Size Selection of Farm Machines	54	6 hours	Ohio State
Teaching Electricity	11	13 days	Ohio State
Tractor Operation and Maintenance	20	13 days	Ohio State

TABLE LVII (Continued)

Agricultural Education (Con't.)

Topic	Number Participating	Length	University Center
Weed Identification and Control	35	12 hours	Ohio State
Electric Arc and Oxy-Acetylene Welding	7	5 days	Troy, Ohio
Spray Painting	5	2 1/2 days	Toledo, Ohio
Business and Office Education			
Overview Training Program for Intensive BOE Teachers	60	2 weeks	Ohio State @ Howard Johnsons (East)
Data Processing Operation for BOE Teachers	13	6 weeks	Chandler Technical School
Transparency Teaching Program for Clerk-Typist	21	2 weeks	Bowling Green @ 3M Corp., Min.
Adult Program Guidelines	18	2 weeks	Bowling Green
Remedial Materials for BOE teachers in DAVY Programs	18	2 weeks	University of Cincinnati
Overview Training Program for Intensive BOE Teachers	19	2 weeks	Kent State
Facilities and Equipment Guide for BOE Programs	20	2 weeks	Ohio State
Cooperated with: Overview of Business Data Processing for Bus. Ed. Teachers	28	3 weeks	University of Dayton
Distributive Education			
Development and Utilization of Visual Instructional Aids for the D.E. Classroom	16	3 weeks	Bowling Green State
Business Communications for Distributive Education	22	2 weeks	University of Dayton
Development of a Two-Year Curriculum in Distributive Education	14	2 weeks	Ohio University
Trade and Industrial Education			
Diversified Cooperative Training, Pre-Service	28	2 weeks	Ohio State
Occupational Work Experience, Pre-Service	44	1 week	Kent State
Diversified Cooperative Training, In-Service	66	1 week	State Staff

TABLE LVII (Continued)

Trade and Industrial Education (Con't.)

Occupational Work Experience, In-Service	32	1 week	Kent State
Pre-Service	44	1 week	Cincinnati University
Pre-Service	25	1 week	Toledo University
Pre-Service	103	1 week	Kent State
Pre-Service	38	1 week	Ohio State
Local Supervisors and Directors, Pre-Service and In-Service	76	1 week	State Staff
State Staff, In-Service	38	1 week	State Staff
Practical Nurse Instructors, Special In-Service	20	1 week	Ohio State
Machine Trade Instructors, Special In-Service	24	2 weeks	Toledo University
Drafting Instructors, Special In-Service	20	2 weeks	Kent State
Related Sciences Instructors, Special In-Service	28	2 weeks	Cincinnati University
Fire Service Instructors, Special In-Service	111	2 days	State Staff
School Bus Instructors, In-Service	42	3 days	State Staff
Practical Nurse Institute, In-Service	105	2 days	State Staff
N.W. Area Supervisors, In-Service	18	50 hours	Staff
N.E. Area Supervisors, In-Service	22	50 hours	Staff
S. Area Supervisors, In-Service	12	50 hours	Staff
VICA Sponsors Conference, Pre-Service & In-Service	56	2 days	State Staff

Veterans Training

During the period from July 1, 1966 to June 30, 1967, the State Approving Agency for Veterans' Training had the responsibility for the approval and inspection of educational institutions of higher learning and those below college level for the enrollment of eligible veteran and war orphan students as provided under Public Law 358.

The Veterans' Readjustment Benefits Act of 1966 (Public Law 358) went into

effect on June 1, 1966. This act provided for the awarding of educational benefits to veterans, who had served on active duty for a period of more than 180 days, any part of which occurred after January 31, 1955, and who were discharged therefrom under conditions other than dishonorable. This law also provided for war orphans.

During the first year of operation under this law, over 20,000 veterans and war orphans within the State of Ohio received educational benefits in 418 educational institutions approved within the State by the State Approving Agency for Veterans' Training under the Ohio State Department of Education.

As of June 30, 1967, the total physical count of educational institutions approved within the State of Ohio for this purpose was as follows:

TABLE LXIII

INSTITUTIONS APPROVED FOR VETERANS TRAINING

Accredited Institutions

80	Colleges and Universities (Higher Learning)
111	Hospitals (Schools of Nursing--Residency Internships)
16	High Schools
207	Total

During that period, the following was reported:

128	Applications received for new approvals	627	Applications approved
616	Applications received for revisions	93	Applications disapproved
		24	Applications pending
744	Total	744	Total

A total of 29 approvals were withdrawn due to violations or for other reasons.

FEDERAL ASSISTANCE

The Division of Federal Assistance administers the various titles and programs of the Elementary and Secondary Education Act. During fiscal year 1967 (July 1, 1966--June 30, 1967), the division had eight distinct areas of responsibility. These areas were:

- Basic Title I programs designed to meet the needs of selected educationally disadvantaged children (P.L. 89-10).

- Special Title I programs designed to meet the educational needs of mentally retarded, emotionally distrubed, deaf, and visually handicapped children in state institutions (P.L. 89-313).

- Special Title I programs designed to meet the educational needs of orphaned, neglected, and delinquent children in state institutions (P.L. 89-750).

- Special Title I programs designed to meet the educational needs of children of migratory agricultural workers (P.L. 89-750).

- Title II programs, which provides both basic grants for library resources and instructional materials and special purpose grants for special collections (P.L. 89-10).

- Title III programs for research and demonstration purposes. During fiscal year 1967, this program was administered directly from the U. S. Office of Education; the role of the Division of Federal Assistance was of a liaison and advisory nature (P.L. 89-10).

- Title V programs for strengthening the Ohio Department of Education (P.L. 89-10).

- Adult Basic Education Programs for individuals who have attained age eighteen and who have less than an eighth-grade education or its functional equivalency (P.L. 89-750).

Conferences and Field Services

The principal means by which Division of Federal Assistance staff members provided information about the various titles of the Elementary and Secondary Education Act were: (1) office conferences, primarily with school superintendents or their appointed representatives, (2) conferences and workshops for specified groups of educators, and (3) field services, including on-site visits of funded projects and meetings with various groups of educators. For statistical details and a listing of conferences, see the following table.

INVOLVEMENT OF INDIVIDUAL DIVISION OF FEDERAL ASSISTANCE STAFF MEMBERS IN CONFERENCES AND FIELD SERVICES DURING FISCAL YEAR 1967

Office conferences with educators		2,651
Office conferences with others		475
Meetings to plan educational conferences		63
Participation in educational conferences		297
Local	165	
Statewide	86	
Regional or national	46	
Other educational conferences attended		56
Addresses given		176
Field Services		
Days spent in the field		621
Visits to schools		494
Program evaluations within schools		196
Meetings with administrators		353
Meetings with school staff groups		63
Meetings with college or university groups		22
Meetings with lay groups		19
Meetings with boards of education		4

Programs for Disadvantaged Pupils

Title I of the Elementary and Secondary Education Act of 1965 provides grants of federal funds to local public school districts for educational programs for educationally disadvantaged students--either public or non-public--who live in areas of high concentrations of children from low-income families. Although non-public youth participate in Title I projects, only public school districts can apply for grants.

The basic grant for each public school district is based on a formula dependent upon the number of children--including ones who attend non-public schools--from low-income families that reside in the attendance areas served by that district. By the nature of the formula, nearly all public school districts in Ohio qualify for funds; however, in proportion to the number of children served, major cities and impoverished rural communities qualify for, and expend, substantially larger grants.

TABLE LXIV

NUMBER OF SCHOOL DISTRICTS, TITLE I PROGRAMS, 1966-67

Type of District	Received Grants for Programs	Eligible, but Non-Participating	Ineligible for Grants
City	153	10	0
Exempted Village	48	6	0
Local	449	35	7
TOTAL	650	51	7

Each pupil selected for participation in a Title I project was typically involved in one or more instructional or service activities. Patterns of involvement varied from district to district and from project to project. On a statewide basis, however, certain patterns emerged. Communication instructional activities were offered to approximately three and a half times as many pupils as any other activity. Distribution of pupil participation among the major instructional and service activities was as follows:

72.8% were in communications instructional activities (reading, language arts)
20.8% were in arts and humanities activities
10.7% were in health service areas
9.6% were in miscellaneous instructional activities
8.6% were in health education instructional areas, including physical development activities
4.2% were in preschool instructional activities
3.4% were in pupil personnel service areas
2.1% were in vocational educational activities
.7% were in special education areas, including speech and hearing therapy and activities for slow learners

TITLE I BASIC PROJECTS IMPLEMENTED DURING FISCAL YEAR 1967

Reported expenditures for basic Title I projects		$32,363,851
Regular school year expenditures	$19,518,315	
Summer expenditures	12,845,536	
Estimated number of participants[1]		214,825
Public school pupils	196,995	
Non-public school pupils	13,860	
Pupils not enrolled (preschoolers, dropouts, etc.)	3,970	
Average cost per participant		$151

Emerging Trends as Seen in Title I Surveys

At the time this report is being prepared--midway through Title I's third year of operation--certain trends appear to be emerging as school personnel have responded with increased awareness and respect for the problems of providing appropriate educational experiences for disadvantaged youth. This included:

- More intense services and activities are being concentrated on fewer disadvantaged children in order to optimize their chances for improved educational achievement and for life success.

- Curricula and services are being tailored to fit the needs of the disadvantaged, contrary to what has so often been true in the past.

- Younger children--particularly ones in the early elementary grades--are being selected more frequently for project participation and programs are gradually shifting away from remediation toward prevention as a more feasible approach.

- Teachers are sharpening their communication skills so that they are better able to reach disadvantaged youth.

- Emphasis in program development has shifted from proposals designed primarily for the procurement of educational resource materials and equipment to more sound types of proposals--ones in which materials and equipment are considered as tools for affecting behavioral changes in children.

- Utilization of supportive personnel, especially teacher aides, is expanding with the result that teachers have more time for working directly with disadvantaged students.

[1]Estimations based on 97 percent return of local evaluation reports.

Public Law 89-313

During fiscal year 1967, sixteen projects were implemented in Ohio--state operated institutions; seven for the mentally retarded, six for the seriously emotionally disturbed, two for the visually handicapped, and one for the deaf. Six of the projects were operated for the entire school year or longer; ten were short-term projects lasting from eight to thirteen weeks.

TITLE I PROJECTS FOR EDUCATIONAL NEEDS OF HANDICAPPED CHILDREN IN STATE-OPERATED INSTITUTIONS

Total reported expenditures		$267,497
For 7 projects for mentally handicapped	$131,503	
For 6 projects for emotionally disturbed	$60,759	
For 1 project for deaf	$39,009	
For 2 projects for visually handicapped	$36,226	
Reported numbers of children receiving district services in one or more projects		2,179
Mentally handicapped	1,497	
Emotionally disturbed	183	
Deaf	249	
Visually handicapped	250	
Average cost per child receiving direct service		$123

Public Law 89-750

Through provisions of the Elementary and Secondary Education Act of 1966, P.L. 89-750, special educational programs for orphaned, neglected, and delinquent children were made possible. Responsibility for state-level administration of this program was vested in the newly organized Special Programs Section of the Division of Federal Assistance in the Ohio Department of Education.

Institutions eligible for the funds provided were the Ohio Soldiers and Sailors Orphans Home at Xenia and five facilities operated by the Ohio Youth Commission--Fairfield School for Boys; Maumee Youth Camp; Scioto Village; Training Center for Youth; and Training Institute, Central Ohio.

Funding occurred so late in the fiscal year that only summer programs were feasible. The Ohio Youth Commission elected to develop an umbrella project with strong emphasis on remedial and developmental reading with supportive activities and services being focused on self-concept improvement and motivation.

TABLE LXVI

TITLE I PROJECTS FOR EDUCATIONAL NEEDS OF ORPHANED, NEGLECTED, AND DELINQUENT CHILDREN IN STATE-OPERATED INSTITUTIONS

Number of agencies eligible for funds		2
Number of agencies implementing projects		2
Total reported expenditures		$104,057
Ohio Youth Commission	$78,582	
Ohio Soldiers and Sailors Orphans Home	$25,475	
Number of children participating		622
Ohio Youth Commission	450	
Ohio Soldiers and Sailors Orphans Home	172	
Average cost per participant		$167

Public Law 89-750

Fiscal year 1967 was a year of transition in Ohio's educational programs for children of migratory agricultural workers. The U. S. Office of Economic Opportunity, which had been providing financial support for such programs, canceled all educational programs for school-age children as of July 1, 1966, leaving the Ohio Department of Education with commitments for which funds were unavailable. Emergency measures were taken so that state funds could be transferred and made available to cover program commitments and to insure the continuation of educational opportunities for migrant youngsters. During the latter half of fiscal year 1967 federal funds were again available through provisions of the Elementary and Secondary Education Act of 1966, P.L. 89-750.

Migrant Children Programs

As a result of the changes in federal funding, the organizational pattern within the Ohio Department of Education changed. The Findlay field office for migrant education was closed and administrative responsibilities were transferred to the Special Programs Section of the Division of Federal Assistance. The migrant program expanded beyond the levels of previous years--more pupils (nearly 3000) were enrolled than ever before, the number of services provided increased, and the quality of education improved.

TABLE LXVII

NON-TITLE I MIGRANT EDUCATIONAL PROGRAMS
IMPLEMENTED FROM JULY THROUGH OCTOBER, 1966

Estimated disbursements to local districts		$71,616
Amounts for instruction	$46,506	
Amounts for transportation	$8,797	
Amounts for food	$6,456	
Amounts for other	$9,857	
Number of school districts involved		17
Reported number of children participating		1,499

TABLE LXVIII

EXPENDITURES FOR FISCAL YEAR 1966 and 1967
TITLE I PROGRAMS IMPLEMENTED IN OHIO

Types of Title I Projects	Reported Expenditures FY 1966	Reported Expenditures FY 1967	Changes in Expenditures
Basic Title I Projects for selected educationally disadvantaged children	$33,813,292	$32,363,851	-1,449,441
Special projects for handicapped children in state institutions	311,432	267,497	-43,935
Special projects for orphaned, neglected, and delinquent children in state institutions		104,057	+104,057
Special projects for children of migratory agricultural workers		146,953	+146,953
TOTAL	$34,124,724	$32,882,358	-1,242,366

Libraries and Instructional Resources

The purpose of Title II of the Elementary and Secondary Education Act of 1965 (P.L. 89-10) is to strengthen and to improve the educational opportunities afforded to children and teachers through the provision of funds for library resources and other instructional materials.

Activities of the Title II staff during fiscal year 1967 included: (1) distribution of funds; (2) project application review and supervision of material acquisition; (3) publication of a guidelines bulletin entitled Bulletin of Information; (4) implementation of four workshops for the purpose of exploring the program and helping schools plan for improved educational opportunities; and (5) provision of field services, including school visitations.

In its two years of existence Title II has, helped to make a marked impact on the educational opportunities provided to the children of Ohio in the following ways:

- The number of elementary libraries has increased.
- The amounts and varieties of materials available in existing school libraries have improved.
- Increased attention is being given to the selection of quality curriculum-related materials.
- Increased attention is being given to organizing library resources and instructional materials for better use.
- Model special collections, which were made possible by Title II special purpose grants, have generated much enthusiasm on the part of school staffs and stimulated interest in procurement of complete, outstanding collections in specified areas of need.

TABLE LXIX

SUMMARY OF TITLE II GRANTS MADE DURING FISCAL YEAR 1967
IN RELATION TO NUMBER OF DISTRICTS

Number of eligible school districts	727
Total number of districts applying for and receiving basic grants	706
Number of districts receiving both basic and special purpose grants	18

TABLE LXX

SUMMARY OF TITLE II GRANTS MADE DURING FISCAL YEAR 1967
BY DISTRICTS AND FUNDS

Approved amounts for the 706 basic grants	$4,700,932
Approved amounts for the 18 special purpose grants	535,896
State-level administrative costs	111,224
Local-level administrative costs paid with shared funds from state administrative budget	103,303
TOTAL	$5,451,355

ESTIMATED EXPENDITURES OF TITLE II FUNDS BY SCHOOL DISTRICTS
DURING FISCAL YEAR 1967

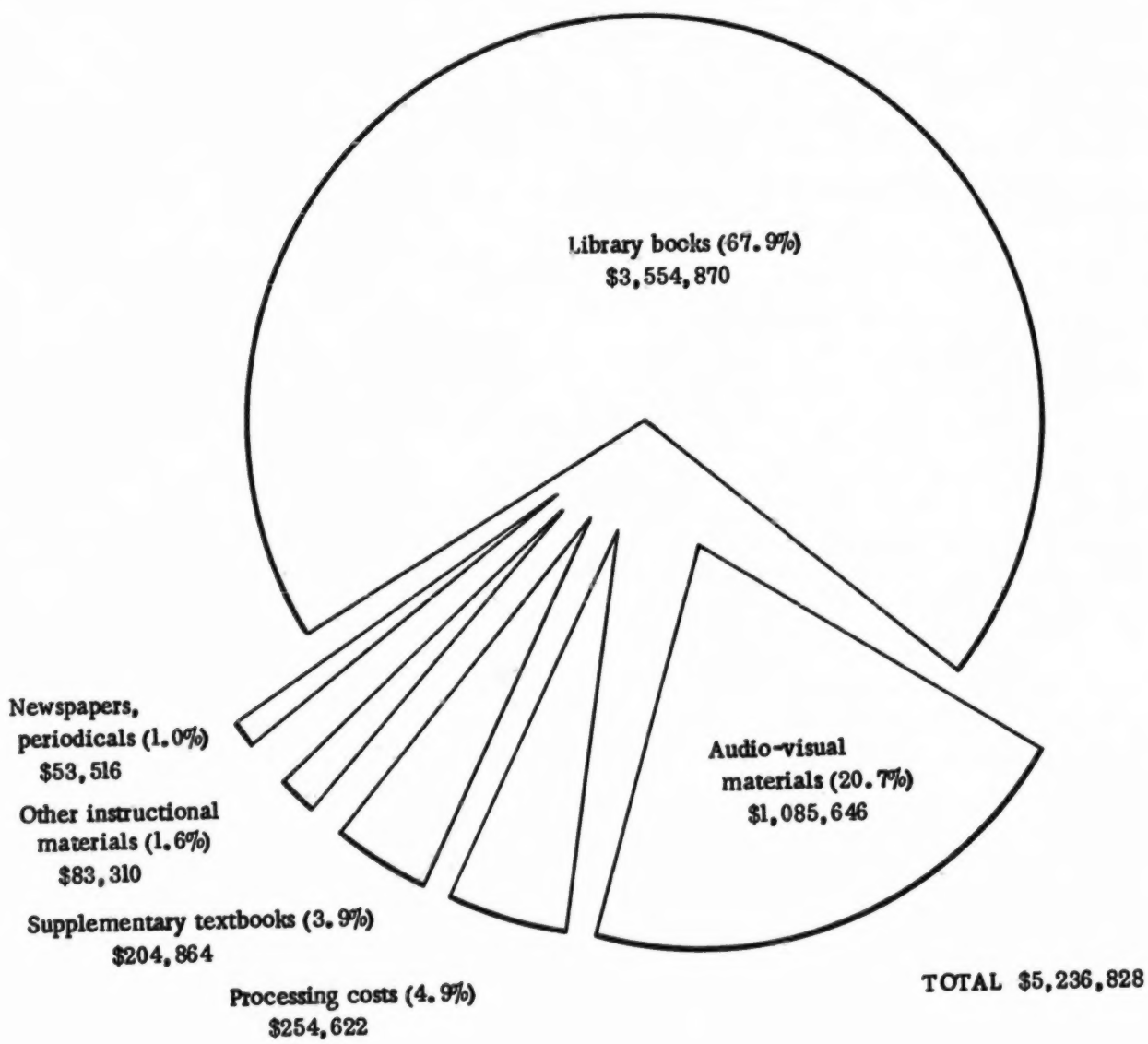

Figure C

Processing
$254,6
TOTAL $5,236,828

TABLE LXXI

TITLE II SPECIAL PURPOSE GRANTS FUNDED DURING FISCAL YEAR 1967

Districts	Counties	Amounts	Levels	What the Special Collections Are to Support
Aurora Local	Portage	$14,270	Grades 9-12	A seminar program for motivated students
Bedford Local	Cuyahoga	33,011	Grades K-6	An individualized reading book collection
Boardman Local	Mahoning	85,756	Grades K-12	An interdisciplinary multi-media approach to selected subjects
Columbus Children's Psychiatric Hospital*	Franklin	8,467	Ungraded Elem.	Enrichment for emotionally disturbed children
Crestwood Local	Portage	7,443	Grades 1-12	Reading for special education and remedial reading
Dover City	Tuscarawas	30,347	Ages 8-20	Slow learners use of resource centers
Eaton City	Preble	34,767	Grades 9-12	A social studies resource center with team teaching
Findlay City	Hancock	71,052	Grades 10-12	Resource centers for independent study and flexible scheduling
Hawthorne Hills School*	Summit	11,806	Ages 12-18	Library materials for psychotic adolescents
Joseph Badger Local	Trumbull	11,271	Professional	A professional library
Ohio State School for the Blind*	Franklin	7,695	Grades K-12	Spatial relationships and abstract reasoning in blind children

TABLE LXXI (Continued)

Districts	Counties	Amounts	Levels	What the Special Collections Are to Support
Ottawa Hills Local	Lucas	27,802	Ungraded Elem.	An audio-visual resource center for individualized instruction
Ridgedale Local	Marion	26,253	Grades 9-12	Cultural understanding through ungraded English
Sycamore City	Hamilton	50,648	Grades 7-12	Independent study contracts
Tipp City Exempted Village	Miami	11,872	Grades K-12	An ungraded language arts program
Warren Local	Washington	34,313	Grades K-12	Character and citizenship development
Warrensville Heights City	Cuyahoga	33,543	Grades 9-12	A four-year humanities program
Wyoming	Hamilton	35,570	Grades K-6	Curriculum project centers

*State-operated schools

Innovative Projects

Title III of the Elementary and Secondary Education Act of 1965 (P.L. 89-10)--often referred to as PACE, Projects to Advance Creativity in Education--provides funds to local educational agencies for planning imaginative solutions to educational problems, for demonstrating worthwhile innovations in educational practice through exemplary programs, and for supplementing existing programs and facilities through model centers that provide services and/or materials.

The basic purpose of PACE is to narrow the gap between current educational research and existing practices in schools.

Beginning with fiscal year 1966, Title III was administered directly from the U. S. Office of Education. At the state level, the Division of Federal Assistance of the Ohio Department of Education acted as liaison and in an advisory capacity. Determination of which projects were to be funded was at the federal level and grant awards were made by the U. S. Commissioner of Education.

TABLE LXXIII

TITLE III PROJECTS AND GRANT AWARDS APPROVED FOR LOCAL EDUCATIONAL AGENCIES IN OHIO

Projects Grant Awards	Fiscal Year 1966	Fiscal Year 1967	Totals
New projects approved	27	87	114
Grant awards, plus supplements to on-going projects	$2,038,940	$8,191,867	$10,230,807

TABLE LXXIII

TITLE III GRANT AWARDS MADE TO LOCAL EDUCATIONAL AGENCIES IN OHIO FROM THE BEGINNING OF THE PROGRAM THROUGH THE JULY, 1967 ROUND

Type of Grant Award	Number of Applicant Agencies Receiving Grant Awards	Number of Approved Projects	Average Grant Award Per Approved Project
Planning	43	55	$ 47,153
Operational	40	53	210,745
Mini-Grant ($25,000 or less)	27	27	21,915
TOTAL	110**	135	$106,289

*Duplicated county; unduplicated number of agencies receiving grant awards, 90.

TABLE LXXIV

ORGANIZATIONAL PATTERNS OF TITLE III PROJECTS IN OHIO FROM THE BEGINNING OF THE PROGRAM THROUGH THE JULY, 1967 ROUND

Type of Project	Number of Approved Projects	Number of Applicant Agencies	Average Grant Award Per Approved Project
Individual Local District Projects	95	60	$100,985
County-Wide Projects	25	19	78,320
Multi-County Projects	15	13	186,491
TOTAL	135	92**	$106,289

*Duplicated count; unduplicated number of agencies receiving grant awards, 90.

Strengthening of State Department

The purpose of Title V of the Elementary and Secondary Education Act of 1965 is to stimulate and assist states in strengthening the leadership resources of their state educational agencies and to assist these agencies in the establishment and improvement of programs to identify and meet the needs of state departments of education.

Title V activities undertaken by the Ohio Department of Education during fiscal year 1967, and for which a total of $796,965 was expended, were divided into the three areas outlined below:

I. Expansion, development, and strengthening the leadership roles and consultative services of the Ohio Department of Education to local educational agencies $521,529

- Twenty-six professional and eleven clerical staff members were employed. Areas of responsibility for professional staff members were as follows:

Title III, ESEA	1
Title VI, ESEA	1
Elementary education	4
Secondary education	3
Physical education	2
Art education	1
Mentally retarded	1
Hearing handicapped	1
Audio-visual services	1
Pupil psychological services	1
School district organization	2
School plant facilities	2
Pupil transportation	2
School lunch	2
School finance	1
Teacher training programs	1

- Supportive services, including travel allowances, were provided for the above personnel.

- Salary increase adjustments were provided for thirty-six existing professional staff positions.

- Thirty-four publications were developed or revised for dissemination to local educational agencies.

- A major study of elementary physical education was initiated.

- A study on student-teaching activities was completed.

II. Development and expansion of supportive services within the Ohio Department of Education $ 52,138

- A new unit was initiated in the area of graphic arts and publications. Three positions--two professional and one clerical--were filled.

- A new unit was initiated in the area of research. Two positions--one professional and one clerical--were filled.

- One business-management professional was employed.

- Two seminars were conducted, one relative to the problems of urban education and one for the entire professional staff of the department.

- Thirty-seven members of the professional staff visited exemplary programs outside Ohio or attended national meetings.

- Equipment was purchased to facilitate the increased demands made upon the department to disseminate information.

III. Development of data processing center and statewide studies of specific aspects of education in Ohio $223,298

- The second-year phase of a study of school-district organization and financing of education was completed.

- A study of "Planning, Programming, and Budgeting for Local Educational Agencies" was initiated.

- The installation of a data processing center, which was begun in fiscal year 1966, was completed.

- The data processing center was made operative. Five additional professional and four clerical positions were filled.

TOTAL TITLE V EXPENDITURES IN OHIO IN FISCAL YEAR 1967 $796,965

Economic Opportunity Act

During fiscal year 1966, Adult Basic Education programs in Ohio were funded under Title II-B of the Economic Opportunity Act of 1964 (P.L. 88-452). Fiscal year 1967 was a year of transition, one in which funding was transferred to P.L. 89-750--the Elementary and Secondary Education Act of 1966. Because this change had been anticipated for some time, responsibility for state administration of A.B.E. programs, as Adult Basic Education programs are frequently called, was assigned to the Title I section of the Division of Federal Assistance in January, 1966.

Responsibilities of the Special Programs Section during the interim period--fiscal year 1967--included administering A.B.E. programs according to the state plan approved under Title II-B and developing a new state plan. Basic principles underlying the Title II-B plan included:

- Qualified students had to be 18 years of age or older and have less than an eighth-grade education or its functional equivalency.

- The target population from which qualified students were to be drawn included unemployed workers, underemployed workers, welfare recipients, and heads of families.

- Students enrolled were not to be charged tuition, fees, or other charges or required to purchase books or other materials.

- Communication and computation skills (reading, writing, speaking, listening, and arithmetic) were to be stressed. Adult experiences such as consumer economics, family relations, community activities, and homemaking were to be interwoven into programs.

- Cooperation at the local level with other community agencies--e.g., health, welfare, Community Action--was encouraged.

- On a statewide basis, no more than ninety percent of the cost of all A.B.E. programs could be paid with federal funds. Ten percent or more had to be paid from local or state funds. In fiscal year 1967, all such funds were from local sources. New legislation, however, makes state funds available for matching purposes in fiscal year 1968.

Highlights for fiscal year 1967 included:

- Funding of thirty-three basic instructional programs compared with twenty-five programs in fiscal year 1966.

- Funding of four pilot projects: a summer project in Columbus City; a county-wide project in Pike County--an Appalachia area; a project in Henry County for migrant laborers; and a project in Lorain City for Spanish-speaking people, predominately Puerto Ricans.

- Sponsoring of a three-week workshop at Ohio State University in Adult Basic Education programs and a two-week counselor-training seminar at Akron University.

- Development of a new state plan, which was approved by both the Ohio State Board of Education and U. S. Commissioner of Education.

TABLE LXXV

ADULT BASIC EDUCATION GRANTS MADE DURING FISCAL YEAR 1967

Reported expenditures of federal funds by local districts		$772,575
Total number of A.B.E. projects approved		37
Basic projects	33	
Pilot projects	4	
Reported number of participants		8,526
Average expenditure per student		$191

TABLE LXXI

ADULT BASIC EDUCATION PROGRAMS DURING FISCAL YEAR 1967

Reported expenditures of federal funds for the 33 basic projects	$726,706
Reported expenditures of federal funds for the 4 pilot projects	45,869
State-level administrative costs	62,193
TOTAL	$834,768

TABLE LXXVII

ADULT BASIC PROGRAMS IMPLEMENTED DURING FISCAL YEAR 1967, RANKED BY REPORTED EXPENDITURES; BY COUNTY

County	Location of Center (s)	Reported Expenditures of Federal Funds	Number of Students
Cuyahoga	Cleveland	$288,142	3031
Hamilton	Cincinnati, Lincoln Heights	66,577	1592
Franklin	Columbus, Southwestern	66,421	611
Mahoning	Youngstown	56,901	556
Lucas	Toledo, S.S. Local	48,339	497
Summit	Akron, Barberton	44,883	372
Montgomery	Dayton	31,878	237
Pike	Scioto Valley	20,966	178
Trumbull	Warren, Girard	20,279	163
Lorain	Lorain, Elyria	19,039	221
Richland	Mansfield	13,616	202
Stark	Massillon, Sandy Valley	11,457	122
Columbiana	East Liverpool	10,412	66
Allen	Perry	8,883	96
Jefferson	Buckeye	7,649	47
Lake	Painesville	6,849	44
Erie	Sandusky	6,379	65
Scioto	Portsmouth	6,254	66
Clermont	Clermont Northeastern	5,946	70
Clark	Springfield	4,972	64
Belmont	Barnesville	4,765	25
Greene	Xenia	4,489	44
Henry	Liberty Center	4,073	36
Ashtabula	Ashtabula Area	3,818	49
Tuscarawas	Newcomerstown, New Philadelphia	3,509	34
Gallia	North Gallia	3,288	23
Crawford	Bucyrus	2,790	15
	TOTAL	$772,575	8526

Elementary and Secondary Education Act

Summary for Fiscal 1967

A summation of ESEA in Ohio, fiscal year 1967, by Titles is as follows:

TITLE I (P.L. 89-10 as amended)		
For 834 basic projects to meet needs of selected educationally disadvantaged children	$32,363,851	
For 16 special projects to meet educational needs of mentally retarded, emotionally disturbed, deaf, and visually handicapped children in state-operated institutions	267,497	
For 2 special projects to meet educational needs of orphaned, neglected, and delinquent children in state-operated institutions	104,057	
For 17 special projects to meet educational needs of children of migratory agricultural workers	146,953	
For state administration of Title I	247,004	
Reported expenditures for Title I as amended		$33,129,362
TITLE II (P.L. 89-10)		
For 706 basic grants for library resources, textbooks, and other instructional materials	4,700,932	
For 18 special purpose grants	535,896	
For state-level administration of Title II	111,224	
For local-level administrative costs	103,303	
Reported expenditures for Title II		5,451,355
TITLE III (P.L. 89-10)		
For 63 planning and operational grants plus supplements approved for FY 1966 projects	7,657,796	
For 24 mini-grants ($25,000 or less each)	534,071	
Total Title III grants and supplements		8,191,867
TITLE V (P.L. 89-10)		
For strengthening Ohio Department of Education resources		796,965
ADULT BASIC EDUCATION (P.L. 89-750)		
For 33 adult basic instructional programs	726,706	
For 4 adult basic pilot programs	45,869	
For state administration of A.B.E. programs	62,193	
Total expenditures for A.B.E. programs		834,768
TOTAL REPORTED EXPENDITURES FOR FISCAL YEAR 1967		$48,404,317

VOCATIONAL REHABILITATION

Ohio Makes Steady Progress

A total of 3698 handicapped Ohioans were restored to gainful employment through the services of the Ohio Bureau of Vocational Rehabilitation during fiscal year 1967 for a 17% gain over fiscal 1966. This percentage of increase represents steady rehabilitation progress in Ohio. The rate of increase is approximately the same as that of the previous year.

Services to Many More

An additional 24,764 were provided one or more services which include guidance and counseling, medical and pyschological examinations, hospitalization and surgery, prosthetics, physical therapy, vocational training and job follow-up.

7,794 were still on the active rolls June 30.

BVR Units in cooperating agencies throughout the state increased to a total of 13. (The establishment of vocational rehabilitation units in mental and correctional units and joint vocational schools began less than two years ago.)

Sixty-four new counselors completed the BVR-Kent State University Rehabilitation Counselor Training Institute.

BVR's Program for the Deaf: One Year of Progress

Concern for the special needs of the deaf in today's society resulted in an extension and improvement project, begun in 1966 by the deaf of Ohio. The program soon became an integral part of Ohio BVR, and one year later the record speaks for itself. 345 were rehabilitated in 1967 as compared with 274 in 1966. Established and still operating under the supervision of Mr. Frank Gattas, the project originally provided one person to work with the deaf. Today there are nine BVR counselors throughout the state, who work with the deaf and hard-of-hearing: five already competent in

manual communication, and four learning the language from the deaf.

These counselors, working with organizations for the deaf, many state agencies, speech and hearing centers, the Division of Special Education and its local school district offices, and the Department of Mental Hygiene and Correction, have increased the rehabilitation program for the deaf, hard of hearing and speech impaired to serve 25.9% more people than last year.

There is still much to be done before this fiscal year ends, those working with the deaf hope to establish a state diagnostic, personal adjustment and work evaluation center in an existing rehab facility to offer BVR services in depth to the deaf.

New Vocational Rehabilitation Programs

Vocational rehabilitation units have been established in thirteen Ohio mental and correctional institutions in recent months. Their purpose is to help the mentally ill, the mentally retarded and prisoners become better adjusted to community life and achieve suitable, gainful employment when they return to society.

Agencies Cooperate

The cooperative plan for this progress was developed under the direction of Martin A. Janis, Director of Mental Hygiene and Correction, and Edward J. Moriarty, Director of the Bureau of Vocational Rehabilitation.

The BVR-DMHC Cooperative program is based on the fact that, properly prepared for a vocation and community living, significant numbers of those with mental and behavioral disorders can become self-sufficient and self-supporting outside the walls of an institution.

Eventually Janis and Moriarty hope to see vocational rehabilitation units in every Ohio mental and correctional institution.

These DMHC facilities have BVR units: Applecreek, Broadview Center, Cleveland Psychiatric Center, Columbus State Hospital, Columbus State School, Dayton State Hospital, Hawthornden State Hospital, Longview State Hospital, Madison Opportunity Village, Mansfield Reformatory for Men, Mansfield Reformatory for Women, Toledo State Hospital and Woodside Receiving Hospital.

Individual BVR counselors are also assigned part-time and full-time to other state and local agency programs.

Federal Funds Help

The present program, which Governor Rhodes hailed in his 1967 State of the State address, will utilize approximately $450,000 of State funds expended by DMHC and $1,350,000 of BVR's federal allotment for fiscal 66-67. The funds are used for case services, necessary building modifications, equipment, and BVR staff.

TABLE LXXVIII

DISABLED CASELOAD DATA

Referral Rolls		
As disabled Ohioans apply or are referred to the Bureau for services, they are entered onto referral rolls.		
At the beginning of this fiscal year, July 1, 1966, these referrals numbered		3,247
During the year were additional new referrals		19,435
for a total of		22,682
After providing counseling, diagnosis, and evaluation services to determine eligibility and assess limitations and potentials 13,187 persons were processed through the referral stage.		
Some were determined not eligible for services	6,501	
The majority were accepted for rehabilitation services	6,686	13,187
There were still many on the rolls June 30, 1967, waiting determination of eligibility		9,495
Active Rolls		
All persons who have been determined eligible for rehabilitation services are entered onto active rolls.		
At the beginning of this fiscal year, July 1, 1966, these active cases numbered		5,780
We added those accepted for rehabilitation services		6,686
and total active cases worked with during the year reached a new high		12,466
Some persons for many reasons are not successfully rehabilitated and we must terminate services	974	
The vast majority of persons receiving rehabilitation services are successfully closed as REHABILITATED	3,698	4,672
At the end of the year, "service" rolls containing persons still in the rehabilitation process reached a NEW HIGH		7,794

Sources of Funds

The Bureau is financed on a Federal-State matching basis with Federal funds being expended only to the extent that State matching funds are spent. In fiscal year 1966-67 the matching ratio was 75% Federal and 25% State.

In addition to the regular program, BVR also obtained limited Federal funds to establish private rehabilitation facilities where such private matching funds were available for these purposes.

Federal funds	$5,196,411
State funds	1,732,137
Total funds used in 1967	$6,928,548

State funds include appropriations from General Revenue $952,293 and other funds made available for BVR use in our regular program. Some private rehabilitation facility funds $96,545 were used to establish rehabilitation facilities.

Use of Funds

The largest portion of our funds--89%--was used to provide rehabilitation services for disabled clients.

Most services are purchased from training institutions and medical facilities. Services include: diagnosis and evaluation, physical restoration, training, materials, and to the extent of financial need--occupational tools and equipment, maintenance and transportation.

These purchases comprise the largest single category of expenditures:

Case services	$3,660,553	53%
Counseling services provided by our own staff	2,497,723	36%
Private rehabilitation facilities advanced their funds to the Bureau and we utilized Federal funds of the Bureau to add to these private funds and expand services in those facilities	386,181	6%
A portion went for administrative costs	384,091	5%
Total program cost	$6,928,548	100%

BVR monies were used in various ways to benefit those 28,462 disabled Ohio citizens on our referral or active rolls. An average cost of approximately $243 per case served might better be termed "average investment."

TABLE LXXIX

CHARACTERISTICS OF THE 3698 DISABLED OHIOANS REHABILITATED THIS YEAR

Sex		Ages	
Men	70.5%	Under 20	29.6%
Women	29.5%	20-34	35.6%
		35-44	16.6%
		45-64	17.5%
Total	100.0%	65 and over	.7%
		Total	100.0%

Dependents		Education Level at Acceptance	
None	58.7%	None	.2%
1-3	28.4%	1-7 Grades	7.2%
4 or more	12.9%	8 Grades	11.3%
		9-11 Grades	24.1%
		12 Grades	38.8%
Total	100.0%	13 and over	5.4%
		Special Ed.	13.0%
		Total	100.0%

TABLE LXXX

SOURCE OF SUPPORT AT ACCEPTANCE

Family and friends	56.1%
Own income	13.9%
Public assistance	6.7%
Other benefits and insurance	5.4%
Workmen's compensation	5.1%
Public institutions	7.9%
Social security disability insurance benefits	4.4%
Private relief agencies	.1%
Not reported	.4%
TOTAL	100.0%

TABLE LXXXI

REFERRAL SOURCES

Educational institutions	20.1%
Hospitals and sanatoriums	14.4%
Interested individuals	9.0%
Other health agencies and rehabilitation centers	8.5%
Welfare agencies	7.3%
State employment service	12.3%
Physicians	6.3%
Self-referred	6.6%
Artificial appliance companies	4.4%
Bureau of old age and survivors insurance	3.8%
Workmen's compensation	2.7%
Correctional institutions	1.2%
Other sources	3.4%
TOTAL	100.0%

TABLE LXXXII

JOBS AFTER REHABILITATION

Professional, technical, and managerial	11.3%
Clerical and sales	19.5%
Service	20.6%
Agricultural and allied work	1.8%
Industrial occupations	
Skilled	11.5%
Semi-skilled	3.9%
Unskilled	20.9%
Sheltered workshops and vending stands	1.9%
Homemakers and unpaid family workers	8.6%
TOTAL	100.0%

TABLE LXXXIII

MAJOR DISABILITIES

Orthopedic deformity or impairment (except amputation)	26.8%
Amputation	13.3%
Visual loss or impairment	6.7%
Deaf, without speech	1.8%
Deaf, with speech	3.0%
Other hearing impairments	2.4%
Speech impairment	2.2%
Mental illness	10.2%
Personality, character, and behavior disorders	5.5%
Mental retardation or deficiency	10.2%
Allergic, endocrine, etc. disorders	2.4%
Neoplasms	.2%
Blood diseases, etc.	.1%
Epilepsy and other nervous disorders	4.2%
Heart and circulatory conditions	5.1%
Respiratory diseases	1.6%
Digestive system disorders	2.5%
Other disabilities	1.8%
TOTAL	100.0%

VT 006 140

Joblessness and Poverty in Urban Slums. A Reprint from the 1967 Manpower Report.

Manpower Administration (DOL), Washington, D.C.
MF AVAILABLE IN VT-ERIC SET.
Manpower Administration, Office of Manpower Policy, Evaluation, and Research, U.S. Department of Labor, 14th Street and Constitution Ave., N.W., Washington, D.C. 20210.
Pub Date - 68 32p.

*UNEMPLOYMENT; UNEMPLOYED; *URBAN SLUMS; *EMPLOYMENT PROBLEMS; SUBEMPLOYMENT; INDIVIDUAL CHARACTERISTICS; FAMILY CHARACTERISTICS; POPULATION TRENDS; *SOCIOECONOMIC INFLUENCES; SOCIOECONOMIC BACKGROUND; RACIAL DISTRIBUTION; ETHNIC DISTRIBUTION; HEALTH CONDITIONS; *ECONOMIC DISADVANTAGEMENT; FEDERAL PROGRAMS; OCCUPATIONS; WORK ATTITUDES; MOTIVATION; PROGRAM DESCRIPTIONS

Households in poverty areas of Boston, New York, New Orleans, Philadelphia, Phoenix, St. Louis, San Antonio, San Francisco, and San Juan were surveyed in November 1966 by the Department of Labor to discern the present critical problems of slum residents. Data from this and other related studies were used to describe unemployment in slums, characteristics of slum residents, barriers to employment of slum-dwellers, changing social conditions and population trends, and present and needed programs to better the social and economic conditions of slum residents. Some highlights of this chapter were: (1) The highest unemployment rates were in the Hough area of Cleveland (15.6 percent) and the El Fangito area of San Juan (15.8 percent), (2) Close to 7 percent of the slum residents with jobs were employed only part-time, although they would have preferred full-time work, (3) 70 percent of the slum population is Negro, 10 percent Puerto Rican, 8 percent Mexican-American, and 12 percent from other racial or ethnic groups, (4) Nonwhite workers represented three of every four of the 39,000 unemployed workers in the 10 slum districts surveyed. Their rate of unemployment (9.2 percent) was not significantly higher, however, than the rate for white workers (8.7 percent), and (5) Inability to find jobs was due chiefly to lack of education, training, skills, or experience, according to 44 percent of the unemployed slum residents. Tables and charts are included. (ET)

VT006140

ED0 31587

JOBLESSNESS AND POVERTY IN URBAN SLUMS

A REPRINT FROM THE
1967 MANPOWER REPORT

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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VT006140

U.S. DEPARTMENT OF LABOR - Manpower Administration

CONTENTS

Joblessness and Poverty in Urban Slums

Page

Unemployment and underemployment 74
Who are the slum residents 76
Racial and ethnic background 76
Family income 77
The unemployed 77
Barriers to employment, underemployment, and low-skill jobs 78
Educational deficiencies 78
Health problems 79
Transportation and childcare 80
Discrimination of slum residents and population job 81
Work attitudes and motivation 82
Police and bail-bond system 84
Problems of the job seeker 85
Location of jobs 87
Changing social conditions and population trends 88
Highlights of economic and social change 88
Population changes 90
Present programs and personnel needs 92
Educational programs 93
Economic opportunity programs 95
MDTA training programs 97
Model Cities Program 98
A concentrated employment program 98

The President sends to the Congress each year a report on the Nation's manpower as required by the Manpower Development and Training Act of 1962. Published together in that report are the *Manpower Report of the President* and an accompanying comprehensive report by the Department of Labor on manpower requirements, resources, utilization, and training.

This is a reprint of the chapter on Joblessness and Poverty in Urban Slums from the Department of Labor's report.

Information regarding reprints of other sections of the *1967 Manpower Report* may be obtained at the locations listed on the inside back cover.

JOBLESSNESS AND POVERTY IN URBAN SLUMS

The failures of our economy and society in providing equal employment opportunities, adequate education and training, and a decent standard of living for all Americans converge in city slums. The people entrapped in the slums bear the brunt of these failures, but through them the community and the Nation reap the consequences—in wasted human resources, in the smoldering and sometimes explosive bitterness or despair of many slum residents, and in the problems of dependency, crime, and juvenile delinquency to which these conditions inevitably contribute.

An "area impacted by segregation and discrimination; blighted by derelict and dilapidated houses, non-conforming land uses, and uncollected trash; overcrowded by a shortage of low-income housing units, and gouged by too-high rents in code-violating dwellings"[1]—this description refers specifically to the slums in one northern city, but it could be applied to many others.

Living in an area such as this isolates the residents from the mainstream of the city's life and adds immeasurably to the obstacles which stand in the way of their satisfactory employment. Joblessness and irregular or part-time work are several times as frequent among slum residents as in the country generally; many even of those employed full time have earnings below the poverty line; and many others, discouraged by repeated rebuffs, are not even looking for employment. Illness and disability, low levels of education, and frequent dependence on welfare or relief are pervasive problems.

Furthermore, social and economic conditions are getting worse, not better, in slum areas. And they will certainly continue to do so unless strong action is taken to change the face of the slums and provide opportunities for reasonably satisfying, decently paid employment for slum residents.

Set in the midst of surrounding areas of unparalleled affluence, the city slums have not been reached significantly by the national gains in employment and income. There has been some movement of the least disadvantaged people to better neighborhoods, but their place has been taken by a continuing influx of the poor—many of them displaced farmworkers, lacking the education and skills needed for urban jobs. The poorest, most disadvantaged people, including a rising proportion of Negroes, are caught in the slums, without hope of enough earning capacity to escape from poverty. And the tremendous, continuing increase in the Negro teenage population in central cities (over 50 percent in just 5 years, 1960–65) compounds a problem of grave social danger—demanding great expansion of training and work opportunities for these youth, as well as for jobless adults in the slums.

To take a sharper look at the current problems of joblessness and poverty in urban slums, the Department of Labor and cooperating State agencies conducted intensive surveys in a number of areas in November 1966. This chapter first discusses some of the major findings of these surveys, as well as other related data, with regard to the present critical problems of slum residents. It then considers the barriers of inadequate education and lack of skill, distance from available jobs and absence of transportation, frequent health problems and minority group status, and attitudes of apathy or hostility based on lifelong experience of failures and rejections, which must be surmounted if slum residents are to be brought into productive employment. It also outlines the

[1] Statement by the North City Congress of Philadelphia, a federation of groups representing a broad range of community interests.

worsening economic and social situation in slums and the population trends which are intensifying these problems. And finally, it briefly describes the major educational, training, and War on Poverty programs already underway to aid the disadvantaged, and the Model Cities Program to regenerate slum neighborhoods.

All these programs are making indispensable contributions to the elimination of the pockets of poverty within every major city, and all should be continued and strengthened. But the need of slum residents for jobs and a fair share in the country's prosperity remains unmet. The new concentrated attack on unemployment, discussed in the concluding section of the chapter, is addressed to this most urgent, immediate need.

Unemployment and Sub-Employment

About 1 out of every 10 workers in the slums of 13 major cities was unemployed in November 1966—an unemployment rate three times the national average.

This is one of the findings of the special surveys conducted that month by the Department of Labor and cooperating State agencies in poverty areas in eight U.S. cities (Boston, New York, New Orleans, Philadelphia, Phoenix, St. Louis, San Antonio, and San Francisco) and San Juan, P.R. In addition, information on slum areas of Cleveland, Detroit, Los Angeles, and Oakland was obtained from independent studies.[2] In general, the areas covered are among the worst and poorest city slums in the country.

The slums where the unemployment rate was highest of all were the Hough area of Cleveland (15.6 percent) and the El Fangito area of San Juan (15.8 percent). Yet the Cleveland metropolitan area as a whole has had a rate of unemployment below the national average (only 3.5 percent in the year ending August 1966).[3] Unemployment rates for each slum district—together with the much lower rates for the metropolitan areas, where these are available—are shown in table 1.

Data on unemployment, as conventionally measured, are a partial indication of the whole complex of work problems which contribute to poverty in the slums. Many more slum residents have only part-time jobs, are earning too little to meet their own and their families' minimum subsistence needs, or are outside the labor force (though able to work) than are unemployed, in the sense that they are jobless and looking for work.

The following findings regarding the 800,000 persons of working age in areas covered by the Department's November surveys make this plain:[4]

—Close to 7 percent of the slum residents with jobs were employed only part time, although they would have preferred full-time work. (The comparable figure for the Nation as a whole was then 2.3 percent.)

—One out of every 5 of those working full time earned less than $60 a week, the equivalent on an annual basis of the poverty-line income figure of approximately $3,000 for a family of four. And nearly two-fifths of the slum area families (and unrelated individuals) reported annual incomes under $3,000, compared with one-fourth in the United States as a whole.

—A disproportionately large number of slum residents of working age were neither working nor looking for work, and so were not count-

[2] The study in Detroit was conducted by Wayne State University for the Michigan State Employment Commission, and the Oakland study by the University of California; both were approximately concurrent with the other surveys. The studies in Cleveland and Los Angeles were made by the Bureau of the Census during 1965, but the information obtained was judged to be generally representative of the current situation in these cities' slum areas.

In addition to the survey findings, some of the material in this chapter is based on reports prepared by representatives of the Secretary of Labor who visited each of the cities.

[3] These comparisons may understate the differences in unemployment between slum residents and the total working population of their metropolitan area, because of the difference in time periods involved. The average national rate of unemployment was higher during this year than at the time of the slum surveys in November 1966 (4.0 percent compared with 3.7 percent).

[4] Unless otherwise indicated, all findings from the slum surveys presented here and in the remainder of this chapter relate to the 10 areas in continental U.S. cities surveyed jointly by the Department of Labor and State Employment Service agencies—three in New York, and one each in the seven other cities.

These surveys involved interviews with a sample of households. Statements on the sampling and response errors are scheduled to be published in early 1967.

ed in the labor force (even though some were not looking because of their conviction, right or wrong, that they could not find a job). This labor force "nonparticipation rate" was 11 percent among men 20 to 64, compared with only 7 percent in the country generally.

—Finally, a fifth or more of the adult men expected to be part of the population of these slum areas were not located by the November surveys. This finding parallels the Census "undercount" experience for nonwhite men. The exact circumstances and facts regarding this situation are not yet fully explored or identified.

TABLE 1. UNEMPLOYMENT RATES FOR SLUM AREAS AND FOR METROPOLITAN AREAS AS A WHOLE[1]

Metropolitan area and slum area	Unemployment rate	
	Slum area, November 1966	Metropolitan area, average for year ending August 1966
Boston—Roxbury area	6.9	3.7
Cleveland—Hough and surrounding neighborhood	15.6	3.5
Detroit—Central Woodward area	10.1	4.3
Los Angeles—South Los Angeles	12.0	6.0
New Orleans—Several contiguous areas	10.0	(2)
New York:		
Harlem	8.1	4.6
East Harlem	9.0	
Bedford-Stuyvesant	6.2	
Philadelphia—North Philadelphia	11.0	4.3
Phoenix—Salt River Bed area	13.2	(2)
St. Louis—North Side	12.9	4.5
San Antonio—East and West sides	8.1	(2)
San Francisco-Oakland:		
San Francisco—Mission-Fillmore	11.1	5.2
Oakland—Bayside	13.0	
San Juan—El Fangito	15.8	(2)

[1] Metropolitan area data are based on special tabulations of data from the Current Population Survey. For source of slum area data, see adjoining text.

[2] Data not available from the Current Population Survey.

As a first approach to measuring the entire area of joblessness and employment hardship, a "sub-employment" index has been constructed, based on these survey findings and other data and on a number of carefully considered estimates and assumptions.[5]

The average rate of sub-employment arrived at for the 10 slums surveyed was 34 percent. In other words, one out of every three slum residents who was already a worker, or should and could become one with suitable help, was either jobless or not earning enough for living above the poverty level.

Sub-employment rates for each area are shown in chart 12 and in the following tabulation:

Area	*Sub-employment rate*
Boston—Roxbury area	24
New Orleans—several contiguous areas	45
New York:	
Harlem	29
East Harlem	33
Bedford-Stuyvesant	28
Philadelphia—North Philadelphia	34
Phoenix—Salt River Bed area	42
St. Louis—North side	39
San Antonio—East and West sides	47
San Francisco—Mission-Fillmore	25

[5] The "sub-employment" concept and index include:

1. People classed as unemployed, since they were jobless and looking for work during the survey week;
2. Those working only part time though they wanted full-time work;
3. Heads of households under 65 years of age who earn less than $60 a week though working full time; also individuals under 65, not heads of households, who earn less than $56 a week on a full-time job (the equivalent of $1.40 an hour for a 40-hour week);
4. Half the number of "nonparticipants" among men aged 20 to 64 (on the assumption that the other half are not potential workers, chiefly because of physical or mental disabilities or severe personal problems); and
5. An estimate of the male "undercount" group (based on the assumption that the number of men in the area should bear the same relation to the number of women that exists in the population generally; also that half of the unfound men are in the four groups of sub-employed people just listed—the others being either employed or not potential workers).

The composite rate is, of course, affected by the yardstick used for each of the five elements in the index. For example, if low-wage part-time workers who said they did not want full-time work had been included in the low-income group (group 3), the resulting sub-employment rate would have been somewhat higher; if nonheads of households had been excluded from group 3 entirely, the overall sub-employment rate would have been about 4 percentage points lower. Although slightly different criteria might, of course, have been used for any of the five elements, those chosen are regarded as reasonable and probably conservative.

RACIAL AND ETHNIC BACKGROUND

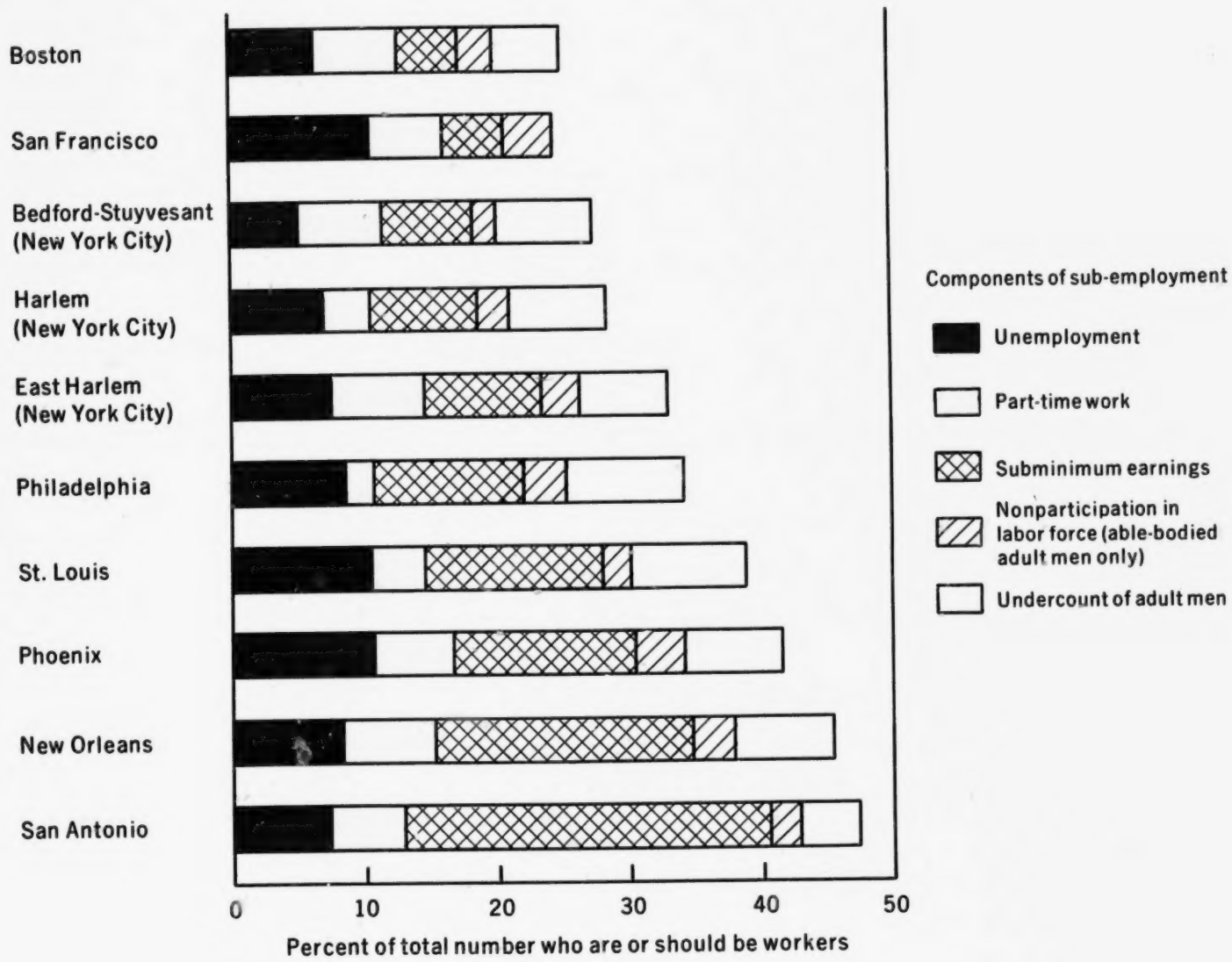
Most of the people living in these areas of deep poverty are Negroes or members of other minority groups. In the 10 surveyed areas taken together, 70 percent of the population is Negro, 10 percent Puerto Rican, 8 percent Mexican American, and 12 percent from other racial or ethnic groups.

The proportion of Negroes in the population of these slums is much greater than their representation among all of the Nation's poor—of whom only a third are nonwhite. Disadvantaged Negroes are concentrated in ghetto areas to a much greater extent than the white poor, who outnumber them in central cities as a whole and even more in outside areas (as shown in table 2).

Nevertheless, practically every city slum has large numbers of white residents. Puerto Ricans predominate in East Harlem and are numerous in Harlem proper and other New York slums. Mexican Americans are by far the largest group

CHART 12

One-third of all slum residents who are or should be workers are sub-employed.



Source: U.S. Department of Labor.

TABLE 2. POOR PEOPLE LIVING IN AND OUTSIDE CENTRAL CITIES, BY COLOR, 1964

[Numbers in millions]

Residence	All persons	White	Nonwhite
Total, number	34.3	23.6	10.6
Metropolitan area	16.4	10.7	5.5
Central city	10.1	5.6	4.4
Outside central city	6.3	5.1	1.1
Outside metropolitan area	17.9	12.8	5.0
Nonfarm	13.5	9.8	3.7
Farm	4.4	3.0	1.3
Total, percent	100.0	100.0	100.0
Metropolitan area	47.8	45.6	52.5
Central city	29.4	23.8	41.7
Outside central city	18.4	21.8	10.8
Outside metropolitan area	52.2	54.4	47.6
Nonfarm	39.5	41.5	35.1
Farm	12.7	12.9	12.5

NOTE: Detail may not add to totals due to rounding.

SOURCE: Mollie Orshansky, "The Poor in City and Suburb, 1965," *Social Security Bulletin*, December 1966, pp. 22-37.

of slum residents in San Antonio, and many live in poverty areas in southern California cities and in Phoenix, Ariz. There are contingents of white, former farmworkers in the St. Louis slums, and of Central and South Americans in San Francisco.

Real intermixture of these various population groups is rare, however. More often, they live in clusters with people of the same background, within a broader slum area.

FAMILY STRUCTURE

The proportion of households headed by women is high in many slum districts—contributing significantly to low family incomes.

Nearly two-fifths of all households in the surveyed areas (including one-person households) had women heads. This was almost twice the national figure. The proportion of women widowed, divorced, or absent from their husbands was also much above the national average—1 out of 3, compared with only 1 out of 5 in the total population.

The absence of a male breadwinner in many households had a clear effect in terms of low family income. Nearly three-fifths of the households with women heads had annual incomes of under $3,000, compared with less than two-fifths of all the households in these slums. No matter how hard these women work, their potential earning capacity is generally too low to lift themselves and their families above the poverty line.

The large size of many families in slums also needs emphasis, because of its critical relationship to poverty and the measures required to escape from it. Sixteen percent of the families in these most impoverished areas of the Nation had six or more members, half again as high a proportion as in the country generally (11 percent).

THE UNEMPLOYED

Nonwhite workers represented 3 out of every 4 of the 39,000 unemployed workers in the 10 slum districts surveyed in November 1966. Their rate of unemployment (9.2 percent) was not significantly higher, however, than the rate for white workers (8.7 percent).

This finding is contrary to the situation in the country generally, where Negroes have twice as high an unemployment rate as whites. It makes evident the heavily disadvantaged position of the white people—many of them members of ethnic minority groups—as well as of the nonwhites in these slums. The handicaps of inadequate education and lack of skill, of prevalent disabilities and police records (discussed below) weigh heavily on both the white and the Negro workers.

Teenagers (16 to 19 years old) had an average unemployment rate of 28 percent in these slums—four times the rate (6.8 percent) for workers aged 20 and over. Separate unemployment figures for white and Negro youth are not available from these surveys. But another study of poverty areas shows that nonwhite youth have by far the highest unemployment rate of all.

The unemployment rate was 46 percent for nonwhite girls and 31 percent for nonwhite boys aged 14 to 19 in poverty areas of the country's major cities in March 1966. Unemployment rates for white teenagers in these areas, though by no means

satisfactory, were much lower (10 percent for girls and 20 percent for boys).[6]

Adult women also had inordinately high rates of joblessness. Those 20 to 64 had an unemployment rate (8.7 percent) far above that for men in this age group (5.4 percent). This difference was much greater than the difference between the national unemployment rates for men and women—2.7 and 3.8 percent—adding urgency to the job-finding problems of women in slum areas.

Barriers to Employment and Satisfactory Jobs

Unemployed workers in slums regard their inability to find jobs as due chiefly to lack of education, training, skills, or experience. By far the largest group of jobless workers in the areas covered by the November surveys (44 percent) cited inadequacies of these kinds as the "principal reason" for their unemployment.

The other reasons for unemployment given by these workers were as follows:

—17 percent considered that they were either too young or too old to qualify for jobs.

—17 percent said that no jobs were available.

—6 percent identified health problems as mainly responsible.

—4 percent reported "police records" or "bad debts."

—1 percent referred to transportation problems.

—And 11 percent cited a variety of other factors or showed no understanding of the reasons.

The personal circumstances and characteristics of the individuals involved are clearly crucial elements in the job-finding problems of a majority of the unemployed slum residents. But job market factors—notably, the number, kind, and location of available job openings—are additional sources of difficulty, not always perceived by the workers involved. The substandard wage rates paid for many unskilled laboring and service jobs also contribute greatly to sub-employment. A significant number of women who want and need jobs are prevented from seeking them by lack of child-care facilities. And a complex of social, psychological, and economic factors, which are only beginning to be explored, contribute to the high proportion of adult men in slums who are outside the labor force or missed by the household surveys.

The chief personal and job market factors which prevent a large number of slum residents from getting jobs at decent wages—or often, any job at all—are discussed in following sections. Some of the deep-rooted social and psychological problems which will have to be taken into account in any effective answer to the potentially explosive situation in these large sectors of the country's major cities are also indicated.

EDUCATIONAL PROBLEMS

Inadequate and inferior education is obviously one of the major elements in the total sub-employment problem among slum residents. It largely explains the high proportion of employed workers in these areas who are in low-skilled, low-paid jobs. And it is directly related to their unemployment rates. Among the slum residents who were high school graduates, the rate of unemployment was 8 percent, according to the November surveys, compared with 11 percent for workers without a high school education.

In hiring workers, employers now require high school diplomas not only for most white-collar jobs but for apprenticeships in skilled trades and often for service and semiskilled jobs, where this level of education may have little relevance to the tasks performed.

Faced with such hiring specifications, slum residents have great handicaps. Only a third of the unemployed slum residents were high school gradu-

[6] Relates to "poverty" areas, as defined by the Census Bureau for the Office of Economic Opportunity, which include about 20 percent of the census tracts in large Standard Metropolitan Statistical Areas. The total number of people aged 14 years and over in all poverty areas of SMSA's with 250,000 or more population (in 1960) was over 12 million in March 1966. It is estimated that about 30 percent of the persons in poverty areas had incomes below the poverty level.

For a description of this study and its other findings, see James R. Wetzel and Susan Holland, "Poverty Areas of Our Major Cities," *Monthly Labor Review*, October 1966, pp. 1105–1110.

ates. And more than 1 out of every 4 had only an eighth-grade education or less—often much less.

These overall figures are just the beginning of the story. Puerto Ricans and Mexican Americans were the groups with by far the greatest educational disadvantages. In Harlem, for example, over two-fifths of the Puerto Rican unemployed had at best reached the eighth grade in school, compared with less than one-fifth of all the unemployed workers in that predominantly Negro area. Still worse off were the Mexican unemployed in Phoenix (of whom 3 out of every 5 had never gone beyond the eighth grade) and in San Antonio (where half had no more than an eighth-grade education and close to 1 out of every 5 had only 4 years or less of school).

Deficiencies in educational opportunities are still extreme among young people in slum areas, in northern and western as well as southern cities. According to the Governor's Commission on the Los Angeles Riots, the citywide school dropout rate for former ninth-grade students there was 30 percent in 1965; but in three predominantly Negro high schools in south central Los Angeles, two-thirds of the student body dropped out before graduation.

Overcrowding and double sessions, prevalent in the schools in Watts and other poverty areas of Los Angeles, are among the factors contributing to this record of educational failure. Over three-fourths of the 26,200 students on double session in the city schools in 1965 were in schools with predominantly Negro or Mexican American enrollments. Furthermore, these schools generally lacked cafeterias, and none of the Los Angeles schools provide free or reduced-price lunches for needy children, whose school progress might be aided by better nourishment. Schools in the city's poverty areas often lack libraries. And, on the average, teachers in these schools are less experienced than in the city school system as a whole.

Even in New York City slum areas, where the average educational attainment of residents is considerably higher than in most of the other slum areas surveyed, there are pockets of severe educational deficiency. For example, a recent report on students in two junior high schools in Harlem showed that roughly two-thirds of the students enrolled in the ninth grade failed to graduate from high school.

There is no senior high school in all of central Harlem, although there are 20 elementary schools and four junior high schools in the district. Thus, Harlem youth lack the stimulus to continued education which would be provided by having a high school and its students in their midst; if they wish to attend high school, they have to commute to another section of the city. The College of the City of New York is now contemplating the opening of collegiate facilities in Harlem, at the junior college level to start with, as a way of illustrating opportunities and motivating youngsters to go on to higher education.

It is important to recognize also that the low proportion of high school graduates among slum residents is no full measure of their educational deprivation. The gap between years of school completed and actual level of educational achievement is very great among the racial and other ethnic groups which make up a large proportion of the slum population, according to a nationwide study sponsored by the U.S. Office of Education, covering some 4,000 schools and 645,000 children.[7] Minority group children have a serious educational deficiency when they start school; the gap between their achievement and that of more privileged children is even wider when they leave. The average 12th-grade Negro in metropolitan areas achieves scores in mathematics that equal the average for seventh- or eighth-grade students in the country as a whole, and the record in reading is only moderately better.

The greatest failure of the slum schools has been the fact that they have not provided disadvantaged youngsters with programs specifically adapted to their needs. As the Governor's Commission in California said: "The same educational program for children of unequal background does not provide an equal opportunity for children to learn."

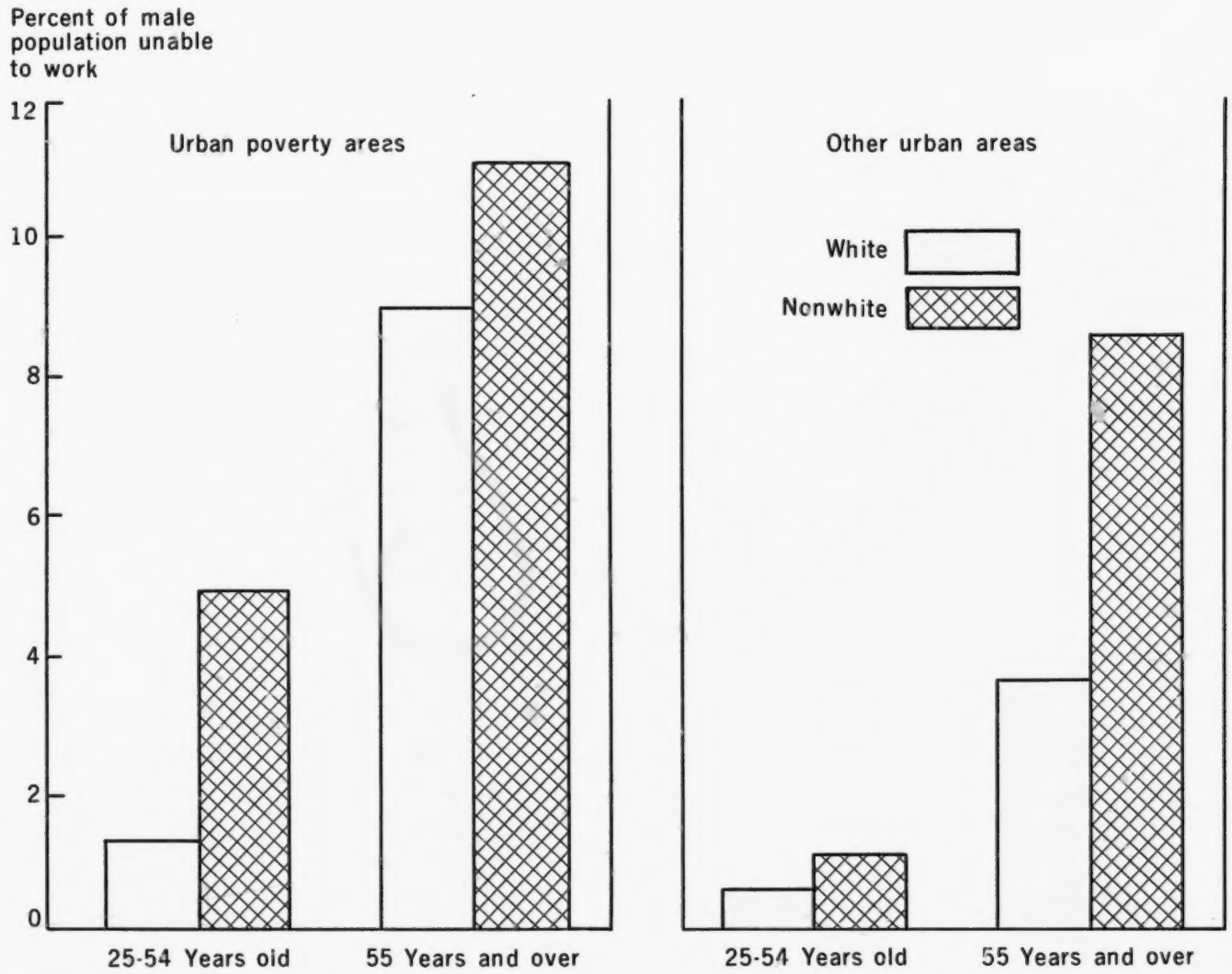
HEALTH PROBLEMS

Health problems are more widespread and health standards much lower in slum areas than in more affluent sections of cities and the country generally. How much of the sub-employment of slum residents is traceable to chronic health problems and disabilities cannot be estimated precisely,

[7] *Equality of Educational Opportunity* (Washington: U.S. Department of Health, Education, and Welfare, 1966), pp. 1–33.

CHART 13

Proportion of men unable to work is highest in poverty areas and among nonwhites.



Note: Data are for Standard Metropolitan Statistical Areas with 1960 population of 250,000 or more.

Source: U.S. Department of Labor.

but probably around 10 to 20 percent of the individuals involved have such problems.

Of the slum residents who were jobless and seeking work, 6 percent considered health problems the main reason for their unemployment. And the proportion of men with disabilities so great that they are unable to work is much higher in poverty than nonpoverty areas (according to data for all large metropolitan areas shown in chart 13). This proportion is considerably higher among Negro than white men (in both poverty and other areas). Negroes not only suffer the most from inadequate health care, poor nutrition, and poor living conditions, but can less often qualify for white-collar and other jobs suitable for workers with limited physical disabilities.

The above-average frequency and severity of health problems among slum residents is shown also by many other indicators. The incidence of tuberculosis and venereal disease, for example, is higher in slums than elsewhere. In Los Angeles slum areas, the venereal disease rate is four times the county average, the TB rate double that for the county. And in St. Louis, the incidence of venereal disease is much higher in both white and Negro slum neighborhoods than in the city as a whole.

Undoubtedly the overcrowded housing and poor physical environment of the slums (e.g., the presence of refuse and rats) contribute to these and other differences in disease rates. The poverty of the average resident also limits his diet and makes him unable to pay for adequate health services. And despite the high incidence of illness and disability among them, slum residents conspicuously lack adequate medical services and hospital facilities, public or private.

In Watts, for example, 20 physicians serve 150,000 residents as well as people from other areas—an average of 1 physician, part time, for every 7,500 persons. Residents of a southwestern poverty area complained that accident victims had no access to immediate medical assistance—there was no provision in the community for medical emergencies. In East Harlem, health clinics located in a public project are reported grossly understaffed.

A substantial beginning in improving the health services available to poor people, including slum residents, has been made in the past 2 years.[8] But there is still great need for education in health care, for further improvements in public health services and in sanitation, and for expansion of vocational rehabilitation services. Much-increased hospital facilities in slum areas are also vital to the health of these people and their ability to rise out of poverty.

ARRANGEMENTS FOR CHILD CARE

The availability of good child-care facilities is extremely important to the slum family whose income is, in whole or in part, dependent on the earnings of the mother. Many women with small children need to work to supplement the inadequate earnings of the family head; many more are themselves family heads who must work to support themselves and their children.

That lack of adequate child-care facilities is a serious barrier to employment of women in slum areas who want and need to work is one of the findings of the November surveys. Almost 1 out of every 5 of the slum residents who were not in the labor force but wanted a regular job gave inability to arrange for child care as the principal reason for not looking for work.

The President in his 1967 message to Congress on America's Children and Youth pointed out that, while the Federal Government and the States support a wide range of services for needy children and their parents, these efforts have fallen short in many ways. He listed day care for children under 3 years old as among the services needed. Such facilities are to be provided through a pilot program of child and parent centers, conducted by Community Action agencies in areas of acute poverty.

A greatly expanded day-care program for preschool children would not only permit more mothers in slum areas to get jobs they greatly need for financial reasons but would also be of inestimable help to many now working and to their children. Often, these mothers are forced to leave young children in the care of elderly relatives or babysitters during their most impressionable years. In one southwestern slum area, it has become usual practice for working mothers to keep older children home from school on alternate days to care for younger ones. Night-shift work—for example, as charwoman or in a bakery—is also resorted to by some slum mothers who do not want to leave youngsters unattended during the day.

Furthermore, many working mothers from poor families have to find private household or other jobs where they can bring their children with them. According to a national survey cosponsored by the Children's Bureau of the Department of Health, Education, and Welfare and the Women's Bureau of the Department of Labor, one out of every five working mothers from families with an income of less than $3,000 was attempting to combine looking after her children with work at her job. (In higher income families, the proportion was, of course, much lower.)

The findings of this survey also reflect the great scarcity of day-care centers. Only 3 percent of the working mothers were using group-care arrangements for their children.

OCCUPATIONS OF SLUM RESIDENTS AND AVAILABLE JOBS

Slum residents who have jobs are employed mostly in low-paid, low-status, low-skilled occupations. And when they are unemployed, their

[8] For a discussion of Federal programs to remove the financial barriers to health care, see "Federal Health Programs," *Special Analyses, Bureau of the Budget of the United States, Fiscal Year 1968* (Washington: Bureau of the Budget, January 1967), pp. 110–122.

job possibilities are generally limited to such occupations—because of their lack of education, training, and skill.

In the slum areas covered by the November surveys, almost half of all currently employed persons were in laboring and service jobs, only a fourth in white-collar work. In one area, the proportion in laboring and service occupations was nearly 60 percent, and in no area did it fall below 40 percent. Similarly, almost half of the unemployed workers had last worked in a laboring or service job, and less than a fifth of them had held white-collar jobs. Another fifth had never worked in any civilian job.

For the many men in slums who are qualified only as laborers, the employment outlook is bleak. Employment in such jobs is declining relative to total employment in the United States. Opportunities in other blue-collar jobs are also growing much less rapidly than white-collar employment.

In service occupations, on the other hand, employment is expanding—offering more opportunities for slum residents, although all too often in the least attractive jobs.

A comparison of citywide data on job vacancies with the occupational background of the unemployed slum residents emphasizes the disparities between the two. In almost every city surveyed, 40 to 50 percent of the unfilled jobs were in white-collar occupations. But only about 15 percent of the unemployed in the slum areas covered by the survey were white-collar workers. And openings were relatively few in the service, laborer, and operative jobs for which slum residents are most likely to be qualified.

That most unemployed slum residents do not have the occupational background called for by most present job openings is also shown by data for the Philadelphia metropolitan area. This area covers an extremely large territory, includes several slum districts, and has many sections which are inaccessible to the slum residents. There were less than 900 vacancies for laborers in the entire Philadelphia metropolitan area in November 1966. But there were then 800 unemployed laborers in the North Philadelphia slums alone.

The following percent distributions compare the last occupations of the unemployed workers in this slum district with the occupational vacancy pattern for the metropolitan area:

Occupation	*Percent distribution*	
	Slum unemployed	*Areawide job vacancies*
Total	100	100
White collar	15	38
Craftsmen	3	22
Operatives	11	21
Laborers	26	6
Service	23	13
Never worked	22	--

Much the same situation is shown by comparative data on job vacancies for the New York City area and the occupational background of the unemployed in the Harlem, East Harlem, and Bedford-Stuyvesant slums. The findings emphasize the need for training, remedial education, and special placement and other services for slum residents if they are to qualify for the available jobs.

WORK ATTITUDES AND MOTIVATION

The significance of joblessness and of low-status, blind-alley employment to slum residents can be understood only in the context of the high value placed upon work by our society as the acceptable means of making a living and achieving success and social status. Preparing for work, getting a job, and moving up occupational ladders to better paying jobs are matters of crucial importance. For most people the way to a more affluent and satisfying life is through meaningful work. But this way is all but closed to many slum residents.

While too little is yet known regarding the effects of slum life and environment upon the aspirations and motivations of slum residents, scattered studies indicate a serious gap between their aspirations and opportunities for realizing them.

Thus, the attitudes of some slum residents toward jobs and their work adjustment problems may arise not so much from the level of aspirations as from the frustrations experienced in efforts to achieve them. In many cases the slum youth gets little or no help from the schools, where efforts have frequently been directed at encouraging him to be realistic—to aspire to, or accept, the very types of low-income, low-prestige jobs from which he hopes to escape. He may reluctantly accept an occupational goal far below his

previous desires, and perhaps well below his potential. In some cases he settles for a life of marginal employment, interspersed with long periods of joblessness. His choice is not made voluntarily in a context of numerous choices available to him—it is forced upon him, and the consequences will have harsh, impersonal, and unwanted effects on his future and the future of his family. He may reject work as a means of achieving his aspirations and substitute other means, such as illicit activity, or he may, in despair, give up both his goals and the means of achieving them and succumb to drug addiction, alcoholism, or vagrancy, or reject both goals and means through rebellion.[9]

Attitudes Toward Low-Paid Menial Jobs

Some unemployed slum residents hold out for jobs with a fair promise of lifting them out of poverty—jobs that pay enough to support their families. This was clear to Secretary of Labor representatives who visited the areas surveyed.

Jobs paying $1.25 to $1.50 an hour are likely to be rejected in some areas except on a short-term basis and when family and personal need is great. They are regarded only as a means of providing the minimum essentials for survival. This attitude is rooted in the knowledge that such jobs offer no more—and often less—for the present or the future than dependence on welfare, or "hustling."

The status which attaches to jobs is also important. White-collar or blue-collar jobs with companies of standing in the community may be accepted at lower wages than jobs as dishwashers, custodians, or janitors. When society places a low value on a job, in terms of pay and prestige, the slum resident is in complete agreement.

Attitudes Toward Welfare Payments

Dependency is virtually imposed on a good many slum residents. Lack of meaningful job opportunities that provide an adequate income reinforces a belief that it is futile to strive—a belief that often becomes irreversible. The sizable proportion of slum residents who live on welfare payments is a hard fact of slum life—both an influence on and a result of the complex pressures operating in the slums.

[9] Robert K. Merton, *Social Theory and Social Structure* (New York: The Free Press of Glencoe, Inc., 1957), pp. 131–160.

In East Harlem, for example, 45,000 persons, or 30 percent of the population, live on welfare payments, according to information obtained by the Secretary's representatives in November 1966. In the Watts area of Los Angeles, 30 percent of the population (94,000 persons) are welfare recipients. Roughly 40 percent of Bedford-Stuyvesant's children and 25 percent of its adults receive welfare payments. The monthly welfare check, most often to mothers with dependent children, becomes a source of security to be weighed long and carefully against the probable insecurity and irregularity of a paycheck for low-paid, low-skilled work. The paychecks for that kind of work, which is usually the only kind available, are often less than the welfare check (even without any allowance for the many extra costs involved in working). And the risk that even these low wages may suddenly cease with the job may be too great for many mothers to take.

Illicit Activity

Among youth, frustration and disillusionment can result in anger as well as despair. This may find expression in a host of ways—refusal to go to school or to work, organized gang activities, or illicit activity. While most young people in poverty areas grow up without regular or continuing delinquent behavior, the deprivations of slum life and environment undoubtedly increase the odds against a child's developing acceptable standards of social behavior.

The struggle for survival in the slums sometimes takes the form of so-called "hustling," which may be a mixture of legitimate, illicit, or borderline activities. Sporadic work for companies which take on "extras"—to deliver, pack, and unload goods or to wait on tables and clean up at banquets, for example—may be interspersed with playing or selling "numbers," gambling, car stripping, shoplifting, and other petty thefts and, less frequently but more seriously, with narcotics pushing, car theft, or armed robbery. The disparity between economic, social, and personal aspirations and opportunities for achieving them all too often brings a sense of failure, loss of self-esteem, despair, anger, and desire for revenge.

The isolation or alienation of slum residents from the values and standards of the larger community and the feeling of powerlessness rooted in

frustration inevitably influence both work attitudes and motivation. The condition of the poor in the slums, and of those around them, "prove to them how generally useless it is for them to try to move into more socially desirable and materially rewarding positions in society." [10]

These attitudes of hopelessness and frustration emphasize the urgent need for action. They point out clearly, also, the difficulties to be met in bringing slum residents into the main current of social and economic life. Above all, they underline the potentially dangerous situation in city after city, which makes action imperative.

POLICE AND BAD DEBT RECORDS

A police record, whether for arrest or conviction, a record of bad debts or of garnishment, represent a barrier to employment for a significant number of slum residents. Many employers refuse to consider hiring anyone with such a record. Once convicted of any offense or even arrested and subsequently released, a worker has greatly increased difficulty in getting a job.

Records of arrests, garnishments, or troubles in previous jobs were the major barrier to employment for about 1 out of every 10 unemployed job applicants in slum areas, according to a special analysis made by the Employment Service in seven slum areas in late 1966.

A survey of male applicants for Federal Civil Service laboring jobs in Washington, D.C., yields similar results. Ten percent of these men, half of them under 26 years old, thought police and other bad records their greatest barrier to finding a job. Two out of 3 had been arrested for or charged with breaking the law, and 9 out of 10 of these had been found guilty of a charge.

All too frequently, employers' failure to distinguish between arrest and conviction, and between petty and more serious offenses, unduly penalizes the innocent and some youthful offenders. The rapidly growing numbers of teenagers in slums thus have an added hurdle to overcome if they are ever arrested.

Efforts to ease the return of offenders and of prisoners to jobs and normal life outside of correctional institutions are being made, however, and with some success. The new training and vocational rehabilitation programs for prison inmates, together with the work-release programs and the halfway houses or way stations for former prisoners authorized by recent legislation, are all important forward steps.[11] But the process of rehabilitation is not a quick and easy one for either youth or adults who have grown up in the slums, often without experience of regular jobs and their requirements and with established patterns of antisocial behavior. Success in the readjustment of these individuals depends on initial remedial work, persuading employers to hire them, and then extended followup work.

An experimental MDTA project with young ex-offenders illustrates both the possibilities of getting jobs for these youth and the difficulties involved. One group in the project received special vocational and remedial training, while a control group did not. The special preparation gave the young people in the experimental group more confidence. And with the aid of job development staff working with employers, they obtained better jobs than the unprepared and unaided control group. More than a fourth of the employers who hired the trainees indicated that they did so only because of the efforts of the job placement personnel.

Once on the job, however, work adjustment proved difficult for many members of the experimental group. These ex-offenders, in competition for the first time with workers from a different cultural background, were sometimes unable to adjust. Tardiness, absenteeism, and uncooperative behavior were frequent problems. And almost three-fifths of the group were dismissed from their jobs. Clearly, the assistance given these youth should have been continued beyond their initial placement, with followup on the job and additional training if needed.

Assistance in obtaining bonding is another essential aid for ex-offenders. Bonds are being required by employers for workers in more and more jobs involving some responsibility for property—even for some janitorial and delivery jobs. But an arrest record almost automatically bars an applicant from obtaining a bond from a private underwriter.

The Federal Government, under contract with a bonding company, has undertaken a pilot program to build a body of valid actuarial experience

[10] Alvin L. Schorr, *Slums and Social Insecurity* (Washington: U.S. Department of Health, Education, and Welfare, Social Security Administration, Division of Research and Statistics, 1963), Research Report No. 1, p. 47.

[11] See the chapter on New Directions in Manpower Programs; also *1966 Manpower Report*, p. 76.

for a "high-risk" group. This experience is intended as a guide to private underwriters in providing appropriate bonding. The program, now operating in some 10 cities and four States, is being extended for the coming year. Applicants to the public Employment Service and persons in MDTA training programs are eligible for bonding under this program.

In effect only since July 1966, the program has helped several hundred persons to find jobs. While fewer than a hundred have actually been bonded under the program, almost three times that number have been hired under the employer's own bond, when the employer was made aware of the problem and the program and was given more information about the applicant.

No claim to recover bond has been made, as yet, under the program. If this experience continues, it should stimulate private underwriters to offer bonding more generally to ex-offenders. Another step will then have been taken in restoring them to productive lives.

PROBLEMS OF THE JOB SEARCH

To the obstacles which bar slum residents from satisfactory employment—and often from any job—must be added problems associated directly with the job search. In general, employers do not recruit people from these areas, most of them members of minority groups, for any but the most low-skilled, menial jobs (although there are now conspicuous exceptions to this rule—for example, in the steel industry, where employers and the union are cooperating with the Government in a program to upgrade workers and hire the disadvantaged).[12] Furthermore, slum residents generally lack information on available job openings and on the most effective ways of looking for jobs. And they have so far had limited access to placement and other services that might aid their job hunt or have felt that it was not worthwhile for them to use these services (though this situation is being much improved through the Youth Opportunity Centers and other facilities now in operation in many slum neighborhoods).

[12] See the preceding chapter on New Directions in Manpower Programs.

Discriminatory Hiring Practices

The job-finding difficulties of workers in poverty areas are often compounded by discrimination on the basis of race, ethnic background, and age.

Unnecessarily restrictive requirements with respect to education and skill, for jobs where these requirements have little if any relevance to the work performed, are prevalent. Such requirements provide an effective way of screening on a racial basis.

Furthermore, the attitudes expressed by some local officials in the slum areas visited reflected generally low expectations of slum residents, in particular the nonwhite residents. Such attitudes served to reinforce the workers' feelings of insecurity and inadequacy, which render their job search more difficult.

Discrimination on the basis of age was more overt and applied not only to workers over 45 but to youth under 21. In a canvass of employers in one of the cities surveyed, a third of those interviewed said they avoid hiring people under 21, whose very youth has become a symbol of instability and inexperience. In the words of one employer: "A man changes jobs three times in a lifetime. I don't want to get him on the first one." Such age discrimination, compounded by discrimination on the basis of race, creates special difficulties and frustration for youth in minority groups.

It appears that employer attitudes may be a greater factor in the high unemployment rate of disadvantaged youth than has been realized. And in the case of young women without salable skills, there is the added factor of employers' reluctance to hire workers who, they think, may soon leave their jobs because of early marriage or childbearing. This hiring policy, combined with the handicap of their race, has helped to push the rate of joblessness among nonwhite girls to by far the highest level for any population group.

Knowledge of Jobs and Ways of Looking for Them

Though many workers lack adequate information on available jobs, this is particularly true of slum residents. Really effective methods of communicating job information do not yet exist in the slum districts visited. Newspapers, radio and

TV advertisements, and placement offices all fail to reach out sufficiently into the slums, and the principal form of communication about jobs is from personal contacts. Since people living in poverty areas generally have contact only with their friends and neighbors in low-level occupations, this kind of communication does little to widen their knowledge of job openings or their jobseeking activities.

In-migrants, particularly those recently arrived in the city from farm areas, lack information about jobs and the services available to help them. A study of recent migrants to Cleveland, for example, showed that few are aware of existing training opportunities, and that almost none have ever been contacted by social workers or others in a position to appraise their experience, abilities and needs and to direct them toward appropriate service agencies. Yet both white and Negro migrants have been unanimous in expressing a desire for occupational training.[13]

The narrowness of the job search among the unskilled and disadvantaged has also been documented by many studies—among them, one recently made of applicants for laborer jobs with the Federal Government. These men more often look for jobs by checking newspaper ads and inquiring around among friends and neighbors than by going directly to employing establishments or employment agencies, either public or private.[14]

The jobseeking patterns of 450 disadvantaged youth in Philadelphia were also explored in a recent study.[15] The most striking finding was that two-fifths of these youth had never made a single contact with an employer. And only 1 out of every 5 had made as many as one such contact per week. The longer the period of their unemployment, the less effort they made to find jobs.

How little these young people know about jobs is shown by the high proportion (nearly one-half) who were unable to express any job preferences. Those who had preferences cited the kinds of jobs commonly held by their relatives and friends.

Any direct job applications these youth made were mostly at factories ("because of better pay") or at small neighborhood stores (because these youth "did not expect to be hired" by larger department stores which, they thought, required a high school diploma even for packing, stockwork, delivery, or sweeping jobs). Girls applied to hospitals and nursing homes, despite the low wages offered, because they "do not require high school diplomas" and provide "free meals." As a group, these youth had little hope or expectation of finding work and often stopped looking before they had made any extended effort to get jobs.

Disillusionment and lack of faith both in their own potentialities and in community programs to help them, where these exist, are clearly an important barrier to persistent job hunting by disadvantaged workers. The response to some recent job development programs in the slum areas visited was very poor—owing in part to the workers' belief that actually there were no jobs.

The psychological attitudes and attributes which contribute most to a successful job hunt are ones slum residents seldom have an opportunity to develop. A recent study of the relationships of social-psychological factors to the ways in which a worker looks for a job and to his chances of success found that the important positive factors include faith in the efficacy of personal planning, assertiveness (needed, for example, in direct applications at hiring gates), and lack of anxiety about job interviews. The authors concluded that techniques for changing attitudes and motivation must be incorporated into comprehensive manpower development programs.[16]

Ironically, slum residents, who are the most in need of placement and counseling services of any group in the city population, are those most out of reach of such services, both geographically and psychologically. Employment offices have usually been located in downtown or business areas. Slum residents must spend both time and money they can ill afford to register with such offices, and the location is likely to make them feel very out of

[13] *The Impact of Prevocational Training, Counseling, and Job Finding Assistance on the Occupational Adaptation of Recent Southern Migrants to Northern Cities* (Washington: Bureau of Social Science Research, Inc., 1966), experimental and demonstration project sponsored by Office of Manpower Policy, Evaluation, and Research.

[14] Samuel M. Meyers, "The Unemployed and the Underemployed: A Study of Applicants for Laborer Jobs" (Washington: Bureau of Social Science Research, Inc., November 1966) mimeographed. Submitted to the Office of Economic Opportunity.

[15] Saul S. Leshner and George S. Snyderman, "Job Seeking Patterns of Disadvantaged Youth," *Preparing Disadvantaged Youth for Work* (Washington: U.S. Department of Labor, Manpower Administration, Bureau of Employment Security, 1966), reprints from *Employment Service Review*, pp. 1–3.

[16] For a full report on this study, which was sponsored by the U.S. Department of Labor, Manpower Administration, Office of Manpower Policy, Evaluation, and Research, see Harold L. Sheppard and A. Harvey Belitsky, *The Job Hunt* (Baltimore, Md.: The Johns Hopkins Press, 1966).

place. When placement agencies are established within slum areas, a great improvement occurs. In Boston, for example, a downtown Urban League office had found jobs for only 250 people during a 5-year period. Then a new office was opened in a slum district. Within 1 year, placement figures doubled. And, in addition, 275 people were placed in on-the-job training programs.

The success of the Employment Services' new Neighborhood Youth Centers in increasing job placements of disadvantaged youth provides some evidence in the same direction. It is a hopeful indication of the progress in employment of disadvantaged adults that may be possible through the network of neighborhood centers now being established to provide services to all groups of slum residents.[17]

LOCATION OF JOBS

The movement of business and industry away from the central city and toward the suburbs during the past decade has created major obstacles to employment of slum residents—barriers much greater than these people themselves perceive. Without automobiles or money for public transportation, and living mostly within the confines of their slum neighborhood, many have little if any knowledge of the new plants which are springing up in the outskirts of their cities.

Between 1954 and 1965, almost two-thirds of all new industrial buildings (measured by valuation) and a little over half of all new stores were constructed outside the Nation's central cities. In some areas the proportions considerably exceeded even these high national averages. In Chicago, for example, over three-fourths of the new industrial buildings and two-thirds of the new stores were in the suburbs; in Los Angeles, 85 percent of the new industrial buildings and 63 percent of the stores. The central city is becoming more and more the working place of office workers—largely white people, who commute from the suburbs, while the shortage of unskilled jobs in or even near the slum areas increases year after year.

The jobs available to slum residents have been changing in response both to changing occupational patterns—to the disadvantage of semiskilled and unskilled workers—and to these shifts in the location of industry. Between 1947 and 1967, total employment in seven large central cities rose by only 50,000, while employment in the metropolitan rings surrounding those same cities increased by 900,000.

By and large, jobs in suburban areas are not held by workers from the central city slums or by Negroes. Distance and travel cost shut most slum dwellers out of this fastest growing job market in the Nation. Even within the city, plants are often many miles distant from the slum areas, and transportation is costly and time consuming. Transportation to the suburbs is prohibitive at the low wages most slum residents can command.

The Traffic Commission of New York City estimates, for example, that it would cost a worker in Harlem $40 a month to commute by public transportation to an aircraft factory on Long Island, or a parts plant in Yonkers, or a shipyard on Staten Island. The cost for a Bedford-Stuyvesant resident to work in the same places would be nearly $50 a month. Since the income of most slum residents is low, even when they are employed, such transportation costs could reduce real earnings to the point where the incentive to work is gone.

Los Angeles is another major city where transportation problems are acute. Since World War II, important industrial centers have sprung up outside of central Los Angeles, whereas previously most industry in the metropolitan area was within the city. Persons working or looking for work who do not have cars find it difficult to get or hold a job in these outlying areas. It costs anywhere from 50 cents to $1.78 to make a round trip between central Los Angeles and the nearest industrialized areas. On trips to more outlying points, costs are much higher and service less frequent.

Within the south central area—Watts—very few jobs are available. Private transportation is a necessity if Watts residents are to find jobs. But 30 percent of the households in this area do not have automobiles.

Similar difficulties are reported in other major cities. The area in which Negroes live in Chicago has a lower rate of use of automobiles for commutation to jobs than any other area of the city.

Furthermore, transportation costs are rising rapidly. Local transit fares are among the items showing the most rapid increase (equaling the

[17] For a discussion of these programs, see the preceding chapter.

rise for medical services) in the Consumer Price Index. During the period 1954–65, public transportation costs soared twice as fast as the costs of owner-operated automobiles.

One recent development—made possible by a Mass Transit Demonstration Grant from the Department of Housing and Urban Development—promises some help to residents of Watts. A new bus line was opened in July 1966, connecting Watts with the industrial area around the Los Angeles Airport and subsequently with another industrial and commercial area. Within 2 months, the line was handling over 10,000 passengers a week, and fares had been substantially reduced. Shortly after the line was opened, a passenger count showed that the majority were either going to work or looking for work.

Similar provision of transportation directly from slums to expanding industrial areas could, of course, help to open more jobs to slum residents in other cities. The new Model Cities Program (discussed later in this chapter) will help to make this possible. One of its statutory purposes is to establish better access between homes and jobs.

Changing Social Conditions and Population Trends

The problems of joblessness and poverty which now beset slum residents gain urgency from comparison with conditions a few years back. These problems have not only failed to ease but actually worsened in many respects since 1960.

Slum districts have been almost completely bypassed by the national gains in employment and standards of living, though this has not been true of all slum residents. There is evidence of considerable movement of people into and out of the slums. The residents able to get ahead economically leave for better neighborhoods as soon as they can; newcomers replace them as they move out; and the poorest, most disadvantaged people remain, unable to move. White people generally find it much easier to leave than Negroes, both because of their higher average earnings and because they do not face the barrier of segregated housing, particularly in suburbia. So the slums more and more become a separate world, with a rising proportion of Negroes in an increasingly deprived population.

The deteriorating situation and environment in slums is made plain by the following highlights of economic and social change in the areas covered by the November surveys. And a brief review of population changes in central cities emphasizes the need for opening of doors—not only to housing in wider areas, but also to education, training, and worthwhile jobs—particularly for the growing numbers of Negroes who will otherwise be stranded in slums.

HIGHLIGHTS OF ECONOMIC AND SOCIAL CHANGE

The average rate of unemployment for the 10 slum areas surveyed was virtually unchanged between the time of the census in April 1960 (8.8 percent) and November 1966 (9.1 percent). Yet the national unemployment rate declined—from 5.4 to 3.4 percent—over this same period. (All these rates are without seasonal adjustment.)

Women workers in these slum areas suffered a sharp rise in unemployment—from 8 to 11 percent between 1960 and 1966. This rise undoubtedly reflected, in part, the great increase in teenage Negro girls in the slum population (who have by far the highest unemployment rate of any population group). It also reflected the rising proportion of women family heads in the slum areas. These women, who are their families' chief breadwinners, generally have higher unemployment rates than those living with their husbands (who are much less likely to persist in looking for work when they have difficulty in finding jobs).

For men in these slum areas, unemployment declined (from 9.2 to 7.7 percent between 1960 and 1966), but not nearly so much as for all men in the country. And this drop in unemployment was by no means a full indication of the extent of joblessness among men in slums, since the proportion of these men in the labor force fell sharply during the same period.

The drop in *labor force participation rates* for men was much greater in the slum areas than in

the country generally between 1960 and 1966. And women in slum districts shared not at all in the national rise in labor force participation of women, as the following figures show:

	Labor force participation rates	
	April 1960	November 1966
Men in—		
10 slum areas	74	65
Total United States	77	75
Women in—		
10 slum areas	43	40
Total United States	34	40

These figures apply to all slum residents aged 14 and over (the only age group for which trend data are presently available). In part, the changes shown reflect the great increase in the number of teenagers in slums (of whom many are still in school, despite the high rate of school dropouts among these disadvantaged youth). But the declining proportion of men in the work force certainly reflects also the growing discouragement of many slum residents, both youth and adults, and their alienation from the economic mainstream.

The occupational trends for men in poverty areas are equally adverse. The proportion of men employed in laboring or operative jobs rose substantially in poverty areas between 1960 and 1966, while remaining unchanged in the country as a whole.[18] And the proportion in white-collar occupations declined, contrary to the national trend. In all probability, some of the more highly skilled workers left the slums, while those coming in or unable to move were chiefly low-paid, low-skilled workers.

The increasing proportion of *households headed by women* is another disturbing social trend in the slums. Some 47 percent of the women in the 10 slum areas in 1960 were married with a husband present in the home. By 1966, this proportion had declined to 43 percent. Conversely, the proportion of women widowed, divorced, or with an absent husband rose from 30 percent to over 33 percent and the proportion reported as single edged upward slightly. This rise in the proportion of households without a male head has obvious implications in terms of reduced family income, and also of a home environment likely to contribute heavily to juvenile delinquency and other behavioral problems among slum youth.

[18] For 1966 data, see James R. Wetzel and Susan Holland, op. cit. Data for 1960 are from a special sample tabulation of census poverty tracts.

A more hopeful sign is the recent rise in the *average educational level* of slum residents. Between 1960 and 1966, median years of school completed rose from 8.3 to 10.4 for people aged 25 and over in the 10 areas surveyed. This improvement partly reflected the influx of younger people into the cities (since young people, as a group, have more education than older ones). But the educational attainment of slum residents is still far below the national average—so low, in fact, as to be a major factor in their sub-employment problems.

Changes in *family income* provide culminating evidence of the worsening problems in slums. In the areas for which information is available, family income has failed to rise along with income in other parts of the same city or the country as a whole. In the poverty neighborhoods of Cleveland, for example, family income rose by only 7 percent between 1959 and 1964, compared with 17 percent in the remainder of the city. Income edged up by only 4 percent in South Los Angeles and remained virtually unchanged in East Los Angeles, while it rose by nearly 9 percent nationally, as shown by the following figures on median family income:

Area	1959	1964	Percent change
Cleveland:			
Poverty neighborhoods	$4,937	$5,259	6.5
Remainder of city	6,558	7,642	16.5

	1959	1965	Percent change
Total, United States	$5,417	$6,882	8.6
South Los Angeles	4,497	[1] 4,669	3.8
East Los Angeles	5,094	[1] 5,106	.2

[1] For the 12 months ending mid-November 1965.

Family purchasing power in these slums actually dropped during this period—judging by the rise of over 8 percent in the National Consumer Price Index for urban families between 1959 and 1965.

The problem of *slum housing* deserves special consideration because of its many effects on how well the residents are able to function as workers and citizens. Besides its influence on health, housing as bad as exists in many slums is an assault on the occupants' personal dignity and feelings of self-worth and can contribute to their alienation from the obviously better housed people in the rest of the city and to their difficulties in work adjustment.

Whether the housing situation was getting better or worse in all 10 slum areas visited in November was not determined, but in some the evidence of further deterioration was clear. A special census survey of the South and East Los Angeles areas in November 1965 showed that, in the 5 years since the 1960 census, the proportion of substandard units had risen sharply, while median rents had risen also. More specifically, the findings were as follows:

Year	South Los Angeles	East Los Angeles
	Percent of substandard housing units	
1960	18	25
1965	34	35
	Median rents	
1960	$69	$63
1965	77	75

And according to the recent report of the Mayor's Housing and Urban Renewal Task Force in New York City, "during the past five years * * * slum housing has increased more swiftly than it has been eliminated." The number of unsound units in that city rose from 420,000 in 1960 to 525,000 in 1965, while the median rent/income ratio was rising from 18.4 percent to 20.4 percent.

For slum residents, this rise in the rent/income ratio can be as serious as poor housing. If the cost of housing is too high in relation to income, as it frequently is in the slums, it can swallow up money needed for food, clothing, school supplies, training, jobseeking, work tools, and health and dental care—in fact, for the essentials of an escape from poverty.

The *story of economic decline* in one slum area—the Hough and surrounding area of Cleveland—sums up all these elements of change and their devastating impact on the people in this slum.[19]

The average person in the Hough area was in worse economic straits in 1965 than the typical inhabitant in 1960. Unemployment was higher, income was lower, and a larger percentage of the population was poor.

Further, this ghetto's economic potential—its potential for generating earned income—declined appreciably over the 5-year period. The families with the most limited earning capacity—those headed by women or aged people—have increased in number, while those with the greatest earnings potential (essentially families headed by men under 65) have become fewer—with the result that the family units with limited economic potential now represent a far larger proportion of the slum population than they did in 1960. When this change is tied together with the higher unemployment rates and lower family income, the deterioration in the slum residents' potential for economic security becomes evident indeed.

Although most other groups in this slum population have declined in number since 1960, the numbers of Negro family units headed by women (the weakest in economic potential) and of children in these families have risen rapidly. Negro families with women heads have increased by 8 percent, while children in these families have increased by nearly a third—an additional 4,000 poor children in 5 years. Members of these families, to a greater extent than any other group in the slums, appear doomed to persistent poverty. The entrapment of Negro children in poverty, with small likelihood of leaving it during their childhood, is probably the grimmest manifestation of the crisis in this and other slums.

POPULATION CHANGES

The most striking population changes affecting central cities and their slums are the rapid increase of the cities' Negro population and the shift of the white population to suburbia. The Negro population in all central cities taken together increased by 20 percent between 1960 and 1965, while the white population there actually declined (for the first time, and by about 1 percent).[20]

The proportion of Negroes in the central city population has more than doubled in the past quarter century. (See chart 14.) It actually increased at a faster annual rate between 1960 and 1965 than in the previous decade. Simultaneously, Negroes have been unable to make any significant inroads into suburbia. They represented only 5 percent of the suburban population in 1965, approximately the same proportion as a generation earlier.

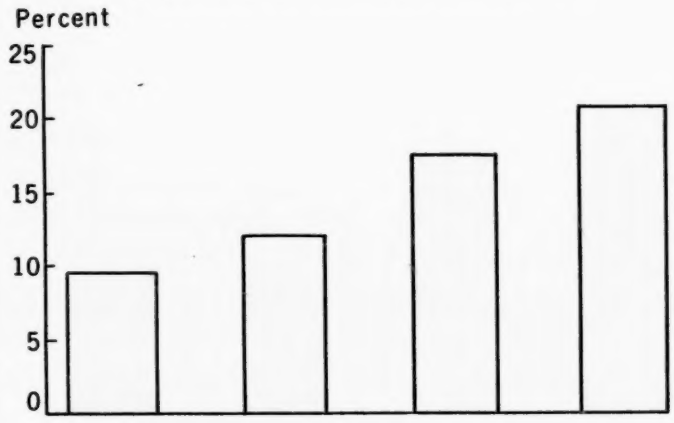
[19] Walter Williams, *Cleveland's Crisis Ghetto—Decay and Prosperity* (Washington: Office of Economic Opportunity, 1966), unpublished paper based on a special census of this area conducted by the Bureau of the Census.

[20] The discussion in this section relates to "central cities" of Standard Metropolitan Statistical Areas (SMSA's include one or more counties with a central city of 50,000 or more). This group of 212 cities included an estimated population of 43.4 million people 14 and over in April 1965.

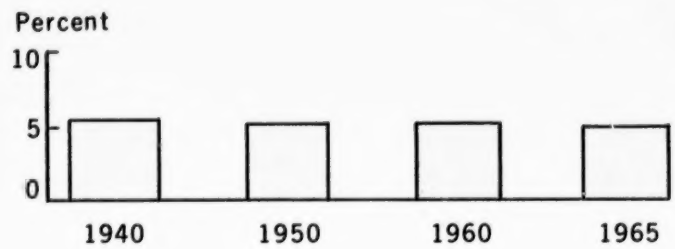
CHART 14

The proportion of nonwhites in the U.S. population increased slightly during the past quarter century . . .

but it more than doubled in central cities . . .



and declined in suburbia.



Source: U.S. Department of Labor.

The increased numbers of Negroes in central cities, chiefly in the poorest areas, and of whites in the suburban rings are the combined result of population growth and migration patterns. The Negro population aged 15 and over in central cities rose by about 1.1 million between 1960 and 1965—with in-migration, largely from rural areas, accounting for about 60 percent of this increase. The white population, on the other hand, dropped by 400,000, because migration to the suburbs more than offset gains from population growth. (See table 3.)

A fact of particular importance from the viewpoint of manpower and educational policy is the tremendous increase in Negro teenage population. The number of Negro teenagers in cities rose by over 50 percent in the short 5-year period, 1960–65, about twice as fast as the teenage population nationally. And the Negro young adult population (age 20 to 24) rose by one-fourth.

These unprecedented increases in numbers of young people—many of them now jobless, out of school, and a potential source of social dynamite in the slums—have obvious and staggering policy implications. They underline once more the essentiality of expanded programs directed to the needs of this particular group.

Next to Negro youth, the most rapidly growing group in the city populations are Negroes aged 45 and over. The number of these older Negroes, who face the double handicap of racial and age discrimination added to their generally limited education and skill, increased by 15 percent in central cities between 1960 and 1965. Here again is a group with problems demanding priority consideration.

The heavy out-migration to the suburbs of the more well-to-do white people and the rapid increase in the cities' Negro residents have been accompanied by a spreading out of slum areas, evident in most large cities. These trends show no signs of weakening. The Negro population in the central cities is now so large that, with present birth and death rates, substantial growth in the nonwhite population is inevitable. And in-migration is certain to continue, though possibly at a declining rate, since employment opportunities in agriculture are expected to go on declining in the foreseeable future.[21]

Other factors besides population growth also contribute to the widening and shifting of slum areas, however. Industrial and freeway construction and even many urban renewal projects have displaced slum residents and forced them to crowd into adjacent areas. Furthermore, when the income of Negro families rises to a point where they can afford better housing, the only houses they can find to move to are often on the fringes of the slums—creating the "border" conflict which appears in many residential areas when Negro families move in.

[21] See the chapter on Underemployment and Poverty in Rural Areas for a discussion of this point.

TABLE 3. COMPONENTS OF POPULATION CHANGE IN CENTRAL CITIES FOR PERSONS 15 YEARS AND OVER, BY COLOR AND AGE, 1960 TO 1965

Color and age	Absolute change (thousands)			Percent change in total population 1960 to 1965
	Total	Due to migration	Due to natural growth	
Total	696	−1,001	1,697	1.7
15 to 19 years	844	65	779	21.3
20 to 24 years	461	326	135	12.1
25 to 34 years	−671	−548	−123	−8.8
35 to 44 years	−536	−529	−7	−6.8
45 to 64 years	75	−462	537	0.6
65 years and over	523	147	376	9.2
White	−378	−1,599	1,221	−1.1
15 to 19 years	478	−48	526	14.6
20 to 24 years	279	144	135	8.9
25 to 34 years	−710	−701	−9	−11.7
35 to 44 years	−661	−565	−96	−10.3
45 to 64 years	−177	−525	348	−1.6
65 years and over	413	96	317	8.1
Nonwhite	1,074	598	476	16.1
15 to 19 years	366	113	253	52.7
20 to 24 years	182	182	----------	26.4
25 to 34 years	39	153	−114	2.6
35 to 44 years	125	36	89	8.8
45 to 64 years	252	63	189	14.1
65 years and over	110	51	59	20.0

SOURCE: Estimates based on data from U.S. Department of Commerce, Bureau of the Census and U.S. Department of Health, Education, and Welfare, Public Health Service.

Thus, programs to increase the employability and employment of slum residents must be accompanied by programs to provide better housing for them on an open basis in larger areas in and outside the city. Legislation to eliminate discrimination in the sale or rental of housing was recommended by the President in his message on Civil Rights in February 1967. Such legislation, as well as the construction of additional low-cost housing, is essential to halt the increasing and dangerous demarcation of metropolitan areas into two worlds—an inner core of deprivation and explosive discontent within an outer ring of affluence.

Present Programs and Program Needs

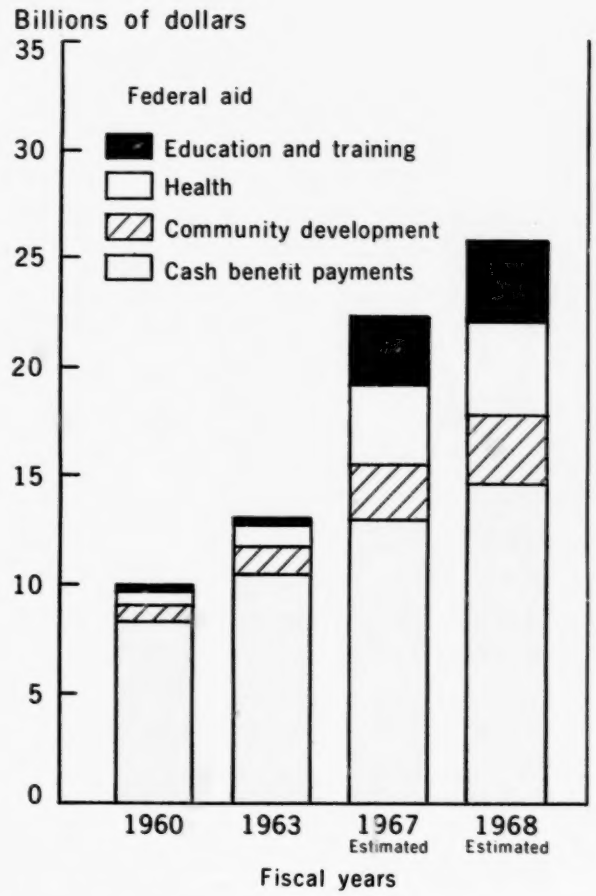
The poverty, misery, and joblessness in sections of our major cities clearly demand nationwide attack. And many of the weapons needed for this campaign are now at hand as a result of the unprecedented legislative advances of the past 3 years in education, training, health, housing, and economic opportunity.

It is too little recognized that Federal appropriations going to improve the conditions of the poor have risen from $10 billion in 1960 to an estimated $22 billion in fiscal 1967. (See chart 15.)

Federally supported program action during the past 2 years has benefited in some degree as many as 2½ million of the Nation's poor. Nevertheless,

CHART 15

Federal aid to the poor has more than doubled since 1960.



Source: U.S. Department of Labor, based on data from Bureau of the Budget.

it is an unhappy fact that we have as yet only scratched the surface, not cut to the root, of poverty problems in slum areas.

The new directions of action in manpower programs in 1966 (described in the preceding chapter) are aimed particularly at reaching greatly underprivileged people, increasing their employability, and getting them into reasonably satisfying, decently paid jobs. The network of multiservice neighborhood centers, which is being developed in slum areas throughout the country—utilizing the Youth Opportunity Centers now operated by the Employment Service in 127 cities and the neighborhood centers established by the Community Action Program—is of special importance, since the absence of readily available services has contributed heavily to slum residents' job-finding problems.

Experience in helping the disadvantaged obtain jobs, gained through these and other programs, has combined with the results of the November slum surveys to dictate a new strategy of attack on unemployment and underemployment in the poorest urban and rural areas. Before considering this new program, however, a brief progress report is in order on the accomplishments and goals of several major programs which must continue to provide the chief resources for improving the education, training, and employability of slum residents.

EDUCATIONAL PROGRAMS

Elementary and Secondary Education Act

From the viewpoint of a longrun solution to slum residents' sub-employment problems, no action is more important than a great strengthening of the education poor children receive from preschool onward. As many educators have pointed out, these youngsters need much better schools than more privileged children, not the inadequate, poorly staffed schools now all too common in slum areas.

The aid to schools in districts with many poor children, provided under title I of the Elementary and Secondary Education Act of 1965, is addressed directly to this problem. In fiscal 1966, nearly $1.2 billion was allocated to local educational agencies in over 17,000 school districts, to assist them in expanding and strengthening programs for educationally deprived children. About 2.5 million children benefited from the 1966 summer programs, and roughly 8.3 million were aided in the fall school session. These programs served all grade levels, including approximately 400,000 preschool and kindergarten youngsters. A large percentage of the children aided were in city poverty areas.

The ESEA title I funds may be used for a wide range of purposes, as dictated by local needs—for the physically and mentally handicapped, for school dropouts, for preschool youngsters, and for children in all grades from the 1st to the 12th. Top priority is being given to remedial reading and other remedial education projects; but many programs support special enrichment, cultural, and

recreational activities to broaden the children's horizons and help them overcome social and emotional handicaps that affect their ability to learn. Where necessary to carry out the purposes of the act, title I funds may also be used for clothing, food, medical and dental care, and for essential construction and equipment. Local educators have wide latitude in utilizing title I to solve the particular problems of the educationally disadvantaged in their areas.

Great improvement in educational achievement can flow from wise use of these funds. In California, for example, concentrated services have led to significant gains in reading among deprived children. In Wichita, Kans., evening and Saturday classes in metal and woodworking for interested junior high school pupils have led to remarkable improvements in attitudes and attendance at their regular classes. And in Detroit, a pilot program is teaching preschool youngsters to identify common objects in words they had no opportunity to learn at home, and other programs are helping to remedy reading and language deficiencies among students up to the 12th grade.

The National Advisory Council on the Education of Disadvantaged Children took a close look at the first summer programs in 1966. In its report to the President in November, the Council said that "The single most widespread achievement of the Title I program is that it is *causing teachers and administrators to focus new thinking on ways to overcome educational deprivation.*"

The Council's most disappointing finding with respect to these initial programs was "*the failure of most schools to identify and attract the most seriously disadvantaged children.*" It strongly urged "greater mutual involvement of school officials and parents and neighborhood antipoverty groups" in planning programs for disadvantaged children.

Schools in poor neighborhoods, many of which lack libraries and are using inadequate, out-of-date textbooks, are also receiving help in purchasing books and other instructional materials under the ESEA (title II). And a program known as PACE (Projects to Advance Creativity in Education), also supported under the ESEA (title III), is encouraging innovative applications of new knowledge, including programs for disadvantaged children.

Project Head Start

The primary source of preschool aid for disadvantaged youngsters is Project Head Start, launched in 1965 as part of the War on Poverty, although programs under the Elementary and Secondary Education Act also provide preschool education and other services for children needing this help.

Project Head Start is broadly conceived as a child development program, concerned with all problems which affect a child's ability to profit from education, including his physical needs, mental attitudes, and home background. It endeavors to involve parents as well as teachers, doctors, social workers, and other professional workers in a team approach to coping with the consequences of cultural and economic deprivation. Classes are small (typically 15 children) and are staffed by a teacher, teacher aide, and at least one volunteer, so as to insure close personal attention for each child. Children also receive needed health and psychological services and get at least one nourishing meal a day. Altogether, the full range of services provided costs roughly $1,000 per pupil per year.

During 1966, nearly 575,000 youngsters were enrolled in Head Start summer programs and 160,000 in full-year programs which, in some cases, provided all-day care so that mothers could work and get off welfare rolls. The majority of these children lived in metropolitan areas. And about 40 percent of them were Negroes. Altogether, about a half million 3- to 5-year-olds were in the program during 1966, one-fifth of the 2.5 million youngsters of this age living in poverty in the United States. The number of 6-year-olds benefiting from the program was large also (over 200,000 in 1966). And total enrollments in Head Start programs are not expected to show much change in 1967 from last year.

Children leave the program with a genuine head-start toward readiness for school. However, recent research findings have corroborated the Head Start staff's early concern that—in an unsympathetic elementary school environment, without an individually oriented approach to the problems of disadvantaged children—Head Start children might lose the gains achieved or even do worse than those who had never had the experience of such a program.

To maintain and expand Head Start gains, the President has recommended that a Follow Through program to improve primary school services for children in areas of acute poverty be launched, with an appropriation of $135 million for fiscal 1968. The development of close ties among educational and community agencies will be necessary to provide the integrated educational, health care, parental counseling and other child development services envisioned. The funds recommended should make possible the development and testing of Follow Through services on a pilot basis. Some increases in enrollments in full-year Head Start programs, particularly in enrollments of 3-year-olds, and in pilot programs to explore the effectiveness of Head Start services for still younger children, are anticipated. Legislation authorizing a pilot program to provide school lunch benefits to needy preschool children has also been recommended by the President.

ECONOMIC OPPORTUNITY PROGRAMS

Community Action Program

The main arm of the War on Poverty in urban slums, as in many impoverished rural areas, is the Community Action Program. Project Head Start is organizationally a part of this broad program. And there are also Community Action projects underway in more than 1,000 cities and towns throughout the Nation.

These programs aim at the improvement of job opportunities, housing, education, health, or almost any other problem which must be dealt with in order to raise the level of life in poverty areas. The programs are carried on with the cooperation of many public and private groups—welfare agencies, churches, employment offices, settlement houses, schools, and others—and with the active participation of the poor themselves, both as members of governing boards and as paid staff members.

Neighborhood centers are a key feature of the Community Action Program in most cities, and have provided the pattern for the more elaborate multiservice centers in 14 cities now being developed through the cooperative efforts of a number of Federal agencies.[22] A typical neighborhood center offers under one roof such services as day care for children of working mothers, adult basic education, volunteer tutors, quiet study areas, legal services, housing information, consumer counseling services, and employment services. Several offer health services.

Educational services tailored to the needs of the poor in the vicinity are an important feature of most projects. These may include, for example, Saturday schools, library services, special teacher training, intensified guidance and counseling, remedial tutoring, and adult education.

Employment of the poor in projects directed toward their own neighborhoods is always emphasized, and is one of the Community Action Program's special contributions. It is anticipated that by the end of fiscal 1967 well over 100,000 poor people will be employed as teacher aides, health aides, child supervisors, and clerks, as well as in other subprofessional jobs which can lead to careers outside the antipoverty program (including about 75,000 in Project Head Start). Furthermore, specialized training for their jobs has been provided for many thousands of these poor people (probably close to 25,000 of them by the end of fiscal 1967).

Neighborhood Youth Corps

Aware of the disproportionately large number of disadvantaged youth living in urban areas and their high rate of unemployment, the Neighborhood Youth Corps [23]—the War on Poverty's largest youth program—concentrated 70 percent of its job opportunities and its funds in urban areas in 1966. Negroes made up 37 percent of the in-school and 46 percent of the out-of-school enrollees during 1966—reflecting the special efforts to enroll disadvantaged Negro youth, particularly those in the inner city.

Eligibility standards for enrollment in the NYC permit inclusion of only those youth most in need of the program—the poorest and most disadvantaged. Thus, a large majority of the NYC enrollees in urban projects are unquestionably from the poorest areas in the city.

Altogether, NYC provided more than 350,000 job opportunities in urban centers for young men and women aged 16 to 21 during fiscal 1966. To

[22] See the chapter on New Directions in Manpower Programs.

[23] For a further discussion of the Neighborhood Youth Corps, see *1966 Manpower Report*, pp. 101–104.

help alleviate the severe unemployment among city youth during the summer, NYC specifically allocated 130,000 summer job opportunities to city students from low-income families. In addition, the year-round program for out-of-school youth operated during the summer and provided 50,000 job opportunities for unemployed city youth who had dropped out of school.

Job opportunities are designed to provide constructive work experience for the enrollees while benefiting communities through their services. Under supervision, in entry-level jobs which usually pay $1.25 per hour, NYC urban enrollees have worked as aides in schools and libraries, parks and hospitals, cafeterias and museums. They have assisted with surveys to determine housing needs in slum areas and helped to sign up persons eligible for benefits under Medicare. They have taken over routine but important daily tasks from overburdened nurses and technicians in short-staffed city hospitals, and they have also freed overworked school teachers from routine tasks.

The Neighborhood Youth Corps has thus prepared great numbers of disadvantaged young people for permanent employment, and it has undoubtedly prevented many from dropping out of school. It has also had noticeable effects in reducing juvenile crime and otherwise mitigating youth problems. For example:

—In city after city, judges, probation officers, and other authorities have linked the presence of a NYC project to a decline in crime and juvenile delinquency rates.

—Urban school systems around the country report a decrease in dropouts and absenteeism and an improvement in school grades coincident with the establishment of NYC projects. Furthermore, in fiscal 1966, 11 percent of the enrollees in NYC projects for out-of-school youth returned to school or further training. These were dropouts—young men and women considered permanently alienated from formal education. The majority were urban youth.

—One-fourth of the enrollees in out-of-school projects in fiscal 1966 left NYC for permanent employment or for service in the Armed Forces. A large majority of these were disadvantaged young people from the inner city, for whom a permanent job or admission into the Armed Forces had previously seemed impossible.

Changes in the NYC program authorized by recent amendments [24] should further increase the effectiveness of urban projects. For example, instead of having to wait until they are 16, as previously required, young people from low-income families who are students in grades nine to 12 may now enroll in NYC in-school programs, and so may those in lower grades who are of high school age. It is believed that admission to NYC at these earlier ages will help to motivate young people as students at the point when they are making the crucial decision whether or not to drop out of school.

Furthermore, NYC may now, for the first time, pay out-of-school enrollees for time spent in counseling or education—services to which it has been difficult to attract enrollees in out-of-school projects, despite the special importance of these services for disadvantaged urban youth.

Job Corps

The Job Corps [25] serves both urban and other youth whose lives have been so underprivileged that they have little chance of becoming productive citizens without a change of surroundings.

The youth enrolled always lack leadership at home, often have a lifelong pattern of rejection and failure, and may be strongly pressured to engage in criminal or antisocial behavior. Basically, the mission of the Corps is to locate these greatly disadvantaged out-of-school, out-of-work youth and enroll them in its residential programs; train them in educational, vocational, and social skills; and then place them in positions with opportunities for their future growth.

More than 30,000 young men and women were enrolled in late 1966 in the Corps' 116 centers—including both conservation and urban centers, and two special experimental centers. Besides remedial education, greatly needed by all enrollees, the centers emphasize guidance and counseling services and efforts to help corpsmen develop good health habits, some initiative and sense of respon-

[24] For a discussion of other amendments affecting the NYC program, see the chapter on New Directions in Manpower Programs.

[25] For a further discussion of the Job Corps, see *1966 Manpower Report*, pp. 104–106.

sibility, and the social skills they will need for holding a job. They also provide training for a variety of occupations, at different levels suited to the corpsmen's varying abilities, but always of a kind which will make employment possible. And they pay corpsmen a modest allowance besides meeting their living expenses.

According to recent sample studies conducted for the Job Corps, about two-thirds of the former corpsmen—both those who had completed training and those who had dropped out—were employed when interviewed at wages directly related to the length of their stay in the Corps. In view of the corpsmen's disadvantaged backgrounds and severe personal problems, this record represents substantial accomplishment.

The Job Corps is now planning to set up and test experimental centers of several different types. It is considering, for example, the establishment of halfway houses to facilitate the readjustment of youth completing training programs. Seventy percent of all Corps members now return to or relocate in urban areas. And job retention studies indicate that those who lose their jobs do so because of inability to function independently in a competitive industrial environment, rather than because of inadequate occupational skills. The Job Corps halfway house program would be designed to assist Corps members in finding jobs and places to live, and in developing the experience, confidence, and social skills required to live independently and productively in particular metropolitan areas.

The Corps is also planning to develop some experimental nonresidential training centers, and to compare the results they obtain in training and rehabilitation of greatly disadvantaged youth with those obtained at the residential centers. One purpose will be to find ways of distinguishing more exactly between those youth who really require relocation for effective help and those who could be helped through nonresidential programs in their home communities (at much less cost in personnel and financial resources).

MDTA TRAINING PROGRAMS

Even before the reorientation of the MDTA program in 1966, which placed new emphasis on training of the disadvantaged, increasing attention was being paid in MDTA projects in central cities to reaching potential trainees with special job market disadvantages.

The results of this effort are shown in the statistics on MDTA trainees in 29 labor areas where hard-core unemployment, particularly among nonwhites and other minority groups, has been a source of concern. In these 29 areas, workers regarded as disadvantaged [26] represented more than half of the MDTA trainees in 1965 and 1966, though they represented little more than two-fifths of all the unemployed and underemployed workers in MDTA programs throughout the country.[27]

The disadvantaged trainees in the 29 areas included many long-term unemployed. Nearly 1 out of every 3 had been out of work for a year or more, and 2 out of 3 for 15 weeks or longer. Four out of 5 had failed to finish high school. Three-fourths were nonwhites, primarily Negroes. And nearly a fifth were 45 years of age or older.

The worth of the MDTA training to these disadvantaged people must be judged by their success in finding jobs. In 1965, 4 out of 5 of them completed training, nearly as high a proportion as among other trainees. And 2 out of 3 were employed when last contacted—a lower proportion than for other trainees but still an encouraging figure for persons with their record of long-term unemployment and other handicaps.

A comparison of the occupations for which these workers were trained with those of their last jobs also bears witness to the possibility of upgrading persons with multiple disadvantages. Almost two-fifths of the disadvantaged trainees in the 29 labor areas in 1966 had previously worked in unskilled or entry-level jobs. Only 5 percent had held skilled jobs before, and less than 15 percent had white-collar jobs. Yet MDTA training prepared one-fourth of them for entrance into skilled work and a third for clerical, sales, or sometimes even semiprofessional jobs. (See table 4.)

These are encouraging results. It must be emphasized, however, that the number of workers reached by the MDTA projects represent a mere beginning in terms of the total needs of the disadvantaged population of central cities.

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[26] The disadvantaged were defined as persons with two or more characteristics which have operated (whether justifiably or not) as barriers to their employment. These included such attributes as an age of 45 or over, education below the high school graduate level, and nonwhite racial background; also being on public assistance, having a physical or mental handicap, and a record of long-term unemployment (15 weeks or more).

[27] Data for the 29 areas are based on reports for 52,000 trainees in 1965, and partial reports covering 22,000 trainees in 1966.

TABLE 4. TRAINING OCCUPATION COMPARED WITH PRIOR OCCUPATION OF DISADVANTAGED WORKERS IN MDTA INSTITUTIONAL TRAINING, 29 LABOR AREAS, 1966

[Percent distribution]

Occupation	Occupation prior to training	Training occupation
Total	100.0	100.0
Semiprofessional and technical	1.3	6.0
Clerical and sales	12.6	25.5
Service	28.2	20.6
Agriculture	2.6	3.4
Skilled	5.1	24.2
Semiskilled	14.4	20.3
Unskilled and entry level	35.8	----------

NOTE: Detail may not add to totals due to rounding.

MODEL CITIES PROGRAM

The Model Cities Program, authorized by the Demonstration Cities and Metropolitan Development Act of 1966 and now in the planning stage, represents a new, massive and coordinated approach to regenerating slum neighborhoods. The plan is to focus on specific target areas in each model city, and to attack not only dilapidated and deteriorating housing but also lack of services (health, recreation, education, police and fire protection) and other problems such as poor sanitation and street repair.

The underlying assumption is that solutions to urban problems are to be found only in a concerted effort using all the legislative tools made available by the Congress, plus new supplemental activities, and involving an unprecedented mobilization of local leadership and resources. The program envisages the cooperation of all Federal agencies in making available to local communities all Federal program aids related to their multitudinous problems. At the same time, the community and its officials will be expected to assume leadership in planning and carrying out the program. Federal technical and financial assistance will be forthcoming only when cities present imaginative and effective plans for dealing with the physical and social problems of their blighted areas.

So far, Federal financial assistance has been limited to planning grants. These cover 80 percent of the cost of the planning, with the city making up the remainder. Congress has provided $11 million for planning in fiscal 1967.

The act also authorizes supplementary financial aid for activities connected with the Model Cities Program which are not covered by other Federal programs—up to a total of $400 million in fiscal 1968 and $500 million in 1969. About 70 cities are expected to qualify for this aid. And the President has requested the Congress to appropriate the full amount authorized for 1968.

To meet the requirements for a supplemental grant, a city must show that its planned program will have a substantial effect not only in improving housing but on social problems such as ill health and unemployment. And maximum employment opportunities must be provided for residents of the area in all phases of the program.

The rehabilitation of dilapidated housing should offer particular opportunity for increased employment of residents of the target slum areas. Where residents lack skills required for the jobs becoming available, cities will institute appropriate training, with assistance from MDTA programs. Assurance of employment for area residents will also involve appropriate arrangements with lending institutions, private construction firms, and labor unions involved in the program.

A CONCENTRATED EMPLOYMENT PROGRAM

A new concentrated employment program launched in early 1967 was built upon findings about the Nation's most urgent and critical unemployment and underemployment problems, outlined in this chapter and the following one. To summarize briefly, in many city slums unemployment rates are three times the overall national rate; about a third of the residents who are or should be workers are in a condition of subemployment—unemployed, working only part time, with earnings below the poverty line, or not even looking for a job; economic and social conditions are significantly worse than 6 years ago; and population trends make certain a further intensification of these problems unless drastic action is taken now to change the residents' lives. Furthermore, underemployment and poverty are more widespread and no less severe in many rural areas than in city slums.

The new program was also founded on evidence that present programs have not adequately reached either urban slums or poor rural areas; that an effort to move the greatly disadvantaged into productive employment would be feasible in terms of the numbers involved; and that these people are generally receptive to and ready for training and other help which will enable them to become self-supporting.

Operating experiences, experiments, and research findings under MDTA and Economic Opportunity Act programs and many locally sponsored efforts have also contributed greatly to the planning of the program. This evidence points to the wide range of opportunities that can be opened for even the most disadvantaged workers through training, remedial education, and other supportive services, and also to the special value to these workers of job experience itself—when accompanied by a full measure of services and with the "books not closed" on any individual until he is placed in a viable, permanent job and has achieved the capacity to continue in employment.

The increasing interest and concern of private employers and their willingness to cooperate in projects for employing the disadvantaged (demonstrated in several projects discussed in the preceding chapter) were another important element in the planning. And the experience of the Departments of Labor and of Health, Education, and Welfare, and of the Office of Economic Opportunity in coordinating their own local activities provided guidelines for this new cooperative undertaking.

The program is an attack on what the Secretary of Labor has called the "third front" in the War on Poverty—a direct attack on the greatest concentrations of joblessness and poverty. There are also two other fronts on which advances are essential. The overall progress of the economy must be continued; any general weakening in business conditions would magnify and multiply sub-employment problems in slums. And the great resources for improvement of the entire human condition in this country—provided by recent educational, training, health, civil rights, and housing legislation—must be brought to bear effectively on the problems of the urban and rural poor. But the immediate, critical need for jobs—decently paid jobs, offering some hope for the future—remains unmet.

A concentrated attack on slum unemployment and underemployment has therefore been mounted. The program began in target slum areas of eight cities—as the first step in an effort scheduled to expand to a considerably larger number of cities and rural areas.

All resources now available to provide jobs for the unemployed and sub-employed in the target areas will be pooled—with the immediate goal of developing 25,000 to 40,000 new jobs for previously unemployed residents of these areas by October 1, 1967. With the additional budget resources requested by the President, the number of newly developed jobs which can be provided under the program will rise to at least 100,000 in fiscal 1968.

The program will have two phases, embarked upon simultaneously. The first phase, with the most far-reaching implications, involves close cooperation with the business community in opening to slum residents jobs normally closed to them by obstacles discussed earlier in this chapter—lack of education and training, lack of transportation, health problems, absence of day-care facilities for children, or such factors as arrest and bad credit records. Employer undertakings to provide job opportunities will be accompanied by a Federal commitment to improve the employability of the workers through services suited to their individual needs—including basic orientation on the requirements of working at a regular job, counseling, education, help with transportation or child-care arrangements, and remedial health care.

An important ingredient of the program will be provision for continued counseling or "coach" support until each worker is successfully employed in a decent job. To start with, the slum residents in the program will be given 2 to 4 weeks of work orientation and will be paid MDTA training allowances during this period. When a worker is placed on a job, the counselor will maintain a close relationship with him, and often with his employer, to increase his chances of remaining employed. In some cases the counselor will have to see the individual through a second chance, involving further training or another job, if the first opportunity is lost.

The second phase of the program will center on employment, for both youth and adults, under the Neighborhood Youth Corps and the other work-training programs established by recent amendments to the Economic Opportunity Act (discussed in the preceding chapter). This em-

ployment will be predominantly with public and private, nonprofit agencies. And remedial education, work experience, prevocational training, and other services will be provided as needed to get slum residents into permanent jobs. In many cities this second phase of the program will begin operations while the first is still being developed. Thus, individuals may, in some cases, work and receive training initially on public projects and then move into jobs in private industry.

The Office of Economic Opportunity and the Departments of Commerce, of Health, Education, and Welfare, and of Housing and Urban Development are cooperating in this new program with the Department of Labor, which is responsible for its overall direction. Community Action agencies will have a vital role in spearheading the program in local communities, but all available community resources will be brought into the effort. Local Employment Service offices will be responsible for providing many essential services—including counseling and testing, developing jobs for workers in the program, and coaching and followup with them after they are on the job.

By concentrated efforts in target areas, and with strong support from the business community, the new employment program should give dramatic proof that apathy, despair, anger, and frustration need not be the chief legacy of the slum—that meaningful work and effective education and skill training can enable men and women of the slums, both youth and adults, to become productive, fully contributing workers and citizens, with a more adequate share in the national prosperity.

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WHERE TO GET MORE INFORMATION

Copies of this publication or additional information on manpower programs and activities may be obtained from the U.S. Department of Labor's Manpower Administration in Washington, D.C. Publications on manpower are also available from the Department's Regional Information Offices at the addresses listed below.

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Reprints of a series of articles by the author which appeared in the "Wisconsin State Journal" discuss the effect of automation. Titles of the articles are: (1) "Automation's Blessings Are Mixed," (2) "Automation Can Develop Jobs, Too," (3) "Automation in Bank Costs No Jobs," (4) "Machines Replace, Improve Hello Girls," (5) "Concrete Proof of Push-Button Gains," (6) "Oscar Mayer's Growth Is Automatic," (7) "Labor Looks At Automation," and (8) "Automation Vital to Insurance Firms." (DM)

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AUTOMATION IN A WISCONSIN COMMUNITY

BY

JOHN NEWHOUSE

VT006142

CENTER FOR PRODUCTIVITY MOTIVATION

The Center for Productivity Motivation was established December 1, 1960 in the School of Commerce at The University of Wisconsin through a grant made by the Johnson Foundation of Racine, Wisconsin. The purpose of the Center is to study objectively the factors affecting productivity. It is hoped that such investigations will shed new light upon those emerging forms of industrial organization which give evidence of stimulating and maintaining capitalism through a widespread private diffusion of the benefits of ownership, with the result that our industrial system can better meet the challenges which it will face in the future.

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J. J. JEHRING, CO-DIRECTOR
CENTER FOR PRODUCTIVITY MOTIVATION
SCHOOL OF COMMERCE
THE UNIVERSITY OF WISCONSIN
MADISON, WISCONSIN 53706

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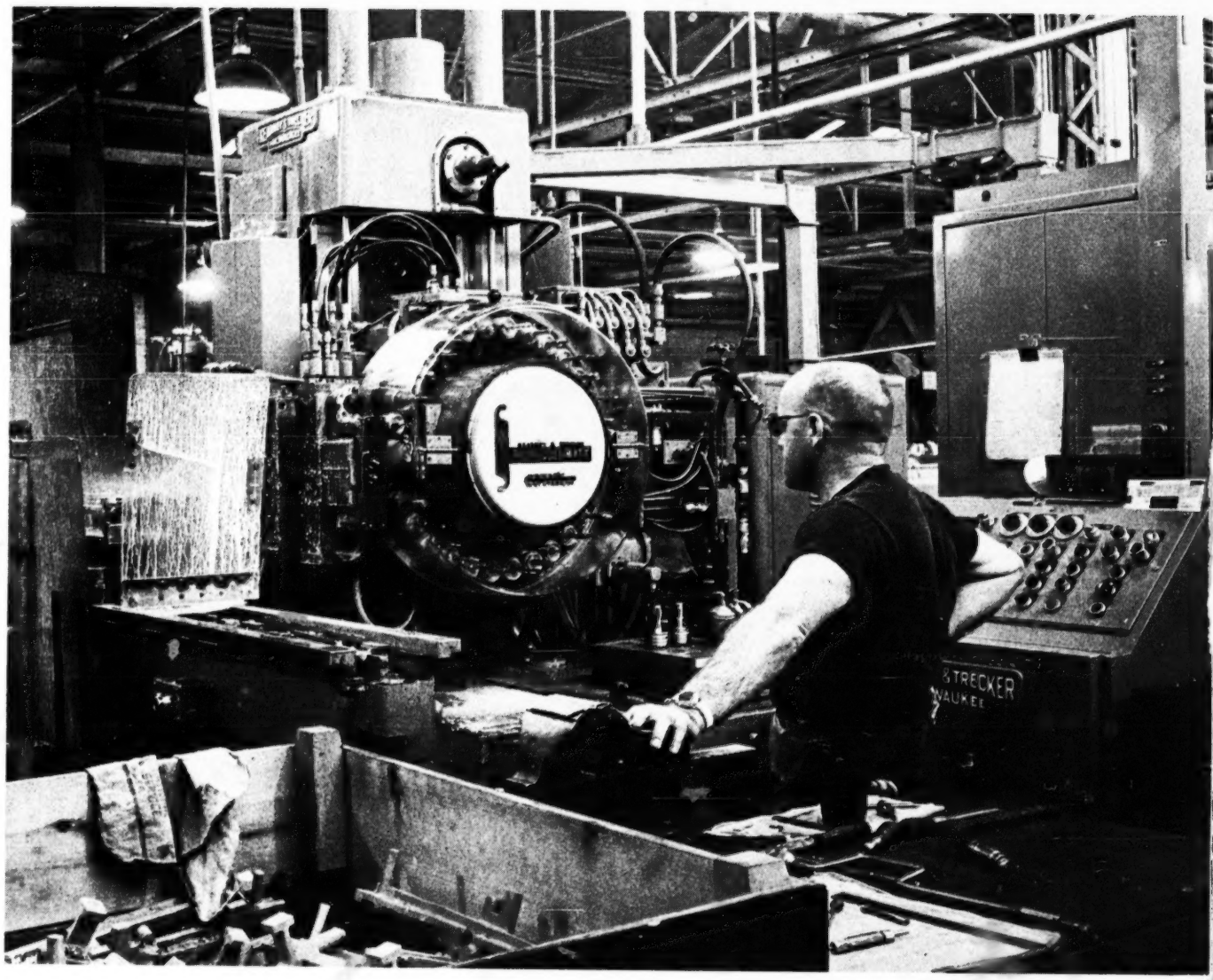
Men vs. Machines:

AUTOMATION IN A WISCONSIN COMMUNITY

by John Newhouse

Mr. Newhouse is a staff writer for the *Wisconsin State Journal*, Madison, Wisconsin, and is a member of its editorial board.



—State Journal Photo

A BIG JOB—The operator of this machine keeps an eye on the big device as it goes through its paces, in operations which before were guided much more closely by a human operator.

The circular plastic "doughnut" on the machine holds 30 machine tools, and the electronic part of the machine, guided by tape at the right, tells the machine what to do next. On the floor of the Gisholt Machine Co., it is a part of automation in Madison.

I

Automation's Blessings Are Mixed

(Sunday, November 17, 1963)

For better or worse, automation has come to Madison.

It's to be found in industrial plants, banks, insurance companies, the telephone company, and the plant in which our newspaper is printed.

All over town, people are learning to cope with the changes the more sophisticated machines bring with them, as they do more of the jobs people once did with muscle and mind.

Automation isn't hitting Madison with the impact it may have in a far more industrialized city, where hundreds or thousands of bewildered men and women may find themselves out of jobs and seemingly with no place to turn.

But management in many a Madison business is worrying about how far to go on automation, and what its effects will be. And many a worker is eyeing his job in terms of the machine that one day may take his place.

Take the Gisholt Machine Co., for instance.

A pair of big machines stand on the production floor. They are called Milwaukee-matics. They cost a quarter of a million dollars each. They run 24 hours a day. At that price, they have to.

On the side of each machine is a drum. It holds 30 machine tools. Beside the machine is a cabinet with hundreds of transistors, miles of wires, and a tape that tells the machine what to do next.

The tape gives the orders. The drum rotates, to bring the next tool needed to the fore. An arm plucks the just used tool from the chuck of the machine and carries it back to the drum. At the same time, the new tool is carried to the chuck and readied for work.

As this is going on, a metal casting on a circular table called a palette turns to a commanded point and stops. The body of the machine slides horizontally to one side—just enough. It rises—just enough. The new tool advances and drills a hole—in just the right place and just deep enough to satisfy the tape.

And this goes on, operation after operation.

At the side of the machine sits a man who used to do many of these jobs on less sophisticated machines. Now his work is reduced to fastening

the casting on the palette, making sure the machine performs perfectly, and removing the casting when the work is done.

What does he think of automation?

"It's here," he says. "You can't stop it."

He works the same number of hours as he did on his former job. The rate of pay is the same. But he isn't using the skills that he once used.

The Gisholt company has no alternative but to go to the machines, they contend at Gisholt. The competition is becoming automated. The machines don't get tired. They don't make errors. They don't get in squabbles with their in-laws, and mope. They don't take coffee breaks. They work 24 hours a day.

And this can be reflected in lower costs which mean greater sales and protection of jobs.

"The machine tool company which will survive will be the company which makes the most intelligent use of automation," predicts Rodney Stebbins, assistant sales manager.

And this brings up the question as to just what is automation.

"Automation is a continuation of the industrial revolution, but with feedback," says John Wrage, public relations director for Gisholt.

Some define mechanization as the process by which a machine puts peas in a can, while automation is the process of putting the peas in the can AND making a decision as to which peas shouldn't go in the can and discarding them.

Others say that automation occurs when one machine does a job virtually by itself, and then hands it on to the next machine to do still more work by itself.

On the national level, there are several schools of thought. One holds that end result of automation will be a shift of people in jobs, the creation of many more jobs, and a better way of life.

The opposing school of thought holds that this is the industrial revolution, all right, but it's gettting out of control. It's erasing jobs much more rapidly than they can be, or will be, created. Unless the benefits are spread much more widely, through shorter work hours or some equivalent, humanity is in for tough sledding.

At Gisholt, no one s predicting just where it all will end.

Its Own Role

Ironically enough, the Gisholt firm owes a good part of its present pre-eminence in the machine tool world to automation, introduced long before the word was coined.

Back in the 1940s, Werner Senger, now a vice-president, came up with

a balancing machine. It evolved into a tool which would balance an entire engine, finding the amount of imbalance and its location, and then adding a bit of welded metal or removing a bit of metal through boring to put the engine in balance.

It was automation at its finest. It has helped the Gisholt company to grow here and give jobs to Madison people.

Widespread Effects

Its effects in the American economy have been widespread, and also impossible to measure. Turbines spin at faster speeds. Electric motors are smoother. Cars go faster. And all of this has undoubtedly created jobs elsewhere by balancing machines which humans, without the Gisholt balancers, couldn't balance.

Today, the Gisholt company is automating its newest lathes, in the never-ending battle of industry to put out the best product and make the most sales which, in turn, will protect the jobs of workers.

There are some men, such as those on the Milwaukee-matics, whose jobs have changed.

And there are new jobs.

Somebody has to punch the tape that tells the machines what to do. This is a new, skilled job.

Another new job is that of programming. Computers can produce all sorts of information a modern company needs, but somebody has to be smarter than the machines to tell them what to do.

If a client calls Stebbins to ask when he can expect delivery of a new $200,000 machine, Stebbins can call product control. Cards zip through a sorter. A computer analyzes them; and in minutes, he has a progress report on the machine.

Then, he can advise the client, who can fit a realistic delivery date into his calculations.

'New' Service Man

Another "new" job is that of the service man. No longer is he a man with dirty hands and a monkey wrench. He wears a business suit. He flies by jet, for his time is important. He gets a good income, based on his knowledge of electronics.

He looks over the plants where he services machines for places where other machines of his company will fit in. Salesmen follow up his tips. Executives worry about how to buy the machines, how much money they will make them, or what they will do to the relations between a plant and its people.

The worry over people is a considerable problem at Gisholt.

Shift in Jobs

"Ideally, automation should not result in unemployment," says Wrage. "If anything, it ought to increase employment. But this can be accomplished only at the cost of shifting people from one job to another. And the best shift, of course, is to a higher and a better job."

This means, he says, that some people should be training for the better job, to be ready for the shift when it comes.

And the problems will be with the person unwilling or unable to learn that new job.

Furthermore, he says, automation is changing hiring patterns. At one time, he said, the man sought was the man with the weak mind and strong back.

Different Pattern

But a different pattern looms today. The accent is on the man who can advance to the better job, if the machines demand that advance—not the man who won't or can't change.

"And the problem of the future may well be this army of unemployables which include the most tragic of all, the persons with good capabilities who drop out of school and find themselves with no place to go," Wrage says.

Over in one end of the production floor of the Gisholt plant, there are three lathes. One of them has a human operator, making the changes as they are needed, watching the work, intent on his job.

End Unknown

Two of the lathes are doing the same work, at the command of little black boxes mounted atop the machines. Their operator sits some 50 feet away.

No one knows exactly where it all will wind up.

But there is a lot of concern, both on the part of the worker and of the plant management.

II

Automation Can Develop Jobs, Too

(Tuesday, November 19, 1963)

VERONA—The Carnes Corp., in Verona, is growing like all get out.

Since 1957, when a new management took over, the number of square feet of manufacturing space has more than doubled.

The number of people on the pay roll has increased from 150 employed here in Verona to more than 500, with another 50 employed in a new plant in Canada.

And gross sales have increased from $1.8 million to $8.9 million.

There are any number of factors concerned in the rapid growth, ranging from good management and heads-up engineering to the luck of having a product in demand at just the right time.

But high among the factors is automation.

The Carnes Corp. is an instance of a corporation that had to go to automation and where, for a time, automation put people out of work. But, in less than three years, the automated machines created a climate where more and more men and women were able to find jobs at Carnes.

And now the number of jobs has more than trebled.

The Carnes Corp. has had an interesting history. It began in a garage out on Helena St., in Madison, back in 1943. It was started by Wilbur Carnes, now Madison's 16th ward alderman. He was a good engineer, an ingenious operator, and he knew a good thing when he had it.

The "good thing" was a line of air distribution equipment—diffusers, grills, and registers which distributed air from central heating or air conditioning units evenly into rooms, plus a line of power ventilator equipment for exhausting air from buildings.

In Market at Good Time

He came on the market at a particularly good time. There was a vacuum in such equipment, and he was able to use the national distribution system of the air conditioner people for rapid growth all over the country.

The garage grew too small. Additions were made. In 1950, the plant

moved to Verona. The original small buildings were added to, time after time.

Then the inevitable happened.

Other firms noted what Carnes was doing. They entered into competition. As the competition strengthened, more and more attention had to be paid to cost in the now more competitive market.

In 1950 there were only five manufacturers in the country, a figure which was to grow to more than 50 today, with Carnes and two others in a tight tie for second place in the field.

Big Loss Factor

In 1957, Carnes sold out his interest in the company for more than $1 million, to the Dings Magnetic Separator Co. of Milwaukee. And, in view of the new highly competitive situation, the new management started some intensive cost accounting to find the weak and strong areas.

They found them in a hurry.

"We found that one of our main lines was operating at a 15 per cent loss," R. W. Krogstad, general manager, said.

There was some real soul searching in the next meeting of the board of directors. The loss couldn't be allowed to continue, for the line was a major part of the plant's output.

Nor could the line be dropped, for the same reason.

"We decided that the only answer lay in automation," Krogstad said.

Machine Pays for Itself

So the firm put in a conveyor system, costing $10,000. It paid for itself in three months. The management looked around for automated machines which could be bought and which would fit their operation.

And, when they couldn't find a machine, they designed one and had it made.

The new machines began to put people out of work. For two and a half years, employment was lower than when the Milwaukee group took over. But then, as the groundwork laid in those years began to take effect, it began to rise dramatically.

Automation was a part of the answer. Another big part was the realization of the management that it had to put out not only a product that would compete price-wise with their competitors, but also a better product.

More Engineers Hired

As a result, the engineering department was beefed up. From three engineers in 1957, the number has risen to 28. They work on such things

as simplifying the design of their product so that it can be automated more, and produced at a lower price.

They work on new machines which will increase automation.

And they work on a product which will work better and look better. As an example, the firm has put a considerable amount of money into one of the quiestest test rooms to be found in any manufacturing plant. Walk through the big door of a test room bigger than a haymow in the middle of the throbbing plant, pulsating with all of the noises of production, and you can all but hear your heartbeat.

When tests are being run, a register or grill will be fitted into one wall of the room, and air brought into the room through it. Then sensitive instruments determine how much noise is caused by this particular design as compared with another.

And the tests are done under formulae devised at Carnes which are rapidly being accepted as standards for the industry.

Some Jobs Can't Be Automated

In other rooms, grills and registers are testing to make sure that they give the best distribution of air to all parts of a room.

In the plant, there are some jobs that cannot be automated. Big discs of aluminum for diffusers or ventilators are still spun into forms where the desired designs are so varied or used so infrequently that to automate their manufacture would not be feasible.

As the flat discs spin on a shaft, skilled men with dual levers force the aluminum or steel over chucks to form the part into grills and registers in an old German process.

For centuries, spinning has been the best way to do this work, and the high degree of skill required cannot be automated.

But, in other parts of the plant, machines take seconds or minutes in doing jobs that would take human operators far more time.

"We're going in more for engineers than bolt twisters," Krogstad said. "Many of the tasks which we have eliminated for people are the more tiresome jobs."

The Final Score

But this final score remains:

The Carnes Corp. has used automation to create more jobs, and better jobs, in an industry which nationwide is creating still more jobs because of automation.

Another 400 more people are working at the Carnes Corp., due to automation.

And what would have happened if the firm had not gone to automation?

Krogstad shrugs his shoulders. It's anyone's guess.

But there is the possibility that the 150 jobs existing at that time would have gone down the drain of a failing firm, and that 550 people would be in other jobs, or looking for other jobs.

WOMAN AT WORK—Untouched by human hands, the bookkeeping machines shown above, in the Bank of Madison, are posting accounts in one of the most automated banks in Madison. And Pat Kaney can sit a moment while making sure that all's going well, rather than do all the work herself. —State Journal Photo

III

Automation in Bank Costs No Jobs

(Thursday, November 21, 1963)

When the Bank of Madison decided to go to automation, first in check sorting, they put the big new sorter in the lobby of the bank.

A comment that was made, from time to time, was:

"Huh, I suppose you're just trying to put people out of jobs!"

At the bank, they early learned to counter with:

"How'd you like to stand at a rack all day long, sorting checks into little boxes?"

And it was this reluctance of people to do this work which was a considerable reason for the bank to go to automation.

Can't Find People

"You just can't find competent people to do this work any more," Frank Saeman, controller of the data processing department, says.

"Eighty-five per cent of the girls go on to college, perhaps. They won't take such a job. The remaining 15 per cent go into various service jobs and, frankly, it's difficult to find the necessary abilities within this group."

The decision was based on more than the difficulty of finding people to do tedious work. The bank set up a four-point criteria, based on its effect on the customer, the community, the employe, and the stockholder, according to Paul Schroeder, president of the bank.

And, having determined that the change would be beneficial, the bank decided to spread the change over five years, to cushion its impact.

No Jobs Lost

So far, Schroeder said, no one has lost a job at the bank because of automation. And he doesn't feel anyone ever will.

You don't save any money in a bank through automation, Saeman says, but you do get the job done. And it's a job that is growing bigger every year.

Since the check sorter has gone in, the bank has also automated the bookkeeping department.

"We had four sorters and five bookkeepers," Saeman says, "Now we have six persons, plus the machines, doing the same work within this department."

But no persons have been let go because of the elimination of the three jobs. The three have been absorbed in less tedious or better paying jobs, for the growth of the bank has been considerable in recent years.

Deposit Growth Cited

Since the bank merged with the Union Trust Co. in 1956, the deposits have grown from some $16 million to between $36 and $40 million.

"And Madison is one of the check-writingest cities in the nation," Saeman noted. "We average about 14 checks per account per month, as against a national average of six to eight."

The automated check sorting and bookkeeping departments, now known as data processing, are on the third floor of the bank.

And it's a decided departure from the way things used to be.

At one time, workers on adding machines "proved" big batches of checks on adding machines, to check the totals; others sorted the checks and put them in alphabetical order, and bookkeepers flipped their ledger sheets into machines all day long, and made the proper entries.

'Iron Idiots'

Today, the incoming checks go to one of two women who "prove" the batches of checks by entering them in a new machine which not only adds up the totals but puts the account of the check down at the bottom in symbols which the sorter can read.

"The 'Iron Idiots,' " says Saeman of the sorters, "can not read your handwriting.

"That's why we have to use a special magnetic ink which prints the amount on the check, in the same manner that the account number and the bank number is already printed on your personal checks."

Next step is the sorter. Checks go through this machine at the rate of 750 a minute, traveling so fast to various compartments that they're just a blur.

There are nine compartments. Three are for the banks personal checks and three for the bank's business checks, in three alphabetical groupings. Another is for the Monona Grove State bank and another for the Hilldale State bank, whose sorting and bookkeeping is done here.

(The Bank of Madison was the first in Wisconsin, outside of Milwaukee, to automate check sorting. Other Madison banks are preparing checks

for automation, and generally will send them to Milwaukee each night for processing and return to Madison the next day.)

A final pocket is for rejects—the check that was badly printed, the check that went through folded and hence unreadable, and the like. These are checked by a human operator, and their numbers are small.

As the checks whir through, the sorter does a fantastically rapid job of checking each account number, to make sure that it's a valid number. Occasionally, the printer of the check makes a mistake. Or, if the account number is not on the check, it may have been put on by a special machine and the operater has made a mistake. You can check the number on your own check by multiplying the first numeral by eight, the second by seven, the third by six, and so forth, then adding the totals all together and dividing by 11.

If the number is valid, there will be no remainder, for 11 will go into the total an even number of times. If it won't, the number is not valid.

And the sorter does this with checks flitting past at the rate of 12½ per second, and does it in the 12 inches or so of travel between the reading head and the reject compartment!

Puts Them in Order

While the sorter is checking the account numbers and putting the checks in the proper compartments, it is also sending a continuous stream of information to the computer. It tells the computer, among other things, the amount of money to be withdrawn from each account number.

The checks, mind you, are not in alphabetical order. So the computer performs its feats of electronic legerdemain, and spews forth a tape on a high speed printer—so high speed that it prints 160 digits a second.

And now they come out in alphabetical order!

The tape then goes to one of three automatic bookkeeping machines. The ledger sheets, also in alphabetical order, are pushed up to the machines. The machine pulls a ledger sheet within it. If the tape finds it has a deposit to make, or a check to subtract, the machine gets the order, and the entry is made.

And the operator sits and watches, in contrast to the day when the bookkeepers bent over their jobs the day long as their fingers flew up and down the keys and their hands banged the total bars.

The customer has an interest in what's going on in this room, and it can be expressed in service charges.

"Our service charge is 10 cents a check," Saeman says. "The actual cost of handling a check, before automation, in the nation was 12 cents. We're able to continue the 10-cent charge, now that we're automated.

"But there are non-automated banks, particularly on the East coast, where they're charging 15 and 20 cents a check. And, without automation in this bank, it seems certain that we'd have to increase the service charge."

Can Do Other Things

The machines do other things. They can be made to tell the operators, via numbers on tapes, which account numbers have the last three digits alike, or within 30 of being alike. They can be told to disregard the fact that there is no bank number on a check, that it is vouched for by the human operator.

But telling the machine is a complicated operation. The directions may run into a formula expressed on a piece of tape several feet long, four inches wide, and completely filled with numbers—all of which have to be right.

"They're really stupid monsters," Saeman says, "but they'll do what you tell them to do. For instance, one bank got a little tired of reading a numeral '4' to indicate someone had transposed a figure, such as writing 23 for 32.

"So they commanded the machine to give them a written message instead, and told it what to say.

"And now the machine writes, **'Better luck next time, stupid!'** "

IV

Machines Replace, Improve 'Hello Girls'

(Sunday, November 24, 1963)

On Oct. 1, 1949, the last of the "hello girls" to handle local calls trooped out of the Madison office of the Wisconsin Telephone Co.

Behind them they left silent switchboards. No buzzing signals. No flashing lights. No people in the operators chairs where people had sat since 1884 when the telephone had come to Madison.

End of Era

It was the end of an era. The machines had won. Dials had beaten the "hello girls."

"You got a funny feeling," says Marion Batty, who was there. "That empty room. The quiet. The feeling that a machine could do your work. That you didn't count for much. It was a little scary."

How does she feel about it today, 14 years later?

"Oh, it's far better today," Miss Batty, now a chief operator, says primly.

"I wouldn't dream of going back. We're doing a better job. It's more interesting. There are more people . . ."

Huh? More people?

Sure, says Jack Mayer, Madison manager. The company is employing 24 per cent more people.

And that's the telephone company. It's a place of rapid change. There are lost jobs in one place. But new jobs have popped up in another. Machines have taken jobs here, and machines have created jobs there.

Here's a job that brought in somebody from another community, and there's a job that was created in another community to be considered in the bewildering picture of what—job-wise—has been happening.

Devices Clicking

And you wind up with the feeling that the biggest computer couldn't trace all of the ramifications and significance of what's been happening in the telephone system.

But come along and try, anyway.

Mayer stops at a door, and unlocks it. Inside, in the gloom, is a room filled with electronic devices on racks, clicking away like an army of robots, following the directions of dialing fingers all over Madison.

The little electronic gadgets, clicking their lives away and oblivious of watching humans, are making the local calls the "hello girls" used to make.

'Lucky They Are'

"They make 400,000 calls a day," says Mayer. "In the 'good old days,' it took a good operator to make 1,000 calls a day. These gadgets are doing the work of 400 good operators."

And it's lucky they are, says Mayer.

"It would be impossible to find 400 good operators to do this job," says Mayer. "We'd have to take just about every girl who graduates from high school and does not go on to college.

And frankly, not every one would meet our standards. They are getting higher each year, to meet the quality of service the public expects."

More than that, the increased volume of business is dependent upon automation, and automation in turn is making the job bigger each day.

101,904 Phones

Back in 1945, Madison had 34,490 telephones. Today the number has risen to 101,904, three times as many.

Back in 1945, there were 176,000 calls handled per day by the human operators. Today it's 413,000, a 134 per cent increase.

And, during that time the city has grown 55 per cent, so that the increase in number of phones and calls is more rapid than that of population.

But the employment growth of the company, though substantial, is not as rapid as that of the population growth of the city.

And this is where the machines make the difference.

1963 OPERATOR—This is the 1963 counterpart of yesterday's "hello girl" which handles your Madison telephone calls, as seen in the telephone company offices.

The device on the table is one of hundreds of such devices, on racks going from floor to ceiling, which takes care of some 400,000 such calls each day. —State Journal Photo by Ed Stein

Scores of Women

But where are these added people?

Mayer leads the way to one of two long distance rooms, where Miss Batty supervises scores of women in a room just like that of the "hello girls" of yesteryear.

The electronic gadgets sort of outsmarted themselves here, he says.

"We've been able to give the public better service, through automating the local calls and a good many of the long distance calls as well, through direct distance dialing," says Mayer.

"The result has been that the number of long distance calls has increased more than 400 per cent in the last 15 years or so. Not all of them can be handled by automation, such as person-to-person calls, where the operator has to make identification; calls to be charged to a third number; credit card calling, and others.

Operators Increase

And the number of operators on long distance has risen within the last five years by 25 per cent, from 250 to 311.

Don Brady, division operations manager, is proud of the cost to the patron.

"National surveys show that telephone service has risen less than half as much as other prices since 1939," he says. "Today it takes a wage earner only half as much time to earn enough for a phone in his home as it did in the early 1940s."

And that pattern, he is sure, is repeated in Madison.

100,000 Calls Daily

So how about the direct distance dialing equipment that's bringing the increase in human long distance operators?

It's in two of the top three floors added last year and this to the Fairchild St. building, where Nick Guerten is in charge of operations.

"We handle about 100,000 calls per day for an area that produces about half the calls of the state," says Guerten. "How many people do we have? Nine."

That doesn't seem like many, particularly since Miss Batty has said that a long distance operator can handle only about 125 calls per day, since they're more complicated than local calls.

On that basis, there ought to be 800 people up here.

"In the first place," says Brady, "where'd we get 800 people? In the second place, the big increases we've had here are dependent upon auto-

mation. Take it away, increase our charges to the customers, and we'd lose business."

The way long distance is being accepted, says Guerten, they're going to have to double the capacity of his direct distance dialing department next year, anyway.

Better Jobs

And almost certainly Miss Batty'll get more human workers in the jobs that the electronic devices can't do.

The nine people up here are doing jobs that never existed before, says Guerten, and they're among the better jobs and the better paid in the office here.

And Brady adds:

"One of the things you don't see, on the surface, is that we're moving to better jobs, that take more training and pay more money. More men are getting jobs here than ever before.

"When we went to dial, for instance, there were four salesmen on the road. Today, there are 45 going into businessmen's offices and showing them how our service can save them time and money.

Computers Talk

"A dentist's assistant, for instance, can put cards in a phone to ring the numbers of people whose appointments are coming up. A businessman can turn a single dial to a man's name, like you'd dial a record on a juke box, and the telephone will dial the number, in Madison or any place in the country.

"A Data-phone will let one computer talk to another, at the rate of a full book of 50,000 words in 45 seconds, and they predict that one day half of the phone lines will be filled with machines talking to machines.

"But . . . you get the idea."

Okay, let's see these complicated gadgets for direct distance dialing.

Your call comes first to a relay in a sender, says Guerten. It is about the size of a deck of cards, in racks that stretch from floor to ceiling. As the first numbers you dial come in, the relay whips off a message to a "marker" and goes on to take the rest of your numbers and remember them.

Tubes Flash

The marker looks like a Christmas tree of wires and tubes that go upward in Yule tree fashion. The tubes flash dull red in rapid blinks, which indicate that they are searching out the best route for your call and whipping the information back to the sender.

They find a route in half a second, if all goes well, and it usually does. If it doesn't go well, the marker trys a second time, again in a half second.

If it doesn't make it this time, it turns the job over to another marker and issues a call for human help, by flashing a light and ringing a bell to show it's in trouble.

And it is then that one of the men in one of the better jobs shows up.

If the marker is successful, it tells the sender, which then makes your call. Generally no more than 13 to 15 seconds have passed from the time you quit dialing until the bell starts ringing at the number you're calling.

Costs Reduced

"Back in the 1920's, it took an average of 10 minutes to make the call," says Mayer. "You were tempted to shout, because it was the equivalent of talking with someone 80 feet away. Today, with the development of new equipment, it's the equivalent of 6 feet.

"Back then, the call cost you $16.50, if it was coast-to-coast. Today that cost has been cut to $1.75, or $1 after 9 p.m.

"And that's automation for you."

As you stand in this room, electronic devices are doing many another job that people never did do.

Here's a gadget that goes to work at night, checking out 1,500 circuits each night, like elves working for the shoemaker in the storybooks, and leaving a list of circuits where trouble exists for the morning crew when it arrives.

Busiest Circuits Found

Over here relay keys are being depressed, as by invisible fingers, as the movement goes from row to row up to the ceiling. An electronic gadget is trying out the circuits, over and over, to determine which are the busiest, and where more capacity is needed.

Here's a man using a special "gun" to wrap wires around a connection so tight that the man with the soldering iron has lost this job, and been shifted to another. It was invented in the Bell laboratories.

On the other hand, look at all the transistors around. They were invented in the Bell laboratories a decade or so ago. They constitute a $1 billion a year industry, which makes jobs all over the country, including places in Madison outside the walls of the telephone office.

And the Bell system has spent more than $1 billion in research since 1920, and that has meant jobs by the hundreds, too.

Shift to Brains

Here's a microwave panel. Your calls to Dodgeville, Platteville, etc. go out over air waves, not on wires and poles. And what's happened to the man who set the poles, and serviced the wires?

He's lost his job, or a part of it, to the expert who knows the more technical job of caring for this equipment.

And Brady can point out that, in the move to better jobs in the entire telephone system in the country, the shift is to brains and more responsibility.

In the last five years in the nation, plant craftsmen went up by 18 per cent; supervisory employes by 17 per cent, and business office and sales employes by 15 per cent. And the fact that the payroll went up by 34 per cent reflects the better rates the firm can pay and the better jobs that have been created.

Hiring Patterns

This has been accompanied, Brady says, by changes in hiring patterns. The company has learned to cushion automation by hiring temporary help as automation occurs, and depending upon the naturally high attrition in an industry where women predominate, to lessen its impact.

And the firm is paying more attention to the workers who will be permanent. There was a time when a lineman's job was a career job. Today there are more linemen than ever before, but it's generally a stepping stone to a better job.

And the company wants to make sure that the individual they hire has that capacity to go ahead.

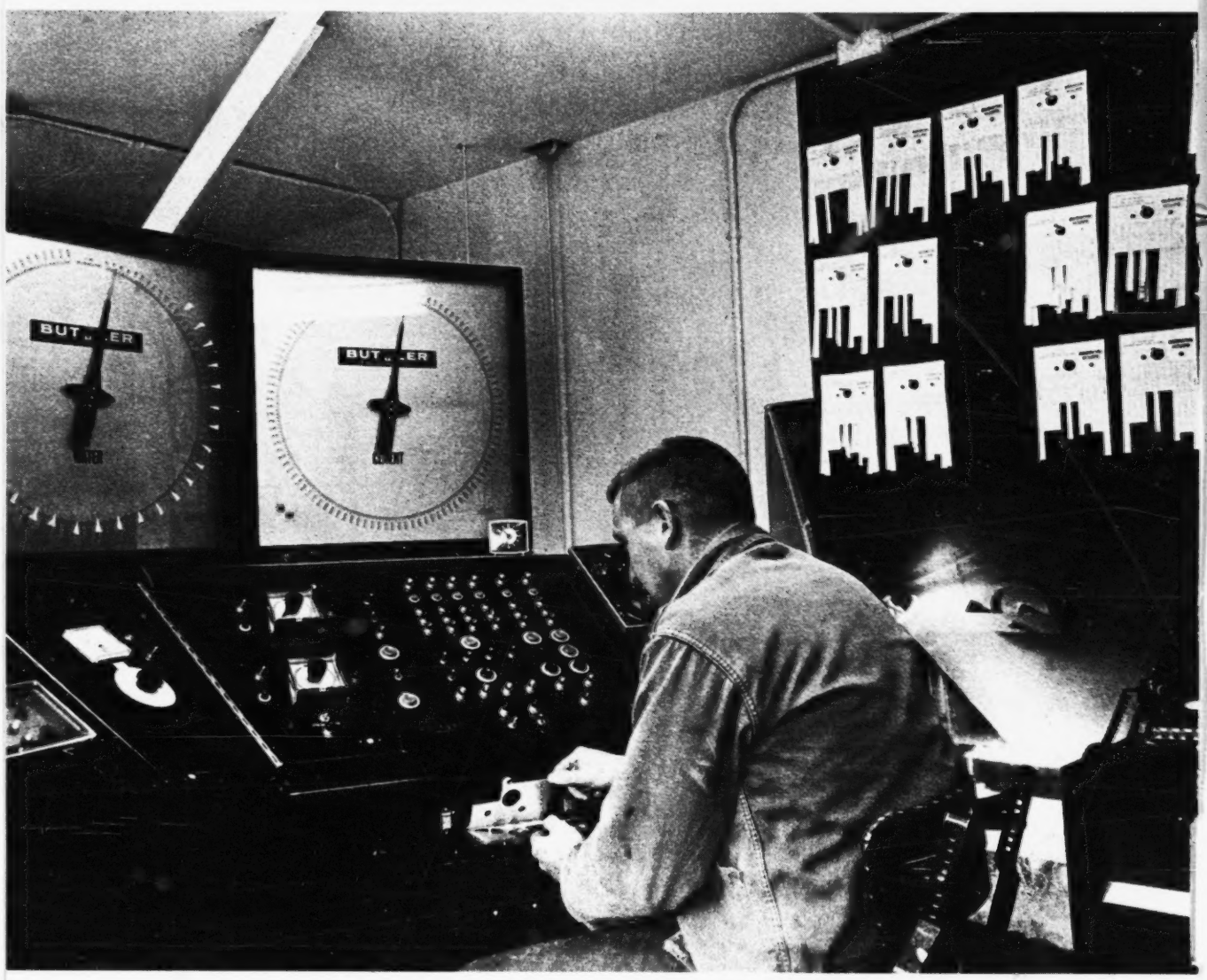
Growing Fast

Down in another rack is where the television programs come in, for sending to Madison stations for rebroadcast. This industry got its start on a national network basis through the inventiveness of the telephone system.

It's now a $4 billion a year industry. And that means jobs, lots of them, in Madison and all over the country.

And that's the telephone company for you, trying out every new technique that it can to do a better job faster and at less cost.

And growing so fast that no one, not even the biggest of the computers, can gauge its impact on the economy of Madison and the nation of which it is a part.



PUSH-BUTTON JOB—To put the ingredients together for a load of concrete in these days of automation, it is necessary only to put a card in the electronic device above and push the right buttons.

And, in 20 seconds, the job is done. Above, Ronald Sailing, Verona, is batching concrete in the absence of the regular operator.

The card which Sailing is placing in the machine is from the group on the wall, in which the "fingers" at the bottom tell the electronic batcher what proportions to use for the various mixes.

—State Journal Photo

V

Concrete Proof of Push-Button Gains

(Sunday, November 28, 1963)

A few years ago, the Janesville Sand and Gravel Co., of Janesville, was casting a speculative look at Madison.

Madison was booming with building. A lot of concrete was needed. They produced sand and gravel for concrete. But how to break into the Madison market with their own ready-mix business?

They found the key in merger and automation.

At the heart of their successful operation, in a merger with the Four Lakes Fuel and Supply Co., is an intricate device called a Butler Bin Model B-1 Push Card automatic batching system.

Push a queerly shaped card into its innards, set a dial or two, and push a button, and sand and gravel starts flowing from bins into hoppers where it's weighed, water and cement are added in just the right proportions, and in 20 seconds or so there's enough material to fill one of those transport trucks you see going down the streets, with its revolving load of concrete.

And it's done with a higher degree of accuracy, they say at Four Lakes, than any human being can do the job alone.

This means a better concrete, they say.

And, as the word gets around, it means more sales.

The man who runs the push card automatic batcher most of the time is Don Storkson, who is highly satisfied with the automatic batcher. He ought to be. It means a lot less work for him.

His "office" is in a little room on high stilts, under which the trucks run to be filled. It is warm. And dry. And he does his work by pushing buttons, rather than running his legs off, as he used to do.

By standing in the door of his "office," he can see the site of his former labors.

It's a big, squarish building between two railroad spur tracks. On one side as many as 16 cars of sand and gravel from Janesville can be unloaded to an underground pit each day. As the materials are unloaded, a

conveyor takes them to the top of the building. There they are channelled to the proper bin, in four grades.

Cat on the Roof

Each bin has a hopper bottom, with a weight hopper underneath. The four bins front on a walkway which Storkson once patrolled on a run.

When he got an order for concrete, he'd figure his proportions, then he'd start one bin to emptying into the weight hopper underneath. Then he'd dash to the next, keeping a concerned eye on the scale of the first weight hopper to make sure that he wasn't getting too much in it, then dash to the third.

It was strictly cat on a hot tin roof.

And if he got too much sand in one batch, he had to make the proper adjustments to get it just right. Then he emptied the weight hoppers via gravity to a conveyor belt below which took it to a mixer. There the water was added and the batch mixed before going to the truck.

It took seven or eight minutes before the concrete hit the truck. And, in addition to Storkson, there was a man on the mixer and a yard superintendent.

Special Card

Today, Storkson gets the order and picks one of the queerly shaped cards off a rack. It has been specially tailored to the customer's needs, by a specialist in Janesville. Storkson slips the card into the automatic batcher, and the card tells the electronic device what proportions of sand, two grades of gravel, cement, water, and whatever additives might be needed for this batch.

He sets a dial for the number of cubic yards he needs. Moisture is critical in concrete, for too much water in relation to cement can rob a batch of strength. So he checks a gadget that tells him how much moisture is in the sand, where most of the water lurks.

He sets a dial to this percentage figure, and now the machine will add just the right amount of water. An amber "Ready to Batch" light glows. He pushes a button, and looks at a bank of lights on his console.

If any of the weight hoppers has been overfilled, a red light for that bin in the upper bank will glow, and the amount will register on a scale above the console. If any weight hopper is underfilled, a light in the second bank will glow. If they're all all right, a bottom row of amber lights will glow.

Catches Error

If there's an error, and it's seldom there is, he can switch the device to manual operation and push a button to fill underfilled weight hoppers, or

set the bins to emptying and stop an overweight hopper at just the right time to hold back the surplus material.

And if he should get careless and overlook the warning lights. the "Batch" button won't depress and he'll have to look for the trouble.

On the average, he can have the concrete batch flowing to the truck in less than two minutes.

"By the use of this automated equipment, we can produce 140 cubic yards of concrete per hour, as compared with 40 yards under the old system," says Goodwin Lyons, Janesville, president of the Four Lakes plant.

"More than that, we're producing a better quality of concrete through virtual elimination of human error. The machine doesn't become preoccupied with its relations with its in-laws, staying out too late at a party the night before, or just plain being tired.

Does Job Faster

"It does the job that humans tell it to do and, assuming that we tell it to do the job right the first time, it does it time after time, without change and faster than a human being can do it."

And what's happened to the human factor?

Well, Storkson is still there, doing his batching from a warm, dry room with a push of the button rather than running up and down the formerly damp and poorly lit room with its bins and weight hoppers.

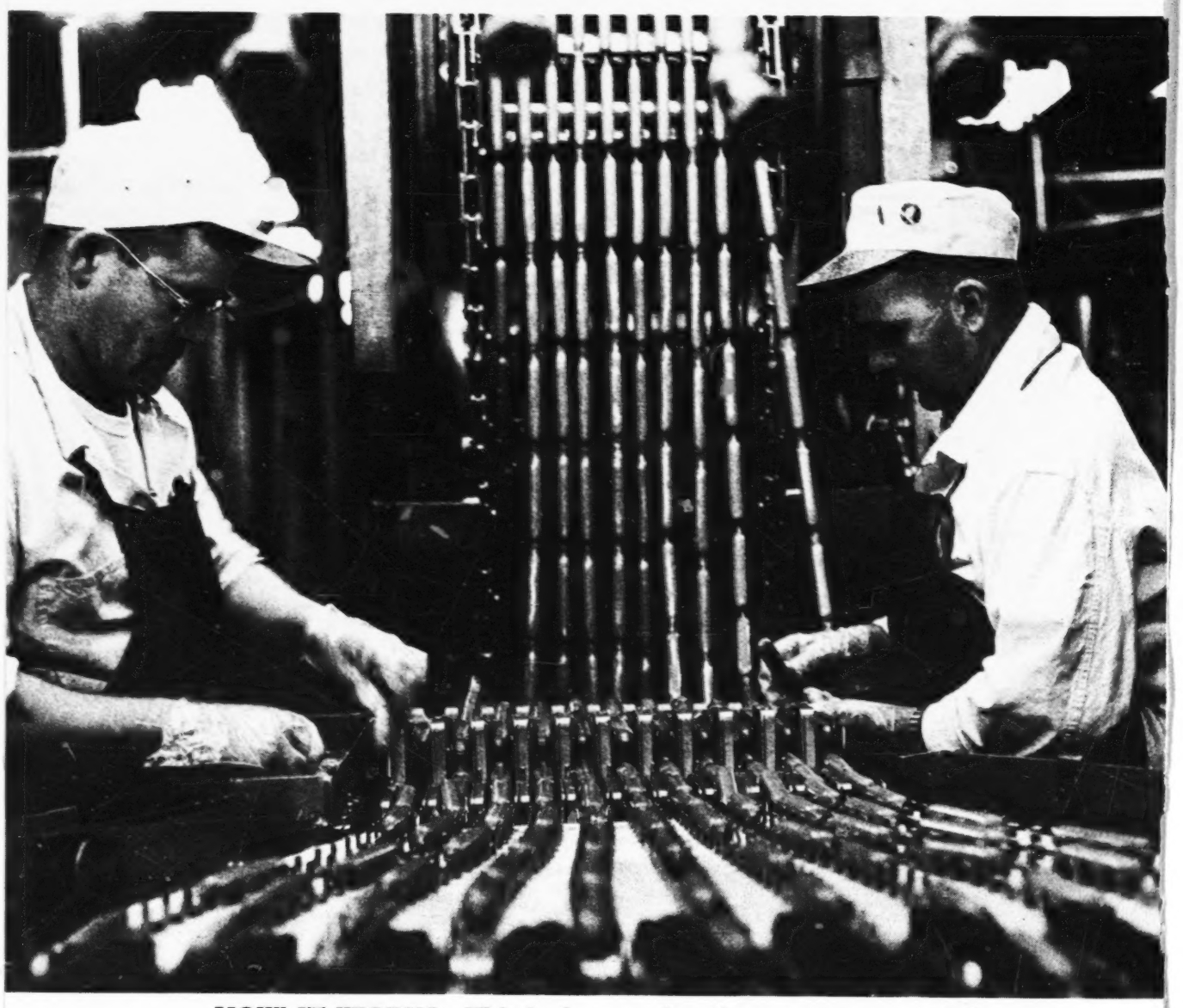
The man on the mixer in the old plant has lost that job, since the batches are now mixed in transit on new and larger trucks. But he has become the plant foreman.

Work Force Increases

And the man he replaced? He's gone on to become the plant foreman in the Midwest Concrete Corp. on the East side of Madison, a plant which is also a subsidiary of the Janesville Sand and Gravel Co., whose president is Ellis Jensen, also a regent of the University of Wisconsin.

"Actually, the work force in Madison has increased by more than 25 per cent since we went to automation," says Lyons.

"And that increase would not have been possible for us without automation."



HOW IT WORKS—This is the way the wieners stream out of the wiener tunnel at Oscar Mayer and Co. They march off a conveyor 10 abreast and, near the two workmen, the casings are stripped by sharp little knives in a machine which does a job which at one time employed as many as several hundred women in the plant. —State Journal Photo

VI

Oscar Mayer's Growth Is Automatic

(Sunday, December 1, 1963)

Mention automation at Oscar Mayer and Co., and all eyes turn toward the wiener tunnel.

At the head of the wiener tunnel stands one man, superintending 10 lines of wieners as they march into the tunnel.

A lot of mysterious and highly secret things happen to the wieners as they go through the tunnel, involving trade secrets competitors would like to know.

Hours to Minutes

They're gone from view for some 36 minutes, and then they march out the other end of the wiener tunnel, having completed in the 36 minutes a process that used to take 36 hours.

A couple of men check the marching wieners as they emerge.

And the tunnel in between is doing a job that was once back-breaking work for men.

Where Are Men?

Men used to scoop the meat into grinders, then scoop the ground meat into stuffers. Men used to operate the stuffers. Other men would put the wieners on "trees" and hang them in smoking chambers.

Now they don't. And what's happened to the people who have seen the machines take over their jobs?

Again, it's highly complicated. Again there's been a shift of people within the plant, as much as possible, and a cushioning of the changes through attrition where possible. Research has created new jobs. Yet . . . .

"We had 2,785 men and women in plant production in 1961," says Paul Bowman, Madison plant manager. "That was before the wiener tunnel was in operation. Today we have 2,787—two more."

Union's Concern

Across the street, in the building of the Amalgamated Meat Cutters and Butcher Workmen, Local 538, Cal Rush, the business manager, corroborates this when he says:

"The membership has stayed normal for the last three years, all right. It's now 2,700 in the plant.

"Our main concern, however, is for jobs for women. At lot of women's jobs have been lost, mainly the women who used to skin the wieners. The fact that our membership has stayed the same means that more men, and fewer women, are working at the plant."

This takes us back to the far end of the wiener tunnel, where the 10 lines of wieners march out, at the rate of 25,000 per hour, under the watchful eyes of the two men.

'Squeaky Wrist'

Oscar Mayer used to have some 200 women skinning wieners, jobs which no longer exist. Advancements in wiener technique created these jobs back in 1934, and the newest advancement has taken them away again.

Back in 1934, Oscar Mayer decided to leave the time honored technique of inserting the sausage meat inside a natural casing which was either tough for the customer to chew or hard to remove.

Mechanical Knives

They developed a cellulose material which could be stripped off before the wiener was sold to the customer. This job required women. It was tedious and monotonous, but it was a job. Women developed something they called "squeaky wrist," which was painful. And Oscar Mayer wanted a better process.

So now as the marching lines of wieners come out of the wiener tunnel, 10 sharp little knives slit their casings, and there have gone the jobs for the women.

More than that, a few years ago the quick fingers of women used to pick up the wieners and put them in a package, loosely packed and shippable only moderate distances.

Today, at the far end of the wiener tunnel, the wieners march along their production line to where vacuum gadgets drop down on them, pick them up 10 at a time, and put them in trays marching off at right angles and into a complicated device which automatically vacuum packs them in plastic wrappers.

In the process, there are 10 less jobs for women than there used to be

"And now we can ship them to much more distant markets," says Bowman. "Their shelf life is much longer. That means more work for this plant and more jobs for Madison people, buying the materials from the farm, trucking them to market, packing the product on cars for shipment, selling it to customers—there just isn't any end."

The women aren't at the end of the wiener tunnel, but new jobs have been created and old jobs enlarged.

And who can say exactly where the gain and loss is?

More Production

Rush, the labor man, points out that while the labor force hasn't been cut, there's a lot more production. And this new production is being accomplished with fewer people. The loss isn't so much in present jobs as the jobs of the future that the machines—not people—do.

The net sales of the company indicate growth. They were $270 million in 1962 as compared with $209 million 10 years before, or 29 per cent higher.

But they reflect the entire Oscar Mayer operation, with six plants and 15 distribution centers about the country.

Other Products

A more accurate figure, Bowman feels, is the plant production, where his figures show a 5 per cent rise.

And Rush points out that a part of the impact of the loss of women wiener stripping jobs has been taken up by the facts that the farmers are selling their meat animals the year 'round, and that Oscar Mayer is making more cold luncheon meat, more sausages in Saran plastic films.

Research Effort

To this, Oscar Mayer says, "Amen, and we planned it that way. It didn't just happen."

Back in 1941, Oscar Mayer established its first research laboratory in the Madison plant. They came up with the Chub pack machine for meats and sausage in 1949; the slice-pack for cold cuts in 1950, and the famous Smokie links in 1951.

All of them have created jobs for people in Madison.

And, probably more important, they have created a stability of work force.

"When I first came here," says Bowman, "it was normal to lay off 200 or 300 men at a crack, when the winter heavy kill had ended, for instance.

Summer Work

"So we sought out a means of creating summer work, so that we could keep people the year around. It's worked out quite well."

He stops, on a tour of the plant, at a Chub pack machine. Liver sausage under pressure, is coming out of a stainless steel tube and automatically being packaged in uniform plastic tubes.

"The machine does the work of the man who used to fill the stuffer, and the man who filled the casing, and the man who washed it and more," says Bowman.

Larger Market

"On the other hand, it means that we now can ship our product farther. When this company started in Chicago, back in 1883, the business was limited to the immediate neighborhood and a few miles beyond.

"Today, we're shipping these Chub-packs all over the nation, and to the military in Japan and Germany as well."

The new packing procedures mean that Oscar Mayer, which had been setting up packing plants in many parts of the country so that they'd be close to the people who'd eat their product, have now begun reversing this procedure.

The result is that there is more production coming back to Madison and more jobs here.

Machines Patented

But aren't there other jobs lost elsewhere by companies not as aggressive as Oscar Mayer? Possibly, but . . . who knows?

And another feature is that Oscar Mayer has patented some of these machines invented in their plant. Those plastic tubes of cookie dough you see on the grocery shelves are made on machines which saw the light of day thanks to Oscar Mayer.

They're creating more jobs, but how many no one can say.

There's another side to automation at Oscar Mayer and Co.—in the business office where computers whip through jobs in split seconds that once took hours or days.

There's a room filled with girls wearing telephone headsets, taking orders from salesmen working with 40,000 customers throughout the country. Here's an order from Philadelphia, for instance. The girl touches keys of a machine as the salesman "talks in" the order. A card comes out of the machine.

Electronic Orders

It goes to the next room, where a computer awaits. It whips out the order quick-as-a-wink in duplicate, printing the name of the customer, what he wants, how much of it he wants, and all the rest. The shipping room gets the order far faster than ever before. And the machine adds up the cost of so many wieners at so much a pound, etc., and gives the final total.

More than that, the computer is "remembering" all of the transactions. At the end of the day, it will tell the firm just how much of what they sold and at what prices.

Cost Figures

Nor is this all. During the day, they're adding all the costs of production into the machine. And at the end of the week, the machine will tell them the profit and loss on the entire operation.

It'll give them the profit and loss of each salesmen's route. It'll tell them what price they ought to pay for what cuts of meat. And, if they see a competitor without a computer paying too much, they just stay away from that particular meat.

In between times, it figures the payroll, and it makes adjustments in the recipes for such products as Smokie links so that each batch of meat—which differs from every other batch—will come out tasting the same.

Furthermore, the computer makes a lot of formerly executive decisions for the firm.

"We simply set up an acceptable range of decisions, and the computer makes them," says Bowman. "This weeds out a lot of the simpler decisions, and leaves humans more time for the more complicated ones."

Bigger Memory

The computer used to get along on a memory core capable of storing 20,000 bits of information. Now the old core stands in a corner, and a new memory with a capacity of 40,000 bits of information is going in.

The electronic gadgets, in their last improvement, do the work of 15 women. With a 15 per cent turnover each year, it's easy to make the change without much of any fuss through attrition. The jobs are gone. But . . .

"The profits in the meat packing industry are traditionally small," says Bowman. "In the entire industry, an average of eight-tenths of 1 per cent of each dollar of sales represents the net income.

Industry Leader

"Oscar Mayer last year netted 1 and six tenths of a cent per $1 sales to lead all the industry. We have led it for nine years, and it looks like the 10th year is coming up. This means that we can put more money into research and into equipment.

"And that, in turn, means that we can do just that much better job for our customers, for our stockholders, and for the people who work at our plant."

VII

Labor Looks at Automation

(Thursday, December 5, 1963)

Madison labor looks at automation from the standpoint of people more than any other group in the city.

For them, automation means a worker who has put in 25 or 30 years on the same job standing before the desk of a union business agent and explaining that a machine is now doing the work he used to do, and . . . where does he go from here?

"You can talk all you want to about automation being the harmless successor to the Industrial Revolution, the easy retraining of employes to better jobs, and the better life to come," says Marvin Brickson, president of the Madison Federation of Labor, AFL-CIO.

"But this is today, and here's a human being, with kids in school and a mortgage on his house, and there's nothing else that he can do."

Perhaps he should have gone to the Vocational school and learned new skills. But he didn't. And now he's out of work. Today.

Not As Hard Here

Fortunately for Madison, automation isn't hitting Madison's blue collar worker as hard here as it is in other places. For one thing, there aren't as many here as there are in other towns.

But labor here is fully aware of such statements as those of John I. Snyder, chairman and president of U.S. Industries, Inc., who says:

"Some four million of our people, or 5.5 per cent of our labor force, are without jobs. More than 2.5 million have completely exhausted all their employment benefits.

"At least one out of five people working today will almost certainly be unemployed some time during next year and upwards of 2.5 million will have to settle for part-time jobs because no full-time work will be available to them."

This sounds grim, and all the more so since Snyder is the chief executive officer of one of the country's leading manufacturers of automated

equipment for industry, trying to find a way to cushion the effects of the machines he's making.

'Quiet Firing'

"He says that 40,000 jobs are being eliminated by what is called 'quiet firing,' " says Brickson. "Actually, no one's fired. A person may be moved to another job in a growing business. He may be kept at his same salary on the new job that the machine is doing, but not replaced when he quits or retires. But then the job is gone."

And this, he says, is happening in Madison as far as many blue collar workers are concerned.

"Some of the union contracts being written in Madison now contain automation clauses," says Brickson. "The first one was the one for the Office Employes Local No. 39. But, while you can write into a contract that no one now on a job will lose that job, or lose a job with the same wages, because of automation, so far no one's written a contract that guarantees that that job will be filled in the future.

"And that's the danger of silent automation."

White Collar Jobs Hit

The Office Employes union, he says, contains some 300 or more members who work mainly for Madison Gas and Electric Co., CUNA Credit Union, and CUNA Mutual Insurance Society.

"In all the talk about automation and the blue collar worker, some people tend to forget that automation is hitting the white collar worker as well," says Brickson.

"At the heart of many job losses through automation, or silent automation, is the computer, and many of the jobs lost are in government work. When the United States Census was taken in 1950, it took 4,100 statisticians. By the time that the 1960 census was taken, many more computers were in operation and it took only 50 statisticians."

The reason he emphasizes this, he says, is that Madison—with its federal, state, county, and city pay rolls—has a lot of government employes.

"There are 85,400 non-farm members of the Dane county work force," says Brickson, "and 29,100—or more than one-third—are in government work."

The computers, he says, are causing a shift in the proportion of jobs held by women.

Team Solution Urged

The answers to the question of how to live with automation, he feels, must be sought by government, industry, and labor as a team, for no one can do the job alone.

And he feels that the benefits of automation, from the profit standpoint, will have to be spread past industry and to the workers in the form of shorter work week, longer vacations, increased pensions, and pensions at an earlier age.

The steelworking industry, he notes, is now granting 13-week sabbaticals every five years to senior workers, and the 35-hour week is more and more widely accepted.

In Madison, the 37½ hour week is entering the picture, but Brickson points out that it's been a long time since the last full five-hour drop in the work week.

"The 40-hour work week is now 30 years old," he says. "It came into the picture in 1933. Before that, the drop had been about five hours each decade back to the first of the century when the painters, for instance, worked as much as 70 hours a week.

"Their first contract here in Madison, for instance, was a 60 hour week and 20 cents an hour."

Twin Brother

Though automation has not had too much effect on many of the union men in town, its twin brother—technological change—has.

The carpenters are getting only about 60 per cent of the man-hours you'd expect, he says, due to such changes as power saws, power nailers, pre-hung doors, windows that come in units, and the like.

The need for common laborers has been tremendously reduced by cranes that lift materials once carried by men to the tops of buildings, power shovels that lift tons instead of pounds, or pumps that push plaster through pipes instead of having the man with hod carry it.

A typical story of technological change is that of Harold Rohr, business agent for the Painters Local Union 802.

"Take a look at the State Office building out at the Hill Farms" says Rohr. "We ought to have 15 or 20 men on that job for six months. What'd we have? Three for 11 months.

"Madison union painters got 33 man-months of work, instead of 120. Instead of working 10½ to 11 months a year, our painters are working around seven months.

"Sure, they make $3.73 an hour, but they average only about $5,000 a year."

Pre-Finished

What's making the difference?

"Everything's going pre-finished or plastic," says Rohr. "We used to paint a whole room. Now the floor is pre-finished tile, and the baseboard

is rubber and doesn't need a finish. The windows are aluminum and don't need paint, and the trim may be prefinished. The ceiling is probably acoustic tile, and finished. We're lucky to get from one to three side-walls to paint."

The painters local is attempting to get local suppliers to put in their prefinishing plants but, "it's rough when you have to compete with somebody getting maybe $2 an hour in a plant up at Wisconsin Rapids," says Rohr.

More than that, they're becoming acutely aware of the need for more education and better education for labor.

"There was a time when the strong back was all you needed for a job," says Brickson. "Well, it's no guarantee of a job today."

There are a limited number of apprenticeships open. The labor groups have set-up a high school diploma as one requisite to getting the best people for these few jobs.

"And that makes it tough on the high school drop-out," says Brickson.

VIII

Automation Vital to Insurance Firms

(Sunday, December 8, 1963)

Insurance is a big business in Madison.

There are 27 companies with home offices here. They employ thousands of persons directly; they give indirect employment to thousands more.

Automation is coming to these Madison companies on a big scale.

American Family Mutual Insurance Co. has a big room filled with electronic devices which are doing jobs that people used to do. They take automation pretty calmly.

Competitive Matter

For one thing, the insurance business is highly competitive. If they didn't use more machines, their competitors would and they'd suffer. Their employment would suffer, too, they say.

Since 1942, when the firm quit the old hand ledgers for the newest and best mechanical equipment, they've been growing.

"In 1942, we had an even 100 employes," says Robert Kelliher, director of office administration. "Today we have 820, in spite of all the labor saving machines we've added."

The newest change came a year ago in the form of an IBM 1410 computer which added 8,000 five-digit figures a second.

Sophisticated Gear

"A few years ago, we saw that we were going to have a problem getting out the work we could anticipate in another several years," says Kelliher. "Our RAMAC system just wasn't fast enough. To expand it would require another 55 clerical persons.

"And even then, our competition, with more sophisticated machines, would be able to do the work at a lower cost, and do a better and faster job for the customer in speed of work, accuracy, and the new types of policies for which rates could be so easily calculated on the new machines."

He gestures to the main work room of the insurance firm, where virtually no one's using a bookkeeping machine.

"We'd have to have that whole room filled with girls at bookkeeping machines and typing," he says, "if we didn't have this—computer and high speed printer."

Swift Printing

The printer takes about as much room as a desk at which a single typist would sit. It prints renewal notices, new policies, amended policies, and premium notices quite rapidly.

It prints typed material at a rate of 1,300 letters a second.

But how about the 55 clerical workers whose work the machines are now doing?

"Our growth has been such that no one has been laid off because of the machines," says Kelliher. "There's been shifting of jobs, but no separations of people from jobs."

Taped Information

Furthermore, says William Werner, supervisor of electronic data processing at the firm, the computer enables them to keep on top of their job as they never did before.

"These eight reels of tape," he says, "contain all of the vital information on our 760,000 policies—the name of the insured, his address, the name and year and model of his car, what coverage he has, and all the rest.

"The information is constantly changing, as you might expect. Among 760,000 insureds, there is constant changing of addresses, automobiles, coverage, and all the rest. And these master controls are up to date within hours."

How It Works

How's it done?

Each day, the 1,500 agents of the company write or phone in changes, along with new policies or orders to drop old policies. Underwriters decide whether to accept the new policies. Rates are applied. The information is punched into cards in code form. The cards whip through a machine, and a work tape comes out.

The master tape goes onto one machine, and the work tape on another. A new master tape emerges, with all the changes made.

"In three hours and five minutes, the entire job is done," says Werner. "By the next morning, we're up to date as of 4 p.m. the day before."

Premium Notices

The computer does a lot more than that. As it encounters a new policy on the work tape, it whips the information off in a new direction to emerge on a tape of its own.

Girls used to type out these policies, but now the high speed printer does the job.

The computer also takes care of premium notices amending policies, changing your address or makes of cars, or renewal notices.

There also is a machine in St. Joseph, Mo., that talks to a machine here.

THINK FACTORY—This is a scene in the electronic data processing room at American Family Insurance Company, where computers do the work of many people. In the background are the tape drives, by means of which information is put into and taken out of a big computer.

—State Journal Photo

American Family has a regional office in St. Joseph, and the St. Joseph office has a teleprocessing machine.

Telephone Report

They fit the day's business, in the form of punched cards, into the machine in St. Joseph. Electronic impulses travel a telephone line to Madison, and a similar machine in Madison punches identical cards here for the computer to work with.

Nor is this all. The computer assembles all sorts of information on command. If you want to know how much the losses are on 1954 Ford cars driven by rural youths between the ages of 18 and 21, the machine will tell you.

We're able to pinpoint losses so we can establish the highest premiums where they belong and, conversely, give the best possible rates to those good drivers of good cars who should get the benefit," says Kelliher.

They get the information in hours, instead of months, this enables them to beat competition or, at the least, keep up with it.

Programmers' Jobs

Telling the machine what to do is a job that requires the services of four people called programmers. It is an intricate job, and time consuming. The instruction to the computer to tell it what to do with the master tape, for instance, took most of one year for one man.

But has the mechanization resulted in long lines of women, particularly, at the personnel office, seeking jobs?

"Not that I notice," says Norbert Vanden Heuvel, personnel director. "Our basic requirements haven't changed much in recent years, and the numbers of persons seeking jobs has changed little in pattern."

Jobs Available

Just to make sure that the experience was general, a check was made with Clyde Selix, partner in Placements of Madison and Girl Friday.

"There's a shortage in Madison of well-qualified women for white collar jobs," says Selix. "One reason may be that, since World War II, the requirements for women may have been relaxed to the point where they've let training slip, or they just don't produce.

"The girl, however, who has a sense of responsibility, is an even moderately good typist, has a good job history, can spell, can punctuate, and can set up a letter by herself when the boss says, 'Tell Joe politely we don't want any' isn't going to have any trouble getting a job in Madison."

"As a matter of fact, if she can't get a good job in a week, she'd starve to death at a free picnic."

CPM

VT 006 161
Developments in the Community Employment Program.

Bureau of Employment Security, Washington, D.C.
MF AVAILABLE IN VT-ERIC SET.
Pub Date - 66 21p.

*ECONOMIC DEVELOPMENT; *COMMUNITY ORGANIZATIONS; *EMPLOYMENT SERVICES; EMPLOYMENT PROGRAMS; *COMMUNITY COOPERATION; COMMUNITY PLANNING; PROGRAM EFFECTIVENESS
USES; UNITED STATES EMPLOYMENT SERVICE

State and local office personnel of the Employment Service completed questionnaires describing their participation in community employment development (CED) groups and significant recent economic and social developments affecting employment, and they commented on their experiences with these groups. "CED groups" refers to the following kinds of organizations: Chambers of Commerce, area economic development committees, industrial development corporations which provide financial assistance and locate and develop industrial sites and facilities, private firms which have established full-time industrial economic development departments, and state and local government agencies conducting economic or area development activity. In 1965 local Employment Service representatives served as consultants to, or members of, a total of 2,578 CED groups. Other developments revealed by the survey were: (1) Coordination and consolidation of efforts improved the effectiveness of the CED groups, (2) The importance of manpower data to CED groups was evidenced by the number and variety of requests for such information, (3) Dynamic changes occurred in communities as a result of joint development efforts, (4) Communities focused attention on overall improvement, (5) Significant community development problems were identified, and (6) Development activities in many communities were based on broad planning, thorough treatment of local problems, and representative participation. Two tables give selected data for each state. See also VT 004 921 (ARM Summer 1969). (ET)

VT006161

ED0 31587

DEVELOPMENTS

IN THE COMMUNITY EMPLOYMENT PROGRAM

VT006161

U.S. DEPARTMENT OF LABOR
W. Willard Wirtz, Secretary
MANPOWER ADMINISTRATION

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION
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BUREAU OF EMPLOYMENT SECURITY, Washington D.C.
Robert C. Goodwin, Administrator

UNITED STATES EMPLOYMENT SERVICE
Frank H. Cassell, Director

REPORT OF DEVELOPMENTS

COMMUNITY EMPLOYMENT PROGRAM

"Manpower policy, it is now evident, is as important in periods of high employment as when jobs are hard to find . . . It is an adjustable instrument which must be directed continually toward changing manpower problems that attend changing economic conditions . . ."

From *MANPOWER REPORT OF THE PRESIDENT,* March 1966

FOREWORD

This report helps to document the fact that almost every community experiences constantly shifting patterns of manpower supply and demand—imbalances caused by such factors as population growth, changes in defense procurement policies, changing technology and shifts in markets or consumer preferences. The Survey on which the report is based reflected dual pressures on many communities to deal with existing or emerging shortages of skilled workers while new employment opportunities must be found for the jobless. Community development groups which sought to reduce unemployment in the early 1960's need to work as diligently on manpower development and utilization programs to meet labor shortages in 1966. Thus the Federal-State employment security system must continue to stimulate and support organized community efforts to utilize human resources to the fullest.

Traditional employment service placement and manpower utilization services must be examined to insure their appropriateness to local needs and problems. Today's local office manager can play a major role in the community—can help it to identify its current and probable future imbalances, can alert it to the need for remedial and preventive action and if necessary can lead that action. Local ES staff perform inadequately if they merely play a role of serving applicants and employers who come to them.

Community activity, including ES participation, is required to help balance labor supply with demand. Such action may involve local public employment offices in recruiting or training programs to meet specific needs of employers or in conducting surveys to determine the availability of manpower, or participation in developing a comprehensive long-range program to meet the total manpower demands of area employers and the community's plans for general growth. Such action has helped community leaders to recognize that in attracting new industry and encouraging home industry to expand, it is important to improve every aspect of community life.

This report confirms the considerable contribution made to community development by public employment service offices. It also indicates the need to intensify our efforts as participants or leaders in community programs designed to resolve local economic and employment problems.

Frank H. Cassell, Director
United States Employment Service

REPORT OF DEVELOPMENTS COMMUNITY EMPLOYMENT PROGRAM

INTRODUCTION

The biennial national SURVEY OF STATE AGENCY AND LOCAL OFFICE PARTICIPATION IN COMMUNITY EMPLOYMENT DEVELOPMENT GROUPS was designed to measure the extent, variety and quality of employment services provided to local groups engaged in employment development activities. State agencies and the local public employment service offices completed questionnaires in which they described their participation in development groups, significant recent economic and social developments affecting employment, and commented on their experiences with these groups. Many of the reports also commented on predominant area problems which were encountered in the period covered—fiscal years 1964 and 1965.

The term "Community Employment Development Groups" (CED groups) is used to describe the following kinds of organizations:

Chambers of commerce . . .

Area economic development committees . . .

Industrial development corporations which provide financial assistance and locate and develop industrial sites and facilities . . .

Private firms, such as public utilities and railroads, which have established full-time industrial-economic development departments . . .

State and local government agencies conducting economic or area development activity . . .

This report, summarizing the survey questionnaires, should help State employment security agencies to evaluate the effectiveness of the Community Employment Programs conducted by the 2,000 local public employment offices and the 50 State central offices with guidance from the Bureau of Employment Security's regional offices. The questionnaire was designed, analyzed and reported by Ethel Polk under the direction of J. Dewey Coates, Chief of the Community Employment Development Branch of the Manpower Development and Utilization Division of the United States Employment Service.

221-725 O - 66 - 2

THE SURVEY REVEALED

GREATER PARTICIPATION BY EMPLOYMENT SERVICE OFFICES IN DEVELOPMENT GROUPS RESULTED IN INCREASED MANPOWER SERVICES TO COMMUNITIES . . .

RECOGNITION OF THE IMPORTANCE OF MANPOWER DATA BY COMMUNITY GROUPS WAS EVIDENCED BY THE NUMBER AND VARIETY OF REQUESTS FOR SUCH INFORMATION . . .

COORDINATION AND CONSOLIDATION OF EFFORTS IMPROVED THE EFFECTIVENESS OF DEVELOPMENT GROUPS . . .

DEVELOPMENT ACTIVITIES IN MANY COMMUNITIES WERE BASED ON BROAD PLANNING, THOROUGH TREATMENT OF LOCAL PROBLEMS AND REPRESENTATIVE PARTICIPATION . . .

DYNAMIC CHANGES OCCURRED IN COMMUNITIES AS A RESULT OF JOINT DEVELOPMENT EFFORTS . . .

COMMUNITIES FOCUSED ATTENTION ON OVERALL IMPROVEMENT . . .
SIGNIFICANT COMMUNITY DEVELOPMENT PROBLEMS WERE IDENTIFIED . . . . . .

GREATER PARTICIPATION BY EMPLOYMENT SERVICE OFFICES IN DEVELOPMENT GROUPS RESULTED IN INCREASED MANPOWER SERVICES TO COMMUNITIES. . .

Increased quality of local office participation is measured by intensified services to community groups. In 1965 local ES representatives served as consultants to, or members of, a total of 2,578 community development groups, compared with 1,846 in 1963, a 29% increase which enabled them to provide more services to community groups through more frequent consultation with development group officials. As members or consultants to CED groups, local employment service officials—

- provided area manpower information. . .
- analyzed emerging employment trends and developments. . .
- conducted special skill, wage and training needs surveys. . .
- recommended industries which could utilize manpower resources most effectively. . .
- suggested government programs to assist in resolving resource and facility deficiencies which retarded employment development. . .

NOTE: In addition to the above, area labor information was furnished, on a routine or nonroutine basis, to another 1,210 community groups. In 1,445 instances, the reporting local offices indicated that participation in community development groups had resulted in learning of new employment development opportunities. Additional instances were cited in which the local offices were approached directly by employers who were considering locating plants in the local office area.

RECOGNITION OF THE IMPORTANCE OF MANPOWER DATA BY COMMUNITY GROUPS WAS EVIDENCED BY THE NUMBER AND VARIETY OF REQUESTS FOR SUCH INFORMATION

The importance of manpower data is reflected in the predominant types of activity or services requested by CED groups. Many of the groups cited as requesting service or activity were served repeatedly in response to successive requests.

PREDOMINANT TYPES OF ACTIVITY OR SERVICE REQUESTED BY COMMUNITY EMPLOYMENT DEVELOPMENT GROUPS	*Number of groups cited as requesting service or activity*
Local office staff—	
1) *met with prospective new employers and provided appropriate manpower data and information on training potentialities of area labor*	1,606
2) *prepared replies to correspondence on manpower aspects of industrial-economic development*	1,756
3) *provided manpower information for economic development and community promotional publications for CED groups*	1,872
4) *conducted area skills or other manpower-data surveys for development purposes*	1,466
5) *participated in surveys conducted by private or academic research firms or groups on behalf of CED groups*	377

NOTE: In several instances, local ES officials prepared testimony on area manpower situations or appeared before municipal and county government agencies as manpower information resource persons.

COORDINATION AND CONSOLIDATION OF EFFORTS IMPROVED THE EFFECTIVENESS OF DEVELOPMENT GROUPS

144 statewide development organizations were identified . . .

290 regional groups were reported . . . These covered multicounty, multicity and some interstate areas . . .

500 groups were identified as coordinating economic development activity for varying sizes of areas . . .

In some instances regionalization helped eliminate unnecessary competition by bringing together areas with common economic, geographic, labor skill and other factors. In others it provided a balanced appeal to new industry as, for example, counties with industrial sites, power and transportation facilities merged their attractions with those of other counties having agricultural, recreational, tourist or educational assets.

As a result of the trend toward coordinated development activity and regionalized programs, many of the smaller groups were absorbed in consolidations with larger ones covering areas that have become normal labor force commuting areas.

Reports of coordinating groups throughout Pennsylvania, consolidations in commuting areas of California and regional development councils in Georgia helped to illustrate the reasons for the decrease of approximately 300 groups reported in 1965 compared with the 1963 total.

DEVELOPMENT ACTIVITIES IN MANY COMMUNITIES WERE BASED ON BROAD PLANNING, THOROUGH TREATMENT OF LOCAL PROBLEMS AND REPRESENTATIVE PARTICIPATION

Approximately 2,000 communities were identified as having comprehensive economic development programs. The value of the plans was indicated by the fact that many of these communities were making a special effort to keep these plans current.

Approximately 675 of the groups with ES participation were described as having either a board of directors or membership in which most major segments of the community were represented.

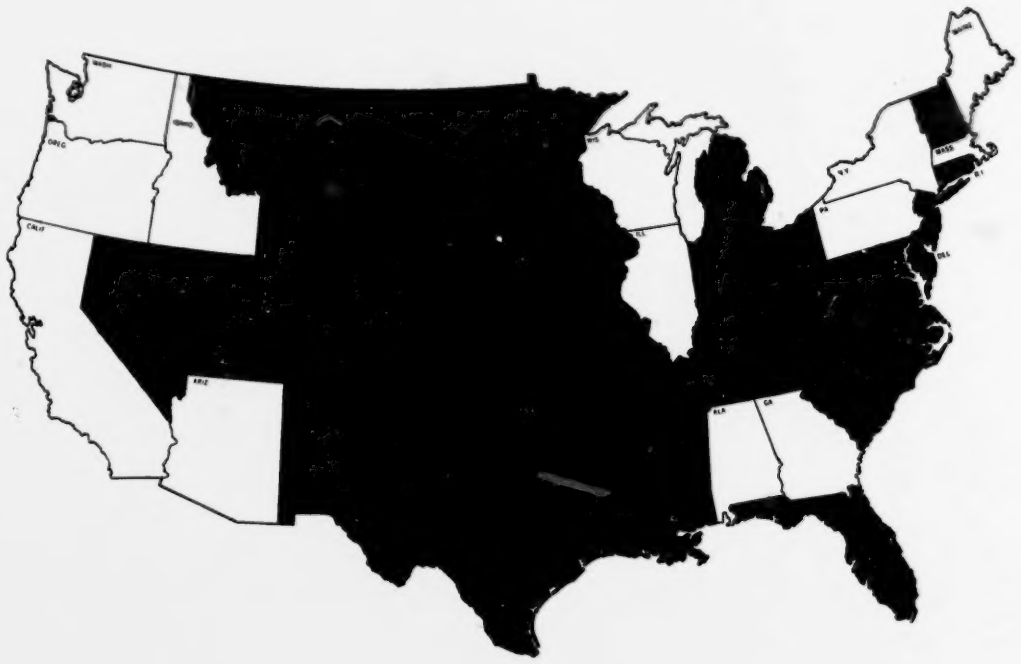
The survey reports identified 750 CED groups which arranged for Federal assistance for employment development purposes. Technical and financial assistance from State governments was also cited. Most frequently mentioned Federal assistance programs were training under the Manpower Development and Training Act; Accelerated Public Works Program with construction of public facilities; Area Redevelopment Administration loans and training; Small Business Administration loans and technical assistance.

From a Minnesota local office report—"With the advent of two Federal highways . . . also with expanded educational facilities including a 4-year college, the future looks bright for all kinds of industrial expansion . . ."

From a Washington local office report—"All members and consultants are working together in preparing economic development of the area, particularly in attempting to get Federal aid for the construction of the Wynoochee River Dam. Attempts are being made to consolidate several city water systems . . . for more efficient use . . . . Increased employment of nearly 1,000 is indicated . . ."

EXAMPLES

A Cross-Country Sampling of Survey Reports Illustrates Types of Local Employment Office Participation in Community Groups . . .



OREGON: Local office helped organize a "Local Agency Resources Committee . . . to correlate services of all local governmental agencies . . . to develop programs to better serve the community."

CALIFORNIA: Local office's role in recruiting, selecting testing, referring trainees for a new company "was a prime factor in the retention of the company in town" during its second year of operations.

ARIZONA: Local office manager is chairman of the Industrial Development Committee of the Chamber of Commerce. Often attends meetings as proxy for Chamber manager and "makes valuable contacts for the (ES) Agency" . . .

WASHINGTON: Local office stimulated community's activity before an Air Force Base closing. A wage and occupational survey by the State employment security department and the local committee's plans indicate that a reemployment crisis will be averted.

IDAHO: Local office answers all mail requests for Chamber of Commerce on area labor information, types of jobs available, occupational surveys, industry survey summary reports . . . "anything to do with manpower . . ." The consolidation of development efforts resulted in the Chamber's having additional funds and staff to advance economic development.

ALABAMA: Local office and Chamber of Commerce cooperated in achieving reopening of a local plant. Success, and expansion of other local industry followed after joint clinics were sponsored, instructing community business leaders on how to obtain government contracts and other technical assistance.

WISCONSIN: Local office in rural-recreational community is helping Chamber of Commerce in successful promotion of area for conventions. With ample tourist accommodations, service trades employment is expanding as facilities are used more fully.

ILLINOIS: Local office manager is a member of a 14-county Regional Resources Committee. Decreased agricultural employment is being offset by boosting the local economy through increased tourism.

MAINE: Local office stimulated effort by community to convert a closing Air Force Base into an industrial park. ARA and MDTA training helped prepare displaced workers for new employers; new vocational training facilities also were developed.

MASSACHUSETTS: Local office manager is chairman of the Chamber of Commerce's Expanding Industry Committee. He recently generated action that resulted in consideration of a local site by the Atomic Energy Commission for a new facility.

NEW YORK: Local office at Canadian border assisted a Canadian firm to locate on the U.S. side, also handled staffing "including preparation of forms for importation of key personnel." Another New York local office is providing area labor information in a 6-month study of 12 firms to "help diversify the economy and broaden employment opportunities by developing new products and markets . . ."

PENNSYLVANIA: Local office, working with the Industrial Fund, helped create about 900 new jobs. The local office surveys firms' plants regularly, recommends appropriate types of training. Development coordination helped change the area from a one-industry town to diversified manufacturing; worker exodus has stopped, population is increasing and unemployment is lowest in years.

GEORGIA: Local office helped "sell the community" to a new company when the town's largest employer closed, displacing 150 workers. The local office processed the new company's work force. Company satisfaction was demonstrated tangibly in an expansion which increased employment to 300. All the people now employed were placed by the local office.

DYNAMIC CHANGES OCCURRED IN COMMUNITIES AS A RESULT OF JOINT DEVELOPMENT EFFORTS

The scope and scale of community developments that influence manpower development and utilization were indicated by the field response to the optional request for an enumeration of significant recent local developments in the CED groups areas:

Industry moving in	1,146	New vocational education facilities	448
Home industry expanding	1,020	Urban renewal	348
Nonmanufacturing industry expanding	674	New colleges, universities**	290
New or expanded recreation-tourism	672	New uses for area resources***	144
New public schools	668	Research centers	124
Increased service trades employment*	537	New laboratories	122

*Service trades with increased employment included: Appliance, TV, auto repair, air conditioning sales, service, repair; restaurants, hotels, motels, schools, health, hospital, medical, dental, mental health—maintainance and technical aides—laboratory technicians; merchandising; recreation leadership and services; barber and beauty shops.

**New colleges and universities include references to substantial expansion of existing institutions and community colleges.

***New uses for wood and chemical byproducts led the list.

COMMUNITIES FOCUSED ATTENTION ON OVERALL IMPROVEMENT . . .

More attention than ever before was focused on the quality of community schools, homes, recreation, medical and health facilities, streets, parking, cultural resources. Community improvements, undertaken to avoid loss of home industry and to attract new industry, were recognized for their further importance. The process of community improvement inevitably resulted in increased job opportunities.

Many communities continued to develop new sites, industrial parks, and other concrete incentives for new business and industry. Downtown, central city improvements and developments began to match the growth of suburbs.

SIGNIFICANT COMMUNITY DEVELOPMENT PROBLEMS WERE IDENTIFIED

Layoffs—Leading the list of community setbacks were references to plants moving, cutbacks in defense-related employment, displacements based on technological or methods changes.

Shortages of skilled manpower—Reports from all regions identified skilled manpower shortages. In communities where local office participation with CED groups was minimal, a tendency to equate skilled job vacancies with adverse developments was observed. Other local offices saw the shortages as an opportunity.

Other inhibiting factors listed most frequently included: the need for improved public transportation, road construction and improvement, water resources and distribution systems, vocational education facilities; the adverse effects of taxation on industrial location; bond issues voted down; inadequate State or local finances to support development activity; shortage of convenient industrial sites.

TABLE NUMBER ONE—STATE-LOCAL EMPLOYMENT SERVICES PARTICIPATION IN COMMUNITY EMPLOYMENT DEVELOPMENT GROUPS

STATES BY REGION	TOTAL NO. CED GROUPS REPORTED		GROUPS WITH STATE-LOCAL ES PARTICIPATION		TYPES OF PARTICIPATION					
					MEMBER		CONSULTANT		AREA LABOR INFORMATION	
U.S. TOTAL	**3,992**	**Regional Total**	**3,788**	**Regional Total**	**746**	**Regional Total**	**1,832**	**Regional Total**	**1,210**	**Regional Total**
I. Connecticut	95		86		5		27		54	
Maine	77		70		6		35		29	
Massachusetts	66		54		14		25		15	
New Hampshire	41	331	40	300	7	40	24	133	9	127
Rhode Island	24		22		3		13		6	
Vermont	28		28		5		9		14	
II. New Jersey	101		96		23		41		32	
New York	71	199	70	190	9	41	43	92	18	57
Puerto Rico	27		24		9		8		7	
III. Delaware	19		14		1		8		5	
Maryland	27		27		5		14		8	
North Carolina	135	716	128	696	20	78	76	408	32	210
Pennsylvania	343		331		38		212		81	
Virginia	85		84		6		49		29	
West Virginia	107		112		8		49		55	
IV. Alabama	83		78		19		38		21	
Florida	80		78		18		29		31	
Georgia	68	513	68	492	8	87	51	277	9	128
Mississippi	120		117		7		82		28	
South Carolina	62		57		10		32		15	
Tennessee	100		94		25		45		24	
V. Kentucky	61		61		17		30		14	
Michigan	130	311	123	300	40	76	37	123	46	101
Ohio	120		116		19		56		41	

TABLE NUMBER ONE—Continued

STATES BY REGION	TOTAL NO. CED GROUPS REPORTED		GROUPS WITH STATE-LOCAL ES PARTICIPATION		TYPES OF PARTICIPATION					
					MEMBER		CONSULTANT		AREA LABOR INFORMATION	
U.S. TOTAL	**3,992**	**Regional Total**	**3,788**	**Regional Total**	**746**	**Regional Total**	**1,832**	**Regional Total**	**1,210**	**Regional Total**
VI. Illinois	109	528	109	475	21	67	49	243	39	165
Indiana	63		63		15		20		28	
Minnesota	106		104		20		65		19	
Wisconsin	250		199		11		109		79	
VII. Iowa	69	325	65	302	8	66	31	122	26	114
Kansas	88		81		16		35		30	
Missouri	61		59		15		21		23	
Nebraska	51		51		12		18		21	
North Dakota	28		19		1		6		12	
South Dakota	28		27		14		11		2	
VIII. Arkansas	106	457	100	439	30	106	61	197	9	136
Louisiana	62		59		19		24		16	
New Mexico	27		27		11		11		5	
Oklahoma	144		140		15		44		81	
Texas	118		113		31		57		25	
IX. Colorado	51	167	50	162	16	73	16	52	18	37
Montana	25		23		15		4		4	
Utah	51		51		23		17		11	
Wyoming	40		38		19		15		4	
X. Arizona	45	214	44	204	13	56	24	99	7	49
California	139		138		33		65		40	
Hawaii	18		12		3		8		1	
Nevada	12		10		7		2		1	
XI. Alaska	15	231	15	228	1	56	9	86	5	86
Idaho	50		48		22		15		11	
Oregon	104		104		15		27		62	
Washington	62		61		18		35		8	

TABLE NUMBER TWO—PREDOMINANT SERVICES AND ACTIVITIES BY LOCAL ES OFFICES WITH CED GROUPS

NUMBER OF CED GROUPS WHICH REQUESTED THESE SERVICES

*ACTIVITY OR SERVICE	UNITED STATES	REGIONS										
		I	II	III	IV	V	VI	VII	VIII	IX	X	XI
Met with Prospective Employers	**1,606**	**121**	**87**	**274**	**302**	**119**	**154**	**118**	**164**	**80**	**111**	**76**
Prepared Communications	**1,756**	**95**	**83**	**277**	**331**	**108**	**194**	**168**	**185**	**96**	**108**	**111**
Material for Brochures	**1,872**	**112**	**94**	**280**	**287**	**149**	**247**	**160**	**195**	**92**	**125**	**131**
Made Surveys	**1,466**	**69**	**76**	**244**	**242**	**105**	**191**	**141**	**153**	**84**	**81**	**80**
Participated in Surveys by Others	**377**	**50**	**14**	**47**	**46**	**31**	**38**	**39**	**42**	**30**	**22**	**18**
Learned of new CED Opportunities through CED Groups	**1,445**	**97**	**96**	**213**	**235**	**104**	**162**	**122**	**122**	**66**	**124**	**104**

*All items are defined more fully on page 5. The first five items listed were services performed at "request of the Community Employment Development group."

COMMUNITY EMPLOYMENT PROGRAM

DIRECTIONAL SIGNALS—1966

"(The ES) should assist in efforts to strengthen community economic development activities. . . ."

". . . The growing demands upon the Employment Service for comprehensive manpower services call for personnel with a more complex set of skills than previously required. . . . Local office managers are much more deeply involved in working with community groups to initiate and implement a variety of programs."

"The efficient use of these (manpower) services is thwarted, however, by the fact that they are too often provided on a piecemeal basis that overlooks the close interrelationships among the component parts of a manpower program. . . ."

". . . skill shortages are appearing and these highlight the need for more effective ways of linking people and jobs."

". . . The importance of the Employment Service stems from the fact that, in carrying out its responsibilities and functions, it interlocks with a diversity of public and private institutions. . . . In addition, by offering a wide range of services, the Employment Service can stimulate higher standards of performance on the part of other intermediaries that are active in the labor market."

Excerpts from
REPORT AND RECOMMENDATIONS
U.S. EMPLOYMENT SERVICE TASK FORCE

U. S. GOVERNMENT PRINTING OFFICE : 1966 O - 221-725

VT 006 220
Educational Specifications for Practical Nursing Facilities. Bull-77H-1.

Florida State Dept. of Education, Tallahassee. Technical and Health Occupations Education Section
MF AVAILABLE IN VT-ERIC SET.
State Department of Education, Room 271, Knott Building, Tallahassee, Florida, 32304.
Pub Date - Mar68 23p.

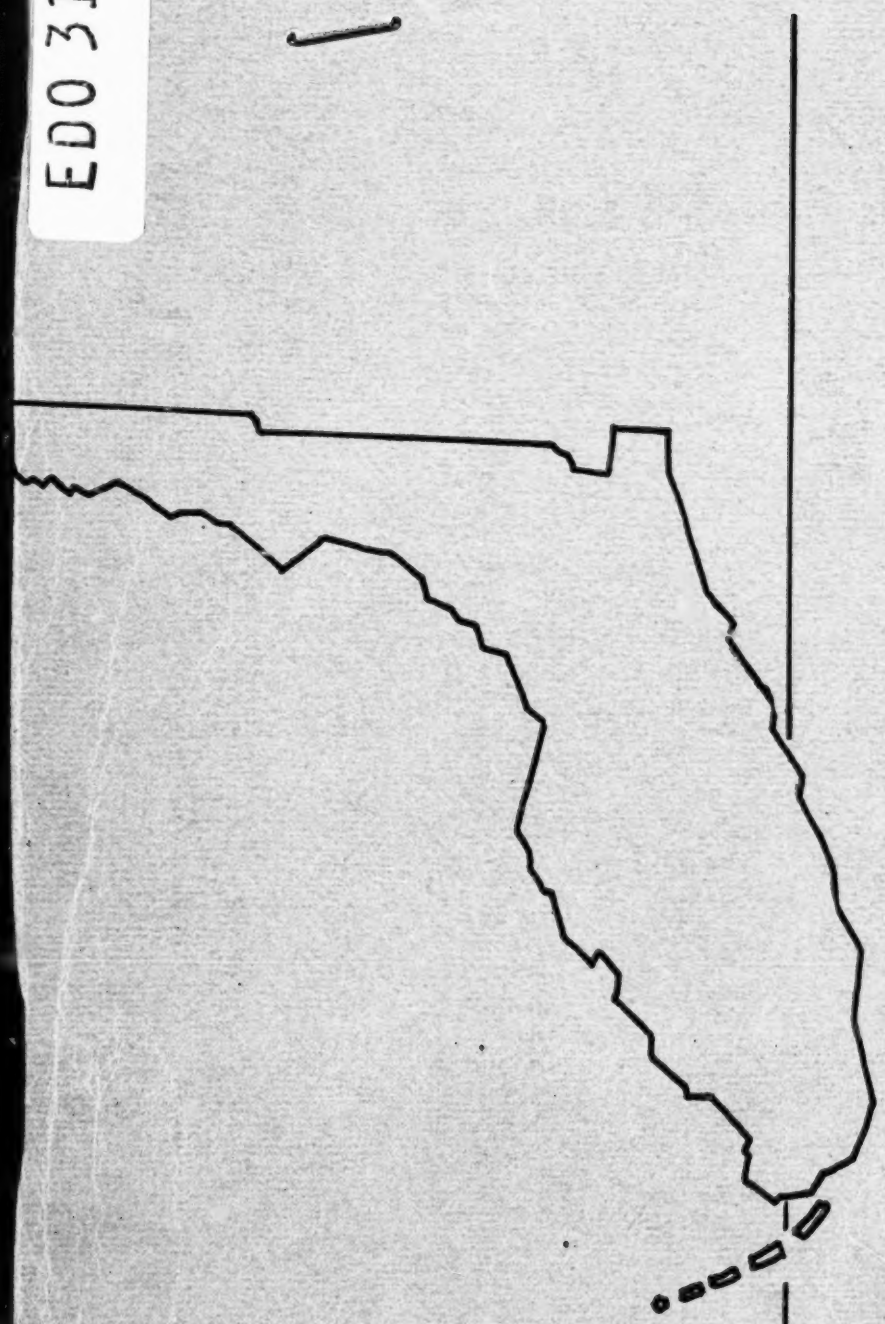
*HEALTH OCCUPATIONS EDUCATION; *PRACTICAL NURSES; *EDUCATIONAL FACILITIES; *PHYSICAL FACILITIES; *FACILITY GUIDELINES; FACILITY REQUIREMENTS; COURSE DESCRIPTIONS; EQUIPMENT
FLORIDA

Intended as a guide in planning construction of new facilities or expansion of existing ones, the specifications were designed for a maximum enrollment of 60 students, and adjustments are necessary for smaller schools. On the basis of the activities which take place within preparatory and supplementary programs, the following areas and estimated space requirements are designated: (1) A 750 square foot lecture-demonstration room including a teaching station, demonstration area, student seating area, and storage space, (2) a 375 square foot general classroom, (3) a 2,000 square foot nursing arts laboratory, including areas for student practice in patient care, dressing cubicles, and medicine, utility, and storage areas, (4) a 300 square foot library with study space, (5) a 200 square foot student area with washrooms and a lounge, and (6) a 650 square foot student faculty area with offices, a conference room, a lounge, and storage space. Furnishings and teaching equipment are specified and guidelines are offered for the arrangement and location of the nursing suite. A guide for developing an agreement between the school and a hospital providing facilities is also included. (JK)

VT006 220

EDO 31587

C.1
21



BULLETIN 77H-1

MARCH, 1968

EDUCATIONAL SPECIFICATIONS FOR PRACTICAL NURSING FACILITIES

THE STATE DEPARTMENT
OF EDUCATION

Floyd T Christian
State Superintendent

TALLAHASSEE, FLORIDA

VT006220

M E M O R A N D U M

TO: The ERIC Clearinghouse on Vocational and Technical Education
The Ohio State University
980 Kinnear Road
Columbus, Ohio 43212

FROM: (Person) Thomas W. Strickland (Agency) State Department of Education

(Address) Room 271, Knott Building, Tallahassee, Florida

DATE: April 9, 1968

RE: (Author, Title, Publisher, Date) Educational Specifications For Practical Nursing Facilities - Coordinated by Miss Vivian Culver, Consultant, Practical Nursing Education

Supplementary Information on Instructional Material

Provide information below which is not included in the publication. Mark N/A in each blank for which information is not available or not applicable. Mark P when information is included in the publication. See reverse side for further instructions.

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(3) Utilization of Material:
Appropriate School Setting Vocational Center, Junior College
Type of Program Post Secondary
Occupational Focus Practical Nursing
Geographic Adaptability Not limited - developed for Florida
Uses of Material Facility P anning
Users of Material Administrators, Instructors, Architects

(4) Requirements for Using Material:
Teacher Competency
Student Selection Criteria

Time Allotment

Supplemental Media --
Necessary ____)
Desirable ____) (Check Which)

Describe

Source (agency)
(address)

BULLETIN 77H-1

MARCH, 1968

EDUCATIONAL SPECIFICATIONS FOR PRACTICAL NURSING FACILITIES

DIVISION OF VOCATIONAL, TECHNICAL, AND ADULT EDUCATION

CARL W. PROEHL, Assistant Superintendent

TECHNICAL and HEALTH OCCUPATIONS EDUCATION SECTION

THOMAS W. STRICKLAND, DIRECTOR

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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EDUCATIONAL SPECIFICATIONS FOR PRACTICAL NURSING FACILITIES

I. Introductory Statement:

These educational specifications are intended to be used as a guide for those contemplating the construction of new practical nursing facilities or the expansion of existing programs. The suggested facility design may be adapted to meet a program's particular needs.

It is hoped that the materials presented in this monograph will be useful in understanding the characteristics and special needs of this type of nursing program. The U. S. Public Health Service Publication, Nursing Education Facilities, 1964, was used as a source for programming considerations and architectural guide in the development of these specifications. The School Plant Planning Services, State Department of Education has given valuable assistance in the development of this material and prepared the space relation diagram to conform to these specifications.

These specifications have been designed for a practical nursing school admitting two classes a year of 30 students each or with a maximum enrollment at any one time of 60 students. Schools admitting smaller classes or only one class annually will need to make adjustments in these specifications. In any plan developed consideration should be given for future expansion of the program. Usually 75-80% of all students admitted can be expected to complete the course. For a school of this size there should be a full-time registered nurse faculty of four, one of whom is designated as an instructor-coordinator of the program. In addition to the nursing faculty the services of a full-time secretary will be needed.

II. Purpose for Which These Facilities Will Be Used:

The practical nursing facilities are used to provide both preparatory and supplementary training in all phases of practical nursing which involve learning how to function within the two accepted roles of the practical nurse; namely, (1) to plan and give nursing care, with self-direction, to selected individuals in various nursing situations that are relatively free of complexity and (2) to learn to assist the registered nurse in the more complex nursing situations.

The maximum utilization of the practical nursing facilities should be planned for two types of classes, preparatory and supplementary.

1. Preparatory classes. Preparatory classes are organized to train persons for gainful employment as practical nurses. These classes operate on the regular six hour vocational school day, five days a week.

2. Supplementary classes. Supplementary classes are organized for employed licensed practical nurses to extend their knowledge and improve their skills in the employment situation. These classes are usually conducted after regular school hours and between the hours of 6:30 and 10:00 p.m.

III. Teacher Pupil Ratio:

The teacher-pupil ratio should not exceed 15 students per teacher, nor be less than 10.

IV. The Instructional Program (Preparatory):

A. General Plan of Instruction

The practical nursing course is one year in length (12 months) and includes classroom and laboratory instruction as well as supervised patient care and correlated instruction. Instruction is carried out in both the school classroom situation and/or in one or more cooperating hospitals or related institutions.

B. Legal Authority for Operating a Preparatory Program

The licensing authority, the Florida State Board of Nursing, must approve all practical nursing schools. This responsibility is assigned to this Board by law (Florida Statutes, Chapter 464.18(2) which reads as follows: "Any institution which desires to conduct a school for the training of practical nurses shall apply to the board and submit evidence that it is prepared to give a program approved by the board of not less than twelve months which shall meet the standards prescribed by this chapter and by the board for the training of practical nurses". This approval admits graduates to the examination for licensure as a practical nurse. Licensure is required to practice nursing in this state.

C. Description of the Preparatory Course (Program)

The primary aim of this program is to prepare graduates to become licensed as practical nurses and be able to function effectively in the occupation.

Curriculum: As described below the curriculum includes both classroom and clinical (hospital) learning experiences. The correlation of classroom and clinical experiences is so planned as to ensure an educational sound program for the student. A Curriculum Guide for Practical Nurse Education, Bulletin 77F-2, State Department of Education, 1962, is used throughout the state and is the basis for the following course descriptions.

a. Course Description (classroom)

1. Vocational Adjustments: A course designed to relate the importance of effective human relationships to the occupations of practical nursing; it also emphasizes the role(s) of the practical nurse in today's nursing care pointing out the obligations and legal responsibilities involved in these functions. Employment opportunities and means for continued vocational improvement are likewise included.

2. Individual, Family and Community Health: A foundation course designed to establish the meaning of health showing its significance for the individual, the family and the community in the prevention and control of illness. It serves as a natural forerunner to the study of disease and infirmity.

3. Nutrition: Adequate nutrition plays an important role in the maintenance of health. This course shows the relationship of food to optimum physical and mental health of the individual throughout the life span accounting for needs of people in varying age groups. Dietary modifications serving as therapeutic measures during illness are incorporated with the study of such illness later in the program.

4. Life Span: This course is designed to show the processes of human growth, development and change that influences individual physical, mental and emotional health from birth on. It serves as foundation knowledge in better understanding human behavior during illness.

5. Body Structure and Function: General knowledge of the normal structure and function of the human body is prerequisite to understanding body reactions to disorder, infirmity and disease. This course lays a foundation for such understanding through presentation of selected facts and concepts appropriate for the practical nurse in rendering safe nursing care.

6. Nursing Fundamentals: This course is designed to be taught in correlation with the above course. Special emphasis is placed upon gaining beginning skills in meeting the needs of patients in all age groups and in varying degrees of dependency upon the nurse for assistance.

7. Drugs: This course purports to introduce selected drug knowledge related to classifying, safe handling, preparing, and administering drugs in general. Specific emphasis on the therapeutic use of drugs is incorporated into the study of illnesses later in the program.

8. Nursing Needs of People In Illness: This course is an extension of the course in Nursing Fundamentals. It serves as a plateau of knowledge and understanding which ready the student for later concentrated study of selected patients(all age groups) with so-called medical-surgical disorders.

9. Medical-Surgical Nursing: This is the longest course in the curriculum and is designed to point out the nursing needs of patients with a variety of illnesses and show how these needs are met. Emphasis is placed upon the commonality factors among all patients showing how age, the type of illness and the stage of patient dependency influence the assistance given by the nurse.

10. Maternal and New-born Care: The emphasis in this course is upon the general needs of the mother during pregnancy and her special needs during labor and following delivery. Likewise it includes the special needs of the new-born upon and following delivery.

b. Clinical Practice (hospital learning experience)

Practice is a vital part of the curriculum. Every effort is made to correlate (by selection of experience) patient practice with classroom learning experiences to ensure the most effective learning for the student. Instructors select patients, and guide and teach students with their learning needs in mind. Here, as in the classroom, the commitment is to the student.

Instruction includes group and individual teaching; it may be conducted in the classroom and/or clinical area. Clinical learning experiences include the care of patients in all age groups and with varying disorders and degrees of infirmity. Introduction to the patient comes early in the program and this patient contact is broadened and deepened as the program progresses. The faculty is mindful that the learner begins with simple, uncluttered patient situations and moves along a logically planned sequence of patient experiences if the student is to receive maximum benefit from the program.

Clinical learning experiences include the nursing care of:

1. Individuals (all age groups) with common medical-surgical conditions representing acute, chronic and long term disabilities. (This includes the elderly and children).

2. Mothers and new-born infants.

Learning experiences focus on direct nursing care and every effort is made to arrange these experiences in a logical sequence that demonstrates continuity of patient care and that adheres to sound educational practices. The beginning phases of the curriculum and some continuing phases of it are taught in the school facilities where demonstration and practice in some of the related skills can be learned. Concurrent, meaningful application of theory to practice is accomplished through early introduction of the student to the clinical area, and on a gradual basis for appropriate experiences under the direction and supervision of instructors employed by the school. In this way the intent of the program; namely, to prepare a beginning patient-side practical nurse practitioner who is capable of rendering safe, effective patient care within his/her defined roles of practice is accomplished.

D. Activities Which Will Take Place in This Facility (School)

1. Preparatory Courses

The teacher's activities include the following:

a. Planning and preparing for teaching; developing course and unit outlines, lesson plans, instructional materials and evaluation instruments.

b. Counseling of students.

c. Teaching knowledge and skills involved in the occupation.

d. Supervising student practice in the performance of skills.

e. Interviewing applicants.

f. Preparing reports and maintaining records.

g. Planning for and participating in general and departmental faculty meetings.

The student activities include the following:

Students spend about 2/3 of the time in basic and related learnings and the balance of the time in practice in the laboratory. Instruction is on both an individual and group basis. Students read and study assignments, learn problem solving, participate in class discussions and learn to meet the patient's needs by rendering patient care in hypothetical classroom situations. During these times some students play the role of "patient".

2. Supplementary Courses

The activities of the teachers and students in supplementary courses as related to the teaching of students are essentially the same, but to a lesser degree of involvement. Not all of the activities of teachers enumerated above would take place in conducting supplementary courses.

V. Facilities Needed:

A. Identification of Space Needed for Practical Nursing Department

The space needed is as follows:

1. Lecture-demonstration room (to include a teaching station, demonstration area, student seating area and storage).

2. Classroom, general.

3. Nursing arts laboratory (multipurpose room to include areas for student practice in patient care, dressing cubicles, medicine, utility and storage areas).

4. Library (reference reading and study room).

5. Student areas (to include women's and men's washroom and student lounge).

6. Faculty areas (to include teacher offices, conference room, teachers' lounge and storage).

B. Estimated Space for the Program:

Space	Square Feet
Lecture-Demonstration Room	750
Classroom	375
Nursing Arts Laboratory	2000
Library	300
Student Areas	200
Faculty Areas	650
Estimated total	4639 square feet

C. Description of the Space Needed (with approximate size and the major items of equipment and/or furniture in each area of space identified above):

1. Lecture-Demonstration Room. Allow 25 square feet per student or approximately 750 square feet for 30 students.

This classroom is to contain:

a. A teaching station at the front of the room with provisions for:

(1) Anatomical charts, 42" x 72" (15) in simplex wall case mounting. Each chart on removable spring-roller unit.
(2) Chalkboard 3 x 12 feet, but maybe as much as room will accommodate.
(3) Map rail to support diagrams and charts.
(4) Projection screen 50" x 37", either mounted on the wall above charts or in the ceiling.
(5) Skeleton cabinet 18" x 18" x 72".
(6) Table on wheels for torso 35" x 18".
(7) Tackboard 6' x 3'.
(8) Teacher's desk 42" x 30" x 3'.
(9) Teacher chair.

b. A demonstration area which is to include:

(1) One adult bed 6' x 3'.
(2) One bedside cabinet 21" x 16".
(3) One bedside chair 18" x 15".
(4) One lavatory 19" x 18".

c. Student seating area:

Either movable adult desk arm chairs, equipped with hinged or removable desk support for writing or seating around small tables. If tables are used, straight chairs will be needed. Ten percent of the chairs should be for left-handed persons.

d. Storage:

A storage closet for storage of full-scale models of the human body, and projection equipment, such as movie projector, overhead projector and/or film strip projector. Approximately 40 square feet.

e. Space to use projectors and stands.

2. Classroom (general). This classroom should accommodate from 15-20 students. It should be separated from the lecture-demonstration room by means of a folding partition which should preferably stack up on a wall alcove designed for this purpose. The partition should be selected for maximum sound-retardant properties. This smaller classroom will permit flexible scheduling for the practical nursing

program that admits two classes a year and at times might be used for a closely related health occupations program such as surgical technician.

This classroom is to contain:

a. Anatomical chart rack 72" x 42" for 14 charts (like the one in the lecture-demonstration room).

b. Chalkboard 3'x 12" (minimum)(like the one in the lecture-demonstration room).

c. Tackboard 6'x 3'.

d. Seating for a maximum of 20 students, in movable desk chairs.

e. Two lavatories with foot or knee controls for hand-washing demonstration and practice if a surgical technician program is anticipated later.

3. Nursing Arts Laboratory: For this multipurpose room allow approximately 2000 square feet for a laboratory with 8 beds.

This laboratory is used for student practice of patient care. It should simulate a "patient-care" area in a hospital and include the following:

a. Patient-care area:

(1) One adult size bed for each 4 students. (Beds are 6'x3') Allow a minimum of 8 beds for a class of 30 students.
(2) One bedside cabinet for each bed. (Cabinets are 21" x 16").
(3) One bedside chair for each bed.

In planning the space needed for patient-care area, allow 4' between beds to accommodate bedside cabinet and give ample work space; allow 8' for length of bed to permit working space at end of bed. This will require 56 square feet for one bed. If beds are placed on both sides of the room and oppose each other allow a minimum of 4' between the foot of the beds. These units need to be separated by curtains suspended from ceiling curtain tracks.

(4) One bassinet 33" x 17½".
(5) One child's crib 27" x 42".
(6) One overbed pedestal table for each bed.

b. Dressing area (for changing clothes):

Four dressing cubicles, each $3\frac{1}{2}$' wide x 5' long x $5\frac{1}{2}$' high with curtain, shelf, stool and hangers.

c. Medicine preparation area:

(1) Medicine preparation installation, $35\frac{1}{4}$" wide, 24" front to back to include counter with sink, and storage cabinets below. Hot and cold water should be provided for this area.

d. Other major items of equipment:

(1) Combination stove and refrigerator 2' x 2' or a small stove and small refrigerator may be provided.
(2) Midget charting desk to accommodate 18 charts and two persons. 30' depth; 33 3/4' width.
(3) Scales, platform, upright $10\frac{1}{2}$" x $14\frac{1}{2}$".
(4) Surgical dressing cart 33" x 18".
(5) Stretcher.
(6) Treatment cart on wheels 40" x $22\frac{1}{2}$" with 2 shelves (edges turned up).
(7) Wheel chair.

e. Utility area (approximately 50 square feet of space):

(1) Double sink with work counter on each side, storage cabinets underneath and wall cabinets above (approximately 10' x 12'), and sink with hot and cold water faucets.
(2) One hopper 20" x 28" with bed pan flusher. Hopper to have hot and cold water.
(3) One linen hamper 25" diameter.

f. Storage closet (approximately 40 square feet of space):

This closet is for the storage of linen and equipment. It should have wide adjustable shelves on three sides (to accommodate different size equipment) and enough free space to store some movable equipment such as wheelchair, etc.

g. Chalkboard. 3' x 12'

h. Tackboard. 6' x 3'.

i. Student conference area (approximately 575 square feet): This area should accommodate one-half of a single class (15-16) for seating at tables for group discussion.

4. Library (reference reading and study room): (Approximately 300 square feet) Allow 20-25 square feet per student.

This room should accommodate one-half of a single class (15-16) around study tables. It is to house special reference and periodicals used in the instructional program.

It is to contain:

a. Two library tables 72" x 30".

b. Fifteen straight chairs.

c. Book shelves on two or three walls to accommodate 200 or more volumes.

d. Vertical files.

e. Magazine rack 21½" x10"

f. Tackboard 3' x 6'.

5. Student Area:

The following areas are to be included:

a. Women's washroom to contain:

(1) Two waterclosets
(2) Two lavatories

b. Men's washroom to contain:

(1) One watercloset
(2) One lavatory

c. Student lounge to contain:

(1) One cot or sofa
(2) Three occasional chairs
(3) One dressing table with mirror
(4) Thirty individual lockers, 1' x 1' x 1'
(5) One coat closet or rack for hanging outside wraps. 6' x 2'.

6. Faculty Areas: (approximately 650 square feet).

The faculty areas are necessary for the activities of teachers in preparing for instruction, recruiting and interviewing applicants, testing, maintenance of records, making reports and holding conference with students. Four full-time staff members will regularly use this area. Space should be provided in this area for a secretary, preferably adjoining a faculty office or else in one of the faculty offices.

a. One office of 100 square feet for each faculty member.

Each office is to contain:

(1) One executive-type desk, 60" x 30".
(2) One desk chair, swivel type.
(3) One legal-size metal locker four drawer file $28\frac{1}{2}$" x 15" x 52".
(4) One or two occasional arm chairs 22" x 22".

b. Conference room(for faculty).

This room is to contain:

(1) One table to accommodate six persons.
(2) Six straight chairs, arm type.
(3) One bookcase on one wall.

c. Lounge.

The lounge should include:

(1) Four occasional chairs, 22" x 22"
(2) One dressing table with mirror
(3) One Chaise lounge
(4) One bathroom, containing one toilet and one lavatory.

d. Storage Closet.

This closet should be about $2\frac{1}{2}$' x 5' and shelved. It is to be used for the storage of instructional materials.

D. Special Facility Considerations:

In planning the Practical Nurse Education Suite, the following points need to be considered:

1. Effective Vocational Education needs to be taught in a facility with equipment similar to the actual conditions to be found by the graduates in a modern work situation. The over-all approach to planning for the Practical Nurse Education Suite should be from the point-of-view that it will insofar as possible simulate hospital conditions.

2. The colors for the walls, ceilings and floors for each space will need to be selected with color dynamics in mind.

3. The floor covering for all areas except the utility room and bathroom should be rubber plastic tile throughout.

4. Lighting should be flourescent, 70-100 feet candles in the instructional areas and offices.

5. Central air conditioning and heating need to be provided.

6. 220 and 110 electrical volt outlets are needed, including

   (a) 220 volt outlet for the stove and refrigerator if the school desires this equipment.

   (b) 110 volt outlets in lecture-demonstration and general classroom, also in the Nursing Arts Laboratory, over medicine counter, in each wall in each room, office, library and lounge. Outlets in Lecture-Demonstration and general classroom should be for projection equipment.

7. Hot and cold water faucets are essential. If hot water is not to be furnished by a central system, a hot water heater will be needed to service this suite.

8. Visitors to the Practical Nurse Education Suite should not have direct access to the classroom or Nursing Arts Laboratory. An entrance foyer, perhaps near the teacher offices, is needed.

9. Door (and traffic lane) between the classroom and the Nursing Arts Laboratory need to be wide enough to permit passage of adult size bed and should be 3' - 8".

VI. Relationship of the Practical Nursing Suite to Other Health Occupations Offerings at the School:

A. If other health occupations programs are offered by the school placing them in close proximity to the practical nursing facility is recommended.

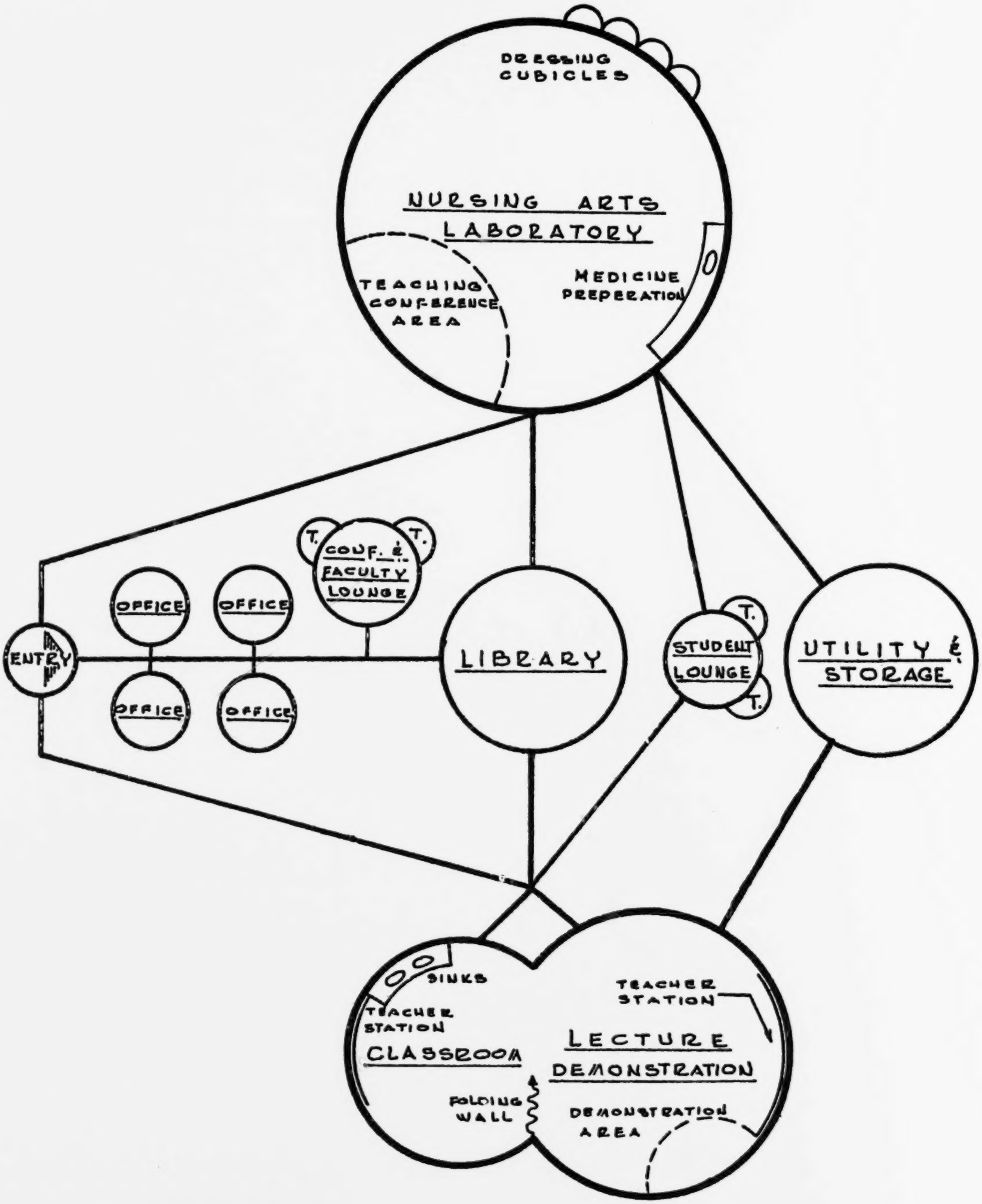
If the school plans to have two beginning classes of thirty students each using the facility at the same time then the general classroom in these specifications should be enlarged and set up like the lecture-demonstration room. Another Nursing Arts Laboratory should be provided.

The Practical Nurse Education Suite needs to be away from disturbing noises created by some types of shops.

B. Relationship of the Practical Nurse Suite to the Site:

Students go from the school to the cooperating hospitals frequently and return. For this reason this facility should have ready access to parking areas and to prevent loss of time it would be well to plan it on the first floor thus avoiding the necessity of elevator services.

VII. Diagram of Space Relations for School Facility:



SPACE RELATION DIAGRAM

A GUIDE FOR DEVELOPING AN AGREEMENT
BETWEEN THE SCHOOL AND THE HOSPITAL

I. PARTICIPATING AGENCIES:

The participating agencies in this agreement are the

_____ and the _____.
Name of School Name of Hospital

II. STATEMENT OF AGREEMENT:

This is a mutual agreement between the administration of the

_____ and the _____
Name of Hospital Name of School

that the hospital will accept practical nurse students from the

_____ for supervised learning experiences
Name of School

in the care of patients in accordance with the provisions set

forth in this agreement.

III. GENERAL PROVISIONS OF THE AGREEMENT:

1. The education of the student shall be the primary purpose of the training program.

2. The school shall be responsible for the education of the student.

3. The hospital agrees to share in the responsibility for the education of the student through the cooperation and assistance of its nursing staff with the faculty of the school and in the guidance and supervision of students.

4. The faculty of the school shall be responsible for selecting learning experiences for the students with the assistance and cooperation of hospital nursing personnel.

5. The school agrees to comply with the established policies and practices of the hospital.

6. The hospital agrees to accept_____class(es) of practical nursing students for clinical experience annually with the understanding that the maximum number of students will not exceed_____at any time including the normal overlapping period.

7. The hospital agrees to allow students and faculty, at their own expense, to use the cafeteria facilities provided for personnel.

IV. THE SCHOOL'S RESPONSIBILITY:

1. To maintain standards recommended in the Rules and Regulations of the Florida State Board of Nursing and in the State Plan for Practical Nurse Education of the State Department of Education.

   These include provision for physical examination, chest X-ray and certain immunizations prior to hospital experience.

2. To employ qualified registered professional nurse faculty who shall be responsible for determining the philosophy and the objectives of the school and developing the curriculum.

   The faculty shall be responsible for:

   a. Selecting patient assignments in cooperation with nursing personnel and supervising students in their learning experiences.

   b. Planning for concurrent related instruction (informal and formal classroom) as needed to meet the objectives of the program. This instruction will be scheduled during the regular school day.

   c. Maintaining individual records of class and ward instruction, nursing practice, evaluation of student competency, and health.

   d. Preparing a clinical rotation plan for services to be used for experience and securing the approval of the plan from the Director of Nursing prior to the beginning of the affiliation. Before any major changes are made in the plan they will be discussed and approved by the Director of Nursing.

   e. Interpreting to hospital and nursing personnel the roles of the practical nurse within the occupations of nursing.

V. THE HOSPITAL'S RESPONSIBILITY:

1. To make available to faculty and students hospital facilities and clinical services for planned learning experiences in patient care included in the practical nursing curriculum.

   The following services will be used for experience:

Services

Medical
Surgical
* Obstretical:
Labor Room and
Observation in
the Delivery
Room
Post Partum
Newborn
Pediatrics
Other:

*EXCEPTION FOR MALE STUDENTS:

Male students will substitute experience in Obstetrics and Gynecology by the following: genito-urinary conditions, surgery, orthopedics, emergency room, cast room, and psychiatric nursing.

2. To provide classroom and office space with adequate lighting and ventilation for the faculty and student use. Telephone to be conveniently located for faculty use.

3. To share and assist in the responsibility for the guidance and supervision of the students, particularly is such restricted areas as nursery.

4. To include members of the faculty of the school in hospital staff meetings when policies to be discussed will affect or are related to the practical nursing program.

5. To provide faculty and students with emergency medical care in case of illness or accidents incurred while on duty.

6. To provide each student with a chest X-ray at the completion of the course at no cost to the student.

VI. SCHOOL POLICIES:

1. The educational program shall consist of no less than thirty hours per week of classroom instruction, laboratory practice and experience in selected learning situations in hospitals and other health agencies. The division and arrangement of time to include the theoretical and clinical learning experiences shall be determined by the faculty, and be based upon the needs of the students for specific learning experiences to meet the objectives of the program.

If the faculty decides that it is desirable for students to have experiences in the hours other than those of the regular school day, this will be planned as a part of the curriculum during the last three months. This experience will be limited to two weeks and will not extend beyond the evening hour of 9:00 p.m. If students are assigned for this experience in this manner, a faculty member will accompany them to provide supervision and instruction.

2. The vocational school day is six hours, Monday through Friday.

3. Students will be regularly assigned for hospital experience Monday through Friday.

4. Students will be given holidays as provided for in the regular school calendar.

VII. REQUEST FOR WITHDRAWAL OF STUDENT:

The participating hospital has the right to request the school to withdraw any student from its facilities whose conduct or work with patients or personnel is not, in the opinion of the administrator of said hospital, in accordance with acceptable standards of performance.

The school may at anytime withdraw a student whose progress, conduct or work does not meet the standards of the school for continuation in the program.

VIII. DISCONTINUANCE OF AGREEMENT:

If either party to this agreement wishes to withdraw, it is understood that at least ninety days shall be given by either participating agency, provided that students currently enrolled in the program shall be permitted to complete the course.

IX. MODIFICATION OF THE AGREEMENT:

Modification of the agreement shall be made by mutual consent of both parties. A memorandum noting the modification shall be attached to this agreement and shall include the date, and signature of parties agreeing to it.

X. RENEWAL OF AGREEMENT:

This agreement shall be in effect for one year from the date of signing. It shall thereafter be reviewed and/or revised annually and for another year.

XI. COPIES OF THIS AGREEMENT:

Copies of this agreement shall be placed on file and be available to the following:

* 1. The Florida State Board of Nursing

2. The State Department of Education

3. The Administrator of the Affiliating Hospital

4. The Director of Vocational Education and/or Principal of the School

5. The Faculty of the School

* A copy of a revised contractual agreement shall be submitted to the office of the Board.

A letter of notification of review of the contract and its continuance for another year shall be sent to the office of the Board, if no changes are made in the contract.

STATE OF FLORIDA
DEPARTMENT OF EDUCATION

TALLAHASSEE, FLORIDA

VT 006 230

Bottoms, James E.; Murphy, Mary Kay

A Plan for Disseminating Vocational Education Research Materials.

Georgia Occupational Research Unit, Atlanta
MF AVAILABLE IN VT-ERIC SET.
Pub Date - Jul67 24p.

*RESEARCH COORDINATING UNITS; *PROGRAM PLANNING; *INFORMATION DISSEMINATION; *VOCATIONAL EDUCATION; *EDUCATIONAL RESEARCH; INFORMATION PROCESSING
GEORGIA

The Georgia Research Coordinating Unit (RCU) receives current vocational education research materials from other RCU's in the nation, the Regional Education Laboratories, Regional Curriculum Projects, Bureau of Research of the U.S. Office of Education, government agencies, and Educational Resources Information Center (ERIC) that are of interest to those concerned with vocational education in the state. Dissemination of research is a stated function of the RCU and a plan was developed to accomplish this function. The plan includes (1) collecting vocational education research materials, (2) cataloging the incoming research materials, (3) evaluating the research to determine the audience to which the materials direct themsevles, and (4) disseminating the research materials to educators and lay people in the state who could benefit from the information. Specifically the plan calls for compilation of a "Three-Month Summary" of abstracts which will be mailed to vocational educators in October, January, and April and to a vocational guidance audience and to general educators in May. (MM)

VT006 230

ED0 31587

A PLAN FOR DISSEMINATING VOCATIONAL EDUCATION RESEARCH MATERIALS

A Project of

Georgia's
Research Coordinating Unit

July, 1967

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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Dr. James E. Bottoms
Associate State Director
Leadership Services

Mrs. Mary Kay Murphy
Occupational Research Assistant
Report Editor

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TABLE OF CONTENTS

		Page
I.	Statement of the Problem	1
II.	Background of the Problem	4
III.	Functions and Objectives of the Dissemination Plan	6
IV.	Procedures	7
	A. Incoming Research Materials	7
	1. Collecting	7
	a. Research Bulletins and Journals	7
	b. Sources of Research Information	7
	c. Sources of State and Federal Legislation	7
	d. ERIC (Education Research Information Center)	7
	3. Microfiche Reader Service	8
	2. Cataloging	9
	a. Location	9
	b. Method	9
	(1) Cataloging	10
	(2) Filing	10
	(3) Recording	10
	3. Evaluating	10
	a. Criteria	11
	(1) Form	11
	(2) Source	11
	(3) Significance	12
	(4) Audience	12
	(5) Other Criteria	12
	4. Disseminating	12
	a. Quarterly Report to Vocational Education Audience	12
	b. Annual Report to Vocational Guidance Audience	12

TABLE OF CONTENTS (cont.)

		Page
V.	Evaluation of Georgia's RCU Dissemination Plan.	14
VI.	Time Schedule	15
VII.	Materials	17
	Appendices.	18
	Reference	21

I. Statement of the Problem

It is the purpose of this paper to set forth an organized plan for disseminating research findings that are pertinent to Georgia's vocational education audience.

As a result of the Vocational Education Act of 1963, much vocational education research is being performed and it is essential that this information be communicated to vocational administrators and teachers at the local level.

Georgia's RCU, established in 1966, is in contact with other RCU's in the country and receives current vocational education research materials from these units.

The Georgia RCU is also in contact with Regional Education Laboratories, with Regional Curriculum Projects, with the Bureau of Research of the U.S. Office of Education, with government agencies, bureaus and departments such as the Labor Department, with regional and national occupational research centers such as those in North Carolina and at Ohio State University, and with national vocational education dissemination centers such as ERIC at Ohio State and ERIC Central.

These research materials--newsletters, bulletins, brochures, abstracts, proposals, interim and final research reports--are of interest to many in Georgia.

1. To those in the Vocational Education Division of the State Department of Education planning and evaluating vocational education programs.

2. To those outside the Vocational Education Division serving as
   a. state department employees
   b. vocational education teachers
   c. vocational education program supervisors
   d. other public school teachers
   e. public school visiting teachers
   f. high school and area school counselors
   g. public school curriculum directors
   h. public school principals
   i. area school directors
   j. public school superintendents
   k. undergraduate and graduate students of vocational education
   l. vocational education professors in Georgia's colleges
3. To those interested lay people in Georgia who could benefit from current findings of vocational education and occupational research.

As outlined in "The Proposal for a Georgia Research and Development Coordinating Unit," the functions of Georgia's RCU can be illustrated in the following terms: stimulation, identification, coordination, dissemination, participation, compilation, annotation, consultation, deliberation, and conduction of research.(1) In view of its stated objective of disseminating research information of importance to vocational educators in Georgia, there is a

need for Georgia's RCU to develop a research materials dissemination plan.

Particular considerations included in this problem of disseminating vocational education research materials are the techniques to be devised for collecting, evaluating, cataloging, and effectively disseminating this research information. To these four topics this paper thus addresses itself.

II. Background of the Problem.

Research materials related to vocational education are numerous. Those received by the Georgia RCU are filed at 98 Mitchell Street, Atlanta. Yet, no uniform method of receiving, reading, evaluating, cataloging, filing, or disseminating this incoming research materials exists now. Relatively few vocational educators in Georgia who could benefit from using this material are aware of its existence or location. A staff already committed to full-time pursuit of other aspects of the workload of the Georgia RCU must, therefore, set about determining priorities, assigning roles, and paving the way to put into operation a plan to disseminate vocational education research materials.

In determining the scope of such a plan, the importance of maintaining a complete file for cataloging and disseminatng must be emphasized. Another important consideration for emphasis is the method of evaluating incoming research materials, cataloging them for distribution, and informing those outside the RCU of their existence, importance, and availability for dissemination.

And, finally, of vital consideration is the need for developing a smoothly-flowing dissemination plan which will encounter a minimum of delay, experience a minimum of confusion, achieve maximum results from almost minimum amounts of time and attention which a limited RCU staff can devote to implementing such a plan.

In developing this plan, a method for dissemination must be designed contributing to the effective collection, evaluation, cataloging, and disseminating of research materials. Central to the development of such a plan, however, is recognition of the need to be flexible in planning. Upon trial runs of the Three-Month Summary system, upon evaluation of the effectiveness of the dissemination techniques proposed in the paper, upon analysis of the appropriateness of procedures outlined here to best meet objectives stated here, upon initial commitment to this plan and resultant evaluation of its effectiveness will the appropriateness of this plan be measured.

There are, of course, many methods for disseminating research materials. If this plan does not work effectively, modifications to it will be made. Later can come evaluation and analysis. Now, in the interest of program efficiency, must come a plan.

A plan for disseminating vocational education research findings is needed for the following reasons:

1. Vocational education at state and local levels become aware of new innovations and procedures for their field;
2. Vocational education at state and local level develop a spirit of creativity--a willingness to buy new things that cut across traditional ideas;
3. Vocational education at state and local levels become more concerned with what is best for the student not what is best for the service.

III. Functions and Objectives of the Dissemination Plan.

A. To organize an effective system of collecting vocational education research materials which are available and accessible to Georgia's RCU.

B. To develop a system of cataloging incoming vocational education research materials received from the many sources established to disseminate such information to Georgia's RCU.

C. To develop a means of effectively evaluating incoming vocational education research materials, deciding what audience the materials direct themselves to and determining what information should be included in the RCU Three-Month Summaries of Research Information of vocational education research materials available for dissemination.

D. To develop an effective method of disseminating vocational education research materials to those educators and lay people in Georgia who could benefit from such information.

IV. Procedures.

In view of the objectives stated previously as being appropriate to the scope of this dissemination plan, the following procedures are developed and included:

A. To organize an effective system of collecting vocational education research materials available and accessible to Georgia's RCU and its audience of those interested in vocational education research information.

1. Georgia RCU will subscribe to bulletins and research dissemination journals which relate to research in vocational education.

   a. Urban Review
   b. AVA Journal
   c. Research in Education
   d. Review of Educational Research (process of ordering)
   e. American Junior College Journal (ordering)
   f. Technical Education News

2. Georgia RCU will keep in touch with other RCU's in country, with Research Centers for Vocational Education, with agencies which concern themselves with information of relevance to occupational education research.

3. RCU will be in touch with Bureau of Research, U.S. Office of Education concerning federal legislation, research priorities and guidelines affecting vocational education research as carried on in Georgia.

4. RCU will be in touch with agencies in Georgia familiar with state legislation affecting vocational education.

5. RCU will be in touch with graduate schools in Georgia to keep informed of graduate level research carried on in Georgia graduate schools related to vocational education.

5. RCU will provide State Department of Education with Microfiche machines, providing these in an area of

central access to vocational and other educators concerned with research information relating to vocational education.

a. The abstracting service ERIC, Education Research Information Center, operates 12 Clearinghouses to procure and to abstract educational research information. This information is of interest to many in the State Department of Education.

b. The Georgia RCU could provide an educationally significant service to all the people of the state by developing plans for incorporating the ERIC resume service and the Microfiche Reader Service into the operational structure of the Georgia State Department of Education. Steps to be taken would be as follows:

(1) Georgia's RCU would either purchase from its funds or encourage the State Department of Education to purchase from its funds a Microfiche Reader and Reader-Printer to enable those ordering ERIC abstracts to read them in the 4" x 6" microfiche film form and to enable those reading this film form to make a hard copy (photo reproduction) of the abstract.

(2) This Microfiche Reader and Reader-Printer would be placed in the State Department of Education's Teacher Library. Staff librarians would be responsible for cataloging and ordering ERIC abstracts from the 12 Clearinghouses.

(3) All Department Directors at the State level involved in the ERIC document abstract subject-matter areas would be invited to a staff meeting or would be informed in writing of the purpose of ERIC and of the availability of using the Microfiche reader in a central State Department location.

(4) State Department Directors to be included in this ERIC program include directors of those subject matter areas which correspond to the 12 Clearinghouses:

(a) Junior Colleges

(b) Exceptional Children
(c) Linguistics
(d) Reading
(e) Counseling and Guidance
(f) Science Education
(g) Small School and Rural Compensatory Education
(h) Disadvantaged Youth
(i) Foreign Lanugages
(j) School Personnel
(k) Vocational and Technical Education
(l) Educational Administering

B. To develop a system of cataloging incoming vocational education research materials received from the many sources established to disseminate such information to Georgia's RCU.

1. All incoming research materials will be filed in one central location in Georgia's RCU.

2. These materials will not be checked out to people outside the RCU staff filing center. The reasons for not checking the materials out after their initial receipt by the Georgia RCU staff are many:

   a. There could be great difficulty in retrieving materials sent to others outside the RCU for evaluation if these materials are not returned to the RCU staff immediately after routing.

   b. It is time consuming and involves much paper work to send incoming RCU research materials to others outside the RCU staff for evaluation.

   c. Efficiency requires that more people than those in Vocational Education Division have easy access to ordering RCU materials. If materials are not checked into RCU filing center, they might not be available for duplicating, etc.

3. All research materials received by Georgia's RCU will be initially evaluated two times in the cataloging process.

   a. The RCU Senior Stenographer, who as Dissemination

Services Coordinator, will initially process all incoming research materials, assigning a catalog number, preparing subject cards, and then routing incoming research information to the Georgia's RCU Technical Writer.

b. The RCU Technical Writer will evaluate incoming research information after it has been processed and prepare it for dissemination. The writer will also write an abstract that contains the essential findings.

4. All materials will be filed in one RCU depository to insure that they are available for cataloging, for abstracting, for inclusion in the Three-Month Summaries and for possible duplicating services.

5. The RCU senior stenographer assigned to the technical writer will be responsible for cataloging of incoming vocational education research materials. Her responsibilities include:

a. Cataloging--all incoming research materials will be catalogued in chronological order according to their date of receipt by Georgia's RCU staff.

b. Filing--these materials will be filed in chronological order in one central location in Georgia's RCU office, with numbers applied to their spines corresponding to their catalog number representing date of receipt by Georgia's RCU staff and with subject matter cards made for the one main subject related to the book. These cards will be filed in alphabetical order according to subject.

c. Recording--all incoming research materials, after having been assigned a catalog number, will have their catalog numbers, their titles, their subjects, and their authors recorded in a Georgia RCU "Journal of Research Materials." This recording step will give an accurate record of date of receipts and titles of research materials included in the Georgia RCU collection.

C. To develop a means of effectively evaluating incoming vocational education research materials, deciding what

audience the materials direct themselves to, deciding which materials should be included in the Three-Month Summaries of vocational education research materials available for dissemination.

1. RCU Technical Writer will abstract highlights from all research materials received by Georgia's RCU and determine appropriateness of these as entries into Three-Month Summary. The Technical Writer will prepare abstract entries for the Three-Month Summary.

2. Quite obviously, all research information relating to vocational education and received by the Georgia's RCU cannot be included in the abstracting process. Thus, criteria for abstracting must be identified. They are as follows:

   a. Form. Abstract form for research reports will follow the style suggested in American Psychological Association in Style Manual, page 8a.

      3. An abstract of a research paper should contain statements of (a) the problem, (b) the method, (c) the results, and (d) conclusions. Results are most important, and every abstract should contain at least the trend of results. It is also highly desirable to state the number and kind of Ss, the kind of research design and the significance levels of results.

   b. Source. The source of incoming research information will be a consideration in evaluating possible entries for Three-Month Summary listing. Such concerns as reliability of information and objectivity in preparing report will be interests of those evaluating research information for inclusion in the Three-Month Summary. The source of each research report will be listed by address, the cost of each article will be listed, if the report is available for ordering from its publisher.

c. Significance. The significance of research findings sent to Georgia's RCU and their relation to vocational education programs, plans, and problems in Georgia will be another consideration in evaluating incoming vocational education research information for inclusion in Three-Month Summary.

d. Audience. The relationship of incoming research information to the many audiences identified for dissemination of vocational education research information received by Georgia's RCU will be a definite criterion for consideration of including vocational education research findings in Three-Month Summary.

e. Other Criteria. Criteria used for including research information in Three-Month Summary include: recent publication date; relevance to programs in Georgia as related to industry in state, course offerings in schools, universal application of information.

D. To develop an effective method of disseminating vocational education research materials to those educators and lay people in Georgia who could benefit from such information.

1. Compilation of abstracts of research materials received by Georgia's RCU staff on a monthly basis will result in the development of an RCU Three-Month Summary report, an outgoing research materials report.

   a. This three-month summary will be mailed to vocational educators three times a year, in the months of October, January, and April, and prepared for mailing on the thirtieth of each month.

   b. In addition, annual mailings will be sent in May of each year to a vocational guidance audience and to general educators. These mailings will be compilations of research reports included in the Three-Month Summaries mailed previously to vocational educators.

c. This report is designed to identify by catalog number, by title, and by abstracting synopsis those research materials available for ordering from research sources throughout the United States, either from principal investigators or from institutions.

d. It is also designed to inform vocational educators and lay people in Georgia of the availability of this information and of the method to use in requesting such vocational education research information.

2. Developing a Three-Month Summary report will result in this dissemination plan's culmination. This dissemination will be to a large audience of vocational educators in the state informing them of this Quarterly Summary service.

3. The Dissemination Services Coordinator will prepare the "Three-Month Summary " for mailing.

V. Evaluation of the Dissemination Plan.

In order to effectively disseminate the research materials received by the Georgia RCU to the largest number of Georgians interested in receiving these materials, the following evaluation procedures are included:

A. Announcement of receipt of research materials, catalog number, title, and brief synopsis of material will be made in RCU's three-month mailing, the "Three-Month Summary."

B. Periodic evaluation sheets will be sent to those state level and local level vocational educators and lay members in Georgia who will help in determining the effectiveness of the Three-Month Summary.

VI. Time Schedule

In putting into operation this dissemination plan of vocational education research materials, Georgia's RCU staff will assign the following time periods and dates to help carry out procedures related to the objectives of this plan:

A. July 1, 1967-September 30, 1967

1. Prepare Dissemination Plan Proposal.
2. Prepare presentation for Vocational Education. Division Staff Meeting, September 11, 1967.
3. Develop mailing list for initial mailing.
4. Develop materials for initial mailing:
   a. Cover letter, including summary of RCU's purpose.
5. Evaluate, catalog, file, cross-reference, and journal enter available vocational education materials for dissemination.

B. October 1, 1967-October 30, 1967

1. Initial mailing of Dissemination Plan Familiarizing Materials to vocational educators throughout the state and to vocational education administrative staff, both in and out of the State Department of Education--October 30, 1967.
2. Preparation of mailing list for October 30, 1967, initial Three-Month Summary mailing--October 1-30, 1967.
3. Preparation of first Three-Month Summary report and stencil--October 1-October 30, 1967.

4. Continued evaluating, cataloging, filing, journal entering and cross-referencing of vocational education research materials for dissemination.

C. October 30, 1967

1. Mail initial Three-Month Summary.
2. Continue with work related to dissemination plan.

D. November 1, 1967-Completion of RCU Contract

1. Three-Monthly mailing of Three-Month Summary, approximately the 30th of the months of October, January, and April.
2. Filing, cataloging, journal entering, cross-referencing, disseminating.
3. Evaluation of Dissemination Plan by survey to see if it is meeting its stated objectives of carrying out the dissemination process as efficiently and as effectively as possible. If it is not, revision of those parts of this plan causing inefficiency will be made.
4. Order Microfiche Reader and Microfiche Reader-Printer. Place in State Department of Education library. Work with library staff to develop abstract ordering and cataloging procedures if library staff requests services of RCU staff in setting up the system. Plan State Department meetings to involve Directors in ERIC Clearinghouse abstracting procedures.

VII. Materials.

In order to most effectively and most efficiently carry out this Dissemination Plan the following materials will be needed by May 1, 1967:

A. Supplies to Collect Vocational Education Research Information.

1. Microfiche Reader

2. Microfiche Reader-Printer

B. Supplies to Catalog Vocational Education Research Information.

*1. One (1) Metal Table, 34" x 70" for assembling Quarterly Summary.

*2. One (1) 5-drawer filing cabinet.

*3. One (1) electric typewriter, suitable for cutting stencils.

C. Supplies to Develop Quarterly Summary.

*1. Office supplies

a. Paper

b. Envelopes

c. Stencils

d. Mimeograph

e. Xerox

*All items are in addition to equipment and supplies available or on hand at the time this proposal is prepared. All items so asterisked appear in the Proposed Budget for "Establishment of State Coordinating Unit for Occupational Research and Development."

A P P E N D I C E S

Appendix 1--Cover letter for initial mailing, October 30, 1967

STATE OF GEORGIA
DEPARTMENT OF EDUCATION
STATE OFFICE BUILDING
ATLANTA, 30334

JACK P. NIX
STATE SUPERINTENDENT OF SCHOOLS

H. TITUS SINGLETARY, JR.
ASSOCIATE STATE SUPERINTENDENT OF SCHOOLS

GEORGE W. MULLING
STATE DIRECTOR
DIVISION OF VOCATIONAL EDUCATION

October 30, 1967

A MESSAGE TO THOSE INTERESTED IN VOCATIONAL EDUCATION RESEARCH

The Georgia Research Coordinating Unit, located in the Vocational Education Division of the State Department of Education, has a service available to all Georgia educators interested in vocational education research.

1. The Georgia Research Coordinating Unit (RCU) is one of 44 RCU's in the country.

2. One of the services of the Georgia RCU is to send vocational education research information of interest to Georgians.

Three times each school year, the Georgia RCU will mail out a summary of vocational education research projects and materials which are available for ordering from research sources around the county. A catalog number, a title of the research publication, and a paragraph summary of the content of the research report will be included in these three-month summary.

You will find the Georgia RCU's first Three-Month Research Summary. enclosed. We look forward to hearing from you and we look forward to sharing with you research information concerning your area of interest as related to vocational education.

MKM:bep
Enclosures

Appendix II--Cover Sheet for RCU Quarterly Summary

GEORGIA RESEARCH COORDINATING UNIT

QUARTERLY SUMMARY

October, 1967

Dissemination Service Provided by

Georgia Research Coordinating Unit
State Department of Education
Division of Vocational Education
Atlanta, Georgia 30303

Dr. Gene Bottoms
Associate State Director
Vocational Education
Leadership Services - Guidance

Mrs. Mary Kay Murphy
Occupational Research Assistant
Report Editor

Benita Pyle
Dissemination Services
Coordinator

REFERENCES

1. Project Proposal and Proposed Budget: "Establishment of State Coordinating Unit for Occupational Research and Development," Georgia Research Coordinating Unit. Atlanta: State Department of Education, 1966.

VT 006 304

Report of Conference on Unions and the Changing Status of Women Workers, (Rutgers--The State University, New Brunswick, New Jersey, October 17, 1964).

Women's Bureau (DOL), Washington, D.C.
MF AVAILABLE IN VT-ERIC SET.
Pub Date - 37p.

*LABOR UNIONS; *WORKING WOMEN; STATUS; LABOR FORCE; *EMPLOYMENT PATTERNS; LABOR LAWS; *CONFERENCE REPORTS; EMPLOYMENT PROBLEMS; EMPLOYMENT PRACTICES
*CONFERENCE ON UNIONS AND THE CHANGING STATUS OF WOMEN WORKERS, NEW BRUNSWICK, NEW JERSEY, OCTOBER 17, 1964

Fifty-six participants met to consider attitudes of employers, labor unions, government agencies, and professional organizations toward working women, and the barriers that limit women's opportunities in hiring, promotion, and training. Because the focus of the conference was on the responsibility of both individual union members and unions themselves to recognize these barriers and find ways to eliminate them, the conferences also discussed the content of labor-management contracts, community participation of unions and of individual members, and involvement of wives of union members. Presentations were: a report of the President's Commission on the Status of Women by Mrs. Gloria Johnson and a speech, "Employment Practices and Women Workers, The New Jersey Experience," by Mr. Raymond F. Male. At workshops the participants discussed: (1) Problems of Women on the Job, (2) How to Activate Women in the Local's Program, and (3) Women's Invitation to Community Action. Discussion questions, a summary of the workshop reports, samples of questionnaires which were administered to union members and their wives, an analysis of the questionnaires, and a list of conference attendees are included. (FP)

VT006304

ED0 31587

C.1
35

Report of Conference on

UNIONS AND THE CHANGING STATUS OF WOMEN WORKERS

Held at
Rutgers-The State University
New Brunswick, New Jersey
October 17, 1964

Sponsors:

Labor Program, Institute of Management
and Labor Relations, Rutgers
Representatives of New Jersey Labor Unions
Women's Bureau, U.S. Department of Labor

U.S. Department of Labor
W. Willard Wirtz, Secretary

Women's Bureau
Mary Dublin Keyserling, Director

VT006304

Report of Conference on

UNIONS AND THE CHANGING STATUS OF WOMEN WORKERS

Held at
Rutgers-The State University
New Brunswick, New Jersey
October 17, 1964

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

U.S. Department of Labor
W. Willard Wirtz, Secretary

Women's Bureau
Mary Dublin Keyserling, Director

82

FOREWORD

This is a report of the 1-day conference on Unions and the Changing Status of Women Workers, held at the Labor Education Center, Rutgers-The State University, New Brunswick, New Jersey, on Saturday, October 17, 1964.

The conference was sponsored by the Labor Program, Institute of Management and Labor Relations, Rutgers; representatives of New Jersey labor unions; and the Women's Bureau, U.S. Department of Labor.

The fact that nearly 26 million women were reported in the labor force in 1964, the great majority of them working for compelling economic reasons, brought new problems into view and emphasized others that had been looked upon formerly as affecting only a relatively small number. These problems explored by the conference participants included attitudes of employers, labor unions, government agencies, and professional organizations toward working women; and barriers that limit women's opportunities in hiring, promotion, and training. Because the focus of the conference was on the responsibility of both individual union members and unions themselves to recognize these barriers and find ways to eliminate them, the conferees also discussed the content of labor-management contracts, community participation of unions and of individual members, and involvement of wives of union members.

Grateful appreciation is extended to all who planned and organized the conference, the speakers, workshop leaders, resource specialists, and others who made the conference possible and successful.

We hope similar regional conferences will be held, to continue to stimulate interest in the welfare of working women and action toward solving their problems.

Mary Dublin Keyserling

Mary Dublin Keyserling
Director, Women's Bureau

CONTENTS

	Page
CONFERENCE PROGRAM	iv
CONFERENCE OBJECTIVES	vi
CONFERENCE SPONSORS	vii
PARTICIPATING UNIONS	vii
WELCOMING REMARKS	1
Report: THE PRESIDENT'S COMMISSION ON THE STATUS OF WOMEN--Mrs. Gloria Johnson	1
DISCUSSION WORKSHOPS	13
Problems of Women on the Job--Discussion Questions	13
How To Activate Women in the Local's Program--Discussion Questions	14
Women's Invitation to Community Action--Discussion Questions	15
Speech: EMPLOYMENT PRACTICES AND WOMEN WORKERS: THE NEW JERSEY EXPERIENCE--Mr. Raymond F. Male	17
SUMMARY OF WORKSHOP REPORTS--Mrs. Agnes M. Douty	18
APPENDIXES	
A. Union Member Questionnaire	23
B. Wives of Union Members Questionnaire	24
C. Analysis of Responses to Union Member Questionnaire	25
D. Conference Attendees	27

PROGRAM

UNIONS AND THE CHANGING STATUS OF WOMEN WORKERS

9:00 - 9:30 a.m.	REGISTRATION Coffee Hour
9:30 - 10:00 a.m.	WELCOME Robert A. Steffen, Assistant Extension Specialist, Labor Program, Institute of Management and Labor Relations, Rutgers Dorothy M. Pendergast, Regional Director, Women's Bureau, U.S. Department of Labor, Boston
10:00 - 11:00 a.m.	Report: The President's Commission on the Status of Women Chairman: Nicholas Juliano, Business Manager, Local 32, Office Employes International Union, AFL-CIO Speaker: Gloria Johnson, Assistant, Research Department, International Union of Electrical, Radio and Machine Workers, AFL-CIO
11:00 - 12:30 p.m.	DISCUSSION GROUPS Coordinator: Robert A. Steffen 1. Problems of Women on the Job Leader: Winfield S. Chasmar, President, Local 284, Laundry Workers, Cleaners & Dyers Union, AFL-CIO Resources: Dorothy M. Pendergast Dr. Georgina Smith, Assistant Research Specialist, Research Program, Institute of Management and Labor Relations, Rutgers Reporter: Phyllis Pank, Local 1038, United Auto Workers, AFL-CIO

2. How To Activate Women in the Local's Program

Leader: Robert A. Steffen

Resource: Betty Tianti, Local 460, Textile Workers Union of America, AFL-CIO

Reporter: Margaret Ault, New Jersey State Federation of Teachers, American Federation of Teachers, AFL-CIO

3. Women's Invitation to Community Action

Leader: Nicholas Juliano

Resource: Esther Murray, Director, Women's Activities, Eastern Area, Committee on Political Education, AFL-CIO

Reporter: Connie Woodruff, Education and Political Director, New Jersey Eastern Regional Locals, International Ladies' Garment Workers' Union, AFL-CIO

12:30 - 1:30 p.m. LUNCHEON

1:30 - 2:30 p.m. Chairman: Dr. Herbert A. Levine, Chairman, Labor Program, Institute of Management and Labor Relations, Rutgers

Employment Practices and Women Workers: The New Jersey Experience

Speaker: Raymond F. Male, New Jersey Commissioner of Labor and Industry

2:30 - 3:30 p.m. CONTINUATION OF DISCUSSION GROUPS

3:30 - 3:45 p.m. BREAK

3:45 - 4:30 p.m. DISCUSSION REPORTS

Speaker: Agnes M. Douty, Chief, Field Division, Women's Bureau, U.S. Department of Labor, Washington, D.C.

4:30 p.m. ADJOURNMENT

CONFERENCE OBJECTIVES

To explore the attitudes of employers, labor unions, and professional and government organizations toward working women.

To consider methods of involving women workers in union activities and community life.

To review the report of the late President John F. Kennedy's Commission on the Status of Women and to devise means of implementing the Commission's recommendations.

CONFERENCE SPONSORS

Labor Program, Institute of Management and Labor Relations, Rutgers-The State University

Representatives of New Jersey labor unions

Women's Bureau, U.S. Department of Labor

PARTICIPATING UNIONS

Amalgamated Clothing Workers of America, AFL-CIO

Communications Workers of America, AFL-CIO, District 1

International Brotherhood of Electrical Workers, AFL-CIO, Telephone Workers of New Jersey, Local 827

International Union of Electrical, Radio and Machine Workers, AFL-CIO, District 3

International Ladies' Garment Workers' Union, AFL-CIO, New Jersey Eastern Regional Locals

American Federation of Teachers, AFL-CIO, New Jersey State Federation of Teachers

Office Employes International Union, AFL-CIO, Local 32

Retail Clerks International Association, AFL-CIO, Local 21

Textile Workers Union of America, AFL-CIO

International Union, United Automobile, Aerospace and Agricultural Implement Workers of America, AFL-CIO, Region 9

WELCOMING REMARKS

Mr. Robert A. Steffen, Assistant Extension Specialist, Labor Program, Institute of Management and Labor Relations, Rutgers, extended a warm welcome to all attending the conference.

Miss Dorothy M. Pendergast, Regional Director, Women's Bureau, U.S. Department of Labor, Boston, added her welcoming remarks.

THE PRESIDENT'S COMMISSION ON THE STATUS OF WOMEN

Mrs. Gloria Johnson
Assistant, Research Department,
International Union of Electrical, Radio and Machine
Workers (IUE), AFL-CIO

Mr. Chairman, friends, delegates, I am most happy to be with you today and to take part in this conference on Unions and the Changing Status of Women Workers.

I am sorry, of course, that Caroline Davis of the United Auto Workers is not able to be here today. As stated in our program, Miss Davis was to have reported to us today on the President's Commission on the Status of Women. Miss Davis served on one of the seven critically important committees of the Commission.

However, to her deep regret, because of a family emergency, she is not able to participate in this conference as she had planned.

I want to thank Mr. Steffen for honoring me and the international union I represent by inviting me to substitute for her. I would be the first to concede that no one can adequately substitute for Caroline. She is, without a doubt, one of the truly outstanding women in the trade union movement today--and has been for more years than she would care to have me mention.

My knowledge of the Commission and its accomplishments does not derive quite as much from firsthand knowledge as does Miss Davis' knowledge. However, I was so fortunate as to be appointed by the president of our union--the International Union of Electrical, Radio and Machine Workers, AFL-CIO--to work closely with and assist the only woman trade union representative on the Commission. Mrs. Mary Callahan, a member of the International Executive Board of the IUE, was named by President John F. Kennedy to serve on the Commission's Committee on Protective Labor Legislation. My work with this committee was close and continual and, I should add, deeply enjoyable.

In addition, I was asked by IUE President Carey to work with him on the Commission's Committee on Civil and Political Rights.

I had the advantage, therefore, of working closely with and becoming familiar with the work and accomplishments of two of the Commission's most important bodies.

No time is more fitting than now--1 year after the historymaking event--to look again at the President's Commission on the Status of Women and to review the reason for its creation, what it accomplished, and what has happened since the Commission filed its report in October 1963.

It was on October 11, 1963, that the late President John F. Kennedy was presented a copy of the final report of the Commission. It was a highly appropriate date, since October 11 was the birthday of Mrs. Eleanor Roosevelt, who was appointed chairman of the Commission when it was established by Executive order in 1961.

Even though Mrs. Roosevelt was no longer with us when the final report was submitted, certainly her interest and enthusiasm for the Commission are reflected in the Commission's devoted labors and comprehensive recommendations.

At the time of her appointment as chairman, Mrs. Roosevelt said:

> It is very necessary to take stock of where women are and of what changes there are in the world community that will change the position of women; growing out of this will be certain recommendations of great value.

This week we celebrated--with more than a little reverence and gratitude--the 80th anniversary of Eleanor Roosevelt's birth, and we feel that her predictions concerning the work of the Commission have come true.

There is no doubt that a Commission on the Status of Women was inevitable in light of the increasingly important part played by women in all aspects of social, political, and economic life and their changing status in many aspects of our swiftly changing world.

A woman, perhaps, is the most dynamic creature alive. No reflection on men--this just happens to be the reality of the 1960's.

Women are homemakers, often heads of families. Many are full-time employees working to help meet the high costs of living as well as to provide family benefits not available without their help. Many women work part time, and are enrolled in schools. Many support their parents in full or contribute to their support. They are mothers, wives, workers, students, civic leaders, PTA presidents, Girl Scout leaders, political activists--the list of vocations and avocations is endless. And in each capacity, the modern woman's status is in constant change.

Let us look at some of this century's radical changes in the status of women:

In 1900, 5 million women made up 18 percent of the total work force. Today there are 24 million women workers; 1 out of every 3 workers is a woman. Six years from now, 30 million is the forecast. In 1940, 18 percent of women workers toiled as household help. The percentage of household workers skidded to 8 percent by 1950.

In 1940 married women comprised less than one-third of the female work force; by 1950 their number had reached half, and today they constitute 60 percent of the Nation's female work force.

Between 1950 and 1960, professional employment of women rose 41 percent; clerical work, 46 percent; and service jobs, 48 percent.

In 1960 we could count 3.4 million women trade unionists--18 percent of all union members and 30,000 above the 1958 mark (not as many as should be).

The number of women earning bachelor's degrees in 1940 was about 77,000; in 1961 the total had soared to 146,000 (again not as many as should be).

These are only a few of the changes in the status of women, only a very few.

It was fitting then that a Commission be established to review all these changes, the results of these changes, and their probable future direction, and to recommend additional changes that would benefit not only the woman but the world in which she operates.

On December 14, 1961, President Kennedy issued Executive Order 10980 establishing the President's Commission on the Status of Women.

Speaking at the first meeting of this Commission, President Kennedy gave two reasons for making this Commission a reality. One reason, he said, with that broad unforgettable smile, was "for my own self-protection." It seemed that every week, or more often, newspaperwomen at his press conferences wanted to know what he was going to do for women.

The other reason for creating the Commission, the late President explained, was that one-third of the country's labor force now is made up of women whose primary obligation is to their families and their homes, but whose work makes it possible to maintain that home and that family.

The Commission he created was composed of 26 members drawn from all walks of American life. It was supplemented by seven committees to handle specific problems.

According to the initial outline of the proposal for the President's Commission on the Status of Women, the goals this Commission was to fulfill were:

1. To give appropriate recognition to women's civic and political accomplishments and to their basic rights.

2. To strengthen homelife by directing attention to critical problems confronting women as wives, mothers, homemakers, and workers, so that the community may provide additional services and protection for mothers who do not wish outside employment as well as for those who seek it because of need or individual choice.

3. To recommend methods of overcoming remaining discriminations against women in employment and in civil, political, and property rights.

4. To promote more effective methods for enabling women to develop their skills and for the Nation to utilize them for its pressing domestic and international requirements.

Four consultations were held on private employment opportunities, new patterns in volunteer work, portrayal of women by the mass media, and problems of Negro women.

On October 11, 1963, Mrs. Esther Peterson, Assistant Secretary of Labor, presented to President Kennedy the Commission's final report.

Entitled American Women, this report is undoubtedly the most incisive and comprehensive study of its kind ever made. My own feeling--and I believe that of the labor movement--is that this report is a pioneering and historymaking appraisal of the status of women that will have permanent and lasting effects.

American Women summarizes impressively the findings of each committee in its particular field.

Because of the significance of each area studied, we shall briefly consider each separately, with attention directed mainly to those recommendations adopted by the Commission.

Education

There is no doubt that more women receive a better education in America today than at any other time or place in history. In fact, until recently more American young women than young men have stayed in school up to the college level. In 1962 the median number of years of school completed by women was 12 compared with 11.6 for men.

But once the college level is reached, girls begin to fall behind. Women are earning only 1 out of 3 of the bachelor's and master's degrees awarded by American institutions of higher learning, and only 1 out of 10 of the doctorates. These ratios are actually less than in the 1930's, when 2 out of 5 bachelor's and master's and 1 out of 7 doctor's degrees were earned by women.

Today for about 50 percent of all American women, formal education ends when they finish high school. Obviously, the problem here is to encourage and provide means of attaining more education.

But of equal importance is the education both high school graduates and nonhigh school graduates have received--its quality and relevance to the needs of women, keeping it alive during years of homemaking and reviving it afterwards.

The Committee on Education had to consider these problems.

Foremost, of course, is the realization that expanded educational opportunities of higher quality are needed for all groups, from kindergarten through graduate school. To this end the committee wholeheartedly endorsed making kindergarten and nursery school facilities available to all. Further, the committee took a stand in support of Federal legislation to improve American schools by providing financial support for expanding facilities and increasing teachers' salaries.

Opportunities for mature women to continue their education beyond high school should be greatly expanded and adapted to their needs. This means, of course, the encouragement of part-time study through grants of financial aid, flexibility in working out schedules, establishment of methods of rebuilding habits of study, and the development of educational guidance services to help the mature woman deal with problems of resumed study and a possible second career.

And, of course, to help direct and prescribe counseling, both private and public resources have to be strengthened.

When we consider the fact that 8 out of 10 girls will work in paid employment at some time in their lives, we see the importance of and the need for attention to the quality and quantity of education they must receive. Age must be no factor in determining when education stops--but rather should merely serve as a guide to the level and type of education that is needed.

Home and Community

Of the 68 million women and girls 14 years old and over in the United States today, 44 million are married and keeping house. The Commission recognized the significance of these statistics. There is no doubt these mothers and homemakers have certain fundamental responsibilities.

Certainly all of these responsibilities can be better met if the mother has available new and expanded community services. It was with this in mind that the Committee on Home and Community formulated its recommendations:

1. Child care services should be available for children of all families at all economic levels.

Today the statistics on the number of licensed day care centers are appalling. Only 185,000 children receive this licensed care; yet almost 3 million mothers of children under 6 years of age work outside the home.

It was recommended that costs should be met by fees scaled to parents' ability to pay, contributions from voluntary agencies, and public appropriations.

2. Tax deductions for child care expenses of working mothers should be kept commensurate with the median incomes of couples where both husband and wife work. Public Law 88-272, enacted February 26, 1964, brought about certain improvements: joint income level raised to $6,000; $900 deduction allowed for two or more dependents. This represents a step in the right direction, but more must be done.

3. Availability of family services under public and private auspices to help families avoid or overcome breakdown or dependency and establish a soundly based homelife should be increased.

There are many women who do not know about the availability of prenatal, infant, and preschool services.

To complicate the problem, there are over a million women who live outside institutions although they have chronic conditions making them unable to work or keep house. Large numbers of physically and mentally disabled women in this country need rehabilitation services to fit them for work or self-care.

4. Volunteer services should be made more effective through coordinated and imaginative planning, and their availability should be expanded. This is needed especially in locating hospitals, schools, child care centers, playgrounds, and the like.

Private Employment

Today there are 24 million women workers; 30 million women workers are predicted by 1970. Nearly one-third work part time, and three-fifths of all part-time work is done by married women. These are not just statistics. These are human beings. And the Committee on Private Employment was given the task of finding out what barriers exist that bar women from equal opportunities in employment, training, and job advancement and to pursue the areas of pay differentials based on sex.

Accordingly, the following recommendation was made: Equal opportunity for women in hiring, training, and promotion should be the governing principle in private employment.

The Commission felt that action should be taken to encourage employers who do not have Government contracts to comply with the Federal policy of nondiscrimination. There exists now Executive Order 10925, which forbids discrimination based on race, creed, color, or national origin--but not sex--in employment under Federal contracts.

While there were those on the committee who felt differently (we shall go into that in a moment), the Commission's position was that sex should not be made a part of this Executive order, since discrimination "based on sex involves problems sufficiently different from discrimination based on the other factors to make separate treatment preferable."

In contrast to the position of the Commission, a minority report was filed by Caroline Davis of the United Auto Workers, AFL-CIO. I shall not attempt to repeat the entire dissent here. Of major importance is the fact that as far back as 1941 the UAW has supported, by convention action, resolutions calling for the inclusion of sex and age in the nondiscriminatory clause of Executive orders dealing with fair employment. This was true in 1962 when again such action was recommended.

Another argument advanced was that our country has had many years of experience with programs based on voluntary compliance. Yet, too often, voluntary compliance is a slow, often not occurring, procedure.

It is Mrs. Davis' opinion that the Executive order proposed by the Committee on Private Employment is no more than a statement supporting equality of opportunity.

Therefore, Mrs. Davis recommended to the President's Commission on the Status of Women that it include in its report to the President, the recommendation that the word "sex" be inserted in the nondiscrimination clause of Executive Order 10925.

(Of course, since the Commission made its report, Public Law 88-352, the Civil Rights Act of 1964, has become law of the land. Title VII, Equal Employment Opportunity, prohibits discrimination because of race, color, religion, national origin, and sex.)

The committee also recommended that the United States Employment Service, Department of Labor, issue a policy statement to promote equal employment opportunities for applicants of both sexes based on skills and abilities. At the request of the Commission this was done. The directive went even further, requesting employers using these employment offices to avoid job orders specifying sex except where genuinely warranted.

Federal Employment

An issue of grave concern to members of the Committee on Federal Employment and to the Commission itself was the part-time worker. There is no doubt that there are women who just can't work 8 hours a day, but who are eager to earn part-time income. In some Government agencies, this type of work has been made available. Unfortunately, Federal systems of manpower utilization discourage part-time work.

Therefore, the Commission recommended that the Civil Service Commission and the Bureau of the Budget facilitate the imaginative and prudent use of part-time personnel throughout the Government service.

The very first recommendation made by the Committee on Federal Employment Policies and Practices to the full Commission was aimed at removing the last legal barrier to equal opportunity for women in Federal Government. This barrier dated back to 1870--even prior to the Civil Service Act. It is ironic that this legal barrier grew out of legislation designed initially to benefit women in the matter of pay, but which was

construed for nearly half a century to give appointing officers the unrestricted right to consider only men (or only women) for appointment. This interpretation continued until 1962, when the Attorney General reviewed the opinion of his predecessor, and his investigation led to only one answer--an opinion that this legislation did not restrict the authority of the President to regulate the civil service.

As a result of this opinion, a Presidential directive was issued to Federal agencies ordering that Government positions must be filled on the basis of merit and without regard to sex, except in unusual circumstances found justified by the Civil Service Commission.

Preliminary studies show that, because a reason must be given now when the sex is specified, there has been a remarkable reduction in the percentage of requests for men only or women only.

Further, the percentage of women appointed from the Federal Service Entrance Examination register rose from 14.9 percent for the 12-month period ending October 1961 to 17.3 percent for calendar year 1962.

There is no doubt that the status of women will improve even more. Certainly individual agencies must insure that promotion is based solely on merit.

Labor Standards

Perhaps no greater contribution has been made to the woman worker than the protective labor legislation enacted over the past 50 years: the workweek has been shortened (not as short as it needs to be); minimum wages have been set (not as high as they should be); and sweatshop conditions have been practically eliminated.

It was only fitting that the Commission on the Status of Women assign one of the committees to study the current status of labor legislation. Issues considered here are certainly of major significance to those of us in the trade union movement, where at the present time many of us are supporting the shorter workweek, higher minimum wages, and higher pay for overtime work. We of the labor movement recognize these as important ways of reducing the persistent high level of unemployment that engulfs our Nation.

The Committee on Protective Labor Legislation recommended the extension of the Federal Fair Labor Standards Act (FLSA) to currently uncovered workers such as workers in hotels, motels, and laundries. Further, it encouraged State legislatures without minimum wage laws to enact them, and those with laws to strengthen them.

I was particularly happy that the recommendation for a Federal equal pay bill is now a reality. I have been a member of the National Committee for Equal Pay for 7 years. I have seen the work this committee, representing labor and civic groups, has done to get this legislation passed. While the act does not completely measure up to our goal, it represents a foot in the door.

I am proud to say that since its inception the IUE has been a leader in the fight for this legislation. A large segment of our membership is women. Our position in regard to equal pay and the advancement of women was well summarized in our 1951 convention proceedings:

> A fundamental principle of our International Union is the equality of all workers regardless of race, color, creed, sex, or national origin.

As unionists we know that either discrimination against women or failure to provide them with equal opportunity produces a weakness in our movement. Women workers should be provided not only with the opportunity for equal pay for equal work, but also assured the safeguarding of their health and the provision for community facilities to aid them in carrying out their family responsibilities.

In 1962, two IUE workers of the General Electric Company and the Westinghouse Corporation, along with President Carey, testified on behalf of the equal pay bill. Needless to say, we were extremely happy when, on June 10, 1963, President Kennedy signed the Equal Pay Act which amended the Federal Fair Labor Standards Act. Our job, of course, is not over. Much improvement is needed, and I am sure that in the future as in the past IUE shall continue to give its time and effort to this cause.

Another recommendation of this Commission of special interest to us in the trade union movement stated: "State laws should protect the right of all workers to join unions of their own choosing and to bargain collectively." The position of labor in regard to right-to-work laws is well known.

We in the labor movement know the difficulty of organizing and maintaining unions when the right to do so is not protected. Where States have enacted legislation restricting the right of employees to organize, the rights of the workers are endangered.

Social Insurance and Taxes

This committee concentrated its study on the Federal old-age, survivors, and disability insurance program (OASDI) and the Federal-State unemployment insurance program. In addition, because of its importance to the welfare of both the mother and the newborn child, the committee felt it should point to the very limited protection provided for loss of income due to maternity.

Since its inception in 1935, both scope and coverage of the OASDI program have been broadened progressively. Benefits, which at first were paid only to workers on retirement, have been added for dependents of retired workers, for survivors, and for disabled persons. Coverage also has been greatly extended, so that the program now provides basic protection for almost the entire population against old age, disability, and death. The OASDI program is of importance to single and married women as workers, as well as to wives, widows, divorced wives, and aged parents. At present, most of the beneficiaries of the program are women. There still are certain deficiencies and inequities that should be rectified.

One obvious change needed is in regard to widows' benefits. A widow's benefit under the Federal old-age insurance system should be equal to the amount that her husband would have received at the same age had he lived. This objective should be approached as rapidly as may be financially feasible.

Many millions of workers are excluded from coverage under unemployment insurance. Employers of less than four workers are excluded in most States. There is little coverage of employees of nonprofit organizations, employees of State and local governments, agricultural workers, or household workers. With the exception of the agricultural group, large numbers--if not most--of the workers in these groups are women.

For these reasons the committee recommended that coverage of the unemployment insurance system be extended.

Further, paid maternity leave or comparable insurance benefits should be provided for women workers. Employers, unions, and governments should explore the best means

of accomplishing this purpose. Such a need is obvious when we consider that not more than a third of the working women of the country have either public or private insurance against loss of income due to childbearing. For low-income families especially, loss of income can threaten the welfare of both the mother and the newborn child.

Civil and Political Rights

Although the legal status of women has improved greatly in the past few decades, there still exist laws and official practices that discriminate on the basis of sex. The Commission considered various proposed methods of achieving greater recognition of the rights of women:

1. Test litigation seeking redress from discrimination under constitutional safeguards

2. Amendment to the Constitution (Equal Rights)

3. State legislative action to eliminate discriminatory State laws.

The Commission asserted that since the United States Constitution now embodies equality of rights for men and women, a constitutional amendment need not be sought now in order to establish this principle. (Our union is against it.) However, early and definitive court pronouncement, particularly by the Supreme Court, is needed urgently with regard to the validity under the 5th and 14th amendments.

Specific problem areas were considered: jury service and personal and property rights. In both cases, the Commission advocated the need for legislative action to remove the barriers to equal treatment of men and women.

Along with full equality and equal treatment for women is the need for women themselves to pursue a more active role politically. The need is obvious when we realize that in the Federal Congress there are only 2 female Senators and only 11 females out of 435 Representatives. Only two women have held Cabinet rank in the Federal Government. Of 7,700 seats in State legislatures in 1962, 234 were held by women.

The Commission recommended, therefore, that women be encouraged to seek elective and appointive posts at local, State, and National levels and in all three branches of government.

In addition to reports of committees, four consultations were held under the Commission's auspices on private employment opportunities, new patterns in volunteer work, portrayal of women by the mass media, and problems of Negro women. Many of the recommendations arising from these consultations have been discussed under committee reports. I shall, however, consider the consultation on problems of Negro women.

Miss Dorothy Height, President of the National Council of Negro Women, a Commission member, beautifully summarized the findings of this meeting when she said: "Negro women have the same problems and hopes as other women, but they cannot take even the same things for granted. If the Negro woman has a major underlying concern, it is the status of the Negro man and his position in the community and his need for feeling himself an important person, free and able to make his contribution in the whole society in order that he may strengthen his home."

It is obvious that there is a need for greater vocational training opportunities; schools providing such training must be open to all people, regardless of race. Not only should job opportunities be found for Negroes already trained, but also vocational training should be stimulated for jobs that currently are not open to them.

Seeing new jobs opened to parents will affect children's decisions about staying in school and selecting fields they themselves wish to enter.

The Commission recommended as a means toward accomplishing many of its goals an Executive order designating a Cabinet officer responsible for assuring that the prestige and the resources of the Federal Government are used to effect the Commission's recommendations. In addition, the order would create a citizens' committee as an advisory group.

On November 1, 1963, to the gratification of the American labor movement and scores of women's organizations, President Kennedy issued Executive Order 11126, which:

1. Established an Interdepartmental Committee on the Status of Women, headed by the Secretary of Labor, and

2. Created the Citizens' Advisory Council on the Status of Women, with 17 members, including IUE International Executive Board member Mary Callahan.

Just this week the Interdepartmental Committee and the Citizens' Advisory Council prepared their first annual report, tracing the development of opportunities and areas of advances for women during the past year.

The advances came, the report stated, from the increased awareness at many levels of women's frequently unused potential and of women's needs, accompanied by expectations of greater accomplishment.

Briefly, here are just a few of the highlights of this report:

1. Between January 1 and October 2, 1964, 68 new appointments of women to important Federal Government posts were announced by President Johnson.

2. Executive agencies had appointed 311 and promoted 1,231 other women at salary levels of $10,000 and above.

3. The Federal Employees Health Benefits Act was amended to provide that married women pay the same premium as married men.

4. The Equal Pay Act of 1963 became effective, and the Civil Rights Act of 1964 was enacted.

5. The wife of an unemployed man now may be paid a training allowance while she is taking training under the Manpower Development and Training Act.

6. Improvements were made in State legislation, and activities of the Governors' Commissions on the Status of Women were expanded in 33 States. These cannot succeed without the cooperation of trade unions.

These are just a few. Certainly the President's Commission on the Status of Women can take credit for these and many more, as a result of creating an awareness of the status of the woman and the need to improve this status. I should mention that American Women has been translated into Italian, Japanese, and Swedish.

There were many groups that moved for this improvement. Certainly the labor movement should receive its share of praise in moving towards these goals.

Many international unions long have sought improved job opportunities for women; many have pressed for the inclusion of equal pay clauses in collective bargaining negotiations and other methods of improving the status of women.

I am proud of what IUE has done in the field of women's rights. In 1957 President Carey called a Women's Conference of IUE trade union women. In his keynote address to that group, he urged passage of provision for extended coverage of the minimum wage law, he discussed the needs that must be met as a result of automation, and he spoke of the need for women to qualify in all occupations.

I am certain we in IUE shall continue to attempt to improve the status of women so that before long there will be equal treatment for all. This conference is an example of what can be done--how we can all move in the same direction.

DISCUSSION WORKSHOPS

Conference participants assembled in three discussion workshops. Each discussion group had a leader, one or more resource specialists, and a reporter. Some of the questions discussed are listed under each workshop topic.

PROBLEMS OF WOMEN ON THE JOB

Discussion Questions

1. The "war" between the sexes has been the subject of some good-natured and some not so good-natured kidding--probably ever since Eve. Do you think there is any truth in this notion? That is, do men combine against women? Do women combine against men? How does the "war" between the sexes show itself on the job?

2. Manufacturing firms generally do not have women in top jobs in the office nor in the shop, and even nonmanufacturing companies in which women predominate--hospitals, school systems, retail stores, banks, insurance companies--rarely have women in key jobs. Why do you think this is so?

3. Are there jobs in your plant, office, or school that women do not hold? Why not?

4. What is the highest job classification (or labor grade) held by a woman in your company? Is another woman in line for her job when she leaves?

5. Do women have equal opportunity for promotion and transfer in your plant, office, or school? Do they have it in some respects? If so, how did they get it?

6. Some employers claim that men are more versatile employees than women, and therefore worth more money, even when they do work identical with the women's. What do you think?

7. Even when men are victimized by lower rates of pay for women, they sometimes support the differential. Why is this so?

8. It is often argued that women do not have the same family obligations men have and should not get the same pay. What do you say to that?

9. When cutbacks in employment occur, there usually is strong pressure to lay off the women first. How do you feel about this? What about widows, divorcees, women supporting aged parents? Do you think men also should be laid off on the basis of need?

10. Some employers argue that women cost more to employ than men do. They say women have higher absentee rates and higher quit rates than men. Do you think this is true or false?

11. Employers sometimes say that the male personality is better suited to some jobs--credit manager, supervisor, furniture and household appliance selling. Is this true in your experience?

12. Is formal training offered to men in your office or shop? What kind and how long? Does it result in a substantial pay rise? Is any offered to women? How does it compare with the men's training? Do you think more training should be available to women?

13. Why do you think employers hire women? Is it because women are easier to supervise? Men are scarce? Women are more efficient in some kinds of jobs? Men won't work on some kinds of jobs? Women are less costly to employ? Employers are becoming more liberal?

14. Now consider the type of problems we have been discussing--all the various reasons and excuses for questioning the working woman's right to her job and for denying her admission to better paying jobs. Do you think the problems of white-collar women in this respect are very different from the problems of blue-collar women? In what way?

15. Women want equal pay and equal job rights. Yet at the same time they enjoy all sorts of protective legislation--State laws on the minimum pay they can be offered, the maximum number of hours they can work, the maximum weight they can lift, and so on. If they want equal rights, they must accept equal work conditions. What would you say to that argument?

16. Some unions are demanding maternity leave for their women members. Others ask for early retirement for women; or for leaves of absence or time off for personal reasons. Don't these special privileges conflict with women's demand for equal treatment?

HOW TO ACTIVATE WOMEN IN THE LOCAL'S PROGRAM

Discussion Questions

1. The war between the sexes is, in part, a kind of joke, but in your mind is there any factual basis for the idea that there is a war between the sexes? Do men combine against women? Do women combine against men? Is a war between the sexes evident on the job? Does this same relationship show in the union?

2. Imagine a plant where the foreman and men have combined to restrict women to low-paying jobs. Without a union, what could the women do? With a union, what can they do if they have a standard contract?

3. The same men who once discriminated against women before the union was organized enforce women's rights once the union is organized; and the men have union responsibilities. Is this so? If so, why?

4. Some people have said that the strongest defense against discrimination and prejudice in a plant or in the economy is seniority. Do you agree? Why?

5. Are women reluctant to write grievances? Are they reluctant to run for local union office or serve on union committees? If they are, why? If they are not, what prevents them from doing these things?

6. Do men encourage or discourage women to run for office? How do they do this? How do women react to their attitudes? Have you ever encountered a situation like this? What did you do?

7. Would conditions be better or worse if women had more positions of union leadership?

8. In what leadership roles can union women participate most effectively?

9. In a shop the married women are united against the single women, and the single women regard the married women as their chief enemies. What kind of problems might divide them and how would you deal with them?

10. How do you go about organizing women in a local so they can work effectively on women's problems?

11. When a union is organizing a company that employs a majority of women, the union organizer generally is a man. Why is this so? Would women organizers be more effective?

12. Do you think a women's auxiliary within a local would strengthen the union?

13. In Israel, nonworking wives of union members are permitted to belong to the union. Do you think this is a good idea?

14. Are women really different as union members? Do women really want to be treated differently as union members? Does the answer to the above have anything to do with the apathy of women unionists?

WOMEN'S INVITATION TO COMMUNITY ACTION

Discussion Questions

1. In what areas of community action are the members of the discussion group now participating? What brought about your joining in this activity?

2. What kinds of programs do these organizations conduct?

3. Do any of the Girl Scout or Boy Scout programs involve bringing an awareness of social problems to the children? Are these groups interracial? Do they ever visit slums? Can or should such activity be encouraged?

4. In what kinds of activities other than those already mentioned do your friends participate?

5. The League of Women Voters and civic associations frequently concern themselves with problems of taxes, government, and the like. Could union members make a contribution in these discussions and programs?

6. What about other groups such as garden clubs and church groups? Are civic questions discussed? Do they help form opinions that are reflected later in political decisions? What role do union members play in such situations?

7. What can you do in your local to sharpen awareness of these avenues of activity in the community?

8. What can the union do to involve the wives of union members in the activities of community life?

9. Assume you are on a committee to compile a list of proposals relating to women's problems that should be put in the platform of the two major parties. What recommendations, as women, would you make?

10. How does all this relate to the political program of the AFL-CIO in 1964?

11. What has been the participation of this group in this election?

12. What is your idea of a good method to get women to take an active interest in politics and to vote?

13. Governor Richard J. Hughes has appointed a 19-member commission to study the status of women and to determine how the potentials and abilities of New Jersey women can be more fully developed. In what ways can the union aid the commission in its inquiry?

EMPLOYMENT PRACTICES AND WOMEN WORKERS: THE NEW JERSEY EXPERIENCE

Mr. Raymond F. Male
New Jersey Commissioner of
Labor and Industry

A summary of Mr. Male's remarks follows:

Mr. Male pointed out that 800,000 women comprise about one-third of the working force in New Jersey. In outlining laws covering women workers in New Jersey, he referred to some laws as being obsolete. He mentioned those that limit the hours and times during which women may work as having had a valid purpose when enacted. He said, however, that he receives complaints from persons who now find these laws prevent them from earning overtime pay or from securing certain jobs that require regular hours.

In citing an opinion that automation would eliminate women from industry, Mr. Male disagreed, saying that with the increase of automation, women could now take on jobs with new machinery that they formerly could not handle.

The labor commissioner said his main concern at the moment was the 50,000 young people in New Jersey between the ages of 16 and 21 who were "doing nothing." Half of these were girls. He blamed the condition on inadequate education together with racial discrimination and general poverty, which result in lack of motivation.

Commissioner Male also criticized pensions that unions were negotiating. He indicated they "prevent mobility of employees." Instead of pensions, he believes there should be a supplementary social security plan, centrally funded and administered, to "stay with you wherever you go."

Mr. Male concluded his remarks by calling on unions to take on the responsibility of working for changes and improvements in services the State provides. He suggested that unions look beyond their traditional demands and work for new programs that hit at the deep social problems of today.

SUMMARY OF WORKSHOP REPORTS

Mrs. Agnes M. Douty
Chief, Field Division
Women's Bureau

Each of the three reporters has given back to her group the conclusions that group has reached, and I see my job as that of pooling those separate reports into a whole, so that we may have an overall view of the combined thinking.

The conclusions I have recorded as being pertinent to the discussion, and maybe a little impertinent to the subject, run the whole gamut of opinion, fact, myth, and outworn theory. The confusion today about the role of women and their place in society is caused by the fact that for the first time in the history of women workers, they have become a fixed factor in the labor force.

Women workers are here to stay. That may be good; it may be bad. It depends upon who thinks it is good and who thinks it is bad. Nonetheless, we are here to stay in the labor force. We have to take ourselves much more seriously than we have taken ourselves before, and perhaps if we do take ourselves much more seriously, the men will take us more seriously. Many of these things we have talked about, I think, are hangovers from the past. Men have not yet caught up with the reality. Therefore, our job is to make them realize that this is a new era. It is a new era in which we can work together and accomplish much more than is possible through a separation of the sexes. In any case, I am against the separation of the sexes. I like sexes--both kinds, simultaneously.

From your workshop discussions there appears to be general agreement, on the whole, that women are in the labor force to stay. There also appears to be general agreement that there is a war between the sexes despite this fact. Again, this may be due to a lack of catching up with the times.

But the real question is, why is there this feeling that there is war between the sexes in the world of work? Is it based on fact? Is it based on reality? Or is it that women are always asking for more than they have a right to get, as a man sees it? According to your own responses, there seems to be a general agreement that this is so. On the other hand, women say that primarily in the field of employment there are discriminatory practices that affect their right to choice of employment, their opportunities to advance in employment, and their right to training for advancement in employment.

Women say that personality, in many instances, has become a more important factor in a working situation than the fact that women should be judged on the basis of job accomplishments rather than on lesser distinctions.

Employers--most of whom are men--believe there is more absenteeism. Many insist that women are less responsible on their jobs than men are. This happens to be an area in which there has been serious research to find out if this is actually so or if it

is something people believe without any factual basis or foundation. It is an area in which research was carried out for the President's Commission on the Status of Women. After very competent research, it was agreed that this was not a real issue; that women, especially the older women who come back to the labor force, are able to adjust themselves completely to their jobs, if they are interested in them. Basically there is less absenteeism among mature women on the job than there is among men.

The reason for absenteeism among men is that men seem not to take care of themselves as quickly as they should when they have a serious physical problem. What this does, of course, is aggravate the condition to the point that when they finally do go off their jobs, they have serious ailments that result in lost time over a longer period. Therefore, their absenteeism rate is greater than that of women, although it appears to many employers that women have a higher absenteeism rate. In other words, when a man removes himself from employment because of illness, it takes much longer for him to get back, because he allowed the illness to become serious. Women tend to anticipate this. They may have more frequent needs to be away from their jobs, but the total amount of absenteeism is far less in a year than that of men. This is what the study reveals, and this is what we think is the fact rather than the myth.

Another question raised here was one that I think was raised in each of the three sessions. What about the implications of seniority in terms of the status of women on their jobs?

The general consensus that I have gathered from the reports of all three of your reporters is this: Women feel that a strictly enforced seniority system could help wipe out some of these antagonisms that women have felt against men. Lack of enforcement is a source of irritation.

The charge also was made that it is very difficult indeed to get women out to meetings in the evening. I think all of us would agree that this is probably true. What we have to do is look for factors that make this true. When a woman leaves her job to return to the household, her evenings are filled with many details that have to be taken care of at home. They are details of shopping, cooking, keeping up with the kids, being with the children so she knows where they are, being in the position where she can relate to them. She carries the burden on from her job to her home. She must continue in the role of wife and mother, as well as wage earner. So it may well be true that this is an extra burden on the woman. She has to be highly motivated to pick herself up in the course of an evening or several evenings and go off to a union meeting. On the other hand, it might well be that if union education directors were ingenious enough to think in terms of more interesting programs for its women members, more trade union women might be willing to go to meaningful meetings in which ideas are discussed and in which they can participate in decisionmaking rather than just be "talked at" by the men. I think the labor education programs that are being developed need to build more variety and meaningfulness into union meetings.

We must develop more effective approaches in labor education programs, both in the universities and in the union. Since I have been in both fields, I feel very strongly about this. We must develop more meaningful and exciting programs to bring both men and women into union meetings when there is need for discussion. We must also realize that there are many other things that keep people away from union meetings. There are the distractions of TV; there are the bowling clubs; there are all of the recreational events that should also be available to both men and women after a hard day. These act as deterrents against rushing off to a union meeting after a long day of work.

This is not a matter of sex. I think we have to understand that. I think that many men as well as women will stay away in a given situation from a trade union meeting. It is probably true, however, that if women are the majority in a plant, more of them will participate. The men, who are the minority in that group, will tend to stay away because

women dominate them. These are the kinds of consideration that will determine whether it is worthwhile to go out to union meetings. The distance from home is also a factor. These are not meant as excuses. What we are saying is that it is not a matter of sex. Women stay away no more than men in the total spectrum of attendance at union meetings, and we should recognize that fact. What we ought to be doing, therefore, is trying to make union meetings as attractive as possible for both men and women, and then see whether this has added something to the dimensions of the meeting, and whether it has interested women more in some of the basic problems on the job.

Women do resent the fact that where women are predominant in a local or occupation, they are not given the choice of whom they will select to be their leader within the local. Leaders are appointed by the shop chairman or by someone who occupies a higher position in the union. Usually this is imposed from above rather than from below. The local union president appoints without consultation.

Another charge has been made that women do not like to give up the security of one job in order to move into a higher position or into a management position. This may well be; I am not sure. I have no way of knowing whether this is actually something that is meaningful in these terms. The question that I raise is, how often are women offered jobs that take them up into managerial positions? How often, even if they are accepted in these jobs, do they receive the same pay that men would have received for those positions? I think most of us know the answer.

On the other hand, there are women who feel that if they had an opportunity to test their ability for a better job, and not be penalized if it becomes too much of a burden along with all their other responsibilities, they might try for higher stakes. This might be something that could be explored in a union shop. This also could be a kind of testing ground to find out whether women can move into upper echelons more rapidly in the shop. More opportunity for promotion should be available.

On the other hand, when we ask men why women workers feel that men discriminate against them, men cite the following grievances: Women, they say, are unstable in their jobs. They are not willing to abide by the terms of the contract when they are in an organized shop. Women raise all kinds of irrelevant issues. Women, on the other hand, say that men feel women are against them when they question a man's judgment.

In one of the three workshops there seemed to be general agreement that the Equal Pay Act of 1963 was a forward step for women workers in reducing the sense of being discriminated against simply on the basis of sex. There was also agreement that men as well as women need protective labor legislation on the job, and that men as well as women should be involved in trying to improve existing legislation. This was disputed in another group. It was felt that the protective legislation now existing in a number of States is a handicap to women, because they are not allowed to work the longer hours that men may work. They are subject to certain weightlifting restrictions and to restricted hours. This is the one real conflict I have heard while visiting your discussion groups.

There is something to be said, perhaps, for both sides of this question. My own feeling is that it would be very unwise to get rid of such protective legislation as we now have until we are assured that what we get would be better than what we now have. Until such time, we cannot afford to do away with present legislation.

We must remember that not all women are in covered industry. Many have neither the Federal coverage given by Federal laws, nor in many States do they have the State coverage they should be getting by law. To throw this protection overboard would be throwing the baby out with the bath. This needs serious consideration. I think we should take more time to explore what would be useful and what would be harmful. I think what I am suggesting is that we have to do some rethinking in this general area of legislation

for working women. Some time should be spent in labor education classes and in your own union halls in discussing the pro's and con's. Don't give up what you have before you know what you are getting in return.

In another workshop it was maintained that women can be trained for any job that traditionally has been for men. This is an area of controversy, too. There is fear that women may displace men. There is fear that we are moving into training areas that will become obsolete in a short time. This is a real problem. One of the antidotes to this, of course, is that our vocational education laws and our vocational schools must become more realistic than they are now. Many are hopelessly behind the times. Today our vocational education systems have the largest amount of money ever obtained from the Congress in the history of this country. They have millions of dollars to work with, and it must be used wisely.

Parents must keep track of what is available now through the vocational education school system. Labor must have its representatives on these advisory boards in order to know what needs to be done. They have to know that when they sit in on vocational education boards as advisers they must be prepared to speak realistically as to whether the programs being worked out in the vocational schools are meaningful for today as well as for tomorrow.

Women agree, in large part, that they could involve themselves somehow in community action more than they do now. They agree to this, and then they say they cannot do it. Again, there are many reasons why they tend not to do it. It is essential for women to involve themselves in the area of community action. There is easier contact between working women and other women in the neighborhood while shopping, at school, and other places. It is a wonderfully easy way to start meaningful discussion. Women should concern themselves more with the political and economic realities of today. They can be important in making decisions on matters they understand. The communication with neighbors on meaningful issues should be done by men and women together, but I think what I am saying here is that women have opportunities to chat with other women and to pass along ideas among themselves.

As a former teacher, I must say I feel that the teachers of America have not been pulling their weight as much as they should have. It is true that they have a pretty burdensome job. I don't believe I ever could have survived teaching on the elementary or secondary school level. Fortunately, I taught college students. That was rough, too, but it was very rewarding. I think teachers are overburdened. Their hours are too long. They have great problems of getting proper material, especially in the schools that are rundown and in which there has been very little development in terms of equipment. But in spite of this, I feel that the teachers of America could devote more of their time to some basic neighborhood problems, and that parents could be made more aware of what is needed from the schools. I think that teachers and parents should be motivated to work directly for better schools and better neighborhoods and to stimulate the churches to more active participation in social problems of our day.

There are many civic groups to which many of you belong. You should try to keep extending your contacts with all such groups. I think we in the labor movement tend to talk too much to ourselves and to our own kind. We have to learn to talk to others with different views, because these other groups may be better educated than we are, and their views may be worth learning about. Our advantage is that we probably know more about the world of work and the economic realities of American life.

I think we have to spend more time on cultivating the active and highly motivated women outside the labor movement who can do a great deal to help us reach common objectives. I believe more and more women are thinking in similar terms. If we could have this two-way discussion--this two-way airing of problems and joint attempts to solve them--we could help solve community problems that need to be taken care of.

I am suggesting here that we work openly with those groups that have the same kind of interests and the same social objectives we have, so that our strength may be three or four times what it would be without this additional womanpower. In order to do this, women have to reach out more and more to understand the social issues, and they must involve themselves in issues they never thought were their concerns. They have to concern themselves with welfare, education, and politics. They must learn how to communicate with neighbors on both sides of the fence. Some of us think of this as men's work. I say it is also women's work.

Women must be willing to learn. We must be willing to understand. We must be willing to take leadership roles when we are qualified for leadership roles; and if we are not qualified we should be willing to get the necessary training. We can be volunteers. We can be unpaid leaders, or we can be paid leaders.

There must be greater emphasis by women trying to get into the political stream. I don't mean that women should be babysitters and car drivers on election day. Women must prepare themselves and be willing to run for public office as well.

Too few women run for office in the United States. When I lived abroad, I guess I thought the United States was really backward in this respect. In France I was astonished by the number of women in the French Parliament. The French women, Yugoslav women in the early days, Dutch women, and many other groups of women are much farther ahead than we are in terms of participation in political life. We have the ability, but we just haven't thought of it as our mission. It has to be one of our missions. We have to be prepared to motivate ourselves and others to action. We have to learn to be alert to what the problem is and the real meaning of the problem. We can do it once we know how to address ourselves to the problem.

This is a wonderful period in which to be alive, despite crises in the world today--or perhaps because of them. Trade union women and men working together for common goals in the labor movement must extend their activities into the community, the city, and the State to bring about more rapidly the society of equals in which all may share. I believe this has been the first all trade union women conference that the Women's Bureau has cosponsored. Your followup from this one will, I am sure, be even more rewarding and adventuresome.

Appendix A

UNION MEMBER QUESTIONNAIRE

1. In your local, what percentage of membership is female?

   Less than half _____ About half _____ More than half _____

2. In your opinion, how well does your local serve the needs of its women members?

   Very well _____ Adequately _____ Not very well _____

3. In what areas below could your local improve its service to women members?

   Wages and salaries _____ Promotional opportunities _____

   Job security _____ Fringe benefits _____

   Other (specify briefly) _____

4. What is the highest office now held by a woman in your local? _____

5. What is the next highest office a woman now holds? _____

6. Have you ever run for office in your union? Yes _____ No _____

7. Are you now an officer? Yes _____ No _____

8. Would you be willing to run (or run again) for a top union office?

   Yes _____ No _____

   If no, why not?

   Haven't time _____
   Think men make better officers _____
   Reluctant to take criticism an officer receives _____
   Don't think members would support a woman candidate _____
   Don't think other officers would accept a woman _____
   Other (specify briefly) _____

9. Do you know another woman you would support for a top union job?

   Yes _____ No _____

10. How many years have you held membership in your union? _____

Appendix B

WIVES OF UNION MEMBERS QUESTIONNAIRE

1. What is the name of your husband's union? _____

2. Have you ever been a union member? Yes _____ No _____

3. Have you ever been employed since marriage? Yes _____ No _____

4. Do you feel that working women need unions? Yes _____ No _____

   Why, or why not? _____

   _____

   _____

5. Do you feel that unions need women members? Yes _____ No _____

   Why, or why not? _____

   _____

   _____

Appendix C

ANALYSIS OF RESPONSES TO UNION MEMBER QUESTIONNAIRE

Registrants here today represent 11 different unions. In the audience (that is, among those listed as "attendees") there are 28 union women, and all but 3 have filled out our survey questionnaire. Here's what your answers told us about you and your unions.

The largest group, 84 percent of you, come from unions in which women comprise the majority of total membership. The rest are divided equally between women from predominantly male unions (8 percent), and women from unions with a 50-50 membership mix (8 percent).

Among you, you represent a total of 348 years of union membership, which gives you an average membership of about 14 years. Here's the way that breaks down: 16 percent of you have 3 to 5 years' membership; 20 percent, 6 to 10 years; 24 percent, 11 to 15 years; 40 percent, 16 years or more. The longest term of membership reported was 26 years.

Now let's see what you think of your unions. Most of you agree that your unions do a pretty good job for their women members. Fifty-six percent of you think your union serves the needs of women members very well. The remaining 44 percent rate the union's service to women as adequate.

The next question was: In what areas could your union improve its service to women members--that is, what can your unions do to make you love them more? Here you could mark more than one answer. Wages and salaries received the largest vote (40 percent of all votes) as the area most in need of improvement. Promotional opportunities ranked second, with 20 percent of the total vote. Job security and fringe benefits tied for third place, with 17 percent each. One answer said all areas could be improved for all members. Six percent of the women considered their unions perfect and skipped that question. Incidentally, your answer to that question differed according to the numerical strength of women in the union. Women from predominantly male unions gave most of their votes to job security; women from the 50-50 unions inclined to favor promotional opportunities; and women from the predominantly female unions concentrated on wages and salaries.

Now let's consider women as union officers. Most of you, 24 percent, come from a local where the highest woman officer is president. Twenty percent named a secretary, a treasurer, or a secretary-treasurer as top woman officer; and 16 percent pointed to a business agent. Another 16 percent reported no women officers. Of course, you realize that there is a lot of duplication in those figures, since many of you are from the same local. (Incidentally, the union most heavily represented was the ILGWU with eight attendees. Next came the teachers, laundry workers, and paper box makers with five each.)

The question about the next highest woman officer was asked to shed light on the path to the top for women officials. However, 48 percent of you come from unions which

apparently have only one woman official--no second highest woman officer is listed. Evidently, no regular chain of progression for women officials has been established. Among the remaining 52 percent of the answers, 24 percent listed a vice president as the second highest woman officer; 8 percent, a president; 8 percent, a secretary or secretary-treasurer; and the rest named chief stewards and stewards.

Now let's see what your answers reveal about why there are relatively few women on the way up. The next question was: Have you ever run for office in your union? Forty-eight percent of you replied Yes; 48 percent, No; 4 percent didn't answer. However, 52 percent of you reported that you are now holding office in your union, so apparently there are some appointees among you.

The next question was: Would you be willing to run (or run again) for a top union office? You answered that one with a loud Yes; 68 percent of you declared you would, indeed! Among the seven women on the No side of that question, two gave no explanation, two explained they haven't time, one said she thought men make better officers, one feared that other members would not support a woman candidate, and one thought that other officers would not accept a woman.

And finally, 68 percent of you said you did know another woman you'd be willing to support for a top union job.

Appendix D

CONFERENCE ATTENDEES

Margaret Ault
22 Munsee Drive
Cranford, N.J. 07016

Betty Bachman
62 Gerdes Avenue
Verona, N.J. 07044

Lillie Barnes
194 Leslie Street
Newark, N.J. 07108

Irene Beers
500 Elizabeth Avenue
New Brunswick, N.J. 08902

Barbara Berger
769 Stephen Avenue
Perth Amboy, N.J. 08861

Kitty Biard
786 Broad Street
Newark, N.J. 07102

Tecla Bodeck
250 North 10th Avenue
Manville, N.J. 08835

Addie Bright
660 Newark Avenue
Jersey City, N.J. 07306

Lucille Brokenbough
213 Monticello Avenue
Jersey City, N.J. 07306

P. N. Casey
34 James Street
Newark, N.J. 07102

Winfield S. Chasmar
660 Newark Avenue
Jersey City, N.J. 07306

Viola C. Corey
U.S. Department of Labor
Boston, Mass. 02203

Anna Dennis
243 Boyle Plaza
Jersey City, N.J. 07302

Agnes Douty
U.S. Department of Labor
Washington, D.C. 20210

Ida Feldman
202 Lewis Street
Perth Amboy, N.J. 08861

Patricia D. Ferrara
204 Ward Street
New Brunswick, N.J. 08902

Barbara Finkelstein
17 18th Avenue
Paterson, N.J. 07524

Mary Galloway
225 South Burnett Street
East Orange, N.J. 07052

Cecelia Garnett
18 Foster Street
Newark, N.J. 07112

Margaret Gross
Hillsborough Line Road
Belle Meade, N.J. 08502

Doris Hubatka
30 Elm Street
Linden, N.J. 07036

Helen Hurd
Rutgers University
New Brunswick, N.J. 08903

Alvin James
786 Broad Street
Newark, N.J. 07102

Gertrude Johannssen
Springfield Avenue
Cranford, N.J. 07016

Gloria Johnson
1011 Carrington
Washington, D.C. 20027

Nicholas Juliano
31 Central Avenue
Newark, N.J. 07102

Milton Kaufman
375 Broadway
Long Branch, N.J. 07740

John Kelly
U.S. Department of Labor
Washington, D.C. 20210

Margaret Lawson
R. D. 3, Carter Road
Princeton, N.J. 08540

Herbert A. Levine
Rutgers University
New Brunswick, N.J. 08903

Rose Litman
786 Broad Street
Newark, N.J. 07102

V. Brantley McMillon
52 Custer Avenue
Newark, N.J. 07112

Raymond F. Male
New Jersey Commissioner
of Labor and Industry
Trenton, N.J. 08608

Nick Menzo
500 Alma Terrace
Teaneck, N.J. 07666

Esther Murray
815 16th Street, N.W.
Washington, D.C. 20006

Ann Nameth
155 Kearny Avenue
Perth Amboy, N.J. 08861

Maude Nelson
67 Hanford Street
Newark, N.J. 07114

Verone Nutchen
20 Elm Street
Bergenfield, N.J. 07621

Adeline O'Connell
1219 Park Avenue
Hoboken, N.J. 07030

Phyllis Pank
129 Murdock Street
Fords, N.J. 08863

Dorothy Pendergast
1496 Commonwealth Avenue
Boston, Mass. 02135

Catherine Renould
33 Broad Street
Elizabeth, N.J. 07201

Susie Richardson
42 Ridgewood Avenue
Newark, N.J. 07108

Georgina M. Smith
Rutgers University
New Brunswick, N.J. 08903

Abe Solomon
660 Newark Avenue
Jersey City, N.J. 07306

Frieda Sorensen
75 Craig Street
Nixon, N.J. 08818

Robert Steffen
Rutgers University
New Brunswick, N.J. 08903

Julia Tewes
33 Broad Street
Elizabeth, N.J. 07201

Betty Tianti
23 Lewiston Street
Willimantic, Conn. 06226

Florence Van Norden
Rutgers University
New Brunswick, N.J. 08903

Celia Vignolo
301 53d Street
West New York, N.J. 07093

Petronella von Wenckstern
Rutgers University
New Brunswick, N.J. 08903

Catherine Watkins
660 Newark Avenue
Jersey City, N.J. 07306

Frances Williams
415 Hawthorne Avenue
Newark, N.J. 07112

Connie Woodruff
3 William Street
Newark, N.J. 07102

Doris E. Wynn
48 Myrtle
Metuchen, N.J. 08840

VT 006 310
Report of Statewide Meeting of the Governor's Commission on the Status of Women (Des Moines, Iowa, November 20-21, 1964).

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*IOWA GOVERNOR'S COMMISSION ON THE STATUS OF WOMEN, DES MOINES, IOWA, NOVEMBER 20-21, 1964

One hundred eighteen participants met to consider the recommendations of the Governor's Commission on various aspects of the role of contemporary women. Presentations were given by Dr. Marguerite Scruggs, Chairman of the Commission, Governor Harold E. Hughes of Iowa, Mary Dublin Keyserling, Director, Women's Bureau, U.S. Department of Labor, and Marguerite I. Gilmore, Chicago Regional Director, Women's Bureau. A symposium on the commission report brought the chairman of each of the commission's committees to the platform. Each in turn discussed the highlights of the commission report in his own area. They were Jude P. West of the Employment Practices Committes, Erma B. Plaehn of the State Labor Laws Committee, Marian L. Jones of the Legal Treatment of Women Committee, Margaret K. Yoder of the New and Expanded Services for Women Committee, and Elizabeth S. White of the Educational Needs of Women Committee. Groups discussed employment practices, state labor laws, legal treatment of women, new and expanded services, and educational needs of women. Suggestions were given for implementation of the recommendations by Dr. Helen R. LeBaron, Dean, College of Home Economics, Iowa State University and by Mrs. Alice M.V. Myers, Executive Director, Y.W.C.A., Des Moines, Iowa. (FP)

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Report of

STATEWIDE MEETING

of the

GOVERNOR'S COMMISSION ON THE STATUS OF WOMEN

Held at
Hotel Savery
Des Moines, Iowa
November 20-21, 1964

U.S. Department of Labor
W. Willard Wirtz, Secretary

Women's Bureau
Mary Dublin Keyserling, Director

VT006310

Report of

STATEWIDE MEETING

of the

GOVERNOR'S COMMISSION ON THE STATUS OF WOMEN

Held at
Hotel Savery
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November 20-21, 1964

Sponsored by

Iowa Governor's Commission on the Status of Women
and
Women's Bureau, U.S. Department of Labor

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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U.S. Department of Labor
W. Willard Wirtz, Secretary

Women's Bureau
Mary Dublin Keyserling, Director

FOREWORD

This report provides a summary of the sessions of the statewide meeting of the Governor's Commission on the Status of Women held at Hotel Savery, Des Moines, Iowa, November 20-21, 1964. An interim report was presented to Governor Harold E. Hughes and interpreted to the Iowa citizens present at the conference sessions.

The conference was sponsored by the Iowa Governor's Commission on the Status of Women and the Women's Bureau of the U.S. Department of Labor.

We acknowledge with appreciation the efforts of the many individuals who prepared the interim report, planned the conference, and participated in it. Special thanks are due Miss Marguerite I. Gilmore, Regional Director, Women's Bureau, U.S. Department of Labor, Chicago, Illinois, and Mrs. Betty Talkington, Director, Women's Activity Department, Iowa Federation of Labor.

Mary Dublin Keyserling

Mary Dublin Keyserling
Director, Women's Bureau

CONTENTS

	Page
CONFERENCE PROGRAM	iv
CONFERENCE OBJECTIVES	vi
SUMMARY OF CONFERENCE PROCEEDINGS	1
OPENING SESSION	1
Presentation of the Report of Iowa's Governor's Commission on the Status of Women to Honorable Harold E. Hughes, Governor of Iowa, by Dr. Marguerite Scruggs	1
Acceptance of Report by Governor Hughes	2
Address by Mrs. Mary Dublin Keyserling, Director, Women's Bureau, U.S. Department of Labor	3
SATURDAY MORNING SESSION	10
Excerpts from Address by Mrs. Mary Dublin Keyserling	10
Highlights of Committee Reports	12
Employment Practices--Mr. Jude P. West	12
State Labor Laws--Mrs. Erma B. Plaehn	13
Legal Treatment--Mrs. Marian L. Jones	14
New and Expanded Services for Women--Mrs. Margaret K. Yoder	16
Educational Needs of Women--Dr. Elizabeth S. White	18
LUNCHEON SESSION	21
Activities of Governors' Commissions on the Status of Women in Midwest--Miss Marguerite I. Gilmore	21
AFTERNOON SESSION	24
Suggestions for Implementation of Recommendations	24
Dr. Helen R. LeBaron	24
Mrs. Alice M. V. Myers	26
MEMBERS OF THE COMMISSION AND COMMITTEES	29
REGISTRANTS	31

CONFERENCE PROGRAM

Friday--November 20, 1966

5:30 p.m. Registration

6:30 p.m. Banquet--Presiding: Mr. George W. Moore, Director, Iowa State Employment Service

Presentation of Report to Honorable Harold E. Hughes, Governor of Iowa, by Dr. Marguerite Scruggs, Chairman of Commission on Status of Women; Head, Department of Home Economics Education, Iowa State University

Acceptance by Governor Hughes

Address by Mrs. Mary Dublin Keyserling, Director, Women's Bureau, U.S. Department of Labor, "Status of Women: National--International"

Saturday--November 21, 1966

8:30 a.m. Registration

9:00 a.m. General Session--Presiding: Mrs. Betty M. Talkington, Director, Women's Activity Department, Iowa Federation of Labor

Introduction of Commission Members

Address by Mrs. Mary Dublin Keyserling

Symposium

1. Employment Practices Committee--Chairman, Mr. Jude P. West, Head of Government Services, Bureau of Labor and Management, University of Iowa

2. State Labor Laws Committee--Chairman, Mrs. Erma B. Plaehn, Professor, Political Science, State College of Iowa

3. Legal Treatment of Women Committee--Chairman, Mrs. Marian L. Jones

4. New and Expanded Services for Women Committee--Chairman, Mrs. Margaret K. Yoder, District Home Economics Superintendent, Department of Home Economics, Iowa State University

5. Educational Needs of Women Committee--Chairman, Dr. Elizabeth S. White, Dean of Women, Morningside College

11:30 a.m. Luncheon--Presiding: Miss Norma J. Bruner, Woman Inspector, Iowa Bureau of Labor

Activities of Governors' Commissions on the Status of Women in the Midwest--address by Marguerite I. Gilmore, Chicago Regional Director, Women's Bureau, U.S. Department of Labor

1:30 p.m. Discussion Groups

1. Employment Practices

2. State Labor Laws

3. Legal Treatment of Women

4. New and Expanded Services

5. Educational Needs of Women

3:15 p.m. General Session--Presiding: Dr. Marguerite Scruggs

Suggestions for Implementation of Recommendations: Report by Dr. Helen R. LeBaron, Dean, College of Home Economics, Iowa State University

Report by Mrs. Alice M. V. Myers, Executive Director, Y.W.C.A., Des Moines, Iowa

CONFERENCE OBJECTIVES

To present to Governor Harold E. Hughes the first report of the Iowa Governor's Commission on the Status of Women.

To interpret to the citizens of Iowa the recommendations of the committees to the members of the public attending the conference.

SUMMARY OF CONFERENCE PROCEEDINGS

OPENING SESSION, Friday, November 20, 1964

MR. GEORGE W. MOORE, Director of the Iowa State Employment Service, presided at the banquet session of the statewide meeting of the Governor's Commission on the Status of Women. After explaining that one of the main functions of the evening was the presentation to Governor Harold E. Hughes of the first report of the Iowa Commission on the Status of Women--appointed by him in October 1963--he introduced the Commission Chairman, Dr. Marguerite Scruggs, head of the Department of Home Economics Education at Iowa State University.

DR. SCRUGGS thanked Governor Hughes, on behalf of the 25 members of the Commission on the Status of Women and the more than 25 other people who served as committee members, for the privilege of serving on the commission and expressed appreciation for his interest in furthering a study of those conditions in Iowa which influence not only women but all citizens of the State.

"You asked the commission to study five areas and to make recommendations for needed action," Dr. Scruggs said. "This first report--and we are saying 'first' because we are quite certain that it isn't completed--summarizes what has been accomplished so far in the way of findings, makes recommendations, and points out areas that we think need further study. The five areas that have been studied focus upon the different roles of women, but our intent is to look at the total picture of women in Iowa, and to suggest ways to improve what in many aspects is already an excellent image.

"Governor Hughes, we appreciate your willingness to let us share this report with those here tonight. It is a real privilege to present to you the first report of your Governor's Commission on the Status of Women."

GOVERNOR HAROLD E. HUGHES accepted the report and commented, "I am pleased that you are on time with your report. I am amazed at what can be accomplished with no money. This is an excellent working production. If we could operate all departments of State government as efficiently, I wouldn't have the problems I have today. I want to express my personal appreciation to Dr. Scruggs, to all of the members of the Commission on the Status of Women, and to all those who cooperated with it. This is not a moment of discontinuance, but rather a moment of rededication to what must be a continuing study. When I decided to follow the guidelines laid out by the late President Kennedy, I hoped that this study could be implemented in the coming session of the general assembly.

"We realize that here in Iowa some problems are not as great or acute as they are in many other areas of the Nation. But at the same time, the problems are sometimes so subtle that they are overlooked and therefore need to be investigated more thoroughly.

"Though I haven't yet read the report, I know the capabilities and dedication of the people who produced it. I am certain it is an excellent report, and I hope that we include some of the recommendations in future legislation. I want to thank every one of you personally for the contributions you have made. I realize that in some States, commissions have been established by statute and have been provided with funds. Even if we had a statutory commission and if you had had some money other than what you rounded up yourselves, I am certain the report would have not been more ably done. This alleviates my conscience a little. Perhaps I can hold you up as an example to other commissions: 'The ladies accomplished this without any money.' Certainly others should be able to be as resourceful as you have been.

"I can only say thank you from the bottom of my heart and hope the dedication you have shown will result in the improvement of the status of women in our State--your goal and ours as well.

"Thank you very kindly."

Mr. Moore then introduced Mrs. Mary Dublin Keyserling, Director of the Women's Bureau of the U.S. Department of Labor.

MRS. MARY DUBLIN KEYSERLING: "This is an historic occasion. The presentation to you, Governor Hughes, of the splendid report of your Commission on the Status of Women marks another great milestone of progress for women. I know the report will open the doors to greater opportunity for women in Iowa and will benefit all women throughout our Nation. For, as some of us advance, all of us enjoy brighter prospects for progress. May I congratulate each and every one of you who has played a part in this heartwarming undertaking.

"You have asked me to say a few words this evening on what has been happening to the status of women generally in the United States.

"It is no exaggeration to say that a veritable new climate of opinion with respect to the position of women in our society is in the making. Everywhere one finds greater recognition that women's place is wherever brains and hearts and hands are needed. Except for that momentous time back in 1920 when the 19th amendment was pushed through to passage, there hasn't been a period in this century in which so many heartening gains have been won as in these past 3 years.

"Just as here in Iowa, groups of able and thoughtful men and women throughout our whole country have been engaged in a review in depth of women's changing role, in an analysis of those barriers which still impede the full realization of women's rights and limit the contribution they are eager to make, whether it be on the job or in the community. Laws affecting their civil and political status and every other aspect of their lives are being scrutinized. Schools and colleges are reexamining their approaches to the educational needs of women. Employment policies are being reviewed. What new services are needed? How can we further strengthen homelife and contribute to family security? These and a myriad of other significant questions are being raised the length and breadth of the land.

"This unparalleled ground swell of interest is apparent at the grassroots. It is more than apparent--it's dynamic and clarion clear at the highest point of national leadership. President Johnson at his very first Cabinet meeting declared, 'The day is over when top jobs are reserved for men.' A few weeks later, you may recall, at the time he made public the names of the first 50 women he appointed to top posts in Government, he said, 'I would like at this time to make a policy announcement.' And then he said, 'I am unabashedly in favor of women.'

"The President went on to speak of his commitment: 'I am insisting that women play a larger role in this Government's plans and programs. Women have a willingness of heart. Moreover, they have an instinct for rightness that is as important to decisionmaking as numbers or logic.' He spoke of his intent to 'bring women of imagination and energy to the fore,' in all the big and challenging jobs to be done. It's clear a very good day is dawning. The President has set the pace for nationwide advance.

"President Johnson has made the upgrading of women in the Federal service a major objective. Between January 1 and October 2, 1964, he named 68 women to top Government posts. In addition the executive agencies have appointed 311 and promoted more than 1,231 others at salary levels of $10,000 and more. The showcase example of the Federal service is benefiting women everywhere.

"As you know, this great upsurge of interest in larger horizons for women--in the fuller use of their abilities and skills in every phase of our national life--was given its major impetus by the work and recommendations of the Commission on the Status of Women appointed by President Kennedy in December 1961.

"You may remember he appointed 26 outstanding men and women as members under the chairmanship of Eleanor Roosevelt. As we pay tribute to the work of your Iowa commission, I know we want to acknowledge together our deep debt of gratitude to that very great lady whose heart encompassed all mankind.

"She understood so well that the task of a commission on the status of women is but a part of the total task which confronts our great Nation. Our times differ from all those that have gone before. For the first time in history, we can say we have the skills, the resources, the know-how to realize man's ancient dream of release from hunger, poverty, and deprivation. We have but to use these skills and resources fully, wisely, and well to provide the good life for all our people. And women's skills and 'willingness of heart,' to use President Johnson's felicitous phrase, are a part of this national bounty which must be fully drawn upon.

"Under the leadership of the President's Commission, the whole nature of the discourse about the status of women has moved in new directions. No longer do our discussions focus solely on rights or needs or the desire to fulfill personal aspiration--important as are these objectives. It centers even more on how the contribution of women to the world around them can be maximized. As never before, women want to rise to new responsibilities.

"On October 11, 1963, the national Commission presented its recommendations to President Kennedy. I hope you all have read its report, 'American Women.' It is inspiring reading. No one who played a part in the Commission's work could have anticipated then how much was to be set in motion by way of new advances. The results have far exceeded expectation.

"Last year, Congress, accepting the Commission's recommendation, passed the equal pay law. The very large numbers of women employed in interstate commerce are already reaping the benefits of this legislation.

"I have mentioned the larger opportunities that have opened to women in positions of high responsibility in Government. This is but part of a determined effort to make the Federal service a model with respect to employment policy.

"As a result of a Presidential directive, both hirings and promotions are being made by all Federal agencies on the basis of qualifications alone, without regard to sex.

"Also following the Commission's recommendation, the U.S. Employment Service has taken steps to encourage acceptance and use of hiring specifications based exclusively on job performance factors, on the part of the very large number of employers throughout the United States who use the employment service.

"We have seen included in the Civil Rights Act, enacted last summer, a provision ruling out all discrimination in employment on the basis of sex. This applies to all women in industries affecting interstate commerce. Although this action was not a specific recommendation of the President's Commission, one wonders whether such a provision would have been included in the law had not the Commission done so much to draw national attention to discriminatory employment practices. A Commission to administer this portion of the Civil Rights Act, which goes into effect next July, is shortly to be appointed by the President.

"When the work of the President's Commission terminated in October 1963, President Kennedy in an Executive order declared that enhancement of the quality of American life, as envisaged by the Commission's report, can be accomplished by both public and private groups, through coordinated action within the Federal Government, and through action by States, communities, educational institutions, voluntary organizations, employers, unions, and individual citizens.

"To help fulfill continuing Federal responsibility, President Kennedy appointed an Interdepartmental Committee on the Status of Women composed of Cabinet officers whom he asked:

to review and evaluate progress of Federal agencies in advancing the status of women, and to do so on a continuing basis;

to serve as a clearinghouse of information on what is being done to improve conditions of special interest to women;

to stimulate cooperation and the sharing of data, views, and information among Federal agencies, State and local governments, State Commissions on the Status of Women, and public and private organizations having responsibilities and interests of special concern to women;

to encourage research on factors affecting the status of women.

"I can tell you, on the basis of close observation and, in fact, participation, that the Interdepartmental Committee has been conscientiously carrying out its duties. Just very recently the Secretary of Labor, at the request of the President, wrote to every agency of Government, asking them to give him a progress report by the end of the year on what they are doing to give women full equality of employment opportunity. The reports which are coming in are immensely encouraging.

"President Kennedy also appointed a Citizens' Advisory Council on the Status of Women composed of 17 members. This Council is charged with responsibility:

to suggest and stimulate action with groups and individuals working for the improvement of conditions of special concern to women;

to review and evaluate their progress in furthering the full participation of women in American life;

to advise and assist the Interdepartmental Committee in evaluating progress and to recommend action to accelerate it.

"And this Council has been hard and very constructively at work.

"Just a few weeks ago these two bodies--the Interdepartmental Committee and the Citizens' Advisory Council--sent to President Johnson their first annual progress report. This report covered advances in the Federal executive branch and legislative progress at the national level. It covered gains in the States--relating both to legislative action and most especially to the truly exciting contribution of the 33 State commissions on the status of women which have thus far been appointed.

"The report summarized only the highlights of the progress made during the course of this past year, yet it runs to 27 printed pages. So you will appreciate why I can't summarize for you in detail this evening what has been transpiring. I hope you will want to read this interesting report. You may obtain a copy by writing to us at the Women's Bureau.

"Legislative gains and administrative improvements are concrete and specific. They can be identified easily. Perhaps even more important are the more subtle changes that are brought about in the attitudes of people--attitudes that shape women's role and affect opportunities. It is here that the report of the Commission and especially the reports of its seven committees have had a most important impact, too diversified and far-reaching to be appraised in the time we have at our disposal this evening.

"There can be no doubt that a ferment of reappraisal and reevaluation has been stimulated everywhere, not only at home but abroad. The Commission's report has been translated into Japanese, Swedish, and Italian. Denmark has established a commission. The Director of the Women's Bureau in Japan has urged similar action. Other countries are expected soon to follow suit.

"The status of women is improving everywhere around the world. The head of the International Division of our own Women's Bureau spent several weeks this summer in Malaysia, working with the National Council of Women's Organizations which has recommended the establishment of a Women's Bureau. This rising interest in advancing the welfare of women is manifest in many other developing countries. Political rights are expanding almost universally. Isn't it good to be able to say that in 106 countries of the United Nations, women may vote in all elections and are eligible for election to office on an equal basis with men? In six countries the right to vote and/or the eligibility of women to hold office are subject to limitations not imposed on men. In only eight countries and in one region of another, women lack voting rights and are not eligible for election--but in two of these I can report that neither men nor women enjoy electors' rights.

"I wish there were time to talk of the numbers of women abroad serving their countries at the cabinet level, as ambassadors, and in other top capacities. But it is very clear that all over the world we are moving ahead together. Progress is rapidly on the way.

"And nowhere are more heartwarming developments to be observed than at the State and local levels here in America. This is because of the kind of work being done by Governors' commissions on the status of women.

"I have already mentioned that 33 State commissions have been appointed. Yours is the fourth State to submit an interim report. The first commission to file its final report--in the State of Washington--was immediately reappointed to go on with this job.

"The State commissions have been doing a remarkably good job seeking every possible way whereby women's needs may better be served and whereby women may better serve our communities and our Nation. They have been holding public hearings and public meetings such as this. Countless committees have been hard at work. The concentrated study and analysis that have been done are bound to lead to unprecedented new gains.

"Our commissions are mobilizing the resources of the widest and most representative range of individuals and organizations. They know how important it is that findings reflect the needs and problems of all women, especially those whose needs are the greatest. They know, too, how important it is that all groups participate if recommendations are to be effectively implemented.

"We anticipate improvements in employment practices in the States and localities. A year ago when your distinguished Governor appointed the Iowa commission, he said, 'Government should lead the way in breaking down discriminatory hiring practices, whether they are directed toward minority groups, aging workers, or women. It can lead best by setting a good example.' He urged that the practice of State and local government agencies be examined to see whether they allow women to make contributions equal to their capacities. He said so well, 'The desires and circumstances of the individual woman should be the deciding factor as to whether she works inside the home or in an outside job, or combines the two. If she has the need to work, however, she should be able to do so without the fear of discrimination.'

"Twenty-six of our States do not as yet have equal pay laws. We already see a great activation of interest in this legislation.

"The work being done to inquire into the need for the extension and improvement of protective labor legislation has already brought home to large numbers of people the fact that millions of women are still being paid distressingly low wages. Already we see evidence of greatly accelerated interest in the improvement of existing State minimum wage legislation and in the enactment of such legislation in many of the 20 States in which minimum wage laws or orders are not now in effect. To the Commission on the Status of Women in Michigan goes much of the credit for an excellent minimum wage law, which was enacted just a few months ago and which protects women and men alike.

"Action in this area would help provide the added purchasing power we need to turn the wheels of industry more rapidly. It would help mitigate the problems of poverty. There are nearly 400,000 women wage earners in Iowa, yet Iowa has no laws assuring a minimum wage, equality of pay, or regulation of hours of work--all matters of deep concern to women workers.

"It's interesting to note that figures for a recent year indicated that over half of the experienced women workers in Iowa had annual earnings of less than $2,000.

"Said Governor Hughes so rightly when he appointed your commission: 'If we accept the working woman as a reality, we must accept the responsibility for providing her with equal employment opportunities, protective labor standards, and suitable working conditions. . . . If we are to maintain the strong family relationships that are the backbone of the stable society, we must continually reassess the employment problems of working women and their implications for the health and economy of our State.'

"Thanks to what your commission is doing and to the admirable leadership of your excellent Governor, we can all be confident that changes for the better are in store.

"The State commissions are stressing the importance of improved vocational guidance programs for girls and older women. They are stimulating new approaches to education, stressing the need for part-time study programs to enlarge opportunities especially for the mature woman who seeks to get her high school diploma; a B.A. or M.A. degree now so widely needed for teaching, social work, and other professions; or training for nursing or other careers.

"Our State commissions are helping to call attention to the need to enlarge part-time employment opportunities for women.

"There will be more widespread provision of homemaker services and of day care facilities for the children of working mothers, thanks to the work of the commissions. New efforts will be made to upgrade the status of women in such relatively disadvantaged occupations as household service. Employer and employee alike will benefit.

"Commissions everywhere are saying to American women: 'Your pattern of life has changed. You are marrying younger. You are bearing your children at younger ages. By the time you reach the age of 35, your children are launched in school. Your homes are easier to manage. You can look ahead to a long span of 30 or more years you want to use creatively and constructively. This is because in the last half century the average expectation of life of women has increased by 25 years.' The commissions are asking, 'What will you do with this great gift of time--time for the use of talents, time for the exercise of responsibilities?'

"Paid employment is not the only challenge, although many women must hold jobs to help meet the basic economic needs of their families. Those who have the privilege of choice as to how they best can use their time now have virtually unlimited opportunities to serve in volunteer capacities in every phase of community endeavor.

"The events of our times are far too important for any of us to stand on the sidelines as spectators. All of us must become involved as active participants. There are endless jobs in which we women can play a vital part. There is not an area in America--rural or urban--where there are not exciting and rewarding jobs to be done.

"We can liquidate poverty within a decade or two. This requires greater understanding of the lives and problems of the poor. It requires study of our interrelated economic problems and our public policies. It requires devoted service. We women are fitted by temperament and interests for this work.

"We can rebuild our slums and renew our cities. This calls for research, education, and creativity. It calls for working with the problems of neighborhoods, cities, and metropolitan areas. There is almost unlimited need for leadership effort here. Women are admirably suited for this work.

"For these and other phases of the task of building the Great Society--tasks too numerous to mention--we need to lift our sights. We need to realize that what we want to do is not greater than our capabilities to do. If we put all our able and willing workers to work, if we translate the new technology and automation into goods and services, instead of allowing them to create idle manpower and plant, there will be more than enough to meet all our needs. There will be so much, indeed, that progress for those at the bottom of the income

structure can be accompanied by progress for both those in the middle and even those at the top. The mutual interests of all should lead to the cooperative effort of all.

"This has important bearing on the position of women in our society. Economic expansion has particular significance for us. When our economy is expanding rapidly, there is room enough for all. When jobs are plentiful, no one challenges the right of all to seek employment opportunity. Discrimination dissipates. Mrs. Roosevelt put this so well when she said: 'Because I anticipate success in achieving full employment and full use of America's magnificent potentials, I feel confident that in the years ahead many of the remaining outmoded barriers to women's aspirations will disappear. Within a rapidly growing economy, with appropriate manpower planning, all Americans will have a better chance to develop their individual capacities, to earn a good livelihood, and to strengthen family life.' It's wonderful to see all that the State commissions are doing to move us toward these and our other vital goals.

"Best of all, the work of the commissions is not drawing to a close. Before the end of the year we expect that commissions will be appointed in three or four additional States. And before very long, we anticipate the appointment of a commission in virtually every State in the Union.

"How good it is to know that here in Iowa, as in other States, the Governor regards the work of the commission as too important to come to a halt even after the final report has been submitted. There's a continuing job to do to help implement recommendations and to carry forward the task of factfinding and identification of need."

MORNING SESSION, Saturday, November 21, 1964

The morning session was called to order by Mrs. Talkington, Director, Women's Activity Department, Iowa Federation of Labor, and secretary of the commission.

After introducing members of the commission and members of the committees who worked with it, Mrs. Talkington appealed for funds to repay the debt incurred by the commission in issuing its report. She expressed appreciation to the many people who contributed their talents above and beyond the call of duty, and explained that the $300 referred to was for paper and printing plates. Mrs. Talkington thanked by name the many individuals who helped to prepare the report for printing.

The chairman then introduced Mrs. Mary Dublin Keyserling, Director of the Women's Bureau and keynote speaker for the statewide meeting.

MRS. MARY DUBLIN KEYSERLING, Director of the Women's Bureau, U.S. Department of Labor warmly praised the work of the Iowa commission.

"Our Governors' commissions on the status of women, which now exist in 33 States, are doing an urgently needed job. While the position of women in the United States has improved immensely over the years," Mrs. Keyserling stated, "nevertheless, it is abundantly clear that women's talents and skills are not being fully drawn upon. Our society is much the poorer for this."

Mrs. Keyserling pointed to the great increase in the participation of women in the labor force. "Today about 45 percent of American women, aged 18 to 64 years, are now in gainful employment. This represents a 30-percent increase since 1947 in the percentage of women of this age working. The number of women at work has doubled, in fact, since before the war. Yet," she said, "the figures indicate that they tend to be more concentrated in the relatively lower paying, lesser skilled jobs than their education, training, and abilities warrant. This is a poor use of womanpower.

"While more women hold top jobs than ever before, the percentage who do so still remains very small," Mrs. Keyserling declared. She pointed out that "only about one-half of 1 percent of the 32 million women who worked some time during last year had money

incomes of $10,000 or more. More important, only 2 1/2 percent received $7,000 or more." Mrs. Keyserling stated, "Wages of both men and women are rising. The standard of living of the average American family has doubled since before the war, after allowance for price rise. Yet we find that men's wages are rising considerably more rapidly than are women's.

"A comparison of the median earnings of men and women employed full time and on a year-round basis indicates that in 1963 women received on the average only 59 percent of what men were paid. The wage gap varies greatly from industry to industry. In professional and related services and in public administration, the two fields in which women are relatively better off in terms of remuneration, our median earnings at full-time year-round work were only about 70 percent of those of men similarly employed. In sharp contrast, our earnings in personal services averaged only about 36 percent of those of men.

"What is more distressing than the existence of the wage gap in the relative wages paid to women and to men is that it has been widening over the past 24 years in every major industry group in which large numbers of women are employed.

"Indicative also of the fact that women are becoming increasingly rather than less concentrated in the lower paid, less skilled jobs is the fact that we now represent a smaller proportion of those in the professional, technical, and kindred fields than we did 16 years ago. In contrast, we comprise a considerably larger proportion of clerical and service workers--obviously far more disadvantaged occupations.

"These trends, which indicate an unconscionable waste of human resources--of the skills and talents of women, cannot be explained away by relative lack of education. Actually, the average number of years of education received by women is slightly higher than in the case of men. But women are faced by many restrictive hiring practices. They are faced by discrimination in promotions. They are faced by myths, running entirely counter to the facts, which assert that women make poor supervisors, or that they have substantially higher rates of absenteeism and labor turnover. The claim is often made, and without the slightest justification, that even women with more than adequate training and knowledge lack the ability to assume higher level positions in industry.

"We know also that all too little has been done to achieve arrangements making it possible for more women to play effectively the dual role which so many seek--to be good mothers and still to contribute as jobholders or volunteer workers. We have done far too little by way of providing services needed to maximize women's contributions in this dual role.

"And, of course, we know very well that we confront obstructions as women, not only in our jobs, but in many other aspects of our lives. Our role in public life remains far from commensurate with our numbers, skills, and abilities. I was distressed to see--and I imagine you were, too--that in this past year's elections fewer women were running for Congress than in many years. Many State laws related to our civil and political rights are antiquated. Many of our educational institutions and services have not been adapted as rapidly as they should be to changing patterns of women's lives.

"The commissions are also active in promoting increased participation of women in volunteer services. Some are discussing means for better coordination of recruitment, placement, and training. There is so much constructive work to be done in every community in America in which more women could lend a helping hand.

"While we should be pleased with the progress the President's Commission and the State commissions are making possible, nevertheless, we should be realistic about the length of the road that still remains to be traveled. We haven't yet arrived at that happy time when we can stop talking about status and about special problems women still face. When any large group of people in our society is relatively disadvantaged, continuing attention ought to be concentrated on the inequities, on the serious waste inherent in failure fully to utilize talent.

"Weighing remaining problems against progress, however, the picture is encouraging. A new spirit is making itself felt, a spirit that reflects the best of our democratic traditions--the determination to provide a climate conducive to the maximum development of the potentials of all people.

"This is a unique and exciting moment in history. For the first time we can say we have the skills and resources which if properly used can make life comfortable and rewarding for every American. At long last we know our society can be what we make it. We women reach for larger opportunity because we want above all to help hasten the day when we can say the good society we seek is truly close at hand for all."

A symposium on the commission report brought the chairman of each of the commission's committees to the platform. Each in turn discussed the highlights of the commission report in his own area.

MR. JUDE P. WEST, chairman of the Employment Practices Committee; head of Government Services, Bureau of Labor and Management, University of Iowa:

"In considering the subject of employment practices, we used 1960 statistics. To try to get some understanding of the problems of the 318,000 working women in the State, we divided them into five major groups--public administration, education, hospitalization, retail trades, and manufacturing--to be investigated by the five subcommittees within topical areas.

"First of all, were women getting equal pay for equal work? Second, did women receive fringe benefits? And then, what was women's opportunity for employment and training?

"When we asked some questions about opportunities for employment, promotion, and training, we found that in no institution we approached was there a stated policy of discrimination against women. Usually we were told that promotion was based on ability, and not on sex. However, the implementation of this policy was left to the individual managers, and we found that the myths Mrs. Keyserling mentioned were indeed in operation.

"We found too that the conditions reported by the President's Commission for the Nation as a whole were true in Iowa as well.

"One of the women on the subcommittee was vice president of a banking firm. But there were very few women at the top level, and when we asked a manager why, we received in answer some of these myths, such as women are not preparing themselves; we want people with M.B.A. degrees (there are very few people with master's degrees in business administration). Mrs. Keyserling touched on that problem too. But as I said we did find there were many myths circulating about women: there is more absenteeism among women, they don't want supervisory jobs, they will not travel, they tend to quit, they automatically follow their husbands, and so on. Our recommendations are:

"First, distribution of facts to employers throughout the State to counter some of these myths.

"Second, that high school and university counselors be alerted to the fact that women are needed not only in the typical female occupations but also in the insurance, banking, and engineering areas.

"Third, we also recommended that more information about counseling services for women reentering the labor market be made available. Twenty-one of the local employment service offices have counseling services for both men and women, but women don't avail themselves of these counseling services on the whole. Why not? Information should be distributed throughout the State, on the radio and in the press to inform women.

"And finally, of course, we recommended that adaptation of the equal pay concept be stressed throughout the State of Iowa."

Mr. West announced that early in January 1965, his committee was going to review Iowa's protective labor laws with the new legislators in the State. He invited conference participants to attend and help discuss the questions of minimum wage, wage collection laws, and other measures.

MRS. ERMA B. PLAEHN, Professor, Political Science, State College of Iowa, and chairman of the Committee on State Labor Laws, said that her committee may have been too conservative in their recommendations.

The extent of the laws in Iowa having to do with labor would limit her to a very short report because the code was very short. She said she had dropped in on sessions of the Iowa General Assembly since 1929; and over the years she had reviewed the 1920-60

censuses, reapportionment debates, the economy, election results in the last 10 years, and was noticing a shift.

In 1960, according to the U.S. Bureau of the Census, 51,759 women in Iowa were in employment covered by the Federal Fair Labor Standards Act, and 256,559, or over two-thirds of the women employed in Iowa, were employed by industries not covered by this act. It is important to remember that a great number of these women are self-supporting or have families to support.

The committee recommended:

1. That legislation be enacted to require all employers to pay wages at regular intervals and to pay said wages in cash or certified check. That a worker separated from his employment, either of his own volition or by his employer, be paid wages due on the next regular payday. That a worker on strike be paid wages due him on the next regular payday. Also, that a provision be made authorizing the Labor Commissioner to take assignments of wage claims which he believes are valid and enforceable. Definite penalties should be instituted for any violations.

2. That a State minimum wage law be legislated to cover all employees not now covered by the Federal minimum wage and hour law; that the wage and hour standard be in line with the Federal wage and hour law with the inclusion of premium pay for time and one-half over 40 hours of work in any one week.

The committee recommended for further study:

1. That maternity protection for working women in both public and private employment be studied and appropriate legislative action be taken to assure women wage earners reasonable maternity leave without loss of reemployment or seniority rights.

2. That, since the State child labor law is dated and does not meet present working conditions, a survey of other State laws along with national standards be made, with a view to future legislative recommendations.

3. That industrial health and safety programs be developed and that legislation be prepared to implement these.

MRS. MARIAN L. JONES, chairman of the Committee on Legal Treatment, summarized the recommendations in the large areas her committee studied, which included women in public office, women's civil and political rights, and women's property rights and family relations.

"Women in public office: In most cases all constitutional and statutory provisions that at one time prohibited women from serving in public office have now virtually disappeared. According to the Merit System Council, 552 women and 547 men are employed in government

agencies in Iowa. The Department of Social Welfare accounts for over 70 percent of these women. In the professional and administrative departments of the State offices, there are only 11 women by comparison with 75 men. As you know, none of the top-level State offices, either elective or administrative, are held by women. Perhaps this is our own fault. Mr. West mentioned that women often don't seek different fields, and we know that the fields of law, the professions, and business often support their own elite for public office. Perhaps that is one reason that we in Iowa do not have as many women registered in public service in 1964 as in 1949. On the other hand, men have not been made adequately aware of women's abilities and their potentialities for leadership. It is up to us as women to let them know.

"I believe there still remains an element of prejudice that operates to exclude women from public opportunities for which they are clearly fitted. Again it is our job to combat it. Perhaps some of our own organizations are to blame--I mean State women's groups, political committees, and professional societies. We should have a channel set up so that we can make continuing arrangements for proposing qualified women for State public service. When appointments are to be made, does the Governor or other appointing official have a list of women who are qualified to fill those positions?

"Our participation in the work of the major political parties seems to be limited to the hard day-to-day work. We stuff envelopes and we ring doorbells. We hope that both parties will give women a voice in policymaking decisions because we feel that this would be a great forward step in achieving a goal of having more qualified women in public office.

"We recommended further study in this area focusing on urging (1) public officials to appoint qualified women to policymaking executive and administrative posts and to judicial offices and (2) State women's groups, professional societies, and other appropriate organizations to continue, but with greater emphasis, to propose qualified women for public service.

"Civil and political rights: Let us concern ourselves for a moment with domicile rights for women. Now, a person's domicile or legal residence is important because it determines many personal rights and obligations. We are concerned with the fact that under Iowa law the husband fixes the family domicile for all purposes. Common law is the law in Iowa. Thus married women who live apart from their husbands may be restricted in the exercise of their constitutional rights, such as voting and running for public office, jury service, obtaining welfare benefits, or being admitted to State institutions because of the lack of required domicile. We have recommended that this outdated law be revised to give married women the same right as married men to establish their own domicile.

"We found varying differences in the treatment of men and women in the field of correction--a very large field. To explore it, we sent to the sheriff of each of the 99 counties a questionnaire asking about facilities for the housing of women prisoners. Now, you know that any woman in the State of Iowa who is sentenced for any crime over 30 days must serve her time in the women's penitentiary. It isn't just, fair, or equitable that any woman should have the stigma of a penal sentence on her record when a man sentenced to the same amount of time serves his time in the county jail. In studying these questionnaires, we found conditions that were beyond belief. Our institutions are impeded in their programs of rehabilitation when they have to receive women prisoners who are sentenced to less than a year. We have recommended also that no woman be sent to the State penitentiary for a sentence of less than a year. We have also recommended that there be at least one woman member on the State parole board.

"In regard to equal rights there are two schools of thought about whether the 5th and 14th amendments to the Constitution afford women protection against discrimination in legal treatment. We have recommended, therefore, that the laws of Iowa be studied to be sure that equality of rights is neither denied nor abridged on account of sex.

"Then, in connection with legislative action, all laws regulating conditions of labor, including maximum daily and weekly hours, rest breaks, sanitary conditions, safety regulations, and insurance protection, should be studied and brought up to the national minimum standards. In conferring with my committee this morning, we felt it should be stated that these laws should apply equally to men and women. We want it perfectly clear that we are not asking for privileges only for women, because, as Mrs. Keyserling pointed out this morning, they must apply equally to men and women.

"We believe that women doing the same work as men--with other qualifications being equal--should be paid the same wages as men; hence, the recommendation of equal pay for equal work."

MRS. MARGARET K. YODER, Supervisor of Home Economics, Iowa State University, and chairman of the Committee on New and Expanded Services for Women: "Our committee has studied the new and expanded services needed by the women of this State in order to carry out their functions and roles.

"The report of the Home and Community Committee of the President's Commission says that many women can make choices freely only if certain services are available and certain policies are in existence to assist them in strengthening family life. Our committee looked at the average Iowa family and realized that in the changing social and economic scene there are many needs for expanded services. Such factors as population growth, reorientation of our community institutions, influence of television, worldwide tensions, developing industrialization and automation, urbanization and suburbanization, the increasing number of elderly people, shorter workweek, working mothers, commuting fathers, and mobile families--all affect the kind and quality of living to be attained by the people of the State, and affect the type of public services necessary to assist the family in fulfilling its functions adequately.

"Our committee was interested in women as homemakers, community workers, employed workers, and I might say, as individuals. And we discussed the following services--homemaker, household, child care, mobile homemaker, mental health, and consumer.

"There is necessity for some kind of in-the-home service which can prevent the breakdown of families. Such situations as young families far away from support of their own families, the marriage of many young people who are emotionally immature and not ready for it, the 11.9 percent of our population 65 years of age and over with their increasing incidence of chronic disease, and the growing welfare load, which in many cases involves inadequate homemakers, have made the need evident.

"Pilot projects in homemaker services exist in the State in some of our major cities, including Des Moines, Burlington, Sioux City, and Davenport. Efforts are being made on the basis of special grants to get these organized in Centerville and Cedar Rapids.

"In Sioux City, seven women, two of them Aid to Dependent Children (ADC) recipients, were trained for this service. They received $1.25 per hour, paid by the recipient, if able, or by a special grant from the Department of Health, Education, and Welfare for city welfare. This project served 51 families and saved $1,437.30 over the cost of nursing home, hospital, and foster care during its first 6 months in operation. One of the ADC mothers who had been trained went off the relief rolls. I suspect other figures would support this type of ultimate saving where the service was used. One of the grave difficulties facing the State is that these projects are at present being financed by special grants. What will happen when these grants run out? What provision can be made by the State to carry on, so that the Homemaker Service can be expanded and thus be made more available to more people of the State? Our commission has recommended that a State Homemaker Service Council be appointed to study some of these problems, to set up standards for comparison, and to serve as a clearinghouse of information and experience.

"The next thing considered was Household Services. Since many women work, there is more and more need for services within the household. We made a small survey of some working women and found they were not utilizing many services partly because services were unavailable and partly because they couldn't afford them. Among services needed were ironing, cleaning, and mending. Also mentioned were such services desired as help with preparation of the evening meal, more chance to have their hair done at the beauty parlor, better facilities for the care of children, dressmaking, and later closing hours of the stores to afford more opportunity for shopping. One woman even suggested a weekly or monthly bulletin of suggested menus.

"How to provide these is really something we must study. We need to investigate this as an area of opportunity for women who want to work and who do not have training. We need to help provide training for women who cannot now do these things. And there is the question of how to give the job more dignity and prestige--certainly an important element of why a person does or does not want the job. It seems this is a fertile field for individual business enterprise, and perhaps in some way we should make people aware of this possibility.

"One other area of study was that of child care. Because many more mothers are now in the labor force, child care seems to be a need. In 1960, 22 percent of the employed women in this State had children under 6 years of age, and certain current surveys point to an increase in the need for child care. The pattern seems to be very varied. Many have no choice but to leave children with friends, relatives, or paid babysitters, and many times this is just custodial care; sometimes in situations harmful to the children involved. Since 1954 we have had standards for group care of young children and licensing administered under the State Department of Social Welfare. These standards are not covering Iowa's needs for the following reason: They do not apply to children under 2 years of age or over 6. The State personnel for maintaining licensing and inspection is insufficient in number to encompass the needed activities. The standards themselves, when formulated, were at a minimum level and now, 10 years later, are to some extent outdated as well as in need of revision upward to reflect the significance of the child's development.

"Currently there are 99 licensed group day care centers for children of preschool age. This number does not approximate the number actually in operation. Nine of the licensed groups are community sponsored. Most of them are operated privately for profit, although

there are some centers sponsored by organizations such as churches and family services. There are very few "extended day care" centers for children, that is, for out-of-school hours of school-age children. In the national picture, there is a growing concern for the development of opportunities for these preschool children. Then, also, a variety of programs are being initiated for young children so "deprived" in environmental opportunity as to be unequipped to compete when old enough for school.

"We have talked about working mothers. There are also mothers upon whom special demands are made by their exceptional, retarded, or handicapped children. There is also the child in times of crisis in a family when just a day or two of care is needed.

"We also have mobile homemakers in the State, many who change locations fairly often. For them it is quite a chore to go into a new community, find out what the facilities are, and learn to use them rapidly. We need to think through the problem of what can be made available to help families in this situation. Other mobile families are families of migrant workers who come into the State. A good job is being done in Muscatine through its migrant council to provide educational opportunities and other community services. We need to study the laws that affect migrants in relation to their housing facilities, health, and sanitation.

"Mental health: There is much need for research into factors affecting the mental health of women. The facilities in our State, while they are being improved right along, still need to increase before we have adequate personnel and family counseling available.

"Services for the consumer: As the homemaker is the primary buying agent of the family, she feels great responsibility for getting her money's worth from the money she spends. Our State laws ought to be looked at. The uniform small loan law is old and does not cover installment buying, except for automobiles, and it does not cover charge accounts. Everything dealing with sales and loan contracts is scattered throughout the contract law and is not available in one place. Our committee has recommended that an Iowa council for the consumer, to parallel the President's council for the consumer, be appointed by the Governor to serve as a sounding board for consumer problems, and work with State agencies and other interested groups."

DR. ELIZABETH S. WHITE, Dean of Women, Morningside College, and chairman of the Committee on Educational Needs of Women, was then introduced as the next speaker.

"Because education is such a broad topic, the subcommittee on education was forced to be selective in the areas of its focus. Our approach was by way of the four themes that Dr. Scruggs mentioned to you last night--women as individuals, as family members, as employed workers, and as citizens and community workers. These same four themes were developed in the leadership conference which we cosponsored with the continuing education committee of the College of Home Economics at Iowa State University on May 18, 1964. Since it was impossible for our committee members, who live clear across the State from each other, to get together many times, we divided the areas of study among our various

members. We realized--just as I am sure every group did--that there is much unused material yet to be digested and used.

"One of the startling facts we noted was that in 1960 the level of education--median number of school years completed by women 25 years of age and over--ranged from a low of 8.9 years to a high of 12.5 years in some counties. Although we are very proud of our literacy rate in Iowa, this is not really a very strong picture. The dropout has been studied quite thoroughly, and we have recommended continuing the study at all levels--elementary through college. We have noted that one in every five students finishing the eighth grade fails to complete high school, and a study in 1960 showed that about 15 percent of the Iowa population 14 to 24 years of age were high school or elementary dropouts. If we take out the ineligibles, we find there would still be 15 percent--a low estimate probably--and Iowa is losing at least 15 percent who, by every standard set up for judging it, ought to be continuing their education.

"As noted by the Education Committee of the President's Commission, 'The high motivation found in early school years often fades into a loss of commitment and interest, other than in the prospect of early marriage.'

"Our first recommendation is that efforts be extended to create an awareness in the women of Iowa of their need for education and of the satisfaction inherent in education. We are not concerned here just with the satisfaction and needs which have to do with employment, but with the greater enrichment to their personal lives and in their development of the finer appreciations and values that come through education. I think we might hope that what has happened to the President's Commission report might happen to our report--that we would see young women on our college campuses carrying the report and saying they were using it in their discussion groups and looking at it in their sociology classes. We have suggested that, to create this awareness, women must become acquainted with the educational opportunities that are theirs now in our public and private educational institutions; that many should be alerted to the present situation in scholarships and financial assistance increasingly available to them to educate themselves through the National Defense Education Act and other means; and that somehow through the media open to us, we must extend this information and knowledge. And we further suggest that we encourage our women to take a fresh look at the opportunities of education existing in different areas of adult education, especially since we hear again and again that fine programs are set up for adult education to which there is a meager and discouraging response.

"The ratio of women in colleges, that is, the ratio of women to men in colleges, is low. A study of the U.S. Department of Health, Education, and Welfare points out that in 1963 there were 23,385 women in Iowa colleges as compared with 36,349 men. The report showed that 1,202 Iowa women and 3,380 men pursued some type of advanced degree beyond the A.B.

"I conducted a survey with the deans of all 4-year colleges in Iowa asking them what seemed to them to be the greatest needs of Iowa women. They put considerable emphasis upon this matter of arousing in women knowledge of the need for education and somehow keeping this knowledge there so that their early interest would not fade.

"Our second recommendation is that opportunities for mature women to continue education beyond high school be greatly expanded and adapted to their needs. This is related closely to the adult education program--an important opportunity for Iowa women.

"The third recommendation suggests such ways of implementing the adult program just mentioned as: adult education programs in the schools, cooperative extension service, volunteer agencies of education, extension correspondence courses, educational television, art centers and libraries, and national and local women's clubs.

"Our fourth recommendation is that more Iowa women, who are or hope to be gainfully employed, should be encouraged to achieve an education that would fit them for today's employment, because as we heard this morning, not fewer, but more women will enter the labor field each year. Discriminatory barriers against women in various areas are falling. Women need to be made aware of this fact, perhaps by being informed of the counseling services now available to them in relation to vocational and educational opportunities. More women should be led to use counseling services to obtain vocational education and pursue opportunities made possible by the 1963 Vocational Education Act.

"And fifth, we recommend support and expansion of educational programs offered to prepare women of all ages, educational levels, and cultural backgrounds to fulfill their responsibilities for homemaking and family life."

A number of areas for further study also were pointed out.

LUNCHEON SESSION

The luncheon session of the Governor's Commission on the Status of Women was called to order in the Terrace Room, Hotel Savery, by the chairman, MISS NORMA J. BRUNER, Woman Inspector, Iowa Bureau of Labor.

Miss Bruner introduced the speaker, Miss Marguerite Gilmore, Chicago Regional Director of the Women's Bureau, U.S. Department of Labor, and said she would report on the activities of Governors' Commissions on the Status of Women in the Midwest.

MISS GILMORE first read a telegram from Kansas announcing the establishment of a brandnew commission there--the 34th one to be appointed. She then read greetings from the chairmen of each of the Midwest regional commissions. (It had been hoped originally that they could have been present in person.) Following that, Miss Gilmore reported briefly on the concerns and accomplishments of the commissions in the nearby States.

"Here in your own State of Iowa you first had a council on the status of women which grew from a statewide conference held in Iowa City in 1963. This council asked the Governor to appoint a commission and he, in turn, asked the council to prepare a list of qualified men and women to serve on the commission. So you have two groups here actually, one a lay group particularly interested in promoting legislation affecting the education and employment of women, and one officially appointed commission with responsibility to make recommendations to the Governor in the areas he outlined in his charge.

"Michigan was the first State to have a commission--back in August of 1962 even before the President's Commission had made its formal recommendation that State commissions were needed to supplement the national one. Here again there is a council as well, self-formed and with a representative cross section of membership. At this time they are working specifically to extend coverage of the equal pay amendment and to establish minimum wage legislation.

"Michigan has a special problem area, the whole Upper Peninsula, listed as an economically distressed area. Motivation for training is lacking there, and a general feeling of discouragement--especially among the women--is evident. The commission has taken on

the Upper Peninsula as a special problem to work on with local groups to try to find at least partial answers.

"The Minnesota commission also grew from a council, which in turn grew from a statewide conference on the status of women. Both the council and the commission are very active. The commission's interim report to Governor Rolvaag sounds something like yours. They are concerned also about educational opportunities, equal pay, and day care. It was interesting to note that the survey of public and private day care facilities was headed by a team of two men--one a pediatrician and the other a State senator.

"Inequities in salary and tenure between men and women teachers have been one of the major concerns of the Minnesota commission. For example, in certain communities women teachers who get married during a school year are considered to have broken their contract, while men, hired under exactly the same contract, are not penalized. Also, a commission survey of five State colleges showed serious inequities between men and women on length of time between promotions, amount of salary increases, and total pay.

"The Minnesota commission also has been concerned about standards for household employees and has produced a little 'Code for Household Employment' outlining suggested relationships between employers and employees, type of duties, working conditions, and coverage by social security. This is a fine step in the direction of giving the occupation more status and dignity.

"Wisconsin established its commission a little later than some of its neighbors but it laid excellent groundwork. A small group met with the Governor, asked him to call a statewide conference in order to bring local leadership to the fore, and then worked with him to appoint a representative commission. This commission plans to work toward bringing more women into positions of public office--at present there is only one woman in the legislature--and to study the situation of women under State civil service. This commission will be cooperating with the Michigan commission in working on the special problems of unemployment in the area where the Upper Peninsula of Michigan and the boundary of Wisconsin come together.

"Illinois also has a council that played an important part in winning approval for a commission. There is a basic difference in form, however, since the Illinois commission was set up by the legislature rather than the Governor. Also, it has a $10,000 appropriation for the biennium. This means it can hire a 2-day-a-week secretary and pay travel expenses for its members.

"The passage of the bill to establish the commission was rather interesting because it was done at the same session where the long-worked-for minimum wage bill and the equal pay bill were roundly defeated. I'm not sure the legislators knew that the commission was going to come up with its major recommendations for minimum wage and equal pay bills, and that part of the $10,000 would be used toward gaining those very same objectives.

"The Illinois commission has also been working hard to make more scholarships available to women, especially on a nonresidential or part-time basis. A number of hearings have been held around the State to get local expressions on this and other areas of concern.

"Illinois, as well as Michigan and Minnesota, has recommended some type of State council or State officer for the education and protection of consumers.

"Indiana has problems somewhat similar to Iowa's, since it has become industrialized more recently and lacks any basic labor standards legislation. That commission is presenting its interim report to the Governor on December 5 and is asking for minimum wage, equal pay, and wage claims legislation. It is also concerned with the need for a very considerable expansion in day care facilities.

"North and South Dakota both have active commissions, quite different from each other in their organization and approach. The North Dakota commission was born in a blizzard, but on that day 12 of its 13 members came in from all parts of the State. This group worked very hard and very well together on the educational and labor legislation fronts especially, carrying on surveys without benefit of a budget. The Governor stayed in close touch with the commission and gave it much encouragement. The members of this commission were persons experienced in their fields, for example, the State president of the AFL-CIO, the district manager of Northwest Bell Telephone, and the chairman of the board of higher education.

"In South Dakota the commission's history was a little different. The commission assumed a real place in the State structure after a slow start during which the first-named chairman had a serious illness and, at the request of the Governor, the vice chairman stepped into that position. Even a change in the governorship did not change the support from that office. In this State the status of Indians both on and off the three large reservations is of great concern, with the rate of school dropout extremely high and jobs hard to get. So this commission hopes, as one of its areas of emphasis, to improve the status of Indians, especially that of Indian women. In addition, this commission wants to get an enabling act passed so that the State can make use of Federal day care funds. It wants also to raise the minimum wage rate, pass an equal pay act, and increase its vocational education facilities.

"These are some of the things happening among your Midwest neighbors. I wish you could know some of the people in these other States. Most of them are doing this work in addition to full-time jobs and without even expenses being paid. They are discovering, as you are, problems--and resources--in their State and community which are new--sometimes startling, sometimes reassuring--and are meeting and working closely with other commission members representing a much wider variety of background than they have known before.

"When I look at the big map on my office wall now, I no longer see just a flat space. I see little bumps and bubbles where groups of people I have met and talked with are doing all kinds of things. Channels are forming from State to State as well as between the States and Washington, and we can already see the beginning of a movement that will make a great difference in this country. As Governor Rolvaag said when speaking of the fine accomplishments of his Minnesota commission, 'This State won't ever be the same again.' So also will the Nation feel the lasting impact of the work of these commissions."

AFTERNOON SESSION

Following a discussion group period, there was a general session at which the chairman, Dr. Marguerite Scruggs, summarized the preceding activities and then called on two people, not members of the commission, to speak as individuals with varying backgrounds of experience and preparation to give suggestions or reactions in regard to implementing the commission report.

DR. HELEN R. LEBARON, Dean of the College of Home Economics at Iowa State University, spoke: "I have listened to the reports and the discussion of last evening and today, and I classify some of the suggestions as having to do with the laws of Iowa. Another group has to do with education, and a third group, with research. And I would like to discuss some of these aspects of the work of the commission from three standpoints.

"Governor Hughes last night said he was appreciative of having this report in time for it to be useful to the legislature which will convene early in January. I found about 12 different recommendations concerning laws in the report. Now, what happens to these? The Governor is popular, certainly. He was reelected with an overwhelming vote, and he apparently has control of the legislature, but I don't believe he can put through these laws. He may not, of course, agree with them either. Who is going to be responsible for lobbying in favor of some of the laws we think important? How will that be done? I wonder whether, if we just get started in 1965, we might expect some results by 1967? What is the role of organizations represented here in doing something about implementing these laws?

"Then as I look at education, I find some things to examine. For example we have an education job to do concerning the status of women in Iowa. I don't think men know what it is, and I don't think very many women know what it is either. So one of our jobs is just to educate people concerning the situation and to find ways to make this report available to folks throughout the State. Another education job is that of providing educational opportunities for these women. This morning's paper carried an article saying that the Board of Regents was cooperating with the Department of Public Instruction and other groups urging that we have vocational technical opportunities in various areas of the State. There are some opportunities for women in these facilities that might well be ideal.

"There is a great deal of interest in continuing education, in providing opportunities for women in the universities, schools, and our local school districts. How are we going to provide opportunities for women who have dropped out of high school to get a high school diploma? Another was this matter of making it possible for women to go to universities and colleges part time, on and off for a number of years, to get a degree. This might be fairly easy in a city like New York City or Philadelphia, in California, or even in Minneapolis, but what do you do if you are in a State like Iowa, where the colleges are scattered in rural areas.

"Another question has to do with the counseling of women. Again and again this was brought out. I think they need counseling about education as much as about jobs. I wonder what job opportunities are available? what educational opportunities?

"And then there is the question of research. You might call this investigation, if you like that word better. The report calls it further study. I don't care what word you use, but we have to get more information. Some of it we can get by reading and by asking questions. Some of it will have to be formalized, and some will have to be derived by sophisticated techniques using our statisticians. We have to know about the attitude of employers toward women workers. What is it in Iowa? We have a little notion, but we need to find out exactly what it is. It has been suggested that we need to know more about the status of part-time employees, particularly women part-time employees. And then we need to know something about the attitudes of women themselves toward work. This is fundamental research that might well be undertaken by one of our State universities or perhaps all three of them in cooperation to find out how women feel about work. Some, I am sure, feel that part of the problem we have concerning the status of women is due to the fact that women have a low level of aspiration in terms of education and employment and in terms of taking responsibilities. We just guess about these things. We need to know the facts. This is the task, as I see it, of changing the laws of Iowa by working through education to get better opportunities for women, and then by getting more information through research or investigation.

"And then I looked at it in another way. It seems to me this material could also be viewed from the standpoint of tasks for different segments of our population. Certainly, the commission has a job to do in the next year, the year after that, and in the year after that also. But there are some tasks that properly fall to organized groups that may be represented here, tasks that can be done best by the organized groups of Iowa. Much of this information can become part of the program material of various organizations. We can implement the proposals to educate the people of Iowa by incorporating much of it in the programs of organizations we represent, whether church organizations--if they are women's action groups--study organizations, or whatever they are. And then our organizations, after they really know what they think and have studied it thoroughly, can pass resolutions, and those resolutions can be transferred or transmitted to the people in our State legislature and our Governor's office, and then these same organizations can take it upon themselves to inform the public through reports. They should take to heart the suggestion that they seriously consider identifying able women who might be considered for public office in the State of Iowa, transmit their names to the proper authorities, such as people in the State House and the various parties that are searching for personnel. These are just a few jobs I think organizations can assume.

"I think that the universities and colleges here represented can find some tasks for themselves, also. Certainly, they can hold conferences dealing with segments of the problem. Two have been cited: one at the University of Iowa and one at Iowa State University. These are just the beginnings. There are other kinds of conferences that the colleges and universities can sponsor, and they can highlight the problems, study them further, and make more information available to the public. They can carefully and critically look at some of the suggestions for research and find ways to secure funds to investigate some of these problems.

"And then I think there are some tasks for you and me, as individuals. Dr. Scruggs said I was talking as an individual. Mrs. Myers will be talking as an individual, too, and each one of you is an individual. You may be representing a group, but you also are a person, and there are lots of things I can find for those of us who are individuals. I think one thing we as individuals can do is to find out what the situation is in our own community and our own county. For example, I am going to find out about the provisions for women in the Story County Jail. It had never occurred to me, until I read and heard the report this morning, to wonder about the situation. I think each of us can find out what the situation is concerning

the rights of women and provisions for women--whether they are given equal pay and equal opportunity. And if I find some things that need to be changed, I can write letters to the newspapers, and tell other people about them. I can incorporate them in speeches I make. I think we, as individuals, can help to improve the status of women."

MRS. ALICE M. V. MYERS, Executive Director of the Y.W.C.A. in Des Moines, with a background of experience in the public schools, in adult education, and in private agencies: "I had the opportunity to read these reports several days ago, but I find I am still digesting them.

"How many of us really understand the changing social scene in which we are today? How many of us actually feel the impact of change and feel we are participating in it? I have felt that this point of view, this concept, is important. I think that as women we are at times extremely conservative. I think when we once get going, we really can do something about it. I feel that here in our State we have hung back a little in the last few years from actually moving out to bring about social change. I think one thing needed here in Iowa--and maybe Iowa is not unique in this matter--is the arousing of women to what is actually going on, in a most revolutionary time, and helping them to understand that in their own life investment they can have an experience far beyond anything they have had previously.

"Another question that came to mind was how well acquainted are we with actual groups of women? You know, it is so easy to categorize human beings, tag them, and group them without very much association with them. I wondered, as each of us heard and read these reports, how have we come alive as human beings. I think this is something that has to come before change really is very effective. How many of us really know women in the lower economic brackets? How many of us see them, talk to them, have them as friends, have a real feeling of understanding of what their lives are? I believe that many times, as women, we are expected to live rather sheltered lives and sometimes do. Those of us who work in jobs where we are in contact with these folk perhaps have a little different kind of experience. There are some of us who do not, whose life paths really cross just a routine group of people, and that is about as far as we go. I am sure if we got to know some of the school dropouts in the lower economic groups, if we got to know Aid to Dependent Children recipients, that perhaps there would be parts of this report, if not a number of parts, that would come alive to us, terrifically.

"I wonder too how many of us actually know the problems of women in minority groups? This did seem to me to be quite an omission. Perhaps it is not always good to point that out, but it has been my own experience and that of the agency with which I work that many times we do not realize what it means to be in a minority group, and especially in a racial group; and therefore, we cannot all apply things said here in exactly the same way. It isn't that they are people that are so very, very different. Basically, they are God's children too, and they come with the same spiritual, mental, and physical equipment as all of us have, but society has set about making life quite different for them. And so to look at some of the areas of concern in these reports calls for persons with a special kind of understanding, empathy, and approach.

"I also have felt strengthened by the realization that we had women looking into women's problems, women's opportunities, and women's potentialities for growth and development. This doesn't mean men are left out of this picture by any means. But we are working in the area of relationships, and I believe that women can help women much better in this area than perhaps men can. I believe we need to think in terms of how we can help women grow in these respects, and we need to look at women's attitudes. In one group today in an informal situation it was mentioned that women will oftentimes be the least sympathetic toward other women, which seems strange. Maybe this is due to some of our basic insecurities in that we do not feel secure enough as persons ourselves, to move out to help other women in whatever may be our groupings. Thus, we ought to consider within our groups and our organizations--perhaps it is something to which the commission should give thought--how we can help women at the adult level to feel secure enough that they can move out among women and change their attitudes; that women, as a group, can have the strength to pull the entire group of women along the lines our report indicates here. Certainly firsthand experience, such as visiting the county jail, will help to overcome some of the feelings we have. Maybe as women we draw into a shell to avoid such experiences.

"I recall hearing Judge Harrison talk in our community a couple of years ago about alcoholism and what was done with people who were highly intoxicated, and he described what they do for the men. They are given a bath, clean clothes, a place to sleep for the night, breakfast the next morning, and sometimes even a spiritual experience before they leave, and some counseling. So in the refreshment period following, I said, 'Ray, where are the women taken?' He said, 'They are taken to the county jail.' And I said, 'What would they have that would help them to go out a different person from when they came there?' He said, 'There is nothing--the same clothes and the food that is served in the jail.' I know in Cook County, as some of the folks with whom I work who are in the audience know, it has been one of my deep desires to have enough women in this community know what the situation is so that they are not afraid to go, that they do not feel contaminated because they have gone, but that instead consider they have reached out and taken the Hand of God and said, 'This is Your will that all of Your children reach a peak of living that is good and right and I have had Your hand when I went.' I believe that, if we can take a spiritual view, we need have no fear, and we need have no feeling but that we have elevated ourselves really when we have gone to some of these places. I don't know whether I am making myself clear, but I think this is one of the hurdles we have to face to encourage women actually to do things for other women in this whole matter of implementation.

"I too have been interested in what we are going to do when this conference is over. How is this going to get going? We talked legislation. We talked about commissions and we talked about councils, but this thing needs to get out to the grassroots. Could the commission set up teams to go out and give the interpretation gained here? How can we work with organized women's groups? There is a tremendous structure of many women's organizations within our State. Could the commission have a meeting with the State officers and leaders of these organizations? Could they work from the standpoint of working with these groups as they are setting up their program planning so that it filters down to the grassroots? Could we have a pilot project in a given community that would help us to see how you really get this thing across?

"I can see that 56-year-old building of ours as being the focal point--a nucleus for some of the women's organizations in this community. I am going to talk to some people here, but I believe we can do a 'dry run' of interpreting this organization. I would like to see some of the professional women's organizations, the women who are attorneys, banking women, insurance women, who would be helpful in giving information and disseminating it. I would like to see the social agencies brought into this. I felt that in the reports there was

lack of involvement of social agencies. And I believe that while we had a great deal of the academic--and I wouldn't say that the academic institutions that were involved do not have practical application, they certainly do--the social agencies could do much in the further application of what we are doing here. I believe we need to have catalytic agencies that can help to bring in a greater quantity of the community's resources, because the whole community can come in at some angle on many things discussed here."

The chairman, Dr. Scruggs, thanked the two speakers for their most helpful and constructive suggestions and reactions and continued, "Those of us on the commission appreciate their picture of the involvement of individuals, various kinds of groups and organizations, universities, as well as the commission, because the commission can accomplish much but does have its limitations. The commission can serve as a catalytic agent, perhaps as a means of focusing attention, focusing study, and encouraging action in regard to various recommendations made.

"The commission, we hope, will be a stimulatory agent, but the commission itself is limited in many ways, as the Governor's commission, to making recommendations to a Governor. Certain kinds of information, encouragement to legislators, and so on, might be appropriate on the part of the commission, but certainly would not be inappropriate on the part of individuals or organizations.

"Our plan is incomplete, but I believe there is a plan to provide a copy of this report for each of the legislators and to have distribution beyond this. In addition, after putting our heads together, several of the officers who were available and looked at the financial resources felt that this recommendation is sound and was our decision. These reports will be available now after this meeting for 50 cents each if you wish additional copies to use with various individuals or to present to individuals, groups, or organizations. Then there will be a free distribution to the legislators and to other individuals yet to be identified.

"I am quite confident I speak for the commission in saying that we want your suggestions on what the commission might do or might consider that would be helpful. As individuals and within your various groups and organizations, we know you are going to think through what needs to be done and do what you think is best. In this you do not need to be held accountable to the commission. One reason for making this report available is to have in your hands the information so far collected. Will you feel free to offer your help, give suggestions, and contact any officers of the commission? If you lose our address, just address the Governor's Commission on the Status of Women in the Governor's office. They will see that we get this information.

"I want to thank each and every one of you--certainly all of the commission members, committee members--all of you who have participated today. There are many individuals who should be thanked more profusely than this, but I believe that we are all grateful for what has been done to make this meeting possible and to provide so much for our further work."

After the benediction given by Mrs. Dwight Krumboltz, a member of the commission, the general session stood adjourned.

MEMBERS OF THE COMMISSION AND THE COMMITTEES

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Dr. Marguerite Scruggs, Ames

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Mrs. Vera Herweg, Carroll
Mrs. Jack F. Padgett, Indianola
Mrs. Sherman Watson, Cedar Rapids

REGISTRANTS

Mina Baker
Central College
Pella, Iowa 50219

Mrs. R. R. Bateson
311 Curtis Hall
Iowa State University
Ames, Iowa 50010

Mrs. Merrill Bird
1218 44th Street
Des Moines, Iowa 50311

Margaret A. Briggs
524 State Office Building
Des Moines, Iowa 50319

Ethel O. Britton
Iowa State University
Ames, Iowa 50010

Norma J. Bruner
Route 1
Carlisle, Iowa 50047

Mrs. Barbara Calderon
Assistant Chief Nurse
V.A. Hospital
Iowa City, Iowa 52240

Rose A. Canavan
301 Wilson Avenue SW.
Cedar Rapids, Iowa 52404

Sam Clark
326 ORC&B Building
Cedar Rapids, Iowa 52401

Margaret Conlan
3422 Grand
Des Moines, Iowa 50312

Mrs. Sharm Cooper
601 North First Street
Centerville, Iowa 52544

Frances L. Coultrap
414 North Gilbert
Iowa City, Iowa 52240

Mrs. Jeanne Cramer
1089 44th Street
Des Moines, Iowa 50311

Mrs. Jane E. Dagley
217 East Webster
Osceola, Iowa 50213

Ruth Daleske
Steamboat Rock, Iowa 50672

Marian P. Dickinson
Senior High School
Mason City, Iowa 50401

Mrs. W. E. Don Carlos
420 SW. Second
Greenfield, Iowa 50849

Mrs. Patricia Duckworth
219 Wickham Building
Council Bluffs, Iowa 51501

Marjorie Eakley
512 Ninth Street
Des Moines, Iowa 50315

Lea Ebro
Iowa State University
Ames, Iowa 50010

Mrs. Inga Eddy
Cooperative Extension Service
Agricultural Building
Centerville, Iowa 52544

Mrs. Scott Ellis
Dallas Center, Iowa 50063

Dr. Ercel S. Eppright
Iowa State University
Ames, Iowa 50010

Mrs. Frederick Epstein
7 Parkwood Drive
Davenport, Iowa 52803

Julie Faltinson
122 MacKay Hall
Iowa State University
Ames, Iowa 50010

Grace Fisher
Route 1
Ottumwa, Iowa 52501

Mrs. Raymond Fisher
Grand Junction, Iowa 50107

Mrs. Pearl Forbes
Box 176
Marshalltown, Iowa 50158

Mrs. Kenneth Fry
Garrison, Iowa 52229

Josephine Gealow
West Friendship Haven
Fort Dodge, Iowa 50501

Marguerite Gilmore, Director
Women's Bureau, U.S.D.L.
219 South Dearborn
Chicago, Illinois 60601

Gladys Grabe
542 State Office Building
Des Moines, Iowa 50319

Janice M. Haring
714 Melrose Avenue
Iowa City, Iowa 52240

Lorene Harrington
127 11th Street, SW.
Cedar Rapids, Iowa 52404

Mary Faith Hart
422 Fletcher Avenue
Muscatine, Iowa 52761

Registrants--Continued

Mrs. Helena Hawkins
U.S. Dept. of Commerce
Paramount Building
Des Moines, Iowa 50309

Mrs. Floyd Hohman
Larchwood, Iowa 51241

Mavis Holmes
State College of Iowa
Cedar Falls, Iowa 50613

Mrs. Evelyn Hood
1527 11th Avenue SW.
Fort Dodge, Iowa 50501

Rowena Hornbeck
105 West Loomis
Ottumwa, Iowa 52501

Dr. Lydia Inman
MacKay Hall
Iowa State University
Ames, Iowa 50010

Margaret Jacobsen
308 Shops Building
Des Moines, Iowa 50309

Ethel I. Jerred
Route 2
Ottumwa, Iowa 52501

Mrs. Glenna B. Johnson
536½ 40th
Des Moines, Iowa 50317

Mrs. Roberta B. Johnson
532 South Van Buren
Iowa City, Iowa 52240

Mrs. Marian L. Jones
1004 Prospect
Malvern, Iowa 51551

Mrs. Gerald Karns
101 North Park
Osceola, Iowa 50213

Mrs. Raymond Klass
3121 Bever Avenue SE.
Cedar Rapids, Iowa 52403

Esther J. Knight
2333 East 13th
Des Moines, Iowa 50316

Mrs. Dwight Krumboltz
2231 Fifth Avenue SE.
Cedar Rapids, Iowa 52404

Elda M. Kyles
313 Landdale
Rockwell City, Iowa 50579

Mrs. Florence Lawhead
600 West Madison
Mount Ayr, Iowa 50854

Helen R. LeBaron
MacKay Hall
Iowa State University
Ames, Iowa 50010

Mrs. Leona McAllister
Conrad, Iowa 50621

Eula McDowell
3[illegible] ORC&B Building
Cedar Rapids, Iowa 52401

Mabel F. McKee
Carlisle, Iowa 50047

Marjorie M. McKinley
Institutional Management
Department
Iowa State University
Ames, Iowa 50010

Mrs. Viola Martinek
211 Avenue "E"
Fort Dodge, Iowa 50501

Mrs. Charles P. Miller
801 High
Burlington, Iowa 52601

Mrs. Charles G. Mogged
206 Wilson Boulevard
Fairfield, Iowa 52556

George W. Moore
1000 East Grand
Des Moines, Iowa 50316

Mrs. Thelma Mortenson
2424 Division
Burlington, Iowa 52601

Helene K. Mosier
404 Royal Union Building
Des Moines, Iowa 50309

Alice M. V. Myers
512 Ninth Street
Des Moines, Iowa 50315

Mrs. Delores P. Nelson
1904 75th Street
Des Moines, Iowa 50311

Mrs. K. M. Nickelson
400 West Fillmore
Fairfield, Iowa 52556

Mrs. Darrell Nielsen
Glidden, Iowa 51443

Evalyn Oakes
1611 College Avenue
Davenport, Iowa 52803

Mrs. Delph Orman
1331 Chester Avenue
Ottumwa, Iowa 52501

Mrs. Jack F. Padgett
607 North "C" Street
Indianola, Iowa 50125

Dr. Mary Pickett
MacKay Hall
Iowa State University
Ames, Iowa 50010

Erma B. Plaehn
State College of Iowa
Cedar Falls, Iowa 50613

Mrs. Inez Pontious
1002 Paramount Building
Des Moines, Iowa 50309

Registrants--Continued

Mrs. Leona Powers
Rockwell City, Iowa 50469

Margaret Pratt
Emmetsburg, Iowa 50536

Mrs. Greg Raps
4836 NW. Morningstar Drive
Des Moines, Iowa 50313

Mrs. Don Reese
Turin, Iowa 51059

Mrs. Irma Rensberger
2325 Tremont Avenue
Davenport, Iowa 52803

Mrs. Elizabeth Richards
1112 Boundary Street
Red Oak, Iowa 51566

Mrs. L. H. Rockey
1511 24th Street
Des Moines, Iowa 50313

Louise Rosenfeld
108 Curtiss Hall
Iowa State University
Ames, Iowa 50010

Mrs. Raymond Sayre
Ackworth, Iowa 50001

Mrs. Claus Schlicht
Sanborn, Iowa 51248

Frankie Schwenk
7 East Hall
Iowa State University
Ames, Iowa 50010

Dr. Marguerite Scruggs
Iowa State University
Ames, Iowa 50010

Mrs. Frances Shambaugh
Argonne Armory
Des Moines, Iowa 50309

Mrs. James Shannahan
2604 East 29th
Des Moines, Iowa 50317

Mary L. Sherrett
1000 East Grand
Des Moines, Iowa 50316

Laura Simonson
2016 South Newton
Sioux City, Iowa 51105

Margaret Sjolander
State College of Iowa
Cedar Falls, Iowa 50613

Margaret K. Spear
335 Newell Street
Waterloo, Iowa 50703

Mrs. K. W. Statler
Box 466
Keota, Iowa 52248

Alline Staveley
404 North Jackson
Charles City, Iowa 50616

Nadine Stillman
Cooperative Extension
Service
Agricultural Building
Centerville, Iowa 52544

Mrs. William Stillman
Emmetsburg, Iowa 50536

Mrs. Saul Suvalsky
183 Keeline Avenue
Council Bluffs, Iowa 51501

Mrs. Betty M. Talkington
5409 Ohio Street SW.
Cedar Rapids, Iowa 52404

Mrs. Arthur Tibben
Victor, Iowa 52347

Betty-Lea Trout
542 State Office Building
Des Moines, Iowa 50319

Marie Van Gilst
Box 111
Newton, Iowa 50208

Mrs. Virginia Van Werden
Winterset, Iowa 50273

Mrs. J. S. Van Wert
Route 3, Box 112
Hampton, Iowa 50441

Dr. Helen J. Van Zante
MacKay Hall
Iowa State University
Ames, Iowa 50010

Marcena Ver Ploeg
3505 Coy
Ames, Iowa 50010

Marilyn F. Wachtel
2142 Sunset Drive
Ames, Iowa 50010

Margaret Warning
140 MacKay Hall
Iowa State University
Ames, Iowa 50010

Mrs. Otha B. Wearin
Hastings, Iowa 51540

Mrs. Marie Weber
Cooperative Extension
Service
Agricultural Building
Centerville, Iowa 52544

Mildred K. Wellman
Iowa State University
Ames, Iowa 50010

Jude P. West
303 Capitol
Iowa City, Iowa 52240

Mrs. Ralph Wheeler
Granger, Iowa 50109

Dr. Elizabeth S. White
1510 South Patterson
Sioux City, Iowa 51106

Mrs. Stanley White
Route 2
Dallas Center, Iowa 50063

Mrs. S. M. Wiese
Norway, Iowa 52318

Mrs. Margaret K. Yoder
111 North Curtiss Hall
Ames, Iowa 50010

Mrs. Martha Zipsie
2057 Linn Boulevard SE.
Cedar Rapids, Iowa 52403

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*ARROWHEAD REGIONAL CONFERENCE ON THE STATUS OF WOMEN IN NORTHERN MINNESOTA, DULUTH, MINNESOTA, JULY 17, 1964

A conference conducted under the joint sponsorship of the Arrowhead Council on the Status of Women, the Minnesota Governor's Commission on the Status of Women, and the Women's Bureau, U.S. Department of Labor met to consider the needs and problems of Northern Minnesota working women. Panel discussions, workshops and speeches were all planned so that conference participants would receive current information about the needs of the labor force, particularly females, could assess legislation affecting wages, hours, and similar areas of concern, and could consider how to work towards solving the problems presented. Presentations were: (1) "The Economic Situation of Northern Minnesota," (2) "Developing Our Economic Potential," (3) "Profile of Women Workers in Northern Minnesota," (4) "State Laws Affecting Women Workers in Minnesota," (5) "Federal Laws Affecting Women Workers in Minnesota," (6) "An Employer Looks at Women Workers," and (7) "Organized Labor Looks at Women Workers". Summaries are included of workshops on employment of women, education of women, home and community, and the legal and civil problems of women. Addresses by James Rice on "The Purpose and History of the Governor's Commission on the Status of Women," and by Mary Dublin Keyserling, the principal speaker at the conference, and lists of resource specialists, conference committees, and participating organizations are included. (FP)

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Report of

ARROWHEAD REGIONAL CONFERENCE

on

THE STATUS OF WOMEN IN NORTHERN MINNESOTA

Held at
Athletic Club
Duluth, Minn.
July 17, 1964

Sponsors:

Arrowhead Council on the Status of Women
Minnesota Governor's Commission on the Status of Women
Women's Bureau, U.S. Department of Labor

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VT006311

U.S. Department of Labor
W. Willard Wirtz, Secretary

Women's Bureau
Mary Dublin Keyserling, Director

Report of

ARROWHEAD REGIONAL CONFERENCE

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July 17, 1964

Sponsors:

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Minnesota Governor's Commission on the Status of Women
Women's Bureau, U.S. Department of Labor

FOREWORD

This report provides a summary of the proceedings of the Arrowhead Regional Conference on the Status of Women which was called under the joint sponsorship of the Arrowhead Council on the Status of Women; the Minnesota Governor's Commission on the Status of Women; and the Women's Bureau, U.S. Department of Labor. Many State agencies, community organizations, educational institutions, and labor groups cooperated to give the conference scope and meaning.

This conference was one of a series of State and regional meetings held for the benefit of individuals and groups who are concerned with the needs and problems of working women. Panel discussions, workshops, and speeches were all planned so that conference participants would receive current information about the needs of the labor force--particularly the female labor force; could assess legislation affecting wages, hours, and similar areas of concern; and could consider how to work toward solving the problems presented. The meeting summarized in this report concentrated on the needs of Northern Minnesota.

We are eager to acknowledge the efforts of the many individuals who helped plan the conference, particularly Mrs. Viola Hymes, Chairman of the Governor's Commission on the Status of Women, and Miss Ruby E. Horn, Chairman of the Arrowhead Council on the Status of Women. The many speakers who represented both State agencies and community enterprises gave generously of their time and thought and contributed to the stimulating and constructive atmosphere that prevailed.

There emerged from this meeting not only a comprehensive picture of the needs of working women in Northern Minnesota but an understanding that the needs of these women must be seen against the background of the needs of the community as a whole. This understanding, combined with the obvious interest and devotion of those who are working to solve the problems of women and of the community, makes us confident of the successful outcome of future plans and action.

Mary Dublin Keyserling

Mary Dublin Keyserling
Director, Women's Bureau

CONTENTS

	Page
CONFERENCE PROGRAM	iv
CONFERENCE OBJECTIVES	vi
GREETINGS FROM THE GOVERNOR	vii
SUMMARY OF CONFERENCE PROCEEDINGS	1
Opening Session. Presiding: Ruby E. Horn, Chairman, Arrowhead Council on the Status of Women	1
Greetings. The Honorable George D. Johnson, Mayor of Duluth	1
Panel Discussion. Moderator: Marguerite I. Gilmore, Midwest Regional Director, Women's Bureau, U.S. Department of Labor	2
THE ECONOMIC SITUATION OF NORTHERN MINNESOTA. Jerry Pratt, Director of Community Relations, Upper Midwest Economic Council for Research and Development, University of Minnesota	2
DEVELOPING OUR ECONOMIC POTENTIAL. Robert Babich, Field Coordinator, Area Redevelopment Administration, Virginia	3
PROFILE OF WOMEN WORKERS IN NORTHERN MINNESOTA. Roy Anderson, Manager, Duluth Office, Minnesota State Employment Service	4
STATE LAWS AFFECTING WOMEN WORKERS IN MINESOTA. Margaret Browne, Acting Supervisor, Division of Women and Children, Minnesota Industrial Commission	6
FEDERAL LAWS AFFECTING WOMEN WORKERS IN MINNESOTA. John Tennant, Assistant Regional Director, Wage and Hour and Public Contracts Divisions, U.S. Department of Labor	8
AN EMPLOYER LOOKS AT WOMEN WORKERS. Virginia Kirby, Personnel Director, Arrow Company, Virginia	9
ORGANIZED LABOR LOOKS AT WOMEN WORKERS. Curtis Miller, Editor, Labor World, Duluth	10
Dinner Session	12
Summation of the Workshops	12
EMPLOYMENT OF WOMEN	12
EDUCATION OF WOMEN	12
HOME AND COMMUNITY	13
LEGAL AND CIVIL PROBLEMS OF WOMEN	13
Presentation of the Governor's Citation	14
PURPOSE AND HISTORY OF THE GOVERNOR'S COMMISSION ON THE STATUS OF WOMEN. James Rice, Secretary to Governor Karl F. Rolvaag	14
PRINCIPAL ADDRESS. Mary Dublin Keyserling, Director, Women's Bureau, U.S. Department of Labor	15
ORGANIZATION OF WORKSHOPS	18
VISITING RESOURCE SPECIALISTS	19
CONFERENCE COMMITTEES	20
PARTICIPATING ORGANIZATIONS	21

CONFERENCE PROGRAM

1:30 p.m. Registration

2:00 p.m. Opening Session--Presiding: Ruby E. Horn, Chairman, Arrowhead Council on the Status of Women
Greetings--The Honorable George D. Johnson, Mayor of Duluth

2:30 p.m. Panel--Moderator: Marguerite I. Gilmore, Midwest Regional Director, Women's Bureau, U.S. Department of Labor

THE ECONOMIC SITUATION OF NORTHERN MINNESOTA. Jerry Pratt, Director of Community Relations, Upper Midwest Economic Council for Research and Development, University of Minnesota

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AN EMPLOYER LOOKS AT WOMEN WORKERS. Virginia Kirby, Personnel Director, The Arrow Company, Virginia

ORGANIZED LABOR LOOKS AT WOMEN WORKERS. Curtis Miller, Editor, Labor World, Duluth

3:30--
5:30 p.m. Workshops. Chairman: Marion Smith
EMPLOYMENT OF WOMEN
EDUCATION OF WOMEN
HOME AND COMMUNITY
LEGAL AND CIVIL PROBLEMS OF WOMEN

6:30 p.m. Dinner--Duluth Athletic Club Dining Room
Welcome--Ruby E. Horn
National Anthem and Invocation--Rev. Stuart Joransen, First Methodist Church, Duluth
Introductions--Ruby E. Horn
Summation of Workshops--Marion Smith
Presiding Chairman--Viola Hymes, Chairman, Governor's Commission on the Status of Women
Governor's Citation--Presented to Marion Smith by James Rice
PURPOSE AND HISTORY OF THE MINNESOTA GOVERNOR'S COMMISSION ON THE STATUS OF WOMEN. James Rice, Secretary to Governor Karl F. Rolvaag
PRINCIPAL ADDRESS--Mary Dublin Keyserling, Director, Women's Bureau, U.S. Department of Labor

CONFERENCE OBJECTIVES

To place before the conferees the latest information available on women workers in the State of Minnesota.

To investigate the needs of our Nation which can be met through the untapped resources of womanpower, and to encourage women to assume their role as full citizens of their State and Nation.

To analyze the dual role of women as homemakers and wage earners in their contribution toward family responsibilities.

To review and assess the present status of women workers as reflected in legislation and practices on minimum wages, hours of work, equal pay, and working conditions.

To recognize and make plans for children of working mothers. To develop guides for the roles that State and local organizations can play in meeting the needs of women workers.

GREETINGS FROM THE GOVERNOR

It is a personal pleasure to send my greeting to the participants in the Conference on the Status of Women in Northeastern Minnesota. I am pleased that the sponsoring groups have centered on this area of our State to emphasize its present and future and the role of women therein.

I regret that my schedule does not permit me to attend, for I would have appreciated the opportunity to meet with you and hear the excellent speakers on your program. I extend my best wishes for fruitful discussions and a productive conference.

Sincerely yours,

KARL F. ROLVAAG
Governor

SUMMARY OF CONFERENCE PROCEEDINGS

OPENING SESSION

The opening session was called to order by Miss Ruby E. Horn, Chairman, Arrowhead Council on the Status of Women. She introduced the Honorable George D. Johnson, Mayor of Duluth, who welcomed the conference to the city and wished it success. He remarked that, as he understood it, in recent times our society had made a significant change in its reasons for hiring workers. Before 1945 or 1946, he said, most workers were hired for their brawn--their ability to pick something up and move it around, but since then, more and more, the chief reason for hiring people has been their brain. The increased emphasis on hiring brainpower and education tends to open more doors for the so-called weaker sex, and he feels it is well to consider some of the ramifications of this.

Mayor Johnson commented on another matter--one that was of vital concern to the Northern Minnesota area with which the conference dealt. "People in the southern part of the State," he said, "do not realize that the Taconite Amendment is also of the utmost importance to them.... Our natural ore tax revenues are gone, never to return. The only way they can be replaced is by the passage of this measure."

Miss Horn traced the origin of the Arrowhead Council on the Status of Women, one of the three groups which sponsored the meeting. This council came into being because a statewide council, set up after 1963 conference at the University of Minnesota in Minneapolis to explore the status of women, felt there was need for more grassroots opinion and discussion. The Arrowhead Council in Northern Minnesota was the first local council organized.

After expressing Governor Karl F. Rolvaag's regret that he was not able to attend the meeting, Miss Horn introduced Miss Marguerite I. Gilmore, Midwest Regional Director of the Women's Bureau, U.S. Department of Labor, who presided during the panel discussion that followed.

PANEL DISCUSSION

The panel discussion was planned to provide conference participants with a common understanding of the particular areas of interest so that group discussion in the afternoon workshops would be more fruitful. Seven panelists addressed the group. Excerpts from their remarks follow. Miss Marguerite I. Gilmore was moderator.

THE ECONOMIC SITUATION OF NORTHERN MINNESOTA

Mr. Jerry Pratt

Director of Community Relations
Upper Midwest Council for Research and Development
Minneapolis, Minn.

Five years ago a group of leaders in the Ninth Federal Reserve District of North Dakota, Minnesota, Western Wisconsin, and the Upper Michigan area discussed some of the problems confronting our area. At that time we had an employment lag in agriculture, mining, oil, and other industries. We had a shift in population from rural to urban communities. (It is hard to realize, but, in this upper Midwest area, 5 million of the 6 million people live in urban communities.) We had less than an average number of jobs in manufacturing. We faced the necessity of making a tremendous adjustment to technological change, not only in the city but also in the towns and rural communities. Another important thing that hit us was the loss of our young people, too many of whom had to leave the area because there were no jobs.

The gentlemen who sat around the conference table came up with a two-point program. First, they wanted an objective study covering all of the economic sectors of this area. And second, after the facts were in they wanted an action program to put the recommendations of the researchers into effect.

The group gathered 250 leaders from agriculture, education, business, labor, and government. They set up a board of directors representing the entire region and representative of all segments of the economy.

The economic study was set up at the University of Minnesota, with seven other universities and colleges in this area--including our own University of Minnesota at Duluth--doing the research studies on 25 sectors of the economy. The research studies covered recreation resources, taconite and iron ore, the St. Lawrence Seaway, forest products, education, technological industry, and urban development.

The research attempts to answer three questions. First, what are the current facts about a given economic sector? Second, what are the projections to 1975? Third, once the first two questions are answered, what are the alternative sources of growth that can provide more needed jobs?

If you don't remember anything else I say today, I hope you will remember one thing. The primary purpose of the Upper Midwest Economic Council for Research and Development is to accelerate the economic growth of this region, including the northeastern part of Minnesota, and to develop needed additional job opportunities.

The research phase has been completed. There are three action committees: one on agriculture, one on business and industry, and one on urban development. Those action committees are now going through the reports to come up with an action program.

To the objective research which has been done by educators, we will add the practical viewpoint of businessmen and labor leaders and, hopefully, come up with an action program that will create more job opportunities for the men and women in this entire region.

The success of this program is going to depend on just one thing--action taken at all levels. Nobody from the Twin Cities or Duluth or Butte, Montana, or Grand Forks, North Dakota, or Virginia, Minnesota, is going to bring this about alone. Success is going to depend on the action taken by men and women all over this entire area.

Fortunately, some action already has been taken in this region. The Northeastern Minnesota Development Association has been formed to join together all of the forces in our economy to do something about economic conditions in this area. It has a budget of over $1,000,000 for a 5-year period.

And our own action program, in reality, has already begun. With the University of Minnesota, we have set up the North Star Research and Development Council. It is a going organization, set up to help stimulate the growth of small industries that do not have their own research facilities and help channel the efforts of communities along the right lines.

In closing, I would like to quote from Governor Rolvaag. At a meeting of the Northeastern Development Association he said: "The meeting here today is a symbol of the determination of the people of Northeastern Minnesota to solve their own economic problems. The economic problems of Northeastern Minnesota are not going to be resolved by expecting all answers to come from Washington or St. Paul. Government can help, but local initiative and direction is initial to success. We stand ready to help, and I am confident this section of Minnesota stands on the threshold of one of the greatest development periods of any section of our State."

Questioning revealed that the research reports mentioned were available upon request from Mr. Jerry Pratt at the University of Minnesota.

DEVELOPING OUR ECONOMIC POTENTIAL

Mr. Robert Babich

Field Coordinator
Area Redevelopment Administration
Virginia, Minn.

In the last few years we have heard words such as "out migration," "retraining," "designated or distressed areas," and the awful word "automation." Yet we have been living with these words for some time, particularly in northern Minnesota. Thanks to better technology, today's farmer produces enough food and fiber for 26 people. Twenty years ago he produced enough for only four. But even with technology, many farmers cannot produce enough to make a living on the small tract of land that came down to them from their forefathers.

There are problems in other industries. Like many other immigrants, my dad came over here and worked as a logger. As our logging industry and resources became depleted, he went into mining.

We are concerned, when we see a land with such vast resources as ours, with such tremendously productive people--why we are compared with Appalachia, a one-industry area. We may be compared to Appalachia, but we will not end up an Appalachia. The people in northern Minnesota, realizing we have depleted our merchantable ores--our profitable ore production--have united to promote the industry we have: the taconite industry, which will begin a new era in our economic recovery, and our paper industry.

We are going through a transformation in our mining industry-- from a merchantable ore to taconite, a much more costly production. After the taconite plants are built, we will still have a problem. The median age of our population is now 46 years. Because of the training required, the plants will want to hire workers between the ages of 18 and 35. There is still going to be the problem of finding jobs for the people in the older age groups. To do this we have to attract new industry and encourage existing industry to utilize this available labor force.

Except during the war years, in northern Minnesota we have witnessed ups and downs, seasonal employment. One large firm here employs a thousand people--mostly women. If it hadn't been for firms such as this, the Range would be in more serious economic trouble than it is today. The men who have had seasonal employment in the mines would have found it impossible to raise their families if this work had not been available for their wives.

The Federal Government now has passed the Area Redevelopment Act (ARA) to attract industries to areas such as ours and to expand existing industries. The program offers a long-term amortization program at a low rate of interest. It will be up to constructive programs such as the ARA to bring in the industries that will employ both women and men.

PROFILE OF WOMEN WORKERS IN NORTHERN MINNESOTA

Mr. Roy Anderson

Manager, Duluth Office
Minnesota State Employment Service

First we need to define the area about which we are talking. What is northern Minnesota? We arbitrarily drew a line through the State of Minnesota, east and west, from the vicinity of Brainerd, which would include Fergus Falls on the extreme west, and drop down slightly to Pine City on the east. This gives us half of the geographical area of the State, including 27 counties in all.

According to the 1960 census--which, by the way, is the basis for most of our information--this 50 percent of the geographical area of our State has only 20 percent of the population, 19 percent of the labor force, and a little less than 17 percent of the women workers.

You have heard many times that in this decade the population of the United States will grow about 15 percent and that at the same time our labor force will grow about 20 percent. You also have heard that about half of this labor force growth will be youth under 25, and that the number of women in the labor force will increase by about 25 percent, as compared to an increase of 15 percent for men. In other words, by 1970, nationwide, more than one of every three workers will be a woman.

As our economy continues to grow and our technology advances proportionately, fewer workers will be needed to produce the goods we need and more workers will be needed to provide the services we request as our living standard goes up and our leisure time increases. In this rapidly changing world, the greatest demands in the future will be for trained workers in the professional and clerical fields, skilled and semiskilled, while the untrained will be left with less and less opportunity.

While this is a nationwide forecast, I am quite sure we can expect to have the same basic developments here in northern Minnesota. Maybe they won't be quite as dramatic as in the State or Nation as a whole, but we will have the same situation here.

Let's take a look at the current status of women workers in these 27 northern counties. According to the 1960 census again, 31.7 percent of the workers in Minnesota were women, compared with only 27.9 percent in northern Minnesota. Ten percent of the male labor force were unemployed in northern Minnesota, but only 6.5 percent of the female labor force were unemployed. This, of course, could indicate a more favorable employment situation among women. I think this may be true, but, on the other hand, we must consider that many more women are in the labor force on a part-time basis and leave for family reasons or seasonally after short periods of employment each year. Therefore, when their employment ceases, they cease to be part of the labor force. This is not true of men.

Let's quickly examine the occupations in which women in northern Minnesota are employed. The majority of women are occupied in much the same activities as for the State as a whole, but there are significant variations in certain fields.

First, among clerical and kindred workers we find 30 percent of the State's women employed, while we have only 23 percent in northern Minnesota. This may be because of a lack of opportunity in the more rural areas in northern Minnesota for clerical workers. When girls are qualified in this field of work, they migrate to metropolitan areas where employment is more plentiful.

Likewise we note that among operatives and kindred workers, total Minnesota has a greater percentage employed than we have. This results from the fact that northern Minnesota has relatively less of the production-line type of manufacturing that is conducive to the employment of women.

On the other hand, almost 10 percent of women workers in northern Minnesota are engaged in the private-household field, as compared with 7 percent for the State as a whole. Here we tend to make up some of our lacks in the other occupational groups. Also, a larger proportion of women in northern Minnesota than of women in the State find work in the service occupations, which include cooks, waitresses, kitchen workers, nurses' aides, and resort workers.

Now let's look at the industries in which these women are employed and compare these with industries in the State as a whole. Again, although the distribution of our women workers generally follows the statewide pattern, there are some variations, as we noted previously--the greatest difference being in manufacturing activity.

We also note a significant difference in the employment of women in wholesale trade and in finance, insurance, and real estate. I think the Twin City area has a tremendous effect on the statewide totals. The headquarters of many large insurance companies are located there, as are many wholesale establishments which employ hundreds of women. We don't have these sizable establishments in the northern part of the State.

There are a few other facts that may be of interest. In looking at the earnings of women in northern Minnesota, we find the median yearly wage in this part of the State is approximately $1,285, as compared with a median of $2,031 for women in the State as a whole. We believe we can attribute this to three factors. First, in northern Minnesota we have a number of relatively small communities where wages tend to be slightly lower. Second, the type of employment available has an influence, since neither the service industry generally nor the household field pays as high wages as those paid by manufacturing industries. Third, many of our workers are employed in the resort industry and often work on a seasonal basis.

We have more women in the labor force for short periods of time. While the seasonal factor exists for the entire State of Minnesota, it is not as prevalent as it is in northern Minnesota.

Now for a brief look at the educational status of women in northern Minnesota. In 1960, 27 percent of the women in the labor force in northern Minnesota were high school graduates, compared with 30 percent of the women employed in the State as a whole. Also, 4.4 percent of northern Minnesota women were college graduates, compared with 5 percent of the State as a whole. The median number of school years completed by women in northern Minnesota was 10.1, as compared with 11.6 for women in the State as a whole. Married women made up 57 percent of the total women in northern Minnesota's labor force.

Some of these factors on education may cause you to wonder a bit. I think there is one thing we have to remember here: A number of our women in the northern part of the State who have gone to college and become professional people migrate to the more metropolitan areas to follow these professions. This may account for some of the difference I've mentioned.

To sum up, I believe we can conclude that in northern Minnesota and in the entire State, employment opportunities for women compare favorably with those for men.

It was interesting to check our 1963 employment service activities. We found that 61 percent of the total placements we made in our office--exclusive of the casual labor type--were women, in spite of the fact that only one-third of the people registered with us are women.

Another interesting fact is that in June 1964, 37 percent of all people employed in Duluth were women. This figure, above the national average, results from the nature of our industries--service and trade.

Northern Minnesota is generally considered a labor supply area, and, in looking forward to the future, I believe it is reasonable for us to think in terms of the national labor force rather than just our own, especially when planning for our young people. With women as with men, training becomes the important factor. The more training the individual has, the better job he will qualify for. Some of the greatest national shortages are in occupations held to a great extent by women.

I believe it is safe to conclude that the problems of employment for women are not too different from those of men. Preparation has become the key to success in employment for either sex.

STATE LAWS AFFECTING WOMEN WORKERS IN MINNESOTA

Miss Margaret Browne

Acting Supervisor
Division of Women and Children
Minnesota Industrial Commission

Of the various laws in Minnesota regulating the employment of women, those relating to wages are the most controversial. More than 60 percent of the complaints received by our office during the past 2 years concerned the low wage rates paid by some employers.

Minnesota now has eight wage orders covering almost every kind of industry or occupation to which our minimum wage laws apply. Domestic service and agricultural workers are exempt from Minnesota's minimum wage laws. While some of the wage rates provided by our wage orders are low and should be revised upward, our investigators during the last 2 years found that there was due to 2,704 employees $218,661.94 in

wages. This involved 420 firms--with an average of $80.87 due each employee. This was accomplished despite the fact we had been operating with only three investigators for about a year and a half.

In comparing Minnesota's minimum wage laws with those of other States, I found the following situation. Of the 35 States and jurisdictions with minimum wage laws, 14 of the laws, including Minnesota's, apply to women and minors only; 16 apply to men, women, and minors; and 5 apply to women only. The reason why minimum wage laws apply to women or to women and minors only in more than half of the jurisdictions with such laws is not to differentiate between the sexes but to provide a floor under the wages paid to employees receiving the lowest wages--generally women and minors.

Some States have statutory minimum wage rates. Some establish minimum wage rates via wage orders. Minnesota is one of these. (I might add that the rates set by wage orders vary with the industry and, in some instances, with the size of the town in which the industry is located.) Some States have a combination of both wage orders and statutory minimums.

It is our considered opinion that the type of minimum wage law we now have is the best for our State at the present time. The present law could be amended to include men, but in comparatively few instances--unless the present values were raised--would males 21 years of age or older benefit from this action.

Minnesota also has a maximum hours law for women. I realize there are different points of view regarding the need for a law limiting the hours that women may be employed. First, we must recognize that while women are equal, they are not as strong physically as men and that there are more limits to their endurance. Second, we should note that our law does not apply to more than 58 percent of the women employed in Minnesota, since officeworkers, executive and administrative employees, nurses, domestic service workers, and other such employees are exempt.

More than 15 percent of the complaints we received during the past 2 years were about the excessive hours of work required of workers employed in establishments that are open 7 days a week, such as nursing homes, hotels, and restaurants. These establishments are not covered under the hour law. Until such time as it can be determined what effect, if any, the maximum hour law has on equal pay under the Federal law, or until an equal pay law is enacted in Minnesota, it is our opinion that no change should be contemplated.

There is great need for a change in our wage collection provision. We have found a wide variance in wage collection provisions enacted by the States. Some States provide for an attorney and secretary to handle wage collection cases. In some States cases are heard by the Department of Labor. Some States provide for claims filed with the Department of Labor or the Industrial Commission to be referred to city or county attorneys for action.

We believe this method could be effective and would provide needed service at a minimum cost to the State. Handling cases at the local level would eliminate travel expenses. The fact that such a statute existed might, in itself create a beneficial attitude and provide a legal means of collecting unpaid wages.

Another Minnesota law provides that women may not be employed in core rooms of foundries; neither may they lift more than 25 pounds in foundries and in other hazardous occupations. Law suits may be brought if necessary. This has not been a problem up to now, and we do not anticipate that it will be one in the future.

We are in the process of tabulating information collected during a wage and hour survey. I believe you will be interested in some of these figures.

In the amusement industry, excluding Minneapolis, St. Paul, and Duluth, the median wage rate for females is 88 cents an hour; for males, $1.22. In Minneapolis, St. Paul, and Duluth, the median wage in the amusement industry for females is 88 cents an hour; for males, $1.29. These rates are low because a larger number of minors are employed in this industry.

In the amusement industry in Minneapolis, St. Paul, and Duluth, the percentages of males and females receiving less than $1.00 an hour are: females, 74.3 percent; males, 34.8. Under $1.15 an hour: females, 80 percent; males, 41. Over $1.50 an hour: females, 7 percent; males, 39.3 percent.

In the retail merchandising industry we have the figures for the State, excluding Minneapolis, St. Paul, and Duluth. The minimum wage for females is $1.15 and for males, $1.52; 15.2 percent of the females and only 9.5 percent of the males receive less than $1.00 an hour. Under $1.15 an hour: 50 percent females; 25 percent males. Over $1.50 an hour: Females, 11.4 percent; males, 53.1 percent.

These are the breakdowns on some other occupations. Sales: Females, $1.12 an hour median wage; males, $1.57. Stockroom workers and miscellaneous: Females, $1.14; males, $1.29. Pharmacists: Females, $3.06 an hour; males, $3.54 an hour.

This small sample indicates that women are employed in the low-paying jobs or receiving less for the same type of work or a combination of both.

In my opinion it is very necessary that women continue to press for an equal pay law in Minnesota. This is a situation where persistence is required.

Minnesota has no laws regarding daily limitation of hours, rest periods, or lunch periods, which many other States have. Possibly this group will want to consider doing something about that, too.

FEDERAL LAWS AFFECTING WOMEN WORKERS IN MINNESOTA

Mr. John Tennant

Assistant Regional Director
Wage and Hour and Public Contracts Divisions
U.S. Department of Labor

The Fair Labor Standards Act, a federal law originally passed in 1938, sets a floor under wages and provides overtime pay after 40 hours a week. As I am sure everybody must know by now, the minimum wage for employees engaged in interstate commerce and in the production of goods for interstate commerce is $1.25 an hour. For employees newly covered by the 1961 amendments, the law requires a minimum wage of at least $1.00 an hour, with time-and-a-half after 44 hours. In September of this year that minimum will be increased to $1.15, with time-and-a-half after 42 hours; and in September 1965 it will be brought up to the general minimum of $1.25, with time-and-a-half after 40 hours.

Of great interest is the most recent amendment to the Act, designated as Section 6 (d). It is called the Equal Pay Amendment of the Fair Labor Standards Act. This Equal Pay Act prohibits discrimination based on sex in the payment of wages within any establishment covered by the Fair Labor Standards Act.

What is meant by establishment? An establishment is a distinct physical place of business rather than an entire company or enterprise which may include several places of business. A firm's manufacturing plant in one location, a warehouse on the outskirts of town, and its office in the city's center, constitute, for the purpose of the law, three separate establishments.

On an establishment basis, then, the prohibition against wage discrimination based on sex is applied to equal work--to jobs that require equal skill, effort, and responsibility, and that are performed under similar working conditions.

It is the job content that counts, with respect to the Equal Pay Act, not the job title. For instance, if both men and women have the title of retail clerks, but men sell major electrical appliances and women sell infants' wear, the job responsibilities might support a finding that their jobs are, in fact, substantially different.

In determining whether jobs require equal skill, we take into account such factors as experience, training, education, and ability. When we measure effort we measure the physical and mental exertion needed for the performance of a job. For example, a male checker in a supermarket may spend part of his time carrying out heavy packages or replacing heavy items in stock while the female checker devotes an equal amount of effort during a similar part of her time performing work requiring greater dexterity, such as arranging displays of spices or other small items. Their "effort" would appear to be equal. Incidentally, the occasional or sporadic performance of an activity which may require extra physical or mental exertion is not in itself sufficient to justify a finding of unequal effort.

Another consideration in measuring jobs under equal pay standards is the principle of equal responsibility. This involves the degree of accountability required in the performance of a job, with emphasis on the importance of the job obligation.

In order for the equal pay standard to apply, the jobs also must be performed under similar working conditions. Jobs in different departments of an establishment are not necessarily performed under similar working conditions.

I have given you what I suppose might be called a "horseback survey" of the recent amendment to the Fair Labor Standards Act called the Equal Pay Standard.

AN EMPLOYER LOOKS AT WOMEN WORKERS

Mrs. Virginia Kirby

Personnel Director
Arrow Company
Virginia, Minn.

The Arrow Company is a division of the Cluett, Peabody and Company, Incorporated. We now have four plants in operation on the Range.

Most of our employees are women--680 of them. The majority are stitch operators--560. The rest are service people, pressers, packagers, supervisors, and office personnel. We employ only 70 men, yet we still have managed to stay in business, regardless of what anyone may say about women and absenteeism, leaves, and turnover. Many of our women have been with us for more than 5 years. Over 100 have 15 years of service or more. Most of us in the office have been with the company for 16 or 17 years.

We do not have in this area a ready supply of experienced operators as plants do in the larger cities. Therefore, our training costs are great. Training time averages 16 weeks. Applicants must be screened carefully to cut potential turnover and absenteeism to the minimum.

Screening procedures are not based primarily on age. They are designed to find out whether a prospective employee can cope with the speed of a power sewing machine and the pressure of a production quota, and whether she has plans for further education or for marriage. Her attitudes and health are considered; her family responsibilities and the arrangements she will make for the care of young children are frankly discussed, as is her husband's attitude toward her working outside the home. If an applicant seems promising, she is tested for dexterity and coordination and is given a physical examination.

Careful screening of the applicants eliminates much absenteeism and turnover. By taking the time to go over some of the problems that could come up and by encouraging applicants to give honest answers we save time and trouble later on.

Once the applicant is hired, we allow leaves of absence for personal illness, illness in the family, and short leaves for marriage and a honeymoon.

Most of our employees are quite conscientious and do not go overboard on this. Our leaves and absences combined average about 4 percent. Absences alone average 2.5 percent. This includes both men and women.

Our turnover rates for the first 6 months of 1964 were 24.1 percent for men and 23.1 percent for women. Note that this is 1 percent less for women.

It has been a long, hard struggle for this new industry on the Range. Public sentiment was against us; people had the old sweatshop idea of factory work. Women were not accustomed to the idea of working outside the home, since so few jobs had been available for them. Husbands had the old-fashioned idea that women should stay at home.

Now, we have made friends. The jobs women hold help financially during mine layoffs. We feel that we have given a definite boost to the economy of the Range.

ORGANIZED LABOR LOOKS AT WOMEN WORKERS

Mr. Curtis Miller,
Editor Labor World
Duluth, Minn.

Eliminating unfair competition based upon the exploitation of women workers or any human beings has always been one of the primary goals of the American labor movement. If this statement seems to be to you just a glittering generality, let me come down to specifics on it.

Some people say that labor demands such high wages for women that employers can't afford to hire them. You've also heard that unions are pricing themselves out of the market, or that union wages are responsible for inflation, but have you ever asked yourself this question: Is it too much to expect that, regardless of a worker's sex, a full-time worker should be paid enough to enjoy a modest standard of living?

Minnesota employment service statistics show that the nonfarm workers in this State earned an average hourly wage of $2.60 in May. Yet the best yardstick of what it takes to afford a decent standard of living for an average Minnesota urban family of four people is $3.25 an hour. Therefore, the current average wage in this State is still about 65 cents less than it should be. Families of four headed by a man who brings home less than $3.25 an hour don't enjoy a decent standard of living unless the wife earns a second paycheck to make up the difference.

There now appear to be so many wives and mothers making up the difference that we have an almost irreversible trend underway toward a two-paycheck system of family support. One could even argue that this amounts to turning the clock back a little bit. In preunion days the whole family worked in a factory to earn food, clothing, and shelter for all of them. Then for a while the unions stopped this practice by getting enough coin from a single paycheck to buy life's necessities. Now we expect more from life than necessities; the single paycheck is often no longer enough. As soon as the kids are in school, many mothers head back to a job.

Sociologists can measure the sociological impact of this trend. Organized labor is not against the idea of women workers, but there is an economic impact that worries us. There are many, many women who are the sole support of themselves or even a whole family. Are their chances of earning a decent income, a decent single income, hurt or helped by other women workers who compete with them to earn a second supplemental income?

There are many, many mothers of large families who cannot possibly expect to go to work outside their homes until rather late in their lives. These families, too, while the children are still at home, are utterly dependent upon the single income earned by the father. Are his chances for a decent income hurt or helped because his fellow workers on the job need not strive for better wages as vigorously as he must, because their wives are working to make up the difference?

These are crucial questions that come down to the core of American family life. Who knows how many wage-earning families are involved in this kind of situation and the frustration they experience?

One other aspect of the problem is the apparent reluctance of many women to join a labor union. I don't see the economic logic in this. Why pay a trained saleswoman--who must be well groomed and well dressed every single working day--a dollar an hour less than the wage earned by a trained women in a packaging line of a meatpacking plant? Or why should a woman poultry dresser be paid half as much as the woman who handles pork? The answer is often simply that one woman works under a union contract and the other doesn't.

There is one final point I would like to mention. Years ago, when mothers became freed from the care of preschoolers they found time for quite a bit of important volunteer work in their communities. Today, the tendency for many women to go back to work leaves no time--or very little time--for community service. So we have a severe shortage of community service volunteers right here in Duluth. Some answer must be found for this problem.

At the conclusion of Mr. Miller's talk, the Opening Session adjourned and participants met in four workshops. Workshop reports were given at the Dinner Session.

DINNER SESSION

The Dinner Session of the conference was called to order by Miss Horn, who called on Mrs. Marion Smith, a member of the Commission on the Status of Women and chairman of the workshops, to preside during the presentation of workshop reports.

SUMMATION OF THE WORKSHOPS

Employment of Women--reported by Mrs. Helen Norris

The workshop found no one set pattern of approach, no one single area of concern in connection with women who work. Young women, middle-aged men, older women, the educated, the uneducated--women of all economic classes are in the labor force. All these women must be considered only on the basis of their qualifications and abilities whether they work out of economic necessity or for self-fulfillment.

The impact of recent Federal legislation will probably be felt this year. As the Federal Equal Pay Act and the Civil Rights Act are enforced, comments may be made indicating a reactionary response. Nevertheless, State as well as Federal equal pay laws are needed.

It was pointed out that younger women more often work out of necessity than out of choice. The larger increases in percentages of women working are in the older age groups. The opinion was strongly voiced that women should have a choice about what they will do. It is not wrong for women to work rather than to stay at home. Since women are working increasingly to achieve self-recognition, counselors of women and girls should call attention to this.

Women are usually overlooked when planning commissions are named. They should be on industrial development boards such as NEMO (North Eastern Minnesota Organization for Economic Education) which needs women's experience and leadership ability.

In the broad view, every approach must be used to help make both men and women useful and happy members of society. The community must be creative in regard to employment opportunities and jobs. At the same time, society must not overlook or denigrate the contributions of those women who find satisfaction in making their contributions through home and community activities.

Education of Women--reported by Dr. Florence Schneider

The workshop heard an explanation given by Dr. Maybelle McCullough, chairman of the Education Section, Governor's Commission on the Status of Women, of the work of that section. The workshop also listened to a resume of the Minnesota Plan for Continuing Education of Women given by Miss Barbara Nantini.

The group then discussed problems suggested by the discussion leader, considering them to some extent in relation to the Minnesota Plan. Discussion revolved around these questions: What can we in education do to cope with the problems raised by the economic status of women in our area? How realistic is the approach of the commission in identifying these women? What can the commission do to reach all the women in the area who may need further education? Could counseling centers be set up where none exist? Could traveling counselors have a temporary headquarters? Could wider use be made of

the present employment services? Are the tests and inventories that we now have adequate, or should new kinds of tools be developed to meet the needs of more mature women?

In conclusion, the workshop voted unanimously to present to the conference the following motion:

> That the Minnesota Arrowhead Conference on the Status of Women recommend to the Governor's Commission on the Status of Women that the Minnesota Plan for Continuing Education of Women be continued and extended to cover northern Minnesota.

(Somewhat later during the session, the recommendation was unanimously adopted by the conference.)

Home and Community--reported by Mrs. Jewell Darland

Two recommendations originally suggested to the President's Commission on the Status of Women by its subcommittee on Home and Community were discussed by the group.

There is a great need for day care centers for the preschool children of working mothers. Though some are established in Duluth, there are not nearly enough. Not too many difficulties stand in the way of licensing a home to care for a small number of children.

Day care centers for the aged are also greatly needed, as are centers for the retarded.

The second recommendation dealt with homemaker service and household help. While some service of this type also is available, it is inadequate for the needs of the community. Mothers who work or are ill and the aged who prefer to stay at home rather than be placed in rest homes or institutions are frequently in need of this service.

Often these services are available but people are unaware of this help. There is also a problem finding women who want to be trained for this type of work. Thus far, no organized effort has been made to train homemakers.

Citizen apathy concerning these various needs is marked. People need to be educated and stimulated. This is an area in which trained volunteers can be extremely valuable since welfare agencies are not able to or cannot afford to meet all demands. Volunteer citizens could help also by looking into the financing of these services.

Workshop members believed that their main contribution would be made by developing awareness among the citizenry.

Legal and Civil Problems of Women--reported by Mrs. Ester Tomljanovich

The workshop reviewed areas of the law that might be discriminatory. It felt that discrimination against women existed in State laws concerning jury service, in laws relating to the right of action for loss of consortium, and in laws relating to certain crimes. Other areas which should be investigated to determine if there is discrimination are property and inheritance laws and laws and ordinances that restrict the employment of women. The workshop suggested that action should be taken by the Governor's Commission on the Status of Women and the Council on the Status of Women if it is found that these laws are discriminatory.

Women's role in civic and political life seems to be recognized more adequately at the higher levels of government than it is at the local community level. It was suggested that women should assert themselves more and be more energetic in making known their ability, availability, and desire to serve.

A final consensus was that women should take the lead as individuals and through organizations such as the Council and the Commission in changing attitudes, laws, and social customs that stand in the way of legal and political equality for women.

PRESENTATION OF THE GOVERNOR'S CITATION

The Governor's Citation, awarded to Mrs. Marion Smith for her long, varied, and distinguished service to the women of Minnesota in the field of education, was presented on behalf of the Governor by his Secretary, Mr. James Rice. The Citation read as follows:

WHEREAS, Marion Smith for some 40 years has served with distinction as a teacher and principal in the Duluth public schools; and

WHEREAS, throughout her many years of service she has maintained the highest dedication to the ideals of education and concern for her fellow man; and

WHEREAS, her vocational and extra-vocational activities together have established a record of outstanding attention to and action on the public issues of the day; and

WHEREAS, throughout this life of public interest and service her devotion and care for her own family never lagged; and

WHEREAS, her personal life, as well as her public life, has been an example of womanhood as we would wish it;

NOW, THEREFORE, I, Karl F. Rolvaag, Governor of the State of Minnesota, do hereby send greetings and do commend Marion Smith for her long, dedicated, and distinguished service to the citizens of Minnesota throughout her years as an educator and as an official and working member of countless organizations, both public and private.

Mrs. Smith was completely surprised and deeply grateful. Expressing her appreciation to the Governor, she said: "I won't say it is deserved or undeserved or anything like that. I worked with a great many of you and it has always been fun. You have been a great part of it, as you know. I look around the room and see so many folks I worked with in so many different capacities, it is terrific. So many others should have this ahead of me. This is lovely."

The last part of the dinner session was presided over by Mrs. Viola Hymes, Chairman of the Governor's Commission on the Status of Women. In introducing Mr. James Rice, Secretary to Governor Rolvaag, she noted that he was more than instrumental in helping to organize the commission. "Without his help," she said, "I think we would still be in the process of forming the commission."

PURPOSE AND HISTORY OF THE GOVERNOR'S COMMISSION ON THE STATUS OF WOMEN

Mr. James Rice

Secretary to Governor Karl F. Rolvaag

First I would extend the warm and personal greetings of our Governor, Karl F. Rolvaag, and I would express to the sponsoring groups of this conference his deep appreciation.

I would like, if I may, to give you some insight into the way the commission came into being.

When we met on many occasions to establish the Governor's Commission on the Status of Women, we were concerned with a higher ideal than the personal feeling that the

Governor has for women, or that I have, or that any one conferring with us had. I think we immediately rejected alike the leering, almost animalistic concept of women as chattels, and the smug, arrogant attitude that some had that women are decorative and should be patronized rather than recognized for their true worth.

Building from that, we realized that what is most needed in the world today is for people to have the opportunity to fulfill all their talents. This applies not only to women but to every citizen in our society. What we need least in this country are strident voices of hatred or of prejudice or of bias.

We structured this commission so there would be 45 members, 9 of whom are men. It is a wonderful commission. Its talents are multiple. It is a sensitive commission whose members have given of themselves to others. It is one of the few commissions whose members were not chosen by saying: "Let's have a person from labor, someone from education, someone from the civic organizations, and someone from the service groups." Each member was individually chosen and many had made contributions in several areas of the community.

So many talented individuals were recommended that in order to take advantage of all their potential contributions we established subcommittees in addition to the main commission.

I am going to conclude my remarks now by saying that the real hope of our society is that this commission succeeds in Minnesota and that commissions succeed in every State in the Union. I say this because we have many sensitive people, highly talented people, highly educated people, who can show--and show in a very direct way--what the consequences of bias and prejudice are. Now we have a group that has experienced bias, has experienced prejudice, and that can go forth and spread the message that we need full utilization of our human resources.

I would like to say this when I am talking to a group that is composed predominantly of women. All of us think of Susan Brownell Anthony as a leader in the suffrage movement, but I would remind you that in 1863 she was a cochairman with Mrs. Stanton, wife of a Cabinet member, of the Emancipation League, whose purpose was to gain support for the Emancipation Proclamation. I think a council on the status of women, a commission on the status of women, a regional group on the status of women should also aim to knock down the barriers of bias and prejudice that keep a large group of our citizens from their full opportunities.

The principal address was delivered by Mrs. Mary Dublin Keyserling. She was introduced by Mrs. Hymes as Director of the Women's Bureau, a noted economist, and a woman of compassion.

PRINCIPAL ADDRESS

Mary Dublin Keyserling

Director, Women's Bureau
U.S. Department of Labor

All of you who are taking part in this great national effort to upgrade our wonderful, but not fully used, national resource--the brains and skills and hearts of women--are engaged in one of the most important movements in our history.

I don't believe that anyone who followed the appointment of the President's Commission on the Status of Women back in December of 1961 knew how important this action would be. We couldn't have dreamed that in so short a time this action would have such tremendous and far-reaching results.

Do you know of a better test of the height a civilization has reached than the place of women in it? Doesn't the status that women hold in a society illustrate the values that society places on the rights and the dignities of the individual, of all its people? I think that is one of the many things that makes our work so meaningful, so important--because we realize that we are engaged in an enterprise that is strengthening the fabric of our society and democratic institutions.

You know that at his very first Cabinet meeting, President Johnson declared that women would no longer be second-class citizens, that the great resource that is women's talents would be called upon more fully in the interest of the Nation, and that the Federal service would be a show case to our whole country and to the world. In the very brief time between the middle of January and the middle of June, over 260 women had been appointed to high-level jobs--jobs paying $10,000 and more. In addition to the 260 appointments, 784 women had been promoted at these high levels.

As a result of a Presidential directive, all hirings and promotions in Federal service are made on the basis of qualifications alone, regardless of sex. This directive also affects the efforts the United States Employment Service makes to encourage employers to hire on the basis of qualifications alone.

You all know that the President's Commission recommended the enactment of the Equal Pay law, and now this is the law of the land. This has much more significance than just the payment of an equal wage for equal work. It starts a whole movement to upgrade women, because, as you know, women workers are concentrated in the less skilled and less well paid jobs.

Another implementation: The Civil Rights Act, which the President signed on July 2, includes Title VII which advances equality of employment opportunity by forbidding discrimination in hiring, training, and promotion on the basis of sex. I don't believe this could possibly have become law had it not been for the work of the President's Commission.

Even more important, I think, than the changing of employment practices and the forging of new laws is the fact that the recommendations have made us take a new and realistic look at the problems that women face. They have made us analyze the trends of the past, determine where we are now, and set goals for the future. We have become much more aware of what is happening to women in the work force.

In 1940, the average age of working women was 28. Today it is 41. The whole pattern of work is changing largely, I think, because we are enlarging the area of choice for women. In the current pattern, women work when they leave school. They marry at a younger age. By the time she is 30, the average woman has had her last child. Instead of having an average life expectancy of 48 years--which was true at the turn of the century--a girl baby now can expect to live to the age of 74, and this age is rising from year to year.

How completely changed are the patterns of our lives! In our sixties and seventies we are not worn out and old, we are young. How many of us know wonderful women of 80, 82, and 84 who are still doing full-time jobs, who are healthy, active, very much a part of their world, spirited, contributing their best. We are not all going to be active at age 82 or 84, but certainly until we are 65, or even 70, most of us will be wanting to pull our weight. From the time we are 35 or 40, when our children are well launched, more and more of us will want to contribute what we have. We don't have to look for paying jobs. There are many ways to seek fulfillment: through creative expression of our talents, as painters or musicians; through doing more in our own homes; through community service--a very important part of American life, almost unique around the world.

The work of the commission has made us face up to the obstacles, the difficulties, the disadvantages that still confront us. It has made us ask what we are going to do to remove those obstacles. It has made us consider in a much more ambitious way our new

needs for training and education, for better guidance, for improved services. It has made us aware of a growing need for women to participate in politics and in civic affairs.

I think it has also demanded that society ask how it can reorganize itself to give women more opportunity to realize their potential. What, for instance, are we going to do about part-time work for women? Isn't it almost silly that so many of our employers don't permit a teaming up of two women--one who could work mornings; the other, afternoons? Women, who because they have children of their own are that much richer in understanding human nature, have that much more to contribute. I ran a research organization at one time and it was just as easy to take two women, working part time, as one man, full time. Actually, it was very advantageous; they brought a greater measure of enthusiasm, of creativity. I think our society should be made aware of this, should adjust more than it has done, should become more flexible.

What I think is so important about the work of the commission is that it asks not just what society can do for women or what women can do for themselves to improve their position, but it asks what women can do for society, and this is very important.

All the activity and discussion that the commission has brought about is helping to open minds, to change attitudes, to enlarge the sense of what is doable. Let me enlarge on the phrase "change attitudes." Isn't this the key to what we are all about to do? Important as is the passage of a good law, isn't it just the beginning of progress? The passage of a good law is in itself the expression of a changed attitude but the implementation of a law also calls for new attitudes. Many changes, as you and I know, go beyond the scope of law; they must take place in the hearts of men.

I feel strongly--as I hope all of you do--that the work we are doing together is helping to make our world a better place. I think we get a sense from what we are doing that great things are happening in America today, and you who are here today are part of this wonderful and really thrilling adventure in human betterment.

All of us who worked on the committee reports recognized that when our society is healthy and moving ahead rapidly toward full employment and full production, this is when women can advance most rapidly. In this kind of atmosphere, discrimination begins to dissipate and we can make headway against poverty. It is in this atmosphere that all of us can more fully be used; all of us have greater opportunities for free choice.

If I were asked to name the most important development that has come out of the President's Commission on the Status of Women, I would say continuation--the appointment of the Interdepartmental Committee on the Status of Women and the Citizens' Advisory Council on the Status of Women, of which your Viola Hymes is a member. An essential part of this continuation has been the establishment of many Governors' Commissions on the Status of Women.

In Minnesota and throughout the land, thousands of people are being involved in deliberations such as we have enjoyed today. Everywhere, citizens are holding the measuring stick of human need up to their communities to evaluate the current situation, to appraise the possibilities for the future, and to set and attain new goals.

I am reminded of Mrs. Lyndon Johnson's concluding remarks in a speech she made a few weeks ago at the national YWCA convention. Some of you may have heard it. She quoted Emerson, who wrote a century ago, "We think our civilization is near its meridian, but we are yet only at the cock crowing and morning star." Mrs. Johnson, taking that as her cue, added, "Emerson's words are as meaningful today as they were when he said them. And you can make the morning beautiful."

And we can!

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PARTICIPATING ORGANIZATIONS

The following groups and agencies were called on for assistance in organizing and running the conference. Conference participants came from all of these organizations. In addition, many participants came as individuals.

Altrusa Club
American Association of University Women
American Federation of Government Employees
Beta Chapter, Delta Kappa Gamma
Business and Professional Women
College of St. Scholastica
Dental Society Auxiliary
Duluth Council of Parent-Teacher Association
Duluth News Media
Duluth Presbyterial Society
Duluth School of Practical Nurses
Jewish Social Service Agency
Junior League
League of Women Voters
Minnesota-Arrow Chapter
Minnesota State AFL-CIO
National Council of Jewish Women
National Secretaries' Association
Nurses' Association
Public Schools
St. Louis County Medical Society Auxiliary
St. Luke's Hospital Volunteer Guild
St. Mary's Hospital Auxiliary
Soroptimist Club
State Employment Service
United Church Women
University of Minnesota at Duluth
Women's Coordinating Committee of Jewish Welfare Federation
Women's Institute
Young Women's Christian Association
Y-Wives Club
Zonta Club

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Standards for Homemaker-Home Health Aide Services.

National Council for Homemaker Services, Inc., New York, N.Y.
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*COMMUNITY AGENCIES (PUBLIC); *VISITING HOMEMAKERS; *PROGRAM GUIDES; *PROGRAM DEVELOPMENT; PERSONNEL POLICY; PROGRAM ADMINISTRATION; COMMUNITY RELATIONS; AGENCY ROLE; STAFF ROLE; *COMPANIONS (OCCUPATION)

Representatives of 17 national welfare and health agencies working as a committee selected topics basic to a code of standards and outlined particulars related to the topics. Reinforced with 30 additional persons knowledgeable about homemaker-home health aide programs, the committee established principles which were then coded for presentation in this document. Separate chapters treat (1) the purpose and function of the homemaker-health aide service, (2) the provision of service in terms of referral, criteria of elegibility, development of a service plan, and supervision and evaluation, (3) organization and administration of the service in terms of the governing body's responsibilities. For example, the establishment of the legal status of the agency and provision for financial support, (4) staffing of the service in terms of provision for executive, supervisory, and direct services and utilization of consultants, volunteers, and supplementary workers, (5) education program including orientation, pre-assignment training, and on-going education, (6) records of intake, service, personnel, and finance, and (7) community relations including broad relationships and working relationships at the direct service level. (JK)

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Standards for Homemaker-Home Health Aide Services

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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NATIONAL COUNCIL FOR HOMEMAKER SERVICES, INC.
1790 BROADWAY, NEW YORK, N. Y. 10019

VT006322

The National Council for Homemaker Services was incorporated in 1962 to stimulate the expansion and promote the improvement of homemaker services throughout the country. Membership is open to agencies providing homemaker services and to organizations and individuals interested in supporting the Council's purposes.

Working cooperatively with other national health and welfare organizations and with public and voluntary agencies, the Council:

- Promotes understanding of the values of homemaker services
- Provides a central source of information and a medium through which knowledge and experience can be pooled and made available
- Encourages and guides communities in organizing and extending homemaker programs
- Promotes development of standards
- Publishes reports and distributes educational and promotional materials
- Sponsors conferences and seminars.

Contents

1. TRANSMITTAL STATEMENT 2

2. FOREWORD — THE CODE, CONTRACT AND COUNCIL 3-4

3. A DEFINITION OF HOMEMAKER-HOME HEALTH AIDE SERVICE 5

4. CHAPTERS

   I—The Purpose and Function of Homemaker-Home Health Aide Service: history, what it is, what it does 6-9

   II—The Provision of Homemaker-Home Health Aide Service to Individuals and Families: how it is given 10-13

   III—The Organization and Administration of a Homemaker-Home Health Aide Service: the governing body, committees, responsibilities of executive, scope of program, personnel policies, evaluation of service 14-20

   IV—The Staffing of a Homemaker-Home Health Aide Service: recruitment and selection of homemakers, qualifications and responsibilities of homemakers, professional and clerical staff, consultants and volunteers 21-32

   V—The Orientation and On-going Education Program of a Homemaker-Home Health Aide Service: the agency plan for homemakers and all other staff, information for governing body 33-38

   VI—The Records of a Homemaker-Home Health Aide Service: areas of need for recorded data 39-42

   VII—The Role of the Homemaker-Home Health Aide Service in Community Relations: its over-all and direct responsibilities to the community 43-46

5. HONOR ROLL: members of the Committee on Standards and its Sub-committees, Federal consultants, guests at Princeton Workshop, staff of the National Council for Homemaker Service 47-48

6. BIBLIOGRAPHY 49

To: MRS. JUAN T. TRIPPE
President
National Council for Homemaker Services

From: MARION YAGUDA
Chairman
Committee on Standards
National Council for Homemaker Services

It is my privilege to transmit to you herewith the completed Standards Code for Homemaker-Home Health Aide Services. The Committee, which you appointed in September 1964 to develop this statement, has worked diligently during the ensuing months. It has had the utmost cooperation in its endeavor from the homemaker-home health aide field: individual representatives of this field have enriched the statement as members of its sub-committees. The Committee has benefited greatly from the consultation given by appointed members of the United States Department of Health, Education, and Welfare. The staff of the National Council for Homemaker Services has performed effectively at all times to promote and coordinate the efforts of the Committee on Standards.

July 1965
MY:aw

The Code, Contract and Council

The development of the Code of Standards for Homemaker-Home Health Aide Services has been a major undertaking of the National Council for Homemaker Services. The principles set forth in it result from research on current practices in the homemaker-home health aide field: a majority of appropriate agencies throughout the United States have contributed to this research. Representatives of seventeen national welfare and health agencies, chaired by an outstanding authority on homemaker programs, have worked as a Committee on Standards for the Code from September 1964 through June 1965. They have had valuable consultation from representatives of three Divisions of the U. S. Department of Health, Education, and Welfare, the Children's Bureau in the Welfare Administration, the Division of Chronic Diseases in the Public Health Service and the Community Research and Services Branch in the National Institute of Mental Health.

The Committee on Standards, during the fall of 1964, selected certain topics considered basic to the Code and outlined particulars related to them. Thirty additional individuals, knowledgeable on homemaker-home health aide programs, joined the Committee on Standards in early 1965 to provide further consideration of necessary Code content. A three-day workshop, to clarify and establish valid principles for the Code, was held at Princeton, New Jersey in mid-March. These principles have since been coded and after considerable scrutiny are presented in the following document.

It is believed by the Committee that the principles included in the Code are applicable to all homemaker-home health aide agencies. They are valid for autonomous agencies or programs set up under voluntary or tax supported "host" agencies; they are applicable to a beginning or small homemaker-home health aide program and to the large agency with many professional employees and homemaker-home health aides. The Committee has, therefore, provided standards for the establishment of new homemaker-home health aide services and the expanding and im-

proving, where necessary, of older programs. These standards will be minimum for certain agencies; they will offer goals to work toward for others. They set forth general principles which may have to be adapted either because of agency structure or local or state laws.

The National Council for Homemaker Services and the Committee on Standards appreciate the practical assistance given toward the development of the Code by the Department of Health, Education, and Welfare. Only because a three-way contract was drawn up between the Bureau of Family Services and the Children's Bureau in the Welfare Administration, the Division of Chronic Diseases in the Public Health Service and the National Council for Homemaker Services has it been possible to finance the production of the Code. The Code represents a worthwhile collaboration between Federal agencies and a voluntary national organization.

Betty Trippe

MRS. JUAN T. TRIPPE, *President*
NATIONAL COUNCIL FOR HOMEMAKER SERVICES

Homemaker-Home Health Aide Service

Homemaker-Home Health Aide Service is an organized community program provided through a public or voluntary non-profit agency. Qualified persons—homemaker-home health aides—are employed, trained and assigned by this agency to help maintain, strengthen and safeguard the care of children and the functioning of dependent, physically or emotionally ill or handicapped children and adults in their own homes where no responsible person is available for this purpose. The appropriate professional staff of the agency establishes with applicants their need for the service, develops a suitable plan to meet it, assigns and supervises the homemaker-home health aides and continually evaluates whether the help given meets the diagnosed need of its recipients.

CHAPTER I

The Purpose and Function of Homemaker-Home Health Aide* Service

Homemaker-Home Health Aide services are multiplying rapidly throughout the country. They are developing under a variety of auspices not anticipated even by the far-seeing individuals who initiated the first such services in the early part of this century. They have earned their popularity as adjuncts to certain of the helping professions—medicine, social work, public health nursing—and especially because of the direct and practical help they have given to people. Much of the present demand for the creation and expansion of homemaker programs is due to the growing conviction throughout the United States that, generally, people of various ages and personal problems are happiest in their own homes if safeguards in necessary services are offered to them.

Homemaker services, in their present form, originated in this country in the early nineteen-twenties under the auspices of voluntary social agencies: concern then centered on children. It was believed that children, who had been deprived of their mother's care through illness, death, desertion or temporarily for less dramatic reasons, could profitably remain in their familiar surroundings if homemaker services were provided to maintain home values for them. The voluntary social agencies have at this time diversified their efforts; they are still, however, the largest providers of homemaker service. Public welfare agencies initiated their first homemaker programs—now rapidly expanding—during the mid nineteen-thirties. Public health agencies, both voluntary and official, recognized later the value of homemaker service for various diagnostic groups cared for in the home and many programs are now part of local visiting nurse associations or health departments. A heartening aspect of the current expansion of homemaker service is the concern of Federal and State departments of welfare and health that this service be provided through local programs for many people disadvantaged by poverty and chronic disease. Because they believe the service, where indicated, will assist families to raise levels of living, and bring comfort to individuals with chronic illness, they are willing to furnish funds, within the limits

* *Generic term "Homemaker" used throughout the Code.*

of their legislative and budget authority, to local official and voluntary agencies for on-going and demonstration purposes.

Although homemaker programs originated, as stated, primarily as a service to children—and still place the well being of children among their most important objectives—they have gradually extended help to other groups: the aging, blind, mentally retarded and physically handicapped children and adults, convalescents, the chronically ill and the mentally disturbed. It should be emphasized that service is provided to these and other appropriate groups in their homes by professionally supervised, trained persons—homemakers. Homemakers are staff members of an organized non-profit community agency: they are selected and assigned, according to the need of the individual or family for help, after the professional staff of the agency has evaluated the applicant's needs and determined whether the homemaker service can meet them.

Valuable as homemaker service is, it should never be regarded as a panacea. No matter how much warmth and good management homemakers offer, certain homes are not for children. It is equally true that older people, the blind and other similarly disadvantaged groups may be isolated and lonely unless more recreation and emotional support is offered than can be given by a homemaker service at its best. The handicapped and chronically ill in various diagnostic groups may gain more facility in self-management and activities of daily living or obtain other needed care in a group setting, where medical supervision and other professional services are readily available to them in adequate amounts. The professional staff of the homemaker agency again must, and does, accept responsibility for reviewing all facets of the applicant's problem and for determining whether it can best be solved by homemaker service or another plan.

I—What is the essence of homemaker service? Its true purpose has remained constant, although demands for it have resulted in an increasingly wide variation in groups served.

> Homemaker service is provided to maintain, strengthen, improve and safeguard the home and family life for individuals and family groups when such service is appropriate.

II—The homemaker agency fulfills its purpose through provision of service to meet the diagnosed needs of a variety of individuals and families. The contribution of homemaker service to families will differ, to an extent, from that offered to individuals. It is implicit in a family situation that even a poor home will provide certain

emotional supports, through its family relationships, that are not available to the individual living alone. Many families, nevertheless, will need a broad range of services from the homemaker program and from other agencies in order to offset a family breakdown. A homemaker program contributes to families in many ways.

1. It enables children to remain at home, if the environment is favorable, when the usual homemaker, generally the natural mother, is incapacitated by illness or when death, desertion or other reasons deprive them of her help.

2. It is increasingly used to help teach young, inexperienced, migrant, or irresponsible mothers improved methods of household management and child care and to lighten the burden of those mothers unable to cope with home management needs of a large family.

3. It provides, in conjunction with protective social agencies and the courts, protective care to children in their homes during a diagnostic period and until an optimum on-going plan is developed.

4. It frees an employed adult, responsible for the economic support of the family, from the direct care of children, older or chronically ill members of the family so that he can maintain his job responsibilities during periods of home crises.

5. It provides, through assignment of a homemaker, a professionally supervised, trained person to give attention to an individual family member requiring simple personal care and thus enables other family members to fulfill their usual responsibilities in the household and toward each other.

6. It enables family members, who must provide continuing personal care to an elderly, blind or chronically ill family member, to have temporary periods of rest or relief on a planned basis, either through daily assignment of a homemaker or through a block assignment for away-from-home purposes, including vacations.

III—Reason for the placement of a homemaker will differ somewhat if the applicant is an individual living alone rather than a member of a family; basics in home-management will be the same. Homemaker service can benefit individuals in various ways.

1. It allows individuals to remain in familiar home surroundings and so helps them avoid unnecessary placement in a hospital or other institution or foster home.

2. It provides care for individuals in order to lessen the stress on the usual caretaker, if there is one, and to free him for other urgent family responsibilities.

3. It supplements the professional service of social agencies necessary in protective care programs for appropriate older or mentally incapacitated individuals.

4. It supplements, and is supplemented by, professional health services through provision of necessary personal care for individuals during their physical and mental rehabilitative processes; it helps promote facility in self-management and activities of daily living; it is supportive to the over-all medical treatment plan.

5. It establishes a favorable home climate for convalescents and thus helps them to return home from hospitals or other institutions without unnecessary delay.

6. It lessens, through the personal care, home management and emotional support provided by homemakers, the economic, physical and emotional burdens of chronic illness for various diagnostic groups.

Summary Statement on Purpose and Function

Homemaker service exists to maintain, strengthen and safeguard family life. It is provided by a tax supported public or voluntary non-profit community agency: the homemakers performing under agency aegis are qualified and trained; and are selected, assigned and supervised by the professional staff of the agency. Children and adults with various medical and social diagnoses benefit through homemaker service.

Originally organized to serve children, it has broadened its scope to include many economically, physically and emotionally disadvantaged groups of both children and adults. The help given to an individual living alone or to a family group may differ according to the need of the individual or the family group. The professional staff of the agency, therefore, continually evaluates the service plan and determines its on-going suitability.

CHAPTER II

The Provision of Homemaker-Home Health Aide Service to Individuals and Families

The service of a homemaker program is the reason for its existence. Once this service is effectively established, referrals will come from many directions. If the program is a unit of a large tax supported or voluntary welfare or health complex, other divisions of its own agency will undoubtedly absorb much of its effort: such homemaker programs, however, frequently accept applications from the broader community. If it is an autonomous program, only concerned with homemaker activities, various community sources will depend on it for service. Under whatever auspices it is established, the basic question to be answered by the staff member responsible for intake procedures is: Can the homemaker program provide the appropriate help for the individual or family referred?

Homemaker service is often assumed to be a simple operation. This is far from so. The homemaker agency will generally encounter problems in the social welfare, home economics and health fields and will have to find solutions for them—not always easy in as unstructured a setting as the home—either through its own staff or through appropriate cooperating agencies. Assistance can therefore best be given if other supportive community services are available to the agency.

It is probable that homemaker service is now entering its greatest period of usefulness. Homemaker service to children and their families must be maintained and increased. One of the most immediate challenges facing homemaker service is the personal care to be given by homemakers; demands for personal care are increasing at a dramatic rate. If homemaker services are to be extended effectively to groups of older people and for children and adults disabled for various reasons, there must be a close partnership between the social welfare and health professions generally, and particularly between social workers and public health nurses. The needs—economic, social and emotional as well as for personal care—of applicants for homemaker service can only be met if the professional disciplines involved work together to evaluate problems and to determine effective solutions.

I—Success of a homemaker program will depend largely on how effectively the agency has defined its intake policies and how skillfully the need for its service is determined.

1. There should be clearly stated criteria of eligibility for the service.

2. Intake policies and procedures which meet the demonstrated need of the agency's community should be established.

3. Methods of referral from a broad spectrum of community sources should be developed.

4. All sources of information—family interviews and consultations with appropriate agencies, medical and social reports—should be utilized during the intake process in determining with the individual or family whether homemaker service offers the best solution for the presenting problem. The professional staff is responsible for evaluating the total need and assisting with alternate plans if homemaker service cannot appropriately or fully meet it.

5. The homemaker is accountable for providing responsible follow-through with the individual or family who seeks its service whether referred by a community agency or self.

6. Reasons for rejection or acceptance of the applicant for homemaker service should be interpreted to the individual or family applying and to the referral source. If accepted, a service plan to fit the special need should be developed and duties to be performed by the homemaker interpreted to the individual or family and the homemaker.

7. The homemaker agency should interpret its philosophy on cost of the service to potential users and referral sources. The cost, and methods of meeting it, should be made clear to each individual or family accepted for service whether the applicant meets the full fee-for-service payment or receives help on a part-pay or fully subsidized basis.

II—It must be recognized that even though a satisfactory plan for service has been developed during the intake period, it will need to change as the family situation does. Flexibility is a most important ingredient in an effective homemaker program. Without it, the service too often falls short of the agency's true purpose. The agency, therefore, should review and adjust the homemaker service to meet

the changing needs of the individual or family. In order to insure flexibility of care, certain policies must be carried out.

1. No arbitrary period of service should be established.
2. The placement of homemakers should be adjusted with regard to the amount and type of service necessary.
3. There should be a well worked out plan for termination of the service of the homemakers. This should include intra- or inter-agency referrals to assure the provision of necessary on-going or new services.

III—All recipients of a homemaker agency's help will need, to a degree, the same basic assistance in the maintenance of sound home values. There will be variations in the understanding and service necessary for special groups; e.g., children, the aging, the physically or mentally incapacitated.

1. Homemaker services which include child care should provide for evaluation and supervision of the home by a social case worker skilled and knowledgeable in child care practices and treatment.
2. Homemaker services which provide personal care should have a carefully worked out policy in relation to personal care practices. This policy should be established in cooperation with appropriate regulatory standard setting bodies and should be reviewed at least annually by a committee which includes physicians and public health nurses.
3. Homemaker services which provide personal care for the aging, handicapped children and adults, the chronically ill and the mentally disturbed should include both social and nursing evaluation and supervision in their plan. A social worker, skilled and knowledgeable in the problems of the aging and of individuals with disabilities, should be responsible for assistance related to maintenance, environmental and emotional difficulties. The plan for personal care to be given by a homemaker should be developed and supervised by a qualified public health nurse after the over-all and personal care plan for the patient has been discussed with, and approved in writing by, his physician.
4. The personal care required by the applicant should be within the ability of the homemaker to perform and consistent with policies of the agency.

Summary on Provision of Homemaker Service to Individuals and Families

Referrals to a homemaker program may come from within its own agency or from a broader spectrum of community sources. At the point of referral, the professional staff is responsible for accepting or rejecting the application. In order to do this effectively, the agency must establish criteria of eligibility for its service. If an application is accepted, a service plan to fit the special need should be developed, including individual payment arrangements, however the payment is met. There should be flexibility in regard to the provision of the service. The evaluation and supervision of the home situation by a social case worker with special knowledge of child care practices and treatment should be included when homemaker services are offered to children. Personal care practices of homemaker agencies should be established and reviewed by appropriate regulatory standard setting bodies. Both social case work and public health nursing should be included where, among other services, personal care is provided for a patient.

CHAPTER III

The Organization and Administration of a Homemaker-Home Health Aide Service

Homemaker service should be available to all persons who can benefit from it. How it is secured will depend largely on the size of the community, the auspices of available programs and, often, whether these programs are financed to help certain categorical groups; e.g., clients of public or voluntary social agencies, patients of a hospital or clinic, the blind, the aging or physically or mentally disadvantaged individuals and their families. Complicated metropolitan areas may best be served by a number of homemaker agencies which, without duplication, are prepared to meet special needs. There is, however, an emerging trend in several large and many small communities toward the autonomous agency prepared to offer service on a community-wide basis to a variety of groups.

Originally established as a division of multi-function family agencies —sometimes called "host" agencies—homemaker services, as indicated, are now developing under various auspices. Whatever the auspices, there must be a governing body responsible for the organization and administration of the homemaker program. This should be a board of directors in a voluntary, autonomous or "host" agency; it may be a board of county commissioners or supervisors or a board of welfare or health in an official program. Throughout the Code it is referred to as the governing body.

It is common procedure—where the homemaker program is either in an official or voluntary "host" agency—for the governing body to appoint an advisory committee or council to concern itself directly with the development of the homemaker service. Members of such groups should be broadly representative of the concerned and informed community. Although they have no legal status, these groups make a vital contribution to the agency through their understanding of administrative and service problems and their recommendations to the governing body. They also serve as effective interpreters of the agency's achievements and need for community support.

I—The homemaker agency should follow certain organizational rules.

1. A homemaker service should be established through planning by a group, broadly representative of the community, which has assessed existing community needs and resources and is prepared to focus its attention on the effective development of a homemaker program.

2. A homemaker service should be set up in an organized non-profit public or voluntary structure. It may be part of an agency with broader functions or an independent community agency under a separate responsible governing body.

3. The governing body of a voluntary agency is responsible for establishing the legal status of the agency.

   a. A constitution and by-laws should be drawn up; a Certificate of Incorporation obtained and filed with the appropriate Secretary of State.

   b. The tax exempt status of the agency should be established with the Internal Revenue Service.

4. The governing body—where the homemaker program is in a "host" agency—should appoint a group of individuals broadly representative of the community to focus its attention specifically on the homemaker service. This may be known as an advisory committee or council.

5. The governing body should be responsible for the selection and appointment of the executive of the agency, and should establish with him criteria for the selection of professional personnel, homemakers and other staff.

6. The governing body, with the executive of the agency, should determine the scope of the agency's policies and program.

7. The governing body should be continuously aware of all phases of agency operation and should be included as an active partner with the staff in carrying out the objectives of the service. It should be involved in studying problems which the homemaker service faces and in developing solutions for them.

II—The governing body should enrich the total program of the agency through the knowledge and skills of professional and lay individuals willing to serve on subsidiary committees.

1. The appropriate number of committees will depend on the size of the agency. It may be desirable, in a large agency, to have standing committees assigned to certain areas of agency operation; e.g., financing, development of program, staff education and inter-agency and broad community relationships.

2. The subsidiary committees should include representatives from broad sections of the community and not be limited to members of the governing body.

3. All committee activities should be focused on the specific needs of the agency and the problems of the individual community related to homemaker services.

4. The participation of community leaders on subsidiary committees should be one of the important avenues to community interest and understanding of the agency's program.

III—There is no royal road to financing. All by-paths leading to funds from any source, and in any amount, must be explored. It is true, at this time, that more funds, both from voluntary and tax sources, are available for homemaker service than at any previous period. It is important, therefore, that the governing body and its finance committee include members who know the giving pattern of the community, have conviction on the worthwhileness of the service and of fund raising for it, and the imagination and ability to locate and secure funds.

1. Every homemaker service which meets broad community need will require community subsidy.

2. An annual budget which covers the optimum operational needs of the agency should be prepared by the staff and approved by the governing body.

3. The governing body should undertake to insure sound financial support for the homemaker program on a continuing basis. Where the service has been initiated as a demonstration or through limited grants or contributions, there should be plans from the beginning for its on-going support.

4. The homemaker program should provide service, within the scope of its program, to people at all income levels. This service should be provided through fees-for-service from recipients, third party payments and subsidized assistance to users of the service who are not able to pay for it and for whom no

third party payment is available. Arrangements for purchase of service by third parties should be in writing and should be periodically reviewed and adjusted. Whatever the payment plan for service, all users and referral sources should be informed of its true cost.

5. The governing body should explore all possibilities of financial support for the homemaker service and determine which sources are most likely to be available for the type and size of program the community determines will best meet its current needs. It should be aware of the broad possibilities for funding available through demonstration grants from voluntary and official sources, shared support through matching grants on a Federal/State basis, single or continuing grants from appropriate foundations, contributions from local affiliates of national voluntary health agencies, allocations from united funds or community chests and last, but not least, fees-for-service from consumers and independent fund raising by the agency itself.

6. The governing body of all homemaker programs — state or county commissions, boards of welfare or health, or boards of voluntary agencies — should familiarize themselves on all possibilities for providing homemaker service through tax funds. When pending legislation will allow for improved financing and functioning of public agency homemaker programs, the voluntary homemaker agency has an obligation to support such legislation.

7. The governing body and the executive should adopt accepted methods of agency accounting, including those methods set up jointly by over-all national welfare and health councils to provide a uniform system of accounting.

IV—Under whatever auspices the homemaker program is established —public welfare or health, or their voluntary counterparts—there must be an executive responsible for the administration of the service; in a "host" agency he may be called a coordinator or supervisor. This role may be included in the duties of the one staff member available in a small county welfare or health department or voluntary community agency. It may be carried as a purely administrative function in an agency with broader scope, a large professional staff and many homemakers. Whether the agency is small or large, certain rules pertain.

1. The executive should head the organizational structure of the agency and be responsible for the operation of its program.

2. The executive should be responsible for recruitment, selection and employment of professional and clerical staff and ultimately of the homemakers.

3. All professional staff, clerical staff, homemakers, consultants and auxiliary personnel should relate directly to the administrative structure of the agency.

4. The executive should delegate appropriate responsibility to other agency personnel when such delegation increases the effectiveness of the program.

5. The executive should continuously appraise the homemaker program in order to make appropriate recommendations to the governing body regarding it.

6. The executive should maintain effective liaison with the governing body, should be prepared to interpret to this body the on-going details of the program and its developmental needs, and, in reverse, relay to the agency's staff the decision of the governing body on all appropriate matters.

7. The executive should be responsible for the fiscal management of the homemaker program at all levels of its operation.

8. The executive should interpret to the community the services available through the agency's program and its need for appropriate referrals for service and adequate community understanding and financial support.

V—Once the homemaker program is established it should search out ways to increase its usefulness. It cannot afford to stand still when the need of people for its service is so great.

1. The governing body and the executive should establish short and long range developmental goals for the agency in relation to community need for its service.

2. The governing body, executive and agency staff should establish standards for the carrying out of the agency's program, including quantity and type of service to be offered and methods of their financing.

3. Program of orientation and on-going education for the gover-

ning body, professional and clerical staffs, homemakers, consultants and volunteers should be developed.

4. There should be provisions for regular systematic evaluation of all aspects of the agency's program and structure as well as performance of its staff.

VI—Much of the success of a homemaker program will depend on how dynamic and effective the relationship is between the governing body, the executive and all other members of the staff. Adequate personnel policies and practices, thoughtfully worked out and adhered to, furnish a sound basis for such a relationship.

1. The governing body and the executive should determine what personnel policies and practices will make for the satisfactory performance of the agency's staff.
2. There should be a written manual in which specific job responsibilities, along with the personnel policies and practices appropriate to each job assignment, are clearly stated.
3. Standards in personnel policies set by professional associations and other organizations, with which both the professional and other members of the staff may be affiliated, should be recognized.
4. There should be planned arrangements for initial and regular comprehensive physical examinations for all staff members.
5. There should be a well defined, limited, probationary period for all staff. The probationary period for homemakers should include on-the-job supervision.
6. There should be clearly stated written policies for all staff on salaries, vacations, sick leave, pension plans and retirement.
7. Special consideration should be given to the insurance coverage necessary for all members of the staff of a homemaker agency: liability, accident, automobile, workman's compensation and unemployment insurance. Regulations on type and amount of such insurances will vary from state to state. Amounts of staff salary to be withheld for insurances, including social security and taxation, should be established with local offices of the State Insurance Commission, Social Security and Internal Revenue Services.
8. The plan for employment of homemakers as full or part time staff members of the agency should include fair employment

practices, payment for service, at least at minimum wage rates, and coverage by special insurances necessary to job assignment.

9. Personnel policies for all professional staff—whether the homemaker program is a division of a complex welfare or health agency or an autonomous agency—should be equivalent to those employment policies established at the highest level by any comparable welfare or health agency.

VII—The effectiveness of the agency's service program should be tested through regular systematic evaluation of all aspects of its activities. All available information related to its operation should be included in such a procedure.

1. The evaluation of the agency program should include consideration of the following questions:

   a. How well does the program fit into the health and welfare structure of the community?

   b. Are its objectives meeting community need?

   c. How effective are communications within the agency, with other agencies and with the community?

   d. What are the real or potential roadblocks which may be deterrents to the agency's effective performance?

2. An evaluation of the agency's program should be carried out by its staff at least annually.

3. It is essential for the agency's growth and development that a periodic evaluation by an unbiased outside appropriate professional group be carried out.

Summary of Organization and Administration

Every homemaker service, whatever its auspices, must have a governing body responsible for its total operation. Responsibilities should include establishment of the legal status of the agency, appointment of subcommittees, adequate financing of the program, selection of the executive, establishment of the scope of the program and development of the procedures. The governing body should approve criteria for selection of various members of the staff, including homemakers, and for personnel policies which will result in satisfactory performance of job assignments at all staff levels.

CHAPTER IV

The Staffing of a Homemaker-Home Health Aide Service

The governing body of a homemaker agency should entrust the operation of its service program to its appointed staff. This staff will differ in size according to the extent of the program. It is important, whatever the extent, that responsibilities be met in three areas, i.e., executive, supervisory and direct service. It was recognized in Chapter III of the Code that all three areas may, in a small agency, be covered by a single staff member and a small group of homemakers. The principles set forth in this chapter, on qualifications and functions of all types of staff necessary to a fully manned homemaker service, should hold whether the agency has a minimum or extensive program. The principles are applicable not only to professional staff; i.e., the executive, supervisors and professional staff members responsible for operation of direct service to recipients of the agency's help; they are also important to the homemakers, the clerical group, consultants and volunteers so necessary to a well organized homemaker program. Because the homemakers themselves are the core of the program, principles related to them are presented first.

I—The unique contribution of the homemaker program is the direct service given by the homemakers to people in their own homes. Major efforts of the agency are directed toward making this service meet the various needs of applicants for it. Obviously the success of the program depends to a large degree on both the quality and quantity of individuals recruited as members of the homemaker staff. It is generally assumed that most communities have a reservoir of woman power—men, too, make excellent homemakers in certain situations—that can be drawn on by a homemaker agency for such personnel. Often a beginning agency, or one limited in staff, will employ few homemakers and many of them on a part time basis. Nevertheless, since the need will probably increase for the service, the agency should establish at the beginning—and broaden as the program grows—an effective pattern of recruiting homemakers.

1. A sub-committee of the governing body, with the executive, should work continuously to establish an effective on-going program of recruitment of homemakers.

2. All appropriate means of communication should be utilized by the agency to attract homemakers to its program; e.g., case stories told on various news media; appeals to church, Red Cross, home nursing and PTA groups; requests to state employment offices; encouragement to homemakers themselves to spread the word.

3. Homemakers should be recruited either for full or part time service in accordance with the demands on the agency and the ability of the homemaker to meet full or part time job assignments.

4. Interpretation of personnel practices of the agency and job satisfactions should be emphasized in recruitment programs.

5. Individuals with special knowledge—different cultural background, languages, experience with various groups of children, older people, chronically ill—should be sought by agencies in order to provide a variety of understanding to meet special situations.

II—Once a potential homemaker applies to the agency, skill in deciding on her ability to perform necessary job assignments is of paramount importance. Many people who have worked only within the protection of their families, or on minor jobs, are inarticulate in the formal surroundings of an agency office. Often the more inarticulate ones, when acclimated, will make the best homemakers. The executive or staff member responsible for selection of the applicant as a homemaker will need to consider not only reference statements, attitudes and abilities observed initially, but, even more especially, on-the-job performance during the first work assignments.

1. A comprehensive initial interview with the applicant should be carried out by the executive of the homemaker service or a designated qualified assistant.

2. The homemaker should be chosen for a number of personal qualifications including her interest and concern for people, a warm out-going and pleasant personality, flexibility in, and objectivity toward, her work.

3. Reasons for the applicant's interest in the service should be explored in depth with emphasis on personal experiences that

have influenced the individual's application and her attitudes and feelings regarding potential recipients of her help; e.g., children, the aging or the sick.

4. Reference should be secured from other than family members: previous employers, clergy, doctors and personal friends.

5. Careful observation of the individual's attitudes and job performance should be carried on by the supervisor of homemaker service during the training and probationary period.

III—It is generally conceded that homemakers functioning under the supervision of the professional staff of a community agency should be mature women with adequate knowledge of food preparation, housekeeping procedures; good judgment, patience, considerable skill in human relationship and, hopefully, a sense of humor to help them meet all sorts of atypical situations in a home. It might well be added that for those involved in personal care for both children and adults, a strong back and some knowledge of body mechanics are assets. No standard has been established in the Code on a recommended age for homemakers since it is agreed that maturity is not necessarily related to years lived.

1. The homemaker should possess both good physical and mental health and should demonstrate maturity of attitude toward her work assignment.

2. The homemaker should demonstrate ability to work under supervision as an employee of the agency.

3. The homemaker should have had, or receive following her agency appointment, adequate training and experience in home management and in the care of children, the aging and chronically ill individuals in various disease categories.

4. The homemaker should be able to deal with minor emergencies which will arise on her assignment and to work under stress when a crisis occurs. She should recognize her limitations in meeting emergencies and crises beyond her ability to handle and be able to report them appropriately to her agency control.

5. The homemaker should be able to read, write, follow written instructions and to converse easily on the telephone.

6. The homemaker should be able to communicate orally with the family to which she is assigned and both orally and in writ-

ing with the agency representative to whom she is responsible. She should be able to maintain the statistical records appropriate to her job assignment.

7. The homemaker should understand and respect the need for confidentiality in regard to the details of her assignment, and the problems of the family involved.

IV—Most homemakers will need to increase their fundamental ability through the orientation, educational programs and supervision provided by the agency. It is important that from the beginning their idea of service not be limited by their own home experience and that they concede the right of individuals and families to self-determination in their own patterns of living. Certain homemakers may be happiest working with children; others enjoy the give-and-take possible with comparatively well older or handicapped individuals; and still others may believe that experience gained in the personal care of a valued relative or in hospital work prepares them especially for giving this type of service. Whatever their preference, their basic guidelines remain the same.

1. The primary responsibility of the homemaker should be to provide individuals or families with the assistance or care deemed necessary by the professional staff of the agency. The emphasis should be on home management and physical needs of the recipients of the service and, within the competence of the homemaker to observe, awareness of emotional climate.

2. The specific responsibilities of the homemaker should include those tasks essential to good family living, such as the routine home management generally undertaken by the natural homemaker, including such duties as necessary food preparation, house cleaning, laundry and on-going personal care of children and adults.

3. Responsibilities to be carried by the homemaker should be related to the total service plan of the agency for the individual or family involved and carried out under the direction of the professional staff.

4. The responsibility of the homemaker should be to assist individuals or family members to continue or improve standards of nutrition, housekeeping, child care and self care, thereby maintaining or contributing to family stability and order.

5. The responsibility of the homemaker should be to provide per-

sonal care, where indicated, to those with illness or disability, under the supervision of appropriate professional persons and as a support to the over-all medical treatment plan.

6. The responsibility of the homemaker should include significant observation of family functioning or problems related to the total service plan of the agency.

7. The responsibilities of the homemaker should include attendance at designated staff conferences related to her orientation and on-going education.

8. The responsibilities of the homemaker should include maintenance of appropriate work records with a realization of their importance to the total operation of the agency.

V—It should be recognized that all professional staff must have the qualifications in education and experience necessary for their job assignments, as well as the certification of professional associations in their particular fields. It is also important that staff members demonstrate leadership qualities and have vital concern for recipients of the agency's help and for maintenance of a favorable climate for the program in its community. The executive responsible for the administration of the program should meet all above requirements: he should, in addition, be qualified to perform the functions appropriate to his administrative responsibility.

1. The executive is responsible for the administration of the agency. He should be selected from a field identified and concerned with the particular goals of homemaker service and should have had adequate administrative experience in the management of a homemaker program or in a related field. Traditionally, he has been appointed from the field of social work, home economics or public health nursing. There is, however, room for experimentation in the appointment of executives for homemaker agencies. Many schools of public or hospital administration include in their curriculum and field work much of the learning content necessary for administration of a homemaker program, particularly if it is in a large autonomous agency.

2. The executive should have concern not only for the effectiveness of his own program, but also for the advancement, generally, of the homemaker field. He should establish sound intra-agency and community relationships and should work closely

with other professional and non-professional groups in his own program and in the broader community.

3. The administrative responsibilities of the executive have been further outlined in detail in Chapter III of the Code, which relates to the organization and administration of a homemaker agency.

VI—The supervisor of a homemaker program has an important role to play in the agency's operation. He is responsible for the effective performance of the homemakers and serves as liaison between the executive, the professional staff responsible for the service plan and the homemaker. The supervisor should have the qualifications and certifications of his professional field and considerable knowledge of administrative functions.

1. The supervisor of a homemaker service should be selected from a professional group identified with particular goals of homemaker service and should have the appropriate qualifications and certifications related to his field. Traditionally, this has been the field of social work, home economics or public health nursing.

2. The supervisor should have had sufficient practical administrative experience in an appropriate professional setting to carry the rigorous responsibility necessary in a homemaker service.

3. The supervisor should be able to plan and carry out a program of orientation, training, assignment to jobs and continued supervision of homemakers employed by the agency.

4. The supervisor should interpret to the employed homemaker staff their role and responsibilities both in regard to the agency which employs them and to the families they will serve.

5. The supervisor should evaluate periodically the homemakers' job performances.

6. The supervisor should maintain effective relationships and liaison between professional staff of the agency and the employed homemakers.

7. The supervisor should recognize when consultation with a professional discipline not generally involved in the agency's program would enrich the service to recipients and secure such help at the appropriate time and in adequate amounts.

8. The supervisor should utilize volunteers where such help would be productive and provide necessary auxiliary personnel.

VII—A large homemaker program, in addition to its executive and supervisory staff, will require the services of additional professional personnel to assist directly in carrying out the agency's plan for the individual or family accepted for service; and to correlate their needs with the duties performed by an assigned homemaker. These professional staff members may be social workers, home economists or public health nurses, according to the function of the agency and their particular job assignment. They should have the professional qualifications and certifications appropriate to their particular field of specialization. They should also have special orientation and experience necessary to help individuals and families accepted by the agency for service.

1. Professional staff members responsible for the designing and execution of a service plan for individuals or families should have the ability to evaluate referrals to the agency effectively. They should also be able to develop a service plan with the applicant to meet his need.

2. Professional staff members responsible for the service plan should also be responsible for helping the homemaker to understand the details of her particular job assignment and her role and duties during it.

3. Professional staff members responsible for the service plan should utilize the skills of other professions necessary in individual or family situations and work as team members with other professional workers, the homemaker and the individual or family.

4. Professional staff members responsible for the service plan should possess skills and knowledge related to the understanding of children, their individual needs and reactions and the importance to them of family relationships. They should be able to help families improve their methods of child care and household management as indicated.

5. Professional staff members responsible for the service plan should have skill and knowledge to deal with the broad range of problems where the focus of helping is on the aging, the blind, the retarded, the chronically ill, the physically handicapped or the emotionally disturbed in all age groups. They

should understand the importance of personal care as one offset to these problems and see that it is provided in adequate amounts under appropriate supervision and as a support to the over-all medical and social treatment plan.

VIII—It is imperative that the homemaker program be supplied with adequate clerical service. The number of such staff will vary according to the size of the agency. The agency's size will also condition the duties performed by the clerical staff.

1. The clerical staff should be at least graduates of an academically approved secretarial course with adequate knowledge of office procedures.
2. The clerical staff of the agency should be selected both for its ability to meet the public intelligently and for its clerical skills in maintaining records necessary to all divisions of the agency's program.

IX **(A)** It is improbable that any homemaker program can, or should, consistently provide, through its own staff, all the help needed by individuals or families to whom it is committed. Fortunately its service can be enriched in many areas by professional or lay consultants on an individual on-going, ad hoc or permanent committee basis. This help often will be given as part of the individual's own contribution to the field or, for small town or rural homemaker agencies, as an additional service performed by appropriate personnel in state or county departments of welfare, health, agriculture or education. The consultation available in cities, if the agency has the will to seek it out, is generally unlimited. Consultants can stimulate better methods of home management and dealing with non-professional staff; advise on statistics, provide legal advice; promote recreational, educational, psychological, speech, occupational and physical therapies for children and adults at home; and better nutrition adapted to therapeutic or cultural diet patterns. No progressive homemaker agency, in short, can afford to be without consultant services.

It should be noted that there is emerging, particularly in "host" agencies where a variety of consultants are regularly available, a policy for the agency to employ consultants on its own staff, either on a full or part-time basis.

Although certain consultation will be provided without cost to the homemaker agency, there should be exceptions to this. The agency

staffed predominantly by social workers will need continuing consultation in its personal care program from a public health nurse; in reverse the public health nursing agency should utilize skills of appropriate social workers in its homemaker activities. It is conceivable that in some communities an inter-agency exchange in consultation for such purposes may be possible: otherwise both types of programs will need to purchase such help either on a contract basis or through direct payment to individuals. Physicians, who review and approve procedures in personal care for an agency, or physicians, including psychiatrists, who provide consistent consultation necessary for the effective performance of the professional staff should be recompensed financially. The various individuals involved periodically in training courses for homemakers may also be paid for their consultation.

Consultation is available to homemaker agencies through several national programs concerned with the provision of this service. The Child Welfare League of America and the Family Service Association of America are pioneers in consultation to homemaker agencies throughout the country: although their member agencies have priority, under certain circumstances they extend their consultation to non-members. The Department of Public Health Nursing of the National League for Nursing includes consultation to its member agencies on home health aide services. The United States Department of Health, Education, and Welfare accepts broad responsibility for consultation on homemaker programs through four of its divisions; the Children's Bureau, the Bureau of Family Services in the Welfare Administration, the Division of Chronic Diseases in the Public Health Service and the National Institute of Mental Health. The National Council for Homemaker Services is prepared to advise on where appropriate consultation can be secured for homemaker services.

Guidelines for the inclusion of consultation in homemaker programs should be followed.

1. The consultation sought by the agency should be on a broad and imaginative basis and utilized to enrich the homemaker service with knowledge and skills not available to the agency on a consistent basis.

2. Consultants involved in the program of homemaker agencies should have the professional qualifications of their particular fields or have developed skills as lay individuals which make them appropriate consultants for the program.

3. Consultants in the homemaker program should have the understanding and ability to work appropriately with the professional or non-professional employees of the agency.

4. Consultants in the homemaker program should be, according to the need for their consultation, available on a planned continuing basis or for ad hoc or as needed purposes as special problems call for their special skills and solutions.

IX **(B)** The executive, supervisor and other professional members of the homemaker staff have a responsibility to interpret to consultants the reasons for their involvement and what is expected through their contribution. Consultants should be helped to understand what their participation will mean to both staff and recipients of the service. Every effort should be made to retain their interest and cooperation where their contributions enrich and increase the effectiveness of the homemaker service.

1. Consultants in a homemaker program should contribute their particular knowledge to the broad development of the service; such knowledge may include home management, legal advice, recreational, educational, psychological, speech, occupational and physical therapies; nutrition adapted to therapeutic and cultural diet patterns; and other special contributions outside the ability of the usual staff to offer. They may also be used to assist inexperienced staff to use their professional skills in relation to homemaker services; this is important in launching a new program.

2. Consultants in a homemaker program with special training skills should assist in the establishment and offering of the training program for homemakers and may be responsible in their particular professional areas for evaluating its execution.

3. Consultants in a homemaker program should be used to advise in individual situations where their particular knowledge and skill will be effective in diagnosing and solving the presenting agency or family problem.

4. Consultants in a homemaker program should be used to provide assistance, within their competence, either to the homemakers themselves or to families served on maintenance, environmental or emotional problems or other significant needs.

X **(A)** Whatever the organizational structure or placement of the homemaker service, volunteer participation, on as broad a base as pos-

sible, should be regarded as essential to the optimum development and functioning of the agency. Volunteers possess many skills needed by both the staff and the recipient of the agency's help. They complement staff effort through their fresh approach to problems. They serve as valuable interpreters of the agency's need for community support in understanding of function and financing.

1. The volunteer in a homemaker service should possess contagious enthusiasm and a zest for performing the task assigned.
2. The volunteer in a homemaker service must have faith in the work to be done and steadfastness in performing it, with an understanding of the time demanded in its performance.
3. The volunteer in a homemaker service should be willing to accept supervision from the professional staff and to demonstrate willingness to cooperate and to revise his own ideas to fit larger needs.

X **(B)** It is important that volunteers receive both orientation to the agency's program and on-going supervision in the activities assigned. Well planned, worthwhile opportunities for service should be offered—not "made work". They should be helped to realize that their contribution has significance in the total operation of the program. The volunteer should always be made to feel that his efforts are accepted by the agency with real appreciation of his potential and performance.

1. Volunteers in a homemaker service should be included extensively in the membership of subsidiary committees appointed by the governing body.
2. Volunteers should be used in ways determined as appropriate by the agency and should have proper understanding of both the agency's objectives and the needs of individuals served by it. They should not, however, replace necessary paid staff.
3. Volunteers should, if they demonstrate special skills in this area, be allowed to contribute to the community's knowledge of the agency with proper supervision of the factual material discussed.
4. Volunteers in the homemaker service should be used to render auxiliary help within the agency when they have proved capable of carrying out assigned duties.

5. Volunteers should be used as friendly visitors to the recipients of homemaker service only after they have demonstrated their sensitivity to the needs of others, their ability to relate to people in need and to maintain the same respect for privacy of the family as required of the homemakers and all other representatives of the agency in direct contact with families and individuals receiving help from it.

XI—There will be certain situations when additional personnel should be paid to augment the services of the homemaker. Such help may be needed for heavy housework, transportation to and assistance at clinics, baby sitting, while the homemaker is involved in more intensive service to children or an adult patient, and other duties either outside the responsibility or the competence of the homemaker to perform.

Summary on the Staffing of a Homemaker Service

Whether the agency is small or large, three functions are necessary for its operation; i.e., executive, supervisory and direct service provided by professional staff and homemakers. All three functions may be performed in a small program by one staff person and a limited number of homemakers. Principles outlined in this chapter, however, should allow for satisfactory staff performance in any size agency with any number of staff. Special emphasis is placed on the program enrichment possible through the imaginative and broad inclusion of consultants and volunteers. It is also suggested that in certain situations auxiliary personnel should be employed by the agency to supplement the work of the homemakers.

CHAPTER V

The Orientation and On-Going Education Program of a Homemaker-Home Health Aide Service

Every individual responsible in any way for the operation of a homemaker service—homemakers, members of the governing body, professional and clerical staff, consultants, volunteers—should receive comprehensive orientation on the purpose, function, organization and service objectives of the agency. Orientation should be followed by programs of on-going information and education geared to the developmental needs of the groups involved. Basic guidelines for such procedures are outlined in this chapter. It is not intended to describe in detail methods through which these guidelines are to be followed. Emphasis, however, should be placed on the formalized training possible for homemakers through extension or continuing education departments of certain state universities, vocational schools, the adult education and home economic divisions of local school systems and the training programs for homemakers established jointly by public welfare or health and voluntary homemaker agencies in certain communities.

I—Orientation and education of homemakers and all other divisions of staff should include certain basic procedures.

1. Orientation and on-going education for all staff, with basic training provided for homemakers, should be regarded as a means of developing skills and identification with the agency to help assure the quality of service.

2. All staff, at every level of homemaker service, should receive planned, purposeful orientation and on-going education for the service to be given. It is desirable that this be done in a group, when possible, to avoid duplication, overlapping or omissions in content.

3. Education of all staff should be directed and coordinated under one staff member.

II—Orientation and preliminary training of homemakers are important both to the individual employed and to the agency. Orientation should be provided for homemakers with all other members of the staff. Examples are given, in the introduction of this chapter, of certain community resources available for training purposes but there are many more to be found if homemaker agencies will explore the possibilities in their local communities. No homemaker, either for her own sake or that of the recipient of her service, should be assigned for home duty without orientation to the agency's program and a training period which covers the essentials of the service she must provide.

1. Orientation information and on-going educational procedures for homemakers should be outlined in a manual. This should include an outline of the content of training, methods of work and duties to be performed. The manual should be made available to each homemaker for continuing reference.

2. Homemakers should have training to provide adequate knowledge and skills as well as the confidence necessary for meeting their job assignment. They should also have job-oriented experience under the supervision of the appropriate staff member of the agency.

3. Homemakers should receive adequate special training where assignments call for special service as with care of children, the aging, the blind, chronically ill or emotionally disturbed individuals.

4. Homemaker agencies which provide personal care for the sick should also provide basic training, individualized instructions, supervision and evaluation of the homemaker's work by a qualified public health nurse.

5. Homemakers should receive periodic refresher courses in the general requirements of home management and in particular areas requiring special skills.

6. Individual needs of homemakers for training and on-going education should be provided through effective developmental procedures and supervision by the agency.

III—A governing body fully informed on agency problems and involved in the agency's direct operation will participate in its program with sound judgment and effectively discharge its responsibilities to the organization. One of these responsibilities is to offer job develop-

ment opportunities to all staff; another is to provide means for professional staff to share in whatever educational stimulation is available to the homemaker field — workshops, seminars, conferences — at local, state and national level.

Individual members of the governing body will have accepted appointment for various reasons. Some will have an understanding of the philosophy and management of a homemaker program before appointment: others will have to be initiated in all areas of its operation. The amount and kind of information made available to a newly appointed member should be geared to his specific experience.

1. New members of the governing body should receive orientation and information on agency procedures through participation in board meetings, agency programs and services. Written material related to the working of the agency and to programs in allied fields should form part of the orientation.

2. The governing body should receive specific information on total agency operation including programs past, present and future. This will help develop strong roots of interest, which, in turn, will provide a continuity to the functioning of the agency.

3. Once a member of the governing body has received basic information on agency operations, he should share in appropriate and well planned agency activities in line with his special interests and in order to help him develop his role of leadership.

IV—The effectiveness of a homemaker program depends to a great degree on the vital concern of the professional staff that demonstrated need be met with adequate service — and the skill with which they recognize the need and provide the service. There is no place in such a program for static thinking or complacency regarding established agency practices which do not meet the current needs of the community. It is imperative, therefore, that all professional staff be provided with up-to-date knowledge on homemaker services and secure for themselves whatever academic or practical experience will increase the value of their contribution to people served. In order to do this, educational guidelines for various divisions of the professional staff should be followed.

1. The governing body should be responsible for the provision of appropriate learning experiences for the executive and super-

visory staff in the homemaker field and in related programs of administration and community organization.

2. The professional staff should be provided with opportunities to have access to new developments in their fields of competence.

3. On-going education of the professional staff should include appropriate learning experience and consultation in child care, household management and health procedures necessary for medically and psychiatrically involved groups. When such experience is not available within the agency itself, the executive should provide opportunities for securing it through whatever educational means are most appropriate.

4. The entire staff of a multi-function agency should be provided with knowledge of the homemaker service in all its particulars as part of staff development and, in reverse, the homemaker staff should be knowledgable about all the components of the agency's program.

V—The principles outlined for the clerical staff should provide the basis for a competent secretarial and recording design. All staff members should realize that the clerical group performs essential services for the agency. The clerical staff should be given ample opportunities to increase their usefulness.

1. All members of the agency's clerical staff should receive orientation and on-going education on the purpose, philosophy, policies and functions of the agency and in regard to its place in the community's health and welfare structure.

2. Emphasis should be placed on the importance of the performance of the clerical staff both in promoting the efficiency of the professional staff and in creating a good public image for the agency through knowledge of its procedures and of the program as a whole.

3. All members of the agency's clerical staff should receive continuous in-service training through planned meetings in areas of concern and interest to the clerical staff alone. They should also participate in general agency meetings concerned with changes or new developments in the agency's policies.

VI—A broad use of appropriate consultation will enrich the program of the homemaker service in many areas. Consultants will offer

their best help if they are provided with all necessary facts concerning the agency's operation. Many of them will come from fields already associated with the efforts of homemaker services and these will not need extensive orientation and education regarding the intent and scope of the program. Opportunities, however, should be given to all consultants to review, with responsible agency staff, matters which will make their contribution effective.

1. Consultants included in the homemaker service should understand the purpose, philosophy and function of the agency as a whole.

2. New consultants or those used on a "one-time" basis should be briefed on the purpose, philosophy and function of the agency through a period of orientation and should have adequate time and opportunity provided them for this reason.

3. Consultants should understand the characteristics of the homemaker, her service role, training and skills, as well as her relationship to her professional supervisor, the agency and other members of the treatment team and the family to which she is assigned.

4. Consultants affiliated with the homemaker service on a continuous basis should attend, at least occasionally, homemaker staff meetings and homemaker training sessions, preferably as a participant in the educational aspect of the discussions.

VII—It has been stated in Chapter IV that volunteers should be given a prominent place in the program of a homemaker service. The professional staff should recognize the importance of contributions of volunteers in many areas of the agency's program. They should be willing to provide knowledge and experience necessary for the growth and development of the volunteer's effort and to accept the limitations of individual volunteers on certain assignments.

Volunteers should receive orientation and training consistent with their special assignments and supervision based on their individual needs.

Where intelligent selection and adequate developmental procedures are established for them, volunteers will enrich the service in many areas not covered by other personnel of the agency.

Summary on Orientation and On-Going Education in a Homemaker Program

Every individual associated with a homemaker program should have comprehensive knowledge of its purpose, function and objectives. This will be achieved if there is effective orientation, basic and on-going education provided for members of the governing body and all staff.

Homemakers should have a carefully planned training course before assignments to jobs. They should be given opportunities for continued learning through on-the-job teaching and professional supervision.

CHAPTER VI

The Records of a Homemaker-Home Health Aide Service

Records of a homemaker service constitute in a very real sense the keystone of its total program. It is imperative, therefore, that from the beginning the governing body and the executive of the service anticipate what detailed recorded facts will be important to its growth and development. Too often, in the enthusiasm of organizing a new program, the setting up and maintaining of an adequate record system has been deferred. The resulting hiatus in factual information on agency achievement has proved a roadblock to the community's understanding of the purpose, function and need for financial support of the program. Responsibility for planning for collection of adequate recorded data rests with the executive, but, if the record system of the agency is to have significance, all other members of the agency staff, including homemakers, must contribute facts appropriate to their particular job assignment.

Recorded data enables an agency to have current quantitative information about its own activities, provides the means for comparing its program with other agencies', furnishes the means for studying service trends from year to year or any designated period of time, allows for specialized data which can furnish leads into qualitative evaluation of the program and may be the basis of statistics required for local, state, regional and national purposes.

A record system will be most effectively organized and maintained if there is a manual on homemaker agency recording which provides guidelines for this purpose. It is regrettable that no such over-all manual on recording exists. There are available, however, through several individual homemaker programs, manuals of recording principles and these can be secured through application to the individual agency involved. The purpose of the guidelines on records in the Code is to establish minimal record standardizations desirable for comparability in measurement, evaluation and interpretation of services. Because some homemaker services are in public health or welfare or voluntary "host" agencies and

others are independent organizations, a flexibility in the standardization is suggested to permit all agencies, regardless of auspices or size, to find the essentials needed for the gathering of data for administrative purposes.

Four areas of recording are recognized as minimum for adequate statistical interpretation of a homemaker service: (I)—intake, (II)—service, (III)—personnel and (IV)—finance. The data to be secured through these four classifications should provide the information necessary for interpreting the agency's program at all levels of operation.

I—All identifying information related to the applicant for service should be recorded during the intake procedure. This information will form a base for the establishment of service or whatever action is deemed necessary for the applicant. Statements on reasons for referral to the homemaker agency, with all available verbal and written medical and social reports on the family or individual involved, should be recorded as part of the intake procedure. The executive, supervisor and other professional staff of the homemaker service should share in the setting up of record outlines to cover adequate intake procedures.

II—Case records should be maintained on the service given to each family or individual by the homemaker agency.

1. Records should be kept of the particulars of the service given to meet the need of a family or individual accepted for help: the purpose of the service, plan for implementing it, and how it was used, should be stated.
2. The service records should include reports on joint planning with other community agencies or with consultants either inside or outside the agency.
3. Records should include statements on reasons for termination and evaluation of the service given.

III—A written record on each staff member employed by the homemaker program, including homemakers, should be maintained on a current basis. Information contained therein should be considered in staff evaluations for promotion, increases in salary and other increments available to the staff.

IV—The homemaker agency should maintain records on all appropriate financial matters including expenditures of funds provided

through various government and/or voluntary sources, statistics on both measurement of and expenditures for service, expenses met on a non-cash or donated basis and indirect expenses relating to operation of the homemaker program.

1. An appropriate statistical unit for the measurement of service should be established along with the total expenditures by type of expense. Statistics on both measurement and expenditures should be available from records maintained on its finances by the agency.

2. Expenses met on a non-cash or donated basis for such items as office space, salary equivalent for volunteer time or materials should be included if essential to the operation of the agency and for which the agency should have had to pay if they had not been donated.

3. All indirect expenses should be recorded, including administrative and clerical salaries; office expenses such as rent, telephone, supplies, insurances, publicity and other expenses of a similar nature which are necessary for the operation of the service. These expenses should be included in the true cost of the homemaker agency's operation.

V—Data obtained through the four minimum record classifications (intake, service, personnel and finance) should provide sufficient information for an adequate picture of the agency's operation.

1. There should be an accurate record of applications for service received and disposition of each application, i.e., whether it was accepted or not accepted and if not, the reason for refusal.

2. There should be an accurate record of applications pending.

3. There should be an accurate record of cases carried over from a previous recording period.

4. There should be an accurate record of cases added during the previous recording period analyzed under the following headings:

   a. No previous service given by the agency to the applicant

   b. Previous service given to the applicant in the current recording period

   c. Previous service given to the applicant prior to the current recording period

5. There should be an accurate record of cases active and of those closed at the end of a designated recording period.

6. There should be an accurate record of the number of individuals served by the agency.

7. The homemaker records should show:

   a. The number of hours of service given by homemakers

   b. The number of homemakers employed on a full or part time basis

   c. The number of supervisory and other staff according to job assignments

8. The governing body and the executive should maintain all financial records in such form as to clearly state the amount of money spent, the current financial problems and future needs in financing to provide the service to which the agency is committed.

Summary Statement on Records

The homemaker agency, from its very beginning, must maintain adequate records on all aspects of its program. The executive has a responsibility to plan the record program and staff members at all levels of operation are obligated to contribute statistics related to their individual job assignmets. Records should be maintained on four areas of agency operation; i.e., intake, service, personnel and finance, including cost accounting. Data to be obtained through the four above record classifications should provide sufficient information to allow for an adequate picture of the agency's program and operation—both service and fiscal.

CHAPTER VII

The Role of the Homemaker-Home Health Aide Service in Community Relations

John Donne said, "No man is an island . . . ". His statement could well be paraphrased and applied to any health or welfare program in a modern community. It has particular significance for a homemaker agency which, because of the nature of its services, is dependent on community cooperation in most areas of its program. A homemaker program, from its beginning, should, as a fundamental responsibility, be an integral part of the local system of public and voluntary services. It should be closely related to and involved with the total welfare and health resources of the community. The principles related to its effective integration with such welfare and health services are stated in this chapter. Many of the principles listed apply to all responsible social welfare and health agencies and are not unique to homemaker services. Such principles are, moreover, applicable to both the independent homemaker program and the program in a "host" agency—whether the "host" is a public welfare or health department or a voluntary community supported organization. Auspices, however, will influence to a degree by whom and how the principles are implemented.

The two general categories under which principles are presented are (I)—Broad relationships as part of the complex of community services and (II)—Working relationships at the direct service level.

I—The homemaker agency should participate actively as a member or affiliate of the local planning council or similar organizations. Where there is no central planning body, the agency should develop a comprehensive formal or informal planning process in order to assure appropriate relations to, and involvement with, the community's welfare and health resources.

1. The homemaker agency should establish community priorities for its service and programs.

2. The homemaker agency should insure community awareness of gaps in services as evidenced through its own experiences with individuals and families who need additional or different services than those provided by its program.

3. The homemaker agency should receive and provide consultation, through appropriate individuals and other effective means, on the development of homemaker programs. It should participate in projects designed to demonstrate need for, and the values of, homemaker services.

4. The established homemaker agency, where appropriate, should actively participate in shaping public agency welfare and health policies related to homemaker services and other identified welfare and health needs.

5. The homemaker agency should make available information on its service to appropriate community planning groups which can further its program, e.g., local committees, local or state welfare or health councils or planning commissions.

6. The homemaker agency should encourage broad volunteer participation in its activities with the realization that community involvement is one means of developing public understanding of its program and should form the base of its community relations.

7. The homemaker agency should assess all communication resources available within the agency itself and in the community, in order to determine what avenues will be most effective in reaching various segments of the community identified as important to it. It should establish effective contact with all news media and enlist their interest in presenting a favorable image of the agency's achievements and needs to a broad cross-section of the public. Materials which interpret the goals and achievements of the homemaker service should be prepared by the agency for the use of all communication channels.

8. The homemaker agency should establish short and long range goals in its interpretative efforts. It should make planned efforts to learn how the community evaluates its current services and what additional services various segments of the community desire the agency to provide.

9. The homemaker agency should maintain active and effective relationships with local, state and national standard setting and/or membership organizations.

II—The homemaker agency has a responsibility to interpret homemaker service as an organized, professionally supervised and community supported program. It should make known the agency's specific program, philosophy on fees, intake policies and limitation of service, as such interpretation is essential in order to obtain community sanction, appropriate use of service, financial support and recruitment of staff and volunteers. To achieve these ends, the agency also needs to maintain effective relationships with social welfare, health and mental health agencies which will be sources of referral to and from the homemaker agency.

1. A homemaker service which provides broad community coverage will, in general, be more responsive to over-all community need than a service organized for a narrowly selected group; e.g., individuals with special physical disabilities, or the clientele of a "host" agency. At the start of a new service or in plans for further development, the agency should relate its proposed variation or expansion of program to demonstrated community need and agreed on community priorities.

2. The homemaker agency should be accountable to the community for the quality of service it renders. Its accountability should include provision for a qualified staff, adequate to meet basic service requests and to provide the community service it purports to render.

3. The homemaker agency is responsible for evaluating the need of the applicant for service and assisting the individual or family with alternate plans if the presenting problem cannot be fully or appropriately met by the homemaker service.

4. The homemaker agency has a responsibility to report back to all referral sources, whether they are community agencies, physicians, lawyers or other concerned individuals, and to maintain continuous communication with any agency concurrently active with the family receiving homemaker service.

5. The homemaker agency should develop clear and explicit agreement on the responsibility of each agency where cooperative services are involved. Since no homemaker program can give all the service necessary to disadvantaged individuals or families, there must be supporting community services if all needs of individuals or families involved are met.

Summary Statement on Community Relations

The homemaker agency is dependent on various sections of the community for the success of its program. It should therefore establish itself from the beginning as an integral part of the local system of public and voluntary welfare and health services. To this end, it should maintain broad relationships at the direct service level. It should participate actively in interpreting and promoting the interests of its own program and of the homemaker field. It should also call attention to, and offset where possible, deficits in community services which prevent its optimum help to people. Agreements with cooperating agencies should be clear and kept up-to-date. Volunteers should be involved extensively in the agency's program. All channels of communication should be utilized to interpret the program and needs of the agency and the importance of homemaker service to the community.

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National Society for Multiple Sclerosis

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Division of Adult Health
Massachusetts Department of Public Health

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Staff Associate
American Public Welfare Association

Mildred Frank
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Family Service Association of America

Mildred Kilinski
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Department of Social Work Practice
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Evelyn McNamara
Chief Social Work Consultant
The National Foundation

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Department of Public Health Nursing
National League for Nursing

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Interdepartmental Health Council

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Child Welfare League of America

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Illinois Department of Public Aid
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Kenneth I. Williams
Associate Director
Community Planning Division, United
Community Funds and Councils of America

Joseph Witt, M.D.
American Medical Association
Board Member
National Council for Homemaker Services

Myrtle Wolff
Regional Foster Care Consultant
Children's Bureau, Welfare Administration
Regional Office II
Department of Health, Education,
and Welfare

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Division of Welfare Services
Bureau of Family Services
Department of Health, Education,
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Home Health Aide Director
Visiting Nurse Service of New York

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Pennsylvania Department of Public Welfare

Mrs. Ruth G. Cohen
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Services for Older Persons
Jewish Family Service of Philadelphia

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Reading and Berks County, Pennsylvania

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National Council for Homemaker Services

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Jewish Family Service, New York

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for Children, San Diego

Winifred Kellogg
Assistant Director
Visiting Nurse Association, Detroit

Robert C. Linstrom
Project Director
Homemaker–Housekeeper Services for the Chronically Ill and Aged
Health and Welfare Council of Metropolitan St. Louis

Eben W. Martin
Family and Child Welfare Consultant
United Community Services of Metropolitan Detroit

Mrs. Alan R. Morse
Board Member
National Council for Homemaker Services

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Director, Bureau of Special Services
New York City Department of Welfare

Mrs. Mary H. Pettee
Homemaker Service Consultant
Division of Child Welfare
Minnesota Department of Public Welfare

Mrs. Nathalie D. Preston
Supervisor of Homemaker Services
Brooklyn N. Y. Bureau of Social Services

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Home-Health Aide Service, Cincinnati
Community Chest and Council
Board Member
National Council for Homemaker Services

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Children's Aid Society, New York

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San Francisco Homemaker Service

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Vice-President
National Council for Homemaker Services

Mrs. Anna Budd Ware
Executive Director
Family Service of the Cincinnati Area

Mrs. Johnnie U. Williams
Homemaker Service Specialist
Bureau of Family Services, Welfare Administration, Department of Health, Education, and Welfare

CONSULTANTS

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

Mrs. Ruth I. Knee
Assistant Chief
Community Research and Services Branch, National Institute of Mental Health

Mrs. Gladys S. Lawson
Homemaker Service Specialist
Children's Bureau
Welfare Administration

Eileen E. Lester
Medical Social Consultant
Division of Chronic Diseases
Care Services Staff
Bureau of State Services
U.S. Public Health Service

GUESTS AT PRINCETON WORKSHOP

Mrs. Florence Fiori
State Consultant
Community Health Organization
New Jersey Department of Health

William Furst, M.D.
Attending Neuropsychiatrist
East Orange General Hospital
New Jersey

Joseph L. Hughes
Director-Hospital Relations
Hospital Service Plan of New Jersey

Theodore R. Isenstadt
Director, Project on Aging
Family Service Association of America

Ata L. Lee
Program Specialist, Home Economics Education Occupations Branch
Office of Education, Department of Health, Education, and Welfare

Mrs. Martha Ball Naylor
Public Health Nursing Consultant
Division of Chronic Diseases
U.S. Public Health Service, Department of Health, Education, and Welfare

Claire Ryder, M.D.
Associate Chief for Care Services
Division of Chronic Diseases
U.S. Public Health Service
Department of Health, Education, and Welfare

Mrs. Lucille Smith
Assistant to Chief
Division of Community Health Services
Bureau of State Services, U.S. Public Health Service, Department of Health, Education, and Welfare

Mrs. Juan T. Trippe
President
National Council for Homemaker Services

STAFF–NATIONAL COUNCIL FOR HOMEMAKER SERVICES

Mrs. Betty H. Andersen
Executive Director

Kathleen Allen
Coordinator for Standards Committee
Writer of the Code

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NATIONAL COUNCIL FOR HOMEMAKER SERVICES, INC.
1790 BROADWAY, NEW YORK, N. Y. 10019

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A Progress Report on Area Vocational-Technical School Development to June 30, 1967.

Pennsylvania State Dept. of Public Instruction, Harrisburg
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PENNSYLVANIA

Progress of area vocational technical school development in Pennsylvania is reported by: (1) listing the attendance area criteria, characteristics of approved areas, and educational program plans, (2) including tables of approved attendance areas, enrollments and course offerings, buildings constructed and funded, projected building construction projects, and programs in operation, and (3) map supplements showing approved attendance areas, areas with approved program plans, and area vocational-technical schools in operation. (DM)

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A PROGRESS REPORT

ON

AREA VOCATIONAL-TECHNICAL SCHOOL

DEVELOPMENTS

TO

June 30, 1967

- Attendance Areas
- Educational Programs
- Building Construction
- Projected Buildings
- Programs Operating

Commonwealth of Pennsylvania
DEPARTMENT OF PUBLIC INSTRUCTION
Harrisburg

VT006375

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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John W. Struck
State Director
Vocational Education

Paul Schallas
Assistant State Director
Vocational Education

Kenneth M. Pfeiffer
Chief
Instruction Consultation

Robert Jacoby
State Supervisor
Technical & Industrial Ed.

PREFACE

The rapidly increasing complexity of business and industry operation has brought to the attention of local, State, and National leadership the need to provide a comprehensive program of Vocational Education as a part of the educational system.

State and local leaders throughout the Commonwealth have been meeting this challenge through enabling legislation encouraging the organization, establishment and operation of area vocational-technical schools on a regional basis.

This brochure gives a brief report on the progress throughout the Commonwealth in the development of area vocational-technical school programs from the initial stage of attendance area development to the programs which will begin operation in September 1967.

Robert Jacoby

August
1967

Robert Jacoby
State Supervisor
Technical & Industrial Ed.

CONTENTS

THE ATTENDANCE AREAS. 1
- Approved Attendance Areas 2
- Characteristics of Approved Attendance Areas 3
- Map - Approved Attendance Areas 4

EDUCATIONAL PROGRAM PLANS 5
- Summary of Facts Concerning Educational Plans 5
- Pupil Enrollments and Course Offerings in Educational Programs 6
- Map - Approved Educational Program Plans 7

BUILDING CONSTRUCTION 8
- Buildings Constructed and Funded. . . . 8
- Projected Building Construction Projects 9

PROGRAMS IN OPERATION 10
- Map - Area Vocational-Technical School in Operation. 11

Technical & Industrial Education Advisors

William C. Bartholomew
Frank R. Hanawalt
A. Louise Harding
Margaret G. Horne
George F. Kosco
Stephen Sworen

Technical & Industrial Education Area Coordinators

Ralph A. Benson
Robert Binkley
Clair F. Fitz
Fred H. Glanding
Raymond J. Gutekunst
Richard D. Koehler
Clyde U. Messinger
D. Thomas Moore
Albert G. Roman
Rex E. Wright

THE ATTENDANCE AREAS

The area vocational-technical school is an educational institution offering programs in one or all phases of vocational education on a technical, skilled, and occupational levels of instruction to secondary school pupils and out-of-school youth and adults in a geographical area comprised and operated on a cooperative basis by several school administrative units.

The basic purpose of the area technical school is to make vocational education available to all pupils of the Commonwealth by the establishment of programs to serve secondary schools in a given geographical area known as attendance areas. Attendance areas, therefore, outline the geographical boundaries of school districts and pupils to be served by an area vocational-technical school.

County Boards of School Directors have been delegated the responsibility to plan, prepare, and submit to the Department of Public Instruction proposals for arranging all school districts of the county into one or more attendance areas. These proposals are developed in counsel with school administrators, industrial, labor, and lay representatives of the area.

An attendance area school should have sufficient number of school districts to maintain a minimum of ten shop/laboratory activities. This requires a senior high school pupil enrollment of approximately 2500 pupils. Factors considered in planning areas include pupil population, community interest, facility of transportation, financial ability, organization of school districts, characteristics of school districts, etc. Attendance areas must be approved by the Department of Public Instruction and the State Board for Vocational Education before proceeding with the establishment of a school in the area.

APPROVED ATTENDANCE AREAS

	No. Areas	Area	Approval Date
ATTENDANCE AREAS APPROVED PRIOR TO ACT 463	1	Fayette County	
	1	Wyoming Valley	
	1	Carbon County	11-57
	1	Bucks County	2-58
	1	Forbes Trail	6-59
	1	Upper Bucks County	6-61
	1	Northumberland	9-62
	1	Central Westmoreland	5-63
	1	Steel Valley	5-63

Attendance Areas Approved Under Act 463

No. Areas.	Area	Approval Date
3	Delaware	2-64
1	Allegheny (Parkway West)	2-64
1	Lebanon	2-64
1	Armstrong	3-64
1	Montgomery #3	3-64
2	Luzerne	3-64
1	York	3-64
1	Mercer	4-64
1	Lawrence	4-64
2	Washington	5-64
1	Allegheny (North)	6-64
1	Clearfield	6-64
1	Westmoreland (East)	6-64
1	Lehigh	6-64
1	Crawford	6-64
1	Dauphin	6-64
1	Columbia-Montour	6-64
1	Snyder-Union-Northumberland	6-64
1	Indiana	8-64
1	Bradford	8-64
1	Franklin	8-64
1	Philadelphia	8-64
1	Pittsburgh	8-64
1	Cumberland-Perry	9-64
1	Greene	9-64
1	Juniata-Mifflin	9-64
1	Venango-Forest	9-64
2	Lancaster	9-64
33		

No. Areas	Area	Approval Date
2	Chester	10-64
2	Schuylkill	10-64
1	Erie	10-64
3	Montgomery #1,2,&4	11-64
1	Clarion-Forest	12-64
1	Lackawanna	12-64
1	Bucks (Central)	12-64
3	Berks	12-64
1	Somerset	12-64
1	Bedford	2-65
1	Lycoming	2-65
1	McKean	2-65
2	Northampton	2-65
1	Warren	2-65
2	Cambria	3-65
1	Clinton	4-65
1	Monroe	6-65
1	Jefferson	6-65
1	Centre	6-65
1	Huntingdon	8-65
1	Cameron-Elk	1-66
1	Fayette	1-66
1	Lancaster	1-66
1	Altoona Area	2-66
1	Harrisburg-Steelton-Highspire	1-67
1	Southern Westmoreland Co.	4-67
1	Northern Westmoreland Co.	4-67
35		

CHARACTERISTICS OF APPROVED ATTENDANCE AREAS

1. A total of seventy-seven (77) have been approved including those areas having schools in operation, covering fifty-five (55) counties.

2. Sixty-eight (68) attendance areas have been approved since February 1964, under Act 463.

3. Sixteen (16) counties have more than one attendance area:

Allegheny (4)	Luzerne (3)	Chester (2)
Montgomery (4)	Bucks (3)	Cambria (2)
Westmoreland (4)	Northumberland (2)	Fayette (2)
Delaware (3)	Northampton (2)	Dauphin (2)
Berks (3)	Washington (2)	
Lancaster (3)	Schuylkill (2)	

4. Seven (7) attendance areas involve major portions of more than one county:

Columbia-Montour	Venango-Crawford-Forest
Juniata-Mifflin	Snyder-Union-Northumberland
Cumberland-Perry	Cameron-Elk
Clarion-Forest	

5. Ten (10) attendance areas are below the minimum standard of 2500 pupil enrollment.

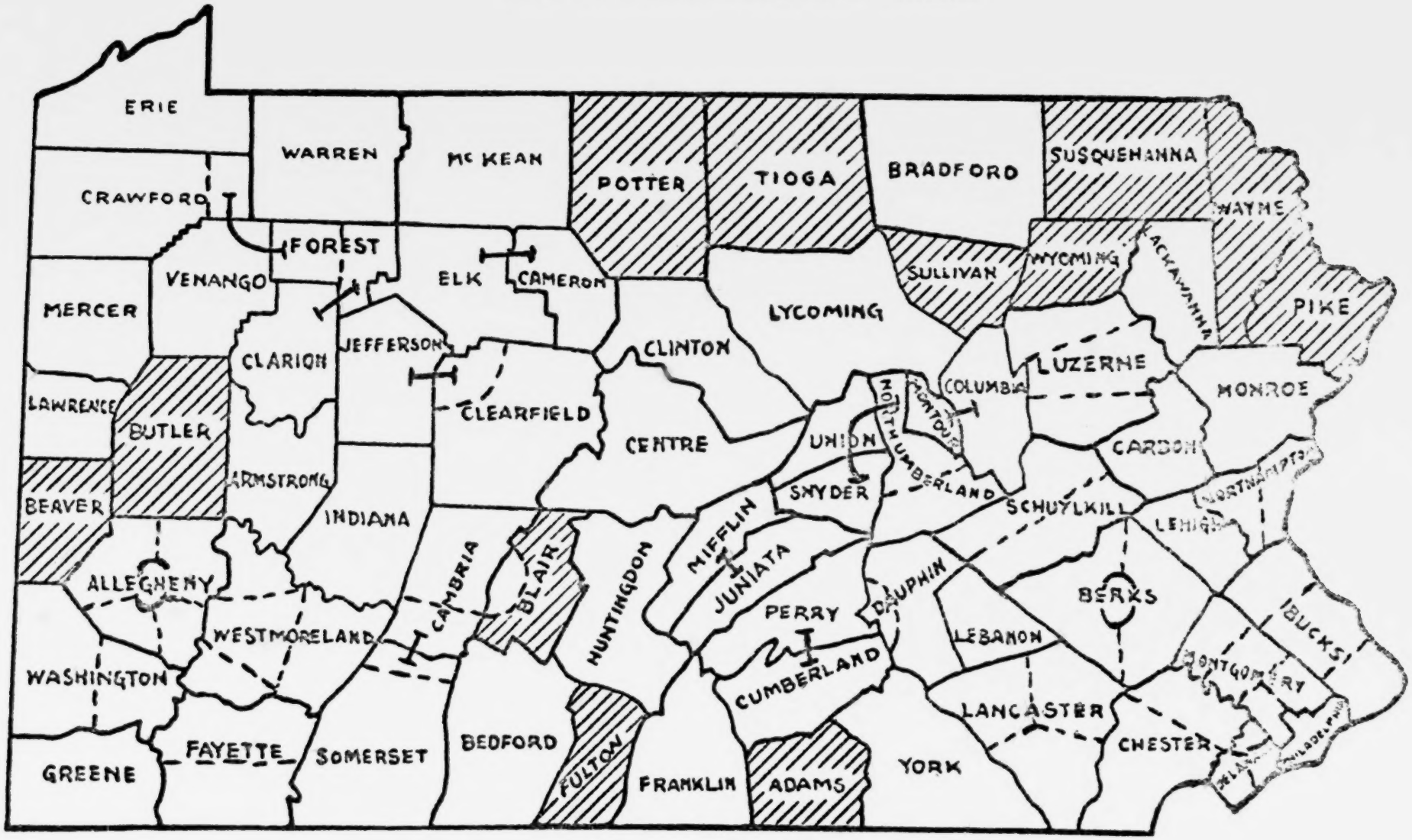
   Greene, Bedford, Warren, Clarion-Forest, Upper Bucks, Clinton, Monroe, Huntingdon, Cameron-Elk, Fayette #2

6. The average senior high enrollment per attendance area is 5100 pupils.

Counties and Pupils Not Served by Approved Attendance Areas

County	Estimated Senior High Enrollment
Adams	1,947
Beaver	10,143
Blair	3,520
Butler	5,896
Fulton	548
Pike	282
Potter	867
Sullivan	288
Susquehanna	1,876
Tioga	1,854
Wayne	999
Wyoming	866
Total	29,086

MAP
APPROVED ATTENDANCE AREAS
FOR
AREA VOCATIONAL-TECHNICAL SCHOOLS



KEY:

- Non-shaded areas indicate portions of Commonwealth having approved attendance areas
- Cross-hatching indicates portions of Commonwealth without approved attendance areas
- Tie indicates a multi-county attendance area

EDUCATIONAL PROGRAM PLANS

The basic purpose of educational program plans is to prepare and justify program size and course offerings. The educational program plan is developed by the local Director of Vocational Education in cooperation with the professional and general advisory committees and field Supervisors of Vocational Education. Preliminary draft plans are reviewed, revised, and presented to the Department of Public Instruction for review and approval of a curriculum committee. The educational plan is used as a basis for drafting a room schedule in preparation for planning a building facility.

Summary of Facts Concerning Educational Plans

1. Total number of educational program plans approved is forty seven (47).

2. Twenty-three (23) of these programs are located in the Eastern Region of the Commonwealth, twelve (12) in the West, and twelve (12) in the Central.

3. Thirty-five (35) programs are County Board operated and twelve (12) Joint Board.

4. Ten (10) programs are being planned as full-time schools and thirty-seven (37) as part-time service centers providing only the shop/laboratory phase of the program.

5. The average pupil size of school is approximately 885 pupils.

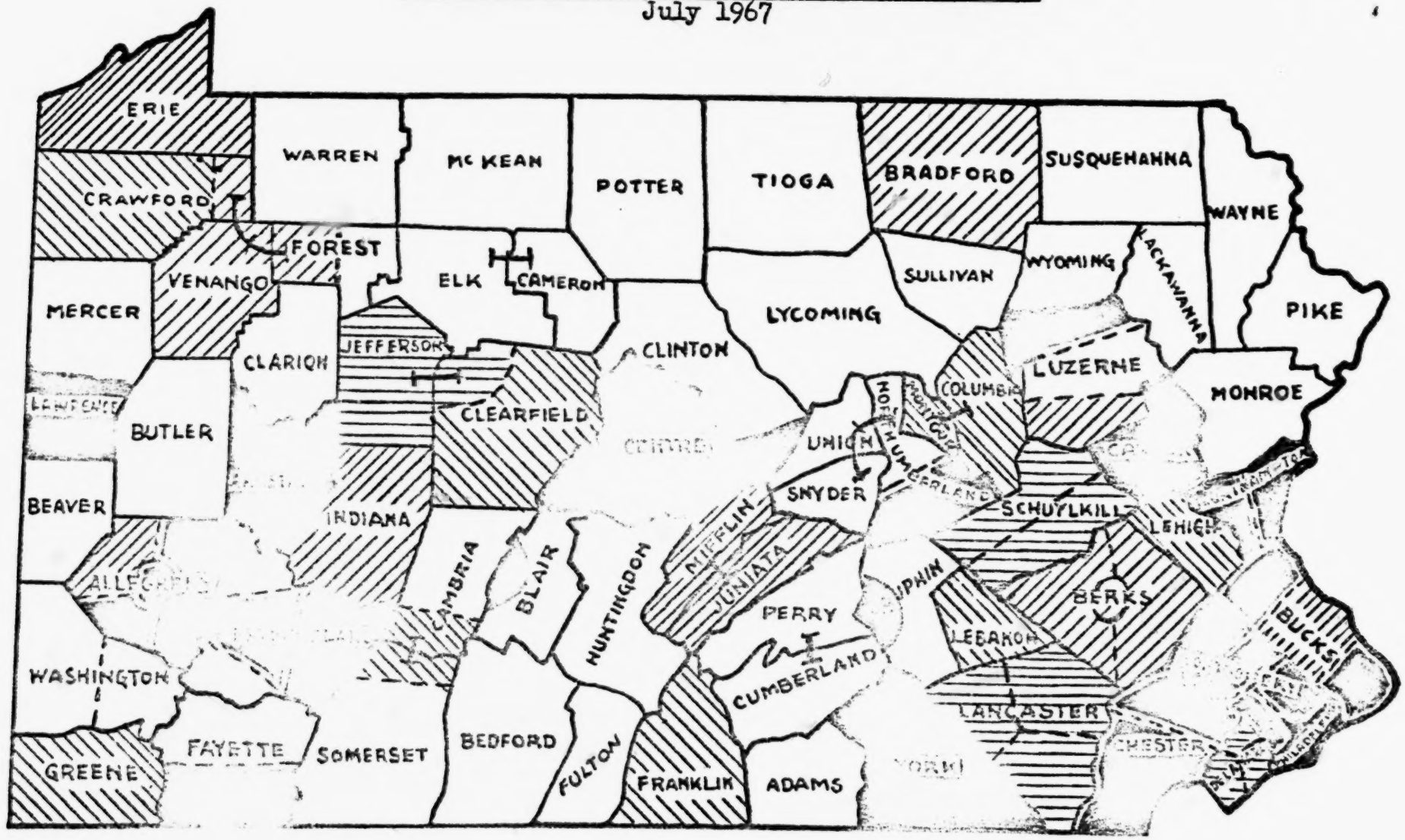
6. The average number of course offerings is twenty-one (21).

7. The average percentage of proposed enrollment of technical school pupils to total enrollment of senior high school pupil in the participating districts is 17.9%.

PUPIL ENROLLMENTS AND COURSE OFFERINGS
IN EDUCATIONAL PROGRAMS

SCHOOL OR COUNTY	ENROLLMENT			NUMBER OF COURSES	COURSE OFFERINGS *							TYPE OF* SCHOOL	TYPE BOARD	REGION OF STATE
	SR. HIGH	TECH SCHOOL	% TECH SCHOOL		AG.	BUS.	D. ED.	H. EC.	HEALTH	TRADE IND.	TECH.			
Montgomery Co. #3	6,163	990	16.1	24	1	0	2	0	1	15	5	P.T.	Co.	East
Lenape Area T. S.	2,986	500	16.7	12	0	1	1	0	0	5	5	F.T.	Co.	West
Carbon County	2,248	675	30.0	15	0	0	1	0	1	9	4	P.T.	Co.	East
Wyoming Valley	4,749	640	13.5	16	0	1	1	0	0	11	3	F.T.	Co.	Central
Delaware #1)		600		15	0	1	1	0	1	8	4	P.T.	Co.	East
Delaware #2) -	17,806	1,000	15.2	25	0	1	1	0	2	14	7	P.T.	Co.	East
Delaware #3)		1,100		20	0	1	0	1	2	8	8	P.T.	Co.	East
Lawrence County	5,036	880	17.5	22	0	1	1	0	2	14	4	F.T.	Co.	West
Lebanon County	2,862	700	24.5	18	1	0	1	0	1	12	3	P.T.	Co.	East
Parkway West	9,571	1,000	10.4	25	0	0	2	0	0	11	12	P.T.	Co.	West
Schuylkill - N	3,133	590	18.8	15	0	0	0	0	2	11	2	P.T.	Co.	East
Schuylkill - S	3,450	660	19.1	17	0	0	1	0	2	9	5	P.T.	Co.	East
Crawford County	3,304	600	18.2	15	1	0	1	0	1	8	4	P.T.	Co.	West
Northern Chester	4,593	800	17.4	20	1	2	1	0	0	11	5	F.T.	Jt.	East
Chester-Central	6,203	966	15.6	23	1	1	2	1	2	11	5	P.T.	Co.	East
Juniata-Mifflin	2,906	680	23.4	18	2	1	1	0	1	11	2	P.T.	Co.	Central
Montgomery #1	6,369	840	13.2	19	0	0	1	0	1	12	5	P.T.	Co.	East
Montgomery #2	2,964	480	16.2	12	1	0	1	0	0	6	4	P.T.	Co.	East
Montgomery #4	4,435	840	18.9	19	0	0	1	0	1	13	4	P.T.	Co.	East
Berks-East	4,650	840	18.1	21	0	0	2	0	1	14	4	P.T.	Co.	East
Berks-West	3,967	840	21.2	21	0	0	2	0	0	14	5	P.T.	Co.	East
Erie County	5,489	760	13.8	18	0	1	1	0	0	12	4	P.T.	Co.	West
Reading-Muhlnbg.	4,550	1,280	28.1	28	0	2	1	0	2	19	4	P.T.	Jt.	East
York County	11,362	1,740	15.3	35	1	1	2	0	2	24	5	F.T.	Co.	Central
Columbia-Montour	3,041	640	20.0	16	1	0	1	0	2	10	2	F.T.	Co.	Central
Clearfield County	3,301	640	19.3	16	0	0	0	0	2	10	4	P.T.	Co.	Central
Centre County	3,001	990	32.9	27	1	1	1	1	2	16	5	P.T.	Co.	Central
Franklin County	5,064	900	17.8	22	1	0	2	0	2	12	5	P.T.	Jt.	Central
Forbes Trail	14,560	880	6.0	22	0	1	2	0	1	5	13	P.T.	Co.	West
Hazleton Area	3,018	920	30.5	23	2	0	1	0	2	15	3	P.T.	Jt.	Central
Northern Area	8,864	800	9.0	19	0	2	2	0	1	6	8	P.T.	Co.	West
Middle Bucks Co.	5,247	1,200	22.8	30	0	0	1	0	1	23	5	P.T.	Co.	East
Lancaster Area X	4,040	1,350	33.4	29	0	1	1	0	3	18	6	P.T.	Co.	East
Lancaster Area Y	3,151	690	21.9	17	2	1	1	0	1	12	0	P.T.	Co.	East
Lancaster Area Z	4,061	720	17.7	18	2	1	1	0	1	13	0	P.T.	Co.	East
Bradford County	3,063	760	24.8	19	3	0	1	0	2	9	4	P.T.	Co.	Central
East Northampton	5,186	950	18.3	22*	1	0	1	0	2	14	4	P.T.	Jt.	East
Jefferson DuBois	3,079	680	22.1	17	0	1	1	0	1	10	4	F.T.	Co.	West
Indiana County	3,791	600	15.8	14	0	0	1	0	1	9	3	F.T.	Co.	West
Penango County	4,071	690	16.9	18	0	0	1	0	1	14	2	P.T.	Jt.	West
Bethlehem Area	5,094	1,320	25.9	31	1	1	1	0	2	19	7	P.T.	Jt.	East
Johnstown Area	6,959	1,500	21.5	36	2	2	1	0	3	17	11	F.T.	Jt.	West
Jbg.-Steelton	3,030	720	23.8	18	0	0	2	3	1	10	2	P.T.	Jt.	Central
Lehigh County	9,714	1,700	17.5	42	3	1	2	0	1	27	8	P.T.	Jt.	East
Altoona Area	4,470	1,470	32.9	38	0	1	2	0	1	28	6	P.T.	Jt.	Central
Greene County	1,986	480	24.2	12	0	1	1	0	1	7	2	P.T.	Co.	West
Dauphin County	6,290	1,070	17.0	22	1	0	1	0	1	15	4	F.T.	Jt.	Central
TOTAL	232,877	41,671	17.9	1001	29	23	56	6	60	601	221	10 F. 37 P.	35 C. 12 J.	23 East 12 Cent. 12 West

AREA VOCATIONAL-TECHNICAL SCHOOL
APPROVED EDUCATIONAL PORGRAM PLANS
AND
ATTENDANCE AREAS WITH PROGRAMS IN OPERATION
July 1967



Shaded areas indicate Area Vocational-Technical Schools in Operation.

Cross-Hatching indicates areas with approved Educational Program Plans for Area Vocational-Technical School.

Tie indicates a multi-county attendance area.

BUILDING CONSTRUCTION

Planning and construction of building facilities evolves from the preliminary steps of planning an attendance area, development of an operating administrative organization for the school, planning the educational program, planning the building, and construction of the building. Adequate planning of program and facility requies a minimum of one year, and one to one and one-half years to construct the building.

BUILDINGS CONSTRUCTED AND FUNDED

The building projects listed began construction in the fiscal years indicated. The equipment cost is included in the total cost of the project and is not an addition to this cost.

	Pupil Capacity	Equipment Cost	Const. Contract Awarded	Total Cost of Project	% Cost Eligible for Reimb.	Allocation: Vocational Ed. Act of 1963	Federal Funds: Appalachian Regional Dev. Act
1964-65							
Fayette County	1200	$ 461,083	Jan. 65	$ 2,086,277	96%	$ 264,549	
Carbon County	672	$ 425,000	Mar. 65	$ 1,600,000	86%	$ 310,358	
Lenape Tech. S.	500	$ 225,471	Apr. 65	$ 1,008,319	89%	$ 169,730	
Upper Bucks Co.	680	$ 310,000	May 65	$ 1,735,000	87%	$ 377,958	
Bucks County	700	$ 300,000	June 65	$ 1,885,000	92%	$ 437,761	
Eastern Mont. Co.	840	$ 565,000	June 65	$ 2,773,836	78%	$ 833,522	
TOTAL	4692	$ 2,286,554		$11,088,432		$2,393,878	
1965-66							
Central Mont. Co	840	$ 480,000	May 66	$ 2,830,000	87.0%	$ 431,115	
North Mont. Co.	840	$ 456,000	May 66	$ 2,535,000	94.5%	$ 448,582	
Lawrence County	880	$ 823,003	June 66	$ 4,845,732	74.8%	$ 358,034	$ 358,034
Western Mont. Co	500	$ 370,000	June 66	$ 2,286,479	78.6%	$ 350,582	
Central Chester Co	966	$ 750,000	June 66	$ 3,327,754	82.8%	$ 577,285	
TOTAL	3826	$ 2,879,003		$15,824,965		$2,165,598	
1966-67							
Lebanon County	700	$ 800,000	Sept. 66	$ 3,496,918	73.9%	$ 594,294	
Pittsburgh	1680	$ 636,250		$ 3,043,725	100.0%	$ 532,651	
Crawford County	600	$ 926,095	Nov. 66	$ 2,679,096	88.6%	$ 585,907	$ 585,907
Erie County	760	$ 1,137,528	Jan. 67	$ 3,692,092	82.8%	$ 665,284	$ 665,284
West Side	700	$ 970,130	Feb. 67	$ 3,375,625	80.6%	$ 286,058	$ 286,058
Delaware Co. #1	600	$ 573,284	Feb. 67	$ 2,365,972	82.4%	$ 350,305	
Delaware Co. #2	1000	$ 916,243	Feb. 67	$ 3,387,962	94.3%	$ 573,908	
Delaware Co. #3	1100	$ 964,191	Feb. 67	$ 3,606,066	91.9%	$ 595,617	
Schuylkill Co. N	590	$ 520,670	Feb. 67	$ 2,200,000	90.0%	$ 492,239	$ 492,239
Juniata-Mifflin	680	$ 795,000	Feb. 67	$ 2,730,000	90.7%	$ 574,026	$ 574,026
Berks Co. East	840	$ 745,767	Feb. 67	$ 2,991,573	86.3%	$ 552,137	
Berks Co. West	840	$ 690,867	Feb. 67	$ 3,073,427	83.1%	$ 545,629	
Schuylkill Co. S.	660	$ 700,000	Mar. 67	$ 2,650,000	85.5%	$ 563,532	$ 563,532
Forbes Trail	880	$ 792,840	Apr. 67	$ 3,115,000	89.7%	$ 525,955	$ 525,955
Reading-Muhlenberg	1280	$ 977,000	Apr. 67	$ 4,125,000	96.9%	$ 795,900	
Centre County	990	$ 550,000	May 67	$ 4,474,250	70.5%	$ 690,552	$ 454,000
TOTAL	13900	$12,695,865		$51,006,706		$8,923,994	$4,147,001

PROJECTED BUILDING CONSTRUCTION PROJECTS

The following attendance areas have planned educational programs for the number of courses indicated and are at various stages of planning a building facility. They plan to begin building construction in fiscal year 1967-68.

FISCAL 1967-68 NAME OF SCHOOL	TYPE SCHOOL Full TIME	TYPE SCHOOL PART TIME	SHOP/LAB COURSES	AWARD CONSTR. CONTRACT	COST OF CONSTRUCTION & EQUIPMENT	SCHOOL OPENING DATE	PUPIL CAPACITY
*Parkway West Tech. School		x	27	July 67	$ 4,406,000	Sept. 68	1,080
*A. W. Beattie Tech. School		x	19	August 67	$ 3,400,000	Sept. 68	760
Middle Bucks Co. AVTS		x	30	August 67	$ 4,660,000	Sept. 69	1,200
*Venango Co. Tech. School		x	18	August 67	$ 3,466,000	Sept. 69	690
*Indiana Co. AVTS	x		15	Sept. 67	$ 3,721,187	Sept. 68	600
York Co. AVTS	x		35	Sept. 67	$ 6,500,000	Jan. 69	1,740
*Columbia-Montour AVTS	x		16	Sept. 67	$ 4,000,000	Sept. 69	640
*Jefferson-DuBois AVTS	x		17	Nov. 67	$ 4,135,000	Sept. 69	680
Franklin Co. AVTS		x	22	Nov. 67	$ 3,904,660	Sept. 68	880
*Clearfield Co. AVTS		x	16	Nov. 67	$ 2,998,965	Feb. 69	640
Northern Chester Co. AVTS	x		20	Nov. 68	$ 4,100,000	Sept. 69	800
*Bradford Co. AVTS		x	19	Dec. 67	$ 3,215,000	Sept. 69	760
Bethlehem Area Tech. School		x	31	Dec. 67	$ 5,000,000	Jan. 69	1,320
*Altoona Area Tech. School		x	38	Jan. 68	$ 7,000,000	Sept. 69	1,470
*Gr. Johnstown AVTS	x		42	Jan. 68	$ 8,500,000	Sept. 69	1,500
Eastern Northampton Co.		x	24	Jan. 68	$ 3,100,000	Sept. 69	950
*Hazleton Area Tech. School		x	23	Jan. 68	$ 3,538,000	Sept. 69	920
Lehigh Co. AVTS		x	40	Feb. 68	$ 5,500,000	Sept. 69	1,682
*Greene Co. AVTS		x	12	March 68	$ 1,750,000	Sept. 69	480
Lancaster Co. Area X		x	29	March 68	$ 3,700,000	Sept. 69	1,350
Lancaster Co. Area Y		x	17	March 68	$ 2,100,000	Sept. 69	690
Lancaster Co. Area Z		x	18	March 68	$ 2,200,000	Sept. 69	720
Dauphin Co. AVTS	x		22	March 68	$ 4,080,000	Sept. 69	1,060
*North Fayette Co. AVTS		x	12	May 68	$ 1,700,000	Sept. 69	600
TOTAL	7	17	562		$96,674,812		23,212

PROPOSED PROJECTS
BEYOND July 1968

*Western Washington Co. AVTS		x	15	68	$ 1,985,000	69	600
*Mon Valley AVTS		x	16	68	$ 1,946,000	69	640
Cumberland-Perry Co. AVTS		x	30	68	$ 4,000,000	Sept. 69	1,200
*Northern Westmoreland		x	15	Feb. 69	$ 3,000,000	Sept. 70	600
*Southern Westmoreland		x	13	Feb. 69	$ 2,500,000	Sept. 70	500
*Central Westmoreland		x	25	Feb. 70	$ 4,000,000	Sept. 71	1,000
*Eastern Westmoreland		x	13	Feb. 70	$ 2,500,000	Sept. 71	500
TOTAL		7	127		$19,931,000		5,040

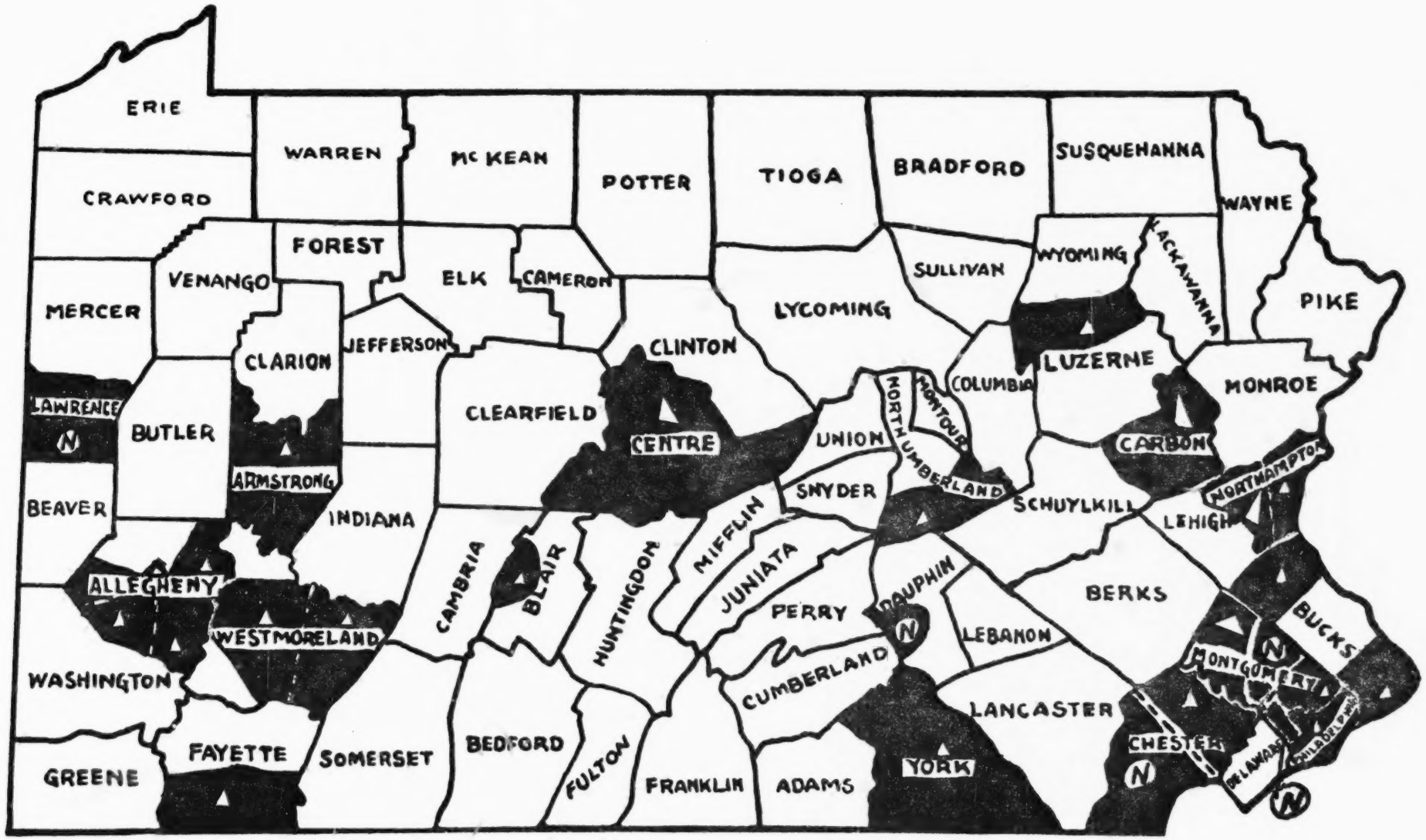
*In Appalachia Region

PROGRAMS IN OPERATION

	County		School	Original Date of Opening
1.	Luzerne		West Side Technical School	Sept. 1955
2.	Fayette	***	Fayette County Tech. School	Sept. 1955
3.	Bucks	*	Bucks County Technical School	Sept. 1958
4.	Allegheny		Forbes Trail Technical School	Sept. 1959
5.	Bucks	*	Upper Bucks Co. Tech. School	Sept. 1962
6.	Northumberland		Northumberland Co. Tech. School	Sept. 1963
7.	Westmoreland		Central Westmoreland Tech. School	Sept. 1963
8.	Allegheny		Steel Valley Tech. School	Jan. 1964
9.	Westmoreland		Eastern Westmoreland Tech. School	Sept. 1964
10.	Philadelphia		Philadelphia School District (Mastbaum, Bok, Dobbins)	Sept. 1964
11.	Allegheny		Pittsburgh School District	Sept. 1964
12.	Allegheny	**	Parkway West Area Tech. School	Sept. 1964
13.	Armstrong		Lenape Area Technical School	Sept. 1965
14.	Northampton		Eastern Northampton Tech. School	Sept. 1965
15.	Northampton		Bethlehem Area Technical School	Sept. 1965
16.	Montgomery		Eastern Montgomery Co. Tech. School	Sept. 1965
17.	York	**	York Co. Area Tech. School	Sept. 1965
18.	Carbon		Carbon County Technical School	Sept. 1966
19.	Montgomery		North Montco Technical School	Sept. 1966
20.	Centre	**	Centre County Area Tech. School	Sept. 1966
21.	Chester	**	Northern Chester Co. Tech. School	Sept. 1966
22.	Blair	**	Altoona Area Tech. School	Sept. 1966
23.	Chester		Central Chester Co. Tech. School	Sept. 1967
24.	Lawrence		Lawrence County Tech. School	Sept. 1967
25.	Montgomery		Western Montgomery Co. Tech. School	Sept. 1967
26.	Montgomery		Central Montgomery Co. Tech. School	Sept. 1967
27.	Dauphin		Harrisburg-Steelton-Highspire T. S.	Sept. 1967
28.	Snyder-Union-Northumberland	**	SUN Area Technical School	Sept. 1967

* New expanded facility in 1965
** Interim operating programs
*** New facility in 1966

AREA VOCATIONAL-TECHNICAL SCHOOLS IN OPERATION



▲ Location of School

Ⓝ Schools to begin operation for first time during the year 1967-68

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Titles representing substantive and basic information about formal training in organizations which were available in the Library of the New York State School of Industrial and Labor Relations through the end of 1963 are included in this annotated bibliography. The 474 entries are grouped under the categories Training--General Work Skill Training, Technical and Vocational Training, Supervisory Training, Management Inventory and Executive Development, Training Techniques and Methods, Audio-Visual Aids, Training Evaluation, and Bibliographies. An author index is included. (DM)

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Training and Education for Manpower Development

BUSINESS
INDUSTRY
GOVERNMENT
SERVICE ORGANIZATIONS
EDUCATIONAL INSTITUTIONS

By Emil A. Mesics, *Associate Professor*
U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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Bibliography Series No. 7

About the Author

The author, Emil A. Mesics, has been interested and involved in training in industrial, business, and other organizations since his entry into the field in 1942 as Training Director at the Harrison, New Jersey plant of the Radio Corporation of America. Subsequently, he served as Staff Training Director at Macy's, New York, as Director of Management Development and Training at the Otis Elevator Company, and as Director of Personnel for the RCA International Division. In his various assignments he was responsible for initiation, development, and administration of training programs for employees at all organizational levels. He has been an active member of the American Society of Training Directors. He is currently serving several major companies as consultant on employee and management training.

Professor Mesics joined the faculty of the New York State School of Industrial and Labor Relations as a Visiting Professor in 1955 and was appointed Associate Professor in 1958. His special areas of interest at the resident instruction and extension teaching levels include courses in design and administration of training programs, personnel administration, and management development.

Professor Mesics graduated from Muhlenberg College in 1928, received the M.A. degree from Bucknell University in 1936, and pursued further graduate study at Pennsylvania State University.

Contents

I. Introduction 1

II. Training—General 4
- A. Status of the Training Function 4
- B. Role of the Training Specialist 6
- C. Identifying Training Needs 7
- D. Instructional Methods 8
- E. Organization for Training 15
- F. Basic Texts on Training 17

III. Work Skill Training 20
- A. Employee Orientation 20
- B. Skill Development and Improvement 21
- C. Office and Clerical Employee Instruction 24
- D. Retraining 24
- E. Vocational Training 26
- F. Apprenticeship—United States 27
- G. Apprenticeship and Skill Training in Foreign Countries 29
- H. Sales Training 30

IV. Technical and Vocational Training 31
- A. Role of the Technician in Industry 31
- B. Institutional Training Resources 33
- C. Technical Training in Foreign Countries 36

V. Supervisory Training 38
- A. Identification of Supervisory Training Needs 38
- B. Structure of Training Programs 40
- C. Job Instructor Training 44
- D. New Supervisor Training 44
- E. Supervisory Selection 45

VI. Management Inventory and Executive Development 46
A. Methods and Techniques 46
B. Performance Appraisal 55
C. University Programs 58
D. Manager Development of Foreign Nationals 61
E. Liberal Arts Programs for Executives 63
F. Critiques of Management Development 64

VII. Training Techniques and Methods 68
A. Conference Discussion Leadership 68
B. Sensitivity Training 70
C. Simulation and Business Games 73
D. Role Playing 76
E. Case Study Techniques and Incident Process 78
F. Programmed Learning 79
G. Miscellaneous 82

VIII. Audio Visual Aids 85

IX. Training Evaluation 87

X. Bibliographies 92
Author Index 95

I. INTRODUCTION

The mounting volume of literature appearing in a wide variety of business, industrial, and professional journals, and in book form, reveals a continued interest in formal training in organizations. For this annotated bibliography the various sources available in the Library of the New York State School of Industrial and Labor Relations have been culled for those titles which are substantive and represent basic information which the student or practitioner can draw on profitably. This publication is a revision and updating of earlier bibliographies in the subject area which have been distributed by the School, and covers the period to the end of 1963. The student can find sources here of historical and developmental importance in the field; the practitioner can find references to apply to his current training problems.

As we review the earlier bibliographies and the content of this one, the titles appear to show the evolutionary changes in emphasis which have occurred in organizational training and in the literature of training. In 1948 and 1952 respectively, the School published Extension Bulletin No. 1 and Bulletin No. 20, both of which were titled *Industrial Training: A Guide to Selected Readings.* As the title suggests, the citations reflected that interest and activity in training were localized largely in industrial operations. By the time *Training in Organizations* was published in 1960, the literature showed evidence that training methods and techniques were being extensively utilized in government agencies, banks, retail stores, and in public service organizations. Although references to training in factories, shops, and offices still made up a substantial number of the several thousand titles reviewed for this volume, even broader areas of study and application were becoming apparent. One important new dimension in the writings has been concern with how training can be related to local and national problems associated with employment security. An abundance of literature has been devoted to vocational training at the secondary school, technical institute, and college levels, and also to retraining and continuing education to deal with the effects of skill obsolescence. Thus the current title, *Training and Education for Manpower Development,* reflects the broader subject coverage of books and articles.

In addition, the review of current articles and books reflects a vital change in the emphasis and direction of training. There has been an

increase in the number of articles dealing with various aspects of management development. These range from descriptive pieces about on-going activities to articles which are clearly critical of the very concept itself. It is evident that much attention is being accorded the methods used to meet the demands for qualified supervisory and managerial manpower.

Managers, trainers, and those who write about training have also been preoccupied with programmed learning. Even after we culled out those articles and books which were clearly repetitive, there remained a substantial volume of items dealing with the conceptual origins of programmed instruction, as well as with applications at the manual skill and cognitive skill levels. This is the major new experimental training technique which has been added to the extensive list of tools for training.

There has also been a change in the quality of inquiry and research, as well as writing in the field. There are fewer articles describing step by step "success" stories than in previous years. More articles reveal efforts at systematic inquiry and research about learning theory and the application of learning theory to the resolution of organizational problems. Our review of the literature suggests that there has been a definite upgrading in the caliber of personnel engaged in the training function in organizations and in writing about it. In this connection it should be noted that a substantial number of items are the work of university men who are actively involved in the study of organizational training matters.

All the indexes and other sources available for the period 1960 to 1963 have been reviewed for those references which appeared to have relevance either for application or for research. The problem faced was to determine what to exclude in order to keep the listing essentially complete while trying to avoid a volume of excessive size. Frequently a clear choice had to be made among several references of comparable high quality. We sincerely hope we have not done injustice to those authors whose works are not included.

The organization of the selected readings follows a sequence from general to specific subjects. Some references are cited in more than one section, when appropriate subject matter warrants such cross reference. For the reader's convenience, each major heading has been subdivided into several minor subject areas. The material is structured as follows:

Training, General — Status of the Training Function, Role of the Training Specialist, Identifying Training Needs, Instructional Methods, Organization for Training, Basic Texts on Training.

Work Skill Training — Employee Orientation, Skill Development and Improvement, Office and Clerical Employee Instruction, Retraining, Vocational Education, Apprenticeship—U. S., Apprenticeship and Skill Training in Foreign Countries, Sales Training.

Technical and Vocational Training — Role of the Technician in Industry, Institutional Training Resources, Technical Training in Foreign Countries.

Supervisory Training — Identification of Supervisory Training Needs, Structure of Training Programs, Job Instructor Training, New Supervisor Training, Supervisory Selection.

Management Inventory and Executive Development — Methods and Techniques, Performance Appraisal, University Programs, Manager Development of Foreign Nationals, Liberal Arts Programs for Executives, Critiques of Management Development.

Training Techniques and Methods — Conference Discussion Leadership, Sensitivity Training, Simulation and Business Games, Role Playing, Case Study Techniques and Incident Process, Programmed Learning, Miscellaneous.

Audio Visual Aids
Training Evaluation
Bibliographies

The annotations are not intended to be précis of the books or articles, although they reflect the substance covered for ready reference. In some instances we took the liberty of making evaluative comments and suggestions concerning the use the reader might make of the material. We hope that the annotations do no violence to any author's intentions, but rather that they serve the reader as a guide in his quest for principles, ideas, methods, and techniques. The author assumes full responsibility for the list of citations in the volume and for the annotations. They reflect his best judgment and perhaps his prejudices as to what represents the most vital available contributions to the literature of training. In making the selections we tried to keep the needs and interests of the variety of potential users in mind. The soundness of our judgment will be determined by the usefulness of the bibliography to its readers.

We encourage readers to call our attention to omissions of important items. Such response to earlier volumes has been valuable. It is our purpose to keep the compilation up to date in the future and all suggestions will be appreciated.

The author is indebted to Allen Torpie, Gary Hansen, James Belasco, graduate students; and Andrew Abraham, undergraduate research assistant, for their work in searching the indexes for titles to be considered for inclusion, and for their editorial contributions. Any omissions, however, are to be attributed to the author and not to his collaborators.

Bibliography

II. TRAINING—GENERAL

A. STATUS OF THE TRAINING FUNCTION

1. American Management Association. *How to Establish and Maintain a Personnel Department* (3rd ed.) sec. 5B, Report 4. New York, 1953.

   A comprehensive description of the design and administration of the training function as part of the personnel department. Covers training objectives and plans for organization of the function.

2. BELMAN, HARRY S., and JOHN E. BLIEK. "The Nature of Current Training Function Activities." *Journal of the American Society of Training Directors:* Vol. 15, No. 2, February 1961, pp. 31–46.

   This is a summary article based on a survey of the status and functions of training departments in business, industry, and government. Describes the kinds of training programs and other activities carried on by the responding establishments.

3. ———. "Organization and Structure of the Training Function." *Journal of the American Society of Training Directors:* Vol. 13, No. 8, August 1959, pp. 21–28.

   This article, in the series reporting a survey of the training function, concerns itself with where the function reports in the organization and the kinds of assignments it carries out.

4. ———. "The Training Function Budget." *Journal of the American Society of Training Directors:* Vol. 13, No. 11, November 1959, pp. 36–48.

   This report of the training function concerns itself with responsibility for the training budget in business, industrial, and government organizations.

5. ———. "Training Departments in Business, Industry and Government." *Journal of the American Society of Training Directors:* Vol. 12, No. 9, September 1958, pp. 45–53.

   First of a series of articles studying the distribution, status, and role of the training function in industry. This article deals primarily with geographic distribution, as well as incidence of formal programs by company size and company product or service.

6. BUCHANAN, PAUL C. "The Function of Training in an Organization." *Journal of the American Society of Training Directors:* Vol. 14, No. 4, April 1960, pp. 53–63.

The author writes a scholarly piece proposing a method to aid the industrial trainer or any "agent of change" in an organization in carrying out the changes needed in the organization. The article emphasizes the importance of knowing the basic concepts of organizational theory in order to facilitate efficient accomplishments of any required adjustment within the organizational framework.

7. CUNNINGHAM, J. W. "Enlargement and Professionalization of the Training Function." *Journal of the American Society Training Directors:* Vol. 14, No. 6, June 1960, pp. 11–15.

A searching look at the present and future status of training, pointing out the needs which training must adequately fulfill and the direction training must take in order to realize its full growth potential. An interesting commentary is given concerning the professional recognition of training.

8. DePHILLIPS, FRANK A., WM. M. BERLINER, and JAMES J. CRIBBIN. *Management of Training Programs.* Homewood, Ill.: Richard D. Irwin, Inc., 1960, 469 pp.

This book attempts to identify the function of training as an integral part of management theory and practice. Through the use of case studies, examples of training problems, and application of learning theory, the authors have addressed themselves not only to the methods and techniques for training but have presented the subject within a framework of theoretical conceptualization. A valuable addition to the literature of training, an important value of which is that essential issues are raised about the fundamental role of training in organizations.

9. LIPPITT, GORDON L., and LESLIE THIS. "Is Training a Profession?" *Journal of the American Society of Training Directors:* Vol. 14, No. 4, April 1960, pp. 3–10.

Defines standards and criteria for a profession and evaluates the training function accordingly. Suggests that professionalism will be a step nearer when trainers become learning theorists rather than only training methodologists.

10. MORGAN, HOWARD K. *Industrial Training and Testing.* New York: McGraw-Hill, 1945. 225 pp.

This book presents attitudes toward training, and describes training activities during World War II when the function was gaining a foothold on the industrial scene. Serves to demonstrate the progress made in the field from those origins to programs described in current literature.

11. SERBEIN, OSCAR N. *Educational Activities of Business.* Washington: American Council on Education, 1961. 180 pp.

Reports a research study on the scope and content of training and educational activities in U. S. industry. Describes the role of training in organizations and relates it to education for business at the institutional level. Extensive data is presented from the inquiry.

12. SCHEER, WILBURT E. "What's Ahead—In Personnel and Training." *Personnel Journal:* Vol. 39, No. 4, September 1960, pp. 126–129, 142.

Personnel administration and training are areas of management displaying a rapid rate of change. After describing how personnel administration and training began, their present status, and where these functions are going, the author specifies the type of manpower needed to fill the positions in these growing functions.

B. ROLE OF THE TRAINING SPECIALIST

13. BELMAN, HARRY S., and JOHN E. BLIEK. "The Head of the Training Function." *Journal of the American Society of Training Directors:* Vol. 13, No. 2, February 1959, pp. 42–53.

Article reports survey results bearing on the activities, relationships, and responsibilities of the person identified as the head of the training function in industrial and other organizations.

14. ———. "Job Opportunities and Status of Training Personnel." *Journal of the American Society of Training Directors:* Vol. 14, No. 5, May 1960, pp. 40–50.

A critical analysis of the opportunities for career development in the training field and the possibilities for lateral transfer and individual growth in organizations.

15. DAMERELL, LORETTA. "Who Wants a Training Job?" *Journal of the American Society of Training Directors:* Vol. 17, No. 1, January 1960, pp. 36–39.

Discussion of some of the problems that will face training directors and training specialists in the future. Changes in job and labor force composition and in organizational structures are discussed in reference to their effect on methods of training and communicating. Necessary capacities of training directors are also treated.

16. LERDA, LOUIS W., and LESLIE W. CROSS. "Performance-Oriented Training: Program Implementation." *Journal of the American Society of Training Directors:* Vol. 16, No. 6, June 1962, pp. 22–29.

One of a series of articles addressed to managers and training specialists delineating the appropriate roles of each in the

process of meeting the learning needs of an organization.
See also by the same authors: "Performance-Oriented Training," *Journal of the American Society of Training Directors:* May 1962; "Training Experimentation and Improvement," *Journal of the American Society of Training Directors:* April 1963.

17. MAHLER, WALTER R. "A Critical Look at Training in American Industry." *Journal of the American Society of Training Directors:* Vol. 16, No. 12, December 1962, pp. 3–10.

    The author has long been a constructive critic of training in industry. In this article he addresses comments to training demands of a changing technology and their implications for the training specialist and his management.

18. SARTORIOUS, HARVEY A. "The Rise and Fall of the Training Director." *Journal of the American Society of Training Directors:* Vol. 13, No. 4, April 1959, pp. 16–22.

    This perceptive article focuses on the legitimate role of the training specialist in the development of an organizational training program. Suggests that the training man serves his management function when he develops the learning tools for management use.

19. SILVERN, LEONARD C. "Professionalization of Training: The MS in Training Administration." *Journal of the American Society of Training Directors:* Vol. 15, No. 8, August 1961, pp. 29–32.

    Reports a study of the problem of professionalization of the training man, with specific reference to appropriate academic preparation. Presents a proposed curriculum listing essential courses and sequences.

20. STOCKARD, JAMES G. "Earmarks of the Modern Training Specialist." *Personnel Administration:* Vol. 24, No. 6, November–December 1961, pp. 36–38.

    The author outlines the major activities in which a Training Specialist should engage. He emphasizes the policy formulation and innovation aspects of the role.

C. IDENTIFYING TRAINING NEEDS

21. Arizona State Employment Service. Economics, Statistics, and Research Unit. *Manpower Requirements and Training Needs Study, Tucson Labor Market Area.* Tucson: Arizona State Employment Service, July 1957.

    An area study examining the skill requirements and training needs to provide the essential manpower for the community. This broad and revealing study is one of several conducted under various sponsorships in coordination with the U. S. Bureau of Employment

Security. (Information about other studies can be obtained from U. S. Department of Labor, B.E.S.)

22. EDGERTON, H. A. "Some Needs in Training Research." *Personnel Psychology:* Vol. 8, Spring 1955, pp. 19–25.

Summary of an address in which a series of areas for internal training research are cited and techniques are suggested.

23. EWING, RUSSELL H. "Training Needs Survey Check List." *Journal of the American Society of Training Directors:* Vol. 14, No. 1, January 1960, p. 50.

A forty-five item check-list which should be useful in helping to isolate those areas in which members of an organization feel training needs exist.

24. JACKSON, B. B., and A. C. MacKINNEY. "Method of Determining Training Needs." *Personnel:* Vol. 36, No. 5, September–October 1959, pp. 60–68.

Authors describe and assess the various methods commonly utilized to determine training needs, concluding that their study shows a scarcity of really hard facts about training need analysis. Provides a jumping-off point for further study of this critical area.

25. SURANK, WILLIAM A. "A Frame of Reference for Development." *Journal of the American Society of Training Directors:* Vol. 14, No. 9, September 1960, pp. 31–38.

The article emphasizes the need for an adequate background of information in evaluating training needs in an organization. The devices for gathering such information are enumerated and explained. Conclusions concerning the subsequent evaluation procedures are drawn.

26. THOMAS, EDWIN J., *et al. In-Service Training and Reduced Workloads.* New York: Russell Sage Foundation, 1960. 130 pp.

Due to the increased work load in the area of Aid to Dependent Children caused by the 1956 amendments to the Social Security Act, a need was evidenced in the Michigan State Department of Social Welfare for improved training of caseworkers to cope with the added burden. This book describes in detail a research project carried out in the department to determine what type of program would be best to accomplish these aims. The account describes the research problem, the research method and design, and the resulting training program.

D. INSTRUCTIONAL METHODS

27. ALLEN, CHARLES R., GEORGE P. HAMBRECHT, and R. L. WELCH. *The Instructor, the Man, and the Job.* New York: Lippincott, 1945. 399 pp.

This text is a revision of a pioneer venture in instructor training for vocational educators and industrial trainers by Dr. Allen, first published in 1919. It is significant in that it is based on the first successful attempts to extend formal training into the workplace environment. As such it is an important historical document, but it also provides sound educational methodology for industrial training. The text follows a logical sequence from learning principles and theory through planning and administration of training programs. Major emphasis is placed on the role of the supervisor and foreman in the instructional process. It is safe to say that a large part of theory and practice in industrial training is derived from this text.

28. BELLOWS, ROGER. "The Management of Learning, Theory and Practice." *Personnel Administration:* Vol. 23, No. 1, January–February 1960, pp. 21–28.

    Brief summaries of principles of learning enunciated at various times in man's history. Describes the concepts which have been applied in the process of learning and teaching. A useful source from which the learner and trainer can identify the areas for deeper study of the learning process.

29. ———. "The Management of Learning." *Personnel Administration:* Vol. 23, No. 2, March–April 1960, pp. 4–10.

    The authors outline seven steps in planning a training program. Major emphasis is placed on the psychological aspects of learning.

30. CANTOR, NATHANIEL F. *The Teaching-Learning Process.* New York: Dryden Press, 1953. 350 pp.

    An analysis and detailed description of instructional method applicable in Group Dynamics processes. Could be useful for the industrial training specialists in the process of teaching line personnel to carry out their job instruction responsibilities. The chapter on "The Measurement and the Quality of Learning" is most directly applicable.

31. CLARK, HAROLD F., and HAROLD S. SLOAN. *Classrooms in the Factories.* Rutherford, N. J.: Institute of Research, Fairleigh Dickinson University, 1958. 139 pp.

    Report of a survey assessing the extent of in-service educational activity conducted by business and industry. Authors concerned themselves mainly with learning programs outside the motor-skill development area. Describe in-plant and institutional courses at the technical, supervisory, and management levels. Conclude that industry's preoccupation with education represents a major shift in values and suggest some important consequences.

32. COUCH, VIRGIL L. "Disaster Management Training." *Journal of the American Society of Training Directors:* Vol. 15, No. 9, September 1961, pp. 3–8.

Suggests that the Training Specialist in the organization must be prepared to set up essential training plans for civil defense and survival requirements as long as there is a threat of attack. Details key items which must be taken into account and outlines a basic program.
(Other references to civil defense training can be found in the same Journal issue.)

33. DINERMAN, BEATRICE, EUGENE P. DRARIN, and EDWARD F. STANIFORD. "Furthering Employee Education in State and Federal Governments." *Personnel Administration:* Vol. 23, No. 1, January–February 1960, pp. 37–43.

This is a report of a research study which outlines in general terms the extent to which federal and state governments sponsor educational programs for their employees.

34. DOUGLAS, PAUL H. *American Apprenticeship and Industrial Education.* New York: Longmans Green, 1921. 348 pp.

A document of historical value in the field of learning skills for employment. A descriptive history of apprenticeship from its origins to the period of World War I, at which time the author finds the use of apprenticeship declining as a means of worker training. Causes for the decline at that time are explored. Early legislation affecting industrial education (Smith-Hughes Act of 1917) and the implementing educational techniques are covered in detail. The concluding chapter asks the question, "How can we, in our complex industrial society, devise a system which will fulfill all the functions of the old-time apprenticeship...?" and the author proceeds to list a program of seventeen proposals. The student of industrial education and training will find significance in the number of the proposals which have been implemented by law and practice.

35. DRUCKER, PETER F. "Employee Education, a Realistic Goal." *Advanced Management:* Vol. 18, No. 12, December 1953, pp. 25–33.

The author suggests that management communication programs are currently based on the assumptions (1) that employees are interested in the same things as management: profits, prices, wages, efficiency, free enterprise, etc., and (2) that employees, or a fairly large number among them, are hostile to the American free enterprise system and at least slightly infected by collectivist doctrines, and that there is no basis for either assumption. Management must create an acceptance of its authority and competence by the operation of its day-to-day operating policies and practices.

36. EMERSON, LYNN A. *How to Prepare Training Manuals.* Albany: University of the State of New York (State Education Department), 1952. 356 pp.

The preparation of written instructional manuals is analyzed and discussed from initial steps to completion. Educational principles to be applied, formats, the writing of copy, illustration, and layout are among the topics covered. A large number of samples are presented in the appendix.

37. FRYER, DOUGLAS H. "Training with Special Reference to Its Evaluation." *Personnel Psychology:* Vol. 4, No. 1, Spring 1951, pp. 19–37.

This article is concerned with a design for building attitudinal and behavioral considerations into training methods to supplement knowledge and skill areas. The author states that in complex tasks the typical job analysis approach is insufficient, and proposes an attitude-knowledge-skill pattern.

38. FRYER, DOUGLAS H., MORTIMER R. FEINBERG, and SHELDON S. ZALKIND. *Developing People in Industry.* New York: Harper and Brothers, 1956. 210 pp.

This book is an elementary text dealing with why and how adults learn in the setting of the work environment. Chapters are devoted to such areas as curriculum construction, training methods and techniques, visual aids to learning, and training program administration.

39. GALENSON, W. "Industrial Training in the Soviet Union." *Industrial and Labor Relations Review:* Vol. 9, No. 4, July 1956, pp. 562–576.

Article examines work-skill training programs in Russia, including factory schools and formal vocational education. Emphasizes program for upgrading skills of the national workforce.

40. GHISELLI, EDWIN E., and CLARENCE W. BROWN. *Personnel and Industrial Psychology.* (2nd ed.) chap. 13, "Training in Industry." New York: McGraw-Hill, 1955.

This chapter places the training activity of organizations into a framework of psychological and sociological concepts and theories. Covers the need for training, learning theory applied in organizational settings, instructional methods and techniques, and evaluation of training results. Makes a case for the importance of attitude development as well as skill development in the training process.

41. GOETZ, BILLY E., and WARREN G. BENNIS. "What We Know about Learning and Training." *Personnel Administration:* Vol. 25, No. 2, March–April 1962, pp. 20–33.

Writers effectively summarize the basic principles and techniques of learning as they apply to industrial training. Useful in planning and executing a training program.

42. GOODACRE, DANIEL M. III. "Changing On-the-Job Behavior: How and Where to Start." *Personnel:* Vol. 37, No. 3, May–June 1960, pp. 58–62.

A pertinent discussion of the introduction and implementation of a program of change in the industrial situation. The article enumerates and explains the conditions necessary for changing attitudes and skills.

43. GOURE, LEON. "Civil Defense Training in Russia." *Journal of the American Society of Training Directors:* Vol. 15, No. 9, September 1961, pp. 9–15.

Describes what the Soviet Union is doing in training for civil defense.

44. HERZBERG, FREDRICK, *et al. Job Attitudes.* Pittsburgh: Psychological Service of Pittsburgh, 1957. 279 pp.

A source text reporting vital data on employee attitude essential to employee training and development.

45. LAWSHE, C. H., and F. J. HARRIS. "Contributions of Military Psychology to Personnel Training." *Personnel:* Vol 25, September 1948, pp. 127–136.

Research psychologists in the military during World War II made some important contributions in the field of training at the work performance level. The authors have analyzed some of the research results for application to industrial job training and conclude that a contribution has been made which can cut cost and heighten the effectiveness of training. Consideration is given to developments in training research dealing with duration of practice, design of training equipment, measurement of learning success, and standardization of training methods.

46. MOSEL, JAMES N. "Why Training Programs Fail to Carry Over." *Personnel:* Vol. 34, No. 3, November–December 1957, pp. 56–64.

This article deals with transference from the learning situation to behavior and job performance. The author identifies barriers that impede transfer with special emphasis on the influence of an organization's "reward structure," both formal and informal. Concludes that organizational climate change must be concurrent with training to effect change in supervisory behavior.

47. MURPHY, M. J. "Job Instruction Training: One Answer to Your Green-Worker Problems." *Factory Management and Maintenance:* Vol. 109, January 1951, pp. 120–121.

Article serves to remind trainers of the TWI programs which were effective during World War II when work force expansion required quick training methods. Suggests the possibility of applying "J" courses to provide for current training needs.

48. OAKLEY, C. A., ed. *Commercial Apprenticeship*. London: University of London Press, 1962. 112 pp.

Describes three British programs designed to provide early in-service training and education for positions in the operation and management of commercial enterprises including banking, accounting, and distribution services. Covers the need for such specialized training as well as methods and course structures.

49. PATTERSON, WILLIAM F., and M. H. HEDGES. *Education for Industry: Policies and Procedures of a National Apprenticeship System*. New York: Prentice-Hall, 1946.

A competent discussion of the role of apprenticeship in industrial training and the procedures for setting up and administering programs.

50. ROSE, HOMER C. *The Instructor and His Job*. Chicago: American Technical Society, 1961. 280 pp.

A sound elementary text designed for use in training job instructors to handle critical teaching responsibilities. Applicable equally for supervisor training and for training skilled employees, shop or office, who are assigned instructional responsibility.

51. SEASHORE, CHARLES, and ELMER VAN EGMOND. "The Consultant-Trainer Role in Working Directly with a Total Staff." *Journal of Social Issues:* Vol. 15, No. 2, 1959, pp. 36–42.

Authors propose the utilization of the training process by an outside consultant as a method of introducing planned change into an organization. Article outlines three kinds of organizational problems for which this approach might be useful.

52. SERBEIN, OSCAR N. *Educational Activities in Business*. Washington: American Council on Education, 1961. 180 pp.

A serious attempt to integrate the activities carried on by educational institutions and internally by business and industry in the process of developing a work force to meet the needs of the national economy. The emphasis is on the interest which business has taken in institutional education through financial and other contributions, and on training programs carried on within business organizations. Evidence in the study points to the fact that in large and small enterprises, increasing concern is being attached to the growing need for an educated work force. Provides a series of case reports outlining company practices in training and education.

53. SYKES, A. J. M. "Effect of a Supervisory Training Course in Changing Supervisor's Perceptions and Expectations of the Role of Management." *Human Relations:* Vol. 15, August 1962, pp. 227–243.

Perceptive article underscores the importance of organization climate

to the success of a supervisory training program. Author reports on an unsuccessful supervisory training program. Failure is traced to the fact that training gave supervisors a different attitude toward their role than top management expected them to fulfill on the job.

54. TEAD, ORDWAY. "Administration as an Educational Function." *Advanced Management:* May 1951, pp. 21–26.

The article discusses four issues revolving around education basic to good administration and management development. The administrative mind; the responsibility of the executive to carry on his functions in such a way so as to be of educational value not only for his associates and subordinates, but also for himself; the need for providing future executives and others qualified for promotion with an opportunity to actually perform under guidance the job for which they are being considered; the role of the university in providing basic knowledge to be utilized on the job where the actual learning "how to" process takes place.

55. U. S. Department of Labor. Bureau of Apprenticeship and Training. *A Look at Industrial Training in Mercer County, N. J.* Washington: G.P.O., 1959. 29 pp.

This report gives the findings of a regional study of training methods utilized to provide qualified manpower in 579 reporting establishments employing four or more people. The study is representative of other regional studies conducted by B.A.T. Survey methods and results are described.

56. VENABLES, P. F. R. *Sandwich Courses, for Training Technologists and Technicians.* London: Max Parrish and Co., Ltd., 1959. 160 pp.

Describes in detail a method for utilizing educational institutions and the work environment in combination to train competent technicians and engineers for industry. Cites the problems of curriculum construction and program administration inherent in making this kind of training effort effective.

57. WEAVER, DAVID O. "The Instructor's Relationship to His Students." *Journal of the American Society of Training Directors:* Vol. 17, No. 1, January 1960, pp. 40–47.

A comprehensive yet easy to understand enumeration of teaching principles and techniques, the understanding and application of which would undoubtedly increase training effectiveness.

58. WRIGHT, MOORHEAD. "Individual Growth: The Basic Principles." *Personnel:* Vol. 37, No. 5, September–October 1960, pp. 8–18.

The article contains a detailed analysis of ten basic principles inherent in the successful development of the individual. The

principles are simple and obvious; however, the author points out that these "obvious" principles are more often violated and ignored than observed and honored. Cogent discussions and examples are included after each principle.

E. ORGANIZATION FOR TRAINING

59. American Management Association. *Management Education for Itself and Its Employees,* part 4, "The Education of Employees: A Status Report with a Proposal for Further Research," by Douglas Williams and Stanley Peterfreund. New York, 1954.

    An analysis of the literature and experience dealing with education programs sponsored and conducted by industrial organizations. Describes company activities in 'nonvocational' education for nonsupervisory employees.

60. CUSHMAN, FRANK. *Training Procedure.* New York: John Wiley, 1940. 230 pp.

    A discussion of problems encountered in planning, organizing operating, and maintaining efficient training programs in organizations. Covers training for initial employment and continuous training on the job. Provides examples of various methods for implementing training requirements of the organization. Sections are devoted to identifying training needs, planning and conducting training activities, and evaluating programs.

61. GLASER, ROBERT. *Training Research and Education,* with chapters by Glenn L. Bryan and others. Pittsburgh: University of Pittsburgh Press, 1962. 596 pp.

    This book examines the findings of psychological research and considers its implications for education and training. The volume includes a wide variety of authors who report the results of their experimental work in terms of learning theory and practice. Each section contains an exhaustive bibliography.

62. HILL, SAMUEL, and FREDERICK HARBISON. *Manpower and Innovation in American Industry.* Princeton, N. J.: Industrial Relations Section, Princeton University, 1959. 85 pp.

    Reports the implications for training and development of management talent to support innovation in industry. Cites evidence of need and outlines the problem associated with developing brain power as it supplants brawn power in the production process.

63. ODIORNE, GEORGE S. "Training for Profit," *Journal of the American Society for Training Directors:* Vol. 15, No. 7, July 1961, pp. 7–17.

    Author suggests that as a more highly educated work force is employed

to meet the exigencies of technological change, management should re-evaluate its training budget. The training specialist in the organization should be in a position to recommend the directions which training expenditures should take. The purpose of the training budget must be to make provision for investment in human capital.

64. "Plan for Greater Productivity with Inspired Employee Training." *Factory:* Vol. 121, November 1963, pp. 164–169.

Provides a number of suggestions for the application of planned employee training in specific industrial situations. Includes a helpful list of sources of instruction aids.

65. SENN, PETER R. *Liberal Education for Trade Union Leaders.* Chicago: University of Chicago, 1958. 100 pp.

An extensive analysis of the problems involved in establishing college-level educational programs for especially qualified union leaders. Based to some extent on the University of Chicago's labor education program, which combines broad training in the humanities and social sciences with specialized training in industrial relations and communication, a number of proposals are made. These proposals concern themselves with program content, administration, selection of students, financing, and evaluation.

66. U.S. Civil Service Commission. *The Training of Federal Employees.* Personnel Methods Series No. 7. Washington: G.P.O., 1959. 146 pp.

A report on training programs and procedures for operation in various federal government agencies. Included in the study are discussions of federal training policy, training organization, methods of need identification, and program evaluation, as well as description of programs covering orientation, supervisory, management, technical, professional, and work-skill training.

67. U.S. Department of Labor. *Our Manpower Future 1955–65.* Washington: G.P.O. 16 pp.

A chart which depicts anticipated changes in U.S. population and labor force during the ten years indicated and points out some of the implications for education and training for effective manpower utilization.

68. U.S. Department of Labor. Bureau of Apprenticeship and Training. *Training Materials You Can Use,* (four parts). Washington: G.P.O., 1957.

A comprehensive listing of sources for training programs and materials for management, clerical, skilled, and service occupations. Contains materials in the category of methods and techniques for planning, administration, and operation of training.

F. BASIC TEXTS ON TRAINING

69. COOPER, ALFRED M. *Employee Training.* New York: McGraw-Hill, 1942. 311 pp.

    This book is a pioneering achievement in identifying the role of the training function in the work environment. In 1942 the author bravely set out to record principles and concepts which at this date may be considered elementary but have formed the basis for expansion of the training function and the development of more current sophisticated training methods and techniques.

70. Cornell Conference Report. *Fifth Annual Institute for Training Specialists.* Ithaca: New York State School of Industrial and Labor Relations, 1955. 88 pp.

    A digest of the proceedings of the annual Institute at Cornell. Major addresses on a variety of training subjects are reported in detail and summaries of workshops are provided. Comparable material can be found in these reports:
    Report of the Sixth Annual Institute for Training Specialists, 1956. 178 pp.
    Report of the Seventh Annual Institute for Training Specialists, 1957. 101 pp.

71. CUSHMAN, F., and R. W. CUSHMAN. *Improving Supervision.* New York: John Wiley, 1947. 232 pp.

    A basic text written during early stages of supervisory training development covering various aspects of training procedures in industry. A source for the student interested in the evaluation of supervisory training ideas and methods.

72. DePHILLIPS, FRANK A., WILLIAM M. BERLINER, and JAMES J. CRIBBIN. *Management of Training Programs.* Homewood, Ill.: Richard D. Irwin, 1960. 469 pp.

    A textbook covering the role and function of training, learning and the instructions process, organization and administration of training, and training evaluation and research. Applicable in the classroom and by the operating practitioner.

73. HAIRE, MASON. *Psychology of Management,* Second Edition. New York: McGraw-Hill, 1964. 238 pp.

    A basic text which can be used profitably in connection with supervisor and manager training in the field of human behavioral characteristics in the work organization setting. The book is a revision of an earlier edition, which takes into account the human relations problems in organizations affected by a rapidly changing technology.

74. HALSEY, G. D. *Training Employees.* New York: Harper, 1949. 263 pp.

Intended primarily as a handbook for use by supervisors and managers who assume responsibility for the training of their employees. Covers details of "how to do" in a wide variety of training situations: manufacturing, office, retail store.

75. KAHLER, ALFRED, and ERNEST HAMBERGER. *Education for an Industrial Age*. Ithaca, N. Y.: Cornell University Press, 1948. 334 pp.

A classic study of the role of educational institutions and the industrial work place in the process of developing manpower resources to meet the needs of an expanding economy. Conclusions are based on an analysis of industrial trends and comparative educational methods used in other industrial countries. Includes a chapter on the early development of the Technical Institute.

76. McGEHEE, WILLIAM, and PAUL W. THAYER. *Training in Business and Industry*. New York: John Wiley and Sons, 305 pp.

A textbook designed for class-room use which has application at the in-service manager training level. Devotes attention to learning principles as applied in the industrial setting. The book is planned around the fundamental assumption that meaningful training must be based on needs derived from organization analysis, operations analysis, and man analysis. One chapter is devoted to training evaluation.

77. McLARNEY, WILLIAM J. *Management Training, Cases and Principles*. Homewood, Ill.: Richard D. Irwin, 1959. 534 pp.

An exhaustive text for use at the college level and for in-service training of supervisors and managers. Combines emphasis on managerial principles with case material for discussion.

78. PLANTY, EARL G., and J. THOMAS FREESTON. *Developing Management Ability: 600 Questions and Answers*. New York: Ronald Press, 1954. 447 pp.

A primer covering vocabulary and definitions of the training field, as well as brief references to techniques and methods employed in supervisor and manager training.

79. PLANTY, EARL G., *et al. Training Employees and Managers for Production and Teamwork*. New York: Ronald Press, 1948. 278 pp.

A basic text covering the broad concepts which have developed in industrial training. Devotes considerable coverage to procedures for organizing and administering the training function; describes in detail a variety of training programs and methods taken from company experiences. For the training man in an organization, the book provides the basis for developing and administering training programs.

80. SANTMYERS, S. S. *Managing Men at Work.* Scranton, Pa.: International Textbook, 1950. 297 pp.

Many companies of modest size, upon deciding to engage in formal supervisory and presupervisory training, find it difficult to adapt training texts and materials which have been designed around the typical problems of large companies. This book should serve such companies well. Content and style are suitable for supervisors and foremen who have been promoted from the ranks. Subject areas include the economic system, production, workers, organized labor, and organization structure.

81. STATON, THOMAS F. *How to Instruct Successfully.* New York: McGraw-Hill, 1960. 291 pp.

This practical text is divided into two parts, covering (1) some concepts of learning and how learning is achieved, and (2) methods and techniques which can be used in the instructional process. The book is designed for those who are called upon to instruct in their area of technical specialties and is not burdened with details about learning theory.

82. TAYLOR, F. W. *The Principles of Scientific Management.* New York: Harper Brothers, 1911, pp. 9–73.

A source reference which represents early emphasis on the need for employer and management training in the organizational setting. The assumptions in this work have influenced the direction in which training methods and emphasis were developed in the U.S. industrial scene.

83. U. S. War Manpower Commission. Bureau of Training, Training Within Industry Service. *The Training Within Industry Report, 1940–1945.* Washington: G.P.O., 1945. 330 pp.

This report details fully the genesis of the TWI program and its design for meeting training needs resulting from the urgent production requirement in the early days of World War II. Describes the job instructor training, job methods training, and job relations training programs.

84. VON BLEICKEN, BLEICK. *Employee Training Handbook: A Guide for Training by Operating Management.* New York: Conover-Nast, 1953. 300 pp.

Author identifies the role of training in the industrial setting and describes specific areas which are considered as essential to the training function. Detailed sections devoted to identification of training needs and training program evaluation.

III. WORK SKILL TRAINING

A. EMPLOYEE ORIENTATION

85. BROCHE, W. G. "Let the Foreman in on Education." *Personnel:* Vol. 29, No. 5, March 1953, pp. 408–411.

    Describes the vital role of the supervisor in the training process, with particular reference to induction and initial job training.

86. CARDWELL, B. W. "Later Orientation Prevents Mental Indigestion." *Personnel Journal:* Vol. 31, No. 10, pp. 364–366.

    The author claims that the tendency to tell the new employee too much about the company as soon as he is put on the payroll results in "mental indigestion." He describes an orientation program conducted after a shakedown period of a few weeks when the new person can absorb it more readily.

87. FISHER, JOHN F., and NEELY D. GARDNER. "A Development Program for Personnel Technicians." *Public Personnel Review:* Vol. 21, April 1960, pp. 110–113.

    The article is concerned with the selection and assignment of personnel technicians for California State Personnel Board. A description is given of the Board's philosophy of training and of the actual training program given to the incoming trainees. The program is based on the belief that development must be consistent with the unique needs of each individual.

88. HALSEY, G. D. *Selecting and Inducting Employees.* New York: Harper, 1951. 361 pp.

    The basic assumption of this handbook is that the employee selection and hiring process is synonymous with effective introduction to the job and company. With this in mind, the text covers interviewing, testing, employment procedures, and formal and informal induction plans.

89. Metropolitan Life Insurance Company. Policyholders Service Bureau. *Orienting the New Worker.* New York, 1959.

    Describes a variety of company programs for hiring a new employee and introducing him to the job. Programs described are characterized in the main by the fact that the function is shared by the personnel department and the appropriate line supervisor, although examples are given of situations in which there is no staff function and the entire orientation is done by the supervisor.

90. National Industrial Conference Board, Inc. *Employee Induction.* Studies in Personnel Policy No. 131. New York, 1953. 48 pp.

    This study covers the purposes for new employee induction to the job and describes, in detail, a number of company orientation plans. Concludes that although programs cover a wide range of

information for employees, the material most frequently found in company induction programs includes: the individual's daily routine, employee benefits and services, personnel policies and practices, safety measures and regulations, company organization and operations, company products and services, and company history and business policy. Describes methods varying from informal coaching by the supervisor to elaborate schedules using extensive visual aids.

91. "Orientation Training." *Journal of Industrial Training:* Vol. 2, May–June 1948, pp. 10–17.

Excellent source for finding the origins of planned techniques for the introduction of new employees to the work environment. Assigns appropriate roles in the process to supervision and to the training function.

92. U. S. Civil Service Commission. *Improving Orientation Programs.* Personnel Management Series No. 7. Washington: G.P.O., 1955. 25 pp.

Outlines a pattern for inducting the new employee into his work environment. Plans and methods used in orientation are discussed; subjects to be covered, types of material, types of programs are among the topics examined in detail.

B. SKILL DEVELOPMENT AND IMPROVEMENT

93. ALLEN, CHARLES R., GEORGE P. HAMBRECHT, and R. L. WELCH. *The Instructor, the Man, and the Job.* New York: Lippincott, 1945. 399 pp.

The chapters in this book titled "Establishing an Effective Instructional Order," "Methods of Instruction," and "Lesson Planning" describe basic techniques for job instruction at the skilled and semiskilled levels.

94. Arizona State Employment Service. Economics, Statistics, and Research Unit. *Manpower Requirements and Training Needs Study, Tucson Labor Market Area.* Tucson: Arizona State Employment Service, July 1957.

A study of community manpower requirements with particular emphasis on training needs to provide a supply of skilled employees and technicians. Concerned with educational facilities and in-plant training required to meet current and projected needs.

95. BENSON, CHARLES S., and PAUL R. LOHNES. "Skill Requirements and Industrial Training in Durable Goods Manufacturing." *Industrial and Labor Relations Review:* Vol. 12, No. 4, July 1959, pp. 541–553.

Report of a study of skill needs and skill development in a sample

of 126 Massachusetts durable goods plants. The authors examined the actual technician and skilled manual worker distribution in the various industries represented in the sample and the kinds of training methods employed. Conclusions describe a clear difference in training methods in shops where technician skill need predominates, as compared to shops employing skilled manual laborers.

96. BOEHM, GEORGE A. W. "Can People Be Taught like Pigeons?" *Fortune:* Vol. 62, October 1960, pp. 176–179.

A critical analysis and evaluation of the level of acceptance which "teaching machines" have gained. A phenomenon of mass education, programmed learning, and the "machine" are based on concepts derived from psychological experiments with animals. It is suggested that the method has merit in training at the work-skill level. Several experimental applications are described.

97. FISHER, W. R. "Training Maintenance Personnel." *Iron and Steel Engineer:* Vol. 29, September 1952, pp. 177–181.

Describes a program of classroom and on-the-job training for maintenance men and supervisors in a large steel plant. The program is developed around the requirements of the steel industry.

98. HARRISON, OVAL S. "On Effective I-A Teaching." *Industrial Arts and Vocational Index:* Vol. 49, No. 1, January 1960, pp. 22–24.

The specific training techniques covered in the article include: (1) the lecture method, (2) the demonstration, (3) the panel discussion, (4) the written instruction, and (5) the problem solving method. The use of audio-visual and textbook and reference material is also discussed briefly.

99. HINRICHS, JOHN R. "Research on Human Motor Skills: Implications for Industry." *Journal of the American Society of Training Directors:* Vol. 16, No. 5, May 1962, pp. 29–32.

Report discusses psychological research and theory dealing with motor skills with particular emphasis on the areas concerned with employee selection and training.

100. LIMBERG, H. "Reinvestment Training Capitalizes on Your Employees' Experience." *Office:* Vol. 57, No. 4, April 1963, pp. 12–13.

Authors describe a unique training device which utilizes the experience and "know how" of senior employees. After management trainees have been indoctrinated with principles and concept, senior employees relate actual case studies which indicate how the principles are applied in practical situations. Thus participation of senior employees and the reinvestment of experience, the authors claim, pay rich dividends.

101. National Manpower Council. *Improving the Work Skills of the Nation,* part 3, "Industry and the Development of Skill." New York: Columbia University, 1955. 203 pp.

This book resulted from a Columbia University Conference on "Improving the Work Skills of the Nation" and represents a series of addresses made at the Conference. Of particular interest is the section dealing with the responsibility of industry in developing the work skills of the national labor force.

102. ———. *A Policy for Skilled Manpower.* New York: Columbia University, 1954. 299 pp.

An appraisal of the role of skilled workers and technicians in the U.S. economy and a statement of problems affecting their training. This study, completed under a grant from the Ford Foundation, focuses attention on improvement of the quality and effective utilization of skilled manpower resources.

103. NAYLOR, JAMES C. *Parameters Affecting the Relative Efficiency of Part and Whole Training Methods: A Review of the Literature.* Columbus: Laboratory of Aviation Psychology, Ohio State University, 1962.

An assessment of research findings dealing with part or whole learning methods to acquire work skills. The report concluded that the nature of the specific task to be learned has a bearing on which method achieves most efficient results. A comprehensive bibliography is included.

104. PARKER, JAMES F., JR., and EDWIN A. FLEISCHMAN. "Use of Analytical Information Concerning Task Requirements to Increase the Effectiveness of Skill Training." *Journal of Applied Psychology:* Vol. 45, No. 5, October 1961, pp. 295–302.

A research study which demonstrates the effectiveness of careful job analysis and recognition of the fact that in complex sequential learning situations different emphasis is required with respect to competence to achieve task requirements. The experiment is built around a tracking task which is typical of complex learning procedures essential in military and other airplane control.

105. POND, ALFRED W. "Telling, Showing—Doing and Learning." *Supervision:* Vol. 22, No. 2, February 1960, pp. 4–6, 12.

Article presents the case for detailed job explanations in training employees. Argues that careful analysis and explanation of smaller as well as major details are essential if trainee is to learn his job well and avoid mistakes. Comprehensive example of this technique is given.

106. QUEENER, J. SHARP. "On-the-Job Training Prevents Off-the-Job Accidents." *Supervisory Management:* Vol. 5, No. 2, February 1960. pp. 9–16.

"Because of intensive plant safety programs, most workers are safer on the job than they are off." After substantiating this assertion, the article goes on to explain the disadvantages which redound to industry when off-the-job accidents occur. Du Pont's program for reducing off-the-job accidents is illustrated.

107. ROSE, HOMER C. *The Instructor and His Job.* Chicago: American Technical Society, 1961. 280 pp.

Detailed coverage of instructional methods for skilled, semi-skilled, and office clerical employees.

108. SINICK, DANIEL, and ROBERT HOPPOCK. "Research by States on the Teaching of Occupations." *The Personnel and Guidance Journal:* Vol. 39, No. 3, November 1960, pp. 218–220.

A brief report on the research done in various states in the area of occupational skill instruction.

C. OFFICE AND CLERICAL EMPLOYEE INSTRUCTION

109. SUOJANEN, WAINO W., and G. C. HOYT. "Differences in Motivation Among White-Collar Workers." *Personnel:* Vol. 34, No. 2, September–October 1957, pp. 26–31.

A discussion of the characteristics of women in the clerical work force and the factors which affect their training and supervision.

110. U. S. Department of Health, Education and Welfare. *Staff Development, the Supervisor's Job.* Washington, D. C.: Supt. of Documents, 1963. 29 pp.

This booklet presents a summary of points of view as well as methods applicable to the problems of training in office and clerical operations.

111. WITT, JOHN A. "Are We Overlooking Something?—Yes, Clerical Training." *Journal of the American Society of Training Directors:* Vol. 15, No. 1, January 1961, pp. 34–41.

Since the amount of time and money spent on recruitment of clerical employees is high, it is evident that training at this level is essential to reduce turnover and to motivate performance. Article describes in detail a program for clerical employee training.

D. RETRAINING

112. ENTWISLE, D. G. "Aging: The Effects of Previous Skill on Training," *Occupational Psychology:* Vol. 33, No. 4, October 1959.

Describes a study involving retraining of employees in a situation where horse-drawn vehicles were replaced by motor vehicles in a company operation.

113. FOLTMAN, F. F. *Xerox Corporation: A Study in Retraining.* Reprint Series No. 134. Ithaca: New York State School of Industrial and Labor Relations, 1963. 20 pp.

A detailed description and evaluation of a retraining procedure in a company involved in major technological change. The case study covers the operating circumstances leading to company and union agreement on the program, the screening methods utilized, and the curriculum followed. An essential part of the study deals with employee reaction to the program.

114. GIOVANONI, RICHARD. "Operator Retraining: To Manual Manufacturing Operations." *Personnel Journal:* Vol. 41, No. 7, July–August 1962, pp. 337–340.

Suggests that training time allowance applied to newly hired employees is not applicable to experienced employees who are transferred to new tasks. Outlines a plan for establishing time allowance for retraining.

115. JAKUBAUSKAS, E. B. "Retraining: A Problem Created Through Equipment Replacement." *Personnel Journal:* Vol. 42, November 1963, pp. 512–518.

Report presents significant findings as to the general labor market trends in the 1960's and the experience of particular firms in adjusting to changes, based on the results of twenty case studies of computer installation.

116. KAUFMAN, JACOB J. "Labor Mobility, Training and Retraining." *Studies in Unemployment,* Special Committee on Unemployment Problems, United States Senate. Washington: G.P.O., 1960. pp. 343–365.

The chapter describes the problems faced in areas having substantial unemployment and how training and retraining might help to solve these problems. The author emphasizes the uses of training in distressed areas, the types of training that might be utilized, and the training being done in the distressed areas of Pennsylvania.

117. McNAMARA, W. J. "Retraining of Industrial Personnel." *Personnel Psychology:* Vol. 16, Autumn 1963, pp. 233–297.

Report presents the results of a preliminary study designed to determine the feasibility of retraining employees made surplus by technological change. Explains in detail how computer electronic technician trainees were chosen, trained, and placed in new, higher level positions. Author's results indicate that learning ability did not present a major obstacle provided that training time could be increased.

118. "Retrain to Retain Displaced Employees." *Factory:* Vol. 118, No. 8, July 1960, pp. 86–89.

A brief article explaining how a large manufacturing company had retained much of its work force in face of increasing automation. A general outline of the training programs being utilized in the account.

119. "The Utica Story: Matching Workers to Jobs." *Industrial Bulletin:* Vol. 33, No. 4, April 1954, pp. 3–7.

Description of the community-wide retraining project which took place in Utica, N. Y. The steps taken by local businessmen and businesses, the State Department of Labor, and local and neighboring high schools and colleges are summarized. Some of the effects of the project are reported.

120. WILLIAMS, LAWRENCE A. "Training Older Workers in New Skills." *Supervisory Management:* Vol. 8, No. 3, March 1963.

Author comments on the nature of older workers as it affects learning capacity during the process of retraining. Offers guides for training older workers.

E. VOCATIONAL TRAINING

121. FOLTMAN, F. F. *Findings and Recommendations With Respect to New York State Policy and Programs for Skilled Manpower Development.* Albany: New York (State) Department of Labor, September 1959. 90 pp.

This study is concerned with development of apprenticeship programs in New York State since the passage of the relevant legislation in April 1941. The study makes a complete evaluation of the apprenticeship programs in the state, including recommendations for the improvement of the extent programs, and a comparison of New York State's programs and the experiences of other states.

122. "Here's Do-it-yourself Unemployment Cure." *Nation's Business:* Vol. 51, No. 9, September 1963, pp. 62–68.

Describes how one state, South Carolina, has overcome the problems which plague adult vocational re-training. Outlines how a separate state agency, The Committee for Technical Education, dealt with trainee selection and motivation, updating teacher skills, and trainee placement.

123. RAMA, LOUIS. *Vocational Training in the Footwear Industry.* Report by Louis Rama. E.P.A. Project No. 5/10-I, Paris, 1960. 185 pp.

A study based on replies to a questionnaire on vocational and technical training in the tanning, footwear, and general leather manufacturing industries.

124. SMITH, DONALD. "Careers for the Unskilled." *Personnel Management and Methods:* Vol. 26, No. 236, February 1960, pp. 21–23.

The author outlines his firm's two-year general vocational training program for young, non-apprentice employees. Advantages of this training system for both the company and its employee are given.

F. APPRENTICESHIP—UNITED STATES

125. BERGEVIN, PAUL. *Industrial Apprenticeship.* New York: McGraw-Hill, 1947. 280 pp.

A detailed text dealing with the selection of apprentice candidates and establishing the curriculum and instructional staff for effective administration of apprenticeship programs.

126. BOYER, G. D. "Prep Selects Better Apprentices: Joint Apprenticeship Committee of Metropolitan Los Angeles." *Electrical West:* Vol. 115, July 1955, pp. 80–81.

Describes in detail the selection process employed for entry into the electrician apprenticeship program in Los Angeles County. Details are covered with respect to referral, application, interview, testing, and ultimate placement. Persistency and interest of the applicant are judged during a ten-week orientation period and is a major factor in determining admission to the apprenticeship. Programs are developed and jointly sponsored by area electrical contractors, the IBEW, and the public school system.

127. CHRISTENSEN, W. C., *et al.* "Special Apprenticeship Section." *Journal of the American Society of Training Directors:* Vol. 12, No. 6, pp. 22–49.

A series of articles analyzing the problems of skilled trade apprenticeship and describing various company programs.

128. DOUGLAS, PAUL H. *American Apprenticeship and Industrial Education.* New York: Longmans Green, 1921. 348 pp.

A historical assessment of apprenticeship method of work-skill training and an analysis of alternate methods under consideration in 1921.

129. ELSON, HILBERT. "N.Y. City School is Center of Apprentice Plan." *Industrial Bulletin:* Vol. 39, No. 9, September 1960, pp. 21–24.

The author describes in detail the overall apprenticeship program in the printing trades in New York State, the largest of its kind in the United States. The New York School of Printing forms the basis for this program, and extension facilities complete the system. Training procedures and methods utilized at the school and the needs that the program is expected to meet are discussed.

130. HAGEMEYER, RICHARD H. "Apprentice Selection Practices in Michigan's Manufacturing Industries." *Journal of the American Society of Training Directors:* Vol. 16, No. 2, February 1962, pp. 28–38.

Describes basic criteria and selection devices at the apprentice level. Concludes that not enough is being done in this area to meet skilled manpower needs.

131. MERENDA, PETER. "The Relative Effectiveness of Formal School and On-the-Job Methods of Training Apprentices in Naval Occupations." *Personnel Psychology:* Vol. 11, No. 3, 1958, pp. 379–382.

A report of research covering Naval apprentices which demonstrated that formal school method proved superior to "learning by doing" supplemented by informal class instruction in theory and practice.

132. "Negroes in Apprenticeship, New York State." *Monthly Labor Review:* Vol. 83, No. 9, September 1960, pp. 952–957.

An evaluation of the status of non-whites in skilled craft occupations and related apprenticeship training in New York State. Attention is given to the general limiting factors which tend to inhibit the entrance of all races into apprenticeship training systems, the limiting factors which confront Negroes, and specific racial discrimination problems.

133. PATTERSON, WILLIAM F., and M. H. HEDGES. *Education for Industry: Policies and Procedures of a National Apprenticeship System.* New York: Prentice-Hall, 1946.

Detailed discussion of need for apprentice training in industry. Attention is given to the stake of the employee, the union, and management in trade training. Integrates the role of government, schools, and industry in an effective program.

134. POULTON, JAMES. "Apprentice Programs Must Be Geared to Automation and Atomic Progress." *Machinists' Monthly Journal:* Vol. 67, Nos. 7 and 8, July–August 1955, pp. 210–213.

A union view of the problems facing skilled worker training as automation progresses. The author concludes that the importance of apprenticeship will grow with the spread of automation and that formal training will assume an even greater role than is the case at present.

135. U.S. Bureau of Apprenticeship and Training. *Apprenticeship and Training in the Contract Tool and Die Industry.* (Bulletin No. T.-150). Washington: G.P.O., November 1959. 31 pp.

A comprehensive report of the firms involved in training apprentices in the tool and die industry and their plans and program for conducting the training.

G. *APPRENTICESHIP AND SKILL TRAINING IN FOREIGN COUNTRIES*

136. "Apprenticeship of Women and Girls." *International Labour Review:* Vol. 72, October 1955, pp. 283–302.

A comparative study of problems affecting the entry of women into skilled occupation training programs in various industrialized countries.

137. BLAIN, ISABLE. "Operator Training: Suggestions for Programme Planning." *Occupational Psychology:* Vol. 30, October 1956, pp. 189–203.

Article describes and evaluates techniques for developing training plans for employees engaged in semiskilled occupations in Great Britain.

138. BLAND, H. A. "Apprenticeship—Can We Expect It to Supply the Need for Skilled Workers?" *The Journal of Industrial Relations:* Vol. 3, No. 1, April 1961, pp. 1–16.

Can a well-conceived apprenticeship program adapt to the demands of rapidly changing technology? This question is explored in this illuminating article concerning manpower training in Australia. Apprenticeship programs in other countries and improvements to Australia's current program are discussed by the author.

139. CROFT, MARGARET. *Apprenticeship and the 'Bulge.'* London: The Fabian Society, 1960. 20 pp.

Author evaluates the problems of apprenticeship training in Great Britain and offers a series of proposals for improvement. Describes the attitudes of government trade unions and management toward apprenticeship program development.

140. DEBOA, J. A. W., *et al. Apprentice Training For the Sixties.* London: Industrial Welfare Society, 1962. 28 pp.

A series of brief descriptions of apprenticeship methods used by British firms for craft skill and foremanship development. The various schemes rely heavily on classroom instruction and early opportunities for the learner to try out his skill under competent supervision.

141. Department of Labor and National Service. "In-Industry Training (A Symposium)." *Personnel Practice Bulletin:* Vol. 17, No. 2, Melbourne, Australia, June 1961, pp. 9–59.

An excellent summary of the current state of apprenticeship programs in Australia. Article outlines the problems faced by apprenticeship training. Included are several industrial examples of attempts to deal with the problem.

142. KROUSS, E. "Vocational Training in the Federal Republic of Germany: In-Plant Training for Apprentices and Learners." *International Labour Review:* Vol. 77, March 1958, pp. 209–219.

The author presents a critical review of preparation for vocational training in Germany and stresses the need to integrate on-the-job training with institutional education at the skilled-employee level.

143. WILLIAMS, GERTRUDE. *Training for Skill,* Research Series, No. 205. London: The Fabian Society, 1959. 28 pp.

After examining some of the reasons for the shortage of skilled workers in British industry, the author analyzes some of the present problem areas in apprentice training. She concludes by outlining several proposals, including those made in the Carr Report of 1958, to alleviate the skilled manpower shortage.

H. SALES TRAINING

144. ALVIN, ROBERT. "Acting Course for Salesmen?" *Sales Management:* Vol. 84, No. 2, Jan. 15, 1960, pp. 90–92, 94–95.

Describes a sales training course in which dramatization and role playing were utilized. Covers course content and teaching method.

145. HETHERMAN, R. "Learning the Hard Way Makes Selling Easier." *Industrial Marketing:* Vol. 47, July 1962, pp. 108–110.

Describes training program designed to update field sales engineers' knowledge of current company capabilities. Sales engineers were brought back into the factory and assigned responsibility for specific engineering problems with field sales application.

146. LAPP, CHARLES L. *Training and Supervising Salesmen.* Englewood Cliffs, New Jersey: Prentice-Hall, 1960. 223 pp.

This book emphasizes that a major responsibility of the sales supervisor is the effective training of sales personnel. Describes in detail methods for developing supervisory instructional skill and also provides educational techniques which the supervisor can utilize.

147. NELSON, R. M. "How Armco Trains Salesmen to Help the Customer Buy." *Industrial Marketing:* Vol. 45, October 1960, pp. 58–61.

Article describes the two and one-half year salesman training program at a client company. A distinctive feature of this program is the utilization of the Company Purchasing agent as the prospective customer during sales training sessions.

IV. TECHNICAL AND VOCATIONAL TRAINING

A. ROLE OF THE TECHNICIAN IN INDUSTRY

148. American Society for Engineering Education. Technical Institute Division. *The Engineering Technician.* New York: Technical Education News, June 1958. 18 pp.

Describes the engineering technician and outlines his duties in such fields as aeronautical, air conditioning, automotive, building construction, chemical, electrical, electronic, mechanical, and instrumentation technologies.

149. BRANDON, GEORGE L. *Twin City Technicians.* Research Report, College of Education. East Lansing: Michigan State University, 1958. 70 pp.

Reports the findings of a survey of industrial technicians in Benton Harbor and St. Joseph, Michigan; shows the kinds of technicians found and the various job titles used; describes the activities of technicians in working with equipment, instruments, industrial materials, hand and machine tools, drawings, other records, and energy and power; outlines in some detail the job activities of engineering, mechanical, maintenance, production, laboratory, and electronic technicians; shows the needs of technicians for various kinds of technical information and training.

150. COLEMAN, JOHN D. "The Winning Team." *Technical Education News:* Vol. 16 (special issue), 1956, pp. 1–3.

Discusses various factors in the evolution of the American industrial scene and the place of the engineering technician in the team of engineers, technicians, and craftsmen.

151. Federal Security Agency. (Now U.S. Department of Health, Education and Welfare, U.S. Office of Education.) *Vocational-Technical Training for Industrial Occupations.* Vocational Division Bulletin No. 228. Washington: G.P.O., 1944, pp. 16–136. (Note: This bulletin is out of print but may be available in libraries and state departments of vocational education.)

Provides an extensive description of the nature of industry's need for technicians; outlines the technician occupations in various divisions of twenty-two industries; describes typical occupations in considerable detail.

152. HAMPTON, THOMAS E. *A Survey of Technical Occupations in Louisiana Industry.* Baton Rouge, La.: State Department of Commerce and Industry, 1951, pp. 13–33.

Chapter surveys the numbers and types of technicians needed in such industries as chemicals, malt liquors, paper, printing, petroleum products, sawmills, shipbuilding, banks, contract construction, hotels, insurance, real estate, retail merchandise, and utilities.

153. HARRINGTON, GORDON M. *Technicians for Connecticut Industry.* Hartford, Connecticut: State Department of Education, 1957, pp. 9–25.

Outlines the place of the technician in industry in relation to the engineer and the skilled mechanic; gives brief descriptions of many technician occupations; reports a survey of technician needs in Connecticut.

154. International Labour Office. *Automation and Other Technological Development: Report of the Director General.* Report I, Part I. Geneva: The International Labour Office, 1957. 105 pp.

Discussion of the pace of technological change, the impact on employment, skill changes brought about by technological change, and its influence on the education and training of young people and adults.

155. MINER, JOHN B. "The Effect of a Course in Psychology on the Attitude of Research and Development Supervisors." *Journal of Applied Psychology:* Vol. 44, No. 3, June 1960, pp. 224–232.

Article discusses problems of supervising technical and scientific personnel.

156. Mississippi State College. Department of Industrial Education. *Development of Technical Education in Mississippi Public Junior Colleges.* Mississippi: State College, 1956, pp. 26–49. (Report of the 1956 Junior College Conference.)

A series of articles on specific needs for technicians in the electrical, chemical, wood products, and highway construction industries; provides information on the place of the technician in these industries, numbers needed, descriptions of technician occupations, and types of education required.

157. National Manpower Council. *Utilization of Scientific and Professional Manpower.* New York: Columbia University Press, 1954, pp. 48–64 and 102–133.

Defines the technician and outlines the characteristics of the technician group; discusses patterns of utilization of technicians and their place in the medical and health fields.

B. INSTITUTIONAL TRAINING RESOURCES

158. American Educational Research Association. "Vocational, Technical and Practical Arts Education." *Review of Educational Research:* Vol. 32, October 1962, pp. 367–432.

Reviews the major research findings in the general areas of vocational, technical, and practical arts education. Provides both the current status of research and major findings. Includes the areas of career planning, job placement, agricultural education, home economics education, industrial education, business education, distributive education, and technical education. Invaluable beginning point for research in the area.

159. ARMSBY, HENRY HORTON. *Cooperative Education in the U.S.* U. S. Office of Education, Bulletin No. 11. Washington: G.P.O., 1954. 58 pp.

The cooperative plan of education is defined as an integration of classroom work and practical industrial experience in an organized program under which students alternate periods of attendance at college with periods of employment in industry. This bulletin covers cooperative programs in the U.S. at the college and technical institute level.

160. Federal Security Agency. (Now U. S. Department of Health, Education and Welfare, U. S. Office of Education.) *Vocational Technical Training for Industrial Occupations.* Vocational Division Bulletin No. 228. Washington: G.P.O., 1944, pp. 16–136. (Note: This bulletin is out of print but may be available in libraries and state departments of vocational education.)

Provides an extensive description of the nature of industry's need for technicians; outlines the technician occupations in various divisions of twenty-two industries; describes typical occupations in considerable detail.

161. ———. ———. *Vocational Technical Training for Industrial Occupations.* Vocational Division Bulletin No. 228. Washington: G.P.O., 1944, pp. 252–276.

Provides a brief overview of equipment needed for vocational-technical education; discusses industrial surveys to determine needs, surveys of existing educational facilities in the community, occupational analysis to determine curriculum content, determination of plant and equipment needs, and the planning of guidance and personnel services.

162. HARRIS, NORMAN C. "Technical Training for the Air Conditioning Industry." *Technical Education News:* Vol. 19, No. 4, April 1960, pp. 1–3.

A helpful beginning point for a person interested in developing a program of instruction for air conditioning technicians. Author

outlines the general conceptual framework for such a course as well as the specific subject areas covered during the two year course offered at Bakersfield College.

163 HOLDERMAN, K. L. "Some Facts About Our Technical Institute Instructors." *Technical Education News:* Vol. 11, April 1952, pp. 1–5.

Reports a study of instructors in eighteen technical institutes, with data on educational preparation, industrial experience, teaching experience, and teaching loads; gives data on part-time instructors in nine institutes.

164. HUDDLESTON, ROBERT H. "Cooperative Work-Study Programs." *Journal of the American Society of Training Directors:* Vol. 12, No. 9, September 1958, pp. 35–40.

This article discusses some vital problems encountered when embarking on a cooperative engineering educational program.

165. HUDSON, EDMUND. "Technical Education: The Challenge to Management." *The Manager:* Vol. 28, No. 3, March 1960, pp. 206–207.

A statement of management's responsibility in the educational processes concerned with developing technical personnel.

166. Illinois University. Bureau of Educational Research. *Vocational and Technical Education in Illinois: Tomorrow's Challenge.* Urbana: University of Illinois, 1960. 163 pp.

Report of a comprehensive study of the projected manpower training needs in Illinois and a series of recommendations for changes in the status educational program to meet the needs at the vocational and technical levels.

167. Professional Engineers Conference Board for Industry. *How to Train Engineers in Industry.* Executive Research Survey No. 4. Washington: National Society of Professional Engineers, 1955. 72 pp.

Reports the results of a survey inquiry about the in-service training practices of two hundred companies employing engineers. Data reported from large, medium, and small companies.

168. RAPPAPORT, BERNARD F. "Technical Electronics at Levittown." *Industrial Arts and Vocational Education:* Vol. 49, No. 2, February 1960, pp. 41–44.

Article describes steps taken by Levittown, N.Y., school board to set up a technical electronics program at the high school level. Program objectives, procedure for student selection, procedure for teacher selection, and curriculum evaluation are among the topics discussed.

169. SMITH, HAROLD T. *Education and Training For The World of Work.* The Upjohn Institute for Employment Research, 1963, Kalamazoo, Michigan. 165 pp.

A comprehensive analysis of the needs for vocational education in Michigan and an outline of a plan to meet the needs. The report is a model for similar studies in other states. It explores administration and financial resources which are available and draws heavily on the experience of other states where vocational education programs had been developed.

170. TRASIN, WALTER. "How to Develop an Auto Mechanics Course." *Industrial Arts and Vocational Education:* Vol. 49, No. 1, January 1960, pp. 42–46.

Although intended primarily as a guide to organizing and administering an auto mechanics course at the high school level, this article presents a number of ideas which could profitably be applied in a similar industrial training situation.

171. U.S. Congress. Subcommittee on Economic Stabilization of the Joint Economic Committee. *Instrumentation and Automation.* Hearings, 84th Congress, 2nd Session. Washington: G.P.O., 1957, pp. 12–15 and 104–105.

Points out inadequacies in the present situation with respect to personnel for instrumentation and automation, and suggests media through which needs might be met; outlines ways in which educational institutions can contribute; recommends provision for training three times as many technicians as engineers.

172. U.S. Department of Agriculture. *Improving the Performance of Retail Food Store Cashiers Through Better Training.* Marketing Research Report No. 48. Washington: G.P.O., 1953.

Reports a study of retail food store procedures for training cashiers. The study covers: (1) review of an existing training practice, (2) the development of an instructional method designed to be more effective, and (3) the results of a controlled experiment testing the relative effectiveness of the two methods of instruction. Although the study was confined to cashier training, the resulting techniques are adaptable to other training areas in the retail food field.

173. WAGNER, W. F., Jr. "Cooperative Engineering Education: How Program Works in Practice." *Factory Management and Maintenance:* Vol. 110, November 1952, pp. 104–109.

Describes the operation of a co-op engineering education program in an organization and outlines methods and procedures for setting up such a program.

174. WILSON, J. D. "Developing Apprenticeship-Training Curriculums." *Industrial Arts and Vocational Education:* Vol. 38, June 1949, pp. 219–223.

Describes a logical approach to the problems of developing trade apprenticeship curricula at the secondary school level; describes the role of apprenticeship committees.

175. The W. E. Upjohn Institute for Employment Research. *Education for a Changing World of Work.* Report of the Panel of Consultants on Vocational Education. Washington: U. S. Department of Health, Education and Welfare, Office of Education, 1963. 296 pp.

Evaluates recent developments in vocational education and training in Michigan and provides a comparison with similar efforts in other states. An exhaustive study which can be used as a model for further analysis of the role of educational institutions in the work-skill development process. Integrates state programs with efforts by the federal government under Manpower Development and Training Act and earlier legislation.

C. TECHNICAL TRAINING IN FOREIGN COUNTRIES

176. Canadian Department of Labor. *Acquisition of Skills.* Ottawa: Canadian Department of Labor, 1960. 68 pp. (Research program on the training of skilled manpower.)

A detailed report of the research conducted by the Canadian Department of Labor to evaluate the state of training for occupational skills in the country and to propose a program for development of a program to meet skilled manpower needs. Contains a series of manual skill training outlines.

177. KOROL, ALEXANDER G. *Soviet Education for Science and Technology.* New York: John Wiley, 1957. 513 pp.

Detailed discussion of scientific and technological training of Soviet youth; describes technicums and gives sample syllabus in mathematics and science; contains much material dealing with industrial and technical education of less than four-year college level.

178. ROSEN, HOWARD. "Technicians in the Labor Forces of Russia and America." *Monthly Labor Review:* Vol. 81, January 1958, pp. 1–5.

Compares the education and supply of technicians in the Soviet Union and the United States; shows practices used in the Soviet technicums; indicates ways in which technicians in the United States are trained, with the Armed Services as the largest training agency; calls for an examination of the American educational system to determine whether it is geared to meet the needs of our present industrial economy.

179. THOMPSON, D. C. "Training of Technical Apprentices and Laboratory Assistants," *Bacie Journal:* Vol. 3, February 1949, pp. 8–11.

Emphasizes level of ability required for apprenticeship candidates considered for training and development as laboratory technicians in England. Also concerned with related institution education, both technical and in preparation for management assignment.

180. VENABLES, P. F. R. *Sandwich Courses, for Training Technologists and Technicians.* London: Max Parrish and Co., 1959. 160 pp.

An extensive report of the application in Great Britain of "work study" or the cooperative educational schemes for technical training. The author deals with the rationale behind the development of such courses and describes in detail the integration of educational institutions and industry in the program. Attention is paid to the problems of curriculum construction and course administration.

V. SUPERVISORY TRAINING

A. IDENTIFICATION OF SUPERVISORY TRAINING NEEDS

181. BLAMBERG, SIEGMAR F. *The Substance of Supervisory Training.* Bulletin No. 10. Storrs: Department of Industrial Administration, School of Business Administration, University of Connecticut, 1961. 41 pp.

Report of a study designed to determine the range of subject matter content in supervisory training courses in industry and government and the distribution of subject matter in various courses. Author concludes from data that it is essential to develop a minimum, acceptable supervisory knowledge skill range around which the unique needs of individual groups can be determined.

182. BUCHANAN, PAUL C. "Factors Making for Effective Supervisory Training." *Personnel:* Vol. 34, No. 5, March–April 1958, pp. 46–53.

Reports a quantitative study of manager and supervisory responses to inquiry about the effect of a training program on supervisory performance.

183. EVANS, CHESTER F. *Supervisory Responsibility and Authority.* Research Report No. 30. New York: American Management Association, 1957. 63 pp.

Report of an extensive survey of the first-line supervisor's job in manufacturing industry. Describes the new dimensions of performance expected of the foreman, including technical duties associated with personnel responsibility. Survey questionnaire and method are reported in detail.

184. FLEISHMAN, EDWIN A., EDWIN F. HARRIS, and HAROLD E. BURTT. *Leadership and Supervision in Industry.* Bureau of Educational Research Monograph No. 33. Columbus: Ohio State University, 1955. 110 pp.

The major emphasis of this report is on program evaluation, but it also describes in detail the administration of a human relations course in a company training school for supervisors. The research results raise serious questions as to the degree of behavioral change

resulting from the training, particularly after the trainees returned to their work environments. This is an important contribution to "leadership" training literature.

185. HERZBERG, FREDERICK, *et al. Job Attitudes.* chap. 6, "Supervision and Job Attitude." Pittsburgh: Psychological Service of Pittsburgh, 1957, pp. 167–206.

Reports substantive studies revealing the influence of supervisory knowledge and behavior on employee attitudes. A vital resource for supervisory training program development.

186. LIKERT, RENSIS. *New Patterns of Management.* New York: McGraw-Hill, 1961. 299 pp.

A book devoted to important conclusions about organizational behavior theory based on research conducted at various levels of the managerial hierarchy. Provides substantive information relating supervisory styles to factors of motivation and productivity.

187. MANN, FLOYD C. "The Supervisor-Member of Two Organizational Families." *Harvard Business Review:* Vol. 32, No. 6, November–December 1954, pp. 103–112.

The author reports a research study in a public utility company in which he identifies the dual role of the first-line supervisor. Concludes that management must recognize the dual character of the foreman's job and create an environment which fosters two-way flow of communication and problem sharing.

188. ———. "Studying and Creating Change." *Research in Industrial Human Relations,* IRRA Series. New York: Harper and Brothers, 1957, pp. 146–167.

A report of research studies into methods for changing supervisory behavior at the workplace. Two studies involving supervisory training programs and one covering an organizational feed-back procedure are described in detail. The effectiveness of classroom human relations training and organizational feed-back are compared.

189. MINER, JOHN B. "The Effect of a Course in Psychology on the Attitude of Research and Development Supervisors." *Journal Of Applied Psychology:* Vol. 44, No. 3, June 1960, pp. 224–232.

A report of a research study into the attitude toward supervisory responsibility of a group of supervisors of research and development personnel. Describes the ten-session lecture course and the post-test used to measure attitudinal change. The lecture course was designed to foster a more favorable attitude toward the supervisory role.

190. MULLER-THYM, BERNARD J. "Reconstructing the Supervisory Job." *Personnel:* Vol. 30, March 1954, pp. 396–405.

The author states that in order to heighten his work satisfaction and effectiveness on the job, some "challenge" must be put back into

the foreman's job. Proposes that supervisory jobs be reconstructed, conferring real decision-making power and responsibility upon the foreman.

191. PERES, SHERWOOD N. "Performance Dimensions of Supervisory Positions." *Personnel Psychology:* Vol. 15, No. 4, Winter 1962.

Report of a study designed to identify performance characteristics of administrative and general supervisors. Provides information which can be useful in the supervisory training process.

192. TANNENBAUM, R., and W. H. SCHMIDT. "How to Choose a Leadership Pattern." *Harvard Business Review:* Vol. 36, No. 2, March–April 1958, pp. 95–101.

Deals with the spectrum of possible kinds of leadership style, between autocratic and democratic, which a manager might use in the supervisory process. Describes the factors which bear on whether one style or another is appropriate in a specific situation.

193. WHYTE, W. F. *Human Relations in the Restaurant Industry.* New York: McGraw-Hill, 1948. 378 pp.

A detailed analysis of the interpersonal situations occurring in an industry where direct customer contact is an essential characteristic of the work environment. The chapters devoted to human elements in supervision provide an excellent resource for supervisory training material.

194. ZALEZNIK, A. *Foreman Training in a Growing Enterprise.* Boston: Harvard University Graduate School of Business Administration, Division of Research, 1951. 232 pp.

A detailed report of a research project which examined the effect of a supervisory training program on foreman attitudes and behavioral changes. The study attempted to learn the compatibility of training objectives with the attitudes and purposes which foremen brought into the training environment. A wide divergence was observed and the effects are noted. The author concludes with a recommended training method for the "middle" man in the management organization.

B. STRUCTURE OF TRAINING PROGRAMS

195. ADAMS, HAROLD F. "Labor Relations Training for Supervisors." *Journal of the American Society of Training Directors:* Vol. 12, No. 11, November 1958, pp. 26–31.

Outlines a course on contract interpretation for supervisors. Emphasizes instructional method as well as the importance of appropriate management climate.

196. BAILEY, JOSEPH K. "The Goals of a Supervisory Training Program: A Study of Company Programs." *Personnel:* Vol. 32, September 1955, pp. 152–162.

What aspects of the supervisor's job are receiving most emphasis in supervisory training? The author has analyzed the scope and content of several representative company programs to identify the areas of major concern. These areas vary by company, reflecting that efforts are being made to fit training programs to specific company needs.

197. BAMBRICK, JAMES J. "Training Supervisors in Labor Relations." *Personnel:* Vol. 37, No. 6, November–December 1960, pp. 50–58.

A description of internal training programs which provide guidelines for helping supervisors to fulfill their labor relations responsibilities. Emphasizes that this kind of program is valuable only when coupled with a company desire to make the supervisor a bona fide representative for training supervisors of organized and non-union employees.

198. BENTZEN, E. C. "Forming Supervisory Development Plans." *Advanced Management:* Vol. 25, No. 8, August 1960, pp. 21–23.

A concise article concerning the inadequacy of supervisory training programs, and the causes for this inadequacy. The author explains the dilemma that the average supervisor generally finds himself in and analyzes the factors which contribute to this dilemma. The article contains a list of appropriate general principles for the training of supervisors. A sample training program is included.

199. FRENCH, J. R. P., Jr. "Role-Playing as a Method of Training Foremen." *Human Factors in Management.* Schuyler Dean Hoslett, ed. New York: Harper, 1946, pp. 99–116.

Article includes dialogue of an actual experience in the use of psychodramatic device for training. Contends that the method stimulates participation, involvement, and identification in such a way as to bring out the deeper emotional aspects of interpersonal relations.

200. GERLETTI, JOHN D., C. C. CRAWFORD, and DONOVAN J. PERKINS. *Nursing Home Administration: Training Materials for Administrators of Nursing, Boarding and Mental Hygiene Homes for the Aged.* Downey, California: The Attending Staff Association, 1961. 472 pp.

An example of an instructional manual which can serve as a model for other administrative units than the type for which it was

designed. A sound approach to the "how to" aspect of supervisory operation in a service organization.

201. JURGENSEN, C. E. "Foreman Training Based on the Test 'How Supervise.'" *Personnel Journal:* Vol. 28, September 1949, pp. 123–127.

Basic concepts on which a group supervisory training program was introduced where none had previously existed. The steps taken are outlined in detail and there is a description of how the test "How Supervise" by File and Remmers is used. Evaluative statements about use of the test in this case are limited.

202. KORB, L. DAVID. U.S. Civil Service Commission. *Training the Supervisor.* Personnel Methods Series No. 4. Washington: G.P.O., 1956. 126 pp.

Topics treated include determination of supervisory training needs, steps in building up course content, selection of training method, program administration, and program evaluation.

203. KRANTZ, IRWIN W. "Supervisory Training for Small Companies." *Personnel Journal:* Vol. 41, No. 2, February 1962, pp. 82–83.

A brief description of how a group of small companies in a non-metropolitan community organized a training program to develop supervisory skills.

204. LISBERGER, T. S. "The Case Method in Supervisory Training." *Advanced Management:* Vol. 20, February 1955, pp. 20–23.

The author suggests that the case method, used at the appropriate time in a training program, can get supervisors to examine their on-the-job behavior and learn to change behavior if necessary. Cites results achieved from the discussion process as well as its limitation.

205. McLARNEY, WILLIAM J. *Management Training, Cases and Principles* (3rd ed.). Chicago: Irwin, 1959. 534 pp.

A text for management and first-line supervisory training designed for use by training practitioners and students at the college level. Identifies the basic concepts of managerial skill and provides text material dealing with each concept, along with cases for study and discussion.

206. ONCKEN, WILLIAM JR. "Why Supervisory Training." *Supervisory Management:* Vol. 5, No. 8, August 1960, pp. 24–26.

Unless integrated by common objectives, it is often found that classroom principles and on-the-job practice are not compatible. The author suggests ways to bridge the gap between job and classroom.

207. PETITT, ALBERT E. "Mid-Management Does the Training." *Journal of the American Society of Training Directors:* Vol. 17, No. 1, January 1960, pp. 24–30.

Describes the program of a company, where the primary responsibility and authority for supervisor training has been delegated to operating middle managers. Steps in the planning and execution of the program are outlined, as are some of the expected results used in evaluating the program. List of topics chosen for coverage and a sample presentation are also included.

208. RITVO, MARIAN and PHYLLIS GORAM. "Meeting Resistance to Change." *Adult Leadership:* Vol. 9, No. 5, November 1960, p. 146.

Describes ten steps taken in one hospital to overcome resistance to in-service training programs for female supervisors. Material is based on a hospital experience.

209. STORM, WILLIAM J. "Training Supervisors in Budgetary Responsibilities and Controls." *Journal of the American Society of Training Directors:* Vol. 14, No. 4, April 1960, pp. 41–52.

A detailed plan to acquaint supervisors with budgetary responsibilities and controls. Article advises as to the selection of supervisors to be trained, the selection of the instructor, and the content of each of seven training sessions.

210. Technical Association of the Pulp and Paper Industry, Corrugated Containers Division. Production Committee. *The Training of Supervisors in Corrugated Box Plants: Ten Session Plans.* Loren F. Ashwood, Chairman, STAP Subcommittee. New York: Technical Association of the Pulp and Paper Industry, 1963. 50 pp.

A series of basic outlines of lesson plans for essentials of plant supervisory job training. This sample provides an elementary program from which training can be further expanded in an organization.

211. VON BLEICKEN, BLEICK. *Employee Training Handbook: A Guide for Training by Operating Management.* New York: Conover-Nast, 1953. 300 pp.

Lists components of the supervisory job and the practical techniques normally used in supervisory job instruction.

212. U.S. Department of Labor. *Safety Subjects.* Bulletin No. 67. Washington: G.P.O., 1956 (rev. ed.).

A comprehensive text covering the field of safety training. Presents fundamental aspects of a wide variety of safety subjects applicable in office, shop, and field construction operations.

C. JOB INSTRUCTOR TRAINING

213. BECKMAN, R. D. *How to Train Supervisors: Manual and Outlines for Determinate Discussion* (4th ed.). New York: Harper, 1952. 335 pp.

This book is one of the classics in the field of supervisory training and warrants a prominent place on the training bookshelf. It assumes that training supervisors and managers is essential in modern industry and proceeds to suggest ways of implementation and administration. Much emphasis is placed on the methods developed in TWI and considerable attention is devoted to job instructor training and job relations training.

214. CHRISTIAN, ARTHUR H. "Safety Training: Concentrate on the New Employee." *Supervisory Management:* Vol. 5, No. 10, October 1960, pp. 7–13.

Studies have demonstrated that it is the new or transferred worker who most urgently needs full safety training. The article is a good refresher course in basic safety practices, and provides some tips as to better methods of training new employees on safe work habits.

215. U.S. War Manpower Commission. Bureau of Training, Training Within Industry Service. *The Training Within Industry Report, 1940–1945.* Washington: G.P.O., 1945. 330 pp.

Since a substantial volume of supervisory training derives from the TWI "J" programs, this report is important as a source document.

D. NEW SUPERVISOR TRAINING

216. CASTLE, P. F. C., and F. I. GARFORTH. "Selection, Training, and Status of Supervisors." *Occupational Psychology:* Vol. 25, No. 2, April 1951, pp. 109–123. (See also, July 1951, pp. 166–180; October 1951, pp. 225–232.)

Three articles discussing research into the selection, training, and status of supervisors carried on under the auspices of the National Institute of Industrial Psychology in Great Britain. Each article reports the findings and conclusions from inquiry into the separate areas noted in the title.

217. Ministry of Labor (Great Britain). *Report of the Committee on the Selection and Training of Supervisors,* London: Her Majesty's Stationery Office. (New York: American Agents—British Information Services.)

A study of the progress made in British industry in the selection and training of first line supervisory personnel, noting also the

absence of progress in some areas. The report covers private industry, nationalized industry, and the appropriate role of educational institutions in the selection and training process.

218. National Industrial Conference Board, Inc. *Developments in Supervisory Training*. Studies in Personnel Policy No. 124. New York, 1952. 84 pp.

A summary description and analysis of philosophy, various approaches, and techniques evident in supervisory training programs. Examples of what selected companies are doing to train new supervisors as well as incumbents.

E. SUPERVISORY SELECTION

219. HUTTNER, L., and R. A. KATZELL. "Developing a Yardstick of Supervisory Performance." *Personnel:* Vol. 33, No. 4, January 1957, pp. 371–378.

Describes an application of the "forced choice" rating method in the process of selecting and training supervisory personnel. Suggests that the device has the advantage of across-the-board comparability in multiplant company operations.

220. ROWLAND, V. K. "Progress to Date in Executive Development." *American Management Association*. Personnel Series No. 145. New York, 1952, pp. 3–19.

Contains a comprehensive status report on supervisory development programs and techniques, and an analysis, with recommendations, of methods for supervisory selection and training.

221. TAYLOR, JACK W. *How to Select and Develop Leaders*. New York: McGraw-Hill, 1962. 255 pp.

Written in a popular and readable style, this book can serve a useful purpose in first-line supervisor training. It is complete with anecdoted illustrations covering leadership, selection, testing and training methods.

VI. MANAGEMENT INVENTORY AND EXECUTIVE DEVELOPMENT

A. METHODS AND TECHNIQUES

222. American Management Association. *Management Education for Itself and Its Employees,* part 2, "A Survey of Management Development," by Joseph M. Trickett. New York, 1954. 61 pp.

Reports what American business organizations of various types and sizes are doing or planning to do to train their management employees; the techniques, methods, and information used in such training; and company attitudes as to whether training is effective.

223. ———. *Management Education for Itself and Its Employees,* part 2, "Case Studies in Management Development," by Robert G. Simpson. New York, 1954. 140 pp.

This report covers management training programs and practices of ten selected companies representing various industries.

224. ANDLINGER, G. R. "Business Games." *Harvard Business Review:* Vol. 36, No. 2, March–April 1958, pp. 115–125.

A detailed description of the simulation technique for training managers in the skills of decision making. Includes the pattern for setting up the game, procedure for participants, and the role of the umpire.

225. ———. "Looking Around: What Can Business Games Do?" *Harvard Business Review:* Vol. 36, No. 4, July–August 1958, pp. 147–160.

An appraisal of the use and value of simulation and business games in the training of supervisors and managers. The author raises critical questions and provides answers as to how gaming devices can be used effectively in training.

226. ANDREWS, KENNETH R. "Executive Training by the Case Method." *Harvard Business Review:* Vol. 29, No. 5, September 1951, pp. 58–70.

Describes and evaluates two company experiments in the use of cases for supervisory and management training. Emphasizes the individual characteristics of the two programs, concluding that the case method

utilization must be adapted to the unique circumstances of particular organizations. Procedural techniques are identified and described.

227. ARGYRIS, CHRIS. *Executive Leadership: An Appraisal of a Manager in Action.* New York: Harper, 1953. 139 pp.

A basic source book for supervisory and management training. Supervisory training and management development programs frequently base their assumptions on concepts drawn from broad observations of the leadership role. The author has taken a pin-point look and reports the characteristic features that distinguish a particular leader and his style of leadership.

228. ASHWORTH, KENNETH H. "Mid-Career Management Courses." *Advanced Management:* Vol. 25, No. 8, August 1960, pp. 23, 29.

A brief article which examines faults which typical mid-career executives are very likely to possess. The author contends that these faults can be remedied and re-emphasizes the value of good management development courses at this stage of a man's career.

229. BARRY, F. GORDON, and C. G. COLEMAN, JR. "Tougher Program for Management Training." *Harvard Business Review:* Vol. 36, No. 6, November–December 1958, pp. 117–125.

What can happen when a manager training program is conceived of as an "obstacle course," involving homework study, intensive participation, and final grades, is described and evaluated by the authors. They conclude that although all the evidence is not yet in, this method as compared to the conventional "panoramic view" holds promise and warrants more experimentation.

230. BECKLEY, D. K. *Executive Training in Department Stores.* Boston: Simmons College, 1952. 62 pp.

The term "Training Squad" has become identified with managerial training in retail and specialty stores. This monograph brings together concepts and practices essential to an appreciation of the various methods and techniques employed in store training. Although designed around retailing, the Training Squad device can be applied in other work environments for management training.

231. BELLOWS, ROGER, THOMAS Q. GILSON, and GEORGE S. ODIORNE. *Executive Skills: Their Dynamics and Development.* Englewood Cliffs, New Jersey: Prentice-Hall, 1962. 344 pp.

A management text, suitable for organizational in-service training, which takes the skills and traits of successful managers and exposes them to conceptual sources from the behavioral sciences.

232. BENNETT, WILLARD W. *Manager Selection, Education and Training.* New York: McGraw-Hill, 1959. 210 pp.

Into the welter of literature on management development, the author has introduced his conceptual scheme to provide the basis for an adequate program. In the pattern, three components of the scheme are identified: (1) competent selection, (2) intellectual conditioning, and (3) supervised training on the job. Although the general theory around which the book is designed may not be acceptable to all, it does provide a take-off for comparison and analysis. Each component of the process is explained in detail in terms of the professional character of the manager's job.

233. BOGARD, HOWARD M. "Union and Management Trainees, a Comparative Study of Personality and Occupational Choice." *Journal of Applied Psychology:* Vol. 44, No. 1, 1960, pp. 56–63.

A report of a research study into the factors which appear to be most influential in directing entry employees at the low managerial levels to select the management orbit or union orbit as a career choice.

234. CLAY, HUBERT, and LEIF OLSEN. "Internships in the Development of People." *Personnel Journal:* Vol. 40, No. 2, June 1961, pp. 58–63.

Outlines a plan for utilizing the managerial internship device for bringing executives along to optimal individual development. Describes the appropriate role of the supervising manager and of the management development specialist or consultant in the organization.

235. DOOHER, M. JOSEPH, and VIVIENNE MARQUIS. *The Development of Executive Talent.* New York: American Management Association, 1952. 576 pp.

A handbook of executive development approaches, techniques, and cases drawn from operating experiences. The authors in the text represent specialists in areas of management training in various companies. Seventeen cases describing company programs in detail are included to illustrate the techniques covered in the early chapters. This is a major resource book in the field.

236. EITINGTON, JULIUS E. "Do it Yourself: The Key to Leadership Training." *Personnel Administration:* Vol. 19, No. 5, September–October 1956, pp. 34–41.

A simple, helpful guide outlining the desirable role of the organization and the individual in achieving the maximum executive self-development.

237. "Executive Development." (A symposium by recognized authorities in the field.) *Advanced Management:* Vol. 18, January 1953, pp. 5–36.

A series of papers by top-flight authorities covering the subject, from evidence of need to the execution of techniques. An excellent summary of the basic considerations essential to an understanding of the elements of executive development.

238. "Executive Development." *Chemical and Engineering News:* Vol. 31, March 1953, pp. 1172–1174.

Summary article based on panel discussion by executives from the chemical industry, consultants, and university personnel interested in the field. Represents a balance in views and suggests that the emphasis of greatest importance should be that of assisting executives to develop themselves. A valuable source for program development, ideas, and concepts.

239. GUETZKOW, H., G. A. FOREHAND, and B. J. JAMES. "An Evaluation of Educational Influence on Administrative Judgment." *Administrative Science Quarterly:* Vol. 6, No. 4, March 1962, pp. 483–501.

Reports the differing effects of an executive development program on two groups of government administrators. Authors attribute the behavior changes after the development program to the organization climate.

240. HABBE, S. "Building New Executives." *Conference Board Management Record:* Vol. 12, April 1950, pp. 132–134.

A report of developments in management inventory and development at a time when many companies first embarked on planned programs. Reflects the assumption on which executive development was established when only a small percentage of companies studied had engaged in formal programs.

241. HOUSE, R. J. "Managerial Development is a Game." *Harvard Business Review:* Vol. 41, July 1963, pp. 130–143.

Author presents the importance of change to the success of an executive development program. He outlines basic areas where change and modifying conditions must occur. Provides a fundamental insight into those conditions and circumstances which determine the effectiveness of executive development programs.

242. HOWER, RALPH M., and CHARLES D. ORTH. *Managers and Scientists.* Boston: Harvard University, 1963. 323 pp.

Assesses the specific problems of developing managers to meet the growing administrative needs of research and development functions in organizations. Following an introductory text on administration concept and theory, the book provides a series of illustrative cases drawn from industry.

243. "The Impact of Science on Management in the Future." *Electrical Journal:* Vol. 155, Nov. 11, 1955, pp. 1588–1591.

Deals with the implications of technological change growing out of data-processing upon the selection and training of executives in the future, and suggests that industry can no longer wait for the "born manager" to emerge.

244. JASINSKI, FRANK J. "Adapting Organization to New Technology." *Harvard Business Review:* Vol. 37, No. 1, January–February 1959, pp. 79–86.

This article discusses the problems growing out of the social changes in an organization resulting from a changing technology. Emphasizes the training implications for supervision and management.

245. JENKS, JAMES M. "The Development of Middle Management Executives." *Advanced Management:* Vol. 25, No. 3, March 1960, pp. 23–25.

Author explains the need for middle management development and presents the advantages of in-plant development programs. One such internal approach is described and discussed.

246. JONES, MARGARET L. "Executive Development Takes a New Step." *Dun's Review and Modern Industry:* September 1953, pp. 61–63.

Describes a situation in which the organizational climate provides opportunity for risk-taking and consequent learning by individual supervisors and managers. An example of planned on-the-job training for management development.

247. ———. "How's Your Climate." *Dun's Review and Modern Industry:* October 1953, pp. 70–72.

Article suggests that managers are developed in an organization by the performance of their supervisors and the extent to which they use formal appraisal results in their day-to-day concern to improve the managerial skills of subordinates

248. KEPNER, CHARLES H., and BENJAMIN B. TREGOE. "Developing Decision Makers." *Harvard Business Review:* Vol. 38, No. 5, September–October 1960, pp. 115–124.

A novel and original method of training in decision-making skills is described in the article. Experience appears to demonstrate that the method can help managers acquire new knowledge and skills, and facilitates putting the new skills into practice. The approach allows the trainee to see and evaluate their results more rapidly than with older methods.

249. KIRCHNER, WAYNE K. "Needed: A Return to Reality in Management Selection and Development." *Personnel Journal:* Vol. 42, No. 7, July 1963, pp. 341–345.

Examines formalized processes for selection and development of

managerial personnel. Concludes that attention might be given to providing an environment in which self-development can occur most naturally.

250. MACE, M. L. *The Growth and Development of Executives.* Boston: Harvard University Graduate School of Business Administration, 1950. 200 pp.

The author examines the policies, formal programs, informal approaches, and practices of a group of manufacturing companies and reports his findings and interpretations. The results provide a logical sequence of the essential pattern for executive development. Areas covered include: the requirements of executive positions with emphasis on a procedure for defining management job specifications; appraisal, inventory, replacement tables, and executive personnel files; psychological testing in the selection and development process; planned progression and job rotation; and coaching and counselling. The most incisive chapters deal with the problems of coaching and getting managers to assume their coaching responsibilities. The formal planned executive development program is seen as the device for implementing the development of competent managers in an organization.

251. McGREGOR, DOUGLAS. *The Human Side of Enterprise.* New York: McGraw-Hill, 1960. 24 pp.

In this book the author elaborates on his description of manpower management assumptions in what he calls Theory X and Theory Y. The content is grounded in behavioral science theory and is essential reading for the training specialist who deems his responsibility to be that of influencing favorably the human resources of an organization.

252. MAHONEY, THOMAS A. *Building the Executive Team: A Guide to Management Development.* Englewood Cliffs, N. J.: Prentice-Hall, 1961. 278 pp.

A basic guide to management development, emphasizing the elements which have become normally acceptable in the process: organization analysis, recruiting, appraisal, development, and referral. Covers the reasons for various appropriate actions as well as methods for implementing.

253. MAHONEY, THOMAS A., THOMAS H. JERDEE, and ALLEN N. NASH. *The Identification of Management Potential.* Dubuque, Iowa: William C. Brown Company, 1961. 79 pp.

The authors state that although much attention has been accorded to management development, little is really known about the components of the process. This book reports a study of the identification of management potential. The purpose of the research was to find reliable predictors of managerial effectiveness and to develop a procedure for such prediction. The research design is described in detail.

254. OHMANN, O. A. "Developing Managers in a Functional Type of Organization." *Management Record:* Vol. 22, No. 4, April 1960, pp. 27–30.

The author discusses the procedures used by Standard Oil of Ohio in developing managers. The company, organized on a functional basis, faces problems in this area of development not ordinarily encountered in enterprises utilizing other forms of organization. The article is the last in a series of three. The series provides a brief view of the development of managers in differing organizational types and reports some good "tips" to persons involved in similar acitvities. (Related to 267 and 268, below.)

255. RACE, H. H. "General Electric's Approach to Manager Development."*Personnel Administration:* Vol. 18, No. 6, November 1955, pp. 13–20.

This article describes GE's philosophy, approach, and purposes in the establishment of their Management Research and Development Institute. Major emphasis is given to the research involved in determining how the company might aid managers to develop themselves.

256. RANDALL, R. L. "Get More from Your Training." *Nation's Business:* Vol. 48, June 1960, pp. 42–43, 94–95.

The article lists four considerations that an organization must bear in mind to insure that its outlay for management development courses will bring an optimum return. The article discusses: selecting the right course or courses, selecting the right students, preparing the students, and utilizing the students' knowledge when they return to their jobs.

257. RANDLE, C. WILSON. "How to Identify Promotable Executives." *Harvard Business Review:* Vol. 34, May–June 1956, pp. 122–134.

This report is based on a research project in which three thousand executives were studied to determine the characteristics of promotable executives. Concludes that certain qualities indicate promotability in all executives, while other qualities are useful for distinguishing promotable executives at given management levels or in specified functional areas.

258. REILLEY, E. W., and B. J. MULLER-THYM. "Executive Development Today for Increased Profits Tomorrow." *Personnel:* Vol. 24, May 1948, pp. 401–412.

This article is a fundamental guide for anyone interested in embarking on an executive development program. Outlines patterns for forecasting executive needs, use of position descriptions, identifying strengths and weaknesses for developments by appraisal, and planning for individual development.

259. ROSEN, JHALMAR, and CHARLES G. WESNER. "Motivation in Management." *Journal of Applied Psychology:* Vol. 44, No. 6, December 1960, pp. 386–392.

In the process of establishing a training curriculum for managers, it is important to know what common areas of subject content might be most useful. This study was designed to determine whether or not there is a commonality of motivation among the various levels of management with regard to what managers want from their jobs and the importance they attach to job conditions. The findings point to some *directions* which can contribute to manager training and development.

260. SAMPSON, R. C. "Train Executives While They Work." *Harvard Business Review:* Vol. 31, November 1953, pp. 42–54.

Article contains a plan for organizing supervisory and management training around the assumption that the individual is interested in and capable of self-development. Suggests that a form of on-the-job training is a suitable technique for meeting the development needs of the individual and the management replacement needs of a company.

261. SARGENT, D. S. "Executive Development Program Using Job Rotation." *Personnel Journal:* Vol. 31, No. 11, April 1953, pp. 405–409.

A description of Consolidated Edison's Executive Development Program which relies basically on job rotation to develop the generalists required for top management positions. According to the author, his company's loss of executives through age and disability retirement is balanced by available replacements under age 50, two-thirds of whom are EDP graduates.

262. STEGGERT, FRANK X. "Some Factors Affecting Executive Development." *Personnel Administration:* Vol. 26, No. 3, May–June 1963, pp. 35–45.

Details research which examines several of the basic factors in an organizational climate which influence the effectiveness of executive self-development activities. Studies conducted at University of Chicago Center for Programs in Government.

263. THOMAS, DAVID. "The Case for Planned Development." *Personnel:* Vol. 38, No. 2, March–April 1961, pp. 8–17.

This article makes a claim for planned management development as opposed to a "laissez-faire" approach for generating managerial competence in organizations. Experiences are cited from various companies. A list of items is provided for guidance prior to embarking on a planned program.

264. THOMPSON, WALTER A. "Developing Managers on the Job." *The Business Quarterly:* Vol. 25, No. 1, Spring 1960, pp. 25–33.

The article is based on research done to discover what factors were beneficial and influential in developing managers. This survey was conducted with groups attending a university management training course.

265. TRICKETT, JOSEPH M. "Fulfilling Individual Needs in Management Development." *Personnel:* Vol. 33, No. 6, May 1957, pp. 520–526.

The author provides a series of guiding concepts for use in training managers to coach and assist the development of subordinates. The concepts are drawn from a situation in which the assumptions are made that (1) the individual is responsible for his own development and (2) the boss is responsible for promoting such self-development.

266. ———. "Something New in Management Development." *Journal of the American Society of Training Directors:* Vol. 13, No. 2, February 1959, pp. 3–10.

The author assesses the validity of management development to improve present performance and management development to prepare for higher-level promotions, and concludes that although both are important, primary attention in an organization should be given to the former purpose.

267. VERITY, WILLIAM. "Developing Managers in an Organization in Transition." *Management Record:* Vol. 22, No. 4, April 1960, pp. 23–27.

The author explains the particular conditions in which managers must be developed at Armco Steel Company, an organization in the process of change. Describing the program used presently at Armco, he explains what the program is aimed to do, how the program was adjusted to meet the changing situation in the company, and the policy of the company concerning present and future needs in the area of management development. (Related to 254 and 268.)

268. WELLFORD, R. CARTER. "Developing Managers in a Product-Type Organization." *Management Record:* Vol. 22, No. 4, April 1960, pp. 20–23.

This article is the first in a series of three, all of which are based on positions taken in a discussion entitled "Developing Managers for Decentralized Operations." The author enumerates the problems encountered in developing managers at the Du Pont Company, identified as a product-type organization. (Related to 254 and 267.)

269. WESCHLER, I. R., M. A. KLEMES, and C. SHEPHERD. "A New Focus in Executive Training." *Advanced Management:* Vol. 20, May 1955, pp. 19–22.

The authors have had experience in the use of sensitivity training with executives and report what they believe are the values of

this training method. They concude that "reports from both trainees and co-workers indicate that this method of training does lead to greater human relations know-how." This article is valuable for those who are interested in exploring the clinical approach to training and developing managerial skills.

270. WHITE, WILFORD L. "Small Business Management Development." *Adult Education:* Vol. 10, No. 2, Winter 1960, pp. 85–89.

An account of the management development programs organized and administered under the joint control of the Small Business Administration and the extension divisions of various universities and other organizations. Cost curricula and other program aspects are discussed, and the steps for initiating similar programs are outlined.

271. "Why All the Fuss about Executive Development?" *Chemical Engineering:* Vol. 60, February 1953, p. 248.

This article reports results of a survey of the management development programs of twenty companies engaged in engineering and technically-related operations. The programs of ten companies are described in detail. It is revealed that although purposes are the same for all companies, the individual programs employ techniques and methods to suit the unique character of their organizations.

272. WIORA, A. P., and J. W. TREGO. "An Experiment in Management Development." *Personnel:* Vol. 38, No. 3, May–June 1961, pp. 25–30.

Cites the favorable experience where the line manager initiated and presented a development for his department. Stresses the importance of the manager's interest in subordinate development.

273. ZIMMERMAN, JOHN W., and SEYMOUR LEVY. "Decision Simulation for Top Management Training." *Journal of the American Society of Training Directors:* Vol. 14, No. 5, May 1960, pp. 3–11.

Article describes an executive development program in decision making used by a major firm undergoing organizational decentralization. The program is based on business simulation. Several observations concerning effective managerial decision-making are included.

B. PERFORMANCE APPRAISAL

274. DAFFERN, GEORGE N. *Management in a Changing World.* New York: Simmons-Boardman Publishing Corporation, 1960. 121 pp.

This book is the result of a serious assessment of the manager

development problems in the railroad industry in the U. S. and Canada. The fundamental reasons for concern about managerial competence in the industry are explored and suggestions for a job-oriented appraisal technique are provided. Although written from a railroad industry point of view, the context of the book can be applied generally.

275. FOREMAN, CHARLES W. "Developing Managers for Decentralized Operations." *Management Record:* NICB, Vol. 22, No. 4, April 1960, pp. 19–30.

Summary of a panel discussion assessing current practices in appraisal and development of supervisors and managers in organizations. Panel members take a critical look at management development procedures and conclude that the trend is toward more concern for evaluation of performance by planned objectives.

276. GRAY, C. E. "Appraising Professional Personnel: One Company's Experience." *Personnel:* Vol. 33, No. 5, March 1957, pp. 442–451.

Describes a technique for personnel evaluation based on the concept that evaluation is a continuing process in which appraisers are active participants. The method implements the concept of self-development.

277. KELLEY, PHILIP R. "Reappraisal of Appraisals." *Harvard Business Review:* Vol. 36, No. 3, May–June 1958, pp. 59–68.

The author raises serious doubt that conventional appraisal patterns and devices are effective and useful in the management development process and cites reasons for the doubt. Suggests that an "organizational review" can provide a more realistic approach to performance improvement and salary administration. Major emphasis is on evaluating performance problems and not people alone.

278. KELLOG, MARION S. "New Angles in Performance Appraisal." *American Management Association,* Management Report Number 63. New York, 1961, pp. 93–102.

Recognizing the critical function of appraisal in the manager development process, the author studies the elements involved in a series of workshops in his company. He was able to identify the perceptions of the appraiser and appraisee. The insights gained tend to place emphasis on the appropriate techniques which were found to be effective.

279. LIKERT, RENSIS. "Motivational Approach to Management Development." *Harvard Business Review:* Vol. 37, No. 4, July–August 1959, pp. 75–82.

This article urges a change in the pattern of relationship between supervisor and subordinate in the essential performance appraisal and coaching process. The author cites examples of development

failures growing out of conventional methods. Recommends an approach which provides for goal-setting by manager and subordinate, and evaluation and coaching based upon agreed-upon performance goals and objectives.

280. McGREGOR, DOUGLAS. "An Uneasy Look at Performance Appraisal." *Harvard Business Review:* Vol. 35, No. 3, May–June 1957, pp. 89–94.

A critical assessment of supervisory and management performance appraisals and a recommended plan for a new and different approach. Typical appraisal plans have been built around factors of personality and have resulted in resistance to the coaching interviews by both the appraisee and the boss. McGregor's new approach suggests that stress on agreed-upon performance goals will result in more effective subordinate development and acceptance of the coaching role by the boss.

281. MACHAVER, WILLIAM V., and WILLARD E. ERICKSON. "A New Approach to Executive Appraisal." *Personnel:* Vol. 35, No. 1, July–August 1958, pp. 8–14.

Authors provide an illustration of the use of the field review method for personnel appraisal in which a narrative description rather than the conventional checking form is employed. In this instance the personnel specialist prepares the boss for counseling through role-playing.

282. MAHONEY, THOMAS A., THOMAS H. JERDEE, and STEPHEN J. CARROLL. *Development of Managerial Performance.* Cincinnati: Southwestern Publishing Company, 1963. 67 pp.

Following a brief introduction of some of the recent contributions to management theory, the authors report on a research project dealing with managerial job performance. They contend that important clues to management development are to be found in performance analysis. This is a vital study which opens one more area of empirical evidence for the student of executive and managerial performance.

283. MAYFIELD, HAROLD. "In Defense of Performance Appraisal." *Harvard Business Review:* Vol. 38, No. 2, March–April 1960, pp. 81–87.

The author analyzes accepted concepts about the performance appraisal process at the management level and finds them unconvincing on the basis of his experience. Suggests that the conventional method for appraisal works admirably if appraisers are trained in this critical function and if management, through a process of regularizing and scheduling, requires that periodic appraisals and discussions with subordinates are conducted.

284. PATTON, ARCH. "How to Appraise Executive Performance." *Harvard Business Review:* Vol. 38, No. 1, January–February 1960, pp. 63–70.

Appraisal of performance is an integral part of the management development process. The author outlines a pattern for judging performance on the basis of criteria which relate individual targets to long and short range goals of an enterprise. Samples of planned performance targets are illustrated.

C. *UNIVERSITY PROGRAMS*

285. American Management Association. *Management Education for Itself and Its Employees,* part 1, "Management Education in American Business," by Lyndall Urwick. New York, 1954. 136 pp.

A summary and analysis of college and in-service management education programs, stressing historical development of such programs in the U. S. Constitutes one part of a study conducted under the auspices of The Fund for Adult Education. Valuable source for theories and philosophies which underlie the patterns of management education and training.

286. ANDREWS, KENNETH R. "Reaction to University Development Programs." *Harvard Business Review:* Vol. 39, No. 3, May–June 1961, pp. 116–134.

A comprehensive report on a study conducted to determine the utility for participants of university courses in executive development. Concludes that such programs are an important resource for supplementing company programs. Re-emphasizes the continuing need to improve instruction on the part of universities engaging in such courses and for companies to select men carefully to gain the most value from involvement.

287. ANSHEN, MELVIN. "Better Use of Executive Development Programs and Experience of Companies Sending Executives to Management Training Courses." *Harvard Business Review:* Vol. 33, November–December 1955, pp. 67–74. (Includes Bibliography).

According to this author: "The administrators and faculty members of university-sponsored executive development programs have learned, through observation and discussion, a good deal about management's mistakes in using these programs." The citations which follow are significant in demonstrating that embarking on the use of this training device should be done by a company only after asking these questions: Is it profitable for one company to send men to the programs? How can we improve the selection of men who attend? How should we handle the men who return? How can we appraise what the courses have done for our men? Top manage-

ment does not actually know whether it is getting its money's worth from such programs.

288. ———. "Executive Development: In-Company vs. University Programs." *Harvard Business Review:* Vol. 32, September–October 1954, pp. 83–91.

A careful analysis of the factors the Bell System took into account when determining whether to train their executives at home or send them to university programs. It is suggested that program appraisal results raised the question as to whether in-company programs at this level serve the same objectives as university programs. Important additional questions are raised for those concerned with executive development.

289. BRICKER, GEORGE W., JR. "University Executive Development Programs." *Michigan Business Review:* Vol. 12, No. 1, January 1960, pp. 6–12.

A comprehensive study of executive development programs at 50 or so U. S. and Canadian universities. Discusses methods of instruction, curricula, type and amount of work required, and trends in these areas. Discusses "business games" and other teaching aids. Offers suggestions for best results from development programs.

290. CLEARY, M. D. "Which University Program for Executives?" *American Business:* Vol. 24, No. 7, p. 22.

Describes the factors and criteria which a management must consider as it anticipates sending men to university management training courses. Also lists and discusses those matters which should be taken into account to prepare a man to get the most out of such courses.

291. FIELDEN, JOHN S. "Thinking Ahead: Business Education." *Harvard Business Review:* Vol. 37, No. 6, November–December 1959, pp. 35–192 *passim.*

An excellent summary of some of the major findings of the Ford Foundation (Robert A. Gordon and James E. Howell) and Carnegie Corporation (Frank C. Pierson) studies of business education in U. S. colleges and universities. The basic problems posed, alternative and recommended solutions, and other comments made in the studies are reported.

292. GORDON, ROBERT A. and JAMES E. HOWELL. *Higher Education for Business.* New York: Columbia University, 1959. 491 pp.

A study of American business education. (See also *The Education of American Businessmen,* by Frank C. Pierson, a similar study published in the same year.) In this extensive and critical evaluation of how people are educated for business, the author explores the types of skills and abilities required in business. He concludes

that the following are necessary: analytical ability; judgment; skill in interpersonal relations; the ability to accept responsibility and to make decisions; general administrative skills; breadth and flexibility of mind; imagination; facility in personal communication; and strong personal motivation. This study points up the complexity of the task of evaluating an educational activity, but even more important, it provides a wealth of material for planning and conducting management training programs.

293. HABBE, S. "Executives Go to School (Long-Term Programs at Various Universities)." *Management Record:* Vol. 12, February 1950, pp. 55–56.

Estimates and descriptions of some of the early university programs for training executive personnel. Subsequently, the kind of program described has proliferated across the nation, but the aims and purposes of the originators of the schools for business executives established in the university setting have remained basic.

294. HUNERYAGER, S. G. "An Evaluation of University Executive Programs." *Journal of the American Society of Training Directors:* Vol. 14, No. 3, March 1960, pp. 37–43.

What are the values in university executive development programs? This report reveals that there are advantages as well as disadvantages in sending executives off to college to develop management knowledge and skill. Concludes that companies expect universities to supplement on-the-job development.

295. National Industrial Conference Board, Inc. *Executive Development Courses in Universities.* Studies in Personnel Policy No. 160. New York, 1957. 85 pp.

An analysis of the purposes of university courses for managers and a detailed description of thirty-two such courses in United States and Canadian universities. Each program is identified with respect to course content, admission requirements, cost, and the major teaching-learning process employed.

296. PIERSON, FRANK C. *The Education of American Businessmen.* New York: McGraw-Hill, 1959. 740 pp.

A major study and evaluation of university-college programs in business administration. The author recommends proposed curricula at both the undergraduate and graduate level. Specific subjects such as accounting, finance, marketing, production, personnel management, and industrial relations are discussed together with managerial decision-making "as an organizing concept." The role of business schools, engineering colleges, arts colleges, junior colleges, evening extension programs, and university programs for practicing executives are evaluated. There is also one chapter on company management development programs.

297. POWELL, REED M. "Business Looks at University Executive Development Programs." *Business Topics:* Vol. 10, Autumn 1962, pp. 57–65.

Describes the results of a comprehensive survey of participants' reactions to university sponsored executive development programs. Information was gathered through the use of questionnaires and interviews. Author concludes that such programs have a positive value for the participants.

298. WHITEHILL, A. M., JR. "Executive Training, Harvard Style." *Personnel Journal:* Vol. 29, May 1950, pp. 3–7.

A detailed description of the genesis and growth of the Harvard Advanced Management Program for business executives.

D. MANAGER DEVELOPMENT OF FOREIGN NATIONALS

299. ANSTEY, E. *Staff Reporting and Staff Development.* London: Allen & Unwin, 1961. 96 pp.

This report describes the current state of the art involving management development in Great Britain. Covers methods used in a Civil Service unit and in a major industrial operation.

300. BAKKE, E. WIGHT. *A Norwegian Contribution to Management Development.* Bergen: Fr. Beyer, N.D. 174 pp.

A description of the underlying philosophy, the methods and designs used, and the results of a top-rate executive development program conducted at the Norwegian School of Economics and Business Administration by the Administrative Research Foundation. A thorough analysis is done of the course itself and the milieu in which it was carried out. An interesting report on an important management development program experiment.

301. British Institute of Management. "A Conspectus of Management Courses." Fourth Edition, *Education and Training in the Field of Management.* London: Sir Isaac Pitman & Sons, 1960. 287 pp.

An exhaustive listing and description of programs and facilities for management education in Great Britain. Covers a wide range from short courses to degree offerings at Universities.

302. CUNYNGHAME, J. O. BLAIR. "A Norwegian Contribution to Management Development." *Personnel Management:* Vol. 42, No. 353, December 1960, pp. 265–272.

An evaluation of five courses for top managers at the Norwegian School of Economics and Business Administration. The author concludes that the courses give the student a better working knowledge of the organizational process and makes him more able to understand the problems faced by others in the organization.

303. DUFTY, N. F. "Management Education in Western Australia." *The Manager:* Vol. 28, No. 2, February 1960, pp. 130–131.

Outline of a comprehensive business and management program for low and middle-rank executives. The program described is noteworthy in that at least as much emphasis is placed upon business and management theory as upon applied business subjects.

304. DUSTAN, JANE, and BARBARA MAKANOWITSKY. *Training Manager Abroad.* New York: The Council for International Progress in Management (USA), Inc., 1960. 291 pp.

A brief comment on the scope and nature of management training overseas by governments, companies, consultants and educational institutions and an exhaustive list of sources of information regarding such training in the U. S. and other countries.

305. HARBISON, FREDERICK, and CHARLES A. MYERS. *Management in the Industrial World.* New York: McGraw-Hill, 1959. 413 pp.

A critical analysis of comparative management development needs and practices with particular reference to the problems of industrial development in economically under-developed countries. The authors devote the first part of the book to theories and concepts of management and the remainder to specific reports of management progress in various countries.

306. NEGLEY, GLENN R. "The British Administrative Staff College: Training for Executive Responsibility." *Personnel Administration:* Vol. 25, No. 1, January–February 1962, pp. 35–42.

Author reports the structure, administration, and philosophy of the world famous Henley School for Administrators.

307. PETER, HOLLIS W., and EDWIN R. HENRY. "Steps to Better Selection and Training for Overseas." *Personnel:* Vol. 39, No. 1, January–February 1962, pp. 18–26.

This perceptive article outlines the basic research steps required to improve the selection and training of overseas personnel. Details pertinent factors which bear on job success overseas as well as techniques for gathering information concerning these factors.

308. SHEARER, JOHN C. *High-Level Manpower in Overseas Subsidiaries.* Industrial Relations Section, Department of Economics and Sociology, Princeton University, 1960. 161 pp.

Report of a study of selection and development of managerial personnel with particular reference to Latin American countries. Is concerned with U. S. personnel as well as with nationals of foreign countries. Comments on and evaluates practices of U. S. companies with respect to their handling and training of management personnel in overseas assignments.

309. WAALER, ROLF. *Management Development: A Norwegian Experiment.* Boston, Mass.: Harvard University, Graduate School of Business Administration, 1962. 6 pp.

Reports on the methods used and the results achieved in the process of conducting a series of management development courses in Norway. The courses were based on U. S. experience, blended with the particular needs of the business community of Norway.

310. WELLENS, JOHN. "Giving Youth Its Opportunity." *The Manager:* Vol. 28, No. 8, August 1960, pp. 584–586.

Explaining the increasing need for competent, trained managerial and technical personnel in England, the author calls for a National Industrial Training agency to fill this need.

311. WIKSTROM, WALTER S. *Developing Better Managers: An Eight-Nation Study.* New York: National Industrial Conference Board, 1961. 182 pp.

Report examines the scope and status of manager development in countries experiencing various degrees of industrialization. Descriptions of the state of the art in Chile, France, Germany, Great Britain, India, Italy, Japan, and the United States.

E. LIBERAL ARTS PROGRAMS FOR EXECUTIVES

312. DUDDEN, ARTHUR P. "The Organization Man—As Student." *Personnel Journal:* Vol. 38, No. 8, January 1960, pp. 286–291.

Rather complete description of the management development program initiated between the Bell Telephone System and the Institute of Humanistic Studies for Executives at the University of Pennsylvania. Includes the motives, objectives, and content of the program, plus an evaluation of results.

313. FIELDEN, JOHN. "Educating Tomorrows Executives." *Harvard Business Review:* Vol. 38, No. 6, November–December, 1960, p. 6.

Report of a survey of business executives who were queried about essential education and training for potential industrial managers. Explores the values and limitations of liberal arts education. Concludes that "the problem is not so much one of broad education for future businessmen, as it is one of a business education for men of breadth."

314. GOLDWIN, ROBERT A., and CHARLES A. NELSON. *Toward the Liberally Educated Executive.* White Plains, N. Y.: Fund for Adult Education, 1957. 111 pp.

A series of articles by educators and business executives exploring the need for up-dating executives in the liberal arts to meet the demands of modern management.

315. PECKHAM, M. *Humanistic Education for Business Executives.* Philadelphia: University of Pennsylvania Press, 1960.

A brief description of the liberal education program for incumbent managers conducted by the Bell Telephone Co. at the University of Pennsylvania and an evaluative commentary on the program by the University official who prepared the program. The assumptions and conceptual framework for what was included in the curriculum are described in detail.

F. CRITIQUES OF MANAGEMENT DEVELOPMENT

316. ANDREWS, KENNETH R. "Is Management Training Effective? I. Evaluation by Managers and Instructors," *Harvard Business Review:* Vol. 35, No. 1, January–February 1957, pp. 85–94.

This is the first of a series of two articles concerned with the effectiveness of training programs in the development of managers. Covers the evaluative reactions of managements that have sent candidates to university courses and the university instructors who have taught such courses.

317. ———. "Is Management Training Effective? II. Measurement, Objectives, and Policy." *Harvard Business Review:* Vol. 35, No. 2, March–April 1957, pp. 63–72.

This article, supplementing an earlier one under the same title draws conclusions from studies of management training by social scientists and evaluates these conclusions. It is concerned with the value to participants of both in-company programs and university-sponsored courses for executives.

318. BLANSFIELD, MICHAEL G. "The Untimely Passing of Management Development." *Personnel Journal:* Vol. 39, No. 10, March 1961, pp. 404–408.

Author points out several reasons why Management Development programs fail. States that Management Development is too often concerned mainly with the completion of forms and maintenance of records. He calls for a return to the planned acquisition of knowledge and opportunities for personal growth. He lays out three important concepts which should guide the Training Director in the installation of a management development program.

319. CAMPBELL, RALPH N., and ELIZABETH R. KNOWLTON. *Business Leadership in Air Transportation, Report on American Airlines—Cornell University Cooperation in a Management Development Program.* Ithaca: N. Y. State School of Industrial and Labor Relations, Cornell University, 1960. 77 pp.

A detailed report of a project in management development cooperatively undertaken by a University and a business organization.

The report covers the program itself, how it came into being, its objectives, and its results.

320. COE, ROBERT S. "Common Sense in Manager Development." *Advanced Management:* Vol. 24, No. 11, November 1959, pp. 24–26.

Some current methods of manager development are analyzed and several noteworthy suggestions are made as to careful re-examination of basic methods of training. Objectives and orientation of development programs are also considered.

321. ELLIOTT, JOHN M. "A Checklist for Auditing the Management Development Program." *Personnel:* Vol. 38, No. 4, July–August 1961, pp. 80–83.

The author poses fifteen questions to be used as a starting point for an audit of a management development program.

322. HUNT, NORMAN C. "Second Thoughts on Management Education." *The Manager:* Vol. 28, No. 5, May 1960, pp. 348–353.

An evaluation of the current status of management development. Points out that the post-war years were a seller's market in management education, and that wide variations in quality were offered. Author sees need for improved judgment in the selection and utilization of management courses by organizations.

323. JOHNSON, THOMAS H., JR. "Let's Get Management Development Back on the Track." *The Management Review:* Vol. XLIX, No. 6, June 1960, pp. 16–22.

The author calls for a re-evaluation of the management development function in the business organization. He points out the pitfalls that exist in the major areas of management development, and explains the steps to be taken to avoid these pitfalls. The article is a warning signal that should prove helpful in the examination and evaluation of existing management development programs.

324. LEAVITT, HAROLD J., and THOMAS L. WHISTLER. "Management in the 1980's." *Harvard Business Review:* Vol. 36, No. 6, November–December 1958, pp. 41–48.

A speculative assessment of the impact of technological forces on the managerial skill requirements in business organizations in the next two decades, and the resulting implications on management development requirements.

325. LEVINSON, HARRY. "A Psychological Look at Executive Development." *Harvard Business Review:* Vol. 40, No. 5, September–October, 1962, pp. 69–75.

Examines the reasons why some management development programs fail, and suggests how psychological principles might be put to use by those who become engaged in the development process.

The article addresses itself to some of the limitations of appraisal and coaching, various problems dealing with executive rewards, and to the role which staff men can play in the development process.

326. McMURRY, ROBERT N. "Executive Development: Dollars Down the Drain?" *Dun's Review:* Vol. 76, No. 2, August 1960. pp. 36–38.

The author makes a critical evaluation of management development programs, exposing many faults and fallacies inherent in, and surrounding the executive training programs of many companies. The article points out that many such programs are expected to achieve miracles, and concludes that for the most part, this does not occur. It goes on to enumerate what a good management development program can accomplish if conditions are right. A short but realistic look at current executive development.

327. MASTERSON, THOMAS R., and KENNETH HENNING. "Is Management Development Worth the Cost?" *Advanced Management:* Vol. 25, No. 11, November 1960, pp. 12–15.

The article states that there is a shortage of, and a need for, competent executive and supervisory personnel. A passage is included on how to evaluate and justify the costs of supervisory training programs. The basis for this justification is found in the demands various jobs make on an individual. The value of identification of the individual with the group is analyzed.

328. NELSON, THOMAS H. "Mistakes of the 50's—Opportunities in the 60's for Management Development." *Advanced Management:* Vol. 25, No. 5, May 1960, p. 5.

The article constitutes an evaluation of the problems that have arisen in management development in the past decade and of the potential that management development can realize in the next decade. The author groups these mistakes into five general categories and analyzes the cause for each. The article goes on to identify the conditions that will be faced in the future and the principles that must be adhered to if management development is to contribute to an organization.

329. POCKRASS, JACK. "Executive Development—Semantics or Substance." *Personnel Administration:* Vol. 22, No. 6, November–December 1959, pp. 36–43.

The author asks whether current management development methods can be substituted for simple work experience in the process of developing men to assume leadership and decision-making responsibility. Suggests a reappraisal to determine how much of what is being done is substantive.

330. SCHEIN, EDGAR H. "Forces which Undermine Managerial Development." *California Managerial Review:* Vol. 5, Summer 1963, pp. 23–24.

Perceptive article analyzes several of the factors in an organization which work to block the attitude and performance changes required for effective management development. Author lists and discusses three major "development blocks" and offers suggestions for ways to overcome them.

331. SPIELE, ARENDA J. H. "An Evaluation Study of the 'Effective Executive Leadership Program,' A Seminar on Human Relations in Administration." M.S. Thesis, New York State School of Industrial and Labor Relations, Cornell University, September, 1960. 163 pp.

This study analyzes and evaluates a seminar course on Human Relations in Administration conducted in a university. The author examines the results of interviews with the seminar participants, as well as mail questionnaires sent out to participants who were not interviewed in the evaluation study.

332. "Survey of Executive Development Across the Country." *Modern Industry:* Vol. 3, February 1953, p. 62.

A report of the views of industrial executives, management consultants, and educators on the status of programs designed to improve managerial skill in organizations. Survey questions can be used to assess and evaluate company programs.

333. TAYLOR, ERWIN K. "Management Development at the Crossroads." *Personnel:* Vol. 36, No. 2, March–April 1959, pp. 8–23.

A critical article discussing the relevant factors that lead to the success or failure of management development programs in organizations. Suggests the deep-seated elements which normally are not taken into account when programs are developed.

334. TOUSSAINT, M. N., and F. C. MUNSON. "How Not to Conduct a Managerial Training Program." *Personnel Administration:* Vol. 26, September–October 1963, pp. 12–20.

Relates the events surrounding an unsuccessful executive training program. Analysis of the information presented in this article provides a helpful insight into the prerequisite for successful training.

VII. TRAINING TECHNIQUES AND METHODS

A. CONFERENCE DISCUSSION LEADERSHIP

335. BUSCH, H. M. *Conference Methods in Industry.* New York: Harper, 1949. 107 pp.

What is a conference? What purposes can supervisory training conferences serve? What are the respective roles of the conference leader and conferee? What of the conference as a policy developing device in a company operation? These are typical of the items covered succinctly in this little book.

336. DEAN, RICHARD L. "The Conference Method: Panacea or Paradox?" *Journal of the American Society of Training Directors:* Vol. 13, No. 12, December 1959, pp. 8–15.

A critique of the conference method as a training technique, as an informational medium, and as a problem solving method. Concludes that for those who subscribe to the philosophy of participative management, sound training programs in conference leadership will lead to more rational business decisions.

337. DePHILLIPS, FRANK A. "How to Activate the Quiet Man in the Conference." *Journal of the American Society of Training Directors:* Vol. 14, No. 4, April 1960, pp. 34–40.

Provides a good analysis of the "quiet man" or non-participating member in conferences. Article contains a proposal designed to force nonparticipants to take a more active part in the conference, and provides a plan by which this proposal may be introduced and used.

338. FISHER, W. E. *Conference Leader's Guide.* Bulletin No. 15. Industrial Relations Section, California Institute of Technology, 1948. 28 pp.

This bulletin, in detailed outline form, provides a conference leader with a structure for developing a typical information-giving conference.

339. FRYER, DOUGLAS H., MORTIMER R. FEINBERG, and SHELDON S. ZALKIND. *Developing People in Industry,* chap. 7, pp. 124–127. New York: Harper, 1956.

The authors set forth a rationale for the use of group participative learning techniques for providing instruction in human relations skills and attitudes at the supervisory and management levels.

340. GORDON, THOMAS. "Improving Your Leadership in Discussion Groups." *Adult Leadership:* Vol. 1, No. 11, March 1953, pp. 13–20.

An instructive discussion of attitudes and techniques essential to creating sensitivity in a group learning situation. Emphasizes the role of the leader in achieving the learning ends of the group.

341. GULLEY, HOLBERT E. *Discussion, Conference and Group Process.* New York: Holt, Rinehart and Winston, 1960. 388 pp.

This book is grounded in concepts derived from research in individual participation in group processes and group processes themselves. An example of application and method, presented at a sophisticated level.

342. "Improving Large Meetings: Tool Kit." *Adult Leadership:* Vol. 1, No. 7, December 1952, pp. 14–20.

To be educationally effective, large group meetings require planning and organization. This item covers minutely the essential details which require attention in planning and organizing meetings for training purposes.

343. INGENOHL, INGO. "Conference Leadership." *Journal of the American Society of Training Directors:* Vol. 15, No. 1, January 1961, pp. 46–55.

Emphasis on more recently developed techniques has obscured the need to review the conference leadership device. The author here summarizes and brings up to date information about various types of conferences and their uses in the organizational setting.

344. "Leading Discussion." *Adult Leadership:* Vol. 1, No. 10, March 1953. 33 pp.

Current emphasis on discussion leadership in the informal discussion environment makes it essential to appreciate the concepts involved. Several authors, including Nathaniel Cantor, have contributed to this issue of *Adult Leadership* and state the case for learning at the adult level in terms of group dynamics. Although no bridge is provided here to take the trainer into the industrial field where he may need to operate, the articles do illuminate the principles which proponents of the values of informal discussion hold important.

345. LEVINE, JACOB and JOHN BUTLER. "Lecture vs. Group Decision in Changing Behavior." Group Dynamics, Research and Theory. Chicago: Row, Peterson, and Company, 1960. 825 pp.

Describes experimental evidence that learning by supervisors results more effectively from group participative instructional method than from the use of the lecture.

346. MAIER, NORMAN R. F. *Problem-Solving Discussions and Conferences.* New York: McGraw-Hill, 1963. 261 pp.

Covers recent research and experimentation by the author dealing with improving the effectiveness of the leader's group problem solving and decision making performance. Discusses how principles of group behavior may be used by the conference leader.

347. MAIER, NORMAN R. F., and RICHARD H. MAIER. "An Experimental Test of the Effects of 'Developmental' Versus 'Free' Discussion on the Quality of Group Decision." *Journal of Applied Psychology:* Vol. 41, No. 5, October 1957, pp. 320–323.

Reports a study of two varying techniques under the general heading of unguided conference discussion.

348. QUINN, JOHN. "Emotional Aspects of Training Discussion Leaders." *Personnel:* Vol. 36, No. 2, March–April 1959, pp. 68–77.

Most participants in a discussion leadership training course come to the session hampered by feelings of self-consciousness and dependency. This article describes a training program designed to minimize these feelings in the process of learning conference leadership techniques.

B. SENSITIVITY TRAINING

349. ARGYRIS, CHRIS. "A Brief Description of Laboratory Education," "In Defense of Laboratory Education," and "A Comment on George Odiorne's Paper." *Journal of the American Society of Training Directors:* Vol. 17, No. 10, October 1963.

These items report the positive portion of a debate on sensitivity training and the laboratory training device. The author makes claims for the validity of the method and cites research findings and his own experience to support his position.
The article should be read in context with the Odiorne reference 361.

350. BARNLUND, DEAN C., and FRANKLYN S. HAIMAN. *The Dynamics of Discussion.* Boston: Houghton Mifflin, 1960. 461 pp.

The authors identify discussion as socially purposeful communication between two or more people. Unlike typical books on discussion, this book draws at considerable depth on the original source ideas from John Dewey and Kert Lewin and the elaborators of their point of view. A prerequisite for appreciating the characteristics of sensitivity training.

351. BASS, BERNARD M. "The Management Training Laboratory." *Advanced Management:* Vol. 25, No. 7, July 1960. pp. 11–16.

The author discusses the importance of the function of interaction in groups, and lists the factors that influence interaction. The body of the article is concerned with the specific problems which are found in the group interaction that occurs in formal organizations, and how a soundly-established, well-run management training laboratory can solve these problems. An analysis of this new training method is included, as well as a commentary on the potential of this method.

352. ———. "Mood Changes During Training Laboratory." *Journal of Applied Psychology:* Vol. 46, No. 5, 1962, pp. 361–364.

Author summarizes the emotional changes which occurred to a management group engaged in sensitivity training. A check list designed to measure any shift in feelings was administered five different times during the ten-day laboratory experience.

353. BIDWELL, ALVIN C., JOHN J. FARRELL, and ROBERT R. BLAKE. "Team Job Training—A New Strategy for Industry." *Journal of the American Society of Training Directors:* Vol. 15, No. 10, October 1961, pp. 3–23.

An exhaustive description of a training method in which the operating personnel team with the training functions to provide more job-related training. Utilizes essential components of sensitivity device to assure constructive involvement of the learner in the process of training.

354. BLAKE, ROBERT R., and JANE SYRGLEY MOUTON. "The Developing Revolution in Management Practices." *Journal of the American Society of Training Directors:* Vol. 16, No. 7, July 1962, pp. 29–52.

Following an analysis of developments in management theory, the authors provide a reconciliation between production-oriented and human relations oriented styles of supervision. The concept of the "managerial grid" is the basis for analysis, and laboratory training is the suggested device for developing managerial skill to achieve production while recognizing human values in the interaction process at the work-place.

See also by the same authors:

"Job Team Training: A New Strategy for Industry, *Journal of the American Society of Training Directors,* October 1961.

"How Executive Team Training Can Help You," *Journal of the American Society of Training Directors,* January 1962.

"Headquarters—Field Team Training For Organizational Improvement," *Journal of the American Society of Training Directors,* March 1962.

355. BLANSFIELD, MICHAEL G. "Depth Analysis of Organizational Life: Sensitivity or Laboratory Training as a Tool for Encouraging Individual Development." *California Management Review:* Vol. 5, Winter 1962, pp. 29–42.

In this case history a firm employed sensitivity training principally to achieve organizational development, with significantly positive results.

356. ———. "Inside the Laboratory Trainer." *Journal of the American Society of Training Directors:* Vol. 14, No. 6, June 1960, pp. 20–25.

Describes the appropriate role of the leader in the accomplishment of sensitivity training group purpose.

357. BRADFORD, LELAND P. *Group Development.* Washington: National Training Laboratories, National Education Association, 1961. 106 pp.

Selected readings by authors who are deeply committed to the concept that there is validity to sensitivity training and laboratory training as a means for achieving effective group decisions in the discussion process. This series follows four other previously published by NTL:

Group Development—L. P. Bradford, Editor

Leadership in Action—G. L. Lippit, Editor

Human Forces in Teaching and Learning—L. P. Bradford, Editor

Forces In Community Development—Dorothy and H. Hurtis Mial, Editors.

Taken together, these volumes reflect the purposes and basic philosophy of NTL.

358. CANTOR, N. F. *Dynamics of Learning.* Buffalo, N. Y.: Foster and Stewart, 1946. 282 pp.

The author approaches the development of leadership in a work-oriented environment from a psycho-sociological point of view. He stresses the functions of status and power in the organizational hierarchy and suggests that changes can be achieved mainly through modification of the behavior of managers. Examples of situations describe the methods for achieving behavioral change in the manager training process.

359. MILL, CYRIL R. "A Theory for the Group Dynamics Laboratory Milieu." *Adult Leadership:* Vol. 11, No. 5, November 1962, p. 133.

A critical analysis of the psychological processes involved in Sensitivity Training.

360. National Training Laboratory in Group Development. *Report of the Second Summer Laboratory Session,* Bethel, Maine, June 13–July 3, 1948. Bulletin No. 3. National Education Association and Research Center for Group Dynamics, 1948. 136 pp. ("Clinic on Role-Playing with Adults," pp. 39–43.)

The impact of "sensitivity" training with its attendant processes of "involvement" in learning has left a mark on training methods at the adult level. These sections of the NTL Bethel report of 1948 are essential reading for anyone who plans to embark on this clinical and diagnostic approach to industrial training. Major value lies in the fact that these are reports direct from Bethel and not warmed-over interpretations of the educational method practiced there.

361. ODIORNE, GEORGE S. "The Trouble with Sensitivity Training." *Journal of the American Society of Training Directors:* Vol. 17, No. 10, October 1963, pp. 9–21.

A penetrating and critical analysis of the assumptions and methods of laboratory training. The author presents criteria for evaluating the processes of sensitivity training and concludes that the evidence based on these criteria does not add up to the claims of validity for the method as a training tool for managerial development. The article should be read in context with the Argyris paper, reference 349.

362. WESCHLER, I. R., M. A. KLEMES, and C. SHEPHERD. "A New Focus in Executive Training." *Advanced Management:* Vol. 20, May 1955, pp. 19–22.

The authors have had experience in the use of sensitivity training with executives and report what they believe are the values of this training method. They conclude that "reports from both trainees and co-workers indicate that this method of training does lead to greater human relations know-how." This article is valuable for those who are interested in exploring the clinical approach to training and developing managerial skills.

C. SIMULATION AND BUSINESS GAMES

363. COHEN, K. J., *et al.* "The Carnegie Tech Management Game." *The Journal of Business:* Vol. 33, No. 4, October 1960, pp. 303–321.

Management games have been designed to serve broad and limited purposes in manager training. This particular game, developed by faculty members at the Graduate School of Industrial Administration at Carnegie Tech, is claimed to provide both complexity and realism in the situation embracing the game. The authors describe the educational and research possibilities they tried to build into the device.

364. COHEN, K. J., and E. RHENMAN. "The Role of Management Games in Education and Research." *Management Science:* January 1961, pp. 131–166.

An excellent summary of the "state of the business game art." Outlines past, present and future use of business games in both industrial training and social science research purposes. Includes a detailed description of several games and suggests improvements.

365. GREENE, JAY R., and ROGER L. SISSON. *Dynamic Management Decision Games.* New York: John Wiley & Sons, 1959. 84 pp.

Seven management decision games which do not require use of electronic competence are included in this volume. Chapters on how to construct, how to direct, and how to modify business games precede the games themselves. Player instructions, referee instructions and background data are included with each game.

366. GREENLAW, PAUL S., *et al. Business Simulation: In Industrial and University Education.* Englewood Cliffs, N. J.: Prentice Hall, Inc., 1962. 356 pp.

Describes the purposes and historical origins of simulation as a business training device. Illustrates games which may be utilized for training at the college and company levels.

367. HERDER, JOHN H. "Do-It-Yourself Business Games." *Journal of the American Society of Training Directors:* Vol. 14, No. 9, September 1960, pp. 3–8.

After introductory comments concerning business games in general, the article provides a detailed description of the basic steps to be taken in establishing and utilizing non-computer business games in one's own particular situation. Emphasis is placed on stimulating the participants by simulating the conditions encountered at "the heart of decision-making."

368. KILIBEE, JOEL M., CLIFFORD J. CRAFT, and BURT MANUS. *Management Games, a New Technique for Executive Development.* New York: Reinhold Publishing Corporation, 1961. 347 pp.

This book enthusiastically supports the games technique as a management development device. Suggests that it can be used for operations research, problem solving, executive testing, as well as for executive education. Half of the book is devoted to six detailed descriptions of industry games.

369. McKENNEY, J. L. "Evaluation of a Business Game in an MBA Curriculum." *Journal of Business:* Vol. 35, July 1962, pp. 278–286.

Author describes the utilization and evaluation of a business game as an adjunct to courses in the MBA curriculum at Harvard Uni-

versity. The evaluation information presented by the author indicates that business gaming did bring out interrelationships of functional decisions within a firm and aid in developing the art of planning.

370. McMURRAY, FRED R. "Combining Simulation, Administration Science and Group Dynamics." *Journal of the American Society for Training Directors:* Vol. 15, No. 5, May 1961, pp. 5-13.

Detailed description of a manager training experiment integrating computer simulation, an administrative science course, and a group dynamics laboratory. Evidence demonstrated that the combination of devices produced an effective learning situation.

371. PLATTNER, JOHN W., and LOWELL W. HERRON. *Simulation: Its Use in Employee Selection and Training.* Management Bulletin No. 20, American Management Association, New York. 21 pp.

A detailed description of the origin and conceptual structure of a managerial selection and training device for college student hired during the summer preceding graduation. The exercise simulates as much as circumstances permit of the manufacturing plant managers job in the company. Results in trial runs are reported to be the basis for optimism about the technique.

372. PORTER, GEORGE W. "Learning Through the Use of Small Games and Puzzles." *Journal of the American Society for Training Directors:* Vol. 15, No. 3, March 1961, pp. 13–21.

Examples of games utilized in the learning process are provided in this article. Emphasizes that since the main learning comes from feedback and discussion of data produced and from intense participant involvement, careful attention must be given to making learning rather than gaming, the prime consideration.

373. STANLEY, JOHN D. "Management Games: Education or Entertainment?" *Personnel Journal:* Vol. 41, No. 1, January 1962, 15 pp.

Evaluates the simulation device as a means for personnel testing and training. Concludes that gaming is another useful method for organizational training in the company training program.

374. STEINMETZ, LAWRENCE L. "Management Games: Computer Versus Non-Computer." *Journal of the American Society of Training Directors:* Vol. 16, No. 9, September 1962, pp. 38–45.

Comparison of learner responses to two types of business games training applications. The study demonstrates elements to take into account when choosing the method to be utilized.

375. THORELLI, H. B., *et. al.* "International Operations Simulation at the University of Chicago." *Journal of Business:* Vol. 35, July 1962, pp. 287–297.

Describes the INTOP business game developed for the training of managers in international business problems. The authors feel that the game, which is programmed on a Univac I-III, has substantial benefit both as a general training device and a research instrument.

376. VANCE, STANLEY. *Management Decision Simulation.* New York: McGraw-Hill, 1960. 50 pp. and worksheets.

A detailed description of a non-computer game for management decision simulation. No attempt is made to justify the training method, but full attention is given to the details of organizing, planning, and executing the procedure to be followed in this particular game. Worksheets and other materials and information are provided for the game in this one source.

377. WIKSTROM, WALTER S. "The Serious Business of Business Games." *Management Record:* Vol. 22, No. 2, February 1960, pp. 6–8, 24–25.

The business game technique of training is rather completely described, and the benefits and limitations of the technique are discussed.

D. ROLE PLAYING

378. ALVIN, ROBERT. "Acting Course for Salesmen?" *Sales Management:* Vol. 84, No. 2, January 15, 1960, pp. 90–92, 94–95.

In evaluating their salesmen, one insurance company discovered that much of their salesmen's delivery sounded canned and mechanical. A drama coach was called in, to set up an acting course for the salesmen to facilitate easier identification with their roles. The article explains how the course was set up and taught, and the results that were forthcoming. A brief, but provocative article.

379. BOTT, ROBERT. "Role Playing in the Raw (Part 2)." *Journal of the American Society of Training Directors:* Vol. 14, No. 1, January 1960, pp. 31–32.

The author describes a training method used at Dow Corning Corp., where participants are put into role-playing situations without their knowledge. After experiencing the controlled situation for a period of time, participants are informed of its contrived nature. An analysis and discussion of the role-played topic under consideration then follows, based on the participants' own behavior and reactions in the controlled situation.

380. CORSINI, Raymond J. "Role-Playing: Its Use in Industry." *Advanced Management:* Vol. 25, No. 2, February 1960, pp. 20–23.

In this article the author presents the general purposes of, and some of the leading techniques employed in, role-playing in indus-

try. Concludes by citing some of the current applications of this method, and his reasons for believing that role-playing will be more widely used in the future.

381. FRENCH, J. R. P., Jr. "Role-Playing as a Method of Training Foremen." *Human Factors in Management,* Schuyler Dean Hoslett, ed. New York: Harper, 1946, pp. 99–116.

Compared with other methods of training foremen to handle interpersonal relations, e.g., reading, lectures, and conferences, the role-playing method has a number of distinctive characteristics. These characteristics are illustrated, identified, and defined in this paper.

382. LIPPITT, R. "The Psychodrama in Leadership Training." *Sociometry:* Vol. 6, August 1943, pp. 286–292.

The psychodrama or role-playing training technique is recommended as an adequate substitute for real experience at the supervisory training level. Illustrations are drawn from social work experiences.

383. MAIER, NORMAN R. F., ALLEN R. SOLEM, and AYESHA A. MAIER. *Supervisory and Executive Development.* New York: John Wiley, 1957. 330 pp.

Case examples of multiple and single role-playing situations and a situation involving the skit-completion technique. Detailed instructions are provided for the conference leader to use the technique in supervisory or executive training.

384. MAIER, NORMAN R. F., L. RICHARD HOFFMAN, and LEONARD M. LANSKY. "Human Relations Training as Manifested in an Interview Situation." *Personnel Psychology:* Vol. 13, No. 1, Spring 1960, pp. 11–30.

A detailed report of a study designed to determine whether the behavior of trainees in a role-playing situation could be improved through experience in a human relations training course. The role-playing experience is described as well as the research design. Results are not conclusive but suggest that time spent on involvement in role-playing contributes to more effective behavioral change.

385. "Sixty-four Hints to Help You Make Role-Playing Work." *Factory Management and Maintenance*: Vol. 112, January 1954, p. 282.

A list of suggestions about the administration of role-playing in in-service training derived from actual experience.

386. SOLEM, ALLEN R. "Human Relations Training: Comparison of Case Study and Role Playing." *Personnel Administration:* Vol. 23, No. 5, September-October 1960, pp. 29–37.

An empirical study of the advantages of case method and role-playing used alone and in combination in the training process. Author concludes that the two methods furnish different training experiences for participant with case study emphasizing factual considerations and role-playing emphasizing emotional and skill factors. Thus used in combination, role-playing can create a situation and case study can be employed to discuss and analyze facts involved in the particular learning situation.

E. CASE STUDY TECHNIQUES AND INCIDENT PROCESS

387. ANDREWS, KENNETH R. "Executive Training by the Case Method." *Harvard Business Review:* Vol. 29, September 1951, pp. 58–70.

Describes and evaluates two company experiments in the use of cases for supervisory and management training. Emphasizes the individual characteristics of the two programs, concluding that the case method must be adapted to the unique circumstances of particular organizations. Procedural techniques are identified and described.

388. BROWN, MARGARET M. "Course for Case-Study Leaders." *The Manager:* Vol. 28, No. 1, January 1960, pp. 61–62.

Brief summary of the format and some of the results of a case-study course carried out by the British Institute of Management. Some suggestions for improving the course are also included.

389. MARSHALL, DONALD M. "The Incident Process of Supervisory Training." *Personnel:* Vol. 31, September 1954, pp. 134–140.

Description of objectives and techniques employed in a company experience with the incident process in supervisory training. Outlines program pattern in detail and presents sample incidents.

390. PHILLIPS, SIDNEY H. and THORNE S. FOSTER. "Self-Development Training for Foreman: A Program for Participation and Motivation." *Personnel Journal:* Vol. 41, No. 9, October 1962, pp. 445–448.

Describes a case-method approach to supervisor training and suggests that the device capitalizes on individual motivation to improve supervisory skill.

391. PIGORS, PAUL and FAITH PIGORS. *Caste Method in Human Relations.* New York: McGraw-Hill, 1961. 413 pp.

An incisive description of the case method and particularly the Incident Process as its use has developed in the hands of the authors. This book is of particular value to those concerned with supervisory and middle management training.

392. ———. *The Incident Process: Learning by Doing.* M.I.T. Department of Economics and Social Science, Publications in Social Science, Series 2, No. 46. 8 pp.

A detailed description of the procedures developed by the authors for pursuing this particular application of the case method. This material is an excellent introduction to the application of the Incident Process to training in organizations.

393. STONE, SAMUEL I. "The Incident Process." *Journal of the American Society of Training Directors:* Vol. 13, No. 3, March 1959, pp. 17–26.

Describes the incident process and notes the role of the observer-reporter from an actual management training experience. Provides full details about the conduct of the training session.

394. U.S. Civil Service Commission. *Index to Supervisory Case Studies.* Personnel Methods Series No. 8. Washington: G.P.O., 1958. 23 pp.

An index to case studies used in training. Lists individual case studies with title, short description, and source by subject areas; motion pictures and publications containing case histories and short descriptions of these in most cases are also indexed.

F. PROGRAMMED LEARNING

395. ABMA, JOHN S. "The Development and Evaluation of a Programmed Training Course for Sales Personnel." *Journal of the American Society of Training Directors:* Vol. 16, No. 10, October 1962, pp. 20–29.

Reports a study in a department store to evaluate effectiveness of lecture-demonstration training method versus programmed instruction. In the latter a comparison was made of the value of teaching machines and a simple device, a program envelope. Each is carefully described.

396. BOEHM, GEORGE A. W. "Can People Be Taught like Pigeons?" *Fortune:* Vol. LXII, No. 4, October 1960, pp. 176–180.

An interesting, provocative article on programmed teaching. The article explains the concept of programmed teaching and analyzes the two most prevalent schools of thought on the subject: the "conditioning" approach of B. Frederic Skinner, and the "non-conditioning" approach of Norman A. Crowder. Examples of programmed teaching are included, and the use of teaching machines is illustrated.

397. CHRISTIAN, ROGER W. "Guides to Programmed Learning." *Harvard Business Review:* Vol. 40, No. 6, November–December 1962, pp. 36–66.

Provides a useful starting point for the company considering programmed instruction. Highlights the information available in the area and includes a brief basic bibliography.

398. DOLMATCH, THEODORE B., *et al. Revolution in Training: Programmed Instruction in Industry,* American Management Association Report Series, No. 72. New York, 1962. 160 pp.

After a brief primer on programmed learning and a report on industrial application of the process, a series of experiences of various companies is recited, covering both machine and nonmachine applications.

399. GEER, LEROY N. "A Study of Comparative Methods of Teaching Basic Electricity." *Journal of the American Society of Training Directors:* Vol. 16, No. 12, December 1962, pp. 17–24.

An experimental study to determine the comparative learning advantage from using programmed instruction in various forms in a situation where knowledge of electricity is essential for work performance.

400. HUGHES, J. L. "Industrial Applications of Teaching Machines." *Journal of the American Society of Training Directors:* Vol. 15, No. 7, July 1961, pp. 30–40.

A practitioner who is also a theorist comments on essential considerations which need to be taken into account with respect to programming techniques, costs of preparation of programs, and the kinds of hardware associated with the teaching machine process.

401. HUGHES, J. L., and W. J. McNAMARA. "A Comparative Study of Programmed and Conventional Instruction in Industry." *Journal of Applied Psychology:* August 1961, pp. 225–231.

Reports the results of an experiment designed to test the effectiveness of programmed learning in industrial training situations. The experimental group consisted of computer service trainees. Significant gains in achievement and reduction in training time were recorded for the trainees receiving programmed learning.

402. ———. "The Potential of Programmed Instruction." *Personnel:* Vol. 38, No. 6, November–December 1961, pp. 59–67.

The authors point to experiences in industry which demonstrate the basic value of programmed learning for employee training at various levels. Consideration is given to how programmed instruction helps to resolve the problems growing out of (1) shortage of qualified instructors (2) difficulties encountered in assembling training groups because of shift work, and (3) need to provide for training of employees in widely scattered locations. In addition, the article deals with methods for preparing programs.

403. LEVINE, L. STANLEY, and LEONARD C. SILVERN. "The Evolution and Revolution of the Teaching Machine." *Journal of the American Society of Training Directors:* Part I, Vol. 14, No. 12, December 1960, pp. 4–16.

Describes and elaborates on the conceptual scheme on which programmed learning and teaching machines are based. Attention is paid to the origins from which the concept is derived and the historical developments which have made contributions. Various machines are described in detail. An important section is devoted to lesson planning, with special emphasis on learning laws as they apply to developing training courses.

404. ———. "The Evolution and Revolution of the Teaching Machine—Part 2."*Journal of the American Society of Training Directors:* Vol. 15, No. 1, January 1961, pp. 14–27.

Traces the theoretical origins of the teaching machine and programmed learning and notes that content, method and the mechanism are essential elements in effective teaching machine instruction.

405. LIPPITT, GORDON L., and WAYNE N. SCHELLE. "Training Directors' Attitudes Toward Programmed Instruction."*Journal of the American Society of Training Directors:* Vol. 16, No. 11, November 1962, pp. 9-17.

Reports a survey of training specialists in organizations to determine current use of and attitudes toward programmed instruction. The survey shows a low level of use but a high level of expectation with respect to the potential of automated teaching.

406. LUMSDAINE, A. A., and ROBERT GLASER. *Teaching Machines and Programmed Learning.* Washington, D. C.: National Education Association, 1960. 723 pp.

A compilation of authoritative contributions for an understanding of theoretical concepts and applications of programmed learning and the teaching machine. The compilers have brought under one cover an exhaustive array of historical and current information on the subject. In two appendices extensive references are provided to cover almost every conceivable application of teaching machine technology.

407. LYSAUGHT, JEROME P. "Programmed Learning and Teaching Machines in Industrial Training." *Journal of the American Society of Training Directors:* Vol. 15, No. 2, February 1961, pp. 8–13.

A description of how one company has experimented with and utilized programmed instruction for improving employee training at the work-skill and supervisory levels.

408. ———. "Programmed Learning and Teaching Machines in Industrial Training—Part 2." *Journal of the American Society of Training Directors:* Vol. 15, No. 6, June 1961, pp. 13–20.

A description of the considerations taken into account by Kodak in the process of setting up methods, techniques and devices in that organization. Covers experiments with devices including programmed books and various machines.

409. ROE, ARNOLD. "Research on Teaching Machines and Programmed Learning." *Journal of Engineering Education:* Vol. 52, No. 7, March 1962, pp. 439–447.

This well-documented article presents research information which bears on seven critical areas in the development of a program and application of that program to a learning situation. Author draws heavily from engineering and educational concepts.

410. ROSEN, NED A., and EMIL A. MESICS. "Programmed Instruction: What It Is and Where It Is Going." *The Business Quarterly,* University of Western Ontario, School of Business Administration, Vol. 28, No. 2, Summer 1963, pp. 39–48.

A non-technical discussion of the theoretical origins of programmed learning, an assessment of its application to learning situations in the work environment and a description of the several devices utilized by the method. Attention is also given to the possibilities and limitations of this instructional method.

G. *MISCELLANEOUS*

411. AGUILAR, F. J. "Case of the Earmarked Executives." *Harvard Business Review:* Vol. 41, November–December 1963, pp. 6–8.

Author perceptively discusses the concepts and operations involved in utilizing "junior boards" as a training device. Using a case study as a starting point, four experts (one from academic life and three from industry) present their views. An excellent review of the problems and potentials in junior boards.

412. BELLOWS, ROGER. "The Management of Learning: I. Theory and Practice" *Personnel Administration:* Vol. 23, No. 1, January–February 1960, pp. 21–28.

An overview of learning theory—brief mention of some of the earlier beliefs, somewhat more detailed examination of contemporary theories and principles. Touches upon the trial and error theory of Thorndike, the conditioning theories of Pavlov and Guthrie, the reinforcement theory of Hull, and the *Gestalt* (perception of relationship within the total situation) theories of Tolman and others. Concludes with discussion of group dynamics as it affects motivation and learning.

413. DOWLING, W. ERNEST. "Interview Training for Pre-Retirement Planning." *Journal of the American Society of Training Directors:* Vol. 15, No. 11, November 1961, pp. 38–51.

Describes a company program designed to train supervisors and managers to handle the critical aspects of planning for employee retirement. Recognizes the psychological factors which influence employee attitudes toward retirement and outlines a method for doing something about them.

414. FINN, MELVIN. "Correspondence Training for Many Civilian Employees." *Journal of the American Society of Training Directors:* Vol. 14, No. 3, March 1960, pp. 12–15.

Author's opinions concerning the desirability of correspondence training for civilian employees of the Navy. Article is based on a study made on a group of Naval employees, and discusses the essentials of establishing and maintaining this program.

415. GIBSON, GEORGE W. "A New Dimension for 'In Basket' Training." *Personnel:* Vol. 38, No. 4, July–August 1961, pp. 76–79.

Describes a motion picture technique developed by the Harvard Business School which adds the hitherto missing elements of work pressure and interruption to the in-basket training device.

416. JUDICE, P. F. "Screen Test for Salesmen." *Sales Management:* Vol. 91, July 5, 1963, pp. 57–58.

Describes the unique use of a short film which forms the basis of a self help training program at Reynolds Metals.

417. MAIER, NORMAN R. F. *Principles of Human Relations.* New York: John Wiley, 1955. 474 pp.

This book deals with learning processes involving individual participation in group decision at the adult level in the typical work environment. It is assumed that improved human relations results and better morale will come from the use of a democratic style of leadership. The author sets forth a method for achieving a modicum of free discussion by role-playing. The important role of the conference leader in reaching group decision is emphasized. Provides a wide variety of illustrative cases with roles identified for discussion application.

418. NICHOLS, RALPH G., and LEONARD A. STEVENS. "Listening to People." *Harvard Business Review:* Vol. 35, No. 5, September–October 1957, pp. 85–92.

Discusses the results of several studies concerned with the skill involved in listening and its effect on learning. Arrives at conclusions and recommendations for integrating the skill into management training.

419. SIEGEL, ARTHUR I., MILTON RICHLIN, and PHILIP FEDERMAN. "A Comparative Study of 'Transfer Through Generalization' and 'Transfer Through Identical Elements' in Technical Training." *Journal of Applied Psychology:* Vol. 44, No. 1, February 1960, pp. 27–30.

The relative effectiveness of generalized theoretical training and specific applied training is studied with respect to three different technical jobs. Criteria and results are presented and discussed, and statistical data furnished.

420. STATON, THOMAS F. *How to Instruct Successfully*. New York: McGraw-Hill, 1960. 291 pp.

Comprehensive chapters dealing with the lecture, demonstration—performance, group discussion, and role-playing of particular value to the new instructor who is drawn into the training function from his job specialty.

421. "Students Become Plant Managers." *Journal of College Placement:* Vol. 22, February 1962, pp. 24–27.

Article describes how Procter and Gamble provides college students with a realistic look at manufacturing management. Students, employed for the summer, become Plant Managers in the week long MATRIX business simulation game. This provides a "close to reality look" for students, aids them in career planning, and the company in selection. (Refer also to no. 321.)

422. WICKSTROM, LEROY A., and DONALD H. KING. "Teaching PERT Project Network Techniques." *Journal of the American Society of Training Directors:* Vol. 15, No. 12, December 1961, pp. 28–49.

A profusely illustrated article describing a pattern for teaching statistical analysis techniques as a managerial tool. Includes a glossary of PERT terms and an applicable mathematical formulation.

VIII. AUDIO VISUAL AIDS

423. BEATTS, PATRICK M. *Visualizing the Abstract.* Holyoke, Mass.: Technifax, 1956.

A small booklet devoted to current knowledge in the field of visual aids with particular reference to the advantages of reproduction in color.

424. CORRIGAN, ROBERT E. "Automated Instructional Methods." *Journal of the American Society of Training Directors:* Vol. 14, No. 4, April 1960, pp. 11–18.

Discussion of the problems and requirements to be encountered in training in the present and the future, and the ways in which automated instructional methods will help to satisfy these requirements. Comprehensive coverage of the methods, principles, and devices used in this mode of instruction.

425. CROWDER, NORMAN. "The Tutor." *Journal of the American Society of Training Directors:* Vol. 14, No. 5, May 1960, pp. 12–17.

Article provides a description of the "Tutor," a recently developed teaching machine. Author claims that the machine "is capable of teaching any subject which can be treated on the printed page or in motion pictures."

426. DALE, E. *Audio Visual Methods in Teaching.* New York: Dryden Press, 1946. 546 pp.

Although this book is primarily designed for use by elementary and secondary school teachers, it contains enough about basic audio-visual techniques to be useful to the industrial training specialist. Divided into three parts, it covers (1) theory of audio-visual materials, (2) examples of audio-visual materials, and (3) audio-visual methods. Source book for a variety of training applications at all levels.

427. EXTON, W., Jr. *Audio-Visual Aids to Instruction.* New York: McGraw-Hill, 1947. 344 pp.

Training at the skill and attitude level is accelerated through the utilization of visual and audio aids. These devices must be tailored to fit the special requirements of the training for which they will be used. Here is a book from which development and application methods and techniques can be derived by anyone faced with the problem of making and using films, slides, graphic materials, recordings, models, etc.

428. "Film Textbook Builds Talent Pool at Armco." *Business Week:* No. 1584, Jan. 9, 1960, pp. 56–60.

Describes innovation of Armco Steel Corporation to put entire

"principles of management" training program on film. Conferences used to supplement the film series, instead of films supplementing discussion.

429. GIBSON, GEORGE W. "The Filmed Case in Management Training." *Harvard Business Review:* Vol. 35, No. 3, May–June 1957, pp. 123–130.

Describes and evaluates five management training film projects. Cites the limitations and advantages of filmed cases at the management level and concludes that as a basis for group discussion the technique holds promise. Stresses that selection of films and adapting them for such use is all-important.

430. HAAS, K. B., and H. Q. PACKER. *The Preparation and Use of Visual Aids.* New York: Prentice Hall, 1950. 236 pp.

The effective use of audio-visual aids in learning requires that the instructor be skilled in the use of a variety of appropriate devices and media. The book covers a wide variety of knowledge and skill essential to anyone who needs to choose audio-visual materials to supplement instruction.

431. LIPSTREU, OTIS. "The Slapboard Is for Adults, Too!" *Journal of the American Society of Training Directors:* Vol. 12, No. 3, March 1958, pp. 21–23.

Article reports tried and effective techniques for utilizing the slapboard in supervisory and management training applications.

432. MOSER, GEORGE V. "Use of the Blackboard in Leading a Conference." *Management Record:* Vol. 22, No. 1, January 1960, pp. 17–19.

The advantages of using a blackboard in discussion-type training are cited, followed by a list of suggestions for making the most effective use of this generally available device.

433. *100 Selected Films in Economic Education.* Joint Council on Economic Education, New York, 1960. 34 pp.

A carefully selected list of films covering a variety of subjects appropriate for training in industry and other organizations. Annotation provides synopses for the films, level at which they can be used, and the source.

434. TAYLOR, IRVING A. "Psychological Roots of Visual Communication." *Journal of the American Society of Training Directors:* Vol. 13, No. 6, June 1959, pp. 34–43.

A report of research into the properties of visual symbols, which raises the question as to whether the traditional view that visuals are aids to verbal communication should be reversed. Suggests that when we reflect on the amount of non-verbal information obtained visually, it would seem that verbal communication is actually more than an aid to visual communications.

IX. TRAINING EVALUATION

435. AMUNDSEN, WALTER E. "Appraisal Plan Feedback." *Journal of the American Society of Training Directors:* Vol. 14, No. 3, March 1960, pp. 7–11.

Illustrates the value of comprehensive analysis of employee appraisal reports, pointing out the usefulness of these reports to management in indicating the personnel needs of the organization. An example of an organization's efforts in this direction is given.

436. BARTHOL, RICHARD P., and MARTIN ZEIGLER. "Evaluation of a Supervisory Training Program with 'How Supervise?'" *The Journal of Applied Psychology:* Vol. 40, No. 6, December 1956, pp. 403–405.

Report of a study testing the validity of the two forms of File-Remmers test as the basis for evaluating the success of a supervisory training program. Reveals some insight into use of this instrument in supervisory groups including members who finished elementary school or secondary school, and college graduates.

437. BESCO, ROBERT, JOSEPH TIFFIN, and DONALD C. KING. "Evaluation Techniques for Management Development Programs." *Journal of the American Society of Training Directors:* Vol. 13, No. 10, October 1959, pp. 13–27.

An exhaustive investigation of evaluation techniques of management development programs within the framework of organizational goals, need for training, program content, training methods, and training effectiveness. An extensive bibliography is provided.

438. BAXTER, BRINT. "A Training Evaluation Study." *Personnel Psychology:* Vol. 6, Winter 1953, pp. 403–417.

This report describes a study designed to measure the effects of a company's conference training program. The results of the study disclosed no significant difference between those given conference training and those trained on the job. The criteria considered and possible explanation of these results are discussed. An example of systematic training evaluation research.

439. BELMAN, HARRY S., and H. H. REMMERS. "Evaluating the Results of Training." *Journal of the American Society of Training Directors:* Vol. 12, No. 5, May 1958, pp. 28–33.

Outlines a suggested plan and basic principles for measuring and interpreting training performance in organizations.

440. BLUM, MILTON L. *Readings in Experimental Industrial Psychology,* chap. 3, "Training." New York: Prentice-Hall, 1952.

The readings assembled in this chapter are primarily concerned with the measurement of training results. Provides examples of the kinds of criteria on which measurements are made and the techniques for analysis. The samples are relevant to the broad field of training.

441. BUCHANAN, PAUL C. "Evaluating the Results of Supervisory Training." *Personnel:* Vol. 33, January 1957, pp. 362–370.

The author describes the development and testing of a supervisory training program into which provision for evaluating results was built from the start. Suggests that the procedure proved to be usable, both as a training device and as a means of measuring results in modified job performance.

442. DAUGHERTY, W. D. "Statistics: A Method of Influencing Attitudes." *Journal of the American Society of Training Directors:* Vol. 14, No. 5, May 1960, pp. 36–39.

Article emphasizes the value of statistical analysis of training programs and their results. It is suggested that the utilization of statistical analysis may have some effect upon the attitudes of the trainees toward the training program, especially if the trainees are engineers or other technically oriented personnel.

443. "Evaluation of Training." *Personnel Journal:* Vol. 38, No. 9, February 1960, pp. 344–345.

Brief account of the training method and evaluation procedure used in a management training program conducted under the auspices of the University of Minnesota.

444. FLEISHMAN, EDWIN A., EDWIN F. HARRIS, and HAROLD E. BURTT. *Leadership and Supervision in Industry.* Bureau of Educational Research. Monograph No. 33. Columbus, Ohio: Ohio State University, 1955. 110 pp.

This report of research into the effectiveness and results of a training course in human relations has become a classic in the field of training evaluation and a model for continuing research.

445. FRYER, D. H. "Training with Special Reference to Its Evaluation." *Personnel Psychology:* Vol. 4, No. 1, Spring 1951, pp. 19–37.

Describes a method for developing and utilizing a procedure for evaluating the effectiveness of training aids and devices.

446. GOODACRE, DANIEL M., III. "The Experimental Evaluation of Management Training: Principles and Practice." *Personnel:* Vol. 33, No. 6, May 1957, pp. 534–538.

The author suggests that subjective evaluation of management training must give way to methods of experimental evaluation and suggests a pattern for such research. The method involves criteria, controls, and statistical analysis built into the training program as an integral part rather than as an afterthought.

447. HUNERYAGER, S. G. "An Evaluation of University Executive Programs." *Journal of the American Society of Training Directors:* Vol. 14, No. 3, March 1960, pp. 37–42.

A discussion, based on a study made by the author, of the views of various firms concerning the advantages of university executive development programs.

448. KIRKPATRICK, DONALD L. "Techniques for Evaluating Training Programs: Part 4—Results." *Journal of the American Society of Training Directors:* Vol. 14, No. 2, February 1960, pp. 28–32.

The final article in a series in which the author suggests four steps for the training evaluation process—learner reaction, measured learning, changed behavior, and performance results. For the earlier articles see:

"Techniques for Evaluating Training Programs." *Journal of the American Society of Training Directors:* Nov. 1959, Dec. 1959, and Jan. 1960.

449. KROPP, RUSSELL P., and EDWARD K. HANKIN. "Paper and Pencil Tests for Evaluating Instruction." *Journal of the American Society of Training Directors:* Vol. 16, No. 11, November 1962, pp. 25–35.

Some carefully drawn guidelines for preparing tests for use in evaluating learning results in skill training programs in industry.

450. LAWSHE, C. H., R. A. BOLDA, and R. L. BRUNE. "Studies in Management Training Evaluation." *Journal of Applied Psychology:* Vol. 43, No. 5, October 1959, pp. 287–292.

Report summarizes five studies designed to evaluate the effectiveness of role-playing as a tool in management and supervisory training. Specifically, the studies were conducted to evaluate the effects of single and repeated exposures to the skit-completion method of role playing on scaled responses to sensitivity and employee orientation.

451. LUNDBERG, CRAIG, C. "Attitude Change and Management Training—A Critical Commentary." *Personnel Administration:* Vol. 25, No. 3, May–June 1962, pp. 35–43.

Author urges a re-examination of the basic objectives and assumptions underlying all management training. Drawing heavily on behavioral science research data, he challenges the utility of current evaluation techniques.

452. MAHLER, WALTER R. "Evaluation of Management Development Programs." *Personnel:* Vol. 30, September 1953, pp. 116–122.

Article assesses evaluation techniques and describes examples of systematic, experimental methods.

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Detailed report of a questionnaire and interview survey of needs determination and program evaluation practices of one hundred fifty companies. The survey was designed to find out: (1) How are training needs determined? (2) What are the relative merits of different training methods? (3) What has training accomplished? (4) What are the relative merits of different training aids? Includes analysis of the literature pertaining to these questions and descriptive statements of company practices.

454. MAHONEY, T. A., *et al.* "An Experimental Evaluation of Management Development." *Personnel Psychology*: Vol. 13, Spring 1960, pp. 81–98.

Authors report a carefully designed experiment to measure the changes in attitudes produced by a management training program which relied heavily on the case study technique. Attitude scales were administered before and after the training sessions to both the participating groups and a control group of managers who were not exposed to the training material. Their results indicate that the training was partially successful in developing improved analytical ability.

455. MAIER, NORMAN R. F., and RICHARD H. MAIER. "An Experimental Test of the Effects of 'Developmental' Versus 'Free' Discussion on the Quality of Group Decision." *Journal of Applied Psychology:* Vol. 41, No. 5, October 1957, pp. 320–323.

Describes a methodology for evaluating group conference leadership methods.

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Presents evidence suggesting that management courses with a strong behavioral science orientation do produce significant changes in attitudes. Students in their junior year at the School of Business, University of Oregon, were utilized in this carefully controlled experiment. Information indicates that changes produced were of a kind that should contribute to future managerial effectiveness.

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Discussion of methods of calculating training benefits to the company. Article covers types of programs, costs of programs, and the ultimate returns on education. The analysis is done computing the costs in dollars.

458. RANDALL, LYMAN K. "Evaluation: A Training Dilemma." *Journal of the American Society of Training Directors:* Vol. 14, No. 5, pp. 29–35.

Article provides a realistic analysis of the attitudes and approaches taken by training personnel toward training evaluation. The author points out that the "refinement" approach to evaluation is the best in the long run and reviews the elements essential for carrying out an evaluation program of this type.

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Reports a company experience in training evaluation in which a commercially available device was utilized. Describes the course and the technique employed to build the evaluation device into the course.

460. "To Improve a Training Program, Give Tests Before and After." *Engineering News Record:* Vol. 170, June 27, 1963, pp. 38–39.

Describes the Delaware State Highway Department method for using tests before and after a training program to stimulate interest and learning. In addition to evaluative information, testing before the program began provided insight into areas which should be included in the program itself.

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Reports a design for studying change occurring in a learning environment and specific results growing out of training into which the evaluation scheme was built. Although study was with conference leader trainees, the methodology is adaptable to other training exposures.

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An annotated bibliography of current research papers and abstracts in the field of training. Covers listings from learned journals and professional periodicals.

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The authors have included an exhaustive bibliography covering management development subject matter.

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Source of information on company training programs in operation.

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468. The International Vocational Training Information Centre. *CIRF Abstracts:* Vol. 1, 1962; Vol. 2, 1963. Geneva, Switzerland: CIRF, International Labor Office.

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Author Index

(Listing is by item number)

A

Abma, John S., 395
Adams, Harold F., 195
Aguilar, F. J., 411
Allen, Charles R., 27, 93
Alvin, Robert, 144, 378
American Educational Research Association, 158
American Management Association, 1, 59, 222, 223, 285
American Society for Engineering Education, 148
American Society for Training Directors, 462
Amundsen, Walter E., 435
Andlinger, G. R., 224, 225
Andrews, Kenneth R., 226, 286, 316, 317, 387
Anshen, Melvin, 287, 288, 463
Anstey, E., 299
Argyris, Chris, 227, 349
Arizona State Employment Service, 94, 21
Armsby, Henry Horton, 159
Ashworth, Kenneth H., 228

B

Bailey, Joseph K., 196
Bakke, E. Wight, 300
Bambrick, James J., 197
Barnlund, Dean C., 350
Barry, F. Gordon, 229
Barthol, Richard P., 436
Bass, Bernard M., 351, 352
Baxter, Brint, 438
Beatts, Patrick M., 423
Beckley, D. K., 230
Beckman, R. D., 213
Bellows, Roger, 28, 29, 231, 412
Belman, Harry S., 2, 3, 4, 5, 13, 14, 439
Bennett, Willard E., 232
Bennis, Warren G., 41
Benson, Charles S., 95
Bentzen, E. C., 198
Bergevin, Paul, 125
Berliner, Wm. M., 8, 72
Besco, Robert, 437, 464
Bidwell, Alvin C., 353
Blain, Isable, 137
Blake, Robert R., 353, 354
Blamberg, Siegmar, F., 181
Bland, H. A., 138
Blansfield, Michael G., 318, 355, 356
Bliek, John E., 2, 3, 4, 5, 13, 14
Blum, Milton L., 440
Boehm, George A. W., 96, 396
Bogard, Howard M., 233
Bolda, R. A., 450
Bott, Robert, 379
Boyer, G. D., 126
Bradford, Leland P., 357
Brandon, George L., 149
Bricker, George W., Jr., 289
British Institute of Management, 301
Broche, W. G., 85
Brophy, J. M., 465
Brown, Clarence W., 40
Brown, Margaret M., 388
Brune, R. L., 450
Burtt, Harold E., 184, 444
Buchanan, Paul C., 6, 182, 441
Busch, H. M., 335
Butler, John, 345

C

Campbell, Ralph N., 319
Canada, Department of Labor, 176
Cantor, Nathaniel F., 30, 358
Cardwell, B. W., 86
Carroll, Stephen J., 282
Castel, P. F. C., 216
Christensen, W. C., 127
Christian, Arthur H., 214
Christian, Roger W., 397
Clark, Harold F., 31
Clay, Hubert, 234
Cleary, M. D., 290
Coe, Robert S., 320
Cohen, K. J., 363, 364
Coleman, C. G., Jr., 229
Coleman, John D., 150
Cooper, Alfred M., 69
Corrigan, Robert E., 424
Corsini, Raymond J., 380

Couch, Virgil L., 32
Craft, Clifford J., 368
Crawford, C. C., 200
Cribbin, James J., 8, 72
Croft, Margaret, 139
Cross, Leslie W., 16
Crowder, Norman, 425
Cunningham, J. W., 7
Cunynghame, J. O. Blair, 302
Cushman, F., 60, 71
Cushman, R. W., 71

D

Daffern, George N., 274
Dale, E., 426
Damerell, Loretta, 15
Daugherty, W. D., 442
Dean, Richard L., 336
Deboa, J. A. W., 140
Department of Labor and National Service, 141
DePhillips, Frank A., 8, 72, 337
Dinerman, Beatrice, 33
Dolmatch, Theodore B., 398
Dooher, M. Joseph, 235
Douglas, Paul H., 34, 128
Dowling, W. Ernest, 413
Drarin, Eugene P., 33
Drucker, Peter F., 35
Dudden, Arthur P., 312
Dufty, N. F., 303
Dustan, Jane, 304

E

Edgerton, H. A., 22
Eitington, Julius E., 236
Elliot, John M., 321
Elson, Hilbert, 129
Emerson, Lynn A., 36
Entwisle, D. G., 112
Erickson, Willard E., 281
Evans, Chester F., 183
Ewing, Russell, H., 23
Exton, W., Jr., 427

F

Farrell, John J., 353
Federal Security Agency, 151, 160, 161
Federman, Philip, 419
Feinberg, Mortimer R., 38, 339
Fielden, John S., 291, 313
Finn, Melvin, 414
Fisher, John F., 87
Fisher, W. E., 338
Fisher, W. R., 97
Fleischman, Edwin A., 104, 184, 444
Foltman, F. F., 113, 121
Forehand, G. A., 239
Foreman, Charles W., 275
Foster, Thorne S., 390
Fox, Harland, 467
Freeston, J. Thomas, 78
French, J. R. P., Jr., 199, 381
Fryer, D. H., 37, 38, 339, 445

G

Galenson, W., 39
Gardner, Neely D., 87
Garforth, F. I., 216
Geer, Leroy N., 399
Gerletti, John D., 200
Ghiselli, Edwin E., 40
Gibson, George W., 415, 429
Gilson, Thomas Q., 231
Giovanoni, Richard, 114
Glaser, Robert, 61, 406
Goetz, Billy E., 41
Goldwin, Robert A., 314
Goodacre, Daniel M. III, 42, 446
Goram, Phyllis, 208
Gordon, Robert A., 292
Gordon, Thomas, 340
Goure, Leon, 43
Gray, C. E., 276
Greene, Jay R., 365
Greenlaw, Paul S., 366
Guetzkow, H., 239
Gulley, Holbert E., 341

H

Haas, K. B., 430
Habbe, S., 240, 293
Hagemeyer, Richard H., 130
Haimon, Franklyn S., 350
Haire, Mason, 73
Halsey, G. D., 88, 74
Hamberger, E., 75
Hambrecht, George P., 27, 93
Hampton, Thomas E., 152
Hankin, Edward K., 449
Harbison, Frederick, 62, 305
Harrington, Gordon M., 153
Harris, Edwin F., 184, 444
Harris, F. J., 45
Harris, Norman C., 162
Harrison, Oval S., 98
Hedges, M. H., 49, 133
Henning, Kenneth, 327
Henry, Edwin R., 306
Herder, John H., 367
Herron, Lowell W., 371
Herzberg, Frederick, 44, 185
Hetherman, R., 145

Hill, Samuel E., 62
Hinrichs, John R., 99
Hoffman, L. Richard, 384
Holderman, K. L., 163
Hoppock, Robert, 108
House, R. J., 241
Howell, James E., 292
Hower, Ralph M., 242
Hoyt, G. C., 109
Huddleston, Robert H., 164
Hudson, Edmund, 165
Hughes, J. L., 400, 401, 402
Huneryager, S. G., 294, 447
Hunt, Norman C., 322
Huttner, L., 219

I

Illinois University, Bureau of Educational Research, 166
Ingenohl, Ingo, 343
International Labor Office, 154
International Vocational Training Information Centre, 468

J

Jackson, B. B., 24
Jakubauskas, E. B., 115
James, B. J., 239
Jasinski, Frank J., 244
Jenks, James M., 245
Jerdee, Thomas H., 253, 282
Johnson, Thomas H., Jr., 323
Jones, Margaret L., 246, 247
Judice, P. F., 416
Jurgensen, C. E., 201

K

Kahler, Afred, 75
Katzell, R. A., 219
Kaufman, Jacob J., 116
Kelley, Philip R., 277
Kellog, Marion S., 278
Kepner, Charles H., 248
Kilibee, Joel M., 368
King, Donald C., 437, 464
King, Donald H., 422
Kirchner, Wayne K., 249
Kirkpatrick, Donald L., 448
Klemes, M. A., 269, 362
Knowlton, Elizabeth R., 319
Korb, L. David, 202
Korol, Alexander G., 177
Krantz, Irwin W., 203
Kropp, Russell P., 449
Krouss, E., 142

L

Lansky, Leonard M., 384
Lapp, Charles L., 146
Lawshe, C. H., 45, 450
Leavitt, Harold J., 324
Lerda, Louis W., 16
Levine, Jacob, 345
Levine, Stanley L., 403, 404
Levinson, Harry, 325
Levy, Seymour, 273
Likert, Rensis, 186, 279
Limberg, H., 100
Lippitt, Gordon L., 9, 405
Lippitt, R., 382
Lipstreu, Otis, 431
Lisberger, T. S., 204
Lohnes, Paul R., 95
Lumsdaine, A. A., 406
Lundberg, Craig C. 451
Lysaught, Jerome P., 407, 408

M

Mace, M. L., 250
McGehee, William, 76
McGregor, Douglas, 251, 280
Machaver, William V., 281
McKenney, J. L., 369
MacKinney, A. C., 24
McLarney, William J., 77, 205
McMurray, Fred R., 370
McMurry, Robert N., 326
McNamara, W. J., 117, 401, 402
Mahler, Walter R., 17, 452, 453, 469
Mahoney, Thomas A., 252, 253, 282, 454
Maier, Ayesha A., 383
Maier, Norman R. F., 346, 347, 383, 384, 389, 417, 455
Maier, Richard H., 347, 455
Makanowitsky, Barbara, 304
Mann, Floyd C., 187, 188
Manus, Burt, 368
Marquis, Vivienne, 235
Marshall, Donald M., 389
Masterson, Thomas R., 327
Mayfield, Harold, 283
Merenda, Peter, 131
Mesics, Emil A., 410
Metropolitan Life Insurance Company, 89
Mill, Cyril R., 359
Miner, John B., 155, 189, 456
Ministry of Labour (Great Britain), 217
Mississippi State College, Department of Industrial Education, 156
Monroe, Willys H., 453, 469

Mosel, James N., 46
Moser, George V., 432
Morgan, Howard K., 10
Mouton, Jane S., 354
Mullen-Thum, Bernard J., 190, 258
Munson, F. C., 334
Murdick, Robert G., 457
Murphy, M. J., 47
Myers, Charles A., 305

N

Nash, Allen N., 253
National Industrial Conference Board, Inc., 90, 218, 295
National Manpower Council, 101, 102, 157
National Training Laboratory in Group Development, 360
Naylor, James C., 103, 470
Negley, Glenn R., 307
Nelson, Charles A., 34
Nelson, R. M., 147
Nelson, Thomas H., 328
Nichols, Ralph G., 418

O

Oakley, C. A., 48
Odiorne, George S., 63, 231, 361
Ohmann, O. A., 254
Olsen, Leif, 234
Oncken, William, Jr., 206
Orth, Charles D., 242

P

Packer, H. Q., 430
Parker, James F., Jr., 104
Patterson, William F., 49, 133
Patton, Arch., 284
Peckham, M., 315
Peres, Sherwood N., 191
Perkins, Donovan J., 200
Peter, Hollis W., 306
Petitt, Albert E., 207
Phillips, Sidney H., 390
Pierson, Frank C., 296
Pigors, Faith, 391, 392
Pigors, Frank C., 296
Pigors, Paul, 391, 392
Planty, Earl, 78, 79
Plattner, John W., 371
Pockrass, Jack, 329
Pond, Alfred W., 105
Porter, George W., 372
Poulton, James, 134
Powell, Reed M., 297
Professional Engineers Conference Board for Industry, 167

Q

Queener, J. Sharp, 106
Quinn, John, 348

R

Race, H. H., 255
Rama, Louis, 123
Randall, Lyman K., 458
Randall, R. L., 256
Randle, C. Wilson, 257
Rappaport, Bernard F., 168
Reilley, E. W., 258
Remmers, H. H., 439
Rhenman, E. 364
Richlin, Milton, 419
Ritvo, Marian, 208
Roe, Arnold, 409
Rose, Homer C., 50, 107
Rosen, Howard, 178
Rosen, Jhalmar, 259
Rosen, Ned A., 410
Rowland, V. K., 220

S

Sampson, R. C., 260
Santmyers, S. S., 80
Sargent, D. S., 261
Sartorious, Harvey A., 18
Scheer, Wilburt, E., 12
Schein, Edgar H., 330
Schelle, Wayne N., 405
Schmidt, W. H., 192
Seashore, Charles, 51
Senn, Peter R., 65
Serbein, Oscar N., 11, 52
Siegel, Arthur I., 419
Silvern, Leonard C., 19, 403, 404
Sinick, Daniel, 108
Sisson, Roger L., 365
Shaw, I. B., 465
Shearer, John C., 308
Shepard, C., 269, 362
Sloan, Harold S., 31
Smith, Donald, 124
Smith, Harold T., 169
Soik, Nile, 457
Solem, Allen R., 383, 386, 389
Spiele, Arenda J. H., 331
Staniford, Edward F., 33
Stanley, John D., 373
Staton, Thomas F., 81, 420
Steggert, Frank X., 262
Steinmetz, Lawrence L., 374
Stevens, Leonard A., 418
Stockard, James G., 20
Stone, Samuel I., 393

Storm, William J., 209
Suojanen, Waino W., 109
Surank, William A., 25
Sykes, A. J. M., 53

T

Tannenbaum, R., 192
Taylor, Erwin K., 333
Taylor, F. W., 82
Taylor, Irving A., 434
Taylor, Jack W., 221
Tead, O., 54
Technical Association of the Pulp and Paper Industry, 210
Thayer, Paul W., 76
This, Leslie, 9
Thomas, David, 263
Thomas, Edwin J., 26
Thompson, Walter A., 264
Thomson, D. C., 179
Thorelli, H. B., 375
Tiffin, Joseph, 437, 464
Toussaint, M. N., 334
Trasin, Walter, 170
Trego, J. W., 272
Tregoe, Benjamin B., 248
Trice, Harrison M., 461
Trickett, Joseph M., 265, 266

U

U. S. Bureau of Apprenticeship and Training, 135
U. S. Civil Service Commission, 66, 92 394
U. S. Congress, 171
U. S. Department of Agriculture, 172
U. S. Department of Health, Education and Welfare, 110, 471
U. S. Department of Labor, 55, 67, 68, 212, 472, 473
U. S. Office of Education, 474
U. S. War Manpower Commission, 83, 215
Upjohn Institute for Employment Research, 175

V

Vance, Stanley, 376
Van Egmond, Elmer, 51
Venables, P. F. R., 56, 180
Verity, William, 267
Von Bleicken, Bleick, 84, 211

W

Waaler, Rolf, 309
Wagner, W. F., Jr., 173
Weaver, David O., 57
Welch, R. L., 27, 93
Wellens, John, 310
Wellford, R. Carter, 268
Weschler, I. R., 269, 362
Wesner, Charles G., 259
Whistler, Thomas L., 324
White, Wilford L., 270
Whitehill, A. M., Jr., 298
Whyte, W. F., 193
Wickstrom, Leroy A., 422
Wikstrom, Walter S., 377, 311
Williams, Gertrude, 143
Williams, Lawrence A., 120
Wilson, J. D., 174
Wiora, A. P., 272
Witt, John A., 111
Wright, Moorhead, 58

Z

Zaleznik, A., 194
Zalkind, Sheldon S., 38, 339
Zeigler, Martin, 436
Zimmerman, John W., 273

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WILLIAM H. BUTTON *and* WILLIAM J. WASMUTH

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IOWA

One hundred forty of 154 Iowa hygienists replied to the survey conducted by the State Board. Of the total 154, four-fifths completed their training after 1955 and three-fourths received their bachelor's degrees or certificates from the State University of Iowa. Sixty-seven of the responding hygienists worked in dental offices 4 to 54 hours in a typical week, or an average of 28.6 hours. Six were employed in the state university dental hygiene school and eight were employed by other governmental agencies, including public school systems and the Veterans Administration. The remainder were inactive. All respondents who reported an income indicated they earned $5,000 or more annually but only one reported earnings in excess of $7,500. Replies indicated that 74 percent of the aggregate hours worked by the hygienists were spent in performing oral prophylaxis, 9 percent in other clinical service, 8 percent in patient education, 6 percent in office management, and 3 percent in dental assisting tasks. Iowa's 154 hygienists were concentrated geographically and only 42 of 99 counties had at least one active or inactive hygienist. While the median age was 28.6, professional activity diminished between 25 and 34 and increased among hygienists 35 and over. Only 13 percent of responding hygienists were single. (JK)

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LICENSED DENTAL HYGIENISTS IN IOWA

In May of 1966, 154 dental hygienists were located in Iowa and were licensed to practice there. More than four fifths of Iowa's hygienists had completed their dental hygiene training since 1955, which was the year that the State University of Iowa first awarded certificates to dental hygiene students. Three fourths of all hygienists in the state had received their training at the Iowa school, and among those whose training had been completed in the eleven years since 1955 virtually all, 9 of every 10, hold bachelor's degrees or certificates granted by the State University of Iowa.

These and many other interesting facts about dental hygienists in Iowa were collected in a survey conducted by the Iowa Board of Dental Examiners in May 1966. All but 14 of the 154 Iowa hygienists completed and returned their survey questionnaires to the State Board. Here are some other highlights of the survey findings based upon information provided by the 140 responding hygienists:

Practice Characteristics

Sixty-seven dental hygienists reported that they were working in private dental offices in Iowa at the time of the survey. Based on this count there was approximately one practicing hygienist for every 16 dentists in private practice in the state. 1/ By far the majority of these hygienists, almost two thirds, worked for only one dentist. Another 13 percent worked in only one office but for two or three dentists, and 22 percent worked in two or three dental offices and for from two to four dentists.

Individual hygienists reported working in the dental office from 4 to 54 hours in a typical week, but, on the average, they worked 28.6 hours. If a full-time hygienist is defined as one who works at least 35 hours per week, then the average Iowa hygienist practiced only part time. The aggregate time reported by the 67 hygienists actually practicing either full time or part time in the state, therefore, was equivalent to the total time which would have been spent by only 55 hygienists who were all working full time. On this basis then Iowa had one full-time-equivalent hygienist in practice for every 20 dentists in private practice.

More than half of the practicing hygienists had worked in a dental office year round, that is 48 weeks or more during the 12 months preceding the survey. However, year-round practice was more frequent among the full-time hygienists than among those practicing part time:

1/ The count of dentists who were primarily in private practice is from the 1965 Survey of Dentists Licensed in Iowa, which was also conducted by the Iowa Board of Dental Examiners.

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	Percent of practicing hygienists		
	Total	Year round	Less than year round
Total	100	56	44
Full time	44	37	7
Part time	56	19	37

Each of the full-time year-round hygienists who reported on income from their practices indicated that they earned $5,000 or more in the 12 months preceding the survey. Only one reported earnings in excess of $7,500. Almost one half of these hygienists worked on a combination salary (or guarantee) and commission (or percentage) basis. In contrast, slightly more than half of those who practiced part time or less than year round were compensated on a commission only basis.

Each practicing hygienist was asked to indicate the types of activities she performed in the dental office and to approximate the hours she spent in a typical week at each activity:

	Percent of practicing hygienists performing activity	Percent of aggregate hours spent in activity
Oral prophylaxis	100	74
Other clinical service	92	9
Time devoted exclusively to patient education	83	8
Office management	53	6
Dental assisting tasks	20	3

All of the reporting hygienists indicated they performed oral prophylaxes, and most provided other patient services such as taking radiographs and applying fluorides or devoted time exclusively to the dental health education of the patient. More than 90 percent of the total hygienists' time in Iowa offices was devoted to providing these patient services for which the dental hygienist is especially trained.

Status of Licensed Supply

At the time the Iowa Board conducted this survey, almost three in every five of the state's licensed hygienists were professionally active in the state:

	Number of hygienists	Percent of hygienists
In Iowa	140	100
Active	78	56
Employed	78	56
Full time, year round	30	21
Part time, part year, or intermittent	48	35
Seeking work as hygienist	-	-
Inactive	62	44

Furthermore, one in every five were employed as hygienists full time year round, that is, they worked 35 hours or more in a typical week and had worked 48 weeks or more during the preceding year. All of the 78 active hygienists were employed and none reported that they were seeking work at the time of the survey.

In addition to the 67 who were working in private dental offices, 6 were employed in the dental hygiene school at the State University of Iowa and 8 were employed by other governmental agencies, including public school systems and the Veterans Administration. (Three of the hygienists working in a private dental office also reported another place of employment).

Iowa had a reserve licensed supply of at least 62 inactive dental hygienists in May 1966. 2/ Five of these inactive hygienists reported that they were employed, but in an occupation other than dental hygiene.

Location

Iowa's 154 licensed dental hygienists were quite concentrated geographically . Only 42 of the state's 99 counties had even one licensed hygienist, active or inactive; furthermore, almost three in every five of the state's hygienists were located in only 4 of the 42 counties:

	Licensed hygienists	Respondents		
		Number	Percent active	Percent active full time, year round
Total	154	140	56	21
Johnson County	30	28	64	18
Polk County	29	28	61	32
Linn County	17	16	44	31
Scott County	13	13	62	8
38 other counties	65	55	51	19

2/ This count does not include any of the 14 nonrespondents who may have been inactive. Nonlicensed resident hygienists are also excluded, since the survey was conducted only among those licensed to practice in the state.

More hygienists were located in Johnson and Polk Counties than in any other county in the state. The fact that Johnson County is the site of the State University of Iowa contributes, at least in part, to the relatively large number of hygienists located there. Johnson County, a nonmetropolitan county, and Polk County, the state's largest metropolitan county, had about the same number of active hygienists, and the proportion active in each county was also about the same. However, almost one third of the hygienists in Polk County were active full time year round, while less than one fifth of those in Johnson County devoted their full time to dental hygiene.

Only two other metropolitan counties, Linn and Scott, had more than 10 licensed hygienists. Linn County had a few more licensed hygienists, but proportionately fewer active hygienists, than Scott County. However, relatively more hygienists in Scott County were active full time and year round than in Linn County.

Of the 38 other counties with licensed hygienists only 14 had more than one. One half of the respondents in these 38 counties were active. Altogether there were 8 licensed hygienists in the other four metropolitan Iowa counties--Black Hawk, Dubuque, Pottawattamie, and Woodbury. Three of the six responding hygienists in these counties were active, but none reported full-time year-round employment.

Age and family characteristics

As would be expected with the relatively large numbers who have only recently completed their college training, the average Iowa hygienist is young--their median age was only 28.6 years in 1966. However, the reported ages covered a wide range: At one end were two professionally-active hygienists of 22 years of age, and at the other a 69-year-old hygienist who retired at age 65 after having practiced in Iowa for many years.

Hygienists in their early twenties were the most likely of all age groups to be active. Professional activity diminished among hygienists between 25 and 34 years of age, but increased again among those 35 and over. Full-time, year-round employment was also most frequent among hygienists in their twenties:

	Percent of hygienists	Percent active	Percent active full time, year round
Total	100	56	21
Under 25	22	77	26
25 - 29	38	55	26
30 - 34	22	27	7
35 and over	18	64	20

These age differences in professional activity reflect the fact that marriage and family responsibilities often influence, at least temporarily, the professional activity of hygienists. The same proportion of married hygienists with one dependent child were active as were those with no children at home, but they were much less likely to devote their full time to dental hygiene. However, among hygienists with two or more dependent children professional activity was curtailed significantly:

	Percent of hygienists	Percent active	Percent active full time, year round
Total	100	56	21
Single	13	89	56
Ever married by number of dependent children			
None	23	75	38
One	21	76	10
Two or more	42	26	7

Despite the fact that family responsibilities influence the professional activity of some hygienists, married hygienists in Iowa had a relatively high attachment to dental hygiene. One half of the 116 respondents who at the time of the survey were married were also active. By way of comparison, U.S. Department of Commerce figures indicate that in March 1966 only 34 percent of the nation's wives were in the paid labor force. 3/

Even though four in every five of the 62 inactive hygienists reported they were not practicing because of full-time family obligations, many indicated that they plan to return to practice at some time in the future. Five in every six of the 30 hygienists who were at least fairly definite about their future plans indicated that they intend to return to practice. However, all but two stated they would prefer to practice part time.

Professional activity since licensure

At the time of the survey the average Iowa hygienist had been licensed to practice in the state for 7.7 years. All but 12 of the 140 hygienists reported that they had been professionally active in Iowa at some time during the years they had been licensed. On the average, the 128 hygienists who were in the state at the time of the survey and had been active there at some time, had held Iowa licenses for 7.9 years and they had actually worked in the state for 5.0 of these years. In other words, they had been professionally active for approximately two thirds of the time that they had been licensed in Iowa.

3/ U.S. Department of Commerce, Bureau of the Census: Current Population Reports P-60, No. 51.

The proportion of licensed years actively devoted to dental hygiene varies significantly though, according to the year in which the hygienist first obtained an Iowa license:

	Percent of ever active hygienists	Average years in Iowa		Percent of licensed years active
		Licensed	Active	
Total	100	7.9	5.0	63
1963 or later	30	1.9	1.7	92
1960-62	25	5.0	3.1	62
1957-59	20	8.0	3.8	50
1954-56	10	10.5	7.9	75
1953 or earlier	15	23.2	14.5	63

Hygienists licensed during the three years preceding the survey had been active for 92 percent of the total time they had been eligible to practice. This percentage falls for those who had been licensed longer. However, hygienists who first obtained their licenses ten years or more ago had devoted a relatively large proportion of their professional lives to dental hygiene.

In addition to the time devoted to dental hygiene in Iowa, about one fourth of the state's hygienists had worked at some time in the past in another state. On the average, these Iowa hygienists had been professionally active in other states for 2.8 years.

October 1967

(Editor's note: Dental hygienists in other states who were licensed to practice in Iowa were also surveyed by the Iowa Board of Dental Examiners in May 1966. Almost all of the state dental examining boards conducted surveys of hygienists licensed to practice in their respective states in 1966 or the first part of 1967. The American Association of Dental Examiners, under a contract with the Division of Dental Health, U.S. Public Health Service, is coordinating this national survey program to assist states in developing comparable information about their dental manpower resources. The preparation of this report has been made possible through the cooperation of the American Association of Dental Examiners and the Division of Dental Health, Resource Analysis Branch.)

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The Vocational School System in Sweden, A Survey. Sweden Today.

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*VOCATIONAL EDUCATION; *PROGRAM DESCRIPTIONS; *ORGANIZATION; *FOREIGN COUNTRIES
SWEDEN

Even though industry and commerce need more vocationally trained personnel, only 50 percent of the applications to vocational schools in Sweden are accepted. During the last 5 years the number attending vocational schools has increased 50 percent. The state is responsible for overall administration, advising, and financing of the vocational schools, and the municipalities, industry, and commerce are responsible for the training program. Civil service departments, the National Board of Education, county boards of education, municipal boards of education, and advisory boards share responsibility for operation of vocational schools which 75,000 full-time students attend. Both a subsidized cooperative education program where students receive theoretical training in the classroom and practical training on the job and a project method program where students receive both theoretical and practical training in school are used. Major types of schools are workshop schools, firm schools, and technical schools. Commercial education is primarily offered in general courses rather than in vocational workshop schools due to cost. Vocational schools generally offer training in industrial and handicraft trades, home economics, nursing and health occupations, and retraining programs. (DM)

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The Vocational School System in Sweden

by Tore Hessler

SWEDEN TODAY is a series of articles in brochure form dealing with different aspects of Swedish life. A list of titles is available from the Swedish Institute, Box 3306, Stockholm 3, Sweden. The articles may be quoted or reviewed without special permission, unless otherwise indicated.

The Swedish Institute for Cultural Relations with Foreign Countries was founded in 1945. Its affairs are managed by a Council of one hundred persons and a Board with a maximum of 15 members. Under its charter the Institute is authorized to foster Sweden's cultural, social and economic relations with other countries by programs of information, cultural exchange and other means. The Institute's activities are financed by grants from the Ministry for Foreign Affairs and the Ministry of Education and Cultural Affairs, and by donations from companies and organizations. The head office is at Kungsgatan 42, Stockholm. Foreign offices are located in England at 49, Egerton Crescent, London S.W.3, and in France at 125, Avenue des Champs-Élysées, Paris 8e. Activities in other countries are carried on in association with embassies, legations, consulates, chambers of commerce, and lecturers at foreign universities. The Institute's most important duties are:

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- to arrange invitations to scientists and visiting lecturers for temporary assignments in Sweden and to make similar arrangements for Swedes abroad;
- to organize summer university courses in Sweden for foreign students;
- to formulate study programs for foreign guests visiting Sweden;
- to support instruction in Swedish at foreign universities;
- to support translations of Swedish literature into foreign languages and to promote cultural [illegible] in drama and the arts;
- to disseminate information on Swedish culture and social life by means of films, exhibitions and printed matter.

The information services of the Institute cater to all subjects and matters of general interest. Examples are education, social welfare, the Swedish economy, industrial relations, national defense, town and states planning, arts and crafts, and [illegible]. Further information may be obtained from the Institute or from Swedish [illegible] abroad.

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The Vocational School System in Sweden

by Tore Hessler

THE VOCATIONAL SCHOOL SYSTEM IN SWEDEN - A SURVEY

by Tore Hessler

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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The Swedish Institute
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Index | Page

The present development	3
Organization	4
The main features of vocational training	5
Vocational schools in the industrial and handicraft fields	6
Commercial schools	7
Schools for domestic training and home economics	8
Schools for training personnel in public health and medical care	8
Retraining programs and refresher courses etc.	9

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The entire Swedish vocational school system is in the process of being reorganized at the present time. The information in this survey has been compiled from actual or estimated data covering the years 1967 and 1968.

The present development

During the course of the past few years, questions concerning vocational training have assumed a greater importance than ever before. Industry and commerce urgently require vocationally trained personnel which, at present, cannot be found in satisfactory numbers. The number of applicants for admission to vocational schools is very high. Unfortunately, only about 50 per cent of these applicants can be accepted.

The greatly increased interest in vocational training certainly has many causes. There is no doubt that the most important cause is the profound transformation that the process of production in industry and commerce has undergone. The processes of production have become so complicated that employers must have skilled personnel to a much greater extent than before. Another important cause is that occupations which earlier did not require much training have now been so altered that a condition of working in them generally is a school-type vocational training.

The present development can best be illustrated by the following comparison: while the number of people in the vocational school age

group has increased by one per cent in the last five years, the number of students attending vocational schools has increased by as much as 50 per cent.

Vocational training is supported and promoted by three major interests: the municipalities, industry and commerce, and the State. The first two of these take the initiative concerning the training program itself and its adaptation to the changing needs of the community while the State for the most part acts as administrative advisor and financial supporter. Almost all vocational training in Sweden is sponsored by the municipalities and by industry and commerce. The only forms of vocational training operated directly by the State are the schools of navigation, the State School of Arts, Crafts and Design, and certain schools of nursing.

Organization

The central administrative agencies (also known as the civil service departments) are characteristic of Swedish public administration. They are independent bodies operating under the Government; they handle many administrative tasks which, in other countries, would be under the jurisdiction of the ministries.

The National Board of Education (Skolöverstyrelsen) is one of these central administrative agencies. It is placed directly under the Ministry of Education and Ecclesiastical Affairs. The Board is in charge of nearly the whole Swedish school system below university level. As such, the Board also heads the vocational high schools (not mentioned in this booklet), the industrial schools, and the special reeducation programs. One of the many duties of the Board is to be familiar with the course of development of industry and commerce so as to be able to adapt the educational program to meet the demands of labor. Another duty is to coordinate and plan the organization of the vocational schools and

to rationalize the training. The Board also handles the budget allotted for education and has the responsibility of distributing State grants to the different schools.

Sweden is divided into 25 counties. In each county there is a county school board and in each municipality, a local school board. The city of Stockholm and the surrounding county of the same name have a common board. The county boards, which are 24, are State institutions. They supervise most of the schools in the county and are also responsible for the planning of the county school system. In this respect they complete the planning activity of the National School Board, which mainly covers the whole country. The interests of industry and commerce are represented by a system of advisory boards. These boards include representatives of both the employers and the employees. There are similar arrangements for the health services too.

The main features of vocational training

Although Sweden has an area three times the size of England and Wales, it has a population only one sixth as large. This state of affairs presents various problems for Sweden in the development of a system of vocational schools.

At the first glance it might appear that in such a sparsely populated country the time-honored system of apprenticeships would continue to occupy a dominant position. This has not been the case, however. To be sure, traditional apprenticeship training still does exist to a certain degree with the State contributing to the employer for his expenses. The apprenticeship system is chiefly found within specialized skilled crafts and the building and construction industry. In the entire country there are at present no more than about 6,000 apprentices whose training is being subsidized by the State.

In building up an effective educational program Sweden has chosen to concentrate on the vocational school system rather than on the apprenticeship system. While recognizing the value of the training

afforded by the apprenticeship system, it was nevertheless felt that the training provided by the vocational schools had certain advantages.

In all large and medium-sized towns, as well as in many small towns and municipalities, there are vocational schools with full-time courses. The total number of students attending such schools is about 75,000. In addition there is an extensive system of evening programs in all such schools. Without digressing here on the subject of the evening programs, it might be said that the value of these courses varies considerably.

Vocational schools in the industrial and handicraft fields

Undoubtedly the most important form of vocational school in the industrial field is the so-called workshop school (verkstadsskola). Most of the students in these schools receive their entire training, both theoretical and practical, at school. However, during the past few years a new type of workshop school has emerged, the so-called incorporated workshop school or associated workshop school (inbyggd verkstadsskola). Such a school is created when a vocational school makes an agreement with a firm to provide the practical side of the training. For this the firm receives a subsidy from the State. The vocational school then provides only the theoretical education.

The training period at a workshop school is generally two years. Some courses can be completed in one year while others take three to four years.

A workshop school, which is supposed to provide young people with reasonable opportunities for choosing a vocation according to their liking and inclination, must by nature be rather large and expensive to operate. Consequently, the sparsely populated areas of the country would have been able to offer only limited educational facilities, compared to what might be offered by a town, had not special central workshop schools been established for them. There are about 40 central schools of this kind. These schools have been designed especially for young people from rural areas. They are all boarding schools.

Each central vocational school serves at least one county. These schools receive grants from the State which are particularly advantageous. The young people from the country are catered to in another way: ordinary workshop schools located in certain towns enroll students from neighboring municipalities; the rural municipalities in these cases have to pay a certain fee to the town.

A comparatively new form of vocational school is the work school or firm school (företagsskola). This is a school run by a large industrial enterprise where the student receives theoretical as well as practical vocational training. These schools are also subsidized by the State. In addition to the vocational schools that are run by the county councils, the municipalities and the State, there are a number of other private vocational schools than the firm schools just mentioned. They are sponsored by branch organizations, foundations etc; the training is run without profit. Like the firm schools, these private vocational schools differ from the others; train for a special vocation or a special vocational field. Most of them receive State grants.

Alongside the workshop schools and the work schools are the schools offering theoretical training based upon an elementary school background. These are the municipal technical schools offering three-term courses for students interested in becoming technicians. By taking an additional one-year specialized course the technician may earn an engineering degree.

The training offered by the municipal technical schools is divided into a number of branches. This form of training has recently been expanded in response to the increased demand for technically trained workers.

Commercial schools

The number of office workers has increased in recent years. It is only natural that this development should be reflected in the vocational training programs. Courses in commercial

education and office training have been considerably expanded in an attempt to meet the labor demands of both the public and private sectors.

The unexpected increase in commercial education has yet another explanation. The municipalities are well aware of their responsibility for providing young people with vocational training. But the establishing of workshop schools is expensive, even with State subsidies. By contrast, commercial education, consisting as it does mainly of theoretical subjects, is much less expensive to establish. Furthermore, even though the student may not immediately acquire a position in industry or commerce, the commercial school education serves to broaden the student's general education as well.

Schools for domestic training and home economics

Vocational schools also offer instruction in the traditional female occupations. There are, for example, home economics courses which train girls in the problems of managing a household. The usual training period is one year although shorter courses are available. In addition, there are courses in child care, catering, hospital work, etc. These schools are also a kind of comprehensive school for those who want to get a higher training in this field. One recent innovation has been the attempts made to train women for occupations traditionally held by men.

Schools for training personnel in public health and medical care

As in other vocational fields the development of public health and medical care has been considerable. New methods of care and treatment have emerged and old ones have been made more efficient. Of course, the vocational training has been adapted to these new methods. At present this training is in great expansion. Nurses are trained at special schools of nursing, some of which are sponsored by the State. Other personnel in public health and medical care are trained at the ordinary vocational schools, which are sponsored by municipalities or county councils. The

period of training is of varying length. For instance, for nurses it is 2 1/2 years, but for other personnel with simple tasks it may comprise only a few weeks.

Retraining programs and refresher courses etc.

The retraining programs have a special position in the vocational education system. Because of structural changes and technical innovations within industry and commerce there is often a need for reeducation in order to make it possible for the unemployed to find new jobs. It may be necessary for them to learn a new trade. These retraining courses may be regarded as one of the most important instruments of labor market policy. Special courses can be arranged for those temporarily unemployed (extension courses) and for fields where there is a shortage of labor.

Another two often neglected source of labor which needs special attention is the large group of women who have left their professions for a second career in the home as housewives and mothers. Many of these women, whose children are grown up, are willing to return to their former professions, if they are given the opportunity to refresh their knowledge and catch up on the latest developments in their fields. Special refresher courses are arranged for these groups of women.

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* Tore Hessler is Assistant Head of Division in the National Board of Education.

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The Municipal Vocational Schools of Stockholm, A Survey.

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*VOCATIONAL EDUCATION; *VOCATIONAL SCHOOLS; PROGRAM DESCRIPTIONS; *FOREIGN COUNTRIES; *URBAN SCHOOLS
STOCKHOLM; SWEDEN

This descriptive report contains information on organization, enrollment, types of vocational training, and services of the municipal vocational schools of Stockholm. Schools administered by the municipality are: (1) School for Industry and Handicraft, (2) School for Sewing Trades, (3) School for Domestic Science, (4) School for Commerce, (5) Stockholm Higher Commercial School, and (6) Stockholm Technical Evening School. The municipality provides public advisers, subsidies to private schools, scholarships, free school meals, free textbooks and materials, five libraries, field trips, health service, school buildings, government grants, practical guidance, and gymnastics and physical training. Teacher education and duties in the schools are outlined. (DM)

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THE MUNICIPAL VOCATIONAL SCHOOLS OF STOCKHOLM

A Survey

The question of establishing vocational schools in Stockholm was raised for the first time in 1900, but it was not until 12 years later that these schools actually began, once the municipal council had accepted a scheme of organization based mainly upon that of the Munich Vocational Schools. In 1920, they were re-organized and different kinds of schools were separated. At the same time, their activity was considerably extended. The organization of the schools set up then has, in its essentials, existed to the present day and may be described as follows.

The central authority for vocational education is the National Board of Vocational Education, which supervises the schools. A municipal board exercises the local management of schools for vocational training and has as its chairman a Deputy Mayor /"borgarråd"/ for the City Educational Department. For the direct management of the schools and for the maintaining of direct contact between school and everyday life, there is, as a rule, an advisory committee of five members, representing each trade or group of trades. On these committees there are specialists in each type of trade. Employers' associations and workmens' unions of the trade in question appoint one representative each. A Director is responsible for the overall management of the vocational schools, and under his direct supervision there are at present five schools, each conducted by a Principal. They are:

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The School for Industry and Handicraft, The School for Sewing Trades, The School for Domestic Science The School for Commerce and one Elementary Vocational School in different trades.

A total of more than 16,000 pupils yearly profit from the above-mentioned schools.

In addition to these vocational schools, there are two more: The Stockholm Municipal Higher Commercial School (700 pupils) and the Stockholm Municipal Technical Evening School (2,300 pupils).

The Higher Commercial School and the Technical Evening School are each supervised and conducted by a board consisting of the members of the municipal Board for Vocational Training and the Principal of the School.

In all the municipal vocational schools of Stockholm the total number of participants amounts to about 19,000, 5,500 of whom are full-time pupils.

Along with the ordinary instruction in the schools, the Board for Vocational Training gives instruction on housewifery work by nine expert advisers.

The Board also places annually quite considerable subsidies at the disposal of private schools.

School for Industry and Handicraft.

After the re-organization, in 1920, of the vocational schools in Stockholm, there are in the main three different types of schools: Workshop courses, Apprentices' courses, and courses for Further Vocational Training.

A workshop course is intended for beginners in a trade and provides fundamental vocational education from the first simple instructions of handling tools to more all-round knowledge and proficiency in the trade. The object of such a course is thus to give young people such education as to enable them to obtain an employment in the trade

The pupils are generally admitted to the workshop course at the age of 15 years. After their admission, the pupils have to undergo a probation period, of about six weeks, at the branch to which they have applied. During this period the teacher is able to judge the pupil's ability to profit in a satisfactory manner from the education. If the pupil lacks the necessary aptitude for that branch, he is transferred, if there is a vacancy, to another branch of the courses more suitable to him.

At school the pupils have to do different kinds of work, thus receiving an all-round training and a knowledge of the various aspects and branches of the trade. In order that the pupils may get practical training at the same time, they have to carry out contracted jobs of varying degrees of difficulty. Out of the income from these jobs, money is paid out to the pupils according to how much diligence they have shown. The gross income from the work produced amounts to some 1,200,000 Swedish Kronor every year (approx. £ 80,000).

Along with practical training, theoretical subjects are taught 6-15 hours a week, varying for different trades. These subjects are, among others: Practical Mathematics, Engineering Drawing, Materials, Calculations, and Trade and Labour Legislation. The total duration of the instruction given in the workshop courses is 45 hours a week, varying within the different trades from two to four years.

Workshop courses are organized for the following trades:

Length of Course	
2 years	Mechanics, Engine Mechanics, Motor Car Mechanics, Aeroplane Mechanics, Welders, Tinsmiths and Platers, Electrical Installation Workers, Plumbers, Photographers, Joiners, Upholsterers, Bricklayers, Masons

	Butchers, Piano repairers, and Concrete and Cement Workers.
3 years	Instrumentmakers, Blacksmiths, Painters, Decorators and Telecommunications-operators.
4 years	Watchmakers and Cabinetmakers.

The Board of Vocational Education has always tried to keep the workshop courses in close touch with the employers in Stockholm. At the courses for Painters and Decorators, for example, the majority of the pupils are sent to various master housepainters in the town, who allow them to do local housepainting work under the guidance and supervision of masters and teachers, the pupils receiving the usual wages as apprentices. At the courses for Bricklayers and Joiners in the building trades, for instance, the pupils are first trained for five months and are then sent to building contractors in the town to take part in productive work for the usual apprentices' wages. Similar contact has also been obtained in the courses for Mechanics, in such a way that two classes alternate with each other, as a rule every 2, 1/2 months, so as to enable the pupils to attend one class for 2, 1/2 months at school, at the same time, the pupils of the other class are placed as apprentices at various mechanical factory workshops. The two classes alternate with each other during the second year.

There have been courses for women's and men's hairdressers similar to those in the workshop courses, and this has promoted co-operation between school and employers. The courses that were previously conducted by the employers themselves as private courses were taken over by the City of Stockholm in 1938. All the pupils of these courses have employment in the town and receive, in addition, practical and theoretical education at the school's hairdressing practice rooms, varying between 6 to 22 hours a week for 3 years.

Since 1926 Journeyman tests have been arranged at the workshop courses. These tests are held in the presence of certain examiners appointed by the Craftsmen's association (Guilds). If a pupil has passed his test exceptionally well, he is awarded the Medal of this Association or a prize. In addition, the pupil receives a Journeyman's Certificate.

The Apprentices' courses are, unlike the workshop courses, intended for those who are already employed in a trade and who wish to complete their practical and theoretical vocational training.

The Apprentices' courses are of different types. The pupils are taught, among other things, Knowledge of the Trade, Economics, and Trade and Labour Legislation. The courses for vocational training comprise generally two years. Training and instruction are given from 6 to 9 hours a week.

Along with the above-mentioned courses for vocational training, so-called special subjects courses have been established which are to give the pupils a more extensive knowledge of one or more of the subjects related to their trades. These courses vary from one term (4, 1/2 months) to two years. Among these apprentices' courses may be mentioned courses for restaurant cooks, for manageresses of the cold buffet, for waiters and other restaurant attendants.

The course for cooks is intended to give the beginner fundamental instruction in the art of cookery and knowledge in the organization and economy of the kitchen. By dividing the course into theoretical and practical instruction, and by arranging it partly in the school itself and partly in restaurants catering for the public, the organizers of the course have set up a comprehensive study-programme.

During their training period the pupils get many advantages. Instruction is free of charge and meals are likewise provided free. During the first six months they

receive contributions towards rent, and during the next eighteen months, so-called pupils' wages. Prizes are also awarded.

The courses for manageresses of the cold buffet and waiters are held mainly on the same lines as the courses for cooks.

They are two-year courses, and are held at the Municipal Restaurant School which is housed in the Hasselbacken Restaurant in Djurgården, Stockholm.

Since 1955 the Board of Vocational Education has organized a Navigation Apprentices' School for training of sailors, ship's motormen (greasers) and ship's cooks. In these courses young boys get a basic training lasting 21 weeks before going to sea.

Special apprentices' courses in practical and theoretical subjects are also arranged for young workers in about 50 factories in Stockholm, for instance the L.M.Ericsson Telephone Co, Ekensbergs Shipbuilding yard, Ulvsunda Mechanical Co etc. The courses are principally designed for mechanics and weak-current electricians, automechanics, shipbuilding workers etc.

In addition to the above-mentioned vocational courses, other courses are arranged for such categories as pipefitters, concrete and cement workers, weak-current and high-tension-current electricians and assistants in the colourman's trade.

Courses for Further Theoretical and Vocational Training are planned to follow upon the basic training of the Apprentices' courses. For entry it is necessary either to have attended an apprentices' course or to have worked at least two years in the trade included in the course. Instruction comprises on the one hand independent courses of different theoretical subjects and, on the other, vocational training courses forming further instruction in a certain number of subjects needed for a particular trade. The courses are organized in diffe-

rent ways according to the needs and conditions prevailing.

The instruction at these types of course is free of charge, with the exception of certain apprentices' courses and courses in special subjects and in vocational training. The entrance fees for these courses are very moderate, varying from between 5 to 25 SwKr (from 7s to £1.10. approx.)

School for Sewing Trades.

The School for Sewing Trades, being the collective name of the courses for dressmakers, tailors, ladies' tailors, milliners and for makers of readymade ladies' wear, is, on the whole, organized on the same lines as the School for Industry and Handicraft. In this school, too, the workshop course provides basic instruction, the stress being laid on practical vocational education. Theoretical instruction is given in Trade Technique, Pattern Design, Economics, Drawing, Materials, Trade and Labour Legislation, and Trade Hygiene. The courses are free of charge and held in day-schools. For each trade there has been fixed a certain probation period. Having finished the probation period, the pupil, as a rule, gets rewards for application. Continuation courses in evening schools offer the pupils a chance of receiving advanced education and of specializing at a trifling cost.

These courses are also accessible to adults, but it is a minimum requirement that the applicant should have gone through a workshop course or otherwise must prove to have at least two years' practice in the trade in question.

The course for Dressmakers is a two-to-three-year school giving chances of a continuation year (a so-called Practice Year) at a dressmaker's workshop. After finishing this practice year, the pupil is entitled to pass a journeyman's test.

The courses for Tailors and Ladies's Tailoring are a

three-year school. Like the dressmakers, the ladies' tailors can have a practice year, which, however, must be passed at the school itself.

The course for Milliners is of two years' duration. Before leaving school, the pupils have to pass a final test in order to obtain a certificate.

The course for Furriers is a four-year school and the course for Dressmakers for Furs is of three years' duration.

The course for Tailors of Ready-Made Ladies' Wear comprises fulltime instruction of 10 months' duration. In addition to the practical training in Whole Piece and Tempo Work, the syllabus contains Trade Technique, Materials, Trade and Labour Legislation, and Trade Hygiene. The probation period is two weeks. 85 per cent of the school's income from the sales of the work produced during the course is set aside for rewards for application to be divided among the pupils.

Beside the compulsory subjects, the syllabus contains optional English and French, with the stress laid on learning a limited vocabulary and some technical terms, and on the translation of easy texts.

Moreover, there is instruction in voluntary solo and choir singing free of charge for those interested.

Beside the sewing schools mentioned, there have been arranged special courses for domestic sewing. There are some 250 courses every year, comprising, for instance, Dressmaking, Sewing, and the Making of Children's Clothes.

Mothers with small children can attend the courses, as there is a nursery at their disposal where, at a trifling cost, they may leave their children while attending the course.

School for Domestic Science.

This school comprises, among other courses, training courses for domestic servants, housekeepers, and, for those serving as attendants at school meals, short housewifery courses and other courses in domestic science. Instruction comprises practical as well as theoretical subjects, such as Cooking and Baking, Theory of Nutrition and Foodstuffs, The Keeping of the Home, Domestic Economy, Health and Child Care.

Several courses are intended for girls who wish to receive fundamental training in housewifery while they are earning their living. Girls wanting further training in domestic duties, as a preparation for trades in which such training is considered desirable (e.g. for hospital nurses), can receive it in the so-called housewifery courses which last for four months.

In collaboration with the Housewives' Association, four housewifery courses for adults are arranged every year. They are intended for those wishing to set up a home. In the instruction are included practical as well as theoretical subjects. In addition there are lectures on housing problems, family hygiene, parent and child psychology, and sociology. These courses are given free of charge. The pupils have to pay 30 Sw Kr (approx. £ 2) a month for food.

In addition to these housewifery courses, short courses in Domestic Science are arranged. The duration of the instruction varies between 12 and 200 hours, depending on the difficulty of the subjects. Instruction is given in the simpler and more elaborate arts of cookery, preserving, baking, keeping the home, and domestic economy together with bookkeeping.

Courses giving instruction in cooking are arranged for housewives with large families. These courses are held in the Municipal Nurseries.

The Board of Vocational Education has organized special courses for housekeepers. Instruction lasts 39 weeks and its object is suitable training in managing a large household with foresight and economy. The education qualifies the pupils for employment at officers' messes, boardingschools, tourist centres and similar institutions.

Since 1957 a special course for training of air hostesses and hostesses for other kinds of traffic has been organized, with instruction lasting 18 - 21 weeks.

For training of domestic servants there are four full-time courses annually. The courses go on for 39 weeks and comprise practical and theoretical instruction.

Continuation courses embracing about two hundred hours are arranged for domestic servants and those who are interested in Domestic Science and have had long and qualified experience, as well as for domestic servants who have passed their final examination. If the pupil should desire to carry on her employment during the course, it will be possible for her to do the course in stages and study one or two groups of subjects at a time.

Instruction is generally free of charge for all these courses. A certain fee for food is to be paid, but the pupil may be exempted from this fee on application. The domestic servant school has a boarding-house of its own.

School for Commerce.

The commercial education carried on earlier by the Stockholm Municipal School (Stockholms Borgarskola) was taken over on July 1, 1924, by the town authorities and transferred to the schools for vocational education, where it was combined into a special group of courses, The Stockholm Commercial School.

The object of the commercial school is to give instruc-

tion to young people of both sexes who, leaving school at different stages in their education, desire to prepare themselves for occupations in business and industry, in retail shops or other commercial establishments, as well as to give supplementary commercial education to people of any age practising a trade. With their many classes and courses partly in the day-time, partly in the evenings, the school meets a great number of study requirements, from all-round education in preparation for exacting office work to specialized education in particular subjects.

The school comprises full-time basic courses for office clerks, courses for further vocational training, separate courses in shorthand and typewriting, and courses for shop assistants.

The commercial day school with full-time instruction comprises a general department of commerce, one-year commercial-enterprise courses, secretarial courses, and courses in Swedish and foreign commercial correspondence.

The general department of commerce offers courses from one to three years, and its object is to give the pupil a fundamental general commercial education. The pupils receive instruction in commercial technique, commercial geography (including knowledge of merchandise), economics, sociology, commercial law, foreign languages, and in certain extra subjects. Entry is open to those who have gone through an Elementary School.

The one-year business economy course is designed to give pupils who have sufficient general knowledge already, such knowledge as will be necessary for the execution of more exacting tasks, especially those involving knowledge of accountancy. Instruction is given in bookkeeping, commercial arithmetic, theory of commerce, and sales and publicity technique. English lessons are also included in the course

In the course for secretaries and the course in foreign commercial correspondence, instruction is concentrated on German, English, French, and commercial technique.

The courses in Swedish commercial correspondence involve typewriting, Swedish shorthand (Melin's system), the Swedish language, Swedish commercial correspondence, commercial arithmetic and handwriting lessons.

The language courses comprise courses in Swedish and English, Swedish and French, and Swedish and German. They are evening courses extending over five terms in all, the first term of which is an apprentices' course and the remaining four terms further vocational training courses. The minimum age of entry is 15 years.

The courses for office clerks consist of a two-year apprentices' course and a one-year further vocational training course and comprise technical commercial subjects.

In the commercial school too, the subjects for the further vocational training courses are designed to provide a continuation of the basic courses. To be admitted to these courses the pupil is required, among other things, to have gone through a basic course or to have reached the age of 17 years and possess the corresponding knowledge, and to have had at least two years' experience. Among other courses are tax legislation, self-assessment of taxes, statistics, office organization, window-dressing and decoration technique, and sales technique.

Further, there are special accountancy courses extending over two years. The conditions of entry are elementary knowledge of bookkeeping and "realexamen" (corresponding to the school certificate examination). Candidates are also required to have had at least five years' approved practice and to have reached the age of 25 years.

The retail trade courses for shop assistants, day courses and evening courses, comprise the following branches: textiles, ladies' clothing, men's clothing, provisions, colourman's trade, shoe-shop and iron mongery.

The day courses for shop assistants last for two years. Instruction is given in Swedish, English, theory of commerce, knowledge of merchandise, commercial arithmetic, bookkeeping, commercial correspondence and lessons in handwriting. For certain periods, the schoolwork is substituted by practical training in shops.

The evening courses extend over three years of study, the first two years' instruction of which is considered as a basic course and the last year as a further vocational training-course. The courses may be entered directly after pupils have left the Elementary school.

Seven practice - rooms are installed in the premises of the Commercial School provided with a stock of goods for the above branches.

In co-operation with insurance enterprises, The Swedish Bank Union and so on, a number of special courses of varying length have been arranged.

Gymnastics and Physical Training.

The majority of the pupils of the full-time day schools have gymnastics instruction from one to three hours a week. The full-time vocational training schools have, besides, their own athletic association in which the pupils take a keen interest. The associations have many sections, among which may be mentioned football, ice-hockey, table tennis, badminton, and shooting. An extensive and fine collection of prizes bears witness to the fact that the schools have fostered many capable athletes among their pupils. The athletic association at the Industry and Handicraft school also publishes an annual report to which the pupils themselves have contributed.

Teachers.

The practical instruction is conducted by teachers appointed annually, whose duties comprise 43 hours per week in the School for Industry and Handicraft, and 30 hours per week in the School for Domestic Science. The teachers of theoretical subjects are either full-time or part-time teachers. Special-subject teachers in the School for Industry and Handicraft have to instruct for 29 hours per week, and in the School for Commerce 24 - 30 hours.

The teachers in the School for Commerce have, to a large extent, a university degree or the degree of an institute of technology or the School of Economics ("Handelshögskolan"). All the teachers of the School for Domestic Science are trained cookery teachers. Those teaching on the practical side of Industry and Handicrafts have, as a rule, attended special courses and have had long practical experience (at least seven years).

The Stockholm Higher Commercial School.

In 1945 the higher department of the commercial school was transformed into a so-called "Handelsgymnasium" (a higher commercial school). An old private higher commercial school (Frans Schartaus handelsgymnasium) was added to the former school in 1952. It consists of three departments, namely, a two-year day course, a one-year day course for pupils with the matriculation examination (studentexamen) and a four-year evening course. The three lines are intended to give the same standard of knowledge and are completed by the same examination. The final examination entitles the pupil to enter the School of Economics.

The Stockholm Technical Evening School.

The object of the Technical Evening School is to make it possible for young people employed in commercial and industrial life to obtain, alongside of their daily work, a general cultural education and the technical training that, besides practical experience, is required for technicians such as foremen, draughtsmen and assistants in technical offices and laboratories.

The school comprises a lower and a higher department, the first one giving three years' and the second two years' instruction. In the lower department the subjects taught are Swedish, German, English, Arithmetic, Physics, Chemistry, and Drawing. This department is also meant to prepare the pupil to enter the Royal Institute of Technology in Stockholm.

The instruction in the higher department specializes in various technical sides such as engineering technics, motor-engine technics, steam-engine technics, strong and weak-current electrotechnical engineering, etc.

Other Instruction.

Advisers. At the service of the public there are nine advisers, namely one head adviser as a chief, an adviser on house-furnishing, four advisers on domestic problems and three advisers to give information concerning the care of bedding, sewing, weaving and knitting.

The principal task of the adviser on house-furnishing is to be of service to young couples who are going to start a home and family. The adviser is to help them to plan wisely when procuring equipment, such as furniture and other fittings for their home, so as to fit in economic with practical and aesthetical requirements. The advice is given partly through personal consultation, and partly in connection with courses and lectures. Exhibitions of furniture and textiles are also held, as well as special displays of glass, china, and pictures.

The duty of the advisers on domestic problems consists of demonstrations of various kinds in food and utensils, preservation, washing, etc. short cookery courses, lectures and the giving of advice on food and nutritional questions, kitchen planning, the economic organization of domestic work.

Under the direction of the head adviser there is also a special section of Dressmakers Workshops (systugor) organized in 1943. Here the public is given advice and guidance in washing, ironing, darning, mending, the daily care of one's clothes, etc. Instruction is also given in renovation and alteration of old clothes.

As far as room permits, these "Systugor" are also made available as workrooms for those interested in sewing who have no sewing machines of their own. Every visitor to the "Systugor" pays a fee of 50 öre (approx. 7 d) each time. That the interest in this activity is great is shown by the fact that the number of visitors was more than 28,000 during 1960. There are at present ten "systugor" in various parts of Stockholm.

Municipal Subsidies to other Vocational Institutes.

To make it possible for private and non-municipal vocational institutes to work in their respective fields, the Municipal Board for Vocational Training grants annually considerable amounts totalling about 780,000 SwKr, (£ 53,000), to about 15 institutes. Among those receiving subsidies may be mentioned the Vocational School for Book Making Craft, the Fredrika Bremer Society's Higher School for Ladies, Gålö Agricultural School, and Sunnerdahl's Practical Junior School.

Scholarships.

State scholarships may be granted to pupils without private means or of small means. These scholarships are, however, granted only to pupils attending full-

time courses of at least four months' duration. The scholarships, as a rule not exceeding 75 Sw Kr (about £ 5) a month, are granted to necessitous pupils living at home while attending school. A pupil without private means, who has to be accommodated outside his home, may be granted a scholarship as a rule not exceeding 175 Sw Kr (about £ 12) a month.

Students who are highly gifted may be granted loans out of the public study loans fund. The loan is given without any security being required.

Besides the above State Scholarships and loans, the students can obtain scholarships from private societies and unions and from the Municipal Scholarships' Fund.

School Meals.

Since 1947 free school meals have been arranged for pupils in schools with full-time instruction.

Textbooks.

All the pupils registered in Stockholm and attending workshop courses, the vocational training departments of the apprentices' course or other courses with full-time instruction that are in most respects comparable to workshop courses, receive free textbooks and free educational materials.

Libraries.

In the schools there are five libraries intended for teachers as well as for pupils. The libraries contain technical literature, sociological literature, and, to some extent, works of fiction. The libraries comprise in all some 17,000 volumes.

Travelling Scholarships (Bursaries) for Pupils.

Schools that are of such recent foundation as those for Vocational Training have in general not obtained any great number of funds. The only fund allotted to the proper vocational schools for travelling scholarships is the Anders Granholm Stipendiary Fund. The object of this fund is to make it possible for apprentices in schools for blacksmiths and metal workers in Stockholm to practise the corresponding trade abroad for at least three months and after that to continue their work in Stockholm. The higher commercial school has also some funds available for prizes for its cleverer students.

Travelling Scholarships for Teachers.

Each year the municipal Board for Vocational Training usually distributes 7,500 Sw Kr in allowances to teachers, chiefly for travels abroad.

Travelling of school classes.

It is considered highly important that the pupils of the schools should now and then make visits to suitable commercial concerns and to museums and other places so as to carry out study suitable for their vocational education.

Full use is made of opportunities of paying educational visits to firms and institutions inside Stockholm and in its surroundings. Moreover, study groups from the schools have visited large or special enterprises of various kinds in the country, such as Bofors, Sandviken, Hagfors Mills, Fagersta, Untraverken, etc.

Health Service.

The schools employ two part-time physicians whose

principal duty is to examine the newly-enrolled pupils. They have, further, to examine regularly all pupils who ought to be under special supervision owing to their state of health, and to recommend them to apply to specialists and policlinics. At the instance of the parents, the pupils may undergo inoculation, and each year the pupils have their lungs X-rayed.

Under certain Government regulations, pupils who have been injured at work are entitled to certain sick-relief money during the time they are unable to work. In case of permanent disablement they may be awarded a life-annuity.

School buildings.

Owing to building restrictions caused by the scarcity of material during the present time of crisis, the building problems have not yet been solved so as to keep pace with the present development of the vocational school system, which is expected to reach its culminating point at the beginning of the 1960's. The instruction is chiefly concentrated in seven school buildings in Stockholm, viz. 35 Polhemsgatan (the School for Industry and Handicraft and the Sailors' School), 85-91 Kungsholmsgatan (the School for Sewing Trades and the School for Domestic Science), 75 Kungsholmsgatan (the Commercial School), Hasselbacken (the Restaurant and Hotel School), Drottningholmsvägen 82 (The Technical Evening School), Stigbergsgatan 26 (The Higher Commercial School), Västberga gård (Västberga Elementary Vocational School).

Government Grants.

Since 1921 grants have been paid, according to the provisions of a Government Act, to municipal institutions for vocational education. Government grants are also given for educational material and libraries.

The Government grant covers at present a minor part of

the cost, that is, about 45 per cent.

Practical Guidance in the Schools for Vocational Training.

As part of the vocational guidance for pupils in the finishing classes of the Elementary School in Stockholm, the Vocational Schools arrange leisure-time occupation. The idea is that young people should be able to try one or more vocations. The young elementary-school pupils are allowed to visit the workshops and classrooms of the Vocational Schools, to see how the trades are carried on and to try to make use of tools, machines and materials. They also receive information about the different conditions connected with the trades. During one session lasting a year the pupils will be able to try out four different trades. Pupils who so desire may choose a more extensive spare-time course in one trade. The courses are held two afternoons a week, as a rule two hours each time. There are about 90 working-groups a year with some 1,500 pupils attending. This practical guidance of spare-time activity has proved to be of great importance for the choice of a vocation by young men and women.

In recent years there has been a general tendency to make the education in the highest forms of the Elementary School more practical. Some elementary-school pupils of Class VIII (at the age of 14 - 15 years) have thus been able to get a preparatory vocational education by attending the courses of the Vocational Schools three days a week during their eighth school year. They have thus carried out their 8th school year by spending every week half of the time at a Vocational course and half of it at the Elementary School.

INDEX

Organization of the Vocational School System and its Various Branches of Activity.

School for Industry and Handicraft 2

The Workshop courses
The Apprentices' courses
The courses for Further Vocational Training

School for Sewing Trades 7

Course for Dressmakers
Course for Tailors
Course for Ladies' Tailors
Course for Milliners
Course for Makers of Ready-Made Ladies' Wear

School for Domestic Science 9

School for Commerce 10

Gymnastics and Physical Training 13

Teachers 14

The Stockholm Higher Commercial School 14

The Stockholm Technical Evening School 15

Other Instruction 15

Advisers

Municipal Subsidies to other Vocational Institutes. 16

Scholarships 16

School Meals 17

Textbooks 17

Libraries 17

Travelling Scholarships (Bursaries) for Pupils .. 18
Travelling Scholarships for Teachers 18
Travelling of school classes 18
Health Service 18
School Buildings 19
Government Grants 19
Practical Guidance in the Schools for
Vocational Training 20

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SWEDEN

The 360 agents in 290 local employment offices operated by 25 county labor boards cooperate with private enterprise to determine existing and potential job vacancies and overages in the work force. Unemployed workers report to local employment offices weekly to remain eligible for benefits. The National Labor Market Board is responsible for determining where adult vocational courses are to be held, the trades in which training will be offered, trainees to attend, living allowance of the trainees, and employment for graduates. The organization and administration of the courses are the responsibility of the Board of Education. Courses are usually established in areas of high unemployment. In September 1965, there were 43 training centers offering 602 courses and 316 additional courses were offered in 130 locations. Trainees must be 21 years old, registered for work, and found suitable for training in the chosen trade. Normally 75 to 80 percent of those completing a course find employment in the area for which he was trained. The appendixes list the trainees financial allowances and the courses offered. (DM)

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SWEDEN TODAY

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Vocational Training for Adults in Sweden

by Anna Wiman

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The Swedish Institute for Cultural Relations with Foreign Countries was founded in 1945. Its affairs are managed by a Council of one hundred persons and a Board with a maximum of 15 members. Under its charter the Institute is authorized to foster Sweden's cultural, social and economic relations with other countries by programs of information, cultural exchange and other means. The Institute's activities are financed by grants from the Ministry for Foreign Affairs and the Ministry of Education and Cultural Affairs, and by donations from companies and organizations. The head office is at Kungsgatan 42, Stockholm. Foreign offices are located in England at 49, Egerton Crescent, London S.W.3, and in France at 125, Avenue des Champs-Elysées, Paris 8e. Activities in other countries are carried on in association with embassies, legations, consulates, chambers of commerce, and lecturers at foreign universities. The Institute's most important duties are:

- to receive foreign stipendiaries and send Swedish stipendiaries abroad;
- to arrange invitations to scientists and visiting lecturers for temporary assignments in Sweden, and to make similar arrangements for Swedes abroad;
- to organize summer university courses in Sweden for foreign students;
- to formulate study programs for foreign experts visiting Sweden;
- to support instruction in Swedish at foreign universities;
- to support translation of Swedish literature into foreign languages and to promote cultural exchange in music, drama and the arts;
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The information services of the Institute relate to all subject matter areas of general interest. Examples are education, social welfare, the Swedish economy, industrial relations, national defense, town and country planning, arts and crafts, and drama. Further information may be obtained from the Institute directly or from Swedish diplomatic missions abroad.

VOCATIONAL TRAINING FOR ADULTS IN SWEDEN

by Anna Wiman

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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The Swedish Institute
Stockholm

Index

	Page
Geographical distribution of the courses	5
Types of courses	6
Selection of trainees	6
Training of teachers	7
Method of training	7
Local administration	9
Co-operation between the two Boards dealing with training for adults and industry	9
Results	10
Appendix 1: Trainee benefits	11
Appendix 2: Vocational training for adults	12

State-organized vocational training for adults was introduced after World War II as one of the measures to be taken for preventing unemployment.

There are other steps, too, for combatting unemployment and it is the task of the National Labour Market Board to decide on the measures to take in case of unemployment.

In order to gauge the situation on the labour market at any given moment, the Board receives continuous information on local developments from the local employment offices via the county labour boards (25 in number). The network of local employment offices is vast (290 in number). In addition there are 360 local agents. Since there are no private employment offices, the State service is able to present a fairly complete picture of the actual demand for labour and for jobs.

The efficiency of the system is enhanced by co-operation between private enterprises and the county labour boards, the employers keeping the boards informed of existing vacancies and notifying them of forthcoming curtailments of production or planned shutdowns several months before the action is taken. [1]

Usually, notice is given at the earliest opportunity to allow time for preparing the placement of workers in other jobs.

On the labour side, unemployed workers covered by unemployment insurance are entitled to benefits from the union-operated, State-subsidized funds, provided, however, that they report every week to

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[1] There exists an agreement between the Swedish Employers' Confederation and the Labour Market Board that such notification should be given at least two months in advance.

the local employment offices. This provision helps to keep the local records up to date, especially in occupations where the majority of the workers are covered by insurance. The publicity given to government-sponsored programmes for the relief of unemployment also induces non-insured workers to report more regularly at the employment offices, since they are encouraged to seek help.

There are two national boards concerned with the organization of vocational training for adults: the National Labour Market Board and the National Board of Education.

The Labour Market Board and the county labour boards play an important part in the implementation of the training programme for adults. It is their task - in addition to the ascertainment of the employers' present and expected future needs of skillded manpower, the numbers of unemployed in need of training and their geographical distribution - to decide where the courses are to be arranged and the trade in which training should be given, to select the trainees and assign them to the different courses, to grant and pay the trainees' living allowances and related benefits during the course. Finally, it is the task of the county labour boards to find employment for trainees completing the course.

The organization, the administration and the running of the courses are carried out by the Board of Education. [2]

Locally, the Board is assisted by a course committee consisting of four members, two of whom are educators and the other two representatives of the county labour board.

When a county labour board finds it necessary to provide training facilities for a great number of unemployed the following measures are to be taken.

If the capacity of the existing courses is sufficient, the unemployed will be sent to those courses. If not, the competent county board, in informing the Labour Market Board of the situation, proposes new courses, the trades in which training ought to be given, and where the courses should be organized. If accepted by the Labour Market Board,

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[2] Since January 1962 the county labour boards have assisted in administration of the courses in bookkeeping, introductory shop training, and so on.

the proposal will be sent to the Board of Education along with the Board's recommendation. And from this point, it is the task of the vocational educational authority to take the necessary steps.

The Board of Education is divided into several divisions, and it is the division called P3 which deals with the training of adults.

When planning new courses, the first task is to prepare a curriculum for the trade in question and to arrange for the workshop. These preparations settled, the workshop has to be equipped with machines, tools, and so on.

The Board of Education has also to deal with the recruitment and training of teachers.

All measures mentioned have to be accomplished rapidly because it is of great importance - from both the psychological and the economic points of view - that measure for the relief of the unemployed are carried out without delay.

Geographical distribution of the courses

In some countries such as Britain and the Netherlands, the training of adults is concentrated in a number of training centres. In Sweden, the courses for unemployed are usually established in areas with large numbers of unemployed. In times of increasing unemployment, this system will result in a situation where lots of courses are spread out all over the country, singly or in smaller groups. At present, the tendency is to bring together more and more courses in training centres. In September 1965, there were 43 training centres offering 602 courses. But there are still about 316 courses dispersed over 130 places throughout the country.

The Swedish system facilitates the recruitment of the unemployed and the handicapped. Candidates who are able to go home every day or every weekend are more attracted by the possibility of receiving training than those obliged to live far away from their families. But from the administrative, economic and educational point of view, the Swedish system involves certain inconveniences.

Types of courses

There are so-called central courses, arranged and entirely financed by the Board of Education. To these courses applicants can be assigned from any part of Sweden. Municipalities can arrange so-called municipal courses and receive subsidies covering part of the costs. The municipal courses serve primarily local needs but vacancies can be filled with applicants from other areas.

According to the trainee's background, there are:

a) Training courses for a new job (retraining courses) which are arranged for those over 21 years of age who have already worked in a trade but, owing to the shortage of employment in that particular trade, must be taught a new trade.

b) Continuation courses which are provided for experienced workers over 21 years of age to improve their skills or to enable them to acquire new skills in their own trade.

Selection of trainees

As mentioned before, the Swedish training programme for adults was introduced as one of the remedies for unemployment. Nowadays the training programme includes more and more of those who, although still in employment, are soon likely to be out of work, as well as a large number of handicapped and also certain aliens.

It is the task of the county labour board to recruit for the courses. The general conditions for eligibility are that the applicant:

1. is at least 21 years old;

2. has registered for work with an employment office; and

3. is found suitable for training in the trade chosen.

In addition to these general conditions, special conditions apply to certain trades.

In order to ascertain the aptitude of the applicants, there will be an

interview and sometimes an aptitude test. The interview provides data concerning the applicant's earlier work and his attitude toward training.

If a trainee is later found not suitable for the trade chosen, he can be taken into training for another trade or may ultimately be withdrawn from further training.

Special training allowances are paid out of public funds to those attending the course. (See App. 1.)

Training of teachers

Before obtaining appointment as teachers, the candidates, who are usually recruited from among skilled workers, have to take a 12-week training course, divided into six periods. These courses are carried out by the same division of the Board of Education which deals with the training of teachers for vocational schools for youth. The courses, usually located in a training centre for adults, include a number of lectures on Demonstration Techniques, Theory of Teaching, Technique of Lecturing and so on, as well as practical training, which takes place in workshop conditions. In the intervals the candidates are acting as teachers while pursuing their studies at the same time.

The training of teachers is considered very important, and at present such courses are permanently going on at two training centres.

Method of training

The training courses for adults usually last one year, at the rate of 45 hours per week. However, they may be longer - there are courses lasting two years. Sometimes they are shorter, owing to the nature of a certain trade. The training is as a rule given entirely in a training centre or in a separate course.

The main part of the training is practical, but theoretical training is also given in the courses for adults. Experience has indicated the

necessity of brushing up the knowledge acquired at the elementary school, because many trainees have never had any other education since leaving school and have forgotten much of what they learned there. The theoretical training includes such subjects as qualities and use of materials, drawing and arithmetic. But the subject matter used is taken from the trade for which the training is intended.

Usually, one teacher is in charge of the entire course, comprising 12 to 20 trainees, giving both practical and theoretical training. Sometimes, however, the theoretical training is provided by one or several specialized teachers, who combine this task with teaching at vocational or other schools or serve at several courses for adults. At training centres, the training is often carried out by specialized teachers. With the training centres dominating more and more, this system will become increasingly common.

In general the admission of trainees is not bound to any special number or dates. Candidates can - in almost all kinds of courses - be accepted from day to day, so that inconvenient periods of waiting are avoided. This also means that trainees finish their courses successively, so that there is no congestion in the employment offices, and once again waiting is avoided. Given this individual method, every trainee can complete his course in accordance with his own capacity for understanding. Every trainee, however, has to complete the same list of work projects, compiled by the P3-Division. If possible, trainee are assigned for this purpose to making things of use for other courses or for sale.

When preparing a curriculum, the first question is: What must the trainees be taught? The curriculum must embrace not more and not less than what is necessary for practicing the trade in question. As opposed to the education of young people, this training must be carried out with a view to meeting immediate requirements.

In order to arrive at a well-working programme, the curriculum is prepared in cooperation with experts from industries.

(Certain trades in which training is given are exemplified in App. 2.)

Local administration

The local responsibility for a course lies in the hands of the director, who is directly subordinated to the National Board of Education.

The function of the director is advisory, co-ordinating and supervisory. He is responsible in every respect for the smooth running of the whole training organization.

In order to assist the director in management, there are periodic checks and inspections by the Head Office. The work projects involve a constant communication between field and Head Office, with the latter ordering projects and checking the progress of project work at the courses.

Co-operation between the two Boards dealing with training for adults and industry

Close co-operation between the Boards and industry in the matter of training adults is of great importance; without it, successful training would be impossible.

Accordingly, the two Boards have considered it necessary to have representatives of industry participate on the general policy of training and in carrying it out. With regard to the general policy, this co-operation is achieved through a Central Coordinating Body with representatives from the Board of Education and the Labour Market Board, from the Swedish Employers' Confederation, the Swedish Confederation of Trade Unions and the Central Organization of Salaried Employees.

The Body considers and advises in matters relating to the scope of the training, the number of the men and women who should be trained and the trades in which training ought to be given.

In addition to the Body, there are local committees. These committees consist of representatives of organized industry, both employers and workers, engaged in the practice of the trades concerned, and of the County Labour Board. These committees consider the trainees' capacity to learn and the teachers' capacity to teach and give advice on matters relating to training.

There exists, however, co-operation established directly between the experts of the Board of Education and those of the different trades, concerning curricula, equipment, and so on.

Results

The Swedish system of establishing training courses when and where the need arises gives a high degree of mobility and speed, which is of great value from the psychological point of view.

The fact that the practical training is, as far as possible, given in the form of production work is also of great value in the training of adults, since it gives them an approximation of the atmosphere of industrial work.

Experience has shown that it is quite easy, even in a period of rising unemployment, to find suitable jobs for those who have undergone a thorough training course. The training of unemployed has been found the cheapest and most productive measure against unemployment, and it is receiving increased emphasis. The number of courses is rapidly growing. The rapidity of expansion is proved by the following example. In the period from July 1956 to June 1957, 79 courses were going on. The corresponding figure for the period from July 1965 to June 1966 was about 900 courses.

As for the chances of finding a new job, usually about 75-80 per cent of those completing the course get employment in the trade for which training has been given or in related trades.

1966

* Anna Wiman is Head of Division in the National Board of Education

Appendix 1

Trainee benefits

Trainees receive living allowances, rental allowances, family supplements and special supplements from the Labour Market Board through the county labour boards. The living allowance is maximized at 450 kronor per month.

The rental allowance for an unmarried trainee is 125 or 175 kronor per month, according to the local cost of living. A married trainee receives an amount equal to the rent actually paid and, if he undergoes training outside his place of domicile, an additional allowance for his own rent equal to that of an unmarried trainee.

Family supplements include:

a) a maximum of 75 kronor per month for the wife (husband), if the training is given in the place of domicile, or a maximum of 220 kronor per month if the training is given outside the place of domicile, and

b) a maximum of 60 kronor per month for each child under 16 years of age; in special cases, 150 kronor.

Special supplements can be granted to cover travel expenses (also daily travel between the place of domicile and the place where the training is given), study material, work clothes, etc.

The benefits are tax-free.

Since September 1958, an unemployed trainee covered by unemployment insurance may choose between the insurance benefits and the Labour Market Board allowances.

Appendix 2

Vocational training for adults

Training for a new trade:	Length of course
Automobile and tractor mechanics	48 weeks
Automobile electricians	2 years
Automobile service (cleaning, lubricating, putting in spare parts, simple repair)	6 months or 3 months
Repair of motorcycles, bicycles, motor scooters	32 weeks
Electrical installation	48 weeks
Electrical armature winding	48 weeks
Repair of instruments and machinery in the field of electronics, radio, etc.	72 weeks
Machinists (different trades) [1]	12-48 weeks
Precision machinists	48 weeks
Sheet metal workers	48 weeks
Welders	20 weeks
Radio, television and radar technicians	72 weeks
Clerical and commercial work	18-20 weeks
Seamstresses in clothing industry	3 months
Domestic work, including sewing and nursing	4 to 5 months
Cook and head waitress	20 weeks
Continuation course:	
Building (various specialities) [2]	2-14 weeks

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[1] Turners (centre lathe turning)
Turners (capstan lathe turning)
Fitters
Milling machine operators
Grinders, etc.

[2] Cement gun worker
Cement plasterer
Carpenter
Concrete worker
Light concrete worker
Plumber
Bricklayer, etc.

Sweden is situated in the eastern half of the Scandinavian peninsula. It is the fourth largest country in Europe, with a surface area nearly twice that of Great Britain and somewhat larger than that of California. Almost 1000 miles from tip to toe, it presents a wide variety of landscape. The fertile, gently undulating plains of the south are a complete contrast to the barren mountain slopes and glaciers of the far north, with its Arctic vegetation. Sweden's highest mountain is Kebnekajse, 2117 meters (6942 ft. above sea level). In between lie great forests broken by thousands of lakes and rivers. The Gulf Stream off the western coast of the peninsula gives a climate that is very mild for the northerly latitude. Sweden is widely known for its "sunlit nights" but tourists should remember that it is only in the small area above the Arctic Circle that the sun - for two months in the summer - shines all round the clock. Sweden has a population of 7.7 million, which means an average population density of 46 persons per square mile. The capital, Stockholm, with its suburbs has a population of 1.1 million. Sweden is a constitutional monarchy, a member (since 1946) of the United Nations, of OECD, GATT, and other international organizations. In the 1950's, Sweden joined with Denmark, Norway, Iceland and later Finland to form the Nordic Council. In 1960, the EFTA agreement was signed in Stockholm. The language of the country is Swedish, which has a great deal in common with Norwegian and Danish. Norwegians, Danes, and Swedes can talk to each other each in their respective languages. The Swedish monetary unit, the krona, is roughly one fifth of the U.S. dollar and one fourteenth of the English pound.

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*AGRICULTURAL EDUCATION; *YOUNG FARMER EDUCATION; *PROGRAM ADMINISTRATION; *PROGRAM DEVELOPMENT; *PROGRAM DESCRIPTIONS; ORGANIZATIONS (GROUPS); ADMINISTRATOR GUIDES; TEACHING GUIDES
NEW YORK; *YOUNG FARMER ASSOCIATION; YFA

The young farmer program is explained to assist boards of education, school administrators, advisory boards, and teachers in making administrative arrangements and to assist teachers in organizing, conducting, and evaluating young farmer programs. Content includes: (1) a description of the young farmer program, (2) suggestions for making administrative arrangements, (3) a guide for determining needs and planning instructional programs, (4) suggestions for group instruction and individual on-farm instruction, (5) suggestions for organizing and conducting a young farmer association, (6) suggestions for record keeping, and (7) plans for evaluation and improvement. Supplementary materials include: (1) a concept of instructional needs, (2) a farm business chart, (3) a young farmer survey form, (4) a farm problem summary sheet, (5) sample teaching plans, (6) a record of on-farm instruction, (7) a sample annual program of activities for a local young farmer association, (8) a chart of progress toward establishment in farming, (9) guidelines and procedures employed by the teacher in organizing and conducting the young farmer program, and (10) a reference list. (DM)

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Organizing and Conducting Young Farmer Programs in New York State

by Harold R. Cushman

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Introduction 3
What is the Young Farmer Program? 3
Making Administrative Arrangements 5
Determining Needs and Planning Instructional Programs 7
Conducting Group Instruction 14
Giving Individual On-Farm Instruction 21
Organizing and Conducting a Local Young Farmer Association 23
Keeping a Record of the Young Farmer Program 26
Evaluating and Improving the Young Farmer Program 26

Organizing and Conducting Young Farmer Programs in New York State

Harold R. Cushman

INTRODUCTION

The emerging pattern of agricultural instruction at the secondary school level in New York State includes specialized programs of instruction during the junior, senior, and post high school years in agricultural business, agricultural mechanization, conservation, farm production and management, and ornamental horticulture. This shift in the purpose of agricultural instruction from preparation for farming to preparation for the entire spectrum of occupations in which agricultural knowledge and skills are needed has been vastly accelerated by the passage of the Vocational Education Act of 1963.

The specialized program during the post high school years in the area of farm production and management is called the young farmer program. It is a well established program strongly oriented to the business management concerns of young men who are entering farming. In addition to receiving systematic instruction, enrollees in this program may also benefit from membership in a local young farmer association. This is an informal organization of young men who are in the process of establishing themselves in farming.

The purpose of this bulletin is fourfold: to explain in detail what the young farmer program is; to assist boards of education, school administrators, advisory boards, and teachers of agriculture in making suitable administrative arrangements for such programs; to assist teachers in organizing, conducting, and evaluating young farmer programs; and, finally, to make the experience of outstanding teachers of agriculture available to persons in out-of-school educational programs here and abroad.

WHAT IS THE YOUNG FARMER PROGRAM?

Who Are Our Young Farmers?

A young farmer is defined as a young man 16 or over who is out of school and in the process of becoming established in farming. Although young women, especially the wives of young farmers, sometimes attend meetings, the young farmer program is not primarily intended for them. Although persons below 16 who are exempted from compulsory school attendance might participate, they seldom do so.

According to a recent study[1], beginning dairy farmers in New York State have a mean age of 26 within a range of 17–39, are married (80 percent), and have an average of two children. They and their wives have completed an average of 12 years of school, and only 13 percent of them did not graduate from high school. Nearly three-fourths of this group were enrolled for varying amounts of agricultural instruction during high school, and 50 percent completed four years of an agricultural program. Two-thirds of them were 4-H Club members. One-fourth of the group attended one or more years of college. Fifty-six percent of the beginners owned their farm businesses, 42 percent were partners, and only 3 percent rented. Many attained their farming status as owner, partner, or renter directly, though most of them worked as farm laborers usually on the home farm. The study further showed that beginning dairy farmers rank higher than the average commercial dairyman in New York in size of business, level of production, and labor efficiency. The study also revealed that many in this group must increase the size of their business and their incomes.

The Young Farmer Needs Help

A young man attempting to establish himself in farming today faces a challenge because of current trends in agriculture, the complexity of farming operations, and the changing role of the farmer in our society. The years during which he seeks to establish himself are critical and obstacle-ridden.

First, he must possess a farm business of adequate size. In view of rising land values and the accelerated trend toward mechanization, the young farmer must control $40,000 to $60,000 in order to buy a farm large enough for economic operation. His credit needs are great whether he enters farming through farm employment, renting, partnership, inheritance, or off-farm employment. He has many kinds of business agreements and commitments to make involving large sums of money. In some cases, he may be faced with the crucial decision of selecting a farm.

Secondly, the young farmer must develop and exercise his abilities in farm business management. His profits will be determined by such factors as the size of business, rates of production of crops and animals, labor efficiency, price relationships, combination of enterprises and capital efficiency. An understanding of these factors and ability to manage them wisely are essential to the young farmer.

In his day to day decisions, the young farmer must apply the findings of research, outlook information, price trends, and new developments in mechanization to his farm.

As he plans and operates his farm business, the young farmer must be able to answer many questions: What are the returns for hours of labor from various enterprises? What does it cost to produce a hundred pounds of milk? What are the returns over feed cost for specific animals? What was the change in net worth last year? The answers to such questions must come from an analysis of carefully kept records and accounts. Unless he follows proper business procedures, the young farmer will be forced to make critical decisions "by guess and by gosh." He will be "flying by the seat of his pants."[2]

Conducting a farm business involves many management decisions and many skills. The young farmer must decide which practices are best for him to follow and put them into effective operation on his farm. In addition he must make improvements in his basic tools of production: buildings, land, livestock, and machinery. The young farmer cannot afford to make mistakes. Errors in judgment are much more serious financially for the young farmer of today than they were for his counterpart in the past.

During the period of establishment, the young farmer and his wife have to make adjustments to marriage, to parenthood, and to citizenship and leadership responsibilities. He and his wife must learn to work together, to develop a satisfying home and family life, and to plan their recreation. They must learn to cooperate with other adults, participate in community organizations, and thus fulfill adult roles in the community. Young farmers and their wives need help and counsel while attempting to make these adjustments.

How the Young Farmer Program Can Be of Help

The young farmer program is designed to assist young men in establishing themselves in farming. A young farmer may be considered to be established when he owns approximately 50 percent of his farm business; is proficient and experienced in making management decisions and in performing the required manipulative skills for his type of farming; looks to farming as the main source of his livelihood; provides himself and his family with a standard of living at least average for the community; and is accepted in the community as a responsible participating citizen.

The young farmer program is educational in nature and provides systematic instruction and an opportunity for participation in the local young farmer association.

In systematic instruction, young farmers, with the help and guidance of a teacher of agriculture, identify the problems confronting them in their individual farm business situations, consider alternatives and plan solutions to these problems as a result of group and individual instruction, and apply the solutions on their farms.

A local young farmer association is an organization of, by, and for young farmers. Here young farmers can gain experience in leadership, cooperation, and community service, and can plan and conduct recreational and social activities of interest and benefit to themselves and their families.

The young farmer program has a number of strengths. It is directed by a teacher of agriculture who has specialized training in planning, conducting, and evaluating educational programs for young men who are out of school. By concentrating his attention on a relatively small number of young farmers with closely related needs, the teacher is able to provide systematic instruction based on specific concerns of the participants. The program of instruction is broadened and enriched by an organization of young farmers. The physical facilities of the school, especially those of the agriculture department, are available to the participants. The services and efforts of the community agencies are enlisted to help meet the needs of the young farmers.

MAKING ADMINISTRATIVE ARRANGEMENTS

Th Changing Setting in Which Young Farmer Programs Are Administered

Young farmer programs in New York State have traditionally been conducted by teachers of agriculture under the administration of local boards of education. Since only one teacher of agriculture was usually employed in each school district, he was responsible for teaching the agriculture courses offered to secondary school students, advising the local chapter of the Future Farmers of America, and organizing and conducting the young farmer program. As an employee of the local board of education, the teacher of agriculture has been subject to the same administrative procedures as other teachers. The normal administrative channel has been from teacher to high school principal to board of education. Schools having a local director of adult education also utilize his administrative services. In addition, Article 93 of the Education Law requires a board of education maintaining vocational instruction to appoint an advisory board representing the local trades, industries, and occupations. For a department of agriculture, such a board has usually been composed of practicing farmers, chosen because of their experience, who represent the dominant agricultural enterprises of the region. The young farmer group has usually held evening meetings at the high school where classroom, shop, and laboratory facilities are available. Meetings have also been held at other locations, including members' farms. In addition, the teacher has given individual instruction to the young farmers.

While this administrative setting still predominates, a number of changes are taking place. One involves the reorganization of school districts. Because of financial pressures and the desire to offer a broader program of instruction, the number of school districts is declining. Consequently, school districts are generally larger and the secondary school agriculture department serves more students. The trend toward providing agricultural instruction under the Board of Cooperative Educational Services has had similar effects.

A second change has been the gradual shift in agricultural instruction from preparation for farming to preparation for all fields of agriculture. This movement was vastly accelerated by the passage of the Vocational Education Act of 1963 which broadened the purpose of vocational agriculture to include preparation for the entire spectrum of occupations in which agricultural knowledge is needed. The emerging pattern of agricultural instruction in New York State now includes specialized instructional programs during the junior, senior and post high school years in agricultural business, agricultural mechanization, conservation, farm production and management, and ornamental horticulture.

Agricultural instruction in the future will, with increasing frequency, be offered in area vocational and technical schools serving several school districts. These schools will offer a variety of vocational subjects under the administration of a director of vocational education who will be responsible to a board of education composed of representatives from the member school districts.

Young farmer programs will also change. There will be more than one teacher of agriculture, each a specialist in one or more areas. Teaching young farmers will be regarded as a specialized task and will be assigned to one or more teachers as a major responsibility. The teacher will report to a director trained in vocational education, but not necessarily in agriculture. The school will provide instruction for young farmers in a larger geographical area. The teacher will be available at any time to give young farmers both individual and group instruction.

The Teacher is the Key to Success

As with all educational endeavors, a competent, well-trained, interested teacher is a must. The employment of such a person is the responsibility of the school administrator and the board of education. They should work to find an outstanding teacher.

The teacher must have demonstrated a sincere interest in, and capability for, working with adults. He must be well-trained in the subject matter areas and the methods of teaching adults. He must be able and willing to keep up to date by cooperating with other persons serving the needs of farmers and by taking advantage of in-service training programs.

Teachers of agriculture report that many of their greatest personal satisfactions result from their participation in the young farmer program. Teachers working with young farmers must be practical and focus their attention on real farm problems. In addition to winning the confidence and respect of farmers in the community, the teachers are often rewarded financially and professionally.

An Informed and Sympathetic School Administrator is Vital

To keep his school administrator informed and involved in the young farmer program, the teacher should issue periodic reports, use normal administrative channels when determining policy, invite the school administrator to participate in well-planned meetings of the advisory board and to observe the young farmer program in action, and involve the

school administrator in special events. Such activities are especially important when there is a change of school administrators.

If the teacher of agriculture wishes to introduce a young farmer program to the area, he should discuss its possibilities with the school administrator and supply complete information concerning the purpose and nature of the program. If the administrator feels the program is desirable, he will explain it to the board of education and discuss it with them, possibly inviting the teacher to assist in presenting the facts. If this group wishes to discover whether the program is needed in their community, the teacher of agriculture and the advisory board may be requested to make a survey to find out how many young farmers would be interested.

Locating and Interesting a Sufficient Number of Young Farmers

In the interest of efficiency, the teacher of agriculture should collect certain information about the young farmers in his school district(s) so that he can select those he should visit. The permanent record files of the school show who took courses in agriculture and give the date of birth, address when in school, and highest grade completed.

Marital status, present address, farming status and degree of need for the program can be obtained from the agriculture department's "Permanent Cumulative Record for Vocational Agriculture" and by interviewing people such as advisory board members, extension personnel, school people, high school agriculture students, rural organization leaders, feed store operators, and others who have lived in the area for a long time. Such persons should also be asked for information about young farmers who did not take agriculture in high school or who have moved in from other areas. Often the teacher himself will have a good knowledge of local people, but he will be wise not to limit his survey to his acquaintances.

When reliable data concerning the young farmers have been collected, the teacher and his advisory board should determine the criteria for selecting those to whom personal visits will be made. For example, it might be decided that the teacher should visit only those young farmers who live in the area of the school, are in the process of becoming established in farming, have a need for training, and constitute a fairly homogeneous group as far as age, marital status, previous education, or farming status are concerned.

The first contact with individual young farmers may be limited to 15 or 20 minutes. When he arrives at the farm, the teacher should introduce himself to the young farmer and inform him of the purpose of his visit. He should explain the program and its benefits, how it operates, and how instruction will be conducted. He should discover the young farmer's plans for the future and observe his farming operation in general. He should answer the young farmer's questions, find out if he is interested, and ask the names of other young farmers who might be interested. Before leaving the farm, the teacher should make it clear what action the young farmer can expect from him if plans are made to begin the program. During this visit the teacher will be wise to include the young farmer's wife or parents in the discussion.

When the teacher has completed his visits with the young farmers, he should report to the advisory board which should review the number of young farmers who are interested, the intended scope of the program, the adjustments needed in the teacher's schedule of responsibilities, and the cost and reimbursement estimates. The advisory board then gives this information to the board of education, along with a recommendation as to whether the young farmer program should become a part of the school's offering in agriculture. The final decision rests with the board of education.

Providing Teacher Time

While plans for the young farmer program are being made, the school administrator should review the teacher's responsibilities and determine the adjustments necessary to provide "teacher time" and fit the new program into the normal working day of the teacher. The teacher must be able to meet the young farmer class without straining his family relationships. He must not be expected to conduct the young farmer program as an overload activity. In fact, it is not advisable to allow him to do so even if he is willing.

In determining adjustments in the teacher's responsibilities, the administrator must realize the teacher should devote at least 10 hours of individual on-farm instruction per young farmer each year. Assuming that four hours per young farmer is spent during the summer, six hours per farmer (or 120 hours of on-farm instruction for a group of 20 young farmers) must be provided during the school day. This is equivalent to 180 forty-minute periods or one regularly scheduled school period per day throughout the school year. Because of the time required for travel, on-farm instruction must be scheduled at the end of the school day.

It is strongly recommended that the teacher's combined pupil load of secondary school students and young farmers be limited to 50. Even so, the teacher must work after school hours to provide the minimum amount of on-farm instruction.

Coordinating Efforts with Other Agencies

The teacher of agriculture must recognize the fact that organizations other than the school serve the educational needs of young farmers. The agricultural extension service, commercial companies, credit agencies, and soil conservationists among others are involved. If efforts are being made to coordinate the activities of these groups, the teacher should explain to them how his program will supplement existing efforts. Where no such attempts are underway, the teacher should call representatives of the interested agencies together to reach agreement on the contribution each can make and the coordination of efforts. The facilities of the agriculture department can be used as a center for programs serving young farmers.

DETERMINING NEEDS AND PLANNING INSTRUCTIONAL PROGRAMS

Instructional Needs and Their Importance

The needs of any individual can be classified as felt or as unfelt depending on his awareness of the gap between where he is and where he should be. When a young farmer becomes dissatisfied with the shortcomings of his farm business, he has a felt need. For example, if his dairy herd records show that his cows are producing an average of 10,000 pounds of milk per cow and he believes they should produce 15,000 pounds to return a reasonable profit, he feels a need to improve the level of production 5,000 pounds per cow. The teacher of agriculture can expect this young farmer to be interested in the problems which must be solved to fulfill his needs.

Conversely, when a young farmer does not recognize the shortcomings of his farm business, he has an unfelt need. For example, a young farmer who does not keep production records or who is unaware of appropriate standards of milk production is unlikely to feel a need for increasing the production of his herd. While taking a farm survey, the teacher of agriculture may divide the pounds of milk sold during a year by the number of cows and discover an approximate average milk production of only 8,000 pounds per cow. If the teacher is convinced that 10,000 pounds per cow is the minimum production that is economically feasible, he will recognize an unfelt need on the part of the young farmer to increase his milk production 2,000 pounds per cow. In this case the teacher must recognize that the young farmer is not aware of his need nor is he concerned about the problems which must be solved to fulfill this need.

Unfelt needs can be converted to felt needs by helping an individual to recognize his present situation, become familiar with appropriate standards, become aware of the difference between the two, and set appropriate goals. The young farmer must be helped in collecting accurate information about his farm business and in computing certain measures of the factors most closely related to success in farming. These include crop yields, animal production, size of business, labor efficiency and capital efficiency. He should compare this information with the standards achieved by successful farmers and take note of the weak spots in his farm business. Finally, he should receive help in setting goals which, when achieved, will strengthen his farm business.

For example, if the teacher of agriculture helps a young farmer compute his present milk production per cow and compare it with that of other successful New York dairy farmers, the young farmer may become convinced that he needs to raise his milk production by 2,000 pounds per cow. In that event, an unfelt need will have been converted to a felt need. Furthermore, the teacher of agriculture will note that this young farmer is interested in the problems which must be solved. A young farmer who is aware of a need may require assistance from the teacher in identifying the specific problems which must be solved to fulfill the need. A teacher of agriculture must convert unfelt needs into felt needs if he wishes to interest the young farmer in identifying and solving his problems.

If the young farmer already possesses the necessary knowledge, skills, attitudes, and understandings, he can go ahead on his own to identify and solve the problems that will enable him to fulfill his needs. On the other hand, if a young farmer does not have the effective abilities necessary to identify and solve his problems, he needs instruction. For example, the young farmer who feels the need to increase milk production per cow by 5,000 pounds may be able, with the teacher's help, to identify such problems as improving the feeding of dairy cows during the barn feeding period, improving the quality of roughage to be fed, planning the breeding program for the dairy herd, and preventing and controlling mastitis. If the young farmer does not already possess the knowledge, skills, understandings, and attitudes to solve these problems, the teacher and the young farmer have identified four of his instructional needs. This concept is illustrated by the diagram in Figure 1.

The teacher of agriculture is an educational specialist. As a teacher of young farmers, it is his obligation to give systematic instruction. If the young farmer program is to realize its potential for improving the lives of young farmers, this instruction must be primarily concerned with those instructional needs of

Figure 1. A Concept of Instructional Needs

What Should Be (Goal) = 15,000 lbs of milk/cow
What Is (Situation) = 10,000 lbs of milk/cow
} Gap (Felt Need) = 5000 lbs/cow

⇩

Instructional Needs

(Problems which the young farmer needs help in solving)

1. Improving the feeding of dairy cows during the barn feeding period.
2. Improving the quality of roughage to be fed.
3. Planning the breeding program for the dairy herd.
4. Preventing and controlling mastitis.

young farmers which, when fulfilled, will most directly influence success in farming; this includes the areas of crop yields, animal production, poultry mortality, size of business, labor efficiency, and capital efficiency.

Determining the instructional needs of young farmers is the essential first step in systematic instruction. Because instructional needs are complex and young farmers frequently lack insight concerning their own needs, the teacher must be well informed about each young farmer's situation and goals (or absence of goals) before he attempts to help him identify his instructional needs. One process by which the teacher and the young farmer achieve this is by taking a farm business survey.

Obtaining a First Impression of Instructional Needs

Arrangements to take a farm business survey should be made in advance with the young farmer so that he will be free from other duties and responsibilities. Between one and two hours should be planned for taking the survey.

When he arrives at the farm, the teacher should be sure the young farmer understands the purpose of the survey—"to find out what we can do that will help you the most" — and that it is to be a joint undertaking. He should then walk the farm with the young farmer. This gives the young farmer a chance to show the teacher his farming operation and gives the teacher an opportunity to see the livestock, crops, buildings, and equipment. As they go about the farm, the teacher should ask questions about the young farmer's situation, plans, and problems. He should take mental notes.

After walking the farm, the young farmer and the teacher should fill out the survey forms together in an atmosphere relatively free of distractions. The following information should be summarized:

1. A farm business analysis including data concerning such factors as size of business, labor efficiency, animal production, crop yields, and mortality rates (Figure 2). It is important to use objective information from such sources as D.H.I. records; farm account books; bale counts; S.C.S. maps; silo, hay and grain tables; and milk plant weight slips rather than guesses the young farmer might be tempted to make.
2. A record of selected approved practices being used on the farm (Figure 3).
3. The farm improvements and approved practices planned for the year ahead (Figure 3).
4. A list of farm problems or instructional needs which are most vital to the young farmer's success.

Before leaving the farm, the teacher should explain that the problems discovered will be kept confidential and summarized with those of other young farmers to help determine the instructional phase of the young farmer program. If the program is new, he should also discuss a convenient time for the first group meeting.

Summarizing Instructional Needs

When the teacher has completed the survey procedure with every young farmer, he summarizes their instructional needs or farm problems. This can be readily accomplished using a chart such as the one in

Figure 2. Farm Business Chart

FARM OF _____ YEAR _____

TOTAL ACRES IN THE FARM _____ ACRES OF TILLABLE LAND _____

Success in farming is the result of many factors. Farm business studies show that the most important factors under the farmer's control are size of business, production rates of crops and animals, labor efficiency and selection and combination of enterprises.

The chart below shows the range of the experience of commercial farmers in New York with respect to size of business, production rates and labor efficiency.

The figure at the top of each column is the median of the highest ten per cent of the farms in that factor. For example, the figure 3.8 at the top of the column headed "Tons of Hay" is the median of the ten per cent of the farms with the highest yield of hay. The other figures in the column are the medians for "the next best 10 per cent," "the 10 per cent below that," and so forth. The figure 1.2 at the bottom of the column is the median of the ten per cent of the farms with the lowest yield of hay.

Each of the columns is independent of the others. The figure 18 at the top of the column headed "Tons of Corn Silage" is the median of the ten per cent of the farms with the highest yield of corn silage.

Hay, Silage, Grain Yields per Acre					Vegetable Yields per Acre								Fruit Yields per Acre			
Tons of Hay	Tons of Corn Silage	Bu. of Corn	Bu. of Oats	Bu. of Wheat	Lbs. of Dry Beans	Cwt. of Potatoes	Tons of Cabbage	Cwt. of Onions	Lbs. of Peas	Tons of Tomatoes	Net Tons of Sweet Corn	Tons of Snap Beans	Bu. of Apples	Bu. of Pears	Tons of Grapes	Tons of Sour Cherries
3.8	18	100	82	53	2,300	340	30	480	5,500	22	4.5	2.8	540	330	6.5	6.6
3.0	16	85	72	46	1,900	305	25	420	4,500	18	3.8	2.5	480	260	5.0	4.6
2.7	14	75	65	43	1,700	285	22	380	3,800	16	3.4	2.3	430	230	4.2	3.6
2.4	13	68	60	40	1,500	265	19	355	3,200	14	3.1	2.1	390	200	3.8	3.0
2.2	12	63	56	37	1,300	250	17	330	2,800	13	2.9	1.9	355	180	3.5	2.6
2.1	11	58	52	35	1,100	240	15	310	2,500	12	2.7	1.8	325	160	3.2	2.3
1.9	10	53	48	33	1,000	225	13	290	2,200	11	2.5	1.7	295	140	2.8	2.0
1.7	9	48	44	30	900	205	11	260	1,900	10	2.3	1.5	260	120	2.4	1.6
1.5	8	43	38	26	800	185	9	230	1,500	9	2.0	1.3	220	100	2.0	1.2
1.2	5	30	28	20	600	150	7	180	1,000	8	1.5	1.1	180	70	1.5	0.8

Dairy Farms					Labor			Poultry Farms				
Number of Cows	Pounds of Milk Sold	Pounds Milk Sold per Cow	Cows per Man	Pounds of Milk Sold per Man	Total Work Units	Man Equivalent	Work Units per Man	Number of Hens	Eggs Sold per Hen	Hens per Man	Dozens of Eggs Sold per Man	Pounds Feed per Dozen Eggs
75	800,000	13,500	34	375,000	1,000	3.5	420	25,000	250	10,000	190,000	4.0
52	545,000	11,800	28	300,000	720	2.7	340	16,000	235	7,500	135,000	4.4
45	440,000	10,800	25	245,000	590	2.3	310	12,000	225	6,000	100,000	4.7
40	380,000	10,200	23	210,000	520	2.0	290	9,500	220	5,000	85,000	4.8
35	335,000	9,600	21	190,000	460	1.8	270	7,500	217	4,000	70,000	4.9
32	290,000	9,000	19	180,000	430	1.6	250	6,000	214	3,500	65,000	5.0
29	245,000	8,300	18	170,000	390	1.4	230	5,000	210	3,000	60,000	5.1
25	205,000	7,400	17	155,000	350	1.3	210	4,000	205	2,500	50,000	5.3
21	160,000	6,500	15	130,000	310	1.2	190	3,000	200	2,000	40,000	5.5
16	110,000	5,300	12	100,000	250	1.0	160	2,000	185	1,500	30,000	6.0

HOW TO USE THIS CHART

Draw lines in each column to show the rank of the farm business being studied. For example, if the farm produced 57 bushels of oats per acre draw a line in the "oats" column between the 56 and 60.

Draw heavy lines so that you can see them easily.

Do not draw lines for factors which are of only minor importance on the farm being studied.

PREPARED BY S. W WARREN, DEPARTMENT OF AGRICULTURAL ECONOMICS, NEW YORK STATE COLLEGE OF AGRICULTURE, ITHACA, NEW YORK, FEBRUARY, 1966

87

Figure 2. Farm Business Chart (continued)

WORK UNITS FOR LIVESTOCK AND CROPS

LIVESTOCK	Number or acres on this farm		Work units per head or per acre		Total work units
Dairy Cows	_____	×	8	=	_____
Beef Cows	_____	×	2	=	_____
Heifers	_____	×	2	=	_____
Hens (production only)	_____	×	0.04	=	_____
Egg processing (per doz.)	_____	×	0.002	=	_____
Pullets raised	_____	×	0.006	=	_____
Broilers raised	_____	×	0.003	=	_____
Brood sows	_____	×	3	=	_____
Hogs raised	_____	×	0.2	=	_____
Ewes	_____	×	0.5	=	_____
_____	_____	×	_____	=	_____

MAN EQUIVALENT

Workers	Full-Time Months
Operator(s)	_____
Family (paid)	_____
Family (unpaid)	_____
Hired men	_____
Other	_____
Total	_____
Man equivalent (Total ÷ 12)	

CROPS						Yield per acre	Total Crop
Hay	_____	×	0.8	=	_____	_____	_____ tons
_____	_____	×	_____	=	_____	_____	_____ tons
Corn Silage	_____	×	1.2	=	_____	_____	_____ tons
Corn for grain	_____	×	1	=	_____	_____	_____ bu.
Oats	_____	×	0.8	=	_____	_____	_____ bu.
Wheat	_____	×	0.8	=	_____	_____	_____ bu.
_____	_____	×	_____	=	_____	_____	_____
_____	_____	×	_____	=	_____	_____	_____
Dry beans	_____	×	1.5	=	_____	_____	_____ lbs.
Potatoes	_____	×	6	=	_____	_____	_____ cwt.
Cabbage	_____	×	9	=	_____	_____	_____ tons
Snap beans—machine harvested	_____	×	1	=	_____	_____	_____ tons
Onions	_____	×	12	=	_____	_____	_____ cwt.
_____	_____	×	_____	=	_____	_____	_____
_____	_____	×	_____	=	_____	_____	_____
_____	_____	×	_____	=	_____	_____	_____
_____	_____	×	_____	=	_____	_____	_____
Apples—growing	_____	×	4	=	_____	_____	_____ bu.
Apples—harvest—per bushel	_____	×	0.02	=	_____		

OTHER					
Work off farm, days	_____	×	1	=	_____
Marketing	_____	×	_____	=	_____
_____	_____	×	_____	=	_____

TOTAL WORK UNITS

WORK UNITS PER MAN

(Total work units ÷ man equivalent)

Total pounds of milk sold	_____	÷	no. of cows	_____ =	_____ pounds of milk sold per cow
Total pounds of milk sold	_____	÷	man equivalent	_____ =	_____ pounds of milk sold per man
Number of cows	_____	÷	man equivalent	_____ =	_____ cows per man
Total dozens of eggs sold	_____	÷	no. of hens	_____ =	_____ dozens of eggs sold per hen
			Dozens of eggs per hen × 12	=	_____ eggs sold per hen
Number of hens	_____	÷	man equivalent	_____ =	_____ hens per man
Total dozens of eggs sold	_____	÷	man equivalent	_____ =	_____ doz. of eggs sold per man
Total lbs. of feed for laying flock	_____	÷	doz. of eggs sold	_____ =	_____ lbs. of feed per doz. eggs

Figure 3. Young Farmer Survey Form

Name.....

Mailing Address.....

Date of Birth.....Highest Grade Completed.....

Farming Status.....Marital Status.....

Military Status.....Number of Children.....

Completed New York Farm Business Chart (circle one) Yes No

Check (√) practices followed in list below

Dairy

.....Production record program (DHIA, OS, other).
.....Breeding records (breeding, calving, heat expectancy).
.....Herd health records.
.....Cows bred first heat period, 70 days after calving.
.....Artificial insemination, (high AI Proven Sires).
.....Veterinarian examines cows for pregnancy.
.....Heifers proper size for age of calving, (24–27 mo. of age).
.....All cows have 50–60 day dry period.
.....Cows freshen in good condition.
.....Calving pen used.
.....Annual herd turnover below 20 percent.
.....Isolate purchased cows temporarily.
.....Feed colostrum to calves.
.....Use antibiotics in feeding calves.
.....Provide special grain mixture for calves.
.....Grain fed according to revised feeding guides (constant ratio not acceptable).
.....Supplements pasture with hay, silage or green chop (6–15 – 10–15).
.....Water supply adequate.
.....Wash udder and stimulate let-down ½ – 1 minute before applying milker.
.....Remove machines as soon as cow is milked out.
.....Bulk tank used.
.....Mechanical ventilation.
.....Barn laid out for "easy work."
.....Stalls at least 43″ wide and 64″ long.
.....Adequate bedding.

Crops

.....Tests soil.
.....Limes according to recommendations.
.....Cooperates in SCS program.
.....Use treated, hybrid corn and certified oat seed.
.....Up-to-date varieties.
.....Band seeding.
.....High analysis fertilizers applied so not in contact with seed.
.....Use chemicals to control weeds.
.....Planned crop rotation.
.....Contour strip cropping on soils likely to wash.
.....Row crops on land with slight slope.
.....Sod crops on land with greater slope.
.....Critical spots artificially drained.
.....Rotates pastures with "big bite" species.
.....Clips permanent pastures.
.....Applies lime and fertilizer on permanent pasture.
.....Studies success of new hybrid corn varieties in neighborhood.
.....Silage variety with high grain content.
.....Move date of corn planting ahead moderately.
.....Corn borer control.
.....Start harvest of silage corn in glazed stage.
.....Finishes first cutting of hay by June 25.
.....Winter killing of forage species not a serious problem.
.....Use of sorghum sudan crosses for supplementing pasture.
.....Use hay crusher or crimper.

Figure 3. Young Farmer Survey Form (continued)

Farm Business Management

.....Maintain a farm office with files and reference materials.

.....Set aside time regularly for management

.....Take an annual inventory.

.....Keep cash account records.

.....Maintain production records.

.....Keep a field and crop record.

.....Have a map of home farm.

.....Use a soil map in analyzing farm business.

.....Analyze and study farm records each year.

.....Prepare and use financial statement.

.....Keep informed on farm prices and farming outlook.

.....Budget alternatives when making major decision.

.....Keep a record of all real estate capital improvements for tax purposes when sold later.

.....Have an inventory of "Your Valuable Papers."

.....Make a will to cover farm and personal matters.

.....Provide sufficient operating capital to take advantage of discounts, sales, etc.

.....Keep debts consolidated and review debt situation annually.

.....Pay all major bills by check.

.....Review insurance program periodically.

.....File tax returns, check stubs, and other important papers for possible future use.

Machinery and Buildings

.....P.T.O.'s protected.

.....Machines stored under cover.

.....Machines properly winterized.

.....Home farm shop.

.....Fire extinguisher in barn.

.....Adjustments, lubrication and maintenance of machinery (circle those wants instruction on)

Milking machine
Manure spreader
Tractor
Baler
Forage harvester
Mower
Hay conditioner
Elevator
Plows
Harrows
Corn planter
Seeder
Sprayer

GOALS, FARM IMPROVEMENTS, NEW PRACTICES PLANNED

Dairy herd (or poultry flock)

Crops and Land

Buildings and machinery

Overall farm

What can we do in the young farmer program that will help this young farmer most?

Figure 4. The chart will have more meaning for the teacher if he differentiates between felt instructional needs and unfelt instructional needs. The teacher can expect considerable diversity in the instructional needs of young farmers.

Using the completed chart, the teacher next makes a list of the five or six farm problems which the largest number of young farmers have identified, placing heavy emphasis on farm business management. On the premise that one purpose of his teaching will be to convert unfelt needs to felt needs, he may also wish to include in his list a few problems relating directly to success in farming which are common to the group but for which only a few young farmers feel a need for instruction. However, he should not be surprised if the young farmers reject these.

Felt instructional needs peculiar to individual situations should be reserved for on-farm instruction.

Typical Instructional Needs

Hill et. al.[1], using a procedure similar to that described above, found the most common instructional needs of 223 beginning New York dairy farmers to be:

1. Farm Business Management: Knowing laws and other legal aspects affecting farm business, interpreting governmental programs, knowing the available government services, increasing efficiency, buying the right type and amount of insurance, keeping records and reporting income tax and social security, planning agreements for renting or buying additional land, planning credit needs, analyzing the farm business, and marketing farm products.

2. Dairy Husbandry: Isolating purchased cows temporarily, using antibiotics in feeding calves, using a calving pen, using a bulk tank, finding ways to increase milk production, maintaining herd health, selecting feed rations, and selecting bulls that will increase milk production.

3. Crop Production: Using contour strip cropping, using band seeding, top dressing pastures with commercial fertilizers, clipping permanent pastures, increasing soil productivity, selecting the proper fertilizer, selecting the best yielding seed variety, controlling weeds, controlling diseases and insects, and increasing pasture yields.

4. Farm Mechanics: Using electrical power on the farm, constructing and repairing farm buildings, providing facilities for housing and milking, and determining size of power machinery and equipment.

Figure 4. Problem Summary Sheet

Farm Problems	Class Members										
											Total

√ = A felt instructional need.
X = An unfelt instructional need.

Making Arrangements for the First Meeting

The teacher should set the date for the first meeting at the convenience of the young farmers. One suggested procedure is to send out a letter to each of the young farmers at least two weeks in advance, announcing the date and hour, the meeting place, and the agenda. This is followed by a postcard reminder three or four days in advance of the meeting.

At the first meeting the teacher should strive for informality. It is usually advisable to arrange tables in a conference-type setting to allow the teacher to sit with the group. The teacher should plan to dress neatly but informally.

Before the meeting, the teacher should provide an opportunity for one or more of the natural leaders in the group to become well informed about local young farmer associations. This might be achieved by giving them appropriate written materials, having them visit another young farmer association, or by some other means.

Conducting the First Meeting

Although the school administrator will probably not be able to attend many meetings of the group, it is most appropriate that he welcome the young farmers to the school on behalf of the board of education.

The instructional program should always be planned jointly by the teacher and the young farmers with the latter making the final decisions. The teacher may remind the group of the farm business surveys previously made with each of them, describe the process he has used in summarizing the results, explain why he has placed emphasis on farm business management, and present the list of five or six problems for which the largest number of young farmers have indicated a need for instruction. He should then encourage the group to made additions to, and deletions from, the list which he has presented. Primary emphasis should

always be placed on farm business management rather than on production.

When the group has agreed on the problems to be included in the program, they should decide the number and frequency of meetings. The teacher should encourage the group to schedule at least one meeting each month with additional meetings during slack work periods. The group should then schedule specific dates for each farm problem, taking into consideration such factors as logical sequence, seasonality, number of meetings needed to solve each problem, and the urgency of each. Since the teacher is to be in charge of instruction, the group should not be encouraged to establish specific plans for the instruction to be given.

When the instructional program has been organized, the group should discuss plans for a local young farmer association. Since the teacher's role in this connection is to be advisory, he should call on a well-informed member of the group to present information and lead the discussion. The teacher should encourage the group to take steps to gather all the facts before any decision is made and allow them to proceed at their own pace. They may wish to invite a leader from another young farmer association to the next meeting to describe his group's activities, to send a delegation to visit a meeting of such a group, or to obtain further information by some other means. Or, if complete information is already available and the group so desires, they may wish to elect temporary officers, select a name, and discuss other details of organization which will be included in an informal constitution. Above all, the teacher should maintain his stance as an advisor throughout the discussion and allow the leadership within the group to function.

The meeting should usually be concluded by the end of the second hour. Refreshments may be served while the meeting is in session or afterwards depending on time.

If the teacher has made careful preparations, the group should emerge from the first meeting with an instructional program strongly oriented toward farm business management, a high degree of interest in forming a local young farmer association, and the impression that their needs and interests will be well served by the program.

CONDUCTING GROUP INSTRUCTION

Young Farmers as Learners

1. Motivation and ability to learn. Compared to older, more established farmers, young farmers are more interested in changing farm techniques and in introducing the changes into their own operations; more interested in monetary gain than such traditional rural values as freedom from debt and self-sufficiency; less inclined to value farming and rural residence as the most desirable pattern of working and living; and more inclined to seek the freedom and diversity of the urban pattern of association rather than primary contacts with family and neighbors.[3]

As adults between the ages of 18 and 40, young farmers are at the prime of life in terms of the rate at which they learn. The teacher of agriculture can expect his young farmers to excel in judgment and reasoning, ability to solve problems, and creative imagination. On the other hand, he should recognize that, compared to high school students, adults tend to have poorer perception and be less capable in reading ability and memorization.

2. Where do young farmers get their information? The findings of Hill et. al.[1] indicate that young farmers in New York State are accustomed to using many sources of agricultural information. The young farmers included in the sample reported they regularly read an average of six farm publications. More than half the young farmers reported they regularly read *Farm Journal, American Agriculturist, Hoard's Dairyman, N.Y.A.B.C. Co-operator, Successful Farming,* and *G.L.F. News.*

Radio is a more common source of agricultural information than television. More young farmers reported listening to agricultural radio programs in the morning (67 percent) than afternoon (19 percent) or evening (30 percent). Those young farmers who use television as a source of agricultural information are more apt to view programs in the afternoon (21 percent) than in the morning (5 percent) or in the evening (5 percent).

The young farmers reported they sought counsel regarding various aspects of their farm businesses an average of 12 times per year. Those from whom such counsel was sought were, in descending order, feed dealers, agricultural extension agents, fertilizer dealers, seed dealers, Soil Conservation Service, commercial banks, agricultural teachers, farmers' cooperatives, and the Farm and Home Administration.

Membership in the following farm organizations was reported by the young farmers: Extension Service (86 percent), farm cooperatives (69 percent), milk marketing agencies (67 percent), Soil Conservation Service (67 percent), Farm Bureau (52 percent), young farmer classes (36 percent), Grange (22 percent), and youth organizations (11 percent). The percentage of members attending meetings of the organizations to which they belonged was highest for those belonging

to young farmer classes, followed in descending order by milk marketing associations, farm cooperatives, Farm Bureau, Extension Service, Grange, and Soil Conservation Service.

3. Learning activities preferred by young farmers. Hill et. al.[1] also asked each young farmer to select, from a list of 15, the 5 educational activities he preferred for obtaining information about farming. The percentage of young farmers who included each of the 15 activities in his list was: going on tours (66), observing demonstrations (62), instruction on the farm (57), reading farm magazines (57), reading farm bulletins (48), small group discussions (45), listening to talks (42), practice in doing jobs (41), observing movies and slides (22), reading newsletters (15), listening to the radio (14), panel discussions (11), watching television (8), large group discussions (7), and reading newspapers (5).

Planning for Group Instruction

Thorough preparation is a must for the teacher of young farmer classes. The young farmers must "get something" out of each class session if attendance is to remain high. The teacher must keep in mind that young farmers attend classes voluntarily. The program of instruction is based on important farm business management concerns recognized as instructional needs. The secret of keeping attendance high lies in thorough preparation and the proper use of appropriate teaching techniques. In preparing a teaching plan, the teacher should follow certain definite steps.

1. State the problem to be solved. The teacher must identify the problems and select those that can be solved in two or three meetings. It is better to divide complex problems into smaller ones before attempting to develop a teaching plan. Instruction may be needed in connection with only a part of a complex problem; if so, the statement of the problem can be restricted. Problems should be stated in words that young farmers understand and use.

2. Become oriented to the teaching situation. Teaching of young farmers is more effective when it is planned and carried out in terms of specific situations. In preparing for teaching, the teacher will need to recall such aspects of the problem's setting as the importance of the problem to class members, the number of young farmers faced with the problem, and the exact circumstances in which the problem exists.

The teacher must also consider the young farmers' attitudes and abilities and the availability of facilities, instructional materials, and other resources which may be needed to solve a problem.

3. Determine teaching objectives. Teaching objectives are the changes in people the teacher hopes to bring about as a result of his teaching.

The teacher's task is to change the behavior of his young farmers so they will be able to solve their own problems and "stand on their own feet." To do this, he must develop in them new skills and abilities, new attitudes and interests, and new understandings. The phrase "to develop an effective ability," is often used in stating teaching objectives since the student must gain not only a skill, but also a favorable attitude toward using the skill and an understanding of what is involved when he performs it.

Well written teaching objectives[4] often include the specific behaviors the teacher seeks to develop, the conditions under which the teacher expects the learner to evidence such behaviors, and evaluation criteria.

When stating specific behaviors, the teacher should use words open to few interpretations.

Words open to many interpretations	*Words open to fewer interpretations*
to know	to list
to understand	to identify
to appreciate	to solve

In stating "conditions" it is often helpful to make specific reference to such qualifiers as *given a list of, without the aid of tools, without the aid of, given a standard set of tools.*

The criteria to be used by the teacher in evaluating achievement of his teaching objectives often involve such matters as time limits, total number (how many), percent or proportion.

4. Analyze the problem. The analysis is the content or "what" of the problem. It is a device for organizing the subject matter for teaching. The teacher is guided in making his analysis by his orientation to the situation and by his teaching objectives. Since planning for teaching is a developmental process, he may wish to re-examine and revise his teaching objectives after he has completed his analysis.

Many problems are of a managerial nature and require the young farmer to make a series of decisions. In analyzing this type of problem, teachers may state a number of "decisions to be made" and list the "factors to be considered" in making each decision.

Certain rules are helpful in stating "decisions to be made."

1. State each "decision" in question form.
2. Use good English.

3. Include only those "decisions" which deal with a critical aspect of the problem.

4. Identify the logical alternatives available to the young farmer in connection with each decision. For example, solving the question "Where will I buy my alfalfa seed?" the alternatives are Dealer A, Dealer B, etc. Reject those questions for which logical alternatives are not identifiable.

5. Avoid multiple decisions. For example, the question "How will I manage my calf?" actually involves several decisions, each requiring the consideration of different factors.

6. Avoid restating the job title to form a single decision. Taking this easy way out obviously avoids the breaking of the problem into parts which is the purpose of analysis.

7. Avoid lethal decisions, questions with yes or no alternatives which block further consideration of the problem.

8. Restrict the number of decisions to four or five.

"Factors to be considered" are the criteria for deciding which course of action is to be pursued by the young farmer. Several rules should be followed in selecting and stating them.

1. Select only those factors which provide a logical basis for choosing between the alternatives.

2. Avoid outlining.

3. State each factor in as few words as possible.

4. Restrict the number of factors to four or five.

5. Select only those factors that are critical in making the decision.

A second type of problem commonly encountered in teaching young farmers is one which can be solved by applying a well-defined and commonly accepted set of operations or procedures. The analysis of such a problem may take the form of a list of "steps in doing the job" either in demonstrating the problem solution or solving the problem in a real-life situation.

A third type of problem springs from the young farmers' need for information about a new government program or a technological development which may concern his farming operation. The analysis can be a list of questions which will be answered in the course of instruction.

5. Select teaching procedures and materials. The teacher now must decide how he will go about solving the problem with the group — what teaching techniques are to be used and who is to give each phase of the instruction. In selecting the techniques, the teacher must keep in mind which of the three types of problems he is attempting to solve.

a. Managerial problems. The teacher's basic responsibility with these problems is to select teaching procedures which will enable the students to pinpoint the difficulties to be solved (decisions to be made) and the setting in which these difficulties exist, discover the logical alternatives for solving each difficulty, explore or predict the outcomes that can be expected if each alternative is pursued, choose the alternative that provides the "best fit" for their situation, and plan procedures for implementing the chosen solution on their farms.

b. Operational or procedural problems. These are characterized by a single solution that has broad application in most farming situations. The difficulty arises from the fact that although the young farmer recognizes the solution, he does not know how to implement it.

This type of problem can be efficiently solved by familiarizing the young farmer with the tools, equipment, and supplies necessary for doing the job, demonstrating the performance of each operation in sequence, and supervising the practice of the young farmers as they do the job themselves. This sequence of teaching procedures has proved particularly effective in problem areas involving mechanical skills.

c. Informational problems. In solving these problems the teacher should use teaching procedures which will place the young farmers in direct contact with appropriate and acceptable sources of information, provide valid answers which the young farmers understand, and present the needed information in a satisfying manner.

Regardless of the type of problem, the teacher should use teaching techniques known to be effective with young farmers. These include general discussion, field trips and tours, demonstrations, practice under supervision, the use of consultants, audio-visual aids, and teacher explanations. By the same token, he should avoid distasteful procedures such as supervised study, written tests, recitation, and long-winded lectures.

By and large, the young farmers will judge the merits of the young farmer program on the basis of the instruction. The intelligent teacher will be sure he provides both substance and variety.

The teaching plans which follow illustrate many of the suggestions made above.

Sample Teaching Plan for a Managerial Problem

Problem: Selecting and purchasing a bulk tank for Pete's farm.

Teaching Objectives: To develop an effective ability:

1. To select the proper size of bulk tank for different dairy farms.
2. To select the most appropriate type of bulk tank for specific situations.
3. To decide the best place to buy a bulk tank which meets the necessary specifications.

Analysis

Decisions	Factors	Teaching Procedures
		First Meeting (2 Hours)
		1. Introduce discussion by reviewing how and why the problem was chosen for group consideration.
		2. With the teacher serving as discussion leader, break the problem into decisions to be made and factors to be considered.
1. What size bulk tank does Pete need?	1. Amount of milk produced.	3. Have Pete supply the information needed on present and future volume of milk to be cooled.
	2. Future volume of milk.	
	3. Space available.	4. Present enlarged diagram showing present dimensions and layout of milkhouse.
	4. Space needed.	5. Use flip chart for various size tanks showing: a. space required between tank and wall b. space needed for cleaning tank and surrounding area c. amount of space needed for tank d. amount of space needed for work area in milkhouse
		6. Chart tentative new layout and compare with space available.
		7. Have the group weigh the relative merits of the two closest sizes which meet Pete's minimum needs and make a tentative group recommendation.
		Second Meeting (2 hours)
2. What type of bulk tank should Pete select?	1. Method of refrigeration. 2. Electric power requirements. 3. Initial cost. 4. Operating cost. 5. Convenience.	1. Field trip to two local dealers to see the alternative types of tanks and collect the information needed about each factor to be considered in deciding the type of bulk tank Pete should select and where he should buy it. Record information on field trip data sheet provided by teacher.
		Third Meeting (2 hours)
		1. With the teacher as discussion leader, review the alternative types of tanks observed on field trip and the information obtained on each and arrive at a group recommendation concerning the type of tank Pete should select.
3. Where should Pete purchase the bulk tank?	1. Cost. 2. Delivery and installation service. 3. Service available from dealer.	2. Using the same procedure, weigh the information concerning each factor to be considered in deciding where to purchase the tank and arrive at a group recommendation.

Sample Teaching Plan for an Operational or Procedural Problem

Problem: Servicing the tractor cooling system.

Teaching Objectives: To develop an effective ability to perform the following operations under farm conditions:

1. Check and determine the cause of leaks in the cooling system.
2. Check the fan belt for tension and wearing and correct to specifications.
3. Flush the cooling system using recommended procedures.
4. Replace coolant following instructions in operator's manual.

Analysis

Steps in Doing the Job	Teaching Procedures
1. Check the level of coolant in the radiator while the engine is cold.	1. (a) Remove cap, check for rust, scum, and proper level. (b) If coolant appears clean, proceed with steps 2, 3, and 4. (c) If rust or scum appear in coolant, proceed with steps 2 to 9.
2. Remove trash from grill and radiator.	2. (a) Demonstrate how to clean using forced air and water. (b) Clean from behind radiator, forcing trash out through front. *Caution*: Excess pressure may damage radiator core.
3. Check for leaks in hoses, clamps, and water pump.	3. (a) Demonstrate how to check old hoses. (b) Show how a small pinhole is a major leak in the cooling system. (c) Show cutaway section of old hose worn with use. (d) Demonstrate the use of liquid or other type hose sealer. (e) Check water pump for leaks. (f) If leaks are found refer to *Operator's Manual* for corrective procedure.
4. Check tension of fan belt.	4. (a) Demonstrate how to check fan belt for tension and wear. (b) Refer to *Operator's Manual* for recommended slack and replacement procedures.
5. Check thermostat if used.	5. Demonstrate how a thermostat works.
6. Flush the radiator.	6. (a) Demonstrate *safe* way to remove cap from hot radiator. (b) Demonstrate how to use cleaning solution. (c) Consult *Job Operation Sheet A-18* or *Operator's Manual.*
7. Refill radiator with proper anti-freeze solution or soft water.	7. (a) Explain how anti-freeze works. (b) Justify selection of coolant under conditions which will exist in use. (c) If soft water is used, add rust inhibiter. (d) Check *Operator's Manual* for amount of anti-freeze needed under different weather conditions.
8. Recheck for leaks.	8. (a) Check under operating conditions for leaks in hoses, water pump, etc. (b) Explain difference between sealed and non-sealed water pumps. (c) Check *Operator's Manual* for greasing.
9. Check freezing point of coolant.	9. (a) Explain how the hydrometer works. (b) Demonstrate to check freezing point of coolant.
	10. Have young farmers perform the job in small groups and give individual instruction as needed.

Teaching Materials

1. *Operator's Manual*
2. *Job Operation Sheet A-18*
3. Hydrometer
4. Old radiator hose
5. New permanent anti-freeze
6. Alcohol type anti-freeze
7. Thermostat (if used)

Sample Teaching Plan for an Informational Problem

Problem: Using the Agricultural Conservation Program.

Teaching Objectives: To develop an effective ability:

1. To refer accurately to the agencies and personnel responsible for soil conservation programs in the county.
2. To list on request the A. C. P. programs available in the county.
3. To compute the extent of government cost-sharing for each conservation practice.
4. To complete correctly, without assistance, the application forms for A. C. P. cost-sharing.
5. To qualify for approval of accepted practices.

Analysis

Questions to be Answered	Teaching Procedures
1. What is the current status with respect to (a) individual participation? (b) attitude toward Federal Cost-sharing Conservation Programs?	1. Motivate interest in the subject area by using a series of short-answer questions. Make questions practical but sufficiently difficult to establish a felt need for information. For example: (a) What does A. C. P. mean? (b) What does A. S. C. S. mean? (c) In which, if any, of the following cost-sharing programs have you participated? (List those available in county.) (d) Where is the county A. S. C. S. office located? (e) Who is the county A. S. C. S. manager? (f) Did you vote in the community committee election this year? (g) Have you ever served as a community committeeman? Ask young farmers to complete the questionnaire at the meeting preceding the one in which the Agricultural Conservation Program Unit is to be discussed. Begin the A. C. P. session with a report of results of the questionnaire. Use the New York State Annual Summary and the A. C. P. County Handbook for sources of information.
2. What is the Agricultural Conservation Program and how is it administered?	2. Using the Annual Summary as a reference, prepare a chart or overhead transparency showing the various A. S. C. S. programs. Use information on page 3 of the Summary for a brief explanation of the method of administration. Stress the responsibilities of local committeemen, method of election, who votes, etc. 3. Arrange for the county A. S. C. S. manager to visit the class and outline the program. 4. Arrange to visit the farm of one of the class members who has made extensive use of conservation services. Plan to have the A. S. C. S. manager in attendance to discuss short- and long-range programs for the farm.
3. What services are available to farmers?	5. Provide each student with a current copy of the County A. C. P. Handbook. Discuss the purpose and application specifications of each of the practices in which the men are interested.
4. How can A. C. P. services be obtained?	6. Ask a local committeeman or the A. S. C. S. manager to bring a Request for A. C. P. Cost-Sharing form for each member of the class. Explain how the application is completed and committee procedure for approving all or part of the request.
5. What are the farmers' responsibilities in carrying out the approved practices?	7. The A. S. C. S. manager or committeeman should explain differences in practice with respect to length of time for completion, as well as penalties for failure to comply. (See pp. 7–8, New York A. C. P. Handbook.) 8. Using Request for A. C. P. Cost-Sharing, work out a request for the farm of one of the class members.
6. To what extent does the federal government share in costs for carrying out conservation practices? (a) Allocation procedures for state and county funds (b) Method of time and payment (c) Limitations (d) Reallocation of funds	9. Make an estimate of the government share of the cost based on information in the County Handbook.

Teaching Young Farmers in Groups

The role of the teacher in the instructional phase of the young farmer program is that of a democratic leader. The young farmers expect him to take charge of the instruction program and to manipulate events and persons so learning takes place and problems are solved.

Group instruction provides an opportunity for young farmers to share experiences and to pick up new ideas from many sources. The teacher's job is to devise situations which will broaden the young farmers' understanding of their alternatives and enable them to make intelligent decisions, allow them to perform operations of which they have previously been incapable, and give them knowledge and information which they did not previously have. The teacher must recognize that it is not his function to supply ready-made solutions to managerial problems or to make decisions for young farmers. He is, after all, a teacher and not a farm manager.

Young farmers can assist the teacher in conducting group instruction by giving special reports, participating freely in general discussion, giving demonstrations, planning and conducting field trips to their farms, participating in panel discussions, and helping to secure the services of local specialists. The teacher should use the talents of his young farmers whenever possible. Young farmers enjoy the opportunity to lead. The wise teacher will seek ways to give each young farmer his turn in a role consistent with his capabilities.

A wide range of problems are considered by a young farmer class during a year. Because of the limitations of the teacher and his young farmers in specialized technical fields, it is often desirable to invite outside resource people to participate in young farmer classes. Whenever this is done, the resource person should act as a consultant, and the teacher should continue to serve as the leader. Whenever the group needs technical information, they turn to the resource person who then responds informally. The consultant thus limits his contribution to his field of specialization; maintains the group's frame of reference, namely, the problem under consideration; speaks to the setting in which the problem is being discussed; and makes no formal speeches.

When such a resource person is invited to participate in a meeting, the teacher should describe the nature of the problem to be discussed, fill him in on the setting of the problem, indicate the sorts of technical advice which may be called for, explain the role he is to play, and request that no speech be prepared or given. If the person represents a commercial concern, the teacher should make the position of the school clear with relation to commercial advertising. Used in this manner, outside resource people can make a unique contribution in helping the young farmers solve their farm problems. In no event should the teacher of agriculture serve as a booking agent who "lines-up" talks by various resource people on topics of interest to young farmers.

Getting Started in Teaching Farm Business Management

Farm business management has been defined as "the ability to organize and operate a farm business to provide high continuous profits consistent with family welfare."[5] It includes keeping records for the purpose of obtaining accurate information, analyzing records to place the information in usable form, and interpreting records so decisions can be made and the operation improved.[6]

Despite the importance of farm business management, many teachers have had difficulty providing effective teaching and leadership in this area. Some teachers have trouble motivating class members or find farm business management hard to teach. Cost studies and usable information applicable to local situations are not always available, and good teaching outlines are hard to find.[7]

The teacher who sees the need for greater emphasis on farm business management in his young farmer program but who finds himself facing such difficulties needs to take certain remedial steps. It is suggested[8] that he:

1. Find out all he can about farm business management and how to teach it to interested learners. New York teachers have ready access to a wealth of information on all phases of farm business management through the Department of Agricultural Economics of the New York State College of Agriculture at Cornell University. Its services include a wide range of publications on various facets of farm business management, reports of farm management studies conducted in New York, local farm record clubs conducted jointly with agricultural extension personnel, farm business management schools conducted by extension specialists, opportunity for personal conferences with department specialists, and summer session and extramural courses especially for teachers of agriculture. In addition, the personnel of this department have worked closely over the years with members of the Agricultural Education Division in developing instructional materials for use by teachers of agriculture. The materials are readily available from the *Instructional Materials Service, Agricultural Education Division, Education Department, New York State College of Agriculture, Cornell University, Ithaca, New York.*

2. Evaluate his efforts to present farm business management instruction and make needed revisions in content and procedures. Some of the questions to examine are:

a. Is the study of farm business management a sensible activity to emphasize in this community?

b. What emphasis should be placed on each phase of such work with in-school students and young farmers?

c. What problem-solving procedures are necessary for developing a superior farm business management program for local young farmers?

3. Acquire beginning practical experience with farm business management. Although the teacher could obtain this experience in other ways, he might select one or more laboratory farms as instructional stations where the managerial problems and the farmer himself will offer a working example. The farm family (or families) selected must understand the role the teacher plans to have them play. They must be willing to share information about their business with others, be interested in making improvements in the business management of their farm, and have a positive relationship with the teacher based on mutual respect and permitting freedom of discussion. Given these conditions, the teacher helps the farm family (or families) set up and keep accounts. At the end of the first year he assists the farmer in organizing and interpreting the facts about the business by making a farm business analysis. In this way, the farmer's problems and alternatives are identified, and a plan for making the best use of the farmer's resources can be developed.

4. Establish farm business management as the core of his instructional program. Once the laboratory farm is well on its way to improved management, the teacher can use it in developing interest in record keeping on the part of the other young farmers and as an important resource in teaching farm business management. With the majority of the young farmers engaged in record keeping, analysis of records, interpretation of records, and development of plans for improving their businesses, the teacher will find the group receptive to the teaching of the basic farm management principles needed in solving their problems.

GIVING INDIVIDUAL ON-FARM INSTRUCTION

Should the instructional phase of the young farmer program end with group instruction, the problem-solving process will have been interrupted at the midpoint, and roughly one-half of the potential of systematic instruction will have been realized. The young farmers and the teacher of agriculture will have identified numerous farm business management concerns faced by the class members and will, as a group, have considered alternative solutions. Each young farmer still must decide on the solution to the problem that best fits his situation and put it into action on his farm. The teacher of agriculture can be an effective agent in assisting the young farmer to implement his new learnings in his own situation. The logical setting for conducting instruction of this sort is on the farm with the individual young farmer.

Purposes for Giving Individual On-Farm Instruction

1. To follow up on group instruction. Viewed in the context of managerial problem solving, group instruction is properly concerned with breaking a problem into manageable, logical components; identifying alternative solutions; and exploring these alternatives so a wise choice can be made among them. Group instruction as applied to an operational problem, at best, provides the young farmer with an opportunity to solve the problem under classroom conditions. In the case of an informational problem, group instruction leaves the young farmer with facts of a general nature.

On-farm instruction provides the teacher and the young farmer with an opportunity to complete the process of systematic instruction and to solve the problem in its setting. It is the keystone of the arch of problem solving.

2. To help young farmers solve individual problems. Whenever the instructional needs of any group of young farmers are summarized, a wide range of problems can be anticipated. If group instruction is designed to meet those instructional needs common to the greatest number of young farmers, a host of individual needs peculiar to a smaller number of young farmers will remain. The only logical way to deal with many of these problems is on an individual basis during on-farm instruction. By helping solve problems in this manner, the teacher can provide maximum assistance to individuals without distracting the other members of the group from their primary concerns.

3. To assist young farmers in determining their instructional needs. One of the most challenging aspects of young farmer instruction lies in the area of converting unfelt needs to felt needs, particularly in the critical area of farm business management. Since individual on-farm instruction is, by definition, focused on the young farmer's situation and the pursuit of his farm business goals, it provides an optimum setting for developing an awareness of instructional needs.

As the young farmer solves problems, his awareness of his needs and the nature of his needs undergo

changes; therefore, the identification of instructional needs must be a continuous process. What has been suggested concerning instructional needs indicated how the teacher of agriculture can "get his foot in the door." The success of the young farmer program requires that this beginning be followed by the solution of the initial farm business management problems and by constant adjustment of the instructional program to include new problems as they arise or are recognized. Thus the determination of instructional needs must be a facet of every individual on-farm instruction session.

Teacher Preparation

The teacher will find it useful to keep a list of the instructional needs of each young farmer. From time to time the teacher will add to this list as new needs are recognized and as the need for follow-up results from group instruction. The teacher must assign priorities to the various instructional needs to be satisfied by individual on-farm instruction. Such factors as importance in farm business management, urgency, seasonality, readiness, and logical sequence should be considered in determining such a rank.

The teacher usually makes specific appointments with his young farmers for on-farm instruction. The appointment is set at least a week in advance for a specific time and purpose. The young farmer is informed of the preparation he must make for the visit.

As appointments are made, the teacher should make a schedule of on-farm instruction commitments for the week ahead. A copy of this schedule is normally given to the school administrator, to whom the teacher reports his activities, well in advance.

In preparing for on-farm instruction, the teacher first reviews his record of the previous visit with the young farmer. He double-checks to see if he has followed through on previous promises and recalls the purpose agreed on for his visit. The teacher is then ready to analyze the problem, to determine the teaching procedures he will use, and to collect any materials or equipment he will need. If necessary, the teacher will study unfamiliar aspects of the problem and gather the information he may need.

In dressing for on-farm instruction, the teacher should avoid both "overdressing" and a "sloppy" appearance. Clean, lightweight work clothes are more often appropriate than the white shirt, necktie, and business suit which the teacher wears at school.

Procedures

When he arrives at the farm, the teacher re-establishes the purpose of the visit with the young farmer. Occasionally it may be advisable to discard the original purpose to deal with an emergency situation, but this is normally not the case. Usually the teacher previews with the young farmer the procedure he has planned and solicits his reactions and suggestions. If the teaching situation has changed drastically from that foreseen by the teacher, a change of procedures may be in order.

Once the purpose and procedures to be followed are agreed upon, the teacher and the young farmer get to work. The teacher maintains a direct relationship with the young farmer during on-farm instruction. Although he is businesslike, he also maintains a friendly and helpful attitude and observes the rules of good teaching. The teacher congratulates the young farmer on his progress and accomplishments and keeps his ear tuned for recognition of new instructional needs.

Before leaving, the teacher agrees with the young farmer on the purpose, date, and hour of the next on-farm instruction visit as well as the preparation the young farmer is to make.

If the teacher is to be efficient in giving on-farm instruction, he must be on guard against over-development of the social aspects of his visit. This problem

Figure 5. Record of On-Farm Instruction

Name.....Date.....

Hours of Instruction.....Miles Traveled.....

Purpose of Instruction:

Results of Visit (Progress Made):

New Instructional Needs Discovered:

Promises Made:

Purpose, Hour, and Date of Next On-Farm Instruction Session Planned:

increases with time and as the teacher and the young farmer become closer in their relationship.

The teacher of young farmers should keep records of his on-farm instruction, using a form similar to that shown in Figure 5.

ORGANIZING AND CONDUCTING A LOCAL YOUNG FARMER ASSOCIATION

What Is a Young Farmer Association?

The local young farmer association is an organization of, by, and for young farmers who have joined together to pursue common interests. While any given local association may choose its own areas of interest on which to place emphasis, young farmers usually have a strong bond in such areas as improving their farming operations, improving their homes, gaining experience in cooperative effort and community service, developing leadership, and finding satisfying recreational opportunities and social outlets.

In an organization of their own, young farmers can often find better opportunities to meet their needs than are available in other organizations in the community. Older adults are often reluctant to relinquish leadership responsibilities and policy determination to the young generation, and many of the traditional organizations have been designed to meet the needs of older adults.

The Advantages of a Young Farmer Association

1. The group gains a sense of identity which is essential in public relations and in promoting the activities of the group.[9]

2. The young farmers share responsibility for the success of the program with the teacher. The fact that the young farmers do have responsibility is a vital ingredient in providing a favorable climate for leadership training.

3. The young farmers obtain leadership experiences such as presiding over meetings, keeping minutes, managing funds, recruiting members, writing publicity, and participating in group decision making. This frees the teacher from many activities that the young farmers can better do themselves.

4. An active association has a favorable effect on attendance and gives the young farmer program the "muscle tone" of a going organization.

5. The young farmers obtain experience in cooperative and community service activities which would be difficult to provide in a program devoted solely to systematic instruction.

6. The social and recreational activities of the group help in keeping interest high in the young farmer program.

7. New members are more easily attracted.

Getting the Association Started

An active young farmer association may be established in any community where there is a need for such an organization and where a teacher of agriculture is available to serve as advisor. If the young farmer program is being organized for the first time or if it has been inactive for a long time, the teacher should include the possibilities of an association in his initial description of a young farmer program. In this situation, the teacher would discuss the possibilities of forming an association with the school administration at the time a decision is being made to offer a young farmer program. The teacher should also introduce the idea of an association to the young farmers during his initial recruiting visits.

If the young farmer program has been in operation for a number of years without an association and the teacher feels one is needed, he must sell the idea to both the school administration and the young farmers as a separate issue. In this event, the teacher should first clarify the nature and purposes of the young farmer association with the school administration and obtain permission before discussing the issue with the young farmers.

Teachers have found the following procedures effective for informing the enrollees in their instructional program of the possibilities of a young farmer association:

1. Discuss the idea of forming a young farmer association with each young farmer during individual on-farm instruction. Conduct a general discussion of the idea over coffee following a young farmer class.

2. Win the interest of the natural leaders within the class and let them carry the ball. Provide opportunity for the leaders to sell the idea to the young farmers during a regular class session.

3. Have a delegation of young farmers attend a meeting of another young farmer association and bring back the word.

4. Invite the officers of a nearby young farmer association to appear before the young farmer group to explain their organization.

5. Discuss what such an organization would do if formed, and develop a list of activities that would be of interest to the young farmers.

Should the young farmers decide to form an association, a first step might be the election of temporary

officers including a chairman, vice-chairman, secretary, treasurer, and reporter. The teacher of agriculture should serve as advisor.

The second step in organizing might be the development of a brief informal constitution. Acting as a committee of the whole, the group should discuss and agree on the name, purposes, membership, officers and their duties, conduct of meetings, and provisions for amendment. This gives every member a full voice in the formation of the association and enables the members to identify with and understand the new organization. Once the group agrees on its major provisions, the constitution can be turned over to a committee which will develop a brief written document. When the constitution has been reviewed and approved by the school administration and the young farmer group, permanent officers should be elected.

Planning the Annual Program of Events

One of the keys to an active and successful young farmer association lies in the annual program of activities. Every member of the group should participate in planning and carrying out such a program. Furthermore, it must represent the true interests and desires of the young farmers. The program must be planned by the total membership under the leadership of the elected officers. The teacher must remain in the background and remember that no matter how interested he is, he is not a member of the group. The teacher's lack of restraint at this point can have nearly fatal effects on the initiative of the members.

The activities included should be related to one or more of the purposes of the organization and should be stated simply. The following activities are typical:

Sample Annual Program of Activities for a Local Young Farmer Association

Purposes	Activities
RECREATIONAL AND SOCIAL	1. Hold a chicken barbecue. 2. Hold pot-luck suppers at homes of members. 3. Sponsor a bowling or softball team and join local league. 4. Hold parties at homes of members. 5. Conduct tours to points of interest with families.
COMMUNITY SERVICE	1. Sponsor a local farm safety campaign. 2. Develop a community picnic area. 3. Sponsor a community beautification program. 4. Sponsor a Christmas party for underprivileged children in the area.
IMPROVING THE HOME	1. Hold ladies' night meetings on such topics as: a. Budgeting b. Interior decoration c. Landscaping the home d. Planning the insurance program e. Care of children 2. Hold furniture-refinishing bees in the school shop.
COOPERATIVE EFFORT	1. Hold a joint meeting with another young farmer association. 2. Purchase seed, feed, or fertilizer cooperatively for use of members. 3. Sponsor one or more open meetings. 4. Market maple syrup cooperatively.

Maintaining an Active Association[9]

1. An active and expanding membership. After the group has agreed on the annual program, committees should be formed to take charge of each of the activities planned. Every member should be given a position of responsibility that fits his interests and talents. A calendar of activities may be developed to remind each member of his responsibilities.

An alert organization is interested in increasing its membership. Special effort should be devoted to contacting prospective members who will profit from the association. New members add new life to the organization.

2. Well-planned meetings. All meetings should be carefully planned so that business is clearly presented and properly handled. The officers should meet before each

business meeting to plan the agenda. Meetings should start and adjourn as scheduled, and sufficient time should be allotted for business, special events, and social and recreational activities. Most business meetings are followed by refreshments and a social hour.

Many young farmer associations have business meetings once a month. Other associations have business meetings as needed in conjunction with the organized instructional program, and the instructional period is reduced to allow enough time for the association meeting.

3. Year-round meetings. Associations should meet on a year-round basis, concentrating their activities during the winter months and continuing to meet monthly during the remainder of the year. Associations which suspend activity during the summer often find that enthusiasm has cooled when autumn arrives.

4. Adequate financing. A systematic program of financing is necessary if young farmer associations are to be successful. Each association should plan its annual budget carefully according to the needs of the chapter as revealed by the program of activities and in keeping with acceptable methods of raising money for the association. A carefully planned program of fund raising should be developed and approved by the association. Care should be exercised against raising money in any way that would not meet with wholehearted school and community approval.

As a general rule the association should not engage in large-scale business operations which involve extensive sums of money. The young farmer association is primarily an educational program.

Associations may find it wise to establish a small membership fee. Payment of dues stimulates interest in an organization and fosters a feeling of belonging. At the same time it provides funds for refreshments, recreation, and other expenses. The membership fee should not be so large that some individuals are discouraged or prohibited from belonging to the association.

5. Competent leaders who fulfill their duties. The officers are of vital importance in developing and carrying out a good program of activities. Some suggested duties of the officers in a formally organized young farmer association are:

President—

a. Presides at all regular meetings of the local association and its executive committee.
b. Serves as an ex-officio member of all organizational planning committees.
c. Appoints all committees.
d. Provides over-all supervision and leadership of activities of the organization.
e. Counsels with advisor concerning matters of organization policy, changes, improvements, or special events.
f. Represents young farmers in other community organizations or activities.

Vice-President—

a. Presides in the absence of the president.
b. Assists the president in fulfilling the duties of his office.
c. Assumes responsibilities in supervising and assisting with the activities of all standing committees. He keeps the committees active and functioning in promoting the activities of the organization.

Secretary—

a. Keeps an up-to-date roll of membership with the correct address of each member.
b. Keeps an accurate record of attendance at meetings.
c. Records the minutes of all meetings.
d. Attends to all communications concerning the organization.
e. Mails out an agenda for each meeting.
f. Assists the president in counting and recording votes at meetings.

Treasurer—

a. Collects all dues, fees, or special assessments of the organization.
b. Keeps complete financial records.
c. Assists with the annual budget.
d. Assists with the program of financing chapter activities.
e. Pays all organizational fees and debts approved for payment by the organization.
f. Gives a financial report at each meeting or as requested.

Reporter—

a. Works with local paper, submitting news items of all organizational activities using procedures consistent with school policy.
b. Keeps a record of young farmer activities in the form of a history, a scrapbook, or both.
c. Submits news items to the state young farmer organization.
d. Assists with all activities in the area of public relations.

Advisor—

a. Assists all officers in properly carrying out the duties of their office.

b. Consults with all committees that request advice or assistance.
c. Assists officers in working with school officials and in public relations.
d. Exerts an enthusiastic influence upon young farmer work.

6. Spontaneous activities. Most young farmer associations carry on a number of spontaneous activities that add interest and zest to young farmer meetings.[10] Typical of such events are swimming after a summer meeting, bowling after a class session, parties for newlyweds, housewarmings, and special refreshments for birthdays and other occasions.

The Role of the Teacher in Working with the Young Farmer Association

The teacher of agriculture should look upon the young farmer association as an organization of, by, and for the young farmers. If he does so, he will not be inclined to run the association in their stead.

On the other hand, it is the obligation of the teacher to serve as advisor of the association. He must see that the young farmer association and its activities bring credit to the school and do not become involved in politics.

The teacher of vocational agriculture must play two separate and distinct roles in the young farmer program. One of his roles is that of a teacher in charge of giving systematic instruction. In this capacity he assumes full responsibility for the instructional program although he may solicit the assistance of young farmers. Whether instruction takes place on the farm or in the classroom, the role of teacher remains constant.

His second role is that of an advisor to the young farmer association. In this situation the elected officers and the group members are the leaders. The advisor must discipline himself to remain in the background, or he may destroy the initiative of the members and, in the end, the organization itself.[11]

The success or failure of the young farmer program is largely dependent on the ability of the teacher of agriculture to differentiate between his two roles and to play each appropriately.

KEEPING A RECORD OF THE YOUNG FARMER PROGRAM

It is essential that the teacher of agriculture maintain certain records pertaining to the young farmer program. Records are particularly vital to the efficient and effective operation of all aspects of the program. They are useful in compiling reports to local school administrators and the State Education Department. And when there is a change of teachers, records help the new teacher become oriented. Three kinds of records are extremely useful: those pertaining to individual enrollees, those having to do with the program of group instruction, and those concerning the affairs of the young farmer association.

Individual folders should be kept for each participant in the young farmer program. The teacher may obtain official permanent record folders from the Association of Teachers of Agriculture of New York, or he may choose to use plain filing folders. In each young farmer's folder the teacher should keep:

Personal data concerning the young farmer
Young farmer survey forms
Farm business summaries and analyses
Memoranda completed in connection with on-farm instruction
Evaluation forms completed by or with the young farmer

Minimum records in connection with group instruction are:

Summary of instructional needs of the young farmers
Program of instructional meetings
Record of group instruction given including date, problem, hours, and attendance
A folder for each unit of instruction

The teacher of agriculture should establish a repository for certain records pertaining to the affairs of the young farmer association. These records are best kept in the agriculture department and would normally include:

Constitution of the young farmer association
Calendar of activities
Program of work
Individual folders for the use of each officer and committee

EVALUATING AND IMPROVING THE YOUNG FARMER PROGRAM

At least two schools of thought exist concerning the evaluation of educational programs. One group approaches the problem by asking two fundamental questions: What is the purpose of the program? How well has that purpose been achieved? This conceptualization of evaluation will be referred to as the "result-centered" approach.

A second type of evaluation involves two distinctly different questions: What principles and/or procedures have proven effective for achieving the purpose of the program to be evaluated? To what extent have these

principles and/or procedures been utilized? This second concept of evaluation will be referred to as the "method-centered" approach.

The Result-Centered Approach

Evaluation of an educational program utilizing the result-centered approach normally involves a sequence of events such as the following:

1. The purpose (or purposes) of the program is identified and defined operationally by analyzing the purpose and breaking it into measurable components.

2. Appropriate measures for each component (or subdivision) of the purpose are selected.

3. Evidence concerning each measure is collected for the specific program being evaluated.

4. The present status with regard to each measure is compared with

   a. Previous status,

   b. Norms for similar persons, groups, or programs, or

   c. Previously established goals.

This type of evaluation has some obvious benefits. An assessment of progress is obtained which may be of value and interest to learners, teachers, administrators, and others, and continuing educational needs of the learners relating to the purpose(s) of the program are revealed.

The result-centered evaluation may give an accurate assessment of how far we have come and what remains to be done, but it cannot tell us why this is true nor what or who is responsible for the results.

The Method-Centered Approach

The method-centered approach to evaluation typically proceeds by the following steps:

1. A job analysis is made of what the teacher must do to conduct a successful program, using a process (or step-by-step) approach.

2. For each phase of the job analysis, specialists determine the most effective principles and procedures.

3. Data is collected to indicate the extent to which the recommended principles and procedures have been used.

4. The evaluator weighs the evidence and rates the program on the basis of the degree to which the principles and procedures have been followed.

The main outcome of the method-centered evaluation is an assessment of the degree to which a teacher has used the most effective methods. It is based on the assumption that the profession has had sufficient experience to select preferred methods. It further implies that improvement in the program can be achieved by more diligent application of these methods.

The method approach has some advantages: It provides a means by which the inexperienced teacher, the administrator, or the lay person can compare the methods used in conducting a program with those recommended by knowledgeable and experienced persons, it may suggest why a program has produced less than satisfactory results, and, at the same time, suggest remedial procedures. The method approach, therefore, deals with *why* the program is where it is and how it can be improved.

This approach, however, has two shortcomings. It makes no attempt to measure the educational program in terms of the learners, and it does not admit there is more than one way to achieve the same result.

Why Evaluate the Young Farmer Program?

Any systematic evaluation of the local young farmer program should serve at least three purposes:

1. To determine the progress of the participants toward establishment in farming.

2. To point out the young farmers' instructional needs for use in program planning during the year ahead.

3. To suggest adjustments in the teacher's methods and procedures.

An Instrument for Evaluating the Young Farmer Program

Most teachers of agriculture have neither the time nor the means to construct an evaluation instrument. For this reason one is presented below for the teacher's use in conducting a self-evaluation of his young farmer program. (Figure 6.)

Part A: *Progress toward Establishment in Farming* uses the result-centered approach to evaluation. It emphasizes definitions of the purpose of the young farmer program and of establishment in farming presented at the beginning of this publication, and is heavily oriented toward farm business management.

Part B: *Guidelines and Procedures Employed by the Teacher in Organizing and Conducting the Young Farmer Program* embodies the method-centered approach to evaluation. It emphasizes the methods presented throughout this publication and the concepts of systematic instruction and problem solving which have been presented in detail.

Procedures for Evaluating

It is suggested that the teacher employ the following steps in evaluating the young farmer program:

1. Collect the data called for in Part A: *Progress toward Establishment in Farming* with the help of each young farmer during individual on-farm instruction visits.

2. Review with each young farmer his progress toward establishment in farming, help him to set new goals for the current year, and develop a list of instructional needs which should be emphasized in planning next year's instructional program.

3. Summarize the data obtained on Part A: *Progress toward Establishment in Farming* using averages or other devices for protecting the identity of individual young farmers.

4. Present the findings from Part A at a young farmer meeting and discuss improvement of the program.

5. Complete Part B: *Guidelines and Procedures Employed by the Teacher in Organizing and Conducting the Young Farmer Program* following the suggested instructions, and decide on changes to be made.

6. Review the findings of both Parts A and B with the agricultural advisory board and obtain their suggestions for changes in the program.

Following up on Evaluation[13]

The payoff from evaluation efforts can only come when the teacher and the young farmers use the findings as a basis for action. Young farmers can use the information revealed about their progress toward establishment in farming in setting new goals, in revising their farm business management plans, and in budgeting their resources for the year ahead. Likewise, the teacher and the young farmers can use their new insights into the instructional needs of the young farmers in planning a program of instruction for the next year. And as the teacher and the young farmers try to overcome weaknesses in the program by adjusting methods and procedures, the value of evaluation will be evident.

Figure 6. Part A: Progress toward Establishment in Farming

Components of Establishment in Farming	Measures for Each Component	Sources of Data	This Year's Goal	Status		
				This Year	Last Year	Comparison Group
1. Financial progress	Total capital investment in farm business.	Inventory				
	Percent of business resources controlled.	Inventory				
	Trend in labor income.	Cash Account Book				
	Increase in net worth.	Personal inventory				
2. Proficiency and experience in performing skills and making management decisions.	Proportion of major decisions made by young farmer	Interview with young farmer				
		Farm Business Chart				
	Size of business					
	Number of cows					
	Pounds of milk sold					
	Man equivalent					
	Number of hens					
	Total tillable acres					
	Total P.M.W.U.					
	Labor efficiency					
	Cows per man					
	Work units per man					
	Pounds milk sold per man					
	Hens per man					
	Crop yields					
	Tons of hay per acre					
	Tons of silage per acre					
	Bushels of oats per acre etc.					
	Animal production					
	Pounds of milk per cow					
	Dozens of eggs per hen					

Part A: Progress toward Establishment in Farming—*continued*

3. Proportion of income from farming	Percent of income	Interview with young farmer				
4. Establishment in the community	Tenure standing in farming Attitude toward farming Farm experience since age 15 Educational program participation Officer participation in organizations Attitude of wife (partner or parent) toward farming Agricultural agency participation Community residence in years Age of farmer Leadership self-confidence rating	Interview with young farmer ↓				
5. Improvement[12] in level of living	Value of sales from farm Value of farmland and buildings Telephone Home freezer Automobile	Interview with young farmer ↓				

Part B: Guidelines and Procedures Employed by the Teacher in Organizing and Conducting the Young Farmer Program

Directions:

1. Place a check mark (√) in the column labeled *Strong Aspect* following each of the items below which you accept and have fully implemented in your young farmer program this past year. Go all the way through the checklist before proceeding to Direction 2.

2. Go through the checklist again. This time, place a check mark (√) in the column labeled *Will Try* following each item not fully implemented this past year, but which you are willing to accept tentatively and which you will attempt to implement in your young farmer program this next year.

	Strong Aspect	Will Try
I. FUNDAMENTAL CONSIDERATIONS		
A. The major purpose of the young farmer program is to assist young men in becoming successfully established in farming as owner-operators		
B. The young farmer program is planned to meet the needs of young men 16 or over who are out of school and in the process of becoming established in farming		
C. A young farmer is considered to be successfully established in farming when he meets certain criteria:		
1. He possesses considerable financial equity in his farm business (perhaps 50 percent)		
2. He is proficient and experienced in making farm business management decisions and in performing the manipulative skills involved in the type of farming in which he is engaged		
3. He looks to farming as the main source of his livelihood		
4. He provides himself and his family with a standard of living at least average for the community		
5. He is accepted in the community as a responsible participating citizen		

	Strong Aspect	Will Try
D. The young farmer program is an educational endeavor designed to provide two types of service to young farmers: systematic instruction and participation in the local young farmer association		
1. Systematic instruction is a process whereby the young farmers, with the guidance and help of the teacher of agriculture,		
a. Identify the problems confronting them in their individual farm business situation		
b. Consider alternatives and plan solutions to these problems as a result of group and individual instruction		
c. And apply the solutions in their individual farm business situations		
2. The local young farmer association is an organization of, by, and for young farmers which provides an opportunity for training and experience in		
a. Leadership		
b. Cooperation		
c. Community service		
d. Social and recreational activities		
E. Certain conditions essential to the success of a young farmer program are present.		
1. A competent, well-trained, and interested teacher		
2. An informed, sympathetic school administration		
3. A sufficient number of interested young farmers		
4. Adequate teacher time		
5. Close coordination with other agencies serving the farmer		
II. MAKING ADMINISTRATIVE ARRANGEMENTS		
A. The young farmer program is planned in advance with the school administration		
1. The school administration understands the purpose and nature of the program		
2. The school administration has a favorable attitude toward the young farmer program		
3. The school administration grants permission to conduct the program		
4. School policy is established in advance concerning:		
a. Teacher time to conduct the program		
b. Expenses to be paid by school		
c. Use of school facilities by young farmers		
d. Selection of participants		
e. Reports to be submitted		
B. Information about the young farmers in the area served by the school is collected before contacting them		
1. The teacher compiles a list of potential enrollees from:		
a. Permanent record files of school		
b. Agriculture department records		
c. Advisory board suggestions		
d. Persons with an extensive knowledge of local people, i.e., feed store operators, rural organization leaders, high school agriculture students, extension personnel, etc.		

	Strong Aspect	Will Try
2. The teacher attempts to discover the following information concerning each young farmer:		
a. Name		
b. Address		
c. Date of birth		
d. Location of farm		
e. Marital status		
f. Farming status		
g. Highest grade completed in school		
h. Degree of need for the program		
C. The criteria established for selecting the young farmers to be invited to participate include:		
1. Live in patronage area of school		
2. In the process of becoming established in farming		
3. Need the program		
4. Constitute a fairly homogeneous group as far as age, marital status, previous education, and farming status are concerned		
D. Recruiting visits are made by the teacher to contact young farmers at their farms		
During recruiting visits, the teacher:		
1. Gets acquainted with the young farmer		
2. Explains the young farmer program		
3. Discovers his plans for the future		
4. Finds out if he is interested		
5. Collects information about other young farmers		
6. Informs the young farmer what to expect of him next		
7. Limits the visit to 15 or 20 minutes		
E. The teacher tries to coordinate the young farmer program with other agencies serving farmers		
1. He explains the unique features of the program		
2. He invites the participation of agency personnel		
3. He exerts leadership in coordinating dates, events, and mutual assistance		
III. DETERMINING NEEDS AND PLANNING INSTRUCTIONAL PROGRAMS		
A. A farm business survey is made with each young farmer to determine his instructional needs		
B. The procedures used by the teacher in making the farm business survey include the following:		
1. An appointment is made in advance with the young farmer		
2. The teacher explains the purpose of the survey		
3. He walks the farm with the young farmer		

	Strong Aspect	Will Try
4. The following information is gathered:		
a. Data for a farm business analysis		
b. Approved practices in use		
c. Improvements and new practices planned		
d. A list of farm problems with which the young farmer needs help		
C. The farm business surveys are summarized		
1. A frequency chart is used to summarize the farm problems with which the young farmers need help		
2. Felt and unfelt needs are designated differently		
3. The teacher identifies the problems with which the largest number of young farmers need and want help		
D. The first meeting of the year includes:		
1. A welcome by the school administrator		
2. Planning of the content of the instructional program		
a. The teacher presents the common problems identified by the farm business surveys		
b. Additions and deletions are made by the young farmers		
3. Deciding on the number and frequency of meetings to be held		
4. Scheduling of dates for each problem included in the instructional program		
a. At least one meeting per month is planned		
b. More frequent meetings are planned for slack work season		
5. Discussion of plans for young farmer association		
6. Refreshments		
IV. CONDUCTING GROUP INSTRUCTION		
A. Farm business management is established as the core of the instructional program for the young farmer program		
B. The teacher makes detailed written teaching plans for each problem to be solved		
Such plans include		
1. Statement of the problem		
2. Teaching objectives		
3. Analysis of problem content		
4. Teaching procedures		
5. Instructional materials required		
C. The teacher consistently uses problem-solving procedures in his group instruction		
D. Every young farmer has an opportunity to assist the teacher in conducting group instruction in a role consistent with his capabilities		
E. The teacher makes extensive use of the principles and procedures effective in promoting learning with young farmers		

V. GIVING ON-FARM INSTRUCTION

	Strong Aspect	Will Try
A. Individual on-farm instruction is used as a means to		
1. Follow up on group instruction		
2. Help young farmers solve individual problems		
3. Assist young farmers in determining their instructional needs		
B. The teacher makes appointments for individual on-farm instruction at least a week in advance for		
1. A specific hour		
2. A specific date		
3. A specific purpose		
C. The teacher prepares for on-farm instruction by		
1. Reviewing his record of the previous visit		
2. Double-checking to see if he has followed through on promises		
3. Analyzing the problem		
4. Determining teaching procedures to be used		
5. Collecting materials or equipment needed		
6. Studying unfamiliar aspects of the problem		
7. Dressing appropriately for the teaching procedures planned		
D. Upon arrival at the farm the teacher		
1. Re-establishes the purpose of the visit		
2. Previews his plans with the young farmer		
3. Seeks an appropriate location and gets to work		
4. Maintains a friendly but businesslike attitude toward the young farmer		
5. Congratulates the young farmer on progress and accomplishments		
6. Watches for and records new instructional needs		
7. Makes an appointment for his next visit		
E. The teacher keeps a record of each on-farm instruction visit.		
Such records include		
1. Date		
2. Name of young farmer		
3. Hours of instruction given		
4. Miles travelled		
5. Purpose of instruction		
6. Progress made		
7. New instructional needs discovered		

	Strong Aspect	Will Try
8. Promises made		
9. Purpose, date, and hour of next visit		

VI. THE LOCAL YOUNG FARMER ASSOCIATION

A. There is a local young farmer association of, by, and for young farmers		
B. The constitution includes		
1. Name of the association		
2. Purposes		
3. Membership		
4. Officers and their duties		
5. Conduct of meetings		
6. Provisions for amendment		
C. An annual program of activities is planned and carried out		
1. Every member participates in its formulation		
2. Every member has a responsible part in carrying it out		
3. The program of activities represents the true interests and desires of the young farmers		
4. The activities are related to		
a. Cooperative effort		
b. Community service		
c. Improving the home		
d. Recreation and social gatherings		
5. Committees have charge of each activity planned		
D. The association is active as evidenced by		
1. An expanding membership		
2. Well-planned meetings		
3. Year-round operation		
4. Adequate financing		
5. Competent leaders who fulfill their duties		
6. Participation in spontaneous activities		
E. The role of the teacher in advising the local young farmer association includes		
1. Providing leadership training		
2. Assisting the officers in carrying out their duties		
3. Consulting with committees who request advice or assistance		
4. Assisting the officers in developing good public relations		

	Strong Aspect	Will Try
5. Maintaining liaison with school authorities		
6. Exerting an enthusiastic influence		
VII. EVALUATING THE YOUNG FARMER PROGRAM		
A. An annual evaluation of the young farmer program is made which		
1. Assesses the progress of the young farmers toward establishment in farming		
2. Points out the instructional needs of the young farmers which should be emphasized in planning the program for the year ahead		
3. Suggests adjustments in the procedures employed by the teacher		
B. In evaluating the young farmer program, the teacher		
1. Collects data necessary for assessing progress toward establishment in farming with the help of each young farmer during on-farm instruction		
2. Reviews with each young farmer his progress toward establishment in farming, helps him to set new goals for the coming year, and develops a list of instructional needs		
3. Summarizes the data obtained (in 1 and 2) above, protecting the identity of individual young farmers		
4. Presents the findings at a young farmer meeting and leads a discussion of improvement of the program		
5. Makes a systematic review of the methods and procedures used for organizing and conducting the young farmer program and decides on changes to be made		
6. Reviews the findings of the evaluation with the agricultural advisory board and obtains their suggestions for improvement		
7. Utilizes the information discovered concerning instructional needs of the individual young farmers in planning next year's instructional program		

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ABSTRACTS OF HOSPITAL MANAGEMENT STUDIES

CONTENTS

	PAGE
Purpose and Policies	iii
Advisory Board and Staff	iv
How to Use Abstracts	v
Classification System	vi
Abbreviations Used	xiii
General List	1
List of Journals Routinely Searched	87
Author Index	95
Subject Index	103

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HOW TO USE ABSTRACTS

Abstracts of Hospital Management Studies is designed to acquaint the reader with studies and research in a given field and to help him obtain copies of reports he wants. Following is an example of the information given about each item.

Classification: Studies are grouped according to a classification system in which the categories are hospital departments and other pertinent headings.

See also: Readers may be also interested in related classifications.

OBSTETRIC SERVICE

(See also OU, Outpatient, Emergency, and Home Care.)

OB0020

118 pp.b.d.th.MPH., 2/67

Sister M. Yolanta
EXPERIENCE WITH ADMISSIONS OF NONINFECTED GYNECOLOGICAL PATIENTS TO THE MATERNITY UNIT
Department of Epidemiology and Public Health, Yale University, New Haven, Connecticut
1966

Available from U.M.I.

Xerox
Film reel 1.71 $4.60

A report of a controlled study Pilot Program for determining the feasability of a combined Obstetrical-Gynecological Unit for more efficient and economical operation at Griffin Hospital, Derby, Connecticut.

Two areas of investigations were undertaken: the comparison of patients' views as to OB or medical-surgical accommodations; and the relationship between OB census and gynecological census. (Clean gynecological patients assigned to OB unit were placed in separate wing of unit as much as possible away from OB patients).

Data on admissions and census were obtained from hospital records. Questionnaires in interviews were submitted to gynecological patients both in OB units and medical-surgical units.

Author concludes little anxiety or apprehension shown by gynecological patients in OB unit. Combining patients did not create "tight bed situation". Waiting list for gynecological patients not shortened. Differences in overall occupancy "not significant". Interview and questionnaire forms included in appendix. See Abstract Nos. OB0019 and OB0011. (L.E.W.)

Available from: These lines tell where to order the study and its price. "U.M.I." means microfilm or xerox copies can be ordered from University Microfilms, Inc., 300 N. Zeeb Rd., Ann Arbor, Michigan (give abstract #-OB0020- or film reel #-1.71). Journals and books are ordered from the publisher or through your local bookstore.

Descriptors: This study has 118 pages, a bibliography, data, is a master's thesis. It came to the Center in February, 1967.

CLASSIFICATION SYSTEM

AB ADMINISTRATOR AND BOARD

(See also AC, Accounting and Business Office; AD, General Non-Departmental Activities; AR, Areawide Planning; CO, Community Attitudes; HE, Health Services; PA, Patient Attitude; PE, Personnel Administration; and RE, Regionalization.)

0 General
1 Governing board
2 Administrators

AC ACCOUNTING AND BUSINESS OFFICE

(See also AD, General Non-Departmental Activities; AM, Admitting and Bed Control; DA, Data Processing; PE, Personnel Administration; MR, Medical Records; and PU, Purchasing, Storeroom and Central Supply.)

0 General
1 Accounting, cost accounting, and budgeting
2 Charges, handling and posting
3 Receivables management
4 Payables management
5 Payroll
6 Auditing
7 Automation

AD GENERAL NON-DEPARTMENTAL ACTIVITIES

0 General
1 Auxiliary and volunteer activity, coffee and gift shops
2 Chapel, auditorium and related activities
3 Disaster planning
4 Information, telephone, messenger services

AM ADMITTING AND BED CONTROL

(See also AC, Accounting and Business Office; and AD, General Non-Departmental Activities.)

0 General
1 Admitting office routines
2 Bed control and scheduling

AN ANESTHESIA AND INHALATION THERAPY DEPARTMENTS

(See also PH, Pharmacy; and PU, Purchasing, Storeroom, and Central Supply.)

0 General
1 Anesthesia department
2 Inhalation therapy department

AR AREAWIDE PLANNING: HOSPITALS AND RELATED FACILITIES

(See also AB, Administrator and Board; CO, Community Attitudes; DE, Design and Construction; HE, Health Services; and RE, Regionalization.)

0 General
1 Criteria and policies
2 Surveys and planning studies

CH CHRONIC DISEASE FACILITIES AND PROGRAMS

(See also AR, Areawide Planning; HE, Health Services; OU, Outpatient, Emergency and Home Care; PS, Psychiatric Services; and RS, Rehabilitation Service.)

0 General
1 Geriatric and chronic units in general hospitals
2 Nursing homes
3 Other chronic disease facilities

CO COMMUNITY ATTITUDES AND PUBLIC RELATIONS

(See also AB, Administrator and Board; AR, Areawide Planning; HE, Health Services; IN, Insurance and Prepayment; ML, Medico-Legal; and PA, Patient Attitudes.)

0 General
1 Power structure
2 Public relations
3 Fund raising

DA DATA PROCESSING SERVICE

(See also MN, Management Science and Operations Research; Excludes data processing for single department or single purpose data processing—see department involved.)

0 General
1 Systems analysis
2 Programs and software
3 Equipment
4 Automated systems

DE DESIGN AND CONSTRUCTION

(See also AR, Areawide Planning; CO, Community Attitudes; Excludes design and construction for single department—see department involved.)

0 General
1 Design criteria and evaluation
2 Examples of hospital design

DI DIETARY (CATERING)

(See also HU, Housekeeping; PU, Purchasing.)

0 General
1 Food processing and service
2 Menu planning
3 Purchasing and supplies

EN ENGINEERING AND MAINTENANCE

(Excludes limited use equipment—see individual departments.)

0 General
1 Equipment maintenance

HE HEALTH SERVICES: USE, NEED, AND DEMAND

(See also AR, Areawide Planning; IN, Insurance and Prepayment; MD, Medical Staff and Medical Care; MP, Manpower; and RE, Regionalization, Shared Services, and Satellites.)

0 General
1 Utilization and need
2 Supply and cost

HU HOUSEKEEPING

(See also DI, Dietary; EN, Engineering and Physical Plant; IC, Infection Control; LD, Laundry; MD, Medical Staff and Medical Care.)

0 General
1 Cleaning
2 Waste disposal

IC INFECTION CONTROL

(See also HU, Housekeeping; MD, Medical Staff and Medical Care; NU, Nursing Service Department; OP, Operating Room and Recovery Room; and PU, Purchasing, Storeroom and Central Supply.)

0 General
1 Hospital Sanitation
2 Environmental Sanitation

IN INSURANCE AND PREPAYMENT

(See also AC, Accounting and Business Office; HE, Health Services.)

0 General
1 Insurance
2 Voluntary Prepayment
3 Comprehensive Health Plans
4 Governmental Plans

LB LABORATORIES

0 General
1 Blood and plasma banks
2 Clinical laboratories
3 Pathological and tissue laboratories
4 Research laboratories

LD LAUNDRY

0 General
1 Linen distribution
2 Linen inspection and repair
3 Laundering

LI LIBRARY

0 General
1 Patients' library
2 Professional library

MD MEDICAL STAFF AND MEDICAL CARE

(See also HE, Health Services; LB, Laboratory; ML, Medico-Legal; MP, Manpower; PA, Patient Attitudes; and RL, Radiology.)

0 General
1 Clinical departments
2 Supply and education of physicians
3 Medical staff organization
4 Computer applications
5 Quality of care

ML MEDICO-LEGAL

(See also MD, Medical Staff and Medical Care; PA, Patient Attitude.)

0 General
1 Patient safety (incident reports)
2 Liability and malpractice
3 Medical contracts
4 Patient release and consent agreements

MN MANAGEMENT SCIENCE AND OPERATIONS RESEARCH

(See also individual areas, CO, Community Attitudes; HE, Health Services; MD, Medical Staff and Medical Care; PE, Personnel Administration.)

0 General
1 Application of industrial engineering—traditional technique
2 Operations research techniques
3 Studies of organization and personnel interaction

MP MANPOWER

(See also MD, Medical Staff and Medical Care; NU, Nursing Service Department; PE, Personnel Administration; PS, Psychiatric Facilities and Services; PT, Physical Therapy.)

0 General
1 Requirements
2 Resources
3 Utilization
4 Training

MR MEDICAL RECORDS

(See also AC, Accounting and Business Office; and ML, Medico-Legal.)

0 General
1 Manual systems
2 Automated systems

NU NURSING SERVICE DEPARTMENT

(See also PA, Patient Attitudes; and SC, Specialized Care Units.)

0 General
1 Personnel, staffing, and procedures
2 Supplies and equipment
3 Unit design
4 Personnel training and education

OB OBSTETRIC SERVICE

(See also OU, Outpatient, Emergency, and Home Care.)

0 General
1 Delivery suite
2 Postpartum nursing unit
3 Newborn nursery

OC OCCUPATIONAL THERAPY

0 General
1 Activities of daily living

OP OPERATING ROOM AND RECOVERY ROOM

(See also AN, Anesthesia and Inhalation Therapy Departments; SC, Specialized Care Units.)

0 General
1 Operating room
2 Recovery room

OU OUTPATIENT, EMERGENCY, AND HOME CARE

(See also individual services; HE, Health Services; and MD, Medical Care.)

0 General (Includes functions and design of outpatient departments; appointment systems.)
1 Clinics
2 Emergency rooms
3 Home care
4 Doctor's office buildings

PA PATIENT ATTITUDE

(See also CO, Community Attitudes and Public Relations; MD, Medical Staff and Medical Care; ML, Medico Legal; and NU, Nursing Service Department.)

0 General

PD PEDIATRIC HOSPITALS AND DEPARTMENTS

0 General
1 Personnel
2 Supplies and equipment
3 Design and layout

PE PERSONNEL ADMINISTRATION

(See also individual departments; AB, Administrator and Board; MN, Management Science; MP, Manpower.)

0 General
1 Hiring, recruitment and selection
2 Training
3 Wages and salaries
4 Benefit programs
5 Union relations
6 Job evaluation

PH PHARMACY

(See also AN, Anesthesia and Inhalation Therapy Department.)

0 General
1 Drugs dispensing and distribution
2 Drug manufacture
3 Outpatient service
4 Purchasing and inventory
5 Drug information systems

PS PSYCHIATRIC FACILITIES AND SERVICES

(See also AR, Areawide Planning; HE, Health Services; IN, Insurance and Prepayment; NU, Nursing Service Department; and MP, Manpower.)

0 General
1 Community health centers
2 Psychiatric departments
3 Psychiatric hospitals

PT PHYSICAL THERAPY

(See also OC, Occupational Therapy; RS, Rehabilitation Services.)

0 General
1 Personnel
2 Equipment and supplies
3 Planning and design

PU PURCHASING, STOREROOM AND CENTRAL SUPPLY

0 General
1 Standards and specifications
2 Systems and procedures
3 Supply distribution and central supply

RE REGIONALIZATION, SHARED SERVICES, SATELLITES

(See also individual departments; AB, Administrator and Board; AR, Areawide Planning; and HE, Health Services.)

0 General

RL RADIOLOGY

0 General
1 Diagnostic
2 Therapeutic

RS REHABILITATION THERAPY

(See also CH, Chronic Disease Facilities and Programs; OC, Occupational Therapy; OU, Outpatient, Emergency and Home Care; PT, Physical Therapy; SC, Specialized Care Units; and SO, Social Service.)

0 General
1 Appliance shop
2 Multi-department rehabilitation service not elsewhere mentioned

SC SPECIALIZED CARE UNITS

0 General
1 Intensive and coronary care
2 Self care, ambulatory care

SO SOCIAL SERVICE

0 General

Z BIBLIOGRAPHIES, ABSTRACTS, AND ANTHOLOGIES

0 General
1 Lists of studies and grants
2 Bibliographies
3 Abstracts and annotated bibliographies
4 Collection of hospital studies (studies classified separately)

ABBREVIATIONS

Available from pub.: Abstracted document can be obtained from publisher or source listed.

B.: Bibliography included in document

d.: Data are included in document suitable for verifying author's conclusion or establishing others

ill.: Photographs, process charts, or other illustrative material are included

n.d.: No date

p.: Floor plans, layouts, or computer programs are included

pp.: Pages

R.: Unpublished report

t.: Unusual theoretical development

T.: Translation of original document

th.: Thesis. Degree for which accepted follows. Condensations of theses are <u>not</u> designated th.

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ADMINISTRATOR AND BOARD

(See also AC, Accounting and Business Office; AD, General Non-Departmental Activities; AR, Areawide Planning; CO, Community Attitudes; HE, Health Services; PA, Patient Attitude; PE, Personnel Administration; and RE, Regionalization.)

AB0007 75pp.R., 12/67

Wiesen, David, editor
ADMINISTRATIVE MANUAL OF THE BETH ABRAHAM HOSPITAL
Beth Abraham Hospital, Bronx, New York 10467, 1966
Available from U.M.I. Xerox $3.40
Film reel #2.04 $4.75

Administrative manual of Beth Abraham, a 511 bed voluntary hospital for chronically ill adults, age 18 and over. Spells out administrative policies and procedures of general concern to all departments of the hospital relating to management, communications, finances, personnel, public relations, safety and security. (D.F.B.)

AB0008 97pp.b.d.ill.th.M.H.A., 12/67

Sister Barbara Marie Beebe
A GUIDE FOR PREPARING AN ADMINISTRATIVE MANUAL
Graduate Program in Hospital Administration, Xavier University, Cincinnati, Ohio, 1966
Available from U.M.I. Xerox $4.40
Film reel #2.04 $4.75

This research project presents the organizational structure of a fifty-four-bed hospital, spelling out the scope and limits of each functional division. Surveys, interviews and review of hospital policies and standards provided data. (H.M.)

AB0009 203pp.b.d.ill.th.M.H.A., 12/67

Sister Mary Rene McNiff
ADMINISTRATOR'S POLICY MANUAL
Graduate Program in Hospital Administration, Xavier University, Cincinnati, Ohio, 1966
Available from U.M.I. Xerox $9.15
Film reel #2.04 $4.75

This manual was developed for Our Lady of Lourdes Memorial Hospital, New York, and is intended as a policy manual, as differentiated from a procedure manual or administrator's guide. It includes an introduction, five major sections and an appendix and bibliography. Section II explains the basic philosophy of Daughters of Charity which operate the hospital, the governing board, administrator, advisory board and medical staff. Section III considers external influences on policy: statutory regulations; accrediting bodies; other health facilities; organizations; and national activity study participation. Section IV deals with internal regulators of policy inherent in day-to-day operation of hospital. Section V considers financial policies and Section VI deals with administrative departmental relations and interdepartmental policies. Included are organization charts and graphic displays and schedules of hospital facilities. (D.F.B.)

AB0010 72pp.b.d.th.M.H.A., 12/67

Sister Maria Stella
DE L'UTILITE D'UN MANUEL ADMINISTRATIF, BASE SUR LA NOUVELLE LOI DES HOPITAUX (USEFULNESS OF AN ADMINISTRATIVE MANUAL, IN VIEW OF THE NEW QUEBEC HOSPITAL ACT)
Program in Hospital Administration, University of Montreal, Montreal, Quebec, Canada, 1963
Available from U.M.I. Xerox $3.25
Film reel #2.05 $4.25

The report of a questionnaire survey made of 100 Quebec hospitals to determine the need for an administrative handbook for key administrative positions and "to prove, in view of Bill 44, that it will be useful to all hospital administrators." Text in French. (L.E.W.)

AB2010 215pp.b.d.th.Ph.D., 7/67

Bingham, Fletcher Havens
GRADUATE EDUCATION FOR HOSPITAL ADMINISTRATION: A CRITIQUE AND A PROGRAM
Graduate Program in Hospital and Health Administration, University of Iowa, Iowa City, Iowa 1967
Available from U.M.I. Xerox $9.70
Film reel #2.05 $4.25

An overview of graduate education in the United States in general and of the graduate work in hospital administration in particular.

The changing emphasis of problem areas facing administration as shown by citations from correlated studies (1938, 1961, 1963) was the basis for the author's call for a reexamination of the goals of graduate education in hospital administration.

The author recommends higher standards in graduate study in hospital administration and possible differentiation between programs, yet with greater alignment "to the general capabilities of graduate education in general". (L.E.W.)

AB2011 36pp.R., 9/67

Hudson, Jay M.
THE ADMINISTRATOR, THE MEDICAL STAFF AND DISCIPLINE: A DOCUMENTATION OF THE AVENUES USED BY THE ADMINISTRATOR IN THE DISCIPLINING OF MEMBERS OF THE MEDICAL STAFF
Program in Hospital Administration, University of California, Berkeley, California, 1967
Available from U.M.I. Xerox $3.00
Film reel #2.05 $4.25

Four hospital administrators from four different types of hospitals were interviewed to determine methods they used to discipline members of the medical staff and to ascertain their opinions concerning their authority to discipline. One of the four thought administrators had no authority to discipline. The general consensus of the other three was that administrators had authority, but the best approach is to work through and with the medical staff to the point where disciplinary action is accomplished by the medical staff as a result of diplomatic pressures by the administrator. The most often used form of discipline was verbal, person to person communication. Study found direct disciplinary action was taken when situation demanded it and when there were specific written procedures covering the situation. Copy of questionnaire used is included. (D.F.B)

AB2013 68pp.d.ill.R., 9/67

Dolson, Miriam T.
PRELIMINARY REPORT ON THE CORNELL STUDY OF THE HOSPITAL ADMINISTRATOR
Sloan Institute of Hospital Administration, Cornell University, Ithaca, New York, 1967
Available from original publisher

This reports is concerned with an analysis of characteristics and attitudes of U.S. and Canadian administrators. Data were obtained from approximately 4,600 completed questionnaires, out of a total of 8,500 mailed in U.S., Canada and U.S. possessions in January, 1965. Part I compares characteristics of respondents with those of overall population of hospital administrators. It is concluded that sample is quite representative of total group. Part II analyzes the administrator according to such factors as educational and socio-economic backgrounds; attitudes, values and interests related to choosing hospital administration as a profession; patterns of geographic and occupational mobility; and participation in community and larger health system. Part III compares university hospital administration program graduates with non-program graduates for similar factors. Findings indicate a profile of average administrator would show he is between forty-five and fifty-five; grew up in community of less than 10,000; married with a child under 18; has some post-graduate training; has held present position seven years; worked in three different states; and is in the $10,000 - $15,000 income category. (D.F.B)

AB2014 104pp.b.d.th.Ph.D., 12/67

Thompson, William Louis
AN EXPLORATION OF THE IMAGE OF PUBLIC HEALTH DEPARTMENTS HELD BY HOSPITAL ADMINISTRATORS
St. Louis University, St. Louis, Missouri, 1966
Available from U.M.I., document no. 67-2971
Xerox $5.20
Film reel $3.00

An assessment of the attitudes of hospital administrators toward public health departments. Study was made through questionnaire sent to administrators of 492 short-term acute general hospitals (a 10 per cent sample of those hospitals listed by A.H.A.). A significant relationship was found between a positive image of public health departments held by certain hospital administrators and the voluntary contacts made by public health departments. (L.E.W.)

AB2015 203pp., 12/67

GRADUATE EDUCATION IN HOSPITAL ADMINISTRATION
Hospital Administration, Fall, 1967, Vol. 12, No. 4
Available from original publisher

A special edition devoted to the several aspects of graduate education in hospital administration in the U. S. Articles by educators and other professionals discuss the trends, the orientations, the two-year curricula, the developing roles of administrators, the quality of programs, and the programs in some other countries. (L.E.W.)

AB2016 85pp.b.d.th.Ph.D., 12/67

Gintzig, Leon
HOSPITAL ADMINISTRATION IN HIGHER EDUCATION: A CURRICULUM IN HOSPITAL ADMINISTRATION EDUCATION
State University of Iowa, Iowa City, Iowa, 1958
Available from U.M.I., document no. 58-1611
Xerox $4.00
Film reel $3.00

This study is an attempt to view and appraise the controversial issues raised in this field. Data is gathered by the direct inquiry-questionnaire and personal interview-from a sample of qualified and representative contributors concerning their attitudes toward hospital management education. The questionnaire was concerned with information of general interest relating to the hospital administrative employee and with opinions concerning the structure of the curriculum. These data are analyzed and a curriculum pattern for professional hospital administration education determined. The purposes and place of hospital administration education have frequently been stated with too little understanding of the role of the institution of higher learning in relation to professional preparation. This study, then, also discusses some commonly used approaches today in studying the professional curriculum, but not alone as they relate to the needs of the student at the graduate level since the writer believes a study of this kind must be undertaken by viewing the educational problem of the future professional hospital administrator as a whole.

It is concluded that professional education for hospital administration cannot be adequate unless it includes portions of general and special education interwoven with supervised practical experience, all of this to start early in the undergraduate years. (Author's abstract, adapted)

ACCOUNTING AND BUSINESS OFFICE

(See also AD, General Non-Departmental Activities; AM, Admitting and Bed Control; DA, Data Processing; PE, Personnel Administration; MR, Medical Records; and PU, Purchasing, Storeroom and Central Supply.)

Please see next column

AC1021 18pp.d.R., 10/67

State of Illinois. Department of Public Health
A STUDY OF OPERATING COSTS IN 199 HOSPITALS 1965 - 1966
State of Illinois, Department of Public Health, Springfield, Ohio, 1967
Available from original publisher

Tables give operating costs by hospital departments with percentage distribution and per diem cost and categorized by hospital bed size. Also included are tables by bed size giving discharges, patient days, average daily census, per cent of occupancy, length of stay, number of employees, ratio of employees to patient days and beds. (A.R.N.)

AC1022 4pp.b.d., 10/67

Andrews, Janet T.; Moore, Aimee N.; Tuthill, Byrdine H.
ELECTRONIC DATA PROCESSING IN INTRA-DEPARTMENTAL FOOD COST ACCOUNTING
Journal of the American Dietetic Association, October, 1967, Vol. 51, No. 4, pp. 332-335
Available from original publisher

A study of a data processing system for determining daily food costs for each unit in a medical center. A computer was used to standardize a summer menu of about 200 recipes and to determine its cost per serving and per pound. Forms for recording and identifying data were developed. Study concludes a data processing system of cost accounting is valuable in determining and justifying charges but work is needed to develop methods of identifying labor and overhead costs. (A.R.N.)

AC1023 8pp.b.d., 10/67

Montag, Geraldine M.; McKinley, Marjorie M.; Kleinschmidt, Arthur C.
PRODUCTION COSTS: LABOR-SAVING EQUIPMENT VS. NON-MACHINE METHODS
Journal of the American Dietetic Association, October, 1967, Vol. 51, No. 4, pp. 324-331
Available from original publisher

Study compares the cost of eight labor-saving machines with non-machine methods to determine when and if there is an economic advantage in the utilization of these machines for a food service facility. Graphs are produced for each machine showing points at which machine production has an economic advantage after wage and volume comparisons have been made. (A.R.N.)

AC1024 125pp.b.d.th.Ph.D., 12/67

Drinkwater, David Anthony
MODEL FINANCIAL STATEMENTS - BASIS OF A PROPOSED REIMBURSEMENT FORMULA TO CONTROL HOSPITAL COSTS
Michigan State University, East Lansing, Michigan, 1966
Available from U.M.I., document no. 67-1618
Xerox $6.00
Film reel $3.00

The author reviews the development of the American hospital system with particular emphasis on current forms of ownership and methods of financing operation. He then proposes a reimbursement form entitled "Community Service Method" which contains an "Eligibility Cost Control System". The Community Service Method is then compared to three other reimbursement formulae in so far as they affect "financial capacity" and "cost incidence". The four methods differ as to the items to be reimbursed, the method of cost apportionment, and the system of controlling cost. The differences in results under the four plans using simulated data were found to be "significant in terms of total and relative financial capacity" with the highest cash balances resulting under the Community Service Methods. (L.E.W)

AC1025 251pp.b.d.th.Ph.D., 12/67

Menn, Hubert L.
COST ACCOUNTING AND BUDGETING FOR STATE MENTAL HOSPITALS
University of Texas, Austin, Texas, 1957
Available from U.M.I., document no. 23,051
Xerox $11.30
Film reel $ 3.25

A study made to develop principles and procedures of accounting and budgeting for state mental hospitals with special emphasis on procedures for determining departmental and functional costs and to the relationship between budget control and functional cost accounting. The major portion of the study is devoted to "the departmentalization of the hospital operation and the classification and distribution of expense". The basic principles of budgeting are explained and the general procedures outlined. Information on problems and practices of other states was derived from returns of a ten-page questionnaire. Text of questionnaire and tabulated results are given in the appendix. (L.E.W.)

AC3007 46pp.b.d.th.M.H.A., 10/67

Moser, Dennis R.
A STUDY TO IDENTIFY PATIENT FACTORS WHICH RELATE TO PROMPTNESS OF PAY FOR HOSPITAL SERVICES
Program in Hospital Administration, University of Minnesota, Minneapolis, Minnesota, 1967
Available from U.M.I. Xerox $3.00
Film reel #2.06 $4.50

Study was conducted among 10 per cent random sample of orthopedic patients at Baylor University Medical Center to determine if factors of marital status, age, sex, type of admission, residence, credit rating, length of stay, size of bill remaining after final insurance payment has been received and delay in receiving insurance payment are related to promptness of patients to pay for hospital services. Two promptness-to-pay groups were studied: those who pay within ninety days after final insurance payments are received; and those who do not pay in full within 120 days. Data were analyzed using Chi Square and Kolmogorov-Smirnov tests. Study found age to be the only significant factor. Patients twenty-three through forty-five years showed increasingly greater history of non-payment, whereas patients forty-six and older showed increasingly a greater history of payment within the allotted acceptable time. A study into the effect of a combination of factors is recommended. (D.F.B.)

AC4001 38pp.d.ill.R., 12/67

Wilczynski, Jerome
ANALYSIS OF ACCOUNTS PAYABLE FUNCTION
Community Systems Foundation, 111 North Main, Ann Arbor, Michigan 48108, 1967
Available from U.M.I. Xerox $3.00
Film reel #2.06 $4.50

This report analyzes the unnecessarily long time lags between receipt of invoices from vendors and the preparation of checks. Solving the problem should lead to the lowering of the hospital's liabilities. Involved is the establishment of procedures to be adhered to in the accounts payable function, at Highland Park (Michigan) hospital. (Author's abstract, adapted)

GENERAL NON-DEPARTMENTAL ACTIVITIES

AD4011 130pp.b.d.th.Ph.D., 12/67

McLees, William Anderson
A SURVEY AND CONTENT ANALYSIS OF HOSPITAL EMPLOYEE HOUSE ORGANS WITHIN BED-CAPACITY RANGE 200-499
State University of Iowa, Iowa City, Iowa, 1958
Available from U.M.I., document no. 58-1615
Xerox $5.85
Film reel $3.00

A questionnaire was submitted to 500 randomly selected U. S. hospitals (200-499 beds) for information on the use of employee house organs. Analysis of content was made of 116 publications. Approximately 60 per cent of content was devoted to six subject categories: personals; features; employee staff; students, interns, and residents; entertainment and social events; and professional departments. From the analysis and from findings of questionnaire, the author concluded house organs were used effectively by respondents as a means of communication to hospital employees. (L.E.W.)

ADMITTING AND BED CONTROL

(See also AC, Accounting and Business Office; and AD, General Non-Departmental Activities.)

AM1012 53pp.d.R., 12/67

Rogers, Philip J.
DEVELOPMENT OF A PATIENT COORDINATOR SYSTEM FOR MEMORIAL HOSPITAL AT EASTON, MARYLAND, INC.
Community Systems Foundation, 111 North Main, Ann Arbor, Michigan 48108, 1966
Available from U.M.I. Xerox $3.00
Film reel #2.06 $4.50

Report discusses a hospital's admitting and discharge procedures and develops a proposal for coordinating them. Data for study are based on volume statistics of patient arrivals and discharges during a two-month period and job profiles prepared by employees. Information for implementing new system covers staffing plan, work scheduling and organizational layout. (H.M.)

AM2010 53pp.b.d.ill.th.M.H.A., 12/67

Sister M. Paulette Collings
"MEDELCO BED SCHEDULER" COMMUNICATION SYSTEM
Graduate Program in Hospital Administration, Xavier University, Cincinnati, Ohio, 1966
Available from U.M.I. Xerox $3.00
Film reel #2.06 $4.50

A description of the planning, installation, and operation of a "Bed Scheduler", a commercial computerized communication system which gives print-out information on bed status to admitting office, housekeeping, business office and dietary from input panels in nursing units. Print out gives location, bed number, sex of patient, and information as to bed being occupied, patient leaving that day, patient discharged, patient expired, transfer in or out, out of service, maid carbolizing bed or finished, bed out of service, or correction of input. Author outlined problems encountered and methods of debugging. After one month's operation author feels the system has increased efficiency. (L.E.W.)

ANESTHESIA AND INHALATION THERAPY DEPARTMENTS

(See also PH, Pharmacy; and PU, Purchasing, Storeroom, and Central Supply.)

AN1001 4pp.d., 12/67

Bridenbaugh, L. D.; Moore, D. C.; DeVriew, J. C.
STERILE, CONVENIENT, ECONOMICAL, DISPOSABLE SPINAL ANESTHESIA TRAYS. FACT OR FANTASY
Anesthesia and Analgesia, Current Researches, 1967, Vol. 46, No. 2, pp. 191-194
Available from original publisher at 3645 Warrensville Center Road, Cleveland, Ohio 44122 at $3.00 per copy

Computer analysis of 967 spinal blocks administered with disposable trays containing drugs and 11,419 spinal blocks performed with hospital trays containing drugs revealed no difference in duration of anesthesia, nor were there any neurologic complications. A study of 757,848 disposable spinal block trays showed no neurologic complications from the use of the 242,018 trays containing no drugs. Thirty-four documented cases of aseptic meningitis occurred with 359,000 drug-containing trays; the patients all recovered without residual. The pharmaceutical company manufacturing the disposable spinal block trays has subsequently substituted Pontocaine, Novocain, and dextrose in the drug-equipped trays. No neurologic complications have been reported from the use of approximately 11,700 block trays containing these new drugs. (*Excerpta Medica*, Section 17, Volume 13, No. 10, October, 1967, pp. 770, no. 4968)

AREAWIDE PLANNING: HOSPITALS AND RELATED FACILITIES

(See also AB, Administrator and Board; CO, Community Attitudes; DE, Design and Construction; HE, Health Services; and RE, Regionalization.)

AR0041 21pp.b.R., 12/67

Schneider, J. B.
A NEW APPROACH TO PLANNING THE GROWTH OF A METROPOLITAN HOSPITAL SYSTEM - Working Paper No. S-1
Regional Science Research Institute, 1314 N.W., 43rd, Seattle, Washington 98105, 1967
Available from original publisher

(This paper continues discussion of previously cited work, AR0036, 0037, 0038.)
The service area approach to the estimation of future bed-need is shown to be unworkable in an urban area. It is suggested that the capacity (how many) estimating and the locational (where) distribution aspects of the bed-need estimate be treated separately at a metropolitan-wide scale. Primary attention is given to the locational aspect of the problem. The sectorgram technique is proposed as a method for describing and evaluating both the present and projected degree of spatial correspondence between hospital facilities and the patients which they serve. Its use would require that a new approach to area-wide hospital planning be developed. One such approach is outlined.
(Author's abstract, adapted)

AR1012 24pp.b.d.ill., 12/67

Schneider, J. B.
MEASURING THE GEOGRAPHIC BALANCE OF A METROPOLITAN HOSPITAL SYSTEM
Regional Science Research Institute, 1314 N.E. 43rd Street, Seattle, Washington 98105, 1967
Available from U.M.I. Xerox $3.00
Film reel #2.06 $4.50

This paper is similar to previously reported AR0036, Volume IV, no. 2, and others discussing the geographic patterns of use of urban hospitals. In this work, the geographic pattern of patient residences, physicians' offices and hospital facilities is compared for each of four specialties: general practice, pediatrics, obstetrics/gynecology and general surgery. Overall, it is apparent that the Cincinnati hospital system exhibits a distinct lack of geographic balance and that a massive decentralization of hospital facilities would be required to achieve a reasonable level of geographic balance in the future. While physicians' offices exhibit a reasonable degree of geographic balance in all cases, it is clear that a decentralization of hospital facilities could reduce the various types of travel required of both physicians and patients. Other possible costs and benefits which might accompany an increased degree of geographic balance are also briefly discussed.
(Author's abstract, adapted)

AR1013 20pp., 12/67

Livergant, H. L.
A GUIDE FOR HOSPITAL LONG-RANGE PLANNING COMMITTEES
Metropolitan Toronto Hospital Planning Council, 234 Eglinton Avenue, East, Toronto 12, Ontario, Canada, 1967
Available from original publisher

A guide for planning committees developed for the Toronto Council based on the experience of several other area councils. (L.E.W.)

AR1014 185pp.b.d.th.Ph.D., 12/67

McKinney, William Mark
GEOGRAPHIC ASPECTS OF HOSPITAL PLANNING
The University of Florida, Gainesville, Florida, 1958
Available from U.M.I., document no. 58-3501
Xerox $8.40
Film reel $3.00

An investigation of the relationship that exists between geographic factors and the regional planning of hospitals. Information was gathered during field visits to hospitals and communities in Georgia and through interviews with persons in the planning, medical, and public health fields.
The author discussed factors which need to be considered in regional planning such as geographic environment, political divisions of territory, population density and composition, special problem areas, and both man - made and natural barriers to movement of patients and medical services. (L.E.W.)

AR1015 9pp.d., 1/68

Drosness, Daniel; Dean, Larry S.; Lubin, Jerome W.; Ribak, Nancy
USES OF DAILY CENSUS DATA IN DETERMINING EFFICIENCY OF UNITS
Hospitals, Vol. 41, December 1, 1967, pp. 45-49, December 16, 1967, pp. 65-68
Available from original publisher

Analysis of data from The Hospital Utilization Research Project of the state of California, or twelve hospitals in Santa Clara County. Prior studies from this data are AR0023, AR1007, and AR1008, Volume III. This analysis studies Blumberg's distinctive patient facilities hypothesis and concludes that occupancy varies according to the normal distribution. The second part of the article discusses the implications of occupancy and the number of facilities on planning decisions and also discusses some possible causes of occupancy variations. A detailed calculation is made of five theoretical possibilities for obstetrical service to the county, ranging from one to eleven units. (J.R.G.)

AR2053 75pp.b.d.ill., 3/67

de Vise, Pierre
HOSPITAL STUDY DISTRICTS FOR METROPOLITAN CHICAGO
Hospital Planning Council for Metropolitan Chicago, 79 West Monroe Street, Chicago, Illinois 60603, 1966
Available from U.M.I. Xerox $3.40
Film reel #2.06 $4.50

A technical bulletin outlining a method for defining service districts in multihospital areas which can be applied to any metropolitan region. Such geographic units permit areawide planning councils to relate needs for health facilities to specific population groups and are determined in this report through consideration of geographic, traffic and trade, and market analysis concepts. Seventeen hospital districts in Chicago were delineated by the use of origin-destination data on maternity patients and results obtained using this method were validated by comparison with 1965 patient origin-destination data. Complete tables and figures are presented to explain this two-way market analysis system for delineating hospital districts. (S.P.)

AR2057 74pp.R., 11/67

Health Facilities Planning Council of Hawaii
AREAWIDE HEALTH FACILITIES PLAN FOR COUNTY OF HAWAII, 1964 - 1985
Health Facilities Planning Council of Hawaii, Suite 820,Ala Moana Building, 1441 Kapiolani Boulevard, Honolulu, Hawaii 96814, 1967
Available from original publisher

Revision of the long range Health Facilities Plan for the County of Hawaii, 1964 to 1985 developed by the Hawaii County Advisory Committee. (A.R.N.)

AR2061 60pp., 9/67

Morrill, Richard L.
HISTORICAL DEVELOPMENT OF THE CHICAGO HOSPITAL SYSTEM
U.S.P.H.S. Grant No. HM00452-01
Hospital Planning Council for Metropolitan Chicago, 79 West Monroe Street, Chicago, Illinois 60603, 1966
Available from U.M.I. Xerox $3.00
Film reel #2.06 $4.50

Analysis of past patterns of behavior to assist Chicago in projecting future hospital needs. Examines particularly the relationship between population and beds. Concludes that hospital response of capacity to demand is slow and imperfect. Older settled, denser areas continue to have excess capacity. Achievement of self-sufficiency, even for community level care, follows a twenty-five to fifty year lag after residential saturation and maturity. (W.S.)

AR2080 9pp.d.ill., 12/67

Wallace, Helen M.; Eisner, Victor; Dooley, Samuel
AVAILABILITY AND USEFULNESS OF SELECTED HEALTH AND SOCIOECONOMIC DATA FOR COMMUNITY PLANNING
American Journal of Public Health, May, 1967, Vol. 57, No. 5, pp. 762-770
Available from original publisher

The authors seek health and social indexes and methods of data analysis most useful in identifying "high risk areas" in the process of planning adequate health and social services in metropolitan centers. Data from San Francisco

1958 - 1962, were used for comparison of two methods of analysis, map plotting and factor analysis. Both were found useful in identifying high risk areas and in reinforcing each other. Socio-economic indexes were found to be consistently more useful than health indexes. (A.R.N.)

CHRONIC DISEASE FACILITIES AND PROGRAMS

(See also AR, Areawide Planning; HE, Health Services; OU, Outpatient, Emergency and Home Care; PS, Psychiatric Services; and RS, Rehabilitation Service.)

CH0019 11pp.d., 9/67

Kelman, Howard R.; Muller, Jonas
THE ROLE OF THE HOSPITAL IN THE CARE OF THE AMBULATORY CHRONICALLY ILL AND DISABLED PATIENT AFTER DISCHARGE
American Journal of Public Health, Vol. 57, No. 1, January, 1967, pp. 107-117
Available from original publisher

A study of fifty-seven chronically ill and disabled patients from two New York City municipal hospitals after discharge to determine role of hospital in furnishing in and outpatient services. Extensive medical and social data are given. (L.E.W.)

CH0020 300pp.d.R., 9/67

Hansen, Gary D.; Sister M. Antoinette Traeger; Dunagan, Willis H.
DECADE FOR ACTION IN GERONTOLOGY AND GERIATRIC CARE
Oregon Gerontology Study and Training Center, Mt. Angel College, Mt. Angel, Oregon 97362, 1966
Available from original publisher for $15.00

Outline of the gerontology program at the Oregon Gerontology Study and Training Center at Mt. Angel College. A section entitled "Theory" reviews relevant research findings up to the present. The bulk of the report describes the present educational program at Mt. Angel, and present and future projects for training personnel. A review of facilities and projected plans for institutions and housing for the aged in the northwest U.S. is also included. (B.L.O.)

CH0021 53pp.d.ill.R., 11/67

Vlasak, George J.; Phillips, Harry T.
WHAT COMES AFTER DISCHARGE
Bureau of Chronic Disease Control, Massachusetts Department of Public Health, Boston, Massachusetts, 1967
Available from U.M.I. Xerox $3.00
Film reel #2.07 $4.50

A final progress report summarizing a study of characteristics of patients six months following discharge from an active-treatment, chronic disease hospital. Descriptive analysis of population profile obtained from 406 hospital patient records and post discharge experience drawn from information supplied by 265 responses to mailed questionnaires. Accompanying distribution statistics include data presented in clusters of linked variables considered potentially interesting for further studies on services, facilities, or follow-up planning for the chronically ill. (H.M.)

CH0022 34pp.d., 12/67

Political and Economic Planning
TRENDS IN PSYCHOGERIATRIC CARE
Political and Economic Planning, 12 Upper Belgrave Street, London, S.W.1, England, 1966
Available in U.S.A. from Committee for Economic Development, 711 5th Avenue, New York, New York for $.75

This paper examines the various approaches to the measurement of frequency of psychiatric illness in old age, considers the principal types of psychogeriatric illness and the parts played by different institutions. It reports on studies of the extent and nature of mental health, on social work carried out with elderly patients and on the impact of psychogeriatric illness on the family. It concludes that Great Britain needs a national policy for old age which considers the psychological and psychiatric aspects of aging as an integral part of the total problem (A.R.N.)

Please see next page

CH0023 239pp.d.R., 12/67

Tennessee Hospital Education and Research Foundation, Incorporated
LONG-TERM CARE PROGRAM - ANNUAL REPORT 1967
Tennessee Hospital Education and Research Foundation, Incorporated, 214 Reedhurst Avenue, Nashville, Tennessee 37203, 1967
Available from U.M.I. Xerox $10.75
Film reel #2.07 $ 4.50

First annual report of study made under direction of Tennessee Hospital Association to explore the role of community hospital in long-term care. Report describes organizational steps taken, problem areas to be probed, and programs and projects undertaken. A statistical profile of 179 of the state's 181 licensed long-term care facilities was compiled and is included in the appendix. This profile permits assessment of nurse staffing patterns, medical staff by-laws, patient services available, type of financial records kept, educational background of administrator, and other pertinent data regarding each institution. Report also describes cooperative institute and educational programs between hospitals and long-term care facilities and the organization of training courses for occupational therapy assistants. Plans for future are outlined and include a study or prepayment plans for extended care. Appendices also include copy of proposed patient transfer agreement between hospitals and extended care facilities. (D.F.B.)

CH0024 85pp.d.ill., 12/67

Madow, William G.
INTERVIEW DATA ON CHRONIC CONDITIONS COMPARED WITH INFORMATION DERIVED FROM MEDICAL RECORDS
Public Health Service Publication No. 1000, Series 2, No. 23
National Center for Health Statistics, Department of Health, Education and Welfare, Washington, D. C.
Available from Superintendent of Documents, Government Printing Office, Washington, D.C., for $.55

A report prepared by the Stanford Research Institute describing the plan, conduct, and findings of a contract research study designed to measure the accuracy and completeness of the reporting of chronic conditions in a health interview.

The sample population was selected from members of the Kaiser Foundation Health Plan. In the study medical records were compared with responses made in interviews for the same persons as those for whom the records were maintained.

In the interview phase of the study, three alternate forms of a health questionnaire were used. Although the questionnaires were different in several important respects, the overall differences in the reporting of conditions included in the medical records were not large enough to be important.

Findings in the study indicate that respondents in a health interview tend to report conditions that are important to them - i.e., conditions that are severe, costly, or require treatment. Differences in reporting of conditions in the interview were associated with differences in communication between physician and patient. The number and recency of medical visits for a condition were factors closely related to the reporting of conditions. (Author's abstract, adapted)

CH0025 46pp.d.ill., 12/67

Bryant, E. Earl
INSTITUTIONS FOR THE AGED AND CHRONICALLY ILL
Public Health Service publication 1000, Series 12, No. 1
National Center for Health Statistics, Department of Health, Education and Welfare, Washington, D.C.
Available from Superintendent of Documents, Government Printing Office, Washington, D.C., for $.35

In this report institutions for the aged in the United States are described in terms of their admission policies, type of nurse in charge of nursing care, whether or not round-the-clock nursing service is provided, and the amount charged for care of residents. The data are based on a sample survey conducted during the spring of 1963 of nursing homes and related facilities, including chronic disease and geriatric hospitals and all types of homes for the aged.

An estimated 17,100 institutions were classified according to the primary and predominant type of service provided. On this basis about forty-six per cent were classified as nursing care homes and twenty-nine per cent as personal-care-with-nursing homes (personal care was the primary service, but some nursing care was provided). Only four per cent were long-stay hospitals or hospital units for the care of the aged and chronically ill. The remaining twenty-one per cent were homes which routinely provided personal care but not nursing care. (Author's abstract, adapted)

CH0029 6pp.d., 1/68

Allen, David
HEALTH INSURANCE FOR THE AGED: PARTICIPATING EXTENDED-CARE FACILITIES
Social Security Bulletin, Vol. 30, No. 6, June, 1967, pp. 3-8
Available from original publisher

Data are presented on the extended care facilities certified for participation as of March 31, 1967 under the Social Security Act, and the characteristics of those facilities. Data are tabulated by geographic division and by the type of service rendered. (L.E.W.)

CH0030 55pp., 11/67

Kovar, Mary Grace
CHARGES FOR CARE IN INSTITUTIONS FOR THE AGED AND CHRONICALLY ILL
National Center for Health Statistics, Department of Health, Education and Welfare, Washington, D.C., Public Health Service publication No. 1000, Series 12, No. 9, August, 1967
Available from the Superintendent of Documents, U.S. Government Printing Office, Washington, D. C. 20402 for $.35

Statistics on the average monthly charge for care and the distribution of residents by level of charge for care according to primary type of service, level of nursing supervision, and type of ownership of the institution; according to age, sex, level of patient care, and primary source of payment for the resident; and according to the geographic region of the United States. Based on data collected during the period May - June, 1964. (Author's Abstract)

CH1010 50pp.d.R., 11/67

United Community Services of Metropolitan Detroit
HOSPITAL-NURSING HOME DEMONSTRATION PROJECT
United Community Services of Metropolitan Detroit, 51 West Warren Avenue, Detroit, Michigan 48201, under a grant from the Dexter Ferry Jr. Trustee Corporation
Available from Floyd C. Plowman, United Community Services of Metropolitan Detroit, 51 West Warren Avenue, Detroit, Michigan 48201 at no charge

The final report of a demonstration project of nursing home-hospital relationships to test the role of post-hospital nursing home care relative to hospital care, and to test the "validity" of payment for post-hospital nursing home care in that area. Participants included six hospitals and their affiliated nursing homes, the social services departments of Detroit and the three counties, and prepayment and insurance carriers. Data were gathered from histories of 326 patients transferred from hospital to affiliated nursing homes during a twenty-five month period.

The findings showed that patients were maintained in nursing homes for about $14.00 less than in hospital. By using "Joint Advisory Committees" the two types of medical facilities "discovered them could work together in harmony". However, specific problems were noted, particularly in the transfer process, patient selection, and in continuing outpatient care to nursing home patients. (L.E.W.)

CH2030 7pp.d., 10/67

McCoy, Leahmae
STUDY SHOWS CAUSES OF STAFFING PROBLEMS
Modern Nursing Home Administrator, Vol. 21, No. 4, July - August, 1967, pp. 71-77
Available from original publisher

A study of staffing problems based on questionnaires returned in 1966 by employees of eleven nursing homes in the Tucson, Arizona area. Three categories of employees were respondents: administrators; nurse supervisors and other employees (the nursing, kitchen and custodial staffs). Summary of data and author's analysis included. Report concludes that low salaries and lack of in-service training were responsible for rapid turn-over and other staffing problems. (A.R.N.)

CH2031 3pp.d., 11/67

Foote, Franklin M.
PROGRESS IN NURSING CARE
Journal of the American Medical Association, October, 1967, Vol. 202, pp. 296 - 298
Available from original publisher

Description of a point system for evaluating nursing homes which is related to a welfare per diem payment rate in Connecticut. Data on achievement of nursing homes over a five-year period is presented. (J.R.G.)

CH2032 40pp.d., 11/67

Nelson, Arne B.
PREVALANCE OF CHRONIC CONDITIONS AND IMPAIRMENTS AMONG RESIDENTS OF NURSING AND PERSONAL CARE HOMES
Public Health Service publication No. 1000, Series 12, No. 8
National Center for Health Statistics, Department of Health, Education and Welfare, Washington, D. C.
Available from the Superintendent of Documents, Government Printing Office, Washington, D. C. for $.30

Statistics on specific chronic conditions and impariments, limitation of mobility, time interval since last saw doctor, length of stay, primary type of service, nurse or nurse's aide on duty, supervisory nurse in nursing and personal care homes. Based on data collected from institutions during the period May - June, 1964. (Author's abstract)

CH2033 36pp.d.ill., 12/67

Bryant, E. Earl; Taube, Carl A.
UTILIZATION OF INSTITUTIONS FOR THE AGED AND CHRONICALLY ILL
Public Health Service publication 1000, Series 12, No. 4
National Center for Health Statistics, Department of Health, Education and Welfare, Washington, D.C.
Available from Superintendent of Documents, Government Printing Office, Washington, D.C., for $.30

Statistics on the number of beds, admissions, discharges, recipients of public assistance, and rate of occupancy in institutions for the aged and chronically ill. Based on data collected from institutions during the period April - June, 1963. See also CH2013, CH2023. (Author's abstract)

CH2034 54pp.d.ill., 12/67

Wunderlich, Gooloo S.
CHARACTERISTICS OF RESIDENTS IN INSTITUTIONS FOR THE AGED AND CHRONICALLY ILL
Public Health Service publication 1000, Series 12, No. 2
National Center for Health Statistics, Department of Health, Education and Welfare, Washington, D. C.
Available from Superintendent of Documents, Government Printing Office, Washington, D.C. for $.40

Statistics on age, sex, color, length of stay, and selected health characteristics of residents in institutions for the aged and chronically ill. Based on data collected from institutions during the period April - June, 1963. (Author's abstract)

CH2035 34pp.d.ill., 12/67

Taube, Carl A.
EMPLOYEES IN NURSING AND PERSONAL CARE HOMES
Public Health Service publication 1000, Series 12, No. 5
National Center for Health Statistics, Department of Health, Education and Welfare, Washington, D. C.
Available from Superintendent of Documents, Government Printing Office, Washington, D.C. for $.30

Statistics on the number and types of employees in nursing and personal care homes by age and sex, hours worked per week, and ratio of residents to employees. Based on data collected from institutions during the period May - June, 1964. See also CH2036. (Author's abstract)

CH2036 36pp.d., 12/67

Taube, Carl A.; Bryant, E. Earl
EMPLOYEES IN NURSING AND PERSONAL CARE HOMES - NUMBER, WORK EXPERIENCE, SPECIAL TRAINING, WAGES
Public Health Service publication 1000, Series 12, No. 6
National Center for Health Statistics, Department of Health, Education and Welfare, Washington, D. C.
Available from Superintendent of Documents, Government Printing Office, Washington, D.C. for $.30

Statistics on the number and types of employees and their total work experience in nursing and personal care homes and hospitals, length of current employment, special training, and wages. Based on data collected from employees of nursing and personal care homes during the period May - June, 1964. See also CH2034. (Author's abstract)

CH2037 43pp.d., 12/67

Nelson, Arne B.
CHRONIC ILLNESS AMONG RESIDENTS OF NURSING AND PERSONAL CARE HOMES
Public Health Service publication 1000, Series 12, No. 7
National Center for Health Statistics, Department of Health, Education and Welfare, Washington, D.C.
Available from Superintendent of Documents, Government Printing Office, Washington, D.C., for $.35

Statistics on number of chronic conditions and impairments, mobility status, time interval since resident last saw doctor, length of stay, primary type of service, nurse or nurse's aide on duty, supervisory nurse, and level of patient care in nursing and personal care homes. Based on data collected from institutions during the period May - June, 1964. (Author's abstract)

CH2038 52pp.b.d.ill.th.M.H.A., 12/67

Cecil, John G.
THE NEW CONCEPT OF NURSING HOMES
Graduate Program in Hospital Administration, Xavier University, Cincinnati, Ohio, 1966
Available from U.M.I. Xerox $3.00
Film reel #2.07 $4.50

A discussion of the care of the aged in nursing homes and similar facilities. Historical background of development of this type of facility, of the social legislation affecting such care in past three decades, and suggestions for regulations, staffing, and services given. Author favors hospital-connected facilities. (L.E.W.)

COMMUNITY ATTITUDES AND PUBLIC RELATIONS

(See also AB, Administrator and Board; AR, Areawide Planning; HE, Health Services; IN, Insurance and Prepayment; ML, Medico-Legal; and PA, Patient Attitudes.)

CO2007 5pp.b.d., 8/67

Gordon, Joseph
EVALUATION OF COMMUNICATIONS MEDIA IN TWO HEALTH PROJECTS IN BALTIMORE
Public Health Reports, Vol. 82, No. 7, July, 1967, pp. 651 - 655
Available from original publisher

Report analyzing effectiveness of communications media in publicizing two health projects points out need for development of the waiting-editing function for public information. In the long-term project, a maternity facility studied over a ten-year period, the greatest source of referrals was person-to-person contact. The short-term project, covering three weeks of advertising, found success due to newspapers, radio and T.V.; in both instances, radio was more effective than T.V. in reaching low-income groups and leaflets, posters, etc. were of little value. (S.P.)

CO2008 90pp.b.d.th.M.H.A., 11/67

Davis, Donald W.
A STUDY TO DETERMINE THE KNOWLEDGE OF HOSPITAL COSTS OF CERTAIN SELECTED HOSPITAL EMPLOYEES
Program in Hospital Administration, University of Minnesota, Minneapolis, Minnesota, 1967
Available from U.M.I. Xerox $4.05
Film reel #2.08 $4.75

This significance of education, patient contact, length of employment, participation in lectures on hospital costs, and frequency of questioning about hospital costs as related to an employee's knowledge of hospital costs were studied by questionnaire at Rhode Island Hospital. Scores from a group that had no patient contact were compared to those of group who had contact with adult medical and surgical patients. Intervening variables of supervisory position, shift worked, sex, and number of hours worked per week were controlled by selection of the sample. The latter group included full time R.N.'s and nurses aides; the former group consisted of full time R.N.'s, laboratory technologists, and laundry, dietary and housekeeping employees. Analysis of variance was used to measure differences in questionnaire scores. Study found significantly higher scores for nurse group, mainly due to higher scores for nurses aides as compared to laundry, dietary and housekeeping employees. Other variables tested were not shown to significantly affect scores. It is concluded those with patient contact are more knowledgable about costs, but significance of patient contact is not consistent when considered in conjunction with other variables. Copy of questionnaire is in the appendix. (D.F.B.)

CO2009 55pp.b.ill.th.M.H.A., 12/67

Eveland, Charles L.
THE BEXAR COUNTY HOSPITAL DISTRICT PUBLIC RELATIONS PROGRAM
Baylor University, San Antonio, Texas, 1965
Available on loan from the Asa S. Bacon Memorial Library, American Hospital Association, 840 North Lake Shore Drive, Chicago, Illinois

An evaluation of the 1965 public relations program of the Bexar County (Texas) Hospital District for the purpose of developing specific administrative procedures which would assist the district in meeting its public relations objectives. Information was gathered through: interviews with the Administrator and Director of Information and Communications; tours of the facility; attendance at staff meetings; observations of hospital activities, and review of hospital publications.

Recommendations resulting from the evaluation were: write a comprehensive P.R. program; write a job description of the Director; appoint a P.R. committee; reduce procedural routines into a P.R. manual; develop an annual calendar of events; publish a patients'/visitors' information booklet; inprove bulletin board program; and re-evaluate after one year. (L.E.W.)

CO2010 41pp.b.d.th.M.H.A., 12/67

Sister M. Evelyn Connolly
A PROFILE OF PUBLIC RELATIONS PERSONNEL BACKGROUNDS AND PRACTICES IN GREATER PITTSBURGH
Graduate Program in Hospital Administration, Xavier University, Cincinnati, Ohio, 1967
Available from U.M.I. Xerox $3.00
Film reel #2.08 $4.75

Study examines the education and experience of hospital public relations directors and the methods favored for creating public awareness of the hospital's services. Questionnaires distributed to hospital P. R. directors in the Pittsburgh area and follow-up interviews conducted with eight of the sixteen respondents. Results showed a well-educated professional group, oriented to journalism standards. Author recommends survey research and training in behavioral sciences as means of identifying the views and interests of the audience to overcome frequent criticism that hospital public relations are inadequate. (H.M.)

DATA PROCESSING SERVICE

(See also MN, Management Science and Operations Research; Excludes data processing for single department or single purpose data processing - see department involved.)

CHANGE IN AVAILABILITY

DA1002 221pp.d.p.R., 9/67

Information Science Associates
EDP IMPLEMENTATION PLANNING STUDY TECHNICAL REPORT
Information Science Associates, 1110 Wynwood Avenue, Cherry Hill, New Jersey, 1966
Available from U.M.I. Xerox $9.95
Film reel #2.08 $4.75

A study made November 1965 - April 1966 "to explore, identify, measure and organize the significant factors pertinent to the development of an EDP implementation plan" for thirteen area hospitals and five health agencies of metropolitan Indianapolis. The prime application area to be investigated was the information processing of physicians' orders and the maintenance of patients' financial and clinical records "and subsequent activities these generate". The objectives of the study were: to define the scope of the implementation job; estimate the type and quantity of manpower needed; solicit proposals from equipment suppliers; develop implementation schedules; make budgets; develop method of allocating costs among users; and seek and maintain community involvement.

The estimated commencement of operation was the beginning of 1968, with full on-line operation with 331 remote terminals in use in eleven hospitals and five agencies by 1971. The initial equipment planned for 1968 is an IBM 360/40 with high speed storage capacity of 131,000 bytes to be upgraded and added to by 1971 to the level of an IBM 360/40 with 262,000 bytes storage and an IBM 360/50 with 262,000 bytes storage with random access capacity of 207 million bytes (which can also be accessed by the 260/40) and a fast drum capable of storing 3.96 million bytes. The peak of employment of staff would be 79 in 1968 which should level off to 70 in 1971

The system would be operated on a fees-for-service basis with estimates that it would be self-supporting soon after 1971. In the meantime (through 1971) there would be accumulated costs of $9.4 million of which $3.66 million support would be needed. The cost estimates of the first year of full operation (1971) would be $2.44 million. See DA0014, Vol. III, for earlier report on project. (L.E.W.)

DA2002 19pp.b.ill.r., 10/67

Greenes, Robert A.; Barnett, G. Octo
GUIDE: A PROGRAMMING LANGUAGE FOR THE STRUCTURE OF DATA-DIRECTED COMMUNICATION
NIH Grant No. FR00263
Laboratory of Computer Science, Massachusetts General Hospital, Boston, Massachusetts
Available from U.M.I. Xerox $3.00
Film reel #2.08 $4.75

Use of the computer in an interactive problem-solving environment tends to depend upon sequential decision-making methods. Information on which decisions are to be based is typically obtained only when it is needed, and its nature and the context in which it is obtained function to determine the particular decision that is appropriate to it. The resultant effect of data-directed communication depends, for its success upon the ability of the subject matter expert to provide an appropriate decision structure for the circumstance. A programming language, GUIDE, is described, which has been developed as a high-level idiom for the design of such a decision structure. Several classes of situations which can benefit from its use are described. (Authors' Abstract)

DA4006 8pp., 10/67

Allen, S. I.; Barnett, G. O.; Castleman, P. A.
USE OF A TIME-SHARED GENERAL-PURPOSE FILE-HANDLING SYSTEM IN HOSPITAL RESEARCH
From the *Proceedings of the I.E.E.E.*, Vol. 54, No. 12, December, 1966, pp. 1641-1648
Available from the Institute of Electrical and Electronics Engineers, Inc., 345 East 47th Street, New York, New York 10017

A summary of the Massachusetts General Hospital on-line computer project, stressing file manipulation considerations. See DA4007 and various citations in class DA, Volumes I, II, and III. (J.R.G.)

DA4007 11pp.b.ill., 10/67

Barnett, G. O.; Castleman, P. A.
A TIME-SHARING COMPUTER SYSTEM FOR PATIENT-CARE ACTIVITIES
Computers and Biomedical Research, Vol. 1, No. 1 1967, pp. 51-61
Available from Academic Press, Inc., 111 5th Avenue, New York, New York 10003

An experimental, time-sharing, remote-access computer system is being developed as part of a research project in the use of automatic data-processing techniques in patient-care procedures in the Massachusetts General Hospital. Programs have been designed that allow a user on a patient-care unit to order medications, retrieve laboratory test results, admit and discharge patients, etc. These programs are still in an experimental phase and duplicate the present hospital function. Summarizes project. Other more detailed reports from this group appear in Data Processing classification (DA), Volumes I, II and III. See also DA4006. (Editor's Abstract, Adapted)

DA4011 246pp.d.ill., 12/67

Condo, W. J.; Hodson, B. A.
VICTORIA GENERAL HOSPITAL COMPUTER PROJECT - PROGRESS REPORT NO. 3 AND PROGRESS REPORT NO. 3 APPENDICES (Two Volumes)
University of Manitoba, Winnipeg, Manitoba, Canada
Available from U.M.I. Xerox $11.10
Film reel #2.09 $ 4.75

A progress report of the computerized information system being designed for the new Victoria General Hospital. The completion of the new hospital was delayed but a prototype ward in the old hospital was established for the hospital computer system. The computer facilities of nearby University of Manitoba are being used. The report describes the development work with doctor's orders, progress notes, an admission system, data retrieval from patients records, the supply system, a drug system, and a laboratory system. The appendices (Volume II) contain the flow sheets, and data forms used in the development to the several units making up the information system. See also DA0012, Volume III. (L.E.W.)

DA4012 128pp.b.ill.th.M.H.A., 12/67

Trexler, David V.
A DESCRIPTIVE STUDY OF COMPUTER APPLICATIONS IN HOSPITALS AND THE IMPLICATIONS FOR THE FUTURE
Graduate Program in Hospital Administration, Xavier University, Cincinnati, Ohio, 1966
Available from U.M.I. Xerox $5.80
Film reel #2.09 $4.75

A descriptive survey of the development of computers and their use by hospitals, with speculation as to future developments. No data. (J.R.G.)

DA4013 54pp.d.ill.R., 12/67

Manitoba Hospital Association
MULTIPLE HOSPITAL DATA PROCESSING PROJECT, 1965
Under grant from W. K. Kellogg Foundation
Manitoba Hospital Association, 556 Academy Road, Winnipeg, Manitoba, Canada, 1967
Available from U.M.I. Xerox $3.00
Film reel #2.10 $4.25

The 1965 annual report of the Association's experimental programs in multiple hospital data processing with planning for payroll, medical records, accounts payable, inventory and purchasing as the first departments to be integrated into a future overall system. The problems of this first year of implementation are discussed and include staffing, equipment requirements, costs, and systems techniques. Forms, abstract worksheets, and schedules are shown. See also DA4014. (L.E.W.)

DA4014 27pp.d.R., 12/67

Manitoba Hospital Association
MULTIPLE HOSPITAL DATA PROCESSING PROJECT, 1966
Under grant from W. K. Kellogg Foundation
Manitoba Hospital Association, 556 Academy Road, Winnipeg, Manitoba, Canada, 1966
Available from U.M.I. Xerox $3.00
Film reel #2.10 $4.25

A report for the second year of an experimental program in data processing under a multiple hospital project. During the year five hospitals began participating for payroll, one for scheduling, and five in a partial accounts payable program. The directors of the project were unable to forsee the difficulties of securing trained personnel, of estimating costs, of arranging for hardware, or of generally estimating lead time. The project directors after re-estimating needs allot two more years for reaching objectives. Proposed schedules and budgets given. See also DA4013. (L.E.W.)

DESIGN AND CONSTRUCTION

(See also AR, Areawide Planning; CO, Community Attitudes; Excludes Design and Construction for single department - see department involved.)

DE0048 45pp.b.d.th.M.H.A., 12/67

Conole, Charles P.
PROJECTED PLANNING AT CHARLES S. WILSON MEMORIAL HOSPITAL
Graduate Program in Hospital Administration, Xavier University, Cincinnati, Ohio, 1967
Available from U.M.I. Xerox $3.00
Film reel #2.10 $4.25

Thesis explains the hospital's building plans over a ten-year period with predictions of changing needs that will determine expansion of services and facilities. Discusses educational programs as well as departmental facilities. (H.M.)

DE1017 34pp.b.d.R., 9/67

Jones, Wanda J.
DECISION-MAKING IN HOSPITAL PLANNING AND DESIGN
Graduate Program in Hospital Administration, School of Public Health, University of California, Berkeley, California, 1967
Available from U.M.I. Xerox $3.00
Film reel #2.10 $4.25

Author attempts "to demonstrate that decisions concerning hospital planning and design are often made at a lower (organizational) level than generally supposed . . ." Decisions concerning an addition to a hospital were traced by searching minutes of committee and Board of Trustees meetings, correspondence and planning files. The groups involved were then asked to rate importance of these decisions. The author concluded that results of study tend to support theory that decisions are made at lower level than supposed. Role of administration was greater than supposed; role of nursing less than "to be desired". Unclear whether increased participation will lead to more "acceptable results", but author suggests participation might increase "readiness of subordinates to accept results." (H.M.)

DIETARY (CATERING)

(See also HU, Housekeeping and Sanitation; PU, Purchasing, Storeroom and Central Supply

DI0046 96pp.b.d.ill.th:M.A., 10/67

Diggs, Mary M.
AN EVALUATION OF THE DIETARY DEPARTMENT, BAPTIST MEMORIAL HOSPITAL, SAN ANTONIO, TEXAS
Baylor University, San Antonio, Texas 1965
Available on loan from the Asa S. Bacon Memorial Library, The American Hospital Association, 840 North Lake Shore Drive, Chicago, Illinois

An evaluation of the dietary department made during a six month period of 1964 using criteria established by the American Dietetic Association. The areas of investigation included: the organizational structure of the department; the food service; personnel policies; and possible ongoing study and analysis of the department. The evaluation was made through: observation of department operations; review of hospital policies, records, and reports; data gathered from patient satisfaction questionnaires; and through interviews. (L.E.W.)

DI0047 121pp.b.d.ill.th.M.A., 10/67

Johnson, L. Barney
A COMPARISON OF UNIT KITCHEN DIETARY ACTIVITIES BEFORE AND AFTER THE IMPLEMENTATION OF A FIVE MEALS PER DAY PROGRAM
Program in Hospital Administration, University of Minnesota, Minneapolis, Minnesota, 1967
Available from U.M.I. Xerox $5.45
Film reel #2.10 $4.25

Implementation of a five meals per day program on two units of the University of Alabama Hospital was evaluated and compared with findings from a 1964 Unit Kitchen Activity Survey when study hospital was on the traditional program of three meals per day with two snack times. Hospital used a centralized preparation system and a decentralized service and distribution system. Data were collected by twenty-six trained observers using the fixed-interval sampling technique over an eight day period. Findings indicate significant increase in direct and indirect work activity and a significant decrease in delay time when utilizing the five meals per day program. Further analysis shows direct work increased chiefly due to an increase in production and processing (mainly due to increase of tray assembly activities). A reduction in delay time was due chiefly to a decrease in idle time. Further research to measure the efficiency of the five meal program under a different food service system is recommended. (D.F.B.)

DI0048 52pp.ill., 11/67

Gue, Ronald L.; Liggett, John C.
SELECTIVE MENU PLANNING BY COMPUTER - Technical Report CP67101
U.S.P.H.S. Grant No. HM 00464-01
Computer Sciences Center, Institute of Technology, Southern Methodist University, Dallas, Texas, 1967
Available from U.M.I. Xerox $3.00
Film reel #2.10 $4.25

Report deals with research at the University of Florida Teaching Hospital on the application of mathematical models to problems of menu planning for hospital patients. Problem formulation and development of algorithms for non-selective and selective menu cycles are discussed. An integer programming model similar to one first proposed by Balintfy is explored in detail. Program and illustrations are given. (H.M.)

DI0049 111pp.b.d.p., 11/67

Donaldson, Beatrice
METHODOLOGY MANUAL FOR WORK SAMPLING - PRODUCTIVITY OF DIETARY PERSONNEL
School of Home Economics, University of Wisconsin, Madison, Wisconsin 53706, 1967
Available from U.M.I. Xerox $5.00
Film reel #2.11 $4.25

This methodology manual, tested in twenty Wisconsin hospitals, gives step-by-step instructions for determining labor utilization in a dietary department by work sampling techniques. Work functions, work areas, and work time functions (separately and in combination) are all considered. The final chapter is devoted to data evaluation. Appendix contains glossary, work function classifications, random number tables, employee orientation presentation, tabulation of work function activities in the test hospitals, an annotated bibliography, floor plans, and specimens of study forms. (L.E.W.)

DI0050 3pp.d., 11/67

Quamme, Mary E.
STUDY COMPARES LABOR COSTS OF READY FOODS AND CONVENTIONALLY PREPARED FOODS
Hospitals, October, 1967, pp. 104-106
Available from original publisher

Examples of application of a labor cost calculation technique and a rating scale for patient acceptability to compare food preparation. Some standard times and unit costs included. (J.R.G)

DI0051 341pp.b.d.ill., 12/67

American Hospital Association
FOOD SERVICE MANUAL FOR HEALTH CARE INSTITUTIONS
American Hospital Association, 840 North Lake Shore Drive, Chicago, Illinois 60611, 1966
Available from original publisher

Basic guide to food service management with current information and techniques of planning, purchasing, production and cost control. Extensive illustrations, index, bibliography. (H.M.)

DI0055 8pp.d.R., 12/67

Wilczynski, Jerry
ANALYSIS OF DIETARY STAFFING PROBLEMS
Community Systems Foundation, 111 North Main, Ann Arbor, Michigan 48108, 1967
Available from U.M.I. Xerox $3.00
Film reel #2.11 $4.25

A study of the dietary department of Highland Park (Michigan) General Hospital taken as one of the last steps in the completion of the Hospital Staffing Methodology Manual MM-3 Dietary. (See abstract 65, p. 21, Vol. I.) See announcement at back of this issue on "change of availability" of methodology manuals. (L.E.W.)

DI0056 31pp.d.R., 12/67

Vaughn, R. G., III
STAFFING AND SUPERVISING THE CENTRALIZED DIETARY DEPARTMENT
Community Systems Foundation, 111 North Main, Ann Arbor, Michigan 48108, 1967
Available from U.M.I. Xerox $3.00
Film reel #2.11 $4.25

A study was made at Marion County General Hospital, Indianapolis, to forecast staffing in the dietary department. The Hospital Dietary Staffing Methodology Manual, (Abstract 65, p. 21, Volume I) was used as a standard. Recommendations were made for predicted work load. Tabulations presented in the appendix. (L.E.W.)

DI2006 5pp.b.t., 1/68

Eckstein, Eleanor Foley
MENU PLANNING BY COMPUTER: THE RANDOM APPROACH
Journal of the American Dietetic Association, December, 1967, Vol. 51, No. 6, pp. 529-533
Available from original publisher

A discussion of planning menus with a computer, using a random approach, and simulating the process followed by a dietitian in making routine menu decisions. Study used as bases for selection criteria: raw food cost; color; texture; shape; calories; variety; and acceptibility. Items for each meal component were randomly selected and tested by program controls until certain criteria were met. (L.E.W.)

ENGINEERING AND MAINTENANCE

(Excludes limited use equipment - see individual departments.)

EN0022 27pp.b.d.R., 10/67

Western Regional Hospital Board
FIRE HAZARDS IN HYPERBARIC ENVIRONMENT
Western Regional Hospital Board, Glasgow, Scotland 1967
Available from original publisher

Report by a committee organized to evaulate fire hazards in the hyperbaric treatment systems of three hospitals. Discussed are the basic principles of hyperbaric treatment, types of installations used, hazards involved; recommendations included prompt updating of equipment, flameproof clothing and bedding, and improvement of electrical installations. (S.P.)

HEALTH SERVICES: USE, NEED, AND DEMAND

(See also AR, Areawide Planning; IN, Insurance and Prepayment: MD, Medical Staff and Medical Care; MP, Manpower; and RE, Regionalization, Shared Services, and Satelliets.)

HE0230 6pp.d., 9/67

MacCharles, C. W.
INFORMATION ON MORBIDITY
The Canadian Medical Association Journal, Vol. 97, No. 7, August, 1967, pp. 331-336
Available from original publisher

Data developed by Physicians' Services Incorporated (P.S.I.) for Ontario in 1963 regarding mortality, separations from hospital and sick persons treated in a health insurance scheme are compared. Tabulations made according to diagnostic groups. (L.E.W.)

HE0237 7pp.d.ill., 10/67

Crosby, Ralph W.
FASTER HOSPITAL SERVICE: IN AND OUT
Medical Economics, August, 1967, pp. 65-71
Available from original publisher

Article describing the In and Out Service at George Washington University Hospital, which functions for minor nonemergency and investigative procedures on a one-day-care basis. Saving time and costs to both doctor and patient, the unit is located near the hospital's main O.R. and handles approximately 200 cases a month. (S.P.)

HE0240 7pp.d.b., 10/67

White, Kerr L.; Andjelkovic, Dragana; Pearson, R. J. C.; Mabry, John H.; Ross, Alan; Sagen, O. K.
INTERNATIONAL COMPARISONS OF MEDICAL-CARE UTILIZATION
The New England Journal of Medicine, Vol. 277, No. 10, September, 1967, pp. 516-522
Available from original publisher

Study to determine whether valid and comparable data relating utilization of services of physicians, nurses, and hospitals among defined populations can be collected simultaneously in several settings over a given time period using standardized procedures. After collecting data through household interviews in the United Kingdom, Yugoslavia and the United States during May - July, 1965, the authors proceeded to develop questionnaires, manuals, and computer programs for future comparative studies; validation studies indicated that the approach was responsive to problems posed. (S.P.)

HE0242 3pp.d., 11/67

Dewdney, J. C. H.
PROFILES OF AUSTRALIAN HOSPITALS
Hospital Administration, (Australia), Vol. 15, No. 8, August, 1967, pp. 10-12
Available from original publisher

Using the 1967 Australian and New Zealand Hospitals and Health Services Yearbook this study attempts to present a profile of the typical general 100 to 199 bed Australian hospital by delineating information concerning the location, bed-accommodation, utilization, facilities, staffing, training programs and costs of fifty-nine hospitals. (A.N.)

HE0244 21pp.d.ill., 12/67

Ontario Hospital Services Commission
1966 ANNUAL REPORT
Ontario Hospital Services Commission, 2195 Yonge Street, Toronto 7, Ontario, Canada, 1966
Available from original publisher

Data concerning the insured population, volume of hospital care, hospital planning, outpatient service, health and educational research and financial operations. In most cases comparative figures are given for 1965. Photographs of new public hospitals completed or under construction during 1966 are included. (A.R.N.)

HE0245 42pp.d., 12/67

Wiesen, David
PATIENT CARE IN BETH ABRAHAM HOSPITAL
Beth Abraham Hospital, Bronx, New York 10467, 1966
Available from U.M.I. Xerox $3.00
Film reel #2.11 $4.25

Annual report of Beth Abraham, a 511 bed, voluntary non-profit extended care facility for ill and disabled adults, 18 and over. Report describes hospital services and provides data on their utilization for 1966. Also included are summaries of social and demographic data pertaining to inpatient admissions for 1966. (D.F.B.)

HE0247 423pp.d., 12/67

Kohn, Robert
THE HEALTH OF THE CANADIAN PEOPLE
Royal Commission on Health Services, 1965
Available from Queens Printers, Ottawa, Ontario, Canada for $4.00

This study for the Royal Commission on Health Services of Canada evaluates health and health problems in terms of their impact on society and particularly on the health services. It describes the people and their characteristics having a bearing on health, presents vital and health statistics, appraises the relative impact of various diagnostic classes and describes the health characteristics of certain population groups. A statistical summary and a list of health legislation are presented in the appendix. (A.R.N.)

HE0248 49pp.b.d.th.M.H.A., 12/67

McGuire, William D.
AN EXAMINATION OF THE PREVALENCE AND TYPES OF HOSPITALIZATION INSURANCE AMONG PATIENTS ADMITTED TO THE UNIVERSITY OF WISCONSIN HOSPITALS FROM JULY 1, 1966 TO DECEMBER 31, 1966 AND A RELATION OF THESE INSURANCE CHARACTERISTICS TO SELECTED VARIABLES
Program in Hospital Administration, University of Michigan, Ann Arbor, Michigan, 1967
Available from U.M.I. Xerox $3.00
Film reel #2.11 $4.25

Analysis of sources of payment of admissions to University (Wisconsin) Hospitals, prior to Medicare. Age, sex, clinical service and length of stay are considered versus Blue Cross or insurance support. (J.R.G.)

HE0249 8pp.b.d., 12/67

Hetherington, Robert W.; Badgley, Robin F.; Matthews, V. L.
VOLUNTARY HEALTH-RELATED BEHAVIOUR IN WHEATVILLE
Canadian Journal of Public Health, Vol. 58, No. 3, March, 1967, pp. 109-116
Available from original publisher

Data were gathered in 1965 in "Wheatville", Saskatchewan to determine the extent of voluntary health-related behavior in 105 heads of family (23 per cent sample) by personal interviews. The behavior was defined as: altruistic-support of community health services; independent-self medication; and dependent-use of non-medical personnel. An attempt was made to relate behavior to social class using the chi-square statistic to identify significant relationships. The altruistic behavior factor was found difficult to measure and unreliable because financial contributions as a variable could not be checked, and the behavior was believed to be influenced by attitudes toward the 1962 physicians' "withdrawal". Upper class families were found to have more means of self-medication, and contacted a larger number of different non-medical personnel than the lower classes. (L.E.W)

HE0250 6pp.b., 12/67

Klarman, Herbert E.
PRESENT STATUS OF COST-BENEFIT ANALYSIS IN THE HEALTH FIELD
American Journal of Public Health, November, 1967, pp. 1948-1953
Available from original publisher

Discussion of current problems in the application of cost-benefit analysis technique with extensive bibliography. (J.R.G.)

HE0251 202pp.d., 12/67

Govan, Elizabeth S. L.
VOLUNTARY HEALTH ORGANIZATIONS IN CANADA
Royal Commission on Health Services, Ottawa, Ontario, Canada, 1965
Available from Queen's Printer, Ottawa, Ontario, Canada for $2.00

This study of voluntary health organizations in Canada is based on reports of these organizations and is supplemented by correspondence and interviews. It describes the voluntary health organizations, their development, support and activity, organizational structure, financial position and motivation. (A.R.N.)

Please see next page

HE0252 25pp.d.ill., 12/67

National Center for Health Statistics
DEVELOPMENT AND MAINTENANCE OF A NATIONAL INVENTORY OF HOSPITALS AND INSTITUTIONS
Public Health Service publication 10000, Series 1, No. 3, 1965
National Center for Health Statistics, Department of Health, Education and Welfare, Washington, D.C.
Available from Superintendent of Documents, Government Printing Office, Washington, D.C., for $.25

A description of the inventory including the procedures used in developing it and the plans to maintain it as the sampling frame for a program of surveys of hospitals and institutions conducted by the National Center for Health Statistics. (Author's abstract)

HE0254 41pp., 12/67

World Health Organization
THE ORGANIZATION OF GENERAL HOSPITALS
World Health Organization, Regional Office for Europe, 8 Scherfigrej, Copenhagen, Denmark, 1966
Available from original publisher in English, French, or Russian for no charge

Report of a 1966 conference at Oxford, England where participants from 27 countries discussed: progressive patient care; the introduction of psychiatry into general hospitals; and developments in the organization of hospital medical records. The report is in form of a summary of group discussions and views expressed. (L.E.W.)

HE0259 423pp.d., 1/68

Epstein, Lenore A.; Murray, Janet H.
THE AGED POPULATION OF THE UNITED STATES - THE 1963 SOCIAL SECURITY SURVEY OF THE AGED
Department of Health, Education and Welfare, Social Security Administration, Office of Research and Statistics, Washington, D.C., 1967
Available from Superintendent of Documents, Government Printing Office, Washington, D.C. 20402 for $1.25

Report on a major national survey of the 62 and over population. Detailed tables and analysis give a comprehensive view of financial resources, work experience, living arrangements, medical needs and insurance coverage in 1962. These data will serve as a factual basis for measuring the future changing circumstances of this group. (H.M.)

HE1025 91pp.b.d.th.M.H.A., 9/67

Begin, Joseph L.
UTILIZATION REVIEW: APPLICABILITY AND IMPLICATION AT AN AIR FORCE HOSPITAL
Program in Hospital Administration, The University of Michigan, Ann Arbor, Michigan 48108, 1967
Available from U.M.I. Xerox $4.10
Film reel #2.11 $4.25

The purpose of this study is to determine the problems and implications resulting from a utilization study in a military hospital, the feasibility and practicality of employing the criteria method of utilization review and the appropriateness and effectiveness of the use of services at an Air Force Hospital for one diagnosis. The mechanics for utilization review were established at this hospital for the study and one diagnosis, bronchial pneumonia, was selected for analysis. The criteria method for review of utilization was applied. A utilization committee of physicians at the hospital, formed for this study, selected the criteria. Five hundred thirty four medical records were reviewed. Information is presented regarding admission evaluation, diagnostic procedure evaluation, and length of stay evaluation. Author concludes that the criteria method of utilization review is an effective tool for measuring the appropriateness of services in the military hospital. It is flexible and can be applied to the changing condition of the service population. (S.F.L.)

HE1028 9pp.b.d., 10/67

Alpert, Joel J.; Kosa, John; Haggerty, Robert J.
A MONTH OF ILLNESS AND HEALTH CARE AMONG LOW-INCOME FAMILIES
Public Health Reports, Vol. 82, No. 8, August, 1967, pp. 705-713
Available from original publisher

An investigation to determine the value of the family as a meaningful unit of health behavior was based on extensive analysis of health calendars kept by seventy-eight families during a summer month. Subjects were of low income, with no family physician; they were asked to record symptoms, action taken, and also upsetting events. Results showed that only one symptom in eight was brought to medical attention and that the family is a meaningful unit which has characteristic patterns in health maintenance. (S.P.)

HE1031 123pp.b.d.th.M.H.A., 10/67

Zulkowski, Edward
A COMPARATIVE STUDY OF THE EFFECT OF MEDICARE ON THE UTILIZATION OF CERTAIN HOSPITAL SERVICES AND FACILITIES BY SPECIFIC PATIENT GROUPS
Program in Hospital Administration, University of Minnesota, Minneapolis, Minnesota, 1967
Available from U.M.I. Xerox $5.55
Film reel #2.12 $6.25

The effect of Medicare on utilization of laboratory and diagnostic radiologic procedures and length of stay was studied at Baptist Memorial Hospital, Tennessee. Two groups of patients age 65 and over were studied: one group had been hospitalized during the five months prior to Medicare; the other group was Medicare patients. Each group was matched for medical diagnosis, sex and approximate age. Two control groups for the same time periods were also studied, composed of patients between 40 and 64 years and also matched for same factors. Diagnoses used in study were myocardial infarction, cholelithiasis and hyperplasia of the prostate. Weighted units were used to measure utilization of laboratory and radiological procedures. Subgroups of patients were analyzed for factors relating to patient's income, social status and education and physician's specialty and years of practice. Some of the major findings are: (1) Medicare study patients show increases in all elements of utilization while control groups show slight decreases. (2) Lower income and lower status patients were responsible for the increase in utilization. (3) Medicare patients with less education tend to show increased length of stay and use of laboratory tests. (4) Physicians with more than 21 years of practice tend to order more tests and have Medicare patients staying longer than they did for similar patients prior to Medicare. (5) A clear majority of both patients 40 to 64 and over, 65 per cent felt Medicare coverage was "not enough". (D.F.B.)

HE1032 108pp.b.d.th.M.H.A., 10/67

Vinluan, Dominador C.
A STUDY OF DAY OF THE WEEK AND TWO OTHER VARIABLES AFFECTING LENGTH OF PATIENT STAY
Program in Hospital Administration, University of Minnesota, Minneapolis, Minnesota, 1967
Available from U.M.I. Xerox $4.90
Film reel #2.12 $6.25

Lengths of stay for medical and surgical patients of St. Luke's Hospital, Duluth, Minnesota discharged from July 1, 1966 to December 31, 1966 were analyzed, using factors of age, sex, day of the week of admission, and day of the week of discharge. Analysis of variance was used for testing statistical significance of the data, at .05 level of significance. The major findings from the study are: (1) average length of stay is longer for patients age 65 and over than those under 65. (2) Average length of stay is longer for male patients than females. (3) For combined medical and surgical patients those admitted on Saturday stay longest. (4) Surgical patients admitted Friday and Saturday have significantly longer stays than those admitted Sunday through Thursday. (5) Pediatric surgical patients admitted Friday have significantly longer stays than those admitted the other days of the week. (6) Average length of stay for all patients does not vary significantly by day of the week of discharge. (D.F.B.)

HE1033 5pp.b.d., 11/67

Thompson, John D.; Fetter, Robert B.
THE APPLICATION OF SIMULATION TO HOSPITAL PLANNING
Proceedings on Simulation in Business and Public Health, pp. 205-209, First Annual Conference of American Statistical Association and Public Health Association of New York City 1966
Available from the American Statistical Association, c/o Miss Natalie Colabro, Look Magazine, 488 Madison Avenue, New York, New York for $4.95

The authors review the limitations of the Poisson process models, contend that they are inadequate as indicators of obstetrical bed needs and suggest substitution of a simulation model. Using simulation studies based upon data from the maternity and gynecological subsystems at Yale University as an example they conclude that simulation could make a valuable contribution to hospital planning as a predictor of bed needs and in providing for those needs efficiently and economically. See also item 1110B, page 109, Volume I. (A.R.N.)

HE1034 59pp.b.d.th.M.H.A., 11/67

Schlenker, Kenneth W.
A COMPARISON OF OBSTETRIC AND PEDIATRIC UTILIZATION OF SUBURBAN VERSUS DOWNTOWN HOSPITALS IN METROPOLITAN MINNEAPOLIS OVER A PERIOD OF FIVE YEARS
Program in Hospital Administration, University of Minnesota, Minneapolis, Minnesota, 1967
Available from U.M.I. Xerox $3.00
Film reel #2.12 $6.25

Utilization of obstetrical and pediatric services was compared for a downtown hospital and a suburban hospital for years of 1961 through 1965 to determine if there is a direct relationship between hospital location for both physician and patient utilization of services. Previous utilization studies related to location are summarized. Data were obtained from medical records and a questionnaire mailed to physicians who had admitted at least sixty pediatric patients or attended sixty or more live birth during study period. Physicians were asked to rank factors in order of importance in choosing a hospital facility and to indicate if they have changed hospital affiliation and if so, why. Findings indicate for total inpatient admissions and pediatric service utilization, location of suburban hospital was a significant factor affecting utilization. This was not true of obstetrical services utilization, however, and possible reasons are discussed. Physicians' response to factor ranking indicate significant degree of agreement, with convenient location ranked third. Thirty-one of forty physicians who changed hospitals, however, gave location as reason. (D.F.B.)

HE1035 7pp.d., 11/67

KRANKENHAUSWESEN 1965 IN ZAHLEN
Krankenhaus Umschau, July, 1967, pp. 635 - 638, 643 - 645
Available from Krankenhaus Umschau, 865 Kulmbach, Kressen~~st~~ein 26, Germany

A statistical comparison of the period 1963-1965 with 1956 in Western German hospitals. Distributions include number of hospitals for acute illness, and other hospitals, and hospitals according to use and ownership. Figures are also given to indicate utilization by clinical departments, beds per 10,000 population, hospital personnel by occupation, and ratio of physicians, specialists, and nursing staff to beds. Text is in German. (L.E.W.)

HE1036 100pp.b.d.th.M.H.A., 11/67

Jones, Thomas F.
ADMISSION AND LENGTH-OF-STAY CHANGES OCCURRING IN THE AGE 65 AND OVER INPATIENT POPULATION OF A UNIVERSITY TEACHING HOSPITAL AFTER THE BEGINNING OF MEDICARE
Program in Hospital Administration, University of Minnesota, Minneapolis, Minnesota
Available from U.M.I. Xerox $4.50
Film reel #2.12 $6.25

A study conducted at the University of Minnesota Hospital, a teaching hospital, of the admissions and length-of-stay of patients 65 years of age and over before and after the beginning of Medicare. Admission studies were made for July through December, 1964, 1965, 1966. Length-of-stay studies were made of patients discharged in August and November of 1965 and 1966. In general changes noted were slight or insignificant. (L.E.W.)

HE1037 26pp.d., 11/67

Sirken, Monroe G.
UTILIZATION OF SHORT-STAY HOSPITALS - SUMMARY OF NONMEDICAL STATISTICS
National Center for Health Statistics, Department of Health, Education and Welfare, Washington, D. C.
Available from the Superintendent of Documents, Government Printing Office, Washington, D.C. for $.25

Statistics are presented on the utilization of short-stay hospitals based on data abstracted by the Hospital Discharge Survey from hospital records for a national sample of discharged patients. Discharges, days of care, and average length of stay are distributed by each of the following variables: age, sex, marital status, color, and discharge status of the patient; and ownership, size, and geographic area of the hospital. Bed occupancy rates are distributed by selected characteristics of the hospital. (Author's Abstract)

HE1038 122pp.d.R., 12/67

J. S. Department of the Air Force
DURATION OF ILLNESS - Air Force Pamphlet 160-27
U. S. Department of the Air Force, Washington, D.C. 20333, 1967
Available from original publisher

Graphic data for loss days due to illness among Air Force Military personnel, compiled from several years records. By primary diagnosis and categories of primary diagnosis. (J.R.G.)

HE2015 45pp.d.R., 9/67

Cooley, John L.; Hallan, J. B.; Packer, A. H.
A SIMULATION STUDY OF ALTERNATIVE MEDICAL SUPPORT SYSTEMS FOR MASS DISASTER CASUALTIES
Research Triangle Institute, Research Triangle Park, North Carolina, 1967
Available from Professor John L. Colley, Jr., Graduate School of Business Administration, University of Virginia, Charlottesville, Virginia 22903 for no charge

Reports on a computer simulation model designed to estimate effectiveness of alternative medical support systems for atomic attack in the immediate post attack period. Effectiveness is measured by number of survivors resulting from the emergency medical system. In formulating model, all essential elements of an emergency support system are described. Inputs are various casualty types who are to be treated by medical resources - personnel, facilities and supplies - according to rules of triage, i.e. treatment priorities. Output is number of survivors. Probability of death is a function both of kind of treatment employed and time delay before treatment. In test runs, quantity of supplies and personnel were varied. In later runs additional factors of different casualty spectra resulting from a warned versus an unwarned population and attack from air burst and surface burst were included. Analysis of upper and lower bounds of medical support system performance was made by varying factors studied with maximum resources and with zero resources. It is concluded model is a flexible tool for study of the operation of an emergency medical support system in the immediate post attack period and possible applications of model for other communities and on a national level are described. (D.F.B.)

HE2017 18pp.b.R., 11/67

Mann, Judith K.; Yett, Donald E.
A REINTERPRETATION OF HOSPITAL COST ANALYSES
Welfare and Social Security Administration Grant No. 300
Human Resources Research Center, University of Southern California, Los Angeles, California 90007
Available from U.M.I. Xerox $3.00
Film reel #2.13 $4.75

This paper presents a reexamination of three major hospital cost studies (Ingbar; Carr; P. Feldstein and M. Feldstein) and attempts to reconcile apparently conflicting results obtained by these investigations. One found constant returns to scale (no decrease in unit costs as hospital size increases), the second a classical U-shaped cost curve, and the third decreasing unit costs up to well beyond the observed range of hospital size. It is concluded that these studies are not as inconsistent as they might appear, and differ mainly in the modesl used, but suggestion is made that the issues will remain unsolved until a consistent and definitive cost model has been developed. The cost theory developed by Alchian and Hershlifer, which contains the concepts of rate of production and volume of production, is suggested as one which offers promise. (G.C.W.)

HE2018 59pp.b.d.R., 11/67

Yett, Donald E.; Mann, Judith K.
THE COSTS OF PROVIDING LONG-TERM INPATIENT CARE: AN ECONOMETRIC STUDY
Research Grant No. 300 from Welfare and Social Security Administration
Human Resources Research Center, Research Institute for Business and Economics, Graduate School of Business Administration, The University of Southern California, Los Angeles, California 90007, 1967
Available from U.M.I. Xerox $3.00
Film reel #2.13 $4.75

Progress report of a study of costs of operating general long-term inpatient facilities. Part I discusses economic theory of cost and problems relating to its empirical application as a framework for assessing assumptions and techniques of previous statistical analyses of hospital costs. Part II reviews and evaluates statistical techniques followed in four major studies of hospital cost functions: Martin Feldstein's "Economic Analysis for Health Service Efficiency"; John Carr and Paul Feldstein's "The Relationship of Cost to Hospital Size"; Gottlieb, Fitzpatrick and Wirick's "Nature of Hospital Cost"; and Ingbar's "Statistical Study of Differences in Hospital Costs". In Part III, authors offer their own econometric model of long-term inpatient costs, using multivariate regression technique, where rate of output is number of cases treated per year and volume is annual occupied bed days. Individual cost-output relations for various types of long-term institutions will be examined by testing three basic equations: a "naive" linear formulation, and curvilinear specifications of both "classical" and "rate-volume" models. Applicability of equations used for "classical" and "rate-volume" models is demonstrated and explained. The other stages of the study to be completed involve surveying, collecting and compiling data in the Los Angeles area for regression analysis in the form specified by the model. (D.F.B.)

HE2020 17pp.d.ill., 12/67

California Department of Public Health, Bureau of Chronic Diseases
SURVEY OF HOSPITAL RESOURCES FACILITIES AND SERVICES FOR PATIENTS WITH SEVERE RESPIRATORY DISEASE
Chronic Disease Quarterly, No. 2, April, 1964
Available from Bureau of Chronic Diseases, California Department of Public Health, 2151 Berkeley Way, Berkeley, California

Information compiled on services, staff and equipment available for treating severe respiratory disabilities in California hospitals as part of study to determine need for state-supported specialized treatment centers. Of 222 hospitals responding to questionnaire, only large metropolitan hospitals were likely to have full care resources. Eighty per cent felt adequate care could be provided for less than two weeks, half felt care could be provided for longer period. (H.M.)

HE2021 45pp.d.ill., 12/67

Wilder, Charles S.
FAMILY HEALTH EXPENSES
Public Health Publication No. 1000, Series 10, No. 41
National Center for Health Statistics, U.S. Department of Health, Education and Welfare, Washington, D.C. 20204, 1967
Available from Superintendent of Documents, Government Printing Office, Washington, D.C. for $.30

Statistics on the average annual cost of personal health expenses per family and per unrelated individual. Information on health expenses type of expenditure: hospital care, doctor care, dental care, medicines, and special and other health expenses. Information on 47 million families in the civilian, non-institutional population is classified by size of family, whether husband - wife family or other family group, and by age of head of the family. Information on 10.8 million unrelated individuals is classified by age, sex, and whether living alone or with nonrelatives. These data were collected by self-enumeration, employing mail-in questionnaires left with the respondents of health interviews conducted during July - December, 1962.

Annual health expenses per family or unrelated individual are shown by geographic region, color, family income, and education of head of the family. (Author)

HE2022 248pp.b.d.th.Ph.D., 12/67

Ro, Kong Kyun
A STATISTICAL STUDY OF FACTORS AFFECTING THE UNIT COST OF SHORT-TERM HOSPITAL CARE
Yale University, New Haven, Connecticut, 1966
Available from U.M.I., document no. 66-14,990
Xerox $11.25
Film reel $ 3.20

A study of short-term hospital care costs from which the following generalizations were made by the author:

1. Economies of scale exist in hospital operations.
2. The higher a hospital's occupancy rate, the lower its unit cost.
3. Hospitals which have a higher proportion of patient care expense to hotel-type services expense have a higher unit cost.
4. As each hospital employee provides more days of inpatient services to more patients per year, the unit cost becomes lower.
5. Hospitals which have accredited professional nursing schools have higher unit costs.
6. There is no significant difference in unit cost between hospitals with approved intern and/or residency programs and those without.
7. Hospitals in areas with higher percentages of urban population have a higher unit cost than those in areas with lower percentages of urban population.
8. Inter-hospital and inter-year differences in unit cost are better explained by multiplicative model than by a linear model. (L.E.W.)

HOUSEKEEPING

(See also DI, Dietary; EN, Engineering and Physical Plant; IC, Infection Control; LD, Laundry; MD, Medical Staff and Medical Care.)

HU0056 92pp.b.d.th.Ph.D., 12/67

Gendel, Howard Lionel
THE MOTIVATION TO WORK IN HOSPITAL HOUSEKEEPING WORKERS
Western Reserve University, Cleveland, Ohio, 1965
Available from U.M.I., document no. 66-5191
Xerox $4.80
Film reel $3.00

A replication of a study which Herzberg did of engineers and accountants to explore hypotheses that job satisfaction and dissatisfaction have their sources in different sets of factors. The author attempted to determine whether results of

original study also applied to "low-level, unskilled" workers. Subjects were 119 housekeeping workers of two V.A. hospitals in Cleveland area.

Data were collected from semi-structured interviews modelled after the Herzberg study, and content analyzed by the same method.

The three factors which appeared most often as "satisfiers" were: recognition; advancement; and responsibility. The "dissatisfiers" were most frequently: company policy and administration; wages; supervision-technical; working conditions; and interpersonal relations-peers. The author concluded results were in good agreement with the original study, and that neither the level of work nor race of the worker "acted to introduce major changes from the original results". (L.E.W.)

HU1011 4pp.b.d., 10/67

Goddard, B.A.
ULTRASONIC CLEANING
British Hospital Journal and Social Science Review, September, 1967, pp. 1735-1738, 1967
Available from original publisher

A study by a British national committee describes the technical aspects of ultrasonic cleaning and reports obervations made in Birmingham, England during 1965 and 1966 comparing seven commercially available ultrasonic cleaning units. Measurements were made on radioactive soil removal, sample erosion, cavitation noise and audible sound. Tables showing the results are included. (A.N.)

INFECTION CONTROL

(See also HU, Housekeeping; MD, Medical Staff and Medical Care; NU, Nursing Service Department; OP, Operating Room and Recovery Room; and PU, Purchasing, Storeroom and Central Supply.)

IC1007 66pp.b.d.th.M.A., 10/67

Sister Mary Fabian
A STUDY TO EVALUATE TWO HOUSEKEEPING METHODS OF CLEANING OPERATING ROOM FLOORS BETWEEN SURGICAL CASES IN RELATION TO BACTERIAL COUNT REDUCTION AND TIME INVOLVED
Program In Hospital Administration, University of Minnesota, Minneapolis, Minnesota, 1967
Available from U.M.I. Xerox $3.00
Film reel #2.13 $4.75

This study compared Mikro-Spray Method of cleaning an operating room floor between surgical cases with Mopping Method at St. Mary's Hospital, Minnesota. Four procedures were evaluated for effectiveness in reducing bacterial count and time involved; Mikro-Spray with mop pick-up; double-mopping method; Mikro-Spray with wet vacuum pick-up; and single mopping method. Operating floor was divided into two equal sections which were subdivided into squares. A random sample of forty squares was drawn for sampling before and after an operative case for each of cleaning procedures tested. Ten squares on one side of the floor were cleaned with a Mikro-Spray procedure before and after surgery and ten squares on the other side were cleaned with mopping method. The next day the other Mikro-Spray method and mopping method were tested, reversing the sides of the room they were used on. Rodac agar plates were used for surface sampling and some germicide was used for entire experiment. Study found no significant difference in bacterial reduction between Mikro-Spray with mop pick-up or wet vacuum pick-up and double-mopping method. Single mopping was significantly not as effective in reducing bacterial count. Single mopping and Mikro-Spray with mop pick-up were fastest procedures and Mikro-Spray with mop pick-up is therefore recommended for speed and effectiveness in reducing bacterial count. (D.F.B.)

INSURANCE AND PREPAYMENT

(See also AC, Accounting and Business Office; HE, Health Services.)

IN1005 57pp.d., 9/67

Myers, Robert J.; Baughman, Charles B.
HISTORY OF COST ESTIMATES FOR HOSPITAL INSURANCE
Office of the Actuary, Social Security Administration, U.S. Department of Health, Education and Welfare, Washington, D.C., 1966
Available from original publisher

Traces the development of cost estimates for various Federal legislative proposals which provided hospital insurance benefits to persons 65 and over, beginning with 1952 proposals and culminating with Medicare legislation. Included is a summary of provisions and benefits of Medicare Act 89-97. Basic assumptions about earnings base and trends of hospitalization costs and earnings that underlie cost estimates of various legislative proposals are detiled. Included is a summary of development of these assumptions and reasons for changing them at different stages.

Initially, the assumption was made that covered earnings rate and average per diem costs would remain static and values and benefits were calculated for period of perpetuity. Since then there have been several major changes. At present, long-range costs are computed for a twenty-five year period on a dynamic basis, but assuming no change in earnings base. A 10 per cent safety margin has also been added to utilization rates. (D.F.B.)

IN1006 12pp.d., 10/67

Reed, Louis S.; Meyers, Kathleen
HEALTH INSURANCE COVERAGE COMPLEMENTARY TO MEDICARE
Social Security Bulletin, Vol. 30, No. 8, August, 1967, pp. 3-14
Available from the Superintendent of Documents, Government Printing Office, Washington, D.C.

Coverage offered to aged persons by various private health insurance organizations is outlined. Categories examined and discussed include Blue Cross and Blue Shield Plans, insurance comanies, independent plans, and Federal employee health benefit programs; well over 60 per cent of all aged persons have some provision for medical costs not covered by Medicare and, generally, coverage supplements Medicare so as to bring it to the level of protection offerred younger persons. (S.P.)

IN1007 22pp.d., 12/67

Health Insurance Institute
REPORT ON NEW HEALTH INSURANCE POLICIES OF INSURANCE COMPANIES
Health Insurance Institute, 277 Park Avenue, New York, New York 10017, 1966
Available from original publisher

A tabular presentation of characteristics of health insurance policies availavle to persons 65 and over. Names of companies, benefits, entrance age, and renewal options are all listed. (L.E.W.)

IN2007 2pp.d., 11/67

BLUE CROSS EXPERIENCE . . . 1966
Health Insurance Review, November, 1967, pp. 8-9
Available from original publisher at 420 East Fourth Street, Cincinnati, Ohio 45202 for $.30

Tabulated ratios of claims expense and operating expense to earned subscription income for all Blue Cross and Blue Shield Plans for 1966. The average operating expense ratio of Blue Cross Plans was 5.81 per cent, of Blue Shield was 9.83 per cent. Total expenses of seventeen of the Blue Cross Plans exceeded earned subscription income. (L.E.W.)

IN2008 89pp.b.d.th.Ph.D., 12/67

Woosley, Joe Curtis
A STUDY OF REPEATED HOSPITAL ADMISSIONS AMONG MICHIGAN BLUE CROSS MEMBERS
University of Michigan, Ann Arbor, Michigan, 1960
Available from U.M.I., document no. 60-1805
Xerox $4.60
Film reel $3.00

An investigation to measure the magnitude of repeated hospital inpatient admissions among members of Michigan Blue Cross and to determine the characteristics of the persons composing the sub-class of repeaters. A sample of 1,275 Blue Cross patients was selected from those admitted to hospital in July, 1956 and studied for subsequent readmissions in the following two years. Approximately one-third cancelled coverage within the two-year period. Fifty-three per cent did not return to hospital in study period, the forty-seven per cent who were repeaters accounted for seventy-three per cent of the total days used by all sample members. Data also given on intervals between discharge and readmission plus estimates of total readmissions for calendar year based on sample results. (L.E.W.)

IN2009 11pp.d., 1/68

Reed, Louis S.; Carr, Willine
HEALTH BENEFIT PLANS UNDER COLLECTIVE BARGAINING
Research and Statistics Note, December, 1967 pp. 1-11
Social Security Administration, Department of Health, Education and Welfare, Baltimore, Maryland
Available from original publisher

The main features of 100 selected collectively bargained health and insurance plans are outlined. The plans were selected because "they covered large numbers of workers in major industries, or because they illustrated different approaches to health insurance coverage, or because of their interest to the general public . . ." They are from twenty-nine major industry groups and the number of workers covered in plans ranged from 1,000 to several hundred thousand. (L.E.W.)

IN4008 62pp.b.d.th.M.A., 10/67

Gipson, Bobby Ralph
THE IMPACT OF TITLE XVIII (MEDICARE) ON THE BUSINESS OFFICE OF A SMALL, COMMUNITY GENERAL HOSPITAL
School of Health Services Administration, University of Alabama, Birmingham, Alabama, 1967
Available from U.M.I. Xerox $3.00
Film reel #2.13 $4.75

A work sampling study was made to determine impact of Medicare on business office activities of a small Alabama hospital. In addition, business office costs related to Medicare processing are analyzed and a comparison of time spend on Medicare processing to percentage of income from the program is presented. Data indicate Medicare patients constituted only 14.3 per cent of total patients, but Medicare-related processing of their admissions and discharges took 56 per cent of total time spent in this function. Primary cause was due to law's requirement that hospital and physician charges be billed separately on different forms for each service performed. In addition, Blue Cross required all Alabama hospitals to keep a medical journal in which identical information is transcribed by hand - a procedure considered redundant by this study. Data also show Medicare outpatients compose only 4 per cent of total outpatients, but processing of their records took 28 per cent of total time. Cost of processing Medicare records for eight months of program's operation was approximately $2,200 more than would be expected, based on per cent of Medicare patient to total patients. Income from Medicare patients was 22 per cent of total, while time spent in processing records was over 25 per cent. It is concluded reimbursement formulas do not adequately reimburse hospitals for clerical and accounting costs. (D.F.B.)

IN4009 158pp.b.d.th.M.A., 8/67

Schumacher, Joseph L.
AN ANALYSIS OF MEDICARE'S IMPACT ON KANSAS UNIVERSITY MEDICAL CENTER AS IT AFFECTS THE TOTAL NUMBER OF DISCHARGED INPATIENTS, AGE 65 AND OVER, THE TYPE OF PATIENT CARED FOR, AGE 65 AND OVER, AND THE FINANCIAL RELATIONSHIP BETWEEN THE HOSPITAL AND THE PATIENT, AGE 65 AND OVER
Program in Hospital Administration, University of Minnesota, Minneapolis, Minnesota, 1967
Available from U.M.I. Xerox $7.15
Film reel #2.13 $4.75

The effect of Medicare on the number of patients admitted, age 65 and over, their primary discharge diagnoses, length of stay, operative procedures and financial category was studied in a sample number of patients admitted to University of Kansas Medical Center. Patients admitted during July through September, 1965 (before Medicare) were compared to those admitted July through September, 1966. Impact of Medicare on gross hospital charges collected and how they are allocated among financial resources was also studied. Except for increase in number of patients whose primary discharge diagnoses were coded to cardiovascular system, there were no significant differences in numbers, type of patients, age 65 and over, and length of their stays after Medicare became effective. Study found substantial difference (12.65 per cent increase) in percentage of gross charges collected since implementation of Medicare. Data indicate 88.62 per cent of gross charges were collected from Medicare, Parts A and B, for study period in 1966. (D.F.B.)

IN4010 98pp.b.d.ill.th.M.A., 10/67

Hill, Roland R.
A STUDY OF THE IMPACT OF MEDICARE, TITLE XVIII, PUBLIC LAW 89-97, ON DIRECT ADMISSION OF PATIENTS TO THE MINNEAPOLIS VETERANS ADMINISTRATION HOSPITAL
Program in Hospital Administration, University of Minnesota, Minneapolis, Minnesota, 1967
Available from U.M.I. Xerox $4.45
Film reel #2.14 $4.00

Admissions of all patients age 65 and over to a V. A. Hospital occurring the last six months of 1965 were compared to those for July through December, 1966 when Medicare Act was in effect. Comparisons were made for factors of diagnosis, area of residence, pensioned or nonpensioned, and service-connected disability. Data were obtained from medical records and questionnaire survey of County Veterans Service Officers. Findings show Medicare Act has significantly reduced number of

48

patients age 65 and over admitted to Minneapolis V. A. Hospital since July 1, 1966. While non-pensioned patient utilization showed little variance, there was a 25 per cent reduction in admissions of pensioned patients. Medicare had no effect on admission rates of those with catastrophic, long-term or terminal illness, and it is concluded voluntary system is unprepared or unwilling to care for these types of illnesses. Study also shows those living within a fifty mile radius of V. A. Hospital are more apt to seek medical care in voluntary system than those living more than fifty miles away. (D.F.B.)

IN4011 53pp.b.d.ill.th.M.H.A., 11/67

Scheibe, Robert G.
A STUDY OF THE LENGTH OF STAY OF PATIENTS OVER AGE 65 YEARS AND CERTAIN RELATED FACTORS
Program in Hospital Administration, University of Minnesota, Minneapolis, Minnesota, 1967
Available from U.M.I. Xerox $3.00
Film reel #2.14 $4.00

Length of stay and discharge rate were analyzed for patients age 65 and over who were admitted during the last six months of 1965 and 1966 at Memorial Hospital, South Bend, Indiana. Six hundred cases each period were matched for age, sex and clinical service. Study hypothesized length of stay would increase after Medicare became effective July 1, 1966 and there would be greater utilization of facilities by patients age 65 and over. Data show patients age 65 and over who were admitted after July 1, 1966 tend to stay longer on average than those admitted prior to that date. Also a 6 per cent increase in utilization occurred after July 1, 1966. Study found women tend to stay longer than men with similar diagnoses. Diagnoses included cholelithiasis, malignant neoplasms, hyperplasia of prostate and cataracts all of which showed increased average stay. Study also shows an increase in number of female discharges for 1966 over 1965. The number of surgical procedures did not increase. (D.F.B.)

IN4012 94pp.b.d.th.M.H.A., 11/67

Penn, Robert F.
A STUDY OF THE IMPACT OF MEDICARE (PUBLIC LAW 89-97) ON THE AVERAGE LENGTH OF AGED PATIENT STAY RELATIVE TO CERTAIN SELECT AREAS
Program in Hospital Administration, University of Minnesota, Minneapolis, Minnesota, 1967
Available from U.M.I. Xerox $4.25
Film reel #2.14 $4.00

Effect of Medicare on length of stay of medical - surgical patients, age 65 and over, was studied at a short-term, 310 bed, voluntary hospital in Kentucky. Data from patients, discharged during last six months of 1965 were compared to those discharged the last six months of 1966. Analysis of length of stay by age, sex, medical-surgical service classification, date of death, distance of residence from hospital, and medical-surgical consultations is presented. Study found overall average length of stay increased under Medicare by 1.9 days. Females stayed longer than males, but since Medicare, males are closing the gap. Data also indicate those residing farthest from the hospital tend to stay longer. Analysis by twelve medical - surgical classifications indicates average length of stay increased in all groups except for general surgery and gynecology. Appendices include data on length of stay, per cent of occupancy and monthly discharges of sample used in the study. (D.F.B.)

IN4013 30pp.d.R., 11/67

Arthur Young and Company
A STUDY OF THE FINANCIAL EFFECTS OF MEDICARE ON CALIFORNIA HOSPITALS
Arthur Young and Company, 120 Montgomery St., San Francisco, California 94104, 1967
Not generally available. Questions should be addressed to California Hospital Association, 111 Pine Street, San Francisco, California 94111

Data for this study were requested from 168 general, acute, short-term California hospitals, representing a cross-section of ownership and size, with 48 per cent responding fully. Study estimated effect Medicare would have had on hospital revenues for the last fiscal year prior to the commencement of Medicare program. Estimates were made by applying Medicare reimbursement formula to actual revenues and costs, together with estimates of departmental revenues attributable to patients of Medicare age. Study found 51 of 78 respondents of California hospitals will be reimbursed 18 per cent less than hospital charges, 9 per cent less than the realistic cost of caring for Medicare patients, and 4 per cent less than related amounts historically collected. RCC (ratio cost to charges) was principal factor in reduction. It is concluded reduction in revenues of many hospitals adversely affected by Medicare will seriously impair their ability to maintain and expand existing care facilities. Study recommends changes in the law which provide for depreciation on basis of replacement values in order to insure equitable and equal treatment of all hospitals and to preserve present capital investment. (D.F.B.)

IN4014 7pp.b.d., 12/67

Badgley, Robin F.; Hetherington, Robert W.; Matthews, V. L.; Schulte, Marjorie
THE IMPACT OF MEDICARE IN WHEATVILLE, SASKATCHEWAN, 1960-1965
Canadian Journal of Public Health, March, 1967, Vol. 58, No. 3, pp. 101-107
Available from original publisher

A survey was conducted in 1965 by interviewing 23 per cent of the heads of households of "Wheatville" to measure effects of Medicare (Saskatchewan style) in comparison to data gathered in 1960 survey, two years before initiation of program. Rates of hospitalization in Saskatchewan have dropped since introduction of Medicare (95 per cent of episodes of illness are treated by doctors outside of hospital). The pattern of admissions by diagnosis had changed. Respondents believed health of population had improved, particularly for those "on the edge of poverty", that doctors were busier than before. Data showed utilization of doctors was up both in number of contacts with patients and by percentage of population, with a greater referral of patients to specialists by G.P.'s. (L.E.W.)

IN4015 124pp.d., 12/67

Social Security Administration
HEALTH INSURANCE ENROLLMENT UNDER SOCIAL SECURITY JULY 1, 1966
Social Security Administration, Office of Research and Statistics, Department of Health, Education and Welfare, Baltimore, Maryland
Available from Superintendent of Documents, Government Printing Office, Washington, D.C. for $.60

A tabulation by regions, states, and counties of persons enrolled July 1, 1966 for health insurance under Social Security with sub-categories of "hospital insurance", "medical insurance", and "hospital and medical". Same categorization made for those receiving benefits under Railroad Retirement, and "other" agencies. (L.E.W.)

IN4016 4pp.d.R., 12/67

Hospital Planning Association of Allegheny County
UTILIZATION OF MEDICAL-SURGICAL BEDS IN SHORT-TERM HOSPITALS IN ALLEGHENY COUNTY, BEFORE AND AFTER MEDICARE
Hospital Planning Association of Allegheny County, 421 Seventy Avenue, Pittsburgh, Pennsylvania 15219, 1967
Available from original publisher

Utilization changes of medical-surgical inpatient facilities of short-term general hospitals in Allegheny County are analyzed for the first full year under Medicare. (L.E.W.)

IN4017 20pp.b.d., 1/68

Rice, Dorothy P.
CURRENT DATA FROM THE MEDICARE PROGRAM
Health Insurance Statistics, November, 1967, pp. 1-20
Available from Office of Research and Statistics, Social Security Administration, Baltimore, Maryland

An analysis of the $3.2 billions expended during the first year of Medicare. (L.E.W.)

IN4019 69pp.d.R., 1/68

Lerner, Raymond C.; Kirchner, Corinne
MUNICIPAL GENERAL HOSPITAL OUTPATIENT POPULATION STUDY: SOCIAL AND ECONOMIC CHARACTERISTICS OF PATIENTS IN NEW YORK CITY OUTPATIENT DEPARTMENTS, 1965: FINANCIAL ELIGIBILITY UNDER MEDICAID AND POTENTIAL REIMBURSEMENT TO THE CITY, REPORT NUMBER 1
Health Research Council Grant of the City of New York U1040
School of Public Health and Administrative Medicine, Columbia University, New York, New York 1967
Available from U.M.I. Xerox $3.15
Film reel #2.14 $4.00

Randomly selected patients (2,648) of fifteen New York City municipal hospital outpatients were interviewed during late 1964 through 1965 to determine financial eligibility of patients for free care by retroactively applying New York State Medicaid provisions. Data on family income, family composition, welfare status, and medical costs were analyzed for each respondent. "Approximately 93 per cent of the sample could be considered as qualifying for eligibility under Medicaid, had its provisions been in effect during the sample year."

Estimation was made of a "one-year total amount of potential reimbursement to New York City for clinic care provided to patients who would have been eligible without any deductible payment, had Medicaid been in effect." The estimated potential for annual reimbursement was computed as about $14,000,000 (based on $8.00 cost per visit) with about 76 per cent derived from Federal-State program (at rate $.75 per $1.00) and 24 per cent from State only program ($.50 per $1.00) (L.E.W.)

LABORATORIES

LB0011 114pp.b.d.ill., 12/67

National Council on Medical Technology Education
NATIONAL CORRELATIONS IN MEDICAL TECHNOLOGY EDUCATION - A REPORT OF A STUDY OF MEDICAL TECHNOLOGISTS
U.S.P.H.S. Grant No. 5514-C-67
National Council on Medical Technology Education, 1025 E. H. Crump Boulevard, Memphis, Tennessee, 38104, 1967
Available from original publisher

A report of a study to weigh medical technology education and certification against job performance. A sample (approximately 10 per cent) of the 1861 technologists who filed for the 1962 certification examination was studied. Data were gathered in various ways to determine possible correlation: by questionnaire from technologists for information about work experience; from records of the technologists' educational preparation and certification; job performance as seen by immediate supervisors; and information about the supervisors themselves. Correlations were established between education and job performance, although other factors were also found important. The findings were to be used as a basis for recommendations for strengthening the educational program. Extensive tabulations of data are given in the report and specimens of questionnaires included in appendix. (L.E.W.)

Please see next column

LB2025 4pp., 11/67

Ozan, M. Turgut
INPROVEMENT AND CONTROL OF PERFORMANCE IN THE LABORATORY
Hospital Progress, April, 1966, Vol. 47, No. 4, pp. 68, 70, 72, 74
Available from original publisher

Presents a simple formula for calculating an index of improvement in laboratory mannours after more efficient procedures have been instituted. (B.L.O.)

LB2026 11pp.b.d.ill., 11/67

Lindberg, D. A. B.
COLLECTION EVALUATION, AND TRANSMISSION OF HOSPITAL LABORATORY DATA
Methodik der Information in der Medizin, Vol. 6, No. 3, July, 1967, pp. 97-107
Available from F. K. Schattauer-Verlag, Stuttgart, Germany, in English

The University of Missouri computer system is described by which the results of all clinical laboratory determinations are collected, evaluated, and transmitted. A special feature is the complex of medical considerations called LIMITS by which reports are evaluated. The system has been effective as a hospital service device and also has been heuristic in raising questions concerning the recognition of patterns amongst clinical laboratory reports. See also DA0060, Vol. IV, No. 1, and LB2006, Vol. III. (Editor's abstract, adapted)

LB2029 8pp.d., 12/67

Heinemann, Ruth I.
GRADUATE STUDY INTERESTS OF MEDICAL TECHNOLOGISTS
American Journal of Medical Technology, Vol. 33, No. 6, November - December, 1967, pp. 505-512
Available from original publisher, Herman Professional Building, Houston, Texas 77025

A report of an informal survey made by the National Council on Medical Technology Education to determine the state of graduate study among medical technologists. Data tabulated from questionnaires returned by eighty-six teaching supervisors and forty-seven non-teaching members of the American Society of Medical Technologists compares the two groups for number doing graduate work, for major and minor subject areas, for major emphasis for graduate work, and for specific courses desired. See also LB0011. (L.E.W.)

LAUNDRY

LD1004 102pp.b.d.th.M.H.A., 12/67

Bajus, Richard G.
A STUDY OF LINEN UTILIZATION AT PARKVIEW MEMORIAL HOSPITAL
Graduate Program in Hospital Administration, Xavier University, Cincinnati, Ohio, 1966
Available from U.M.I. Xerox $4.60
Film reel #2.15 $4.75

A study of linen utilization at Parkview Memorial Hospital, Indiana, was undertaken to determine reasons for increasing expenses, excessive use and a chronic problem of linen loss. Procedures of each department of the hospital in acquiring clean linen and disposing of soiled were studied, including an analysis of the laundry department. Where applicable, patient characteristics and patient load are described as they affect linen utilization. Study found there were no formal controls on linen procurement and usage. Generally, inventories were not taken or supply levels for each area established. Some soiled linen was disposed of loosely down a laundry chute from various areas in the hospital. Cultures taken of air in laundry chute collection room indicate a high concentration of various types of bacteria colonies. Recommendations are made concerning establishing supply levels, formal distribution system, soiled linen handling, new linen procurement, inventory procedures, and laundry management. It is concluded unexplained loss of linen is due to theft which could be remedied in part by a formal distribution system. (D.F.B.)

LD3003 5pp.d., 10/67

Dickinson, J. C.; Wagg, R. E.
CHEMICAL DISINFECTION OF HOSPITAL WOOLAN BLANKETS IN LAUNDERING
Journal of Applied Bacteriology, Vol. 29, No. 2, pp. 375-364, 1966
Available from Society of Applied Bacteriology, Academic Press, 111 5th Avenue, New York 10003 for $20.00 per year to non-members of the Society

Three laundry disinfecting processes for woollen blankets were tested in a hospital laundry against total bacteria. Results were somewhat indefinite owing to a low general level of infection and the incidence of slight recontamination during drying. Before drying, disinfection was demonstrated. Laboratory simulated launderings on pieces of blanket infected with Pseudomonas pyocyanea showed significant differences between the processes. (Editor's Abstract)

LIBRARY

LI2006 99pp.b., 12/67

Robinow, Beatrix H.
OUTLINE FOR THE ORGANIZATION OF HOSPITAL LIBRARIES
Canadian Hospital Association, 25 Imperial Street, Toronto 7, Ontario, Canada, 1967
Available from original publisher for $4.00

Practical guide for non-professionals in charge of hospital medical libraries in Canada. Gives suggestions on organization, staffing, and equipment. Main emphasis is on outlining steps involved in basic library procedures, from ordering and cataloging to circulation and reference work. Includes samples of cards and records needed and lists additional sources (mostly American) of information on library operation. Also gives a basic list of books and journals for small hospital medical libraries. (L.S.)

MEDICAL STAFF AND MEDICAL CARE

(See also HE, Health Services; LB, Laboratory; MC, Medico-Legal; MP, Manpower; PA, Patient Attitudes; and RL, Radiology.)

MD0060 22pp.d.ill., 5/67

SOME FACTS ABOUT PHYSICIANS IN METROPOLITAN WASHINGTON
Health Facilities Planning Council for Metropolitan Washington, 2430 Pennsylvania Ave., N.W., Washington, D.C. 20037, 1965
Available from original publisher for $.50

Information compiled from the 1963 American Medical Directory and Metropolitan Washington hospital and medical societies is presented as a statistical profile of physicians in the area whose practice could affect community hospital utilization. Categories include physician numbers, fields of specialization, office location, age distribution, and hospital affiliation. (S.P.)

MD0069 7pp.d.ill., 9/67

Jeffers, William N.
ANESTHESIOLOGY: WELL PAID IF NOT WELL OFF
Medical Economics, Vol. 44, No. 17, August, 1967, pp. 93-99
Available from original publisher

Part of the second *Medical Economics* survey of the economic aspects of the ten largest medical fields. Anesthesiologists rank sixth of all specialists in annual median pretax income, but lowest in professional expenses. Many are satisfied with income but mention long work hours and job tension. (B.L.O.)

MD0070 5pp.d., 10/67

Jeffers, William N.
COMPARE EARNINGS WITH YOUR AGE GROUP'S
Medical Economics, August, 1967, pp. 85-89
Available from original publisher

Professional incomes for 1965 of self-employed M.D.'s under 65 in the ten largest fields of medical practice. Data from questionnaire administered by publisher. Incomes are grouped chronologically as to years in practice; in seven out of ten specialties, the earnings peak appeared in the second decade. Figures are given in tables relating comparisons between solo and partnership practice. (S.P.)

MD0071 8pp.d., 10/67

Jeffers, William N.
OBG FINANCIALLY: HEALTHY AND EXPECTANT
Medical Economics, August, 1967, pp. 90-91
Available from original publisher

Article presents results of a 1965 survey probing earnings of obstetricians/gynecologists. The median pretax income for the group was up 7.5 per cent over the preceding year, placing them fifth on the medical specialists' income scale. Although birth rate has declined, incomes rose due to increased gynecological work, raised fees, and partnership practice. (S.P.)

MD0073 77pp.b.d.th.M.H.A., 11/67

Whalen, John
A PILOT STUDY OF LEADERSHIP ATTITUDES IN A MEDICAL SCHOOL'S DEPARTMENTS OF MEDICINE AND SURGERY
Program in Hospital Administration, University of Minnesota, Minneapolis, Minnesota, 1967
Available from U.M.I. Xerox $3.50
Film reel #2.12 $4.75

Leadership attitudes of academic and house staff physicians in departments of medicine and surgery at University of Florida College of Medicine were studied using Leadership Opinion Questionnaire to collect data. Physicians were classified according to specialty, staff appointment, staff-specialty, affiliation and academic rank. Twelve groups were formed from these classifications and summary descriptive statistics are computed and presented for each group. The effects of group membership were analyzed for only eight of the groups, composed of staff-specialty and combined academic rank groups. Findings indicate leadership attitudes of academic and house staff physicians in departments of medicine and surgery are homogeneous. It was also shown that similar leadership attitude patterns prevail in hierarchies of the medical school's departments of medicine and surgery. Replication of study in other regions is recommended to determine significance of "climate" as a variable affecting development of leadership attitudes. (D.F.B.)

MD0074 68pp.b.d.ill.R., 12/67

White, Ruth Preston; Quade, Dana; White, Kerr L.
PATIENT CARE CLASSIFICATION: METHODS AND APPLICATION
U.S.P.H.S. Grant No. NU00080
Department of Medical Care and Hospitals, School of Hygiene and Public Health, Johns Hopkins University, Baltimore, Maryland 21205, 1967
Available from original publisher

The study objective was to devise criteria which would effect closer agreement between physicians and nurses classifying inpatients into categories of self care, intensive care and intermediate care as a part of progressive patient care.

Data from two concurrent surveys in two university hospitals were used. Patient characteristics and nursing activities were evaluated and a simplified list of criteria developed. (L.E.W.)

MD0077 4pp.d.ill., 1/68

STAFF M.D.S' EARNINGS: STILL MOVING UP
Hospital Physician, December, 1967, pp. 36-39
Available from original publisher

Article gives data from the third Annual Survey of Physicians in full-time hospital practice showing earnings of physicians by specialties, by region, by type of hospital, by length of service, and showing a three year trend. (L.E.W.)

MD0078 6pp., 1/68

Arie, Thomas; Fairey, M. J.; Tooley, P. H.; Webster, B.
A COLLABORATIVE STUDY OF STAFF ATTITUDES: EMERGENCY ADMISSIONS TO A LONDON TEACHING HOSPITAL
The Hospital, (London), Vol. 63, No. 10, October, 1967, pp. 377-382
Available from original publisher

A report of attitudes of a sample of physicians, nurses and student nurses of The London Hospital who were given questionnaire, and interviewed, about the admission and bed control system when there was a bed shortage. The welfare of patients, the pressures on the staff, the faults and good features of the system, and suggested solutions for problems were the principal topics covered. (L.E.W.)

MD2037 9pp.d., 11/67

Theodore, Christ N.; Sutter, Gerald E.
A REPORT ON THE FIRST PERIODIC SURVEY OF PHYSICIANS
Journal of the American Medical Association, Vol. 202, No. 6, November, 1967, pp. 516-524
Available from original publisher

Report of a survey of physicians' work activities, location of practice, specialization and age distribution from 2,833 responses to a simple random sample of 3,549 physicians in private practice conducted by the American Medical Association. (J.R.G.)

MD2038 471pp.b.d.th.Ph.D., 12/67

Mumford, Emily Hamilton
INTERNS AND RESIDENTS IN TWO HOSPITAL LEARNING ENVIRONMENTS: A COMPARATIVE STUDY
Columbia University, New York, New York, 1963
Available from U.M.I., document No. 65-7465
Xerox $21.40
Film reel $ 6.00

This is a qualitative study of interns and residents in a large, university-affiliated hospital and in a small, nonaffiliated community hospital. It focuses on the influence of the structure and culture of the two organizations upon the reference-group behavior of interns and residents recruited by them.

The investigation distinguishes between two types of reference-group behavior. First, behavior related to the recruit's comparison of his situation with that of people in groups, categories and statuses is considered. Second, behavior that relates to the recruit's identification or feeling at one with members of groups or statuses is considered.

Six aspects of organizations are found to affect the comparisons and identifications of interns and residents. These are the complexity of the organization, patterns of status-sequence, status-sets, role-sets, the composition of one part of the role-set, and the climate of values. Differences in these aspects of organizations are found to influence the degree to which reference-groups become salient for behavior. The tentative findings help clarify prevailing assumptions of reference-group theory and specify some areas for needed research.

The basic data were provided by participant observation, focused interviews, hospital statistics and questionnaires dealing with the staff of the two hospitals. Supplementary data were provided by national statistics on hospitals and by a nationwide survey of 961 interns and residents in a sample of large, university-affiliated hospitals and 360 in a sample of small, non-affiliated community hospitals.

Although the investigation centers on advancing the sociological theory of reference-group behavior, it also provides new evidence on the attitudes and behavior of young physicians undertaking post-graduate education in hospitals. (Author's abstract)

Please see next page

MD2039 378pp.b.d.th.Ph.D., 1/68

Barker, Thomas Carl
A QUANTITATIVE ANALYSIS OF THE RELATIONSHIPS BETWEEN AND THE INFLUENCES OF THE HOSPITAL SURVEY AND CONSTRUCTION PROGRAM IN IOWA AND THE DISTRIBUTION OF PRACTICING PHYSICIANS IN THE STATE
University of Iowa, Iowa City, Iowa, 1963
Available from U.M.I., document No. 63-7987
Xerox $17.10
Film reel $ 4.85

An investigation to determine how effective the hospital construction program has been in Iowa in meeting the problem of maldistribution of physicians. The author hypothesized: there is a direct relationship between the number of hospital beds in an area and the number of physicians who practice there; that as hospital facilities are constructed and expanded, the number of physicians practicing will increase; that osteopaths will tend to locate where M.D.s' are most scarce. The years 1947, 1952, 1957, and 1962 were studied for change of the relationships. The author concluded there was a "high, positive correlation between physician practice location and hospital bed location in all four years". Doctors of osteopathy were found to act much as doctors of medicine in locating practices. (L.E.W.)

MD3019 82pp.b.d.th.M.H.A., 11/67

Mooney, Robert C.
A PILOT STUDY OF CERTAIN CHARACTERISTICS OF MEDICAL STAFF MEMBERS AND THE DEGREE OF CORRELATION THEY EFFECT BETWEEN THE CLINICAL CHIEFS AND BED COMPLEMENT OF A HOSPITAL
Program in Hospital Administration, University of Minnesota, Minneapolis, Minnesota, 1967
Available from U.M.I. Xerox $3.70
Film reel #2.15 $4.75

Purpose of this study was to determine if the bed complement of a hospital is a prime factor in determining characteristics of the clinic chiefs it maintains, with special focus on characteristics of the smaller hospital. Chiefs in six metropolitan hospitals of varying bed size were studied. It was hypothesized there would be negative correlation between size and degree to which chiefs differ from their medical staff in terms of five factors stressing a "wisdom-oriented" environment. A positive correlation was hypothesized for five factors stressing a "prestige-oriented" environment. Only one correlation was proved as hypothesized - bed complement to sum of memberships in special societies, a prestige factor. Three other factors were significant in the opposite direction of hypothesis. It is concluded small community hospital characteristics are not inherent in small hospitals and perhaps size is not an important factor at all in determining differences in characteristics between small and large metropolitan hospitals. Further research is recommended, using geographic location, type of hospital, size of medical staff, and procedure for selection of chiefs as independent variables. (D.F.B.)

MD2040 4pp.b.d., 12/67

Heller, Ronald J.; Robertson, Leon S.; Alpert, Joel J.
HEALTH CARE OF HOUSE OFFICERS, A COMPARATIVE STUDY
New England Journal of Medicine, Vol. 277, No. 17, October, 1967, pp. 907-910
Available from original publisher

Questionnaires were sent to a random sampling of interns and residents in Boston hospitals and to Ph.D. candidates of a Boston graduate school to determine the pattern of health care for the house officers and to compare it with that of the Ph.D. candidates. The survey showed that 46 per cent of the 237 house officers responding received no medical care while only 21 per cent of the 272 Ph.D. candidates responding received none. Author concluded house officers do not receive adequate care and that hospitals should assume greater responsibility for the care. (A.R.N.)

MD4023 8pp.b.ill., 11/67

Shubin, H.; Weil, M. H.; Rockwell, M. A., Jr.
AUTOMATED MEASUREMENT OF CARDIAC OUTPUT IN PATIENTS BY USE OF A DIGITAL COMPUTER
Medical and Biological Engineering, Vol. 5, 1967, pp. 353-360
Available from Pergamon Press, 44-01 21st St., Long Island City, New York 11101, published bi-monthly, $9.00 per copy

A digital computer system has been developed to repetitively measure cardiac output on-line. This system, which also monitors arterial pressure, heart rate, and other physiological variables, derives the values for stroke volume, vascular resistance, appearance and mean circulation time of dye, central blood volume, and cardiac work. Measurements, computation and print-out are accomplished within a 5 minute period. Summary reports of these variables are generated by a typewriter. A complete set of data is recorded on punched cards for detailed analysis. (Editor's Abstract)

MD5010 5pp.b., 11/67

Borda, Ivan; Jick, Hershel; Slone, Dennis, Dinan, Barbara; Gilman, Barry; Chalmers, T. C.
STUDIES ON DRUG USAGE IN FIVE BOSTON HOSPITALS
Journal of the American Medical Association, Vol. 202, No. 6, November, 1967, pp. 506-510
Available from original publisher

Analysis of 682 medical records from both acute and chronic hospitals. Findings reflect wide variations in amount and kind of drugs prescribed. The data are extensively tabulated. (J.R.G.)

MD5011 7pp.b.d., 11/67

Hoddinott, B. C.; Gowdey, C. W.; Coulter, W. K.; Parker, J. M.
DRUG REACTIONS AND ERRORS IN ADMINISTRATION ON A MEDICAL WARD
Canadian Medical Association Journal, October, 1967, Vol. 97, pp. 1001 - 1006
Reprints available from Dr. C. W. Gowdey, Department of Pharmacology, University of Western Ontario, Health Sciences Centre, London, Ontario, Canada

One hundred four patients in a thirty-one bed ward studied for 1,517 patient days during a fifty-nine day period for reactions to drugs and to detect errors in drug administration. Reactions to drugs were determined by observations of patients. Errors in drug administration were determined by comparison of doctors' orders and nurses' notes and were classified as "overdose", "under dose", or "omission". Twenty-nine reactions were detected in twenty-six patients; twenty-three errors in drug administration were detected in twenty patients. Data tabulated in several distributions. (L.E.W.)

MD5012 7pp.d., 12/67

Greenberg, Sidney M.; Rogers, Theresa F.
STUDY UNCOVERS 'UNNECESSARY' LONG-TERM STAYS IN A SHORT-TERM HOSPITAL
Hospitals, Vol. 41, No. 21, November, 1967, pp. 76-82
Available from original publisher

An analysis of 612 patients hospitalized thirty or more days at New York Hospital, Cornell Medical Center in 1961. Tables show diagnostic and related medical factors, prognosis, potential facilities to which patients could have been discharged and an analysis of patients felt by their physician to have been eligible for earlier discharge than they actually received. (J.R.G.)

MD5015 224pp.b.d.th.Ph.D., 12/67

Walker, Dorothy Jean
PATTERNS OF PATIENT CARE: A STUDY OF PATIENT CONTACT IN A COMMUNITY HOSPITAL
St. Louis University, St. Louis, Missouri, 1967
Available from U.M.I., document no. 67-2975
Xerox $10.15
Film reel $ 3.00

This research was concerned with studying patient contact as a manifestation of various possible organizational processes, which are influenced by the limitations of available staff, space, and technical resources.

The hypotheses of this study were that: (1) the distribution of patient contact by the non-resident force is related to type of procedures, (2) the distribution of patient contact by resident force is significantly related to staff determined severity of patient condition, (3) the distribution of patient contact for surgical patients shows different pattern variations than for medical patients, and (4) the frequency of patient initiated contacts will vary with the sex and age of the patient.

The descriptive survey method of research was employed. Data were collected by means of structured observations carried out on a thirty-one bed, medically non-segregated unit in a one-hundred and twenty bed community hospital. The hospital operates a diploma school of nursing which admits, on the average, twenty students each year.

On the basis of the findings of this study the following statements were made:

The non-resident actors spent significantly more time with the patient in the performance of activities which had originated in the specific health needs of patient than they did in carrying out institutional routines and, at least to this extent, contributed to the institutional goal of individualized patient care. The amount of time spent in patient contact by the resident actors was found to increase significantly as the number of orders written by the physician increased. The patient-resident actor contact time was also found to be influenced by the nurse's estimate of the patient's condition. However, in this case there was not a direct increase in the amount of time spent with the patient as the patient condition increased in severity.

Separation of the patients into medical and surgical groups for study showed that the surgical patient received more care in terms of contact time during the first quarter of his hospital stay than did the medical patient. The reverse was the case during the last three-quarters of the patient's hospitalization.

When frequency of patient initiated contacts was studied according to the age and sex of the patient the absence of a significant difference among the various categories led to the conclusion that the needs or wants of patients of all age groups and of both sexes were being met with equal facility. (Author's abstract, adapted)

MD5016 5pp.b.d., 12/67

Ogilvie, R. I.; Ruedy, J.
ADVERSE REACTIONS DURING HOSPITALIZATION
The Canadian Medical Association Journal, Vol. 97, No. 24, December, 1967, pp. 1445-1449
Available from original publisher

Incidence of adverse reactions to hospitalization among patients of a thirty-five bed ward over a twelve month period was 24 per cent with drugs accounting for 74 per cent of reactions. Less frequently reactions due to diagnostic and therapeutic procedures, to transfusions and to "miscellaneous hazards". Patient's with chronic illness showed lowest incidence. See also MD5017. (L.E.W.)

MD5017 8pp.b.d., 12/67

Ogilvie, R. I.; Ruedy, J.
ADVERSE DRUG REACTIONS DURING HOSPITALIZATION
The Canadian Medical Association Journal, Vol. 97, No. 24, December, 1967, pp. 1450-1457
Available from original publisher

All 731 patients admitted to a public medical service of The Montreal General Hospital during the year from July, 1965 were surveyed for adverse drug reactions (any undesired consequence of drug therapy) during hospital stay. One hundred thirty-two patients suffered 193 adverse reactions. A majority (81 per cent) of reactions were due to pharmacological action of the drug: overdose; side effects; or cytotoxic effects. A minority (19 per cent) were due to the interactions of the drug with special predisposing factors. See also MD5016. (L.E.W.)

MEDICO-LEGAL

(See also MD, Medical Staff and Medical Care; PA, Patient Attitude.)

Please see next column

ML0013 25pp.b.d.R., 10/67

Redfield, Richard E.
THE CRITERIA FOR HOSPITAL MEDICAL RECORDS AS LEGAL EVIDENCE
Graduate Program in Hospital Administration, School of Public Health, University of California, Berkeley, California, 1967
Available from U.M.I. Xerox $3.00
Film reel #2.15 $4.75

Paper reviewing past court cases where a legal ruling determined admissability, to identify criteria for admission into evidence. A good medical record is defined as one "in which there is sufficient data written in sequence of events to justify diagnosis and warrant treatment and end results"; the hospital accreditation program has extended and upgraded such record-keeping. The author examines three categories of jurisdictions and enumerates court-emphasized criteria for legal acceptance in each. (S.P.)

ML2005 85pp.b.d.ill.th.M.H.A, 1/68

Hodgins, K. W.
A STUDY OF PATIENT CONSENTS TO THERAPY IN GENERAL HOSPITALS
Department of Hospital Administration, School of Hygiene, University of Toronto, Toronto, Ontario, Canada, 1965
Available from U.M.I. Xerox $3.85
Film reel #2.15 $4.75

The author studied the use of consent agreements for therapy in general hospitals in Ontario. He discussed what "consents" are, their relationship to law, and certain special aspects to be considered about them.

Analysis of questionnaires returned by fifty of the larger general hospitals of Ontario showed that: there is not agreement on whether all admissions should sign some sort of consent; a majority of hospitals require a consent where treatment with risk is involved; the attending physician rarely presents the consent form; written statements are required later for consents given over the telephone; most hospitals at times ask for legal assistance about consents; most administrators believe a consent manual is needed. (L.E.W.)

MANAGEMENT SCIENCE AND OPERATIONS RESEARCH

(See also Individual areas, CO, Community Attitudes; HE, Health Services; MD, Medical Staff and Medical Care; PE, Personnel Administration.)

MN0021 225pp.b.ill.p., 9/67

Llewelyn-Davies, R.; Macaulay, H. M. C.
HOSPITAL PLANNING AND ADMINISTRATION
Monograph Series No. 54
World Health Organization, Geneva, Switzerland, 1966
Available in U.S. from International Documents Service, Columbia University Press, 2960 Broadway, New York, New York 10027 for $5.25

The book presents basic information on hospital planning and administration for world-wide use. The first section is devoted to national and regional planning. The second section discusses planning of general hospitals of several hundred beds serving populations of 50,000 to several hundred thousand. The third section analyzes "the requisites of the principal departments within a comprehensive general hospital". The general orientation is toward discussion of problems rather than a presentation of floor plans and department layouts. The book's bibliography is annotated and gives citations from several countries. (L.E.W.)

MN0022 41pp.b.d.R., 11/67

Hess, Irene; Srikantan, K. S.
MULTIPLE STRATIFICATION OF GENERAL HOSPITALS
U.S.P.H.S. Grant No. CH00039
Survey Research Center and Bureau of Hospital Administration, The University of Michigan, Ann Arbor, Michigan 48108
Available from U.M.I. Xerox $3.00
Film reel #2.16 $4.25

A detailed analysis of factors involved in sophisticated sampling procedures, relevant to persons using the Goodman-Kish probability technique to sample hospitals and to those planning ad hoc hospital studies when resources and time available for designing the sample are strictly limited. Detailed tabulations of variables generally available for stratification of the hospital universe are presented and discussed. Characteristics considered are bed capacity, geographical region, Standard Metropolitan Statistical Area classification, hospital control or ownership, and selected approvals. For a limited set of variables, the results of an empirical investigation of the reduction in the sampling variance accompanying increased stratification are reported. Data employed are for the 1961 universe of United States nonfederal, short-term general medical hospitals. The investigation suggests that after stratification by bed capacity and geographical region, SMSA class or hospital control would be the more likely variables to use in the primary stage of a multistage sample. Stratification variables omitted at the primary stage may be incorporated in the second stage of selection. While adding substantially to the work, stratification by approvals appears to lead only to minor increases in precision of the estimates considered. See also MN0019, Volume IV, No. 1. (Author's abstract)

MN1034 6pp.ill., 11/67

Smalley, Harold E.
AN INSERVICE APPROACH TO MANAGEMENT SYSTEMS IMPROVEMENT
Hospitals, Vol. 41, July, 1967, pp. 63-68, 168
Available from original publisher

Description of an experimental program to train hospital employees as management systems analysts undertaken in ten hospitals in Atlanta, Georgia. Components of the program were an academic course, a preceptorship, and a special project, all to be completed by the ten trainees in a given time with achievement of the minimum passing grade. Results and implications discussed. See PE2015, Volume III for more extensive description. (Editor's Abstract, adapted)

MN1035 293pp.b.d.R., 9/67

Roswell, Charles G.
HOSPITAL IMPROVEMENTS THROUGH EMPLOYEE PARTICIPATION
U.S.P.H.S. Grant No. HM 00037
United Hospital Fund of New York, 3 East 54th Street, New York, New York 10022, 1960
Available from U.M.I. Xerox $13.20
Film reel #2.16 $ 4.25

Reports on results of a three year study (conducted 1957 - 1959) of improvement programs in fourteen New York hospitals. Two different programs were studied, requiring employee participation: a work simplification program and a methods study and development program. Each program was tested at seven hospitals. See also abstract MN1036. The report is arranged in four parts. Part 1 offers background data on work simplification and description of how study was organized and conducted. Parts 2 and 3 describe

basic elements and accomplishments of two programs tested and evaluations of each program. Part 4 compares and summarizes basic characteristics and findings of two programs and presents study's conclusions and recommendations concerning successful administration of employee participation programs. Appendices include statistical data relating to programs, an outline of proposals selected for installation by department and syllabuses of training courses for program directors. (D.F.B.)

MN1036 196pp.ill.R., 9/67

Roswell, Charles G.
TRAINING COURSE MATERIAL FOR DIRECTORS OF HOSPITAL IMPROVEMENT PROGRAMS
U.S.P.H.S. Grant No. HM-00037
United Hospital Fund of New York, 3 East 54th Street, New York, New York 10022, 1960
Available from U.M.I. Xerox $8.80
Film reel #2.17 $4.50

This volume contains materials for two different courses: (1) a course in work simplification; and (2) a course in methods study and development. Materials for each course include: content of the training course; syllabus of the training course; illustrations of charting tools taught to program directors; list of motion pictures shown to program directors; list of books distributed to program directors; and materials given to program directors for possible distribution to hospital employees during in-service training sessions. A list of faculty participants for each of the two courses is included also. This material should be read as supplement to "Hospital Improvements Through Employee Participation". (See Abstract MN1035) (D.F.B.)

MN1037 255pp.b.d.th.Ph.D., 12/67

Hudson, Wellborn R.
AN APPLICATION OF MANAGEMENT ENGINEERING TO NONREPETITIVE WORK - HOSPITAL NURSING
Department of Industrial and Management Engineering, Graduate College, University of Iowa, Iowa City, Iowa, 1954
Available from U.M.I., document no. 10,219
Xerox $11.70
Film reel $ 3.30

An early (1954) work measurement study. The nursing service of a hospital was chosen to test whether industrial engineering techniques could be applied meaningfully to non-repetitive work as it has been traditionally to repetitive tasks. Standard techniques of work sampling, process analysis, activity analysis, layout, work planning and written standard procedure were all applied successfully. Memomotion analysis was restricted in usage by technical difficulties of lighting and field of camera view.

In a pilot study ward a number of tasks were formed into a standard work plan which: saved approximately 25 per cent in walking by nurses; enabled handling of ward with 17 per cent less personnel; and permitted prediction of amount of time required for completion of tasks in the standard plan. (L.E.W.)

MN1038 6pp.R., 3/67

Cox, John M.
INDUSTRIAL ENGINEERING IN HOSPITALS
American Institute of Industrial Engineers, Detroit, Michigan, 1963
Available from American Institute of Industrial Engineers, 345 East 47th Street, New York, New York 10017

A study to help a Detroit (Michigan) hospital find most effective methods of operation. Recommendations on laundry, laboratory, housekeeping and maintenance functions. (H.M.)

MN1039 302pp.b.d.th.Ph.D., 12/67

Smalley, Harold Eugene
A STUDY OF WORK SIMPLIFICATION IN HOSPITALS WITH EMPHASIS UPON ECONOMIC IMPLICATIONS
University of Pittsburgh, Pittsburgh, Pennsylvania, 1957
Available from U.M.I., document no. 22,864
Xerox $13.60
Film reel $ 3.90

The general objective of this study is to discover and to identify problems of application, to appraise applicability, and to propose means of minimizing obstacles to the application of work simplification principles to hospitals, with due regard for economic considerations. The approach selected for pursuing this objective premises the flow of problems of application from economic, psychological, sociological, and philosophical factors. The study itself is divided into three main parts. The first deals with the environment within which the central problems of applicability function, the second with the means employed in treating these central problems, and the third with constructive proposals for capitalizing upon the solutions to problems of applicability.

The study holds that if specialists in hospital and medical administration understand the economic bases of health services, they will be better equipped to deal with problems in the decision-making process. Through such an understanding, definitive administrative and management guides can be established for quality and cost. Thus, with a policy on quality levels and cost goals within which to work, the industrial engineer can proceed to the task of maximizing the quality-cost ratio.

The opinions of health-oriented people are that instructional technique and training materials used in the institutes of this study are satisfactory and that the tools of work simplification are useful. Workshop experiences make possible an analysis of alternative methods of indoctrination. A comparison between the opinions of work-shop participants and methods practitioners reveals general agreement on work simplification applicability. One must conclude that work simplification practitioners generally regard their work as important in carrying out hospital objectives. They testify, as do workshop participants and respondents, that the principles of work simplification are readily applicable to hospitals. (Author's abstract, adapted)

MN1040 10pp.b.d.ill., 12/67

Bartscht, Karl G.
HOSPITAL STAFFING METHODOLOGIES - CONCEPTS, DEVELOPMENT AND USES
Journal of Industrial Engineering, December, 1967, pp. 708-717
Available from original publisher

A description of the logic and methodology underlying the hospital staffing methodologies development. See announcement at end of Volume IV, No. 3 regarding revised availability of these documents. (J.R.G)

MN2020 20pp., 10/67

Piepmeyer, Thomas A.; Robinson, George W.
ACTUAL PERFORMANCE MEASUREMENT SYSTEM
Graduate Program in Hospital Administration, University of California, Berkeley, California, 1967
Available from U.M.I. Xerox $3.00
Film reel #2.17 $4.50

A student discussion of a method for measuring quality of care provided by an institution by determining the deviation of selected outcome measures from a level considered optimal. Post-operative infections are used as an example. (J.R.G.

MN2022 14pp.R., 11/67

Parker, Rodger D.
SOME INTERESTING PROBLEMS IN MEDICAL OPERATIONS RESEARCH
U.S.P.H.S. Grant No. HM-0079
Department of Public Health Administration, School of Hygiene and Public Health, The Johns Hopkins University, Baltimore 5, Maryland
Available from U.M.I. Xerox $3.00
Film reel #2.17 $4.50

Brief problem formulations for three operations research applications. (1) To find the mathematical relationship between diseases and symptom - sign profiles. (2) Objective functions to measure the effectiveness and/or efficiency of Health Services. (3) To have a basis for cost benefit studies. (4) To determine a feasible abstracted medical record sufficient to study patterns of epidemiology, health services utilization and content of medical practice. (Author)

MN2023 31pp.d., 12/67

Hsieh, Richard K. C.; Flagle, Charles D.
LINEN DISTRIBUTION IN THE JOHNS HOPKINS HOSPITAL
Operations Research Division, The Johns Hopkins Hospital, Baltimore, Maryland 21205, 1965
Available from U.M.I. Xerox $3.00
Film reel #2.17 $4.50

A description of the linen distribution system of The Johns Hopkins Hospital showing that the efficiency of the system for forecasting needs is linked to the application of the patient classification system developed at that hospital. (L.E.W.)

MN2024 17pp.d.R., 12/67

Das, B. C.; Das, Rhea S.
TRANSITIONAL PROBABILITIES AND THE ESTIMATION OF NEED FOR HOSPITAL SERVICES
Research and Training School, Indian Statistical Institute, 203 Barrackpore Trunk Road, Calcutta 35, India, 1966
Available from U.M.I. Xerox $3.00
Film reel #2.17 $4.50

This paper presents a series of statistical models of probabilities and estimators for admissions, duration of stay and cost of hospitalization. Models are first formulated for a homogeneous population and undifferentiated medical services. These initial concepts are then expressed in matrix form to represent varying

need for medical services as function of age and sex. A third set of transitional probability concepts is presented which incorporates fluctuations of level of disability into the model of hospital demand. These models can be applied to populations of varying age-sex structures and varying standards of living and health care. (D.F.B.)

MN2025 4pp.d., 12/67

Das, B. C.
ESTIMATES OF HOSPITAL DEMAND BASED ON AGE-SPECIFIC MEASURES OF UTILIZATION
U.S.P.H.S. Grants W-192(C1), R.G.8509 at Case Institute, Cleveland
Journal of Operations Research of India, Vol. I, No. 3, pp. 165-168 published by the Operations Research Society of India, c/o C.S.I.R., Rafi Marg, New Delhi, 1, India, quarterly, for $5 per year
Available from original publisher

Paper discusses and explains a statistical method of estimating demand for hospital services based on age-sex structure of population. Application of equation in estimating annual male admissions to all U.K. hospitals by medical service is presented as an example. (D.F.B.)

MN2026 10pp.b.d., 12/67

Das, Rhea S.
SERVICE GATE INFORMATION AND PREDICTION OF DEMAND FOR HOSPITAL SERVICES
U.S.P.H.S. Grant W192(C1) at Case Institute, Cleveland, Ohio
Journal of Operations Research in India, Vol. I, No. 3, pp. 141-150
Available from Operational Research Society of India, C/O C.S.I.R., Rafi Marg, New Delhi, 1, India, published quarterly, $5.00 per year in U.S.

Describes a method for predicting demand for hospital services by using patient's age and number of diagnoses made by admitting physicians. Data were abstracted from patients' records at Cleveland Metropolitan Hospital and a sampling frame was drawn up according to topographic system affected and operative status. Data were analyzed using multiple regression and factor analysis techniques to identify important variables and service factors. Values for patient's age and number of diagnoses are determined and used in a model with appropriate coefficients and constants to predict demand for five hospital services: duration of stay; laboratory tests; nurses notes; physicians' order; and number of records in a patient's chart. Report includes tables of statistical data used in study. (D.F.B.)

MN2027 5pp.d.ill., 12/67

Williams, William J.; Covert, Richard P.; Steele, James D.
SIMULATION MODELING OF A TEACHING HOSPITAL OUTPATIENT CLINIC
Hospitals, November, 1967, Vol. 41, No. 21, pp. 71-75
Available from original publisher

Discussion of the results achieved in decreased waiting time and improved scheduling by simulation of modeling of outpatient clinic demands at University of Missouri Hospital. (J.R.G.)

MN2028 13pp.b.d., 12/67

Rice, Dorothy P.; Cooper, Barbara S.
THE ECONOMIC VALUE OF HUMAN LIFE
American Journal of Public Health, November, 1967, Vol. 57, No. 11, pp. 1954-1966
Available from original publisher

Estimates are prepared of the value of individuals by age, sex, race, schooling, based on income streams discounted at four per cent. (J.R.G.)

MN2029 98pp.b.d.t.th.Ph.D., 12/67

Parker, Roger Duane
APPLICATIONS OF A FIXED INPUT QUEUE
Johns Hopkins University, Baltimore, Maryland, 1965
Available from U.M.I., document No. 64-10,451
Xerox $5.00
Film reel $3.00

In the pursuit of solutions to several seemingly desperate problems a certain infinite channel queue, called the fixed input queue, in which arrivals are uniformly spaced in time and service times are exponentially distributed has turned out to be of central importance. In Chapter One the transient and equilibrium state probabilities for this queue are derived. The moments of the

equilibrium probabilities are given. An analogy between the fixed input queue and a Bernoilli Process is exhibited, and the advisability of approximating the fixed input queue by a Poisson process is discussed.

Chapter Two contains a problem of hospital operations research: to determine the expected gain of occupancy in two medical units to be effected by making available beds of each unit to the other. The gain of occupancy to be anticipated through scheduling is determined using the equilibrium probabilities of the fixed input queue. Other chapters deal with non-hospital applications. (Author's abstract - adapted)

MN3015 72pp.b.d.ill.th.M.S., 8/67

Goldberg, Donald H.
"THE HOSPITAL ENVIRONMENT" AS A FACTOR AFFECTING HOSPITAL UTILIZATION BY INDIVIDUAL PHYSICIANS WHO WORK AT MORE THAN ONE HOSPITAL
Program in Medical Care Administration, Graduate School of Public Health, University of Pittsburgh, Pittsburgh, Pennsylvania, 1967
Available from U.M.I. Xerox $3.25
Film reel #2.17 $4.50

Mean preoperative and postoperative lengths of stay were computed in selected diagnostic classifications for patients of physicians affiliated with more than one hospital to determine if hospital environment was a significant factor affecting utilization. In addition, mean stays of study patients were compared with the means of all patients for each diagnosis studied. Data were obtained from HUP and included twelve Allegheny County hospitals. Data indicate in six out of ten surgical comparisons the difference between surgeon's means at the two hospitals did not reflect a change in same direction as difference between means of all patients in two hospitals. The difference in surgeon's means, however, were not as great as differences in hospitals' means. It is therefore inferred: (1) Surgeon is more consistent as an individual than two hospitals when dealing with same diagnosis. (2) Hospital environment has some influence on length of stay, but judgment on postoperative length of stay is result of both personal and environment influences with personal predominating. Analysis of preoperative length of stay indicates it not influenced by surgeon's judgment as much as postoperative stays. (D.F.B.)

MN3016 92pp.b.d.R., 8/67

Aird, John C.
PROFESSIONS WITHIN AN ORGANIZATION: CONFLICT AND ADAPTATION
Graduate Program in Hospital Administration, School of Public Health, University of California, Berkeley, California, 1967
Available from U.M.I. Xerox $4.15
Film reel #2.18 $6.75

Fifty respondents employed at a county hospital rated their own and nine other occupations on the degree to which they were professionalized. Employees rated each occupation on four characteristics: (1) esoteric body of knowledge; (2) judgment utilization; (3) group autonomy in work situation; and (4) group community service approach.

Gross results were predictable, with housekeepers rated lowest on the scale by everyone, and clinical psychologists and clinical physicians rated highest. Intermediate occupations judged themselves as more professional than management did, supporting the results of researchers.

Where significant differences in perception of professionalism exist, the author suggests, conflict will occur in the organization. (B.L.O.)

MN3020 6pp.d., 12/67

Stephens, Linda Coogle
STAFF COMMUNICATIONS ON THE MEDICAL AND SURGICAL SERVICES: A RESEARCH NOTE
Journal of Health and Social Behavior, Vol. 8, No. 3, June, 1967, pp. 148-153
Available from original publisher

Study of informal, verbal communication patterning among staff at University of Florida's J. Hiller Miller Health Center. Conversations between two or more doctors, nurses and health-related personnel noted during observation periods over a two-week period. Results compared with 1958 Wessen study at a private, metropolitan hospital show significantly greater degree of lateral communication at this health center. Factors evaluated. (H.M.)

Please see next page

MN3022 264pp.th.Ph.D., 1/68

Zawacki, John Stanley
THE SYSTEM OF UNOFFICIAL RULES OF A BUREAUCRACY: A STUDY OF HOSPITALS
University of Pittsburgh, Pittsburgh, Pennsylvania, 1963
Available from U.M.I., document no. 63-7562
Xerox $11.95
Film reel $ 3.40

One hundred ninety-four taped interviews were collected in seven hospitals to develop "a theory of the unofficial rules or informal covenants that arise among personnel of the general hospital" and to show "how the unofficial rules are generated by the hospital's social structure and social system". The study concentrated on interaction between physicians and subordinate personnel, both laymen and "second-rank" professionals. A variety of situations were considered: the admission of emergency cases; drug procurement; ward rounds of physicians; scheduling of surgery; and the use of the emergency room facility.

A dual structure and dual authority system were noted: a bureaucratic structure based on office or administration to handle the "secondary" needs of patients; and a collegial structure (medical staff) to handle the "primary" needs of patients. When the demands of the physicians ran counter to the bureacratic, the subordinates sometimes were found facing contradictory directives. Unofficial rules developed when personnel adjusted bureacratic rules to fit expectations of physicians. "The unofficial goal of physicians is that bureaucratic routine and rules shall not interfere with individualized patient care". The unofficial rules were found also to "generate some unintended consequences that can inhibit the attainment of other goals in the hospital" by disrupting the routines of subordinate personnel. Responses to the unofficial rules were found to range from overt hostility to identification with the physicians and legitimation of unofficial rules. (L.E.W.)

MN3023 35pp.b.d.R., 8/67

Toomer, John D.
THE NURSE AND THE PHYSICIAN DYAD: EFFECTIVE OR INEFFECTIVE COMMUNICATIONS?
Graduate Program in Hospital Administration, University of California, Berkeley, California, 1967
Available from U.M.I. Xerox $3.00
Film reel #2.18 $6.75

A student paper which explores four aspects of physician - nurse interaction to determine the effectiveness of their communications. Data were gathered from thirty-four questionnaires sent to selected physicians and registered nurses in outpatient clinic and serving a large student population. (S.P.)

MN3024 474pp.b.d.th.Ph.D., 12/67

Adams, Fred Thomas
ROLE ACCOMMODATION: A STUDY OF NURSES AND ATTENDANTS IN A MENTAL HOSPITAL
Tulane University, New Orleans, Louisiana, 1958
Available from U.M.I., document No. 59-1079
Xerox $21.00
Film reel $ 6.05

The central problem considered was "to determine what accommodations nurses and attendants in a modern Southern mental hospital made and to see how such accomodations fitted in with formal demands and expectancies of the reciprocal occupational group".

A group of "reciprocal actors" (eleven nurses, and 104 ward attendants) was studied over an eighteen month period to determine role conception. Interviews, questionnaire, and observations were used.

The roles and statuses were quite clearly defined but the respondents were found not to be accepting or acting roles. The author concluded the role is not determined solely by the process, but "structured within a cultural framework of values, beliefs, and attitudes which are incorporated by the actors during socialization . . ." (L.E.W.)

MN3025 74pp.b.d.th.M.A., 12/67

Holmgren, John Howard
THE QUASI-PUBLIC CHARACTERISTICS OF THE PRIVATE HOSPITAL
Department of Political Science, University of Wichita, Wichita, Kansas, 1962
Available from U.M.I. Xerox $3.35
Film reel #2.18 $6.75

Selected indices of public administration in public and private hospitals were compared to determine to what degree private hospitals are losing their essentially private characteristics and becoming quasi-public in nature. Characteristics of Kansas City General Hospital were compared to a voluntary, private hospital in terms of: finances and clientele; legislative and legal controls; democratic behavior; organizational parallelism; theory of "consent"; rule of immunity; voluntary cooperation on national basis;

local autonomy; flexibility and dynamics of hospital trends; application of public administration theory to hospital administration field. Study found private hospitals exhibited quasi-public characteristics in organizational structure, public responsibility for patient care, non-profit and tax exempt status; degree of semi-political influences exercised by appointed or elected members of Board of Trustees, and dependence on theoretical field of public administration by leaders of voluntary hospital associations. The acceptance of Social Security plan for medical care of the aged is seen as adding to public nature of the voluntary hospital. Appendices are missing. (D.F.B.)

MN3026 141pp.d., 11/67

Georgopoulos, Basil S., Wieland, George F.
NATION-WIDE STUDY OF COORDINATION AND PATIENT CARE IN VOLUNTARY HOSPITALS
Survey Research Center, Institute for Social Research, The University of Michigan, Ann Arbor, Michigan
Available from University Publications, Institute for Social Research, Ann Arbor, Michigan 48106 for $2.00

A report of preliminary results of a nation-wide study of voluntary hospitals "designed to provide the fifty hospitals which participated in the study with information on various aspects of their operation, as seen by people directly associated with each institution".

Data were collected in the last quarter of 1962 through use of questionnaires and interviews. Respondents were mainly from groupings of: non-supervisory R.N.'s; supervisory nursing staff; key medical staff, general medical staff; and department heads. Other persons were also interviewed in certain technical aspects of the study.

Findings were presented about: the hospital(s) in general; the job and work situation; supervision and communication; organizational coordination and intergroup relations; intraorganizational strain; patient care and quality of service; performance of selected groups and departments; adequacy of selected facilities; some aspects of organizational change; selected characteristics of respondents; and reactions of respondent to study.

Results tabulated in percentages showing findings by hospital size, "own" hospital, PAS hospital, national average, regional average, religious-non-religious, and group reaction. (L.E.W.)

MANPOWER

(See also MD, Medical Staff and Medical Care; NU, Nursing Service Department; PE, Personnel Administration; PS, Psychiatric Facilities and Services; PT, Physical Therapy.)

MP0008 98pp.b.d., 8/67

Crichton, Anne; Hardie, Robin
THE NEED FOR MANPOWER PLANNING IN THE HOSPITAL SERVICE
Welsh Hospital Board, "Carville", The Avenue, Llandaff, Cardiff, Wales, 1966
Available from U.M.I. Xerox $4.50
Film reel #2.18 $6.75

Report traces national manpower planning efforts in Wales, United Kingdom, developing from World War II demands. Points up need to extend planning system to social services. Discusses available records and studies on hospital staffing, organizational structure and training functions. (H.M.)

MP0009 114pp.b.d.ill., 10/67

Sturm, Herman M.
TECHNOLOGY AND MANPOWER IN THE HEALTH INDUSTRY 1965 - 1975
U.S. Department of Labor, Manpower Administration Office of Manpower Policy, Evaluation, and Research, Washington, D.C.
Available from original publisher

A study by the Department of Labor on expected relationship between technological advance and manpower in the health service industry during the decade of 1965 and 1975. The report (1) analyzes trends in structure and summarizes major problems in health service employment, (2) identifies the technological developments likely to have an impact on health service manpower and (3) analyzes the combined effect of expected trends in the demand for health services and of technological developments on the structure of health service employment. An appendix is included which contains published sources, statistics, and names of experts in various fields all of which contributed to the study. (A.N.)

MP0010 202pp.b.ill., 12/67

Klutch, Murray
MENTAL HEALTH MANPOWER VOLUME II
Office of Planning, California Department of Mental Hygiene, 1500 Fifth Street, Sacramento, California, 1967
Available from original publisher for $2.00

This volume reviews literature and presents original papers concerning alleviation of current shortages of personnel in mental health professions. A panel of mental health experts evaluate these papers and express their own views. Includes also results of surveys of psychiatric opinions, summary of current research and annotated bibliography. (D.F.B.)

MP0011 37pp.b.d.ill., 1/68

Butter, Irene
HEALTH MANPOWER RESEARCH: A SURVEY
U.S.P.H.S. Contrant No. 108-66-201
Inquiry, Vol. IV, No. 4, December, 1967, pp. 5-41
Available from original publisher

A paper based on a report to the U. S. Public Health Service on a survey of health manpower problems and the research needed in this area. Extensive data are tabulated on employment, distribution and projected needs for manpower in health occupations. The paper attempts to develop a framework for classifying health manpower research. See also MP0005, MP0006, and MP0007 in Volume IV, No. 2. (L.E.W.)

MP0012 72pp.b.d.ill., 1/68

Allied Health Professions Education Subcommittee of the National Advisory Health Council
EDUCATION FOR THE ALLIED HEALTH PROFESSIONS AND SERVICES
Department of Health, Education and Welfare, Washington, D.C., 1967
Available from the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402, for $.45.

A report with tabulated data of a 1966 survey made by the Subcommittee of the health manpower supply and needs, the education and training for the allied health professions (most groups besides physicians and dentists), and the location and outputs of the various educational programs. Recommendations were made for meeting future needs. (L.E.W.)

MP2003 141pp.d., 12/67

Ross, Thomas M.
PHARMACIST MANPOWER IN CANADA
Royal Commission on Health Services, 1966
Available from Queens Printer, Ottawa, Ontario, Canada for $1.50

This study, based on the responses of 5,672 pharmacists to questionnaires, investigates the supply, distribution and demand of pharmacist manpower in Canada and attempts to evaluate the supply of pharmacists in relation to the demand for their services. The study suggests alternatives for meeting this and related problems. Seventy-two tables are included to present data of various types. (A.R.N.)

MP2004 224pp.b.d., 1/68

Manitoba Hospital Commission
REPORT OF THE MINISTER OF HEALTH'S COMMITTEE ON THE SUPPLY OF NURSES
The Province of Manitoba, Winnipeg, Manitoba, 1966
Available from U.M.I. Xerox $10.10
Film reel #2.18 $ 6.75

The committee report of a 1965 study of supply of nurses in various categories in Manitoba, methods of recruitment for education programs, employment status of R.N.'s and L.P.N.'s, of the optimal number of nursing schools consistent with need and availability of clinical resources and faculty. The committee also observed developments in nursing in other provinces. Recommendations were made to the Minister of Health for meeting future nursing needs. The appendix contains an activity study (including coding system) of the nursing department of Winnipeg General Hospital. (L.E.W.)

MEDICAL RECORDS

(See also AC, Accounting and Business Office; and ML, Medico-Legal.)

MR0032 78pp.b.d.ill.th.M.H.A., 1/68

Hanson. Paul W.
DETERMINING THE NUMBER, COST AND STAFFING PATTERN OF MEDICAL RECORD TRANSCRIPTIONISTS
Program in Hospital Administration, The University of Michigan, Ann Arbor, Michigan, 1963
Available from U.M.I. Xerox $3.55
Film reel #2.19 $5.50

A 1963 study made at Mount Sinai Hospital, Cleveland to determine the necessary staff and the cost of expanding dictating - transcription service used by physicians to include admission histories and physicals, and discharge summaries. Previous dictation had been used for surgical summaries.

A daily total of the 1962 admissions, discharges, and surgeries was plotted to determine flow of work and the amount of transcribing required. The work output was estimated against tests of three staff transcriptionists. Projections of staffing and added costs were based on findings. (L.E.W.)

NURSING SERVICE DEPARTMENT

(See also PA, Patient Attitudes; and SC, Specialized Care Units.)

NU0034 6pp.d., 9/67

Bowden, Edgar A. F.
NURSES' ATTITUDES TOWARD HOSPITAL NURSING SERVICE
Nursing Research, Vol. 16, No. 3, Summer, 1967, pp. 246-251
Available from original publisher

A 1963 study of nurses' attitudes in a Hamilton, Ontario, hospital, prompted by high turnover among nurses on intensive care and intravenous therapy assignments. Through interviews and questionnaires, author demonstrated that these positions were viewed as outside the profession by many group members. Nurses in these positions were treated as outsiders, and other nurses lacked detailed knowledge of these jobs. The resulting sense of alienation is presumed to lead to turnover. Data and questionnaire are included. (J.R.G.)

NU0035 94pp.b.d.th.M.H.A., 10/67

Brudvig, Wallace A. D.
A STUDY OF A HOSPITAL OPERATED NURSERY SCHOOL IN RECRUITMENT AND STABILIZATION OF REGISTERED NURSES 1964-1966
Program in Hospital Administration, University of Minnesota, Minneapolis, Minnesota, 1967
Available from U.M.I. Xerox $4.25
Film reel #2.19 $5.50

This is a study of the impact that a hospital-operated nursery school at Mt. Sinai Hospital in Minneapolis, Minnesota has upon the recruitment and stabilization of nursing personnel at the hospital. In December, 1966 sets of questionnaires were submitted to two groups of registered nurses at Mt. Sinai Hospital - those who were married and those who were single - seeking their attitude toward the nursery school. There were 106 responses. The study observes that nurse resignations have remained fairly consistent over a three year period, that there has not been a significant increase in unemployed nurses with children returning to nursing and that there has been a decrease in the use of the nursery school by the nursing staff at Mt. Sinai. The study concludes that the nursery school has little effect upon the recruitment and stabilization of nursing personnel at the hospital. (A.R.N.)

NU0036 112pp.d.ill., 11/67

Ramsden, Gertrude A.; Skeet, Muriel H.
MARRIAGE AND NURSING, A SURVEY OF STATE REGISTERED AND STATE ENROLLED NURSES
National Florence Nightingale Memorial Committee of Great Britain and Northern Ireland, 175 Cromwell Road, London S.W.5, England
Available from original publisher for $1.05

A report of a questionnaire survey conducted by the Dan Mason Nursing Research Committee of Great Britain and Northern Ireland to estimate the proportion of registered and enrolled nurses inactive because of marriage or other reasons and the proportion of those likely to return to nursing and the conditions under which they would return. The study was based on a sample of 5,974 nurses who qualified for the General Register in 1950 and 1959 and for the Roll in 1950, 1954 and 1959. Report shows that about three-fourths of respondents were married and almost half of these were not gainfully employed. It suggests the latter might be a source of nurses to meet the nursing shortage. Wages, hours, attitudes desired by these nurses are discussed. Respondent profile data tabulated and specimens of questionnaires given. (A.N.)

NU0037 8pp.d., 11/67

EARNINGS OF HOSPITAL NURSES, JULY, 1966
Monthly Labor Review, June, 1967, Vol. 90, No. 6, pp. 55-62
Available from the Superintendent of Documents, Government Printing Office, Washington, D.C. for $.75

A report of the average straight-time weekly salaries for seven selected nursing occupations, based on a 1966 survey conducted by the Bureau of Labor Statistics. Included are data for these occupations for the United States, its four major regions and twenty-one selected areas within the United States categorized for all hospitals, short term hospitals, private and governmental (excluding Federal) hospitals. A comparison of data from 1963 and 1966 showing percentage salary increases between these dates is made. (A.N.)

NU0038 169pp.b.d.th.Ed.D., 12/67

VanTrump, William Frederick
DUTIES, COMPETENCIES AND OPPORTUNITIES FOR TRAINED LICENSED PRACTICAL NURSES WORKING IN THE HOSPITALS OF MISSOURI
University of Missouri, Columbia, Missouri, 1961
Available from U.M.I., order number 61-4101
Xerox $7.80
Film reel $2.75

A study made to ascertain the practices of 133 member hospitals of the Missouri Hospital Association in utilizing the services of licensed practical nurses, to determine the level of competency at which the LPN's were performing their duties, and to determine current and future employment opportunities for LPN's. Hospitals supplied information concerning hospital facilities, personnel policies, and staffing. LPN's supplied employment information and supervisors rated LPN's in performance of fifty duties selected as being representative of "high-level nursing care".

LPN's were found to be doing bedside care in 95 per cent of cases. Supervisors rated LPN's higher in competency than the LPN's did themselves, and rated more duties for LPN's than the practical nurses did themselves. Supervisors indicated the extent of illness of patient was not a factor in duty assignment of LPN. Data were given on employment and salaries for Missouri with immediate and projected needs for LPN's stated.

Author concluded: LPN's were performing "a considerable portion of their duties without the direct supervision of professional nurses"; degree of illness no longer a factor in work assignment; LPN schools should place more emphasis on teaching nursing skills; specialized duties infrequently performed can be taught on the job; training facilities for LPN's in Missouri should be increased and wages raised. (L.E.W.)

NU0039 162pp.b.d.th.Ph.D., 12/67

Hill, Marion Elizabeth Hanley
THE PRACTICAL NURSE: ROLE EXPECTATIONS HELD BY RELEVANT GROUPS
Michigan State University, East Lansing, Michigan 1963
Available from U.M.I., document no. 64-7512
Xerox $7.60
Film reel $2.75

The purpose of this study was to identify and clarify the agreement and disagreement of role expectations which the practical nurses, directors of hospitals, medical doctors and three groups of professional nurses: administrators, non-administrators and clinical instructors hold for selected aspects of the duties and responsibilities of the practical nurses. These expectations related to the following areas of practical nursing: general responsibility, bedside, bedside-technical, technical and medical. Intraanalysis of the expected and actual roles of the practical nurses was also included in the study. It was hypothesized that the expected and actual roles of the practical nurses would be defined differently by the different respondent groups.

Practical nurses, directors of hospitals, medical doctors and three groups of registered nurses: administrators, non-administrators and clinical instructors associated with the eight practical nurse centers in Michigan were given a questionnaire dealing with expected and actual role of the licensed practical nurse. Opinions were expressed on a five point scale of intensity varying from "never" to "always". Thirty-three items were selected for intensive analysis. The expected and actual roles of the practical nurse, as seen by the practical nurse, were expected and actual (inter-analysis) role expectations of the respondent groups were compared with those of the practical nurse and agreement and lack of agreement noted.

Significant differences were found between means of certain items pertaining to the expected and actual roles of the practical nurse as seen by the practical nurse. There tended to be more in the area of general responsibility than in the areas of duties.

Significant differences were also found between the means of items pertaining to the expected and actual roles of the practical nurse as seen by the practical nurse and the respondent groups. (Author's abstract, adapted)

NU0040 3pp.d., 1/68

Gordon, Ruby D.
STUDY OF NURSE INJURIES SHOWS NEED FOR BETTER SAFETY TRAINING
Hospitals, December, 1967, Vol. 41, No. 24, pp. 70-72
Available from original publisher

Extensive tabulation of 114 accidents occurring to 630 nursing departmental personnel. Age, class of personnel, cause of accident, month, day of week, and hour of day are included. (J.R.G.)

NU0041 29pp., 1/68

Mauksch, Hans O.
THE ORGANIZATIONAL CONTEXT OF NURSING PRACTICE
THE NURSING PROFESSION: FIVE SOCIOLOGICAL ESSAYS, pp. 109-127, 1966
Available from original publisher, John Wiles & Sons, New York, New York

Organizational analysis of the nurse in the hospital, examining the hospital from the point of view of its impact on the unfolding of the nursing function and of the direction, limits, and climate that it sets for nursing.

Two systems of functions operate interdependently, although separately, within the total complex of hospital patient care. One, medical in nature, is concerned with the direct therapeutic practices and with the process of diagnosis and treatment. This is called here the "cure" process. The other, somewhat less purposive and less clearly identifiable, is the syndrome of functions which can be grouped under the term "care". The nurse's place in these systems, involving various conflicting as well as coordinating roles, is analyzed.

Alternative ogranizational proposals and innovations appearing in recent years are discussed in the light of their potential advantages and shortcomings when gauged against nursing's traditional emphasis. Figures, references. (*Medical Care Review*, Vol. 24, No. 10, pp. 825)

NU0042 278pp.b.d.th.Ph.D., 1/68

Folta, Jeannette Ruth
NURSES' PERCEPTIONS OF ROLE REQUIREMENTS AND ROLE ACTION IN SITUATIONS INVOLVING DEATH IN HOSPITALS
University of Washington, Seattle, Washington, 1963
Available from U.M.I., document no. 64-4501
Xerox $12.60
Film reel $ 3.60

This study is a sociological analysis of how nursing personnel respond to situations of potential threat in the work situation. The potential threat considered is the occurrence of dying and death of patients in hospitals. Inquiry was directed to the perception of death, role requirements, and role action in three hospitals with different philosophical or value orientations. A series of fifty-six hypotheses were tested relating seven designated independent variables to the perception of norms and acts for the solution to interpersonal problems between nurses and dying patients.

Data was collected by group administration of a questionnaire to 426 respondents who were the full nursing personnel of the three hospitals. Supplementary data was collected through the analyses of the procedure and policy manuals of the three hospitals and a select number of interviews.

Formal written role prescriptions were found for the handling of the dead, but no such role requirements existed for the interpersonal relationships of nurses with dying patients. Despite this, in two out of three of the total choices registered in this study, the respondents said they should refer these problems to the internal social system of the organizations. This represented a considerable degree of normative consensus.

The amount of inconsistency between the normative and action perceptions, for the solution of the seven contrived situations which were representative of the threat was slight. (Author's abstract, adapted)

NU0043 181pp.d.ill., 1/68

Crichton, Anne; Crawford, Marion P.
THE LEGACY OF NIGHTINGALE
Welsh Hospital Board, "Carville", The Avenue, Llandaff, Cardiff, Wales
Available from original publisher

A survey of the nurse staffing problems of Welsh hospitals, particularly in the larger acute general District Hospitals. Matrons (Directors of Nursing), Chief Male Nurses, and Tutors (nursing

school faculty) of hospitals with training schools in Shrewsbury and Hereford were sent questionnaires and later interviewed in 1964. In 1965, Matrons and Chief Male Nurses of non-training hospitals were sent questionnaires.

The conclusions of the survey outline the present and changed roles of nurses, nursing administrators and educators, and changed organizational relationships. The state of recruitment, education, and administration of education are all evaluated from data collected. The survey also contains data on the present nursing manpower situation with recommendations for future action. (L.E.W.)

NU1067 51pp.d.ill., 3/67

Commission for Administrative Services in Hospitals
A STUDY OF NURSING TIME REQUIREMENTS FOR PATIENTS OF VARIOUS AGE GROUPS - PILOT LABOR COST STUDY Appendix I - Appendix III
Commission for Administrative Services in Hospitals, 4777 Sunset Boulevard, Los Angeles, California 90027, 1966
Available from U.M.I. Xerox $3.00
Film reel #2.19 $5.50

Appendix I - A study of nursing time requirements by patients grouped by age into over and under 65 groups to produce data for handling the expected influx of over 65 age patients because of new Medicare legislation. The presentation of Appendix I contains a series of charts and simple explanations of studies culminating in the conclusion that "the average daily nursing time requirements for the average patient over 65 years of age is 36.6 per cent greater that the average daily nursing time requirements for the average patient under 65 year of age".

Appendix III - A presentation of the work sampling method used to verify the results obtained above. The actual sampling sheets and verification equations are included but the presentation is less clear as it presents technical materials as a guide for conduct of a similar study. (E.O.M.)

NU1082 9pp.b.d., 7/67

Schmieding, Norma Jean
STUDY OF NURSE ACTIVITY AFTER REMOVAL OF MANAGEMENT FUNCTIONS
Journal of Psychiatric Nursing, November-December, 1966, pp. 531-539
Available from Stuart James Company, Box 204, Bordentown, New Jersey for $1.00 per copy

Non-nursing functions were removed from the duties of two psychiatric head nurses to see if increased time would be spent in direct patient care in a project at the Veterans Administration Hospital at Brockton, Massachusetts. Work sampling of activities and conferences to report on patient contact provided comparative data during a twelve-week study. While little change was noted in direct patient care time, author suggests that higher management direction with more nurses involved might produce further behavioral change. (H.M.)

NU1087 93pp.ill., 9/67

Paetznick, Marguerite
A GUIDE FOR STAFFING A HOSPITAL NURSING SERVICE
World Health Organization, Geneva, Switzerland, 1966
Available in U.S.A. from Columbia University Press, International Documents Service, 2960 Broadway, New York, New York 10027 for $1.25

This guide presents material useful in considering staffing needs for a hospital nursing service. It offers a method for calculating amount and kinds of nursing personnel needed, based on an analysis of nursing work to be done in a hospital ward. Consideration is given to these factors relating to patient care: personal care of the patient; services performed by other hospital departments; physical environment of physician; and ward management of nursing care. Hospital administrative practices relating to nursing are discussed including standards of care, personnel management and techniques of administration. Guide is based on data and opinions collected from 112 nursing, medical and administrative personnel from various countries. Appendices include organizational charts for nursing services in small and medium-sized hospitals, sample of time assignment sheets, and job descriptions of nursing positions. (D.F.B.)

Please see next page

NU1093 41pp.b.d.R., 8/67

Sister Mary Barbara Anderson
A STUDY OF THREE CONCEPTS IN TEAM NURSING
Graduate Program in Hospital Administration, School of Public Health, University of California, Berkeley, California, 1967
Available from U.M.I. Xerox $3.00
Film reel #2.19 $5.50

Report of a study comparing team nursing in a 420 bed acute general hospital to a modified ease approach to nursing care in a 340 bed acute general hospital and 160 bed acute medical hospital. Several types of questionnaires were administered to general duty staff nurses, licensed practical nurses and aides. It was concluded that team nursing neither improves personnel utilization nor increases job satisfaction. Team conferences were found to be dependent upon the ability of the participants and considered not essential to group problem solving.

Bibliography, tables, sample questionnaires included. (R.N.S.)

NU1095 5pp.d.ill., 8/67

Bayer, Alan E.
NURSE SUPPLY: IT'S BETTER THAN WE THOUGHT
The Modern Hospital, Vol. 109, No. 1, July, 1967, pp. 75-79
Available from original publisher

Analysis of data developed by the U.S. Public Health Service and the American Nurses Association to plot the trends in "mix" of diploma, baccalaureate, and associate degree nurses among new registrants and to project total registration for the future. (L.E.W.)

NU1096 81pp.b.ill., th.M.H.A., 9/67

Clark, Lawrence J.
AN ANALYSIS OF NURSING UNIT DRUG AND LABORATORY ACTIVITIES IN TWO HOSPITALS
Program in Hospital Administration, The University of Michigan, Ann Arbor, Michigan 48108 1967
Available from U.M.I. Xerox $3.65
Film reel #2.19 $5.50

A comparative study between the self-contained unit management approach to the provision of laboratory and pharmacy services on a nursing unit, and the traditional method for providing these services. The effect of placing a laboratory technician on a nursing unit to be responsible for the processing of all requests for laboratory is compared to a nursing unit without this laboratory representative.

The effect of the unit dose system of providing drugs to the nursing unit is compared to the traditional method of providing drugs. The study of effect is limited to nursing activity. Comparison was made between University Hospital in Lexington, Kentucky, where the self-contained nursing units were located, and a short term acute hospital also located in Lexington, Kentucky. Analysis of nursing activity patterns revealed that the organization of laboratory services using technical representatives from the laboratory on the nursing unit resulted in a substantial reduction in nursing unit personnel's involvement in laboratory functions. A similar effect cannot be attributed to the centralized unit-dose dispensing program. Statistical findings are presented. Author concludes that the self-contained unit approach may contribute to an overall reduction in nursing personnel time consumed on supportive activities but that further study is required to determine total effect. (S.F.L.)

NU1099 22pp.d., 9/67

Mele, Frank M.
AN INQUIRY INTO THE REGISTERED NURSE SHORTAGE IN ALAMEDA AND CONTRA COSTA COUNTIES
Graduate Program in Hospital Administration, University of California, Berkeley, California 1967
Available from U.M.I. Xerox $3.00
Film reel #2.19 $5.50

Study surveyed by questionnaire amount of turnover and vacancy rates during 1966 of registered nurses in six California hospitals located in Alameda and Contra Costa counties. Results of questionnaire are summarized for each of the hospitals studied, including a descriptive profile of the terminated nurse in each hospital. Procedures hospitals utilized to cut down turnover and recruit new employees are discussed. Results from this study indicate actual quantity of nurses is not so acute as is usually thought and vacancy rates are low. Appendices include questionnaire used and statistical data relating to characteristics of terminating nurses in each of the hospitals studied. (D.F.B.)

NU1102 67pp.d.R., 11/67

Jaco, E. Gartley
EVALUATION OF NURSING AND PATIENT CARE IN A CIRCULAR AND RECTANGULAR HOSPITAL UNIT - Final Report
A report to Hill Family Foundation, 1967
Available from E. Gartley Jaco, Ph.D., Department of Sociology, University of California, Riverside, California 92502

Final report on study which quantitatively evaluated the effects of physical design on patient care and efficiency in the use of nursing personnel in a general hospital. Phase I compared patients needing intermediate care, Phase II patients requiring intensive care and Phase III compared self-care. Ten dependent variables were investigated: type, amount and level of nursing care; nurses' utilization of unit; patient welfare; patient satisfaction; nursing staff satisfaction; physician satisfaction; length of stay; and costs of patient care. Twelve study situations were set up for each level of care in which occupancy and nursing staff levels were varied. Report gives results of findings when all study situations are pooled as well as individual findings for each study situation. Some of the major findings are: (1) In situations where there is a high demand for patient care and a limited nursing staff, the circular unit has more advantages in provision of total patient care than the angular unit. (2) Some types of patients are not suitable for circular unit. (3) Circular unit is designed more for staff convenience than patient convenience. (4) Reducing demands for patient care is more detrimental to morale of nursing staff on circular unit than angular unit. (5) Operational costs are less for circular unit in size studied (twenty-two beds) with equal or better quality patient care than angular unit. It is concluded physical design can lower costs without imparing quality of care depending on psychological, administrative, medical and social utilization of the unit. (D.F.B.)

NU1103 62pp.b.d.th.M.S., 10/67

Underwood, Claire Blout
COMPARISON OF NURSING ACTIVITIES BEFORE AND AFTER IMPLEMENTATION OF THE PATIENT UNIT MANAGEMENT PROGRAM
School of Health Service Administration, University of Alabama, Birmingham, Alabama 1967
Available from U.M.I. Xerox $3.00
Film reel #2.19 $5.50

Study compared proportion of time nurses spent in non-nursing activities before patient unit manager program began and afterwards on a forty-nine bed surgical sub-specialty unit for medically indigent patients at University of Alabama Hospital. Data from a work-sampling study of the unit in 1963, before introduction of Patient Unit Management was compared to a 1966 study of the same unit with a patient unit manager. Study found total patient care activities, direct and indirect, increased from 40.5 per cent in 1963 to 59.2 per cent in 1966. Direct patient care showed greatest amount of increase. In addition, there was a 65.9 per cent decrease shown in unit management activities performed by nursing personnel. Comparisons by day of week, by hour and by worker classification also demonstrate an increase in total and direct patient care and a decrease in unit management activities. Copies of observation sheets used and statistical data from the study are included in the appendix. (D.F.B.)

NU1104 156pp.b.d.th.M.H.A., 10/67

Spang, A. James
A STUDY TO DETERMINE THE ROLE OF THE PATIENT SERVICES MANAGER AS SEEN BY TWO GROUPS OF NURSING SERVICE PERSONNEL
Program in Hospital Administration, University of Minnesota, Minneapolis, MInnesota, 1967
Available from U.M.I. Xerox $7.05
Film reel #2.20 $5.00

The study was based on data obtained by questionnaires from control and sample groups of registered professional nurses and ward secretaries at Charles T. Miller (Minnesota) Hospital and by interviews with the "authority group" consisting of the Assistant Administrator, the Director and Associate Director of Nursing, the In-service Coordinator and her assistant. The control group worked directly with the patient service manager. The other did not.

No significant difference of opinion was found between the control and sample groups as to the expected behavior or expected attributes of a Patient Services Manager, or of the attitudes of the two groups toward the manager, or of the observed behavior of the manager. Differences of opinion were noted among the Patient Service Manager and members of the authority group which prompted the author to conclude the manager's role "has not been defined for everyone". (L.E.W.)

NU1105 72pp.b.d.th.M.H.A., 10/67

Edmands, Clay D.
A STUDY OF THE EFFECTIVENESS OF RECENT SALARY INCREASES ON ATTRACTING THE INACTIVE NURSE BACK TO NURSING
Program in Hospital Administration, University of Minnesota, Minneapolis, Minnesota, 1967
Available from U.M.I. Xerox $3.25
Film reel #2.20 $5.00

This study was made to measure the impact of salary increases late in 1966 in many Hennepin County, Minnesota hospitals as a factor in attracting registered but inactive nurses back tc work. Questionnaires were sent to inactive nurses of the county who were identified in a 1966 study at Fairview Hospital as nurses who either were not interested in returning to work or who might return under certain conditions. Questionnaires were returned by 336 nurses in February, 1967. The study concludes that salary is not a major factor in the decision of whether to return to work or not, that family and personal reasons were more significant. (A.R.N.)

NU1106 8pp.d., 10/67

Hatt, F. M.
ASSESSMENT OF NURSING STAFF ARRANGEMENTS IN A GENERAL HOSPITAL
International Journal of Nursing Studies, Vol. 4, No. 3, August, 1967, pp. 201-208
Available from original publisher

An assessment of nursing organization at St. Mary's Hospital Group of London by an assistant matron. Data concerning the way nursing personnel was utilized were collected for one year. Nurses were observed performing non-professional functions in areas of food preparation and cleaning. Changes were instituted which tended to increase the effective use of nursing time. Accounts of methods of observing activities and effecting changes are mentioned in this report. (A.R.N.)

NU1107 77pp.b.d.th.M.H.A., 11/67

Schmitt, George H.
BIOGRAPHICAL CHARACTERISTICS AND JOB STABILITY OF REGISTERED NURSES
Program in Hospital Administration, University of Minnesota, Minneapolis, Minnesota, 1967
Available from U.M.I. Xerox $3.50
Film reel #2.20 $5.00

The relationship of biographical characteristics to job stability of permanent full-time registered nurses was studied at Palo Alto - Stanford Hospital Center, California. A questionnaire was developed which included forty-eight biographical characteristics. Of these forty-eight, twenty-two were considered significant to job stability at .05 level, using chi-square test. Job stability is defined in study as working at least twenty-four months with each employer. Many of the twenty-two significant characteristics were considered a function of age. Further analysis was made, holding age constant. Six characteristics were found to be significant and unrelated to age, but were considered weak as predictors of job stability for reasons discussed. Study concludes present age and age at time of hire held most value in predicting job stability. The more stable nurses had significantly higher mean age when hired and at the present time. Some of the other significant factors were marital status, number of children and home ownership. Copy of questionnaire used and statistical data are included in the appendix. (D.F.B.)

NU1108 87pp.b.d.th.M.H.A., 11/67

Graham, John A.
A STUDY OF NURSES PREFERENCE FOR SELECTED FRINGE BENEFITS AND THE IMPORTANCE OF FRINGE BENEFITS IN RECRUITMENT
Program in Hospital Administration, University of Minnesota, Minneapolis, Minnesota, 1967
Available from U.M.I. Xerox $3.95
Film reel #2.20 $5.00

Fringe benefit preferences of full time female nurses at St. Luke's Hospital, Milwaukee, were surveyed by questionnaire to determine: (1) if fringe benefits were an inducement to accepting employment at St. Luke's; (2) if fringe benefits are more attractive than comparable additional salary as inducement for employment; (3) importance of fringe benefits if a nurse were looking for employment elsewhere; and (4) preferences for selected benefits. Each of these situations was analyzed by variables of age, marital status, tenure and salary. Study found generally a majority of nurses considered fringe benefits an inducement to accepting employment at St. Luke's and would not have accepted the position if additional salary comparable to fringe benefits had been offered instead. Except for those in the 1 - 3 years tenure group, a majority of nurses indicated they would place more emphasis on fringe benefits now than they would have originally if looking for another job. Ranking of certain benefits varied according to variables tested. Paid vacations and holidays, however, were found to be independent of other benefits and not affected by variables studied. (D.F.B.)

NU1109 73pp.b.d.th.M.H.A., 11/67

Rowland, John E.
NURSING SERVICE TURNOVER AT SAN ANTONIO STATE TUBERCULOSIS HOSPITAL
Baylor University, San Antonio, Texas
Available on loan from Asa S. Bacon Memorial Library, American Hospital Association, 840 North Lake Shore Drive, Chicago, Illinois 60611, 1965

A study made to determine the causes, rates, and costs of voluntary termination of employment of nursing service employees at the hospital. A questionnaire was submitted to 260 former employees who terminated employment during a two year period to determine reasons. Costs were figured on basis of cost of termination of old employees, and the expense of hiring and training replacements. The monthly quit rate was expressed as a percentage of the total employed each month. The primary cause for termination was pay administration - rate of pay, method of pay, and management of payroll. Other principal causes were personnel-management oriented. Total pay administration and personnel reasons accounted for 38 per cent; leaving town, military service, family problems, 25 per cent. Monthly quit rate was over four per cent; cost of turnover to hospital was about $45,000 annually. Text of questionnaire given. (L.E.W)

NU1110 149pp.b.d.th.Ed.D., 12/67

Forest, Betty Lucille
THE UTILIZATION OF ASSOCIATE DEGREE NURSING GRADUATES IN GENERAL HOSPITALS
Columbia University, New York, New York, 1965
Available from U.M.I., dissertation no. 65-14,967
Xerox $7.00
Film reel $3.00

This study was undertaken to ascertain whether associate degree nursing graduates employed in general hospitals in New York City were performing the functions for which they had been prepared in their preservice nursing programs.

The functions of the technically-prepared nurse were identified through a review of the literature and verified by the chairmen of sixty associate degree nursing programs in response to a mailed questionnaire.

Data were collected through the administration of questionnaires to sixty-four associate degree nursing graduates who had no further formal academic preparation and had been employed a minimum of three months in sixteen accredited general hospitals in New York City. Both personal and experiential information were obtained from all graduates. In addition, tape-recorded interviews were held with the nursing service directors in these sixteen hospitals.

Thirteen of the graduates were employed in head nurse positions. The remaining fifty-one graduates who were employed in staff nurse positions provided data concerning their current functions and activities and their preparation for these activities. These data were analyzed to learn whether the graduates were performing the functions for which they had been prepared and if they were performing additional activities. Information provided by the nursing service directors was analyzed to find out reasons for the current utilization of associate degree nursing graduates and to identify the directors' knowledge of the functions for which these nurses were prepared.

The majority of the associate degree nursing graduates were performing functions for which they had been prepared.

The majority reported performing additional activities other than those for which they had received preparation.

Associate degree nursing graduates were considered for promotion on the same basis as other nurses. In making decisions concerning the promotion of staff nurses to head nurse positions, little or no consideration is given to the objectives of the various types of programs in nursing and the preservice preparation of the graduates of these programs. (Author's abstract, adapted)

NU1111 97pp.b.d.p.th.M.H.A., 12/67

Sister Mary Adrian Andrie
A STUDY OF PERSONNEL UTILIZATION ON RECTANGULAR AND CIRCULAR UNITS AT ST. JOSEPH HOSPITAL, DENVER, COLORADO
Graduate Program in Hospital Administration, Xavier University, Cincinnati, Ohio, 1967
Available from U.M.I. Xerox $4.40
Film reel #2.21 $4.75

A study of nursing activity in two circular patient units (twenty-four and twenty-five beds) and a two-part rectangular unit of fifty beds was conducted over a five-day period, December, 1966, keeping staffing patterns in existence prior to study and the patient-mix randomly assigned to the units at this time. Work sampling questionnaires, interviews and Yale Traffic Index were used to gather data. (L.E.W.)

NU1112 19pp.d.R., 12/67

McLean, Margaret D.
ACTIVITY STUDY OF THE NURSING DEPARTMENT OF WINNIPEG GENERAL HOSPITAL
Winnipeg General Hospital, Winnipeg 3, Manitoba, Canada, 1963
Available from U.M.I. Xerox $3.00
Film reel #2.21 $4.75

A 1963 study of nursing activities at Winnipeg General Hospital. Data were collected by a work sampling of all nursing personnel except those of central supply, operating room, outpatient, and casualty. Only one table per se included although data from all analyzed in essay form. Text of the activity coding system included. (L.E.W.)

NU2007 89pp.b.th.M.H.A., 12/67

Swearingen, Lawrence Lee
AN EVALUATION OF AN EXPERIMENTAL REORGANIZATION OF THE NURSING CARE DELIVERY SYSTEM
Program in Hospital Administration, University of Michigan, Ann Arbor, Michigan, 1967
Available from U.M.I. Xerox $2.05
Film reel #2.21 $4.75

An effort to measure impact of a revised job assignment for R.N.s and L.P.N.s which instructed them to work as a two-nurse team and to avoid all duties which were not patient-related and clinical nursing. Although several different measures were undertaken, aimed at nurse satisfaction, patient satisfaction and quality of care, the experimental conditions were severely limited by factors beyond the author's control. Sample sizes were very small and most measures showed no significant change. (J.R.G.)

NU4024 282pp.b.d.th.Ed.D., 12/67

MacLaggan, Katherine Eva
A PLAN FOR THE EDUCATION OF NURSES IN THE PROVINCE OF NEW BRUNSWICK
Columbia University, New York, New York, 1965
Available from U.M.I., dissertation no. 65-10,054
Xerox $12.85
Film reel $ 3.65

This study proposes a plan for the undergraduate education of nurses within the general educational system of the Province of New Brunswick for educating two categories of nurses, differentiated on the basis of educational preparation for the functions which they will perform.

Methodology included: an exploration of geographical, historical, economic and cultural influences on education in the province; a review of the present system of organization and administration of high school and post-high school education, including federal aid to education; an examination of the literature of the past twenty years on pre-specialized nursing education; an examination of reports, minutes, records, and other primary sources pertaining to the study; a survey of the status quo in terms of the quality and quantity of existing nursing education programs, (including, where possible, costs), for the years 1961, 1962 and 1963, using total populations in each year; an exploration of staffing patterns; and an exploration of resources available to the education of nurses.

Analysis of the data leads to the projection, in detail, of two types of nursing education programs, within the general educational system (post-high school) of the province, namely: for the Nurse Grade I and the Nurse Grade II. As well, the education of two new workers in the health services was projected namely: ward keepers and ward secretaries. With the creation of these new workers, it was proposed that the present nursing assistant programs should cease to operate.

The end result was a blueprint for the future, including the identification of the adjustments necessary to the transition from the service-centered and hospital-controlled school of nursing to the education-centered and multi-purpose Institutes for Health Services. An administrative pattern and two university programs, one French and one English, were also presented. The balance in terms of the number of nurses in the groups Nurse Grade I and Nurse Grade II was maintained at 75 per cent and 25 per cent respectively. (Author's abstract, adapted)

NU4034 44pp.d.R., 9/67

Canadian Nurses' Association
STATISTICAL DATA ON SCHOOLS OF NURSING IN CANADA, 1966
Research Unit, Canadian Nurses' Association, 50 The Driveway, Ottawa 4, Ontario, Canada, 1967
Available from original publisher for $.50

Statistical tables for Canadian nursing schools show undergraduate admissions and graduations, summarize nursing schools' programs and sizes, categorize graduate students, and give characteristics of faculty. (B.L.O.)

NU4036 64pp.b.d.th.M.H.A., 10/67

Ferguson, James E.
A COMPARATIVE STUDY OF SELECTED FACTORS TYPICAL OF DIPLOMA, ASSOCIATE DEGREE AND BACCALAUREATE NURSES
Program in Hospital Administration, University of Minnesota, Minneapolis, Minnesota, 1967
Available from U.M.I. Xerox $3.00
Film reel #2.21 $4.75

Selected factors were compared for diploma, associate degree and baccalaureate nurses to determine what kind of educational background produces a R.N. who works for longest period of time in hospitals. A random sample was drawn of 660 nurses from a total of 32,000 in Los Angeles county. Data were obtained from mailed questionnaires, with 52.5 per cent response. Findings indicate that baccalaureate nurses in sample had highest proportion of those who had never worked in a hospital and were not currently working in a hospital. They also showed highest response for category "better job outside the hospital" as a reason for leaving hospital work. Diploma nurses had highest number of nurses working full-time in hospitals. In response to question pertaining to adequacy of education in preparing a nurse for hospital work, diploma nurses showed greatest confidence, followed by associate degree nurses. Baccalaureate nurses had greatest negative response. (D.F.B.)

NU4037 104pp.b.d.th.M.H.A., 11/67

Cushing, John C., Jr.
A COMPARISON STUDY OF ACTIVE VERSUS INACTIVE NURSE REFRESHEES IN RESPECT TO THE INFLUENCE OF CERTAIN FACTORS IN THEIR ACTIVITY STATUS
Program in Hospital Administration, University of Minnesota, Minneapolis, Minnesota, 1967
Available from U.M.I. Xerox $4.70
Film reel #2.21 $4.75

Study surveyed 183 nurses who were inactive registered nurses and enrolled in one of a series of refersher courses sponsored by Manpower Development Program in St. Paul and Minneapolis during 1965-66. There were 134 questionnaires returned and these were divided into two groups of active or inactive in nursing at the time of the survey. Factors associated with personel environment, past working experience, the refresher course, and initial experiences upon resuming nursing were compared for the two groups. Major findings were: (1) Nurses active in nursing were more likely to have husbands in non-professional occupations. (2) Encouraging attitude by husband increases probability that refreshee will be active in nursing. (3) Refreshees with more than three children have more probability of being active in nursing. Other factors related to refresher course and working experiences did not significantly affect probability of being active in nursing. Copy of questionnaire and statistical data developed are included in appendix. (D.F.B.)

NU4038 54pp.b., 12/67

Hamelin, Ingrid
GUIDE FOR IN-SERVICE EDUCATION ON NURSING PERSONNEL
World Health Organization, Geneva, Switzerland 1966
Available from original publisher

This guide was written after a study of the needs of inservice nursing education and a review of the literature. The readership addressed is principally outside United States and Canada. An annotated bibliography is included with most citations in English. (L.E.W.)

NU4039 168pp.b.d.th.Ed.D., 12/67

Simms, Laura Louise
THE HOSPITAL STAFF NURSE POSITION AS VIEWED BY BACCALAUREATE GRADUATES IN NURSING
Columbia University, New York, New York, 1963
Available from U.M.I., document No. 64-4340
Xerox $7.80
Film reel $3.00

Fifty-two baccalaureate nursing graduates were interviewed for opinions about the hospital staff nurse position with reference to preservice education, and perceived deterrents to the practice of five clinical nursing functions: (1) planning and implementing individualized nursing care; (2) teaching patient and family; (3) collaborating with members of the health team; (4) assigning and guiding non-professional assistants; and (5) utilizing intramural and interagency nursing referrals. An almost unanimous response was that a large medical center provided the needed practical training combined with their preservice education to fit them for a leadership position (most frequent meaning "teaching"). (L.E.W.)

OBSTETRIC SERVICE

(See also OU, Outpatient, Emergency, and Home Care.)

OB0027 11pp.b.d., 11/67

Sheps, Mindel C.; Ridley, Jeanne Clare; Lingner, Joan W.
EFFECTS OF SELECTED FACTORS ON NATALITY: QUANTITATIVE ESTIMATION THROUGH SIMULATION
Proceedings on Simulation in Business and Public Health, pp. 176-186, First Annual Conference of American Statistical Association and Public Health Association of New York City, 1966
Available from the American Statistical Association, c/o Miss Natalie Colabro, Look Magazine, 488 Madison Avenue, New York, New York for $4.95

By the use of a simulation model the authors study the effects of the selected factors, fecundability, secondary sterility, pregnancy wastage, postpartum non-susceptibility and mortality upon the reproductive history of birth cohorts of women. Among the conclusions suggested by the authors are: that detailed analysis of variability and mean levels for different subdivisions of data will promote a better understanding of the effects of such factors, that increased efforts of such factors, that increased efforts are needed to secure suitable data from different populations and that similar investigations under a variety of conditions are desirable. (A.R.N.)

OB0028 27pp.b.R., 11/67

Walker, R. G.
AN ASSESSMENT OF THE CURRENT STATUS OF THE "AT RISK" REGISTER
Scottish Home and Health Department, 79 Lauriston Place, Edinburgh 3, Scotland
Available from original publisher

An evaluation of the "At Risk Register" based on a 1966 Scottish Survey. Generally children who run a special risk of physical or mental handicap are to be listed in the "At Risk Register" at birth. Discussion covered list of conditions and diagnoses to be considered applicable, length of period of retention on register, percentage of children practicable to supervise, and responsibilities of various professionals in supervision. (L.E.W.)

OB0029 14pp., 11/67

Program Area Committee on Child Health
REQUIREMENTS FOR DATA ON INFANT AND PERINATAL MORTALITY
American Journal of Public Health, Vol. 57, October, 1967, pp. 1848-1861
Available from original publisher

Discussion of the quality of vital statistics and medical record data for the study of perinatal mortality. Includes recommendations and discussion of research questions. (J.R.G.)

OB0030 157pp.b.d.th.Ph.D., 12/67

Wells, Henry Bradley
METHODOLOGY IN THE ANALYSIS OF PERINATAL MORTALITY - THE PERINATAL MORTALITY EXPERIENCE IN THREE TEACHING HOSPITALS IN NORTH CAROLINA
The University of North Carolina, Chapel Hill, North Carolina, 1959
Available from U.M.I., document no. 59-5592
Xerox $7.40
Film reel $3.00

Medical, biological, and social factors from a pilot study of perinatal mortality are analyzed by several different methods in order to determine which one(s) to recommend for routine use in the analysis of causal and associative relationships in perinatal mortality. The methods used give different results possibly because of differences in underlying mathematical models and varying amounts of efficiency in analysis.

Discriminant analysis and regression analysis are recommended as the methods of choice. These two additive linear models seem best to satisfy intuitive notions of how the multitude of factors interact in causing a perinatal death. In addition, the results obtained by using these models are reasonably consistent with each other and with current obstetric knowledge.

Based upon these methods of analysis, the social and biological factors are not significant when the incidence of medical complications of pregnancy, labor, and delivery are held constant. Birth weight and length of gestation are consistently highly significant in determining outcome. The obstetric complications of pregnancy, labor, and delivery are highly lethal factors. (Author's abstract, adapted)

OB1002 4pp.b.d., 1/68

Hobbs, M. S. T.
SURVEY OF GENERAL-PRACTITIONER MATERNITY UNITS IN ENGLAND AND WALES
British Medical Journal, November, 1967, pp. 287-290
Available from original publisher

The results are given of a questionnaire survey of the 288 general-practitioner maternity units in England and Wales to determine the geographical relationship of G.P. units to consultant (specialist) units; to determine the direct liaison between the two types of units for selection of cases, provision of antenatal care, and complications in labor; and to assess the standard of facilities and equipment in the G.P. units.

Almost half the G.P. units were more than ten miles from a consultant unit. In nearly half the situations there was no formal liaison arrangement, however, consultants visited 74 per cent of cases of difficult labor. Prenatal care seemed to be linked to existence or not of prenatal clinics. One in five G.P. units did not have safe anesthetic facilities; one in three did not have facilities for intubation the newborn. (L.E.W.)

OB3007 9pp.b.d., 10/67

Hilbert, Morton S.; Kirschner, Seymour L.
AUTOCLAVE AND FREE-FLOWING-STEAM SYSTEMS FOR HEAT TREATMENT OF INFANT FORMULA
U.S.P.H.S. Grant No. 1S01FR-05447-01
Public Health Reports, Vol. 82, No. 89, September, 1967, pp. 813-821
Available from original publisher

A free-flowing-steam unit was installed at the University of Michigan School of Public Health, in order to compare the bacteriological results in samples of formulas treated with a commercially available free-flowing-stem equipment with the autoclaving used in many hospitals. Eleven types of formula used each day at the University of Michigan Hospital were subjected to each heat treatment for a period of three weeks. It was found that microbiological sterility was not met by either system. Nonsterile formulas obtained with autoclave however could be attributed to chance, while results from free-flowing-steam were significantly different from sterility values expected by chance. No significant differences between the two systems were reported for nipple inversion. (A.R.N.)

OCCUPATIONAL THERAPY

OPERATING ROOM AND RECOVERY ROOM

(See also AN, Anesthesia and Inhalation Therapy Departments; SC, Specialized Care Units.)

OP1023 41pp.d.R., 12/67

Friedland, Richard
ANALYSIS OF THE SURGICAL SUITE, HARPER HOSPITAL
Community Systems Foundation, 111 North Main, Ann Arbor, Michigan, 1965
Available from U.M.I. Xerox $3.00
Film reel #2.22 $4.00

This 1965 study of the surgical suite of Harper Hospital, Detroit, was made to examine and evaluate the non-medical procedures of the operating suite in order to reduce delays between surgical cases. Three hundred eighty-five surgical procedures were observed, causes for delays between cases determined, and a list of eleven proposed procedural changes made. Tables and graphic representations of data are included. (A.R.N.)

OP1024 22pp.d.R., 12/67

Ludwig, Patric E.
SURGICAL SUITE REORGANIZATION - Report 114-65
Community Systems Foundation, 111 North Main, Ann Arbor, Michigan 48108, 1965
Available from U.M.I. Xerox $3.00
Film reel #2.22 $4.00

A 1965 study made of the surgical suite of Frederick (Maryland) Memorial Hospital because of complaints expressed when the suite was reduced from three to two rooms. The recommendations call for increased authority and responsibility for the supervisor. Suggestions were made for revised suite regulations and for new scheduling procedures. (A.R.N.)

OP1025 5pp.d., 12/67

Braidwood, Rick
OPERATING ROOM UTILIZATION
Community Systems Foundation, 111 North Main, Ann Arbor, Michigan 48108, 1965
Available from U.M.I. Xerox $3.00
Film reel #2.22 $4.00

An analysis shows the average utilization of the operating rooms of Saginaw (Michigan) Osteopathic Hospital to be 45 per cent of available time. Even allowing for special use of certain operating rooms, the reports suggests the present number of rooms is adequate if an equitable schedule is followed. (A.R.N.)

OP1026 25pp.d.R., 12/67

MacLeon, Vernon
OPERATING ROOM STAFFING AND SCHEDULING - Report 315-66
Community Systems Foundation, 111 North Main, Ann Arbor, Michigan, 1966
Available from U.M.I. Xerox $3.00
Film reel #2.22 $4.00

A study of the staffing and work scheduling for the operating rooms of the Church Home and Hospital (Baltimore) with recommendations to improve utilization and reduce costs. (L.E.W.)

OUTPATIENT, EMERGENCY, AND HOME CARE

(See also individual services; HE, Health Services; and MD, Staff and Medical Care.)

OU0046 6pp.d., 10/67

Sanford, Gilbert A.
THE OUTPATIENT EXPLOSION
Maryland State Medical Journal, Vol. 16, No. 6, June, 1967
Available from Medical and Surgical Faculty of the State of Maryland, 1211 Cathedral Street, Baltimore, Maryland 21201, published monthly, $.75 per single copy

Article describing increased use of emergency room-outpatient facilities in Maryland hospitals. The rate of increase in some Maryland hospitals for the last ten to fifteen years is shown and a projection for 1970 made. Reasons given for the increase include decreasing number of general practitioners, increased mobility of population, and physician unwillingness to make home visits. (S.P.)

OU0047 5pp.b.d., 10/67

Taubenhaus, Leon J.; Kirkpatrick, John R.
ANALYSIS OF A HOSPITAL AMBULANCE SERVICE
Public Health Reports, Vol. 82, No. 9, September, 1967, pp. 823-827
Available from original publisher

Results of a study carried out for a ten-week period by Boston City Hospital's ambulance service. Using the ambulance attendant's records of 432 selected trips, analysis shows that only 28 per cent of the trips were emergencies; police vehicles were generally used for emergency service. The hospital ambulance service was more often used as a transportation link between medical care facilities; authors discuss implications for equipment and personnel planning. (S.P.)

OU1018 83pp.b.d.th.M.H.A., 10/67

Miller, Bruce J.
A COMPARATIVE STUDY OF THE UTILIZATION OF DIAGNOSTIC LABORATORY PROCEDURES IN A SELECTED GOVERNMENTAL OUT-PATIENT CLINIC AND A PRIVATE PHYSICIAN'S CLINIC
Program in Hospital Administration, University of Minnesota, Minneapolis, Minnesota, 1967
Available from U.M.I. Xerox $3.75
Film reel #2.22 $4.00

Amount of diagnostic laboratory procedures ordered for 116 outpatients in a private physician's metabolic clinic were compared to those ordered for 116 diabetic outpatients in a governmental diabetic clinic, using a weighting factor to measure utilization. Sample patients were over 40, had at least three clinic visits, and had not expired or been hospitalized during study period of January 1, 1965 through December 31, 1965. Initial visit of sample patients occurred before January 1, 1965. Study found significantly higher mean weighted laboratory test value for private physician's clinic than governmental clinic. Also at both clinics, physicians ordered more laboratory procedures for private paying patients than welfare recipients. Distance of residence from the clinic was not found to affect amount of laboratory procedures ordered. (D.F.B.)

OU1019 43pp.b.d.th.M.H.A., 12/67

Sister Mary Camille
FISCAL POLICIES IN THE MERCY HOSPITAL OUTPATIENT CLINIC
Graduate Program in Hospital Administration, Xavier University, Cincinnati, Ohio, 1966
Available from U.M.I. Xerox $3.00
Film reel #2.22 $4.00

This evaluation of fiscal policies in Outpatient Clinic at Mercy Hospital, Pittsburgh, included analysis of financial criteria for eligibility, rate structure, charging and collection procedures, accounting procedures and third-party reimbursement. Clinic served moderate to low-income group of people. Study found Clinic extended credit liberally, and collection and billing were done haphazardly, with no financial controls. Data on five outpatient clinics in surrounding areas are presented for comparative purposes. Study recommends adoption of cost accounting system relating costs to charges, initiation of registration-billing forms, evaluation of collection philosophy and installation of cash register for internal controls. (D.F.B.)

OU1020 70pp., 1/68

Stewart, Rosemary; Sleeman, Janet
CONTINUOUSLY UNDER REVIEW
G. Bell and Sons, Ltd., York House, Portugal St., London, W.C.2, England, 1967
Available from original publisher for $2.00

Report of an investigation of the effect of an official bulletin sent to hospital management committees in England and Wales suggesting waiting time standards for patients visiting outpatient clinics. Waiting time maximums were put at two weeks for an appointment, and one-half hour in the clinic. Of a sample of thirty hospital committees interviewed, eleven had a "positive approach" to the circular, nine did "almost nothing" and the remainder "came in between". Excessive waiting time was blamed on lateness of physicians, and making more appointments than could be cared for in allotted span of time. (L.E.W.)

OU1021 125pp.d.ill., 12/67

Community Service Society of New York
A SURVEY OF TUBERCULOSIS PATIENTS IN THE SOUTH BRONX
Community Service Society of New York, 105 East 22nd Street, New York, New York 10010, 1966
Available from original publisher for $2.00

New York Community Service Society studied self-care health practices of 206 tuberculosis outpatients of Bronx Mott Haven Chest Clinic in 1962. Patients in sample were between 15 and 45, registered for treatment after January 1, 1959, living with immediate family and not active and contagious carriers of TB at time of interviewing. Typical patient was married, in early 30's, of Puerto Rican back ground, did not attend high school and had very modest income. Study found most serious impact of TB was its upsetting effect on patient's family and family relationships. One-fourth of patients were judged in poor health and showed signs of backsliding For seriously ill patients, study found cooperation of patients extremely necessary for satisfactory improvement, as only three out of ten non-cooperative patients made regular progress. Two items of the most gross non-cooperative behavior were unauthorized departures from hospital and persistent delinquency at the Clinic. Findings indicate TB is a lower class disease and patients do not get enough emotional support from doctors and clinical staff. Patients' knowledge of the disease was lacking and they saw a stigma attached to the disease. It is concluded social, economic and emotional problems are contributing to an increase of TB in lower classes. (D.F.B.)

OU3048 5pp.b.d., 9/67

Ryder, Claire F.; Frank, Bernard
COORDINATED HOME CARE PROGRAMS IN COMMUNITY HEALTH AGENCIES - A DECADE OF PROGRESS
American Journal of Public Health, Vol. 57, No. 2, February, 1967, pp. 261 - 265
Available from original publisher

A survey of the coordinated home care agencies in community health agencies and their progress since 1955. Surveys made in 1960 and 1964 showed doubling of number of agencies in that period alone. Potential for doubling caseload seen. (L.E.W.)

OU3049 6pp.d., 10/67

Hanchett, Effie; Torrens, Paul R.
A PUBLIC HEALTH HOME NURSING PROGRAM FOR OUTPATIENTS WITH HEART DISEASES
Public Health Reports, Vol. 82, No. 8, August, 1967, pp. 683-688
Available from original puplisher

A two and one-half year study was conducted at St. Luke's Hospital Center in New York City to determine if the rate of admission to the hospital for congestive heart failure could be reduced by adding anticipatory public health nursing follow-up to the outpatient clinic routine.

The addition of this nursing followup was accompanied by a reduction in the rate of admission to the hospital for congestive heart failure for the 126 study group patients as compared to the rate of admission of the 113 control group patients. (Author's Abstract)

OU3050 6pp.b.d., 10/67

Lemon, Genelle M; Welches, Lois
SURVEY OF WELFARE CLIENTS TO DETERMINE NEED FOR HOME HEALTH AIDES
Public Health Reports, Vol. 82, No. 8, August, 1967, pp. 729-734
Available from original publisher

To determine the need for personal care services in the home among welfare recipients in Contra Costa County, California, social service case records were reviewed for all clients receiving attendant services in September, 1966. Validity of this method was subsequently confirmed when public health nurses made home visits to assess the needs of a subsample of the patients surveyed and concurred with thirty-five of forty evaluations made from a review of the records. Of a total of 821 clients, attendant care clearly was necessary for 715. Of these, 63.9 per cent apparently required primarily domestic services and 36.1 per cent will need home health aide services. (Author's Abstract)

OU3051 6pp.d., 11/67

Allen, David
HEALTH INSURANCE FOR THE AGED: PARTICIPATING HOME HEALTH AGENCIES
Social Security Bulletin, September, 1967, pp. 12-17
Available from original publisher

A survey of the home health services offered by the 1,800 home health agencies certified for participation under the Medicare program as of March 31, 1967. One tabulation shows the number and percentage distribution of participating home health agencies by type of agency, geographic division, and state. A second table shows the number and percentage of persons enrolled in the hospital insurance program and of participating home health agencies by geographic division. Another table shows the number of participating agencies and the per cent offering selected services by geographic division and state. Another gives number and percentage distributions of states and territories offering specified services. (L.E.W.)

OU3052 22pp.d.R., 11/67

Home Care Program for Metropolitan Toronto, Inc.
SECOND ANNUAL REPORT
Home Care Program for Metropolitan Toronto, Inc., 2195 Yonge Street, Toronto 7, Ontario, Canada
Available from original publisher

A report for the fiscal year ending March 31, 1966 of the home care program caring for 217 community-initiated and 1,311 hospital initiated patients. Data are presented showing patient characteristics, family composition and place of care, sources of family income, ability to pay, sources of referral, amounts and costs of services, and discharge information. (L.E.W.)

OU3054 242pp.d.ill., 12/67

Holliday, Jane
PUBLIC HEALTH NURSING FOR THE SICK AT HOME - A DESCRIPTIVE STUDY
U.S.P.H.S. Grant No. NU 00045-03
Visiting Nurse Service of New York, 107 East 70th Street, New York, New York 10021, 1967
Available from original publisher

In this study interviewers gathered opinions on home nursing care offered by the Visiting Nurse Service of New York from field staff nurses, patients, and family members and friends of patients. Staff members were evaluated on personal and professional data from the interviews. The study also presented patients' characteristics, opinions, likes and dislikes concerning their homebound status. (H.M.)

Please see next page

OU3055 8pp.d., 12/67

Stiefel, Joseph B.
USE AND COSTS OF AHS COORDINATED HOME CARE PROGRAMS
Inquiry, Vol. 4, No. 3, October, 1967, pp. 61-68
Available from original publisher

Reports the experience of New York's Associated Hospital Service Home Care programs based on hospital agreements which provide nursing service through local community agencies. Tabulations on subscriber use since 1960 give data on first 5,000 cases including breakdowns by age, diagnosis, outcome and comparisons with inpatient hospital care. Growth trends are shown, with estimates of hospital days saved and value. (H.M.)

OU3056 8pp.d., 12/67

Mather, William G.; Hobaugh, Robert J.
PHYSICIAN AND PATIENT ATTITUDES TOWARD A HOSPITAL HOME CARE PROGRAM
Inquiry, Vol. 4, No. 3, October, 1967, pp. 47-54
Available from original publisher

A study of factors affecting acceptance of a hospital-based program of Home Care among physicians, patients and community health leaders. Data obtained by interview questionnaire compared professional characteristics and reactions to programs of user and non-user physicians. The study indicated that favorable response by the professional health community was frequently related to the degree of advance information and involvement in the program's early planning stages. (H.M.)

OU3057 6pp.d., 12/67

Gee, David A.
COST FACTORS IN A HOSPITAL-BASED HOME CARE PROGRAM
Inquiry, Vol. 4, No. 3, October, 1967, pp. 55-60
Available from original publisher

Discusses several factors involved in computing costs of a Home Care program which negate direct comparison with hospital costs. Potential capital cost savings can be measured but operating costs may differ considerably, the author feels. Length of stay is a variable affected by social and medical conditions of the caseload. Therefore, estimates cannot be accurately based on per diem or per visit costs. (H.M.)

OU3058 10pp.ill., 12/67

Greenlick, Merwyn R.; Burke, Donald W.; Stitt, Pauline G.
THE DEVELOPMENT OF A HOME HEALTH PROGRAM WITHIN A COMPREHENSIVE PREPAID GROUP PRACTICE PLAN
Inquiry, Vol. 4, No. 3, October, 1967, pp. 31-40
Available from original publisher

The organized system of a prepaid group practice health plan offers an ideal setting for a project to develop and test the integration of Home Care services, the authors feel. Ongoing information and inpatient data systems for 100,000 Oregon members of the Kaiser Foundation Health Plan were utilized to develop hypotheses. Article discusses the decision making procedures for referral and various dimensions to consider in evaluating need for hospital extended care or home health services. No data. (H.M.)

OU3059 26pp.d., 12/67

Griffith, John R.
MCPHERSON COMMUNITY HEALTH CENTER HOME CARE PROGRAM
Inquiry, Vol. 4, No. 3, October, 1967
Available from original publisher

Article describing home care department established as part of the hospital's planned six levels of progressive patient care services. Data summarizes details on costs, distribution of patients and diseases, length of stay and services. The program is an economical and feasible alternative to institutional care, but as in the case of other small hospital programs studied, financial reimbursement does not yet (1964) meet the costs of operating the Home Care program. (H.M.)

OU3060 14pp., 12/67

Buxbaum, Richard J.
BLUE CROSS PROVISION OF COORDINATED HOME CARE BENEFITS
Inquiry, Vol. 4, No. 3, October, 1967, pp. 69-82
Available from original publisher

Survey in April, 1967 of all Blue Cross Plans furnished details on the coordinated Home Care benefits offered by seventeen Plans. Charts illustrate discussion of reported expenses, services and claims paid, and data collected. (H.M.)

OU3061 26pp.d.R., 12/67

Home Care Program for Metropolitan Toronto, Inc.
THIRD ANNUAL REPORT - APRIL 1, 1966 TO MARCH 31, 1967
Home Care Program for Metropolitan Toronto, Inc., 2195 Yonge Street, Toronto 7, Ontario, Canada, 1967
Available from original publisher

The report covers the Toronto home care program in which thirteen hospitals participated and 2,086 cases were handled for the period. The tabulated data are classified under costs, referral sources, days of services, estimated hospital days saved, diagnoses of patients, services rendered, patient characteristics, reasons for discharge and disposition of patients discharged as major categories. The tabulated data are evaluated. (L.E.W.)

PATIENT ATTITUDE

(See also CO, Community Attitudes and Public Relations; MD, Medical Staff and Medical Care; ML, Medico-Legal; and NU, Nursing Service Department.)

PA0020 3pp.d., 8/67

Dean, D. J.; Watson, J. P.; Whitehead, J. A.; Casson, P. D.
PATIENTS' VIEW OF A PSYCHIATRIC HOSPITAL
Nursing Times, Vol. 63, No. 27, July 7, 1967, pp. 887-889
Available from original publisher

Account of a survey designed to measure patients' satisfaction with their stay at a large psychiatric hospital in the United Kingdom. The authors conducted the interviews, asking pre-determined questions on the day of discharge, in the hope of establishing a guide for a standard of care; included are sample questions, tables of results, and discussion. (S.P.)

PA0022 100pp.b.d.ill.th.M.H.A., 10/67

Linville, Fred E.
AN INVESTIGATION OF THE ATTITUDE OF ADOLESCENTS TOWARD THEIR HOSPITALIZATION
Program in Hospital Administration, University of Minnesota, Minneapolis, Minnesota, 1967
Available from U.M.I. Xerox $4.50
Film reel #2.22 $4.00

Study compared attitudes of adolescents hospitalized in a special youth unit at Children's Hospital, San Francisco with those in a general nursing unit at nearby St. Mary's Hospital toward various aspects of hospitalization. Attitudes of male and female adolescents were compared. Findings from this study were compared to similar earlier study done in 1962. Sample included all adolescents, age 12 to 20, admitted from December 21, 1966 through January 31, 1967. No significant differences were found for: groups on two different nursing units; male and female adolescents; weekday vs. weekend hospitalization; holiday vs. non-holiday hospitalization; and attitudes at admission and discharge times. Although patients on youth floor expressed more dissatisfaction with interest shown by nursing staff and amount of activity available, author observed youth floor patients to be more relaxed in a hospital setting than those of the general nursing unit. Findings also indicate male adolescents resent establishment of too many rules. Some differences between this study and earlier one are noted. Appendices include questionnaire used and statistical data from study. (D.F.B.)

PA0023 73pp.b.d.th.M.H.A., 10/67

Myers, Charles G.
A QUANTITATIVE STUDY OF PATIENT PREFERENCE TOWARD HOSPITAL ROOM ACCOMMODATIONS IN AN AIR FORCE HOSPITAL
Program in Hospital Administration, University of Minnesota, Minneapolis, Minnesota, 1967
Available from U.M.I. Xerox $3.30
Film reel #2.23 $4.25

A study of room preference of patients of 360-bed Keesler Air Force Hospital based on data collected from questionnaire completed by 657 impatients discharged in September and October, 1966. Distributions were made of data reflecting preferences of patient by classifications of: age; education; sex; marital status; type of service; military or non military dependents; race; and geographic area of origin.

The totals showed preference for private rooms to be 16.5 per cent; two-bed rooms, 38 per cent; four-bed rooms, 28 per cent; multiple rooms, 17.5 per cent. There were variations according to patient characteristics. The pattern of preferences was different from the distribution of rooms at Keesler. (L.E.W.)

PA0024 124pp.b.d.th.M.H.A., 10/67

Green, Riley M., Jr.
A STUDY OF HOSPITAL VISITING FROM THE PATIENTS' VIEWPOINT
Program in Hospital Administration, University of Minnesota, Minneapolis, Minnesota, 1967
Available from U.M.I. Xerox $5.60
Film reel #2.23 $4.25

Visiting preferences of 853 inpatients at Rochester Methodist Hospital, Minnesota were studied to determine relationship between six patient-oriented aspects of visiting and fourteen patient characteristics. Variations in these relationships were further analyzed by three degrees of consanguinity between patient and visitor: immediate family; good or close friend; and other friends and acquaintences. Data were obtained from written questionnaires. Some major conclusions of study are: (1) there should be no limit on length of visits by immediate family, but not over one hour for good friends and one-half hour for other friends; (2) patients felt good friends and other acquaintences should be restricted to one or two visitors at a time; (3) patients preferred meal times and afternoon rest period be free from all visitors except for immediate family; and (4) majority of patients preferred their visitors to leave while they were being assisted by a nurse. Specific visiting policies are recommended based on findings from study. Appendices include questionnaire used and tables of statistical data computed in analyzing results of study. (D.F.B.)

PA0025 15pp., 10/67

Raphael, Winifred
DO WE KNOW WHAT THE PATIENTS THINK? A SURVEY COMPARING THE VIEWS OF PATIENTS, STAFF AND COMMITTEE MEMBERS
International Journal of Nursing Studies, Vol. 4, No. 3, August, 1967, pp. 209-223
Available from original publisher

Report of a survey conducted in the United Kingdom to compare the view of patients about their conditions with the views of hospital personnel about conditions for patients. The unstructured individual interview conducted by an interviewer not associated with the hospital was the survey method selected to sample opinions of patients and staff personnel of four general non-teaching hospitals, one from each of the Metropolitan Regions of London. Survey shows that most patients were satisfied with the care they received and that they felt the most urgent improvements needed were in matters dealing with ways of passing time. On the other hand hospital personnel felt that patient care was unsatisfactory and that the most urgent improvements needed were in areas of patient care and physical environment. Survey concludes that many of the improvements most often suggested by patients would be introduced with little expenditure of money. Tables, numbers, and types of people interviewed, distribution of ratings by groups and important areas of change are included in the report. (A.R.N.)

PA0027 199pp.b.d.th.Ph.D., 12/67

Sister Mary Margarella O'Neill
THE PATIENT ROLE: ANALYSIS OF SELECTED SOCIAL VARIABLES WHICH INFLUENCE RESPONSE TO ROLE SOCIALIZATION IN THE GENERAL HOSPITAL
The Catholic University of America, Washington, D. C., 1966
Available from U.M.I., document no. 67-1268
Xerox $9.00
Film reel $3.00

The report of a study conducted on a random sample of 100 male patients with a somatic illness hospitalized in a general hospital to determine the behavioral response to role socialization in the hospital.

The tool used to elicit behavioral response to adult socialization was Patient Response to Role Socialization Inventory, designed to measure four socio-cultural factors. These were indexes of family orientation, occupational responsibility, value, and social position. The degree of illness was considered to have a relationship to response to role socialization also.

Author concluded the "findings revealed that family and occupational role deprivation did not affect significantly the pattern role response patterns in the hospital, but factors associated with social class, cultural orientation and degree of illness had very significant bearing on behavioral response to learning the patient role". (L.E.W.)

PEDIATRIC HOSPITALS AND DEPARTMENTS

PERSONNEL ADMINISTRATION

(See also individual departments, AB, Administrator and Board; MN, Management Science; MP, Manpower.)

PE0037 125pp.b.d.th.M.H.A., 9/67

Howard, John K.
HOSPITAL EMPLOYEE PATTERNS OF SICK ABSENCE
Program in Hospital Administration, The University of Michigan, Ann Arbor, Michigan 48108, 1967
Available from U.M.I. Xerox $5.65
Film reel #2.23 $4.25

An exploratory study to discover what patterns exist in hospital employee sick absence which might be useful as management tools.

Two basic questions were asked: (1) Does sick absence as observed in certain hospital departments exhibit definite patterns in retrospective or concurrent time periods? (2) Can the prospective time of occurrence, group affected, and amount of sick absence be predicted?

Departments studied were nursing, housekeeping, laundry and dietetics. The job classification of "aide" in each of the four departments provided a comparison of absence between departments for a similar group of employees. The nursing department was studied in its entirety for comparison of absences between professional groups within one department. A third grouping for study was six separate groups of aides in the dietetic department, all of whom had different supervision. The organizational setting was Harper Hospital, Detroit, Michigan, a private, voluntary, non-profit general hospital with seven hundred beds and 1,650 full-time employees. A sample group of 754 employees were selected for analysis.

The number of sick days for any group in the nursing department is subject to variation of as much as fifty per cent increase or decrease from month to month. A seasonal pattern of sick leave usage exists for the number of persons absent, but not for total days absence. The lowest skilled employees show a more consistent and pronounced seasonal pattern. Between 80 and 90 per cent of all absences are one day in length, and the most "absent days" are Saturday and Sunday. A comparison among six homogeneous groups of dietetic workers produced marked evidence of variation within a single department among different supervisors. Repeatable patterns were found to exist which can be identified with a particular group of employees though the exact time of occurrence of particular patterns is difficult to predict. A series of recommendations for improving management information of sick absence utilization and for improvement of the pattern of sick absence are presented. (S.F.L.)

PE0038 112pp.b.d.th.M.H.A., 10/67

Ferrell, Edward Shinault
INSTRUMENTS FOR PREDICTING TURNOVER AND ABSENTEEISM OF HOSPITAL EMPLOYEES
School of Health Services Administration, University of Alabama, Birmingham, Alabama, 1967
Available from U.M.I. Xerox $5.05
Film reel #2.24 $6.75

A study of turnover and absenteeism as functions of age, sex, education, marital status, salary, race and dependents was made of fulltime employees at University of Alabama Hospital for two periods of time during January 1, 1964 through August 31, 1966. Employees were classified into three skill levels which are described and then sub-classified for above mentioned factors. Skill levels by gross classification as to training were: (1) high school not necessary; (2) high school or technical training; (3) college education or extensive experience. Study found at lowest skill level greatest employee stability is secured by hiring older people. At this level however, absenteeism tends to increase with age. In skill levels two and three turnover rates decreased with age. Absentee rates were somewhat irregular, but pattern suggests rates are lowest for youngest and oldest employees. Turnover rates for white males under 25 were extremely high in skill levels one and two, but fairly stable in level three. Study found virtually no non-white males employed for skill levels two and three. Generally for white females there is pattern of lower turnover as skill level and age increase. Non-white females' turnover rate is highest at highest skill level and several possible reasons for this are discussed. Appendix includes numerous tables of statistical data comparing skill levels by various factors studied. (D.F.B)

PE0039 45pp.d.R., 10/67

Ammer, Dean S.
INSTITUTIONAL EMPLOYMENT AND SHORTAGES OF PARAMEDICAL PERSONNEL
U.S.P.H.S. Grant No. CH 00146
Bureau of Business and Economic Research, Northeastern University, Boston, Massachusetts, 1967
Available from original publisher for $1.50

Study designed to make a broad survey of paramedical personnel employed by Northeastern University and the Greater Boston area hospitals. Analysis of over-all employment covers thirteen major groups of skills and thirty-three job classifications; employers include all licensed hospitals, nursing homes, clinics, infirmaries, and medical laboratories. Data show that demand for paramedical personnel will increase faster than supply; results will be used in planning new training programs for paramedical skills. (S.P.)

PE0040 90pp.b.d.th.M.H.A., 11/67

Clarke, Kenneth R.
AN ANALYSIS OF THE ASSOCIATION OF EMPLOYEE ATTITUDES WITH SPECIFIC EMPLOYEE CHARACTERISTICS IN A HOSPITAL SETTING
Program in Hospital Administration, University of Minnesota, Minneapolis, Minnesota, 1967
Available from U.M.I. Xerox $4.05
Film reel #2.24 $6.75

Attitudes of 566 employees and forty-two supervisors of San Jose Hospital (California) were surveyed by questionnaire to determine if differences exist according to factors of sex, department, length of employmen, education, shift worked, and whether full or part-time. Responses to twenty-five questions concerning administrative practices, supervision, working conditions, and job satisfaction were scored from 0, strongly negative, to 4, strongly positive. Study found no significant differences in attitude according to sex, education or full or part-time status. Certain departments showed significantly more positive attitudes and several demonstrated significantly more negative attitudes. Supervisors, employees with five or more years service, and employees of day shift exhibited significantly positive attitudes. Questionnaire included. (D.F.B.)

PE0041 84pp.ill., 12/67

Rogers, Charles A.
A GUIDEBOOK TO PERSONNEL POLICIES, PRACTICES, AND PROCEDURES
Michigan Hospital Association, 2213 East Grand River, Lansing, Michigan 48912, 1967
Available from original publisher for $6.00

A reference for hospitals developing programs of personnel administration. Topics covered in this guide are: conditions essential to effective personnel administration; personnel organization and payroll cost; salary scales and administration policies; fringe benefits; employee services, privileges and benefits; work scheduling; rules; staffing; personnel administration; grievance procedures; personnel records; interrelationship of personnel and other departments, including work simplification; and community relations. Appendix includes job descriptions of director of nursing service, head nurse, and orderly. (D.F.B.)

PE0042 8pp.b.d., 12/67

Mann, K. J.; Abramson, J. H.; Camrass, I.; Alon, J.
WORK INJURIES IN A MEDICAL ORGANIZATION
Archives of Environmental Health, Vol. 15, November, 1967, pp. 554-561
Available from the American Medical Association, 535 North Dearborn Street, Chicago, Illinois 60610 for $1.25 per copy

A study work injuries sustained by the personnel of the Hadassah Medical Organization in Jerusalem, Israel, during a ten-year period (1955 to 1965). The study was based upon routine records.

The mean annual injury rate was 7.9 per 100 workers. There was a marked rise in the annual injury rate during the period studied. The occurrence of injuries was related to month, day of the week, hour of the day, occupational category, sex, and possibly length of service. The severity of injuries was related to occupational category and age.

The practical implications of the findings are discussed. Consideration is given to the possibility that the rise in the incidence rate was related to the growth and consolidation of the institution during this period. (Editor's Abstract)

PE0044 296pp.b.d.th.Ph.D., 12/67

Levey, Samuel
CONFLICT AND ORGANIZATION: SOME ASPECTS OF CONFLICT IN HOSPITALS
State University of Iowa, Iowa City, Iowa, 1961
Available from U.M.I., dissertation no. 61-1926
Xerox $13.50
Film reel $ 3.80

A major object of this work is to locate disruptive factors in the hospital enterprise with eventual perspective directed toward reappraisal and re-evaluation of existing structures.

The investigation is based on responses to a questionnaire and subsequent limited interviews. The respondents are categorized in terms of three major hospital groups: administrators, directors of nursing service, and physicians.

Conflicts of attitude and ideology may account for a major proportion of the group and interpersonal differences which arise in the hospital. It is proposed that resolution of such conflicts must be primarialy founded upon: (1) superior strength of educational back ground among professionals and paramedical personnel in the hospital, and (2) excellence of management in the organization. (Author's abstract, adapted)

PE0047 136pp.d.ill., 1/68

Crichton, Anne; Crawford, Marion P.
HOSPITALS IN TRANSITION
Welsh Hospital Board, "Carville", The Avenue, Llandaff, Cardiff, Wales
Available from original publisher

A survey made to determine the readiness of the staff employed in food, laundry and plant services "in Welsh hospitals to meet the change proposed by the hospital plan". Questionnaires and interviews were issued to elicit information on attitudes and opinions of 324 personnel (mainly supervisory) of engineering and maintenance, dietary, housekeeping, and laundry departments in respect to planned and anticipated changes in building and operation: age, training, and deployment of personnel were also noted. The committee used survey findings as a basis of recommendations to the Ministry for training in craft skills and management, for recruitment, promotion, working conditions, salaries, and for communication of opinions of departmental managers upward in the hierarchy. See also PE0049. (L.E.W.)

PE0049 110pp.d.ill., 1/68

Crichton, Anne; Crawford, Marion P.
DISAPPOINTED EXPECTATIONS?
Welsh Hospital Board, "Carville", The Avenue, Llandaff, Cardiff, Wales
Available from original publisher

The report of a survey of professional and technical staff members (excluding physicians, nurses, and administrators) of hospitals in Wales as part of the Ten Year Hospital Plan for Wales. Thirty categories of staff members were studied. Information was gathered by questionnaires and interviews and included data on personnel policies, recruitment, training, training schools, salaries and grading, promotion policies, deployment, and attitudes. See also PE0047. (L.E.W.)

PE1014 322pp.d.R., 10/67

Gross, Llewellyn A.; Yeracaris, Constantine A.; Grosof, Elliott H.
SOCIAL CAUSES OF LABOR TURNOVER IN MODERN HOSPITALS
U.S.P.H.S. Grant No. HM-00123
Department of Sociology, State University of New York at Buffalo, Buffalo, New York, 1966
Available from U.M.I. Xerox $14.50
Film reel #2.24 $ 6.75

Report summarizes major findings of a four year study of total personnel in one hospital and selected samples from three others. The following types of data were obtained to determine most likely factors associated with labor turnover in the modern hospital: organizational characteristics of employment; demographic characteristics; social characteristics; socio-psychological characteristics of organizational behavior; and orientation toward social norms. Report evaluates incluence of each factor on participant's behavior individually. Both general and specialized theories of labor turnover are then presented as interpretations of the findings. The specialized theory offers a status-linked theory of labor turnover. Intra-organizational mechanisms are viewed as anchoring individuals in the organizational setting. The three types of anchorage related to labor stability in decreasing order are: authority anchorage, co-worker anchorage, and clientele anchorage. The relationship of low, intermediate and high status groups to anchorage mechanisms is described. The general theory of labor turnover holds the more constant, similar and close the relationship between the environment of persons, things and symbols and a participant's actions and attitudes, the more likely will he remain in it. Therefore, those quickest to move from job to job are those whose group ties are different, inconstant and distant. Specific applications of those principles to empirical findings of this study are presented. Included is a case application of the general theory. Appendices include description of methodology, a few working papers on marginal interpretation, propositional summary of all findings and tabular summary of the data. (D.F.B.)

PE1015 56pp.b.d.ill.th.M.P.H., 12/67

Scott, Walter E., Jr.
HOSPITAL RECRUITMENT AND EMPLOYMENT PRACTICES COMPARED WITH ANNUAL TURNOVER RATES OF NURSE AIDES AND ORDERLIES
Graduate School of Public Health, University of Pittsburgh, Pittsburgh, Pennsylvania, 1965
Available on loan from Asa S. Bacon Memorial Library, American Hospital Association, 840 North Lake Shore Drive, Chicago, Illinois 60611, 1965

A study made in ten non-federal short-term general hospitals of approximately 200 beds each in Pittsburgh area to relate, if possible, the hiring procedures used by the various hospitals to the annual personnel turnover rate of nurse aides and orderlies.

Interviews were held with personnel officials of the hospitals with focus on the role of the personnel officials, wages paid aides and orderlies, sources of potential employees, screening of applicants, checking of references, selection ratio, training, merit rating, and employee separations.

Author concluded there was "no demonstrable relationship between the factors studied and the annual turnover rate" and the "no factor could be related to turnover with any degree of certainty whatsoever". (L.E.W.)

PE2029 556pp.b.ill.R., 12/67

Weckwerth, Vernon E.; Wickre, Faye; Leyasmeyer, Edith, et.al.
SUPERVISORY TRAINING
Supported by an original grant from the W. K. Kellogg Foundation through the Hospital Research and Educational Trust of the American Hospital Association
Office of Continuing Education, Program in Hospital Administration, University of Minnesota, Minneapolis, Minnesota
Available from U.M.I. Xerox $25.05
Film reel #2.25 $ 7.00

Report describes and evaluates a program for teaching principles of supervision with hospital applications, coordinated by University of Minnesota. The program was conducted in five nearby colleges and included fifty hours of classroom teaching: twenty for lecture and thirty for discussion, case work and application, The approach to supervisor training was similar in structure among the five colleges, but there were individual differences in emphasis and teaching methods used. Report includes syllabus and report of programs followed in each college. An evaluation of the programs was made by administering a questionnaire to trainees and their superiors before and after taking the course. Findings indicate that while there were no major changes in students' perceptions of their institutions and superiors, there were substantial changes in job knowledge. There were also documented changes in knowledge, skill, attitudes and practice of supervision reported by both students and superiors. It is concluded decentralized educational programs, using local faculty, produce desired changes in supervisory skills and nationwide programs of this type are recommended. Cooperation of state hospital associations, local advisory committees, local educational institutions and Office of Continuing Hospital Education is emphasized as necessary to an effective program. (D.F.B.)

PE2030 80pp.b.d.ill.th.M.H.A., 12/67

Sister M. Rita Basgall
PERSONNEL DEVELOPMENT
Graduate Program in Hospital Administration, Xavier University, Cincinnati, Ohio, 1967
Available from U.M.I. Xerox $3.60
Film reel #2.26 $5.25

Outlines a plan for personnel development in hospitals. Organization, methods of implementation and evaluation procedures are discussed. Included under organization are specifications for position of Coordinator of Personnel Development, description of functions of Inservice Committee for Personnel Development, and discussion of method study and development procedures. Methods of implementing this program described are orientation, on-the-job training, continuing education and preparation for leadership and management. Paper includes sample of evaluation forms. (D.F.B.)

PE3015 70pp.b.d.th.M.A., 10/67

Berneking, C. L.
A PILOT STUDY OF RELATIONSHIPS OF EMPLOYEE PAY GRADE, DEPARTMENT, AND VACANCIES TO OVERTIME
Program in Hospital Administration, University of Minnesota, Minneapolis, Minnesota, 1967
Available from U.M.I. Xerox $3.15
Film reel #2.26 $5.25

Hours or work data were collected for employees of Nursing, Supply, Engineering, and Housekeeping departments at Johns Hopkins Hospital during October, November, December, 1966 to develop methods for measuring and evaluating overtime and to determine if an association exists between an employee's department, pay grade and vacancies and amount of overtime worked. (Study period occurred before Federal legislation requiring time and a half pay for overtime took effect.) The number of vacancy hours were determined by subtracting the straight time hours from the number of budgeted hours for a position. For each pay grade in the four departments, study calculated vacancy factor (percentage of straight time to budgeted time); overtime rate (percentage of overtime hours per total time); and overtime per vacancy ratio (overtime hours divided by vacant hours). Findings indicate overtime and overtime per vacancy are not directly proportional to pay grade. Degree of correlation does vary, however, with the various departments. Also no significant similarities of overtime per vacancy ratio among equal pay grades in different departments were found. It is concluded, however, vacancies offer some explanation of overtime and vacancy is an acceptable unit by which to measure overtime utilization. (D.F.B.)

PE3016 117pp.b.d.th.M.A., 10/67

Dalton, James E., Jr.
A STUDY TO DETERMINE THE PROBABLE INITIAL EFFECTS OF FEDERAL MINIMUM WAGE COVERAGE UPON THE NON-GOVERNMENT HOSPITALS IN CENTRAL VIRGINIA
School of Hospital Administration, The Medical College of Virginia, Richmond, Virginia, 1966
Available on loan from Library of American Hospital Association, 840 North Lake Shore Drive, Chicago, Illinois 60611

A structured interview was used to gather data from a sample of twenty-one community and five proprietary hospitals of central Virginia. The purpose was to determine: the current status of the sample hospitals in relation to proposed Federal minimum wage coverage; the initial effects of such legislation on the sample hospitals; and to determine what preparatory measures could be carried out to diminish the "traumatic" effects of the law. Twenty-two of the sample hospitals were found to have minimum wage levels below the Federal minimums. Job evaluation, review of work standards, study of overtime patterns were suggested as needed studies before law goes into effect, and before adjustments of charges to patients are made. Appendix contains structured interview guide. (L.E.W.)

PE3017 119pp.d.ill.R., 11/67

Jehring, J. J.
INCREASING PRODUCTIVITY IN HOSPITALS: A CASE STUDY OF THE INCENTIVE PROGRAM AT MEMORIAL HOSPITAL OF LONG BEACH (CALIFORNIA)
Center for the Study of Productivity Motivation, School of Commerce, 854-856 Van Hise Hall, The University of Wisconsin, Madison, Wisconsin, 1966
Available from original publisher for $3.00

Report describes and evaluates incentive program installed in 1961. The MERIT plan (Memorial Employees Retirement Incentive Trust) is financed by salary deductions and employer contributions. This plan provides benefits to participating, eligible employees and beneficiaries upon retirement, disability or death. A formula for determining amount of hospital's contribution was devised. A base figure, determined by dividing total controllable expenses by total operating revenue, was compared with the percentage calculated for the present year and the difference yielded the efficiency improvement percentage. Hospital's contribution was this percentage times the total payroll for the year within specified limitations. Management techniques used to acquaint and interest employees in the program are described. Discussion also includes accounting and budgeting procedures followed in administering the MERIT plan. Financial analysis of plan indicates employees have gained substantially in accumulated assets, while labor turnover has been reduced and costs have been kept down below those of comparable area hospitals. (D.F.B.)

PE3018 3pp.d., 11/67

Witt, John A.
NEW SURVEY MEASURES THE FRINGE BENEFITS ADMINISTRATORS RECEIVE
The Modern Hospital, October, 1967, pp. 109-111
Available from original publisher

Results of a mailed survey to 7,000 administrators of general hospitals in May of 1966. 2,742 responses analyzed for salary and type and value of fringe benefits. Includes table of average salary increases. (J.R.G.)

PE3019 113pp.b.d., 12/67

Bureau of Labor Statistics
INDUSTRY WAGE SURVEY - HOSPITALS, JULY, 1966
Bulletin 1553
U. S. Department of Labor, Washington, D. C.
Available from Superintendent of Documents, U. S. Government Printing Office, Washington, D. C. for $.70

Results of survey of earnings and supplementary benefits in over 1,200 private, state and local government hospitals. Federal hospitals not included but appendix presents information on pay systems. There are extensive cross tabulations of data by geographic, rural-urban, ownership, and category of employee. Data include ranges with jobs, and distributions for groups of jobs. Hours are reported, with other fringe benefits. Other reports are available from publisher on specific geographic areas included. (J.R.G.)

Please see next page

PE3020 20pp.d.R., 12/67

South Carolina Hospital Association
SURVEY OF HOSPITAL SALARIES - SELECTED POSITIONS
South Carolina Hospital Association, 1825 Gadsden Street, Columbia, South Carolina 29201, 1967
Available from original publisher

This survey of 1967 hospital salaries for selected nursing and paramedical positions by the South Carolina Hospital Association gives data concerning per hour and per month rates, number of hospitals and number of employees for each position. High, low and median rates are given for starting and maximum levels for each job classification. Average salaries are given for 1966 and 1967 for each position. (A.R.N.)

PE3021 68pp.b.th.M.H.A., 12/67

Sister M. Carmelia Lohaus
WAGE AND SALARY ADMINISTRATION IN THE DEVELOPMENT OF PERSONNEL
Graduate Program in Hospital Administration, Xavier University, Cincinnati, Ohio, 1966
Available from U.M.I. Xerox $3.10
Film reel #2.26 $5.25

An overview of wage and salary administration practices and personnel development programs in a hospital setting. Data were obtained from literature and interviews with hospital administrative personnel. Included are: a discussion of purpose of wage and salary administration; employee characteristics, performance evaluation and morale; supervisory responsibilities; work flow, standards and simplification; and in-service training programs. (D.F.B.)

PE5006 62pp.b.d.R., 9/67

DiMercurio, Gary M.
ROLE EXPECTATIONS OF REGISTERED NURSES AS A CONSEQUENCE OF UNIONIZATION
Graduate Program in Hospital Administration, University of California, Berkeley, California, 1967
Available from U.M.I. Xerox $3.00
Film reel #2.26 $5.25

The effect of unionization activity on role expectations of registered staff nurses was studied by questionnaire in two moderately-sized, general, acute hospitals in a California metropolitan area. Six areas of role expectations were studied: changes in style of supervision; emergence of shop steward; changes in grievance procedures; changes in job satisfaction; changes in importance of membership in California Nursing Association; and an open question for individual comments. Respondents were differentiated from scores on questionnaire according to three sociological types: professional nurse; bureaucratic nurse; and traditional nurse. Characteristics of these three types are described. Findings indicate 51.3 per cent of nurses were classified as professional, 7.7 per cent bureaucratic, and 41 per cent traditional. Differences in perceptions of changes in role behavior among three types of nurses were subtle and sometimes non-existent. It is generally concluded nurses expect a little less formality in supervision, the emergence of a counterpart to the shop steward, more formilized structure of grievance machinery and increased job satisfaction (particularly income benefits) as a consequence of unionization. It is also concluded that these expectations indicate unionization has not detracted from professionalism of nurses. Copy of questionnaire is included. (D.F.B.)

PE5007 126pp.b.d.th.M.Pub.Ad., 10/67

Sister M. Columcille Kelly
LABOR UNIONS IN VOLUNTARY NONPROFIT HOSPITALS IN THE CITY OF NEW YORK
Graduate School of Public Administration, New York University, 4 Washington Square, New York, New York, 1966
Available from U.M.I. Xerox $5.70
Film reel #2.26 $5.25

This study presents an overview of the extent of unionization of non-professional employees in voluntary hospitals in New York City from May 6, 1959 through December 31, 1965. (Amendments to New York State Labor Relations Act in 1963 and 1965 gave hospital employees the right to bargain collectively.) A brief outline of collective bargaining in hospitals in the U.S., pertinent labor legislation and court rulings are presented as background. In addition, a case study of St. Clare's Hospital's experience with unionization attempts by several locals is described. The principal problems concerning labor relations, legislation, employees and administrative policy which hospitals faced before, during and after changes in labor legislation are examined. Data indicate forty of ninety voluntary non-profit hospitals in New York City now have collective bargaining agreements. A summary of content of those agreements is presented. Another concludes unionization in inevitable, but there are some parts of the country where there will be no union activity in hospitals in the near future. (D.F.B.)

PE5008 5pp.d., 11/67

Kossoris, Max D.
THE SAN FRANCISCO BAY AREA 1966 NURSES NEGOTIATIONS
Monthly Labor Review, June, 1967, Vol. 90, No. 6, pp. 8 - 12
Available from the Superintendent of Documents, Government Printing Office, Washington, D.C. for $.75

This article traces the historical development of bargaining between the California Nurses Association and the hospitals of the San Francisco Bay Area between 1946 and 1966, details the negotiations leading to the creation of a fact-finding panel, 1966, and reports the conclusions of the panel and the resulting agreement. (A.N.)

PE5009 125pp.d.ill.th.M.H.A., 12/67

Bartholomew, Robert
PROFILE OF A STRIKE
Graduate Program in Hospital Administration, Xavier University, Cincinnati, Ohio, 1967
Available from U.M.I. Xerox $5.65
Film reel #2.27 $6.25

This report documents both unionization efforts at Middletown Hospital, Ohio, from September, 1966 through April 13, 1967 and steps the hospital took to oppose union organization of the hospital. Included are photostatic copies of newspaper articles concerning union organization activities, and union communications to employees and the hospital administration seeking recognition as bargaining agent. Report gives an outline of problems hospital faced and the steps used to solve them. These methods included small groups meeting with employees to explain wages and benefits, preparation of fact sheets for supervisory use in answering employees; questions, letters to employees from hospital administrator, and establishment of a telephone "action line" for employees and public to call for information on the hospital and the strike, which lasted four days and ended in defeat for the union. Report also summarizes procedures which have been followed since the strike to improve communications with employees and establish good public relations. (D.F.B)

PE6011 251pp.b.d.th.Ph.D., 12/67

Levine, Solomon
THE RELATIONSHIP BETWEEN PERSONALITY AND EFFICIENCY IN VARIOUS HOSPITAL OCCUPATIONS
New York University, New York, New York, 1951
Available from U.M.I., document no. 2510
Xerox $11.50
Film reel $ 3.00

An early (1951) study undertaken to explore the relationship between personality and efficiency as an employee in three hospital occupations. A total of 158 subjects were studied including sixty-nine hospital attendants, forty-six food service workers and forty-three clerical workers employed in a large Veterans Administration Hospital in New York City.

The order of merit ranking was employed as the criterion measure. Each subject was ranked by two independent qualified raters on the basis of job efficiency. Three personality measures, the Minnesota Multiphasic Personality Inventory (group short form), the Cornell Index and the Graphomotor Projection Test, and one intellectual measure, the SRA Primary Mental Abilities (Intermediate form A H) were administered.

A variety of statistical techniques were employed to determine whether significant relationships exist between efficiency and the personality and intellectual factors measured by the battery of tests. These techniques included the test of significance, the chi-square test and correlation analysis. The test of significance was used in comparing the test scores of the highest and lowest ranking 25 per cent, 33 1/3 per cent and 50 per cent of the population of each occupational category.

No significant relationship was discovered between personality and hospital attendant efficiency. None of the personality tests differentiated between efficient and inefficient hospital attendants. Intellectual factors, however, consistently differentiated between efficient and inefficient subjects. The efficient hospital attendant achieved significantly higher mean scores on each of the Primary Mental Abilities. (Author's abstract, adapted)

Please see next page

PHARMACY

(See also AN, Anesthesia and Inhalation Therapy Department.)

PH0029 3pp.d., 9/67

Kelly, A. D.
DRUG COSTS UNDER HOSPITAL INSURANCE
Canadian Medical Association Journal, Vol. 97, No. 8, August, 1967, pp. 425-427
Available from original publisher

Hospital insurance statistics from each of Canada's ten provinces, whose insurance plans cover 99.3 per cent of the population, show that between 1961 - 1965 total drug costs increased from $29.6 million to $41.1 million. In terms of cost per annuam for each person insured, the author concluded that the increase was not excessive. (B.L.O.)

PH0030 110pp.b.th.M.H.A., 9/67

Handley, James Gene
AN EXPERIMENT IN DETERMINATION OF STAFF LEVELS IN THE PHARMACY AT USAF HOSPITAL WRIGHT-PATTERSON
Program in Hospital Administration, The University of Michigan, Ann Arbor, Michigan 48108, 1967
Available from U.M.I. Xerox $4.95
Film reel #2.27 $6.25

The purposes of this study are (1) to ascertain what effect the application of the *Michigan Pharmacy Methodology* could have on current staffing of an Air Force Hospital Pharmacy, (2) to ascertain if the pharmacy staffing methodology can be successfully used to analyze work load and assess staff requirements in an Air Force Hospital Pharmacy, and (3) to evaluate the potential applicability of the pharmacy staffing methodology to other Air Force Hospital pharmacies. The pharmacy staffing methodology was applied to the activities of the pharmacy at USAF Hospital, Wright - Patterson Air Force Base, Ohio. The study found that the pharmacy staffing methodology can be applied to a U. S. Air Force Hospital successfully, and that its use revealed significant staffing information which has not been previously obtained. Author concludes that this, and other, staffing methodologies should be used as a complement to the composite work-unit technique of determining necessary staff levels. (S.F.L.)

PH0032 3pp.d., 11/67

King, Stonewall C., Jr.
SMALL HOSPITALS, NURSING HOMES SERVED BY CONSULTANT PHARMACISTS
Hospital Topics, Vol. 45, No. 9, September, 1967, pp. 95-97
Available from original publisher

A survey of the pharmaceutical services of 205 Georgia hospitals and suggested methods of providing professional pharmacist service to hospitals and nursing homes without a full-time pharmacist. Reports the results of a survey of ninety-two consultant pharmacists in Georgia providing information regarding hours and frequency of service, compensation and personal opinions concerning their individual affiliation. (A.N.)

PH0033 45pp.d., 11/67

Alderman, Alice J.
PRESCRIBED AND NONPRESCRIBED MEDICINES - TYPE AND USE OF MEDICINES
Public Health Service Publication No. 1000 - Series 10 - No. 39
National Center for Health Statistics, Department of Health, Education and Welfare, Washington, D. C.
Available from the Superintendent of Documents, Government Printing Office, Washington, D.C. for $.30

Statistics on the number and percentage distributions of acquisitions of prescribed medicine, cost per purchased acquisition of prescribed medicine, cost per person of prescribed and of nonprescribed medicine, and distribution of costs of nonprescribed medicines by place of purchase, by age, sex, and type or use of medicine. Based on data collected in household interviews during July 1964 - June, 1965. Excludes in-hospital drug use. (Author's abstract, adapted)

PH0035 83pp., 12/67

Richards, James, W., editor
PHARMACY SERVICES IN NURSING HOMES AND SMALLER HOSPITALS
College of Pharmacy, University of Michigan, 1525 Chemistry and Pharmacy Building, Ann Arbor, Michigan 48104, 1966
Available from original publisher for no charge

A compilation of papers delivered at the Conference on Pharmacy Services in Nursing Homes and Smaller Hospitals in Ann Arbor, October, 1966. Pharmacy problems, Medicare, and regulations (Federal and Michigan), all as related to nursing homes and smaller hospitals were disucssed. (L.E.W.)

PH0036 114pp., 12/67

Deno, Richard A., editor
PHARMACY - MEDICINE - NURSING - Proceedings of Conference on Health, Education, The University of Michigan, Ann Arbor, February 16-18, 1967
Available from Dean, College of Pharmacy, University of Michigan, 1525 Chemistry - Pharmacy Building, Ann Arbor, Michigan 48104 for $1.00

A collection of papers delivered at a conference on health education with representatives of schools of pharmacy, medicine, and nursing for the purpose of determining the role of schools of pharmacy in preparing graduates to work well within the total health community. (L.E.W.)

CHANGE IN AVAILABILITY

PH1032 250pp.b.d.ill., 7/67

Tester, William W.
A STUDY OF PATIENT CARE INVOLVING A UNIT DOSE SYSTEM
U.S.P.H.S. Grant No. HE-00328-01
College of Pharmacy, University Hospitals, The University of Iowa, Iowa City, Iowa 52240 1967
Available from U.M.I. Xerox $11.25
Film reel #2.27 $ 6.25

A report consisting of a series of substudies at the University of Iowa Hospitals, all bearing on the establishment and evaluation of a unit dose drug distribution system using decentralized pharmacy ward substations. The system entails direct order from the physician to the pharmacist, and direct preparation of single dosages in pharmacy substation at proper time of administration of medicine. The pharmacist maintains a complete patient medication record and interprets all medication orders.

Some of the substudies include: medication errors and discrepancies in conventional method vs. unit dose system; utilization of RN time in two systems; consultative activity of the pharmacist in the two; efficiency of the charging systems; comparative drug inventories; planning and comparative floor space needed; costs of unit packaging; order forms and communication of medication orders; educational aspect of pharmacy and nursing and attitude studies of staff affected.

After a ten-month study the investigators concluded the unit dosage system based in pharmacy substations did improve the safety of the medication cycle; improved the total communication of medication orders; improved the availability to physician and nurse of medication information; freed nursing time; and revealed relative costs, and space and inventory needs. The study will be continued and refined over a two-year period. The appendix contains specimens of forms and procedural instructions. (L.E.W.)

PH1033 7pp.d.ill., 12/67

Gautreaus, Ronald; Watkins, C. Eugene
A SURVEY OF NARCOTIC CONTROL IN HOSPITALS
American Journal of Hospital Pharmacy, Vol. 24, October, 1967, pp. 567-573
Available from original publisher

Study designed to obtain information from hospitals of 100 beds or more in Louisiana. Hospital pharmacists and nurses were contacted by questionnaire and responses were tabulated and evaluated. An obvious degree of similarity was noted in procedures employed for handling narcotics by nurses. The pharmacists' procedures, however, differed in several respects. Several recommendations are made based on the study. Each recommendation pertains to suggested policies which should be studied by the hospitals for benefits which could be derived. Typical of these recommendations are the more widespread use of single-unit packaged narcotics (this would be dependent upon the availability of such products) and the use of a perpetual inventory system. Both these measures would increase control over narcotic drugs in the hospital. (Author's abstract, adapted)

PH1034 4pp., 12/67

Crooks, J.; Weir, R. D., et.al.
EVALUATION OF A METHOD OF PRESCRIBING DRUGS IN HOSPITAL AND A NEW METHOD OF RECORDING THEIR ADMINISTRATION
The Lancet, 1/7491, pp. 668-671
Available from original publisher

'Medicine lists' in the Aberdeen General Hospitals have been dispensed with, and a single prescription sheet is used for the administration of drugs. This system has been evaluated over an eighteen-month period. Instructions could be accommodated on a single sheet for 95 per cent of patients. A satisfactory reponse was obtained to recommendations on printing drug names, use of the metric system, and signing of prescriptions by a doctor. Introduction of the system resulted in a 50 per cent saving in time spend on this aspect of drug administration. The next step was to devise a system of recording drugs administered. This was achieved for 'regular' drugs by

designing a separate recording sheet. A preliminary trial indicated a true error-rate of about 2 per cent could be attained. Use of the recording sheet reduced the saving in nursing-time to 40 per cent, on average. With the introduction of these two sheets, the way is now clear for more detailed studies of drug administration. (*Excerpta Medica,* Section 17, Volume 13, No. 10, October, 1967, pp. 769, no. 4959)

PH1035 10pp.d., 1/68

Vere, D. W.
PRESCRIBING SYSTEMS IN HOSPITAL
Journal of Royal College of Physicians of London, April, 1967, Vol. 1, No. 3, pp. 244-253
Available from original publisher at 12 Pall Mall Street, London S.W.1, England

The London Hospital found that there was a considerable rate of error in drug administration. A work study revealed that experts differed in their interpretations of prescriptions, and communication between stages of drug administration broke down. It was decided to try the following changes in routine: (1) the pharmacists would be invited to establish a service within the ward; (2) new prescription sheets would be provided; (3) the number of daily drug rounds would be cut down; (4) a lockable drug trolley would be introduced; (5) drug administration could be delegated to senior student nurses; (6) the metric system and official drug names would be used when possible; and (7) obscure prescribing terms, longhand writing and abbreviations would be disallowed. The new system reduced the overall rate of errors by about two-thirds. There are twelve references to the literature. (*Hospital Abstracts,* (London), Abstract no.1918, p. 643, November, 1967.)

PH5002 27pp.p.R., 11/67

Moir, J. G.
FINAL REPORT - A PROJECT TO DEVELOP A COMPUTER-BASED POISON CONTROL INFORMATION SYSTEM
Faculty of Pharmacy, The University of British Columbia, Vancouver, British Columbia, Canada, 1967

Available from U.M.I.	Xerox	$3.00
	Film reel #2.28	$5.50

A description of a project to develop a computerized Poison Control Information System. The project included: the identification of requirements for information processing, storage, and retrieval system; the selection of existing "software" to be used on available "hardware"; determination of essential data elements needed; and the identification of problems respecting data-base maintenance. Flow charts for process, and specimen printouts included. See also PH5003, and PH0021. (L.E.W.)

PH5003 46pp.ill.R., 12/67

Moir, J. G.
DRUG INFORMATION RESEARCH PROJECT - SECOND PROGRESS REPORT
National Health Grant No. 609-7-156
Faculty of Pharmacy, The University of British Columbia, Vancouver, British Columbia, Canada, 1967

Available from U.M.I.	Xerox	$3.00
	Film reel #2.28	$5.50

Second progress report on research to develop Poison Control Information as part of a comprehensive drug information service and center at University of British Columbia. (See PH0021, Volume IV, No. 1, for first progress report, and PH5002 for final report.) Current progress of studies into staffing, organization and administration of the drug information center and training of needed personnel is described. Report also includes an outline of studies made of methods for data processing, storing and retrieving essential elements of information relating to toxicity of drugs and symptomatology and treatment regimens concerning adverse reactions, overdosage or poisoning in development of a computer-based information system. A description of De Haen Drug Information Abstract Services is included in appendices. (D.F.B.)

PSYCHIATRIC FACILITIES AND SERVICES

(See also AR, Areawide Planning; HE, Health Services; IN, Insurance and Prepayment; NU, Nursing Service Department; and MP, Manpower.)

PS0071 62pp.b.d.th.M.H.A., 10/67

Sister Ann Marita Loosen
A STUDY PERTAINING TO PATIENTS WITH PSYCHIATRIC DIAGNOSES DISCHARGED FROM A RURAL COMMUNITY HOSPITAL WITHOUT PSYCHIATRIC FACILITIES
The Program in Hospital Administration, University of Minnesota, Minneapolis, Minnesota, 1967
Available from U.M.I. Xerox $3.00
Film reel #2.28 $5.50

This study compared patients discharged with psychiatric diagnoses from a rural community hospital without psychiatric facilities to those discharged from a metropolitan community hospital without psychiatric facilities. It is hypothesized the rural hospital will discharge more patients with both primary and secondary psychiatric diagnoses than a metropolitan hospital will. Data from three metropolitan hospitals were averaged to provide a comparison between a "typical" metropolitan hospital and a rural hospital (Frederick Memorial, Maryland). Findings substantiate study's hypothesis. A comparison was also made of proportion of psychiatric consultations requested in the two types of hospitals. Data indicate there was no significant difference in this regard between the two types of hospitals. Analysis of psychiatric diagnoses of rural patients indicates predominant diagnoses are psychoneuroses and psychophysiological disorders while alcoholism and schizophrenia predominate in other institutions. Views of medical staff in study hospital toward mental health problems are discussed. It is concluded rural areas warrant special consideration in developing mental health studies and programs. (D.F.B.)

PS0072 11pp.b.d., 11/67

Horvath, William J.
THE OPERATION OF CHANCE FACTORS IN RECURRENT HOSPITALIZATIONS FOR MENTAL ILLNESS
Proceedings on Simulation in Business and Public Health, pp. 152-162, First Annual Conference of American Statistical Association and Public Health Association of New York City, 1966
Available from the American Statistical Association, c/o Miss Natalie Colabro, Look Magazine, 488 Madison Avenue, New York, New York for $4.95

Paper attempts to establish a statistical procedure for understanding the role of change factors and their operation in mental illness. Same as PS0037, Volume III. (A.R.N.)

PS0073 197pp.b.d.th.Ph.D., 12/67

Hammer, Muriel
AN ANALYSIS OF SOCIAL NETWORKS AS FACTORS INFLUENCING THE HOSPITALIZATION OF MENTAL PATIENTS
Columbia University, New York, New York, 1961
Available from U.M.I., order number 61-3883
Xerox $9.00
Film reel $2.75

A study is made of the impact of the behavior of the mental patient on the structure of the social units in which he participates, and of the ways in which the characteristics of these structures may be expected to determine the responses made to his behavior. The sample studied consists of Negro and Jewish psychotic patients primarily from one New York City hospital. Primary attention is given to the most intimate unit of which the patient is a member, usually a nuclear family. Several hypotheses regarding speed of hospitalization, agent responsible for hospitalization of the patient, and social responses other than hospitalization are considered as functions of differences in the structures of social units and of the patients' positions in their units. These hypotheses are tested on both the Negro and the Jewish groups, since they are expected to hold independently of subcultural differences. It is found for both groups that hospitalization occurs sooner for patients in narrowly-defined positions; that responses involving structural change in the unit are more likely to occur if ties with the patient are close; and that severance of ties with the patient is less likely to occur if ties are interconnected.

In addition, the Negro subculture is considered to be more deviant than the Jewish subculture from the dominant code, and the effects of disparity of codification on symptom patterns and on frequency and duration of hospitalization are analyzed. Comparison of the Negro and Jewish groups indicates that hospitalization is more frequent, of shorter duration, and for more overt symptoms for a group whose norms are further from the dominant code. (Author's abstract, adapted)

PS0074 138pp.d.ill., 12/67

California Department of Mental Hygiene
MENTAL HEALTH SERVICES IN THE UPPER SAN JOAQUIN VALLEY
Office of Planning, California Department of Mental Hygiene, 1500 Fifth Street, Sacramento, California, 1966
Available from original publisher for $2.00

This report is the first of the intensive area studies of mental health services in California intended to provide data for five-year regional and state plans for capital outlay, program projections and budget allocations. Covers present programs and facilities, including services for emotionally disturbed children. Recommendations encourage broader outpatient services through community mental health center program. (H.M.)

PS0075 288pp., 12/67

Elinson, Jack; Padilla, Elena; Perkins, Marvin E.
PUBLIC IMAGE OF MENTAL HEALTH SERVICES
Published for New York City Community Mental Health Board
Published by Mental Health Materials Center, Inc., 104 East 25th Street, New York, New York 10010, 1967
Available from original publisher

A report of a survey conducted by the Columbia University School of Public Health and Administrative Medicine and the New York City Community Mental Health Board during 1963 to determine the public image of mental health services of New York City including public knowledge and opinion of mental health care, appraisals of mental health facilities and professionals, attitudes toward the mentally ill, and experience with professional mental health help. Probability sampling techniques were used to select adults to be interviewed. The report includes tabulation and analysis of the data and samples of the questionnaires used. (A.R.N.)

PS0076 459pp.b.d., 12/67

Richman, Alex
PSYCHIATRIC CARE IN CANADA: EXTENT AND RESULTS
Royal Commission on Health Services, Ottawa, Ontario, Canada, 1964
Available from Queens Printer, Ottawa, Ontario, Canada for $4.50

This survey of the "extent and results" of psychiatric care in Canada focuses on the clinical attention received from psychiatrists and other physicians and evaluates this care quantitatively. Indices for the evaluation were rates of separation and readmission, retention ratios, and hospital utilizations. A study was included of the experience of members of prepared medical insurance plans in terms of costs and duration of psychiatrists' care, and volume of medical care prior and subsequent to psychiatric attention. The system of national mental health statistics was reviewed in regard to information needed for program planning and evaluation. (L.E.W.)

PS0080 159pp.b.d.th.Ph.D., 12/67

Levenson, Myron Herbert
A SOCIOLOGICAL STUDY OF THE PSYCHIATRIC HOSPITALIZATION OF AGED PERSONS IN WESTERN NORTH CAROLINA
The University of North Carolina, Chapel Hill, North Carolina, 1966
Available from U.M.I., document no. 67-1018
Xerox $7.40
Film reel $3.00

A demographic and ecological approach consisting of the arrangement of counties in seven groups according to size of largest population center (thus providing an urbanization gradient) is utilized to investigate the social background of the hospitalization of aged psychiatric patients. Assuming status decline to be important in poor adjustments to later life the following status characteristics, sex, location of residence (rural-farm, rural-nonfarm, urban), marital status, educational level, and occupation are utilized as intervening variables in attempting to explain variation in incidence of psychiatric hospitalization.

Data were obtained from hospital admission records on I.B.M. cards supplied by the North Carolina State Hospitals Board of Control and from the U.S. Census of 1960.

Findings indicated that all the variables used in the study are, singly or combined, of importance in explaining psychiatric hospitalization of the aged. Although variation in residence area (the seven groups of counties) proved to be a significant factor the gradient principle did not appear to be of general use in such a study. (Author's abstract)

PS0081 37pp., 12/67

Dominion Bureau of Statistics
MENTAL HEALTH STATISTICS, TRENDS IN HOSPITAL CARE AND PATIENT CHARACTERISTICS, 1955 - 1963
Dominion Bureau of Statistics, Health and Welfare Division, Public Health Section, Ottawa, Ontario, Canada
Available from Publications Distribution Unit, Dominion Bureau of Statistics, Ottawa 3, Ontario, Canada, as publication no. 83-505, for $.75

Tabulated and graphic data given to show trends in hospital care of psychiatric patients and in the characteristics of those patients in Canada, 1955 - 1963. Patient movement in public mental hospitals, in public psychiatric units, and in hospitals for mental defectives is shown. Patient movement is also tabulated by age groups and by selected diagnoses. (L.E.W.)

PS0083 5pp.b.d., 12/67

Meier, Gitta; Eliot, Johan W.; Hoffman, Sybil
FAMILY PLANNING ASSISTANCE TO LOW INCOME PSYCHIATRIC PATIENTS IN GENERAL HOSPITALS: AN EXPLORATORY STUDY
Michigan Medicine, September, 1967, pp. 1071-1075
Available from original publisher

The responsibilities of counseling and referral for family planning services assumed by psychiatric personnel were ascertained in 1964 as part of a survey sponsored by the Committee on Family and Population Planning of the Maternal and Child Health Section, American Public Health Association. The study was of family planning assistance for low-income patients in all of the twenty hospitals and associated clinics with obstetrics-gynecology residencies in a midwestern metropolitan area. The factors determining the nature and extent of the assistance were discussed. (L.E.W.)

PS3007 3pp.d., 7/67

Walker, Robert; Winick, William
NEW PATIENTS CAN DO MEANINGFUL WORK
Hospital and Community Psychiatry, Vol. 18, No. 7, July, 1967, pp. 34-36
Available from original publisher

Study to determine the proportion of newly-hospitalized psychiatric patients willing and able to participate in a paid-work sheltered shop program. Over a fourteen month period 67 per cent invited patients elected the program; a comparison group of thirteen traditional-treatment patients were referred to the program. Rates of success were found to be about equal (approximately 70 per cent success); it is concluded that more patients would be able to do meaningful work if they were permitted. (S.P.)

PS3012 10pp.d., 12/67

Baldwin, J. A.; Hall, D. J.
ESTIMATION OF THE OUTCOME OF A STANDING MENTAL HOSPITAL POPULATION
British Journal of Prev. Soc. Med., 1967, 21/2, pp. 56-65
Available from original publisher

A review of surveys of mental hospital populations for planning purposes showed discrepancies in conclusions and in interpretation of results. Methods of estimating the attrition of a standing mental hospital population are examined and a method using direct estimates of probability of separation from hospital detailed. Results of application to North-East Scottish mental hospitals showed a curvilinear outcome with a relatively short period required to halve the population but a very long one to eliminate it. Marked differences were found between various age and sex groups. Little change was observed in projected outcome in the period 1956-1964. The projected age and sex composition was obtained for the 1964 population of North-East Scottish mental hospitals at intervals of ten years. The reliability and validity of the method and the results are discussed and some applications mentioned. (*Excerpta Medica*, Section 17, Volume 13, No. 9, September, 1967, pp. 699, no. 4538)

PS3014 207pp., 12/67

Adelson, Becky
THE BROOKLYN DAY HOSPITAL: AN EXPLORATORY STUDY
Columbia University, New York, New York, 1961
Available from U.M.I., dissertation no. 61-1069
Xerox $9.45
Film reel $3.00

A study to explore the nature and function of the Brooklyn Day Hospital for psychiatric patients. Data were collected from open-end interviews of eighty patients and relatives. The patients were schizophrenic, previously admitted to a state mental hospital, were between ages of 18 and 50, and attended the day hospital at least five days of first calendar month following admission during study period. The author summarized data from the interviews in seventeen conclusions as to patient response to situations, treatments, progress, and relationships to staff at Day Hospital. Author indicated additional casework and a social club for discharged patients for continuing support were needed. (L.E.W.)

PS3015 44pp.d.ill., 12/67

Taube, Carl A.
CHARACTERISTICS OF PATIENTS IN MENTAL HOSPITALS
Public Health Service publication 1000, Series 12, No. 3
National Center for Health Statistics, Department of Health, Education and Welfare, Washington, D. C.
Available from Superintendent of Documents, Government Printing Office, Washington, D. C., for $.35

Statistics on age, sex, color, length of stay, and selected health characteristics of patients in long-stay mental hospitals. Based on data collected in a survey of mental hospitals during April - June, 1963. See also CH2013. (Author's abstract)

PS3016 337pp.d.ill.R., 12/67

California Department of Mental Hygiene
STAFFING STANDARDS FOR PUBLIC MENTAL HOSPITALS VOLUMES I AND II
California Department of Mental Health, 1500 Fifth Avenue, Sacramento, California 98514 1967
Available from original publisher

This two volume report summarizes an eighteen month study by California Commission on Staffing Standards for State Mental Hospitals. Data were compiled through time and work sampling studies made on example wards considered representative of the whole system. In addition, professional staff personnel kept a diary of activities over a seven-day period, representing nearly 8,000 man days. Detailed task inventories were prepared by hospitals and data from fourteen private hospitals were compared with state institutions. Results of study establish basic levels of treatment staff time necessary to furnish adequate medical care to anyone who is so seriously ill or handicapped he enters a hospital for mentally ill or retarded. Volume I includes findings, conclusions, recommendations, numerical standard values developed, appendix and bibliography. Volume II describes SCOPE (Staffing Care of Patients Effectively) the system developed by this study which uses computer programming to determine ward nursing service staff requirements. (D.F.B.)

PS3017 283pp.b.d.th.Ph.D., 12/67

Smith, Dorothy Edith
POWER AND THE FRONT LINE: SOCIAL CONTROLS IN A STATE MENTAL HOSPITAL
University of California, Berkeley, California 1963
Available from U.M.I., document no. 64-5304
Xerox $12.85
Film reel $ 3.65

An analysis of the control structures at Western State (Mental) Hospital with particular emphasis on the "front line organization" . . . one in which "power tends to settle towards units at the periphery". The role of the physician in the custodial system is explored, and the peculiar position of the ward attendants' monopoly of information about the patient and the physicians' inexperience given as explanation for the existence of the front-line organization. (L.E.W.)

PS3018 139pp.b.d.th.Ph.D., 12/67

Silver, Helen Goodman
A FACTOR ANALYTIC STUDY OF PATIENTS' RESPONSES TO SELECTED ASPECTS OF HOSPITALIZATION IN A LARGE NEUROPSYCHIATRIC HOSPITAL
New York University, New York, New York, 1966
Available from U.M.I., document no. 67-635
Xerox $6.60
Film reel $3.00

This study was concerned with the encounter between the mental patient and the mental hospital as seen from the perspective of the patient. The major adaptational tasks confronting individuals entering a mental hospital were defined. It was proposed that each patient must formulate his own position toward the issues raised by these tasks. Extensive interviews were conducted with patients in residence at the hospital under study focused around these tasks. A representative sample of attitude-opinion statements was then compiled, based on these interviews, and a questionnaire developed to assess patients' degree of agreement or disagreement with these statements.

The respondents were 187 male patients drawn randomly from the closed and open wards of four buildings at a large neuropsychiatric hospital. When the matrix of item intercorrelations was subjected to centroid factor analysis followed by varimax rotation to orthogonal simple structure, four salient factors emerged accounting for 36 per cent of the total vairance. The factors were labeled: "Disaffected Alienation"; "Sick Role"; "Psychiatrically Enlightened Optimism"; and "Disillusioned Pessimism". Scales were developed to measure each of the factors, the reliability and validity of which were deemed adequate for the purpose of both group and (with one exception) individual measurement.

An operational definition of a good hospital adjustment was developed based on nursing aides' completion of the questionnaire under instructions to respond as would the kind of patient the aide enjoys working with. The reliability of the resulting twenty-six item measure, which was defined as Conformity with Aides' Hospital Adjustment Ideal (CAHAI), was adequate. The items constituting this measure covered the full range of adaptational tasks defining hospitalization in this study.

Hypotheses were tested relating factor scores to the following variables as a contribution to the construct validity of the obtained factors: age, diagnosis, education, hospital history, discharge, treatment atmosphere, and CAHAI.

Apart from the specific findings, this study demonstrated that the chronic hospitalized mental patient is suitable for socialpersonality investigations of this sort and should no longer be neglected on the grounds that he is too confused, regressed, or out of contact with his surroundings. (Authors' abstract, adapted)

PS3019 353pp.b.d.th.D.S.W., 12/67

Oviatt, Boyd Eugene
PRIVATE MENTAL HOSPITAL LICENSING LAW
University of Southern California, Los Angeles, Californis, 1966
Available from U.M.I., document no. 67-417
Xerox $16.00
Film reel $ 4.55

An inquiry into the nature and extent of laws for licensing private mental hospitals in the fifty states, the District of Columbia, and Puerto Rico.

After an analysis was made of licensing laws and several field trips were taken, a guideline consisting of twenty-four propositions was drawn to represent minimum essentials for the development or reformulation of licensing law for private mental hospitals. (L.E.W.)

PS3020 142pp.b.d.th.Ph.D., 12/67

Peterson, Donald Robert
PREDICTING HOSPITALIZATION OF PSYCHIATRIC OUTPATIENTS
University of Minnesota, Minneapolis, Minnesota, 1952
Available from U.M.I., document no. 4348
Xerox $6.40
Film reel $3.00

The investigation constitutes an attempt to devise simple, widely applicable, and maximally accurate indices to aid in predicting hospitalization of psychiatric outpatients. Data were gathered at a V. A. mental hygiene clinic for all patients who underwent psychological examination, were seen for at least two interviews by clinic staff members, and later were admitted to psychiatric hospitals. In all, 108 such patients were found. They were compared with 114 non-hospitalized patients at the same clinic in terms of certain non-psychometric data and the results of three psychological tests, the Wechsler-Bellevue, the M.M.P.I., and the Rorschach.

Three forms of "short" index were derived, one consisting only of non-psychometric variables, one consisting only of M.M.P.I. signs, and one comprising both non-test and M.M.P.I. factors. The non-psychometric device correctly classified 65 per cent of the cases in the total sample, the M.M.P.I. index was accurate for 67 per cent, and combination of indices yielded 71 per cent accuracy. Choice will be dictated by the amount of data available. If no tests have been given, the non-psychometric index is applicable; if prediction is required and an M.M.P.I. profile is all that the clinician has to work with, he must use the corresponding sign list; if both kinds of data are available, predictive accuracy can be increased by using the combined index. (Author's abstract, adapted)

PS3021 78pp.b.d.th.Ph.D., 12/67

Daniel, Wayne Wendell
THE USE OF DEMOGRAPHIC CHARACTERISTICS IN PREDICTING LENGTH OF STAY IN A STATE MENTAL HOSPITAL
The University of Oklahoma, Norman, Oklahoma, 1965
Available from U.M.I., document no. 65-12,606
Xerox $4.20
Film reel $3.00

The purpose of this paper is to investigate the feasibility of using routinely collected demographic and other data for predicting length of hospitalization of patients admitted to state mental hospitals. The study material consists of 13,731 patients admitted to the state supported mental hospitals of Oklahoma.

The mathematical model employed is Bayes' Theorem. The use of the theorem makes is possible to calculate the conditional probability of a certain length of hospitalization that a patient may experience, given that he possesses certain characteristics.

It was possible to predict length of hospitalization with varying degrees of accuracy depending on the categories used to define the length of hospitalization. The best results, 86 per cent overall accuracy, occurred when the length of hospitalization categories were less than thirty days and thirty days or more. When four length of hospitalization categories, less than thirty days, thirty through fifty-nine days, sixty through eighty-nine days, and ninety days or more, were used the overall accuracy was 61 per cent, the poorest result obtained. (Authors' abstract, adapted)

PHYSICAL THERAPY

(See also OC, Occupational Therapy; RS, Rehabilitation Services.)

PT0006 74pp.b.d.th.M.H.A., 11/67

Miller, Charles L.
A PILOT STUDY OF SELECTED VARIABLES CONCERNING ORTHOPEDIC SURGEONS AS THEY AFFECT INPATIENT UTILIZATION OF PHYSICAL THERAPY
Program in Hospital Administration, University of Minnesota, Minneapolis, Minnesota, 1967
Available from U.M.I. Xerox $3.35
Film reel #2.28 $5.50

Inpatient utilization of physical therapy department of Stormont-Vail Hospital, Topeka, Kansas, was studied for inpatients of seven orthopedic surgeons to determine correlation between number of visits to physical therapy and six selected characteristics of orthopedic surgeons.

Surgeons were ranked from highest to lowest for number of inpatient therapy visits. Each of the six variables studied was ranked similarly and Kendall Rank Correlation Coefficient Test was used to determine correlation, with significance set at .05. Study also determined if variables were independent of each other, using Kendall Partial Rank Correlation Coefficient. Data indicate significant positive correlation between number of visits and number of inpatient dismissals, number of inpatient days, and number of operations and procedures performed by orthopedic surgeons. These three variables were also found to be interrelated, with inpatient days perhaps making relationship of other two variables. (This is to say: use of physical therapy is related to use of the hospital for inpatient care.) A strong relationship was also shown between number of offices held in medical staff organization and opinions of surgeons about physical therapy departments. Further studies using other variables are recommended. (D.F.B.)

PT1002 9pp.b.d.ill., 12/67

Johnson, Marjory W.; Ware, Carolyn B.
ASSESSMENT OF CONTINUING EDUCATION
Physical Therapy, Vol. 47, No. 10, October, 1967, pp. 962-970
Available from original publisher

An assessment of twelve short-term courses for graduate physical therapists given at the University of North Carolina from 1963 to 1966. Evaluations were based on objectives of courses, pretest and post-tests to measure attainment of objectives, and follow-up assessment. Specimen of evaluation forms, and tabulation of results given. (A.R.N.)

PURCHASING, STOREROOM AND CENTRAL SUPPLY

PU0016 9pp.d.ill., 12/67

Sleight, Robert E.
SYSTEMS ANALYSIS SMOOTHES CONVERSION TO DISPOSABLES
Hospitals, November, 1967, Vol. 41, No. 21, pp. 84-92
Available from original publisher

Review of procedures for evaluating disposable products with exemplary data comparing the cost. (J.R.G.)

PU2018 28pp.d., 12/67

Harris, David H.; Hopp, W. Michael
THE CONTROL SYSTEM DEFINED - INTERIM REPORT 48-64
Community Systems Foundation, 111 North Main, Ann Arbor, Michigan 48108, 1964
Available from U.M.I. Xerox $3.00
Film reel #2.28 $5.50

An analysis of the Surgery Storeroom activities of St. Joseph Mercy Hospital of Ann Arbor, Michigan to establish a program of inventory control in the surgical supply items. Recommendations which the authors feel will establish better communication and develop a less expensive purchasing procedure are given. (A.R.N.)

PU2019 72pp.ill.R., 12/67

Donnelly, W. A.; Dorsey, H. W.; Kuyawa, J.
PURCHASING DEPARTMENT ANALYSIS
Community Systems Foundation, 111 North Main, Ann Arbor, Michigan 48108, 1967
Available from U.M.I. Xerox $3.25
Film reel #2.28 $5.50

The report of Phase I of an analysis of the purchasing department of a private mental hospital near Baltimore, Maryland. Phase I includes a description of the present procedures of the department and establishes a Purchasing Department Manual. The manual treats "such areas as: department organization; department policies; procedures for issuing, ordering, receiving, inventorying and disposing of stores and nonstores items, invoice processing, property control and vendor relationship". Appendix contains specimens of forms used in purchasing department. (L.E.W.)

PU3020 41pp.b.d.th.M.H.A., 11/67

Ortega, Frank A.
AN EVALUATION OF REUSABLE AND DISPOSABLE GLOVES AT BROOKE GENERAL HOSPITAL AND VALLEY FORGE GENERAL HOSPITAL
Baylor University, San Antonio, Texas
Available on loan from Asa S. Bacon Memorial Library, American Hospital Association, 840 North Lake Shore Drive, Chicago, Illinois 60611, 1965

A study to determine if disposable gloves should be substituted for reusable gloves at the two military hospitals. The evaluation was based on a study of the following points:

if the disposable was as functional as the reusable; if the disposable was acceptable to the professional staff; if the disposable was safe; if it contributed to patient comfort and care. The cost of using disposable gloves at Brooke General Hospital was found to be higher than reusables; at Valley Forge General the opposite was found. On the basis of cost the recommendation was made for disposables at Valley Forge and against at Brooke. (L.E.W.)

PU3021 114pp.b.d.ill.th.M.H.A., 12/67

Quinlan, Richard S.
AN ORGANIZATIONAL AND STAFFING STUDY OF THE BINGHAMTON GENERAL HOSPITAL CENTRAL SUPPLY SERVICE
Graduate Program in Hospital Administration, Xavier University, Cincinnati, Ohio, 1966
Available from U.M.I. Xerox $5.15
Film reel #2.28 $5.50

Analysis of Central Supply Service of this 363 bed, short-term city hospital (Binghamton New York) includes review of internal organization, interorganizational relationships and their effect on services rendered, staffing, description and illustrations of functional areas, and procedures followed for inventory, bulk storage, and management of administrative tasks. Study found Central Supply was meeting only minimum requirements. Some of the major recommendations include: placing department head under administrative offices; revision of two-step pick-up and delivery system to a one-step system; elimination of bulk storage area and portion of sterile solution area to accommodate Oxygen-Therapy and orthopedic appliances; establishment of bin card system for inventory; and acquiring a ward assistant to assume routine administrative tasks which interrupt duties of technical personnel. (D.F.B.)

PU3023 23pp.d.p.R., 12/67

Gonzalez, P.; Jacobs, M. O.
STUDY OF CENTRAL SUPPLY ROOM LAYOUT
Community Systems Foundation, 111 North Main, Ann Arbor, Michigan 48108, 1967
Available from U.M.I. Xerox $3.00
Film reel #2.29 $5.25

Study made at Foote Memorial Hospital, Jackson, Michigan "to improve layout of Central Supply Room". Five alternative layouts were presented to administration which resulted in a sixth which the architect incorporated in expansion plans. The six alternative floor plans are shown with related statistics as to travel distance to user departments and frequency of delivery trips. (L.E.W.)

REGIONALIZATION, SHARED SERVICES, SATELLITES

(See also individual departments; AB, Administrator and Board; AR, Areawide Planning; and HE, Health Services.)

RE0014 13pp.d., 12/67

Manitoba Hospital Association
REPORT OF THE COMMITTEE ON THE FUTURE OF THE COUNSELLING SERVICES PROGRAM
Manitoba Hospital Association, 556 Academy Road, Winnipeg 9, Manitoba, Canada, 1967
Available from U.M.I. Xerox $3.00
Film reel #2.29 $5.25

Report showed the need for advice at top management level in Manitoba hospitals, and the need to utilize existing information resources within the hospital field both of which are objectives of the relatively new counselling service. The appendix gives statistics on cost and operation of the program, the time allotment of personnel, and tabulations on surveys completed. (L.E.W.)

RADIOLOGY

REHABILITATION THERAPY

(See also CH, Chronic Disease Facilities and Programs; OC, Occupational Therapy; OU, Outpatient, Emergency and Home Care; PT, Physical Therapy; SC, Specialized Care Units; and SO, Social Service.)

SPECIALIZED CARE UNITS

SC0023 85pp.b.d.ill.th.M.A., 10/67

Davis, Gordon Morris
THE ORIGIN AND DEVELOPMENT OF THE BURN THERAPY UNIT AT THE MEDICAL COLLEGE OF VIRGINIA
School of Hospital Administration, The Medical College of Virginia, Richmond, Virginia 1965
Available on loan from the Asa S. Bacon Memorial Library, The American Hospital Association, 840 North Lake Shore Drive, Chicago, Illinois

A historical study of the Burn Therapy Unit at Medical College of Virginia made for the purpose of learning of the "complexities involved in establishing a burn unit, the scope of the unit, and its contributions toward improved patient care". The study was accomplished by interviews of burn unit personnel, review of published and unpublished material on the unit, and by correspondence with authorities in the field. (L.E.W.)

SC1040 6pp.b.d., 9/67

Lawrie, D.M.; Greenwood, T.W.; Goddard, M.; Harvey, A.C.; Donald, K.W.; Julian, D.G.; Oliver, M.F.
A CORONARY-CARE UNIT IN THE ROUTINE MANAGEMENT OF ACUTE MYOCARDIAL INFARCTION
The Lancet, Vol. II, No. 7507, July, 1967, pp. 109-114
Available from original publisher

Article describes experience of new coronary care unit (Royal Infirmary, Edinburgh) with first 400 cases of myocardial infarction admitted. The design, equipment and staffing of the unit are detailed. Also discussed are admission and discharge policies and problems of therapeutic policy, staffing and administration that present in this type of unit. Of the 400 cases, there were 70 deaths - 55 in the unit and 15 in wards after transfer. High proportion of deaths was due to shock, asystole and severe cardiac failure. It is concluded this type of unit can make maximum impact on mortality if admissions are restricted to patients whose symptoms began within preceding 48 hours and to those who develop serious arrhythmias while being treated elsewhere. (D.F.B)

SC1041 5pp.b.d.p., 1/68

Campbell, Donald; Reid, J. M.; Telfer, A. B. M.; Fitch, W.
FOUR YEARS OF RESPIRATORY INTENSIVE CARE
British Medical Journal, November, 1967, pp. 255-259
Available from original publisher

This paper gives data on a survey of patients at Glasgow Royal Infirmary (July, 1963 - January, 1964) to determine the percentage of beds needed for Intensive Care, and length of stay in the unit, distribution of patients by age group, and the mortality rate. Unit was restricted to patients in acute respiratory embarrassment. It was decided four per cent of the bed complement should be ICU; the three - five day length of stay was most common; the distribution by age group was quite wide; and "the mortality in patients thought to require intensive care was found to be 19 percent." (L.E.W.)

SOCIAL SERVICE

S00013 57pp.b.d.R., 11/67

Gordon, Barbara; Rehr, Helen
A STUDY OF AGING WARD PATIENTS SERVED BY THE MOUNT SINAI HOSPITAL SOCIAL SERVICE DEPARTMENT
Social Service Department, The Mount Sinai Hospital, 11 East 100th Street, New York, New York, 10029, 1966
Available from U.M.I. Xerox $3.00
Film reel #2.29 $5.25

A study was made of the 121 ward patients 60 years of age and older who completed social service contact at The Mount Sinai Hospital (New York City), January - May, 1965. Data were collected for descriptive demographic data, socioeconomic characteristics, referral patterns to social service, selected activities of social service, to draw comparisons between aged population served by social service and those served by major division of medicine, and to describe prior social living arrangements and "post-admission" discharge plans. Extensive tabulation of data given as well as examples of data collection forms. (L.E.W.)

S00014 133pp.th.D.S.W., 12/67

Krakow, Sylvia G.
A STUDY OF COLLABORATION BETWEEN THE SOCIAL WORKER AND THE DOCTOR IN THE TUMOR CLINIC AT BETH ISRAEL HOSPITAL
University of Pennsylvania, Philadelphia, Pennsylvania, 1966
Available from U.M.I., document no. 64-10,519
Xerox $6.40
Film reel $3.00

A study to describe the nature of collaboration ("joint thinking and planning . . . on the patients' behalf") between the social worker and physician in hospital. An investigator during a six-month period made observations, consulted records, conducted interviews, which were focused on twenty-five patients at five crucial points of time and decision in relation to their progress in Tumor Clinic.

The author found collaboration to be a secondary process called into operation "when social and psychological complications distort medical treatment and care". Initiation of most of collaboration was by the physician - coordinator of the clinic who carried "central and primary responsibility". Use of collaboration was made "in areas involving motivation for use of medical treatment and care, reality factors which impede action, and relationship problems occasioned by illness." (L.E.W.)

BIBLIOGRAPHIES, ABSTRACTS AND ANTHOLOGIES

CHANGE IN AVAILABILITY

Z2011 89pp.b.R., 3/67

Bartscht, Karl G.; Choley, Patricia A. and Harazin, Anne M.
DEMONSTRATION AND EVALUATION OF HOSPITAL STAFFING METHODS
Hospital Systems Research Group, Institute of Science and Technology, The University of Michigan, Ann Arbor, Michigan, July, 1966
U.S.P.H.S. Grant No. HM-00406-01
Available from U.M.I. Xerox $4.05
Film reel #2.29 $5.25

Bibliography of references used in development of admitting, housekeeping medical records and radiology staffing methodologies. Bibliography is organized by department, describes content of references, includes material relating to current thinking on department organization and design and includes publications through May 1, 1966. (D.F.B.)

Z2020 138pp.b.R., 11/67

Edwards, Mabel I.
SELECTED ANNOTATED BIBLIOGRAPHY: HOME CARE SERVICES OF THE CHRONICALLY ILL AND AGED
Institute of Gerontology, University of Iowa, Iowa City, Iowa, June, 1967
Available from original publisher

An annotated bibliography of several hundred citations (mostly 1960 or later) which was prepared for those interested in sources of information about organized home care services for the chronically ill and aged. Material is presented in four sections: "Coordinated Home Care"; "Homemaker - Home Health Aide Services"; "Meals on Wheels"; and "Dental Home Care Services". See also Z2018 and Z2019, Volume IV, No. 1. (L.E.W.)

Z2021 22?pp.b.R., 11/67

Sigler, Jack E.; Bryant, Louise R.
PROVISION AND UTILIZATION OF HEALTH FACILITIES AND SERVICES - A SELECTED ANNOTATED BIBLIOGRAPHY
U.S.P.H.S. Grant No. 108-66-49
Institute for Community Studies, 2300 Holmes, Kansas City, Kansas 64108, June, 1966
Available from U.M.I. Xerox $9.95
Film reel #2.29 $5.25

A general annotated bibliography of over 500 citations of the health facilities and related services, covering various aspects. The majority were published since 1960. In alphabetic order by author. (L.E.W.)

Z2022 48pp.b., 11/67

Health Insurance Institute
A LIST OF CURRENT HEALTH INSURANCE BOOKS, 1967
Health Insurance Institute, 277 Park Avenue, New York, New York 10017
Available from original publisher

An annual publication of about 150 citations of current books on health insurance. (L.E.W.)

Z2023 58pp.b.R., 11/67

Wright, Donald E.
BIBLIOGRAPHY ON CLEAN ROOMS
Biological Sciences Communication Project, The George Washington University, Washington, D.C.
NASA Contract NSR 09-010-027
Available from Clearinghouse for Federal, Scientific and Technical Information, U.S. Department of Commerce, Washington, D.C., hardcopy, $3.00, microfiche, $.65

A bibliography compiled with references (1939-1966) particularly to work related to HASA-sponsored research. Within this research the removal of particulate contaminants from the air has been the main stress. Over 200 citations are given as well as author and permuted key word indexes. (L.E.W)

Z2024 17pp.b.R., 12/67

Beauregard, Robert M.
AN ANNOTATED BIBLIOGRAPHY ON FACTORS INFLUENCING PARTICIPATION AND NONPARTICIPATION IN HEALTH SURVEYS
Chronic Disease Quarterly, May, 1965
Available from California Department of Public Health, Bureau of Chronic Diseases, 2151 Berkeley Way, Berkeley, California 94704

Annotated list of publications dealing with health attitudes toward illness and variables affecting response to health examination surveys. Includes a chart of influential factors derived from nine selected studies. (H.M.)

Z3007 262pp.b.R., 11/67

Ohio Department of Health
A DIRECTORY OF SOURCES OF HEALTH PLANNING INFORMATION, VOLUME III
U.S.P.H.S. Grant No. HM00450-01
Ohio Department of Health, Columbus, Ohio, 1967
Available from original publisher

A directory of information resources for health planning with commentaries on services available in the various agencies. Also contains excerpts from a wide variety of reports and projects relating to health planning problems. Described as "supplement to Volume I", although it appears largely to supersede that work (AR0030, Volume IV). (L.E.W.)

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New York 10022

CHANGE OF AVAILABILITY

The Hospital Systems Research Group, Department of Industrial Engineering, The University of Michigan working under U.S.P.H.S. Grant Number HM00406-02 developed a number of methodology manuals for departments of hospitals. These manuals have been used in Methodology Workshops at the University and were made available also through the Publications Distribution Service of the University. Abstracts of several of the manuals were published in Abstracts of Hospital Management Studies during the past three years with the University service given as the place to purchase.

The U.S.P.H.S. grant has terminated and the principals of the group at work have now joined Community Systems Foundation, where the methodologies are now available. Below is a list of the abstracts of methodologies which have appeared in Abstracts of Hospital Management Studies and the address from which the manuals are now available.

ABSTRACT NUMBER	TITLE
AM0003	ADMITTING METHODOLOGY MANUAL
65	DIETARY METHODOLOGY MANUAL
HU0030-1	HOUSEKEEPING METHODOLOGY MANUAL
85	LAUNDRY METHODOLOGY MANUAL
118	PHARMACY METHODOLOGY MANUAL
MN1025	STAFFING METHODOLOGY MANUAL
MR0020	MEDICAL RECORDS METHODOLOGY MANUAL
RL0005	RADIOLOGY METHODOLOGY MANUAL

Priced at $48.50 per volume for each Methodology Manual

Available now from:

Community Systems Foundation
111 North Main Street
Ann Arbor, Michigan 48108

INDEXES

LIST OF JOURNALS ROUTINELY SEARCHED

The following journals have been reviewed by the editorial staff for Volume IV. Articles reporting hospital management studies are cited in Abstracts. Reprints should be ordered directly from the journal cited.

Abstracts for Social Workers
2 Park Avenue
New York, New York 10016
$10.00 per yr.
Issued: Quarterly

Administrative Science Quarterly
Graduate School of Business and
Public Administration
Cornell University
Ithaca, New York
Single copies: $3.00
Issued: Quarterly

American Druggist
1790 Broadway
New York, New York 10019
Single copies: $.50
Issued: Fortnightly

The American Economic Review
629 Noyes Street
Evanston, Illinois 60201
Single copies: $2.00
Issued: Quarterly

American Institute of Architects Journal
1735 New York Avenue, N.W.
Washington, D.C. 20006
Single copies: $.75
Issued: Monthly

American Journal of Hospital Pharmacy
4630 Montgomery Avenue
Washington, D.C. 20014
Single copies: $1.50
Issued: Monthly

American Journal of Nursing
10 Columbus Circle
New York, New York 10019
Single copies: $.60
Issued: Monthly

American Journal of Occupational Therapy
251 Park Avenue South
New York, New York 10010
Single copies: $1.35
Issued: Bi-monthly

American Journal of Public Health and the Nation's Health
1740 Broadway
New York, New York 10019
Single copies: $2.00
Issued: Monthly

American Psychologist
1313 Sixteenth Street, N.W.
Washington, D.C. 20036
Single copies: $1.00
Issued: Monthly

American Sociological Review
1001 Connecticut Avenue
Washington, D.C. N.W. 20036
Single copies: $2.50
Issued: Bi-monthly

Archives of Physical Medicine and Rehabilitation
30 North Michigan Avenue
Chicago, Illinois 60602
Single copies: $1.00
Issued: Monthly

Arizona Nurse
506 W. McDowell Road
Phoenix, Arizona 85003
Single copiesL $.50
Issued: Five times a year

Blue Cross Reports
840 North Lake Shore Drive
Chicago, Illinois 60611
Sent on request
Issued: Quarterly

British Hospital Journal and Social Service Review
27-29 Furnival Street
London, E.C.4, England
$8.40 per yr.
Issued: Weekly

British Medical Journal
Tavistock Square
London, W.C.1, England
Single copies: $.70
Issued: Weekly

Business Topics
Graduate School of Business Administration
Michigan State University
East Lansing, Michigan
Sent on request
Issued: Quarterly

Canada's Mental Health
Mental Health Division
Department of National Health and Welfare
Ottawa, Ontario, Canada
$3.00 per yr.
Issued: Bi-monthly

Canadian Hospital
25 Imperial Street
Toronto 7, Ontario, Canada
$6.00 per yr.
Issued: Monthly

Canadian Journal of Public Health
1255 Yonge Street
Toronto 7, Ontario, Canada
Single copies: $1.00
Issued: Monthly

Canadian Medical Association Journal
150 St. George Street
Toronto 5, Ontario Canada
$15.00 per yr.
Issued: Monthly

Cleveland-Marshall Law Review
1240 Ontario Street
Cleveland, Ohio 44113
$5.00 per yr., Single copies: $1.75
Issued: Three times a year

Community Mental Health Journal
Behavioral Publications, Inc.
2852 Broadway - Morningside Heights
New York, New York 10025
Single copies: $2.75
Issued: Quarterly

Contemporary Psychology
1200 Seventeenth Street, N.W.
Washington, D.C. 20036
Single copies: $1.00
Issued: Monthly

Excerpta Medica
New York Academy of Medicine Bldg.
2 East 103 Street
New York, New York 10029
$25.00 per yr.
Issued: Monthly

Group Practice
American Association of Medical Clinics
Box 58
Charlottesville, Virginia 22902
$8.00 per yr.
Issued: Monthly

Harvard Business Review
Soldiers Field Station
Boston, Massachusetts 02163
$10.00 per yr.
Issued: Bi-monthly

Health Services Research
Hospital Research and Educational Trust
840 North Lake Shore Drive
Chicago, Illinois 60611
$12.00 per yr.
Single copies: $3.00
Issued: Quarterly

The Hospital
75 Portland Place
London, W.1, England
Single copies $1.20
Issued: Monthly

Hospital Abstracts
P. O. Box 569
London, S.E.1, England
Single copies: $.90
Issued: Monthly

Hospital Accounting
840 North Lake Shore Drive, Suite 530
Chicago, Illinois 60611
Single copies: $1.50
Issued: 10 issues per year
(No issues in July and August)

Hospital Administration
840 North Lake Shore Drive
Chicago, Illinois 60611
Single copies: $.150
Issued: Quarterly

Hosptial Administration (Australia)
Box 3631 G.P.O.
Sydney, N.S.W., 2001 Australia
Single copies: $.50
Issued: Monthly

Hospital Administration in Canada
1450 Don Mills Road
Don Mills, Ontario, Canada
$10.00 per yr. (U.S.A.)
Issued: Monthly

Hospital and Community Psychiatry
American Psychiatric Association
1700 Eighteenth Street, N.W.
Washington, D.C. 20009
Individual subscriptions: $8.00 per yr.
Issued: Monthly

The Hospital Engineer
15 Cleveland Square
London, W.2, England
Single copies: $.70 (overseas)
Issued: Monthly

Hospital Formulary Management
Clissold Publishing Company
105 West Adams
Chicago, Illinois 60603
Single copies: $1.00
Issued: Monthly

Hospital Forum
4777 Sunset Boulevard
Los Angeles, California 90027
$5.00 per yr.
Issued: Monthly

Hospital Literature Index
840 North Lake Shore Drive
Chicago, Illinois 60611
$10.00 per yr.
Issued: Quarterly

Hospital Management
105 West Adams Street
Chicago, Illinois 60603
Single copies: current, $.50,
back issues, $1.00
Issued: Monthly

Hospital Management, Planning and Equipment
Wrotham Place, Wrotham, Sevenoaks
Kent, England
Single copies: $.60
Issued: Monthly

Hospital News
25 Adelaide Street
Belfast 2, Northern Ireland
Available on request
Issued: Quarterly

The Hospital Pharmacist
Pharmacy Department, University Hospital
Saskatoon, Saskatchewan, Canada
Single copies: $1.00
Issued: Bi-monthly

Hospital Progress
1438 South Grand Boulevard
St. Louis, Missouri 63104
Single copies: $.50
Issued: Monthly

Hospital Topics
2737 West Peterson Avenue
Chicago, Illinois 60645
Single copies: $1.75
Issued: Monthly

Hospitals
840 North Lake Shore Drive
Chicago, Illinois 60611
Single copiesL $.50
Issued: Semi-monthly

Hospitals' Association Journal
10 Birchgrove Road
Balmain, N.S.W., Asutralia
$4.20 per yr.
Issued: Monthly

Human Factors
Periodical Manager
Johns Hopkins Press
Baltimore, Maryland
Single copies: $4.00
Issued: Bi-monthly

Inquiry
Blue Cross Association
840 North Lake Shore Drive
Chicago, Illinois 60611
Issued: "Regularly"

Institutions Magazine
1801 Prairie Avenue
Chicago, Illinois 60616
Single copies: $1.00
Issued: Monthly

International Journal of Nursing Studies
Pergamon Press, Limited
44-01 21st Street
Long Island City, New York 11101
$20.00 per yr. (libraries)
$7.50 per yr. (private subscribers)
Issued: Quarterly

Journal of the American Dietetic Association
620 North Michigan Avenue
Chicago, Illinois 60611
Single copies: $.75
Issued: Monthly

Journal of the American Medical Association
535 North Dearborn Street
Chicago, Illinois 60610
Single copies: $.60
Issued: Weekly

Journal of the American Osteopathic Association
212 East Ohio Street
Chicago, Illinois 60611
$10.00 per yr.
Single copies: $1.00
Issued: Monthly

Journal of the American Statistical Association
810 18th Street, N.W.
Washington, D.C. 20006
Single copies: $3.00
Issued: Quarterly

Journal of Chronic Diseases
44-01 21st Street
Long Island City, New York 11101
Single copies: $4.00
Issued: Monthly

Journal of Health and Social Behavior
49 Sheridan Avenue
Albany, New York 12210
Single copiesL $2.50
Issued: Quarterly

Journal of Industrial Engineering
345 East Forty-Seventh Street
New York, New York 10017
Single copies: $2.50
Issued: Monthly

Journal of Medical Education
2530 Ridge Avenue
Evanston, Illinois 60201
Single copies: $2.50
Issued: Monthly

Journal of Risk and Insutance
112 East Washington
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Single copies: $2.00
Issued: Quarterly

The Lancet
(North American Edition)
34 Beacon Street
Boston, Massachusetts 02106
Single copies: $.50
Issued: Weekly

Management of Personnel Quarterly
Bureau of Industrial Relations
Graduate School of Business Administration
The University of Michigan
Ann Arbor, Michigan 48108
$4.50 per yr.
Issued: Quarterly

Management Science
Box 273
Pleasantville, New York
Single copies: $2.00
Issued: Monthly

Medical Care
East Washington Square
Philadelphia, Pennsylvania 19105
$10.00 per yr. in U.S.A. and Canada
$12.00 per yr. elsewhere
Single copies: $2.25
Issued: Bi-monthly

Medical Care Review
Bureau of Public Health Economics
School of Public Health, Room 3533
The University of Michigan
Ann Arbor, Michigan 48104
$10.00 per yr.
Issued: Monthly, except September

Medical Economics
Oradell, New Jersey 07649
Single copies: $1.50
Issued: Fortnightly

Medical Record News
211 East Chicago Avenue
Chicago, Illinois 60611
Single issues: $1.00
Issued: Bi-monthly

Medical Social Work
Institute of Medical Social Workers
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London, W.C.1, England
Single copies: $.35
Issued: 10 times a yr.

Medicine, Science and the Law
Sweet and Maxwell, Limited
11 New Fetter Lane
London, E.C.4, England
$15.00 per yr.
Single copies: $3.75
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Michigan Business Review
Graduate School of Business
Administration
The University of Michigan
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Issued: Bi-monthly (November through
July. Sent on request)

Michigan Hospitals
2213 East Grand River Avenue
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Superintendent of Documents
U.S. Government Printing Office
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Issued: Monthly

MTM Journal
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Issued: Bi-monthly

New England Journal of Medicine
10 Shattuck
Boston, Massachusetts 02115
Single copies: $.20
Issued: Weekly

The New Zealand Hospital
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Nursing Forum
Nursing Publications, Inc.
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$6.50 per yr.
Single copies: $1.75
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Nursing Homes
4015 West 65th Street
Minneapolis, Minnesota 55435
$10.00 per yr.
Issued: Monthly

Nursing Outlook
10 Columbus Circle
New York, New York 10019
Single copies: $.60
Issued: Monthly

Nursing Research
10 Columbus Circle
New York, New York 10019
Single copies: $2.50
Issued: Quarterly

Nursing Times
Macmillan and Co., Ltd.
Brunel Road
Basingstoke, Hants, England
$9.00 per yr. (U.S.A.)
Issued: Weekly

Operations Research
Mt. Royal and Guilford Avenues
Baltimore, Maryland 21202
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Physical Therapy
1740 Broadway
New York, New York 10019
Single copies: $2.00
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Public Health Reports
Superintendent of Documents
U.S. Government Printing Office
Washington, D.C. 20402
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Issued: Monthly

Review of Economic Studies
Tweeddale Court
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Edinburgh 1, Scotland
Single copies: $2.50
Issued: 3 times yearly

Social Security Bulletin
Superintendent of Documents
Government Printing Office
Washington, D.C. 20402
$2.75 per year
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Southern Hospitals
Clark - Smith Publishing Co.
218 West Morehead Street
Charlotte, South Carolina
Single copies: $.30
Issued: Monthly

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Texas Hospital Association
6225 U.S. Highway 290E
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World Hospitals
The Hospital Centre
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AUTHOR INDEX

A

Abel-Smith, B., MN0021
Abramson, J. H., PE0042
Adams, Fred Thomas, MN3024
Adelson, Becky, PS3014
Aird, John C., MN3016
Alderman, Alice J., PH0033
Allen, David, CH0029, OU3051
Allen, Robert G., AB2015
Allen, S. I., DA4006
Allied Health Professions Education Subcommittee of the National Advisory Health Council, MP0012
Alon, J., PE0042
Alpert, Joel J., HE1028, MD2040
American Hospital Association, DI0051
American Institute of Industrial Engineers, Detroit Chapter, MN1038
American Public Health Association, Program Area Committee on Child Health, OB0029
Ammer, Dean S., PE0039
Andjelkovic, Dragana, HE0240
Andrews, Janet T., AC1022
Archambault, George F., PH0036
Arie, Thomas, MD0078
Arthur Young and Company, IN4013

B

Baan, P., MN0021
Badgley, Robin F., HE0249, IN4014
Bajus, Richard G., LD1004
Baldwin, J. A., PS3012
Barker, Thomas Carl, MD2039
Barnett, G. Octo, DA2002, DA4006, DA4007
Barnett, J. W., PH1034
Bartholomew, Robert, PE5009
Bartscht, Karl G., MN1040
Baughman, Robert J., IN1005
Bayer, Alan E., NU1095
Beauregard, Robert M., Z2024
Begin, Joseph L., HE1025
Berneking, C. L., PE3015
Bingham, Fletcher H., AB2010, AB2015
Borda, Ivan, MD5010
Bowden, Edgar A. F., NU0034
Braidwood, Rick, OP1025
Bridenbaugh, L. D., AN1001
Bridgman, R. F., MN0021
Brodie, Donald C., PH0036
Brudvig, Wallace A. D., NU0035
Bryant, E. Earl, CH0025, CH2033, CH2036
Bryant, Louise R., Z2021
Btesh, S., MN0021
Bugbee, George, AB2015
Burke, Donald W., OU3058
Butter, Irene, MP0011
Buxbaum, Richard J., OU3060

C

Caie, H. B., PH1034
Calder, G., PH1034
California Department of Mental Hygiene, PS0074, PS3016
California Department of Public Health, Bureau of Chronic Diseases, HE2020
Campbell, Donald, SC1041
Camrass, I., PE0042
Canadian Nurses' Association, NU4034
Cando, W. J., DA4011
Carr, Willine, IN2009
Casson, P. D., PA0020
Castleman, P. A., DA4006, DA4007
Cecil, John G., CH2038
Chalmers, T. C., MD5010
Clark, Lawrence J., NU1096
Clarke, Kenneth R., PE0040
Coates, William, PE2029
Colley, John L., HE2015
Commission for Administrative Services in Hospitals (CASH), NU1067
Community Service Society of New York, OU1021
Community Systems Foundation, AC4001, AM1012, DI0055, DI0056, OP1023, OP1024, OP1025, OP1026, PU2018, PU2019, PU3023
Conole, Charles P., DE0048
Cooper, Barbara S., MN2028

Coull, D. C., PH1034
Coulter, W. K., MD5011
Covert, Richard P., MN2027
Cox, John M., MN1038
Crawford, Marion P., NU0043, PE0047, PE0049
Crichton, Anne, MP0008, NU0043, PE0047, PE0049
Crooks, J., PH1034
Crosby, Ralph W., HE0237
Cushing, John C., Jr., NU4037

D

Dalton, James E., Jr., PE3016
Daniel, Wayne Wendell, PS3021
Das, B. C., MN2024, MN2025
Das, Rhea S., MN2024, MN2026
Davis, Donald W., CO2008
Davis, Gordon Morris, SC0023
Dean, D. J., PA0020
Dean, Larry S., AR1015
Deno, Richard A., PH0036
De Vise, Pierre, AR2053
De Vries, J. C., AN1001
Dewdney, J. C. H., HE0242
Dickey, Frank G., AB2015
Dickinson, J. C., LD3003
Diggs, Mary M., DI0046
DiMercurio, Gary M., PE5006
Dinan, Barbara, MD5010
Dolson, Miriam T., AB2013
Dominion Bureau of Statistics, PS0081
Donald, K. W., SC1040
Donaldson, Beatrice, DI0049
Donnelly, W. A., PU2019
Dooley, Samuel, AR2080
Dorsey, H. W., PU2019
Drinkwater, David Anthony, AC1024
Drosness, Daniel, AR1015
Dunagan, Willis H., CH0020
Dunn, Donald W., AB2015

E

Eckstein, Eleanor Foley, DI2006
Edmands, Clay D., NU1105
Edwards, Mabel I., Z2020
Eisner, Victor, AR2080
Elinson, Jack, PS0075
Eliot, Johan W., PS0083
Epstein, Lenore A., HE0259
Eveland, Charles L., CO2009

F

Fairey, M. J., MD0078
Ferguson, James E., NU4036
Ferrell, Edward Shinault, PE0038
Fetter, Robert B., HE1033
Filerman, Gary L., AB2015
Fitch, W., SC1041
Flagle, Charles D., MN2023
Fleming, Donald, PE2029
Folta, Jeannette Ruth, NU0042
Foote, Franklin M., CH2031
Forest, Betty Lucille, NU1110
Frank, Bernard, OU3048
Friedland, Richard, OP1023

G

Gautreaux, Ronald, PH1033
Gee, David A., OU3057
Gendel, Howard Lionel, HU0056
Georgopoulos, Basil S., MN3026
Gillam, Robert, AB2015
Gilman, Barry, MD5010
Gintzig, Leon, AB2016
Goddard, B. A., HU1011
Goddard, M., SC1040
Goldberg, Donald H., MN3015
Gonzalez, P., PU3023
Gordon, Barbara, SO0013
Gordon, Joseph, CO2007
Gordon, Ruby D., NU0040
Govan, Elizabeth S. L., HE0251
Gowdey, C. W., MD5011
Graham, John A., NU1108
Green, Melvin W., PH0036
Green, Riley J., Jr., PA0024
Greenberg, Sidney M., MD5012
Greenes, Robert A., DA2002
Greenlick, Merwyn R., OU3058
Greenwood, T. W., SC1040
Griffith, John R., AB2015, OU3059
Grosof, Elliott H., PE1014
Gross, Llewellyn A., PE1014
Gue, Ronald L., DI0048

H

Haggerty, Robert J., HE1028
Hall, D. J., PS3012
Hallan, J. B., HE2015
Hamelin, Ingrid, NU4038
Hammer, Muriel, PS0073
Hanchett, Effie, OU3049
Handley, James Gene, PH0030
Hansen, Gary D., CH0020
Hanson, Paul W., MR0032
Hardie, Robin, MP0008
Harris, Davis H., PU2018
Hartman, Gerhard, AB2015
Harvey, A. C., SC1040
Hatt, F. M., NU1106
Health Facilities Planning Council for Metropolitan Washington, MD0060
Health Facilities Planning Council of Hawaii, AR2057
Health Insurance Institute, IN1007, Z2022
Heine, Cal, PE2029
Heinemann, Ruth I., LB2029
Heller, Ronald J., MD2040
Hershel, Jick, MD5010
Hess, Irene, MN0022
Hetherington, Robert W., HE0249, IN4014
Hill, Marion Elizabeth Hanley, NU0039
Hill, Roland R., IN4010
Hobaugh, Robert J., OU3056
Hobbs, M. S. T., OB1002
Hoddinott, B. C., MD5011
Hodgins, K. W., ML2005
Hodson, B. A., DA4011
Hoffman, Sybil, PS0083
Holliday, Jane, OU3054
Holm, Donald S., Jr., AB2015
Holmgren, John Howard, MN3025
Home Care Program for Metropolitan Toronto, Incorporated, OU3052, OU3061
Hopp, W. Michael, PU2018
Horvath, William J., PS0072
Hospital Planning Association of Allegheny County, IN4016
Hospital Utilization Research Project, AR1015
Howard, John K., PE0037
Hsieh, Richard K. C., MN2023
Hubbard, William N., Jr., PH0036
Hudson, Jay M., AB2011
Hudson, Wellborn R., MN1037

I

Idreas, A. M., MN0021
Illinois, Department of Public Health, AC1021

J

Jaco, E. Gartley, NU1102
Jacobs, M. O., PU3023
Jeffers, William N., MD0069, MD0070, MD0071
Jehring, J. J., PE3017
Johnson, L. Barney, DI0047
Johnson, Marjory W., PT1002
Jones, Thomas F., HE1036
Jones, Wanda J., DE1017
Julian, D. G., SC1040

K

Kelly, A. D., PH0029
Kelman, Howard R., CH0019
King, Stonewall C., Jr., PH0032
Kirchner, Corinne, IN4019
Kirkpatrick, John R., OU0047
Klarman, Herbert E., HE0250
Kleinschmidt, Arthur C., AC1023
Klutch, Murray, MP0010
Kohn, Robert, HE0247
Kosa, John, HE1028
Kossoris, Max D., PE5008
Kovar, Mary Grace, CH0022
Krakow, Sylvia G., SO0014
Kralewski, John Edward, AB2015
Kuyawa, J., PU2019

L

Lawrie, D. M., SC1040
Lemon, Genelle M., OU3050
Lerner, Raymond C., IN4019
Levenson, Myron Herbert, PS0080
Levey, Samuel, PE0044
Levine, Solomon, PE6011
Leyasmeyer, Edith, PE2029
Liggett, John C., DI0048
Lindberg, D. A. B., LB2026
Lingner, Joan W., OB0027

Linville, Fred E., PA0022
Livergant, H. T., AR1013
Llewelyn-Davies, R., MN0021
Lubin, Jerome W., AR1015
Ludwig, Patric E., OP1024

M

Mabry, John H., HE0240
Macaulay, H. M. C., MN0021
MacCharles, C. W., HE0230
McCoy, Leahmae, CH2030
McGuire, William D., HE0248
McKinley, Marjorie M., AC1023
McKinney, William Mark, AR1014
MacLaggan, Katherine Eva, NU4024
McLean, Margaret D., NU1112
McLees, William Anderson, AD4011
MacLeod, Vernon, OP1026
McNab, J. W., PH1034
Madow, William G., CH0024
Manitoba Hospital Association, DA4013, DA4014, RE0014
Manitoba Hospital Commission, MP2004
Mann, Judith K., HE2017, HE2018
Mann, K. J., PE0042
Martin, Samuel P., PH0036
Mather, William G., OU3056
Matthews, V. L., HE0249, IN4014
Mauksch, Hans O., NU0041
Meier, Gitta, PS0083
Mele, Frank M., NU1099
Menn, Hubert L., AC1025
Metropolitan Toronto Hospital Planning Council, AR1013
Meyers, Kathleen, IN1006
Miller, Bruce J., OU1018
Miller, Charles L., PT0006
Moir, J. G., PH5002, PH5003
Montag, Geraldine M., AC1023
Mooney, Robert G., MD3019
Moore, Aimee N., AC1022
Moore, D. C., AN1001
Morrill, Richard L., AR2061
Moser, Dennis R., AC3007
Muller, Jonas, CH0019
Mumford, Emily Hamilton, MD2038
Murray, J. F., MN0021
Murray, Janet W., HE0259
Myers, Charles G., PA0023
Myers, Robert J., IN1005

N

National Advisory Health Council. Allied Health Professions Education Subcommittee, MP0012
National Center for Health Statistics, CH0024, CH0030, CH2032, CH2034, CH2036, HE0252
National Council on Medical Technology Education, LB0011
Nelson, Arne B., CH2032, CH2037

O

Ogilvie, R. I., MD5016, MD5017
Ohio Department of Health, Z3007
Oliver, M. F., SC1040
Ontario Hospital Services Commission, HE0244
Ortega, Frank A., PU3020
Oviatt, Boyd Eugene, PS3019
Ozan, M. Turgut, LB2025

P

Packer, A. H., HE2015
Padilla, Elena, PS0075
Paetznick, Marguerite, MN0021, NU1087
Parker, J. M., MD5011
Parker, Rodger D., MN2022, MN2029
Parrish, Henry M., AB2017
Pearson, R. J. C., HE0240
Pellegrino, Edmund D., PH0036
Penn, Robert F., IN4012
Perkins, Marvin E., PS0075
Peterson, Donald Robert, PS3020
Phillips, Harry T., CH0021
Piepmeyer, Thomas A., MN2020
Political and Economic Planning, CH0022

Q

Quade, Dana, MD0074
Quamme, Mary E., DI0050
Quinlan, Richard S., PU3021

R

Ramsden, Gertrude A., NU0036
Raphael, Winifred, PA0025
Redfield, Richard E., ML0013
Reed, Louis S., IN1006, IN2009
Regan, Peter F., PH0036
Rehr, Helen, SO0013
Reid, J. M., SC1041
Ribak, Nancy, AR1015
Rice, Dorothy P., IN4017, MN2028
Richards, James W., PH0035
Richman, Alex, PS0076
Ridley, Jeanne Clare, OB0027
Ro, Kong Kyun, HE2022
Robertson, Leon S., MD2040
Robinow, Beatrix H., LI2006
Robinson, George W., MN2020
Rockwell, M. A., Jr., MD4023
Rogers, Charles A., PE0041
Rogers, Philip J., AM1012
Rogers, Theresa F., MD5012
Ross, Alan, HE0240
Ross, Thomas M., MP2003
Roswell, Charles G., MN1035, MN1036
Rowe, Tom D., PH0036
Rowland, John E., NU1109
Ruedy, J., MD5016, MD5017
Ryder, Claire F., OU3048

S

Sagen, O. K., HE0240
Sanford, Gilbert A., OU0046
Scheibe, Robert G., IN4011
Schlenker, Kenneth W., HE1034
Schlotfeldt, Rosella M., PH0036
Schmieding, Norma Jean, NU1082
Schmitt, George H., NU1107
Schneider, J. B., AR0041, AR1012
Schulte, Marjorie, IN4014
Schumacher, Joseph L., IN4009
Scott, Walter E., Jr., PE1015
Sheps, Mindel C., OB0027
Shubin, H., MD4023
Sigler, Jack E., Z2021
Silver, Helen Goodman, PS3018
Simms, Laura Louise, NU4039
Sirken, Monroe G., HE1037
Sister Ann Marita Loosen, PS0071
Sister Barbara Marie Beebe, AB0008
Sister M. Antoinette Traeger, CH0020
Sister M. Carmelia Lohaus, PE3021
Sister M. Columcille Kelly, PE5007
Sister M. Evelyn Connolly, CO2010
Sister M. Paulette Collings, AM2010
Sister M. Rita Basgall, PE2030
Sister Maria Stella, AB0010
Sister Mary Adrian Andrie, NU1111
Sister Mary Barbara Anderson, NU1093
Sister Mary Camille, OU1019
Sister Mary Fabian, IC1007
Sister Mary Margarella O"Neill, PA0027
Sister Mary Rene McNiff, AB0009
Skare, Orlan, PE2029
Skeet, Muriel H., NU0036
Sleeman, Janet, OU1020
Sleight, Robert E., PU0016
Slone, Dennis, MD5010
Smalley, Harold E., MN1034, MN1039
Smith, Dorothy Edith, PS3017
South Carolina Hospital Association, PE3020
Spang, A. James, NU1104
Srikantan, K. S., MN0022
Steele, James D., MN2027
Stephens, Linda Coogle, MN3020
Stewart, Rosemary, OU1020
Stiefel, Joseph B., OU3055
Sturm, Herman M., MP0009
Sutter, Gerald E., MD2037
Swearingen, Lawrence Lee, NU2007

T

Taube, Carl A., CH2033, CH2034, CH2036, PS3015
Taubenhaus, Leon J., OU0047
Telfer, A. B. M., SC1041
Tennessee Hospital Education and Research Foundation, Incorporated, CH0023
Theodore, Christ N., MD2037
Thomas, Gordon, PE2029
Thompson, John D., AB2015, HE1033
Thompson, William Louis, AB2014
Tooley, P. H., MD0078
Toomer, John D., MN3023
Torrens, Paul F., OU3049
Trexler, David V., DA4012
Tuthill, Byrdine H., AC1022

U

Underwood, Claire Blout, NU1103
United Community Services of Metropolitan Detroit, CH1010
United States Bureau of Labor Statistics, PE3019
United States Department of the Air Force, HE1038
United States Social Security Administration, IN4015

V

Van Trump, William Frederick, NU0038
Vaughn, R. G., III, DI0056
Vere, D. W., PH1035
Vinluan, Dominador C., HE1032
Visiting Nurse Service of New York, OU3054
Vlasak, George J., CH0021

W

Wagg, R. E., LD3003
Walker, Dorothy Jean, MD5015
Walker, R. G., OB0028
Walker, Robert, PS3007
Wallace, Helen M., AR2080
Ware, Carolyn B., PT1002
Watkins, C. Eugene, PH1033
Watson, J. P., PA0020
Webster, B., MD0078
Weckwerth, Vernon E., PE2029
Weil, M. H., MD4023
Weil, Thomas P., AB2015
Weir, R. D., PH1034
Welches, Lois, OU3050
Wells, Henry Bradley, OB0030
Western Regional Hospital Board, EN0022
Whalen, John, MD0073
White, Eugene V., PH0036
White, Kerr L., HE0240, MD0074
White, Rodney F., AB2015
White, Ruth Preston, MD0074
Whitehead, J. A., PA0020
Wickre, Faye, PE2029
Wieland, George F., MN3026
Wiesen, David, AB0007, HE0245
Wilczynski, Jerome, AC4001, DI0055
Wilder, Charles S., HE2021
Williams, William J., MN2027
Winick, William, PS3007
Witt, John A., PE3018
Woosley, Joe Curtis, IN2008
World Health Organization, HE0254
Wren, George R., AB2015
Wright, Donald E., Z2023
Wunderlich, Gooloo S., CH2034

X

Y

Yeracaris, Constantine A., PE1014
Yett, Donald E., HE2017, HE2018

Z

Zawacki, John Stanley, MN3022
Zulkowski, Edward, HE1031

89

SUBJECT INDEX

ABSENTEEISM PE0038
-Sick absence
-Patterns PE0037
ACCIDENT PREVENTION
-Fire safety
-Hyperbaric chambers EN0022
-Personnel safety
-Israel PE0042
-Nurses NU0040
ACCOUNTING (see also BUSINESS OFFICE; COSTS AND COST ANALYSIS; CREDIT AND COLLECTION; FINANCIAL MANAGEMENT; RATES)
-Accounts payable
-Data processing, automated
-Multi-hospital DA4014
-Systems analysis AC4001
-Accounts receivable
-Promptness to pay AC3007
-Cost accounting
-Food service
-Data processing, automated AC1022
-Mental hospitals AC1025
-Outpatient clinics OU1019
-Payroll
-Data processing, automated
-Multi-hospital DA4013, DA4014
-Reimbursement forms AC1024
ADMINISTRATION (see also DECISION-MAKING; FINANCIAL MANAGEMENT; TRUSTEES) MN0021
-Administrative handbook AB0010
-Bureaucracy of hospitals MN3022
-Decision-making
-Planning and design DE1017
-Manual AB0007
-Nursing service NU1087
-Policy manual AB0009
ADMINISTRATORS
-Attitudes
-Public health departments AB2014
-Characteristics AB2013
-Education AB2010, AB2013, AB2015, AB2016
-Fringe benefits PE3018
-Nursing home administrators
-Educational background CH0023
ADMINISTRATORS (Contd.)
-Relationships
-Medical staff
-Discipline AB2011
-Wages and salaries PE3018
Admission statistics see UTILIZATION
ADMITTING AND DISCHARGE (see also PRE-ADMISSION; REFERRAL SYSTEMS; SCHEDULING, PATIENTS) AM1012
-Bed control
-Bed shortage MD0078
-Computerized AB2010
-Fixed input queuing MN2029
-Patient coordinator system AM1012
ADOLESCENTS
-Hospitalization
-Attitude toward PA0022
AFFILIATION
-Hospital-nursing home CH1010, CH2038
AFTER CARE
-Chronic illness CH0019, CH0021
AGED (see also CHRONIC DISEASE; GERIATRICS; OLD AGE HOMES) HE0259, Z2021
-Care
-Charges CH0030
-Extended care facilities
-Medicare participants CH0029
-Facilities CH0025, CH2038
-Utilization CH2033
-Health insurance IN1006
-Home care service Z2020
-Hospital utilization
-Medicare, impact of IN4009
-Length of stay HE1032
-Medicare, effects IN4011
-Living arrangements
-New York City S00013
-Nursing time requirements NU1067
-Patient characteristics CH2034
-Psychiatric hospitalization PS0080
-Psychogeriatric illness CH0022
-Social service department
-Use S00013
-Supplementary health insurance IN1007

AGED (Contd.)
-Utilization of VA hospitals
-Medicare, effect on IN4010
Aides, nurses' see NURSES' AIDES
Aides, psychiatric see PSYCHIATRIC AIDES
Airborne infection see CROSS INFECTION
AMBULANCES OU0047
Ambulatory care see OUTPATIENT SERVICES
Ambulatory inpatient unit see SELF CARE UNIT
ANESTHESIOLOGISTS
-Income and working conditions MD0069
ANESTHESIOLOGY
-Nurse anesthetists
-Salaries PE3020
-Spinal anesthesia trays
-Disposable AN1001
APPOINTMENT SYSTEMS
-Outpatient service
-Clinics
-Waiting time MN2027
Architecture see DESIGN AND CONSTRUCTION
Area-wide planning see HEALTH FACILITIES PLANNING
Area-wide planning surveys see HEALTH FACILITIES SURVEYS
Automated data processing see DATA PROCESSING, AUTOMATED
Auxiliaries see VOLUNTEERS
Bacterial infection see CROSS INFECTION
BAYESIAN ANALYSIS
-Disease profiles MN2022
-Length of stay prediction PS3021
Bed control see ADMITTING AND DISCHARGE; and SCHEDULING, PATIENT
Bed occupancy see UTILIZATION
Benefit programs see PERSONNEL ADMINISTRATION
BLUE CROSS (see also INSURANCE, HEALTH)
-Aged IN1006
-Income and expenses IN2007
-Re-admissions
-Patterns IN2008
BLUE CROSS - BLUE SHIELD
-Nursing home care
-Hospital-nursing home affiliations
-Michigan CH1010
BLUE SHIELD
-Aged IN1006
-Income and expenses IN2007
Board of trustees see TRUSTEES
Building see DESIGN AND CONSTRUCTION
BURNS
-Burn therapy unit SC0023
BUSINESS OFFICE (see also ACCOUNTING)
-Clerical personnel
-Efficiency
-Personality effects PE6011
-Medicare, impact IN4008
Census, patient see UTILIZATION
Central service department see CENTRAL SUPPLY
CENTRAL SUPPLY
-Gloves
-Disposable and reusable
-Processing PU3020
-Layout PU3023
-Organization PU3021
-Personnel
-Overtime/vacancy ratio PE3015
-Staffing PU3021
Charges see ACCOUNTING; and RATES
CHILDREN
-"At risk" register OB0028
CHRONIC DISEASE (see also AGED; NURSING HOMES)
-Care
-Costs
-Econometric model HE2018
-Facilities CH0023, CH0025, Z2021
-Charges CH0030
-Personnel CH2035, CH2036
-Utilization CH2033, HE0245
-Home care service Z2020
-Incidence
-Nursing homes CH2037
-Long-term stays, unnecessary MD5012
-Patient characteristics CH2034
-Post-discharge care CH0019, CH0021
-Prevalance CH2032
-Reporting
-Interviews vs. medical records CH0024
-Veteran's hospital
-Medicare, effect IN4010
Clinical laboratories see LABORATORIES, CLINICAL
Clinical records see MEDICAL RECORDS
Clinics see OUTPATIENT SERVICE
Collective bargaining see LABOR UNIONS; PERSONNEL ADMINISTRATION
COMMUNICATION
-Organizational factors MN3026
-Physician-nurse MN3023
-Staff
-Medical and surgical services MN3020

COMMUNITY HEALTH SERVICE
-Home care programs
-Community health agencies OU3048
Community relations see PUBLIC RELATIONS
Comprehensive care see FAMILY PRACTICE
Computer applications see DATA PROCESSING, AUTOMATED
Construction see DESIGN AND CONSTRUCTION
CONSULTANT SERVICES RE0014
-Pharmacy service
-Small hospitals and nursing homes PH0032
Contamination see CROSS INFECTION
Continuing education see EDUCATION, CONTINUING
CORONARY CARE UNITS (see also INTENSIVE CARE UNITS; MONITORING, PATIENT; SPECIALIZED CARE UNITS) SC1040
-Admission policies SC1040
-Staffing, SC1040
COST OF MEDICAL CARE (see also ECONOMICS, HEALTH)
-Drug costs
-Canada PH0029
-Employee knowledge CO2008
COSTS AND COST ANALYSIS (see also ACCOUNTING; ECONOMICS, HEALTH) AC1024
-Business office
-Medicare processing IN4008
-Cost-benefit analysis HE0250
-Cost effectiveness
-Health services MN2022
-Disposables PU0016
-Food service DI0051
-Convenience foods
-Labor costs DI0050
-Cost accounting, computerized AC1022
-Gloves
-Disposable and reusable
-Comparison PU3020
-Home care service OU3055, OU3057, OU3059, OU3060
-Hospital operating cost
-Effect of size HE0217
-Illinois AC1021
-Unit costs
-Factors affecting HE2022
-Labor-saving machines
-Food service AC1023
-Long-term care costs
-Econometric model HE2018
-Medical records transcription MR0032
COSTS AND COST ANALYSIS (Contd.)
-Medicare processing
-Business office IN4008
-Medicare reimbursement IN4013
-Mental hospitals
-Cost accounting AC1025
-Nursing home care
-Hospital-nursing home affiliations CH1010
-Nursing service
-Turn-over NU1109
-Nursing units
-Circular NU1102
-Outpatient clinics OU1019
CREDIT AND COLLECTION (see also ACCOUNTING)
-Outpatient clinics OU1019
-Promptness to pay AC3007
Critical care see INTENSIVE CARE UNITS
CROSS INFECTION
-Blankets LD3003
-Central supply
-Layout PU3023
-Clean rooms Z2023
-Laminar flow rooms Z2023
-Linens, soiled LD1004
-Operating rooms
-Cleaning methods IC1007
DATA PROCESSING, AUTOMATED (see also AUTOMATION; INFORMATION SYSTEMS, PROGRAMMING; SIMULATION) DA4012
-Accounting, cost
-Food service
-Menu planning AC1022
-Drug information service PH5003
-Food service
-Cost accounting AC1022
-Menu planning DI2006
-Program DI0048
-Laboratories, clinical LB2026
-Medical records
-Data bank MN2022
-Monitoring patient
-Cardiac output measurement, on-line MD4023
-Multi-hospital DA4013, DA4014
-Poison information centers PH5002
-Programming language DA2002
-Scheduling, patient AM2010
-Staffing requirements
-Mental hospitals
-SCOPE system PS3016

DATA PROCESSING, AUTOMATED (Contd.)
-Time-sharing computer system
-Massachusetts General Hospital DA4006, DA4007
-Victoria General Hospital DA4011
DAY CARE
-Acute hospitals HE0237
-Psychiatric patients PS3014
DEATH
-Nurse-patient relations NU0042
DECISION MAKING
-Planning and design DE1017
-Programming language DA2002
Delivery suites see OBSTETRICS
Demand for services see HEALTH FACILITIES AND SERVICES
DENTAL SERVICE
-Home care service Z2020
DESIGN AND CONSTRUCTION (see also HEALTH FACILITY PLANNING) DE0048
-Central supply
-Layout PU3023
-Changes
-Employee reaction PE0047
-Clean rooms Z2023
-Decision-making DE1017
-Laminar flow rooms Z2023
-Nursing units
-Circular NU1111
-Costs NU1102
-Patient room
-Size preference PH0023
DIAGNOSIS
-Patient symptom profiles MN2022
Dictating systems see TRANSCRIPTION SYSTEMS
Dietary department see FOOD SERVICE
DISASTER SERVICE
-Simulation model
-Atomic attack HE2015
Discharge statistics see UTILIZATION
DISEASES
-Disease profile MN2022
-Duration of illness HE1038
-Air Force hospital HE1038
DISINFECTION
-Laundries
-Woollen blankets LD3003
DISPOSABLE EQUIPMENT
-Economic evaluation of PU0016
-Gloves
-Disposable and reusable
DISPOSABLE EQUIPMENT (Contd.)
-Comparison PU3020
-Spinal anesthesia trays AN1001
Doctor-patient relations see PHYSICIAN-PATIENT RELATIONS
Doctor's orders see MEDICAL RECORDS; PHARMACY SERVICE
Drugs and drug dispensing see MEDICATION ERRORS; PHARMACY SERVICE
ECONOMICS
-Human life
-Value of individual MN2028
ECONOMICS, HEALTH (see also COST OF MEDICAL CARE; COSTS AND COST ANALYSIS
-Cost-benefit analysis HE0250
-Cost of hospital care
-Prediction model MN2024
-Cost theory HE2017
-Health expenditures
-Family HE2021
-Hospitals
-Economies of scale HE2017, HE2022
-Long-term hospital costs
-Econometric model HE2018
EDUCATION
-Geriatric care CH0020
-Hospital administration AB2010, AB2013, AB2015, AB2016
-Medical technologists
-And job performance LB0011
-Graduate study LB2029
-Paramedical personnel MP0012
EDUCATION, CONTINUING PE2030
-Nursing refersher courses
-Active and inactive nurses NU4037
-Physical therapists PT1002
-Supervisors
-Junior colleges PE2029
EDUCATION, INSERVICE (see also PERSONNEL ADMINISTRATION) PE2030
-Management systems analyst MN1034
-Methods improvement
-Manual MN1036
-Nursing NU4038
EDUCATION, MEDICAL
-Intern and resident MD2038
-Medical school departments
-Leadership attitudes MD0073
EDUCATION, NURSING
-Associate degree graduates
-Job performance NU1110

EDUCATION, NURSING (Contd.)
-Baccalaureate
-Role perception NU4039
-Canada NU4024
-Inservice education NU4038
-Length of hospital career NU4036
-Nurse supply
-Prediction NU1095
-Refresher courses
-Active and inactive nurses NU4037
-Statistics
-Canada NU4034
-United Kingdom NU0043
EMERGENCY SERVICE
-Ambulance service OU0047
-Utilization OU0046
ENGINEERING
-Personnel
-Overtime/vacancy ratio PE3015
EQUIPMENT AND SUPPLIES
-Disposables, conversion to PU0016
-Gloves
-Disposable and reusable PU3020
-Hyperbaric chambers EN0022
-Labor-saving machines
-Cost analysis AC1023
-Spinal anesthesia trays
-Disposable AN1001
-Surgical
-Inventory control PU2018
-Ultrasonic cleaning units HU1011
Extended care see CHRONIC DISEASE; NURSING HOMES; OLD AGE HOMES; PROGRESSIVE PATIENT CARE
FAMILY
-Health behavior
-Patterns HE1028
-Health expenditures HE2021
-Hospitalization of mental patients PS0073
-Psychogeriatric illness
-Impact CH0022
FAMILY PLANNING SERVICE
-Low-income psychiatric patients
-General hospitals PS0083
FINANCIAL MANAGEMENT
-Outpatient clinics OU1019
-Reimbursement formulas AC1024
FIRE PREVENTION
-Hyperbaric chambers EN0022
FOOD SERVICE DI0051
-Convenience foods
FOOD SERVICE (Contd.)
-Labor cost analysis DI0050
-Cost accounting
-Data processing, automated AC1022
-Evaluation DI0046
-Five meals/day program
-Unit kitchen
-Activities analysis DI0047
-Labor-saving machines
-Cost analysis AC1023
-Menu planning DI0051
-Computer-aided AC1022, DI0048 DI2006
-Personnel
-Absenteeism patterns PE0037
-Efficiency
-Personality effects PE6011
-Staffing DI0051, DI0055, DI0056
-Supervision DI0056
-Unit kitchen
-Activities analysis
-Five meal/day program DI0047
-Work sampling DI0047, DI0049
FORMULA ROOMS
-Formula
-Heat treatment OB3007
GENERAL PRACTICE
-Obstetrics
-United Kingdom OB1002
-Shortage
-Effect on outpatient service used OU0046
GERIATRICS
-Hospitals
-Personnel CH2035, CH2036
-Personnel
-Training programs CH0020
-Psychogeriatric illness CH0022
GERONTOLOGY
-Training programs CH0020
GLOVES
-Disposable and reusable
-Comparison PU3020
Group purchasing see PURCHASING
Group services see SHARED SERVICES
GYNECOLOGY
-Obstetrician/gynecologists
-Earnings MD0071
Health economics see ECONOMICS, HEALTH
HEALTH EDUCATION
-Communications media
-Effectiveness CO2007
-Pharmacy PH0036

HEALTH FACILITIES AND SERVICES HE0247
Z2021
-Bed complement
-Medical staff characteristics
MD3019
-Cost effectiveness measures MN2022
-Day care facilities
-In acute hospitals HE0237
-Demand AR2061
-Estimating MN2025
-Prediction AR2080, MN2026
-Model MN2024
-Germany HE1035
-Hospital bed need
-Urban AR0041
-Mental health services
-Public image PS0075
-Need
-Respiratory disease services HE2020
-Need prediction models
-Obstetrics HE1033
-Northwest United States CH0020
-Obstetrics
-United Kingdom OB1002
-Patient attitudes HE0249
HEALTH FACILITIES PLANNING AR2053, DE0048
MN0021, Z2021
-Committees in hospitals AR1013
-Geographic aspects AR1014
-Information sources
-Directory Z3007
-Mental hospitals
-Population projection
-Techniques PS3012
-Occupancy variation AR1015
-Ontario, Canada HE0244
-Physician office location AR1012
-Poisson process
-Limitations HE1033
-Simulation, application of HE1033
-Urban
-Geographic dispersion AR1012
-Hospital location AR0041
HEALTH FACILITIES PLANNING ASSOCIATIONS
-Directory Z3007
-Hospital Planning Council for Metropolitan Chicago AR2061
HEALTH FACILITIES SURVEYS
-California
-Mental health services PS0074
-Respiratory disease services HE2020
-San Joaquin Valley
-Mental health services PS0074
HEALTH FACILITIES SURVEYS (Contd.)
-Hawaii
-County of Hawaii AR2057
-Tennessee
-Long-term care facilities CH0023
Health insurance see INSURANCE, HEALTH
Health manpower see MANPOWER, HEALTH
HEALTH SURVEYS HE0247
-Mental health services
-Public image PS0075
-Participation
-Factors affecting Z2024
HEART DISEASE
-Home nursing program OU3049
HILL-BURTON ACT AND AGENCIES
-Physician distribution
-Iowa MD2039
HOME CARE SERVICE OU3051, Z2021
-Aged Z2020
-Chronic disease Z2020
-Community health agencies
-Coordinated programs OU3048
-Costs, OU3055, OU3057, OU3059, OU3060
-Evaluation model OU3058
-Group practice plan OU3058
-Home health aides
-Welfare clients' need OU3050
-Homemaker service Z2020
-Meals on wheels Z2020
-Patient attitudes OU3054
-Physician attitudes OU3055, OU3059
-Prepayment plans OU3060
-Staff attitudes OU3054
-Toronto OU3052, OU3061
-Utilization OU3055, OU3057, OU3058, OU3059, OU3060
HOME HEALTH AIDES
-Need for OU3050
HOME NURSING OU3051
-Heart disease patients
-Public health program OU3049
Homemaker service see HOME CARE SERVICE
HOSPITAL ASSOCIATIONS, STATE
-Counselling services
-Canada RE0014
Hospital information systems see INFORMATION SYSTEMS
Hospital organization see ORGANIZATION
HOSPITAL POLICIES
-Administrative manual AB0007
-Manual AB0009
-Small hospital AB0008
-Visiting policies
-Patient preferences PA0024

Hospital records see INFORMATION SYSTEMS; MEDICAL RECORDS
HOSPITAL SERVICE AREAS
-Delineation
-Methodology AR2053
-Measurement of
-Urban AR0041
Hospital size see HOSPITALS - Size
HOSPITALIZATION
-Attitudes toward
-Adolescents PA0022
-Patient role socialization
-Behavioral response to PA0027
-Psychiatric PA0020, PS0073
-Aged patients PS0080
-Prediction of PS3020
HOSPITALS MN0021
-Changes
-Employee reaction
-United Kingdom PE0047
-Location
-Effect on utilization HE1034
-Urban AR0041
-National inventory HE0252
-Organization
-Other nations than United States HE0254
-Quasi-public nature MN3025
-Rural and metropolitan
-Psychiatric discharges PS0071
-Size
-Chiefs of service, correlation MD301
-Effect on costs HE2017
-Stratification variables MN0022
HOSPITALS, AIR FORCE
-Pharmacy service
-Staffing PH0030
-Utilization control and review HE1025
HOSPITALS, COUNTY
-Outpatient clinic
-Lab tests, diagnostic
-Use OU1018
HOSPITALS, NON-U.S.
-Australia
-Characteristics HE0242
-Germany HE1035
-New Zealand
-Characteristics HE0242
Hospitals, psychiatric see PSYCHIATRIC HOSPITALS
Hospitals, teaching see TEACHING HOSPITALS
HOUSE JOURNALS
-Employee house organs AD4011
House staff see MEDICAL STAFF
HOUSEKEEPING
-Cleaning methods
-Operating rooms IC1007
-Job satisfaction HE0056
-Personnel
-Absenteeism patterns PE0037
-Overtime/vacancy ratio PE3015
-Ultrasonic cleaning HU1011
HUMAN LIFE
-Value of MN2028
Human relations see COMMUNICATION; INTERPERSONAL RELATIONS
HYPERBARIC CHAMBERS
-Fire hazards EN0022
Improvement of patient care see QUALITY OF CARE
INCENTIVE PROGRAMS
-Evaluation PE3017
-Reimbursement formula AC1024
INDIGENT CARE
-Family planning assistance
-General hospitals PS0083
-Health behavior
-Family unit
-Patterns HE1028
-Home health aides
-Need OU3050
INDUSTRIAL ENGINEERING
-Application in hospitals MN1038 MN1039
-Nursing service MN1037
INFANT CARE
-"At risk" register OB0028
INFANT NUTRITION
-Formula
-Sterilization OB3007
Infection control see CROSS INFECTION
INFORMATION SYSTEMS DA4011
-Drug information service PH5003
-Poison information centers
-Data processing, automated PH5002
Inservice education see EDUCATION, IN-SERVICE; and PERSONNEL ADMINISTRATION
INSURANCE HEALTH (see also BLUE CROSS) Z2022
-Aged HE0259, IN1006
-Supplementary IN1007
-And hospital utilization HE0248
-Coverage
-Collective bargaining IN2009
-Federal legislative proposals
-Cost estimates
-History IN1005

INSURANCE, HEALTH (Contd.)
-Nursing home care
-Hospital-nursing home affiliations CH1010
-Ontario HE0244
-Prepayment
-Canada IN4014
-Drug costs PH0029
-Psychiatric care PS0076
-Re-admission patterns
-Blue cross members
-Michigan IN2008
-Social security enrollment IN4015
INTENSIVE CARE UNITS (see also CORONARY CARE UNITS; PROGRESSIVE PATIENT CARE; RECOVERY ROOMS; SPECIALIZED CARE UNITS)
-Circular units NU1102
-Length of stay SC1041
-Mortality rate SC1041
-Nurses
-Job dissatisfaction NU0034
-Patient classification MD0074
-Respiratory disease HE2020, SC1041
INTERNSHIPS AND RESIDENCIES
-Teaching vs. non-teaching hospital MD2038
INTERPERSONAL RELATIONS (see also COMMUNICATION) MN3026
-Communication, informal
-Staff MN3020
-Conflict PE0044
INTERVIEWING
-Household interview
-Methodology HE0240
INVENTORIES PU3021
-Control
-Surgical storeroom PU2018
-Data processing, automated
-Multi-hospital DA4013
-Linen LD1004
ISOLATION Z2023
Job description, evaluation and satisfaction see PERSONNEL ADMINISTRATION
JOURNALS
-Hospital employee house organs AD4011
JUNIOR COLLEGES
-Use in supervisory training PE2029
Kitchens see FOOD SERVICE
LABOR UNIONS (see also PERSONNEL ADMINISTRATION)
-Collective bargaining
-Health insurance plans IN2009
-Nonprofessional PE5007
-Strikes PE5009
-Unionization drive
-Case study PE5007
LABORATORIES Z2023
-Laboratory tests, diagnostic
-Outpatient OU1018
-Medical technologists LB0011
-Nursing unit service NU1096
-Tests
-Demand
-Prediction MN2026
-Utilization
-Medicare, effects HE1031
LABORATORIES, CLINICAL
-Data processing, automated LB2026
-Manpower standards LB2025
LAUNDRIES
-Disinfection
-Woollen blankets LD3003
-Linen control system LD1004
-Personnel
-Absenteeism patterns PE0037
LEADERSHIP
-Medical school departments
-Leadership attitudes MD0073
LEGISLATION
-Federal minimum wage law
-Impact PE3016
-Health insurance for aged
-Legislative proposals
-Cost estimates
-History IN1005
-Health legislation
-Canada HE0247
-Nursing home care CH2038
LENGTH OF STAY (see also UTILIZATION)
-Aged
-Medicare, effects HE1036, IN4011
-Circular nursing units NU1102
-Diagnostic categories HE1038
-Factors affecting
-Age HE1032
-Day of week HE1032
-Sex HE1032
-Long stays, unnecessary
-Short-term hospitals MD5012
-Medicare, effects HE1031, IN4011, IN4012
-Prediction MN2026
-Prediction model MN2024
-Psychiatic hospital, state
-Prediction PS3021
-Surgical
-Factors affecting MN3015

LIBRARIES, HOSPITAL
-Procedure manual LI2006
LICENSURE
-Mental hospitals, private PS3019
LINENS
-Control systems LD1004
-Demand MN2023
Long term care see CHRONIC DISEASE CARE; NURSING HOMES; PROGRESSIVE PATIENT CARE
MANPOWER, HEALTH (see also NURSES; PERSONNEL ADMINISTRATION; PHYSICIANS)
-Germany HE1035
-Great Britain
-Planning MP0008
-Mental health manpower MP0010
-National requirements, 1965-1975 MP0009
-Nurses NU4036
-Canada MP2004
-Shortage NU1099
-Supply
-Prediction NU1095
-United Kingdom NU0043
-Nurses, inactive
-And marriage
-Great Britain NU0036
-Recruitment NU1105
-Nurses, practical
-Missouri NU0038
-Nursing home employees CH2035, CH2036
-Paramedical personnel PE0039
-Education MP0012
-United Kingdom PE0049
-Pharmacists
-Canada MP2003
-Physicians
-Distribution
-By age MD2037
-Washington, D.C. MD0060
-Supply of MD2037
-Recruitment
-Nurses
-Effect of fringe benefits NU1108
-Research needs MP0011
-Technological advances, impact MP0009
MANUALS
-Administrative AB0007
-Library procedures LI2006
-Personnel administration PE0041
-Policy manual AB0009
-Purchasing PU2019
-Work simplification training MN1036
MARKOV CHAIN ANALYSIS MN2024
MASSACHUSETTS GENERAL HOSPITAL
-Time-sharing computer system DA4006, DA4007
Maternity care see OBSTETRICS
Meals-on-wheels see HOME CARE SERVICE
MEDICAID
-Costs
-Outpatients
-New York City IN4019
-Eligibility
-Outpatients
-New York City IN4019
Medical audit see QUALITY OF CARE
MEDICAL CARE
-Aged HE0259
-"At risk" register
-Children OB0028
-Health behavior
-Canada IN4014
-Family unit
-Patterns HE1028
-Health expenditure, family HE2021
-Medical practice
-Measurement MN2022
-Utilization of services
-Data collection HE0240
Medical education see EDUCATION, MEDICAL
MEDICAL RECORDS (see also INFORMATION HANDLING; INFORMATION SYSTEMS) MN2026
-Abstracting MN2022
-Data collection CH0024
-Data processing, automated
-Multi-hospital DA4013
-Legal evidence, criteria ML0013
-Patient consent forms ML2005
-Transcriptionists MR0032
Medical research see MEDICAL CARE; and RESEARCH
MEDICAL STAFF (see also PHYSICIANS)
-Characteristics
-Bed complement, correlation MD3019
-Chiefs of service
-Bed complement, correlation MD3019
-Discipline AB2011
-Full-time
-Earnings MD0077
-House staff
-Health care MD2040
-Nursing homes CH0023
-Orthopedic surgeons
-And use of physical therapy PT0006
-Wales, United Kingdom MP0008
MEDICARE IN4015
-Business office, impact of

MEDICARE (Contd.)
-Clerical and accounting costs IN4008
-Cost estimates
-History IN1005
-Costs IN4017
-Effect HE1031
-Effect on utilization IN4016
-Teaching hospital HE1036
-VA hospitals IN4010
-Extended care facilities
-Certification CH0029
-Home health agencies OU3051
-Impact
-Kansas University Medical Center IN4009
-Length of stay
-Effect on IN4011, IN4012
-Reimbursement IN4013
-Reimbursement formula AC1024
-Statistics IN4017
-Supplementary insurance IN1007
MEDICATION ERRORS (see also PHARMACY SERVICE) MD5010, MD5011, PH1035
MEDICO-LEGAL
-Medical records
-Legal evidence
-Criteria ML0013
-Patient consent ML2005
MENTAL HEALTH
-Aged CH0022
-Psychiatric hospitalization PS0080
-Canada PS0076, PS0081
-Family planning assistance
-Low-income patiemts PS0083
-Hospitalization
-Factors influencing PS0073
-Prediction of PS3020
-Hospitalization, recurrent
-Model of PS0072
-Manpower MP0010
-Rural community hospitals
-Psychiatric discharges PS0071
MENTAL HEALTH SERVICES PS0074
-California PS0074
-Canada PS0076
-Day hospital PS3014
-Patient characteristics PS3015
-Planning
-Hospital population projection PS3012
-Public image PS0075
Menu planning see FOOD SERVICE
METHODS IMPROVEMENT (see also WORK IMPROVEMENT; WORK MEASUREMENT; WORK SAMPLING; WORK SIMPLIFICATION) MN1038 MN1039
-Employee participation programs
-Work simplification MN1035
-Food service
-Convenience foods
-Work measurement DI0050
-Work sampling DI0047, DI0049
-Laboratories, clinical LB2025
-Nursing service
-Work sampling MN1037, NU1082, NU1103, NU1112
-Training manual
-Work simplification MN1036
Minimal care unit see SELF CARE UNIT
MONITORING, PATIENT
-Cardiac output measurement, on-line MD4023
MORBIDITY
-Statistics
-Ontario, Canada HE0230
MORTALITY
-Infant and perinatal
-Data collection OB0029
-Intensive care patients SC1041
-Statistics
-Ontario, Canada HE0230
MULTIPLE REGRESSION ANALYSIS
-Demand for hospital service
-Prediction MN2026
NARCOTICS
-Control PH1033
NATIONAL HEALTH SERVICE (BRITISH)
-Manpower
-Wales MP0008
Newborn care see INFANT CARE
NURSE-PATIENT RELATION
-Dying patients NU0042
NURSE-PHYSICIAN RELATIONS MN3023
NURSERIES
-For employees' children
-Effect on nurse recruitment NU0035
NURSES
-Absenteeism
-Patterns PE0037
-Associate degree graduates
-Job performance NU1110
-Characteristics, biographical
-Turn-over
-Relationship NU1107
-Collective bargaining
-San Francisco Bay Area Hospitals PE5008

NURSES (Contd.)
-Decision making
-Planning and design DE1017
-Educational background
-Length of hospital career NU4036
-Fringe benefits NU1108
-Germany HE1035
-Inactive NU4037
-Great Britain NU0036
-Recruitment NU1105
-Intravenous care assignments
-Job satisfaction NU0034
-Job satisfaction
-Intensive care units NU0034
-Team nursing NU1093, NU2007
-Nursing homes CH2035
-Recruitment
-Day nursery program, effect NU0035
-Fringe benefits, effect NU1108
-Salaries NU1105
-Refresher courses
-Active and inactive nurses NU4037
-Role
-United Kingdom NU0043
-Role Perception NU4039
-Salaries NU0037, PE3020
-Specialization
-Job satisfaction NU0034
-Supply of
-Canada MP2004
-Great Britain NU0036
-Prediction NU1095
-Wales, United Kingdom MP0008
-Turn-over NU1107, NU1109, NU4036
-Turn-over and vacancy rates NU1099
-Unionization, effect PE5006
NURSES' AIDES
-Salaries PE3020
-Turn-over PE1015
NURSING NU0041
-Activities Analysis MP2004
-Circular units NU1111
-Drug and laboratory activities NU1096
-Psychiatric hospitals NU1082
-United Kingdom NU1106
-Work sampling NU1103, NU1112
-Education, inservice NU4038
-Medication errors MD5011
-United Kingdom NU0043
NURSING PRACTICAL
-Performance evaluation NU0038
Role expectations NU0039
NURSING, PRACTICAL (Contd.)
-Salaries PE3020
-Missouri NU0038
Nursing, psychiatric see PSYCHIATRIC NURSING
NURSING, SUPERVISORY NU1087
-Activities analysis
-Psychiatric hospitals NU1082
-Salaries PE3020
-United Kingdom NU0043
NURSING, TEAM NU1093
-Effect on care NU2007
NURSING CARE NU0041, NU1093
-Circular units NU1102, NU1111
-Drug reactions, adverse MD5016, MD5017
-Nursing time requirements
-Age NU1067
-Patient classification MD0074
-And linen distribution MN2023
-Patient contact MD5015
-Unit manager system
-Effects NU1103
Nursing care - quality see QUALITY OF CARE
Nursing education see EDUCATION, NURSING
NURSING HOMES CH0023, CH0025, CH2038 Z2021
-Chronic disease
-Incidence CH2037
-Prevalence CH2032
-Costs CH1010
-Hospital affiliations CH1010
-Medicare certification CH0029
-Patient characteristics CH2034
-Personnel CH2035, CH2036
-Pharmacy services PH0035
-Consultants, use of PH0032
-Quality of care CH2031
-Rating system CH2031
-Staffing problem CH2030
-Training programs CH2036
-Transfer agreements CH0023, CH1010
-Utilization CH2033
-Wages and salaries CH2036
Nursing records see MEDICAL RECORDS
Nursing research see RESEARCH
NURSING SERVICE
-Attendants
-Efficiency
-Personality, effects PE6011

NURSING SERVICE (Contd.)
-Medication system MD5010
-Methods improvement MN1037
-Organization NU0041, NU1087, NU2007
-United Kingdom NU1106
-Patient services manager NU1104
-Personnel
-Overtime/vacancy ratio PE3015
-Safety NU0040
-Staffing NU1087
-Unit manager system
-Effects of NU1103
NURSING UNITS
-Circular NU1111
-Quality of care NU1102
-Drug and lab service NU1096
-Patient
-Room preferences PA0023
-Rectangular
-Quality of care NU1102
OBSTETRICS
-"At risk" register
-Infants OB0028
-Bed need prediction
-Simulation HE1033
-Facilities
-United Kingdom OB1002
-Hospital utilization
-Location of hospital, effect HE1034
-Natality
-Simulation Model OB0027
-Obstetrician/gynecologist
-Earnings MD0071
-Perinatal mortality OB0030
-Physicians office location AR1012
-Unit
-Planning AR1015
-United Kingdom OB1002
OCCUPATIONAL THERAPY
-Assistants
-Training courses CH0023
OLD AGE HOMES CH0025, CH2033
-Chronic illness
-Incidence CH2037
-Patient characteristics CH2034
OPERATING ROOMS OP1023, OP1024
-Cleaning methods IC1007
-Infection control Z2023
-Laminar flow Z2023
-Staffing OP1026
-Supervisor
-Salaries PE3020
-Technician
-Salaries PE3020
-Utilization OP1025
OPERATIONS RESEARCH MN2022
-Queuing theory MN2029
ORDERLIES
-Turn-over PE1015
ORGANIZATION
-Analysis
-Nursing NU0041
-Bureaucracy of hospitals
-Unofficial rules MN3022
-Change MN3026
-Employee reactions PE0047
-Conflict in hospitals PE0044
-Control structures
-State mental hospitals PS3017
-Evaluation MN3026
-Hospitals
-Quasi-public nature MN3025
-Organizational setting
-Labor turn-over PE1014
-Professionalization
-And conflict MN3016
-Small hospital AB0008
ORTHOPEDICS
-Orthopedic surgeons
-And use of physical therapy PT0006
OSTEOPATHS
-Distribution
-Effect of Hill-Burton program
-Iowa MD2039
OUTPATIENT SERVICE HE0237
-Chronic disease care CH0019
-Clinics
-Fiscal policies OU1019
-Scheduling
-Simulation modeling MN2027
-Social worker, role SO0014
-Clinics, psychiatric
-Hospitalization
-Prediction of PS3020
-Clinics, Tuberculosis OU1021
-Lab tests, diagnostic
-Use
-Private vs. indigent OU1018
-Medical status
-New York City IN4019
-Medicare processing costs IN4008
-Ontario, Canada HE0244
-Utilization OU0036
Patient care see NURSING CARE
PATIENT CONSENT ML2005
Patient classification see NURSING CARE
Patient monitoring see MONITORING, PATIENT
Patient origin studies see UTILIZATION

PATIENTS
-Attitudes
-Adolescents PA0022
-Saskatchewan HE0249
-Tuberculosis care OU1021
-Food preferences
-Convenience foods DI0050
-Patient contact MD5015
-Reaction
-Neuropsychiatric hospital PS3018
-Role socialization
-Behavioral response to PA0027
-Room preferences PA0023
-Satisfaction PA0025
-Circular nursing units NU1102
-Food service DI0046
-Nursing care NU2007
-Psychiatric hospitals PA0020
-Visiting preferences PA0024
PEDIATRICS
-"At risk" register OB0028
-Hospital utilization
-Location of hospital, effect HE1034
-Physicians office location AR1012
Performance evaluation see PERSONNEL ADMINISTRATION
PERINATAL MORTALITY
-Analysis, methodology in OB0030
PERSONNEL ADMINISTRATION PE0037
-Child care program
-Effect on nurse employment NU0035
-Communication MN3020
-Conflict PE0044
-Employee attitudes PE0040
-Cost of care, knowledge of CO2008
-Introduction of change PE0047
-Organizational factors MN3026
-Professionalization MN3016
-Employee health care
-House staff MN2040
-Employee house organs AD4011
-Fringe benefits PE3019
-Hospital administrators PE3018
-Nurses preference NU1108
-Guidebook PE0041
-Incentive programs PE3017
-Job performance
-Efficiency
-Personality, effects PE6011
-Medical technologists LB0011
-Job satisfaction PE0040
-Housekeeping personnel HU0056
-Nurses PE5006
-Intensive care units NU0034
-Team nursing NU1093
PERSONNEL ADMINISTRATION (Contd.)
-Manuals
-Purchasing department PU2019
-Methods improvement programs
-Employee participation MN1035
-Overtime/vacancy ratio PE3015
-Paramedical personnel
-Attitudes
-United Kingdom PE0049
-Performance
-Organizational factors MN3026
-Performance evaluation PE3021
-Nurses, practical NU0038
-Recruitment
-Nurses NU1099
-Fringe benefits, effect NU1108
-Salary increases, effect NU1105
-Role studies
-Nursing MN3024
-Scheduled weekly hours PE3019
-Selection
-Nurses aides and orderlies
-And turn-over rates PE1015
-Supervisors
-Administrative handbook AB0010
-Attitudes PE0040
-Food service DI0056
-Training PE2029
-Training
-Hospital-nursing home program CH0023
-Management systems analyst MN1034
-Methods improvement MN1036
-Nursing homes CH2036
-Paramedical personnel PE0039
-Personnel development program PE2030
-Supervisors PE2029
-Training, inservice PE3021
-Nursing NU4038
-Turn-over PE0038, PE1014
-Non-professional nursing PE1015
-Nurses NU1099, NU4036
-Biographical characteristics NU1107
-Nursing homes CH2030
-Nursing service NU1109
-Union relations
-Collective bargaining
-Non-professionals PE5007
-Nurses PE5006
-Collective barbaining PE5008

PERSONNEL ADMINISTRATION (Contd.)
-Strikes PE5009
-Vacancy/overtime ratio PE3015
-Wages and salaries PE3019
-Administration practices PE3021
-Hospital administrators PE3018
-Minimum wage law, effect PE3016
-Nurses NU0031, NU1105
-Nurses, practical NU0038
-Nursing homes CH2036
-South Carolina PE3020
PHARMACISTS
-Consultants PH0032
-Manpower
-Canada MP2003
PHARMACY SERVICE
-Consultant service
-Small hospitals and nursing homes PH0032
-Dispensing and distribution PH1035
-Unit dose system NU1096
-Narcotics PH1033
-Drug administration
-Prescription sheet, single PH1034
-Drug costs
-Canada PH0029
-Drug information service PH5003
-Drug usage MD5010
-Drug reactions, adverse MD5011, MD5016, MD5017
-Drugs
-Nonhospital use PH0033
-Use
-Out of hospital PH0033
-Health education PH0036
-Medication errors MD5010, MD5011, PH1035
-Narcotics control PH1033
-Nursing homes PH0035
-Records
-Drug administration PH1034
-Staffing PH0030
-Methodology models MN1040
PHYSICIAN-NURSE RELATIONS MN3022, MN3023
PHYSICIANS
-Attitudes
-Home care OU3056
-Distribution
-Effect of Hill-Burton program
-Iowa MD2039
-Distribution, age MD2037
-Washington, D.C. MD0060
PHYSICIANS (Contd.)
-Earnings MD0070
-Anesthesiologists MD0069
-Full-time hospital staff MD0077
-Obstetrician/gynecologists MD0071
-Germany HE1035
-Hospital affiliation
-Effect of location HE1034
-Medical schools
-Leadership attitudes MD0073
-Office location MD2037
-Washington, D.C. MD0060
-Relationships
-Staff MN3022
-Specialists MD2037
-Income MD0070
-Respiratory disease care HE2020
-Washington, D.C. MD0060
-Supply of MD2037
-Washington, D.C. MD0060
-Use of laboratory
-Private vs. indigent OU1018
-Work activities MD2037
PHYSICAL THERAPY
-Education, continuing PT1002
-Utilization
-Orthopedic surgeons, effect on PT0006
Planning see DESIGN AND CONSTRUCTION; and HEALTH FACILITIES PLANNING
Planning agencies see HEALTH FACILITIES PLANNING ASSOCIATIONS
POISON INFORMATION CENTERS
-Data processing, automated PH5002, PH5003
POISSON PROCESS
-Bed need prediction
-Obstetrics HE1033
-Mental hospitalization, recurrent PS0072
POPULATION
-Health characteristics HE0247
Press relations see PUBLIC RELATIONS
PROGRAMMING
-Hospital-medical decision language DA2002
-Menu planning DI0048
PROGRESSIVE PATIENT CARE
-Circular units NU1102
-Non-U.S. programs HE0254
-Patient classification MD0074
Psychiatric care see MENTAL HEALTH

PSYCHIATRIC DEPARTMENTS
-Family planning assistance PS0083
-Non-U.S. programs HE0254
PSYCHIATRIC HOSPITALS
-Aged patients PS0080
-Attendants
-Role accommodation MN3024
-Canada PS0081
-Cost accounting and budgeting AC1025
-Day hospital PS3014
-Hospitalization of outpatients
-Prediction of PS3020
-Length of stay
-Prediction of
-By demographic characteristics PS3021
-Licensure laws
-Private hospitals PS3019
-Nurses
-Role accommodation MN3024
-Nursing
-Supervisory work analysis NU1082
-Organization
-Control structures PS3017
-Paid work programs PS3007
-Patients' adaptation PS3018
-Patient characteristics PS3015
-Patient satisfaction PA0020
-Population projection
-Technique PS3012
-Staffing standards PS3016
-Utilization
-Canada PS0076
PSYCHIATRIC NURSING
-Role accommodation MN3024
Psychiatric services see MENTAL HEALTH SERVICES
Psychiatric units in general hospitals see PSYCHIATRIC DEPARTMENTS
PUBLIC HEALTH
-Departments
-Hospital relations AB2014
-Home nursing program
-Heart disease patients OU3049
PUBLIC RELATIONS CO2009
-Hospital public relations directors
-Background CO2010
-Methods CO2010
-Labor disputes PE5009
-Mental health services
-Public image PS0075
-Public information
PUBLIC RELATIONS (Contd.)
-Communications media
-Effectiveness CO2007
PURCHASING
-Accounts payable
-Systems analysis AC4001
-Data processing, automated
-Multi-hospital DA4013
-Disposables, conversion to PU0016
-Food service DI0051
-Manual PU2019
-Surgical supplies PU2018
QUALITY CONTROL
-Laboratory procedures LB2025
QUALITY OF CARE MD5010, NU2007
-Drug reactions, adverse MD5016, MD5017
-Design and construction
-Circular units NU1102
-Infant and perinatal mortality
-Data collection OB0029
-Long-term stays, unnecessary MD5012
-Measurement MN2020
-Nursing homes
-Rating system CH2031
-Organizational factors MN3026
-Patient contact MD5015
-Patient satisfaction
-Staff opinions, comparison PA0025
-Perinatal mortality
-Statistical analysis OB0030
QUEUING THEORY
-Fixed input queue MN2029
RADIOLOGY
-Staffing
-Methodology models MN1040
-Technicians
-Salaries PE3020
-Utilization
-Medicare, effect HE1031
RATES
-Chronic disease facilities CH0036
-Institutions for aged CH0030
-Outpatient clinics OU1019
RE-ADMISSIONS
-Blue Cross members
-Michigan IN2008
-Chronic disease CH0019
-Psychiatric hospitals
-Canada PS0076
Recruitment see MANPOWER, HEALTH; PERSONNEL ADMINISTRATION
REFERRALS AND CONSULTATIONS
-Psychiatric consultations
-Rural and metropolitan hospitals PS0071

REGRESSION ANALYSIS
-Long-term hospital costs
-Econometric model HE2018
RESEARCH
-Disease reporting
-Interview vs. medical records CH0024
-Health and Education
-Ontario, Canada HE0244
-Health manpower problems MP0011
-Health planning information Z3007
-Hospitals
-National inventory HE0252
-Stratification variables MN0022
RESPIRATORY DISEASES SC1041
-Facilities and services
-California HE2020
RURAL HEALTH
-Psychiatric discharges PS0071
Salaries see PERSONNEL ADMINISTRATION
SAMPLING
-Hospital
-National inventory HE0252
-Stratification of hospitals MN0022
SCHEDULING, PATIENT
-Computerized AM2010
-Data processing, automated
-Multi-hospital DA4014
-Operating rooms OP1023, OP1024, OP1025, OP1026
-Outpatient clinics
-Simulation modeling MN2027
-Queuing
-Fixed input queue MN2029
Scheduling, personnel see STAFFING
SELF CARE UNITS
-Circular units NU1102
-Patient classification MD0074
Sequence of care see PROGRESSIVE PATIENT CARE
Service unit manager system see UNIT MANAGER SYSTEM
SHARED SERVICES
-Management counseling RE0014
SIMULATION
-Disaster service
-Atomic attack HE2015
-Menu planning DI2006
-Model
-Natality OB0027
-Obstetrical facilities HE1033
-Outpatient clinics
-Scheduling MN2027
Size of hospitals see HOSPITALS
SOCIAL SECURITY
-Health insurance enrollment IN4015
SOCIAL SERVICE
-Aging ward patients
-Characteristics SO0013
-Physician/social worker collaboration SO0014
SPECIALIZATION
-Nurses
-Job satisfaction NU0034
SPECIALIZED CARE UNITS
-Burn therapy unit SC0023
STAFFING
-Admitting and discharge AM1012
-Central supply PU3021
-Coronary care units SC1040
-Food service DI0051, DI0055, DI0056
-Great Britain (Wales) MP0008
-Medical records
-Transcriptionists MR0032
-Mental hospitals
-Staffing standards PS3016
-Methodologies MN1040
-Nursing homes CH2030
-Nurse staffing CH0023
-Nursing service NU1087
-Team nursing NU1093
-Operating rooms OP1026
-Pharmacy service PH0030
Staphylococcus see CROSS INFECTION
STATISTICAL ANALYSIS
-Factor analysis AR2080
-Map plotting AR2080
STATISTICS
-Hospital discharge survey
-National HE1037
-Hospitals
-National inventory HE0252
-Infant and perinatal mortality
-Data collection OB0029
-Medical utilization
-Data collection HE0240
-Morbidity
-Ontario, Canada HE0230
-Perinatal mortality
-Analysis, methodology in OB0030
Stay, patient see LENGTH OF STAY
STERILIZATION
-Clean rooms Z2023
-Infant formula
-Heat treatment OB3007

Supervisors see PERSONNEL ADMINISTRATION
Supervisors, nursing see NURSING, SUPERVISORY
Supplies see EQUIPMENT AND SUPPLIES
SURGERY (see also OPERATING ROOMS
-Department
-Communication, staff MN3020
-Length of stay MN3015
-Orthopedic surgeon
-And use of physical therapy PT0006
-Patient contact MD5015
-Scheduling OP1024
-Storeroom
-Inventory control PU2018
SURVEY RESEARCH
-Disease reporting
-Interview vs. medical records CH0024
SYSTEMS ANALYSIS
-Disposables, conversion to PU0016
-Training program MN1034
TEACHING HOSPITALS
-Intern and residency training MD2038
-Outpatient clinics
-Scheduling
-Simulation modeling MN2027
-Utilization
-Effect of Medicare HE1036
TECHNOLOGISTS, MEDICAL
-Education
-And job performance LB0011
-Education, graduate LB2029
-Salaries PE3020
TERMINAL CARE IN4010
-Nurse-patient relations NU0042
TRAFFIC, INTERDEPARTMENTAL
-Central supply layout PU3023
Training programs see EDUCATION, INSERVICE; MANPOWER, HEALTH, AND PERSONNEL ADMINISTRATION
TRANSCRIPTION SYSTEMS
-Medical records MR0032
TRAVEL TIME AR1012
TUBERCULOSIS CARE
-Outpatient OU1021
TUBERCULOSIS HOSPITALS
-California HE2020
-Turn-over
-Nursing service NU1109
Turn-over see PERSONNEL ADMINISTRATION
ULTRASONIC CLEANERS
-Evaluation HU1011
Union relations see LABOR UNIONS; and PERSONNEL ADMINISTRATION
UNIVERSITY HOSPITALS
-Patient classification MD0074
-Payment for care, sources
-University of Wisconsin hospitals HE0248
UTILIZATION HE1037, Z2021
-Bed shortages MD0078
-Chronic disease facilities CH2033
-Chronic disease hospitals HE0245
-Emergency services OU0046
-Factors affecting
-Day of week HE1032
-Hospital and physician MN3015
-Insurance coverage HE0248
-German hospitals HE1035
-Health facilities
-Compulsory insurance IN4014
-Location of hospital
-Suburban vs. downtown
-Obstetrics and pediatrics HE1034
-Measurement MN2022
-Medical care
-Data collection HE0240
-Medicare, effects HE1031, HE1036 IN4011, IN4012, IN4016
-Veteran's hospitals IN4010
-Medicare, impact of
-Kansas City, University Medical Center IN4009
-Nursing homes CH2033
-Obstetrical services
-Location of hospital, effect HE1034
-Occupancy variation AR1015
-Ontario, Canada HE0030, HE0244
-Outpatient services OU0046
-Payment for care, sources HE0248
-Pediatric services
-Location of hospital, effect HE1034
-Prediction model MN2025
-Psychiatric hospitals
-Canada PS0076, PS0087
-Re-admissions
-Blue Cross members
-Michigan IN2008
-Saskatchewan IN4014
UTILIZATION CONTROL AND REVIEW
-Air Force hospital HE1025
-Long-term stay, unnecessary MD5012

VETERANS ADMINISTRATION HOSPITALS
-Medicare
-Effect on utilization
-Aged IN4010
-Nursing activities analysis
-Work sampling NU1082
VICTORIA GENERAL HOSPITAL
-Data processing, automated DA4011
VISITING NURSES ASSOCIATION OU3051
-And home care OU3054
VOLUNTARY HEALTH ORGANIZATIONS
-Canada HE0251
Wages and salaries see PERSONNEL ADMINISTRATION
Waiting line theory see QUEUING THEORY
Ward manager system see UNIT MANAGER SYSTEM
WELFARE
-Clinic patients
-Lab tests, diagnostic
-Use OU1018
-Nursing homes
-Per diem payment CH2031
WORK MEASUREMENT
-Food service
-Convenience foods DI0050
WORK SAMPLING
-Food service DI0047, DI0049
-Nursing activities MN1037, NU1103 NU1112
-Circular units NU1111
-VA hospital NU1082
WORK SIMPLIFICATION MN1039
-Employee participation MN1035
-Training manual MN1036
X-ray see RADIOLOGY

SEMINARS ON STAFFING

The Center for Hospital Continuing Education, Bureau of Hospital Administration instituted Staffing Seminars in June of 1967. Continuing programs are planned for March and ensuing months of 1968.

Staffing methodologies for particular hospital departments form the basis for the Seminars. The University of Michigan Department of Industrial Engineering with the aid of many U.S. hospitals and the support of U.S.P.H.S. has developed detailed methodologies which can be used by administrators or department heads to calculate objective reliable estimates of how many employees they need. Methodologies are now complete for:

Admitting	Medical Records
Dietary	Pharmacy
Housekeeping	Radiology
Laundry	

The most significant use of this new approach is its use by hospital administrators, and as important, by department heads as a management tool for measuring and/or forecasting effective staffing. The manuals will permit the department head to determine correct staffing figures and to evaluate alternative operation conditions based upon his own specific:

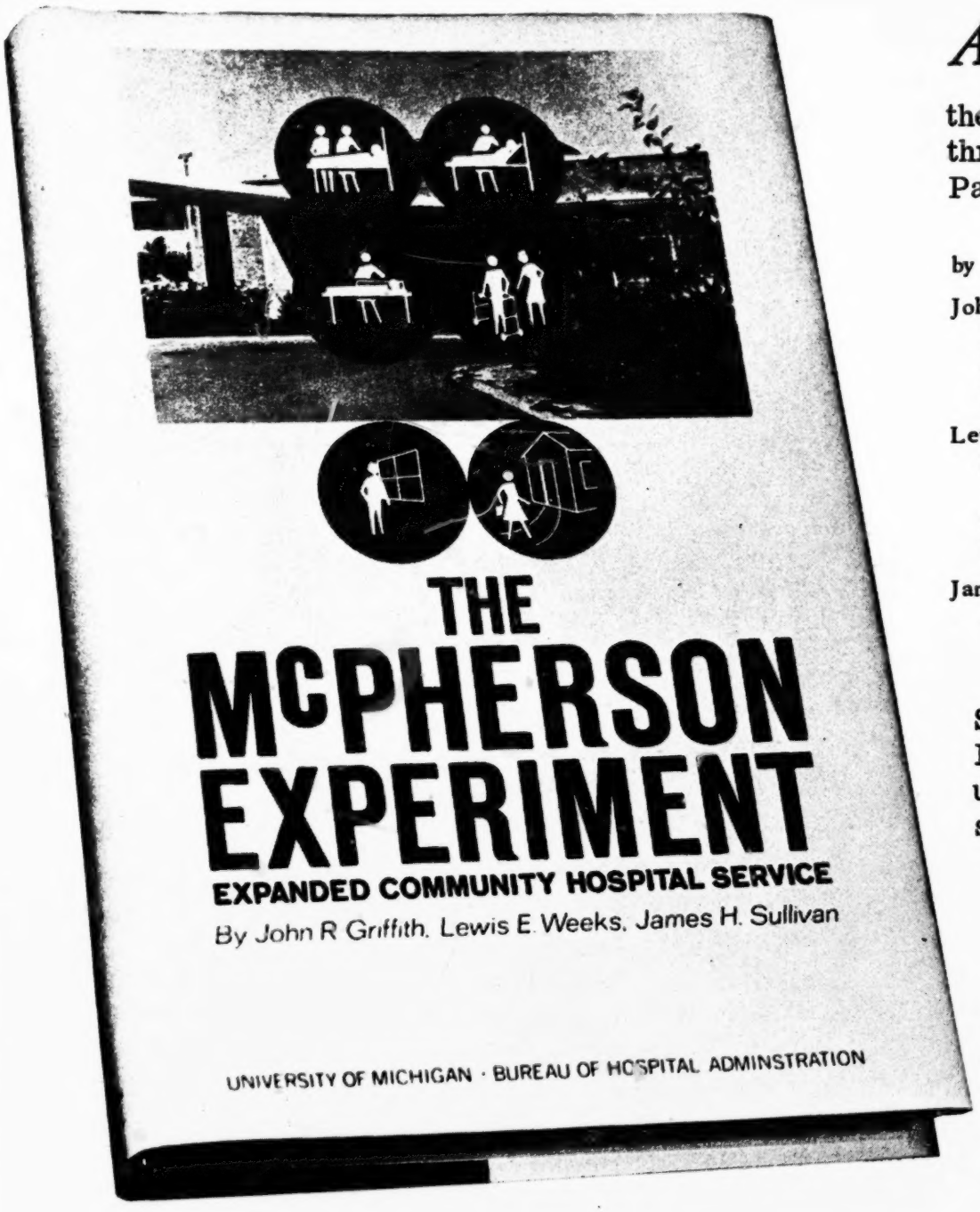
- Workload
- Types of equipment, working tools and supplies used
- Scheduling policies
- Physical facilities, work-place layouts, and material handling
- Administrative and operating policy

Programs are presently planned as follows:

March 25-29, 1968 - Methodology Workshop, Ann Arbor
May 20-24, 1968 - Methodology Workshop, Ann Arbor

Further information may be secured from:

Richard F. Stoll
Hospital Continuing Education
University of Michigan
1424 Washington Heights
Ann Arbor, Michigan 48104



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by

John R. Griffith
Associate Director and Associate Professor
Program and Bureau of Hospital Administration
The University of Michigan

Lewis E. Weeks, Ph.D.
Managing Editor, *Abstracts of Hospital Management Studies*
Bureau of Hospital Administration
The University of Michigan

James H. Sullivan
Administrator, McPherson Community Health Center, 1951-1967

Study conducted by members of the Bureau of Hospital Administration under W. K. Kellogg Foundation support.

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337 pages, 11 pages photographs, floor plans, bibliography, index, research methodologies, clothbound.

The authors tell what happened when a 75 bed community hospital decided to expand its capacity to 141 beds and embark on a full-scale PPC program including Intensive Care, Continuing Care (Rehab.), Outpatient Care, and hospital-based Home Care. Also, the management steps necessary to make the program a practical, economical way to meet community medical needs are shown.

Some of the questions covered were:

- How does a hospital plan for a major expansion?
- What are the critical elements of organizational policy and facility design?
- What do patients, employees, and physicians think of the system?
- What happens to nursing care under PPC?
- How is the hospital income affected by PPC?
- When does PPC save money, when does it cost money?

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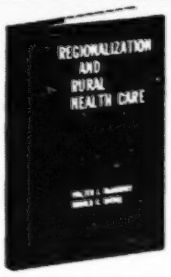
A collection of salient articles on Progressive Patient Care. Some treat PPC as a balanced program, others consider individual units such as Intensive Care, Self Care, Long Term, and Home Care. Reports given on planning, implementation, and operation of PPC programs. Several writers discuss staffing, floor plans, patients' profiles, costs, and charges. A comprehensive bibliography adds to the value of this source book. 385 pp., illustrated, clothbound. **5.00**



REGIONALIZATION AND RURAL HEALTH CARE

Walter J. McNerney
Donald C. Riedel

A study of an actual, formal regionalization compact entered into by three health centers and two regional hospitals in northern Michigan. Data on utilization of the health facilities by residents of the areas before and after regionalization were collected and studied by the Bureau of Hospital Administration, The University of Michigan, under a W. K. Kellogg Foundation grant. Attitudes toward regionalization gleaned from interviews. Bibliography included. 209 pp., 83 tables and figures, clothbound. **5.00**

PATTERNS OF PATIENT CARE

Donald C. Riedel
Thomas B. Fitzpatrick

An extended analysis of data from a University of Michigan study on character and effectiveness of hospital use as measured by criteria set by a panel of medical specialists. Eighteen diagnostic categories used in consideration of appropriateness of admission, length of stay, and use of hospital services. Medical and financial records of probability sample of discharged patients of Michigan hospitals used to compare actual care to criteria of appropriate use. Appendix contains tabulation of data and description of methodology. 292 pp., 169 tables and figures, clothbound. **7.50**

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VT 007 279
Inventory of Manpower Research Projects in Indiana, Number 3.

Indiana Manpower Research Association, Lafayette
MF AVAILABLE IN VT-ERIC SET.
Pub Date - May68 17p.

*MANPOWER DEVELOPMENT; *ANNOTATED BIBLIOGRAPHIES; VOCATIONAL EDUCATION; *MANPOWER UTILIZATION; LABOR ECONOMICS; *RESEARCH PROJECTS; MANPOWER NEEDS
INDIANA

This inventory of research consists of two parts: Part I includes 38 research projects, Part II lists 23 papers, articles and other items of interest. This year the listing was compiled from postcards returned by researchers. Only the title of the project was requested and therefore brief statements or annotations do not appear for all the projects. Projects newly reported are indicated by asterisks. The report contains a form which can be used to furnish information about manpower research projects which will then be included in the next inventory. Two earlier inventories are available as VT 003 780 (ARM Summer 1969) and VT 003 781 (ARM Winter 1968). (CH)

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INDIANA MANPOWER RESEARCH ASSOCIATION

INVENTORY OF MANPOWER RESEARCH PROJECTS IN INDIANA

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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May 1968 - Number 3

VT007279

A N N O U N C E M E N T

THE FOURTH INDIANA MANPOWER RESEARCH CONFERENCE

WILL BE HELD AT INDIANAPOLIS IN MID - NOVEMBER

MORE INFORMATION WILL BE AVAILABLE AT A LATER DATE.

INVENTORY OF MANPOWER RESEARCH PROJECTS IN INDIANA

This is the third inventory compiled by the Indiana Manpower Research Association. At the first conference held in Indianapolis on December 7 -8, 1965, the conferees agreed that it would be mutually beneficial to continue efforts to advance manpower research, create a repository of related studies and data, coordinate activities, and establish liaison among researchers and users. The Association was formally organized at the Second Conference held at Purdue University on November 15 - 16, 1966.

By means of its inventories, proceedings, and other activities, the Association disseminates information about completed, on-going, and planned manpower research, as well as information about needs. Through these efforts, research gaps can be indicated and duplication lessened.

This listing was compiled from the postcards returned by researchers. Only the title of the project was requested this time, and therefore, brief statements do not appear for all of the projects. Projects newly reported are indicated by asterisks. The form on the next page can be used to furnish additional information about projects, which will then be included in the next Inventory.

Part I includes research projects while Part II lists papers, articles and other items of interest.

A list of suggested topics for manpower research compiled by the Coordinating Board is available upon request.

Inquiries and requests for additional copies of the Inventory may be directed to Research and Statistics, Indiana Employment Security Division, 10 North Senate Avenue, Indianapolis, Indiana 46204.

Indiana Manpower Research Association Coordinating Board

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INVENTORY OF INDIANA MANPOWER RESEARCH PROJECTS

Your Name

Names of Principal Investigator and Collaborators: Titles

University, College or Organization

School or Department

Date

Proposed or Working Title of Project

Brief Statement of Objectives and Procedures

Final Form e.g., Book, Article, Paper, etc. Please Give Citation	Date of Completion, or Expected Date	Price of Copy

Return to: Dwight Kelley, Chief of Research
Indiana Employment Security Division
10 North Senate Avenue
Indianapolis, Indiana 46204

PART I

RESEARCH PROJECTS

* Asterisks indicate projects newly reported

ADAMS, R. F., see DREW, ALFRED S.

*AIKIN, EVELYN
Indiana Hospital Association, Indianapolis
PREDICTING STAFFING PATTERNS
(In progress)

ANDREWS, WILLIAM H., see CHRISTENSON, C. L.

BAIN, R. K., see DREW, ALFRED S.

BLEDSOE, HARRY J.
Purdue University, Industrial Education
A COMPARISON OF THE EDUCATIONAL DEVELOPMENT OF DIVERSIFIED COOPERATIVE EDUCATION STUDENTS AND NON-DIVERSIFIED COOPERATIVE EDUCATION STUDENTS IN SELECTED INDIANA HIGH SCHOOLS
(Ph.D. Thesis, Purdue Univ., Completed)

Objective: To ascertain whether high school cooperative education programs adversely affect the educational development of participants when compared with their counterparts who obtain all their instruction within the formal school.

Procedure: Test-retest design with the Iowa Tests of Educational Development (ITED) which provides ten measures in nine areas, including a composite measure of tests one through eight. Subjects were equated, within predetermined limits, with respect to sex, chronological age, attendance, initial ITED composite score, grade, and school. Single factor covariance analysis was used to test differences. Initial scores were used as independent variables and post-test scores as dependent variables.

BLEDSOE, H. J., see DREW, ALFRED S.

*BLACKBURN, CLEO W.
Board for Fundamental Education, Indianapolis
AN EXPERIMENTAL AND DEMONSTRATION MANPOWER PROJECT FOR RECRUITMENT TRAINING, PLACEMENT AND FOLLOW-UP OF 300 UNEMPLOYED PERSONS IN INDIANAPOLIS, INDIANA FROM SEPTEMBER 1, 1966 TO NOVEMBER 30, 1967
(In progress)

BONSER, CHARLES
Indiana University, Bureau of Business Research
INDIANA HIGHER EDUCATION NEEDS AND RESOURCES
(In progress)

With a grant from HEW, and sponsored by the Indiana Commission on Academic Facilities and the Indiana Conference on Higher Education (consisting of presidents of all public and private colleges in the state) a two year study will be conducted to determine post-high school educational needs over a fifteen year period. Starting projects include a survey of existing facilities and programs offered.

BOULGER, J. R., see DREW, ALFRED S.

CHRISTENSON, C. L. and ANDREWS, WILLIAM H.
Indiana University, Economics
A COMPARATIVE STUDY OF LABOR MARKET ADAPTATION TO TECHNOLOGICAL CHANGE IN BRITISH AND AMERICAN COAL MINES
(In progress)

The investigators propose to make a critical analysis of the labor market adaptations to technological change in an industry that has been basic for the economies of the two countries. This will include study and appraisal of:

a. Changes in total labor utilization and the portion of this attributable to technological change.

b. Changes in labor force structure within the industry.

c. The relation of these changes to such variables as geographic distribution of production, production in different types of mines, productivity of labor in the industry, extent of total or partial unemployment, and regional economic development of the areas involved.

d. The role of training and retraining programs in labor force adjustments.

e. Possible future manpower developments in this industry.

*DENT, JAMES
Southeastern Indiana Vocational School, Versailles
STUDENT PROGRAM SELECTION PROCEDURES AT THE SOUTHEASTERN INDIANA VOCATIONAL SCHOOL, VERSAILLES, INDIANA
(In progress. Conference paper is included in the 1967 Proceedings of the Indiana Manpower Research Conference)

DeWITT, NICHOLAS
Indiana University, Economics
INTERNATIONAL SURVEY OF EDUCATIONAL DEVELOPMENT AND PLANNING
(Two or more books in 1968 or 1969. Interim results: Pakistan's High Level Manpower and Human Resource Development Planning. U.S. Agency for International Development: Pakistan Mission. February, 1965. Mimeo. Comments on the Education Commission Activities and Review of the Design of India's National Education Plan. Government of India: Education Commission. September, 1965. Mimeo.)

World survey of the relationship between educational development and national economic and political development with particular emphasis on the economics of education and planning. Special attention will be given to the role of scientific-technical personnel, professional manpower and professional higher education in economic development. The research objective is the study of criteria for setting educational and manpower planning goals. Methods will include review of available plans, documents and interviews with officials responsible for preparation of such plans. The research is being sponsored by the Carnegie Corporation, Indiana University and Ford Foundation and in cooperation with international organizations (OECD and UNESCO).

*DeWITT, NICHOLAS
Indiana University, Economics
MANPOWER GUIDELINES FOR EDUCATIONAL POLICY PLANNING
IN THE STATE OF CALIFORNIA
(Mimeo., Consultant's report prepared for the State Committee on Public Education, Feb. 1968)

This study provides guidelines for educational policy based on the analysis of current and projected manpower developments in the State of California.

DREW, ALFRED S. (Project Director), ADAMS, R. F., BAIN, R. K., BLEDSOE, H. J., BOULGER, J. R., HASSENMILLER, M. G., JOHNSON, P. V.
Purdue University, School of Technology
A STUDY OF THE NEED FOR EDUCATIONAL AND TRAINING ADJUSTMENTS IN APPRENTICESHIP PROGRAMS FOR SELECTED CRAFT OCCUPATIONS
(Report to U.S. Dept. of Labor, OMPER, September 1968. Conference paper is included in the 1967 Proceedings of the Indiana Manpower Research Conference)

The goals for this national project include attempts:

1. To develop procedures, or guidelines--perhaps, a pattern or framework--for an optimum apprenticeship training system(s);

2. To compare contemporary training systems with the optimum; and

3. To generate suggestions, if needed, for the improvement of on-going programs.

The interdisciplinary team, composed of research scientists from Industrial Engineering, Sociology, Industrial Education, Labor Relations and Economics, and Industrial Psychology, will analyze data obtained from individuals and organizations involved in the apprenticeship system by a variety of survey instruments. To determine a pattern for an optimum apprenticeship training system, consideration will be given to:

1. The basic criteria of accrediting agencies.

2. The factors basic to the development of superior workers who adapt to technological and other changes.

3. The discriminators between superior and other types of training programs.

4. The kinds of analyses and feedback systems which must be identified and used to keep workers in a state of operational readiness.

DUNBAR, J. O., see WADSWORTH, H. A.

*ERENBURG, MARK
Indiana University, Economics
RELOCATION AND RETRAINING OF MIGRANT FARM WORKERS
(In progress)

*FARMER, RICHARD N.
Indiana University, Graduate School of Business
GREAT BRITAIN: A STUDY IN COMPARATIVE MANAGEMENT AND ECONOMIC GROWTH
(Completed. A related paper is included in the 1967 Proceedings of the Indiana Manpower Research Conference)

HASSENMILLER, M. G., see DREW, ALFRED S.

*INDIANA EMPLOYMENT SECURITY DIVISION
INDUSTRY EMPLOYMENT TRENDS AND PROJECTIONS, 1950 - 1975, REGION ONE
(Booklet, Jan. 1968)

Presents background information and employment demand projections by industry based upon past trends in the region, expected developments in the various industry groups nationally and known regional variables.

INDIANA EMPLOYMENT SECURITY DIVISION, RESEARCH AND STATISTICS
WEEKS OF WORK AND WEEKLY WAGES
(Booklet, in process)

In this study, an analysis will be made of the weeks of work and earnings for each week during the 52 weeks preceding the claim. A sample of people who filed new claims for unemployment benefits was selected, and their previous employers furnished the necessary data.

*INDIANAPOLIS HOSPITAL DEVELOPMENT ASSOCIATION
HEALTH MANPOWER REQUIREMENTS AND RESOURCES IN METROPOLITAN INDIANAPOLIS 1966 - 1971
(Booklet, October 1967. Conference paper is included in the 1967 Proceedings of the Indiana Manpower Research Conference)

This study provides health manpower data on the health care agencies and educational institutions of the metropolitan Indianapolis area. It presents number of employees in full-time equivalents, current additional needs, and estimated additional needs and replacement needs through 1971. The results indicate that Indianapolis will experience a substantial manpower shortage of dietitians, medical technologists, medical records librarians, registered nurses, nurse aides, occupational therapists, physical therapists and social workers. It would seem that the demand for certified laboratory assistants, licensed practical nurses, and radiologic technicians will be essentially satisfied.

JOHNSON, P. V., see DREW, ALFRED S.

*KING, ROBERT
Flanner House, Indianapolis
EXPERIMENTAL AND DEVELOPMENT PROGRAM, INDIANAPOLIS MANPOWER UTILIZATION PROJECT
(In progress)

KRAVIS, JOHN and KASEFF, LAWRENCE G.
Indiana Dept. of Commerce, Research Division
INDIANA COMMUNITY PROFILES - 1967
(3 vols.: Northern, Central, Southern, 1968)

The profiles present general information about communities provided by local Chambers of Commerce.

*LeBOLD, WILLIAM K.
Purdue University, Engineering
A STUDY OF PROFESSIONAL JOB SATISFACTION DIMENSIONS AND THEIR CORRELATES
(In progress. Conference paper is included in the 1967 Proceedings of the Indiana Manpower Research Conference)

*LISACK, J. P.
Purdue University, Office of Manpower Studies
COMPUTER AND ELECTRONIC DATA PROCESSING MANPOWER REQUIREMENTS FOR THE CALUMET, INDIANA AREA
(Booklet, 20 Sept. 1967, $1.25)

COMPUTER AND ELECTRONIC DATA PROCESSING MANPOWER REQUIREMENTS FOR FORT WAYNE, INDIANA
(Booklet, 25 Oct. 1967, $1.25)

COMPUTER AND ELECTRONIC DATA PROCESSING MANPOWER REQUIREMENTS IN KOKOMO, INDIANA
(Booklet, 1 March 1968, $1.50)

These three studies provide descriptions and qualifications for occupations related to computer and EDP operations. Current employment and future requirements were analysed. Average annual requirements for new personnel in each occupation were calculated. Ascertained were the training programs now being conducted and the nature and amount of support to educational programs and students that can be expected. Kinds of equipment and nature of present operations were determined. Projected manpower requirements were compared with future equipment acquisitions. Recommendations were made for the types of educational programs needed. The data were obtained through surveys, interviews and pertinent literature.

*LISACK, J. P.
Purdue University, Office of Manpower Studies
MANPOWER REQUIREMENTS FOR INDUSTRIAL ILLUSTRATORS AND DRAFTSMEN IN THE CALUMET, INDIANA AREA
(Booklet, 15 June 1967, $1.25)

MANPOWER REQUIREMENTS FOR INDUSTRIAL ILLUSTRATORS AND DRAFTSMEN IN FORT WAYNE, INDIANA
(Booklet, 1 August 1967, $1.25)

These two reports contain data concerning needs, employment, and salaries of technicians and draftsmen; occupational descriptions, salary, education and training information for Industrial Illustrators and Draftsmen; the results of surveys in the Calumet area and Fort Wayne; discussion of the impact of future technological changes on the drafting processes; and conclusions and recommendations concerning related technical training and educational programs.

*LISACK, J. P.
Purdue University, Office of Manpower Studies
MANPOWER REQUIREMENTS IN INDIANA FOR AIR AND WATER POLLUTION CONTROL, WATER RESOURCES AND SOLID WASTE DISPOSAL
(In progress)

*LISACK, J. P.
Purdue University, Office of Manpower Studies
MANPOWER REQUIREMENTS FOR VETERINARY AUXILIARIES IN INDIANA
(In progress)

*LISACK, J. P.
Purdue University, Office of Manpower Studies
REQUIREMENTS FOR PERSONNEL STAFF MEMBERS AND SUPERVISORS
IN THE NORTHEAST REGION OF INDIANA
(Booklet, Dec. 28, 1967, $1.25)

This paper identifies the current employment and possible future requirements for Personnel Staff Members and First Line Supervisors for Allen County and other counties making up the Northeastern Region of Indiana.

*LISACK, J. P.
Purdue University, Office of Manpower Studies
TECHNICAL EDUCATIONAL PROGRAM NEEDS IN RICHMOND, INDIANA
(In progress)

McCORMICK, ERNEST J.
Purdue University, Psychology
STUDY OF JOB DIMENSIONS
(Report to Office of Naval Research, Summer 1968)

The objective of this study is to identify the various "dimensions" of jobs in terms of human behaviors. A worker-behavior job analysis check list and rating scale format is being developed. The job analysis format will be used in analyzing a sample of jobs. Factor analysis of the resulting data will be performed to identify statistical factors (dimensions).

*McCORMICK, ERNEST J.
Purdue University, Psychology
JOB QUALIFICATIONS ANALYSIS STUDY
(In progress)

MILLER, WILLIAM, see WADSWORTH, H. A., and PIERSON, THOMAS R.

OTLEWSKI, ROBERT E.
Indiana University, Economics
ANALYSIS OF MALE SECONDARY SCHOOL TEACHER MOBILITY
(Ph.D. thesis, Aug. 1968. Conference paper is included in the 1967 Proceedings of the Indiana Manpower Research Conference)

The objective of this study is to ascertain the pattern of job changes, reasons for observed patterns of mobility, and the communication links (formal and informal) utilized by teachers in changing jobs.

PERRUCCI, CAROLYN CUMMINGS
Purdue University, Sociology
THE FEMALE ENGINEER AND SCIENTIST: FACTORS ASSOCIATED WITH THE PURSUIT OF A PROFESSIONAL CAREER
(Book, articles, August 31, 1968)

This research will examine factors which distinguish women engineering and science graduates who are pursuing careers in these fields from those who are not; will estimate the relative ease or difficulty with which women not pursuing a career in engineering or science could do so if necessary; and will investigate the career patterns of women compared with men who are working in engineering and science.

Within the framework of a larger study of Purdue University engineering and science alumni of the classes of 1947 to 1964, inclusive, special randomly selected subsamples of female engineering and science graduates were obtained. A total of four hundred thirty alumnae was sampled with a return rate of seventy per cent. Questionnaires were mailed to all who were sampled.

*PERRUCCI, ROBERT
Purdue University, Sociology
ORGANIZATIONS, CAREERS AND PROFESSIONAL PERFORMANCE
(In progress)

PIERSON, THOMAS R. and MILLER, WILLIAM L.
Purdue University, Agricultural Economics
A MARKOV CHAIN APPROACH TO PROBABILITY LIMITS OF GEOGRAPHICAL MOBILITY
(In progress. Conference paper is included in the 1967 Proceedings of the Indiana Manpower Research Conference)

The general objective of this thesis is to ascertain geographical mobility limits by occupation for projections of potential supply and demand and to determine the theoretical and statistical validity of the Markov Chain Process for such work.

POLLIARD, FORBES
Indianapolis Hospital Development Association
HEALTH MANPOWER RESEARCH AND PLANNING
(In progress)

POND, MARTIN T., see WADSWORTH, H. A.

*SCHUH, G. EDWARD
Purdue University, Agricultural Economics
ECONOMETRIC STUDY OF DEMAND AND SUPPLY OF AGRICULTURAL LABOR
(In progress)

*SCHUH, G. EDWARD
Purdue University, Agricultural Economics
THE EFFECT OF TECHNOLOGICAL CHANGE ON THE DEMAND FOR AGRICULTURAL LABOR
(In progress)

STOLNITZ, GEORGE
Indiana University, Economics
AMERICAN MANPOWER MOVEMENTS AND REGIONAL ECONOMIC CHANGES
(In progress)

Using OASDI data for 1960-1963, the industrial and regional origins and destinations of the one per cent sample labor force covered by OASDI are traced. Such origin--destination patterns will be related to wage movements, demographic characteristics, regional/industrial changes and metropolitan-nonmetropolitan location of work.

*ULLMAN, JOSEPH
Purdue University
JOB SEEKING ACTIVITY OF GRADUATE BUSINESS STUDENTS
(In progress)

WADSWORTH, H. A., (Leader), DUNBAR, J. O., POND, MARTIN T. and MILLER, WILLIAM L.
Purdue University, Dept. of Agricultural Economics
ANALYSIS OF THE FACTORS AFFECTING ECONOMIC AND SOCIAL DEVELOPMENT IN INDIANA
(Research and Extension Bulletins, June 30, 1969)

1. To identify the changes in the pattern of the types and location of industries in Indiana.

2. To determine major economic factors which influence the location of different types of industries in Indiana.

3. To determine the economic and social effects on the local community of changes in the industrial composition of the coummunity.

*WINDLE, JIM L.
Purdue University Placement Service
A COMPARATIVE ANALYSIS OF THE AFFECT OF THE STANDARDIZED METHOD AND A SELECTED METHOD OF PRESENTING ACADEMIC PERFORMANCE INFORMATION TO EMPLOYERS ON THE EMPLOYMENT SELECTION PROCESS OF B.S. GRADUATES
(In progress)

*WINTERS, ROBERT W.
Purdue University
THE REGIONALIZATION OF EMPLOYMENT PATTERNS IN INDIANA
(In progress)

*WOOD, DONALD A.
Purdue University
DIMENSIONALITY OF JOB SATISFACTION IN ENGINEERING
(In progress. Conference paper is included in the 1967 Proceedings of the Indiana Manpower Research Conference)

*HANNAFORD, JOHN
Ball State University
ECONOMICS OF THE GHETTO
(Monograph, 1968)

PART II

PAPERS, ARTICLES AND

OTHER ITEMS OF INTEREST

INDIANA EMPLOYMENT SECURITY DIVISION
REGION ONE--AN AREA OF GROWTH
(Article, Indiana Business Review, March/April, 1968, pp. 6 - 10)

INDIANA MANPOWER RESEARCH ASSOCIATION COORDINATING BOARD
SUGGESTED TOPICS FOR MANPOWER RESEARCH
(Mimeo., 4 pp.)

Members of the Coordinating Board have each suggested topic areas where additional research could be used by policy-making groups in government and business. The list can be obtained from any member of the Coordinating Board.

KELLEY, DWIGHT
Chief, Research and Statistics, Indiana Employment Security Division
OCCUPATIONAL TRENDS AND DETERMINING MANPOWER NEEDS BY EMPLOYER SURVEYS
(Paper presented at the American Vocational Association Convention, December 5, 1967)

LISACK, J. P.
Associate Professor and Director, Office of Manpower Studies, Purdue University
PROGRAM NEED DETERMINATION THROUGH MANPOWER STUDIES
(Paper presented at the American Vocational Association Convention, December 5, 1967)

The following papers are included in the Indiana Manpower Research Conference, 1967 Proceedings, Indiana University, November 29 - 30, 1967. Indianapolis: Indiana Manpower Research Association, 1968.

ADAMS, CHARLES F.
President, Mind, Inc., Greenwich, Connecticut
A BREAKTHROUGH IN TRAINING HARD-CORE UNEMPLOYED

BIRDCELL, JOHN
Director of Research, Indiana Vocational Technical College
70,000 HIGH SCHOOL SENIORS: THEIR EDUCATIONAL AND VOCATIONAL PLANS

BORUS, MICHAEL E.
Associate Professor, School of Industrial and Labor Relations,
Michigan State University
TIME TRENDS IN THE GAINS FROM RETRAINING

CLOOS, GEORGE W.
Business Economist, Federal Reserve Bank of Chicago
MONETARY POLICY AND MANPOWER UTILIZATION

DENT, JAMES
Coordinator, Student Personnel Services,
Southeastern Indiana Vocational School
STUDENT PROGRAM SELECTION IN VOCATIONAL TECHNICAL TRAINING

DREW, ALFRED S.
Chairman, Vocational Technical Education,
Department of Industrial Education, Purdue University
THE NATIONAL APPRENTICESHIP RESEARCH PROJECT: AN INTERIM REPORT

FARMER, RICHARD N.
Chairman, International Business, Indiana University
MANAGEMENT MANPOWER DEVELOPMENT IN THE UNITED KINGDOM AND INDIANA

HUNTER, AUBREY E.
Director, Division of Social Resources Planning,
Minnesota State Planning Agency
MANPOWER PLANNING AT THE STATE AND LOCAL LEVEL

JOHNSON, DOROTHY
Assistant Professor of Education, Ball State University
COUNSELLING FOR OCCUPATIONAL CHOICE IN THE FACE OF TECHNOLOGICAL CHANGE

LEARN, DALE H.
President, Information Science Inc.,
New City, New York
THE COMPUTER MOVES INTO THE JOB MATCHING FIELD

LeBOLD, WILLIAM K. and WOOD, DONALD
Assistant to the Dean of Engineering,
Freshman Engineering and Research Assistant,
Purdue University
THE MULTIVARIATE NATURE OF PROFESSIONAL JOB SATISFACTION

McGILL, KENNETH H.
Chief, Research and Statistics Division,
Selective Service System, Washington, D.C.
APPLYING DATA FROM A ONE-PERCENT SAMPLE INVENTORY

MILLER, AARON
The Center for Vocational and Technical Education,
Ohio State University
ERIC - A NATIONAL INFORMATION RETRIEVAL AND DISSEMINATION SYSTEM

OTLEWSKI, ROBERT
Economics, Indiana University
ANALYSIS OF MALE SECONDARY SCHOOL TEACHER MOBILITY IN THE STATE OF INDIANA

PATTERSON, D. JEANNE
Business, Indiana University
LOCAL INDUSTRIAL DEVELOPMENT CORPORATIONS IN INDIANA

PIERSON, THOMAS R. and MILLER, WILLIAM L.
Research Assistant and Assistant Professor,
Agricultural Economics, Purdue University
A MARKOV CHAIN APPROACH TO PROBABILITY LIMITS OF GEOGRAPHICAL MOBILITY

POLLIARD, FORBES W.
Executive Director, Indianapolis Hospital Development Association
HEALTH MANPOWER NEEDS IN THE METROPOLITAN INDIANAPOLIS AREA

RITTER, THOMAS
Supervisor, Manpower Resources Research,
State of Wisconsin Industrial Commission
PROJECT VISION: AN APPROACH TO A MODEL OF OCCUPATIONAL EMPLOYMENT INFORMATION

STOLNITZ, GEORGE
Director, International Development Research Center and Professor of Economics, Indiana University
AMERICAN MANPOWER MOVEMENTS: RESEARCH NEEDS AND POLICY ISSUES

VT 007 469
Zoned Analysis Techniques in Planning and Curriculum Development. Information Bulletin.

Delaware Occupational Research and Coordinating Unit, Dover
MF AVAILABLE IN VT-ERIC SET.
Pub Date - 10p.

CHARTS; *SYSTEMS APPROACH; *PROGRAM PLANNING; CONTENT ANALYSIS; *FACTOR ANALYSIS; *CURRICULUM PLANNING; *FACTOR STRUCTURE; METHODOLOGY
*ZONED ANALYSIS

Zoned analysis is a method of graphic delineation through which factors involved in any organizational or research project may be arranged in an orderly sequence on an easy-to-understand chart. The analysis proceeds from the general to the specific according to a predetermined and definite plan. The completed chart functions as a master plan which shows the relationship of each part to the whole. The zoned analysis chart, a series of circles (zones) around a central core, has a variable number of zones according to the project being analyzed. The core must bear a clear-cut title which will restrict the scope of the investigation. The first zone beyond the core is divided into "What It Is," and "How It Is Used." Each of these is divided in the second zone; division may continue indefinitely, resulting in more precise definition of detail with the progression from one zone to another. Details are outlined for the use of zoned analysis as a conference tool, an outline, and a visual aid. Charts are included which describe and illustrate various ways the zoned analysis technique may be used in educational planning. (FP)

VT007460

IB #3

DELAWARE OCCUPATIONAL RESEARCH COORDINATING UNIT

INFORMATIONAL BULLETIN

Assistance to Delaware educators to keep them informed of developments in the field of Occupational Education.

"ZONED ANALYSIS TECHNIQUES IN PLANNING AND CURRICULUM DEVELOPMENT"

I. WHAT IS "ZONED ANALYSIS"?

A. METHOD OF GRAPHIC DELINEATION

1. Explanation: Zoned analysis is a method of graphic delineation which may be explained as a system through which factors involved in any organizational or research project may be arranged in orderly sequence on an easy-to-understand chart. The analysis proceeds from the general to the specific according to a predetermined and definite plan.

2. Function: When the chart has been completed, it functions as a master plan which shows the relationship of each part to the whole. Because the factors are arranged logically, constructive action is a natural result. While the chart is not an unalterable document, and changes will be found necessary as an investigation proceeds, they will be minor - more in the nature of additional detail rather than of structural alteration.

B. PLAN FOR DEVELOPMENT

1. Form of the Chart: The zoned analysis chart is in the form of a series of circles described around a central core, thus establishing the boundaries for a series of zones. The number of zones will vary with the project to be analyzed. These zones may be given significant titles if desired. Such titles are not particularly important or necessary where one person is making an analysis for his own use. However, when a number of persons are to take part in a study, the naming of the zones is important.

2. Definition of Terms Used: Experience has proved that words may be interpreted differently by the persons reading them. For example, the word "unit" has significant meaning only if one defines its use in a specific case. In any analysis, outline, or research, the objective must be delimited. In Zoned Analysis, it is also important that the core be given a clear-cut title which will restrict the scope of the investigation. The words used to delimit the title may have differing connotations and it is, therefore, necessary to make a concise explanation of what is meant. For the same reason, it is desirable to limit the meaning of titles assigned to zones, and to define them by clear-cut statements.

VT007469

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3. Partition of Zones: The accompanying chart shows how the zones are partitioned. The first zone beyond the core, "Zoned Analysis," is divided into two parts entitled, "What It Is" and "How It Is Used." Each of these is divided in the second zone; in the third zone a further division takes place. The principle involved is that as an investigation proceeds from zone to zone, each new item must break down into two or more parts. This process of division may continue indefinitely; it results in more and more detail with the progression from one zone to another. The number of zones will, therefore, depend upon the objective. All factors included in a single zone must be parallel. This does not mean that they must necessarily be equal to each other in all respects; the extent of their parallelism is distinctly influenced again by the objective of the analysis. It will be easier to check for parallelism if the same parts of speech and grammatical construction are used to identify the factors in a given zone.

. HOW IS ZONED ANALYSIS USED?

A. AS A CONFERENCE TOOL

A conference is a meeting or series of meetings called to consider specific problems. The participants are usually experienced and thus qualify to represent points of view related to the subject. "Zoned Analysis" may be used effectively to analyze the problem, to arrange the facts in an orderly sequence and to present an over-all picture which may be used in drawing conclusions.

1. Preparation: Before the conference begins, the leader should define the subject to be considered and give it a clear-cut title. This is the core. He may then classify zones, bearing in mind that these classifications should provide for more and more detail as they move away from the core. Materials needed , such as books, other analyses, related information, and the like should be assembled. If a blackboard is to be used, he should have chalk, a large blackboard compass, an eraser, and a straight edge. Or, each conferee should be provided with a pre-printed sheet on which circles are already described, the core named, and zones identified.

2. Presentation: The conference leader should define the "Zoned Analysis" system. He should read his definition of the core topic and secure a common understanding of the topic to be considered and charted.

3. Delineation: The leader should present a classification of the zones together with an explanation to show how detailed the analysis will become as progress is made from one zone to another. When the conferees understand the meaning of titles assigned to the zones, it is safe to proceed with the actual breakdown. Each part of the first zone breaks into two or more parts in the second zone. The same progression continues from zone to zone.

4. Summation: If the suggestions made above have been followed, it will be possible to read any section of the chart from the core out, in a straight line, in any direction. For example, referring to the "Zoned Analysis" chart, we read

> "Zoned Analysis is a method of graphic delineation which may be explained as a system by which factors are arranged in an orderly manner."

or

> "Zoned Analysis is used as a conference tool; in preparing for a conference, the leader should define the subject to be considered."

As the chart is read, corrections may be made. When all this has been done, the conferees will have a clear-cut, detailed analysis. They are then ready to take action. If no definite action seems appropriate, this same Zoned Analysis system may be followed in analyzing the various possible actions. The core might be in the form of a question. The first zone might state possible actions, the second one advantages and disadvantages of different actions, and the third might be details involved. In any case, the whole picture would be before the group in a visual form. Psychologically, it is a good form because the eye is drawn toward and held by circular shapes.

B. AS AN OUTLINE

The same factors are involved in using Zoned Analysis for the development of an outline. It makes no difference what the purpose of the outline might be - a theme, a research paper, or an organization plan - the system is a visual aid which can be used effectively. The factors involved include delimitation of the objective and a definition; identification of the zones and definition of what they mean; and a check to make sure that the progression will result in an increasing number of details. Elaboration will include details which must be parallel within each zone; and finally, in summarizing, it must be possible to read the chart and check if for accuracy.

NOTES:

THE ZONED ANALYSIS CHART IS A VISUAL AID:

The chart attached is the outline which has been followed in preparing this informational bulletin. The breakdown of separate "Zones" includes:

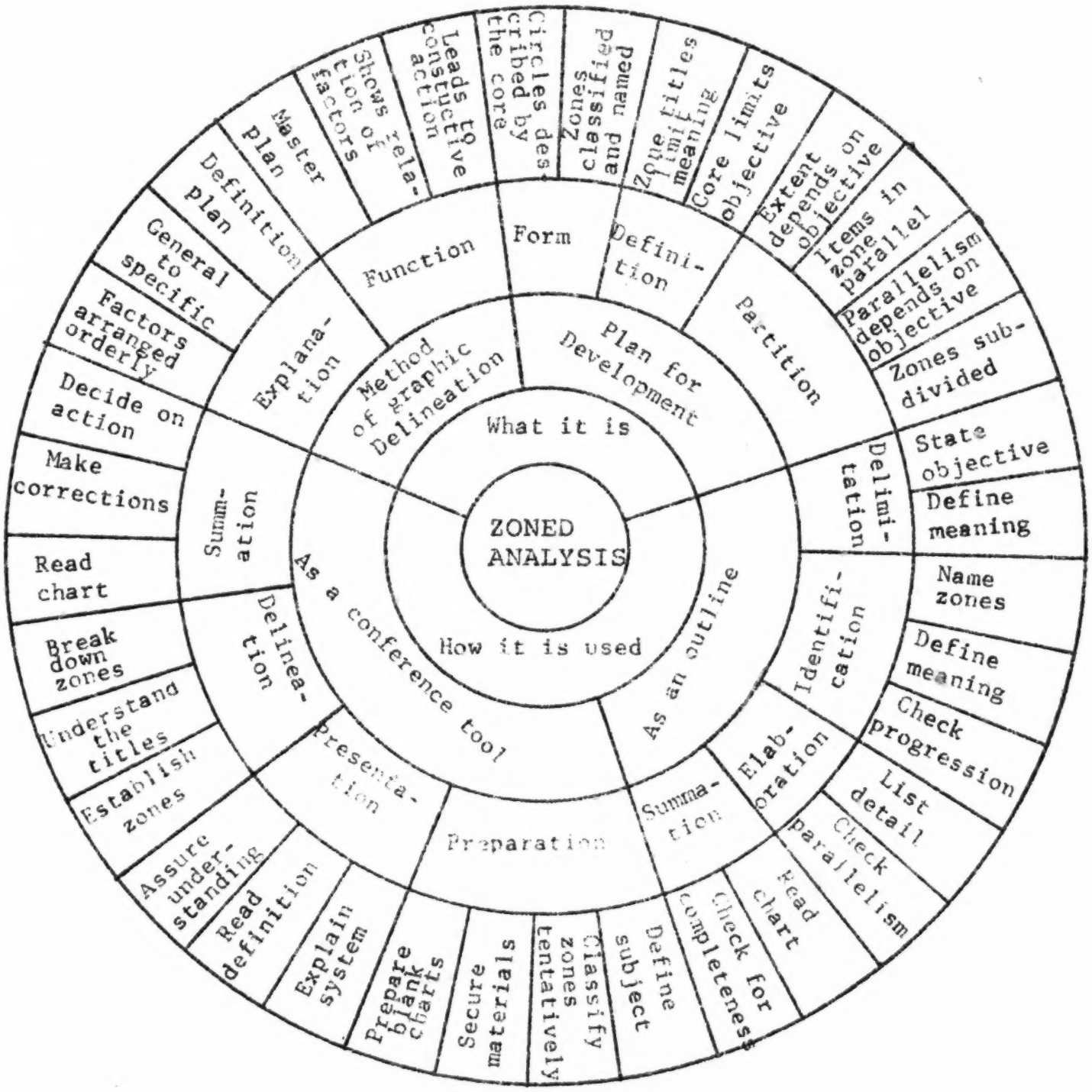
The Core: "Zoned Analysis"
Zone #1 : Major Ideas To Be Considered
Zone #2 : Primary Breakdown of Ideas
Zone #3 : Subjects for Discussion
Zone #4 : Details Regarding Subjects

Attached also is a blank "Zoned Analysis Chart". Try this analysis technique on a special problem you are working on!

ZONED ANALYSIS CHART

Topic: .Using Zoned Analysis Techniques

Developed By: Delaware ORCU Date: October 1, 1968



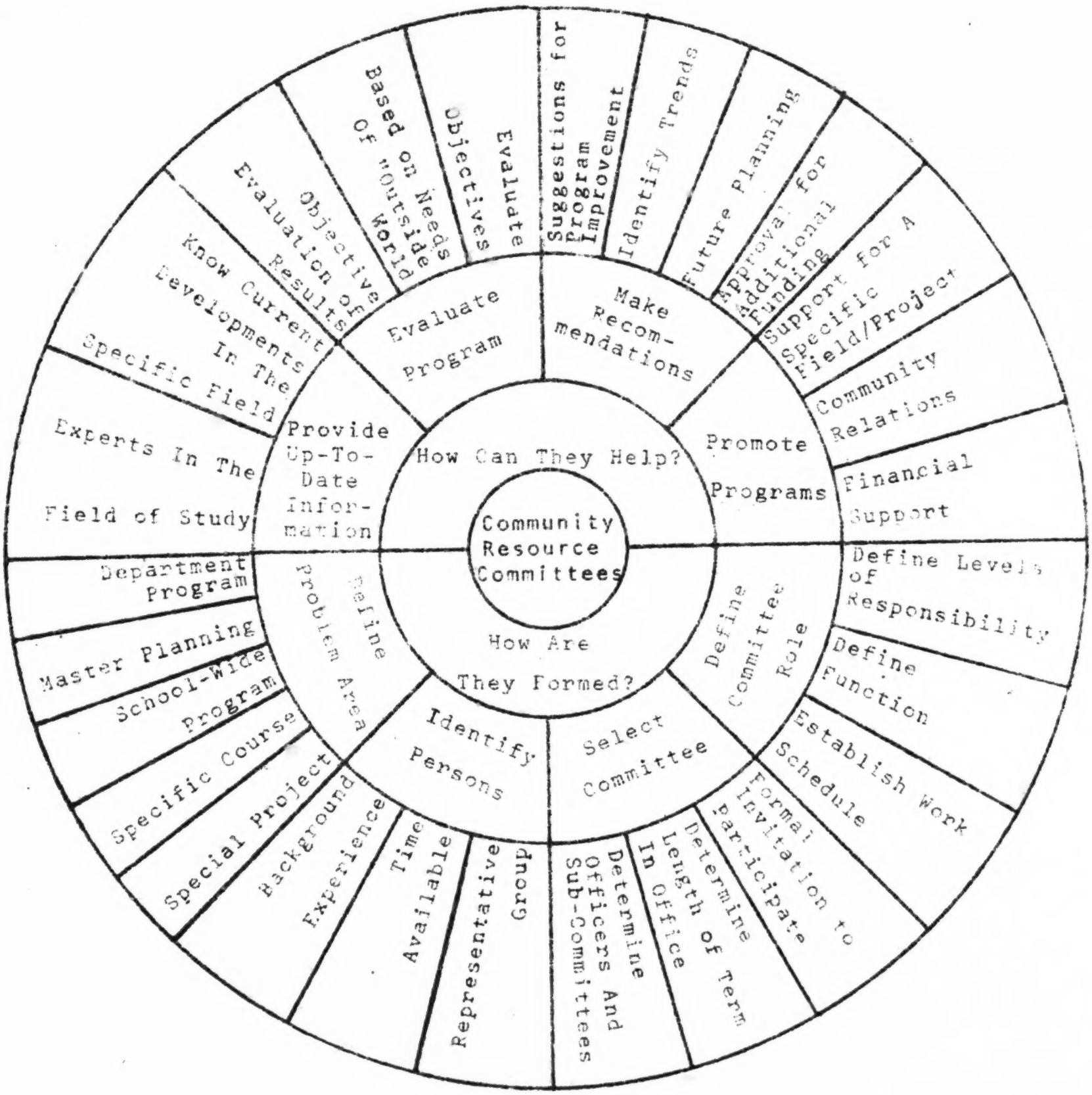
Objective: To describe the "Zoned Analysis" technique and illustrate various ways it may be used in educational planning.

DELAWARE OCCUPATIONAL RESEARCH COORDINATING UNIT

ZONED ANALYSIS CHART

Topic: "Community Resource Committees" (Advisory Committees)

Developed By: R. A. Dieffenderfer Date: 8/16/68



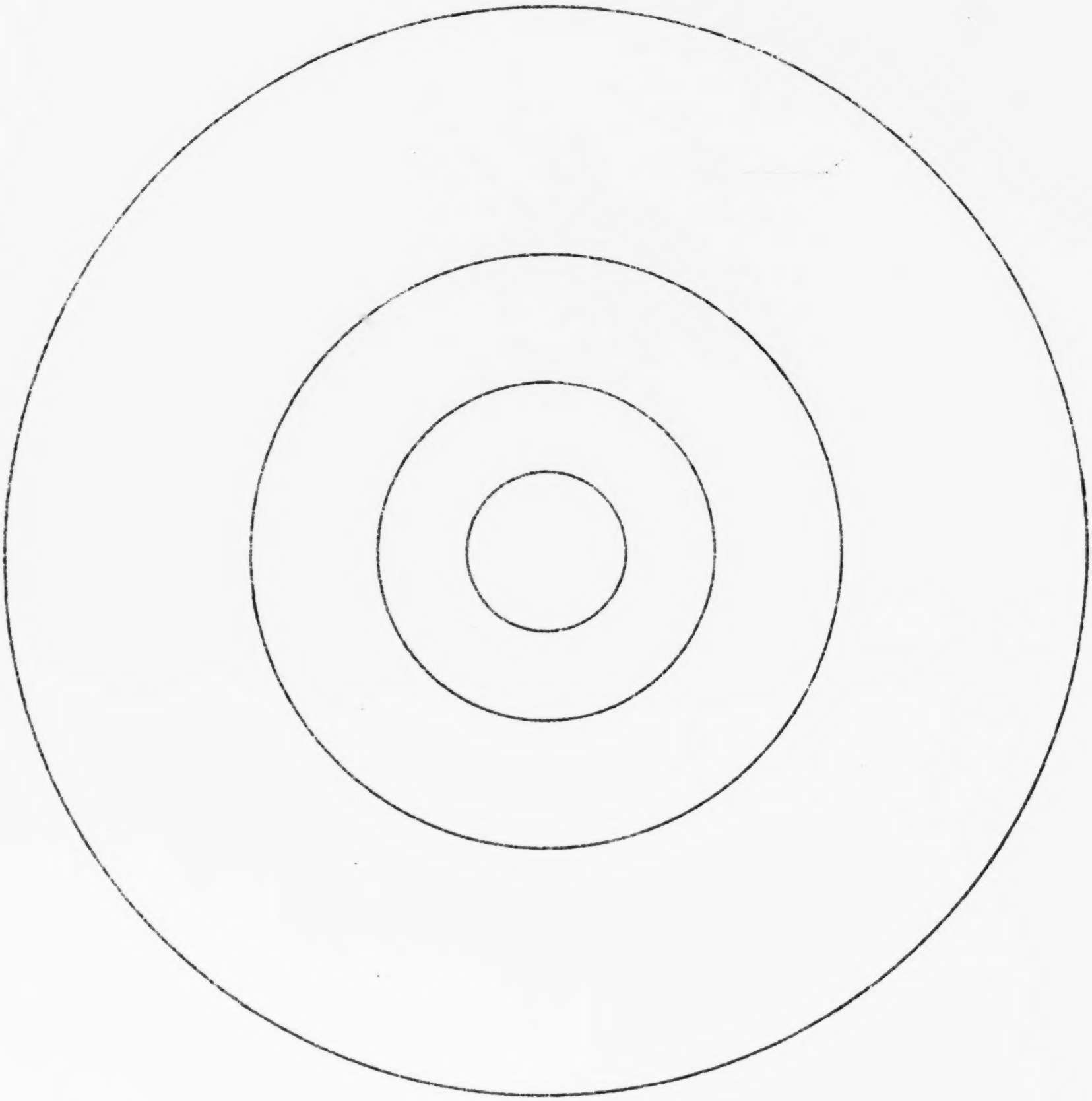
Objective: To illustrate procedures for establishing "Community Resource Committees" and the function they can serve in educational programs

DELAWARE OCCUPATIONAL RESEARCH COORDINATING UNIT

ZONED ANALYSIS CHART

Topic: _____

Developed By: _____ Date: _____



Objective: _____

_____

_____

DELAWARE OCCUPATIONAL RESEARCH COORDINATING UNIT

VT 007 492
Barlow, Melvin L.; Reinhart, Bruce
Profiles of Trade and Technical Teachers: Revised Summary Report 1968.

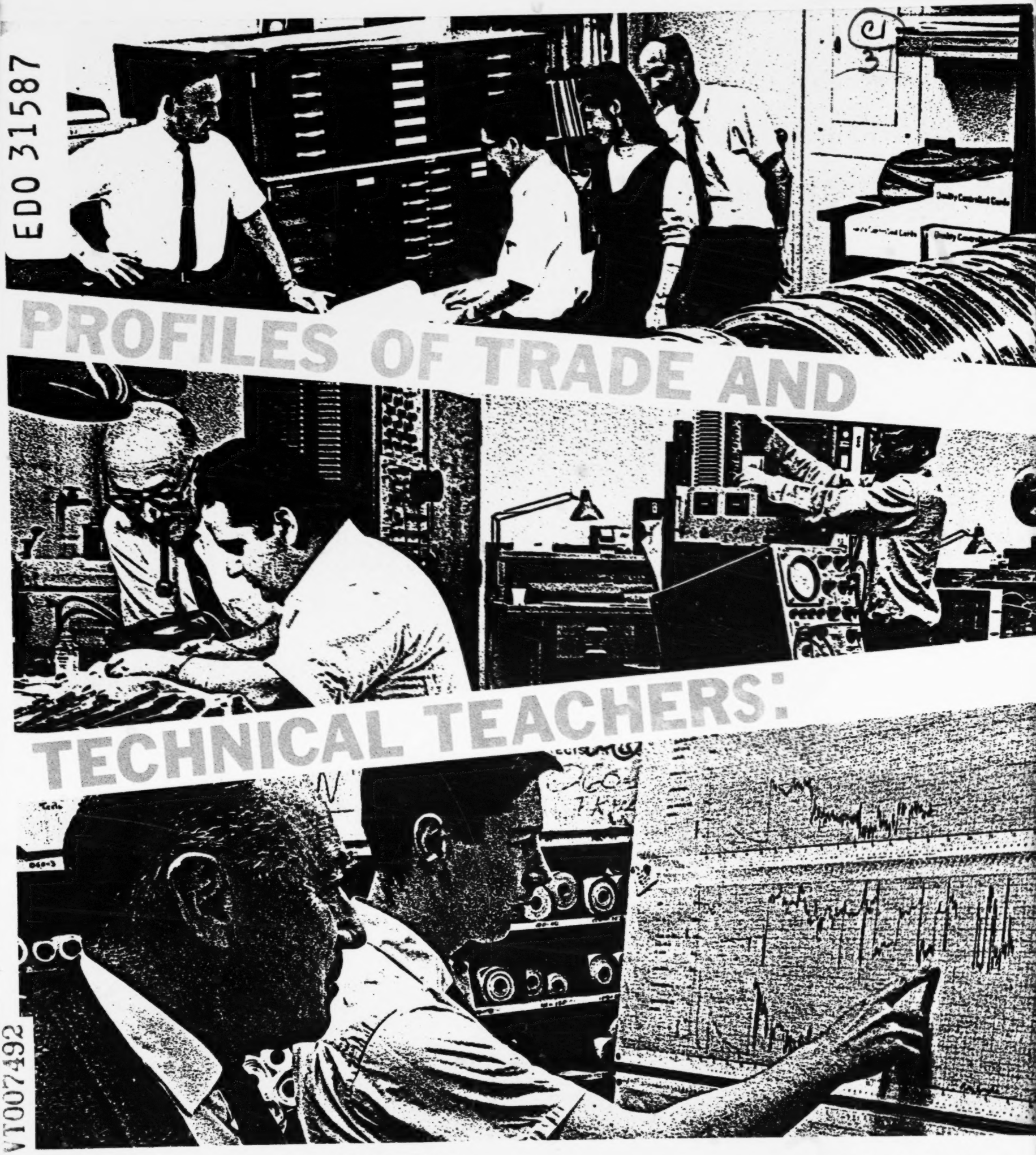
California, Univ., Los Angeles. Div. of Vocational Education
California State Dept. of Education, Sacramento. Bureau of Industrial Education
MF AVAILABLE IN VT-ERIC SET.
Pub Date - 68 38p.

*TRADE AND INDUSTRIAL EDUCATION; *TECHNICAL EDUCATION; TEACHER ATTITUDES; *TEACHER CHARACTERISTICS; TEACHER EDUCATION; *TEACHER BACKGROUND; TEACHER ROLE; TEACHER DISTRIBUTION; TEACHER EXPERIENCE; TEACHER SALARIES; PROFILE EVALUATION; STATE SURVEYS
CALIFORNIA

A Basic Description Questionnaire from 2,238 teachers was used to describe the teacher population, and make comparisons with previous studies. Fourteen group interviews, which included a self-perception questionnaire, were conducted throughout the state with a total teacher attendance of 185 and resulting data was used to make a prescription-description questionnaire, dealing with changing environment and colleague relationships, which was completed and returned by 408 teachers. Discussed are: (1) Three major types of institutional employment, (2) Characteristics of the trade and technical teacher's career in education, (3) Perceptions of the teachers about their careers, (4) An educational profile of the teachers which compares the educational factor with other factors and reports a striking rise in the educational level, (5) Patterns of affiliation and factors associated with memberships, (6) Relationships of teachers to their several environments, and (7) Teachers' perceptions about what is most helpful in both pre-service and in-service training. A major finding of the study was the respondents' desire for in-service training. Some of the areas of specific information about teachers include personal statistics, educational background and credentials, earnings, and distribution by county. (MM)

VT007492

EDO 31587



PROFILES OF TRADE AND TECHNICAL TEACHERS:

VT007492

SUMMARY REPORT

1968 - REVISED

MELVIN L. BARLOW
BRUCE REINHART

Division of Vocational Education
University of California, Los Angeles

In Cooperation With

Bureau of Industrial Education
California State Department of Education

PROFILES OF TRADE AND TECHNICAL TEACHERS: REVISED SUMMARY REPORT

1968

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by:

MELVIN L. BARLOW
Director, Division of Vocational Education, UCLA

BRUCE REINHART
Supervisor, Division of Vocational Education, UCLA

Division of Vocational Education
University of California, Los Angeles,

IN COOPERATION WITH:

Bureau of Industrial Education
California State Department of Education

FOREWORD

The information assembled in this report provides a descriptive profile of the trade and technical teacher in California. It also explores many facets of his teaching and training. The perceptions and attitudes of teachers presented here are of particular value.

This research has been needed for a long time by the Bureau of Industrial Education, teacher training institutions, county boards of education and local school districts. It is needed for policy development and decision-making. It helps us know how teachers think and feel about key issues and how we can work to enhance the status of trade and technical teachers. It provides the facts which document the advances we have made in our profession.

These data will be used wherever appropriate in California and throughout the nation to further the cause of trade and technical education. They help answer many questions which are being raised today and provide direction for meeting the needs of tomorrow.

I am grateful to all of the teachers and administrators who have given their assistance to this research project.

Richard S. Nelson

Richard S. Nelson, Chief
Bureau of Industrial Education
California Department of Education

CONTENTS

	Page
FOREWORD	iii
CONTENTS	v
I. THE PROFILES STUDY	
Previous Studies	2
Research Methods	2
Research Schedule	6
Description of Comprehensive Report	7
Advisory Committee	8
II. SUMMARY DATA	
What Do Teachers Teach?	13
How Old Are Trade And Technical Teachers?	14
What Is The Sex And Marital Status of Teachers?	15
Where Do The Teachers Teach?	16
How Many Credentials Do Teachers Hold Clear?	17
What Do Teachers With Full-time Credentials Do?	18
How Much Formal Education Do Teachers Have?	19
Do New Teachers Have More Education?	20
Do Teachers Work For Degrees While Teaching?	21
Do Teachers Plan More Education?	22
How Much Work Experience Do Teachers Have?	23
How Much Teaching Experience Do Teachers Have?	24
What Is Unique About Trade And Technical Teacher Careers?	25
Are There Any Institutional Differences?	26
How Much Do Public School Teachers Earn?	27
What Is Appreciated Most In Pre-Service Training?	28
What Do Teachers Suggest For In-Service Training?	29
How Do Teachers Perceive A Good School Environment?	30
Do Teachers Join Organizations?	31
What Organizations Do Teachers Join?	32
What Characterizes Their Organizational Affiliations?	34
What Is The County Distribution of Teachers?	35

THE PROFILES STUDY

The past few decades have seen major scientific and technological revolutions. The need for skilled technicians and craftsmen has exerted pressure upon our educational institutions to meet the demand for a trained labor force. Grant Venn states that situation in these terms.

> Technological change has, rather suddenly, thrown up a dramatic challenge to this nation's political, economic, social, and educational institutions. Though the full scope of this challenge may not be comprehended for years to come, its dimensions are now clear enough to call for a massive response on the part of American Education. All levels of education, and particularly post-secondary education, must quickly move to assume greater responsibilities for preparing men and women for entry into the changed and changing world of technological work. Unless far more and far better education on the semiprofessional, technical, and skilled levels is soon made available to greater numbers of citizens, the national economy and social structure will suffer irreparable damage. [1]

Vocational teachers are the major factor in the acquisition of "far more and far better education on the semiprofessional, technical, and skilled levels." They are the key to any adequate program for the future. But even though we have amassed enough sophisticated knowledge to carry us through space and conquer the heavens, we still do not have the elementary information about the trade and technical teachers who play a vital role in the development of trained manpower.

---

[1] Grant Venn, Man, Education and Work (Washington, D. C.: American Council on Education, 1964), p. 1.

The descriptive information summarized in this greatly abbreviated report is only a small part of the Comprehensive Report.[2] But even the Comprehensive Report fills only a small part of the vacuum of needed information about these important teachers. We are hopeful that others will be inspired to go beyond the limitations of current research and focus on the numerous remaining needs and problems of this unique group of teachers.

Previous Studies

During the past two decades three studies have made spot inventories of the status of trade and technical teachers in California. Two of the status studies, jointly conducted by Melvin L. Barlow and Gail E. Moore, covered the period 1945-1950.[3] A third study, by David Allen, covered the period 1955-1962.[4]

Research Methods

The Profiles Study is more comprehensive than any other study of the subject known to the authors. The following is a description of the study.

---

[2] Melvin L. Barlow and Bruce Reinhart, Profiles of Trade and Technical Teachers: Comprehensive Report (Los Angeles: Division of Vocational Education, University of California, 1968).

[3] Melvin L. Barlow and Gail E. Moore, A Study of Teachers Entering Trade and Industrial Education (Los Angeles: Division of Vocational Education, University of California, 1953).

Melvin L. Barlow and Gail E. Moore, A Survey of Trade and Industrial Teachers (Los Angeles: Division of Vocational Education, University of California, 1955).

[4] David Allen, A Study of Trade and Technical Teachers Who Received First Credentials July 1955-June 1962 (Los Angeles: Division of Vocational Education, University of California, 1963).

Identification of the population. An up-to-date list of full-time trade and technical teachers in California was not in existence at the time this research began. For this reason the identification of the population was a task of immense importance. During 1966-67 approximately 4,000 teachers were examined for inclusion in the study, but many of these did not meet the criteria for inclusion. A search for trade and technical teachers took the researchers to the files of the teacher training offices of the University of California, to the regional offices of the State Department of Education, to selected county offices and to approximately fifty schools and school districts. Junior college catalogues and the California School Directory were also searched for the names of trade and technical teachers.

The population of the study was limited to trade and technical teachers with full-time credentials who were not engaged primarily in supervision or administration. The full-time credentials which met the criteria of the study were (1) the Standard Designated Subjects, Full-time, (2) the Special Secondary Vocational - Class A and (3) the Special Secondary Vocational - Class B. Full-time teachers with additional responsibilities in supervision, administration or other school employment were considered within the parameters of the population. Teachers who held a full-time credential but worked only part-time also were included in the population.

Basic Description Questionnaire. The Basic Description Questionnaire (BDQ) was initially sent to approximately 2,500 teachers. When the processing of the questionnaires began, 1,893 returns had been

received. Three hundred and six of these returns failed to meet the parameters of the study and were excluded from the survey population. The data reported from the BDQ in the original Summary Report are based on 1,587 returns. We estimate that these data represent at least 75 percent of the teachers known to be within the population when the questionnaire was administered.

During 1967-68 1,100 additional teachers were considered for inclusion in the study (some of whom did not respond to the earlier inquiries). After further examination 1,087 teachers thought to be within the population were sent BDQ's. One hundred and forty-six of the 797 returns did not meet the parameters of the study and were not retained. Therefore, 651 teachers in the 1967-68 restudy were added to the 1,587 in the original study to comprise the data on 2,238 teachers in the Revised Summary Report.

The purpose of the BDQ is to collect descriptive information about the characteristics of trade and technical teachers. These data were utilized to describe the teacher population, to make comparisons with previous studies and to explore the relationships of numerous variables.

Group interviews. Fourteen group interviews were conducted in eleven counties geographically distributed throughout the state. Three hundred and ten teachers from these counties were selected randomly to attend the interviews. One hundred and eighty-five teachers attended these sessions. The interviews attempted to identify teacher perceptions and suggestions related to the following four areas:

1. The changing environment of trade and technical education

2. The relationships of trade and technical teachers with their colleagues (academic and vocational)

3. The pre-service training of teachers

4. The in-service training of teachers

Data from the group interviews became the basis of the Prescription-Description Questionnaire described below.

Self-Perception Questionnaire. The Self-Perception Questionnaire (SPQ) was administered to the "captive" participants in the group interviews described above. The purpose of the SPQ was to obtain responses from teachers on a comprehensive range of teaching activities.

Prescription-Description Questionnaire. The Prescription-Description Questionnaire (PDQ) was designed to follow up the series of group interviews. The items incorporated in this questionnaire were selected from typescripts and other notes made from the interviews.

Two forms (Form A and Form B) of the PDQ were utilized so that prescriptive and descriptive data could be collected from the first two sections of the instrument (changing environment and relationships with colleagues). The prescriptive Form A asked how frequently the suggested items should be practiced. The descriptive Form B asked how frequently the suggested items are practiced. In the third and fourth sections (pre-service and in-service) only the prescriptive data were required.

A random sample of 510 teachers was drawn from the 1,587 respondents to the BDQ. The sample also was representative of the

types of institutions (high school, junior college and correctional). Half of the teachers (255) received Form A and half received Form B.

The data reported below are based on an 80 percent return (408 responses). The samples were kept representative by type of institutions.

Research Schedule

The original proposal provided for individual interviews following the group interviews, but this plan was abandoned and a questionnaire was substituted for the individual interview. The size of the total study population originally was estimated at about 1,000 teachers. Because the population proved to be considerably larger, the required clerical work and data processing time were grossly underestimated. The original schedule was adjusted for this reason. The revised schedule follows:

July 1 -- September 30, 1966

1. Prepare list of trade and technical teachers.
2. Prepare Basic Description Questionnaire.
3. Schedule group interviews and select participants.
4. Prepare Self-Perception Questionnaire.

October 1, 1966 -- January 30, 1967

1. Administer Basic Description Questionnaire.
2. Conduct group interviews.
3. Administer Self-Perception Questionnaire.
4. Process data from Basic Description Questionnaire and Self-Perception Questionnaire.
5. Develop Prescription-Description Questionnaire and conduct random sampling.

February 1 -- April 15, 1967

1. Continue data analysis of all three questionnaires.
2. Present available data to Advisory Committee.

April 16 -- June 30, 1967

1. Complete data analysis.
2. Develop descriptions and interpretations.
3. Prepare reports for publication.

July 1 -- September 30, 1967

No work on teacher Profiles Study.

October 1 -- December 31, 1967

1. Update list of trade and technical teachers.

January 1 -- April 30, 1968

1. Administer Basic Description Questionnaire to additional teachers.

May 1 -- June 30, 1968

1. Process data from Basic Description Questionnaire.
2. Prepare Revised Summary Report.

Description of Comprehensive Report

The content of the Comprehensive Report of the Profiles Study is divided into seven chapters. Three major types of institutional employment are reported in Chapter I and related to many other factors. The type of institutional employment is one of the most discriminating factors in the study. Chapter II describes the characteristics of the trade and technical teacher's career in education and the perceptions of the teachers about them. It also includes data on teachers prior to teaching. Chapter III provides an educational profile of the current population of teachers, compares the educational factor with other factors and reports a striking rise in the educational level. Analysis

of memberships reported reveals that trade and technical teachers have a median of 5.6 organizational affiliations per teacher. Chapter IV describes the patterns of affiliation and the factors associated with memberships. The relationship of the teachers to their several environments is described in Chapter V. Teacher perceptions about what is most helpful in both pre-service and in-service training are reported in Chapter VI. A major finding of the study has been the respondents' desire for in-service training. A summary of the study, in Chapter VII, with interpretations and an appraisal of future developments, concludes the report.

Advisory Committee

This research is indebted to its advisory committee. The interpretation, evaluation and use of the information gathered in the course of the research have been enhanced by their guidance and cooperation.

The following persons served on this committee:

Dr. David Allen
Coordinator
Trade and Technical Teacher Education
University of California, Los Angeles

Mr. Everett W. Coles
Instructor of Print Shop
Garfield High School
Los Angeles

Mr. Donald C. DePuy
Instructor of Electronic Math
Fullerton Junior College
Fullerton

Dr. John W. Dunn
District Superintendent
Peralta Junior College District
Oakland

Mrs. Grace M. Edwards
Instructor of Drafting
El Camino College
El Camino

Dr. Claude W. Fawcett
Professor of Education
Education Placement Officer
University of California, Los Angeles

Mr. Franklin R. Johnson
Dean of Instruction and Curriculum
Los Angeles Trade-Technical College
Los Angeles

Dr. Milo Johnson
District Superintendent
President
Mt. San Jacinto Junior College District
Banning

Dr. Paul V. W. Lofgren
Supervisor
Occupational Proficiency Testing
University of California, Berkeley

Dr. John Lombardi
Associate Superintendent
Division of College and Adult Education
Los Angeles City Schools

Mr. Robert Lorenzen
Supervisor
Trade and Technical Teacher Education
University of California, Berkeley

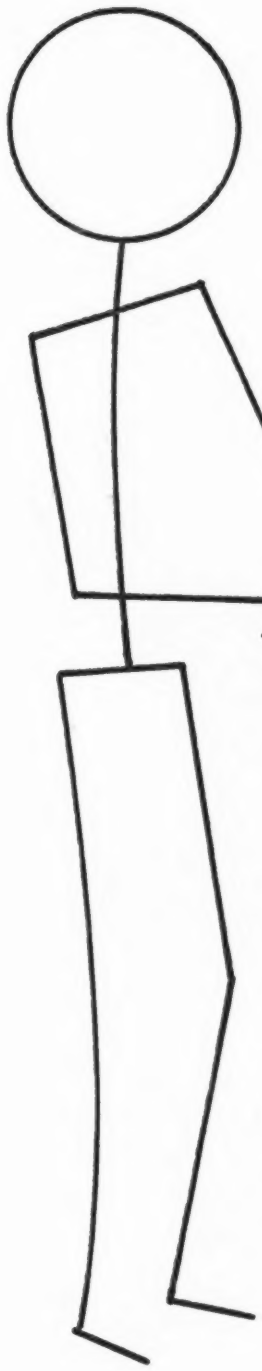
Dr. Sidney E. McGaw
Dean of Vocational Education
San Jose City College
San Jose

Ex-officio:

Mr. Richard S. Nelson
Chief
Bureau of Industrial Education
California State Department of Education
Sacramento

SUMMARY DATA

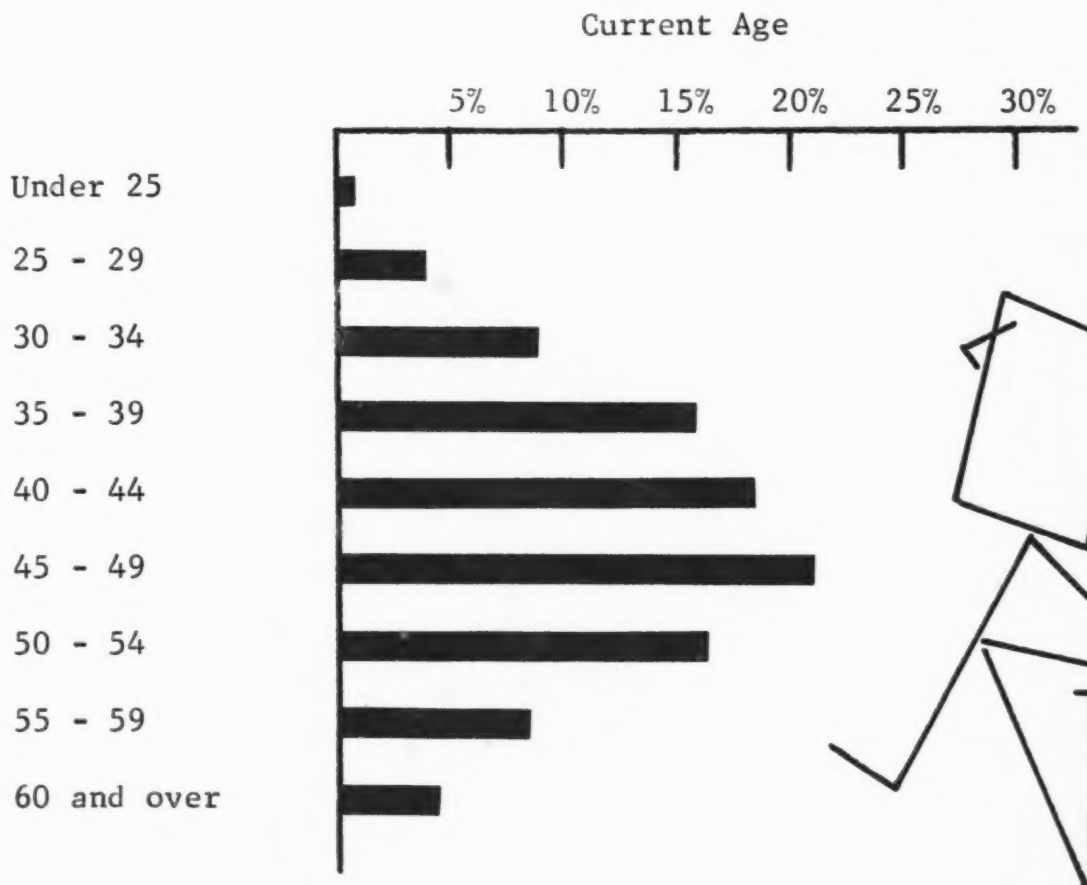
WHAT DO TEACHERS TEACH?



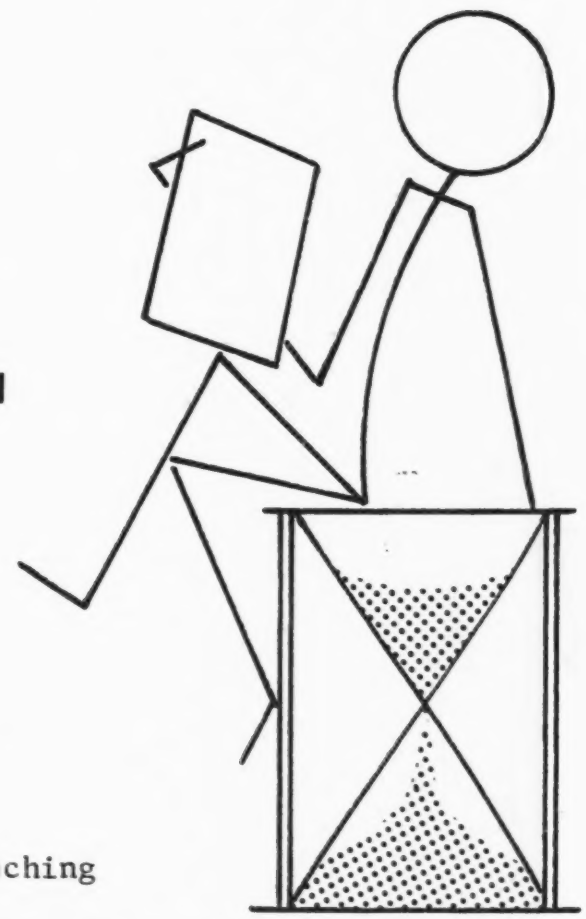
Major Subject Areas	Percent of Overall Population[5]
Practical nursing	14.7
Automotive	11.0
Electrical-electronics	9.9
Drafting	6.6
Machine shop	5.8
Cosmetology	4.2
Printing	3.6
Peace officer	3.5
Carpentry	3.4
Welding	3.3
Dental	3.1
Medical	3.0
Foods	2.9
Aircraft	2.8
Sewing	2.1
Photography	1.2
Architectural landscaping	1.1
Radio-television	1.1
Sheet metal	1.1
Air conditioning, heating and refrigeration	1.0

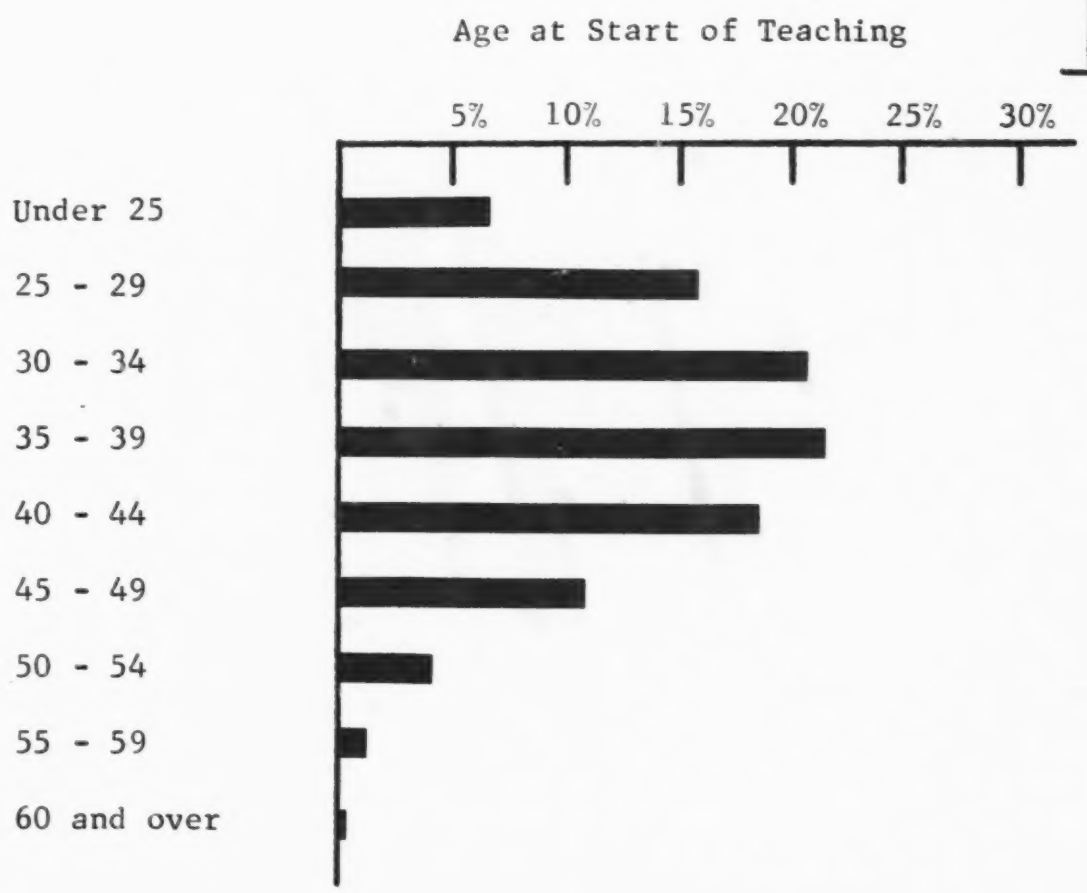
[5] All percentages in succeeding tables are assumed to be percentages of overall population unless otherwise stated.

HOW OLD ARE TRADE AND TECHNICAL TEACHERS?



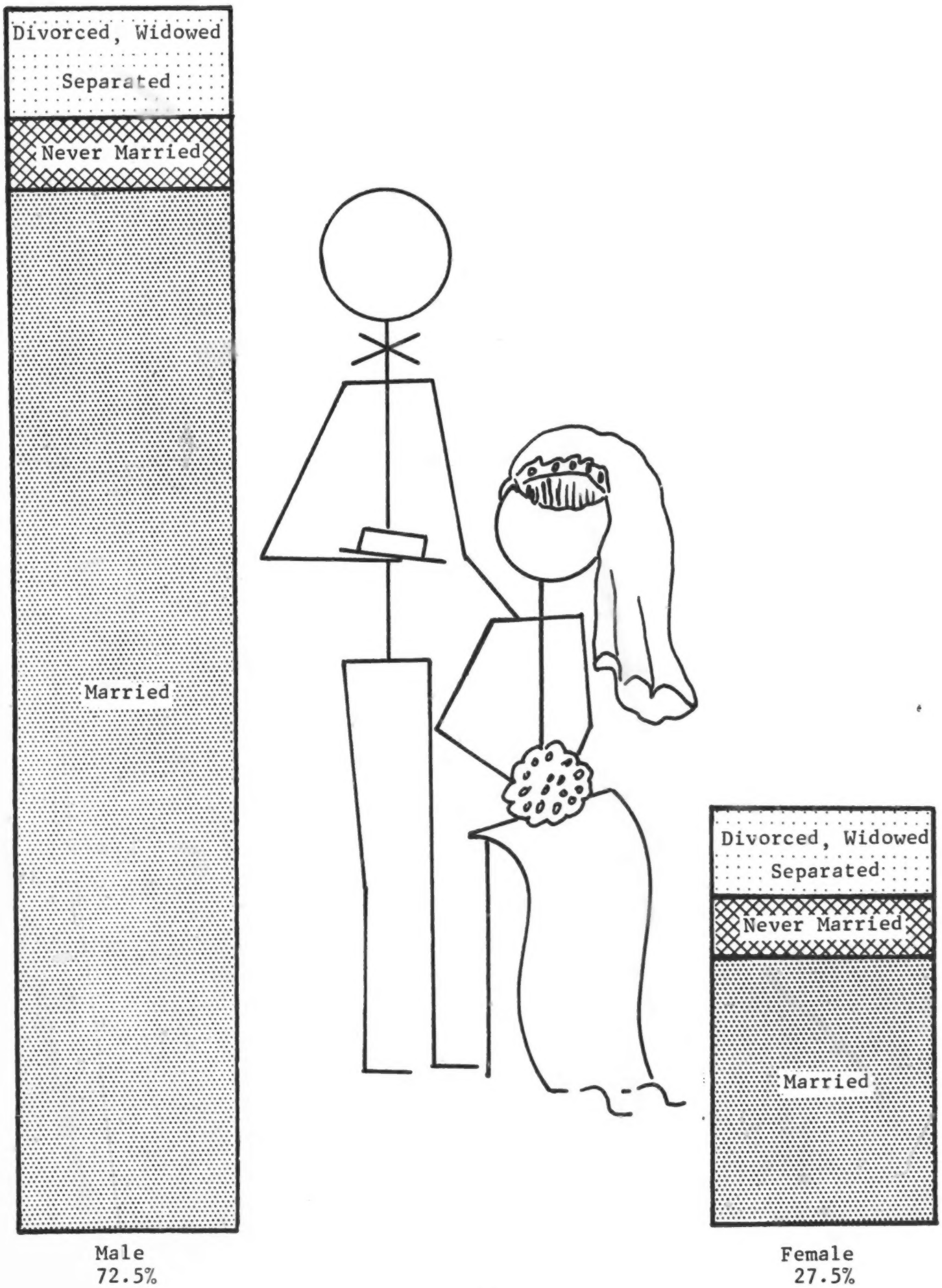
* The median age is 45.5 years



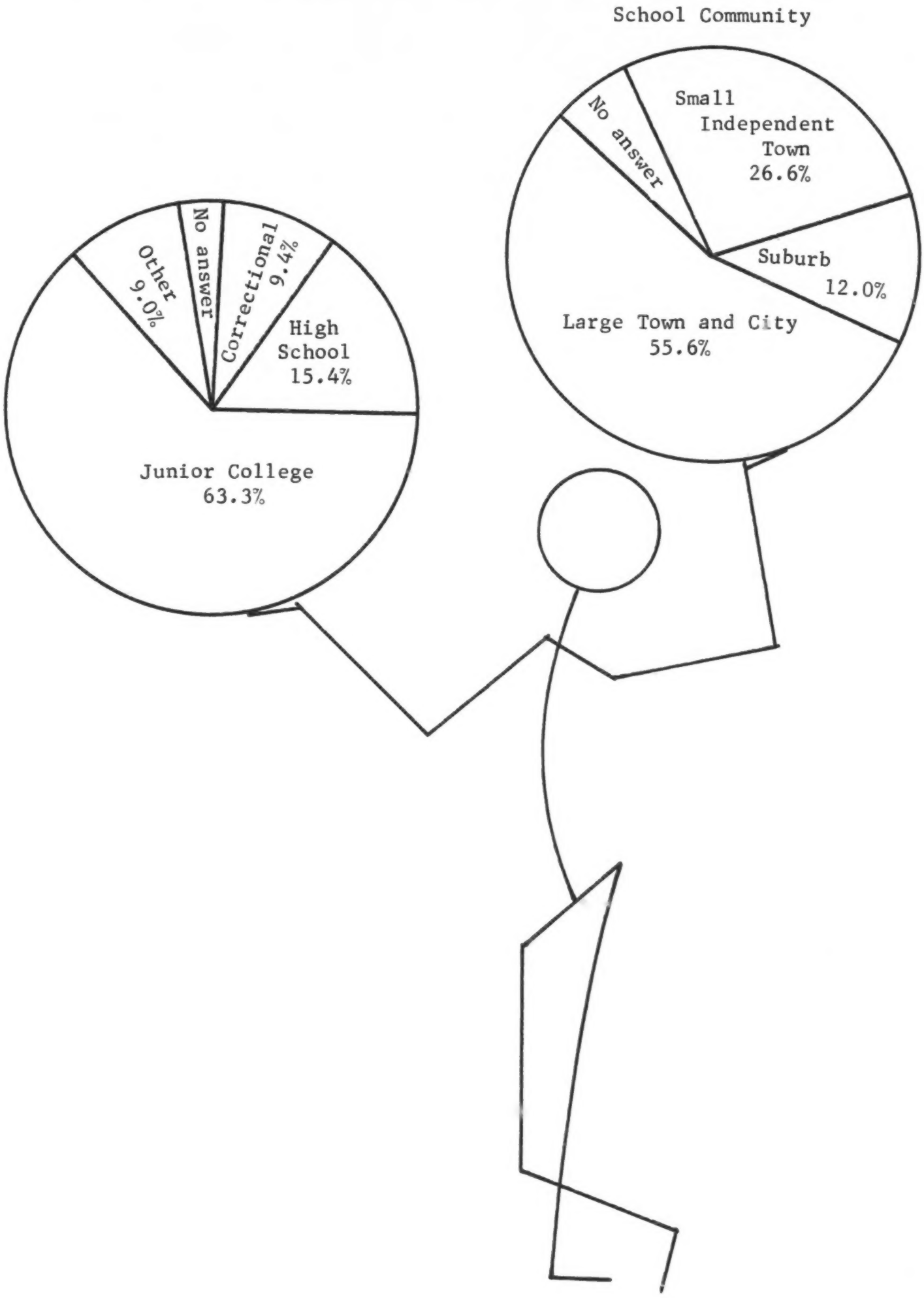


* The median age is 36.7 years

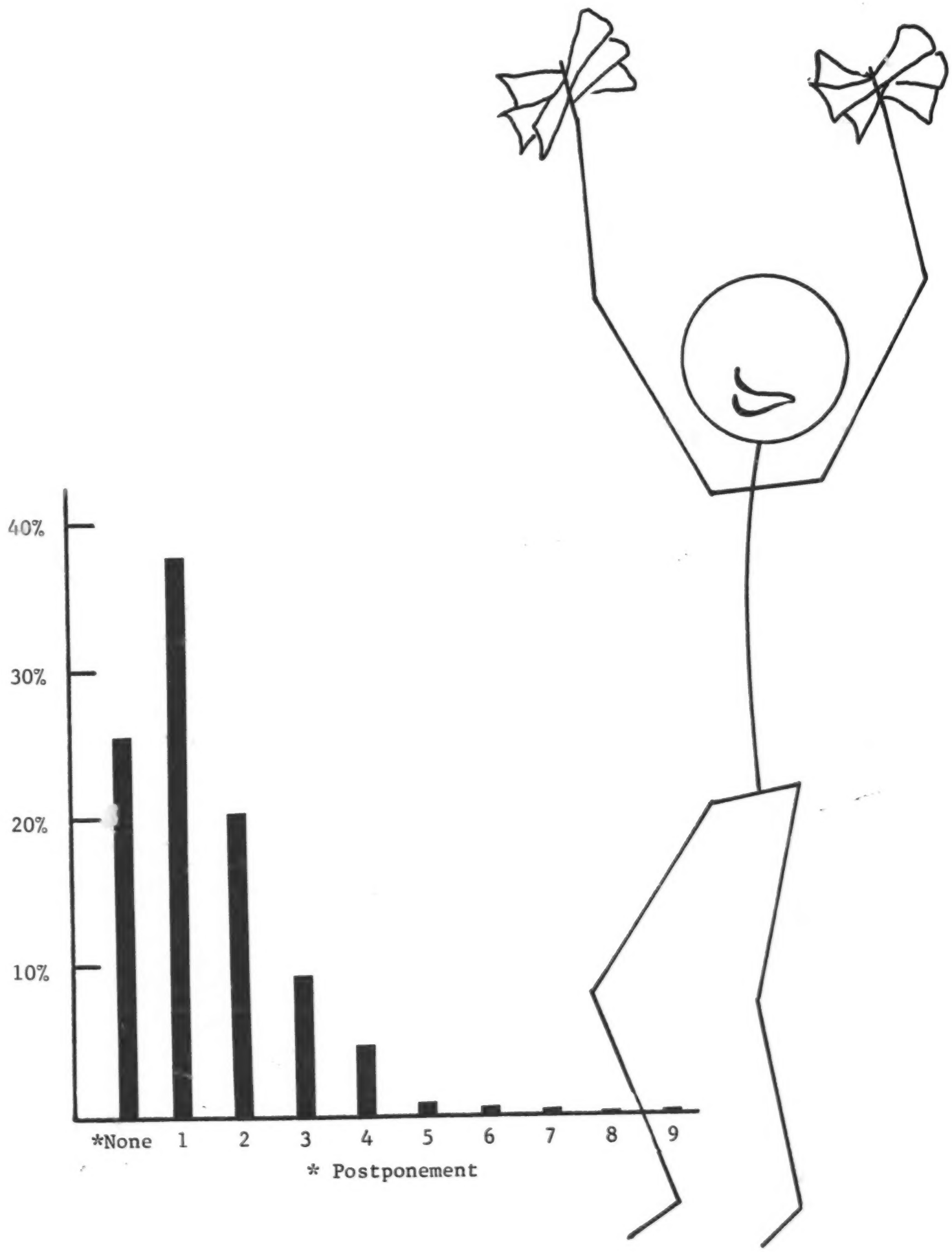
WHAT IS THE SEX AND MARITAL STATUS OF TEACHERS?



WHERE DO THE TEACHERS TEACH?



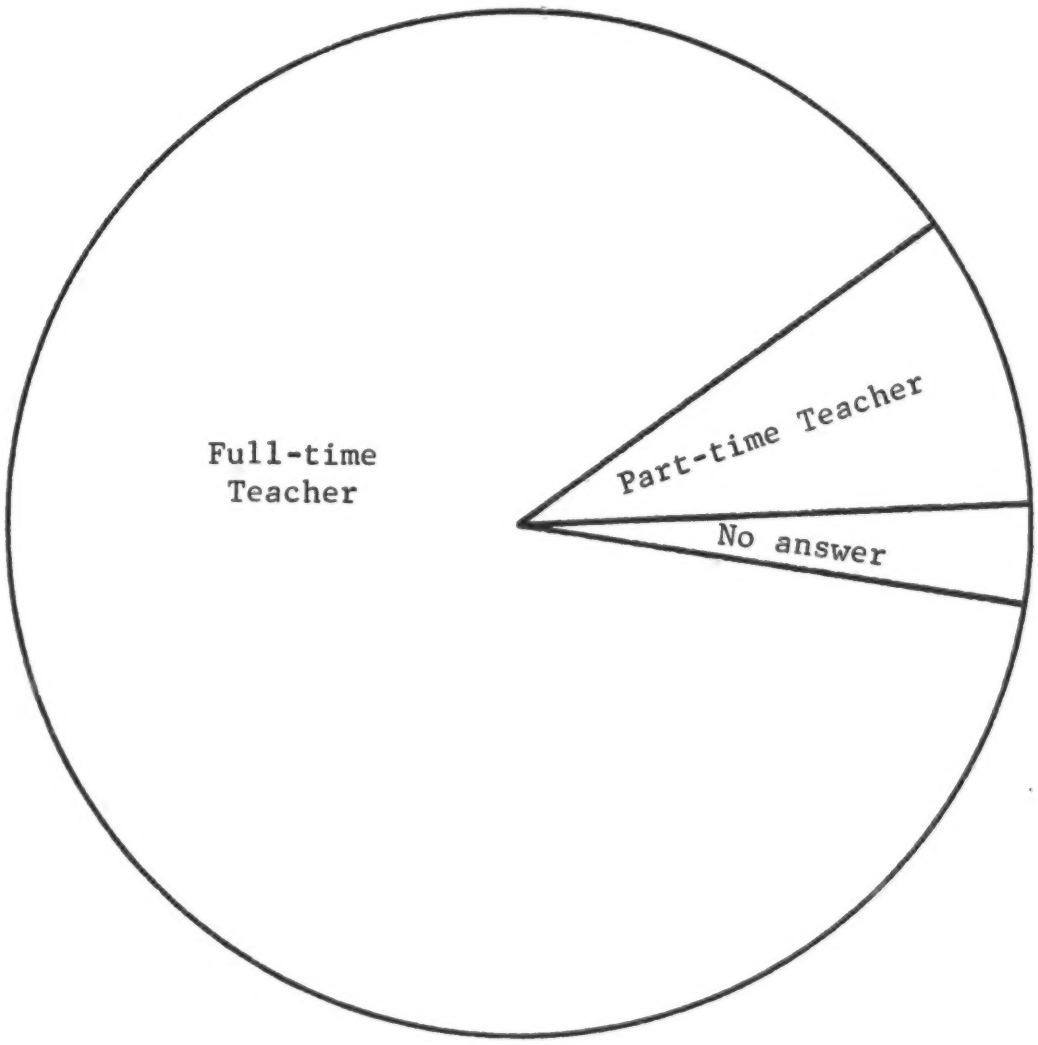
HOW MANY CREDENTIALS DO TEACHERS HOLD CLEAR?



WHAT DO TEACHERS WITH FULL-TIME CREDENTIALS DO?

Part-time teacher with:

(a) no other employment	2.3%
(b) supervision and/or administration responsibilities	2.6%
(c) other school employment	1.3%
(d) other non-school employment	3.1%
	9.3%

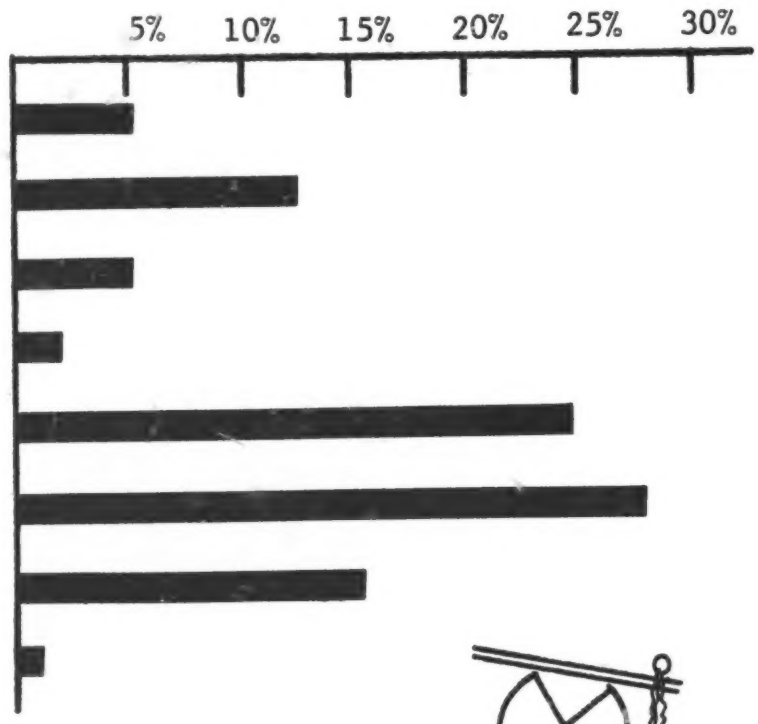


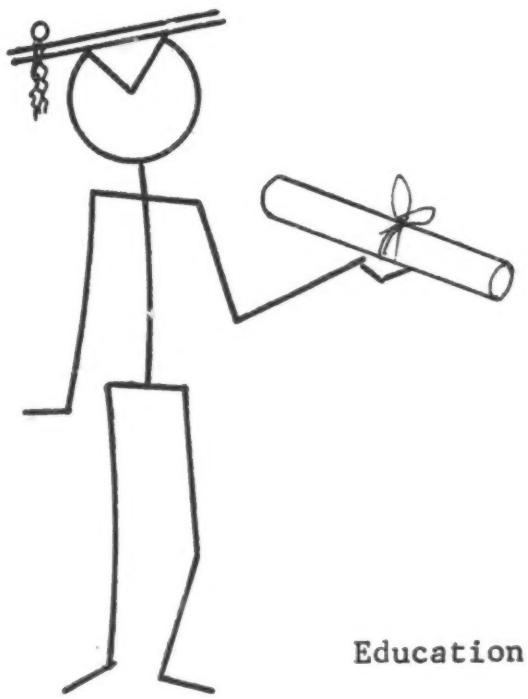
Full-time teacher with:

(a) no other employment	50.8%
(b) additional supervision and/or administration responsibilities	14.9%
(c) other school employment	12.2%
(d) other non-school employment	10.2%
	88.1%

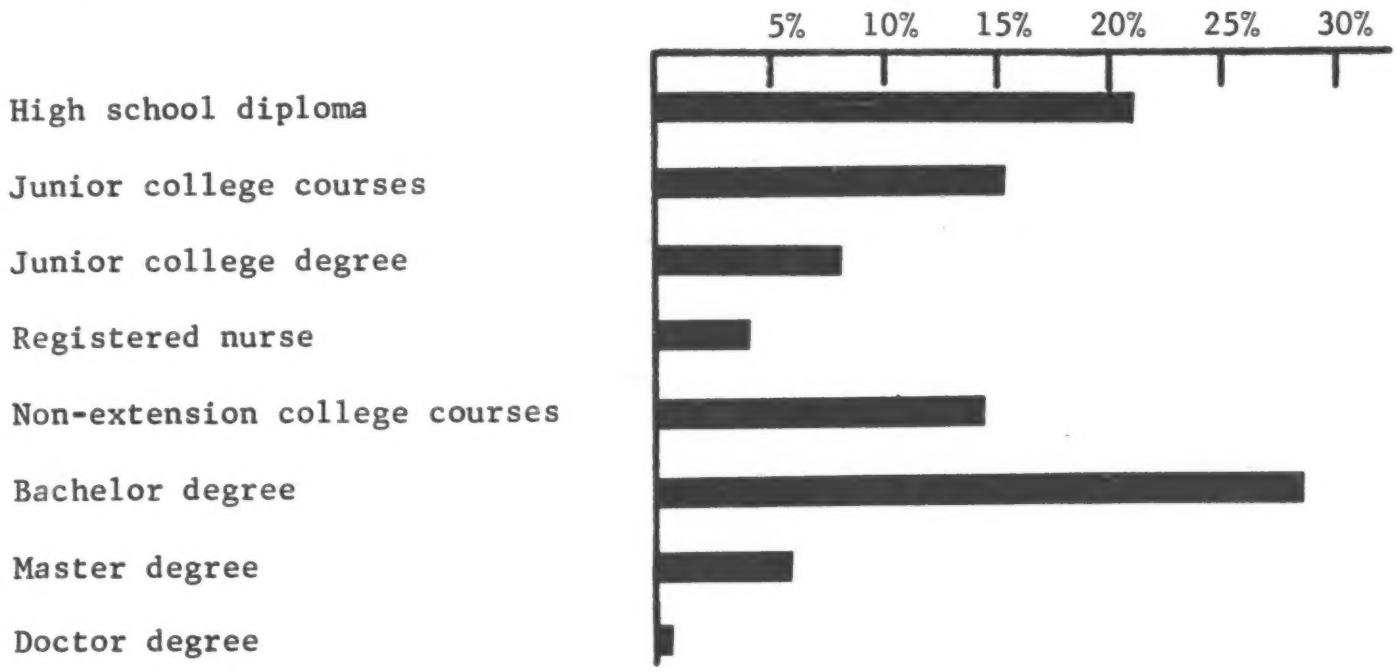
HOW MUCH FORMAL EDUCATION DO TEACHERS HAVE?

Current Education





Education Prior to Teaching



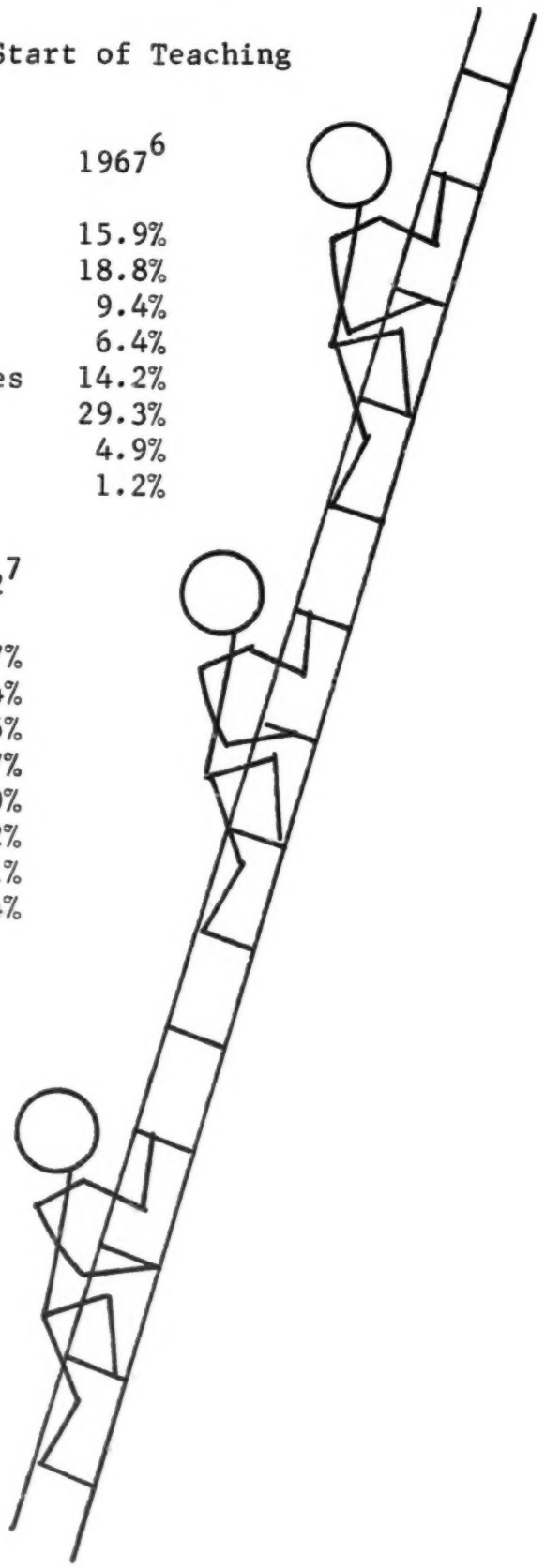
DO NEW TEACHERS HAVE MORE EDUCATION?

Studies of "Recent Entrants" at the Start of Teaching

	1967[6]
High school diploma	15.9%
Junior college courses	18.8%
Junior college degree	9.4%
Registered nurse	6.4%
Non-extension college courses	14.2%
Bachelor degree	29.3%
Master degree	4.9%
Doctor degree	1.2%

	1962[7]
High school diploma	38.7%
Junior college courses	6.4%
Junior college degree	7.5%
Registered nurse	5.7%
Non-extension college courses	9.0%
Bachelor degree	24.2%
Master degree	8.1%
Doctor degree	.4%

	1953[8]
High school diploma	59.9%
Non-extension college courses	19.9%
Bachelor degree	16.1%
Master degree	4.8%
Doctor degree	.2%



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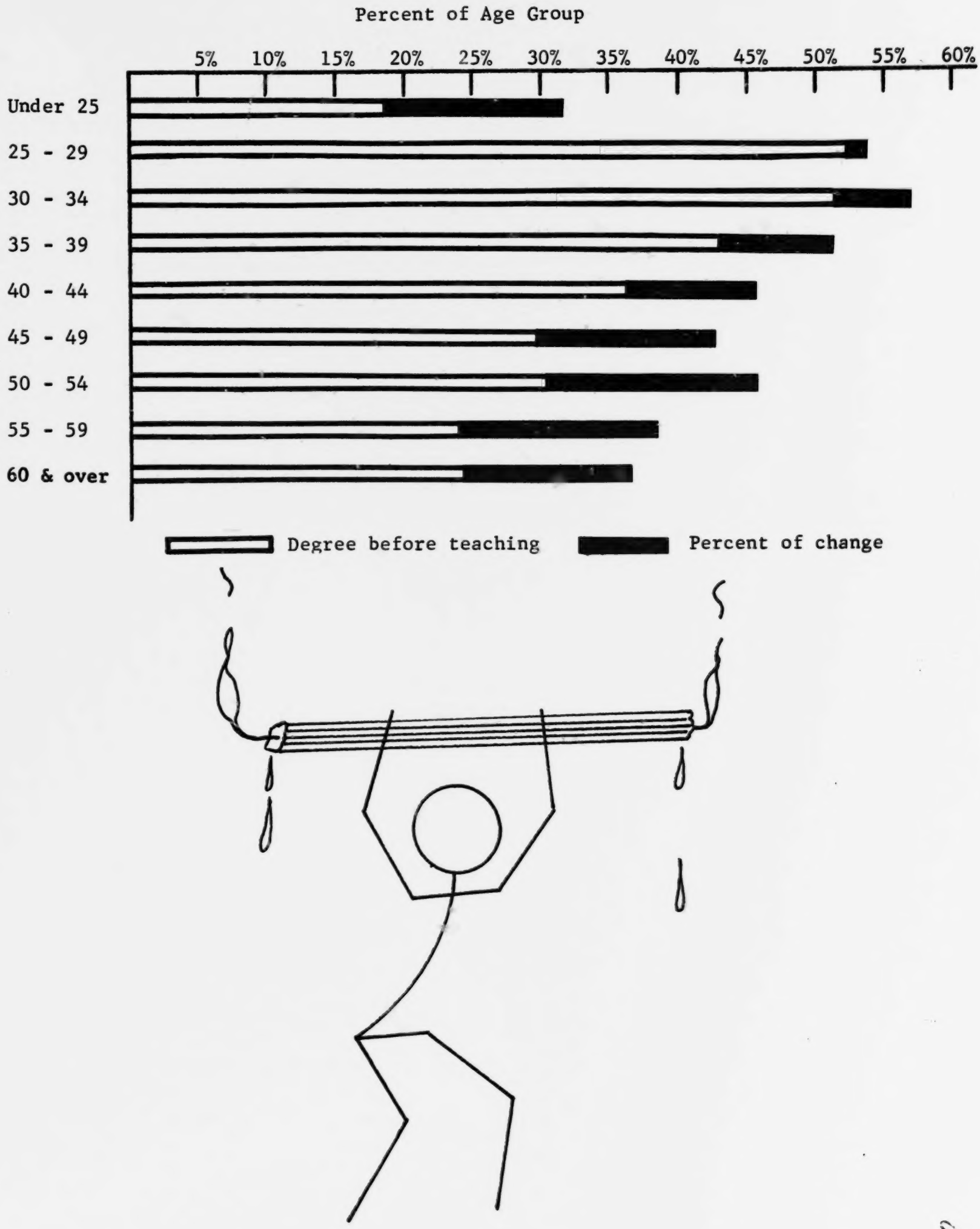
[6] The number of recent entrants from the 1967 survey is only a sample of the total population of new teachers since 1962.

[7] David Allen, A Study of Trade and Technical Teachers Who Received First Credentials July 1955-June 1962 (Los Angeles: Division of Vocational Education, University of California, 1963).

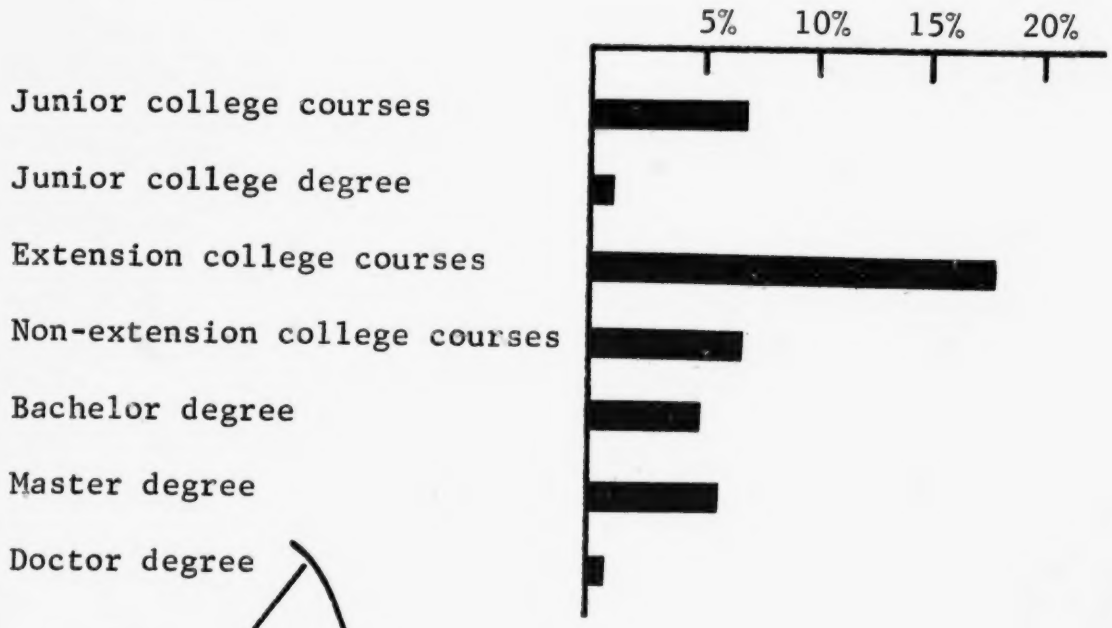
[8] Melvin L. Barlow and Gail E. Moore, A Study of Teachers Entering Trade and Industrial Education (Los Angeles: Division of Vocational Education, University of California, 1953).

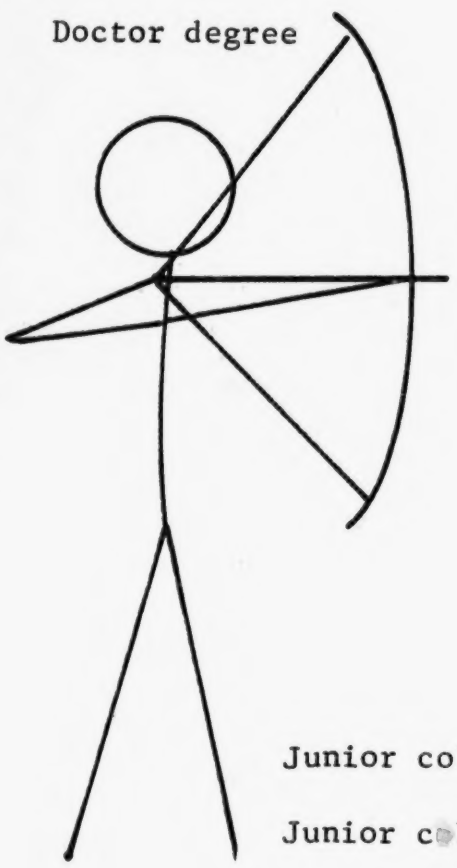
DO TEACHERS WORK FOR DEGREES WHILE TEACHING?

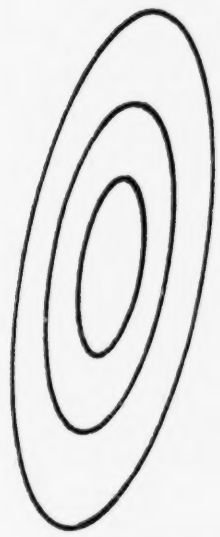


DO TEACHERS PLAN MORE EDUCATION?

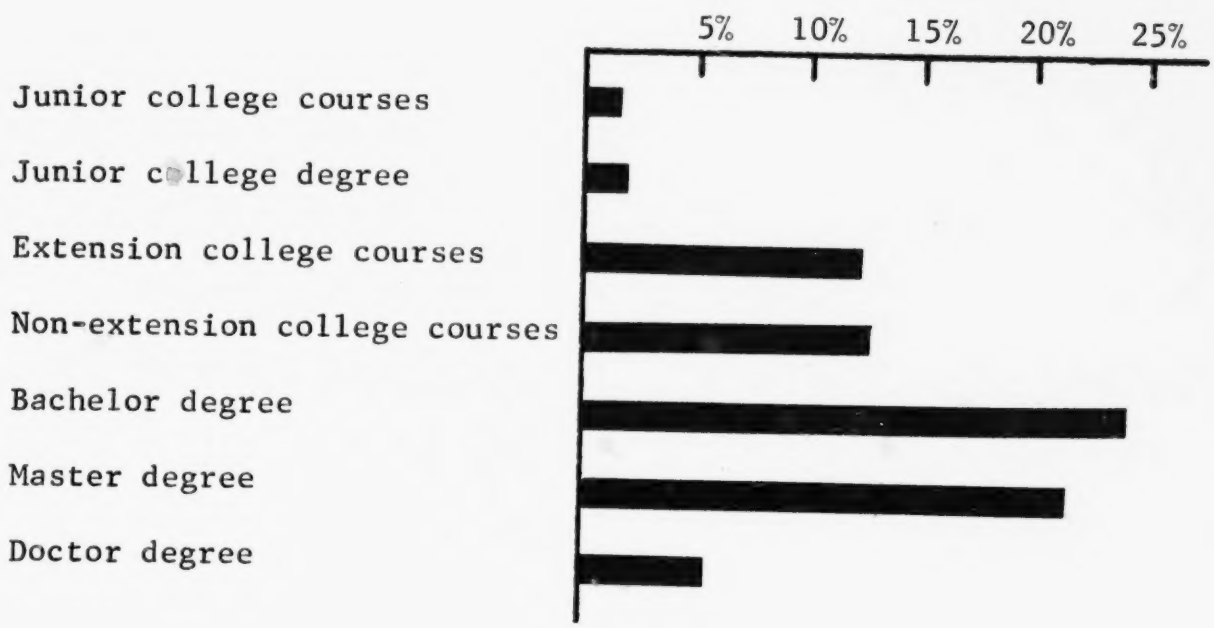
Current Enrollment





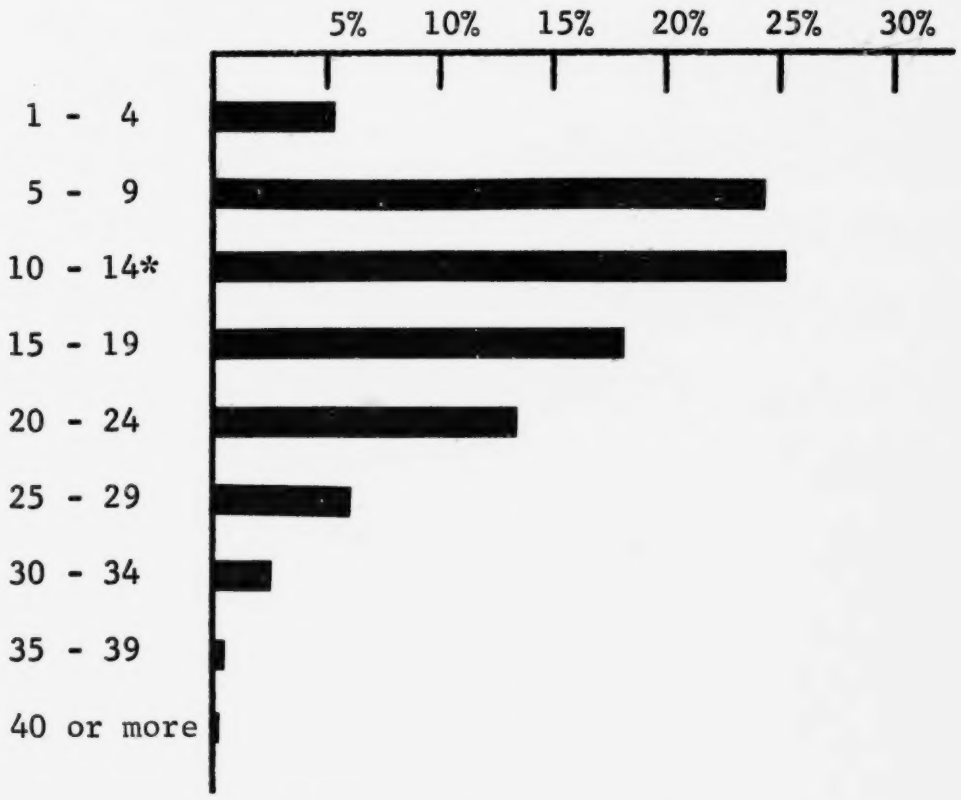


Anticipated Enrollment

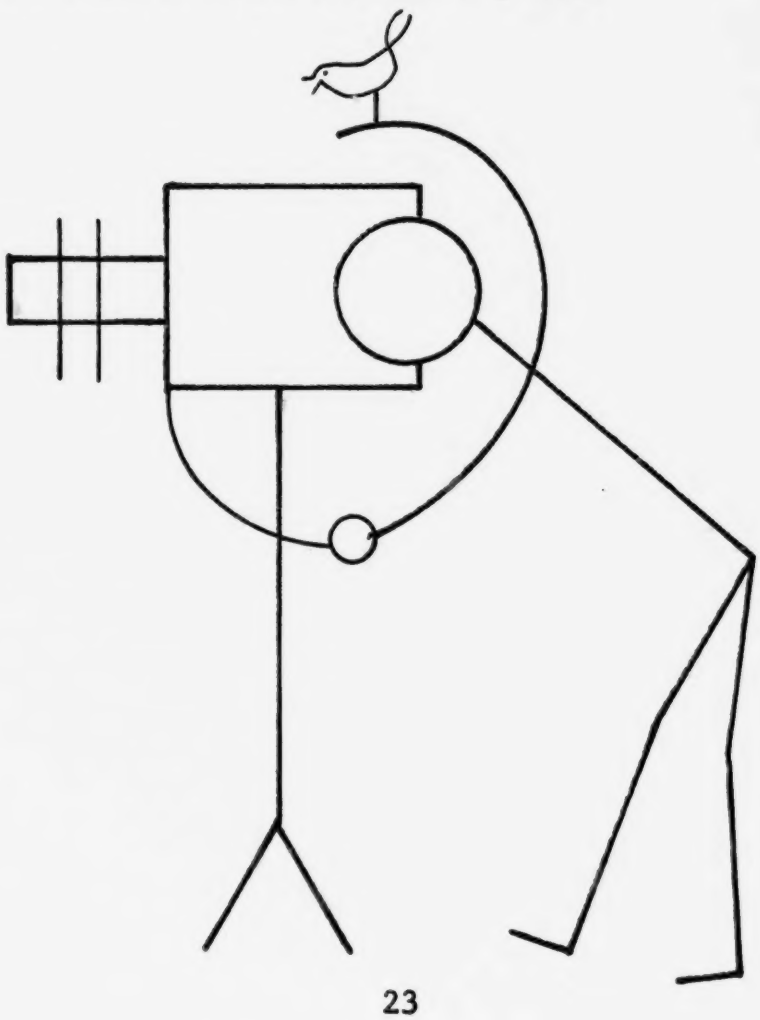


HOW MUCH WORK EXPERIENCE DO TEACHERS HAVE?

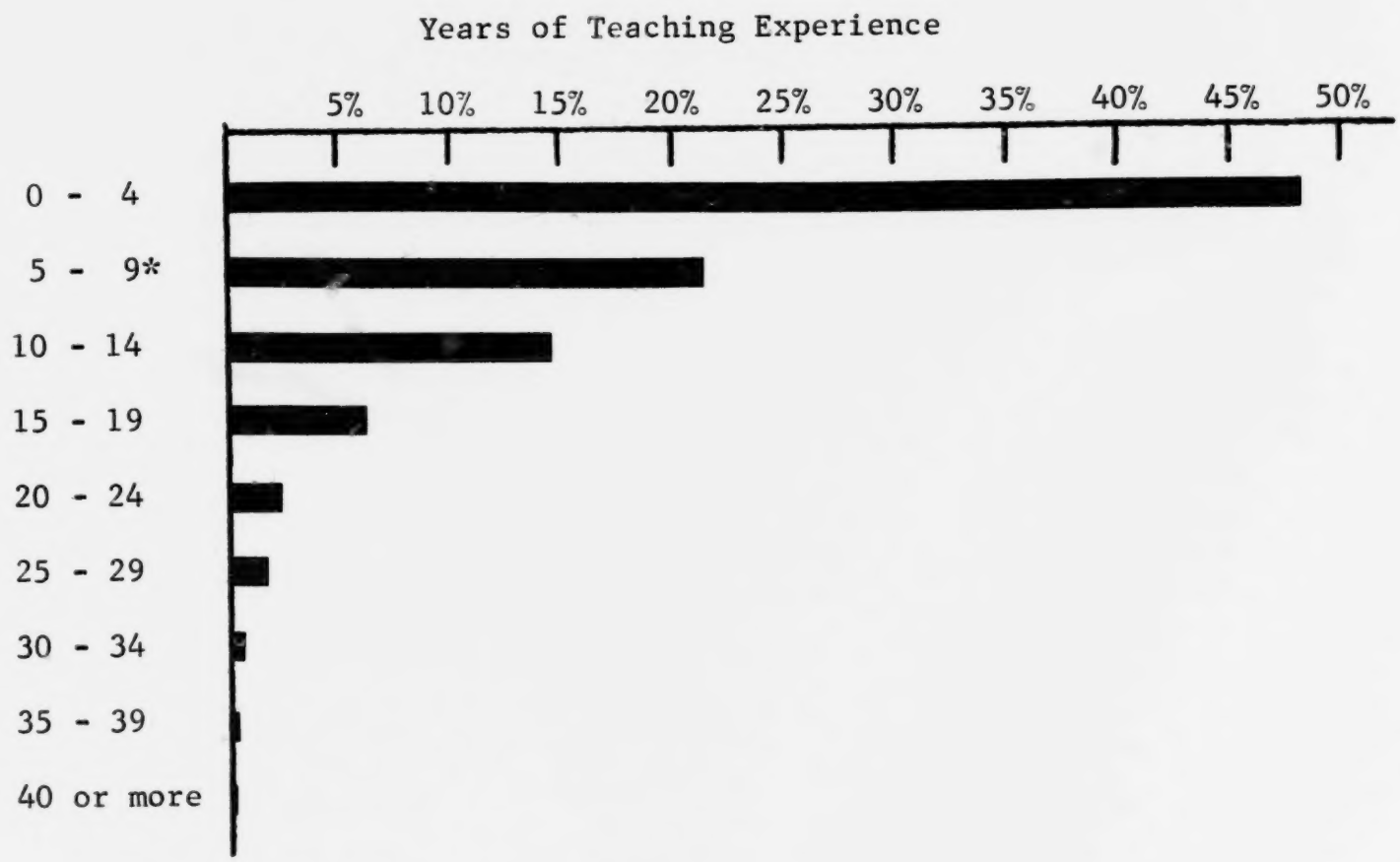
Years of Work Experience Prior to Teaching



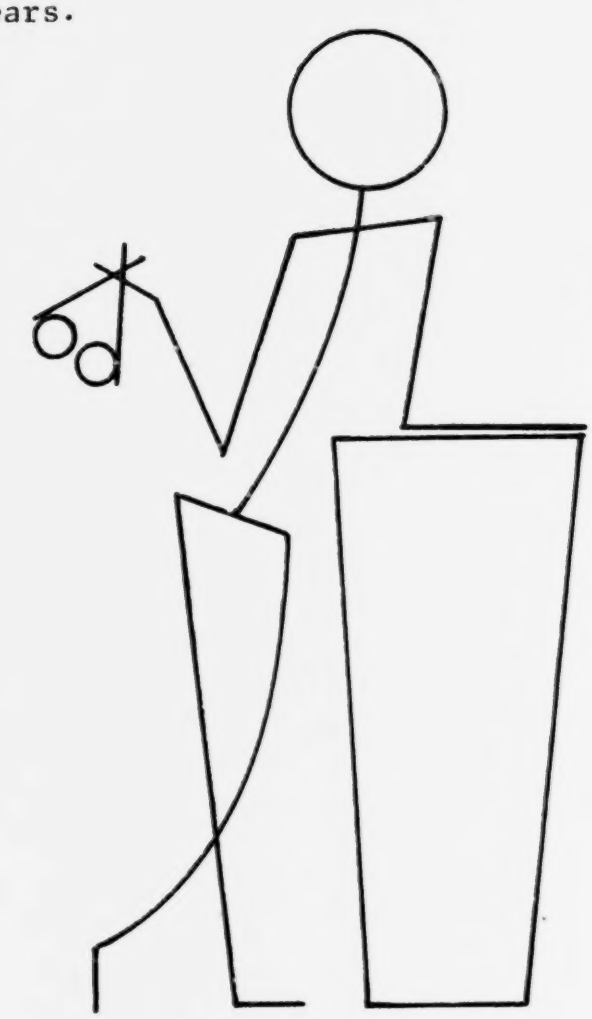
* The overall median is 13.5 years.



HOW MUCH TEACHING EXPERIENCE DO TEACHERS HAVE?



* The overall median is 5.4 years.



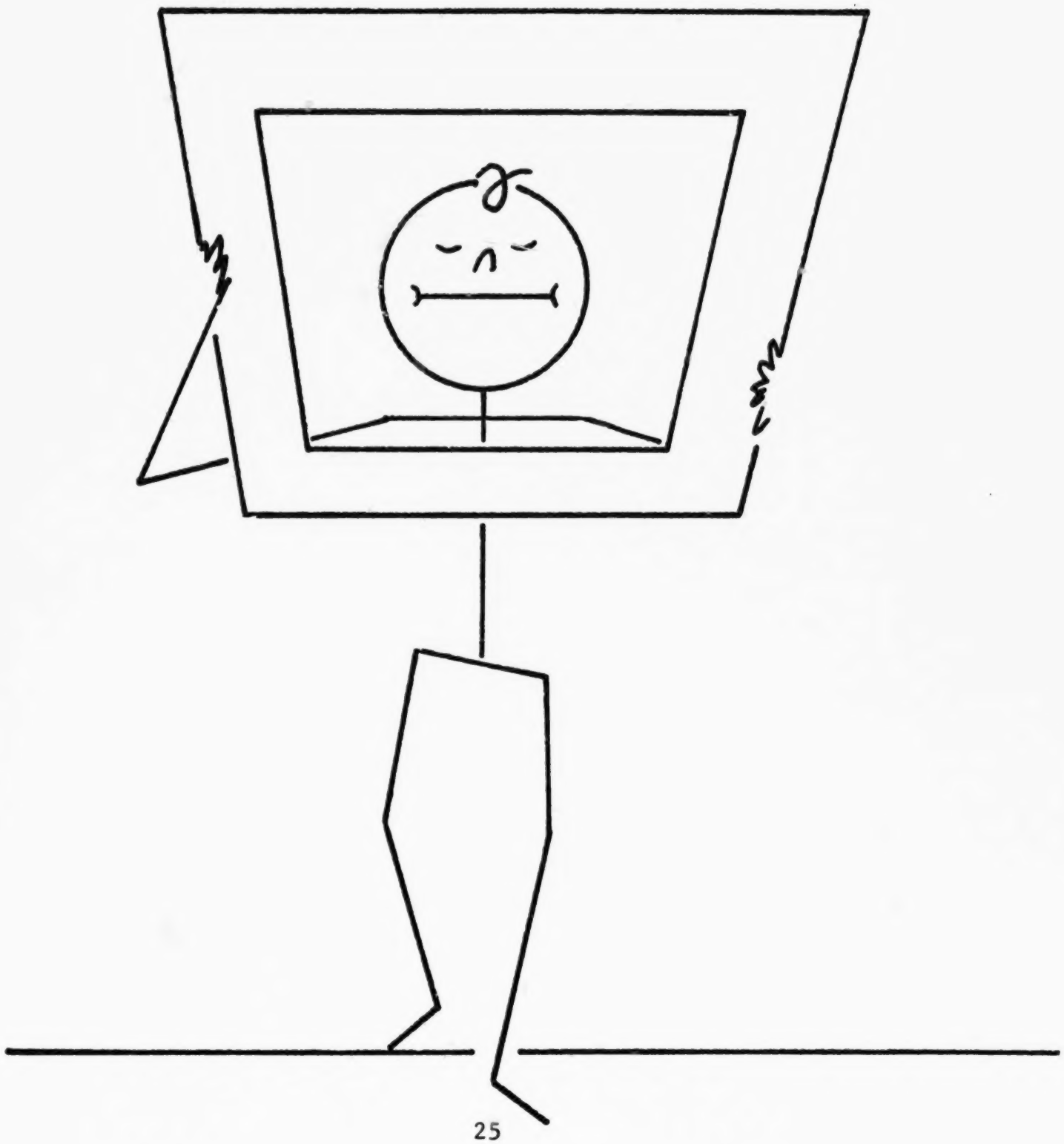
WHAT IS UNIQUE ABOUT TRADE AND TECHNICAL TEACHER CAREERS?

They are older than most other groups of teachers (median of 45.9 years) and they are older when they begin to teach (median of 36.8 years).

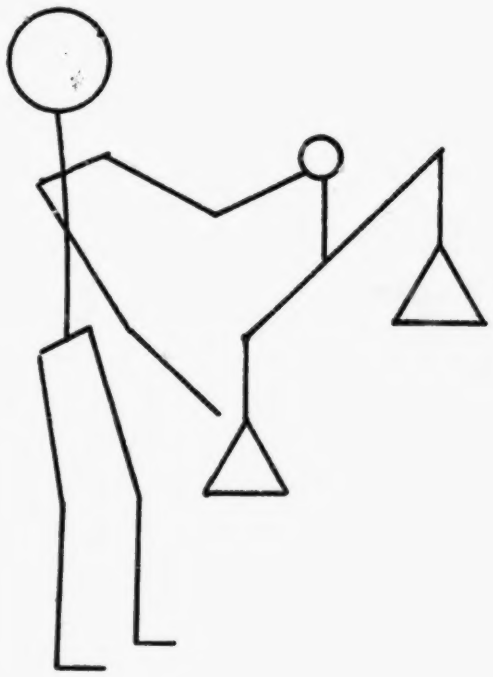
They have a median of 13.9 years of work experience prior to teaching.

Two-thirds teach in fourteen vocational subject areas and ninety per cent are teaching full-time.

Large numbers of recent entrants contribute to the smallness of the median (6.7 years) of teaching experience for the group. Forty per cent have taught less than five years and two-thirds have taught less than ten years.

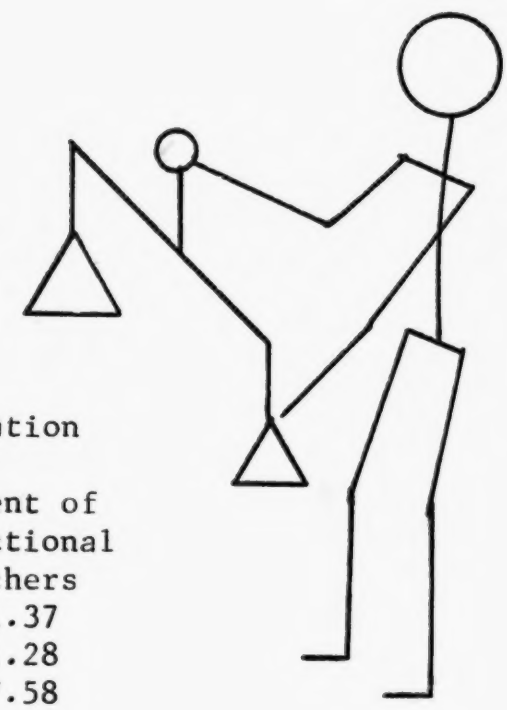


ARE THERE ANY INSTITUTIONAL DIFFERENCES?



Correctional Teachers Have More Work Experience

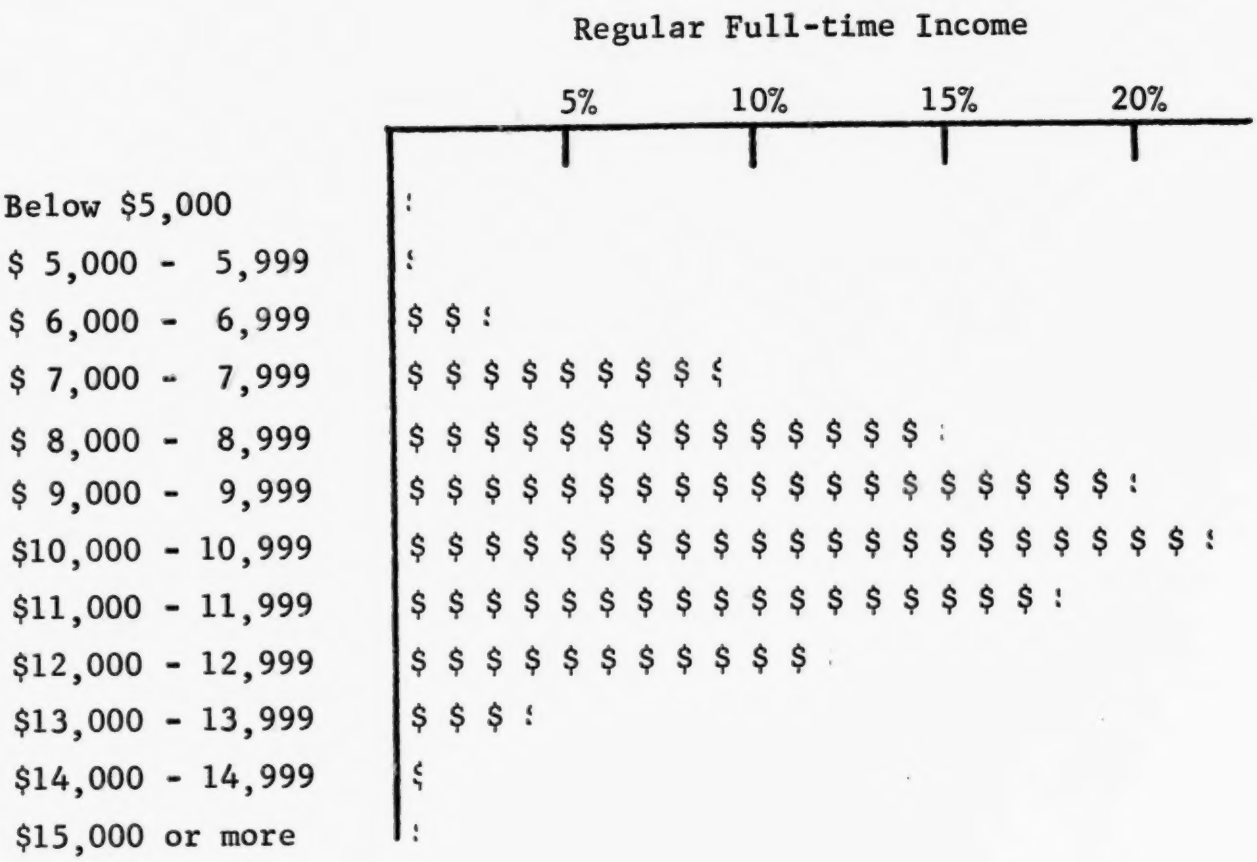
	Median Number of Years
High school teachers	14.74
Junior college teachers	12.66
Correctional teachers	18.07
Other teachers	14.88

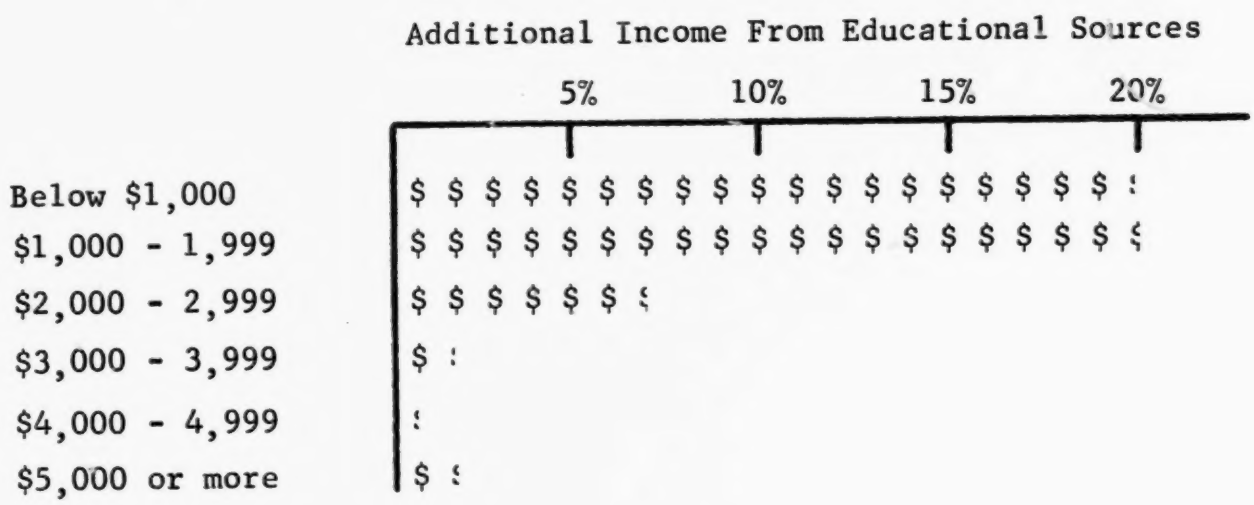


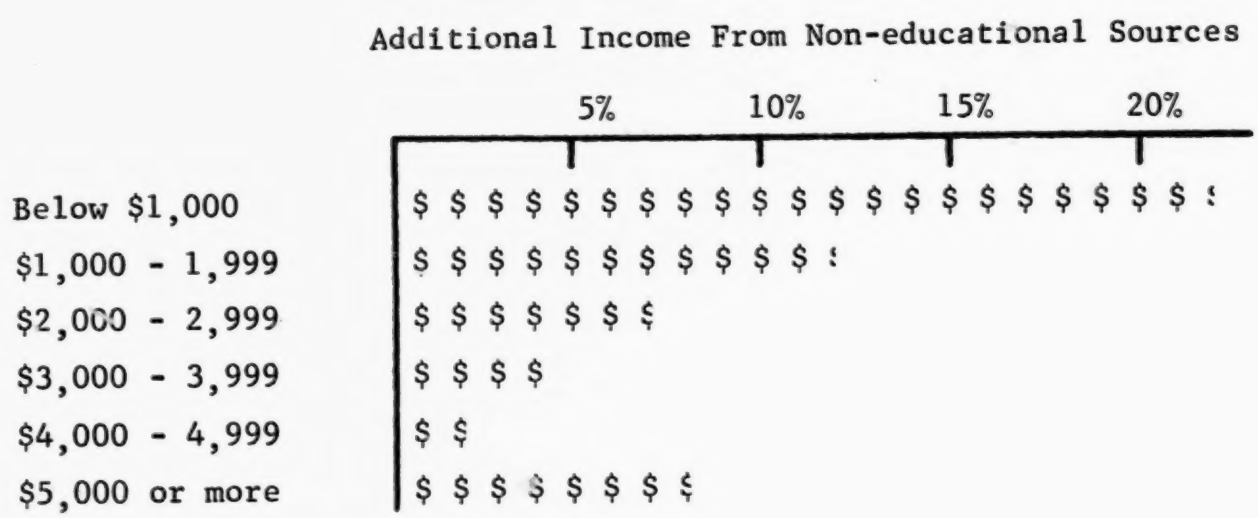
Public School Teachers Have More Formal Education

	Percent of Public School Teachers	Percent of Correctional Teachers
High school diploma	3.82	11.37
Junior college courses	10.70	31.28
Junior college degree	5.32	7.58
Registered nurse	7.85	---
Non-extension college courses	22.10	36.49
Bachelor degree	29.73	4.11
Master degree	16.77	2.84
Doctor degree	.97	---

HOW MUCH DO PUBLIC SCHOOL TEACHERS EARN?







WHAT IS APPRECIATED MOST IN PRE-SERVICE PREPARATION?

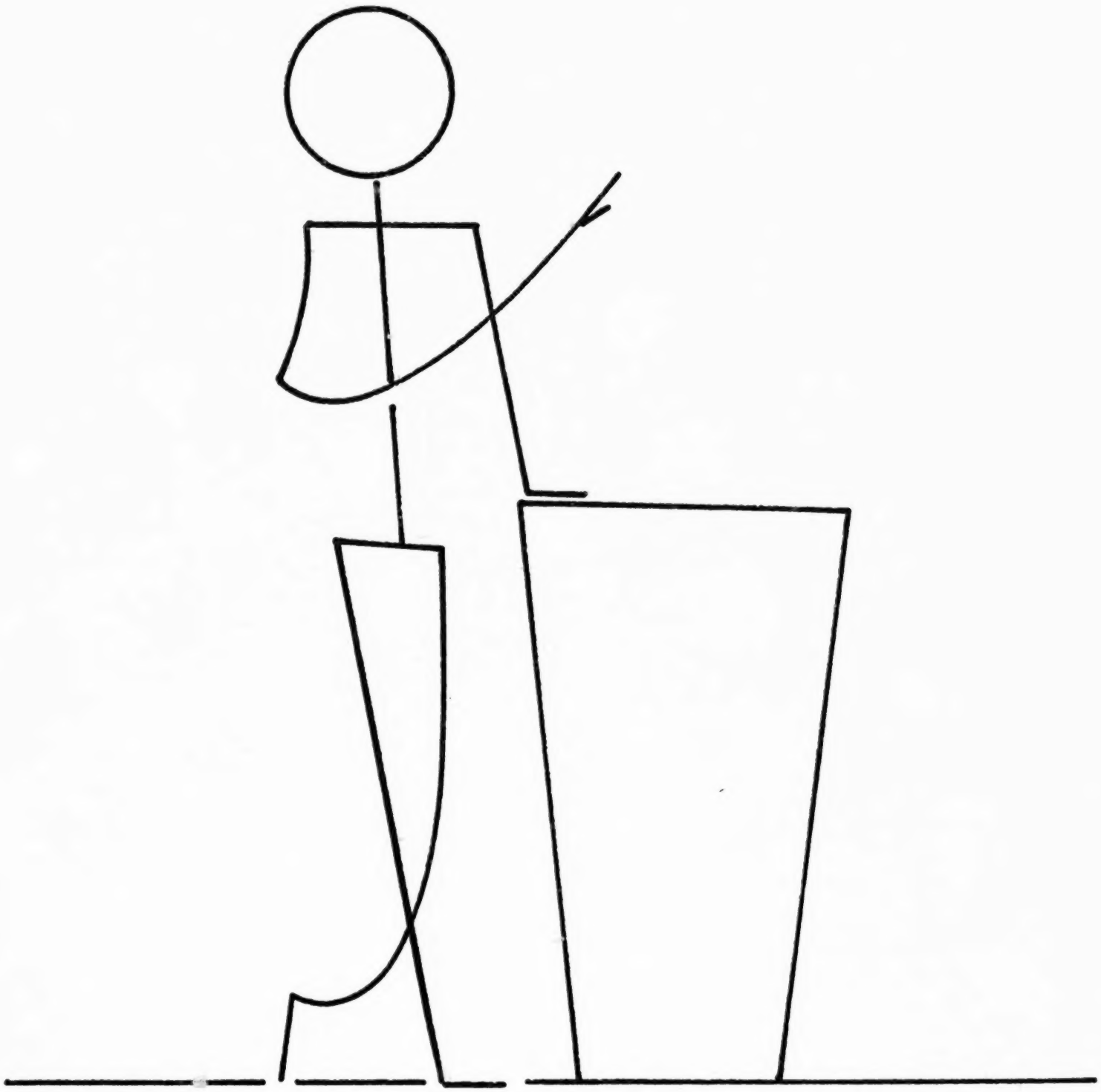
Demonstrations by master teachers

Practice in actual instruction

Emphasis on methods and techniques related to subject areas

Help in lesson planning

Help in curriculum development



WHAT DO TEACHERS SUGGEST FOR IN-SERVICE TRAINING?

Workshops and seminars for specific subject areas should be provided.

Latest information in the trade and technical fields should be disseminated.

Industrial organizations and institutions of higher education should sponsor in-service training.

Master teachers should be employed for in-service instruction.

Training for vocational counseling should be provided for teachers and counselors.

Central responsibility, direction, coordination and communication for in-service training should be established.

Sound methods of instruction should be taught and demonstrated.

Credit should be provided on the salary schedules of school districts for in-service training.

HOW DO TEACHERS PERCEIVE A GOOD SCHOOL ENVIRONMENT?

Philosophy of administration that supports vocational education

Equal status with academic teachers

Professional advancement related to trade and technical competence

Adequate vocational counseling for all students

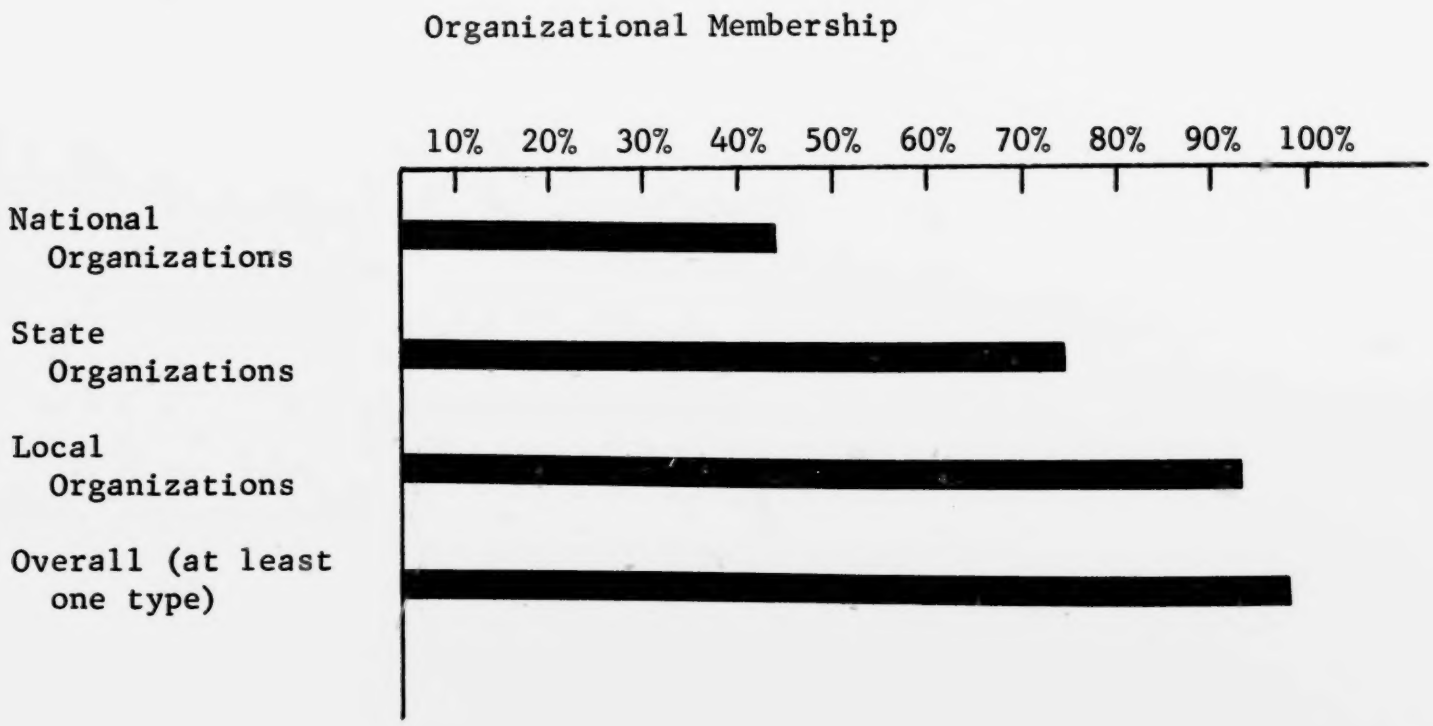
Competent students

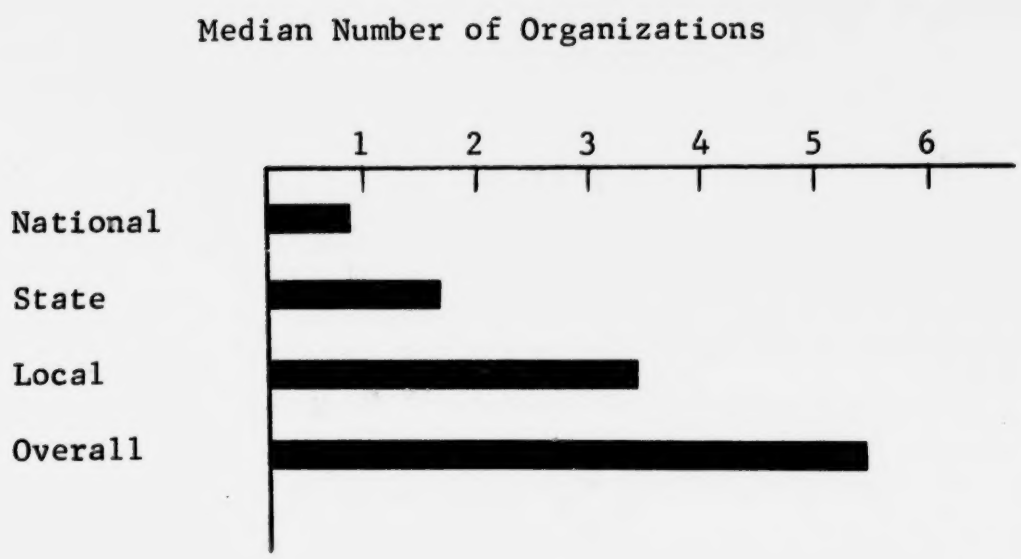
Vocational orientation for all students

Students who complete their training for a job

Adequate space

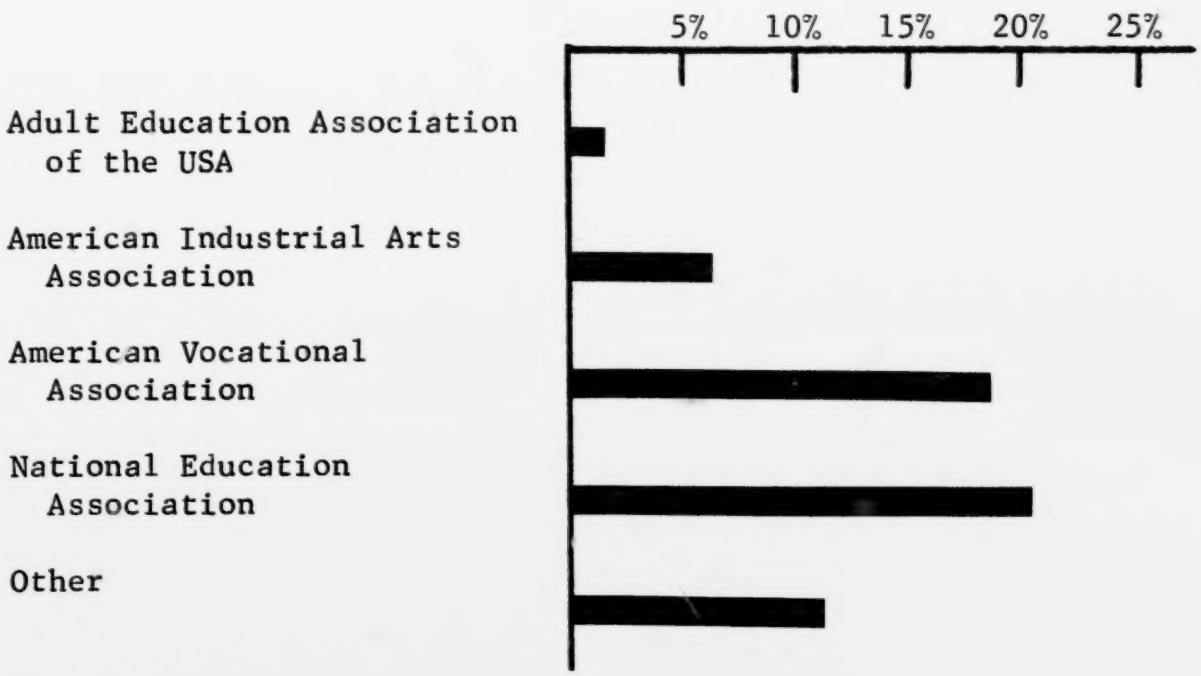
DO TEACHERS JOIN ORGANIZATIONS?



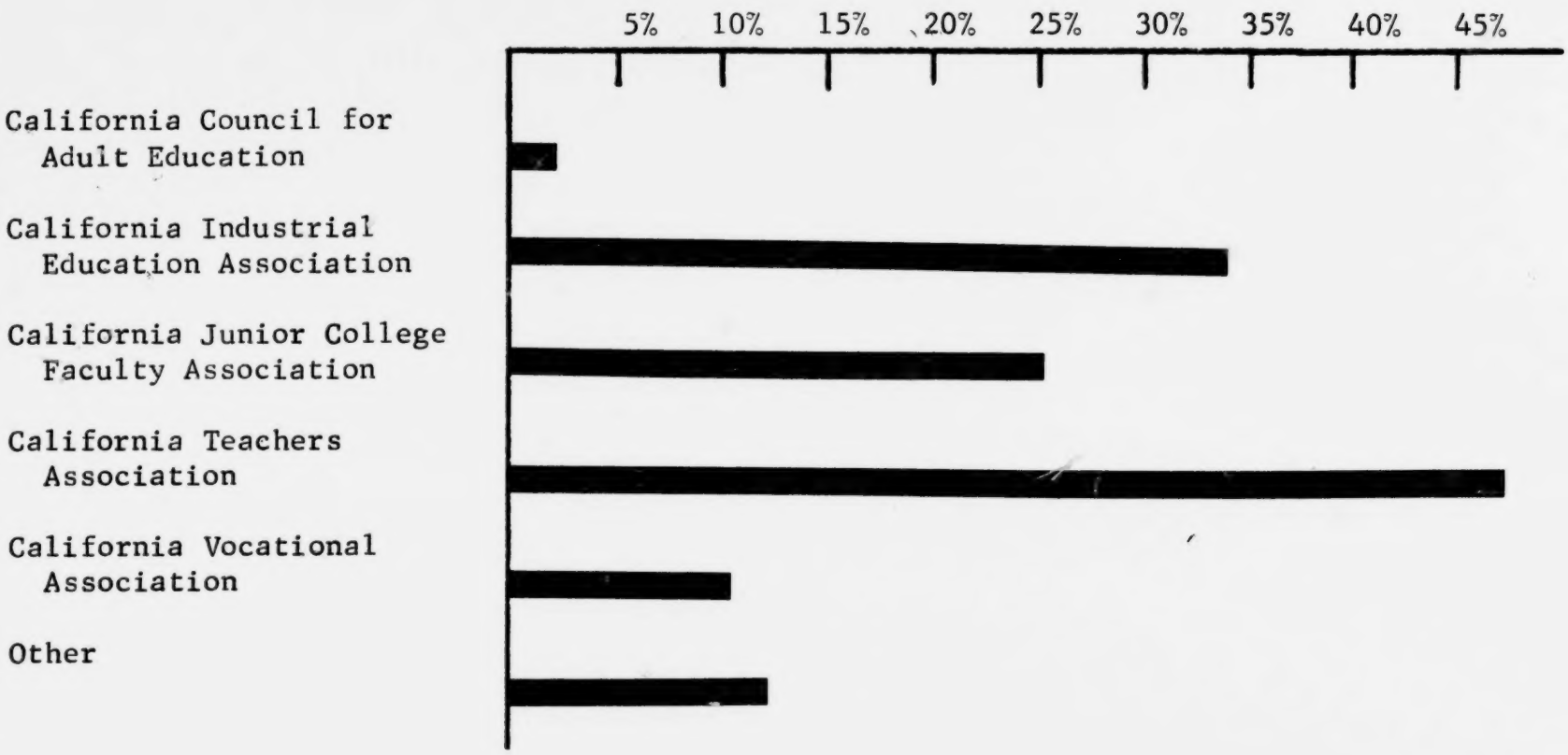


WHAT ORGANIZATIONS DO TEACHERS JOIN?

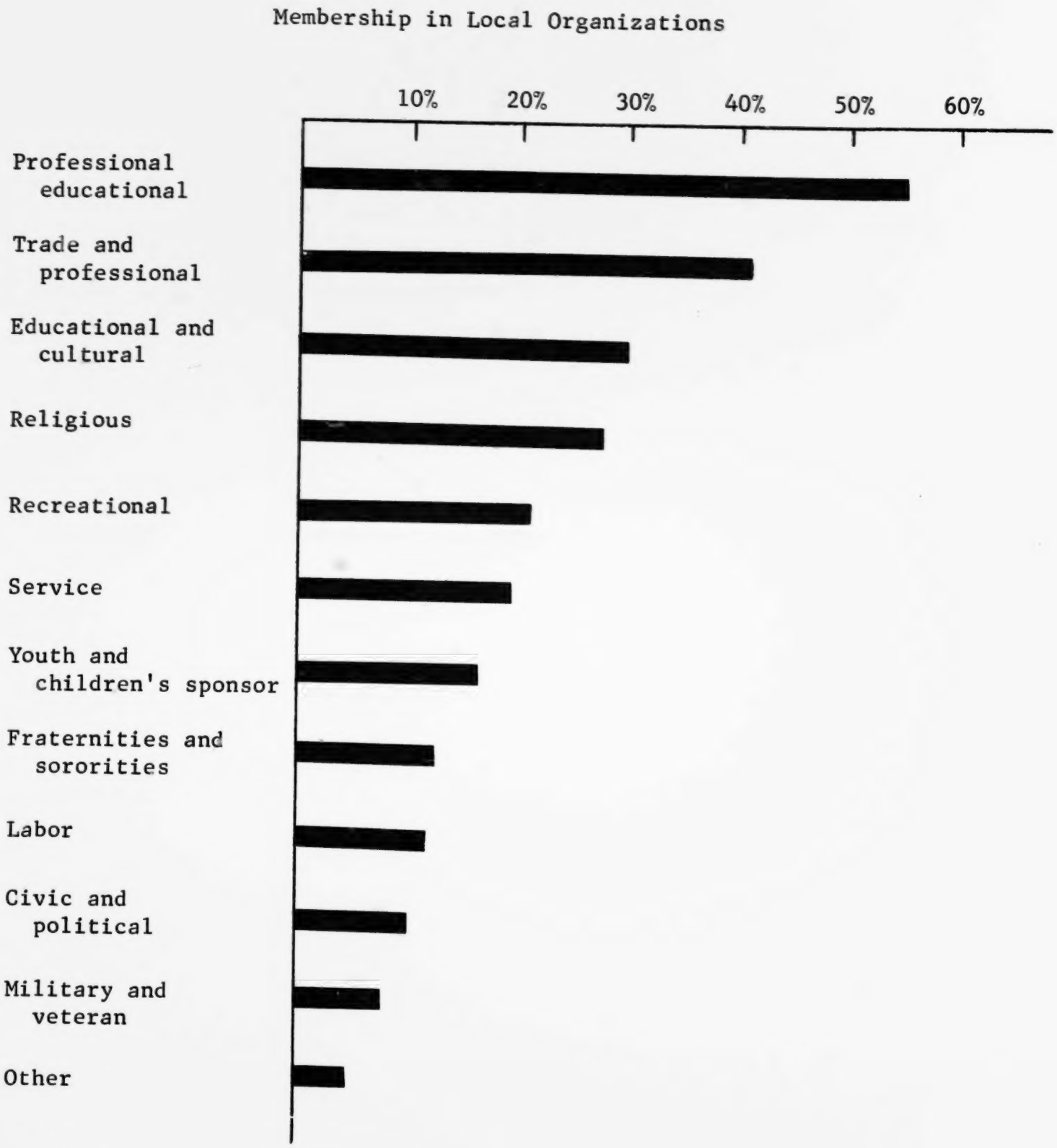
Membership in National Organizations



Membership in State Organizations



WHAT ORGANIZATIONS DO TEACHERS JOIN?

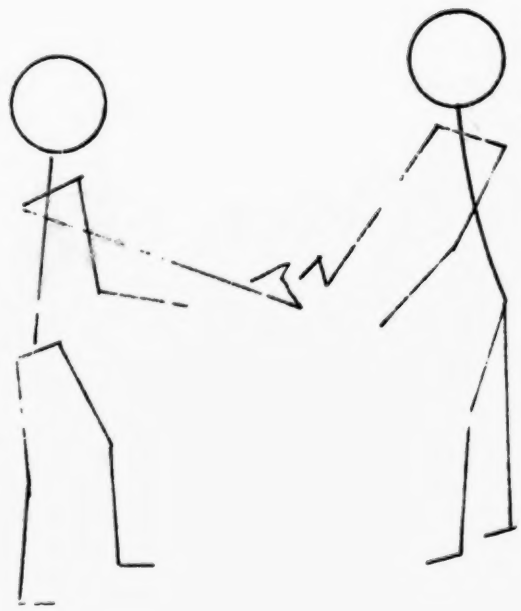


WHAT CHARACTERIZES THEIR ORGANIZATIONAL AFFILIATIONS?

Memberships in organizations are also found to increase with age, salary and additional credentials.

Higher percentages of "joiners" have academic degrees, assume more additional school-related responsibilities, are employed by junior colleges and teach in large towns and cities.[9]

The percentage of memberships in general teacher organizations is larger than the percentage in vocational teacher organizations.



Higher percentages of "non-joiners" are employed by correctional institutions and have Catholic religious affiliations. Lower percentages have academic degrees, teach in large towns and have Protestant religious affiliations.[9]

Memberships are predominantly related to the teaching profession.

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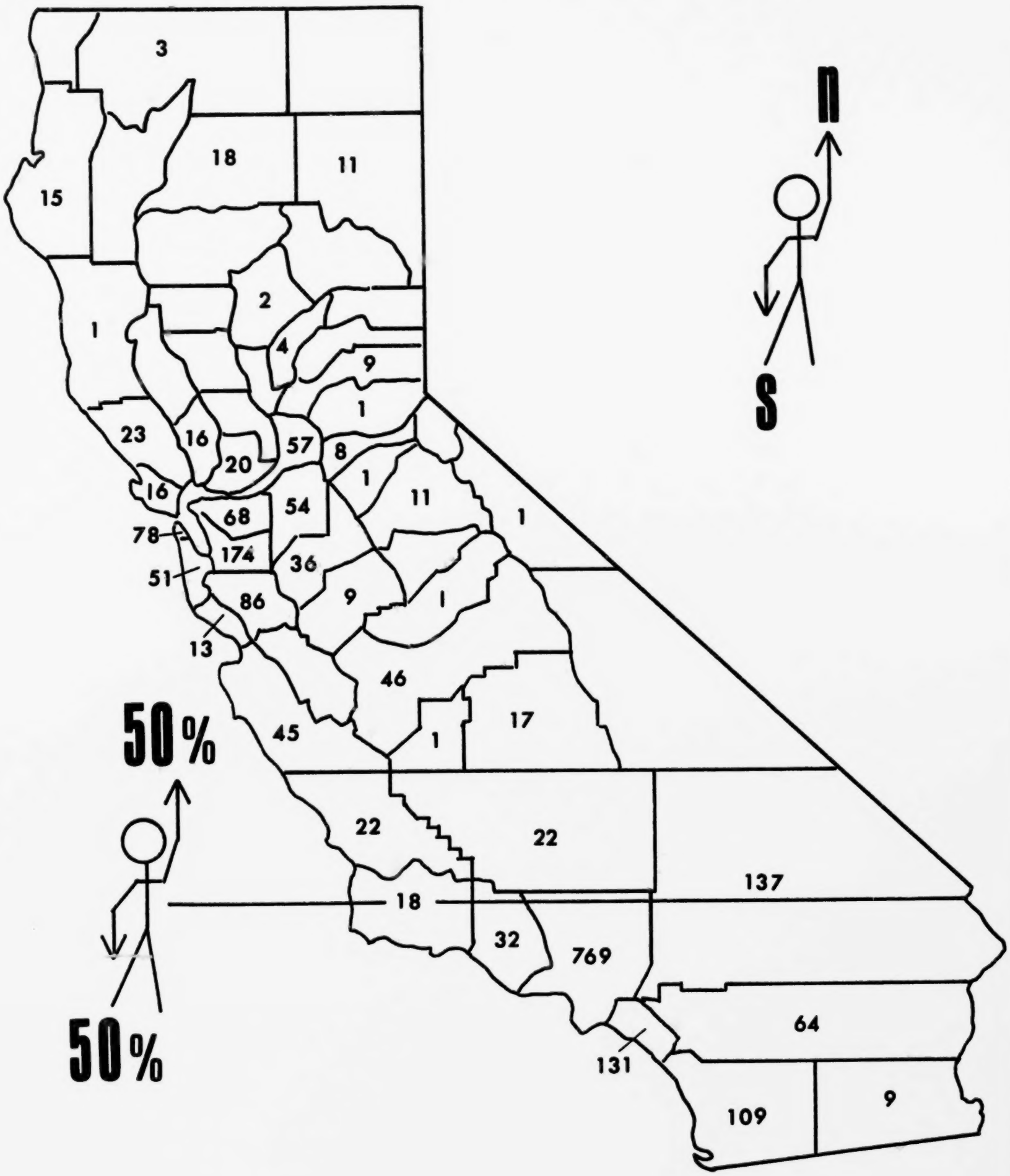
[9]The "joiners" are teachers who are members of ten or more organizations. The "non-joiners" are teachers who are not members of any organization.

WHAT IS THE COUNTY DISTRIBUTION OF TEACHERS?



VT 007 567
A Catalogue of Vocational Training Programmes in Republic of China.

National Vocational Training Commission, Republic of China
MF AVAILABLE IN VT-ERIC SET.
Pub Date - 67 167p.

FOREIGN COUNTRIES; *VOCATIONAL EDUCATION; STUDENT ENROLLMENT; *PROGRAM DESCRIPTIONS; *INDUSTRIAL TRAINING; EDUCATIONAL SURVEYS; FEDERAL PROGRAMS; *NATIONAL SURVEYS; *ADULT VOCATIONAL EDUCATION; INPLANT PROGRAMS; PROGRAM LENGTH
REPUBLIC OF CHINA

In November 1966, when the National Vocational Training Commission was established, its responsibilities consisted mainly of establishing and promoting a national vocational training system. To do this it was necessary to conduct a survey of current practices and to compile a catalog of training programs. Data were collected from the Department of Reconstruction, the Performance Inspection Report of Labor Education in 1966, and the Training Survey Report of the National Youth Commission. This Chinese-English version reports, in tabular form, all kinds of skill training programs as of 1966 under these headings: (1) Number of Vocational Training Classes and Trainees by Categories of Sponsoring Establishments and Industries, (2) Vocational Training sponsored by Public and Private Enterprises, Government Agencies, Schools and Colleges, and (3) Private Business Organizations. A total of 160 enterprises offering 1,691 classes to 53,732 trainees were covered by the survey. The appendix gives information such as type of personnel organization, number of staff and trainees, course offerings, and types of facilities for 15 training programs. (EM)

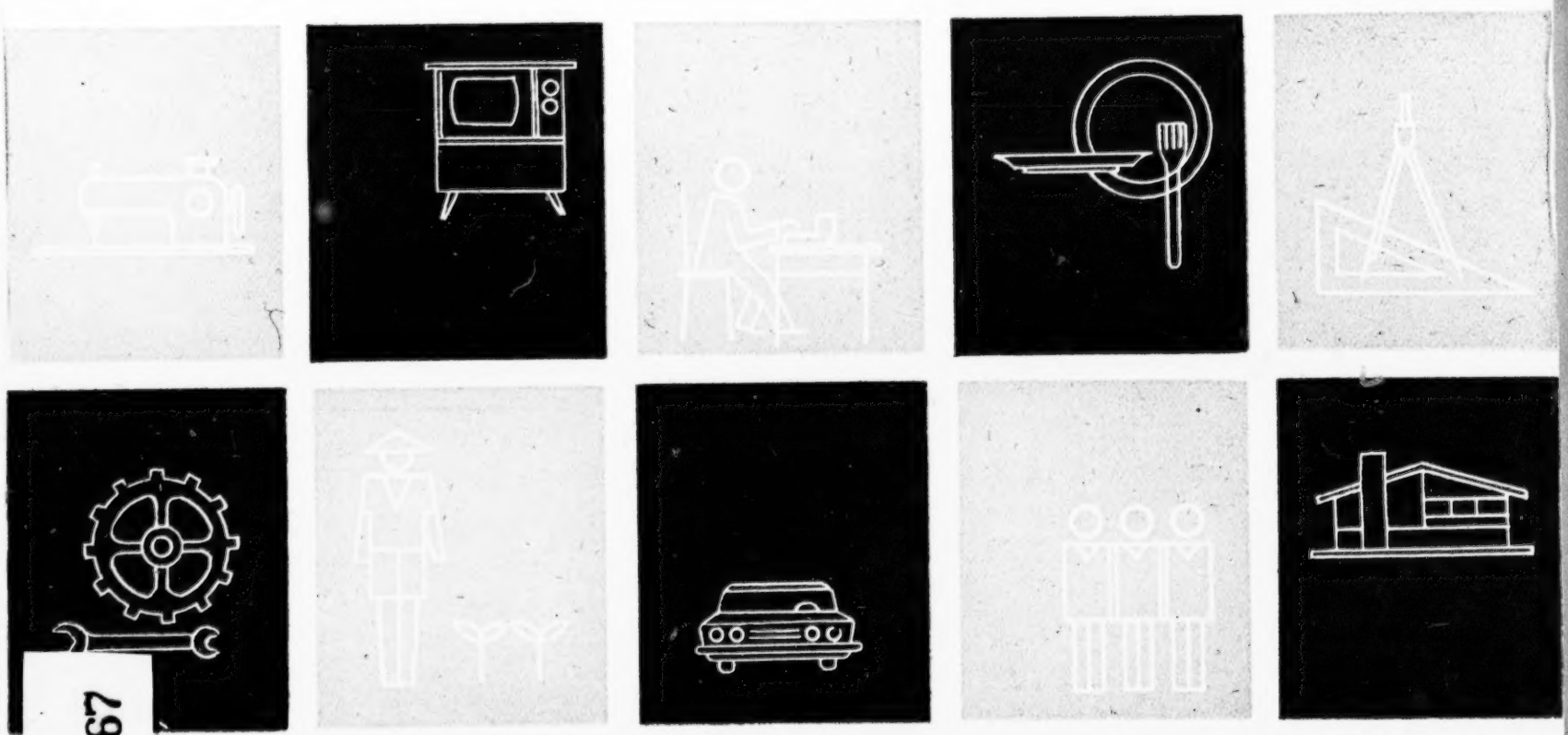
VT007567

EDO 31587

中華民國
職業訓練統計

民國五十六年

A CATALOGUE
OF VOCATIONAL
TRAINING PROGRAMMES IN
REPUBLIC OF CHINA



VT007567

中央職業訓練委員會
NATIONAL VOCATIONAL TRAINING COMMISSION

1967

中 華 民 國

職 業 訓 練 統 計

A CATALOGUE OF VOCATIONAL TRAINING PROGRAMMES IN REPUBLIC OF CHINA

民國五十六年

1967

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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中 央 職 業 訓 練 委 員 會

NATIONAL VOCATIONAL TRAINING COMMISSION

前　　言

我國自民國四十二年開始賡續實施四年經濟建設計劃以來，工業發展極爲迅速，因而技術人力逐年益感缺乏。政府於五十五年公佈人力發展計劃，期使我國人力之發展得與經濟建設齊頭並進。同年冬中央職業訓練委員會成立，其職責在建立全國職業訓練體制，並促進職業訓練工作之推行；但在從事工作之初，對於目前臺灣已有職業訓練現狀須先瞭解，故出版職業訓練統計，實有必要。

由於財力及人力之限制，本統計大部份係採間接調查，資料來源除部分直接來自受查單位外，多根據：

一、臺灣省建設廳調查資料。

二、中央委員會第五組五十五年度勞工教育實施績效考查報告。

三、行政院青年輔導委員會訓練調查報告。

而本統計之對象以獲得專業技術之各類職業訓練爲主。

爲求今後職業訓練之調查統計更爲翔實起見，無論名稱或數字如有錯誤或遺漏均請通知本會以便改正。

FOREWORD

Since the implementation of the four Four-Year plans for Economic Development, the industrial growth has been so rapid that has created the immense problem of shortages of skilled manpower. In 1966 the government promulgated the Manpower Development Plan designed to promote skill development to the levels demanded by the industrial and economic growth. In November 1966 the National Vocational Training Commission was established. Its responsibilities consisted mainly of establishing a national vocational training system and of promoting various training programmes.

In order to discharge its responsibilities it became necessary to carry out a vocational training survey of current practices and to compile a catalogue of training programmes in this country.

The survey was limited by available resources and reliance was placed on statistics from following indirect sources: (1) The survey materials of Dept. of Reconstruction, Taiwan Provincial Government; (2) Performance Inspection Report of Labour Education in 1966 by 5th Division, Central Committee of Kuomingtong; (3) Training Survey Report of the National Youth Commission of Executive Yuan.

The scope of the survey covers any kind of training that can endow one with skills.

This is a first attempt to collect this kind of statistics and any correction of both figures and titles is cordially invited.

目　　錄

一、五十五年職業訓練班數及受訓人數按機構性質別統計表。
二、五十五年職業訓練班數及受訓人數按行業別統計表。
三、五十五年公營事業機構辦理之職業訓練。
四、五十五年民營事業機構辦理之職業訓練。
五、五十五年政府機關辦理之職業訓練。
六、五十五年各級學校辦理之職業訓練。
七、五十五年民間團體辦理之職業訓練。
八、附錄：各訓練機關簡介。

CONTENTS

1. Number of Vocational Training Classes and Trainees by Categories of Sponsoring Establishments in 1966
2. Number of Vocational Training Classes and Trainees by Categories of Sponsoring Industries in 1966
3. Vocational Training Sponsored by Public Enterprises in 1966
4. Vocational Training Sponsored by Private Enterprises in 1966
5. Vocational Training Sponsored by Government Agencies in 1966
6. Vocational Training Sponsored by Schools and Colleges in 1966
7. Vocational Training Sponsored by Private Business Organizations in 1966
8. Appendix: Outline of training facilities of the institutions.

一、五十五年職業訓練班數及受訓人數按機構性質別統計表

機構性質別	單位數	班數	受訓人數
公營事業	33	669 班	20,432 人
民營事業	39	311 班	7,015 人
政府機關	20	163 班	9,219 人
各級學校	46	374 班	9,632 人
民間團體	22	174 班	7,434 人
合計	160	1,691 班	53,732 人

1. Number of Vocational Training Classes and Trainees by Categories of Sponsoring Establishments in 1966

Sponsoring Establishment	No. of Enterprises	No. of Classes	No. of Trainees
Public Enterprises	33	669	20,432
Private Enterprises	39	311	7,015
Government Agencies	20	163	9,219
Schools and Colleges	46	374	9,632
Private Business Organizations	22	174	7,434
Total	160	**1,691**	**53,732**

二、五十五年職業訓練班數及受訓人數按行業別統計表

行業別	班數	受訓人數
電氣機械器材製造修配業	61 班	1,102 人
紙及紙製品製造業	20 班	409 人
航空運輸業	46 班	1,045 人
運輸工具製造修配業	23 班	934 人
橡膠製品製造業	6 班	308 人
金屬基本工業	2 班	116 人
食品製造業	56 班	2,384 人
金屬鑛業	16 班	632 人
石油煉製及煤製品製造業	23 班	689 人
鹽業	11 班	324 人
非金屬礦產物製品製造業	29 班	794 人
紡織業	88 班	1,842 人
水運費	20 班	1,088 人
汽車及其他車輛運輸業	76 班	3,651 人
鐵路運輸業	31 班	1,192 人
保險業	28 班	226 人
郵電通訊業	72 班	1,811 人
自來水供應業	1 班	15 人
農耕業	24 班	1,316 人
林業及伐木業	6 班	212 人
木、竹、籐、柳製品製造業	6 班	186 人
漁業	7 班	271 人
煤礦業	6 班	220 人
金融業	28 班	1,153 人
菸草及飲料製造業	51 班	1,862 人
化工業	100 班	2,572 人
服飾品製造業	1 班	16 人
機械製造修配業	13 班	413 人
金屬製品製造業	5 班	173 人
電氣供應業	143 班	2,301 人
政府機關服務業	163 班	9,219 人
教育服務業	401 班	9,998 人
社會福利團體	55 班	2,935 人
工商服務業	72 班	2,318 人
其他不能歸類行業	1 班	5 人
合計	1,691 班	53,732 人

2. Number of Vocational Training Classes and Trainees by Categories of Sponsoring Industries

	Categories of Sponsoring Industries	No. of Classes	No. of Trainees
3-7	Electrical Machinery Apparatus & Supplies Manufacturing and Repairing	61	1,102
2-7	Manufacture of Paper & Paper Products	20	409
7-4	Air Transport	46	1,045
3-8	Transport Equipment Manufacturing and Repairing	23	934
3-11	Rubber Manufacturing Industries	6	308
3-4	Basic Metal Industries	2	116
2-0	Food Manufacturing Industries	56	2,384
1-2	Metal Mining Industries	16	632
3-2	Coal Products & Petroleum Refineries Manufacturing	23	689
1-5	Manufacture of Salt	11	324
3-3	Manufacture of Non-Metallic Mineral Products	29	794
2-3	Spinning & Weaving	88	1,842
7-3	Water Transport	20	1,088
7-2	Motor Vehicles and Other Vehicles Transport	76	3,651
7-1	Railway Transport	31	1,192
6-6	Insurance	28	226
7-8	Posts & Telegraphs	72	1,811
5-2	Water Supply	1	15
0-1	Agriculture	24	1,316
0-2	Forestry & Logging	6	212
2-5	Manufacture of Wood, Bamboo, & Osier Products	6	186
0-5	Fishing	7	271
1-1	Coal Mining	6	220
6-5	Financial Institution	28	1,153
2-2 2-1	Tobacco & Beverage Industries	51	1,862
3-1	Manufacture of Chemicals	100	2,572
2-4	Manufacture of Adornment	1	16
3-6	Manufacture of Machinery	13	413
3-5	Manufacture of Metal Products	5	173
5-1	Electricity Service	143	2,301
8-0	Government Service	163	9,219
8-2	Educational Service	401	9,998
8-71	Social Welfare	55	2,935
8-4	Industry & Commerce Business Services	72	2,318
9-0	Industries not Elsewhere Classified	1	5
	Total	**1,691**	**53,732**

三、五十五年公營事業機構辦理之職業訓練

3. Vocational Training Sponsored by Public Enterprises in 1966

公營事業單位別辦理職業訓練班數及人數統計表

Classes & Trainees of Vocational Training in Public Enterprises

事業單位別 Organizations	班數 Number of Classes	受訓人數 Number of Trainees
臺灣電力公司 Taiwan Power Co.	143	2,301
臺灣水泥公司 Taiwan Cement Corporation	13	456
臺灣糖業公司 Taiwan Sugar Corp.	50	2,224
臺灣機械公司 Taiwan Machinery Manufacturing Corp.	12	393
臺灣金屬礦業股份有限公司 Taiwan Metal Mining Corp.	16	632
臺灣省漁業公司 Taiwan Fishery Corp.	7	271
臺灣碱業股份有限公司 Taiwan Alkali Corp.	9	142
中華機械工程股份有限公司 China Machinery Corp.	1	20
臺灣造船有限公司 Taiwan Shipbuilding Corp.	8	271
臺灣鋁業股份有限公司 Taiwan Aluminum Corp.	5	173
中本紡織股份有限公司 Chung-Ben Textile Co. Ltd.	4	84
新中國打撈公司 New China Salvage Co.	1	5
交通部國際電台 Ministry of Communications, International Radio Administration	1	124
郵政總局 General Post Office	7	280
臺灣省郵政管理局及各地分局 Taiwan Post Administration & Local Post Office	26	576
臺灣省電信管理局及各地分局 Taiwan Tele-Communication Administration	28	623
高雄港務局 Kao-Hsiung Harbour Bureau	6	462

公營事業單位別辦理職業訓練班數及人數統計表 (續)

Classes & Trainees of Vocational Training in Public Enterprises

事業單位別 Organizations	班數 Number of Classes	受訓人數 Number of Trainees
基隆港務局 Keelung Harbor Bureau	14	626
臺灣省公路局 Taiwan Highway Bureau	65	3,225
臺灣省鐵路管理局 Taiwan Railway Administration	11	173
臺北市自來水廠 Taipei Water Work	1	15
鹽務局布袋鹽場 Taiwan, Pu-Tai Salt Work Factory	11	324
臺灣省物資局嘉義原麻處 Taiwan Supply Bureau, Chia-I Gunny Department	1	30
中央銀行 The Central Bank of China	1	30
華南商業銀行 Hwa Nan Commercial Bank	10	400
臺灣第一商業銀行 The First Commercial Bank of Taiwan	14	359
臺灣省合作金庫 The Co-operative Bank of Taiwan	1	50
彰化商業銀行 Chang-hwa Commercial Bank	2	314
臺灣省菸酒公賣局 Taiwan Tobacco & Wine Monopoly Bureau	51	1,862
臺灣肥料股份有限公司 Taiwan Fertilizer Corp.	82	2,228
中國石油公司 China Petroleum Corp.	23	689
臺灣省林務局 Taiwan Forestry Bureau	6	212
金屬工業發展中心 Metal Industry Development Center	39	858
合計 Total	**966**	**20,432**

公營事業機構辦理之職業訓練

Vocational Training Sponsored by Public Enterprises

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
臺灣電力公司 Taiwan Power Company	主管人員訓練班 Executives Training	6	200	5 天 5 days
〃	T.W.I. 指導員講習班 T.W.I. Supervisors Seminar	2	28	1 週 1 weeks
〃	T.W.I. 指導員訓練班 T.W.I. Supervisors Training Class	100	800	〃
〃	水力機械保養人員訓練班 Hydraulic Mechanical Maintenance Personnel Training Class	1	40	〃
〃	發變電廠所電氣保養人員訓練班 Generating Station & Transformering Station, Electricity Maintenance Personnel Training Class	〃	〃	4 週 4 weeks
〃	變電所工作人員訓練班 Transformering Station Operater Training Class	〃	20	2 週 2 weeks
〃	領班人員訓練班 Foremanship Training Class	〃	〃	20 週 20 weeks
〃	通訊人員訓練班 Communication Personnel Training Class	〃	30	2 週 2 weeks
〃	輸電線路活線作業班 Power Cable Live Line Operation Class	2	24	4 週 4 weeks
〃	配電線路活線作業班 Distributing Cable Live Line Operation Class	1	〃	3 週 3 weeks
〃	配電設計人員訓練班 Distributing Designer Training Class	〃	25	10 天 10 days
〃	檢驗人員訓練班 Inspectors' Training Class	〃	〃	3 週 3 weeks
〃	工作安全訓練班 Work Safety Training Class	2	80	1 週 1 weeks

公營事業機構辦理之職業訓練(續)

Vocational Training Sponsored by Public Enterprises (Continued)

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
臺灣電力公司 Taiwan Power Company	事務管理人員訓練班 Business and Managerial Staff Training Class	1	34	1 週 1 week
〃	管理分析人員訓練班 Management & Analysis Staff Class	2	40	2 週 2 weeks
〃	人事管理人員訓練班 Personnel Managerial Staff Training Class	2	70	1 週 1 week
〃	新進職員訓練班 Orientation Class	2	200	〃
〃	火力發電技工養成班 Heat Engine Generating Workers Preparatory Training Class	1	20	1 年 1 year
〃	配電技工養成班 Distribution Workers Preparatory Training Class	2	89	〃
〃	變電所技工養成班 Transformering Station Workers Preparatory Training Class	1	40	〃
〃	服務所技工養成班 Service Station Workers Preparatory Training Class	2	82	〃
臺灣電力公司新竹區管理處 Hsin-Chu District Management Division, Taiwan Power Company	T. W. I. 指導員訓練班 T. W. I. Supervisors Training Class	1	6	12 小時 12 hours
〃	鋁線施工法訓練班 Aluminium Cable Working Process Training Class	6	180	24 小時 24 hours
臺灣電力公司嘉義區管理處 Chia-I District Management Division, Taiwan Power Co.,	鋁線甲班 Aluminium Cable Class A	1	15	65 小時 65 hours
〃	鋁線乙班 Aluminium Cable Class B	1	15	〃

公營事業機構辦理之職業訓練(續)

Vocational Training Sponsored by Public Enterprises (Continued)

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
臺灣電力公司彰化區管理處 Chang-Hua District Management Division Taiwan Power Co.,	服務所檢驗班 Service Station, Inspection Class	1	154	466 小時 466 hours
小計 Total		143	2,301	
臺灣水泥公司高雄廠 Kaohsiung Factory Taiwan Cement Corporation,	潤滑油使用法訓練班 Lubricant Usage Training Class	1	60	100 小時 100 hours
臺灣水泥公司蘇澳廠 Suao Factory, TCC	機車維護班 Machine Maintenance Class	〃	40	80 小時 80 hours
〃	架空起重機操作維護訓練班 Over-Head Crane Operation & Maintenance Course	〃	10	75 小時 75 hours
〃	汽車駕駛班 Drivers Training Class	〃	50	100 小時 100 hours
〃	品質管制訓練班 Quality Control Training Class	3	46	54 小時 54 hours
〃	工廠安全班 Shop Safety Class	1	40	20 小時 20 hours
〃	工作革新班 Work Study Class	〃	〃	〃
臺灣水泥公司竹東廠 Chu-Tung Factory, TCC	機器操作及維護班 Machine Operation and Maintenance Class	〃	80	40 小時 40 hours
臺灣水泥公司臺北廠 Taipei Factory, TCC	機器班 Machine Class	〃	30	16 小時 16 hours
〃	成品班 Products Class	〃	〃	〃

公營事業機構辦理之職業訓練(續)

Vocational Training Sponsored by Public Enterprises (Continued)

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
臺灣水泥公司臺北廠 Taipei Factory, TCC	業務班 Business Class	1	30	16 小時 16 hours
小計 Total		13	456	
臺糖公司員工訓練所 Personnel Training Center, Taiwan Sugar Corporation	農務組實習員訓練班 Agriculture Section, Recruit training Class	1	91	186 天 186 days
〃	高農科訓練班 Senior Agricultural Department Training Class	〃	45	1 年 1 year
〃	農業技術訓練班 Agricultural Technique Training Class	〃	35	12 天 12 days
〃	原料推廣講習班 Sugar Cane Promoting Seminar	〃	40	10 天 10 days
〃	土壤調查與土壤管理訓練班 Soil Surveying & Soil Management Training Class	〃	35	30 天 30 days
〃	新購履帶式曳引機訓練班 New Track Tractor Training Class	〃	33	6 天 6 days
〃	養猪飼養管理訓練班 Pig Feeding Management Training Class	〃	24	〃
〃	農務技工訓練班 Agricultural Workers Training Class	〃	75	90 天 90 days
〃	灌溉人員訓練班 Irrigation Personnel Training Class	5	327	5 天 5 days
〃	工作組實習員訓練班 Work Section Recruit Training Class	1	16	183 天 183 days

公營事業機構辦理之職業訓練(續)

Vocational Training Sponsored by Public Enterprises (Continued)

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
臺糖公司員工訓練所 Personnel Training Center, Taiwan Sugar Corporation	新購儀器保養訓練班 New Instruments Maintenance Training Class	1	26	14 天 14 days
〃	壓榨透平訓練班 Milling Turbine Training Class	〃	30	7 天 7 days
〃	煮糖訓練班 Boiling Training class	〃	26	63 天 63 days
〃	高級品質管制訓練班 Advanced Quality Control Training Class	〃	40	15 天 15 days
〃	臺中高工技工訓練班 Taichung Technical School, Technician Training Class	〃	50	90 天 90 days
〃	柴油機車保養檢修操作實習班 Diesel Vehicle Maintenance Operation Class	〃	17	150 天 150 days
〃	柴油機車駕駛訓練班 Diesel Vehicle Drivers Training Course	〃	36	14 天 14 days
〃	轉業人員業務介紹訓練班 Orientation Course for Shift Personnel	〃	40	4 天 4 ydas
臺糖公司大林糖廠 Talin Factory, Taiwan Sugar Corporation	糖業科 Sugar Manufacture Class	〃	24	510 小時 510 hours
〃	農務作業訓練班 Cane Planting Training Class	〃	31	8 小時 8 hours
臺糖公司北港糖廠 Pei-Kaung Factory, Taiwan Sugar Corporation,	防護基本訓練 Basic Safety Training	〃	240	49 小時 49 hours
〃	農務人員經常講習 Agriculture Personnel Training	〃	54	120 小時 120 hours
臺糖公司蒜頭糖廠 Suan T'ou Factory, Taiwan Sugar Corporation	糖業科中級班 Sugar Manufacture, Middle Level Class	〃	16	120 小時 120 hours

公營事業機構辦理之職業訓事(續)

Vocational Training Sponsored by Public Enterprises (Continued)

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
臺糖公司蒜頭糖廠 Suan T'ou Factory, Taiwan Sugar Corporation	農務人員講習班 Agricultural Personnel Seminar	1	68	21 小時 21 hours
臺糖公司南靖糖廠 Nan Chen Factory, Taiwan Sugar Corporation	糖業科中級班 Sugar Manufacture, Middle Level Class	〃	12	〃
臺糖公司溪湖糖廠 Chi-Hu Factory, Taiwan Sugar Corporation	農務人員業務講習班 Agricultural Personnel Management Seminar	〃	40	16 小時 16 hours
〃	歷進講習班 Upgrading Training Course	〃	50	10 小時 10 hours
〃	品質管制講習班 Quality Control Seminar	〃	5	2 小時 2 hours
臺糖公司彰化副產品加工廠 Chang-Hua By-Products Processing Factory, Taiwan Sugar Corporation	領班訓練 Foremanship Training	〃	30	10 小時 10 hours
〃	養猪技術專業訓練班 Pig Feeding Technique Course	〃	21	64 小時 64 hours
臺糖公司埔里副產品加工廠 Pu-Li By-Products Processing Factory, Taiwan Sugar Corporation	工務作業訓練班 Engineering Affairs Class	〃	20	60 小時 60 hours
臺糖公司虎尾總廠 Huwei General Factory, Taiwan Sugar Corporation	補習教育中級部糖業科 Sugar Manufacture, Assistant Eduction Middle Level Class	〃	44	492 小時 492 hours
〃	攝影研究班 Photography Study Class	〃	14	6 小時 6 hours
〃	麵食講習班 Wheat Flour Diet Seminar	2	100	10-12 小時 10-10 hours
臺糖公司岸內糖廠 Annei Factory, Taiwan Sugar Corporation	農務人員經常講習 Agricultural Personnel Class	1	46	25 小時 25 hours
〃	工業安全訓練班 Industrial Safety Training Course	1	30	2 小時 2 hours

公營事業機構辦理之職業訓練(續)

Vocational Training Sponsored by Public Enterprises (Continued)

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
臺糖公司岸內糖廠 Annei Factory, Taiwan Sugar Corporation	會計實務講習班 Accounting Practice Seminar	1	27	15 小時 15 hours
臺糖公司玉井糖廠 Yu-Gen Factory Taiwan Sugar Corporation	婦女縫紉班 Women's Sewing Class	〃	29	8 小時 8 hours
〃	農務人員經常講習 Agriculture Personnel Class	〃	40	21 小時 21 hours
臺糖公司糖業試驗所 Sugar Testing Station, Taiwan Sugar Corporation	德文補習班 German Language Extension Training Class	〃	20	120 小時 120 hours
〃	汽車駕駛訓練班 Drivers Training Course	〃	50	180 小時 180 hours
臺糖公司橋頭糖廠 Chu-T'ou Factory Taiwan Sugar Corporation	中級部糖業科 Sugar Manufacture, Middle Class	〃	21	260 小時 260 hours
臺糖公司旗山糖廠 Che-Shan Factory, Taiwan Sugar Corporation	歷進講習班 Up-Grading Training Seminar	〃	84	32 小時 32 hours
〃	農場蔗作業講習班 Cane Planting Seminar	〃	52	16 小時 16 hours
臺糖公司南州糖廠 Nan Chow Factory, Taiwan Sugar Corporation	農務農場人員經常講習 Agricultural Field Personnel Training Class	〃	70	24 小時 24 hours
小計 Total		50	2,224	
臺灣機械公司 Taiwan Machinery Manufacturing Corporation	技工第二技能訓練高架吊車司機訓練班 Over-Head Crane Operator Training Class(Workers Secondary Technique Training)	2	8	2 個月 2 months
〃	領班訓練班 Foremanship Training Class	1	20	1 個月 1 month

公營事業機構辦理之職業訓練(續)

Vocational Training Sponsored by Public Enterprises (Continued)

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
臺灣機械公司 Taiwan Machinery Manufacturing Corporation	油漆訓練班 Painting Training Class	1	20	2 個月 2 months
〃	技工第二技能訓練金屬研磨技能訓練班 Metal Grinding Class (Workers Secondary Technique Training)	〃	10	3 個月 3 months
〃	技工第二技能訓練冷作訓練班 Cold Work Training Class (Workers Secondary Technique Training)	〃	20	〃
〃	技工第二技能訓練裝配訓練班 Assembling Training Class (Workers Secondary Technique Training)	〃	15	4 個月 4 months
〃	鍍片工訓練班 Plating Worker Training Class	〃	20	2 個月 2 months
〃	鍛造工場督導人員訓練班 Forging Shop Supervisors Training Class	〃	30	1 個月 1 month
〃	機船兩廠勞工教育補習班 Machine Works & Ship Yard Labor Education Extension Class	〃	35	144 小時 144 hours
〃	鑄造廠勞工教育補習班 Foundry Factory, Labor Education Extension Class	〃	〃	〃
〃	鋼品廠勞工教育補習班 Steel Work Factory, Labor Education Extension Class	〃	180	〃
小計 Total		12	393	
臺灣金屬鑛業股份有限公司 Taiwan Metal Mining Corperation	竹箕編製訓練班 Bamboo Winnow Basket Making Training Class	1	27	3 個月 3 months
〃	防護團團員基本訓練班 Basic Safety Training Class	〃	97	28 小時 28 hours

公營事業機構辦理之職業訓練(續)

Vocational Training Sponsored by Public Enterprises (Continued)

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
臺灣金屬鑛業股份有限公司 Taiwan Metal Mining Corperation	爆破技術訓練班 Demolition Technique Training Class	1	48	8 小時 8 hours
〃	品質管制講習會 Quality Control Seminar	2	58	15 天 15 days
〃	護理進修班 Nursing Class	1	15	4 小時 24 hours
〃	救護訓練班 First Aid Training Class	〃	25	25 小時 25 hours
〃	機電技術訓練班 Electric Engineering Techniques Training Class	〃	32	46 小時 46 hours
〃	柴油機技術訓練班 Diesel Engine Technique Training Class	〃	35	48 小時 48 hours
〃	企業管理研討會 Enterprise Management Development Symposium	2	80	40 小時 40 hours
〃	鑽孔技術訓練班 Drilling Technique Training Class	3	150	20 小時 20 hours
〃	鑛廠安全訓練班 Mine Safety Training Class	1	35	36 小時 36 hours
〃	草繩袋紡織訓練班 Straw Rope Bag Making Training Class	〃	30	2 週 2 weeks
小計 Total		16	632	
臺灣省漁業公司 Taiwan Fishery Corporation	遠洋漁船報務員訓練班 High Sea Fishing Boat Signal Operator Training Class	1	51	4 個月 4 months

公營事業機構辦理之職業訓事(續)

Vocational Training Sponsored by Public Enterprises (Continued)

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
臺灣省漁業公司 Taiwan Fishery Corporation	漁船新式儀器漁具巡廻講習 Fishing Boat New Type Instrument & Fishing Equipment Rotary Training	1	40	5 天 5 days
〃	遠洋拖網船長訓練班 High Sea Trawler Skipper Training Course	〃	〃	30 天 30 days
〃	近海蝦成網漁船長訓練班 Coastal Trawler Skipper Training Course	〃	〃	〃
〃	遠洋漁船漁航幹部訓練班 High Sea Fishing Boat Crew Training Course	〃	35	5 個月 5 months
〃	遠洋漁船輪機幹部訓練班 High Sea Fishing Boat Machinery Training Course	〃	〃	〃
〃	魚市場業務人員訓練班 Fish Market Manager Training Course	〃	30	30 天 30 days
小計 Total		7	271	
臺灣碱業股份有限公司 Taiwan Alkali Co.	碱氯製造技術及督導管理知識訓練班(高雄廠) Liquid Chlorine Production Technique and Supervisoring Management Training Course(Kaohsiung Factory)	2	40	4 週 4 weeks
〃	基層督導人員訓練班 Basic Supervisor Training Course	1	20	8 週 8 weeks
〃	產品管理講習班 Product Management Seminar	〃	20	1 週 1 week
〃	領班講習班 Foremanship Seminar	3	28	19 小時 19 hours
〃	第三階層主管訓練 Third Echelon Manager Training	1	16	48 小時 48 hours

公營事業機構辦理之職業訓練(續)

Vocational Training Sponsored by Public Enterprises (Continued)

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
臺灣碱業股份有限公司 Taiwan Alkali Co.	碱氯製造技術及基層管理知識訓練班 Liquid Chlorine Produce Technique and Basic Management Knowledge Training Course	1	18	48 小時 48 hours
小計 Total		9	142	
中華機械工程股份有限公司 China Machinery Corporation	第二期引擎高級補習班 Senior Engine Continuation Training Class, Second Class	1	20	200 小時 200 hours
小計 Total		1	20	
臺灣造船有限公司 Taiwan Shipbuilding Corporation	領導技工講習班 Foremanship Seminar	4	120	60 小時 60 hours
〃	製圖班 Drawing Class	1	30	150 小時 150 hours
〃	第一期養成技工班 Journeyman Preparatory Training Class A	〃	24	1 年半 1 1/2 years
〃	第二期養成技工班 Journeyman Preparatory Training Class B	〃	40	2 年 2 years
〃	學徒工班 Apprenticeship Training Class	〃	57	3 年 3 years
小計 Total		8	271	

公營事業機構辦理之職業訓練(續)

Vocational Training Sponsored by Public Enterprises (Continued)

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
臺灣鋁業股份有限公司 Taiwan Aluminum Corporation	汽車雜護訓練班 Automobile Maintenance Training Class	1	30	2 個月 2 months
〃	新同仁業務簡介班 Business Orientation Class	〃	28	1 個月 1 month
〃	生產管制訓練班 Production Control Training Class	2	80	4 個月 4 months
〃	會計訓練班 Accounting Training Class	1	35	8 個月 8 months
小計 Total		5	173	
中本紡織股份有限公司 Chung-Ban Textile Co. Ltd.	T. W. I. 指導員講習班 T. W. I. Supervisors Seminar	2	24	10 小時 10 hours
〃	紡織品質管制班 Textile Quality Control Class	〃	60	30 小時 30 hours
小計 Total		4	84	
新中國打撈公司 New China Salvage Co.	深潛人員訓練班 Deep Diver Training Class	1	5	3 個月 3 months
小計 Total		1	5	

公營事業機構辦理之職業訓練(續)

Vocational Training Sponsored by Public Enterprises (Continued)

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
交通部國際電臺 International Radio Administration, Ministry of Communications,	報務人員講習班 Telegraphist Seminar	1	124	
小計 Total		1	124	
郵政總局 General Post Office	英文郵件翻譯人員訓練班 English Postage Interpreters Training Class	1	50	2 週 2 weeks
〃	郵件投遞研討會 Postal Delivery Symposium	4	150	4 天 4 days
〃	郵務稽查工作研討會 Post Inspection Symposium	1	30	1 週 1 week
〃	新進高級業務技術員訓練班 Orientation Seminar for Senior Technical Staff	〃	50	4 週 4 weeks
小計 Total		7	280	
臺灣郵政管理局及各地分局 Taiwan Post Administration & Local Office	高級會計班 Senior Accounting Class	1	65	35 小時 35 hours
〃	高級會計(A)班 Senior Accounting Class A	〃	37	71 小時 71 hours
〃	高級會計(B)班 Senior Accounting Class B	〃	41	〃
〃	高級會計(C)班 Senior Accounting Class C	〃	54	80 小時 80 hours

公營事業機構辦理之職業訓練(續)

Vocational Training Sponsored by Public Enterprises (Continued)

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
臺灣郵政管理局臺北郵局 Taipei Post Office, Taiwan Post Administration	珠算班 Abacus Arithmetic Class	1	23	110 小時 110 hours
臺灣郵政管理局高雄郵局 Kao-Hsiung Post Office, Taiwan Post Administration	〃	2	24	106 小時 106 hours
〃	會計(甲)班 Accounting Class A	〃	39	〃
〃	會計(乙)班 Accounting Class B	1	21	〃
臺灣郵政管理局臺南郵局 Tainan Post Office, Taiwan Post Administration	珠算班 Abacus Arithmetic Class	2	20	68 小時 68 hours
〃	會計班 Accounting Class	〃	22	102-106 小時 102-106 hours
臺灣郵政管理局嘉義郵局 Chia-I Post Office, Taiwan Post Administration	珠算班 Abacus Arithmetic Class	〃	38	104-105 小時 104-105 hours
臺灣郵政管理局豐原郵局 Feng-Yuan Post Office, Taiwan Post Administration	會計班 Accounting Class	1	13	105 小時 105 hours
臺灣郵政管理局屏東郵局 Ping-Tung Post Office, Taiwan Post Administration	珠算班 Abacus Arithmetic Class	2	24	104-106 小時 104-106 hours
臺灣郵政管理局彰化郵局 Chang-Hua Post Office, Taiwan Post Administration	〃	〃	22	68-70 小時 68-70 hours
臺灣郵政管理局中壢郵局 Chung-Li Post Office, Taiwan Post Administration	簿記班 Book-Keeping Class	1	17	104-106 小時 104-106 hours
臺灣郵政管理局臺東郵局 Tai-Tung Post Office, Taiwan Post Administration	會計班 Accounting Class	〃	46	106 小時 106 hours
臺灣郵政管理局鳳山郵局 Feng-Shan Post Office, Taiwan Post Administration	〃	〃	33	96 小時 96 hours

公營事業機構辦理之職業訓練(續)

Vocational Training Sponsored by Public Enterprises (Continued)

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
臺灣郵政管理局宜蘭郵局 I-Lan Post Office, Taiwan Post Administration	簿記班 Book Keeping Class	1	26	104 小時 104 hours
〃	會計班 Accounting Class	〃	11	〃
小計 Total		26	576	
臺灣省電信管理局及各地方局 Taiwan Tele-Communication Administration	電纜試驗接續工作法訓練班 Cable Testing Cable Connecting Training Class	2	52	96 小時 96 hours
〃	電纜充氣設備裝設訓練班 Cable Filling Equipment Installing Training Class	〃	30	〃
〃	線路傳輸訓練班 Wire Transfer Training Class	1	20	〃
〃	國內電報營業訓練班 Domestic Telegram Operation Training Class	〃	〃	7 天 7 days
〃	報務工作討研會 Telegraphic Work Symposium	〃	〃	4 天 4 days
〃	電話交換研習班 Telephone Exchange Seminar	〃	〃	120 小時 120 hours
〃	電子計算機劃線訓練班 Electronic Computer Symbolic Training Class	3	64	21 小時 21 hours
臺灣電信管理局高雄電信局 Kao-Hsiung Office, Taiwan Tele-Communication Administration	話務訓練班 Telephonic Affairs Training Class	1	46	79 小時 79 hours
臺灣電信管理局員林電信局 Yuan-Lin Office, Taiwan Tele-Communication Administration	〃	2	72	64 小時 64 hours

公營事業機構辦理之職業訓練(續)

Vocational Training Sponsored by Public Enterprises (Continued)

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
臺灣電信管理局屏東電信局 Pin-Tung Office, Taiwan Tele-Communication Administration	話務訓練班 Telephonic Affairs Training Class	1	23	50 小時 50 hours
臺灣電信管理局新竹電信局 Hsin-Chu Office, Taiwan Tele-Communication Administration	〃	〃	65	18 小時 18 hours
臺灣省電信管理局彰化電信局 Chang-Hua Office, Taiwan Tele-Communication Administration	市話營業員訓練班 Domestic Telephone Operator Training Class	〃	2	48 小時 48 hours
臺灣省電信管理局北投電信局 Pei-Tou Office, Taiwan Tele-Communication Administration	〃	〃	〃	〃
臺灣省電信管理局豐原電信局 Feng-Yuan Office, Taiwan Tele-Communication Administration	〃	〃	3	〃
〃	話務訓練班 Telephonic Affairs Training Class	〃	38	〃
臺灣電信管理局有線載波工務段 Taiwan Tele-Communication Administration	電工數字班 Electrician Digit Class	〃	25	64 小時 64 hours
〃	線路傳輸常識訓練班 Wire Transfer Knowledge Training Class	〃	20	96 小時 96 hours
〃	油機維護人員訓練班 Generator Maintenance Personnel Training Class	〃	19	144 小時 144 hours
〃	縱橫制交換設備訓練班 Cross System Exchange Equipment Training Class	〃	12	40 小時 40 hours
臺灣電信管理局中區機線工務段 Central Wiring Engineering Section, Taiwan Tele-Communication Administration	數字班 Digit Class	〃	2	64 小時 64 hours
臺灣電信管理局中區微波工務段 Microwave Engineering Section, Taiwan Tele-Communication Administration	電氣網路訓練班 Electric Wire Training Class	〃	20	36 小時 36 hours
〃	微波維護訓練班 Micro-Wave Equipment Maintenance Training Class	〃	31	60 小時 60 hours

公營事業機構辦理之職業訓練(續)

Vocational Training Sponsored by Public Enterprises (Continued)

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
臺灣電信管理局微波工務段 Microwave Engineering Section, Taiwan Tele-Communication Administration	油機維護人員訓練班 Engine Generator Maintenance Personnel Training Class	1	17	144 小時 144 hours
小計 Total		28	623	
高雄港務局員工訓練所 Personnel Training Office, Kao-Hsiung Harbor Bureau	裝卸技術訓練班預備工人訓練 Loading and Unloading Techniques Training Class Reserve Worker Training	3	304	2 週 2 weeks
〃	堆高機訓練班 Fork-Lift Truck Training Class	2	46	102 天 102 days
〃	隊班長講習 Squad Leader Training	1	112	20 天 20 days
小計 Total		6	462	
基隆港務局員工訓練所 Personnel Training Office, Keelung Harbor Bureau	裝卸養成班 Loading and Unloading Technique Preparatory Training Class	2	28	3 年 3 years
〃	〃	〃	92	〃
〃	碼頭員工儲訓班 Wharf Personnel Reserve Training Class	10	486	1 週 1 week
基隆港務局修造廠 Ship Building Yard of Keelung Harbor Bureau	技術工人訓練班 Journeyman Training Class	1	20	4 個月 4 months
小計 Total		14	626	

公營事業機構辦理之職業訓練(續)

Vocational Training Sponsored by Public Enterprises (Coutinued)

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
公路局汽車技術員工訓練中心 Auto Technicians and Instructors Training Center, Taiwan Highway Bureau	汽車系師資班 Automobile Department Instructor Class	3	45	4-12 週 4-12 weeks
〃	汽車系研究班 Automobile Department Researching Class	2	40	8 週 8 weeks
〃	汽車系監導班 Automobile Department Supervisor Class	〃	〃	〃
〃	汽車系進修班 Automobile Department, Promotion Class	3	60	〃
〃	複訓引擎班 Engineering Retraining Class	2	40	3 週 3 weeks
〃	複訓電氣班 Electricity Retraining Class	〃	20	2 週 2 weeks
〃	複訓底盤班 Chassis Retraining Class	1	〃	3 週 3 weeks
〃	汽車系複訓駕駛班 Automobile Department Retraining Driving Class	4	80	2 週 2 weeks
〃	汽車系初級技工班 Automobile Department, Journeyman Training Class	1	35	26 週 26 weeks
〃	汽車系養成大客車駕駛班 Automobile Department, Bus Driver Preparatory Training Class	4	160	16 週 16 weeks
〃	小客車駕駛保養班 Sedan Drive and Maintenance Class	8	900	2 週 2 weeks
〃	監導管理班 Supervisory Management Class	2	40	〃
〃	修理班 Servicing Class	3	60	5 週 5 weeks

公營事業機構辦理之職業訓練(續)

Vocational Training Sponsored by Public Enterprises (Continued)

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
公路局汽車技術員工訓練中心 Auto Technicians and Instructors Training Center	引擎班 Engine Class	2	40	3 週 3 weeks
〃	柴油機系研究班 Diesel Engine Department, Research Class	1	20	8 週 8 weeks
〃	柴油機系技工長班 Diesel Engine Department, Chief Mechanic Class	2	50	〃
〃	柴油車講習班 Diesel Vehicle Class	8	240	1 天 1 day
〃	重機械系監導班 Heavy Machinery Department, Supervisory Class	2	40	8 週 8 weeks
公路局臺北區監理所 Taipei District Supervision Office, Taiwan Highway Bureau	汽車駕駛員講習會 Automobile Drivers Class	4	1095	24 小時 24 hours
〃	小客車駕駛保養訓練班 Sedan Drive & Maintenance Training Class	7	144	96 小時 96 hours
公路局臺中區運輸處 Taichung District Transportation Department, Taiwan Highway Bureau	縫級補習班 Sewing Extension Class	1	36	192 小時 192 hours
〃	打字訓練班 Type-Writing Training Class	〃	20	〃
小計 Total		65	3,225	
臺灣鐵路局臺北機廠鐵路技工養成所 Technicians Training Institute, Taipei Factory, Taiwan Railway Administration	駕駛訓練班 Drivers Training Class	1	—	99 小時 99 hours
〃	業務(簡化班)訓練班 Business (Simplification Class) Training Class	4	—	〃

公營事業機構辦理之職業訓練(續)

Vocational Training Sponsored by Public Enterprises (Continued)

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
臺灣鐵路局臺北機廠鐵路技工養成所 Technicians Training Institute, Taipei Factory, Taiwan Railway Administration	技工訓練班 Journeyman Training Class	3	77	3 年 3 years
〃	領工人員訓練班 Foreman Training Class	〃	96	270 小時 270 hours
小計 Total		11	173	
臺北市自來水廠 Taipei Water Works	水質班 Water Quality Class	1	15	46 小時 46 hours
小計 Total		1	15	
鹽務局布袋鹽廠 Pu-Tai Factory, Taiwan Salt Works	手工藝訓練班 Handicraft Training Class	2	30	6 個月 6 months
〃	失學鹽工補習班 Illiterate Salt Workers Extension Class	9	294	192 小時 192 hours
小計 Total		11	324	
臺灣省物資局嘉義原麻處 Chia-I Gunny Department, Taiwan Supply Bureau	技術訓練班 Technique Training Class	1	30	12 小時 12 hours
小計 Total		1	30	

公營事業機構辦理之職業訓練(續)

Vocational Training Sponsored by Public Enterprises (Continued)

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
中央銀行 The Central Bank of China	金融人員在職訓練班 Financial Staff on Job Training Class	1	30	12 週 12 weeks
小計 Total		1	30	
華南商業銀行 Hwa Nan Commercial Bank	存款實務訓練 Deposit Procedure Training	2	100	4 天 4 days
〃	放款實務訓練 Loan Procedure Training	〃	〃	2 天 2 days
〃	工友服務教育訓練 Waiters Service Eduction Training	1	50	60 小時 60 hours
〃	新進行員訓練班 Orientation Class for New Staff	〃	〃	6 天 6 days
〃	正副主管訓練 Manager and Assistant Manager Training	3	60	10 天 10 days
〃	外滙業務訓練班 Foreign Exchange Business Training Class	1	40	50 小時 50 hours
小計 Total		10	400	
臺灣第一商業銀行 The First Commercial Bank of Taiwan	主管(經理級)研討會 Managers Symposium	3	80	1 週 1 week
〃	副主管(副理襄理級)研討會 Assistant Managers Symposium	5	129	6 天 6 days

公營事業機構辦理之職業訓練(續)

Vocational Training Sponsored by Public Enterprises (Continued)

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
臺灣第一商業銀行 The First Commercial Bank of Taiwan	新進行員訓練班 Orientation Class for New Staff	6	150	5 天 5 days
小計 Total		14	359	
臺灣省合作金庫 The Co-Operative Bank of Taiwan	新進職員講習班 Orientation Class for New Staff	1	50	24 小時 24 hours
小計 Total		1	50	
彰化商業銀行 Chang-Hua Commercial Bank	新進行員實務訓練 New Staff Practice Training	1	64	5 天 5 days
〃	珠算能力檢定 Abacus Capability Examination	〃	250	1 天 1 day
小計 Total		2	314	
臺灣省菸酒公賣局 Taiwan Tobacco & Wine Monopoly Bureau	品質管制講習 Quality Control Class	3	117	2週4週或6週 2,4 or 6 weeks
〃	品質管制研究 Quality Control Research	1	26	14 天 14 days
〃	配銷業務講習 Distribution & Sales Business Seminar	〃	34	20 天 20 days

公營事業機構辦理之職業訓練(續)

Vocational Training Sponsored by Public Enterprises (Continued)

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
臺灣省菸酒公賣局 Taiwan Tobacco & Wine Monopoly Bureau	統計業務講習 Statistics Business Seminar	1	42	28 天 28 days
〃	工業衛生訓練 Industrial Health Training	〃	35	14 天 14 days
〃	機電技術訓練 Electricity Generator Technique Training	13	365	21 天 21 days
〃	工廠領班訓練 Shop Foreman Training	7	301	16 天 16 days
〃	主計業務講習 Auditor Business Seminar	1	53	21 天 21 days
〃	人事業務講習 Personnel Business Seminar	〃	45	28 天 28 days
〃	建築工程訓練 Construction Engineering Training	〃	30	14 天 14 days
〃	會計業務研究 Accounting Business Study	〃	42	10 天 10 days
〃	工業儀器管理人員講習 Industrial Instruments Managment Staff Seminar	〃	30	18 天 18 days
臺灣省菸酒公賣局屏東酒廠 Pin-Tung Wine Factory	勞工技藝補習班 Labourer Skill Extension Class	〃	31	180 天 180 days
臺灣省菸酒公賣局宜蘭酒廠 I-Lan Wine Factory	縫級技藝補習班 Sewing Technique Extension Class	〃	27	156 天 156 days
臺灣省菸酒公賣局埔里酒廠 Pu-Li Wine Factory	勞工技藝補習班 Labourer Skill Extension Class	〃	30	108 天 108 days
臺灣省菸酒公賣局臺中菸廠 Taichung Cigarette Factory	〃	〃	32	204 天 204 days

公營事業機構辦理之職業訓練(續)

Vocational Training Sponsored by Public Enterprises (Continued)

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
臺灣省菸酒公賣局臺中菸廠 Taichung Cigarette Factory	勞工事務訓練班 Labour Affairs Training Class	1	30	204 天 204 days
臺灣省菸酒公賣局製瓶工廠 Bottle Factory T. T. W. M. B.	技藝訓練班 Skill Training Class	〃	50	192 小時 192 hours
臺灣省菸酒公賣局木作工廠 Woodworking Factory T. T. W. M. B.	勞工技藝教育補習班 Labourer Skill Extension Eduction Class	〃	26	60 小時 60 hours
臺灣省菸酒公賣局松山菸廠 Sungshan Cigarette Factory T. T. W. M. B.	機械訓練班 Machine Training Class	〃	30	192 小時 192 hours
〃	電機訓練班 Generator Training Class	〃	〃	〃
〃	監工領班訓練班 Supervisor Training Class	〃	〃	〃
臺灣省菸酒公賣局製瓶廠 Bottle Factory T. T. W. M. B.	經理業務訓練班 Management Business Training Class	〃	63	216 小時 216 hours
臺灣省菸酒公賣局瓶蓋工廠 Bottle Cover Factory T.T.W.M.B.	機電補習班 Generator & Electricity Extension Class	〃	29	168 小時 168 hours
臺灣省菸酒公賣局第一酒廠 1st Wine Factory T.T.W.M.B.	西點烹飪補習班 Western Style Snack Cooking Extension Class	〃	50	192 小時 192 hours
臺灣省菸酒公賣局第二酒廠 2nd Wine Factory T.T.W.M.B.	勞工技藝補習班 Labourer Skill Extension Class	〃	41	240 小時 240 hours
〃	機電補習班 Generator & Electricity Extension Class	〃	〃	〃
臺灣省菸酒公賣局板橋酒廠 Pan Chiao Wine Factory T. T. W. M. B.	縫級補習班 Sewing Extension Class	〃	61	192 小時 192 hours
臺灣省菸酒公賣局臺中酒廠 Taichung Wine Factory T. T. W. M. B.	勞工技藝補習班 Labourer Skill Extension Class	〃	40	180 小時 180 hours

公營事業機構辦理之職業訓練(續)

Vocational Training Sponsored by Public Enterprises (Continued)

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
臺灣省菸酒公賣局屏東菸葉廠 Pin-Tung Tobacco Factory T. T. W. M. B.	勞工綜合技藝教育補習班 Labourer Combined Skill Education Extension Class	1	41	192 小時 192 hours
臺灣省菸酒公賣局製瓶工廠 Bottle Factory T. T. W. M. B.	電機保養訓練班 Generator Maintenance Training Class	〃	60	〃
小計 Total		51	1,862	
臺灣肥料股份有限公司 Taiwan Fertilizer Corporation	領工工業安全訓練班 Supervisor's Industry Safety Training Course	1	50	26 小時 26 hours
〃	基本作業訓練班 Basic Operation Training Course	4	103	20 小時 20 hours
〃	品質管制訓練班 Quality Control Training Course	14	267	8-20 小時 8-20 hours
〃	防護訓練班 Safety Training Course	1	100	48 小時 48 hours
〃	化工操作工訓練班 Chemical Works Operator Training Course	〃	30	234 小時 234 hours
〃	組織管理實例研習課程 Organizational Management Practical Example Study	〃	2	15 天 15 days
〃	產品包裝訓練 Packing Training	〃	1	5 天 5 days
〃	生產訓練及管理訓練 Production Training & Management Training	〃	2	6 天 6 days
〃	壓鑄訓練 Die Casting Training	〃	4	15 天 15 days

公營事業機構辦理之職業訓練(續)

Vocational Training Sponsored by Public Enterprises (Continued)

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
臺灣肥料股份有限公司 Taiwan Fertilizer Corporation	分析訓練 Analysis Training	1	6	10 小時 10 hours
〃	在職專業訓練 On-the-Job Professional Training	〃	2	20 天 20 days
〃	工業安全訓練 Industrial Safety Training	3	70	24 小時 24 hours
〃	保養訓練班 Maintenance Training Course	2	30	50 小時 50 hours
〃	重過磷酸鈣工場操作訓練班 Calcium Shop Operation Training Class	1	24	120 小時 120 hours
〃	鍋爐操作訓練班 Boiler Operation Training Course	〃	15	54 小時 54 hours
〃	員工業務講習班 Employee Business, Seminar	2	60	12 小時 12 hours
〃	公文程式及應用文訓練班 Document Formula & Practical Writing Training Class	3	55	32-104 小時 30-104 hours
〃	玻璃細工訓練 Glass Finishing Work Training	1	15	50 小時 50 hours
〃	製法研究訓練 Production Methods Research Training	〃	30	30 小時 30 hours
〃	初級化工訓練 Basic Chemical Work Training	〃	40	360 小時 360 hours
〃	五廠高級化學訓練班 Advanced Chemical Training Class	〃	27	〃
〃	技工訓練 Journeyman Training	2	90	180 小時 180 hours

公營事業機構辦理之職業訓練(續)

Vocational Training Sponsored by Public Enterprises (Continued)

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
臺灣肥料股份有限公司 Taiwan Fertilizer Corporation	工業管理訓練 Industrial Management Training	1	30	12 小時 12 hours
〃	工業管理講習會 Industrial Management Seminar	〃	20	3 小時 3 hours
〃	蒸汽工廠工作工訓練 Power Plant Operator Training (Steam)	〃	75	25 小時 25 hours
〃	煤氣工廠操作工訓練 Gas Plant, Operators Training	〃	68	20 小時 20 hours
〃	煤氣工廠職員工作訓練 Gas Plant, Employee Work Training	〃	5	〃
〃	液氨工廠職員訓練 Liquid Ammonia Factory, Employee Work Training	〃	11	48 小時 48 hours
〃	液氨工廠緊急停車及操作複習訓練 Liquid Ammonia Factory, Emergency Stop and Operation Re-Training	〃	57	16 小時 16 hours
〃	液氨裝瓶技能訓練 Liquid Ammonia Filling Technique Training	〃	25	25 小時 25 hours
〃	尿素工場專題操作討論 Urea Factory, Special Problem Operating Discussion	〃	51	35 小時 35 hours
〃	製粒部工作方法訓練 Granulate Department, Work Method Training	〃	50	12 小時 12 hours
〃	尿素工場更改設備操作訓練 Urea Factory, Change Equipment Operation Training	〃	51	36 小時 36 hours
〃	化工機械訓練 Chemical Machine Training	〃	30	90 小時 90 hours
〃	修繕工場保養工訓練 Repair Shop, Maintenance Worker Training	〃	80	30 小時 30 hours

公營事業機構辦理之職業訓練(續)

Vocational Training Sponsored by Public Enterprises (Continued)

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
臺灣肥料股份有限公司 Taiwan Fertilizer Corporation	修繕工場工程師訓練 Repair Shop, Engineer Training	1	15	30 小時 30 hours
〃	主管人員安全訓練 Managerial Staff Safety Training	〃	20	12 小時 12 hours
〃	領班及操作工一般安全訓練 Foreman and Operator, General Safety Training	〃	40	48 小時 48 hours
〃	消防訓練 Fire Extinguisher Training	2	80	6小時-30天 6hours-30 days
〃	POP (燃油製氫) 擴建工程訓練 POP Extension Construction Training	〃	121	48 小時 48 hours
〃	安全專題測驗訓練 Safety Special Problem Test Training	3	380	84 小時 84 hours
〃	急救訓練 First Aid Training	2	40	12 小時 12 hours
〃	操作訓練 Operation Training	5	140	210 小時 210 hours
〃	初級品質管制訓練 Basic Quality Control Training	4	150	360 小時 360 hours
〃	中級品質管制訓練 Middle Class Quality Control Training	1	50	20 小時 20 hours
〃	成本控制及管理會計 Cost Control & Management Account	〃	2	4 天 4 days
〃	五廠玻璃加工訓練班 Factory No. 5, Glass Processing Training Class	〃	14	50 小時 50 hours
小計 Total		82	2,228	

公營事業機構辦理之職業訓練(續)

Vocational Training Sponsored by Public Enterprises (Continued)

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
中國石油股份有限公司員工訓練中心 Personnel Training Center, China Petroleum Corporation	新進人員業務講習班 Orientation Class for New Staff	1	53	4 天 4 days
〃	領班人員業務講習班 Foreman Seminar	〃	30	6 天 6 days
〃	企業管理人員業務講習班 Enterprise Management Development Seminar	2	55	〃
〃	第三階層主管人員業務講習班 Third Grade Managerial Staff Seminar	1	33	20 小時 20 hours
〃	加油站業務講習班 Gasoline Filling Station Seminar	2	105	7 天 7 days
〃	預防保養業務講習班 Preventive Maintenance Seminar	1	30	6 天 6 days
〃	保護工作業務講習班 Protection Seminar	〃	〃	〃
〃	安全防護業務講習班 Safe-Guard Seminar	〃	40	7 天 7 days
〃	焊接技術業務講習班 Welding Techniques Seminar	〃	20	5 天 5 days
〃	人事行政業務講習班 Personnel Administration Seminar	〃	30	7 天 7 days
〃	教學方法研討會講習班 Instruction Method Symposium	〃	20	5 天 5 days
〃	工業安全業務講習班 Industry Safety Seminar	〃	30	7 天 7 days
〃	電子儀器業務講習班 Electronic Equipment Seminar	〃	20	21 天 21 days

公營事業機構辦理之職業訓練(續)

Vocational Training Sponsored by Public Enterprises (Continued)

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
中國石油股份有限公司員工訓練中心 Personnel Training Center, China Petroleum Corporation	營業人員業務講習班 Sales Man Seminar	1	30	7 天 7 days
〃	儲運業務講習班 Storage & Transport Seminar	〃	20	〃
〃	會計業務講習班 Account Seminar	〃	〃	〃
〃	財產管理業務講習班 Property Management Seminar	〃	25	〃
石油公司高雄煉油廠 Kao-Hsiung Refinery, China Petroleum Corporation	汽車駕駛班 Automobile Drive Class	〃	30	〃
〃	初級縫級班 Basic Sewing Class	〃	28	52 天 52 days
〃	中級縫級班 Secondary Sewing Class	〃	19	〃
〃	車繡班 Sew Embroidery Class	〃	16	〃
小計 Total		23	689	
臺灣省林務局 Taiwan Forestry Bureau	林產處分業務研討會 Forest Product Disposal Symposium	1	35	10 天 10 days
〃	林務人員講習班 Forest Personnel Seminar	〃	〃	2 週 2 weeks
〃	集材技術及柴油機引擎檢修保養技術訓練班 Pile Technique and Diesel Engine Inspection and Repair Maintenance Technique Training Class	〃	46	1 週 1 week

公營事業機構辦理之職業訓練(續)

Vocational Training Sponsored by Public Enterprises (Continued)

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
臺灣省林務局玉山林區 Yu-Shan Forest District, Taiwan Forestry Bureau	汽車駕駛班 Automobile Drive Class	1	20	192 小時 192 hours
臺灣省林務局蘭陽林區 Lan-Yuan Forest District T.F.B.	木材工藝訓練班 Timber Technique Training Class	〃	50	〃
臺灣省林務局大雪山林業公司 Ta Hsie Shan Lumber Works Co. Ltd. T.F.B.	檢尺訓練班 Measuring Training Class	〃	26	1 週 1 week
小計 Total		6	212	
金屬工業發展中心 Metal Industry Development Center	工廠保養計劃與實施講習 Shop Maintenance Program & Practise Seminar	4	100	96 小時 96 hours
〃	企業管理研討會 General Management Symposium	3	73	66 小時 66 hours
〃	領班人員講習班 Supervisor Seminar	7	161	392 小時 392 hours
〃	齒輪設計與製造 Gear Design & Manufacture	1	22	15 小時 15 hours
〃	候補領班人員講習班 Reserved Supervisor Seminar	4	73	168 小時 168 hours
〃	公差制度與互換 Tolerance System and Exchange	2	32	48 小時 48 hours
〃	鑄造研討會 Die Casting Symposium	〃	136	42 小時 42 hours
〃	工作研究講習會 Work Study Seminar	3	54	360 小時 360 hours

公營事業機構辦理之職業訓練(續)

Vocational Training Sponsored by Public Enterprises (Continued)

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
金屬工業發展中心 Metal Industry Development Center	督導人員講習班 Supervisor Seminar	2	31	252 小時 252 hours
〃	講師講習班 Instructor Seminar	1	21	42 小時 42 hours
〃	教師進修班 Teacher Uprising Class	〃	18	120 小時 120 hours
〃	鐘錶技術講習班 Watch & Clock Technique Seminar	2	32	160 小時 160 hours
〃	盤元講習班 Inventory Seminar	1	9	18 小時 18 hours
〃	車床技術講習班 Lathe Technique Seminar	〃	11	2 小時 2 hours
〃	實用市場管理研討會 Practical Market Management Symposium	〃	37	6 小時 6 hours
〃	球軸承講習班 Ball Bearing Seminar	〃	7	42 小時 42 hours
〃	工具機檢驗講習班 Tool & Apparatus Inspection Seminar	〃	15	24 小時 24 hours
〃	生產管制 Production Control	〃	12	60 小時 60 hours
〃	工具模具講習班 Tool Model Seminar	〃	14	24 小時 24 hours
小計 Total		39	858	

四、五十五年民營事業機構辦理之職業訓練

4. Vocational Training Sponsored by Private Enterprises in 1966

民營事業機構別辦理職業訓練班數及受訓人數統計表

Classes & Trainees of Vocational Training in Private Industries

事業單位別 Organizations	班數 Number of Classes	受訓人數 Number of Trainees
大同製鋼機械公司 Tatung Engineering Co.	44	824
裕隆汽車製造股份有限公司 Yue-Lung motor Co.	15	663
南港輪胎股份有限公司 Nan-Kang Rubber Tire Co.	6	308
臺灣日光燈股份有限公司 Taiwan Fluorescent Lamp Co.	17	278
亞洲水泥股份有限公司 Asia Cement Corp.	2	30
臺灣勤益紡織公司 General Textile Manufacture Co.	4	97
新光紡織股份有限公司 Shin-Kong Textile Co.	17	524
三星染織廠股份有限公司 Shuang-Sheng Dyeing & Weaving Works	14	130
遠東紡織廠 Far Eastern Textile Co.	41	568
泰成被服廠有限公司 Tai-cheng Clothing Co.	1	16
新茂木業股份有限公司 Cyma Plywood & Lumber Co.	2	105
林商號合板股份有限公司 Lin-Shun-Hao Plywood Corp.	4	81
臺灣紙業股份有限公司 Taiwan Pulp & Paper Corp.	7	121
永豐紙板股份有限公司 Yuen-Foong Paper Mfg. Co.	3	108
南亞塑膠工廠有限公司 Nan-Ya Plastic Fabrication Co.	2	120
紙業公司大肚紙廠 Ta-tu Factory, Taiwan Pulp & Paper Corp.	2	67
紙業公司新營紙廠 Hsin-Ying Factory, Taiwan Pulp & Paper Corp.	5	13

民營事業機構別辦理職業訓練班數及受訓人數統計表（續）

Classes & Trainees of Vocational Training in Private Industries (Continued)

事業單位別 Organizations	班數 Number of Classes	受訓人數 Number of Trainees
小港紙廠 Shiao-Kong Paper Factory	3	100
魚池茶場 Yue-Chi Tea Farm	1	20
民航空運公司 Civil Air Transport Co.	4	30
亞洲航空公司 Air Asia Co.	42	1015
中國化學製藥股份有限公司 China Chemical & Pharmercetical Co.	3	69
臺灣武田藥品工業股份有限公司 Taiwan Takada Pharmercetical Industrial Co.	4	13
新竹玻璃製造廠股份有限公司 Hsinchu Glass Works	14	308
味全食品工業股份有限公司 Wei-Chuan Food Industrial Co.	1	60
國光人壽保險公司 Kuo-kuang Life Insurance Co.	28	226
唐榮鐵工廠股份有限公司 Tang-Eng Iron works Co.	2	116
民德煤礦公司 Ming-Den Coal Mining Co.	1	40
宏裕煤礦公司 Hung-Yeu Coal Mining Co.	1	40
基隆煤礦公司 Keelung Coal Mining Co.	1	40
瑞三煤礦 Shui-shan Mining Co.	1	40
建基煤礦公司 Chien-chih Coal Mining Co.	1	40
石底煤礦公司 Shi-Dee Coal Mining Co.	1	20
民興紡織廠 Ming-shing Cotton Mill Co.	4	200

民營事業機構別辦理職業訓練班數及受訓人數統計表（續）

Classes & Trainees of Vocational Training in Private Industries (Continued)

事業單位別 Organizations	班數 Number of Classes	受訓人數 Number of Trainees
六和紡織廠 Lio-Ho Cotton Weaving Mill	3	200
台元紡織廠 Tai-Yuan Textile Co.	1	39
興南汽車客運公司 Shin-Nan Bus Co.	3	46
豐原汽車客運公司 Fong-Yuan Bus Co.	4	195
高雄汽車客運公司 Kao-Hsiung Bus Co.	2	105
合計 Total	311	7,015

民營事業機構辦理之職業訓練

Vocational Training Sponsored by Private Enterprises

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
大同製鋼機械公司 Tatung Engineering Co.	第一期服務站服務人員訓練班 Serviceman Training	1	19	56 小時 56 hours
〃	試用同仁訓練班 Orientation Training	3	51	15 小時 15 hours
〃	中級服務人員講習會 Middle Grade Serviceman Training	2	26	32 小時 32 hours
〃	第一期 T.W.I. 如何主持討論會講習班 T.W.I. Discussing Leading Seminar	1	12	30 小時 30 hours
〃	領班講師講習班 Foreman & Instructor Seminar	〃	19	56 小時 56 hours
〃	教學法講習會 Seminar for Pedagogics	〃	36	24 小時 24 hours
〃	品質簡介班 Quality Introduction Course	5	205	2 小時 2 hours
〃	成本會計班 Cost Accounting Course	4	95	15 小時 15 hours
〃	臺電 20KVA 變壓器簡介 Introduction to 20 KVA Transformer Made by Taiwan Power Co.	1	65	2 小時 2 hours
〃	臺電控制盤 10 KVA 變壓器簡介 Introduction to Control Board 10 KVA Transfarmer by T.P.C.	〃	40	1 小時 1 hour
〃	家電廠 T.W.I 訓練 T.W.I. Training	6	64	40 小時 40 hours
〃	家電廠技術訓練 Techuical Training	〃	〃	〃
〃	家電廠一般項目訓練 General Training Course	〃	〃	〃

民營事業機構辦理之職業訓練(續)

Vocational Training Sponsored by Private Enterprises (Continued)

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
大同製鋼機械公司 Tatung Engineering Co.	家電廠A班工作教導訓練班 Job Instruction Course Class A	1	11	40 小時 40 hours
〃	家電廠B班工作教導訓練班 Job Instruction Course Class B	〃	10	〃
〃	家電廠C班工作教導訓練班 Job Instruction Course Class C	〃	12	〃
〃	家電廠D班工作教導訓練班 Job Instruction Course Class D	〃	11	〃
〃	家電廠E班工作教導訓練班 Job Instruction Course Class E	〃	〃	〃
〃	家電廠F班工作教導訓練班 Job Instruction Course Class F	〃	9	〃
小計 Total		44	824	
裕隆汽車製造股份有限公司 Yue-Lung Motor Co.	練習工訓練班 Apprenticeship Training	9	420	2-3 年 2-3 years
〃	在職技工研習班 In-Service Training	1	12	2 週 2 weeks
〃	三輪車工友轉業訓練班 Pedicab driver Transfer Course	2	140	2 年 2 years
〃	研究設計班 Research Design Course	1	21	144 小時 144 hours
〃	生產管制班 Production Control Course	〃	31	〃

民營事業機構辦理之職業訓練(續)

Vocational Training Sponsored by Private Enterprises (Continued)

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
裕隆汽車製造股份有限公司 Yue-Lung Motor Co.	品質管制班 Quality Control Course	1	39	144 小時 144 hours
小計 Total		15	663	
南港輪胎股份有限公司 Nan-Kang Rubber Tire Co.	南港廠55年度勞工教育訓練班 Workers Education Course	3	147	32 小時 32 hors
〃	橡膠工業訓練班 Rubber Industry Training	〃	161	96 小時 96 hours
小計 Total		6	308	
臺灣日光燈股份有限公司 Taiwan Fluorescent Lamp Co.	品質管制簡介班 Quality Control Course	4	80	15 小時 15 hours
〃	抽樣檢驗 Sample Inspection	1	10	20 小時 20 hours
〃	職務訓練 In-Service Training	5	50	18 小時 I8 hours
〃	日光燈之原理及應用 Theory & Practice of Fluorescent Lamp	2	30	20 小時 20 hours
〃	安定器器之原理及應用 Theory & Practice of Stablizer	〃	〃	〃
〃	簡易機械圖表的看法 Drawing Reading	〃	〃	8 小時 8 hours

民營事業機構辦理之職業訓練(續)

Vocational Training Sponsored by Private Enterprises (Continued)

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
臺灣日光燈股份有限公司 Taiwan Fluorescent Lamp Co.	燈泡製造技術講座 Globe Manufactury Skill Seminar	1	48	58 小時 58 hours
小計 Total		17	278	
亞洲水泥股份有限公司 Asia Cement Corp.	工廠保養訓練班 Workshop Maintenance Training	1	20	1 週 1 week
〃	耐火材料講習會 Refractory Materials Training	〃	10	1 天 1 day
小計 Total		2	30	
臺灣勤益紡織公司 Ceneral Textile Manuf Co.	養成工訓練 Apprenticeship Training	3	33	1 個月 1 month
〃	組長級在職訓練 In-Service Training for Foreman	1	64	3 個月 3 month
小計 Total		4	97	
新光紡織股份有限公司 Shinkong Textile Co.	士林廠養成教育 Apprenticeship Training	12	480	1 個月 1 month
〃	士林廠在職訓練 In-Service Training	3	30	2 週 2 weeks

民營事業機構辦理之職業訓練(續)

Vocational Training Sponsored by Private Enterprises (Continued)

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
新光紡織股份有限公司 Shinkong Textile Co.	T.W.I 指導員講習 T.W.I. Instructor Seminar	2	14	1 週 1 week
小計 Total		17	524	
三星染織廠股份有限公司 Shuang Sheng Dyeing & Weaving Works	織造技術工訓練班 Weaving Technician Training Course	2	40	3 個月 3 months
〃	工作技術講習 Working Techniques Seminar	12	90	6 個月 6 months
小計 Total		14	130	
遠東紡織廠 Fa Eastern Textile Co.	管理人員訓練班 Supervision Training	2	40	30 小時 30 hours
〃	組長責任工調訓班 In-Service Training for Foreman	4	80	20 小時 20 hours
〃	新進工友訓練(女性) Orientation Training	24	300	15 天 15 days
〃	T.W.I 工作關係講習班 T.W.I Job Relation Course	5	60	12 小時 12 hours
〃	T.W.I 工作教導講習班 T.W.I Job Instruction Course	2	24	〃
〃	T.W.I 工作方法講習班 T.W.I. Job Method Course	〃	〃	〃

民營事業機構辦理之職業訓練(續)

Vocational Training Sponsored by Private Enterprises (Continued)

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
遠東紡織廠 Far Eastern Textile Co.	管理人員訓練班 Supervision Training	2	40	30 小時 30 hours
小計 Total		41	568	
泰成被服廠有限公司 Tai Cheng Clothing Co.	縫製養成班 Sewing Class	1	16	2 年 2 years
小計 Total		1	16	
新茂木業股份有限公司 Cyma Plywood & Lumber Co.	汐止工廠領班訓練班 Foreman Training	2	105	45 小時 45 hours
小計 Total		2	105	
林商號合板股份有限公司 Lin Shan Hao Plywood Corp	候補領班人員訓練講習班 Foreman Training Course	1	2	40 小時 40 hours
〃	本廠品質管制訓練班 Quality Control Course	3	79	20 小時 20 hours
小計 Total		4	81	
臺灣紙業股份有限公司 Taiwan Pulp & Paper Corp	大肚紙廠保養訓練班 General Maintenance Training	1	40	1 週 1 week

民營事業機構辦理之職業訓練(續)

Vocational Training Sponsored by Private Enterprises (Continued)

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
臺灣紙業股份有限公司 Taiwan Pulp & Paper Corp	大肚紙廠打漿工作訓練班 Paper Starch Preperation Work Training	3	30	
〃	大肚紙廠製漿訓練班 Paper Manufactuing Training	〃	51	
小計 Total		7	121	
永豐紙板股份有限公司 Yuen Foong Paper Mfg. Co.	班長訓練班 Foreman Training	3	108	10 小時 10 hours
小計 Total		3	108	
南亞塑膠加工廠有限公司 Nan-Ya Plastics Fabrication Co.	新進員工入廠訓練班 Orientation Training	2	120	1 週 1 week
小計 Total		2	120	
紙業公司大肚紙廠 Ta-Tu Factory, Taiwan Palp & Papen Corp.	保養訓練班 General Maintenance Training	1	40	12 小時 12 hours
〃	打漿訓練班 Paper Starch Preperation Training	〃	27	24 小時 24 hours
小計 Total		2	67	

民營事業機構辦理之職業訓練(續)

Vocational Training Sponsored by Private Enterprises (Continued)

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
紙業公司新營紙廠 Hsin-Ying Factory, Taiwan Pulp & Paper Corp,	品質管制班 Quality Control Course	1	4	78 小時 78 hours
〃	領班訓練 Foreman Training	〃	5	66 小時 66 hours
〃	工業安全 Industry Safety	〃	1	54 小時 54 hours
〃	生產計管與管制班 Production Control Course	〃	2	〃
〃	預防保養班 Preventive Maintenance Training	〃	1	48 小時 48 hours
小計 Total		5	13	
小港紙廠 Shiao Kong Paper Factory	捲機班 Rall Winder Training	1	20	20 小時 20 hours
〃	潤滑油班 Lubrication Course	〃	30	〃
〃	工廠安全 Industry Safety	〃	50	30 小時 30 hours
小計 Total		3	100	
魚池茶場 Yeu-Chi Tea Farm	香蕉種植法講習班 Banana Planting Method Course	1	20	96 小時 96 hours
小計 Total		1	20	

民營事業機構辦理之職業訓練(續)

Vocational Training Sponsored by Private Enterprises (Continued)

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
民航空運公司 Civil Air Transport	業務運務訓練班 Business & Transportation Course	4	30	13 天 13 days
小計 Total		4	30	
亞洲航空公司 Air Asia Co.	外勤機械員訓練 Maintenance & Inspection Training	1	25	1 年 1 year
〃	白鐵訓練 Sheet Metal Training	4	80	6 週 6 weeks
〃	波音 727 型機訓練 Boeing 727 Plane Training	10	300	〃
〃	C-46 型機再訓練 C-46 Plane Re-Training	3	90	2 週 2 weeks
〃	DC-4 型機訓練 DC-4 Plane Training	2	100	6 週 6 weeks
〃	Beech 12 型機訓練 Beech 12 Plane Training	9	30	2 週 2 weeks
〃	DC-6 型機訓練 DC-6 Plane Training	10	〃	〃
〃	東南亞地區顧客飛機訓練 Custom Plane Maintenance Training for Southeastern Area	2	300	6 週 6 weeks
〃	引擎大修訓練 Engine Overhaul Training	42	60	〃
小計 Total			1,015	

民營事業機構辦理之職業訓練(續)

Vocational Training Sponsored by Private Enterprises (Continued)

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
中國化學製藥股份有限公司 China Chemical & Pharmercetical Co.	樹林工廠業務人員訓練 Business-Man Training	1	16	156 週 156 weeks
〃	樹林工廠安全訓練 Safety Training	〃	28	36 週 36 weeks
〃	樹林工廠消防訓練 Fire Fighting Training	〃	25	2 週 2 weeks
小計 Total		3	69	
臺灣武田藥品工業股份有限公司 Taiwan Takada Pharmercetical Industrial Co.	T.W.I 講習班 T.W.I. Course	4	13	1 週 1 week
小計 Total		4	13	
新竹玻璃製造廠股份有限公司 Hsinchu Glass Works	苗栗廠引上操作講習班 Miao-Li Factory Drawing Operation Seminar	1	36	29 小時 29 hours
〃	第三屆品質管制講習班 Ouality Contral Course	2	64	10 小時 10 hours
〃	切片工訓練 Glass Cutter Training	〃	113	39 個月 39 months
〃	檢驗訓練 Inspection Training	1	18	4 個月 4 months
〃	包裝夾紙訓練 Packing & Rapping Training	〃	〃	2 個月 2 months

民營事業機構辦理之職業訓練(續)

Vocational Training Sponsored by Private Enterprises (Continued)

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
新竹玻璃製造廠股份有限公司 Hsinchu Glass Works	木箱檢驗訓練 Wooden Case Inspection Training	1	9	2 個月 2 months
〃	包裝器材訓練 Packing Materials Training	〃	2	1 個月 1 month
〃	散片庫操作訓練 Loose Lites Packing Room Operation Training	〃	9	3 個月 3 months
〃	成品庫操作訓練 Finished Products House Operation Training	〃	3	〃
〃	燒窰訓練 Furnace Operation Training	〃	〃	〃
〃	製磚及燒火 Brick Making & Curing Training	〃	〃	1 個月 1 month
〃	打片訓練 Glass Making Training	〃	30	〃
小計 Total		14	308	
味全食品工業股份有限公司 Wei Chuan Foods Corp	領班訓練 Foreman Training	1	60	10 小時 10 hours
小計 Total		1	60	
國光人壽保險公司 Kuo Kuang Life Insuance Co.	外野幹部訓練班 Salesman Training	11	89	1 週 1 week

民營事業機構辦理之職業訓練(續)

Vocational Training Sponsored by Private Enterprises (Continued)

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
國光人壽保險公司 Kuo-Kuang Life Insurance Co.	新進人員外野幹部訓練班 Orientation Training for Serviceman	2	29	3 週 3 weeks
〃	收費員講習會 Premium Collecter Seminar	10	80	1 週 1 week
〃	外野經理訓練班 Manager Training	5	28	〃
小計 Total		28	226	
唐榮鐵工廠股份有限公司 Tang Eng Iron Works Co.	災害防護與電氣安全講習班 Injury Protection & Electric Safety Course	1	76	36 小時 36 hours
〃	主計實務講習班 Accountant Seminar	1	40	32 小時 32 hours
小計 Total		2	116	
民德煤礦公司 Ming-Der Coal Mining Co.	安全訓練 Safety Training	1	40	
小計 Total		1	40	
宏裕煤礦公司 Hung-Yeu Coal Mining Co.	安全訓練 Safety Training	1	40	
小計 Total		1	40	

民營事業機構辦理之職業訓練(續)

Vocational Training Sponsored by Private Enterprises (Continued)

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
基隆煤礦公司 Keelung Coal Mining Co.	安全訓練 Safety Training	1	40	
小計 Total		1	40	
瑞三煤礦 Shui-Shan Mining Co.	安全訓練 Safety Training	1	40	
小計 Total		1	40	
建基煤礦公司 Chien-Chih Coal Mining Co.	安全訓練 Safety Training	1	40	
小計 Total		1	40	
石底煤礦公司 Shi-Dee Coal Mining Co.	安全訓練 Safety Training	1	20	
小計 Total		1	20	
民興紡織廠 Ming Shing Cotton Mill Co.	技術訓練班 Techanical Training	4	200	192 小時 192 hours
小計 Total		4	200	

民營事業機構辦理之職業訓練(續)

Vocational Training Sponsored by Private Enterprises (Continued)

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
六和紡織廠 Lio-Ho Cotton Weaving Mill	第二教育夜間補習班 Supplementary Education Evening Class	3	200	180 小時 180 hours
小計 Total		3	200	
台元紡織廠 Tai-Yuen Textile Co.	初級紡織技術訓練班 Elementary Weaving Skill Training	1	39	5 月 5 months
小計 Total		1	39	
興南汽車客運公司 Shin-Nan Bus Co.	服務員訓練班 Serviceman Training	2	38	84 小時 84 hours
〃	駕駛員訓練班 Driver Training	1	8	24 小時 24 hours
小計 Total		3	46	
豐原汽車客運公司 Fong-Yeun Bus Co.	售票員訓練班 Ticket Seller Class	4	195	3 小時 3 hours
小計 Total		4	195	

民營事業機構辦理之職業訓練(續)

Vocational Training Sponsored by Private Enterprises (Continued)

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
高雄汽車客運公司 Kao-Hsiung Bus Co.	駕駛員訓練班 Driver Training	1	45	66 小時 96 hours
〃	售票員訓練班 Ticket Seller Class	〃	60	196 小時 166 hours
小計 Total		2	105	

五、五十五年政府機關辦理之職業訓練

5. Vocational Training Sponsored by Government Agencies in 1966

政府機關別辦理職業訓練班數及受訓人數統計表

Classes & Trainees of Vocational Training in Government Agencies

政府機關別 Government Agencies	班數 Number of Clesses	受訓人數 Number of Trainees
司法行政部法官訓練所 Ministry of Justice, Judge Training Institute	5	330
行政院新聞局 Government Information Office of Executive Yuan	1	57
行政院主計處 Comptroller General, Executive Yuan	6	319
交通部民航局航空技術人員訓練班 Civil Aviation Bureau, Ministry of Communication	3	38
教育部心理衛生中心 Mental Hygiens Center of Ministry of Education	3	290
審計部 Ministry of Audit	2	60
中非技術合作委員會 Sino-Africa Technique Co-operation Committee	2	220
臺灣水利局 Taiwan Province, Water Conservancy Bureau	3	145
臺灣省交通處 Taiwan Province, Department of Communications	6	263
臺灣省社會處合作事業管理處 Taiwan Province, Department of Social Affairs, Cooperative Enterprise Administrative	4	196
臺灣省婦幼衛生研究所 Taiwan Province, Women and Children's Health Research Office	41	1,462
臺灣省訓練團 Taiwan Province Training Corps	16	970
臺灣省國民學校教師研習會 Taiwan Province, Primary School Teachers Symposium	15	2,760
臺灣省各農業改良場 Taiwan Provincial Agricultural Promotion Farm	15	646
臺灣省工礦檢查委員會 Taiwan Province, Industry & Mine inspection Committee	12	340
臺灣省觀光事業委員會 Provincial Tourism Committee	17	40

政府機關別辦理職業訓練班數及受訓人數統計表（續）

Classes & Trainees of Vocational Training in Government Agencies (Continued)

政府機關別 Governmeut Agencies	班數 Number of Classes	受訓人數 Number of Trainees
臺灣省北區國民就業輔導中心 North District Employment Service Center, Taiwan Province	7	457
基隆市國民就業輔導所 Keelung City, Employment Service Office	5	352
臺北市兒童心理衛生中心 Taipei Children Mental Hygiene Center	5	161
建設廳管理技術發展中心 Department of Reconstruction Management Technique Development Center.	11	113
合計 Total	163	9,219

政府機關辦理之職業訓練

Vocational Training Sponsored by Government Agencies

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
司法行政部司法官訓練所 Ministry of Justice, Judge Training Institute	司法官訓練 Judge Training	1	90	18個月 18 months
〃	現職監所人員訓練 Prison Officers on-the-Job Training	4	240	4週 4 weeks
小計 Total		5	330	
行政院新聞局 Government Information Office of Executive Yuan	公共關係研討會 Public Relations Symposium	1	57	
小計 Total		1	57	
行政院主計處 Comptroller General, Executive Yuan	統計人員講習班（普通班） Statistics Personnel Seminar (General Class)	2	99	2個月 2 months
〃	統計人員講習班（高級班） Statistics Personnel Seminar (Senior Class)	〃	100	〃
〃	主計儲備知能訓練班 Comptroller Reserve Knowledge Training Class	1	60	1個月 1 month
〃	統計人員訓練班 Statistics Personnel Training Class	〃	60	
小計 Total		6	319	

政府機關辦理之職業訓練(續)

Vocational Training Sponsored by Government Agencies (Continued)

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
交通部民航局航空技術人員訓練班 Civil Aviation Bureau, Ministry of Communications	空中交通管制人員 Air Traffic Controller Training	1	15	4個月 4 months
交通部民航局航空技術人員訓練班 Aviation Bureau, Ministry of Communications	無線電通信 Radio Communication Training	2	23	2個月 2 months
小計 Total		3	38	
教育部心理衛生中心 Mental Hygiene Center, Ministry of Education	心理衛生教育研習會 Mental Hygiene Education Symposium	2	190	5天 5days
〃	〃	1	100	
小計 Total		3	290	
審計部 Ministry of Audit	職員進修班(民法) Employee Upgrading Training Class (Civil Law)	1	30	36小時 36 hours
〃	職員進修班(會計) Emplyee Upgrading Training Class (Accounts)	〃	〃	48小時 48 hours
小計 Total		2	60	
中非技術合作委員會 Sino-Africa Techniqne Cooperation Committee	派赴非洲農耕示範隊員儲備訓練班 Reserve Training Class for Africa farm Demonstration Team	2	220	45天 45 days
小計 Total		2	220	

政府機關辦理之職業訓練(續)

Vocational Training Sponsored by Government Agencies (Continued)

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
臺灣省水利局 Taiwan Province, Water Conservancy Bureau	灌溉工程研究班 Irrigation Engineering Research Class	1	50	38天 38 days
〃	壩工工程 Dam Engineering	〃	45	30天 30 days
〃	防洪工程 Anti-Flood Engineering	〃	50	29天 29 days
小計 Total		3	145	
臺灣省交通處 Taiwan Province, Department of Communications	臺灣省政府交通機料人員訓練班 Taiwan Province Government Communicational Maintenance & Supply Personnel Training Class	2	74	1個月 1 month
〃	交通動員人員講習班 Communication Mobilization Personnel Seminar	3	165	2週 2 weeks
〃	港船從業人員訓練班 Harbor Boat Employee Training	1	24	1個月 1 month
小計 Total		6	263	
臺灣省社會處合作事業管理處 Taiwan Province, Department of Social Affairs, Cooperative Enterprise Administration	已辦合作人員訓練 Cooperative Enterprise Employee Training	4	196	3天 3 days
小計 Total		4	196	

政府機關辦理之職業訓練(續)

Vocational Training Sponsored by Government Agencies (Continued)

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
臺灣省婦幼衛生研究所 Taiwan Province, Women and Children's Heatlh Research Office	省縣市醫院婦兒科醫師訓練班 Provincial(Hsin)Hospital, Gynecologist & Pediatrics Training Course	1	10	2週 2 weeks
〃	省縣市立醫院婦兒科護產人員訓練班 Provincial(Hsin)Hospital Gynecology & Pediatrics Nurse Training Class	6	72	3週 3 weeks
〃	衛生局所醫護人員短期補充訓練班 Health Bureau(Center,)Doctors' and Nurses Short Period Suplementary Training Class	34	1,380	2天 2 days
小計 Total		41	1,462	
臺灣省訓練團 Taiwan Provincial Training Corps	普通行政人員訓練班 General Administration Personnel Training Class	2	100	1個月 1 month
〃	鄉鎮基層幹部訓練班 Rural and Town Basic Cadre Training Class	〃	200	〃
〃	議事人員訓練班 Councilor Training Class	1	80	〃
〃	戶籍行政人員訓練班 Household Registration Administrational Personnel Training Class	2	160	〃
〃	山地鄉村行政人員訓練班 Mountain Area Rural Administrational Personnel Training Class	〃	80	〃
〃	山地土地業務人員訓練班 Mountain Area Territory Affairs Personnel Training Class	1	30	3週 3 weeks
〃	役政人員訓練班 Conseription Personnel Training Class	2	100	〃
〃	農地重劃業務人員講習班 Farm Land Re-Plotting Personnel Seminar	1	60	2週 2 weeks

政府機關辦理之職業訓練(續)

Vocational Training Sponsored by Government Agencies (Continued)

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
臺灣省訓練團 Taiwan Provincial Training Corps	農地重劃工程人員講習班 Farm Land Replotting Engineers Training Class	1	40	2個月 2 months
〃	市地重劃人員訓練班 City Land Replotting Personnel Training Class	〃	60	1個月 1 month
〃	土地登記訓練班 Land Registration Personnel Training Class	〃	〃	〃
小計 Total		16	970	
臺灣省國民學校教師研習會 Taiwan Province, Primary School Teachers Symposium	臺灣省國民學校教師研習會 Provincial Primary School Teachers Symposium	12	1,800	3週 3 weeks
〃	國校校長研習會 Primary School Masters Symposium	1	720	1週 1 week
〃	國校校長儲備訓練班 Primary School Masters Reserve Training Class	〃	120	12週 12 weeks
〃	國校主任儲備訓練班 Primary School Deans Reserve Training Class	〃	〃	
小計 Total		15	2,760	
臺灣省各農業改良場 新竹區農業改良場 Taiwan Provincial Agricultural Promotion farm, Hsin-Chu District Agricultural Promotion Farm	農業推廣人員綜合技術訓練 Agriculture Promotion Personnel Training	4	160	16小時 16 hours
臺中區農業改良場 Taichung District, Agriculture Promotion Farm	臺灣省臺中農業推廣人員綜合技術訓練 Taichung District Agriculture Promotion Personnel Training	〃	200	2天 2 days

政府機關辦理之職業訓練(續)

Vocational Training Sponsored by Government Agencies (Continued)

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
高雄區農業改良場 Kao-Hsiung District Agriculture Promotion Farm	農業綜合技術訓練 Agriculture Combined Technique Training	2	100	2天 2 days
〃	畜牧綜合技術訓練 Livestock Combined Technique Training	1	50	〃
花蓮區農業改良場 Hua-Lian District Agriculture Promotion Farm	水稻共同幹部技術講習 Rice Common Cadre Technique	〃	23	8小時 8 hours
〃	推廣人員綜合技術訓練班 Promotion Personnel Combined Technique Training	〃	40	16小時 16 hours
〃	水稻病蟲害防治人員講習 Personnel Training For rice Prevention of Damage by Blight & Harmful Insects	〃	60	8小時 8 hours
〃	各市鄉鎮農會總幹事訓練 Rural & Town Agriculture Association Secretaries Training	〃	13	16小時 16 hours
小計 Total		15	646	
臺灣省工礦檢查委員會 Taiwan Province Industry and Mine Inspection Committee	礦場在職工人安全訓練班 Mine Workers Safety Training Class	12	340	24小時 24 hours
小計 Total		12	340	
臺灣省觀光事業委員會 Provincial Tourism Committee	風景區管理及服務人員講習班 Scenic Areas management & Service Staff Seminar	1	40	6天 6 days
小計 Total		1	40	

政府機關辦理之職業訓練(續)

Vocational Training Sponsored by Government Agencies (Continued)

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
臺灣省北區國民就業輔導中心 North District Employment Service Center, Taiwan Province	化學技工訓練 Chemicial Technicians Training	1	100	3 個月 3 months
〃	紡織工訓練 Textile Workers Training	4	300	〃
〃	機械研習 Machine Class	1	42	〃
〃	藝術陶瓷 Art Ceramic Class	〃	15	〃
小計 Total		7	457	〃
基隆市國民就業輔導所 Keelung City Employment Service Office	遠洋漁船船員訓練班 Highsea Fishing Boat Crew Training Class	1	89	2-3 個月 2-3 months
〃	工廠技藝班 Factory Technique Class	4	263	1-3 個月 1-3 months
小計 Total		5	352	
臺北市兒童心理衛生中心 Taipei Children Mental Hygiene Center	兒童福利機構工作人員訓練班 Children Welfare Agency Workers' Training Class	1	16	1 學期 1 Term
〃	東門國校心理衛生工作研討會 Tung-Men Primary School, Mental Hygiene Workers Symposium	〃	15	1 年 1 year
〃	桃園國校心理衛生研討會 Tao-Yuan Primary School, Mental Hygiene Workers' Symposium	〃	80	〃

政府機關辦理之職業訓練(續)

Vocational Training Sponsored by Government Agencies (Continued)

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
臺北市兒童心理衛生中心 Taipei Children Mental Hygiene Center	臺北市智能不足兒童特殊教育班 Taipei Mentally Deticient Childrens Special Education Class	1	10	1 年 1 year
〃	臺北市衛生局所辦衛生所主任醫師及部份開業醫師心理衛生講習班 Taipei Health Bureau, Health Center Doctors' and Part Practicing Doctors' Mental Hygiene Seminar	1	40	20 小時 20 hours
小計 Total		5	161	
建設廳管理技術發展中心 Management Technique Development Center, Department of Reconstruction	工作教導訓練 Job Instruction Training	1	12	36 小時 36 hours
〃	工作關係訓練 Job Relations Training	4	37	〃
〃	工作方法訓練 Job Method Training	3	36	〃
〃	如何主持討論會訓練 How to Conduct Forum Training	1	12	〃
〃	工作考成訓練 Work Efficiency Evaluation Training	2	16	〃
小計 Total		11	113	〃

六、五十五年各級學校辦理之職業訓練

6. Vocational Training Spansored by Schools and Colleges in 1966

各級學校別辦理職業訓練班及受訓人數統計表

Classes & Trainees of Vocational Training in Schools

學校別 Schools	班數 Number of Classes	受訓人數 Number of Trainees
國立政治大學公共行政及企業管理中心 Center for Public & Business Administration Education, National Cheng-chi University	24	1.137
臺灣省立師範大學中等學校研習中心 Research Center for Middle School Teachers Taiwan Priovincial Normal University	10	400
臺北市立高級工業職業學校 Taipei V. I. School	5	102
私立明志工業專科學校 Ming-cheh Institute of Technology	1	60
臺灣省立宜蘭農業職業學校 Provincial I-Lan V.A School	7	383
臺灣省立豐原商業職業學校 Provincial Feng-yuan V. C. School	6	190
臺灣省立彰化工業職業學校 Provincial Chang-Hua V.I. School	4	115
臺灣省立嘉義高級農業職業學校 Provincial Chia-I Senior V. A. School	9	340
臺灣省立臺北商業職業學校附設技藝訓練中心 Provinciol Taipei V. C. School, Supplementary Skill Training Center	19	657
臺灣省立中壢商業職業學校附設技藝訓練中心 Provincial Chung-li V. C. School, Supplementary Skill Training Center	3	41
臺灣省立新竹工業職業學校 Provincial Hsin-chu V.I. School	6	180
臺灣省立花蓮工業職業學校附設實用技藝訓練中心 Provinciai Hualian V. I. School, Supplementary Skill Training Center	6	
臺中市立家事職業學校附設實用技藝訓練中心 Taichung Home Economics Vocationol School, Supplementary Skill Training Center	8	116
臺灣省立西螺農業職業學校附設實用技藝訓練中心 Provincial Shi-lu V.A. School, Supplementary Skill Training Center	3	117

各級學校別辦理職業訓練班及受訓人數統計表（續）

Classes & Trainees of Vocational Training in Schools (Continued)

學校別 Schools	班數 Number of Classes	受訓人數 Number of Trainees
臺灣省立嘉義工業職業學校附設實用技藝訓練中心 Prnvincial Chia-I V. I. School Supplementary Skill Training Center	10	200
臺灣省立嘉義商業職業學校附設實用技藝訓練中心 Provincial Chia-I V. C. School, Supplementary Skill Training Center	11	460
臺灣省立嘉義家事職業學校附設技藝訓練中心 Provincial Chia-I Homemaking Vocational School, Supplementary Skill Training Center	3	110
臺灣省立臺南工業職業學校附設實用技藝訓練中心 Provincial Tainan V. I School, Supplementary Skill Training Center	9	202
臺灣省立臺南高級農業職業學校附設實用技藝訓練中心 Provincial Tainan V. I. School Supplementary Skill Training Center	3	90
臺灣省立高雄工業職業學校附設實用技藝訓練中心 Provincial Kao-hsiung. V. I. School, Supplementary Skill Training Center	9	203
臺灣省立屏東工業職業學校附設實用技藝訓練中心 Provincial Pin-tung V. I. School, Supplemantary Skill Training Center	11	205
臺灣省立屏東農業專科學校附設實用技藝訓練中心 Provincial Pin-tung Institute of Agriculture, Supplementary Skill Training Center	10	500
省立臺北第二女子中學附設實用技藝訓練中心 Provincial The Second Taipei Middle Girl School, Supplementary Skill Training Center	6	200
省立高雄女子中學附設實用技藝訓練中心 Provincial Kao-hsiung Girl School, Supplementary Skill Training Center	5	182
宜蘭縣頭城中學附設實用技藝訓練中心 I-lan Hsian, Toa-chen Middle School, Supplementary Skill Training Center	6	120
嘉義縣立東石中學附設實用技藝訓練中心 Chia-i, Tung-shi Middle School, Supplementary Skill Training Center	8	211

各級學校別辦理職業訓練班及受訓人數統計表（續）

Classes & Trainees of Vocational Training in Schools (Continued)

學校別 Schools	班數 Number of Classes	受訓人數 Number of Trainees
臺南縣私立南光中學附設實用技藝訓練中心 Tainan Hsing, Nan-kuang Middle School, Supplementary Skill Training Center	4	198
省立竹東高級中學附設實用技藝訓練中心 Provincial Chu-tung Senior High School, Supplementary Skill Training Center	6	100
省立大甲中學附設實用技藝訓練中心 Provincial Ta-cua Middle School, Supplementary Skill Training Center	9	360
省立南投中學附設實用技藝訓練中心 Provincial Nan-toa Middle School, Supplementary Skill Training Center	2	111
省立高雄中學附設實用技藝訓練中心 Provincial Kua-hsiung Middle School, Supplementary Skill Training Center	6	234
省立基隆女子中學附設實用技藝訓練中心 Provincial Keelung Middle Girl School, Supplementary Skill Training Center	8	189
省立高雄高級水產職業學校附設實用技藝訓練中心 Provincial Kao-hsiung Aquatic Vocational School, Supplementary Skill Training Center	7	119
省立澎湖水產職業學校附設實用技藝訓練中心 Provincial Pen-hu Aquatic Vocational School, Supplementary Skill Training Center	3	140
省立師範大學附屬中學附設實用技藝訓練中心 Provincial Normal University, Entrusted Middle Shool, Supplementary Skill Training Center	6	120
省立中壢中學附設實用技藝訓練中心 Provincial Chung-li Middle Shool, Supplementary Skill Training Center	4	84
省立臺南商業職業學校附設實用技藝訓練中心 Provincial Tainan V. C. School, Supplementary Skill Training Center	7	
省立高雄商業職業學校附設實用技藝訓練中心 Provincial Koa-Hsiung V. C. School, Supplementary Skill Training Center	12	540
花蓮縣立商業職業學校附設實用技藝訓練中心 Hwa-lian V. C. School, Supplementary Skill Training Center	12	319

各級學校別辦理職業訓練班及受訓人數統表計（續）

Classes & Trainees of Vocational Training in Schools (Continued)

學校別 Schools	班數 Number of Classes	受訓人數 Number of Trainees
省立基隆高級水產職業學校附設實用技藝訓練中心 Provincial Keelung Vocational Aquatic School, Supplementary Skill Training Cente	7	
省立新竹商業職業學校附設實用技藝訓練中心 Provincial Hsin-chu, V. C. School, Supplementary Skill Training Center	10	327
省立臺中商業職業專科學校附設實用技藝訓練中心 Provincial Tai-chung V. C. School, Supplementary Skill Training Center	20	
省立彰化商業職業學校附設實用技藝訓練中心 Provincial Chang-Hwa. V. C. School, Supplementary Skill Training Center	18	
省立臺中高級工業職業學校附設實用技藝訓練中心 Provincial Tai-chung V. I. School, Supplementary Skill Training Center	18	
省立桃園農業職業學校附設實用技藝訓練中心 Provincial Tao-Yuan V. A. School. Supplementary Skill Training Center	5	
省立臺中農業職業學校附設實用技藝訓練中心 Provincial Tai-chung V. A. School, Supplementary Skill Training Center	8	270
合計 Total	374	9,632

各級學校辦理之職業訓練

Vocational Training Sponsored by Schools and Colleges

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
國立政治大學公共行政及企業管理中心 Center for Public and Business Administration Eduction, National Chengchi Uuiversity	電子資料處理講習班 Electronic Data Processing Seminar	6	124	4 週 4 weeks
〃	財務管理與成本控制研討會 Property Management & Cost Control Symposium	2	65	〃
〃	會計進修班 Accountant Upgrading Instruction	〃	173	4 個月 4 months
〃	高級主管人員管理發展研討會 High Level Manager Management Development Symposium	1	36	1 週 1 week
〃	外銷實務研討班 Export Practise Symposium	〃	40	2 週 2 weeks
〃	審核人員研討班 Auditor Symposium	〃	33	6 週 6 weeks
〃	聯勤生產主管人員現代管理研討會 CSF Production manager Modern Management Symposium	3	108	2 週 2 weeks
〃	經濟新聞人員研討會 Economic News Men Symposium	1	43	〃
〃	煤礦業管理研討會 Coal Mining Management Symposium	〃	30	4 週 4 weeks
〃	臺灣電力公司會計人員講習班 Accountant Seminar, Taiwan Power Co.	〃	〃	4 個月 4 months
〃	實用經濟講習班 Practical Economy Seminar	〃	27	6 個月 6 months
〃	聯勤營區軍官團現代管理講習會 Modern Management Seminar for Officers in CSF	2	300	2 週 2 weeks
〃	五十五年公共關係研討會 Fiscal Year 1966, Public Relations Symposium	1	57	〃

各級學校辦理之職業訓練(續)

Vocational Training Sponsored by Schools and Colleges (Continued)

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
國立政治大學公共行政及企業管理中心 Center for Public and Business Administration Eduction, National Chengchi University	外銷實務進修班(初級組) Export Practise Upgrading Training Course (Basic Team)	1	71	2 個月 2 months
小計 Total		24	1137	
臺灣省立師範大學中等學校研習中心 Research Center for Middle School Teachers, Provincial Normal Uuiversity	數學科研習班 Mathematics Symposium	3	150	4-8 週 4-8 weeks
〃	物理科研習班 Physics Symposium	1	40	2-6 週 2-6 weeks
〃	化學科研習班 Chemistry Symposium	〃	50	4-6 週 4-6 weeks
〃	生物科研習班 Biology Symposium	〃	40	2-6 週 2-6 weeks
〃	實驗室管理班 Laboratory Management Class	〃	〃	4-5 週 4-5 weeks
〃	教育人員研習班 Administration Symposium	3	80	〃
小計 Total		10	400	
臺北市立高級工業職業學校 Taipei V.I. School	機器脚踏車修護科 Motorcycle Maintenance Class	1	20	4 個月 4 months
〃	無線電裝修科 Radio Assembly & Repair Class	〃	22	〃

各級學校辦理之職業訓練(續)

Vocational Training Sponsored by Schools and Colleges (Continued)

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
臺北市立高級工業職業學校 Taipei V.I. School	汽車駕駛科 Automobile Driving Class	1	20	4 個月 4 months
〃	機械製圖科 Mechanical Drawing Class	〃	18	〃
〃	冷凍科 Refrigeration Class	〃	22	〃
小計 Total		5	102	
私立明志工業專科學校 Ming-Cheh Institute of Technology	技工訓練班 Journeyman Training Class	1	60	10 個月 10 months
小計 Total		1	60	
臺灣省立宜蘭農業職業學校 Provincial I-Lan V.A. School	珠算簿記科 Abacus Arithmetic & Bookkeeping Class	2	106	16 週 16 weeks
〃	會計簿記科 Accounting & Bookkeeping Class	1	27	
〃	英文打字科 English Typewriting Class	〃	14	
〃	縫紉編織科 Sewing & Knitting Class	〃	25	
〃	農產品加工科 Agricultural Product Processing Class	2	211	4 週 4 weeks
小計 Total		7	833	

各級學校辦理之職業訓練(續)

Vocational Training Sponsored by Schools and Colleges (Continued)

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
臺灣省立豐原商業職業學校 Provincial Feng-Yuan Commercial Vocational School	簿記珠算科 Bookkeeping & Abacus Arithmetic Class	4	130	288 小時 288 hours
〃	中文打字科 Chinese Type-Writing Class	2	60	〃
小計 Total		6	190	
臺灣省立彰化工業職業學校 Provincial Chang-Hua V.I. School	車床工科 Lathe Operator Class	1	30	10 個月 10 months
〃	汽車駕駛科 Automobile Driving Class	2	60	5 個月 5 months
〃	機器脚踏車修護班 Motorcycle Maintenance Class	1	25	16 週 16 weeks
小計 Total		4	115	
臺灣省立嘉義高級農業職業學校 Provincial Chia-I Senior V.A. School	農村家事技藝訓練 Rural House Keeping technique Training	2	80	17 週 17 weeks
〃	農業技藝訓練 Farming Techniques Training	〃	60	〃
〃	農業加工技藝訓練 Farm Processing Technique Training	〃	100	〃
〃	農業機具技藝訓練 Farm Machinery Technique Training	〃	60	〃

各級學校辦理之職業訓練(續)

Vocational Training Sponsored by Schcols and Colleges (Continued)

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
臺灣省立嘉義高級農業職業學校 Provincial Chia-1 Senior V. A. School	農產加工貧民訓練 Farm Products Processing Training for the Poor	1	40	17 週 17 weeks
小計 Total		9	340	
臺灣省立臺北商業職業學校附設技藝訓練中心 Provincial Taipei Commercial Vocational School Supplementary Skill Training Center	成本會計科 Cost Accounting Class	2	80	16 週 16 weeks
〃	商業會計科 Commercial Accounting Class	〃	100	〃
〃	簿記珠算科 Bookkeeping & Abacus Arithmetic Class	4	200	〃
〃	英文打字科 English Typewriting Class	2	60	〃
〃	中文打字科 Chinese Type-Writing Class	〃	〃	〃
〃	理髮科 Hair-Cutting Class	〃	30	〃
〃	家事服務科 House Keeping Service Class	〃	40	〃
〃	貧民技藝訓練簿記珠算班 Bookkeeping & Abacus Arithmetic Class	1	〃	20 週 20 weeks
〃	國軍待退官兵商業會計訓練班 Retired Servicemen Commercial Accounting Training Class	〃	37	48 週 48 weeks

各級學校辦理之職業訓練(續)

Vocational Training Sponsored by Schools and Colleges (Continued)

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
臺灣省立臺北商業職業學校附設技藝訓練中心 Provincial Taipei Commercial Vocational School Supplementary Skill Training Center	退役官兵子女中文打字訓練班 Retired Servicemen's Children Chinese Typewriting Training Class	1	10	12 週 12 weeks
小計 Total		19	657	
臺灣省立中壢商業職業學校附設技藝訓練中心 Provincial Chung-Li Commercial Vocational School Supplementary Skill Training Center	珠算簿記科 Abacus Aritnmetic & Bookkeeping	1	25	16 週 16 weeks
〃	中文打字科 Chinese Type-Writing Class	〃	6	〃
〃	英文打字科 English Type-Writing Class	〃	10	〃
小計 Total		3	41	
臺灣省立新竹工業職業學校 Provincial Hsin-Chu Industrial Vocational School	無線電裝修科(初級班) Radio Assembly (Basic Class)	2	60	18 週 18 weeks
〃	無線電裝修科(高級班) Radio Assembly (Senior Class)	1	30	〃
〃	機器二輪車修護科 Motorcycle Repair Class	2	60	〃
〃	機械工科 Machinist Class	1	30	〃
小計 Total		6	180	

各級學校辦理之職業訓練(續)

Vocational Training Sponsored by Schools and Colleges (Continued)

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
臺灣省立花蓮工業職業學校附設實用技藝訓練中心 Prorincial Hualian V.I. School Supplementary Skill Training Center	大理石工 Marble working Class	1		18 週 18 weeks
〃	汽車機車修護 Automobile & Motor Cycle Repair	〃		〃
〃	汽車駕駛 Automobile Driving	〃		〃
〃	傢具木工 Furniture making	〃		〃
〃	初級無線電裝修 Radio Assembly Class (Basic Course)	〃		〃
〃	高級無線電裝修 Radio Assembly Class(Senior Course)	〃		〃
小計 Total		6		
臺中市立家事職業學校附設實用技藝訓練中心 Taichung House Keeping Vocational School Supplementary Skill Traing Center	縫級科 Sewing Class	2	41	4 個月 4 months
〃	烹飪科 Cooking Class	〃	32	〃
〃	刺綉科 Needle Point Class	〃	16	〃
〃	家庭服務科 House Service	〃	27	〃
小計 Total		8	116	

各級學校辦理之職業訓練(續)

Vocational Training Sponsored by Schools and Colleges (Continued)

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
臺灣省立西螺農業職業學校附設實用技藝訓練中心 Provincial Shi-Lo Agriculture Vocational School Supplementary Skill Training Center	農村家事科 Rural House Keeping	1	47	12 週 12 weeks
〃	農村電工科 Rural Electrician Class	〃	30	〃
〃	農產加工科 Agricultural Product Processing Class	〃	40	16 週 16 weeks
小計 Total		3	117	
臺灣省立嘉義工業職業學校附設實用技藝訓練中心 Provincial Chia-I Industrial Vocational School Supplemenary Skill Training Center.	車床工科 Lathe Operator Class	2	40	16 週 16 weeks
〃	無線電裝修科 Radio Assembly Class	〃	〃	〃
〃	汽車駕駛科 Automobile Driving	〃	〃	〃
〃	機車修護科 Motorcycle Repair Class	〃	〃	〃
〃	配線工科 Wiremen Class	〃	〃	〃
小計 Total		10	200	
臺灣省立嘉義商業職業學校附設實用技藝訓練中心 Provincial Chia-I Commercial Vocational Sehool, Supplementary Skill Training Center	會計珠算科 Accounting & Abacus Arithmetic	2	100	4 個月 4 months

各級學校辦理之職業訓練(續)

Vocational Training Sponsored by Schools and Colleges (Continued)

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
臺灣省立嘉義商業職業學校附設實用技藝訓練中心 Provincial Chia-I Commercial Vocational School, Supplementary Skill Training Center	簿記珠算科 Bookkeeping & Abacus Arithmetic	4	200	4 個月 4 months
〃	店員科 Counterman Training Class	1	40	〃
〃	中文打字科 Chinese Type-writing Class	2	60	〃
〃	英文打字科 English Type-Writing Class	〃	62	〃
小計 Total		11	460	
臺灣省立嘉義家事職業學校附設實用技藝訓練中心 Provincial Chia-I House keeping Vocational School, Entrusted Pratice Technique Training Center.	縫級科 Sewing	1	40	16 週 16 weeks
〃	珠算科 Abacus Arithmetic Class	〃	〃	〃
〃	簿記珠算科 Bookkeeping Abacus Arithmetio	〃	30	〃
小計 Total		3	110	
臺灣省立臺南工業職業學校附設實用技藝訓練中心 Provincial Tainan Industrial Vocational School, Supplementary Skill Training Center.	汽車修護科 Automobile Repair Class	1	20	16 週 16 weeks
〃	摩托車修理科 Motorcycle Repair Class	〃	27	

各級學校辦理之職業訓練(續)

Vocational Training Sponsored by Schools and Colleges (Continued)

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
臺灣省臺南工業職業學校附設實用技藝訓練中心 Provincial Tainan Industry Vocational School Supplementary Skill Training Center	車床科 Lathe Operator Class	1	24	16 週 16 weeks
〃	建築製圖科 Construction Drawing	〃	15	〃
〃	無線電修護科 Radio Repair Class	〃	24	〃
〃	實用化學科 Practical Chemistry Training Class	〃	21	〃
〃	汽車駕駛科 Automobile Driving Class	〃	21	〃
〃	機械製圖科 Mechanical Drawing Class	〃	20	18 週 18 weeks
〃	貧民技訓班摩托車修護科 The Technique Training Class for the Poor, Motorcycle Repair Course	〃	30	
小計 Total		9	202	
臺灣省立臺南高級農業職業學校附設實用技藝訓練中心 Provincial Tainan Senior Agriculture Vocational School Supplementary Skill Training Center	綜合農業班 Combined Agriculture Class	1	30	10 週 10 weeks
〃	園藝班 Gardening	〃	〃	〃
〃	縫紉班 Sewing	〃	〃	〃
小計 Total		3	90	

各級學校辦理之職業訓練(續)

Vocational Training Sponsosed by Schools and Colleges (Continued)

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
臺灣省立高雄工業職業學校附設實用技藝訓練中心 Provincial Kao-Hsiung Industrial Vocational School Supplementary Skill Trainiing Center	汽車駕駛科 Automobile Driving	2	40	960 小時 960 hours
〃	水電工程科 Water & Electricity Engineering	1	11	1 年 1 year
〃	電器修護科 Electric Apparatus repair	〃	21	〃
〃	機工科 Mechanic	〃	12	〃
〃	化工科 Chemistry	〃	43	〃
〃	電工科 Electricity	〃	40	〃
〃	無線電裝修科 Radio Assembly & Repair	2	36	〃
小計 Total		9	203	
臺灣省立屏東工業職業學校附設實用技藝訓練中心 Provincial Pin-Tung Industrial Vocational School Supplementary Skill Training Center	無線電機裝修科(高級班) Radio Assembly & Repair (Senior Class)	2	30	20 週 20 weeks
〃	無線電機裝修科(初級班) Radio Assembly & Repair (Basic Class)	4	60	〃
〃	機器脚踏車修護科 Motorcycle Repair	3	75	〃
〃	土木建築製圖科 Civil-Construction Drawing	1	25	〃

各級學校辦理之職業訓練(續)

Vocational Training Sponsored by Schools and Colleges (Continued)

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
臺灣省立屏東工業職業學校附設技藝訓練中心 Provincial Pin-Tung Industrial Vocational School Supplementary Skill Training Center	電工科 Electric Worker Training Class	1	15	20 週 20 weeks
小計 Total		11	205	
臺灣省立屏東農業專科學校附設實用技藝訓練中心 Provincial Pin-Tung Institute of Agriculture Supplementary Skill Training Center	農產加工科 Agricultural Product Processing	6	300	120 小時 120 hours
〃	綜合農業科 Combined Agriculture	3	150	〃
〃	禽畜飼養科 Poultry and livestock Feeding	1	50	〃
小計 Total		10	500	
省立臺北第二女子中學附設實用技藝訓練中心 Provincial The Second Taipei Middle Girl School Supplementary Skill Training Center	家事技藝班 House Keeping Course	6	200	
小計 Total		6	200	
省立高雄女子中學附設實用技藝訓練中心 Provincial Kao-Hsiung Middle Girl School Supplementary Skill Training Center	實用技藝訓練班 Practical Skill Training Course	5	182	
小計 Total		5	182	

各級學校辦理之職業訓練(續)

Vocational Training Sponsored by Schools and Colleges (Continued)

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
宜蘭縣頭城中學附設實用技藝訓練中心 I-Lan Hsian Toa-Chen Middle School Supplementary Skill Training Center	汽車駕駛保養班 Automobile Driving & Maintenance Class	2	34	
〃	技藝班 Skill Training Class	〃	44	
〃	簿記珠算班 Book Keeping & Abacus Arithmetic Class	1	26	
〃	商業美藝班 Commercial Arts Class	〃	16	
小計 Total		6	120	
嘉義縣立東石中學附設實用技藝訓練班 Chai-I Tung-Shi Middle School Supplementary Skill Training Center	珠算班 Abacus Arithmetic Class	2	85	
〃	中英文打字班 Chinese & English Type-Writing Class	〃	40	
〃	家事縫紉班 House Keeping & Sewing Class	〃	58	
〃	手工藝班 Handicraft Training Class	〃	28	
小計 Total		8	211	
臺南縣私立南光中學附設實用技藝訓練中心 Tai-Nan Nan-Kuang Middle School Supplementary Skill Training Center	臺糖農場管理班 Sugar farm Management Training Course	1	40	

各級學校辦理之職業訓練(續)

Vocational Training Sponsored by Schools and Colleges (Continued)

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
臺南縣私立南光中學附設實用技藝訓練中心 Tai-Nan, Nan-Kuang Middle School Supplementary Skill Training Center	農務技工訓練班 Agricultural Skill Worker Training Class	1	75	
〃	灌溉人員訓練班 Irrigation Workers Training Class	〃	46	
〃	道班工訓練班 Railway Maintenance Training Class	〃	37	
小計 Total		4	198	
省立竹東高級中學附設實用技藝訓練中心 Provincial Chu-Tung Senior High School Supplementary Skill Training Center	英文打字班 English Type-Writing Class	2	37	
〃	簿記珠算班 Book Keeping & Abacus Arithmetic Training Class	〃	43	
〃	電器修護班 Electric Equipments Maintenance Class	1	12	
〃	廣告畫班 Advertisement Painting Class	〃	8	
小計 Total		6	100	
省立大甲中學附設實用技藝訓練中心 Provincial Ta-Cha Middle School Supplementary Skill Training Center	商業簿記班 Commercial Book Keeping Class	2	80	
〃	會計班 Accounting Class	1	40	

各級學校辦理之職業訓練(續)

Vocational Training Sponsored by Schools and Colleges (Continued)

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
省立大甲中學附設實用技藝訓練中心 Provincial Ta-Cha Middle School Supplementary Skill Training Center	縫級班 Sewing Class	2	80	
〃	英文打字班 English Type-writing Class	〃	〃	
〃	食品加工班 Food Processing Class	〃	〃	
小計 Total		9	360	
省立南投中學附設實用技藝訓練中心 Provincial Nan-Toa Middle School Supplementary Skill Training Center	技藝訓練班 Skill Training Class	2	111	
小計 Total		2	111	
省立高雄中學附設實用技藝訓練中心 Provincial Kao-Hsiung Middle School Supplementary Skill Training Center	簿記珠算班 Book Keeping & Abacus Arithmetic Training Class	4	175	
〃	收音機裝修班 Radio Assembly & Repair Class	2	59	
小計 Total		6	234	
省立基隆女子中學附設實用技藝訓練中心 Provincial Keelung Middle Girl School Supplementary Skill Training Center	簿記珠算班 Book-Keeping & Abacus Arithmetic Class	2	70	

各級學校辦理之職業訓練(續)

Vocational Training Sponsored by Schools and Colleges (Continued)

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
省立基隆女子中學附設實用技藝訓練中心 Provincial Keelung Middle Gril School, Supplmentary Skill Training Center	縫級班 Sewing Class	2	54	
〃	中文打字班 Chinese Type-Writing Class	〃	37	
〃	英文打字班 English Type-Writing Class	〃	28	
小計 Total		8	189	
省立高雄高級水產職業學校附設實用技藝訓練中心 Provincial Kao-Hsiung Aquatic Vocational School Supplementary Training Center	駕駛班 Automobile Driving Class	2	29	
〃	輪機班 Machinery Class	〃	60	
〃	漁業班 Fishery Class	〃		
〃	乙種船員班 B-Class Mariner Training Class	1	30	
小計 Total		7	119	
省立澎湖水產職業學校附設實用技藝訓練中心 Provincial Pen-Hu Aquatic Vocational School, Supplementary Training Center	水產經營班 Aquatic Products Management Class	2	92	
〃	輪機班 Machinery Class	1	48	
小計 Total		3	140	

各級學校辦理之職業訓練(續)

Vocational Training Sponsored by Schools and Colleges (Continued)

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
省立師範大學附屬中學附設實用技藝訓練中心 Provincial Normal University Entrusted Middle School Supplementary Practical Skill Training Center	金工班 Machinist Training Class	1	18	
〃	印刷班 Printing Training Class	〃	17	
〃	廣告畫班 Advertising Class	〃	18	
〃	收音機裝修班 Radio Assembly & Repair Class	〃	22	
〃	冷機修護班 Rafrigeration Maintenance Class	〃	20	
〃	電視修護班 T.V. Set Maintenance Class	〃	25	
小計 Total		6	120	
省立中壢中學附設實用技藝訓練中心 Provincial Chung-Li Middle School, Supplementary Skill Training Center	機械工訓練班 Machinist Training Class	1	22	
〃	汽車修護訓練班 Automobile Maintenance Training Class	〃	〃	
〃	手工藝訓練班 Handicraft Training Class	〃	15	
〃	紡織訓練班 Weaving Training Class	〃	25	
小計 Total		4	64	

各級學校辦理之職業訓練(續)

Vocational Training Sponsored by Schools and Colleges (Continued)

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
省立臺南商業職業學校附設實用技藝訓練中心 Provincial Tai-Nan V. C. School, Supplementary Skill Training Center	簿記珠算班 Book Keeping & Abacus Arithmetic Training Class	4		
〃	中文打字班 Chinese Type-Writing Class	2		
〃	英文打字班 English Type-Writing Class	1		
小計 Total		7		
省立高雄商業職業學校附設實用技藝訓練中心 Provincial Kao-Hsiung V. C. School, Supplermentary Skill Training Center	簿記珠算班 Book Keeping & Abacus Arithmetic Training Class	8	380	
〃	中文打字班 Chinese Type-Writing Class	2	80	
〃	英文打字班 English Type-Writing Class	〃	〃	
小計 Total		12	540	
花蓮縣立商業職業學校附設實用技藝訓練中心 Hwa-Liun V.C. School Supplementary Skill Training Center	簿記珠算班 Book Keeping & Abacus Arithmetic Training Class	4	131	
〃	中文打字班 Chinese Type-Writing Class	2	47	
〃	英文打字班 English Type-Writing Class	〃	37	

各級學校辦理之職業訓練(續)

Vocational Training Sponsored by Schools and Colleges (Continued)

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
花蓮縣立商業職業學校附設實用技藝訓練中心 Hwa-liun V. C. School Supplementary Skill Training Center	會計珠算班 Accounting & Abacus Arithmetic Class	2	59	
〃	廣告畫班 Advertising Class	〃	45	
小計 Total		12	319	
省立基隆高級水產職業學校附設實用技藝訓練中心 Provincial Keelung Vocational Aquatic School Supplementary Training Center	駕駛訓練班 Navigating Class	2		
〃	輪機訓練班 Machinery Class	〃		
〃	經營科訓練班 Management Class	〃		
〃	餐勤訓練班 Meal Service Training Class	1		
小計 Total		7		
省立新竹商業職業學校附設實用技藝訓練中心 Provincial Hsin-Chu V. C. School Supplementary Skill Training Center	簿記珠算班 Book Keeping & Abacus Arithmetic Class	2	102	
〃	會計珠算班 Accounting & Abacus Arithmetic Class	1	28	
〃	廣告畫班 Advertising Class	2	34	

各級學校辦理之職業訓練(續)

Vocational Training Sponsored by Schools and Colleges (Continued)

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
省立新竹商業職業學校附設實用技藝訓練中心 Provincial Hsin-Chu V. C. School Supplmentary Skill Training Center	中文打字班 Chinese Type-Writing Class	2	59	
〃	英文打字班 English Type-Writing Class	〃	53	
〃	縫紉編織班 Sewing & Weaving Class	1	51	
小計 Total		10	327	
省立臺中商業職業專科學校附設實用技藝訓練中心 Provincial Tai-Chung V.C. School, Supplementary Training Center	會計珠算班 Accounting & Abacus Arithmetic Class	2		
〃	簿記珠算班 Book Keeping & Abacus Arthmetic Class	8		
〃	中文打字班 Chinese Type-Writing Class	4		
〃	英文打字班 English Type-Writing Class	2		
〃	縫紉班 Sewing Class	〃		
〃	理髮班 Hair-Cutting Class	〃		
小計 Total		20		

各級學校辦理之職業訓練(續)

Vocational Training Sponsored by Schools and Colleges (Continued)

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
省立彰化商業職業學校附設實用技藝訓練中心 Provincial Chang-Hwa V.C. School, Supplementary Training Center	簿記珠算班 Book Keeping & Abacus Arithmetic Class	6		
〃	照相班 Photographing Class	2		
〃	中文打字班 Chinese Type-Writing Class	〃		
〃	縫級編織班 Sewing Class	〃		
〃	會計珠算班 Accounting & Abacus Arithmetic Class	〃		
〃	英文打字班 English Type-Writing Class	〃		
〃	廣告製畫班 Advertising Class	〃		
小計 Total		18		
省立臺中高級工業職業學校附設實用技藝訓練中心 Provincial Tai-Chung V. I. School, Supplementary Training Center	初級無線機裝修班 Radio Assembly & Repair Junior Class	2		
〃	高級無線機裝修班 Radio Assembly & Repair Senior Class	1		
〃	車床工班 Lathe Operator	〃		
〃	機械製圖班 Mechanical Drawing Class	〃		

各級學校辦理之職業訓練(續)

Vocational Training Sponsored by Schools and Colleges (Continued)

單位名稱 Sponsoring Establishments	班別 Name of Classse	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
省立台中高級工業職業學校附設實用技藝訓練中心 Provincial Tai-Chung V.I. School, Supplementary Training Center	電匠預訓班 Electrician Training Class	1		
〃	機車修護班 Motorcycle Maintenance	2		
〃	冷凍設備修護班 Rafrigeration Maintenance Class	〃		
〃	家用電具修護班 Home-Use Electric Equipments	1		
〃	電信班 Tele-Communication Class	2		
〃	配電班 Wiremen Training Class	〃		
〃	海外青年機車修護班 Overseas Youth Vehicle Maintenance Class	1		
〃	海外青年電機修護班 Electric Maintenance Class for Overseas Youth	〃		
小計 Total		18		
省立桃園農業職業學校 Provincial Tao-Yuan V.A. School	農家修造班 Farmer House Building Class	1		
〃	農業加工班 Agriculture Processing Class	〃		
〃	綜合農業班 Farm Work Training	〃		

各級學校辦理之職業訓練(續)

Vocational Training Sponsored by Schools and Colleges (Continued)

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
省立桃園農業職業學校 Provincial Tao-Yuan V. A. School	海外青年畜牧獸醫班 Livestock & Veterinarians Training Class for Overseas Youth	1		
〃	海外青年綜合農業班 Farm Work Training Class for Overseas Youth	〃		
小計 Total		5		
省立臺中農業職業學校 Provincial Tai-Chung V.A. School	農具修護班 Farm Equipment Maintenance Class	1	30	
〃	食品加工班 Food Processing Class	2	60	
〃	農藝班 Aguicultural Skill Class	〃	〃	
〃	家事班 Home Economics Class	1	〃	
〃	縫紉班 Sewing Class	2	〃	
小計 Total		8	270	

七、五十五年民間團體辦理之職業訓練

7. Vocational Training Sponsored by Private Business Organizations in 1966

民間團體別辦理職業訓練班數及人數統計表

Classes & Trainees of Vocational Training in Private Business Organizations

民間團體別 Private Business Organizations	班數 Number of Classes	受訓人數 Number of Trainees
中國生產力及貿易中心 China Productivity and Trade Center	65	2,082
臺灣省兒童福利業務人員研習中心 Training Center for Taiwan Children Welfare Business	2	86
中國青年反共救國團 Anticommunists Youth & National Salvation Corps.	16	693
臺灣土壤肥料學會 Taiwan Institute of Soil Fertilizer	7	620
臺灣省罐頭業公會 Taiwan Canning Association	5	100
中華民國郵政公會全國聯合會 National Union of China Post Association	6	150
中國美術設計協會 China Art Design Association	1	81
臺南基督教青年會 Tainan Chinese Young Men Christian Association	1	8
臺灣手工業推廣中心 Taiwan Handicraft Promotion Center	3	90
中國圖書館學會 Chinese Institute of Library	1	50
中國大陸災胞救濟總會職業訓練所 Vocational Training Center of China Mainland Refugee Relief Organization	27	510
聯合工業研究所 United Industry Research Office	3	65
臺灣鐵路黨部直轄第一推行小組 First Promotion Team, Taiwan Railway Kuomintang Headquarters	20	1,019
臺灣區公路黨部 Taiwan District Highway Kuomintang Headquarters	2	80
臺北市司機工會 Taipei Drivers Association	1	81
臺南縣總工會 Tainan Federation of Labor	1	30

民間團體別辦理職業訓練班數及人數統計表

Classes & Trainees of Vocational Training in Private Business Organizations

民間團體別 Private Business Organizations	班數 Number of Classes	受訓人數 Number of Trainees
花蓮縣總工會 Hua-Lian Federation of Labor	1	38
臺南市總工會 Tainan City Federation of Labor	2	1,321
臺東縣總工會 Taitung Federation of Labor	3	146
彰化縣總工會 Changhwa Federation of Labor	3	108
臺灣郵政工會 Taiwan Postal Business Association	3	58
光啓文教視聽節目服務社 Kuang-Chi Program Service	1	18
合計 Total	174	7,434

民間團體辦理之職業訓練

Vocational Training Sponsored by Private Business Organizations

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
中國生產力及貿易中心 China Productivity and Trade Center	企業管理概要講習班 General Management Seminar (Orietation)	3	124	60小時 60 hours
〃	現代人事管理研討會 Modern Personnel Management Symposium	1	48	10小時 10 hours
〃	人事管理訓練班 Personnel Management Training Class	4	80	45小時 45 hours
〃	管理顧問發展研討會 Management Consultant Development Symposium	1	70	〃
〃	中小企業管理研討會 Small & Middle Scale Industry Management Symposium.	〃	37	40小時 40 hours
〃	領班人員訓練班 Foremen Training Class	5	150	56小時 56 hours
〃	工業工程概要講習班 Industrial Engineering Seminar (Orientation)	2	70	78小時 78 hours
〃	品質管制訓練班 Quality Control Training Class	18	540	60小時 60 hours
〃	工作研究訓練班 Work Study Training Class	4	110	40小時 40 hours
〃	工業安全訓練班 Industry Safety Training Class	1	30	30小時 30 hours
〃	生產計劃與管制訓練班 Product Planning and Control Training Class	2	59	45小時 45 hours
〃	預防保養訓練班 Preventive Maintenance Training Class	〃	62	30小時 30 hours
〃	物料管理訓練班 Supply Management Training Class	〃	60	40小時 40 hours

民間團體辦理之職業訓練(續)

Vocational Training Sponsored by Private Business Organizations (Continued)

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
中國生產力及貿易中心 China Productivity & Trade Center	塑膠加工技術訓練班 Plastic Processing Techniques Training Class	2	83	18小時 18 hours
〃	鹽基性耐火材料製造使用技術班 Basic Refractories Manufacture & Using Technique Class	〃	27	9小時 9 hours
〃	包裝技術訓練班 Packing Techniques Training Class	〃	48	25小時 25 hours
〃	工業設計訓練班 Industrial Design Training Class	3	100	2個月 2 months
〃	國外商務貿易推廣訓練班 International Commerce and Trade Promotion Training Class	4	149	100小時 100 hours
〃	出口貿易實務講習班 Export Trading Practice Seminar	3	143	72小時 72 hours
〃	貿易推廣技術研討會 Trade Promotion Techniques Symposium	1	32	42小時 42 hours
〃	市場推銷研討會 Marketing Symposium	2	60	2週 2 weeks
小計 Total		65	2,082	
臺灣省兒童福利業務人員研習中心 Training Center for Taiwan Children Welfare Business	工作人員在職訓練 On-job Training for Clerks	2	86	3天 3 days
小計 Total		2	86	

民間團體辦理之職業訓練(續)

Vocational Training Sponsored by Private Business Organizations (Continued)

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
中國青年反共救國團臺中縣團務指導委員會 Directing Committee of Taichung Sub-Corps, Anticommunists Youth & National Salvation Corps	簿記珠算班 Book keeping & Abacus Arithmetic Class	1	70	5個月 5 months
〃	中文打字班 Chinese Type-Writing Class	〃	45	2個月 2 months
〃	珠算班 Abacus Arithmetic Class	〃	40	4個月 4 months
〃	會計班 Accounting Class	〃	33	〃
〃	縫級班 Sewing Class	〃	40	〃
中國青年反共救國團金門縣支隊部 Kinmen Sub-Corps, Anticommunists Youth & National Salvation Corps	會計班 Accounting Class	〃	50	3個月 3 months
〃	打字班 Type-Writing Class	〃	20	1個月 1 months
中國青年反共救國團直屬嘉義縣團務指導委員會 Directng Committee of Chia-I Sub-Corps, Anticommunists Youth & National Salvation Corps	攝影技術訓練班 Photography Training Class	〃	30	3個月 3 month
〃	縫級訓練班 Sewing Training Class	2	80	4個月 4 months
〃	無線電裝修訓練班 Radio Assembly Training Class	1	25	3個月 3 months
〃	珠算訓練班 Abacus Arithmetic Training Class	2	70	4個月 4 months
〃	高級會計研究班 Senior Accounting Class	1	120	3個月 3 months
〃	汽車修護班 Automobile Maintenance Class	〃	30	2個月 2 months

民間團體辦理之職業訓練(續)

Vocational Training Sponsored by Private Business Organizations (Continued)

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
中國青年反共救國團臺北市團務指導委員會 Directing Committee of Taipei Sub-Corps, Anticommunists Youth & National Salvation Corps	縫紉研習班 Sewing Class	1	40	3個月 3 months
小計 Total		16	693	
臺灣土壤肥料學會 Taiwan Institute of Soil Fertilizer	土壤肥料幹部研究班 Soil Fertilizer Staff Study Class	1	20	7天 7 days
〃	臺灣省糧食局肥料運銷處委辦55年度施肥講習會 Taiwan Provincial Food Bureau, Fertilizer Transfer and Sale Division 66FY Fertilizer Seminar	6	600	2天 2 days
小計 Total		7	620	
臺灣省罐頭公會 Taiwan Canning Association	罐頭公會農務處鳳梨生果選別人員技術訓練班 Canning Association, Agriculture Division Pineapple Selecting Technique Training Class	5	100	10小時 10 hours
小計 Total		5	100	
中華民國郵政公會全國聯合會 National Union of China Post Associations	第二期郵工幹部講習班 Postman Seminar Class B	6	150	3天 3 days
小計 Total		6	150	

民間團體辦理之職業訓練(續)

Vocational Training Sponsored by Private Business Organizations (Continued)

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
中國美術設計協會 China Art Design Association	美術設計人員講習班 Art Designer Seminar	1	81	1個月 1 month
小計 Total		1	81	
臺南中華基督教青年會 Tainan Chinese Youngmen Christian Association	觀光事業從業人員訓練班 Tourism Employee Training Class	1	8	3個月 3 months
小計 Total		1	8	
臺灣手工業推廣中心 Taiwan Handicraft Promotion Center	珠繡串珠訓練班 Beading Class	1	30	4個月 4 montl s
〃	毛衣織製訓練班 Woolen Sweater Knitting Class	〃	〃	〃
〃	皮鞋作業訓練班 Shoe-making Class	〃	〃	6個月 6 months
小計 Total		3	90	
中國圖書館學會 Chinese Institute of Library (Librarians)	55年度暑期圖書館工作人員補習班 Summer Extension Class for Librarians in FY 1966	1	50	8週 8 weeks
小計 Total		1	50	

民間團體辦理之職業訓練(續)

Vocational Training Sponsored by Private Business Organizations (Continued)

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
中國大陸災胞救濟總會職業訓練所 Vocational Training Center of China Mainland Refugee Relief Organization	縫級初級班 Basic Sewing Class	3	90	3個月 3 months
〃	車綉初級班 Basic Embroidery Class	〃	〃	〃
〃	家事管理班 House Keeping Class	〃	〃	〃
〃	中文打字班 Chinese Type-Writing Class	6	60	〃
〃	英文打字班 English Type-Writing Class	〃	〃	〃
〃	編織班 Knitting Class	2	40	4個月 4 months
〃	會計班 Accounting Class	〃	30	5個月 5 months
〃	車綉高級班 Senior Embroidery Class	1	25	〃
〃	縫級高級班 Senior Sewing Class	〃	〃	〃
小計 Total		27	510	
聯合工業研究所 United Industry Research Office	土木技藝訓練班 Mason & Carpenter Training Class	1	18	3個月 3 months
〃	英語補習班 English Continuation Class	〃	32	每週二次 2 times/week

民間團體辦理之職業訓練(續)

Vocational Training Sponsored by Private Business Organizations (Continued)

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
聯合工業研究所 United Industry Research Office	微積分補習班 Calculus Extension Education Class	1	15	每週二次 2 times/week
小計 Total		3	65	
臺灣鐵路黨部直轄第一推行小組 First Promotion Team, Taiwan Railway Kuomintang Headquarters	車綉班 Embroidery Class	3	119	90小時 90 hours
〃	縫級班 Sewing Class	〃	117	〃
〃	汽車駕駛班 Automobile Driving Class	2	138	〃
〃	攝影班 Photography Class	〃	79	〃
臺灣鐵路黨部臺北第二推行小組 Taipei Second Promotion Team, Taiwan Railway Kuomintang Headquarters	業務技藝班 Business Techniques Class	〃	60	〃
〃	汽車駕駛班 Automobile Driving Class	1	30	〃
鐵路黨部彰化推行小組 Chang-Hua Promotion Team, Taiwan Railway Kuomintang Headquaters	業務技藝班 Business Technique Class	〃	123	〃
鐵路黨部嘉義推行小組 Chia-I Promotion Team, Taiwan Railway Kuomintang Headquaters	〃	〃	144	〃
鐵路黨部屏東推行小組 Pin-Tung Promotion Team, Taiwan Railway Kuomintang Headquaters	縫級班 Sewing Class	2	80	〃
鐵路黨部花蓮推行小組 Hualian Promotion Team, Taiwan Railway Kuomintang Headquaters	〃	1	50	〃

民間團體辦理之職業訓練(續)

Vocational Training Sponsored by Private Business Organizations (Continued)

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
鐵路黨部宜蘭推行小組 I-Lan Promotion Team, Taiwan Railway Kuomintang Headquaters	業務技藝班 Business Techniques Class	2	79	90小時 90 hours
小計 Total		20	1,019	
臺灣區公路黨部 Taiwan District Highway Kuomintang Headquerters	編結補習班 Knitting Continuation Class	1	38	192小時 192 hours
〃	縫紉補習班 Sewing Continuation Class	〃	42	〃
小計 Total		2	80	
臺北市司機工會 Taipei Drivers Association	司機工會小組長講習班 Drivers Association Team Leader Seminar	1	81	8小時 8 hours
小計 Total		1	81	
臺南縣總工會 Tainan Federation of Labor	會員技術補習班 Mumbers Technique Continuation Class	1	30	215小時 215 hours
小計 Total		1	30	

民間團體辦理之職業訓練(續)

Vocational Training Sponsored by Private Business Organizations (Continued)

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
花蓮縣總工會 Hua-Lian Federation of Labor	縫級班 Sewing Class	1	38	192小時 192 hours
小計 Total		1	38	
臺南市總工會 Tainan City Federation of Labor	三輪車交通安全講習班 Pedicab Traffic Safety Seminar	1	921	4小時 4 hours
〃	汽車司機交通安全講習班 Automobile Driver Traffic Safety Seminar	〃	400	〃
小計 Total		2	1,321	
臺東縣總工會 Taitung Federation of Labor	勞工補習班 Labor Suplementary Class	3	146	20小時 20 hours
小計 Total		3	146	
彰化縣總工會 Changhwa Federation of Labor	珠算簿記高級班 Senior Abacus Arithmetic, Bookkeeping Class	1	32	135小時 135 hours
〃	珠算簿記初級班 Basic Abacus Arithemetic, Bookkeeping Class	2	76	〃
小計 Total		3	108	

民間團體辦理之職業訓練(續)

Vocational Training Sponsored by Private Business Organizations (Continued)

單位名稱 Sponsoring Establishments	班別 Name of Classes	班數 Number of Classes	受訓人數 Number of Trainees	訓練時間 Training Hours
臺灣郵務會 Taiwan Postal Business Association	簿記班 Bookkeeping Class	1	18	69小時 69 hours
〃	珠算班 Abacus Arithmetic Class	〃	20	30小時 30 hours
〃	郵政法規 Postal Regulations Class	〃	〃	
小計 Total		3	58	
光啓文教視聽節目服務社 Kuang-Chi Program Service	國際大衆廣播訓練班 International Public Broadcast Training Class	1	18	
小計 Total		1	18	

八、附　　錄

各訓練機關簡介

8. Appendix: Outline of Training Facilities of the Institutions.

目　　錄

（一）　金屬工業發展中心
（二）　中國生產力及貿易中心
（三）　國立政治大學公共行政及企業管理教育中心
（四）　臺灣電力公司員工訓練所
（五）　臺灣機械公司訓練委員會
（六）　中國石油公司員工訓練中心
（七）　臺灣糖業公司員工訓練所
（八）　臺灣省公路局汽車技術員工訓練中心
（九）　臺灣省建設廳管理技術發展中心
（十）　臺灣省訓練團
（十一）　省立師範大學中等學校教師研習中心
（十二）　中國大陸災胞救濟總會職業訓練所
（十三）　臺灣省鐵路局臺北機廠技工養成所
（十四）　郵政總局郵政員工訓練所
（十五）　裕隆汽車製造股份有限公司練習工訓練班

CONTENTS

(1) METAL INDUSTRY DEVELOPMENT CENTER
(2) CHINA PRODUCTIVITY AND TRADE CENTER
(3) PUBLIC ADMINISTRATION AND BUSINESS MANAGEMENT DEVELOPMENT CENTER, NATIONAL CHENGCHI UNIVERSITY
(4) TRAINING CENTER, TAIWAN POWER COMPANY
(5) TRAINING COMMITTEE, TAIWAN MACHINERY MANUFACTURING CORPORATION
(6) EMPLOYEES TRAINING INSTITUTE, CHINESE PETROLEUM CORPORATION
(7) EMPLOYEES TRAINING INSTITUTE, TAIWAN SUGAR CORPORATION
(8) AUTO TECHNICIANS AND INSTRUCTORS TRAINING CENTER, T. H. B.
(9) MANAGEMENT DEVELOPMENT CENTER, DEPT. OF RECONSTRUCTION, TAIWAN PROVINCIAL GOVERNMENT
(10) TAIWAN PROVINCIAL TRAINING CORPS
(11) MIDDLE SCHOOL TEACHERS IN-SERVICE TRAINING CENTER, TAIWAN PROVINCIAL NORMAL UNIVERSITY
(12) VOCATIONAL TRAINING CENTER, CHINA MAINLAND REFUGEES RELIEF ORGANIZATION
(13) TECHNICIANS TRAINING INSTITUTE, TAIPEI FACTORY, TAIWAN RAILWAY ADMINISTRATION
(14) EMPLOYEES TRAINING CENTER, TAIWAN GENERAL POST OFFICE
(15) YUELOONG AUTOMOBILE MANUFACTURING CO. TRAINING INSTITUTE

(一) 金屬工業發展中心

地　　址：

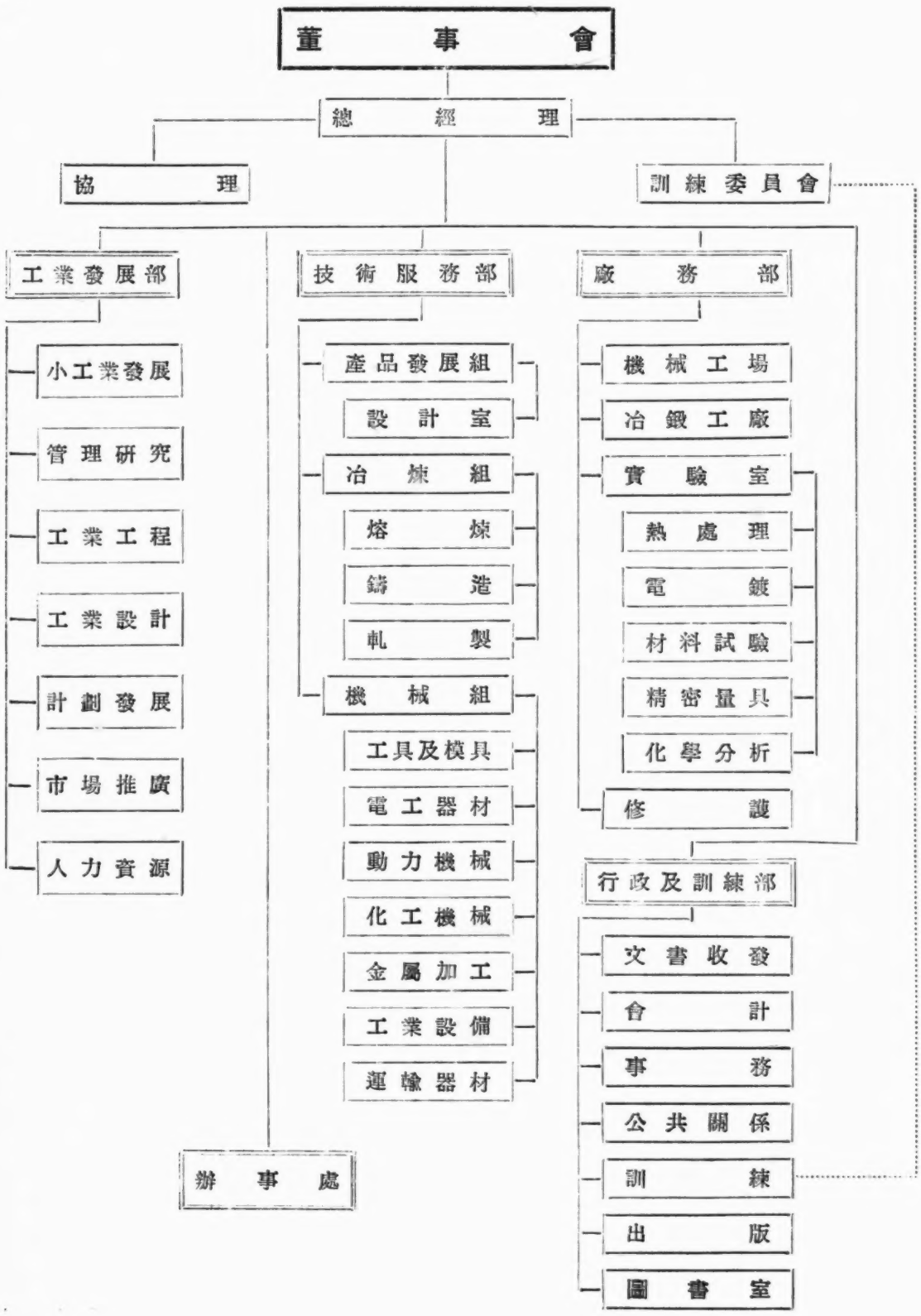
中心所在地——高雄市楠梓區高楠公路 1001 號

臺北辦事處——臺北市懷寧街七十號

電　　話：高雄21128；臺北35874，37955，38376

成立經過：該中心成立於民國五十二年十月，由中華民國政府，聯合國特別基金會及國際勞工局聯合辦理。其目的在對我國基本金屬、金屬處理、機器、交通器材、電器用具等之製造業等予以發展及改進。

組織系統：



訓練人員：訓練部門設主任一人，現有職員65人，技工17人，共計83人，教員均係兼任。

主要訓練場所設及備：

課　棹　椅	60 套
電子教具	9 套
實驗工廠	1 座
鑄造工廠	1 座

舉辦訓練：該中心訓練科目之安排係按工廠調查或工業界之實際需要而定。訓練之範圍從高層經理人員到領班，監工及技士，包括技術及管理課程。

從五十二年十月至五十五年六月底止，金屬工業發展中心共舉辦五十九班，其中60%即三十六班係屬管理課程方面者，其中40%即二十三班係屬技術方面者。同時在此期間中舉辦了十七班在廠訓練班。

所有之訓練共有 1,363 人參加，其中27%即 368 人係屬管理人員；73%即 995 人屬工程師及技士。其中值得注意者爲大多數的參加者爲工程師及技師，雖說事實上訓練班的管理課程超過技術課程20%。至於在廠訓練班共計有 495 人參加。

就訓練所使用之時數言，共用去 2,388小時，其中28%即669小時在臺北區舉辦，72%即 1,719 小時在高雄舉辦。除此之外，在廠訓練共使用 579 小時。

班　別	班數	時數	參加人數
1. 金屬工業管理	2	40	51
2. 管理教育之設計與模擬	1	27	13
3. 電子爐操作	1	15	31
4. 輾製技術講習會	1	18	16
5. 量度訓練	2	50	46
6. 鋼鐵鑄造技術	1	35	61
7. 塑膠金屬模型製造講習班	2	30	35
8. 管理控制報告表單之設計與使用	2	56	43
9. 潤滑講習班	2	48	58
10. 鋼鐵工業品質管制講習班	1	26	10
11. 新計劃之設計與控制講習班	2	40	27
12. 銷售控制講習班	2	30	37
13. 製鋼工業講習班	3	60	27
14. 市場講習班	2	40	42
15. 督導人員訓練	3	355	66
16. 在廠訓練講習班	1	14	17
19. 領班人員訓練班	8	512	194
18. 熱處理講習班	1	30	31
19. 工作研討講習班	3	348	47
20. 電子資料處理介紹	1	25	25
21. 訓練人員講習會	1	40	13
22. 工具模型之設計與製造講習班	3	104	68
23. 齒輪之設計與製造講習班	3	95	68

24. 候補領班人員講習會	3	120	67
25. 防護保養系統之設計與實施	2	84	60
26. 一般管理	2	36	51
27. 公差制度與互換製造	2	40	32
28. 鑄造技術座談會	1	28	106
29. 講師訓練班	1	42	21
總　　計	59	2388	1363

歷屆舉辦在廠訓練班次及人數表（五十二年十月至五十五年六月）：

類　別	班　數	參加人數
1. 高級管理研討會	2	75
2. 監督及領班人員等講習班	12	368
3. 工業工程課程講習班	3	52
總　　計	17	495

（二）中國生產力及貿易中心

地　　址：臺北市西寧南路六十二號

電　　話：48631

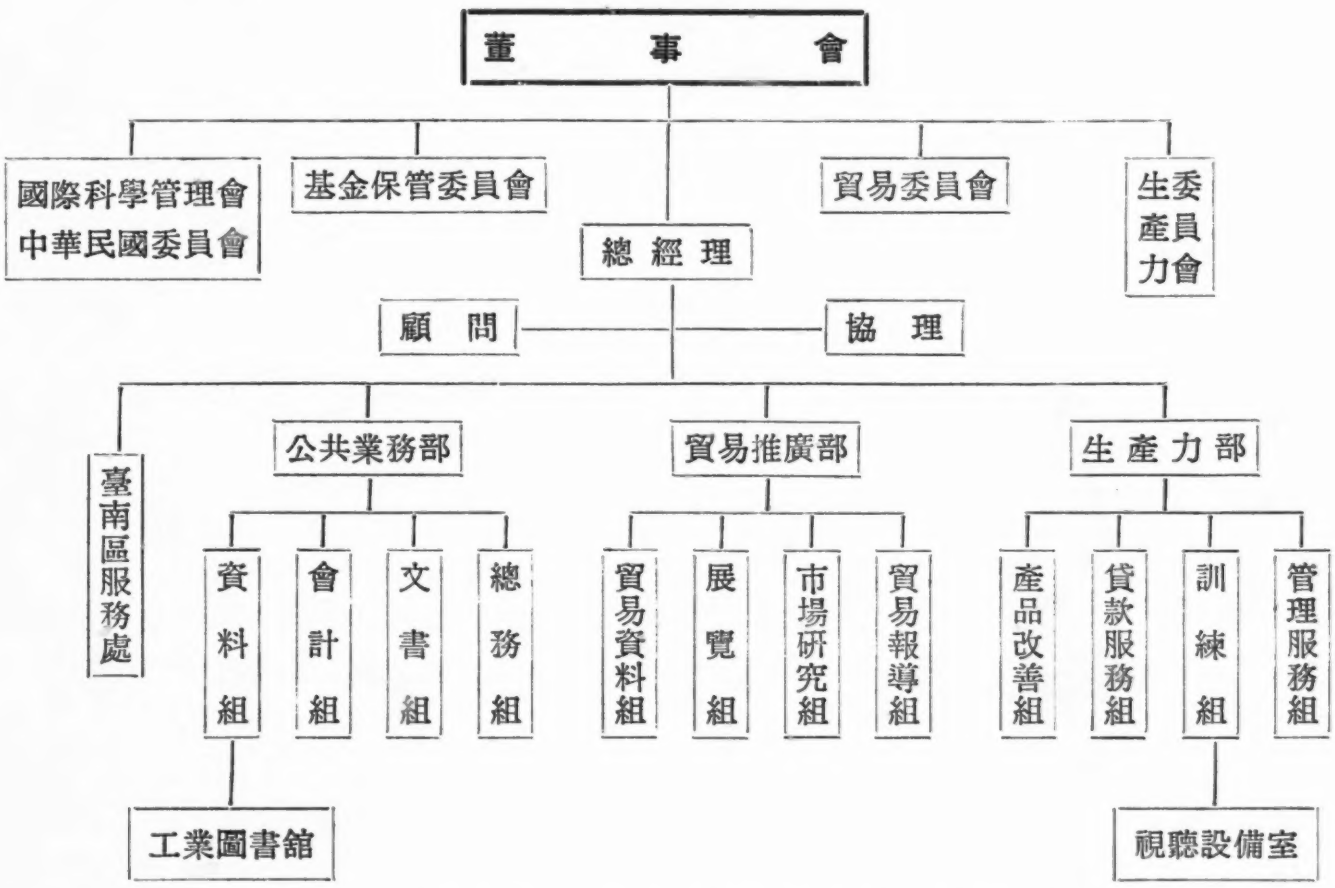
成立經過：民國四十四年成立，初名中國生產力中心，爲一非營利性之民間機構，其目的在向工商界提供管理咨詢與技術服務，以求生產力之提高。

民國四十五年臺南區服務處成立。

民國四十八年增設貿易推廣部，該機構名稱亦更改爲中國生產力及貿易中心。

民國四十九年設立陶業訓練所，以發展陶器工業。

組織系統：中心之最高機構爲董事會，有董事二十一人，由政府機關，工商團體，勞工組織，教育機關與資方公會之有關人士組成，現任董事長爲金開英，總經理（吳道艮）主持實際業務，下分生產力部，貿易推廣部與公共業務部三部及臺南區服務處。其組織系統表如下：



訓練人員：該中心之訓練工作由生產力部下之訓練組負責辦理，現有專任組長一人，職員十人，技工一人，共計十二人，教員係隨需要由中心同人及外界專家中遴聘，無專任教員。

主要訓練場所與設備：

教　　室	3間（冷氣）可容130人。
圖　書　館	1間（藏書 12000 餘冊，雜誌 100 餘種）
辦　公　室	1間
會　議　室	2間
陶器試驗室及工場各	1間

電影放映機	3部
電　影　片	130部
幻　燈　機	4部
幻　燈　片	30套
錄　音　機	3部

訓練實施情形：

㈠依訓練性質分，民國四十四年至五十三年，十年間訓練班次與學員人數如下：

訓練性質	班　數	學員人數
管理發展	29	1370
工業工程	214	6938
技　　術	86	2454
財務與會計	21	709
貿易與市場	24	839
其　　他	23	686
共　　計	397	12996

㈡近三年來（民52-54年）所舉辦之訓練：

訓練班名稱	班　數	結訓人數
染整技術與管理講習班	5	142
紡織工業管理研討會	1	35
現代企業管理研討會	5	435
企業管理概要講習班	5	173
電腦管理學講習班	1	77
金屬工業管理研討會	2	51
提高生產力講習班	2	86
領班人員訓練班	1	36
工業工程概要講習班	2	83
品質管制訓練班	89	2943
工作研究訓練班	19	566
抽樣檢驗訓練班	11	282
工業安全訓練班	6	203
生產計劃與管制訓練班	3	118
預防保養訓練班	8	295
物料管理訓練班	4	145
工作抽查訓練班	9	265
製革技術訓練班	3	76
鋼鐵熱處理訓練班	2	43
木器裝飾訓練班	1	21
肥皂清潔劑製造技術班	1	41
化粧品製造技術班	1	25
包裝技術訓練班	7	212

工業設計訓練班	6	180
陶瓷技藝訓練班	10	162
耐火材料講習班	6	208
彩色印刷訓練班	5	96
印刷技術訓練班	2	43
成本會計訓練班	2	85
怎樣閱讀會計	4	122
成本分析講習班	3	105
市場推銷研討會	4	143
高級市場推銷研討會	1	21
市場推銷複習研討會	1	35
貨物流通研討會	2	96
貿易推廣技術研討會	1	46
國外商務及貿易推廣訓練班	3	168
英文商用函件訓練班	9	331
共 計 班 次	247	8194

㈢依職業別，歷年來之結訓人數：

	專門及技術人員	行政及參管人員	領工技工半技工
45年	292		
46年	798	357	
47年	467	213	
48年	900	154	
49年	389	746	
50年	599	334	
51年	1,750	495	
52年	2,637	551	86
53年	1,576	654	
54年	1,884	770	36
共計	11,292	4,274	122

（三） 國立政治大學公共行政及企業管理教育中心

地　　址：臺北市金華街 187 號

電　　話：39546

設立經過：該中心設立於民國五十一年，其目的在訓練政府機構人員以及工業界之管理人員。自五十一年至五十四年該中心與美國密西根大學合作辦理在職訓練，該中心設有訓練組負責訓練工作。

訓練人員：講師均係由校內外之專家遴選擔任，無專任講師。

舉辦訓練：1. 迄至民國五十四年底爲止，該中心已舉辦66班，參加人數2096人，迄至民國五十五年七月，則已達91班，參加人數3253人。

訓練班性質	班　數
管理發展	22
訓練方法	4
財稅會計	19
人事管理	10
杜邦討論會主持方法	4
電子資料處理	8
公共關係	3
經略研究	2
其　　他	19
共　　計	91

2. 依職業別歷年來受訓人數之統計：

	專門及技術人員	行政及管理人員	佐理人員
民51年		20	
民52年	96	273	
民53年	24	620	
民54年	491	508	37
共　計	611	1421	37

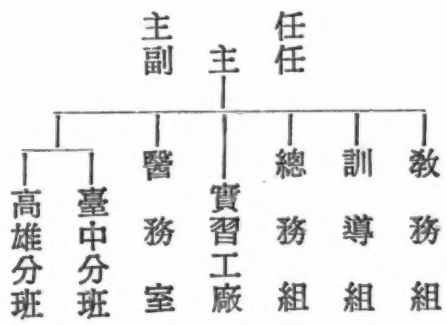
(四) 臺灣電力公司員工訓練所

地　　址：臺北縣新店鎮龜山路 20 號

電　　話：新店龜山電信局轉

成立經過：該中心成立於民國四十年，位於新店龜山，距臺北市21公里，民國四十二年在臺中設立分班，民國四十六年在高雄設立分班，前者與省立臺中高級工業職業學校合作，後者與省立高雄高級工業職業學校合作。

組織系統：



訓練人員：訓練所主任爲張澤仁，有專任職員12人，專任技工12人，共25人，講師係依課程需要，聘請公司內外專家擔任，無專任講師。

主要訓練場所與設備：

教　　室	4 間
工　　場	1 間
實 驗 室	1 間
圖 書 館	1 間
健 身 房	1 棟
受訓人宿舍	4 間
辦 公 室	2 間
會 議 室	1 間
禮　　堂	1 間
講師宿舍	1 棟
外線實習場	1 處
總 面 積	2500 坪
車　　床	5 台

鉋床、鑽床、鐵鋸床、砂輪床、電動洗管器、空氣壓縮機、定盤、絕緣油試驗器、接地電阻試驗器、水銀整流器各 1 台

枱 虎 鉗	14 件
電動發電機	6 座

（上述建築場地不包括高雄及臺中分班）

訓練實施情形：五十二年至五十四年共辦理 498 班，參加者共 7885 人，其中有 392 班爲 T. W. I. 訓練，參加者 3843 人。

訓練班名稱	班　數	結訓人數
企業管理講習會	17	1300
主管人員講習班	24	762

指導員講習班		9	95
督導員訓練班		392	3843
水文觀測人員訓練班		3	66
輸電線路活線作業班		4	48
通訊維護人員訓練班		1	20
變電所工作人員訓練班		2	40
工作安全訓練班		4	94
配電設計人員訓練班		3	69
外線領班人員訓練班		3	60
外線派工人員訓練班		1	22
配電線路活線作業班		1	28
檢驗人員訓練班		1	20
自動變電所兼管主任訓練班		1	25
服務所主任訓練班		2	62
二次變電所工作人員訓練班		2	40
職位分類講習班		3	159
管理分析人員訓練班		3	57
新進職員講習班		2	199
材料管理業務工養成班		1	32
服務所技工養成班		5	243
配電技工養成班		7	368
火力發電技工養成班		2	70
輸電線路技工養成班		1	40
國軍待退官兵訓練班	配電班	2	60
國軍待退官兵訓練班	電表檢驗班	1	33
國軍待退官兵訓練班	電工班	1	30
共計		498	7885

依職業別歷年來之結訓人數：

	專門及技術人員	行政及管理人員	領工技工半技工
41年	282	70	
42年	239	91	129
43年	64		208
44年	42	30	167
45年		55	50
46年	243	63	286
47年	277	50	160
48年	635	69	171
49年	762	131	192
50年	474	37	176
51年	502	100	227
52年	347	2716	182
53年	400	2238	226
54年	268	1222	286
共計	4535	6872	2460

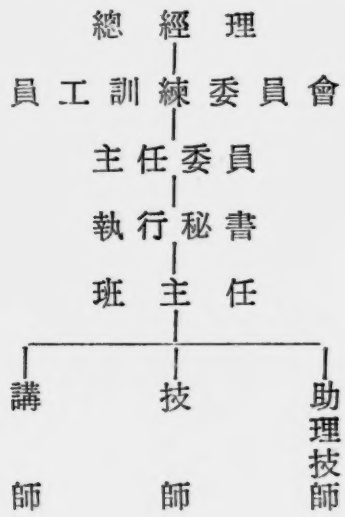
(五) 臺灣機械公司訓練委員會

地　　址：高雄市公園二路25號

電　　話：21171

成立經過：該公司於四十二年十一月設置員工訓練委員會，辦理訓練事宜，在該會成立之初，實施大專學生獎學金辦法，與職業學校建教合作及辦理高級技術員出國實習，四十四年起開辦藝徒訓練班，四十五年起依據工廠工作需要舉辦各種技能訓練班與管理人員講習班，以訓練在職技工及管理人員。

組織系統及訓練人員：訓練委員會設主任委員(現任主任委員爲陳喜棠)，其下設執行秘書，各種訓練班設班主任、講師、技師及助理技師等。班主任、講師、技師，助理技師等均於舉辦訓練班或講習班時臨時選聘適當人員擔任。



主要訓練場所與設備：有教室二間，可容69人，及辦公室1間，其他設備均係利用該公司之有關工場設備。

訓練實施情形：

㈠近三年（52-54年）來辦理之訓練班如下：

訓練班名稱	班　數	結訓人數
鍍片技工訓練班	2	78
技工第二技能訓練電焊訓練班	3	62
技工第二技能訓練冷作訓練班	3	67
檢驗人員訓練班	1	33
鑄造技術訓練班	1	60
第三階層主管人員訓練班	2	89
業務常識講習班	1	25
金屬研磨訓練班	1	27
技工第二技能訓練吊車司機訓練班	4	16
技工第二技能訓練電爐操作訓練班	1	11
督導人員訓練班	1	30
工廠工作人員訓練班	4	92
共　　計	24	596

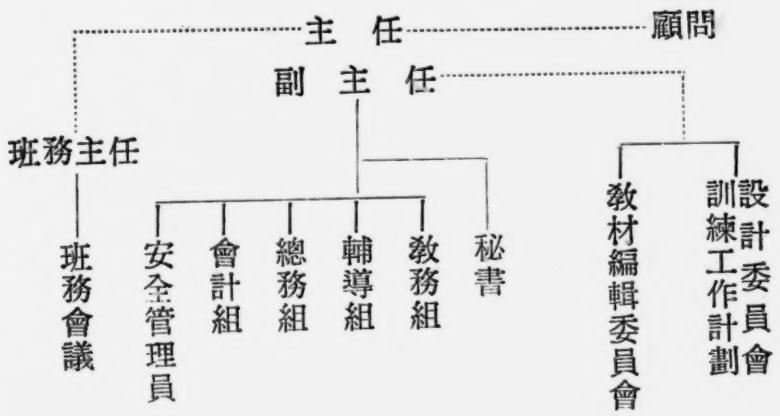
97

㈡依職業別歷年來之結訓人數：

	專門及技術人員	行政及管理人員	領工技工半技工
44年			40
45年			60
46年			127
47年			152
48年		66	95
49年			40
50年			4
51年		146	8
52年	33		135
53年	25	124	159
54年		92	22
共計	58	428	842

(六) 中國石油公司員工訓練中心

地　　址：嘉義市吳鳳路23號
電　　話：3070
成立日期：民國五十二年五月一日
組織系統：



訓練人員：現有專任訓練中心主任一人（劉魁餘），專任職員12人，技工2人，教員係視課程需要聘請公司內外專家擔任，無專任教員。

主要訓練場所設備：

教　　室	2 間（可容 100 人）
實 驗 室	2 間（一爲自動儀器室，一爲電子儀器室）
圖 書 館	1 所
受訓人宿舍	20 間（可容80人）
會 議 室	2 間
禮　　堂	1 間（80人）
講師宿舍	2 棟（可容10人）
教學器材模型陳列室	1 間
運 動 場	136 坪
總 面 積	6000 坪
電子控制訓練器	3 部
自動控制訓練儀器	1 套
各種電化教學輔助	10 套
油料消防演習場	1 處

訓練實施情形：

自五十二年至五十四年之三年中共辦四十個訓練班，參加者計一千二百十一人，均爲本公司之員工，每班平均訓練時間約爲一週，茲分別如下：

訓練班名稱	班　數	結訓人數
職位分類講習班	1	52
新進人員講習班	5	270
企業管理講習班	7	89
加油站業務講習班	3	137
退役轉業人員講習班	2	76

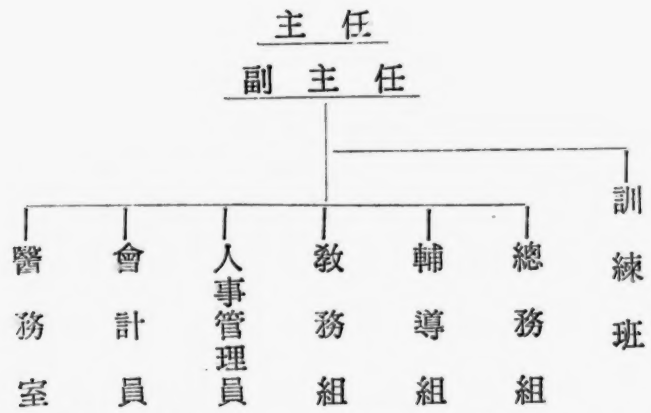
領班人員業務講習班	2	62
設備檢查及預防保養講習班	3	91
會計業務講習班	2	55
量子化學講習班	1	42
財產管理講習班	1	39
表格簡化講習班	1	38
工業安全講習班	1	33
儲運業務講習班	1	32
物料管理業務講習班	1	30
事務管理業務講習班	1	23
工程估價業務講習班	1	22
品質管制業務講習班	1	21
營業人員業務講習班	1	21
生產力業務講習班	1	20
人事管理業務講習班	2	38
加油機保養業務講習班	1	15
出國人員業務講習班	1	5
共　計	40	1211

依職業別歷年來之結訓人數：

	專門及技術人員	行政及管理人員	佐理人員	買賣人員	交通人員	領工技工半技工
52年	73	79	47			34
53年	95	87	144		15	61
54年	174	55	170	21	52	104
共計	342	221	361	21	67	199

(七) 臺灣糖業公司員工訓練所

地　　址：臺中縣潭子鄉
電　　話：潭子5號
成立日期：民國四十三年七月一日
組織系統：



訓練人員：臺糖公司總經理（袁夢鴻）兼任該所主任，副主任二人，一人爲協理鎮天錫，一人爲林振德（駐所辦公）、所有各組長及幹事等均爲專任，講師係視課程需要，聘請公司內外人員擔任之。

訓練場所與設備：

教　　室	2 間（可容 112 人）
學員宿舍	2 幢（可容 144 人）
會議室	1 間（可容 40 人）
禮　　堂	1 間（可容 200 人）
講師宿舍	1 幢（可容 14 人）
餐　　廳	90 坪
訓練所面積	1000 坪
視聽教具	多 種

舉辦訓練：1. 民五十二年至五十四年三年間舉辦之訓練：

訓練種類	班　數	結訓人數
新進人員講習	12	656
管理發展類	20	1585
農業技術類	16	830
工程技術類	16	621
鐵道通訊技術類	11	330
會計稽核類	2	118
其　　他	7	325
共　　計	84	4465

2. 依職業別，歷年受訓人數之統計：

	專門與技術人員	行政與管理人員	交通運輸人員	領工技工半技工
民43年	98	176	50	
民44年	400	150		185

民45年	679	740	174	190
民46年	718	402	299	
民47年	383	48	109	
民48年	445	233	155	
民49年	435	636	165	
民50年	167	817	60	
民51年	264	155		
民52年	164	702	54	
民53年	766	944	197	
民54年	1202	356	80	
共　計	6221	5359	1343	375

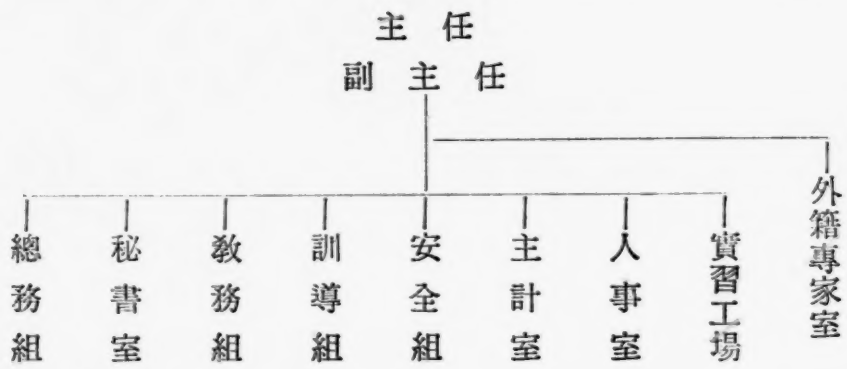
（八） 臺灣省公路局汽車技術員工訓練中心

地　　址：臺北縣中和鄉積穗村

電　　話：92-2390・92-2441

成立經通：民國四十三年四月我國政府接受亞洲暨遠東經濟委員會提高亞洲各國汽車修護駕駛技術建議與聯合國國際勞工局技術合作，由該局供應值美金一萬二千元之機具，及汽車修理保養專家二人，設立汽車技術員工訓練班於中和鄉及北投，四十九年遷入現址，五十一年取得聯合國特別基金會協助，擴大辦理柴油機械及重機械訓練，同年更名爲臺灣省公路局汽車技術員工訓練中心。

組織系統：



訓練人員：主任副主任各一人。

專任講師21人。

外籍專家 6 人。

職　　員33人。

主要訓練所與設備：

土　　地	9400 坪
房　　屋	1448 坪
學員容量	200 人
班次容量	7 班
機　　器	115 具
教練車及實習車	29 輛
實習引擎	42 具
模　　型	124 件
試驗器	53 件
儀　　器	276 件
工　　具	357 組
駕駛訓練器材	12 件
訓練叢書	45 種
圖　　表	2300 張
着色三夾板圖解	150 張
輔助訓練教材	80 種
參考書籍	2140 冊
技術電影幻燈片	735 捲
視聽器具	42 具

訓練實施情形：

1. 汽車系——分師資班、研究班、監導班、機務管理班、機務研究班、修理班、修理複訓引擎班、修理複訓電氣班、修理複訓底盤班、大客車駕駛保養班、小客車駕駛保養班，貨車駕駛保養班，技工班、初級技工班、檢驗電器專業班及柴油引擎燃料機械專業班、每班訓練期間 2–26 星期不等。
2. 柴油機系——分師資班、研究班及監導班、每班訓練期間爲8–12星期。
3. 重機械系——分師資班、研究班及監導班、每班訓練期間爲8星期。

截至五十四年十二月底止，十一年來已舉辦 268 班，結訓人數達8280人。

送訓機構：達 329 個單位，其中以公路局，公車管理處，國軍退除役官兵就業輔導委員會及公營機關較多，民營運輸機構以新竹、興南、彰化、員林、桃園、臺南、豐原客運公司較多。

訓練績效：據該中心稱，績效中有車輛使用壽命由 250000 公里增至 500000 公里，電瓶使用壽命由 4 個月增至 1 年，輪胎使用壽命由 25000 公里增至 110000 公里，引擎大修後使用里程由 30000 公里增至 110000 公里，汽油消耗每公升由 2.5 公里增至 3.5 公里等。

（九） 臺灣省建設廳管理技術發展中心

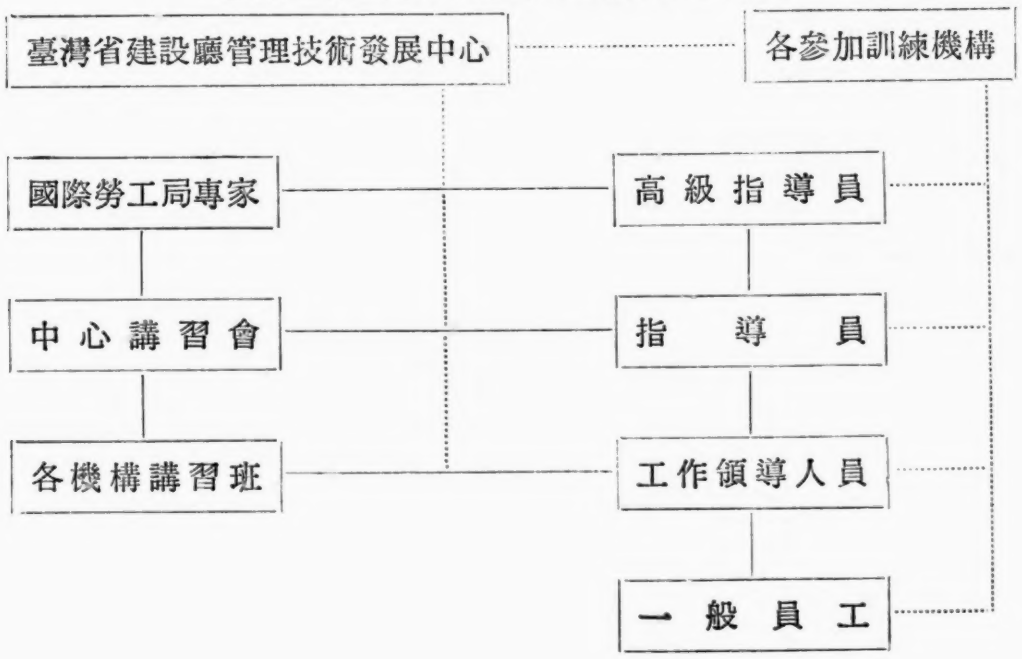
地　　址：臺北市鎮江街2號

電　　話：臺北市 28169

成立日期：民國四十五年二月，隸屬於臺灣省政府建設廳，聯合國及國際勞工局給予協助，以從事企業工作領導人員在職訓練爲目的。

組織系統：

企業工作領導人員在職訓練現行系統圖



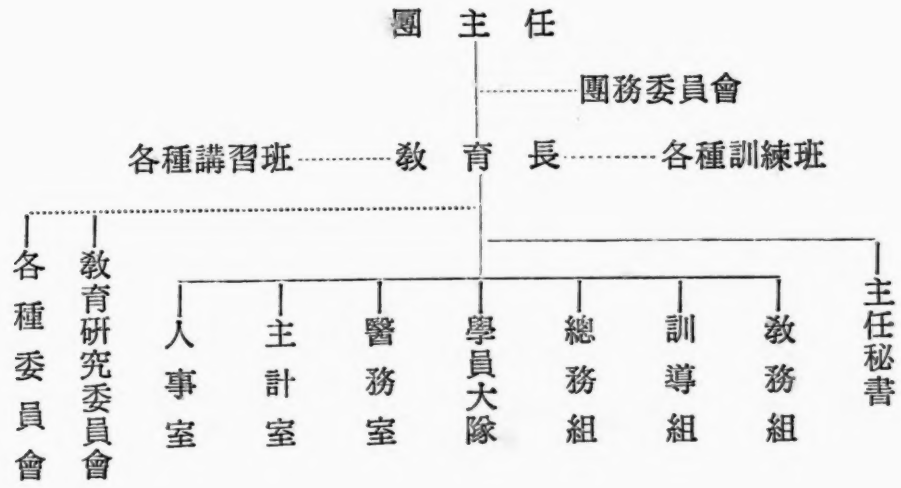
訓練人員：建設廳副廳長（李炳齊）兼任中心主任，楊其敏任總幹事，教員係兼任人員。

訓練課程：
1. 工作教導
2. 工作關係
3. 工作方法
4. 如何主持討論會
5. 工作考成
6. 如何發展訓練計劃

舉辦訓練：自民五十二年至五十四年，三年間曾舉辦597個班次，參加訓練人數達5506人，各種教材，係來自美國（在職訓練基金會）

(十) 臺灣省訓練團

地　　址：南投縣中興新村光明路1號
電　　話：575
成立日期：民45年7月，專爲訓練省政府各級機構人員設立。
組織系統：



訓練人員：團主任由省主席兼任，教育長由杭世騏擔任。
　　下設專任主任秘書1人，專任教員15人，專任職員112人及專任技工14人。
訓練場所及設備：

總面積	29343 坪
運動場	7680 坪
教室	11 間（可容750人）
圖書館	1 所
學員宿舍	75 間（可容700人）
醫務室	3 間
辦公室	23 間
會議室	1 間
禮堂	1 間（可容800人）
講師宿舍	1 幢

舉辦訓練：1. 三年（民52-54年）來辦理之訓練，共計218班，14122人。

性質	班數
財務與稅務	35
主管人員管理方法研究	33
水利	21
教育與文化	17
兵役行政	14
人事管理	13
土地行政與工程	11
戶政	9
交通電訊	8

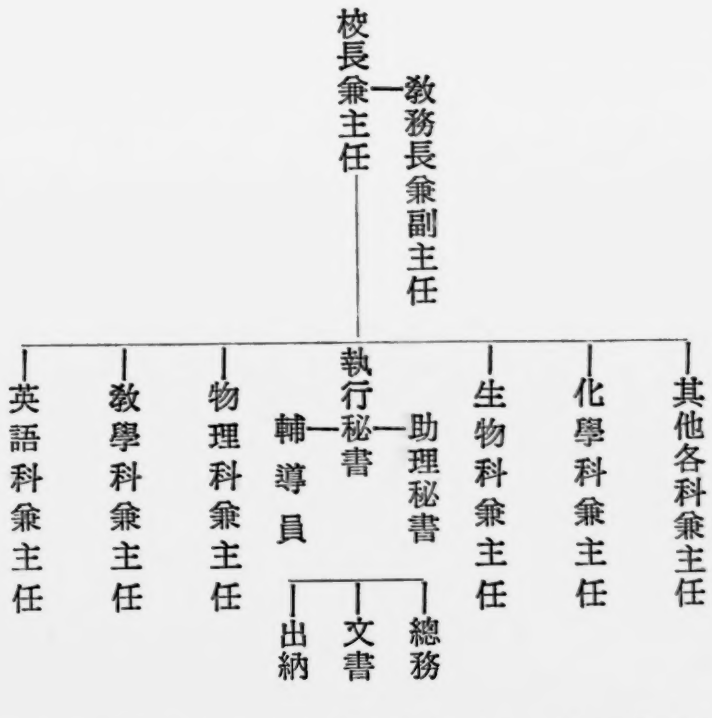
林　　務	7
社團工作	5
社團行政	3
合作事業	3
山地行政	2
建設行政	2
糧　　政	2
其　　他	31
共　　計	218

2. 依職業別歷年來受訓人數：

	專門及技術人員	行政及管理人員	佐理人員	交通運輸人員
民45年		234	96	
民46年	295	2970	460	
民47年	292	2224	1097	
民48年	359	2890	824	
民49年	86	2681	449	
民50年	111	3974	291	
民51年	70	3893	322	
民52年	224	3802	325	23
民53年	75	4439	378	225
民54年	259	4004	272	188
共　計	1771	31111	4514	436

（十一） 省立師範大學中等學校教師研習中心

地　　址：臺北市和平東路1段162號
電　　話：37841
成立日期：民國49年7月
組織系統：



訓練人員：專任職員3人，專任技工4人，兼任主管3人，兼任職員2人，共12人。

主要訓練場所與設備：

教　　室	8 間（容400人）
語言實驗室	1 間（容 30人）
圖 書 館	1 所（容 50人）
受訓人宿舍	35 間（容209人）
辦 公 室	8 間
會 議 室	2 間
餐　　廳	2 間
實驗桌及實驗台	36 個

訓練實施情形：

㈠近三年（52-54年）來辦理之訓練班：

訓練班名稱	班　數	結訓人數
數學科及自然科實驗教材研習班	2	43
英語科研習班	10	1196
物理科研習班	6	216
數學科研習班	7	327
科學實驗室管理員班	2	90
化學科研習班	5	203

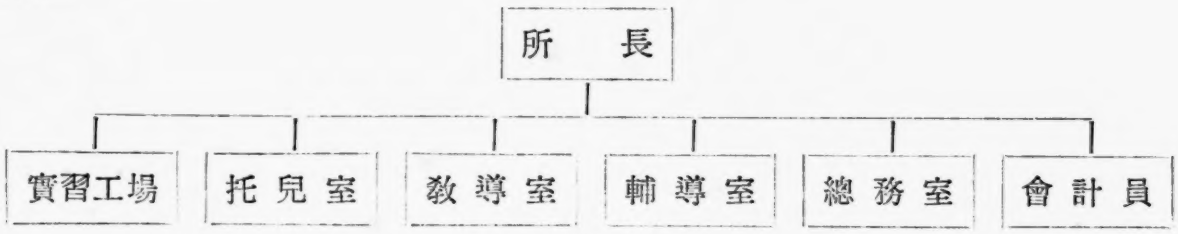
生物科研習班	3	141
共　　計	35	2216

㈡依職業別歷年來之結訓人數：

	專門及技術人員
47年	34
48年	86
49年	153
50年	268
51年	208
52年	821
53年	1019
54年	376
共計	2965

（十二） 中國大陸災胞救濟總會職業訓練所

地　　址：臺北市松山虎林街 124 巷 321 號
電　　話：43320
成立日期：53年 4 月
組織系統：



訓練人員：專任主管 3 人，兼任主管 3 人，專任教員22人，專任職員13人，共計專任38人，兼任 3 人。

主要訓練場地及設備：

教　　室	6 間（150 人）
工　　場	1 所（100 人）
辦 公 室	1 間
會 議 室	1 間（ 30 人）
托 兒 室	1 間（ 80 人）
縫 紉 機	59 台
電動縫紉機	4 台
電動軋邊機	1 台
電動綉花機	2 台
中文及英文打字機	各 10 台
編 織 機	4 台
電 動 鑽 床	1 台
萬能圓鋸機	1 台

訓練實施情形：

㈠近三年（52–54年）來辦理之訓練班：

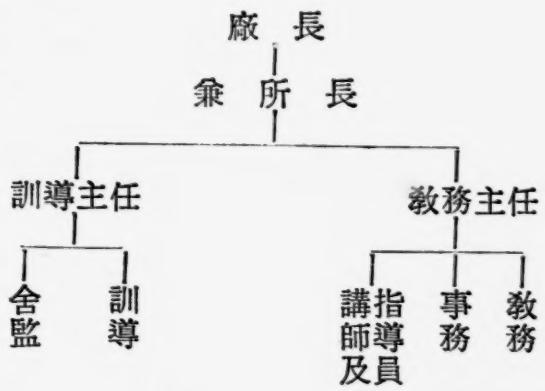
訓練班名稱	班　數	結訓人數
家事管理班	6	122
縫紉初級班	7	153
車綉初級班	7	145
縫紉車綉高級班	4	87
車綉研究小組	1	10
中文打字班	6	58
英文打字班	6	58
會 計 班	4	86
編 織 班	1	20
共　　計	42	699

㈡依職業別歷年之結訓人數：

	佐理人員	領工技工半技工	服務人員
52年		42	23
53年	63	161	40
54年	139	212	59
合計	202	415	122

（十三） 臺灣省鐵路局臺北機廠技工養成所

地　　址：臺北市松山區東興街38號
電　　話：51131-2341-32
成立日期：民國二十四年四月，以訓練鐵路技工爲主要目的。
組織系統：



訓練人員：所長由廠長兼任(王世一)，教務及訓導主任均爲專任，另有專任職員及技工 8 人，講師及指導員視實際需要臨時聘請。

主要訓練場地及設備：

教　　室	2 間（容量 84 人，可打通爲 1 間）
基本實習工場	1 所（可容 30 人）
受訓人宿舍	2 間（可容 100 人）
辦　公　室	2 間
會議室兼圖書館	1 間
飯廳兼康樂室	1 間
運　動　場	1 所
舍　監　室	1 間
各種視聽教具	7 套
圖 書 雜 誌	數佰冊

訓練實施情形：

㈠近三年（52-54年）來辦理之訓練班：

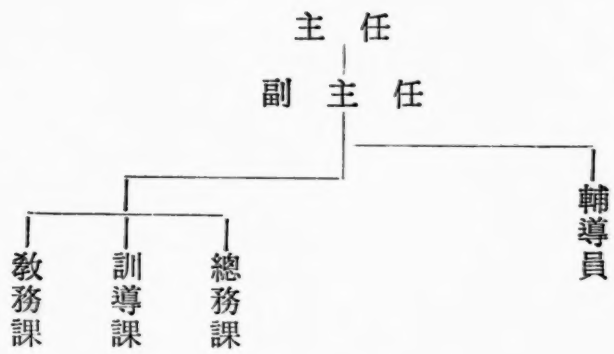
訓練班名稱	班　數	結訓人數
技工訓練班	2	59
汽車駕駛班	2	72
技術類士級及佐級特種考試講習班	2	257
車輛製造班	1	30
工作簡化班	2	60
機車檢修班	2	60
客車冷氣機檢修班	1	30
業務講習班	1	30
共　　計	13	598

㈡依職業別歷年之結訓人數：

	交通運輸人員
41年	43
45年	57
46年	99
47年	299
48年	166
49年	583
50年	540
51年	310
52年	210
53年	299
54年	89
共計	2735

(十四) 郵政總局郵政員工訓練所

地　　址：北投泉源路41巷11號
電　　話：95-2461
成立日期：54年9月
組織系統：



訓練人員：在主任潘明紀下有專任主管2人，職員11人，兼任教員臨時聘請，輔導員1人，共14人。

主要訓練場所與設備：

教　　室	1 間（容100人）
受訓人宿舍	13 間（容100人）
辦 公 室	5 間
會 議 室	1 間
禮　　堂	1 間
講師宿舍	1 幢
運 動 場	約 300 坪
總 面 積	約2000 坪

訓練實施情形：

㈠近三年（52-54年）來辦理之訓練班：

訓練班名稱	班　數	結訓人數
臺灣郵政管理局所屬局長訓練班	2	100
臺灣郵政管理局郵局窗口人員訓練班	1	80
共　　計	3	180

㈡依職業別歷年來之結訓人數：

	行政及管理人員	佐理人員
52年	100	
53年		80
共計	100	80

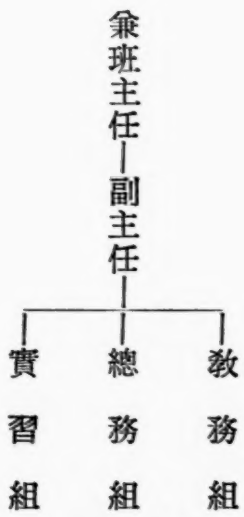
（十五） 裕隆汽車製造股份有限公司練習工訓練班

地　　址：臺北縣新店大坪林

電　　話：932291-932298

成立日期：49年8月

組織系統：



訓練人員：該訓練班之兼班主任爲楊傑，下有專任主管1人，教員2人，職員1人，紀錄工2人，兼任教員22人，合計28人。

主要訓練場所與設備：

教　　室	1 間（容 250 人）
圖 書 館	1 所
受訓人宿舍	1 間（容 250 人）
醫 務 室	1 間
辦 公 室	1 間
會 議 室	1 間
禮　　堂	1 間（容 500 人）
籃 球 場	112 坪
實習工場	1 所
車　　床	8
工 作 台	10
放映機、磨床、砂輪機	各 1
幻燈機、銑床、鑽床	各 2

訓練實施情形：

㈠近三年（52-54年）來辦理之訓練班：

訓練班名稱	班　數	結訓人數
練習工訓練班	8	153
領班在職訓練班	3	38
共　　計	11	191

㈡依職業別歷年來之結訓人數：

	領工技工
51年	88
52年	61
53年	50
54年	80
共計	297

(1) METAL INDUSTRY DEVELOPMENT CENTER

LOCATION:

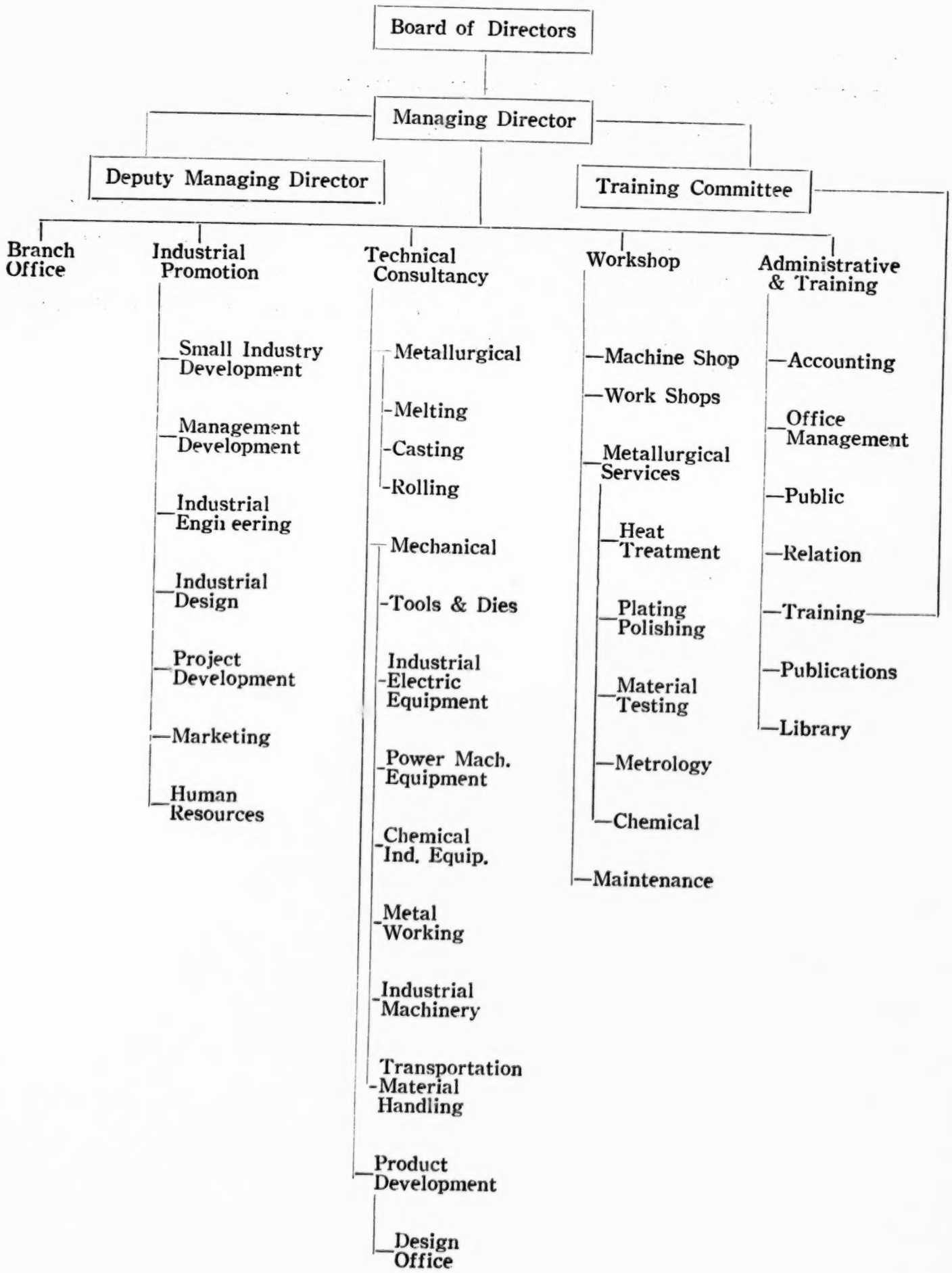
Head Office: 1001, Kao-Nan Highway, Natzu, Kaohsiung

Taipei Office: 70, Hwaning St., Taipei City

TELEPHONE: 21128 Kaohsiung; 35873, 37955, 38376 Taipei

ESTABLISHMENT: This Center was established in October 1963 as a joint operation of the Republic of China, the United Nations Special Fund and ILO for the development and improvement of our basic metal treatment, machinery, transportation and communication equipment and electric appliance industries.

MIDC ORGANIZATION CHART



TRAINING PERSONNEL:

Under the Chief of Training Division, there are 65 staff members and 17 technical workers. Instructors are on temporary basis.

TRAINING FACILITIES:

Desks and Chairs	60 sets
Visual Aids	9 sets
Work Shop	1
Foundry Shop	1

TRAINING CONDUCTED:

Training courses are conducted as deemed necessary from factory surveys or specific requests from industry.

Courses extend from top management through to foremen, supervisors and technicians and cover both technical and managerical subjects.

From October, 1963 to the end of June, 1966, MIDC sponsored 59 seminars and training classes of which 36 or 60% were of management, 23 or 40% were of technological courses. In addition 17, in-plant training classes were conducted during the period.

There were altogather 1,363 participants, of whom 364 or 27% are management personnel; 999 or 73% are engineers aud technicians.

It is interesting to note that there was an over whelming majority of participants being engineers and technicians in spite of the fact that training classes on management exceeded technological courses by 20%. As to the in-plant training classes, there were 495 participants.

Implementation of the programs called for 2,388 hours, of which 688 or 28% were for the Taipei area, while 1700 or 72% for the Kaohsiung area. Besides, 579 hours were spent in in-plant training.

Item	No. of Classes	Hrs.	No. of Participants	Remarks
1. Management for Metal Industries	2	45	51	
2. Seminar on the Design and Simulation in Management Education	1	27	13	
3. Seminar for Electronic Arc Furnace Operation	1	15	31	
4. Seminar on Rolling Technique	1	18	16	
5. Measurement Training Course	2	50	46	
6. Seminar on Foundry Technique of Iron and Steel for TMMC	1	35	61	
7. Plastics Mold Engineering Training Course	2	30	35	

8. Seminar on Design and Use of Management Control Report	2	56	43
9. Seminar on Lubrication and Lubricant	2	48	58
10. Seminar on Quality Control of Steel Industries	1	26	10
11. Seminar on Design and Control of New Project	2	40	27
12. Seminar on Sales Control	2	30	37
13. Seminar on Steel Industries	3	60	27
14. Seminar on Marketing	2	40	42
15. Supervisory Training Course	3	355	66
16. Seminar on In-Plant Training	1	14	17
17. Foreman Training Course	8	512	194
18. Seminar on Heat Treatment	1	30	31
19. Seminar on Work Study	3	348	47
20. Introduction to Electronic Data Processing	1	25	25
21. Training Officer's Seminar	1	40	13
22. Seminar on Tool and Die Design	3	104	68
23. Seminar on Gear Design and Manufacture	3	95	68
24. Candidate Foreman Training Course	3	120	67
25. Seminar on Planning and Practice of Preventive Maintenance System	2	84	60
26. Seminar on General Management	2	36	51
27. Seminar on Interchange Ability and Tolerance System	2	40	32
28. Foundry Technique Symposium	1	28	106
29. Instructor Training Course	1	42	21
Total	59	2388	1363

MIDC In-plant Training Records

(From Nov. 1963 to June 1966)

Kinds of Training	No. of Classes	No. of Participants
Senior Management Seminars	2	75
Supervisors and Foremen's Seminars	12	368
Industrial Works Seminars	3	52
Total	17	495

(2) CHINA PRODUCTIVITY AND TRADE CENTER

LOCATION: 62 Hsinuing South Road, Taipei City

TELEPHONE: 48631

ESTABLISHMENT AND GROWTH OF THE INSTITUTION:

The China Productivity Center was first founded in 1955 for the promotion of industrial productivity by providing a variety of administrative consultation and technical services.

In 1956 the branch office in Tainan was established.

In 1959 a Trade Promotion Division was incorporated into the Center and The Center's name was changed to the China Productivity and Trade Center.

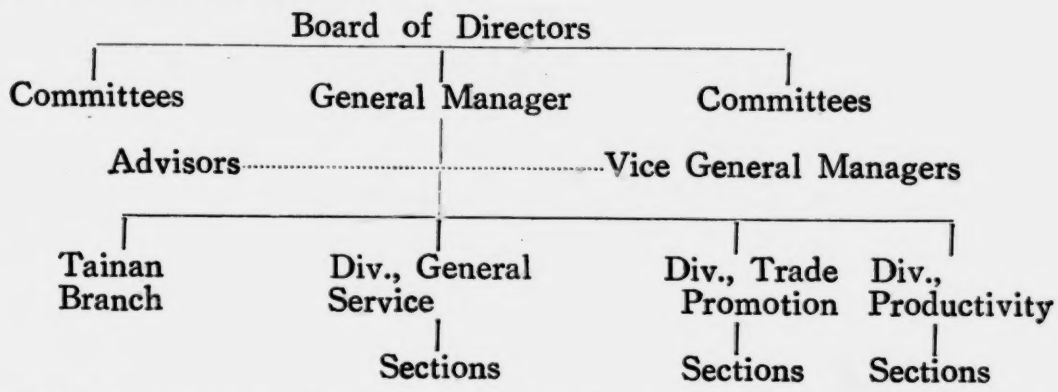
In 1960 a Ceramic Training Institute was established specially to help developing the ceramic industries.

STRUCTURE OF THE ORGANIZATION:

The Board of Directors is the highest authority of the center which was composed by 21 directors, representing industrial and commercial associations, trade unions, educational agencies and the employers' associations, The current chairman of the board is Mr Ch'in Kai-szu.

The general manager is in charge of practical operation and under him there are three divisions—General Service, Trade Promotion, Productivity and the Tainan Branch.

STRUCTURE OF THE ORGANIZATION:



The Training Section is allocatd in the Productivity Division of CPTC. which is responsible for planning, coordinating and implementing all the training programs.

TRAINING PERSONNEL:

There are ten staff members and one technician under the supervision of the Chief of Training Section. Instructors are invited from outside experts and appropriate personnel of the CPTC. There is no permanent instructor.

TRAINING FACILITIES:

Classrooms 3 (air-conditioned, capacity; 130 persons)

Library 1 (Over 12,000 volumes of books)
Office 1
Conference Room 1
Ceramic Institute 1 (with 1 lab. and 1 workshop)
Movie Projectors 3
Films 130
Slide Projectors 4
Slides 30 sets
Recorders 3

TRAINING CONDUCTED:

(1) From 1955 to 1964, the following kinds of training were conducted:

Item	No. of Classes	No. of Participants
Management Development	29	1,370
Industrial Engineering	214	6,938
Technology	86	2,454
Finance and Cost	21	709
Trade and Marketing	24	839
Misc.	23	686
Total	397	12,996

(2) Courses conducted during the recent 3 years (1963–65)

TITLE	No. of Classes	No. of Participants
Textile Dyeing and Finishing Technique Seminar	5	142
Txtile Industry Management Seminar	1	35
Modern Industrial Management Seminar	5	435
Industrial Management Introductory Course	5	173
IBM Management	1	77
Metal Industry Management Seminar	2	51
Promoting Productivity Course	2	86
Foremen Training Class	1	36
Industrial Engineering Introductory Course	2	83
Quality Control Training Course	89	2943
Work Sampling Inspection Training Course	11	282
Industrial Safety Training Course	6	203
Production Planning and Control Course	3	118
Preventive Maintenance Training Course	8	295
Inventory Control Training Course	4	145
Work Sampling Training Course	9	265
Tannery Techniques Training Course	3	76

Metal Heat Treatment Training Course	2	43
Furniture Decoration Techiques Course	1	21
Soap and Detergents Manufacturing Class	1	41
Cosmetics Manufacturing Class	1	25
Packaging Techniques Class	7	212
Industrial Designs Training Class	6	180
Ceramic Techniques Training Class	10	162
Fire Resistance Materials Seminar	6	208
Color Printing Training Program	5	96
Printing Training Program	2	43
Cost Accouning Training Course	2	85
Cost Analysis Training Course	4	122
Sales Promotion Seminar	3	105
Advanced Sales Promotion Seminar	4	143
Sales Promotion Re-training Seminar	1	21
Marketing Manageminar	1	35
Trade Seminar	2	96
Trade Promotion Techniques Seminar	1	46
International Trade Seminar	3	168
Business Coorespondence Training Course	9	331

There were altogther 247 such conducted in last three years with 8,194 persons participated.

(3) Number of persons participated the training by year and by occupation:

	Professional & Technical	Administrative & Managerial	Foremen, Skilled & Semi-skilled
1956	292		
1957	798	357	
1958	467	213	
1959	900	154	
1960	389	746	
1961	599	334	
1962	1,750	495	
1963	2,637	551	86
1964	1,576	654	
1965	1,884	770	36
Total	11,292	4,274	122

(3) PUBLIC ADMINISTRATION AND BUSINESS MANAGEMENT DEVELOPMENT CENTER, NATIONAL CHENGCHI UNIVERSITY

LOCATION; 187-1 Ching-hwa St., Taipei City

TELEPHONE: 39546

DATE OF ESTABLISHMENT AND GROWTH:

It was established in 1962 for the Purpose of training personnel of governmental agencies as well as those of industries in the field of management.

From 1962 to 1965 it cooperated with Michigan University., U. S. A. in its in-service training.

The Training Division of the Center is responsible for training.

TRAINING PERSONNEL:

Instructors are invited on subject basis. There is no full-time instructor in the Center.

TRAINING CONDUCTED:

1. From 1962 to 1965 the Center had conducted 66 classes or seminars with total of 2,906 participants. Up to July 1966, 91 classes and seminars have been conducted, with 3,235 Persons participated.

NATURE	No. of CLASSES
Managemect Development	22
Training Methods	4
Tax and Cost Accounting	19
Personnel Management	10
Dupont Discussion Leading	4
Electronic Data Processing	8
Public Relations	3
Operation Research	2
Others	19
Total	91

2. Participants by occupations

	Professional & Technical	Administrative & Managerial	Clerical
1962		20	
1963	96	273	
1964	24	620	
1965	491	508	37
Total	611	1,421	37

(4) TRAINING CENTER
TAIWAN POWER COMPANY

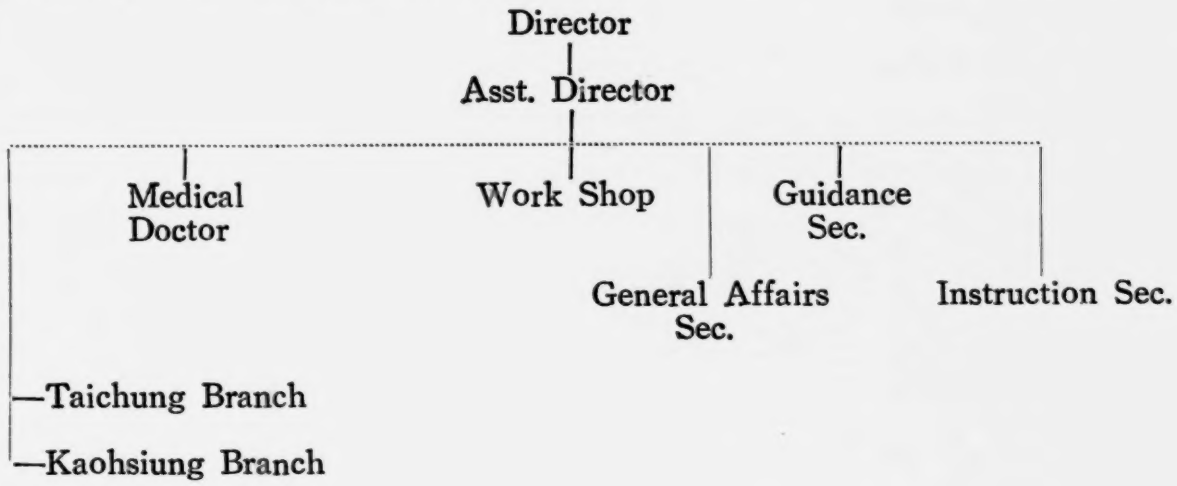
LOCATION: Kwei-shan Road, Shin-Tien Chin, Taipei Hsien, Taiwan.

TELEPHONE: Via Shin-Tien Telephone Office

ESTABLISHMENT AND GROWTH OF THE INSTITUTION:

The Center was established in 1951 in Shin-Tin Chin which is about 21 k.m. from Taipei City. In 1953 the Taichung Branch was established and in 1957 the Kaohsiung Branch was established too. The former was in cooperation with Taichung Senior Industrial Vocational School and the latter was in cooperation with the Kaohsiung Senior Industrial Vocational School.

STRUCTURE OF THE ORGANIZATION:



TRAINING PERSONNEL:

The present Director of the Center is Mr. C. Y. Chang. Under him there are 12 staff members and 12 technicians. Instructors are invited on course basis from outside sources and the Company's own personnel. There is no permanent instructor.

TRAINING FACILITIES:

Classrooms	4
Work Shop	1
Lab.	1
Library	1
Gym	1
Trainees Dorm.	4
Office	2
Conference Room	1
Auditorium	1
Instructors Quarters	1
Practice Field	1

Total campus space	2,500 Ping
Lathes	5
Shaper, drilling machine	1
Sawing machine, grinding machine	1
Pipe cleaner, Air compressor	
Insulating oil tester, grounding	1
Electric resistance tester	1
Mercury adjuster	1
Benches	14
Generators	6

TRAINING CONDUCTED:

1. In 1963–65 498 classes had becn conducted with 7,885 persons participated. Among them, 392 classes were T. W. I. programmes with 3,843 persons participated.

Item	No. of Classes	No· of Participants
Business Management Seminar	17	1,300
Executives Training	24	760
Superintendents Seminar	9	95
Supervisors Training	392	3,843
Hydrology Observers Training	3	66
Power Cable Live Line Operation Class	4	48
Communication Maintenance Personnel Training	1	20
Transformer Station Operator Training	2	40
Work Safety Training	4	94
Distributing Designers Training	3	69
Linemen Training	3	60
Lineman Supervisors Training	1	22
Distribution Live Line Operation Training	1	28
Examinars Training	1	20
Auto Transformer Station Directors Training	1	25
Service Office Supervisors Training	2	62
Second Transformer Station Workers Training	2	40
Job Classification Seminar	3	159
Management Analysts Training	3	57
New Staff Orientation Seminar	2	199
Material Management Workers Training	1	32
Service Office Workers Training	5	243
Distribution Workers Preparatory Training	7	368
Heat Engine Generation Workers Training	2	70

Power Cable Workers Training	1	40
Ex-enlisted Men Training Distribution Class	2	60
Ex-enlisted Men Training Electricians Class	1	30
Ex-enlisted Men Training Electric Meter Inspection Class	1	33
Total	498	7,885

2. Nunber of persons participated the training, by year and by occupations:

	Professional & Technical	Administrative & Managerial	Foremen, Skilled Semi-Skilled
1952	282	70	
1953	239	91	129
1954	64		208
1955	42	30	167
1956		55	50
1957	243	63	286
1958	277	50	160
1959	635	69	171
1960	762	131	192
1961	474	37	176
1962	502	100	227
1963	347	2,716	182
1964	400	2,238	226
1965	268	1,222	286
Total	4,535	6,872	2,460

(5) TRAINING COMMITTEE
TAIWAN MACHINERY MANUFACTURING CORPORATION

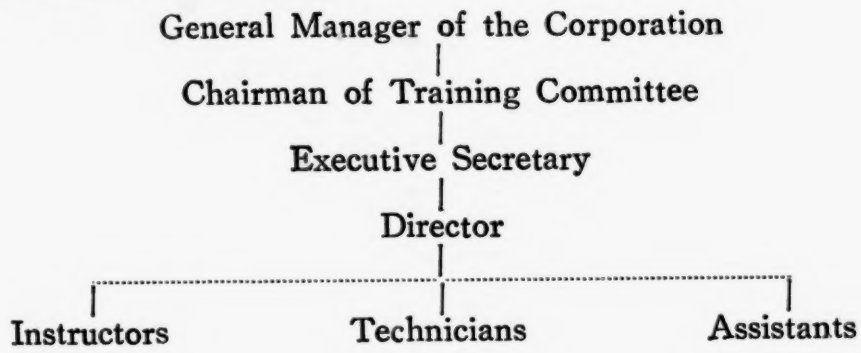
LOCATION: 25 Kung Yuan Road II, Kaohsiung, Taiwan

TELEPHONE: 21171

ESTABLISHMENT AND GROWTH OF THE INSTITUTION:

The Training Committee was established in November 1953. In 1955, the apprentice training class were set up, and then in 1956 various kinds of classes were established to train the staff and workers who were already on the job.

STRUCTURE OF THE ORGANIZATION:



TRAINING PERSONNEL:

The present Chairman of Training Committee is Mr. S. T. Chen. Instructors are invited as course requaired. There is no permanent instructor.

TRAINING FACILITIES:

Two classrooms (capacity: 69 persons) and one office are provided for the training. Plant equipment of the corporation can be utilized for training as necessary.

TRAINING CONDUCTED:

Kinds of Training	No. of Classes	No. of Trainees
Plating Training	2	78
Electro-welding Training (Secondary Skill)	3	62
Sheet Metal Training	3	67
Inspectors Training	1	33
Foundry Training	1	60
3rd Level Executives Training	2	89
Business Training	1	25
Metal Grinding Training	1	27
Suspension Wagon Operation	4	16
Electric Stove Operation (secondary skill)	1	11
Superintendents Training	1	30
Operators Training	4	92
Total	24	596

Number of persons participated the training by year and by occupations:

	Professional & Technical	Administrative & Managerial	Foremen, Skilled & Semi-skilled
1945			40
1946			60
1947			127
1948			152
1949		66	95
1950			40
1951			4
1952		146	8
1953	33		135
1954	25	124	159
1955		92	22
Total	58	428	842

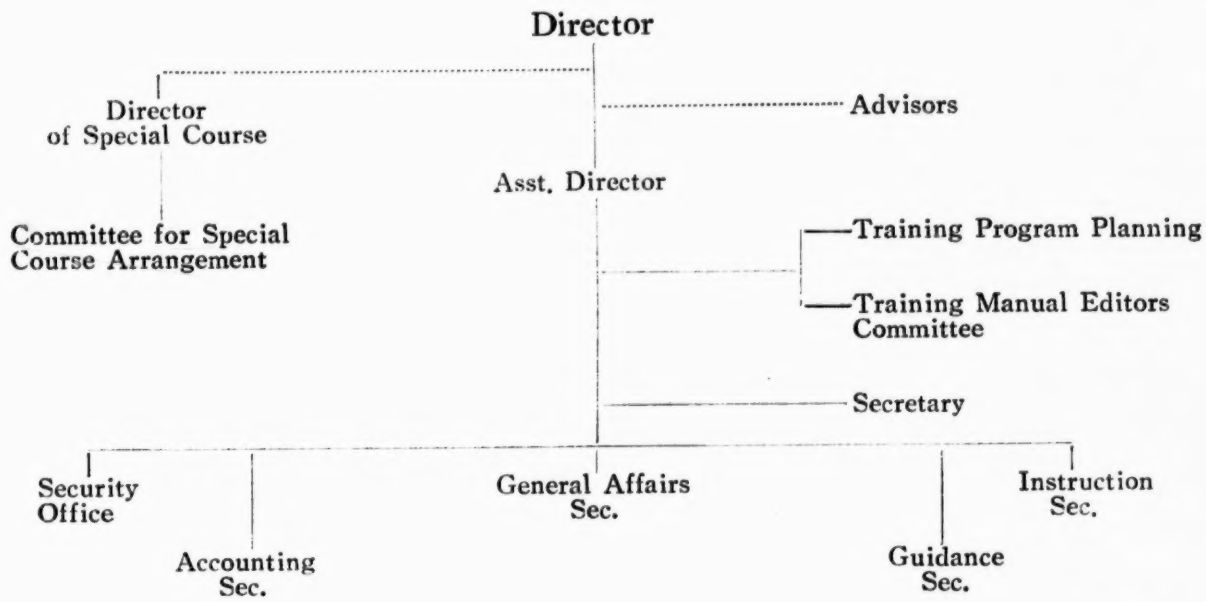
(6) EMPLOYEES TRAINING INSTITUTE CHINESE PETROLEUM CORPORATION

LOCATION: 23, Wu-fang Road, Chia-yi, Taiwan

TELEPHONE: 3070 Chia-yi

DATE OF ESTABLISHMENT: May 1, 1963

STRUCTURE OF ORGANIZATION:



TRAINING PERSONNEL:

The present Director is Mr.K.Y. Liu. Under him, there are 12 staff members and 2 technicians. Instructors are invited on course basis from outside sources and the corporation's own personnel. There is no permanent instructor.

TRAINING FACILITIES:

Classrooms	2 (capacity; 100 persons)
Laboratories	2 (1 for automatic instruments and 1 for electronic instruments)
Library	1
Trainees dormitories	20 rooms (capacity: 80 persons)
Conference rooms	2
Auditorium	1 (capacity: 80 persons)
Instructors quarters	2 (capacity: 10 persons)
Displayroom	1 (for models and teaching materials)
Playground	136 ping
Total area of campus	6,000 ping
Electronic control training instruments	3

Automatic control training instrument	1
Audio-visual aids	10 sets
Fire drill area	1

TRAINING CONDUCTED:

1. Between 1963-65, 40 classes have been conducted with 1,211 persons participating. All were corp. employees. The average time of training for each class was about one week. The following are some of the training classes:

Item	No. of Classes	No. of Participants
Job Classification	1	52
Orientation Seminar	5	270
Business Management	7	89
Gasoline Station Operation	3	137
Orientation Training for Veterans	2	76
Foreman Training	2	62
Equipment Inspection & Preventive Maintenance	3	91
Accounting	2	55
Quantnm Chemistry	1	42
Property Management	1	39
Forms Simplification	1	83
Industrial Safety	1	33
Storage and Transport	1	32
Material Management	1	30
Business Management	1	23
Construction Work Estimation	1	22
Quality Control	1	21
Salesmen Training	1	21
Productivity Control	1	20
Personnel Management	2	38
Gasoline Meter Maintenance	1	15
Seminar for the People Going Abroad	1	5
Total	40	1,211

2. Number of persons participated the training by year and by occupations:

	Professional & Technical	Administrative & Managerial	Clerical	Sales	Transportation	Foremen, Skilled & Semi-Skilled
1963	73	79	47			34
1964	95	87	144		15	61
1965	174	55	170	21	52	104
Total	342	221	361	21	67	199

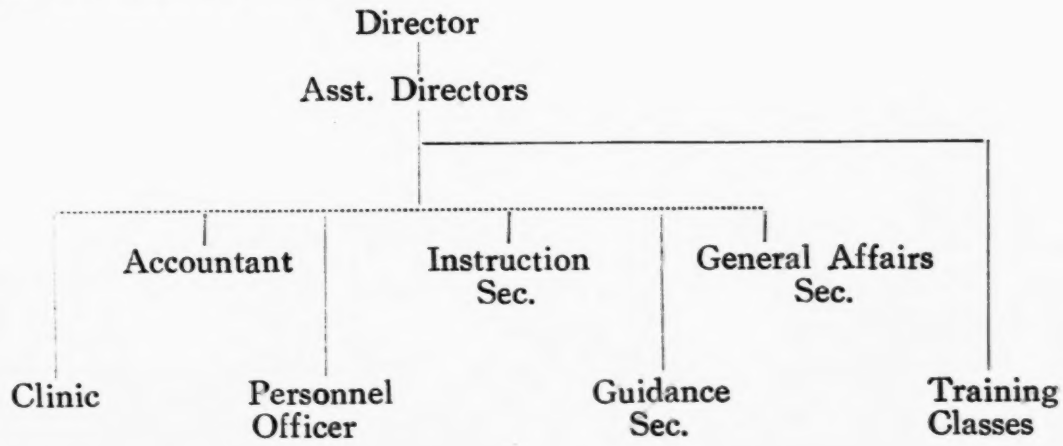
(7) EMPLOYEES TRAINING INSTITUTE, TAIWAN SUGAR CORPORATION

LOCATION: Tantze hsiang, Taichung Hsien, Taiwan

TELEPHONE: 5 Tantze

DATE OF ESTABLISHMENT: July 1, 1954

STRUCTURE OF ORGANIZATION:



TRAINING PERSONNEL:

The Director is the President of the Corporation (Mr. M. H. Yuan). One Asst. Director is Mr. T. S. Cheng (Vice President of the Corp). and the other is Mr. C. T. Lin who is also the Resident Asst. Director. All staff under them are on full-time basis cxcept instructors who are invited from Corporation personnel and outside sources on subject basis.

TRAINING FACILITIES:

Classrooms	2 (capacity 112 persons)
Dormitories	2 (capacity 114 persons)
Conference room	1 (capacity 40 persons)
Auditorium	1 (capacity 200 persons)
Instructors quarters	1 (capacity 14 persons)
Dining room	90 ping
Total area of campus	1,000 ping
Visual aids equipment	

TRAINING CONDUCTED:

1. (From 1963 through 1965):

Item	No. of Classes	No. of Trainees
New Employees Orientation	12	656
Management Development	20	1,585
Agricultural Technique	16	830
Engineering Techniques	16	621

Railway and Communication Techniques	11	330
Accounting and Auditing	2	118
Others	7	325
Total	84	4,465

2. Number of trainees by year and by occupation:

	Professional & Technical	Administrative & Managerial	Transportation & Communication	Foremen, Skilled & Semi-skilled
1954	98	176	50	
1955	400	150		185
1956	679	740	174	190
1957	718	402	299	190
1958	383	48	109	
1959	445	233	155	
1960	435	636	165	
1961	167	817	60	
1962	264	155		
1963	164	702	54	
1964	766	944	197	
1965	1,202	356	80	
Total	6,221	5,359	1,343	375

(8) AUTO TECHNICIANS AND INSTRUCTORS TRAINING CENTER TAIWAN HIGHWAY BUREAU

LOCATION: Tsi-Sai Village, Chung-Ho Hsiang, Taipei Hsien (about 12 Km. from Taipei City)

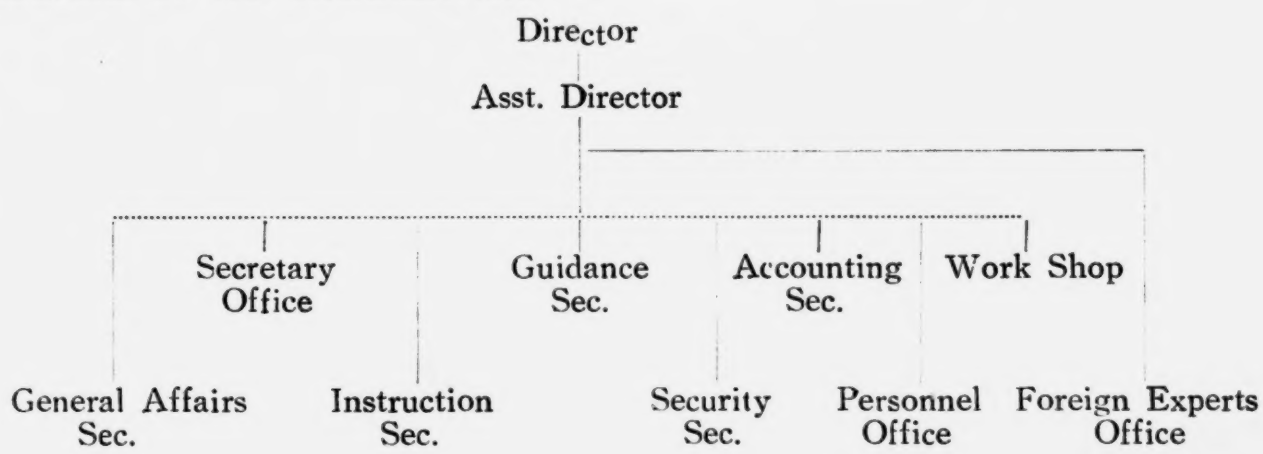
TELEPHONE: 92-2390, 92-2441

ESTABLISHMENT AND GROWTH:

The Center was established in 1954 under the jurisdiction of National Highway Administration, Ministry of Communications with technical assistance from the International Labour Organization. In 1962, the Center was re-assigned under the administrative control of Taiwan Provincial Highway Bureau, Dept. of Communications of Provincial Government of Taiwan.

UN Special Fund of US$657,000 and Government's counterpart Contribution of US$552,000 were granted in 1962 for its 4-year expansion project which is now under way.

STRUCTURE OF THE ORGANIZATION:



TRAINING PERSONNEL:

There are 1 director, 1 asst. director, 21 full-time instructors, 6 foreign experts, and 33 staff workers.

TRAINING FACILITIES:

The campus consists of 9,400 ping of land with buildings of 1,448 ping floor space which can accomodate 200 trainees or 7 classes.

Other facilities are:

Machines	115
Practice vehicles	29
Practice engines	42
Models	124
Experimental equipment	53
Demonstrating Apparatuses	276
Tools	357 sets

Driver's Training Instruments	12	
Training Manuals	45	series
Exhibiting Tables	2,300	Colored
Exhibiting Boards	150	
Training Materials	80	kinds
Reference Books	2,140	
Slides	735	rolls
Audio-visualAids	42	

TRAINING CONDUCTED:

Up to Dec. 1965, 298 classes of training have been conducted with a total of 8280 trainees. Duration of each class was from 1 week to 26 week. Mainly there are three sections of training:

The Auto Section,

The Diesel Engine Section, and

The Heavy Equipment Section.

The average time spent for lecture for each class was about 24% for practice 43%, and for review, audio-visual aids and tests, 33%.

ACHIEVEMENTS:

Among the achievements, the Training Center reported, average life of vehicles prolonged from 250,000 k.m. to 500,000 k.m., average service life of engines after overhaul prolonged from 30,000 k.m. to 110,000 k.m., average battery life prolonged from 4 months to one year, average tire life prolonged from 25,000 k.m. to 110,000 k.m., and average gasoline mileage of bus increased from 2.5 km/liter to 3.5 km/liter.

(9) MANAGEMENT DEVELOPMENT CENTER, DEPARTMENT OF RECONSTRUCTION, TAIWAN PROVINCIAL GOVERNMENT

LOCATION: 2 Cheng Kiang Street, Taipei City

TELEPHONE: 28169 Taipei

DATE OF ESTABLISHMENT:

This Center was established in February 1956 under the jurisdiction of Department of Reconstruction, Taiwan Provincial Government with the assistance of the United Nations and the International Labour Office, for the main objective of introducing Training Within Industry (TWI) program in Taiwan.

STRUCTURE OF ORGANIZATION:

Management Development Center ..... Participating Agencies

ILO Experts ..... Institute Conductors .....
|
Sessions ..... Trainers .....
|
Groups ..... Supervisors .....
in each agency
|
Employees & Workers .....

TRAINING PERSONNEL:

Director of the Center is the Vice Commisioner of the Department of Reconstruction (Mr. P. C. Lee.) The Executive Secretary is Mr. C. M. Young. Institute Conductors and Trainers are invited on part-time basis.

TRAINING COURSES:

1. Job Instruction
2. Job Relations
3. Job Methods
4. How to preside over a meeting
5. Job Inspection
6. Program Development

TRAINING CONDUCTED:

From 1963 through 1965, there were 579 classes conducted with 5,506 persons attended. All the teaching material came from "Training within Industry Foundation" in U. S. A.

(10) TAIWAN PROVINCIAL TRAINING CORPS

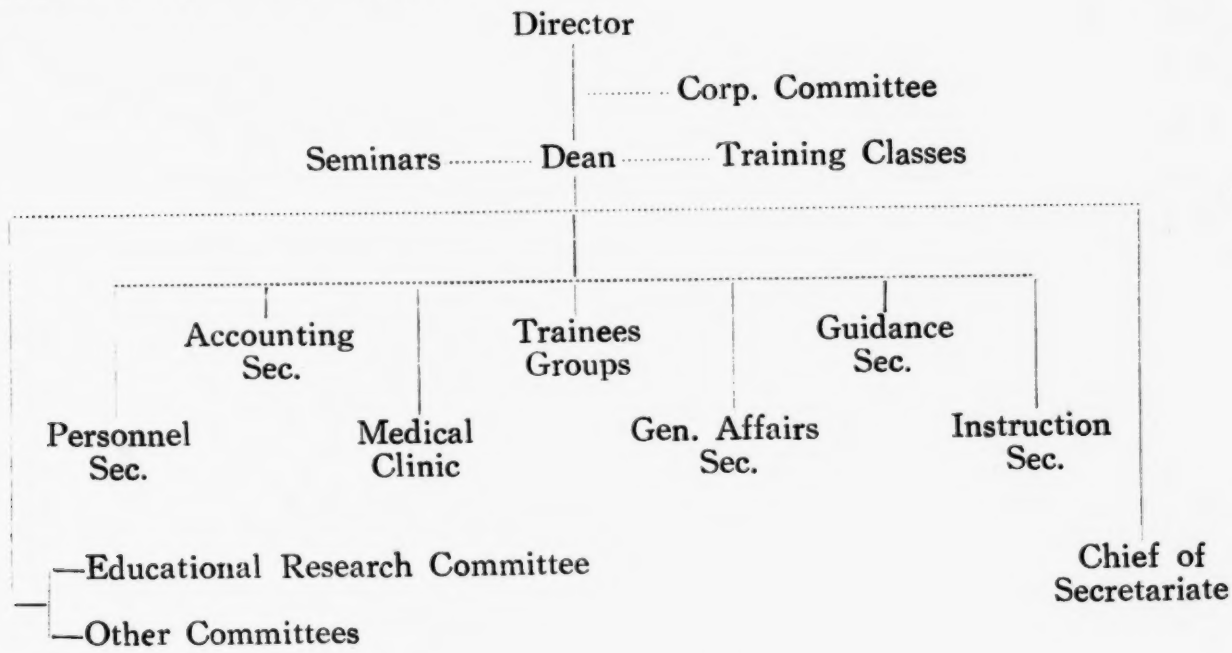
LOCATION: 1 Kwan-ming Road, Chungshing Village, Nantou

TELEPHONE: 575

DATE OF ESTABLISHMENT:

July 1956. This is a training center for provincial government personnel of all levels.

STRUCTURE OF ORGANIZATION:



TRAINING PERSONNEL:

Governor C. Huang is concurrently the director of the corps and the Dean is Mr. Chang Kuo-Chiang under them, are the chief of secretariate, 15 instructors, 112 staff and 14 technicians. All of them are permanent personnel.

TRAINING FACILITIES:

Total area of the campus	29,343 ping
Athletic ground	7,680
Classrooms	11 (capacity: 750 persons)
Library	1
Trainees Dormitories	75 rooms (capacity: 700 persons)
Medical Clinic	3
Office Rooms	23
Conference Room	1
Auditorium	1 (capacity: 800 persons)
Instructors Quarters	1

TRAINING CONDUCTED:

1. Training conducted in the last three years (1963 through 1965) by categories:

Nature	No. of Classes
Finance and Taxation Adm.	35
Management Development	33
Navigation Adm.	21
Education and Culture	17
Conscription Adm.	14
Personnel Adm.	13
Land Adm.	11
Household Registration Adm.	9
Transportation and Communication	8
Forestry Adm.	7
Social Work	5
Social Adm.	3
Cooperative Enterprises	3
Mountain Area Adm.	2
Construction Adm.	2
Food Adm.	2
Others	31
Total	218
	(14,122 persons)

2. Number of trainees by year and by occupaton:

	Professional & Technical	Administrative & Managerial	Clerical	Communication & Transportation
1956		234	96	
1957	295	2,970	460	
1958	292	2,224	1,097	
1959	359	2,890	824	
1960	86	2,681	449	
1961	111	3,974	291	
1962	70	3,893	322	
1963	224	3,802	325	23
1964	75	4,439	378	225
1965	259	4,004	272	188
Total	1,771	31,111	4,514	436

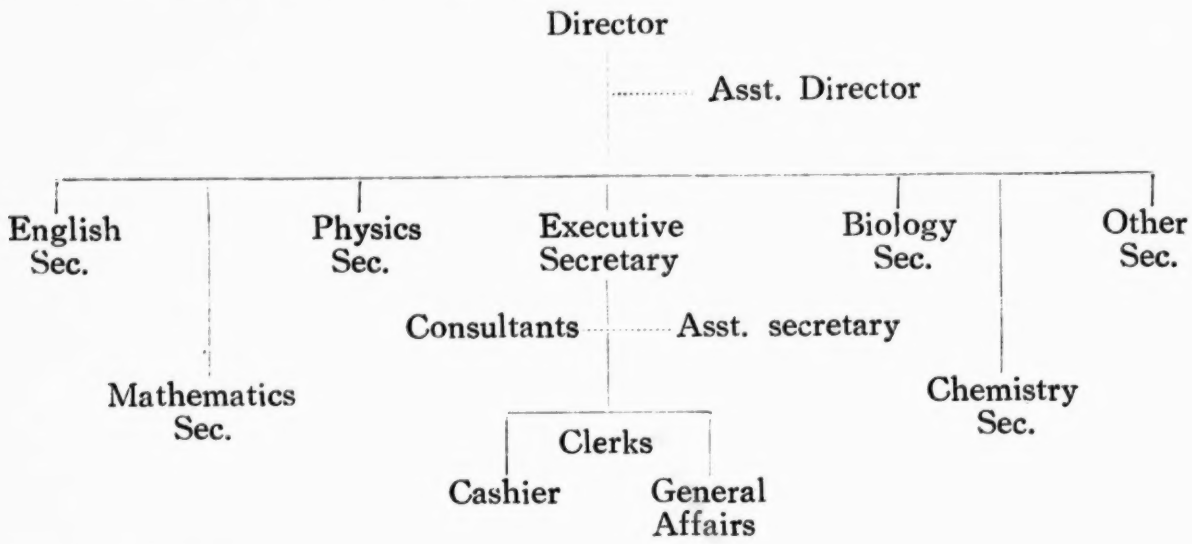
(11) MIDDLE SCHOOL TEACHERS IN-SERVICE TRAINING CENTER TAIWAN PROVINCIAL NORMAL UNIVERSITY

LOCATION: 162, Hoping Road, 1st Sec., Taipei City

TELEPHONE: 37841

DATE OF ESTABLISHMENT: 1958

STRUCTURE OF THE ORGANIZATION:



TRAINING PERSONNEL:

The president of the university is concurrently the director of the Center, and the dean of the university takes the job of assistant director of the Center. Except 3 clerks and 4 technicians, other staff (5 persons) work part-time basis from the university. The instructors come from the faculty of the university.

TRAINING FACILITIES:

Classrooms	8 (capacity: 400 persons)
Library	1 (capacity: 50 persons)
Language Lab.	1 (capacity: 30 persons)
Trainees Dormitories	35 rooms (capacity 209 persons)
Office	8
Conference Room	2
Dinning Halls	2
Experimental Tables and Benches	36

TRAINING CONDUCTED:

1. From 1963 through 1965:

Seminars	No. of Classes	No. of Participants
Math. & Natural Science	2	43
English	10	1,196
Physics	6	216

Math.	7	327
Science Lab. Management	2	90
Chemistry	5	203
Biology	3	141
Total	35	2,216

2. Number of participants by:

	Professional & Technical
1958	34
1959	86
1960	153
1961	268
1962	208
1963	821
1964	1,091
1965	376
Total	2,965

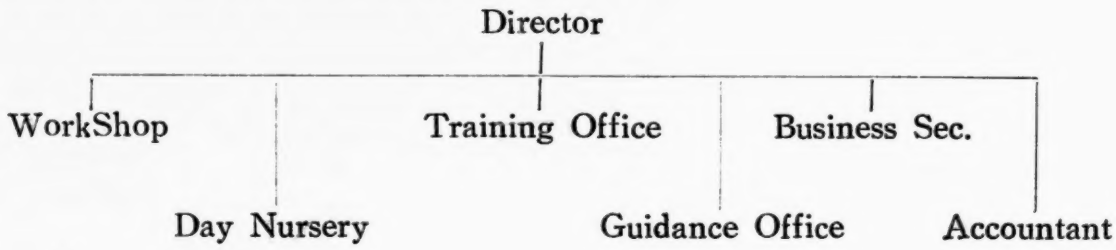
(12) VOCATIONAL TRAINING CENTER
CHINA MAINLAND REFUGEES RELIEF ORGANIZATION

LOCATION: 321 Lane 124, Hu-lin Street, Sung-shan, Taipei City

TELEPHONE: 43320, Taipei

DATE OF ESTABLISHMENT: April 1964

STRUCTURE OF THE ORGANIZATION:



TRAINING PERSONNEL:

Under the Director, there are 6 supervisors, 22 instructors and 13 clerks. All except 3 of the 6 supervisors are tull time.

TRAINING FACILITIES:

Class Rooms	6 (capacity 150 persons)
Work Shop	6 (capacity 100 persons)
Office	1
Meeting Room	1 (capacity 30 persons)
Sewing Machines	59
Tele-sewing Machines	4
Tele-edge-maker	1
Tele-embroidery-makers	2
Chinese Typewriters	10
English Typewriters	10
Weaving Machines	4
Drilling Machine	1
Universal Sewing Machine	1

TRAINING CONDUCTED:

1. Kinds of training conducted from 1963 through 1965:

NATURE	CLASSES	TRAINEES
House-keeping	6	122
Sewing	7	153
Embroidery	8	155
Sewing & Embroidery	4	87
Embroidery (advanced class)	1	10
Chinese Typing	6	58

English Typing	6	58
Accounting	4	86
Weaving	1	20
Total	42	699

2. Number of trainees by year and by occupation:

	Clerical	Foremen, Skilled & Semi-skilled	Service
1963		42	23
1964	63	161	40
1965	139	212	59
Total	202	415	122

(13) TECHNICIANS TRAINING INSTITUTE, TAIPEI FACTORY, TAIWAN RAILWAY ADMINISTRATION

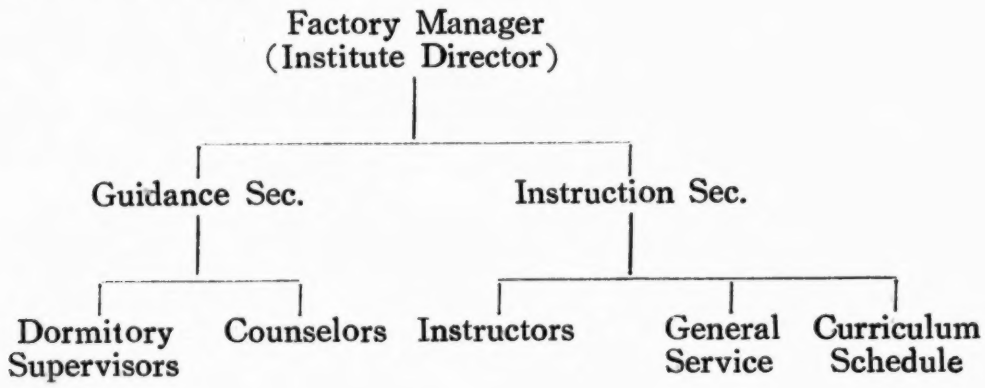
LOCATION: 38 Tung-shing St., Taipei City

TELEPHONE: 51131-2341-32 Taipei

DATE OF ESTABLISHMENT:

April 1935 for the main purpose of the training of railway skilled workers and technicians.

STRUCTURE OF ORGANIZATION:



TRAINING PERSONNEL:

Mr. S. I. Wang is the Factory Manager and Institute Director. Besides the Chiefs of Guidance Section and Instruction Section, there are 11 staff on permanent payroll. Instructors are invited on subject basis.

TRAINING FACILITIES:

Classrooms	2 (capacity: 84 persons)
Workshop	1 (capacity: 30 persons)
Dormitories	2 (capacity: 100 persons)
Office Rooms	2
Conference Room	1
Dinning Hall	1
Playground	1
Dormitory Master Room	1
Audio-visual Aids	7 sets
Books and Periodicals	Hundreds copies

TRAINING CONDUCTED:

1. From 1963 to 1965:

NATURE	No. of Classes	No. of Participants
Skilled Workers Training	2	59
Drivers Training	2	72
Special course for Technicians	2	257
Car Manufacturing	1	30

Work Simplification	2	60
Engine Inspection	2	60
Air-conditioner Inspection	1	30
Orientation Training	1	30
Total	13	598

2. Trainees by Occupations:

	Professional & Technical	Administrative & Managerial	Transportation & Communication	Skilled & Semi-skilled Workers, Foremen	Total
1952	15			28	43
1956				57	57
1957	35			64	99
1958	14			215	229
1959	45			121	166
1960	25			558	583
1961	110	60		370	540
1962		20		310	330
1963				101	101
1964		30	42	104	176
1965	185		30	106	321
Total	429	110	72	2,034	2,645

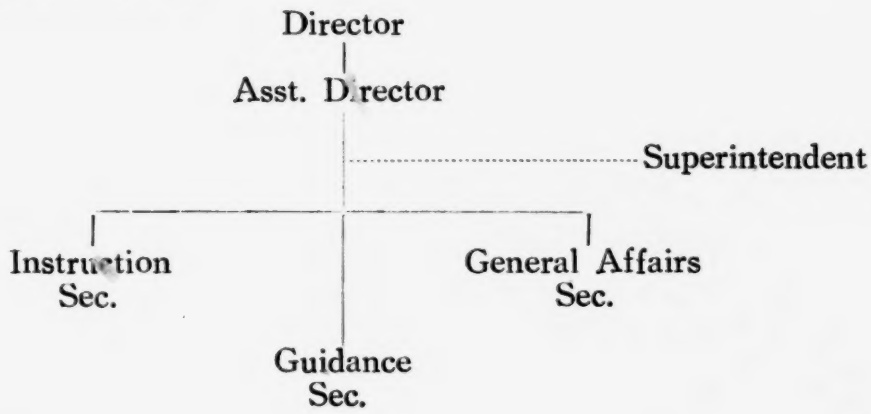
(14) EMPLOYEES TRAINING CENTER TAIWAN GENERAL POST OFFICE

LOCATION: 11, Lane 41, Chuan-yuan Road, Pei-tou, Taipei Hsien

TELEPHONE: 95-2461

DATE OF ESTABLISHMENT: Sept. 1965

STRUCTURE OF ORGANIZATION:



TRAINING PERSONNEL:

Under the director, assistant director, there are 15 permanent staff. Instructors are invited on temporary basis.

TRAINING FACILITIES:

Classroom	1 (capacity: 100 persons)
Dormitories	13 (capacity: 100 persons)
Office rooms	5
Conference Room	1
Auditorium	1
Instructors Quarters	1
Playground	300 ping
Total campus space	2,000 ping

TRAINING CONDUCTED:

1. From 1963 through 1965:

NAMES	CLASSES	TRAINEES
Post Office Managers Training	2	100
Clerks Training	1	80
Total	3	180

2. Number of trainees by year

	Administrative & Managerial	Clerical
1963	100	
1964		80
Total	100	80

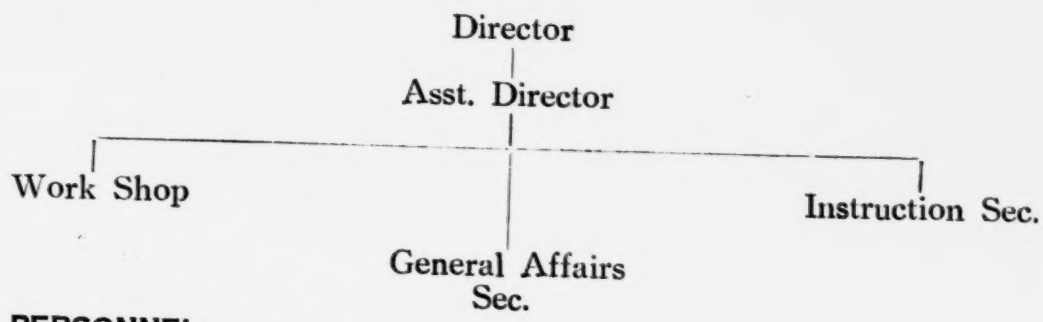
(15) YUELOONG AUTOMOBILE MANUFACTURING CO. TRAINING INSTITUTE

LOCATION: Ta-pin-lin, Hsin Tin, Taipei Hsien

TELEPHONE: 932291-932298

DATE OF ESTABLISHMENT: Aug. 1960

STRUCTURE OF THE ORGANIZATION:



TRAINING PERSONNEL:

There are 6 permanent staff (1 Asst. Director, 2 instructors) and 3 clerks and 22 instructors on part-time basis.

FACILITIES:

Classroom	5 (capacity: 250 persons)
Library	1
Trainees Dormitory	1 (capacity: 250 persons)
Clinic	1
Office Room	1
Auditorium	1 (capacity: 500 persons)
Playground	112 ping
Workshop	1
Lathes	8
Work Benches	10
Movie Projector	1
Grinding Machine	1
Grinder	1
Slide Projector	2
Milling Machine	2
Drilling Machine	2

TRAINING CONDUCTED:

1. From 1963 through 1965:

Names	Classes	Trainees
Apprentice Training	8	153
Foremen In-service Training	3	38
Total	11	191

2. Number of trainees by year:

	Foremen, Skilled & Semi-skilled
1962	88
1963	61
1964	50
1965	80
Total	279

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Profiles of Trade and Technical Leaders: Summary Report.

California Univ., Los Angeles. Div. of Vocational Education
California State Dept. of Education, Sacramento. Bureau of Industrial Education
MF AVAILABLE IN VT-ERIC SET.
Pub Date - 69 60p.

*ADMINISTRATOR CHARACTERISTICS; *ADMINISTRATOR BACKGROUND; TECHNICAL EDUCATION; EDUCATIONAL PROBLEMS; STATE SURVEYS; *ADMINISTRATIVE PROBLEMS; *TRADE AND INDUSTRIAL EDUCATION
CALIFORNIA

To provide descriptive information concerning trade and technical education leaders in California, a series of three questionnaires was used to collect data from over 200 persons and interviews were held with 30 who were randomly selected. Findings included: (1) median age was 48.56 years, (2) over 50 percent held M.A. degrees, (3) most were married, (4) median work and teaching experience was 10.31 years and 7.82 years respectively, (5) the median salary was $15,344 (6) about 85 percent spent all their time in coordination, supervision, and administration, and (7) meetings, report writing, and coordination are most oftern reported activities. Fifteen major issues were identified and 10 solutions were rated by 239 leaders. Some of these issues and highest rated solutions were: (1) The status of vocational education can be improved by orienting counselors to its values, (2) Federal efforts can be more effective by increasing flexibility, (3) Publicity can help bring vocational education into the educational mainstream, (4) The shortages of qualified vocational education teachers can be resolved by inservice education, (5) Relationships between academic and vocational education teachers can be improved by involvement in the counseling program. This is a summary of a report by the same title which is available as ED 019 457. (EM)

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PROFILES OF TRADE AND TECHNICAL LEADERS: SUMMARY REPORT

MELVIN L. BARLOW
BRUCE REINHART

Division of Vocational Education
University of California, Los Angeles

IN COOPERATION WITH:

Bureau of Industrial Education
California State Department of Education

VT007615

PROFILES OF TRADE AND TECHNICAL LEADERS: SUMMARY REPORT

1969

by:

MELVIN L. BARLOW
Director, Division of Vocational Education, UCLA

BRUCE REINHART
Supervisor, Division of Vocational Education, UCLA

Division of Vocational Education
University of California, Los Angeles

IN COOPERATION WITH:

Bureau of Industrial Education
California State Department of Education

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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FOREWORD

The Profiles Study of trade and technical leaders extends the study of trade and technical educators. Profiles of Trade and Technical Leaders can now be placed alongside Profiles of Trade and Technical Teachers which was previously prepared by the Division of Vocational Education at UCLA in cooperation with the Bureau of Industrial Education. Together these studies are putting together a description of trade and technical educators which have never before been available.

This research has been needed for a long time. It provides facts to document descriptions of trade and technical leadership. It describes how trade and technical leaders spend their time and what they think about major issues. It identifies the factors which influence their thoughts and actions. It describes their professional advancement.

These data will be used wherever appropriate in California and throughout the nation to further the cause of trade and technical education. They help answer many questions which are being raised today and provide direction for meeting the needs of tomorrow.

I am grateful to all of the leaders who have given their assistance to this research project.

Richard S. Nelson

Richard S. Nelson, Chief
Bureau of Industrial Education
California Department of Education

CONTENTS

	Page
FOREWORD	iii
CONTENTS	v
I. THE PROFILES STUDY	
Population	3
Research Methods	4
Limitations of Summary Report	5
II. BASIC DESCRIPTION	
How Old Are Trade And Technical Leaders?	9
What Is Their Sex And Marital Status?	10
How Much Formal Education Do They Have?	11
Do They Plan More Education?	12
How Much Work Experience Do They Have?	13
How Many Credentials Do Leaders Have?	14
How Much Teaching Experience Do They Have?	15
How Much Do They Earn?	16
How Much Do They Earn?	17
What Organizations Do They Join?	18
What Organizations Do They Join?	19
What Organizations Do They Join?	20
Summary	21
III. WORK ANALYSIS	
How Do They Divide Their Time Between Persons And Individual Effort?	31
How Do They Spend Their Time With Persons?	32
How Do They Spend Their Time In Individual Effort?	33
What Proportion Of Time Do They Devote To Major Responsibilities?	34
Summary	35
IV. MAJOR ISSUES	
How Can Vocational Education Achieve The Status And Prestige It Needs To Perform Its Proper Role?	41
How Can The Federal Government Be More Effective In Vocational Education?	42

How Can Vocational Education Be Brought Into The Mainstream of Education? 43
How Can The Shortage Of Qualified Teachers Be Resolved? 44
How Can The Relationships Between Vocational And Academic Teachers Be Improved? 45
How Can The Relationships Between Vocational And Academic Leaders Be Improved? 46
How Can We Provide Credit For Student Learning Regardless Of How Or Where It Is Achieved? . . . 47
What Kinds Of Institutions Should Offer Vocational Education? 48
How Can We Provide Diversity And Comprehensiveness In Vocational Education? 49
How Can We Improve Vocational Guidance? 50
How Can We Better Respond To The Challenge Of The New Technology? 51
How Can Vocational Education Respond To Poverty Problems? 52
How Can We Improve Continuing Occupational Education? 53
How Can We Prepare Craftsmen And Technicians To Teach? 54
How Should We Provide For The In-service Training Of Trade And Technical Teachers? 55
Summary 57

THE PROFILES STUDY

Few depth studies of the characteristics of vocational educators have been made. During the years of 1966 - 1968, however, a study of trade and technical teachers credentialed to teach full-time in California was conducted at UCLA under the sponsorship of the Bureau of Industrial Education of the California State Department of Education.[1]

During 1967 - 1968 the Bureau continued to sponsor the study of trade and technical educators by expanding the research to full-time leaders of trade and technical education in California. The term "leader" in this study is generously used to describe persons with a variety of titles such as coordinator, director, supervisor, dean, consultant, etc.

Population

Names of persons to be included in the study were supplied from the Bureau of Industrial Education. Names of leaders in correctional institutions were supplied by the Department of Corrections. The first survey questionnaire used in the study, the Basic Description Questionnaire (BDQ), was designed to identify those persons who supervised, coordinated, directed or acted as consultant for trade and technical

---

[1]The three reports published on the Profiles Study of trade and technical teachers are entitled (1) Profiles of Trade and Technical Teachers: Summary Report--1967, (2) Profiles of Trade and Technical Teachers: Comprehensive Report--1968, and (3) Profiles of Trade and Technical Teachers: Revised Summary Report--1968. The Comprehensive Report provided a very detailed analysis not included in the Summary Report. The Revised Summary Report included a larger population than the original summary.

programs more than fifty percent of their time. The BDQ was sent to 389 persons thought to be in the population. Three hundred and fifty-eight persons returned the questionnaire but 72 of the returns were deleted from the study because they did not meet the parameters of the study. Two hundred and eighty-six valid returns were used to comprise the data from the BDQ.

The population was not limited to educators with backgrounds in trade and technical education. Persons who provide the leadership for trade and technical education in California have a variety of backgrounds in general education, industrial arts, trade and technical education and other vocational areas. In brief, all persons who "call the shots" in trade and technical education below the level of general administrative officials were included in the study.

Research Methods

Three questionnaires and thirty interviews were utilized in the course of the research. The BDQ was utilized to collect descriptive information about the characteristics of the leader population, to explore the relationships of numerous variables and to identify the population.

The data from the BDQ are based on 286 returns. If the 31 persons who did not return the questionnaire are assumed to be in the population these comprised a 90 percent return.

The Work Analysis Forms (WAF), an instrument developed by the Ohio State Leadership Studies in the Bureau of Business Research, was

used to provide a modified form of job analysis.[2] The WAF is designed to identify various aspects of administrative performance by recording estimates of the time that the subject spends in various kinds of work.

The WAF was sent to all 286 respondents to the BDQ. The data from the WAF were collected from 224 returns (79 percent).

Fifteen major issues were identified for consideration by trade and technical leaders and incorporated in a questionnaire entitled the Major Issues Questionnaire (MIQ). Nine issues were identified by Grant Venn in his book, Man, Education and Work.[3] Some of these same issues and six additional issues were identified by thirty leaders interviewed throughout California. Suggestions for the solution of these issues were solicited from the thirty interviewees (randomly selected from the list of 286 respondents to the BDQ) and ten suggestions for the solution of each major issue were offered to the entire sample in the MIQ. The leaders were asked to score the importance of each suggestion on a five point scale of helpfulness.

The data from the MIQ are based on a return of 239 returns (84 percent).

Limitations of Summary Report

The Summary Report is limited to general overall descriptions of the population of trade and technical leaders. The Comprehensive

---

[2]For a description and analysis of the Work Analysis Forms see Ralph M. Stogdill and Carroll L. Shartle, Methods in the Study of Administrative Leadership (Columbus: The Ohio State University, Bureau of Business Research, 1955), Monograph No. 80, pp. 44-53.

[3]Grant Venn, Man, Education and Work (Washington, D.C.: American Council on Education, 1964), Ch. 7.

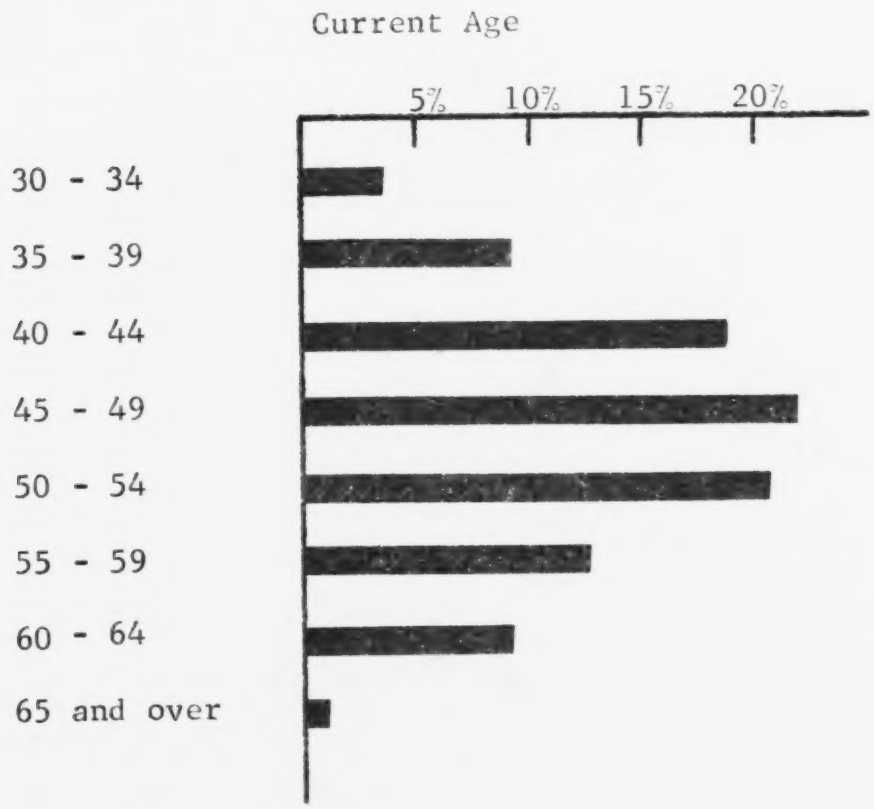
Report, on the other hand, examines the relationship of numerous variables (e.g., teaching background, type of institution, education, career patterns, type of authority, etc.) to the overall population and particular subgroups.

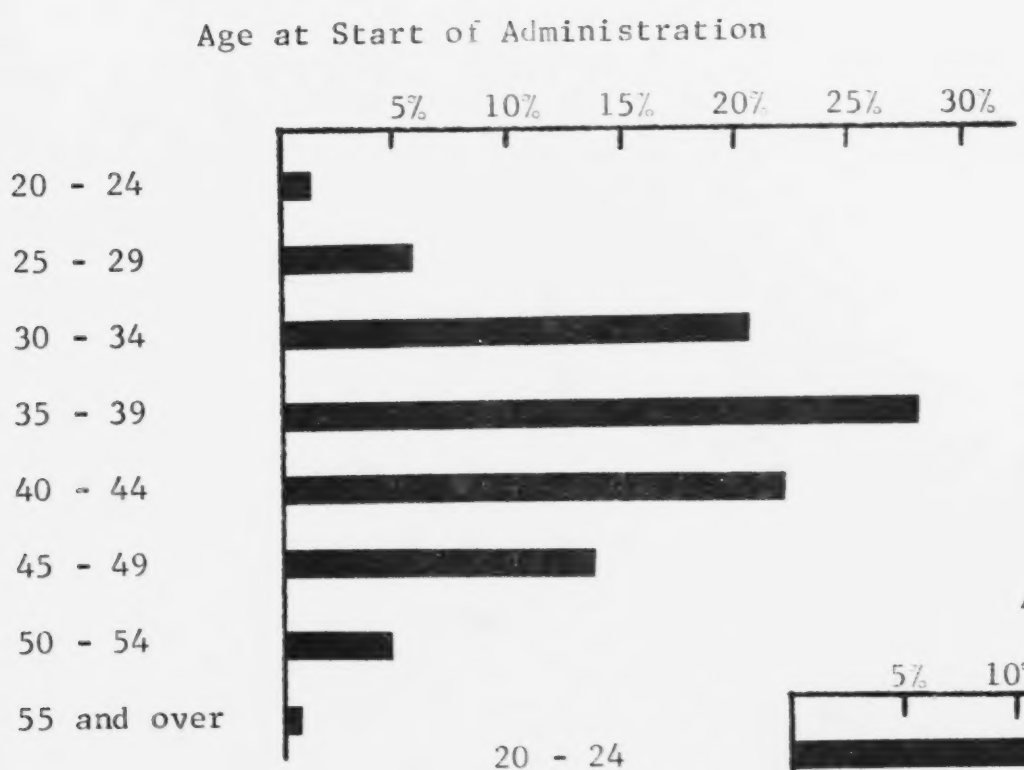
BASIC DESCRIPTION

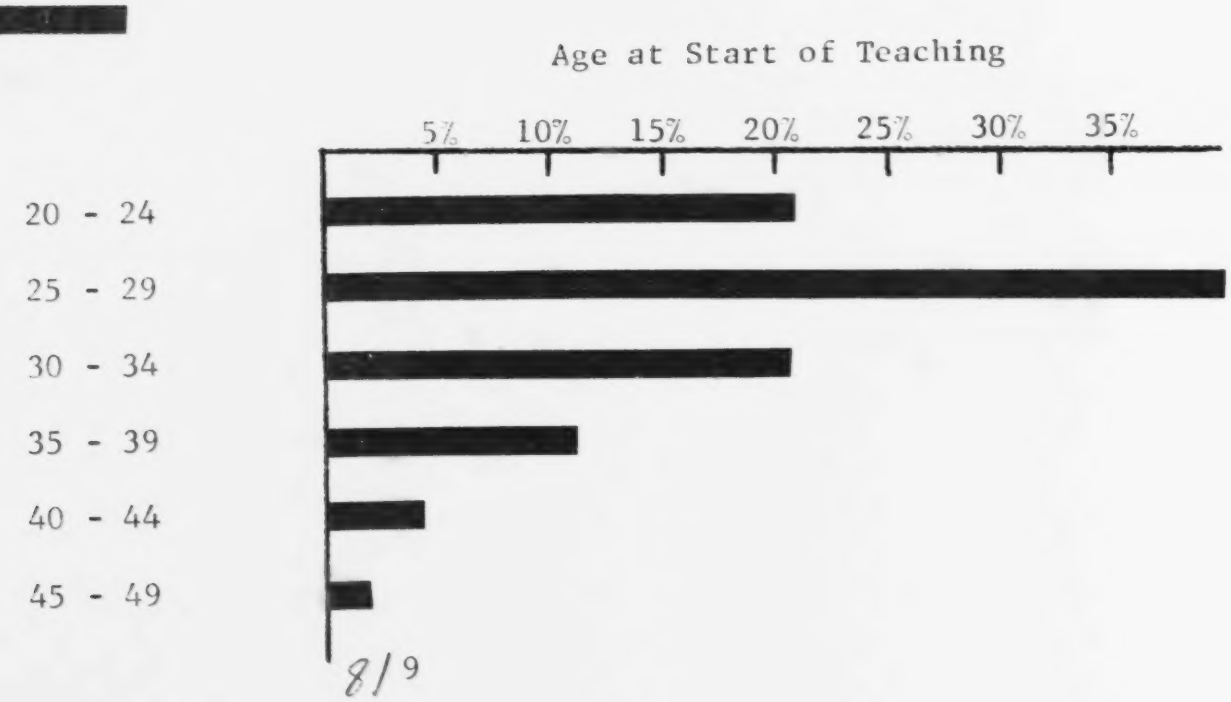
The data reported on the following pages were collected by the Basic Description Questionnaire. The BDQ was designed to collect the most frequently requested information about trade and technical leaders to provide a "profile" of characteristics and to explore the relationships of numerous variables.

The data from the BDQ are based on 286 returns. If the 31 persons who did not return the questionnaire are assumed to be in the population (some of those who did return the questionnaire were not) these comprised a 90 percent return.

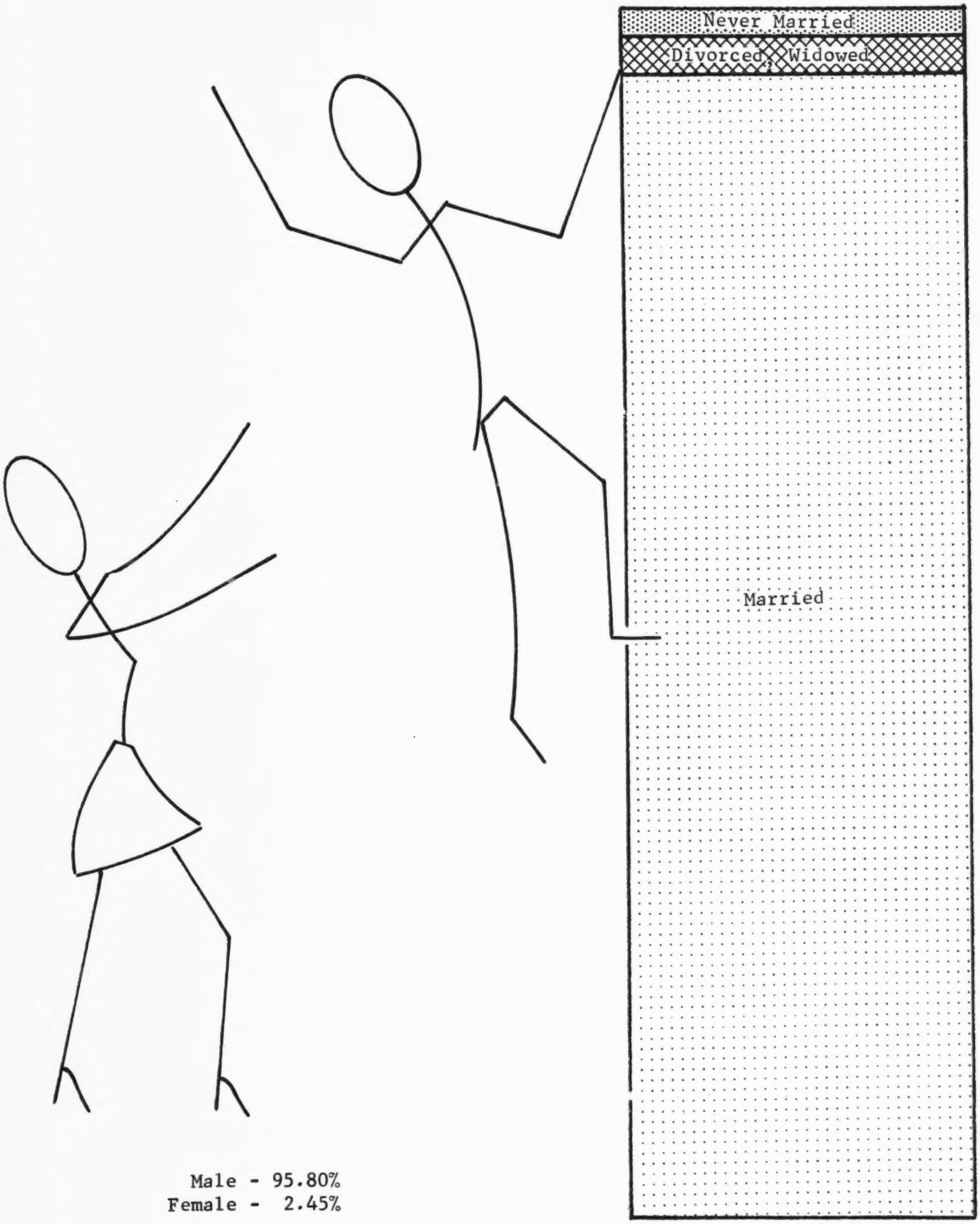
HOW OLD ARE TRADE AND TECHNICAL LEADERS?





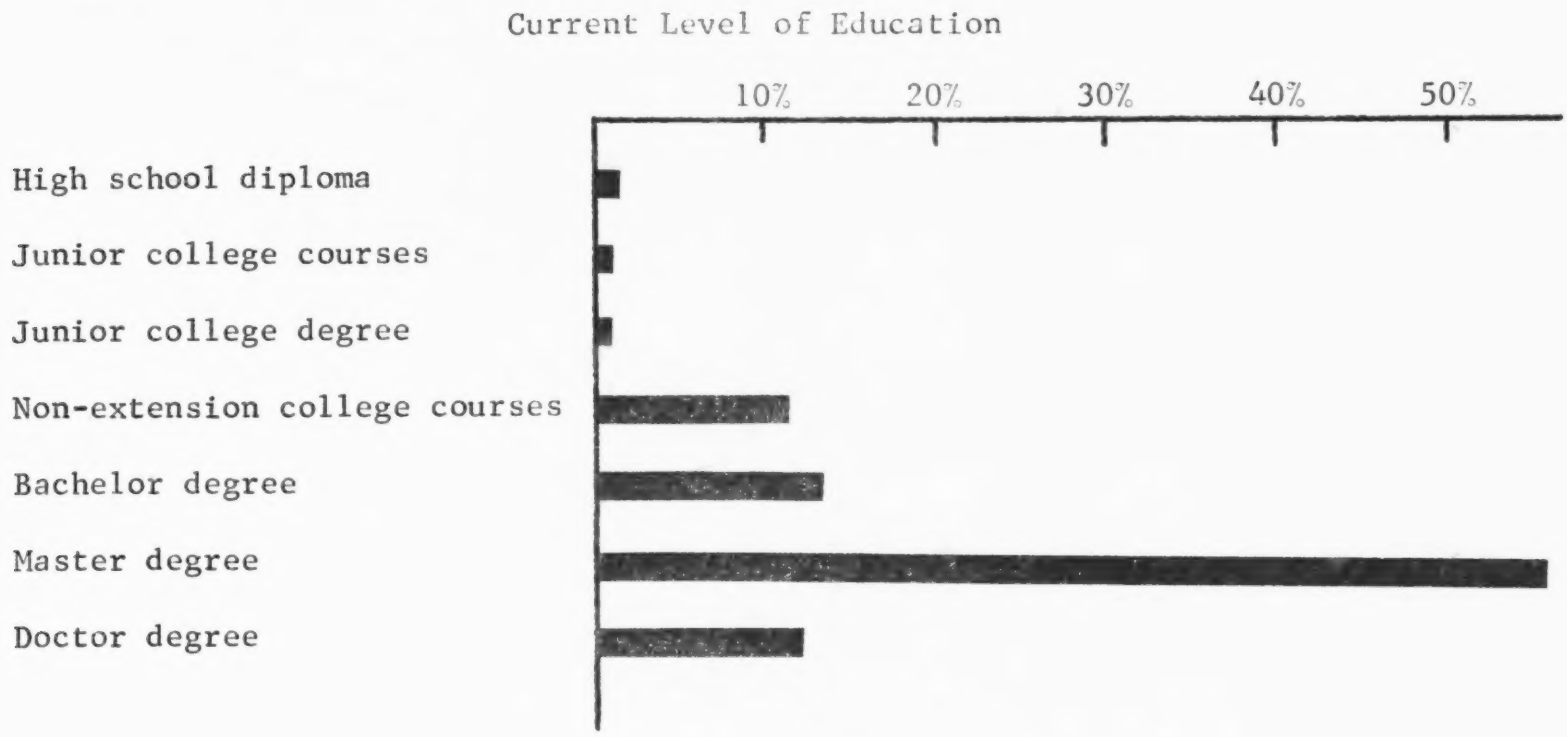


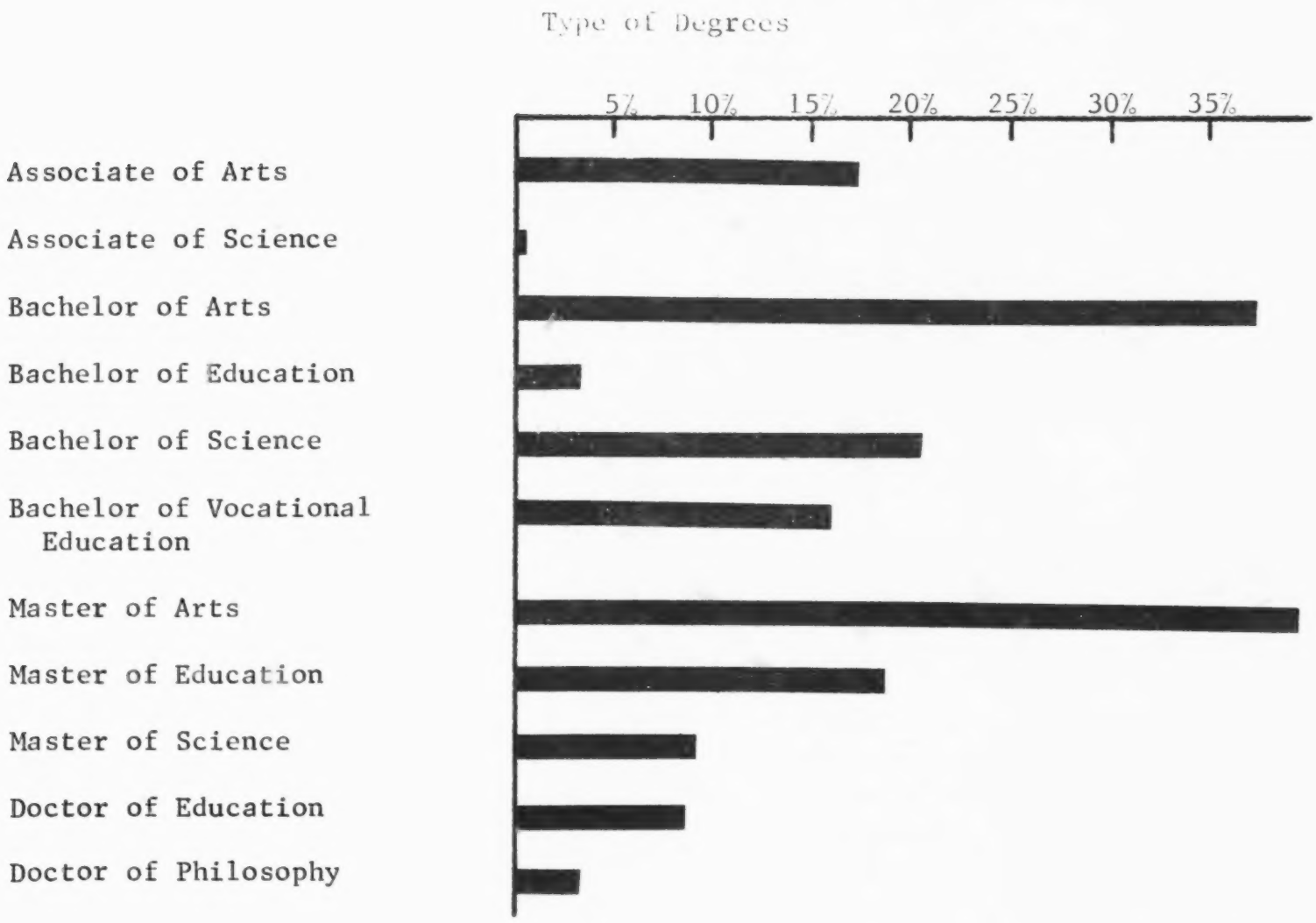
WHAT IS THEIR SEX AND MARITAL STATUS?



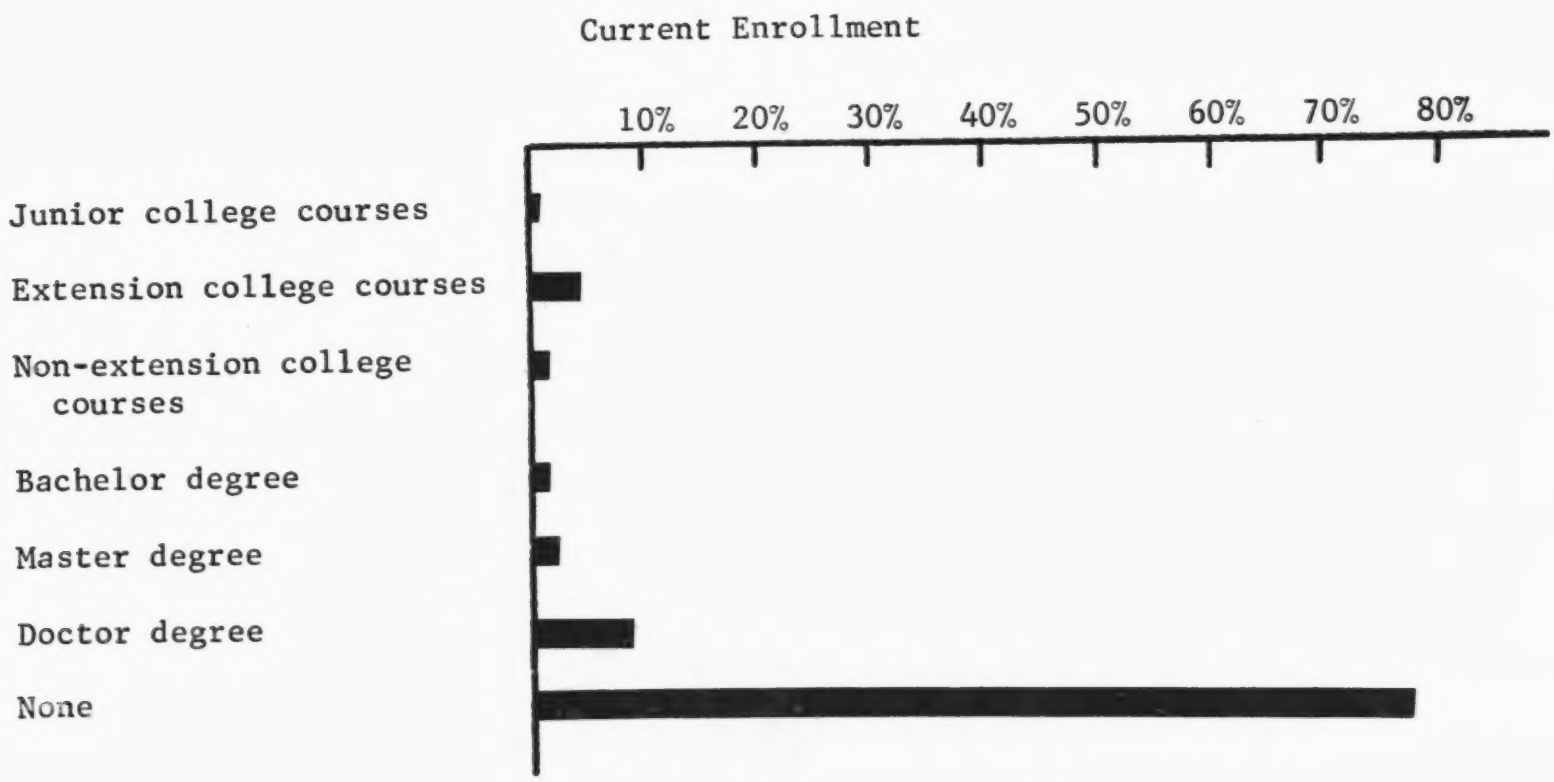
Male - 95.80%
Female - 2.45%

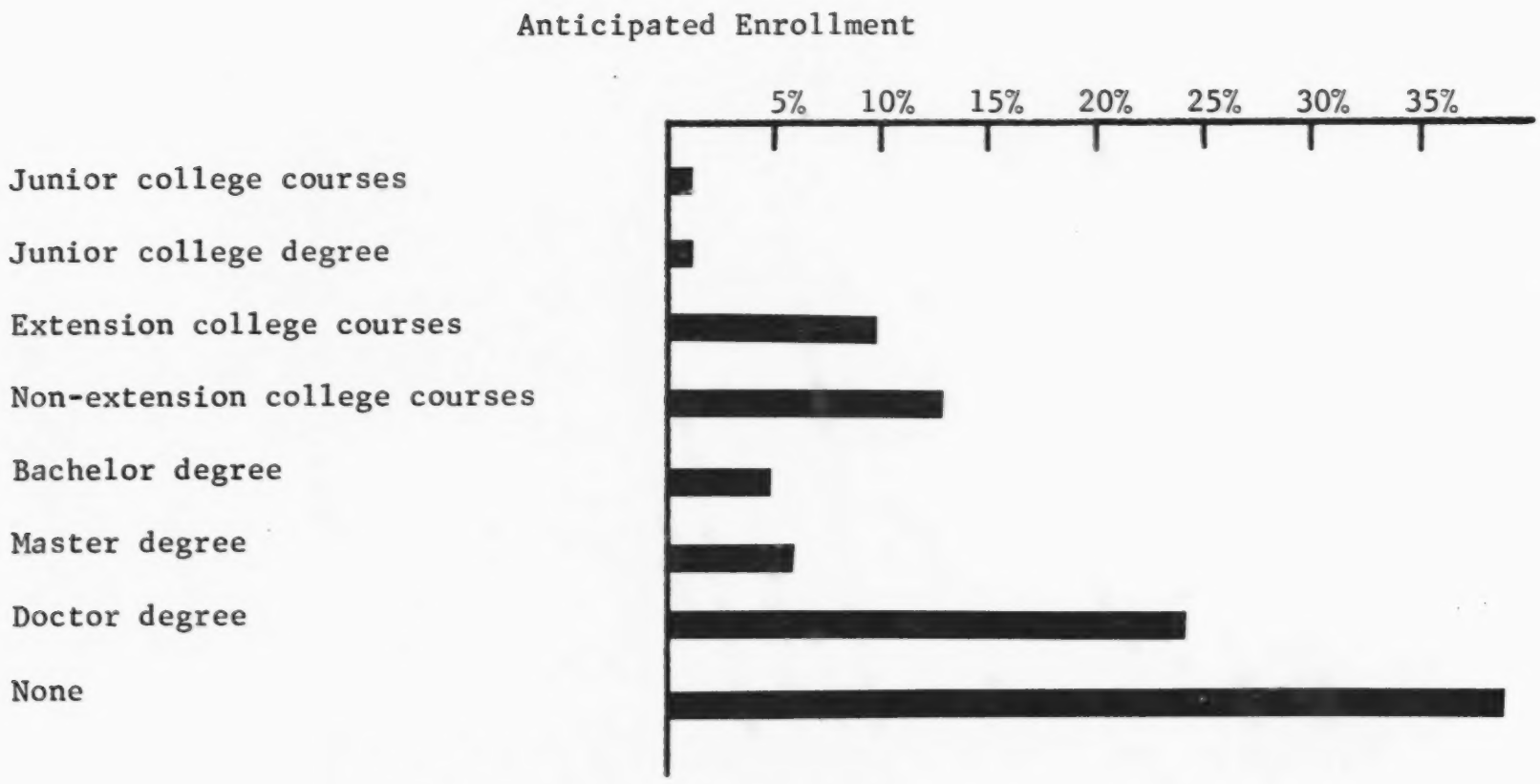
HOW MUCH FORMAL EDUCATION DO THEY HAVE?



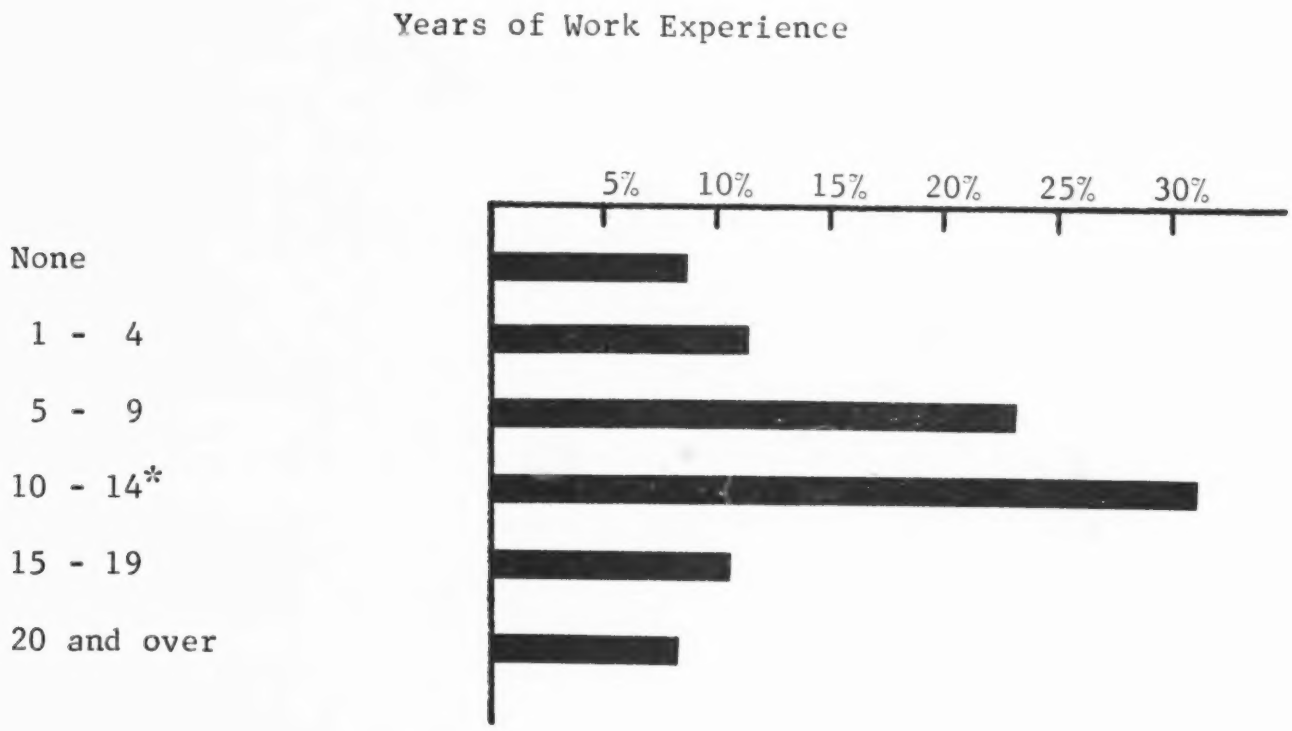


DO THEY PLAN MORE EDUCATION?

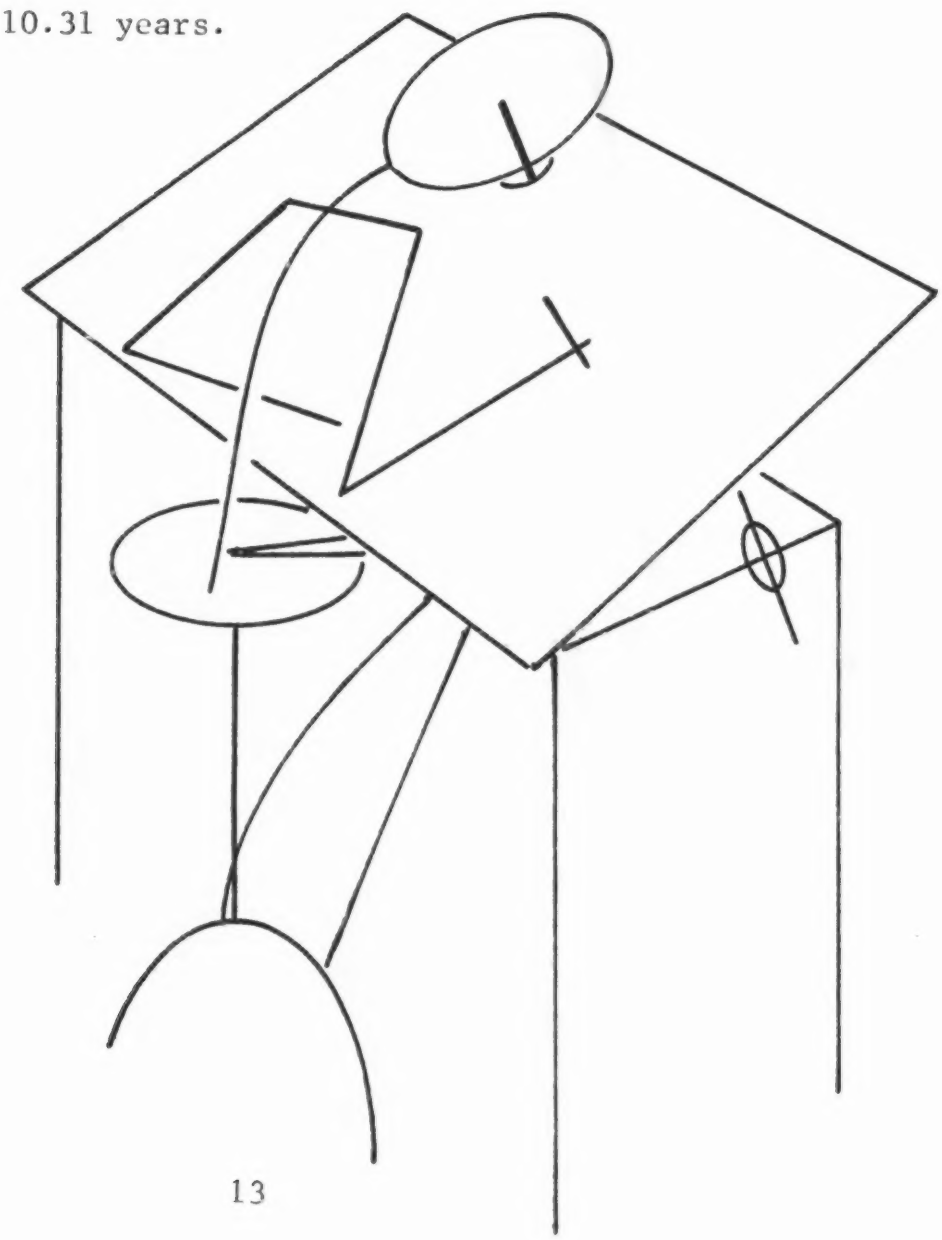




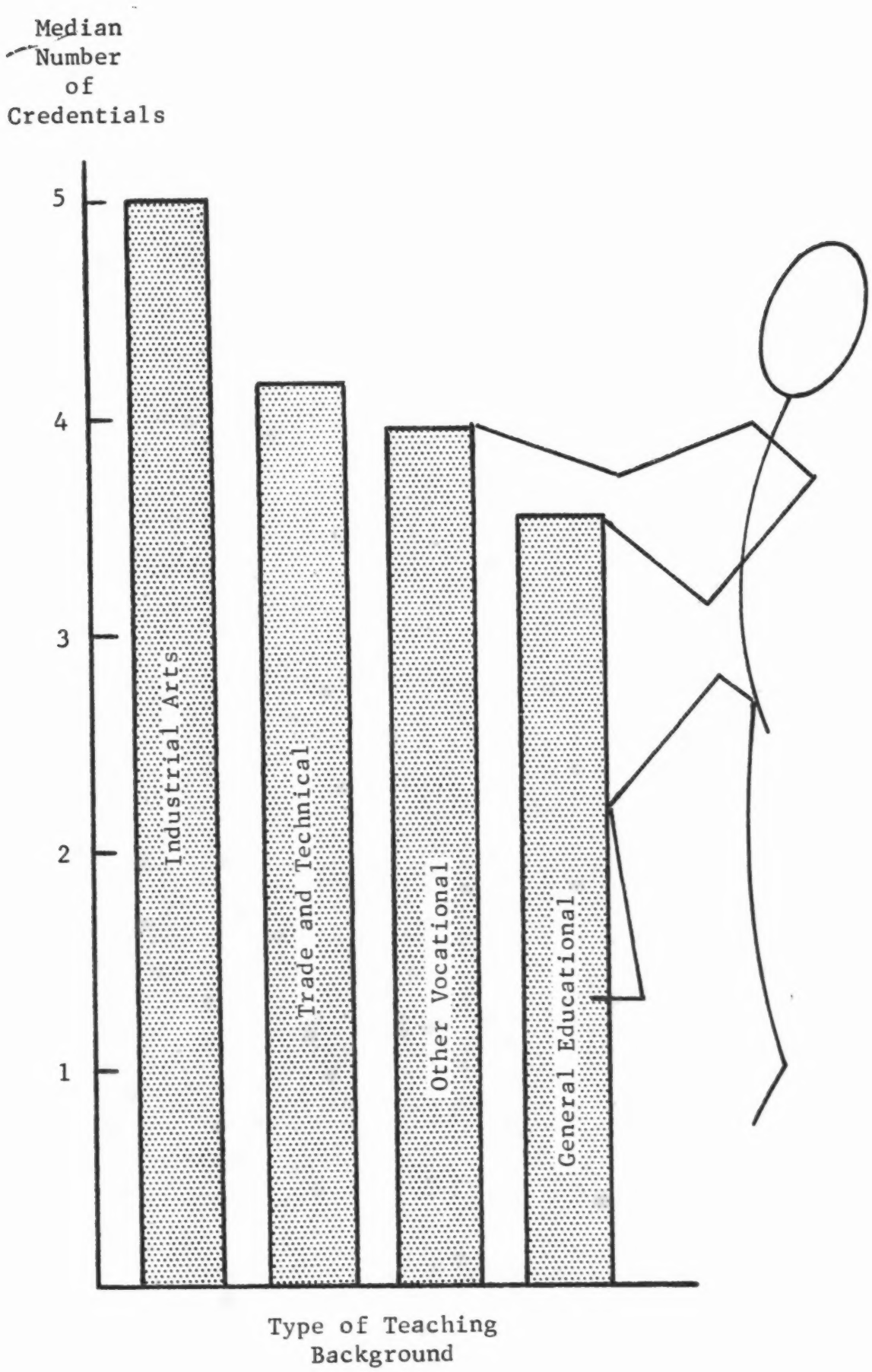
HOW MUCH WORK EXPERIENCE DO THEY HAVE?



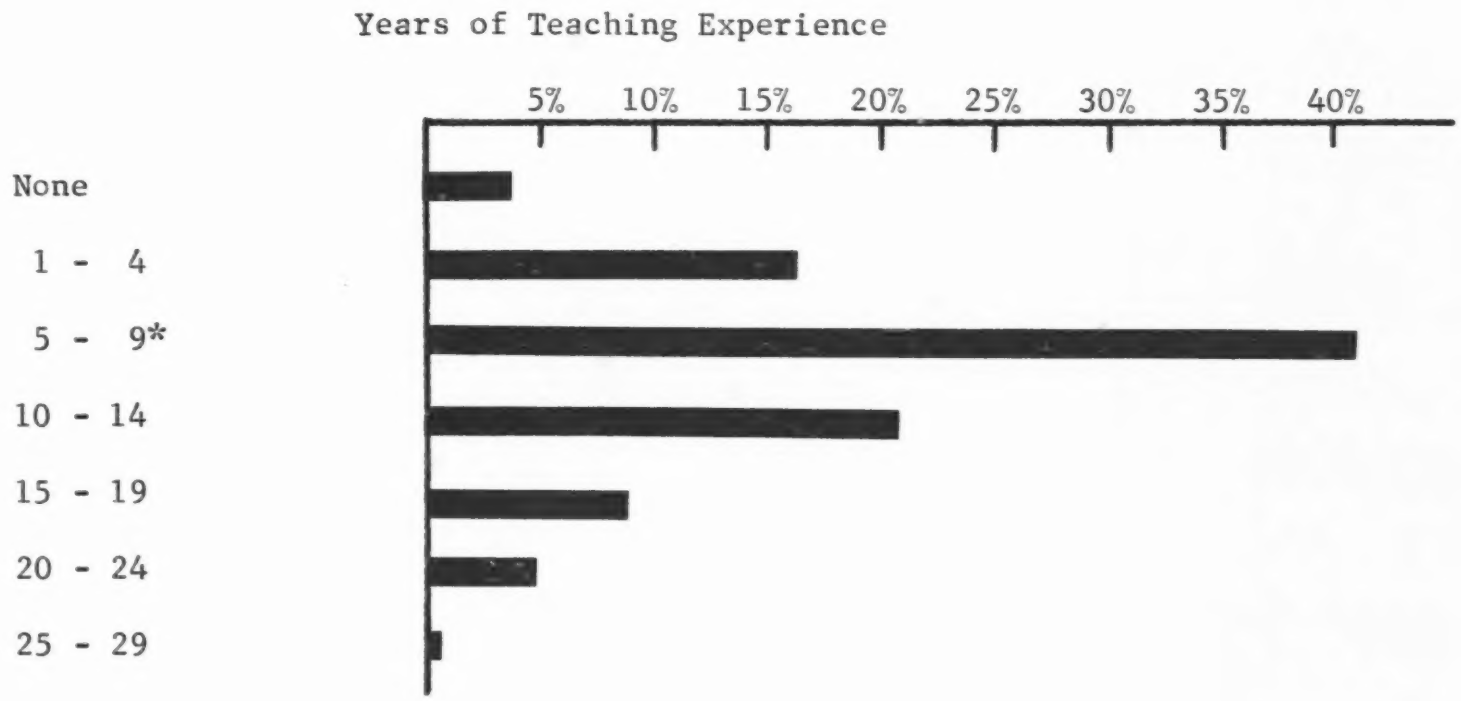
*The overall median is 10.31 years.



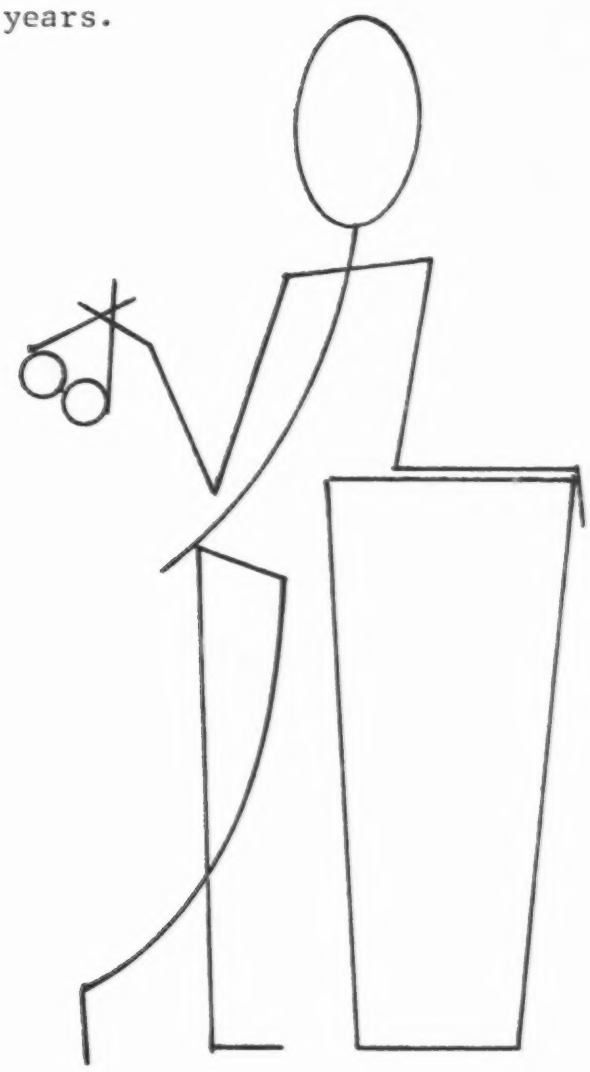
HOW MANY CREDENTIALS DO LEADERS HAVE?



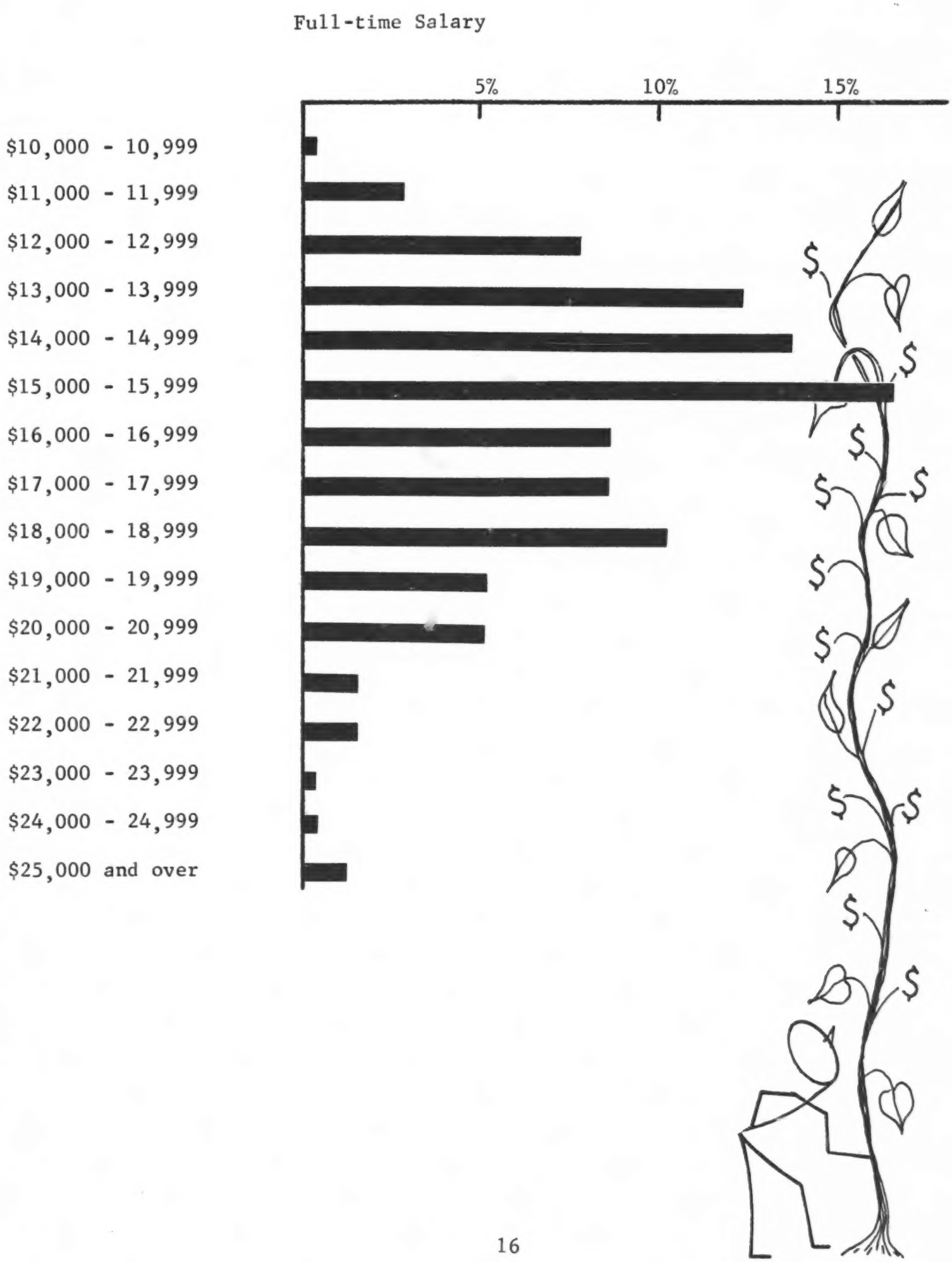
HOW MUCH TEACHING EXPERIENCE DO THEY HAVE?



*The overall median is 7.82 years.

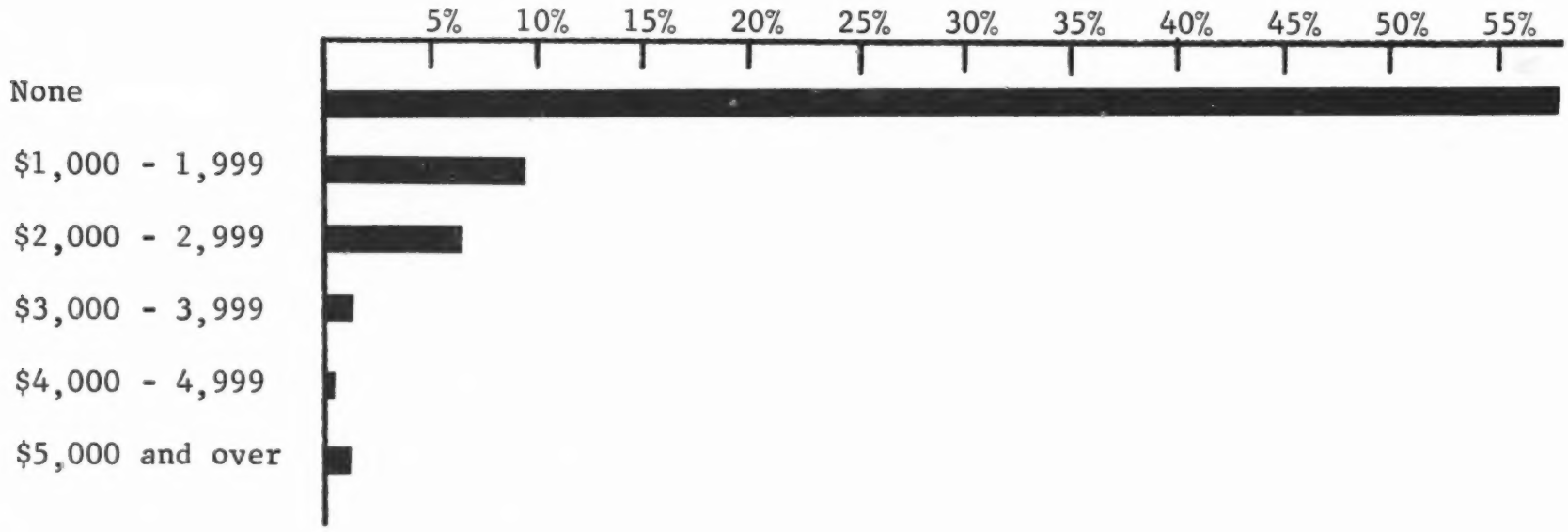


HOW MUCH DO THEY EARN?

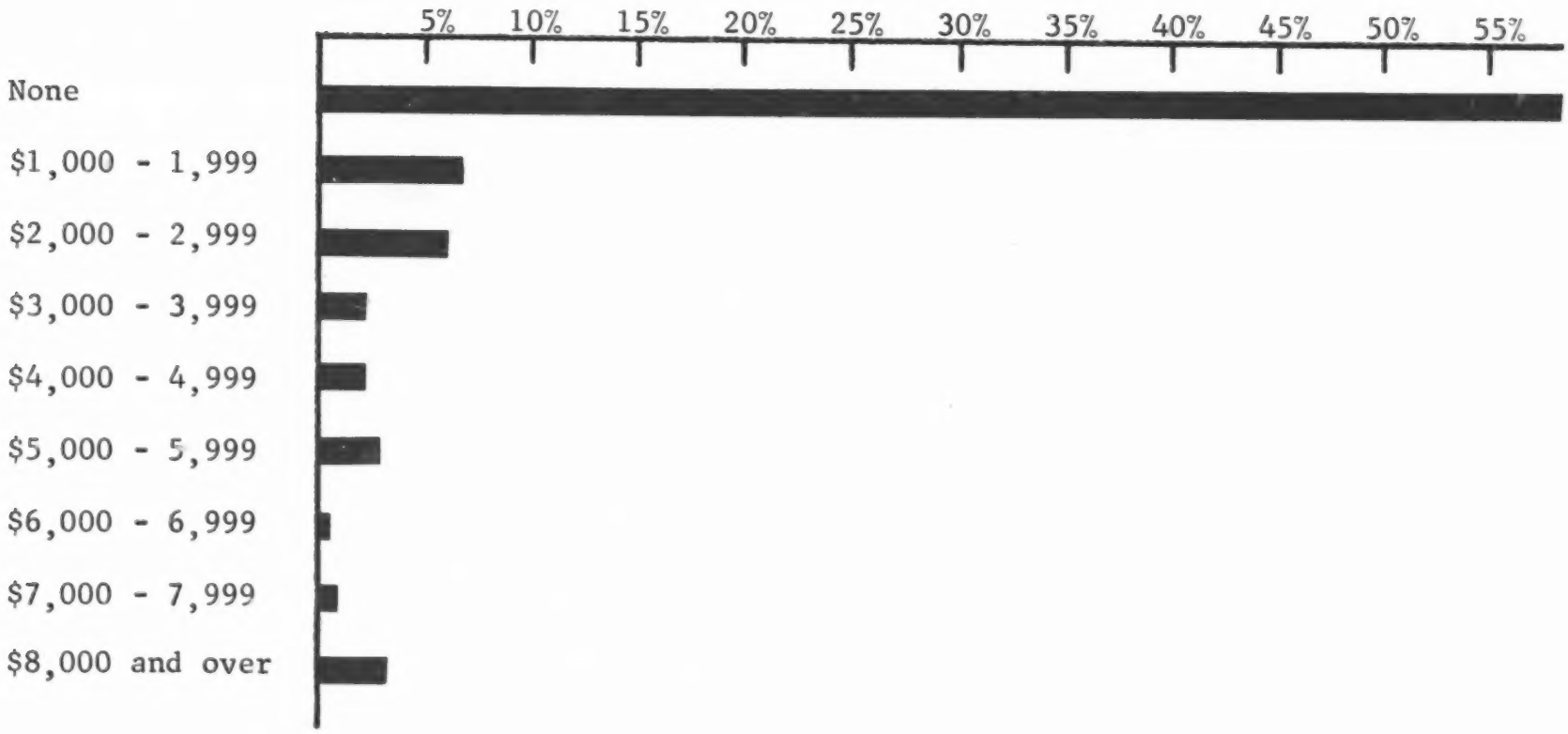


HOW MUCH DO THEY EARN?

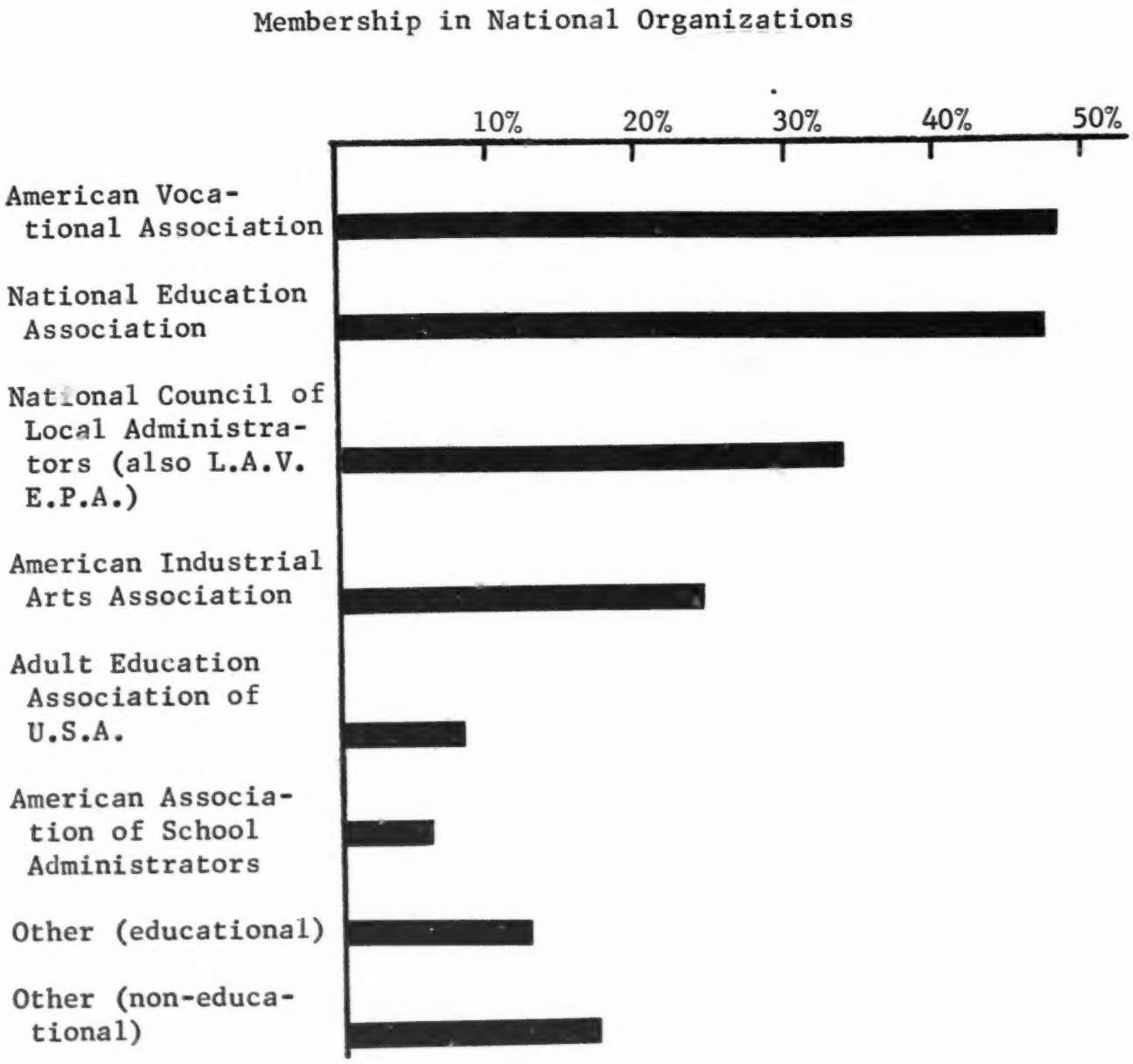
Additional Income From Educational Sources



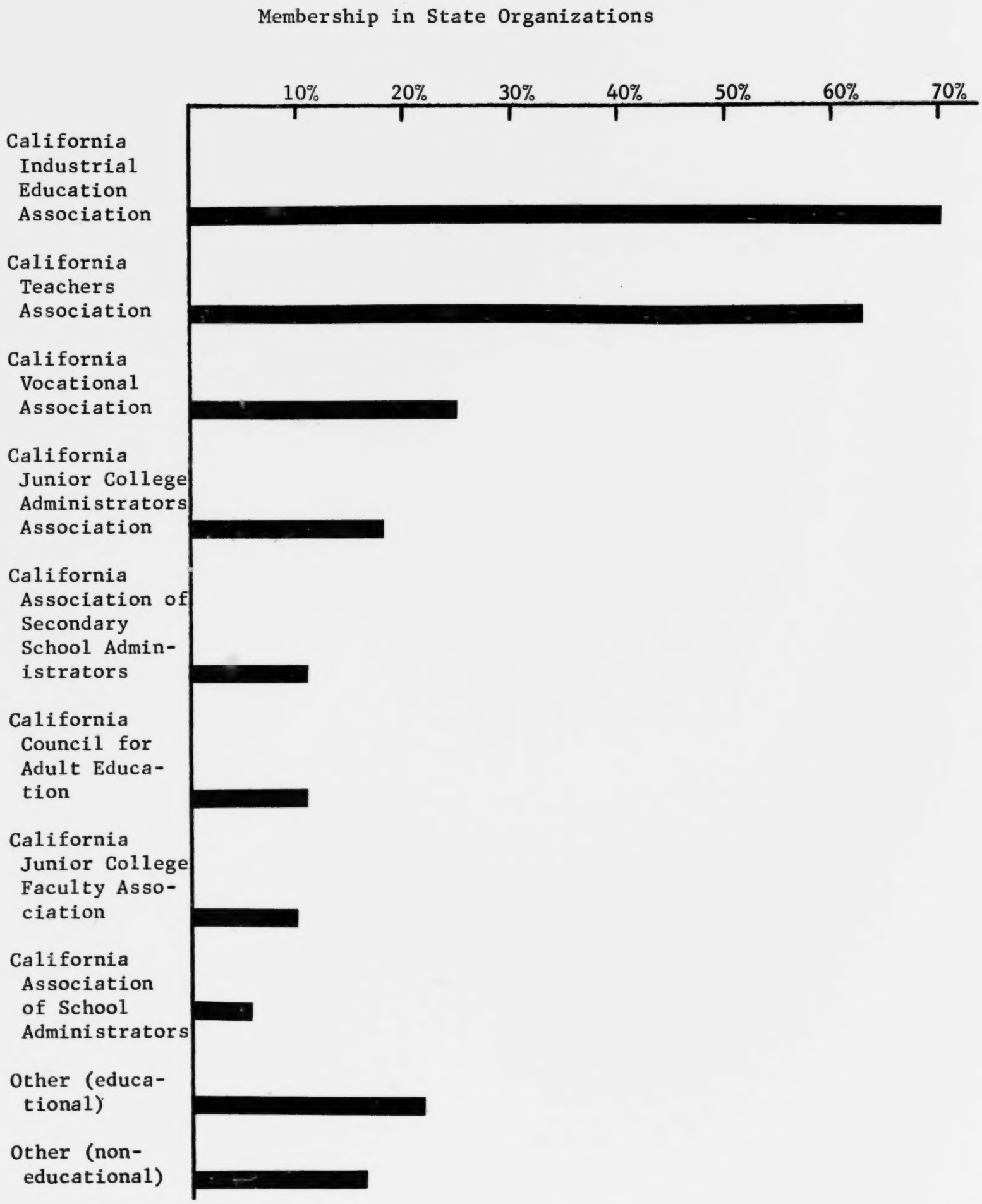
Additional Income From Non-educational Sources



WHAT ORGANIZATIONS DO THEY JOIN?



WHAT ORGANIZATIONS DO THEY JOIN?



WHAT ORGANIZATIONS DO THEY JOIN?

SUMMARY

Numerous generalizations, characterizations and relationships can be discerned from the data reported in the preceeding pages of this Summary Report and other data reported in the Comprehensive Report. In addition, the data gathered with the Basic Description Questionnaire reflect varying career patterns and patterns of organizational affiliation.

For example, the following descriptions can be made about trade and technical leaders in California:

> Most of the leaders are white, Protestant, married males in their late forties. They begin teaching in their late twenties, enter administration in their late thirties and have a median age of 48.56 years.
>
> About six out of ten (61.54 percent) are employed by schools or districts with 50,000 or more citizens. More leaders work in metropolitan areas (46.51 percent) than in independent towns and cities (31.17 percent).
>
> Almost half of the leaders (47.92 percent) work for junior college districts, 18.33 percent work for high school districts and about one in ten (9.17 percent) work for correctional institutions. County offices and the State Department of Education account for the remainder.
>
> They are most frequently titled "coordinators" (27.97 percent), but "director" (17.13 percent), "supervisor" (15.73 percent) and "dean" (15.73 percent) are also common.
>
> More than eight out of ten (84.96 percent) spend 100 percent of their time in coordination, supervision and/or administration.
>
> Most of them (86.84 percent) have "across the board" responsibility. Half of these have

authority to direct and control programs and half have responsibility to recommend changes only.

The trade and technical subject areas most frequently associated with their work are metals programs (73.78 percent), electricity/electronics (73.08 percent), automotive (69.23 percent), drafting (67.48 percent) and the building trades (59.44 percent).

They have a median of 7.82 years of teaching experience; however, the range extends from no teaching experience to 30 years.

They have a median of 10.31 years of work experience in subject areas related to vocational education but the range extends from no work experience to almost 40 years.

Trade and technical educators invest large amounts of energy in formal education while employed in education. For example, 59.08 percent have bachelor, master or doctoral degrees when they start teaching, but three-quarters (75.17 percent) have them when they start supervision and/or administration and eight out of ten (81.82 percent) currently have one of these degrees.

Younger administrators are entering vocational education with more education than their older colleagues and they are working toward more degrees.

They have a median salary of $15,344. The range extends from $10,000 to about $30,000. Approximately three-quarters (72.37 percent) are on yearly contracts. About one-fifth (19.58 percent) report additional income from other educational sources and about one-fourth (25.53 percent) report income from non-educational sources.

Different career patterns are most easily discernable when work experience, teaching backgrounds, education, institutional employment and credentials are examined.

The most common career route to a position of leadership in trade and technical education begins in the world of work as a

craftsman or technician, continues with a teaching position in the world of education and advances into the coordination, supervision and/or administration of vocational education. The best single indication of this is the teaching background of the leaders. More than half (55.59 percent) of our sample have taught trade and technical subjects. Those who follow the traditional trade and technical career route tend to have more work experience, less formal education (especially when they begin to teach) and obtain more limited, special purpose credentials and fewer comprehensive, general credentials.

The second most common career pattern (16.43 percent of the sample) is that of the general educators. This group usually has little or no work experience in trade and technical subject areas, has taught academic rather than trade and technical subjects, has the most formal education and obtains the least number of credentials. Their credentials are almost always comprehensive in scope.

The industrial arts group is the third most common type in our sample (14.69 percent). They have less work experience than the traditional trade and technical group, have taught industrial arts courses, have considerable formal education and the largest number of credentials of any group. Their credentials are a mixture of general purpose and special purpose credentials.

One-tenth (10.14 percent) of our sample are leaders with teaching backgrounds in other types of vocational subjects (e.g., business education, agriculture, etc.). They frequently have work experience in vocational subject areas other than trade and technical.

They obtain a mixture of general purpose and special purpose credentials although they acquire fewer credentials than the industrial arts or trade and technical group.

Career patterns also vary by the type of institutional employment. Apparently the recruitment patterns and incentive structures of different types of institutions differ. This was most apparent in formal education and credential acquisition. For example, correctional leaders usually obtain special purpose credentials; but they have fewer credentials than any other group and the second lowest number of educational degrees. State department leaders obtain more special purpose and fewer general purpose credentials than any other group. They also have fewer degrees than any other group. Junior college leaders, the largest institutional subgroup, obtain more special purpose credentials than general purpose credentials and they represent the middle range in number of degrees. High school leaders, on the other hand, obtain fewer special purpose and more general purpose credentials than any other group and they have the second highest ranking in number of degrees. Every county leader in the sample has the distinction of at least a bachelor degree. They also tend to obtain more general purpose credentials than special purpose credentials.

In the course of the research, it was also discovered that the number of credentials increases as the level of educational attainment increases (with the exception of those who hold doctorates) and increases as years of work experience increases (up to 15 years), but decreases by age.

It is also apparent that the types of credentials (general purpose vs special purpose) are related to the level of educational attainment and years of work experience. In general, the level of formal education is directly related to the number of general purpose credentials and inversely related to the number of special purpose credentials. Work experience is directly related to the number of general purpose credentials. In other words, education and work experience have opposing relationships in patterns of credential acquisition.

The study of organizational memberships among trade and technical leaders in California lends credence to the general observation and belief that vocational educators with "successful," upward mobile (orderly) career patterns give greater support to organizations (both professional and non-professional). For example, those who have advanced to leadership positions in trade and technical education have more memberships than teachers of trade and technical education. This holds true for the number of memberships per person in national organizations (2.6 vs. 1.0), state organizations (3.0 vs. 1.8), local organizations (4.3 vs. 3.6) as well as overall memberships (8.9 vs. 5.6). Not only do leaders belong to more organizations available to both teachers and administrators, but their number of memberships is also increased by the fact that they belong to other organizations specifically for administrators.

Among national organizations the leaders have large percentages of memberships in the AVA (48.6 percent), NEA (47.5 percent),

NCLA (33.9 percent) and the AIAA (24.13 percent). The most numerous memberships among state organizations are in the CIEA (70.3 percent), CTA (63.9 percent), CVA (25.9 percent) and the CJCA (18.5 percent). The most common type of memberships at the local level include professional fraternities (53.9 percent), service clubs (44.7 percent), educational and cultural groups (42.3 percent), church and religious organizations (40.6 percent), civic and political associations (34.6 percent), youth and children's clubs (26.9 percent) and military and veteran groups (26.6 percent).

As do trade and technical teachers, the leaders belong to more professional organizations than non-professional organizations at the state and national levels. Unlike teachers, the organizations with the largest number of memberships is a vocational (exclusive) organization such as the AVA or the CIEA rather than a general purpose (inclusive) organization such as the NEA or the CTA.

When the memberships of trade and technical leaders are categorized by low (less than five memberships), medium (from five to ten memberships) and high (ten or more memberships) and compared with other variables, the following characteristics are found:

> Leaders with trade and technical teaching backgrounds are inclined to join fewer organizations and leaders with industrial arts and other vocational backgrounds are inclined to join more organizations than the overall population.
>
> Correctional leaders are disposed to join fewer organizations and public school teachers (high school, junior college and adult school) and county leaders are inclined to join more organizations than the overall population.

Leaders who begin teaching with at least a bachelor degree and leaders who work for advanced degrees while teaching are more inclined to join organizations than leaders with less formal education and those who do not work for advanced degrees.

Leaders who acquire five or more credentials are inclined to join more organizations and those who acquire less than five credentials are inclined to join fewer organizations than the overall population.

Leaders with Protestant religious affiliations are inclined to join more organizations than all other religious groups including those who have no religious affiliation.

Leaders who earn $17,000 or more are more inclined to join organizations than those who earn less.

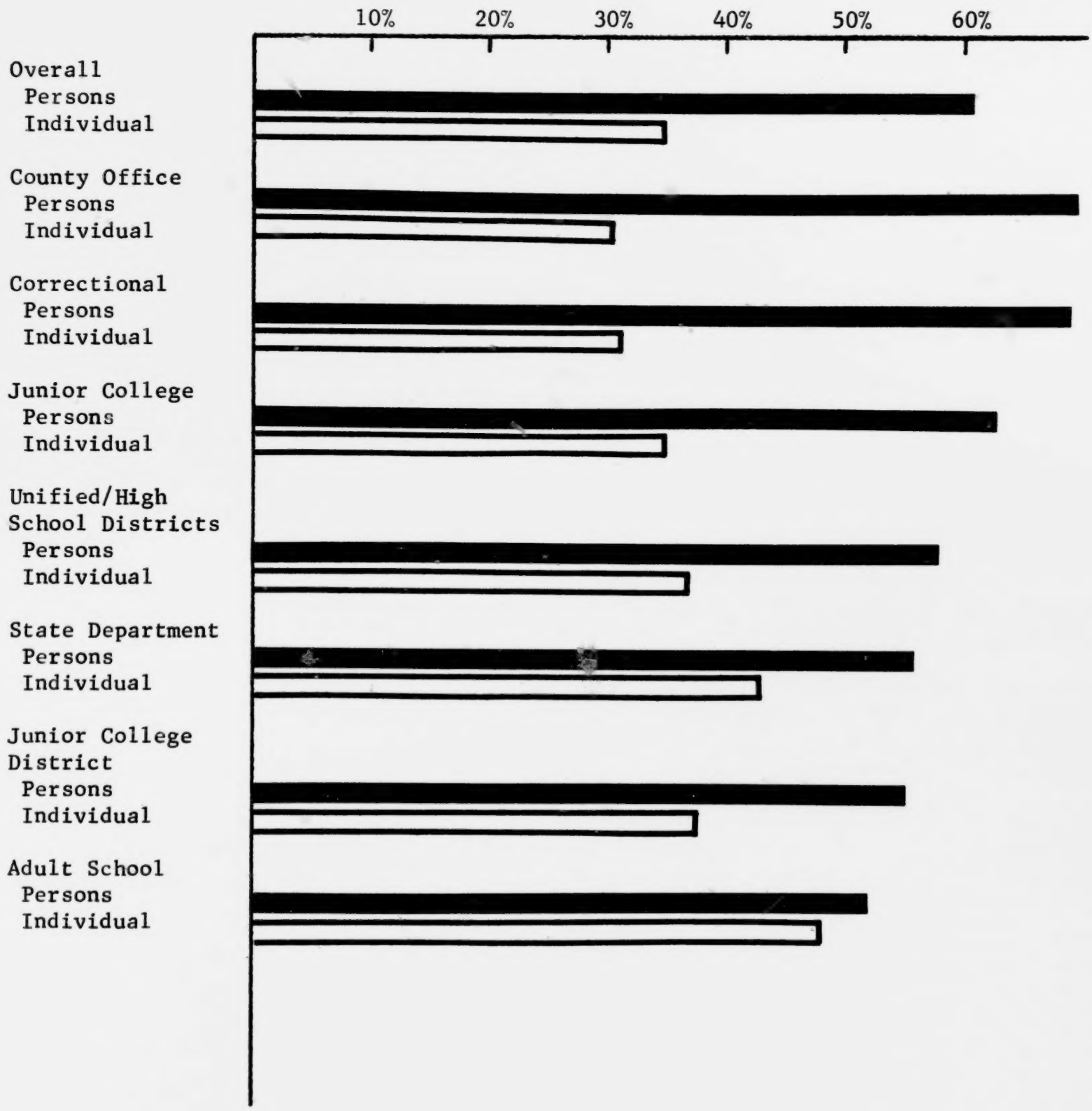
Leaders with large amounts of work experience (fifteen years or more) are less inclined to join organizations.

WORK ANALYSIS

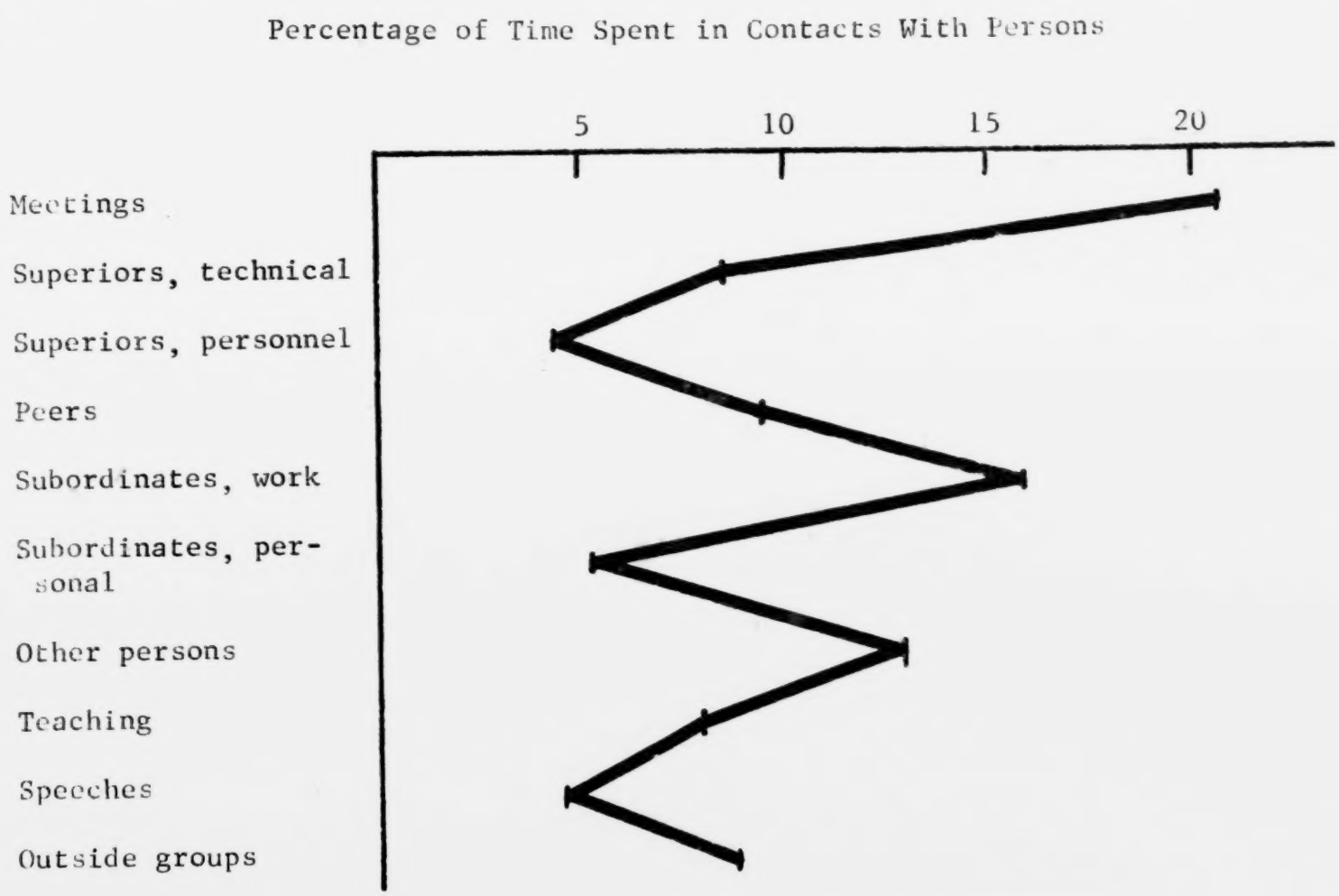
The Work Analysis Forms, an instrument developed by the Ohio State Leadership Studies in the Bureau of Business Research, was used to provide a modified form of job analysis. The WAF is designed to identify various aspects of administrative performance by recording estimates of time that the subject spends in various kinds of work. Estimates of time spent in contacts with persons, in individual effort and devoted to major responsibilities are reported in the following tables.

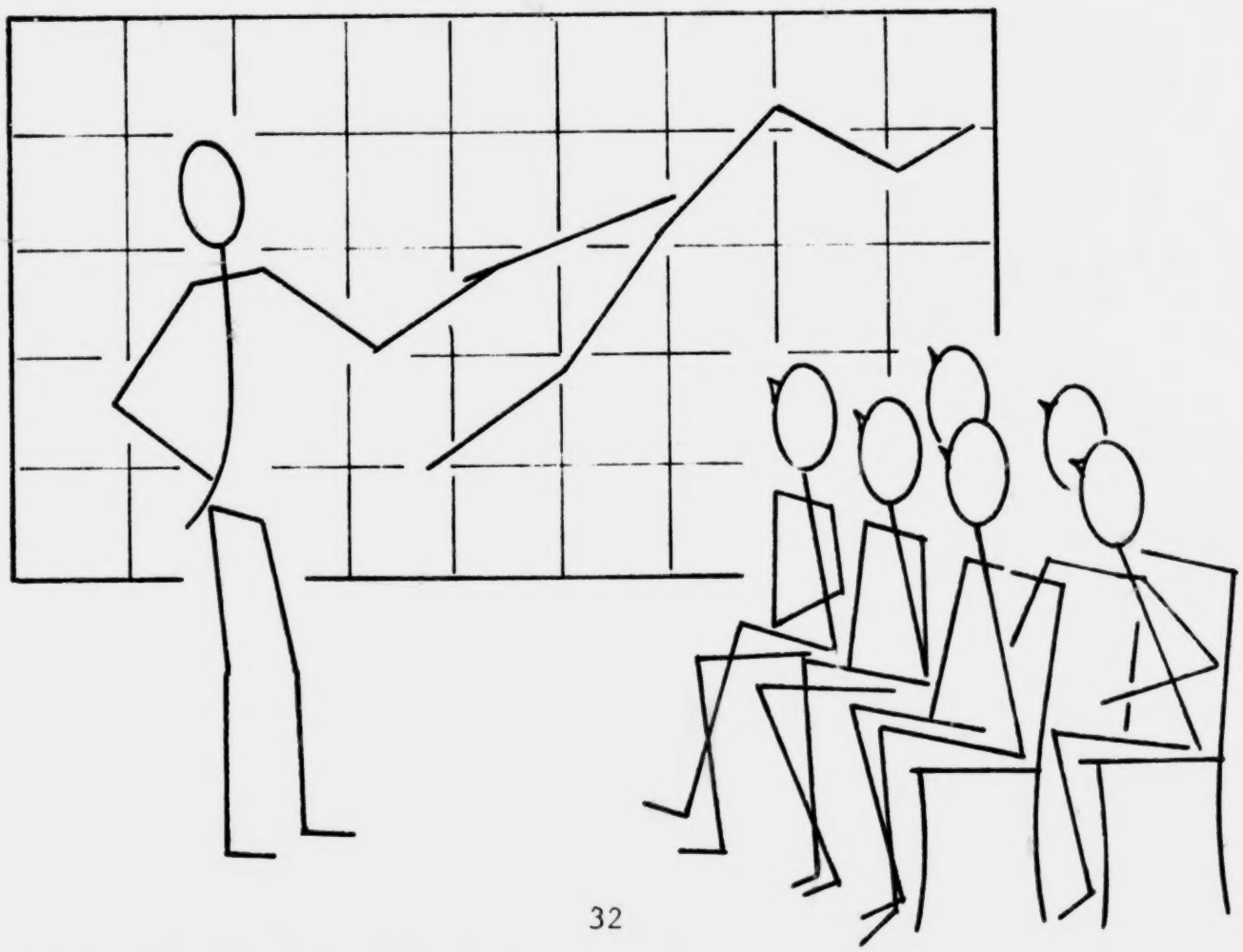
The WAF was sent to all 286 respondents to the Basic Description Questionnaire. The data from the WAF were collected from 224 returns (79 percent).

HOW DO THEY DIVIDE THEIR TIME BETWEEN PERSONS AND INDIVIDUAL EFFORT?

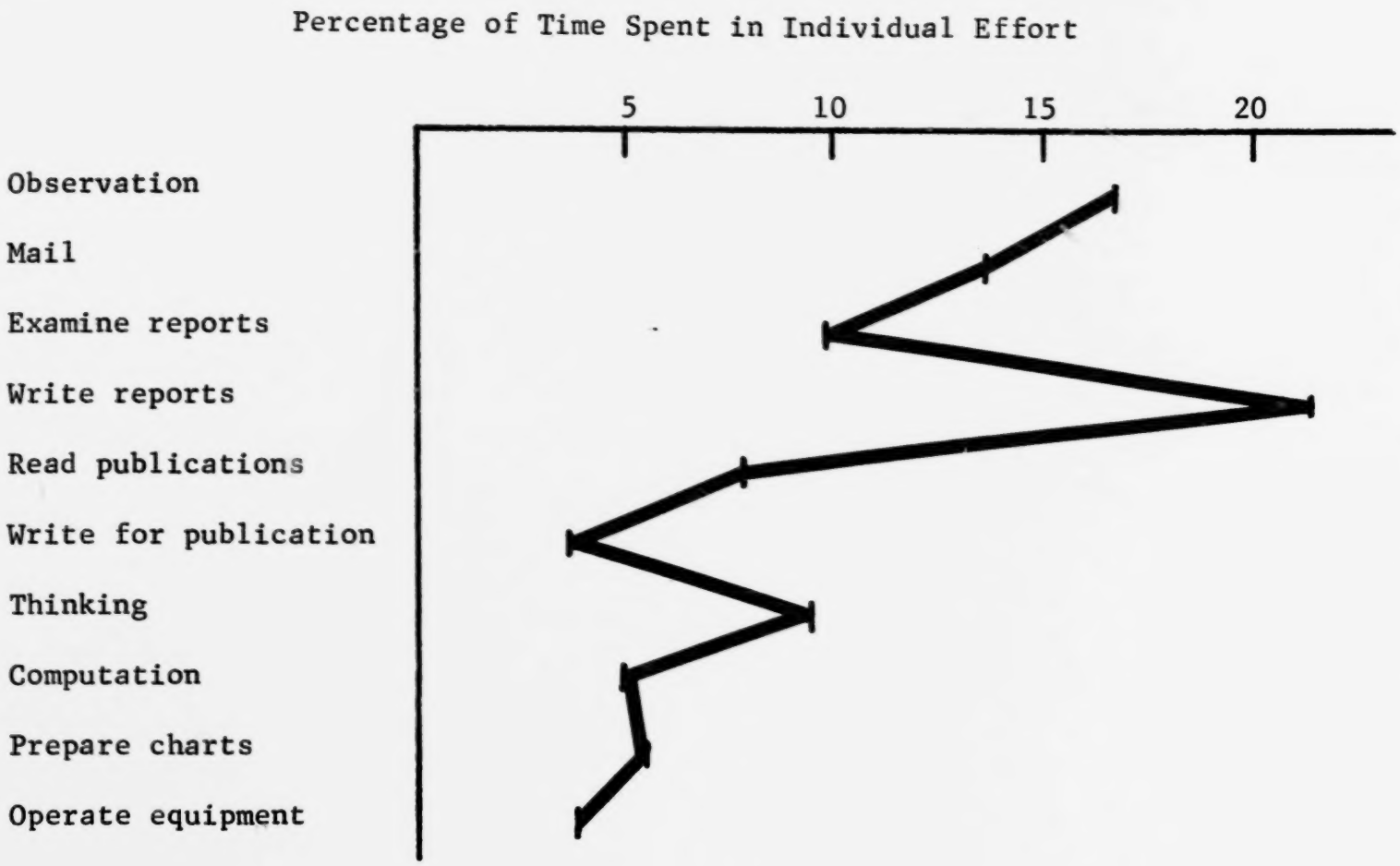


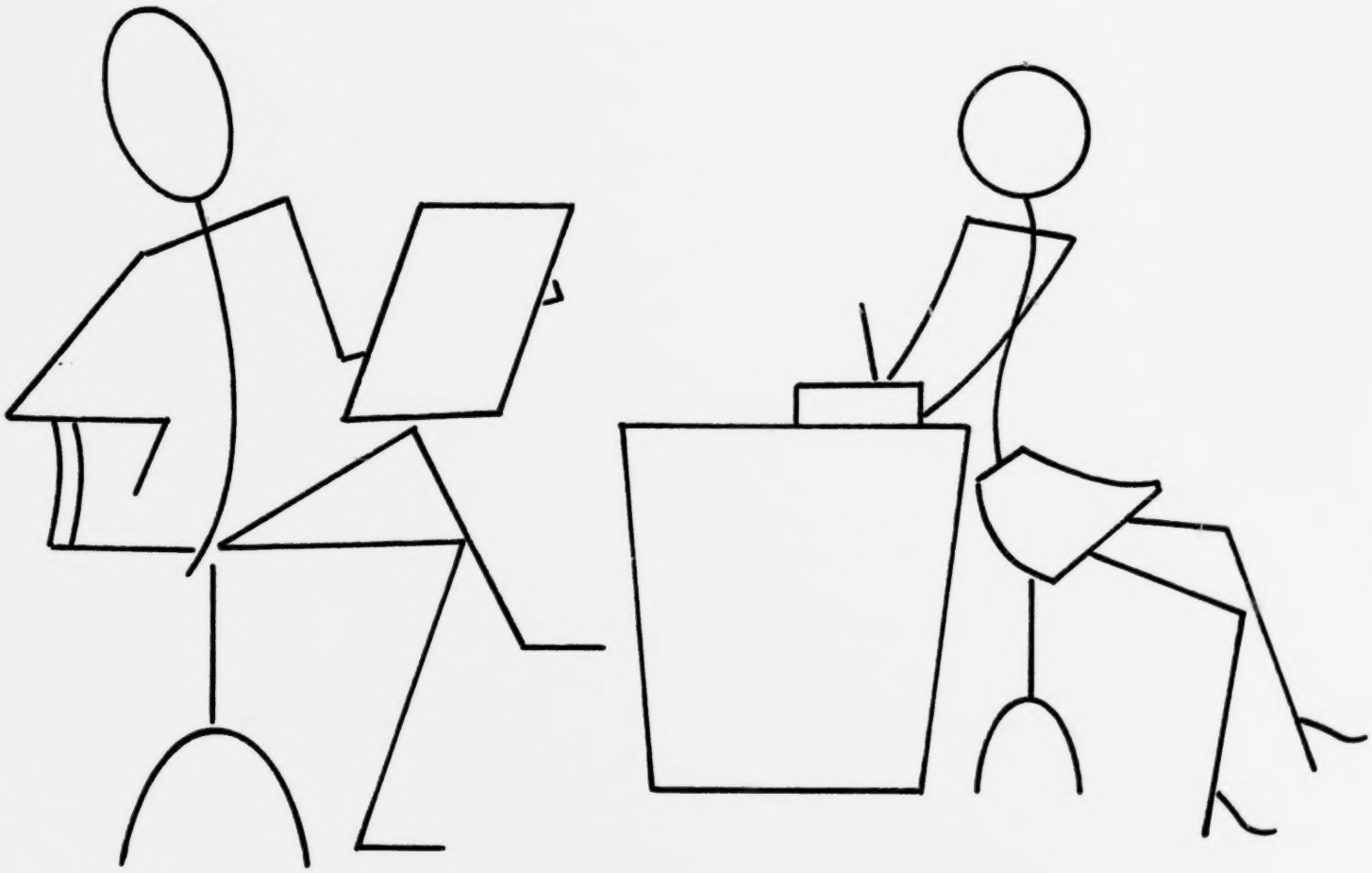
HOW DO THEY SPEND THEIR TIME WITH PERSONS?



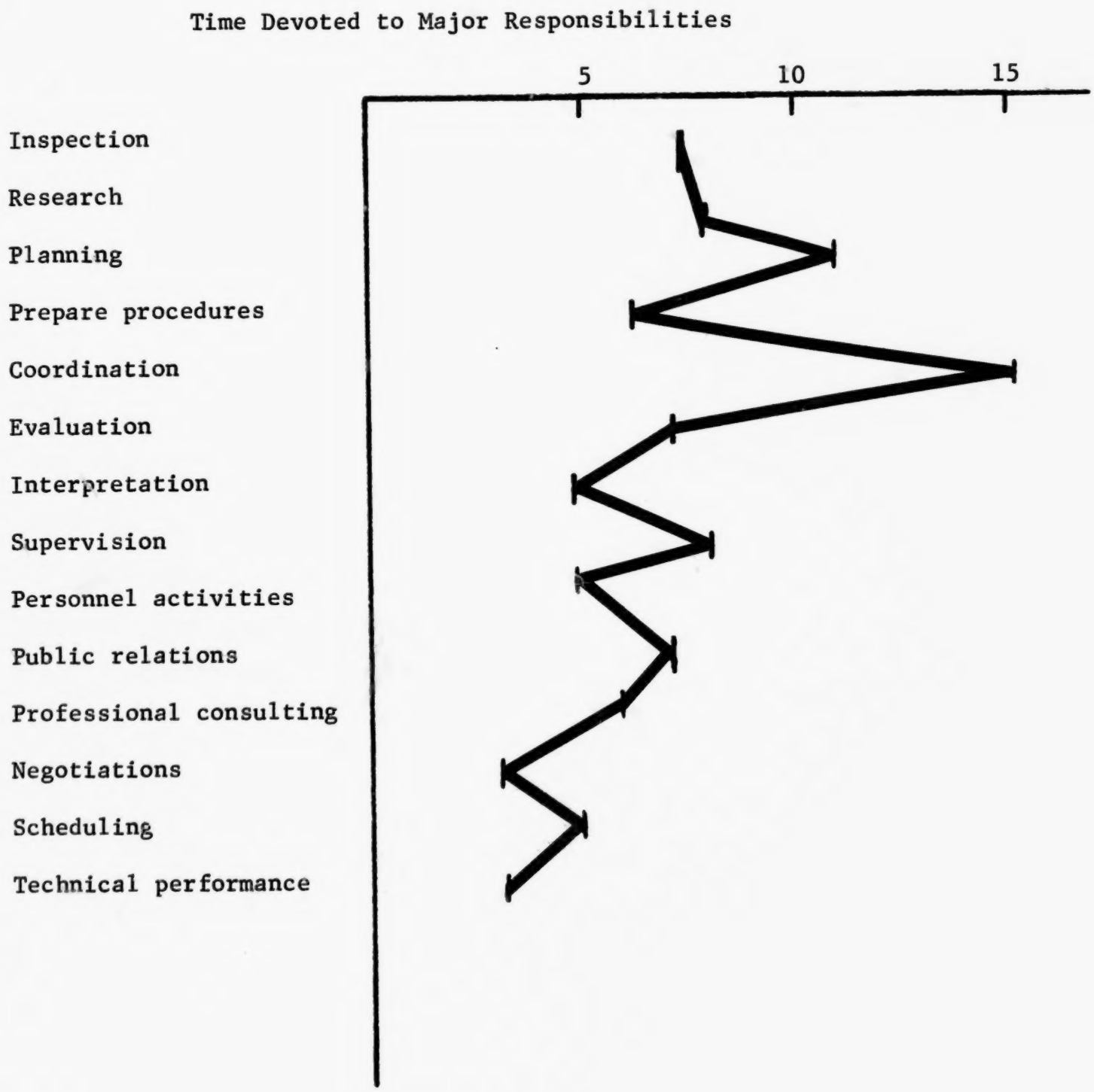


HOW DO THEY SPEND THEIR TIME IN INDIVIDUAL EFFORT?





WHAT PROPORTION OF TIME DO THEY DEVOTE TO MAJOR RESPONSIBILITIES?



SUMMARY

From the estimates provided on the WAF, leaders of trade and technical education in California spend more time in contacts with persons than in individual effort. Attending meetings and conferences, consulting with subordinates and consulting with "other persons" (neither subordinates, peers nor superiors) require the largest amounts of time spent in personal contact. Writing and examining reports, processing mail and observing and inspecting demand the most time spent in individual effort. The most time consuming major responsibilities are coordination and planning.

Although there is a general similarity in the profiles of subgroups within the overall population a number of differences stand out. For example, leaders in county offices divide the time they spend in contacts with persons and in individual effort with a 70-30 percentage division of labor, but the leaders in adult schools have close to a 50-50 split. Other institutional subgroupings fall between these two extremes.

Other institutional differences are reported in the Comprehensive Report. For example, State Department leaders have one of the most distinctive profiles. They spend much less time with superiors, peers and subordinates as the overall population but twice as much time with other persons. Their largest single category of individual time is devoted to observation, inspection and examination. Although they spend much more time in examining reports, they spend less time in writing reports.

County leaders, who spend more time than any other group in contacts with persons, also have a distinctive profile. Since they have no programs to manage they spend much less time with subordinates and superiors and more time with peers, other persons and outside groups. They invest smaller amounts of individual effort with reports and mail but much more effort in observation, inspection and examination of programs. Time spent in coordination and consultation are well above the average for major responsibilities.

Leaders who work in high school or unified districts have a profile similar to the overall profile. Time spent with superiors and peers is higher than the overall population, but they are spending less time with subordinates even though they have programs to supervise. This may be accounted for by a time press on their individual effort. They have a much higher mean score for writing reports.

The profile of junior college leaders is very similar to that of the overall population. Most of the mean scores do not vary more than a percentage point. This is partially accounted for by the fact that they are the largest subgroup in the population and tend to dominate any measure of central tendency. Leaders in the junior college district offices vary more from the overall population and this may be because they are further removed from instructional programs. However, a significantly higher proportion of their time spent with persons are in contacts with subordinates and with outside groups. Their only atypical score in individual time is in observation and inspection.

This is also reflected in their high coordination score for major responsibilities.

Adult school leaders, who report the lowest scores for time spent with persons, spend considerably less time in meetings and conferences and more than the average amount of time with subordinates and outside groups. Their most atypical scores for individual effort are a lower score for writing reports and a higher score for preparing charts and similar materials. Their major responsibilities emphasize personnel activities and scheduling and de-emphasize coordination.

The much larger amounts of time that correctional leaders spend in contacts with persons reflects the unusually large amounts of time they spend with subordinates and other persons (perhaps inmates). Observation and processing mail received atypically high scores for individual effort. The much higher mean scores for supervision of technical operations as a major responsibility undoubtedly reflects the peculiar character of the correctional facility. Coordination, which normally demands more time, received a low score from correctional leaders.

Those interested in the details of these institutional analyses and other analyses (e.g., by type of authority and span of responsibility) are referred to the Comprehensive Report.

MAJOR ISSUES

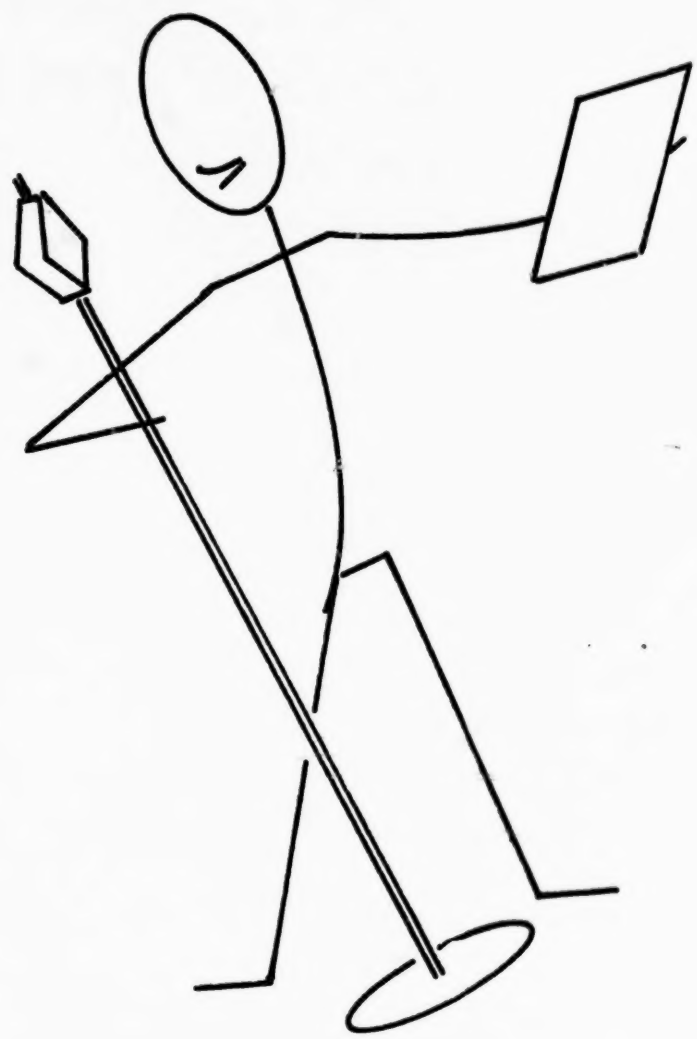
Fifteen major issues were identified for consideration by trade and technical leaders and incorporated in a questionnaire entitled the Major Issues Questionnaire. Suggestions for the resolution of these issues were solicited from thirty interviewees (randomly selected from the 286 respondents to the Basic Description Questionnaire). Ten suggestions for the solution of each major issue were offered to trade and technical leaders in California in the MIQ. The leaders were asked to rate the importance of each suggestion on a five point scale.

The data from the MIQ are based on 239 returns (84 percent). The overall mean scores on the following pages can be placed into a quintile division and characterized as follows:

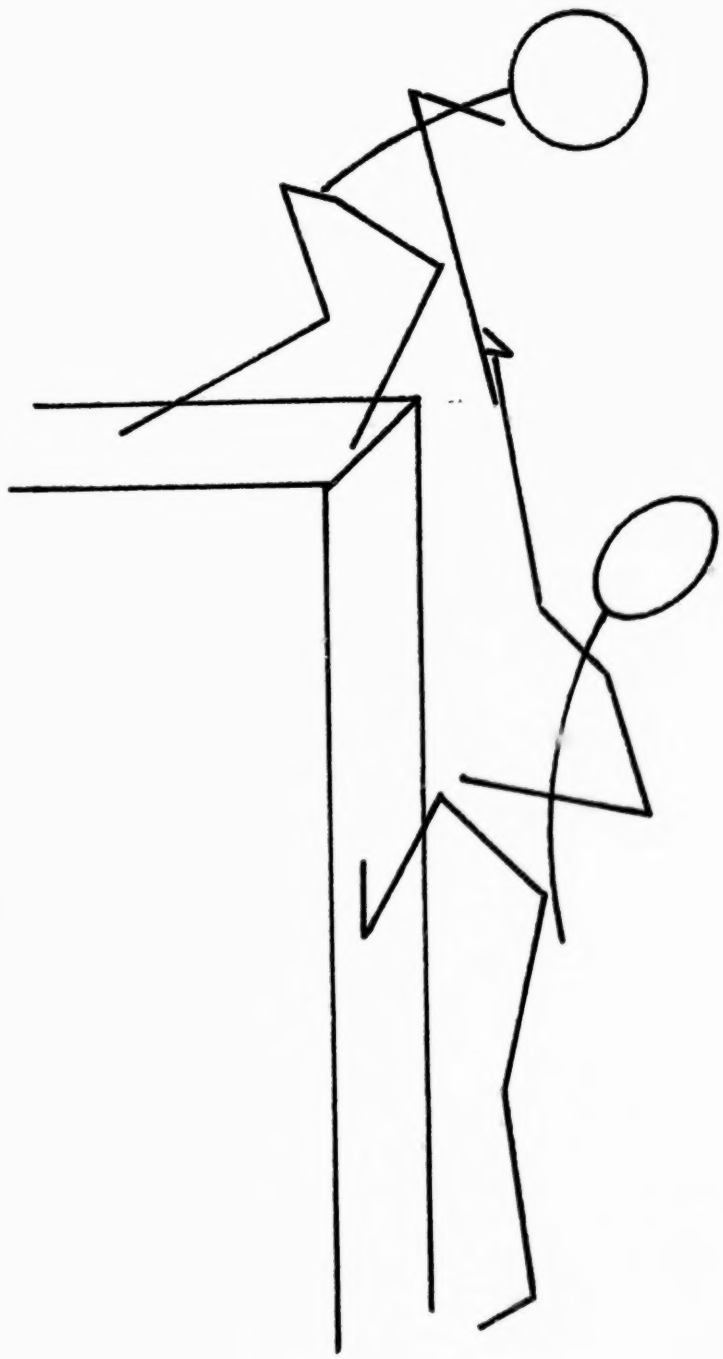
Above 4.3562	Very high
4.1518 to 4.3537	High
4.0275 to 4.1472	Substantial
3.7244 to 4.0218	Weak
Below 3.7109	Poor

HOW CAN VOCATIONAL EDUCATION ACHIEVE THE STATUS AND PRESTIGE IT NEEDS TO PERFORM ITS PROPER ROLE?

Orient counselors to the values of vocational education for students.	4.5798
Establish positive attitudes toward work in prevocational education at the elementary and junior high levels.	4.2650
Offer parents information about the advantages of vocational education.	4.1907
Publicize advantages (financial rewards, style of life, etc.) of graduates with occupational training.	4.0847
Offer programs of vocational orientation for the total student body.	4.0420
Publicize successful vocational programs via radio and television.	4.0298
Promote visitation of vocational programs by parents and public.	3.9099
Participate in many community organizations as a professional vocational educator.	3.8305
Establish area councils to develop regional strategies to promote vocational education.	3.6913
Maintain speakers' bureau to disseminate information about vocational education.	3.3174



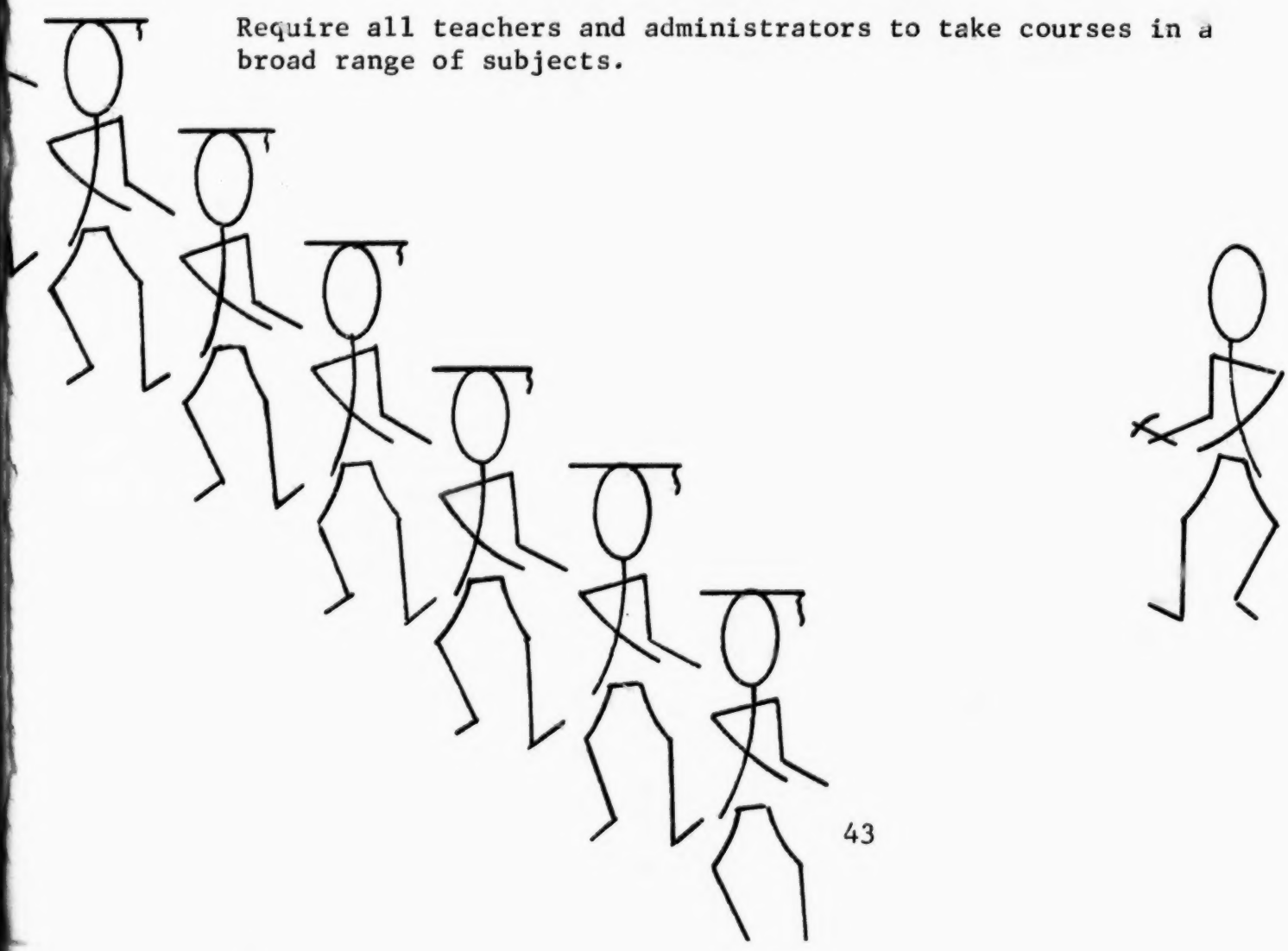
HOW CAN THE FEDERAL GOVERNMENT BE MORE EFFECTIVE IN VOCATIONAL EDUCATION?



4.5804	Increase flexibility of vocational programs to meet local needs.
4.4115	Maintain continuity of federal support.
4.2928	Allocate funds to the districts earlier in the year.
4.2342	Increase federal appropriations to the states.
3.9724	Combine all vocational legislation administered by the Office of Education into one act.
3.7249	Maintain continuous national study of vocational education.
3.7244	Maintain a National Advisory Committee on vocational education.
3.5628	Establish a Department of Education and Manpower Development at the Cabinet level.
3.1304	Transfer the responsibility for identifying manpower needs from the Department of Labor to the Department of Health, Education and Welfare.
2.8610	Provide federal funds to construct and operate residential vocational schools.

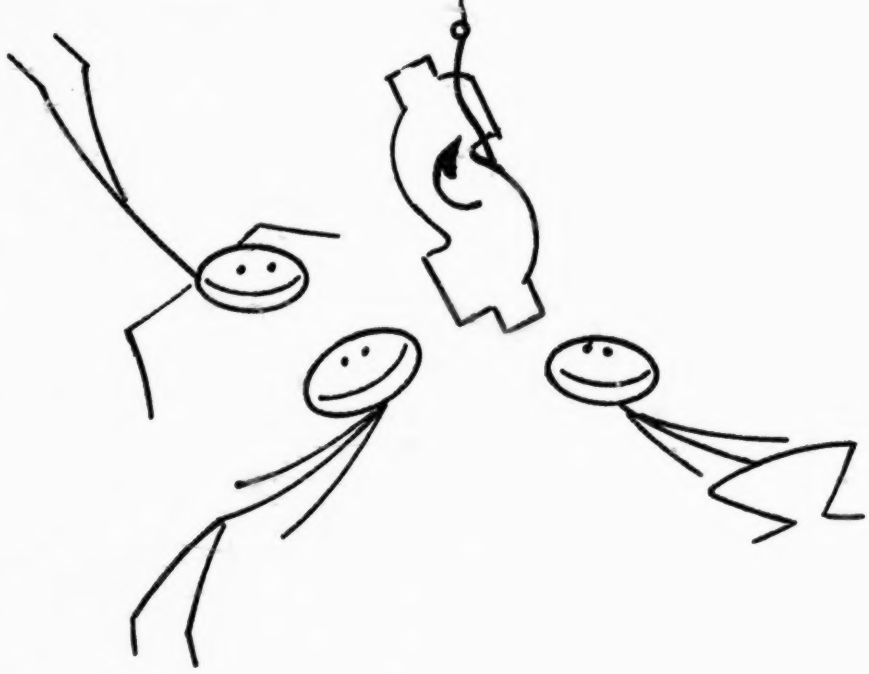
HOW CAN VOCATIONAL EDUCATION BE BROUGHT INTO THE MAINSTREAM OF EDUCATION?

Publicize vocational programs through all available media.	4.4035
Establish policy and commitment for vocational education through school boards.	4.3689
Keep vocational education in comprehensive schools.	4.1518
Maintain vocational information programs for parents.	4.1278
Promote interdisciplinary experimentation.	3.8664
Establish more team teaching combining both academic and vocational teachers.	3.8616
Establish workshops, seminars and staff meetings to attack the problem of isolation.	3.7373
Relax course requirements to provide opportunity for students to take a greater variety of vocational courses.	3.5227
Interchange academic and vocational instructional staffs between all areas wherever feasible.	3.2844
Require all teachers and administrators to take courses in a broad range of subjects.	3.2455



HOW CAN THE SHORTAGE OF QUALIFIED TEACHERS BE RESOLVED?

Promote in-service training to increase teacher competence.	4.3991
Emphasize vocational competence in recruitment.	4.2795
Increase salaries by equating a year of work experience with a year of teaching experience on the salary schedule.	4.2434
Emphasize ability to instruct in recruitment.	4.1410
Concentrate on teacher guidance during the early period of teaching to reduce teacher "drop outs."	4.1404
Create a clearinghouse for qualified available teachers.	4.1039
Maintain a statewide recruitment program.	3.7277
Initiate a survey for qualified potential teachers by occupational area.	3.5614
Establish advisory committees for the specific purpose of recruitment.	3.2500
Emphasize formal education in recruitment.	2.9735



HOW CAN THE RELATIONSHIPS BETWEEN VOCATIONAL AND ACADEMIC TEACHERS BE IMPROVED?

4.6087 Include vocational teachers in the counseling program.

4.2588 Offer workshops for teachers (both academic and vocational) and industrial leaders to improve the preparation of graduates for the world of work.

4.1703 Bring vocational and academic teachers together for the integration of course content.

4.1174 Encourage teachers to participate in vocational organizations to advance vocational education.

4.0565 Encourage teachers to publish and speak about vocational education.

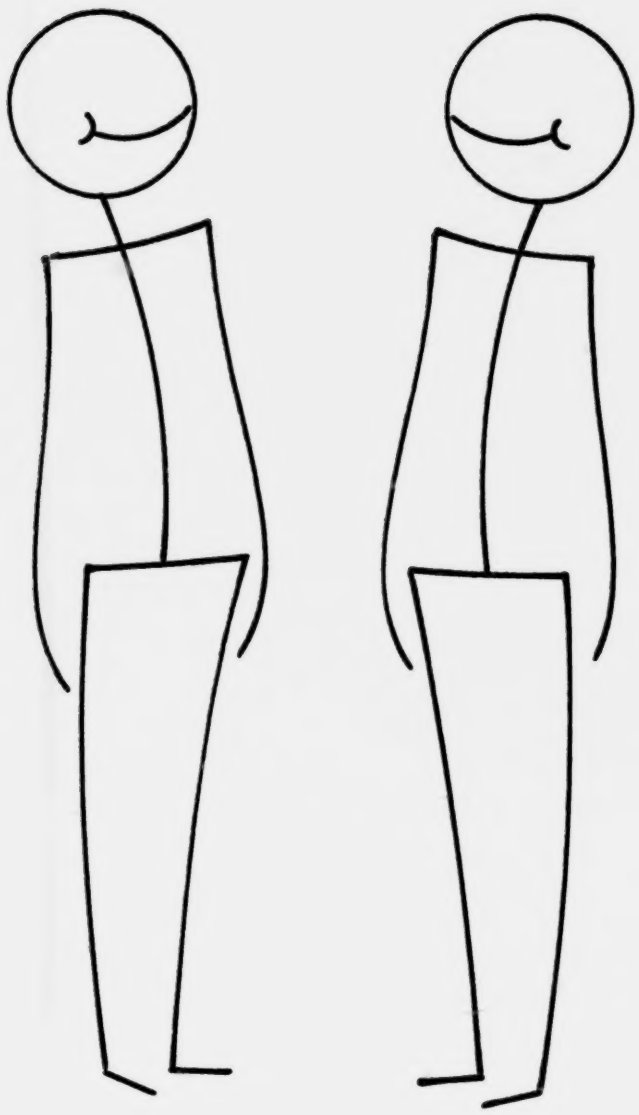
4.0519 Encourage teachers to participate in professional organizations that cover all areas.

3.9258 Emphasize comprehensive education to unite vocational and academic faculties.

3.8546 Increase the social contacts of vocational teachers with academic teachers.

3.6856 Expose vocational teachers to problems of academic teachers.

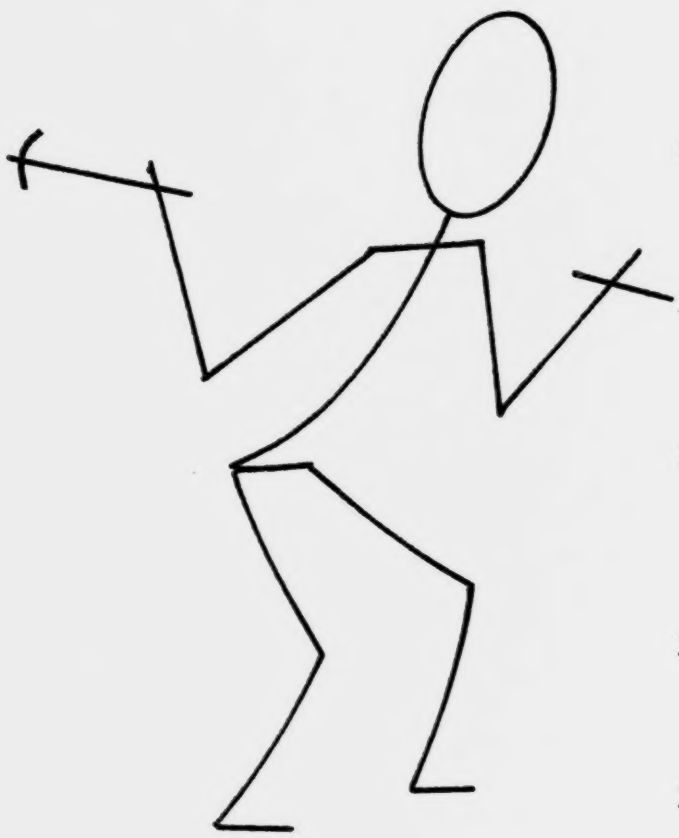
3.5939 Bring the problems of vocational teachers to the attention of all colleagues.



HOW CAN THE RELATIONSHIPS BETWEEN VOCATIONAL AND ACADEMIC LEADERS BE IMPROVED?

Increase efforts at articulation between schools on different levels (e.g., high school and junior colleges).	4.4842
Program more instruction on an individual basis so that students can move quickly through familiar material.	4.4395
Establish pre-tests for advanced placement.	4.1697
Establish credit criteria for work experience.	4.0909
Provide opportunities to skip courses by examination.	4.0818
Intensify efforts to identify and evaluate knowledge acquired out of school.	3.7963
Recognize knowledge acquired out school as "delayed credit" to be awarded at the conclusion of the program of study.	3.7387
Devise methods of equating learning in occupational programs with academic programs.	3.7109
Establish organizational "machinery" in every district to study the problem of non-accredited learning.	3.3048
Enroll students "on probation" to prove their non-credit knowledge.	3.2233

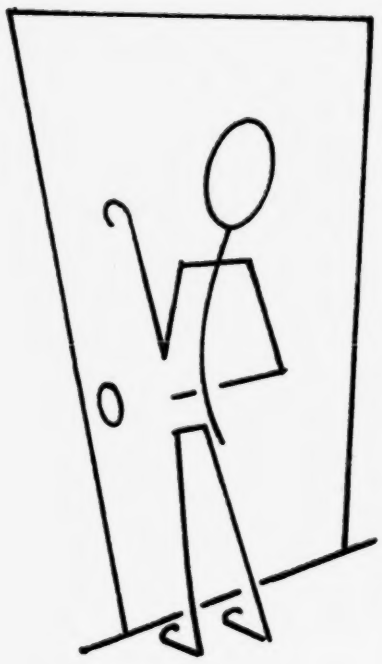
HOW CAN WE PROVIDE CREDIT FOR STUDENT LEARNING REGARDLESS OF HOW OR WHERE IT IS ACHIEVED?



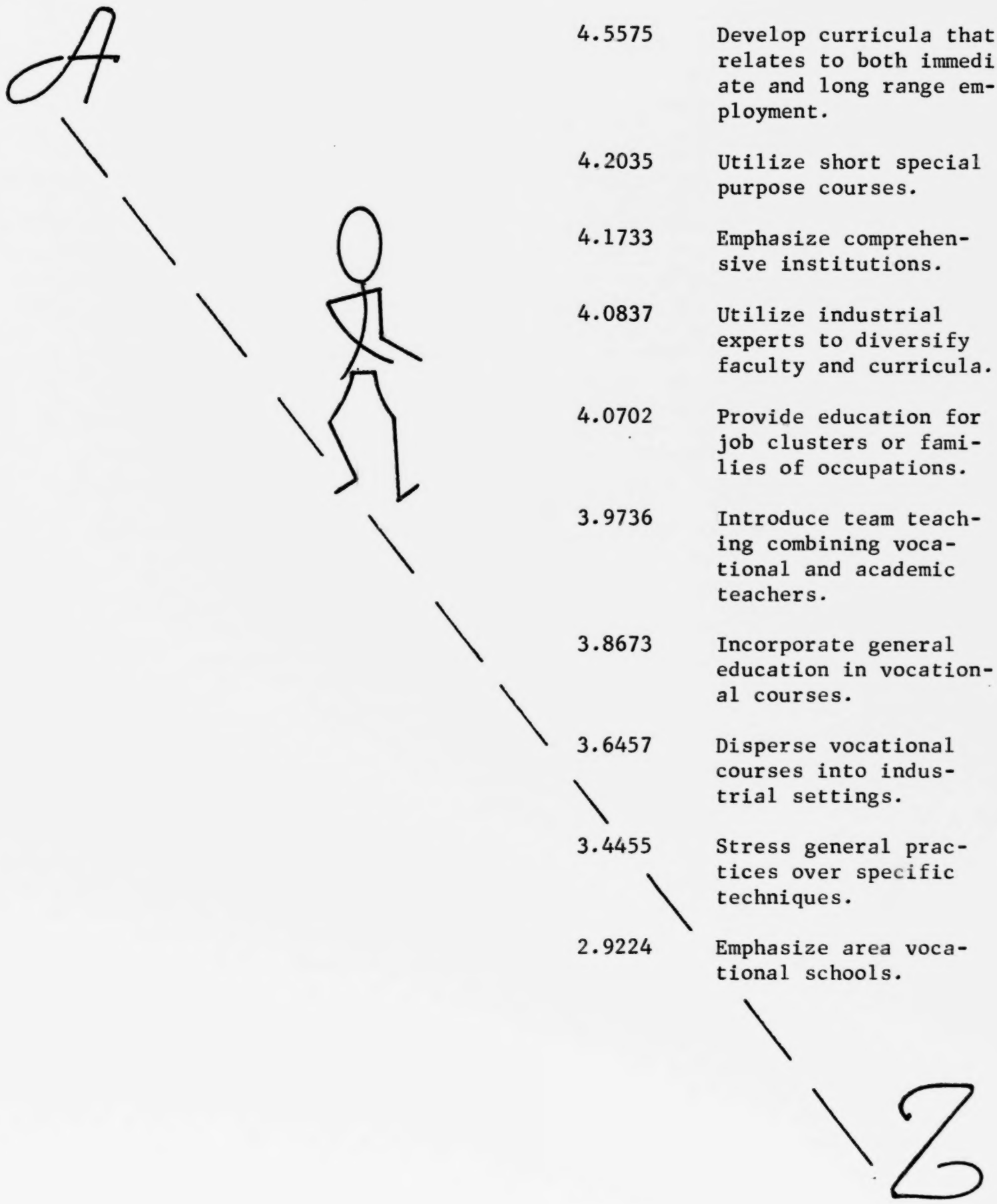
4.2091	Increase vocational staff to expand occupational offerings.
4.2080	Emphasize comprehensive schools.
4.1593	Place vocational education under the administration of vocational educators.
4.0352	Increase the emphasis on occupational skills with the underprivileged.
3.9301	Increase the emphasis on basic education with the underprivileged.
3.8805	Increase the participation of academic staff in areas related to vocational programs.
3.7911	Expand the base of related general education in vocational programs.
3.7911	Increase the emphasis on specific occupational skills in vocational programs.
2.6927	Place vocational education under the administration of comprehensive educators.
2.4152	Emphasize single-purpose vocational schools (e.g., area vocational schools, vocational high schools, etc.).

WHAT KINDS OF INSTITUTIONS SHOULD OFFER VOCATIONAL EDUCATION?

Bring academic, vocational and industrial leaders together to study the relationships of school to the world of work.	4.5238
Join with the counseling staff for the solution of mutual problems.	4.5109
Join with academic colleagues in the problem-solving processes of the whole school.	4.4000
Emphasize successful vocational programs in publicity.	4.3652
Promote understanding of the vocational educator's role.	4.3074
Increase the rank (and salaries) of vocational leaders.	4.1022
Emphasize national focus upon vocational education at every opportunity.	4.0265
Bring academic colleagues into the problem-solving processes of vocational education.	4.0177
Provide a greater number of leadership training programs.	3.8628
Emphasize sensitivity training in the in-service training of vocational educators.	3.5330



HOW CAN WE PROVIDE DIVERSITY AND COMPREHENSIVENESS IN VOCATIONAL EDUCATION?



4.5575	Develop curricula that relates to both immediate and long range employment.
4.2035	Utilize short special purpose courses.
4.1733	Emphasize comprehensive institutions.
4.0837	Utilize industrial experts to diversify faculty and curricula.
4.0702	Provide education for job clusters or families of occupations.
3.9736	Introduce team teaching combining vocational and academic teachers.
3.8673	Incorporate general education in vocational courses.
3.6457	Disperse vocational courses into industrial settings.
3.4455	Stress general practices over specific techniques.
2.9224	Emphasize area vocational schools.

HOW CAN WE IMPROVE VOCATIONAL GUIDANCE?

4.5284 Maintain follow-up studies of graduates and drop-outs.

4.5129 Maintain placement services for all graduates.

4.5021 Provide in-service training in vocational guidance for counselors.

4.2489 Initiate more dialogue with counseling staff.

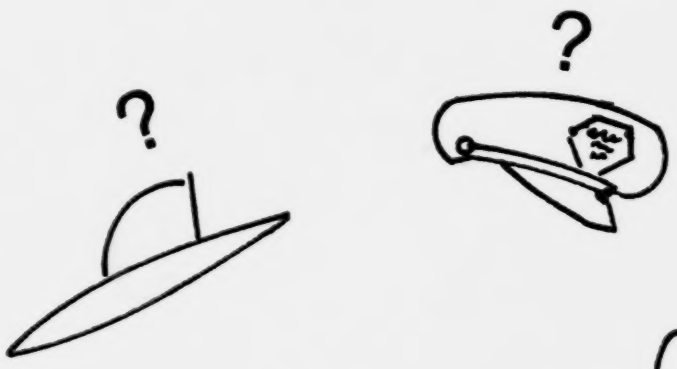
4.1853 Utilize vocational teachers as part-time counselors.

4.1233 Make vocational counselors available to students in the classroom.

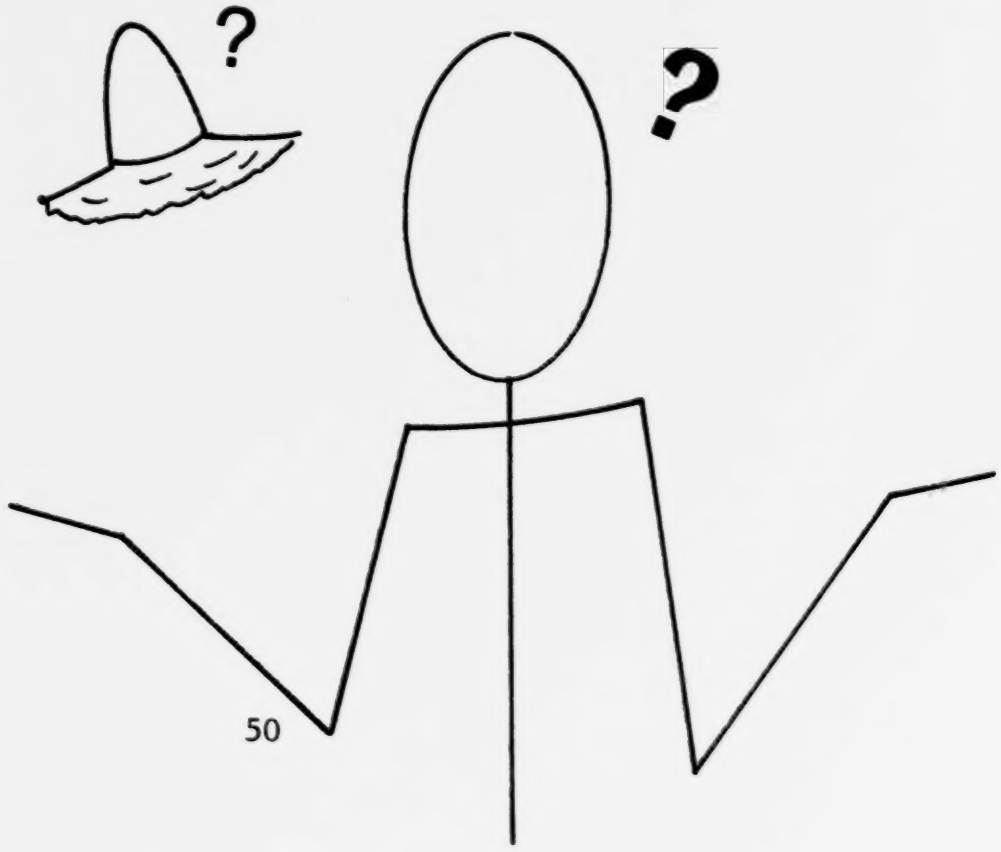
4.0396 Utilize an advisory system of vocational teachers for counselors.

4.0393 Provide more student contacts with tradesmen.

3.7793 Establish employment standards for vocational students to parallel the transfer standards for academic students.



3.7696 Introduce more vocational exploration in elementary schools.



HOW CAN WE BETTER RESPOND TO THE CHALLENGE OF THE NEW TECHNOLOGY?

Build direct liaison with key people in industry. 4.6410

Encourage teachers to work in industry to learn new developments. 4.5983

Utilize more modern equipment through loan, lease or industry-based programs. 4.4786

Provide in-service training for teachers to keep up to date in trade and technical competencies. 4.4764

Utilize advisory committees to update course content, identify new courses and evaluate equipment needs. 4.4573

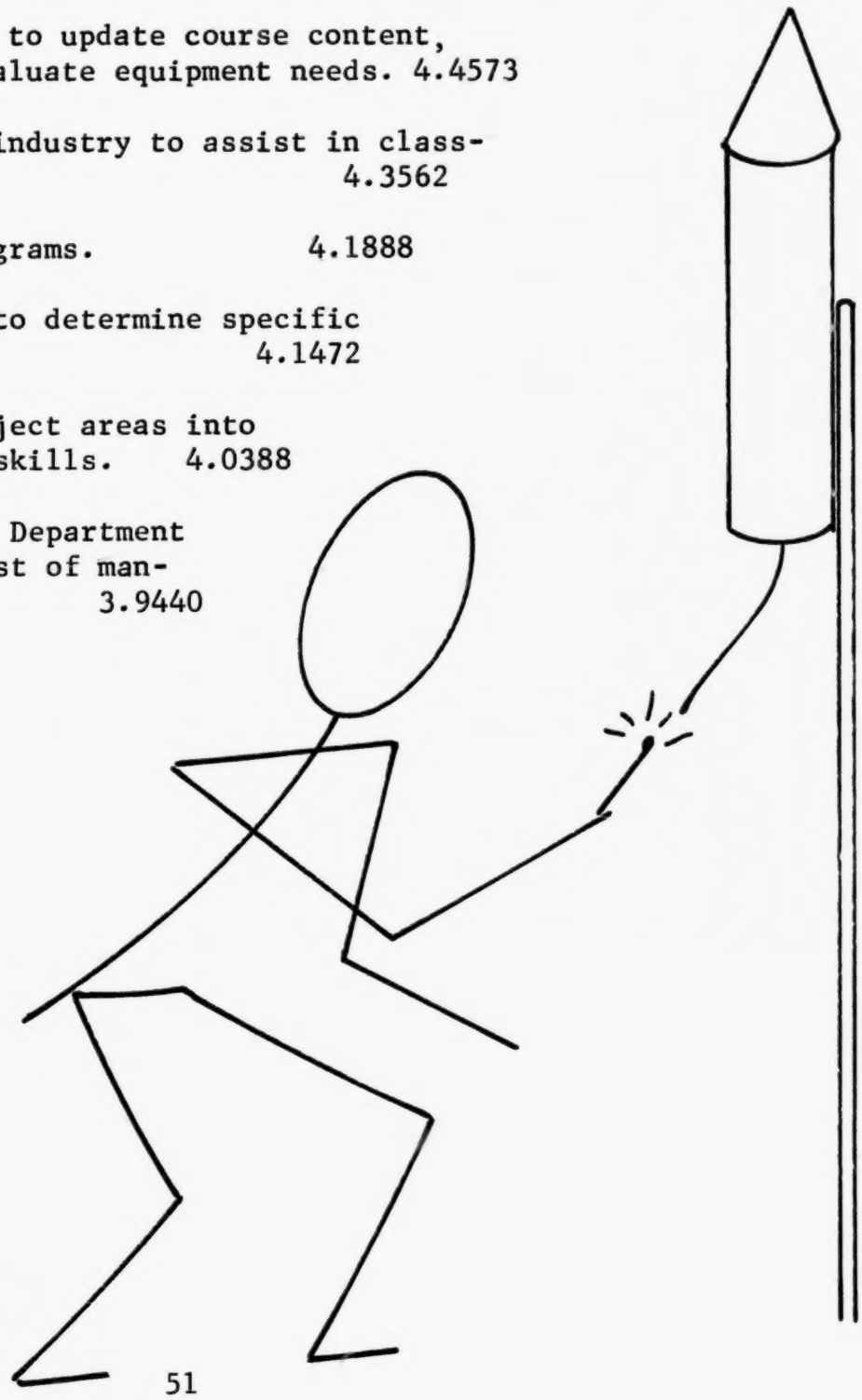
Bring resource people from industry to assist in classroom instruction. 4.3562

Provide more work/study programs. 4.1888

Conduct industrial surveys to determine specific training needs. 4.1472

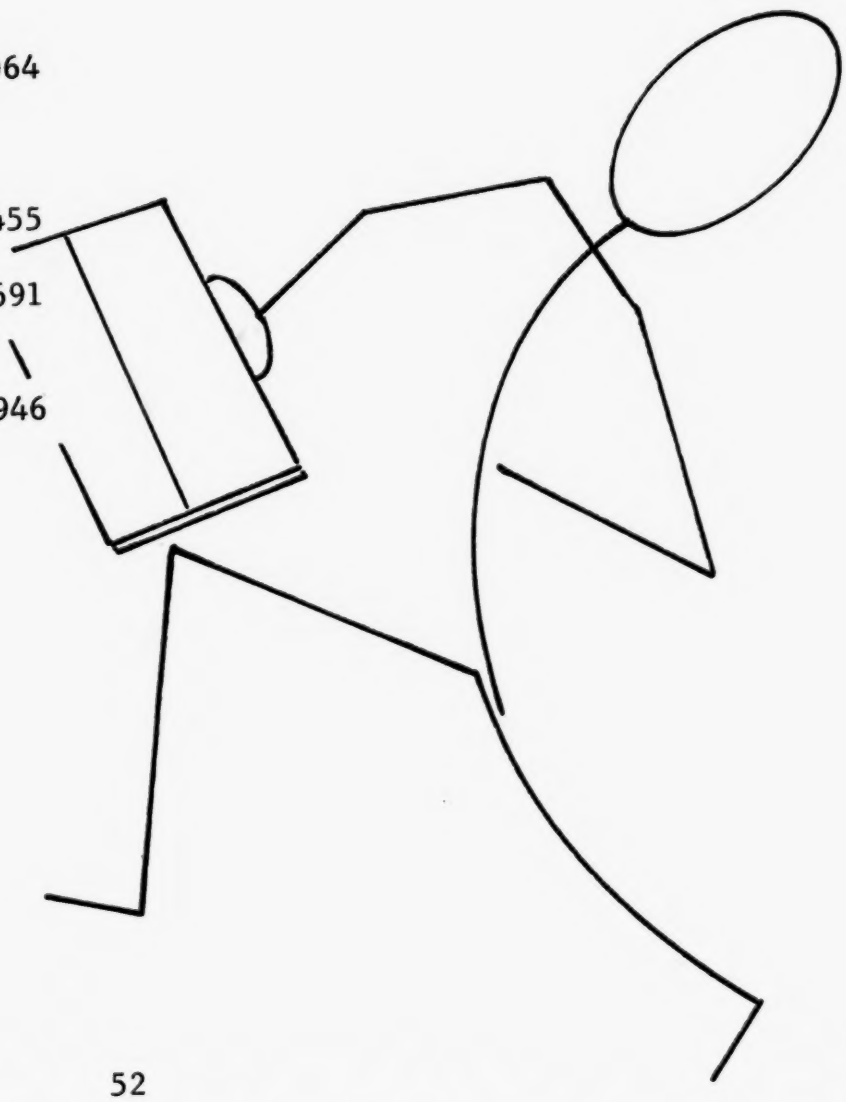
Restructure traditional subject areas into "families" of occupational skills. 4.0388

Work closely with the State Department of Employment to keep abreast of manpower needs. 3.9440



HOW CAN VOCATIONAL EDUCATION RESPOND TO POVERTY PROBLEMS?

Offer short special purpose courses.	4.4518
Publicize training opportunities through radio and television.	4.1422
Join community groups concerned with solving poverty problems.	4.1289
Emphasize work-study programs.	4.0841
Utilize mobile counseling units in poverty areas.	3.7260
Devote more curricula to basic education.	3.7067
Eliminate educational expenses for members of poverty groups.	3.4064
Teach in the native language of monolingual groups.	3.1455
Develop more skill centers.	3.0691
Emphasize traditional rather than special programs.	2.3946



HOW CAN WE IMPROVE CONTINUING OCCUPATIONAL EDUCATION?

Maintain direct liaison with industry to determine continuing occupational training needs.	4.6853
Keep continuing occupational programs up to date with advisory committees.	4.4416
Maintain direct liaison with industry to publicize continuing occupational courses.	4.4156
Conduct follow-up studies on graduates and drop-outs.	4.3537
Establish more short special purpose courses for continuing occupational education.	4.3319
Utilize the more flexible structures of extension education for continuing education.	4.0310
Conduct leadership workshops on the planning of change in continuing education.	4.0307
Conduct industrial surveys to identify modifications in the curricula of continuing occupational education.	3.9563
Provide 100 percent federal support for innovative programs in continuing education.	3.7822
Establish vocational guidance centers for vocational alumni.	3.5785

HOW CAN WE PREPARE CRAFTSMEN AND TECHNICIANS TO TEACH?

4.3581 Include observation-demonstration sessions with master (expert) teachers in training programs.

4.2844 Establish on-the-job programs to help new teachers.

4.2611 Emphasize lesson planning.

4.2478 Demand practice-demonstrations of <u>all</u> trainees.

4.2159 Emphasize teaching methodology (how to teach).

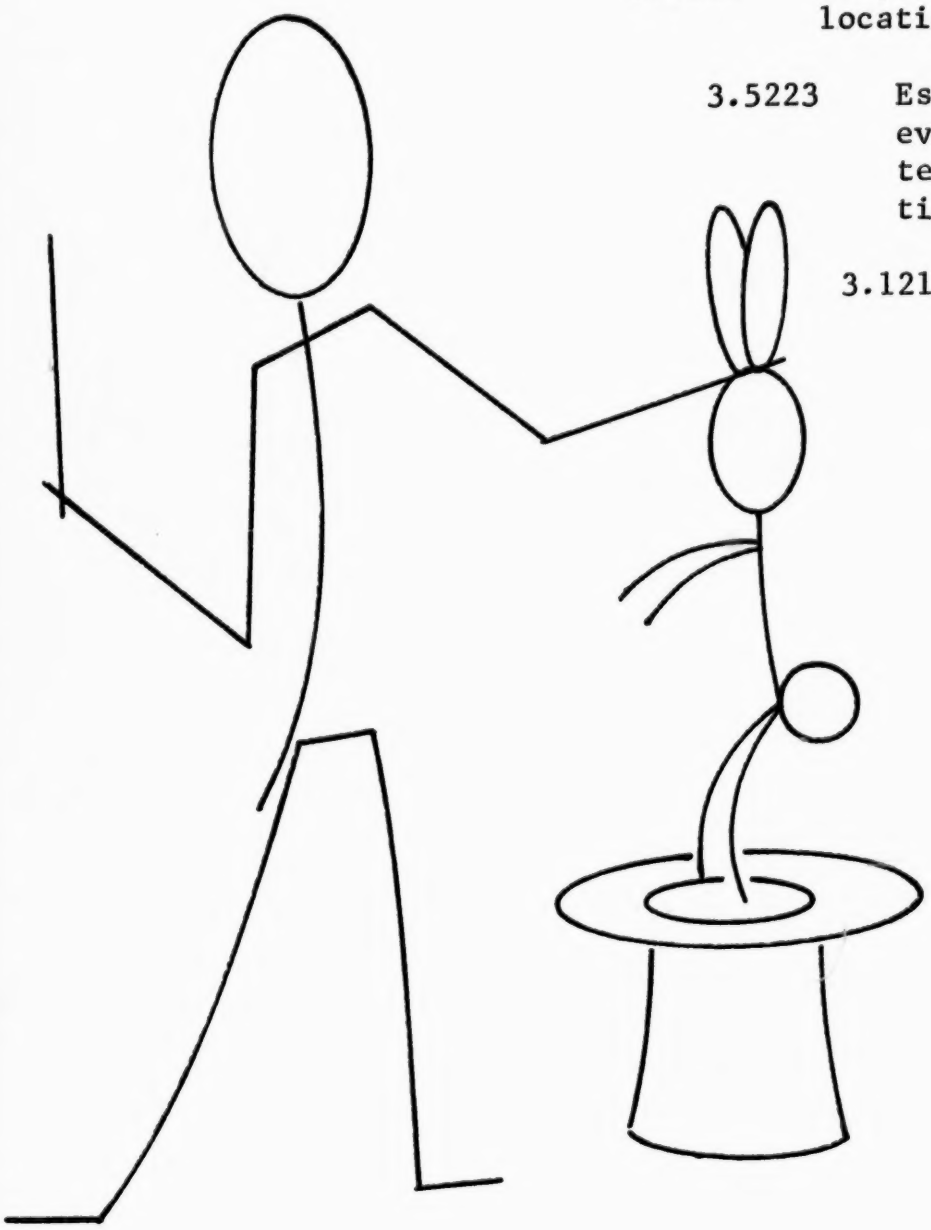
4.1867 Emphasize the learning process (how students learn).

4.0493 Offer core programs throughout the year.

3.9823 Disperse teacher education to more locations.

3.5223 Establish a board of examiners to evaluate the work experience of teachers and to make recommendations for needed up-grading.

3.1211 Provide different teacher training for high school, junior college and correctional teachers.



HOW SHOULD WE PROVIDE FOR THE IN-SERVICE TRAINING OF TRADE AND TECHNICAL TEACHERS?

Maintain teacher exposure to the latest developments in their subject area.	4.5536
Provide programs of in-service training through industry.	4.3877
Give salary credit for qualified work experience programs in industry.	4.3233
Emphasize instructional skills in in-service training.	4.2684
Provide programs on in-service training at the local level.	4.2632
Maintain dialogue between administration and administrators and other vocational leaders about in-service training needs.	4.1667
Maintain dialogue between teachers and administrators about in-service training needs.	4.0485
Release teachers for on-the-job in-service training.	4.0391
Insist that districts provide salary credit for vocational in-service training.	4.0218
Provide programs of in-service training through the Bureau of Industrial Education.	3.8202

SUMMARY

In general, the scores on the MIQ tend toward the high ("most helpful") end of the rating scale. This is understandable since the suggestions originated with leaders. Also, a forced ordering was not employed. However, there were discernable differences in the scores for every issue and more differences when the responses were analyzed with respect to the teaching background and type of institutional employment of the leaders.

Overall scores The status and prestige problem of trade and technical education can be effectively met, as the leaders view it, by working with counselors, parents and students and through publicity. Most important to them is orienting counselors to the values of vocational education for students. But more orientation in vocational education is also needed for all students and their parents (even at elementary and junior high school levels). The leaders also call for more publicity about the advantages of vocational programs and the nature of these programs.

The four most important suggestions concerning the role of the Federal Government involve increased flexibility and continuity of federal support, increased funds and an earlier allocation of funds.

To combat vocational education's isolation from other forms of education, the leaders call for more publicity through all available media to reach the general public, especially the parents. They also feel, however, that policy and commitment for vocational education

must come from the school boards and that vocational education must be kept in comprehensive institutions.

In-service training receives the highest score as a suggestion for building quality into the teaching staff. Next in importance are suggestions concerning the recruitment of teachers. For recruitment, they emphasize vocational competence over ability to instruct; but both are high scores. They also desire equating work experience with teaching experience on the salary schedules, more teacher guidance during the early period of teaching and a clearinghouse for qualified and available teachers.

The leaders believe that the relationship of trade and technical teachers with their colleagues can be improved by including vocational teachers in counseling programs, by bringing vocational and academic teachers together for workshops, by integrating course content and by participating in professional, general purpose organizations. However, they also want trade and technical teachers to participate in vocational organizations, to publish and to speak about vocational education.

The most highly rated suggestions for improving leader relationships recognize the need for bringing differing groups of people together for study, problem-solving or training. For example, they want to bring academic and vocational leaders together with industrial leaders; and they want to join with the counseling staff for the solution of mutual problems. They would also like to join academic leaders in the problem-solving processes of the whole school, but are much less

enthusiastic about bringing academic leaders into the problem-solving processes of vocational education. The leaders believe that the role of the vocational leader needs better understanding, higher rank and higher salaries. They feel that the national focus on vocational education should be emphasized at every opportunity.

The most popular suggestions for an increased recognition of student learning, regardless of how or where achieved, are increased efforts at articulation between schools, more instruction on an individual basis to allow for acceleration, examinations for advanced placement and for skipping courses and credit criteria for work experience.

To develop an institutional "character" which supports vocational education trade and technical leaders desire comprehensive institutions with an increased vocational staff, the administration of vocational education by vocational educators and an increased emphasis upon occupational skills for the underprivileged.

Trade and technical leaders feel that diversity and comprehensiveness can be built into vocational education by keeping educational institutions comprehensive, by developing curricula that relate to both immediate and long range employment objectives and by providing training for clusters of occupations on the one hand and short, special purpose courses on the other hand. They also call for the utilization of industrial experts to diversify faculty and curricula.

The suggestions for improving vocational guidance were strongly supported by trade and technical leaders. Follow-up studies and

placement services for graduates receive the highest scores. Counselors are singled out for more in-service training, for more dialogue with vocational educators and for their presence in the classroom. Vocational teachers are singled out for service as part-time counselors and as advisors to counselors. Students are singled out for more contacts with tradesmen.

Suggestions for meeting the challenge of the new technology emphasize the relationship of trade and technical education with industry. The leaders want to maintain a liaison with key persons in industry, conduct industrial surveys and coopt industrialists as members of advisory committees and as instructors. They also want teachers to keep up to date by working in industry and participating in in-service training. They feel that the programs of trade and technical education also call for more modern equipment and more work/study courses.

Suggestions for dealing with the evasive problem of relating vocational education to poverty groups call for more short, special purpose courses and more work/study programs. The leaders also favor suggestions to work with community groups and publicize training opportunities.

According to trade and technical leaders, we need to maintain a liaison with industry to promote training, work through advisory committees and conduct follow-up studies to improve continuing occupational education. Programs must be flexible and utilize short, special purpose courses. They also feel that leadership workshops are necessary to keep abreast of the changes in continuing education.

The general conception of what is required in pre-service teacher training, as specified by the leader scores, are observation-demonstration sessions with master teachers, training in lesson planning and teaching methodology and practice-demonstration sessions in instruction. The leaders also desire that teacher training programs be conducted throughout the year and programs to help new teachers be conducted on the job.

Judging by the scores, the leaders are asking industry and local districts to sponsor in-service teacher training. They want salary incentives for teachers to induce them to obtain both in-service training and work experience in industry. They also believe that teachers ought to be released for on-the-job training. Above all, they feel that teachers should be exposed to the latest developments in their subject areas as well as training to improve their instructional skills. To keep abreast of in-service training needs, however, there must be communication between administrators, vocational leaders and teachers.

Comparisons by teaching background and by type of institutional employment There are distinctive differences in the MIQ scores when they are analyzed by the teaching background and by the type of institutional employment of the leaders. In general, leaders with teaching backgrounds in general education and industrial arts differ more from the leaders with trade and technical backgrounds than leaders with backgrounds in other vocational subjects. In addition, when the general education and the industrial arts groups are significantly different from the trade and technical group, their scores are usually

lower. The leaders with teaching backgrounds in other vocational subjects are more similar to the trade and technical group. However, when they differ from the trade and technical group, their scores are usually higher.

Comparisons by the institutional employment of the leaders also reveal some distinctive differences. The preferences are evidently related to the needs and the problems of each type of institution and the pressures upon the leadership role in the institution. Although the correctional leaders stand out in the number and type of significantly different scores from the overall scores, each type of institutional leader has some distinguishing characteristics in his approach to major issues.

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James, Rhett H.; Thomas, A. I.
Effective Trade and Industrial Programs for the Disadvantaged Persons with Special Needs.

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*AMERICAN VOCATIONAL ASSOCIATION CONVENTION, DALLAS, TEXAS, DECEMBER 9-13, 1968

A.I. Thomas reviewed the characteristics of persons with special needs and suggests some general solutions. Some of the programs and approaches which have been set up to deal with the problem are outlined, and recommendations given. H. Rhett James discussed differential disadvantagement due to race and some national training efforts directed at the disadvantaged. (EM)

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Speeches Presented At The

62nd Annual Vocational Convention

Of The

American Vocational Association

Dallas, Texas

December 8, 1968

NASSTIE General Meeting ,

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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VT008165

TOPIC - "Effective Trade and Industrial Programs For The Disadvantaged Persons With Special Needs."

PANEL - Mr. Clarence Huginnie, Collins Radio, Dallas, Texas

Mr. H. Rhett James, Minister, Dallas, Texas

Dr. A. I. Thomas, President, Prairie View A&M, Prairie View, Texas

PLACE & TIME: Statler-Hilton Hotel - December 8, 1968
7:30 p.m. to 9:30 p.m.

TABLE OF CONTENTS

I. Introduction

II. Realizing the Problem

III. Recognition of Problems

IV. What Can Be Done

V. How Serious Is The Problem

VI. What Has Been Done

VII. Minority Gain in Employment

VIII. Recommendations and Conclusions

I. Introduction

Let me extend my sincere thanks for the opportunity to speak here at the general meeting of this association and with the initials NASSTIE, how could I refuse. Also I wish to thank Mr. J. L. Thomas, of the Texas Employment Commission, Mr. Graham of the Texas Education Agency and Mr. Robert N. Taylor of Collins Radio Company for their inputs to the research effort of this talk.

If I bring you one message tonight it is; the emergency of this task. Members of business, education, and government must solve the problems of the disadvantaged persons immediately if we are to have peace and tranquility. If this nation on the brink of a revolution must be saved. You haven't seen a riot on downtown Fifth Avenue or downtown Park Avenue, its always uptown Fifth Avenue and Park Avenue in Harlem. ORDINARILY Working citizens do not riot, thus maybe the answer is jobs. How can you become more effective at your task of providing vocational and technical training to disadvantaged persons with "special needs". The term "special needs" has been defined as applying to those persons experiencing racial discrimination and others with physical, mental, social, and economic handicaps.

Let us explore briefly certain aspects of persons with "special needs" and suggest possible solutions to the encountered problems.

II. Realizing the Problem Exists

One of the serious deficiencies that exist among middle class orientated individuals is the inability to understand or realize there are authentic problems inherent in the behavior of the culturally deprived or disadvantaged. As individuals, we are prone to use ourselves as criterions. We usually develop some strong convictions concerning what other individuals should have done with themselves or what they could do if they put forth the effort.

III. Recognition of Problems[1]

1. Educational Deficiency - A major and most obvious drawback in the search for employment is educational deficiency. A youth may even be a high school or college graduate and still lack the ability to read or comprehend basic English or handle figures competently. This is often frustrating and bewildering to the individuals themselves.

   A. Reasons

      1. Lack of parental encouragement and support.

      2. Attend schools with poorest facilities and are taught by teachers many of whom also have deprived backgrounds.

      3. Overcrowded classrooms and overburdened teaching staff.

      4. Enters school from culturally deprived environment.

      5. Schools are middle-class orientated and fail to consider children from culturally deprived areas - they enter school behind and fall further behind.

      6. Mobility of families.

2. Socio-economic factors - the most massive, the most universal, and the disadvantage factor shared by most is undoubtedly socio-economic. Maybe "poverty-stricken" is more applicable term for this discussion.

   A. Implications

      1. No personal experience in the world of comfort and well-being.

      2. Poor images of mother and father working in dead-end jobs or not working at all.

      3. For their own futures, they do not identify with any vision of personal success.

      4. Attitudes reflect their home surroundings.

      5. Effects of deprivation etched on their personalities.

      6. Have difficulty relating to a new alien culture.

      7. Goals are usually short-range rather than long-range (it is usually difficult for them to think of future career possibilities when there is desperation about the future).

      8. Feeling of hopelessness (experienced so many defeats that they feel that there is no use trying).

      9. Appeal for glamour jobs and the development of unrealistic occupational choices (no relevant experiences by which to learn about various occupations).

[1] J. L. Thomas, Staff Training On The Disadvantaged, Texas Employment Commission, Dallas, Texas (1968).

As a result of some or all of these problems, disadvantaged persons may be severely limited in their employability. The principal manifestations may include the following:

1. They may function below their potential due to deficiency in educational background, or because they do not know of the various employment opportunities to which they could aspire.

2. They may have such low self-esteem that it is difficult for them to see themselves as able to acquire or hold jobs for which they are otherwise capable.

3. They may be socially undeveloped, act impulsively, have difficulty getting along with co-workers and employers. They may not understand how to accept supervision, to develop and learn under it, or to tolerate any implied criticism. They may be irresponsible, and lacking in middle-class standards of reliability. They may not show up on time for interviews, may be late for work, or not show up at all for several days, for punctuality is often not expected or practiced in their home environments.

4. Some may be bitter and disillusioned, with hidden or obvious hostility. Others will have a sense of powerlessness in the face of overwhelming obstacles. Others will compensate with an over-agressive manner, but more will be inarticulate and withdrawn.

IV. What Can Be Done

Raising the aspirational level of a disadvantaged person who is entering the labor market may well be a long-term endeavor.

1. He must be shown that the world can be friendly and that people want to help him (refer to importance of being able to accept the fact that special problems de exist).

2. He must be made to realize that the climb upward is made one step at a time, and that every bit of work experience will add to his skill and knowledge.

3. He must be helped to understand that aptitude and other tests are only ways of finding a clue to his potential, and not for putting him on the spot, and that he cannot pass or fail.

4. It may take longer and be more difficult to establish rapport with the disadvantaged, but extra time and effort must be expended to accomplish this objective.

5. Warmth, empathy, and sincerity must be conveyed. Disadvantaged individuals are hypersensitive to insincerity and lack of interest, as these attitudes reflect the inferior self-image they often have.

6. Great patience will be required because of lack of responsiveness in some of the individuals, and possibly a very negative attitude, even mistrust of most people.

There are significant numbers of disadvantaged in all racial and ethnic groups.

V. How Serious Is The Problem?

According to the Secretary of Commerce approximately 7.4% or 650,000 non-whites are unemployed, while 15% of the total population, with the majority non-white can not read on a 4th grade level. Over 25% of all adults can't read above 6th grade level and 36% have not completed high school. The problem is widespread again not limited to race.[2] But, for a nation that prides itself on its affluence this is tragic.

VI. What Has Been Done?

1. STEP program (Solution to Employment Problems) created by NAM in 1964, serves as follows:
   a. Collects and distributes data and advice on methods used by various companies.
   b. Films and case studies are available.
   c. Representatives are available.
2. MIND (Method of Intellectual Development) was created by NAM in 1966, with objective of improving basic educational tools. MIND was created in Harlem and further developed at Corn Product Company in Summit, Illinois.
   a. Utilizes programmed instruction.
   b. Individual approval
   c. Relatively inexpensive.
   d. Examples (1). A 57 year old illiterate worker upgraded his level in arithmetic and word knowledge about three grades in only 79 hours of taped instruction. He moved up three job levels and $800.00 more per year. Average cost per worker is $400.00; $100.00 less than recruitment cost.
3. HRD at Laurens, South Carolina, the average I. Q. was lower than 75. U. S. Research and Development Corporation in a program called (HRD) Human Resource Development conducted a 10-week course. 72 students completed the course and 68 became employed. 21 of the students, former receipents of

[2]Fortune, January, 1968.

relief and $140,000 in new salaries was generated for the local economy.

Success at Laurens was based on attitudial training motivation is the essential factor. Poor motivation is often the most disturbing barrier of all for unskilled, inexperienced workers.

4. Buddy System

On-the-job training is being used by some firms. A one-to-one relationship is established with a skilled worker and have provided some good results.

5. Systems Approach

North Carolina Manpower Development Corporation has an integrated approach: Outreach training, transportation, housing and mobility in a systematic fashion. This approach uses information Science, Inc. computer services to match hard core applicant and job.

6. Area Approach

Rochester area with Xerox, Eastman Kodak, General Motors, General Dynamics, Burroughs, American Can, Singer, 3M and others pooled $100,000 to create "Rochester Jobs Inc." This coordinating agency draws jobs together with applicant, and trains foremen.

7. Two Detroit Negroes founded Career Development Center (CDC) with Henry Ford II help along with other industrialists. CDC has about $200,000 worth of donated special training equipment. A second center is now being opened.

8. Ex-Cons

Xerox Corp. of Rochester established classes with ex-convicts, 21 weeks in length to provide practical work experience, combined with remedial reading and arithmetic lessons.

9. McDounel Douglas Corp. In an 18 month period McDonnel Douglas of St. Louis has trained 5,633 in its private war on poverty, at the cost of 8 million dollars.

10. Ford Motor Company of Detroit established employment offices in the slums and hired 700 out of 1,000 applicants without the usual tests.

11. LTV of Dallas area trained 684 workers from the Rio Grande Valley at a cost of about $5,000 each.

12. NAB - a guiding force behind many of the jobs for disadvantaged persons has been The National Alliance of Business, which with government encouragement has pledged 100,000 jobs by July 1969 and 500,000 by July 1971.

VII. Minority Gains in Employment

Plans for Progress companies (441) have shown 37.2% overall minority employment increase since 1966.[3]

Over 10% of all employees in the PFP companies were of minority groups, 995,934 of the total 9,567,833. The growth in minority employment gain is twice the rate of all citizens. The biggest category has been in white-collar position;

1966	59,125	2.8%
1968	225,225	4.9%

VIII. Recommendations and Conclusions

According to W. P. Gullander, President of National Association of Manufacturers "The objective must be to apply the creative genius of industrial America to the successful conversion of the unemployable into self-respecting, self-sustaining, productive people who can participate fully in this age of affluence..."[4]

The intensity of the violence of the summers makes crystal clear that the time for experimentation is past. Everyone wants to do a study, then study of studies or maybe a pilot program. What is needed now, is national committment to an urgent, massive program. A committment from all sectors of society, similar to the committment to win World War II, and the Korean War.

George Gallup, reports in Outlook, October, 1968, that 58% of the nation oppose guaranteed minimum income, but 78% favor a guaranteed work plan.

[3]Plans For Progress Newsletter, number 51 (September, 1968, U.S. Government Printing Office)

[4]National Association of Manufacturers, The Answer is Jobs (New York: National Association of Manufacturers, 1968) p.1.

It would appear that industry is succeeding where the public schools have failed. This is a serious indictment on our current American school system. Our schools in the most part, train all students, as if they are going to enter college or some other institution for vocational training. This approach represents our old, traditional, unrealistic way of educating for today's needs. More technical and vocational high schools must be established if the educational system is to be revelent to the disadvantaged person.

As a clue to why the education system responds the way it does, might be the image created by the mass medias. Seemingly the press and especially television depicts the successful man as white collar worker. Where has the pride in being a craftsman gone? We must stress to our youth that there is respect and dignity in being able to work with one's hands in blue collar skilled positions.

The pay scale of the building trades, IN DALLAS for example, averages about $4.80 per hour for electricians, plumbers, pipefitters, carpenters, sheetmetal workers, bricklayers, structural ironworkers, painters, roofers, cement masons, plasters and glaziers.

The school system should establish a comprehensive evening school program to train and upgrade all adults.

Short courses (8, 10, 12 or 20 weeks) in factories, at night if necessary are also needed to retrain and upgrade employees.

In general business must adopt a greater social responsibility role. The remedy to the disadvantaged persons might be a chance to develop some type of skill, as well as the ability to read and write; plus effective counseling and housing assistance.

Finally, we businessmen must change our attitudes, job requirements and where possible job descriptions.

From top management down to the foreman and individual worker continual efforts should remove discrimination against minority groups. Evaluate each police record on its own merit distinguishing between arrests and convictions. Old or youth

police records should be disregarded.

A. R. Miller, President of Ford, states "Before we were testing cultural backgrounds and some tests screened out individuals who could have done a good job." What is so magical about a college degree or high school diploma? Recently, I heard of a city that required trash collectors to be a high school graduate - obviously this job requirement is too high.

We need to break the poverty cycle of many of our citizens by extending an opportunity to perform, not be tested. Where possible job descriptions should be broken into more easier elements, thus creating more jobs at lower skill levels. With major revisions in our traditional practices and attitudes, business can hire, train, motivate and upgrade the disadvantaged persons with special needs.

"In the end it must be clear to all of us that no group of citizens can be expected to support, nurture, and espouse with pride a society which denies them human dignity and the right and opportunity to advance.[5]

[5]Burkeley G. Burrell, A Stake For The Excluded, Outlook, (October, 1968), p.8

28

ADDRESS BY H. RHETT JAMES

DELIVERED TO THE AMERICAN VOCATION ASSOCIATION

DECEMBER 8, 1968 - Dallas, Texas

A TIME FOR ACTION

Americans are acutely aware that there are millions of people among us who do not share in the mounting benefits of our economy. As a consequence our communities are visited with discord, and violence threthens the fabric of our society.

Poverty occurs in many places and isen dured by people in many situations; but its occurrence is nonetheless highly concentrated among those with certain characteristics. The scars of discrimination, lack of education, and bro ken families show up clearly from almost any viewpoint. Here are some landmarks:

--One-fifth of our families and nearly one-fith of our total population are poor.
--Of the poor, 22 percent are nonwhite; and nearly one=half of all non-whites live in poverty.
--The heads of over 60 percent of all poor families have only grade school education.
--Even for those denied opportunity by discrimination, education significantly raises the chance to escape from poverty. Of all non-white families headed by a person with 8 years or less of schooling, 57 percent are poor. This percentage falls to 30 for high school graduates and to 18 percent for those with some college education.
--But education does not remove the effects of discrimination: when n on-whites are compared with whites at the same level of education, the non-whites are poor about twice as often.
--One-third of all poor families are headed by aperso n over 65, and almost one-half of families headed by such a person are poor.
--Of the poor, 54 percentl ive in cities, 16 percent on far ns, 30 percent as rural nonfarm residents.
--Over 40 percent of all farm families are poor. More than 80 percent of nonwhite farmers live in poverty.
--Less than half of the poor are in the South; yet a southerner's chance of being poor is roughly twice that of a person living in the rest of the country.
--One quarter of poor families are headed by a woman; but nearly one-half of all family and its headed by a woman are poor.
--When a family and its head have several characteristics frequently associated with poverty, the chances of being poor are particularly high: a family headed by a young woman who is non-white and has less than an eighth grade education is poor in 94 out of 100 cases. Even if she is white, the chances are 85 out of 100 that she and her children will be poor.

The Changing Extent Of Poverty

There were 47 million families in the United States in 1962. Fully 9.3 million,

or one-fifth of these families--comprising more than 30 million persons--had total money incomes below $3,000. Over 11 million of these family members were childre, one-sixth of our youth. More than 1.1 million families are now raising 4 or more children on such an income. Moreover, 5.4 million families, containing more than 17 million persons, had total incomes below $2,000. More than a million children were being raised in very large families (6 or more children) with incomes of less than $2,000.

Serious poverty also exists among persons living alone are living in non-family units such as boarding houses. In 1962, 45 percent of such "unrelated individuals" 5 million persons--had incomes below $1,500, and 29 percent--or more than 3 million persons--had income below $1,000. Thus, by the measures used here, 33 to 35 million Americans were living at or below the boundaries of poverty in 1962--nearly one-fifth of our Nation.

In the decade 1947-56, when incomes were growing relatively rapidly, and unemployment was generally low, the number of poor families (with incomes below $3,000 in terms of 1962 prices) declined from 11.9 million to 9.9 million, or from 32 percent to 23 percent of all families. But in the period from 1957 through 1962, when total growth was slower and unemployment substantially higher, the number of families living in poverty fell less rapidly, to 9.3 million, or 20 percent of all families.

The progress made since World War II has not involved any major change in the distribution of incomes. The one-fifth of families with the highest income received an estimated 43 percent of total income in 1947 and 42 percent in 1962. The one-fifth of families with the lowest incomes received 5 percent of the total in 1947 and 5 percent in 1963.

Even if poverty should hereafter decline at the relatively more rapid rate of the 1947-56 period, there would still be 10 percent of the Nation's families in poverty in 1980. And, if the decline in poverty proceeded at the slower rate achieved from 1957 on, 13 percent of our families would still have income under $3,000 in 1980. We cannot leave the further wearing away of poverty solely to the general progress of the economy. A faster reduction of poverty will require that the lowest fifth of our families be able to earn a larger share of national output.

Private social endeavors appear woefully inadequate and government programs are still envolved in scratching the surface in getting to the core of the problem.

Now is the time, not for bewailing our difficulties, but for thinking them through and now is the time, not for despair, but for action.

What american needs is more committed leadership, dedicated to solving these mounting problems. America is a land of good intentions and most Americans, I feel, want desperately to help. But in the absence of sensible leadership, many will consider themselves powerless in the face of the masive problems that confront us and some, out of sheer frustration, will give way to oversilplified solutions that can only intensify rather than alleviate the tensions that reside in our communities.

The unrealistic structures of public education, that of preparing students to be drop-outs in society, rather than to become productive contributors, because of the over emphasis on academic education, only adds more oil on the fire.

The sterotype placed on vocational education in most American communities, has robbed thousands of American students of a good life and has placed them in a position of non-employables in todays industry because their education does not meet industrial needs. The absence of skills, the American Negro in particular, has suffered tremendous handicapps in this area. Yet this is not a problem facing the Negro alone. It is an all inclusive problem which the Negro, as in most instances, being on the bottom of the todem poll, is stripped of the requirements for becoming a productive citizen in this industrial age.

The Negro for example has been told so long that white is right, brown sticks around and black gets back, that often when the opportunities are there, he is not convinced they are available.....He has to be unbrainwashed and re-brainwashed in believing that its not a balloon's color that determines how high it flies, its what's inside it.

A society which has created structures for dependence, cannot endure. Men must be provided opportunities to be self reliant. A man, white or black will never be free until he stops begging, and becomes a producer. This is the challenge before us, turning our liabilities into assets...

In order to accomplish this great challenge we will have to incorporate two main ingredients...goodwill and reason .....In the long run a way out of our dilemmas will be found, not by marhcing and shouting, but by a calm and rational deliberation of men and women of goodwill and reason, gathered to match needs with resources and to organize for purposeful action.

What is required is concereted action by all sectors of society, government, business, education, voluntary agencies, professional people..... The emphasis is on the word concerted.....

Business and industry, the most realistic elements of our society, are our last hope.

Neither history nor modern experience, however, indicates that the sterotype or the present lack of qualifications of millions of Negroes, reflects the ability to perform on productive jobs. At the end of the War between the states, for example 100,00 of the 120,000 skilled workers in the South were Negroes. During world war II, employers who ere facing desperate manpower shortages found that minority group members who ere unaccustomed to eigher urban living or industrial environment could be placed quickly on production lines. In the 1960's a number of companies, working through programs such as Plans for Progress, again discovered that Negroes, when given the opportunity, can produce as well as any other group.

Our Nation can no longer afford quite expermentation and token hiring of the hard core. Unemployment in the ghetto, which for Negro youth alone equals the National employment rate, during the depression, is costly to the United States, to business, and to the cities which nurture business and give it its vitality.

The cost of employment discrimination, and the hard-core poverty it has produced, is a demonstrably heavy burden. The toll in the waste of human talent along, bleak, unporductive lives, broken homes, fatherless children, is exhorbitant.

Added to this is the cost of billions lost in income, and spent on welfare, and unharvested in taxes. President Johnson said in 1967 "If the Negroes today had the same skills as other Americans, and if they were free from discrimination in employment, our gross national product could become 30 billion dollars higher!"

Programs such as the National Alliance of Businessmen, the Opportunities Industrialization Centers, Southwest Industrial Training Corporation and other groups recognize the special needs for motivating the unemployed, are reaching down to relieve the situation.

Let us turn a moment to another great challenge facing us today... Why shouldn't black firms generate capital, provide jobs and help develop their communities? True, there are many in the ghettos who will need job training and many who in fact need jobs. Property denotes owership, and control, and its axiomatic that ownership confers dignity, parcitipation and freedom. Property and freedom are inserpable.....The people who yell--"Burn Baby Burn" have not investments nothing to loose. Business and property ownership is one of the major challenges facing the Negro in America today. In order to achieve this, there must be three areas of assistance,.....1. Management development; technical and administrative assistance and economic aid.....The loan of white corporate executive personnel to black business, or a community pool of corporate specialist can provide these areas of need. There must also be the development of risk-capital to help create, new business which black can participate in the ownerwhip....Sub-contracting or spinning off functions of the present corporation may be a Way to initiate these new businesses.

Most minority people understand fully that dignity, indentity, hope, human growth and personal achievement are qualities that cannot be achieved through welfare.... They can be achieved through full participation in the enterprise of American,.... Industry.....with its teeming abilities, can create wealth, promote a climate condusive to producers of wealth, build new markets, and in so doing provide opportunities for unlimited human developments for all people.....

Dallas with its teaming industrial complexes.....A city of emerging opportunities works for the furtherance of these goals, through consistent challenge and the presentation of need. It is our goal to make our community a pilot prototype of what can be done with the cooperative efforts of the Business, Civic and minority sectors. Dallas has demonstrated that it has the capacity for this growth and its leadership is commited to the continued development and furtherance of the aims of industrial, opportunities for the vocational trained and skilled citizens. Our goal is to make this opportunity manifest itself into all sectors of need. Yet the challenge lies within the providing of pre-vocational training. Those who have been locked out of opportunities for educational achievements, must have this phase of training to move into the industrial community as contributing employees. Such programs, again working with the DCCAC as O. I. C., a delegate agency commited to training the under-employed, the unemployed, the undermotivated.....O. I. C. has trained and placed over 400 on jobs in one (1) year---adding 1-1/2 million to our income with 1,000 people --- 4 million will be added.....Such programs as the National Alliance of Businessmen will enhance this opportunity to an inmeasurable degree.

Accoring to the latest Labor Department report of November 11, 1968, the unemployment rate of white workers in America remained unchanged in October, while the non-white jobless rate rose to 7.4 percent in September and 6.2 in August. Here lies our challenge. One to keep this percentage from rising, and to decrease it by excellerating the opportunities for persons in these catagories to receive pre-vocational training, skill training and job opportunities.

The American Vocational Association has, likewise, a great responsibility in this joint effort. Primarily, the furtherance of the importance of Public Schools providing educational opportunities to match the needs of industry; through realistic vocational counseling of students, making sure that their desires can match their abilities and realistic opportunities and the upgrading of the image of vocation al education in the minds of the American Citizen.

Too long, in many communities, Vocational educational suffered from the image of providing education for those who can't make it in the academic fields or those who cannot pursue a college education. This is not so. The requirements for Vocational Skills are just as severe as those in other areas of educational pursuits. Its a matter of vocational choice. Here the National Association of State Supervisors of Trade and Industrial Education Personnel can made an impressive contribution..... That of waging a major attack on systems who refuse to take a realistic position on the position of Vocational and Industrial Education must play in our industrial age..... Through constant prodding, inovations in Curriculum dewelopment and through public education, this media must tell its story of the necessity of Public Schools equipping its students for the needs of the Industrial society of which we are a part. The norman one-third of students who are either drop-outs, will finish High School but will not go on to college must have the skills for making a contribution to a productive society....if we do not meet this challenge, we shall continue to produce from one third to a half of our students who become thoroughly incapable of entering the industrial work world.

Violence is not the answer to this problem....We must rebuild, not destroy. We must give our support to groups and indiviauals who are dedicated to the restoring of sanity to our society.....We must redouble our efforts to assure that all our people and not some of them not only feel that they have a stake in order and stability and that our democracy does in fact afford the equality of opportunity we bost for it..... "This is our First Last Chance."

VT 008 167
Yarborough, Ralph
Tomorrow, Today.

MF AVAILABLE IN VT-ERIC SET.
Pub Date - Dec68 16p.; Speech Presented at the Annual Vocational Convention of the American Vocational Association (62nd, Dallas, December 9, 1968). Opening General Session.

*VOCATIONAL EDUCATION; *EDUCATIONAL LEGISLATION; *SPEECHES; *INSTRUCTIONAL TECHNOLOGY; *TECHNOLOGICAL ADVANCEMENT; PROGRAM IMPROVEMENT; PILOT PROJECTS
*AMERICAN VOCATIONAL ASSOCIATION CONVENTION, DALLAS, TEXAS, DECEMBER 9-13, 1968; VOCATIONAL EDUCATION ACT OF 1968

The Vocational Education Act of 1968, the most comprehensive and far reaching piece of vocational education legislation in the history of this nation, is a tribute to the years of work and the wisdom back of it. Another bill which is now pending, the Educational Technology Act, provides that the existing technology program be strengthened and expanded as rapidly as schools can assimilate materials and equipment and provide professional staff to administer and oversee these programs. It also calls for the planning for and funding of model school systems which utilize technological approaches and technology in their educational design. This latter approach requires the redesign of cooperating model school districts and the provision of operational funds which are in excess of those normally provided. Educational technology offers the "key" for major breakthroughs in achieving instructional excellence. (CH)

VT008 167

ED0 31587

Speech Presented At The

62nd Annual Vocational Convention

Of The

American Vocational Association

Dallas, Texas

December 9, 1968

Opening General Session

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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TOMORROW, TODAY.

Excerpts from remarks by U.S. Senator Ralph Yarborough at 62nd Annual National Convention of ~~the~~ American Vocational Association, Hotel Adolphus, Dallas, Tex~~as~~, ~~Monday~~ December 9, 1968; 8:00 P.M.

President Shilt, distinguished officers, Fellow Workers for Educational Progress, Fellow Americans:

Welcome to Texas! As this 62nd Annual National Vocational Convention convenes, we in Texas are proud to be your hosts, and I am grateful for the privilege of representing my home State in this welcome to one of the most important educational organizations in the whold world. You do more than build America, your educational leadership in vocational fields is sought for in the undeveloped countries, and is needed to the uttermost ends of the earth.

This is a large and an important convention. We welcome you to one of the ten largest cities in America, to a state of considerable size. Recently at another convention, a speaker from another state turned to me and said, "Well, Texas is no longer the largest state in the Union, what are you going to brag about now?" I said: "We have substituted excellence for size."

During the next few days, I am going to meet and talk with many of you personally. I look forward to that, and to participating on two

of your panel discussions. But what I look forward to more than anything during this exciting week is the opportunity to introduce Senator Wayne Morse - the man who guided the new Vocational Education Act through Congress this year. And I pay tribute also to the great work of the Advisory Council on Vocational Education of 1968: and its report under the title:/"The Bridge Between Man and His Work". But most of all, I pay tribute to this organization.

The Vocational Education Act of 1968, the most comprehensive and far-reaching piece of vocational education legislation in the history of this nation, is a tribute to the years of work and the wisdom back of it, with which you urged this legislation. You did it, so that all persons of all ages in all communities of the nation could have an opportunity to build a better life for themselves, regardless of the age of their commencement.

This bill authorizes the Congress to appropriate($ 3 billion) three billion dollars, spread over the next four years.

Under the leadership of both John F. Kennedy and Lyndon Johnson, America has developed a committment to come to the aid of those citizens who lack the skills to compete for jobs in our increasingly complex Society.

A primary Must of this committment was written into the Vocational Education Act of 1963. Through this important legislation both young people and adults have gained the ability to become fully productive citizens.

In 1964, the year the Vocational Education Act of 1963 took effect, only some 4½ million Americans were enrolled in Vocational Education Classes. Because of the national government's concern, we have almost doubled the number of students enrolled in programs of vocational education. In 1968, there were over 8,000,000 enrolled in such programs, and the number is increasing rapidly.

This National committment has been espeically meaningful to Texans. In 1967 more than 563,000 Texans, over half a million, were enrolled in Vocational Education programs.

With all that involvement in vocational education in Texas, Vocational Education has found a home here.

I will not discuss the various titles of the Vocational Education Act of 1968; you have Senator Morse and other speakers to do that, and I will discuss my $110,000,000.00 Homemakers Amendment and my New Careers provisions in other sessions with you.

Instead I will turn to another bill, now pending, which I will re-introduce in January.

During the closing days of the 90th Congress, I introduced a bill -- S. 4184, The Educational Technology Act. I would like to tell you a little about it, and about the promise I think it holds for vocational education in America.

By almost any measure, the 20th Century has been a time of dynamic technological change.

For example, during the past two-thirds of a century, we have witnessed a 200-fold increase in the speed at which man can travel. It was a long leap from the model A to the more than 17,500 miles per hour that man can now travel. Those of us whose intellectual nourishment included a diet of Sunday comics "knew" that only Buck Rogers and Flash Gordon took seriously the possibility of interplanetary space travel. What we may not recall today, however, is that Buck Rogers was supposed to be operating in the 25th Century.

Technological change has intimately and oftentimes imperceptibly affected each of our

lives. Advances in such fields as medicine, psychology, and chemistry, to name a few, have been so striking as to defy the comprehension of the average layman. Even a year ago, few would have believed it possible that a person's heart could actually be successfully transplanted.

Breakthrough since 1900 such as radio, television, and the Telstar staellite have revolutionized man's ability to communicate. Many persons in this room today have been participating architects in the communications revolution.

Because of these changes, this is the most exciting age the world has ever known. It is also the most challenging.

And the velocity of change will increase.

For acceleration begets acceleration.

It is now anticipated that within 9 years, three-fourths of all persons working in industry will be directly or indirectly producing products that have not yet been invented.

At the vortex of change is the individual. For this new kind of world demands a new kind of a person.

It will require of all persons not only more knowledge, but a flexibility of viewpoints, since it is increasingly apparent that rigidity may be a greater barrier to progress than ignorance.

Stated in its most simple terms, the task of education has become that of providing more knowledge in less time to more people.

In the hands of imaginative teachers and

administrators, educational technology can inculcate in every student the sense of excitement, not the fear of change. It can help each child sniff the exhilaration of personal achievement, not snuff it out. It can help them embrace the world as it is, not reject it.

The object of the bill is to provide for the progressive improvement of the education process through the most effective utilization of educational technology.

The Educational Technology Act of 1968 is designed to meet all of the requirements for the successful introduction of technology into education. Most important, it is geared toward the bringing about of significant improvements in the educational process.

The intent of the bill is to provide a comprehensive program of funds for the improvement of education through the expanded use of educational technology in the schools and colleges of America.

The bill represents a comprehensive approach since, while it is readily apparent that educational materials, such as instructional films, would be useless without accompanying equipment, it is not so readily apparent that professional media personnel, area centers, and operational funds are required to realize the potential of communications media.

Essentially, the bill follows a dual approach. First, it provides that the existing technology program be strengthened and expanded as rapidly as

schools can assimilate materials and equipment and provide professional staff to administer and oversee these programs.

Secondly, it calls for the planning for and funding of model school systems which utilize technological approaches and technology in their educational design. This latter approach requires the redesign of cooperating model school districts and the provision of operational funds which are in excess of those normally provided.

The time for extensive use of all forms of educational technology within every single classroom of this Nation has already come. We now owe it to the children of America to prepare for it and to wisely use these newly developing educational

"tools" for the greatest number of young persons.

We all know that instructional technology is not a simple concept. We know that it is not simply more movies for more kids in their self-contained, 19th century classrooms. Educational technology offers the "keys" for major breakthroughs in achieving instructional excellence. It may even bring about basic changes in our traditional concepts of a school, since increasingly we are being made aware of the fact that students learn outside of school as well as--and perhaps as much as--in school.

It strikes me that if there is any one field in American education today which could

successfully take hold of something like the Educational Technology Act and run with it, it is you men and women here tonight.

If the war in Viet Nam were to end tonight and at the same time the Gods were to smile on all of us assembled here so that tomorrow morning we had unlimited funds to be spent for educational technology, I suggest we would not be much better off than we are right now. The reason, of course, is manpower: There are not enough men and women today who trained as educational technology specialists, who are trained in the art of producing films and film strips in concert with a teacher and a curriculum specialist; there are not enough

people trained to design and set-up educational technology systems.

Well, vocational education can train that manpower. And when it does, it should be done with educational technology; there is nothing more useless than teaching a teacher or a specialist about something they are to specialize in, rather than with the thing they are going to specialize in.

The promise of educational technology is almost overwhelming in the field of vocational education. Behond the obvious advantages of assisting in individualizing instruction and creating an atmosphere in which a child seeks to learn, educational technology in vocational education could be used for providing adequate drill

and practice in fundamental skill areas such as machine set-up procedures and operation, adjustment and maintenance of tools and equipment.

*Programmed learning materials could be used to assist students in proceeding at their own pace in learning the names of tools or of symbols used in drawings and blueprints.

*Through educational technology simulation of experiences with highly expensive machines could be provided.

*Through the use of computer games, instruction in management of farms, homes and businesses could take place, not to mention the use of computers in vocational guidance and career selection.

*Perhaps the most dramatic use of educational technology in vocational education to date has been

the experience of the Armed Forces. The application was wide-spread, and although dated by the sophistication of today's equipment and today's knowledge about how youngsters learn--the results were dramatic.

The list could go on and on. But I look to your imagination and expertise for such a list and for other suggestions. I plan to send a copy of the Educational Technology Act to each of your for your comments. And I look forward to your responses.

Educational technology is the education of tomorrow--the world of Buck Rogers and Captain Video. But Vocational education has the promise, the drive, and the imagination to make that tomorrow happen today. Thank you and God Bless You.

VT 008 168
Letson, John W., And Others
Speeches Presented at the National Conference on Exemplary Programs and Projects (1968 Amendments to the Vocational Education Act) (Atlanta, March 12-14, 1969).

MF AVAILABLE IN VT-ERIC SET.
Pub Date - Mar69 258p.

EDUCATIONAL ADMINISTRATION; *MODELS; PROGRAM DEVELOPMENT; *VOCATIONAL DEVELOPMENT; *SPEECHES; OCCUPATIONAL GUIDANCE; JOB PLACEMENT; WORK EXPERIENCE PROGRAMS; CURRICULUM; ELEMENTARY SCHOOLS; JUNIOR HIGH SCHOOLS; SECONDARY SCHOOLS; ADULT EDUCATION; NONCOLLEGE PREPARATORY STUDENTS; EDUCATIONAL PROGRAMS; *PROGRAM DESCRIPTIONS; *EDUCATIONAL INNOVATION
*NATIONAL CONFERENCE ON EXEMPLARY PROGRAMS AND PROJECTS (1968 AMENDMENTS TO THE VOCATIONAL EDUCATION ACT), ATLANTA, MARCH 12-14, 1969

Among the 10 papers presented at this conference were: (1) "Implications, Priorities and Program Potential of the Exemplary Program Section of the Amendments" by Dr. John Letson, (2) "Unifying an Entire System of Education Around a Career Development Theme" by Dr. Edward Herr, (3) "School Based Models for Promoting Occupational Exploration and Guidance at the Elementary, Junior High, Secondary, and Adult Levels" by Dr. Normal Gysbers, (4) "Occupational Guidance, Counseling and Initial Job Placement Systems for Junior High and Secondary School Youth" by Dr. Gene Bottoms and Dr. Kenneth Matheny, and (5) "Patterns and Guidelines for Administering Exemplary Programs and Projects at Both State and Federal Levels" by Dr. John Coster. (CH)

VT008168

ED0 31587

Speeches Presented At The

National Conference on Exemplary Programs and Projects

(1968 Amendments To The Vocational Education Act)

Atlanta, Georgia

March 12-13-14, 1969

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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National Conference on Exemplary Programs
And Projects

(1968 Amendments to Vocational Education Act)

Date to be presented		
March 12	9:00 - 10:00	Registration
Morning Session	10:00 - 10:30	Program Overview and Welcome
	10:30 - 11:00	Presentation and Discussion Working Paper I: "Implications, Priorities and Program Potential of the Exemplary Program Section of the Amendments" Dr. John Letson
	11:00 - 12:00	Presentation and Discussion Working Paper II: "Unifying an Entire System of Education Around a Career Development Theme" Dr. Edward Herr
	12:00 - 1:15	Lunch
Afternoon Session	1:15 - 2:15	Presentation and Discussion Working Paper III: "School Based Models for Promoting Occupational Exploration and Guidance at the Elementary, Junior High, Secondary, and Adult Levels Dr. Norman Gysbers
	2:15 - 3:15	Presentation and Discussion Working Paper IV: "Occupational Guidance, Counseling and Initial Job Placement Systems for Junior High and Secondary School Youth" Dr. Gene Bottoms Dr. Kenneth Matheny
	3:15 - 5:00	Work Groups
Evening	7:30 - 9:00	Work Groups

March 13 Morning Session	9:00 - 10:00	Presentation and Discussion Working Paper V: "Work-Experience Educational Program for All Secondary Youth" Proposed Presenter: To be named
	10:00- 11:00	Presentation and Discussion Working Paper VI: "New and Improved Improved Career-Centered Curriculum To Serve Both the Non-College, College-Bound Youth, and Young Workers" Dr. George Champion
	11:00 - 12:00	Work Groups
	12:00 - 2:45	Lunch
Afternoon Session	1:15 - 2:45	Presentation and Discussion Working Paper VII: "Personnel, Resource Materials, and Occupational Information Exchange Programs, Including Schools, Manpower Agencies, Industry, and Other Public and Private Agencies and Organizations" Proposed Presenter: To be named
	2:45 - 5:00	Work Groups
Evening		Free
March 14 Morning Session	8:30 - 9:30	Presentation and Discussion Working Paper VIII: "Patterns and Guidelines for Administering Exemplary Programs and Projects at Both State and Federal Levels" Dr. John Coster
	9:30 - 10:30	Presentation and Discussion Working Paper IX: "Strategies for Implementing Exemplary Programs and Projects in Order to Make Maximum Change in the Educational Process" Proposed Presenter: To be named

	10:30 - 12:00	Work Groups
	12:00 - 1:15	Lunch
Afternoon Session	1:15 - 2:00	Presentation and Discussion Working Paper X: "Basic Elements and Consideration In Planning and Developing Exemplary Programs" Dr. Vern Burgener
	2:00 - 3:30	Work Group Reports - Discussion
	3:30 - 3:45	Conference Adjourns

Implications, Priorities and Program Potential of
the Exemplary Program Section of the Amendments

By John W. Letson

Prepared for
National Conference on Exemplary Programs and Projects

The contribution that vocational education has made to the growth, expansion and development of the nation is a thrilling story. It is a story worthy of telling and retelling and in general includes the listing of successful accomplishments that are the envy of the whole world. How it is now possible for a relatively small part of the work force to feed and clothe the nation, with surpluses to spare, is a part of our economic history that other nations would like to emulate. A large part of the credit for this accomplishment is due vocational education and the thousands of dedicated teachers and others who have made it the dynamic force that it has been and is.

It is this success story, however, which at least in part confronts us with the dilemmas we face today. The world of work is changing. Old jobs have disappeared and new ones are emerging. Work opportunities for the unskilled and untrained are disappearing while jobs calling for more education and higher skills are increasing at a rapid rate. A vocational education program designed to meet the needs of a past era is inadequate for the demanding present. Changes must be made to adapt the program to the changing world in which we live, and it is the implications, priorities and potential of this process to which this paper is addressed.

By including a section on Exemplary Programs and Projects in the 1968 amendments to the Vocational Act of 1963 the Congress recognized the need for increased effort to develop new approaches to the solution of educational problems. The Exemplary Programs section also gives evidence that the development and implementation of creative ideas can best be carried out by those who are actively engaged in the educational process. At least the Exemplary Projects section provides an opportunity to demonstrate that this is true. The funds authorized have not yet been appropriated, but it should be assumed that they will be, and no time should be lost in beginning the creative planning the Exemplary Projects section authorizes and will require.

The purposes of the section are well stated in the Act:

Findings and Purpose

Section 141 "The Congress finds that it is necessary to reduce the continuing high level of youth unemployment by

developing means for giving the same kind of attention as is now given to the college preparation needs of those young persons who go on to college to the job preparation needs of the two out of three young persons who end their education at or before completion of the secondary level, too many of whom face long and bitter months of job hunting or marginal work after leaving school. The purposes of this part, therefore, are to stimulate, through Federal financial support, new ways to create a bridge between school and earning a living for young people who are still in school, who have left school either by graduation or by dropping out, or who are in post-secondary programs of vocational preparation, and to promote cooperation between public education and manpower agencies."

Funding authorizations for the "Exemplary Programs and Projects" section may or may not bear a relationship to actual appropriations when made, but are an indication of the importance Congress has placed on this section:

$15 Million	June 30, 1969
$57.5 Million	June 30, 1970
$75 Million	June 30, 1971
$75 Million	June 30, 1972

Fifty percent of the funds appropriated under this section may be used by the U. S. Commissioner for grants or contracts with state boards or local educational agencies and other organizations, and fifty percent may be used by state boards for model vocational education programs under the state plan. Each state will receive a basic state allotment of $200,000 with the remainder allotted on the basis of population aged 15 through 19.

An important provision of the Exemplary Programs and Projects section is that financial assistance for a project may not continue for more than three years. At the expiration of three years the cost of successful projects could, of course, move to the regular and/or vocational budget, but careful planning is required if this is to be accomplished. Title III of the Elementary-Secondary Education Act contains a similar provision. Experience has shown that many school systems have found it difficult to continue innovative programs, regardless of how successful, after the expiration of the three year funding period. This is likely to be the case with the exemplary projects section of the Vocational Education Act unless projects which are approved provide for an orderly transition, at the expiration of three years, to other financing.

Innovation in education generally and vocational education in particular has been limited because of the absence of risk capital. The demand for dollars to support the on-going program has left little leeway for experimentation and innovation even though the experimentation may have ultimately paid dollar dividends. The exemplary programs and projects section of the new act provides a source of risk capital. Resources provided under this section should be considered as exactly that -- risk capital, and not confused with funds required to develop and operate programs on a long range basis. This suggests that cost-effectiveness must be a primary concern from the beginning. Both the design and approval of innovative projects should reflect a consideration of the unit cost of anticipated results. Even if an innovative program achieves its purpose, if the unit cost is too high, the project will ultimately be abandoned because of the competition for dollars which could buy a larger return if spent in a more efficient manner. This is merely another way of saying that innovation in education must be as concerned about the reduction of costs as is a private business firm in search of dollar profits. A private business offsets the cost of experimentation through the expectation of future profits. The same is true in education except that profits are realized through the improved performance of those who are a part of the educational effort. In both instances it is disastrous if "we pay too much for a whistle."

Section 143 of the new act outlines in rather specific detail the uses which may be made of funds appropriated under Part D -- Exemplary Programs and Projects.

Section 143. Grants or contracts pursuant to this part may be made, upon terms and conditions consistent with the provisions of this part, to pay all or part of the cost of --

(1) planning and developing exemplary programs or projects such as those described in paragraph (2), or

(2) establishing, operating or evaluating exemplary programs or projects designed to carry out the purposes set forth in Section 141 and to broaden occupational aspirations and opportunities for youths with special emphasis given to youths who have academic, socioeconomic, or other handicaps, which programs or projects may, among others, include--

(A) those designed to familiarize elementary and secondary school students with the

broad range of occupations for which special skills are required and the requisites for careers in such occupations;

(B) programs or projects for students providing educational experiences through work during the school year or during the summer;

(C) programs or projects for intensive occupational guidance or counseling during the last years of school and for initial job placement;

(D) programs or projects designed to broaden or improve vocational education curriculums;

(E) exchanges of personnel between schools and other agencies, institutions, or organizations participating in activities to achieve the purposes of this part, including manpower agencies and industry;

(F) programs or projects for young workers released from their jobs on a part-time basis for the purpose of increasing their educational attainment; and

(G) programs or projects at the secondary level to motivate and provide pre-professional preparation for potential teachers for vocational education.

For the first time since vocational education was initiated following the passage of the Smith-Hughes Act in 1917, there is a free and unincumbered opportunity to design and implement innovative and creative programs which give promise of moving vocational education forward toward a higher and more effective level of accomplishment. There is now a chance for vocational education to demonstrate that it can do for the urban poor what it did for many of the rural poor in years past. Also, there is now an opportunity to move vocational education into the mainstream of educational effort and eliminate the artificial separation that has characterized general and vocational programs in the past. Whether education, vocational and general, is equipped and ready to meet these challenges only time will tell. The urgency of doing so, however, cannot be overstated, and on the outcome will depend the future of thousands of potentially able workers and in the final analysis the future of Georgia and the nation. It is time to be up and about the task at hand.

It is recognized that the following comments reflect a personal bias, and for some school systems the suggestions may be far from innovative. Innovations, like other developments, are related to time and place and what is innovative for one school or one community may be past history for another. At the very least, vocational education now has an opportunity and a charge initiated by Congress to find the new and innovative programs which will more adequately prepare young people for the changing world of work.

Work Experience

Many of the things learned by an older generation in the process of growing to maturity are no longer a part of the experience of young people growing up today. The difficulties many youths encounter in meeting today's job requirements are related to the absence of work experience that was routine for past generations. Dr. George Counts commented recently that some of our problems today are related to the fact that young people no longer experience the discipline of the milk cow. It was not possible to put off the milking of a cow until next week because of bad weather, nor was it possible to skip a milking session because of other attractive possibilities for utilizing the same amount of time. The milk cow was a demanding task master and for many young people contributed to and helped develop a sense of responsibility which carried over into job performance in later years. Dr. Counts was not suggesting that we try to provide each family with a milk cow. The growing use of reconstituted milk may result in the remaining cows becoming obsolete anyway. Dr. Counts was suggesting that we need to find some modern substitute for the discipline the milk cow provided. Meaningful work experience for high school pupils is a hopeful answer.

Vocational education pioneered the work-study idea and is now providing excellent work opportunities for a limited number of young people. The challenge before us is to expand existing cooperative programs to include most if not all young people as they move through the secondary schools. In an Atlanta school that offers three cooperative work-study programs it was found that more than three times as many additional pupils were working part time without benefit of the guidance and assistance vocational education could provide. The time has come to think in terms of the total challenge rather than the limited, institutionalized programs now operated as a part of vocational education. The work-study concept must be expanded to include more than training for a specific job. The value of work for its own sake, providing opportunities for real involvement and participation in worthwhile activities, could add meaning and validity to much that is now meaningless for some young people. Volunteer, contributed service in schools, hospitals and other health institutions, and community agencies of many kinds offer educational possibilities that are virtually untapped. All that is needed is a design and structure that can make the goal of work experience for all a

meaningful reality. The new Vocational Education Act may offer some possibilities in this direction.

Most vocational work-study programs follow a rather standard pattern -- morning classes at school followed by work in a business establishment in the afternoon. This type of schedule has worked well and is now working well for many pupils. This standard pattern, however, has not been fully successful for educationally disadvantaged, poorly motivated pupils. The following comments and questins may provide some leads as to how the work-study approach can be varied for increased effectiveness.

1. The trend toward institutionalizing cooperative work-study programs has been greatly influenced by inflexible high school scheduling. There is little justification today for the limitations imposed by the standard day of six periods. Further experimentation is needed to demonstrate that high schools, particularly in urban areas, can operate from early morning to late at night and better serve the needs of young people and adults. It should be possible for pupils to work in the morning and take academic classes in the afternoon or evening thus increasing tremendously the number of work opportunities available. It would then be possible for two students to fill one full time position which, in many instances, would prove advantageous for both pupils and cooperating business firms.

2. For some pupils work-study arrangements would be improved if it were possible for them to work full time for a period of weeks and alternate the work schedule with an equal number of weeks of full time school attendance. Such an arrangement would, of course, require some fundamental changes in the typical high school program. The increased flexibility achieved through such arrangements would pay dividends in ways other than improved work-study possibilities.

3. We have too often assumed that academic courses must be pursued within the four walls of a classroom and that pupils must be in physical attendance at a school in order to progress toward graduation. In some instances it might be better to send teachers to the business firms where pupils are employed rather than require the pupils to be present in school a part of each day. Such a plan suggests a number of innovative possibilities for developing programs which would best fit the needs of pupils -- especially those the schools are not reaching at present.

4. In spite of the changed world in which we live, public schools, for the most part, still adhere to a school calendar that was designed to fit an agricultural past. Each year we see thousands of young people apply for summer jobs and witness the frustration that results from the obvious fact that there are not enough summer work opportunities to go around. The time has come to organize our schools on a full year operating basis and take advantage of the increased flexibility to design programs that best fit the needs of all pupils enrolled.

5. The time has come for the schools to assume responsibility for all pupils until they successfully make the transition from school to work. For many, of course, the next step following high school will be further training -- college, technical school or participation in other kinds of advanced preparation programs. For a majority, however, the next step is a job. This will not be too difficult an assignment for able, well adjusted, properly motivated pupils. Unfortunately, all do not fall in these categories. There is an urgent need for innovative demonstrations designed to better prepare disadvantaged young people for that important next step -- a job. Many of these pupils become disenchanted with school long before they are eligible for most existing vocational programs. An earlier beginning with programs designed to utilize the techniques vocational education has pioneered, offers promise that many of these pupils can be salvaged. Vocational education can often provide the motivation that academic instruction alone has not provided.

Guidance and Counseling

The high school guidance and counseling program has been tremendously expanded in recent years but still reflects a pupil-counselor ratio that is too high. As related to vocational guidance, however, the major problem is not the high ratio. A part of the difficulty lies in the fact that vocational guidance has not been assumed as an essential part of the counselors' role. The exemplary projects section of the new Vocational Act recognizes the importance of improving vocational guidance programs. There is an obvious need and a broad opportunity provided through the act to devise innovative ways of achieving this goal. It would be a serious mistake to further separate general and vocational education by encouraging the development of vocational guidance as separate and

apart from the overall guidance function. The obvious need is for the counselors to become proficient in vocational guidance and to assign an equal priority to the needs of all pupils whether bound for college or an early job.

It also would be a mistake to assume that the improvement needed in the area of occupational understanding can be fully accomplished through improved counseling. The world of work is far removed from the experience of many young people today. Occupations that were usable and close at hand in years past are now remote and foreign to their experience. The average teenager today cannot describe with full understanding and accuracy the work that his father does. The remedy lies in a greater emphasis upon elementary and high school programs designed to achieve for all pupils a better understanding of the world of work. Occupational information is essential for wise occupational choices, but such understanding is not best achieved through the usual academic approach. Innovative programs and exemplary projects are needed to demonstrate how best to achieve the occupational understanding that is so essential if young people are to make wise choices.

Early Childhood Education

There is no question about the urgent necessity of discovering and implementing projects and programs which will be more effective in eliminating and preventing the disastrous effects of poverty and deprivation. In recent years there has been an intensive search for better answers to the educational problems so frequently related to the limited and impoverished pre-school experiences of many children. A growing body of evidence supports the position that the pre-school years provide the most hopeful point of attack. Many special programs are underway to demonstrate that properly designed pre-school activities and experiences can greatly improve a child's readiness for learning. Thus far these special pre-school efforts have been successful within limits, but in terms of the total need only a few children have benefited. For many reasons it is doubtful that an extension of the kindergarten-nursery school concept down to ever earlier years can provide the full answer.

In earlier years, vocational education (county agents, home demonstration agents, agriculture and home economics teachers) achieved dramatic results in reducing poverty and its disastrous effects throughout rural America. Although the need is as great or even greater than ever before in urban areas throughout the nation, vocational education has been slow to transfer resources and know-how to meeting the urban problem. At least a part of the answer to meeting the needs of pre-school children lies in improving home conditions and in involving the total family in the kinds of activities which vocational education has pioneered through the years. It is tragic for vocational education to have invented what has been referred to as a magic process and through default fail to adapt it to the special and somewhat different needs of the urban poor. Time is short, but it is not too late to undertake the home improvement efforts which will be most effective in solving many related urban problems.

Working Paper

Unifying an Entire System of Education Around a Career Development Theme

Edwin L. Herr
Professor of Education and Chairman,
Graduate Programs in Counselor Education

The Pennsylvania State University

Introduction

The premise upon which this paper is based, that an entire system of education can be unified around a career development theme, may seem pretentious, but it is neither premature nor is it an impossibility. Such an expectation is not premature because as the outcomes of education obtained by many young persons are appraised objectively the irrelevance and the lack of specific purpose which results can be readily documented. For example, one study published by the U. S. Office of Education (Grant, 1965) indicated that for every 10 pupils in the fifth grade in 1957-58, 9.4 entered the ninth grade in 1961-62; 8.1 entered the eleventh grade in 1963-64; 7.1 graduated from high school in 1965; 3.8 were expected to enter college in the fall of 1965; 1.9 would likely earn baccaleureate degrees in 1969. Thus, approximately 30 percent of American children leave education before high school graduation. These statistics include young persons with above average intelligence who have found no meaning in school; who recognize that it is not designed for them. But needs for career development are not restricted to those who drop out. There is reflected in these statistics another 50 percent of the student population who, at the conclusion of high school, enter the labor market directly and they, too, must come to terms with vocational choices and career considerations whether determined by purpose or by chance. Finally, if the college choice can be seen as something other than an end in itself, as an intermediate step in career development, then those who select this educational option also need help in facilitating their career development. Studies which examine whether career development and choice-making are really of concern to students in elementary and secondary school demonstrate repeatedly that students assert their interest in these areas but also that they are not getting from education assistance in planning the steps which will lead them to their goals, to personal clarification, or to a sense of the vocational and social contexts with which they must cope (Slocum and Bowles, 1967; Campbell, 1968).

It is not the purpose here to exhaust the documentation which supports the relevance of career development for pre-adolescents or adolescents. Rather, it is to acknowledge that the central purposes of education--to prepare the young to accept the reality of constructive pathways to adulthood, to help them engage these pathways successfully, and to assist them find personal relevance in the life options available to them--are not being effectively accomplished for a large number of persons. Because of the personal and societal deficiencies which obtain as a result of this reality, fundamental realignments must occur within the totality of the educational enterprise if the elements by which it discharges its responsibilities are to be made meaningful to all students, not just certain homogeneous strata.

One of the goals, then, toward which education must direct itself in a specific fashion is the provision for every student to acquire the skills which will

allow him to make a livelihood; to be responsible economically for himself and for his future family; to be employable. Such skills are not confined to the manipulative skills--the ability to use some set of tools or knowledge to accomplish a specific task or function. While the attainment of such narrowly defined skills have validity in some isolated situations, the present dynamics of the occupational structure lend little credence to the generalized importance to education of such goals in responding to the future.

Rather, the skills necessary are those by which one can use his capabilities, whether limited or great, freely and responsibly in ego-involved activities which contribute both to individual fulfillment and to society's maintenance and progress. These types of skills precede and transcent task skills. They involve the personal values and attitudes which motivate one to gain task skills, to want to contribute, to be constructive. They are the foundation for goal-directed behavior which is vocationally effective. They involve knowledge not only of specific tasks but of the ways such tasks are combined interdependently in the occupational structure and in varied contexts as well as of the opportunities available by which one can use himself in shaping personal and social fulfillment. Such skills do not arise spontaneously, they must be developed in systematic ways.

Is a wedding of self-knowledge, knowledge of environmental options, the acquisition of requisite skills by which effective strategies of planning for, coping with, and mastering the diversity of opportunities which this society affords possible within the context of educational experience? The answer is a qualified Yes: qualified by the purpose and system which is applied as well as by a broadening of the lines by which education and the larger society relate.

In the past the goals of education have reflected a consciousness of the concerns expressed here. However, it has been assumed that all of the goals identified will result as by-products from general education. Little systematic attention has been given to the need to create experiences designed to foster the individual attitudes and skills which comprise such goals. In some instances, education has tried to meet the needs of individual groups within the society with emergency programs conceived in gross terms without responding to the variance, the heterogeneity, which is found in any group whether it be labeled disadvantaged, rural, pre-dropout, mentally retarded, specialty-oriented, or college bound. Further, education has often responded to the "whole child" by allowing the objectives of particular disciplines to define the boundaries within which educational experiences would be conceived, thus negating for the individual the possibilities for interrelating, articulating, sequencing, individualizing, differentiating, and intergrating the deluge of experiences which constitute growth, learning, and the attainment of personal competence.

The purpose of this paper is to examine the efficacy of using career development as an organizing theme around which education can be unified and by which the relevance of education can be restored to larger number of persons. To do this, the following will be considered.

1. Implications of a systems approach to education.

2. Career Development.

3. Behavioral Goals.

4. Relationships between career development and general education.

5. Relationships between career development and vocational education.

6. Operational goals towards which exemplary programs and projects might be directed.

Implications of a systems approach to education

Before turning to some of the implications of career development per se, it is necessary to examine some implications inherent in a systems approach to education. A systems approach to the solution of educational problems requires a restatement of ends and means concerns of educational philosophy in terms of the application of resources (means) to the attainment of system objectives (ends) (Phillips, 1966). With regard to career development as a unifying theme, the questions become: Can it be accomplished within existing institutional forms? How? If not, why? What modifications to existing structures are necessary? What is required to arrange the educational environment of individual consumers so that particular types of behavioral change can take place? What are the management problems for which solutions must be found? Within the context of education, any system conceived must respond to the separate as well as the interdependent effects of at least the following:

1. Learner Characteristics
2. Resource Characteristics
3. Teacher Caharcteristics
4. Instructional Methodology
5. Administrative Dimensions

The basic question which must be addressed is: "which resources or combination of resources (people, places, media) are appropriate for teaching what type of subject matter to what type of learner under what conditions (time, place, size of group and so on) to achieve what purposes" (Phillips, 1966). Implicit in this question are such realities as the different tempos by which learners can proceed through the system, the required translations of subject matter which will facilitate their progress, as well as a step-wise series of purposes or competencies to be achieved at different developmental points. Portions of knowledge and increasingly complex skill acquisition should be built one upon another according to the characteristics by which learner readiness is defined. It is necessary to define specifically and measurable the terms of competence students must demonstrate upon completion of a set of educational experiences. Abstract or global concepts are not sufficient for these purposes. They must be broken into their components in ways which diminish semantic affects and incremental goals so general as to be not susceptible to programming or measurement.

One of the thorniest problems of evaluation is the statement of expectations for students (Hull, 1967). It necessitates the making of value judgments of what the pupil ought to be able to achieve and it requires description of these activities in behavioral terms. If career development is to be individualized, then each student must be able to work on information or be exposed to experiences different from other students at any given time. This requires both an emphasis on diagnoses and on the availability of diverse learning experiences from which can flow prescriptions for individual progress. Thus, the individuality of pupils demands a set of expectations for each person because career choice, occupational interests, and other relevant variables are determined by each student's concept of occupations, is related closely to his concept of self, and is based to a great extent on his environmental development.

Programmed efforts to facilitate career development must begin at the student's level of development and proceed on the basis of personal variables defined by experiences, aspirations, values, capacities, and a continuously spiraling series of success experiences within the career developmental objectives established.

Programmed instruction, as a technology, has made a valuable contribution to a systems process by defining at the outset the desired behavioral change in the student, then breaking down material to effect this change into a logical series of minute steps which the student can take. Through provision of continuous reinforcement and encouragement, immediate recognition of each increment of knowledge is provided and the learner is continuously tested to determine qualitatively whether or not the specific behavioral changes have occurred. If the intended changes have not occurred, one of the most important elements in programmed instruction is implemented--the system is redesigned until the desired results are obtained. There is no intent here to foster the use of teaching machines per se but rather to emphasize the importance of the philosophy of programmed learning to a systematic approach to the facilitation of career development. Indeed, in a systems approach to implementing career development, education cannot afford saturation with just one technique at a time, becoming hung-up on sub-systems, but rather available media must be orchestrated in ways which respond effectively to learner characteristics. The observations of Bruner (1964) about curriculum construction are of prime concern to a systems approach facilitating career development. He indicates that a curriculum reflects not only the nature of knowledge itself but also the nature of the knower and the process of acquiring knowledge. It is an enterprise within which the line between subject matter and method grows necessarily indistinct.

Goodlad (1964), Guba (1965) and Krathwohl (1965) have variously identified other factors which must be incorporated into curricular design and by analogy a systems approach to education. Among them are the needs for an explicit theoretical or logical framework; analysis of objectives at increasing levels of specificity, including broad and general statements necessary to program development, goals of sequences of lesson plans and of single lesson plans; curriculum sequences which move from the bottom up, the elementary school forward; the development and testing of materials with children and youth representing divergent cultural groups; the testing of advantages and disadvantages of various learning styles; and, the implications of each of these for new styles of preparing teachers and counselors to implement and facilitate such systematic efforts to individualize development.

Career development offers the content and the objectives within which such a system can be conceived. The following section will provide an overview of career development and, then, respectively a concept of behavioral goals which might be evolved from career development.

Career Development

Work has always had the potential of meeting more than the economic needs of man. It also provides a means of meeting far broader social and psychological needs among which are needs for social interaction, personal dignity, identification and human relationships. In view of the prevalence of alienation, characterized by difficulties in seeing oneself surely and constructively as a part of the adult society, it seems apparent that many individuals have not been assisted to view work as having personal relevence, as being critical to the way of life they will exhibit, or as being a consistent vehicle for finding self-fulfillment.

The recent surge of findings and theoretical speculation from occupational sociology, developmental psychology, vocational psychology, decision theory and information theory have cast into increasingly bold relief the factors which facilitate or impede individual aspirations and plans of action which lead to placement in the labor market and to development of vocational identity. While career development theory is not yet addressed as completely or precisely to women or to the disadvantaged segment of society as is necessary, that which is presently known provides a sufficient context for programmatic approaches designed to spur the development of effective vocational behavior. The present state of career development is largely descriptive of what happens if no purposeful intervention is convened in the school or in the community to facilitate the process. Thus a systematic approach to such intervention will not only profit the individuals so exposed but will broaden the empirical base from which increasingly meaningful theory can flow.

Brayfield (Brayfield and Crites, 1964) has pointed out that the term theory as applied to vocational development is somewhat pretentious if used in the strictest sense. But, if one views the dominant approaches to career development with some objectivity, it is clear that even though no current approach yields the comprehensiveness of explanation desired, in a collective sense there exists a conceptual frame of reference which provides a set of constructs and propositions which serve to explain differential vocational behavior and decision-making as well to facilitate such developmental processes.

The approaches which describe career development or some piece of it can be classified in several ways. They have been classified by Hilton (1962) into the Attribute Matching Model, the Need Reduction Model, the Economic Men Model, the Social Men Model and the Complex Information Processing Model. Osipow (1968) has placed career-development theory into four categories: Trait-factor approaches, sociology and career choice, self-concept theory, and vocational choice and personality theories. The following discussion of career development will present a blend of these two approaches as they relate to a taxonomic structure of career development.

The most consistent approach to career development, at least in a historical sense, is that labeled trait and factor. The trait and factor approach to career development, because of its consistent partnership with the findings of psychometrics, has identified the importance of certain specific factors to choice behavior, job satisfaction, and job success. It has examined and identified the interaction of variables such as occupational aspirations, occupational stereotype and occupational prestige as they influence personal value systems and by which is delimited the occupational fields in which exploration will be focused; the importance of social status, socio-economic background, parental influences and the existence or lack of existence of role models in creating the climate in which vocational development proceeds; the occupational limits prescribed by intelligence level and by the possession of specific aptitudes. It has demonstrated that most individuals have multipotentiality and, thus, the cliché that there is one right job for everyone has little foundation in reality. In addition, trait and factor approaches cast light on the range of ability and temperament found in and the latitude which is available to tolerate individual differences in most occupations.

Trait and factor theory has given impetus to an actuarial approach to vocational development in which are couched probability statements of success and failure in terms of specific tasks or jobs. The logic of trait and factor approaches is reflected in the assumptions that individual differences can be observed and classified in terms of certain variables; occupational requirements can be classified in analogous ways; and, thus the individual

can be "matched" to the right occupation. Such assumptions represent both the strengths and the weaknesses of trait and factor approaches to career development. Trait and factor approaches have been primarily oriented to specific occupations or to specific tasks but career development is not concerned solely with the choice of an occupation per se but rather with a process by which such choices can be purposefully integrated in a patterning of decisions through which an individual plans and implements his measurable traits as well as their personal meaning to him. Further, trait and factor approaches are static in nature. They do not provide for or consider systematically, the dynamics, the changing nature of the individual or the environmental characteristics to which he must relate himself.

An implicit derivation of trait and factor theory which pervades much of the thinking about career development is economic in origin. The assumption is made, based upon Keynesian economic theory, that one chooses a career or an occupational goal which will maximize his gain and minimize his loss. The gain or loss is, of course, not necessarily money but can be anything of value to a particular individual. Frequently, this approach assumes that all choice-making is positive. However, individuals frequently choose to escape from an undesirable situation by choosing a lesser evil rather than moving to a positive good. This approach does emphasize the importance of levels of investment--training, time, or energy--and of risk--the relative probability of outcomes--as these contribute to the ways by which different individuals approach choices.

A third approach to career development is sociologically based. It has become increasingly clear that the social structure of which one is a part has a great deal to do with the viability of the choices which are made. Thus, there are limitations placed upon career development by restricted social class horizons. Much floundering in decision-making is a result of limited avenues of career choice or limitations upon the knowledge of opportunities available to the individual so restricted. Indeed, such an approach also recognized by implication the dilemma of a favored and gifted youngster who has so many choices that are relevant that he finds tremendous conflict operating as he chooses. However, the individual of restricted social support blunders in or finds himself in jobs without any purposeful selection of his part, because the only guideline he has is immediate gratification. Thus, the narrowness or the breadth of the individual's cultural or social class horizons has much to do with the choices he can make, can consider, or can implement. For example, the conditions of poverty produces a distinctive milieu that conditions the social responses, the educational attainment, the vocational ambition, and the general level of intellectual competence of many of those raised within its stifling precincts. And, each of these elements has important correspondence with the level and the meaningfulness of career development which can be expected.

A fourth approach is one which can be described as a complex information processing model. It suggests that the magnitude of the information, of the factors which need to be considered, in career development is so overwhelming that the individual prematurely selects a career, and supports his selection by rationalization, or by a process which Festinger (1957) calls cognitive dissonance, without sufficient thought to the implications of the choice. Although the chooser knows there are other options which might be more compatible with his needs and personal characteristics it is comforting to make a selection and suppress the costs of its unrealism by a variety of self-deceptive devices.

A fifth approach is based in need or personality theory. The major assumption of this approach is that because of differences in personality structure individuals develop certain need predispositions, the satisfaction of which are sought in occupational choices and ultimately through career development. This hierarchy or pattern of personal orientations directs the individual toward an environment within which can be found satisfaction or a reduction of needs. Such an approach gives more emphasis than the others cited to genetics, child-rearing practices, and early childhood experiences as these relate to later vocational behavior.

The sixth and final approach to be considered here is that which gives major emphasis to the importance of the self-concept. Self-concept approaches to decision-making and career development can be separated from personality or need approaches not because they reject the latter but because their emphases are more developmentally focused and the importance of the self-concept, as the integrating construct, is accentuated. The assumption is made that individual behavior is shaped by one's self-concept system, the pictures which one has of himself in different roles, which he attempts to implement through career development and in specific choice behavior. One learns through experience and by socialization what kind of person he is, that of which he is capable, what he values, his strengths and weaknesses, and the kinds of outlets which will be compatible with the pictures he has of himself. This is a dynamic model which provides for change in individual behavior, change in environmental expectations, and change in the interaction between the individual and the environment. Rather than espousing only the concept of compromise among options, or the "chance" variables expressed by error and accident, it emphasizes the importance of progressive synthesis in role clarification and in choice options.

The collective finding of these several approaches to career development is that career development like all human behavior is complex. Like other developmental processes, individuals will differ in their readiness level and in the ways by which they develop. Thus, not everyone will reach the same point at the same time. Career development is integral to the total fabric of personality development broadly conceived. It is characterized by progressive development within a network of impinging forces intrinsic and extrinsic to the individual. Career development and choice behavior develop through processes of growth and learning which extend from infancy through at least young adulthood. Choice behavior involves a series of interdependent decisions which are to some extent irreversible. The factors which interact with choice-making and which need to be developed include personal capacities, interests and values; the availability and the requirements of training; opportunities available in the occupational structure; and, the self-concept as it is cast against such relationships as self in institution, self and environment, and self-in-process.

Vocational behavior and career selection develop from less effective behavior and unrealistic or fantasy choices to more complex behavior, more specifically in selection and more realistic choosing. The dimensions of such convergence effects are seen in the work of Tiedeman and O'Hara (1963) who describe choice anticipation as involving substages of exploration, crystallization, choice and clarification; Super (1963) who describes the exploratory stage as involving substages entitled tentative, transition, and trial (little commitment) and the earlier work of Ginzberg, Ginsburg, Axelrod, and Herma (1951) in their choice paradigm involving fantasy, tentative and realistic progression. Specific choices and decisions are seen as intimately tied to one's personal history and personal perceptions of the future, to both antecedent experiences and future alternatives.

Career development theory indicates that individuals progress through life stages which place upon them different expectations in terms of the specificity and the realism of career choice and these are mediated to a large degree by the cultural strata and the socio-economic class of which one is a part. Thus, what one becomes as a person as well as in the vocational sense depends upon his mastery of an array of developmental tasks, including specific learning tasks, which find their genesis in the early years of the family.

Because of the importance of early childhood experiences in the family, the school and the community, intervention in career development needs to begin during the first decade of life. This is the nursery of human nature and the time when the attitudes are formed which ultimately are manifested in vocational commitment or rejection. Youngsters in elementary schools must be exposed to experiences which are meaningful in terms of their individual characteristics and to information which is accurate if they are not to carry residuals of exaggeration and over-romanticized occupational stereotypes into later decision-processing. Further, it is relatively futile to expect one in early or mid-adolescence to commit oneself to a specific occupational choice, except as he rejects the normal cultural expectation to involve himself in education, but it is possible and central to this life stage to wed occupational and educational information to vocational exploration. If career information is to be meaningful to students it must be cast in terms of the questions students are asking themselves and in a format which responds to the language system, readiness level, and stage of development at which they are located. To be effective career information should include not only objective factors like earning possibility, training requirements, and numbers of positions available but also the social and psychological conditions in which the work activity is performed.

Career development theory also emphasizes the importance of providing youngsters experiences which enable them to identify and try-on suitable work roles. Probably the richest source of these opportunities for most young people is part-time work experience. But to receive maximum educational value, the stimuli which work provides must be analyzed in relation to the self. Work is not the only way to test reality. Curricular experiences and extra-curricular experiences if used with purpose, analyzed, and placed into a context meaningful to the individual can serve this purpose well.

Career development theory also points out that decision-making involves action. Thus ways must be found to help students take responsibility for their own learning and increasingly for their own direction. They need to be more involved in planning. To learn to be responsible and to be involved you have to be given responsibility and involvement.

In sum, as the findings of career development have unfolded, the emphases attendant to guidance and the aspects of education which have vocational implications have shifted from a Parsonian model of matching men and job to a model more committed to the clarification of those aspects of self--e.g. interests, capacities, values--which need development for a lifelong process of planning and decision-making. Within the individual must be fostered a conscious awareness that he <u>does</u> have choices, he must be assisted to verbalize and make explicit those choices with which he is presented, and to translate these into action. The base of alternatives from which individuals conceptualize choice must be made broader than the dichotomy between work and college. The alternative plans of action which ensue must be tested against a clarified value system within which are recognized and implemented concepts related to the risk function as a basic and essential reality. The individual must be encouraged

and assisted to determine at any given choice point what kind of decision is involved and the factors inherent in the decision that make a difference to him. Such expectations cannot be accomplished by any set of specialists alone but must pervade and be reinforced throughout the educational process.

Behavioral Goals

Vocational or career maturity is by definition the goal toward which career development is directed. Can such an abstraction be used to create unifying themes and behavioral descriptions which can serve to facilitate the steps leading to such a goal? In other words can vocational or career maturity be dissected into the elements which make it up and educational experiences built around these elements? In the discussion of career development theories it was noted that developmental tasks and stages of increasingly mature behavior have a strong partnership in these frames of reference. Several theorists, among them Havighurst (1953), Erikson (1950), Super (1957, 1963), Tiedeman and O'Hara (1963), Gribbons and Lohnes (1968) have discussed the presence of such phenomena in career development.

What utility might a development task concept or its sub-elements have in creating a unified system of education built around a career development theme? A developmental task has been defined by Havighurst (1953, p.2) as "a task which arises at or about a certain period in life of the individual, successful achievement of which leads to happiness and success with later tasks, while failure leads to unhappiness in the individual, disapproval by society, and difficulty with later tasks." This definition has come to be accepted rather universally as the major interpretation of this concept. Those who are involved with developmental task formulations generally agree on the following statements:

1. Individual growth and development is continuous.

2. Individual growth can be divided into periods of life stages for descriptive purposes.

3. Individuals in each life stage can be characterized by certain general characteristics that they have in common.

4. Most individuals in a given culture pass through similar developmental stages.

5. The society makes certain demands upon individuals.

6. These demands are relatively uniform for all members of the society.

7. The demands differ from stage to stage as the individual goes through the development process.

8. Developmental crises occur when the individual perceives the demand to alter his present behavior and master new learnings.

9. In meeting and mastering developmental crises, the individual moves from one developmental stage of maturity to another developmental stage of maturity.

10. The task appears in its purest form at one stage.

11. Preparation for meeting the developmental crises or developmental tasks occurs in the life stage prior to the state in which it must be mastered.

12. The developmental task or crisis may arise again during a later phase in somewhat different form.

13. The crisis or task must be mastered before the individual can successfully move on to a subsequent development stage.

14. Meeting the crisis successfully by learning the required task leads to societal approval, happiness, and success with later crises and their correlative tasks.

15. Failing in meeting a task or crisis leads to disapproval by society (Zaccharia, 1965).

Thus, the developmental task concept can be used to describe a nomothetic or average set of demands or requirements with which individuals must cope as well as a way of looking at how a given individual is attaining such expectation, where he may be having difficulty, what specific experiences or competencies he needs to acquire, and what resources might be committed to his needs. Such a concept permits a sequential development of experiences which relate to emerging developmental tasks as well as an opportunity to prescribe on an individual base alternative strategies for coping successfully with the developmental task at which point specific difficulties obtain. Individual variation relative to the attainment of developmental tasks can be further considered in the sense that first, "a given task has a unique meaning to each individual....secondly, individuals vary with respect to their general approach to developmental tasks....the third idiographic dimension of developmental tasks is the pattern of mastering developmental tasks" (Zaccharia, 1965). In the latter dimension, LoCascio (1964) has identified three basic patterns for mastering developmental tasks: continuous developmental pattern, delayed developmental pattern, and impaired developmental pattern. Obviously, the individual differences which contribute to such differential patterns relate to such factors as values, attitudes, need systems, age, sex, temperament, and cultural factors such as socio-economic class.

Developmental tasks can be utilized also as short-range, intermediate-range, long-range or ultimate goals as they are translated into criteria by which individual progress can be monitored. It is of principal concern that the specific sub-tasks or sub-elements which contribute to the accomplishment of developmental tasks be analyzed, monitored, and related to the development of specfic individuals.

As a framework for implementing this approach, Havighurst (1964, p. 216) has identified both broad and rather more specific developmental tasks in his analysis of the lifelong process of vocational development. The gross stages and more specific developmental tasks are as follows. Only the developmental tasks of the first and third stages will be identified.

	Ages
I. Identification with a worker.	5 - 10
Father, mother, other significant persons.	
The concepts of working becomes an essential part of the ego-ideal.	

Principal Developmental Tasks of Middle Childhood.

1. Developing fundamental skills in reading, writing and calculating.

2. Learning physical skills necessary for ordinary games.

3. Learning to get along with age-mates.

4. Learning an appropriate masculine or feminine social role.

5. Developing concepts for everyday living.

6. Developing conscience, morality, and a scale of values.

7. Achieving personal independence.

II. Acquiring the Basic Habits of Industry 10 - 15

Learning to organize one's time and energy to get a piece of work done (School work, chores).

Learning to put work ahead of play in appropriate situations.

III. Acquiring Identify As a Worker in the Occupational Structure 15 - 25

Choosing and preparing for an occupation.

Getting work experience as a basis for occupational choice and for assurance of economic independence.

Principal Developmental Tasks of Adolescence

1. Achieving new and more mature relations with age mates of both sexes.

2. Achieving a masculine or feminine social role.

3. Achieving emotional independence of parents and other adults.

4. Achieving assurance of economic independence.

5. Selecting and preparing for an occupation.

6. Acquiring a set of values and an ethical system as a guide to behavior.

7. Preparing for marriage and selecting a mate.

8. Starting a family.

9. Getting started in an occupation.

IV.	Becoming a productive person.	25 - 40
	Mastering the skills of one's occupation.	
	Moving up the ladder within one's occupation.	
V.	Maintaining A Productive Society	40 - 70
VI.	Contemplating A Productive Life	70+

Although the developmental tasks identified by Havighurst in this illustration are too gross to be of much operational utility, several pertinent points are valuable. If one looks at the first gross stage, identification with a worker, what does this suggest for a student who comes from a home and a culture where there are no productive workers? If the achievement of later tasks is predicated upon the success of such identification it requires education to respond to that lack in the case of this individual. In accordance with Havighurst's belief that one must repeat a missed stage before going on, what resources, what role models, what experiences can the school provide which will help this particular youngster acquire a concept of work as a part of his ego-ideal?

There is another implication here. If, for example, the development of fundamental skills in reading, writing, and calculating are critical to later developmental success, and there is no doubt that they are, and if developing a concept of work as a part of one's ego-ideal is also essential can these concerns not be mutually addressed through materials and experiences which help children to learn to read, write, and calculate about work-oriented topics? The answer seems to be obviously affirmative.

One final point here. The developmental tasks of Stages I and III clearly indicate a process of increasing specificity through thema which become more intense as one ages. As examples, development of a value system, acquiring a sex-typed social role, achieving effective interpersonal relationships are each points along a fluid process which has specific manifestations at different points of time but has roots early in the life of the individual.

Another example of the longitudinal shaping of tasks which are relevant to ultimate vocational behavior is that provided in the work of Stratemeyer, Forkner, McKim, and Passow (1957, 208-214). In this illustration (See page 12a), a concept such as Using Effective Methods of Work, is broken into pertinent subaspects or sublevels like Planning on and Clarifying Purpose and then extended longitudinally across ages and contexts in which they might operate. Such a procedure permits the elaboration of a conceptual scheme which is built from the bottom up and provides the opportunity for building experiences on experiences which flow toward and from common denominators. This scheme also permits a gross profile of the experiential background which one is expected or assumed to have but which may not be present in the personal history of a given individual. Thus, it can be used to show instrumental relationships between present and future levels of expectation as well as for diagnostic purposes to determine what present experiences need to be acquired and what successes an individual might need to move from a particular developmental plateau to increasingly effective behavior.

Both of the illustrations cited provide a frame of reference from which to move in more specific operational terms. They both suffer from the gross nature of their content, the lack of current findings from career development

research and theory, and behavioral descriptions which permit evaluation of the degree to which an individual student has accomplished the behavioral goals set for him. Hull (1967) has examined one approach to this latter requirement which is relevant here. He states that, "Behavioral objectives couched in descriptive expectations for individual performance enhance evaluation efforts." Hull used as a conceptual scheme the work of Bloom, Engelhardt, Furst, Hill, and Krathwohl (1956) in which the cognitive domain was divided into six classes: knowledge, comprehension, application, analysis, synthesis, and evaluation. These classes represent spiraling complexity of individual cognition. Hull applies this schema to the evaluation of pupil attainment in vocational tasks in each of six occupational fields. Most importantly, for the purposes here, he defined the tasks in behavioral descriptions, the attainment of which can be measured. His work is as follows:

Occupational Field	Objective Class	Operationally Defined Tasks in the Cognitive Domain
Office Occupations	Knowledge	To spell a list of fifty "most difficult" words correctly
Carpentry	Comprehension	To lay out a rafter cutting diagram for a gable roof with a 1/4 pitch
Food Service	Application	To serve a full-course dinner to a party of eight persons quickly, efficiently, and without disrupting conversations
Distribution	Analysis	To recognize unstated reasons for the customer's initial questions about a sales product
Production Agriculture	Synthesis	To plan a schedule of fertilizer application (time of year, type and amount of fertilizer, etc.) for a given crop rotation on a particular farm
Welding	Evaluation	To apply 60,000 pounds of pressure per square inch to a butt weld of 3/8 inch mild steel

Hull, of course, applies his example to vocational tasks which are more related to the acquisition of occupational skills than to the concepts of career development and his illustration represents a point in time rather than a longitudinal process. But the wedding of a cognitive concept to a specific behavior which can demonstrate the acquisition of the skills inherent in the concept is the major point. With some juxtaposing of time and space, without consideration of the occupational field labels in the first column, one can see how the concepts of knowledge, comprehension, application, analysis, synthesis, and evaluation could correspond to the developing characteristics of groups of children or particular children in a longitudinal schema for fitting experiences to the complexity of unfolding abilities.

Although Hull's framework used as a model the analysis of the cognitive domain by Bloom et al, there is a more recent companion piece dealing with the Affective Domain (Krathwohl, Bloom, and Masia, 1964). Stripped of their definitions, the category and subcategory titles which embrace the spiraling hierarchy of affective complexity is as follows:

1.0 Receiving (attending)

- 1.1 Awareness
- 1.2 Willingness to receive
- 1.3 Controlled or selected attention

2.0 Responding

- 2.1 Acquiesence in responding
- 2.2 Willingness to respond
- 2.3 Satisfaction in response

3.0 Valuing

- 3.1 Acceptance of a value
- 3.2 Preference for a value
- 3.3 Commitment (conviction)

4.0 Organization

- 4.1 Conceptualization of a value
- 4.2 Organization of a value system

5.0 Characterization by a value or a value complex

- 5.1 Generalized set
- 5.2 Characterization

Krathwohl has stated (1965) "If the analysis of the cognitive and affective areas is correct, then a hierarch of objectives dealing with the same subject matter concepts suggests a readiness relationship that exists between those objectives lower in the hierarchy and those higher." Thus, the taxonomies of the cognitive and the affective domains provide models which can be extended longitudinally, which can be used to represent nomothetic expectations which can be translated into profiles of individual development, and to which can be related experiences designed to facilitate progress in particular categories of development.

The question now becomes, how can the input from current work in career development be placed in some specific way into a model which is longitudinally viable, which lends itself to behavioral description, and for which facilitative experiences might be designed? Two examples will be cited. Both contribute elements making up vocational maturity which fall principally within the cognitive domain. The first example comes from the longitudinal research of Gribbons and Lohnes (1968, 15-16). They have examined the concept of Readiness for Vocational Planning which has been cited as a measure of vocational maturity during adolescence. They have identified eight variables which in combination correlate to a high degree with readiness for vocational planning at the eighth grade and at post-secondary school levels. They are:

Variable I. Factors in Curriculum Choice

Awareness of relevant factors, including one's abilities, interests and values and their relation to curriculum choice; curricula available; courses within curricula; the relation of curriculum choice to occupational choice.

Variable II. Factors in Occupational Choice

Awareness of relevant factors, including abilities, interests, values; educational requirements for choice; relation of specific high school courses in choice; accuracy of description of occupation.

Variable III. Verbalized Strengths and Weaknesses

Ability to verbalize appropriately the relation of personal strengths and weaknesses to educational and vocational choices.

Variable IV. Accuracy of Self Appraisal

Comparison of subject's estimates of his general scholastic ability, verbal ability, and quantitative ability with his actual attainments on scholastic aptitude tests, English grades, and mathematics grades.

Variable V. Evidence of Self-Rating

Quality of evidence cited by subject in defense of his appraisal of his own abilities.

Variable VI. Interests

Awareness of interests and their relation to occupational choices.

Variable VII. Values

Awareness of values and their relation to occupational choices.

Variable VIII. Independence of Choice

Extent of subject's willingness to take personal responsibility for his choices.

The other example is from the work of the Career Pattern Study, a longitudinal study of career development directed by Super. The example used here is from the first of five gross vocational development tasks which are respectively: Crystallizing a vocational preference, Specifying a vocational preference, Implementing a vocational preference, Stabilizing in a vocation and Consolidating status and advancing in a vocation. Super and his colleagues have indicated that the first of these, crystallizing of a vocational preference, is the process of formulating a generalized vocational goal. It takes place in early and middle adolescence, and, it is essentially and, at its best, a cognitive process.

Attitudes and behaviors associated with the vocational development task, crystallizing a vocational preference, include the following: (Super et al, 1963, 84-86)

1. Awareness of the need to crystallize -- The behaviors which constitute this attitude are often verbal as illustrated by voluntary discussion of the need to choose a career, but they are also frequently instrumental, as in the case of going to the school library to read an occupational pamphlet, or seeking an appointment with the counselor.

2. Use of resources -- Relevant instrumental behaviors are consulting with counselors and other sources of occupational information and self-understanding, reading occupational materials, seeking part-time or vacation jobs in one's field of interest.

3. Awareness of factors to consider -- A cognitive process in which the individual takes into account self and situational factors which affect the wisdom of a preference: intellectual requirements, interests for which outlets are possible, accessibility, security, the timing of choices and the need for alternatives. Relevant behaviors are largely verbal and involve expressions of the importance of a given consideration, self-awareness, and knowledge of situational factors.

4. Awareness of contingencies which may affect goals -- Seems more likely to assist in ruling out some possible preferences, in narrowing the field of preferences, and in providing a basis for greater stability of whatever preferences are crystallized. Relevant behaviors are largely verbal and include statements concerning the need for parental approval of preference and plans, of the need for continuing financial support may also be instrumental.

5. Differentiation of interests and values -- Shown by depth and patterning as in inventoried interests and values, by the degree to which a person makes some low and some high scores, as contrasted with all average scores on an interest or values inventory. The behaviors in this instance are verbal behaviors recorded in inventories, but they could also be instrumental behaviors manifested in extracurricular activities, clubs and hobbies.

6. Awareness of present-future relationships -- Consists of relating present prevocational activities to intermediate and ultimate vocational preferences. Relevant verbal and motor behaviors are illustrated by the mention of the fact that choosing algebra is essential to entering engineering school, and by taking blueprint reading in order to help qualify for advancement to skilled factory employment.

7. Formulation of a generalized preference -- Self and situational awareness, crystallized interests and values, make possible the formulation of a generalized vocational preference. In many cases, this may seem to be a specific occupational preference, but it is in fact a more general occupational-type preference. In such cases, the occupational title serves as the symbol of a number of related activities for which liking is indicated.

8. Consistency of preference -- Consistency of preferences at this age is largely verbal, but is may also be instrumental, as in the consistent election of subjects relevant to a particular vocation.

9. Possession of information concerning the preferred occupation -- Is manifested in verbal behavior, in which the subject reveals what he knows about requirements, training, duties, conditions of work, and so forth in the occupation which he prefers.

10. Planning for the preferred occupation -- Is a type of verbal behavior which can be characterized in the same way as possession of information. However, the focus is on decisions as to what to do and when and how to do it. The amount and specificity of planning like information, has been shown to be a measurable characteristic of vocational maturity in early adolescence.

11. Wisdom of the vocational preference -- shown in verbal behavior.

The elements of the Gribbons and Lohnes and Super et al data can be condensed and blended in several ways. It is clear in both that students need a comprehensive body of information which links what they are doing educationally at particular points in time to future options which will ve available to them within the context of education as well as within the context of work. Thus, they need to know what curricula will be available to them, what factors distinguish one curriculum from another, what components make up separate curricula pathways, what personal factors are relevant to success in different curricula, and how the various curricula are linked in an instrumental fashion to different field and level responsibilities in the occupational world.

Students also need self-knowledge. They need to be able to differentiate personal values and personal interests as these are related to personal strengths and weaknesses in the several manifestations of ability -- verbal, quantitative, scholastic. They need to be able to assess these elements of the self, incorporate their meaning into the self-concept, and relate the relevance of self information to the choices with which they will be confronted.

Transcendant to this necessary base of knowledge is the motivation to use it in purposeful ways. Or, as Clarke, Gelatt, and Levine (1965) observe to develop "an effective strategy for analyzing, organizing, and synthesizing information in order to make a choice." There is in the making of decisions, skills which can be learned. Once a person has made a plan for some segment of his life which he is content to live by, he is better able to make the next one intelligently and with less hesitation or conflict. As has been indicated previously, one cannot make vocational decisions without educational implications and vice versa. Nor can effective planning and choice-making occur without recognizing and assessing the psychosocial, emotional, implications inherent in the choice.

Inherent in the studies of Gribbons and Lohnes and of Super and his colleagues is the need for an attitude of planfulness to be generated in students as well as recognition of possible alternative actions, possible outcomes of these actions, probable outcomes of these actions, and the desirability of the outcomes as defined by personal preferences and values. In this context, students can be helped to assess the sequence of outcomes -- proximate,

intermediate, ultimate -- which lead from immediate choice, the factors which are personally relevant at each experimental branch point, the probabilities associated with those factors, and the personal desirability of the outcomes which make up the sequence. The facilitation of planfulness and of career development, then, involves not only knowledge, but opportunities to apply the knowledge to one's personal characteristics. It involves the student's willingness to commit to work a sense of value, ego-involvement, personal endeavor, and achievement related motives.

Education can equip students with accurate and relevant information which is translated in terms of the developmental level and state of readiness of individual children; it can encourage and assist them to formulate relevant hypotheses about themselves, the choice points which will lie in their future, and the environmental options available; it can help them use appropriate ways of testing these hypotheses against both past and new experiences; and it can help the student to come to terms with the educational relevance of what he already knows, or will learn, about himself and his future. In other words, students can be helped to see themselves in process and to acquire the tools and knowledge which will allow them to exploit this process in positive, constructive ways.

Can these expectations of education to facilitate career development be converted behavioral descriptions which can guide specific experiences? Several models have been suggested which can provide such a frame of reference. One of the operational goals critical to implementing the Exemplary Programs and Project Section of the 1968 amendments to the Vocational Education Act relates to the need to design behavioral descriptions which would encompass the characteristics of career development, placing these at appropriate developmental levels, and wedding them to educational strategies which will facilitate them.

Relationship Between Career Development and General Education

As one views general education it becomes quite clear that there is already operating a number of activities which are at least tangentially related to career development. In fact, all contacts with people, things, and ideas have potential for influencing career development (Roeber, 1965-66), if these are purposefully any systematically addressed to this expectation. The creation of the behavioral goals suggested previously as ways of bringing focus to the activities and experiences through which career development can be facilitated would be powerful means by which career development can be made to stand clearly as a central activity at all educational levels. The early work of Comenius and Dewey and the more recent work of Piaget and Bruner among others have supported the premise that success experiences and the realities of the adult society can be grasped and internalized by even very young children if these concepts are placed in a language system and an experiential framework which is attuned to the readiness level of the children being served.

It is important that general education be seen not just as an opportunity for the expression of certain personal characteristics which make up career development but rather that it be seen as devoted to developing these characteristics. Although this distinction is subtle, it represents the difference between purposeful, sequential development and development by chance and happenstance. Thus, a series of exposures to career development-oriented activities adapted to the developmental level of children and provided through different media will have an impact that isolated, compartmentalized experiences can never realize.

It is also important that any sequential development within general education recognize that if the present conditions of occupational illiteracy, lack of goal directedness, and nonemployability are to be overcome, a broader perception of the many types and degrees of talent necessary to the world of work must be fostered. If schools are in fact to develop the requisites of career development, emphasis must be given from the elementary school forward to the identification and facilitation of the positive elements, strengths, and talents, which for each individual represent the best coin for future career success. In addition, education must attend to the fact that support it in programmatic ways, that students will differ in their approach to career orientations and in their readiness for such thinking because of the high degree of interdependence between one's concept of self, his concept of occupations, and his environmental development. Educational practices must embody better and more comprehensive approaches to the diagnosis of where students are in their career development, in success with learning, in their interest and value formulations. Equally important, however, is the need to make available large numbers of learning experiences which can be related to individual needs and capacities. In the last analysis, the objective of education built around career development must be the development of the individual, not the needs of the labor market.

The discussion which follows is not intended to be exhaustive of the ways by which general education can facilitate career development but rather illustrative of some of the activities now underway at different educational levels from which systems to facilitate career development can flow. The discussion does not center about the specific roles which teachers or counselors can play in their respective professional endeavors to facilitative career development although it is only by the application of their separate skills and their cooperative behavior that a unified system of education through career development can be brought to fruition.

The Elementary School Level

If Luchins Primacy Affect (1960) is a valid premise -- that the information which is obtained first carries the most weight in ultimate decisions -- significantly more attention must be concentrated at the elementary school in terms of attitude development, decision processing, self awareness as well as awareness of and knowledge about the broad characteristics and expectations of work. Frequently, unrealistic vocational plans are made at this level because of the emphases on parental and community attitudes as well as in textbooks upon "prestige fields," which obscure the existence and the significance of other fields that employ a large proportion of workers. The occupations and careers exhibited should cover the full range of alternatives from unskilled and semi-skilled worker to Ph.D. However, the greatest stress should be placed on those jobs which do not require a four-year college education, but probably involve continuing education beyond high school.

Increasingly rigid walls have been erected between the pre-adolescent, and for that matter the adolescent, and the vocational niches or educational options to which they must relate. In far too many instances, large segments of our students population -- those from the culture of poverty and others -- have no systematic models to which to relate or psychological support for the quest for behavior which is personally and socially relevant. These conditions occur at a time when attitude formation is in its seed stages. Consequently, the total educational process must support and reinforce those experiences which will generate attitudes and self-acceptance ultimately having a vocational manifestation. Vocational values and

attitudes need attention prior to specific skill consideration although current levels of knowledge and procedures now incorporated in such areas as industrial arts could be placed in the elementary school with benefit to individual children. The integration of vocational values, attitudes, and facts, as well as the relationship between academic content and occupations as reflected in curriculum development, is a priority concern. Students must be helped to relate, in an instrumental way, what they are doing in the classroom to the expectations of varying work contexts. Teachers must be made sensitive to the fact that their attitudes toward work of various kinds make a significant impact on the attitudes of students as they develop personal perceptions of aspiration and prestige. It is in these gross ways that the objectives of guidance, career development, and general education must interface and infuse the formative experiences of children.

More specifically, though the creative use of curricular materials, films displays, role-playing, dramatizations, gaming and simulation, elementary school children can be introduced to career development concepts which are accurate and pertinent to their future development. This is not to suggest that elementary school children be robbed of their fantasies, but rather that their fantasies operate from a base of knowledge instead of overromanticism and stereotype. Almy (1955, p. 200) states that the six year old lives more in a world of reality and less in a world of phantasy. We can understand a number of relationships in the physical world....He knows his actions have consequences for other people and is more alert to their responses and feelings." Jersild (1951) too, has indicated that children have at an early age greater capacities for learning to meet, understand, and deal effectively with realities than has been assumed in psychological theories or in educational practice. Certain of the behavioral objectives discussed previously can be introduced in different stages of the elementary school and identification of those students requiring specific experiences to cope with the developmental tasks demanded of them can be placed in process.

Gross (1967) has suggested that preparation for work life involves four dimensions: (a) preparation for life in an organization, involving authority, security quests, impersonality, routine, conflict, mobility, and demotion; (b) preparation for a set of role relationships; (c) preparation for a level of consumption, involving a certain style of life, and (d) preparation for an occupational career, involving changes in the nature of jobs, and different types of jobs depending on the position in the life cycle. Such topical areas would seem to lend themselves to language arts, social studies, science, geography or, in fact, virtually any elementary school endeavor. Such themes are not confined to the elementary school population but could create organizing concepts which spiral in increasing complexity throughout the educational continuum. Blocher (1966) too, has discussed the importance of social roles as they relate to developing human effectiveness. Students could examine social roles as they relate to leadership, creative or original contributions, helping relationships, and unusual levels of accomplishment. The study of social roles could be extended to occupational fields and levels of responsibilities as well as to such areas as coping behaviors and their implications for growth and development.

Goff (1967) demonstrated in two socio-economically different elementary schools that measurable increments in vocational knowledge, level of occupational aspiration and realism of occupational choice can be attained through a planned vocational guidance program. Stress was placed upon developing a respect for all levels of human endeavor, toward gaining an understanding of personal strengths and limitations, and toward acquiring

satisfaction in the task of learning itself. Children were asked to work through the making of occupational choices for the purposes of testing and discussion as well as to reinforce the idea that early and specific choices were not expected at the elementary school levels.

In an attempt to determine whether primary grade children could gain occupational awareness important to vocational attitude and value formation, Wellington and Olechowski (1966) found that eight year old youngsters could: develop a respect for other people, the work they do, and the contributions made by providing production and services for everyone; understand that occupations have advantages and disadvantages for the worker; understand some of the interdependent relationships of workers. The group of students with which Wellington and Olechowski worked was first exposed to a unit of study entitled "Shelter". The building industry and the variety of workers related to the industry were explored. Initial indications were that youngsters at the conclusion of the unit did not yet understand the workers' role and function. Follow-up discussions were then focused on methods for increasing the children's understanding. The students were assigned to interview a variety of workers. With the assistance of the teacher and the counselor, the students developed questions to be asked in the interviews. The interviews and the class discussions which followed were taped. After the children listened to the tapes and completed their discussions concerning the building industry and its workers, there was a significant increase in the students' understanding and awareness of working people and their work. The important point is that the initial lack of increased student awareness was a result of faculty techniques not a lack of student ability to grasp the concept.

Vocational guidance or exploration at the elementary school level and later cannot be confined to an informational service although relevant, comprehensive information is vital. Arbuckle (1963) has suggested that the world of work be viewed at the elementary school level as a "world of people" thus emphasizing the importance of individual characteristics in shaping one's future work life and to diminish the remoteness, the outside-the-person focus, which work is perceived frequently as being.

Kabach (1966) has indicated that "the younger the child the greater the interest in the actual job performance itself. Most children are natural born actors; they want to act out in order to understand what it feels like to be a carpenter or a ball player." There are several important implications here. First, in terms of media or vocational exploration, in the elementary school particularly, the use of dramatizations, role-playing, simulation each has potential for allowing youngsters to try on possible occupational roles. Secondly, it is possible to facilitate student identification with attainable vocations represented in their immediate neighborhoods or community. Finally, if children base their occupational preferences on job performance itself this is a prime time to introduce them to the relationship between interests and occupational areas. An array of experiences can be built upon how interests develop and their importance in life. Interest themes can also be related to change as a process, to capacities, to values, to decision-making or any other process.

A set of materials encompassing these concepts specifically designed for use in grades five, six, and seven were developed by personnel of the Abington School District in Pennsylvania under a grant from the Pennsylvania Department of Public Instruction. The model they developed drew upon the resources of the school, home, and community. As one piece of this model,

six sessions were developed so that they could be integrated in the language arts curriculum and, thus, contribute to student development in the area of spoken and written communications. The objectives for these sessions were met through

1. A card game which demonstrated how interests develop

2. Short stories based upon characters with whom students could readily identify

3. An interest inventory designed to obtain a profile of the interests of students through media which were relevant to their age level

4. An "open-ended" play illustrating the influence of interests on personal relationships which provided students the opportunity to write the second act showing the outcome of the situation

5. A taped series of role-played interviews with various workers in which the students were to determine the occupation from the interests described by the person interviewed.

Similar experiences were created to facilitate awareness of change, values, educational and occupational relationships and similar pertinent concepts as these interacted with student development.

In a sense, many of the possibilities for influencing awareness of career development in the elementary school are built around the premise that at the base of later career differentiation and integration must be a foundation (O'Hara, 1968). And, this foundation has as a basic ingredient the development of a language of vocations, a base for personal imagery and symbolization. Through the acquisition of relevant words, children begin to accomodate to cues by which to differentiate and integrate both the world around them and themselves as part of this world.

Junior High School Level

Many of the concepts and methods introduced at the elementary school level can be reshaped and extended to the junior high school level. It must be remembered, however, that as a result of experience and growth students at this level have needs and abilities which are different from those of elementary school pupils and from secondary school pupils. Students of this age level are more able than elementary school pupils to comprehend relationships and to use abstract terms and symbols; they are in a period where they are preoccupied with belonging and conformity while they are also attempting to achieve independence from their families and sort themselves from the mass. They are enmeshed in the continued development, refinement, and strengthening of basic academic skills begun in the elementary school and they are beginning to converge on the more specialized experiences of the secondary school. Because specific choices of curricula or of the specific high school they will attend are rapidly approaching, however a theoretical that might be, their sensitivity to work and its personal relevance to them as creatures who will "become" is accentuated. It is a period where intensive almost frenetic exploration can be expected. It is also a period where many students will absent themselves from formal education permanently. It is a period when such career development concepts as compromise become operational

as realities and ideals are reality-tested through curricular and extra-curricular experiences. Thus, experiences designed for these students must be timely and immediate to the questions which they are asking themselves. It is a time when student responsibilities through participation in planning can be related to the consequences of decisions made. It is a time when sex differences exert important influences in curriculum choice and when choice considerations become different in kind and value for males and females (Cass and Tiedeman, 1960). It is also a time when because of the unevenness of development, there are wide ranges of maturity within the population and within individuals.

It is inevitable that the junior high school student will move toward a conception of self as seen against a background of work. For some youngsters at this level purely academic content holds no appeal at all unless its immediate relevance to salable skills can be made obvious. These students need access to a skill-centered curriculum, to vocational education if you will, at what is organizationally the seventh through ninth grades. If they do not receive this opportunity, the chances are that they will leave the school as unemployable. Some of these young people do not have the tolerance or the ego-strength to wade through a morass of personally-meaningless experiences until the ninth, tenth, or eleventh grades when they can get their hands on the tangible and the concrete. This is not to imply that these students should not be provided the experiences which will facilitate career development beyond the narrowness of task skills. Indeed, it is within the context of skill development that they can be helped not only to see where they might go but prescriptions of the specific ways by which they can implement their goals can be created. For these persons for whom skill-centered learning is most relevant and the source of success experiences, training in decision-making and in planning which transcends job layouts, can facilitate their self-understanding and their recognition of alternative goals to which they can respond. The concept of continuing to learn throughout one's work life through apprenticeships, on the job-training, post-secondary vocational/technical schools and other experiences can be introduced and explored.

Integral to skill-centered access for some students and different exploratory experiences for students not requiring skill emphases is work itself. Work for many students will be the best of all try-out experience. For some students, organized work and study programs are ways of shortening the period of economic and psychological dependence under which so many youth chafe. To facilitate career development, however, such work experience should be more than casual, unsystematic ventures into whatever chance opportunity presents itself. Rather, the behavioral goals to be attained within the developmental task frame of reference previously elaborated are pertinent here also. They represent motivational as well as diagnostic possibilities to which work can be related. If such a possibility is to be realized, however, education and industry will need to come together in mutually creative exchanges in order to provide such opportunities systematically. This would seem to require that schools accept a placement responsibility for placing youth in jobs on a part-time or summer basis where they can make use of what they have learned.

If work as a try-out experience cannot be made available to all junior high school students or if it is not relevant for some individuals, one of the alternatives is the purposeful wedding of educational technology to career development. To this point, educational technology has been more concerned with how to communicate rather than what to communicate. It has, however, clear and powerful potential in simulating career development and decision-making processes, contingencies and outcomes, as well as a medium for

translating informational retrieval in terms of individual needs. Many relevant projects already exist. Among these are the following:

1. The work of Loughary, Friesen, and Hurst (1966) in developing Autocon, a computer-based automatic counseling simulation system.

2. The development of a Man-Machine Counseling System (Cogswell, Donahue, Estavan, and Rosenquist, 1966) which among other things will track students through their school progress by computer to identify counseling problems and automate interviews to help students in the areas of course programming, post high school educational planning and vocational exploration.

3. The computerization of vocational information using Roe's field and level classification and relating student information to this classification for the purpose of conversation between computers and students about decision-making (Harris, 1968).

4. Life career games, in which students plan the life of a fictitious student within simulated environments and receive feedback on the possible consequences of their decision (Boocock, 1967).

5. The work of Gellatt and his associates in the Palo Alto public schools in which locally developed probability data as well as general probability data available from government and commercial sources were used in the group guidance program. A control group which received no probability data was also included. In an evaluative design integral to this project, it was found that the group which received local probability data scored significantly higher on knowledge about the process of decision-making, awareness of high school and college alternatives, and knowledge of the probabilities involved in these alternatives than did the group receiving general probability data or the control group which received no probability data (Yabroff, 1964).

These projects are not intended to supplant teachers or counselors, but it is probable that with increasing sophistication the outcomes of these projects will cause a reordering of the possible uses to which teachers and counselors can put their energies.

To return again to curriculum content per se, it is necessary that a body of content be identified which is relevant here. The concept of change as it relates to characteristics of the self and to environmental options has been mentioned as a thread which can complement career development. At the junior high school such a theme can be related to implications of accelerating application of new technological discoveries to the occupational structure. It can reinforce the validity of preparing oneself to be versatile and yet firmly grounded in the fundamental processes which undergird all occupations. Such a continuing concept can be related to work habits, mechanical principles, electrical principles, structural design and representation, chemical and biological principles, numerical operations and measurement, verbal communication as this is related to supervisor-subordinate relationships and human relationships. In this context, students can be increasingly encouraged to ask not only whether I like it? but What does it take? and Do I have what it takes? In addition to simulated and work experiences, these kind of questions can be tested in various courses. Students can be encouraged to ask such questions as Why am I taking chemistry or algebra or English and how can I

use it? And, teachers must be encouraged to respond to this question as one for which they are fairly specific answers.

A relevant technique for synthesizing many of these suggestions is that used by Lockwood, Smith, and Trezise (1968). They took the position that if students are even to begin making meaningful vocational investigations they must first become more aware of the almost infinite possibilities that are open to them -- their world must be enlarged. Students were, therefore, introduced to four worlds: the Natural, the Technological, the Aesthetic, and the Human world. In the Natural world, the students studied not only what nature has to offer men both materially, and spiritually, they also looked into man's preoccupation with the destruction of nature. In the Technological world, topics dealing with machines, mass production, automation, cybernetics, and computers were used to stimulate students to discuss not only how developing technology will affect jobs of the future, but more broadly, what will it do for man and society as a whole? In the Aesthetic world, students discussed the role of the arts in modern society and the place of the artist, contemporary trends of art, the "culture boom", and why the arts must have a vital place in any mature culture. In the Human world, students studied overpopulation, poverty, war and peace, social injustices and the individual in mass society. The important dimension here is that the students discussed career areas related to each world and the interrelationships among them.

Senior High School Level

The continuation of career development at the senior high school level must as at other levels be predicated upon individual needs, readiness, and motivations. In one sense the principal concern at this level is the intensity of the planning, individual readiness, and goal-directedness which characterizes the individuals to be served. Specific career development activities must take each student from where he is to the creation and the achievement of a set of specific goals. Here perhaps, more than at any other point in the educational continuum, activities must be individually prescribed and they must proceed with logic and system to permit the realization of future motivations whether these be immediate job acquisition, post-high school technical training, baccaleureate preparation, or a potential future mix of each.

If the architect's dictum, that form should follow function is valid, then institutional shapes and organization will need to incorporate more flexibility, more interdisciplinary integration, variable time blocks, individualized programming, multi-media approaches, and self-teaching devices than is presently characteristic of most educational systems.

Because of the importance of fundamental cognitive skills -- e.g., reading, writing, computing -- to career development, many students will need renewed efforts to attain these skills through remedial or individualized methodology. But their acquisition can be facilitated by placing them in the context of vocational experiences. One of the exciting possibilities for doing this lies within the cluster concept which blends an interdisciplinary approach to academic learning with a family of skills or career clusters which are broadly applicable to many jobs. Through the E S 70 program pilot projects are already underway in such places as Quincy, Massachusetts, and in the Richmond Pretechnical Program, San Francisco, to use students' occupational interests as a means of developing his general and academic skills. Lessons are not separated into such courses as physics, math, English or electromechanics; they are interwoven in ways which insure that students have attained

skills which are salable but which permit students the opportunity to qualify for advanced training at the junior college level or in other post-secondary educational endeavors (Bushnell and Rubel, 1968). Thus curricula can be blended in ways which emphasize both the acquisition of technological principles and the personal skills which permit one to make use of the technical skills which are acquired. Theoretically at least, one can train a young person to be the finest machinest in town but unless he is given the personal skills and attitudes which permit manifestation of the technical skills e.g., be willing to be at work at 7:00 a.m., five days per week each week, he is still unemployable.

If career cluster curricula could be developed beginning at the ninth grade, this would not preclude the continuation of specific job training for some students. Not all vocationally oriented students are capable of or desire preparation for the skilled trades or for technical occupations. Specific programs must be developed for the low end as well as the high end of the intellectual continuum whether such preparation is to be a helper, a dishwasher, a waiter, a lawnmower repairman, an industrial landscape gardener or whatever. Indeed, low intellect aside as a rationale, pathways to constructive work must be broadened so that youth are not fitted to programs but programs are fitted to youth. The existing lockstep of certain training durations and specified training experiences must be broken to exploit the enlarging opportunities in the occupational world to use the talents of individuals characterized by a wide range of capability. The specialty-oriented youngsters (Hoyt 1963), who are not solely representative of those with limited intelligence, can be provided clusters of job skills in such areas as social and public services, transportation, management, finance, business communication, distribution -- areas which are not mechanical or theoretical, if such dichotomies are viable, but are nevertheless tangible, concrete, and important outlets for a range of personal predispositions.

Integral to any of these conceptions of creating vocational experiences and tying them to academic learning in meaningful ways is the opportunity for individual and group problem-solving. These opportunities must span educational levels. Students can be helped to identify and define problems to be solved within the context of current vocational experience and ways can be identified to solve the problems. Students can participate in planning projects which exploit decision-making behavior and through which their own interests can surface.

At the senior high school level, the possibility of integrating work experience with schooling is a reality. The age and sex of the student are no longer the contingencies they are at the junior high school level. Blocks of time can be developed by which students will actually report to jobs instead of school for two or three weeks or perhaps a term at a time. While the economic appeal is obvious, the training and the exploratory potential needs to be fitted to individual needs. Hence, if a particular student is interested in business or in electronics, a program could be made available by which he can complete his high school work and simultaneously secure the on-the-job training available through part-time employment. For some students, this could be pre-technical training, for others it will be a permanent job, and for still others exploration prior to baccaleureate study.

All of this emphasis in the senior high school on vocational experience, career clusters, work is not to denigrate the continuing career development potential of the academic curriculum <u>per se</u>. The types of activities integral to curriculum but complemented by simulation devices and processes which have been indicated as possible at earlier educational levels are also important

in modified form at the senior high school level. A continuing career development theme in courses designed to prepare students for college will serve to diminish the persistent assumption that college is an end in itself. It, too, is an intermediate vocational choice for the vast majority of students who enter college. With such an emphasis, college will be seen less as a way of deferring career thinking and more as one of the alternative ways to achieve particular vocational goals. Indeed, many of the students for whom college is the immediate step following high school will also profit from direct work experience or from access to vocational experience in the school itself in order to heighten the purpose with which college is approached.

Relationships of Career Development and Vocational Education

Vocational education has been called the Bridge Between Man and His Work (The General Report of the Advisory Council on Vocational Education, 1968). If a career development theme is to be viable, such an appelation must come to describe the total educational enterprise not just a segment of it. If any one part or all of education is to deserve this label by bringing to reality in the lives of individual students the complex of experiences necessary to bridge education and work, more than narrowly defined job training is involved. It is this very specificity of trade or job training which has led to cries of obsolescence in vocational education and unresponsiveness to the dynamics of the occupational structure. As one evidence that these charges have some validity, the first nationwide study of the postgraduate employment experience of male graduates of trade and industry vocational courses shows that the majority of vocational course graduates do not, for their first job, enter the trade for which they trained in high school nor do many tend to enter the trade in later years (Eninger, 1965, p. 25). Thus, the intent and the patterning of vocational education as it is manifested in many current programs of education must be reshaped and reconstituted.

Virtually all of the relationships which have been suggested as pertaining between general education and career development, apply with equal force to vocational education. They will not be repeated here. Indeed, if such relationships are incorporated into a reshaping of the many thrusts of vocational education, the lines which presently separate or dichotomize vocational education and "general education" can be made to blur or vanish.

For too long vocational education has been seen as having validity only for a highly restricted sample of the total student population rather than for all students. Operationally, it has been seen as a second class alternative for those with low verbal skills or for those with technician interests. In the process, many of these students and many vocational educators have become defensive about their alleged inferior status, moved further into an isolationist stance, and tied themselves to training experiences rigidly defined by time and content. As a result, many students who desperately need what vocational education and vocational experiences can offer have been blocked from this access. Students have been arbitrarily separated into supposedly homogeneous categories of college-bound and non-college-bound, the experiences for each category being seen as mutually exclusive.

The alternative to releasing more of the potential contribution which vocational education has to make to career development lies not in assigning to or recruiting more students for a vocational education track, but in making vocational education an equal partner with all other activities which constitute the educational enterprise. This means that vocational education courses must be systematically structured to teach not only skills across

families of jobs but to develop within students the elements of career development which will free them to conceptualize the alternative ways in which these skills can be used and to attain the personal competency to capitalize upon skill acquisition. Further, it means that more avenues must be created by which all students can move freely between "academic" and vocational education with the criteria for such movement being individual need, readiness, interest, motivation and the blend of academic and vocational experiences which can meet these criteria. As Moss (1968) has indicated it is "the relative prevocational value of various patterns of preparation that is of prime educational significance." To aid students in patterning and mixing academic and vocational experiences, counselors will need probability as well as multiple discriminant data which compare the characteristics of the student contemplating a particular blend of experience with the characteristics of those individuals who have completed different sequences of experiences and the career outcomes they have attained. Such a procedure cannot be a once and done exercise but rather a complementary and continuing reinforcement of decision-making, value refinement, and personal planning as these occur not only in the selection of pertinent educational experiences but within the experiences themselves.

Higher Education

Although the place of higher education in a unified system or education built around a career development theme has not been made explicit in this paper, it is a necessary corollary to the goals discussed. Post-secondary vocational/technical schools, community and junior colleges, and private institutions providing specific skill training all have a contribution to make to the acquisition by late adolescents and adults of particular types of training. Many of the experiences which they can offer must include the types of experiences and content recommended at earlier educational levels. For some persons, post-secondary education will be the final step of specific skill acquisition before moving into a technician role or a skilled craft. These may be persons who have been exposed to broad prevocational and exploratory experiences before entering post-secondary opportunities. Other persons will seek post-secondary skill training who have not acquired a mastery of more fundamental skills in communications, mathematics, reading, other prerequisites to skill acquisition, or the attitudes necessary to making effective use of skills to be attained. Thus, post-secondary programs, much like secondary programs, will need to begin where the individual is and build in systematic ways the individual experiences necessary to meeting particular interests and goals. Other persons, because of possible displacement by changes in occupational activities, will need retraining or upgrading opportunities and these, too, need to be made available through the several possible combinations of post-secondary education.

In the last analysis, it is necessary that post-secondary vocational experiences be characterized by flexibility and diversity in order that individuals of divergent characteristics can be equipped with skills at the levels and in the fields consonant with their personal needs and the realities of the occupational structure.

Operational Goals Toward Which Exemplary Programs and Projects Might Be Directed

1. Create a system of behavioral objects which reflect career development concepts and which respond to differences in learner characteristics.

2. Determine how content must be structured to include the important concepts to be communicated, the objectives to be realized, the appropriate learning sequence of the material, and the ways by which individual accomplishment of goals can be evaluated.

3. Determine how curricula can be constructed which enable each student to learn about the world of work at higher levels of specificity as he proceeds through school.

4. Determine what current academic experiences are most likely to lead to the specified goals and behavioral outcomes of career development and how their impact on students can be strengthened.

5. Identify strategies by which behavioral goals can be attained through multiple alternatives. Use systems analysis techniques like PERT, PPBS, and CIPP to project the relationships between such areas as career development and curriculum, media and instructional styles, pre-service and in-service education needs of counselors and teachers, the integration of work experience with curriculum, interdisciplinary concepts and occupational clusters, in-school and out-of-school experiences and needed research.

6. Determine the relationships between academic course content and job requirements so that a view of employment and the instrumental value of education can be reinforced throughout the total curriculum

7. Determine strategies by which disadvantaged children can be exposed to the world of work and prescriptions developed by which they can get there.

8. Determine how the concept of continuous education for all segments of the population can be integrated into educational philosophy and into programmatic operations and develop strategies by which students can interrupt their formal schooling without stigma or penalty and with the possibility of return as necessary for consistent up-grading of skills.

9. Determine the efficacy of combining particular educational media with individual learning styles to facilitate acquisition of behavioral goals.

10. Determine strategies by which student interests, readiness, and goals, rather than arbitrary class schedules, can determine access to a wide range of instructional materials -- e.g., films, tapes, records, books, CAI -- in support of determined lines of inquiry related to career development.

11. Determine what kind of community and industrial resources contribute to the attainment of specific career development behavioral goals and under what conditions, for whom and when such referral sources as rehabilitation, youth opportunity centers, the urban league, mental hygiene clinics, tutorial services are feasible.

12. Determine the efficacy and the characteristics of simulated environments, e.g. techniques of gaming, by which students can experience cause-effect relationships and the knowledge that choices have consequences.

13. Determine the characteristics of emerging occupations employing large numbers of women as well as those areas in the technical and health fields, public employment sector, consumer and production services which suffer low visibility as these need attention in occupational information.

14. Determine the relationships which exist between various patterns of academic and vocational education and subsequent performance in job families.

15. Compare on different criteria of career maturity the status of youth who have had work experiences of different kinds with those who lack such experience. Ascertain whether youth with planned work experiences are more responsive to career planning than those who are exposed to simulated experiences.

16. Determine how work experience activities can be integrated with the total school curriculum without impeding student progress toward a number of future goals simultaneously.

17. Identify the characteristics of those students who find success in various vocational education options and the outcomes which they subsequently attain as a result of vocational education.

18. Identify those factors related to restricted socio-economic status which limit the promise of such youth to cope with skill mastery, attitude development, achievement motivation and design experiences which can overcome systematically such deficits.

19. Identify work factors which possess the highest degree of communality, and hence transferability, among and between job families or clusters as a basis for constructing occupational classification systems, improving occupational information, and designing behavioral objectives.

20. Determine how and what types of information contribute to the meeting of particular behavioral objectives and under what conditions it does so.

21. Determine how information retrieval systems can tailor the characteristics of information specific to characteristics of individual learners, the questions about which they are personally concerned, and relative to the specific decisions being made.

22. Design an occupational classification system within an explicitly development framework. Relate occupations to interests, capacities, investment required -- e.g. training and time, differential work roles.

23. Develop occupational information sensitive to the cognitive and affective dimensions of career development as these are related to motivational behaviors, perceptual behavior, attitudes, and predisposing sets found among students of different experiential backgrounds.

24. Test informational materials with different subpopulations in the setting for which they are intended to assess the degree to which they are generally sensitive to the vocational problems of these populations.

25. Examine ways by which training durations and time spent in vocational experiences can be made more flexible to accomodate individual differences.

26. Identify models which reflect patterns of schooling responsive to the needs of women, differently advantaged populations, different learner styles and develop their implications for institutional forms and organizational management of educational experiences.

27. Identify the contributions of specialists at different levels of responsibility -- the practitioner, the preparer, the supervisor -- to the behavioral objectives established for students.

28. Devise, install, pilot test, and evaluate career development programs in natural school and community settings. Create networks of career development demonstration projects which have a resource/demonstration/in-service as well as an evaluation capability.

29. Develop systematic programs to prepare teachers and counselors, both pre-service and in-service, to facilitate career development and to acquire knowledge of and experience in the work world outside the school.

30. Examine the relationships between universities, state education agencies, and local educational systems necessary to the facilitation of a career development theme throughout education.

31. Inventory legal and legislative constraints as well as those restrictions attendent to union membership and access to apprenticeships which may impinge upon the creation of work experiences for large numbers of students, the blending of in-school and out-of-school experiences for particular students, and any proposed dimension of career development. Design strategies by which such constraints can be removed.

32. Identify administrative and political considerations which may inhibit or which are necessary to implement effectively a career development approach within education.

33. Design models by which State Education Agencies can provide impetus to career development at local levels, can tie the objectives of career development to state objectives for education, and can generate activities designed to demonstrate the efficacy of a career development theme pervading education at all levels.

34. Intensify research on early childhood, learning relative to concepts of mastery, coping behavior, achievement motivations, vocational motives, occupational valuing, as these bear upon later vocational planning and adjustment.

35. Intensify research on such questions as Do students think in terms of careers or entry jobs, school subjects and college majors or industries? Is indecisiveness a general behavior pattern or is it restricted to career choice? How wide spread is indecisiveness among student population at different levels and of different characteristics? What are the characteristics which differentiate those who are guided by security from

those who are risk-takers in decision-making? When are career choices made and what influences are most potent in shaping choices? When students do not perform adequately in their field of interest is this a matter of aptitude or of commitment? How can individuals be most effectively assisted to connect their interests and the various career patterns available to them?

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Elements of a Model for Promoting Career Development in Elementary and Junior High School

Norman C. Gysbers
Associate Professor of Education
University of Missouri

This paper is divided into two major sections. The first section will examine the current status of career development activities in today's schools, discuss some necessary conditions for learning to place as a basis for establishing model programs, and suggest a sequence of content and activity emphases based on these conditions for a developmental program of career exploration from kindergarten through grade nine. The second section of the paper will provide an annotated listing of selected references which may be helpful to those who have the responsibility of developing exemplary programs of career exploration at the elementary and junior high level.

Current Status of Career Development Programs

The role of work in the life of man has long been of concern to educators. This has been particularly true for personnel in the fields of vocational education and guidance. One aspect of this concern has manifested itself most recently in the increasing research and commentary on the phenomenon of career development and on how these concepts relate to the growth and development of youth. The stimulation for gaining knowledge and insight into this aspect of development has come, in part, from the fact that the work world of today and tomorrow for youth is and will be vastly different from what it was at the turn of the century. The world of work is invisible to many youth of today because of the increasing size of many industrial complexes and because of the increasing specialization found within most business enterprises. Concurrently the longer period of time spent in compulsory education has created an additional barrier to their active participation in work. As a result students' concepts of the industrial and occupational world may be diffuse and distorted. Suffering in varying degrees from occupational illiteracy, many youth find it difficult to make the transition from school to work.

These conditions are known and are well documented. The literature is replete with reference after reference concerning the impact of industrialization and social change on the career development of youth. Numerous references can also be found concerning suggested school based programs and activities (particularly at the secondary school level) to soften the effects of these conditions. Where conducted, such programs have met with varying degrees of success. In summarizing the available research, Hoppock (1967) suggests that these programs tend to increase subsequent job satisfaction, reduce unemployment, and increase the knowledge of students concerning the work world. And yet, even with this positive evidence concerning the possible impact these programs can have, they have not generally become part of the accepted curricula in most of our nation's schools. For whatever the reasons, and there are many, the schools of America have not yet devoted appropriate attention to implementing carefully articulated programs designed to foster the career development of all youth. Unfortunately too, those programs which do exist are frequently "one-shot", cross sectional attempts to handle a developmental process.

Several recent developments, however, offer promise of changing this situation. Much more is known today concerning the factors which influence the career development of youth. Also, recent national concern has focused on the imparative need to foster the total development, including career development, of all youth. A look at the variety of recent national conferences and books on the topic and the number of pieces of Federal legislation which directly or indirectly mention counseling and career development confirms this. Of particular importance for us, of course, is the Vocational Education Amendments of 1968. This bill, through the provisions of Part D--Exemplary Programs and Projects--provides the potential to develop, promote, and evaluate carefully designed and articulated exemplary school based programs to enhance the career development of youth. The present national concern combined with the resources provided by the Vocational Education Amendments of 1968 suggest that the time is now right for action. It also is apparent that vocational education and counseling personnel, working together, are in an excellent position to provide national, state, and local leadership to see that career exploration programs are established, evaluated, and made a part of the curriculum in every school of the country.

The research and commentary on career development make it quite clear that activities designed to enhance one's development in this sphere should begin at the elementary school level. Writers and researchers also agree that these activities must go well beyond only developing job skills

and simply providing occupational information, as valuable as these activities are. It is not enough to supply each elementary school room with copies of the Occupational Outlook Handbook, teach the students some simple manipulative skills with tools, have them visit a local business, and then expect that their career development needs have been fulfilled. Elementary age youth need the opportunity to continuously and systematically explore, from an internal frame of reference, their values, attitudes, aplitudes, and interests in relation to the wide range of educational and career opportunities which may be available to them so that they will avoid premature educational and occupational foreclosure

> The timing for prevocational orientation may be crucial. Once students get involved in the junior high school milieu their own social and physical maturation and the existing organizational structures (both formal and informal) and the rewards offered from these environments in which they live all influence them. They turn their attention to diverse pursuits, such as popularity, prestige, athletic and academic achievement, and appear to develop different life styles, each with a different set of values. If students are helped to focus on career development prior to becoming a part of this milieu, it could help them to build a kind of core attitude toward their personal futures which might provide a slightly different perspective on the many other concerns of this age which are so much a part of growing up. (Sherman, 1967)

Conditions for Learning

To develop sound school based career exploration models at the elementary and junior high levels requires an understanding of the learner and knowledge of how to structure the material to be learned most effectively and efficiently. For purposes of this paper, the learner will be viewed as developing through three learning phases during the elementary and junior high years: percepualization, conceptualization, and generalization. (Wellman, 1967).

The percepualization phase focuses on the processes necessary for an individual to become aware of himself and his environment and to differentiate among them. For example, an early elementary school child is usually able to distinguish between a fireman and a doctor but is probably unable to conceptualize at any depth as to what they do. This usually occurs at the next learning level known as the conceptualization phase. As a child enters this phase he

develops the ability to conceive of the functions of the fireman and doctor. This phase also tends to be more action oriented than the previous phase in the sense that the child begins to use the experiences gained during the perceptual period as a basis for action. He now is able to change perceptions into conceptions. In addition, other behaviors begin to appear. Concept formation is not random but is directional in nature. Based on previous experiences (perceptions) a child begins to value certain things and not to value other things. This is a critical time in career development in that this is when both positive and negative work world stereotypes begin to form. Finally, the next phase (generalization) occurs as an individual is able to cope with cultural and environmental demands, make internal interpretations of environmental transactions, and then generalize these interpretations to other situations. For example, he previously has learned how to conceive of the occupation of fireman and is now able to transfer this conceptualization ability to other occupations.

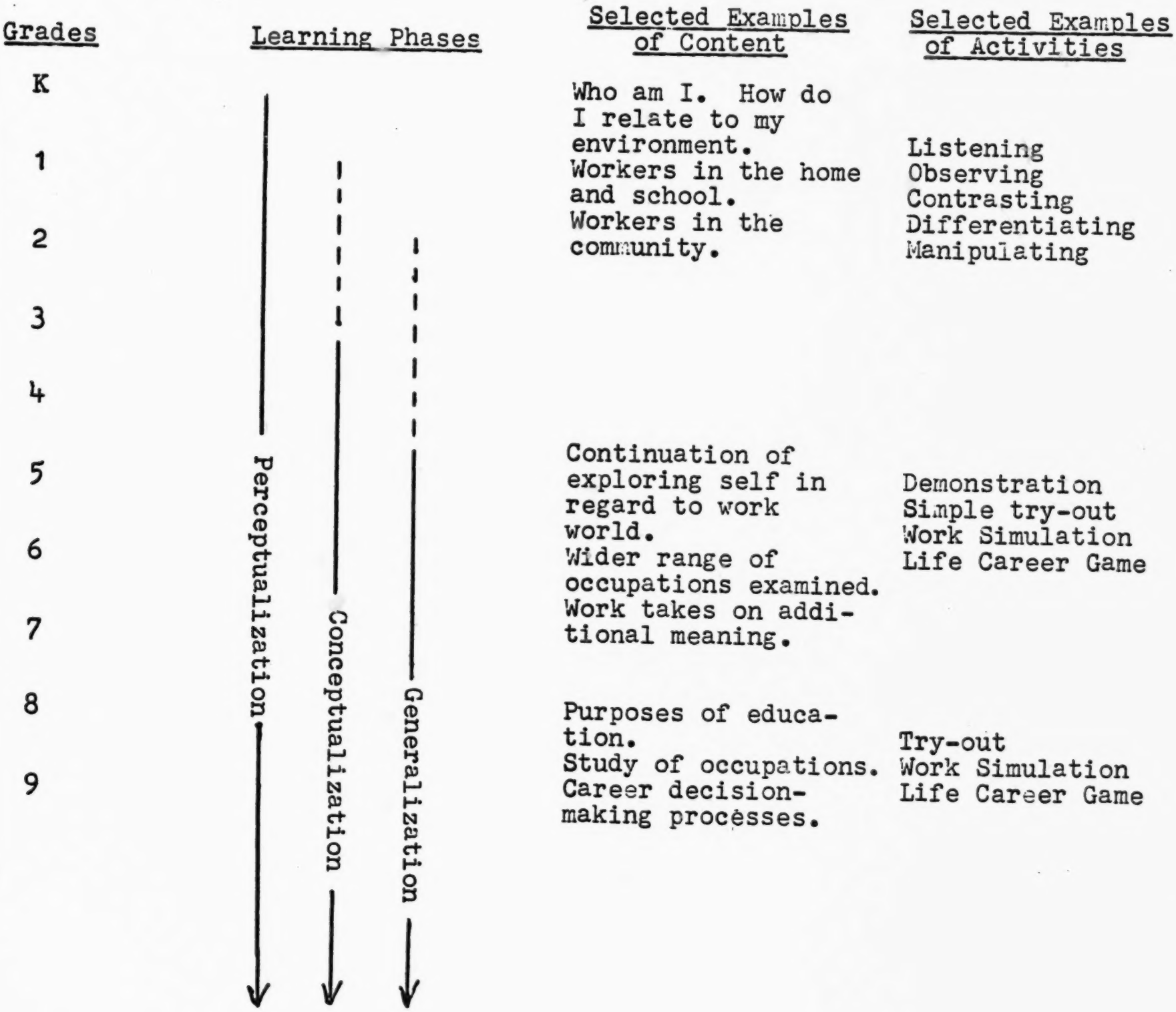
In broad terms the perceptualization phase could be thought of as occuring during the early elementary years, the conceptualization phase during the later elementary years, and the generalization phase during junior and senior high school (See Figure 1). It is understood, of course, that some individuals may move through these phases more rapidly than others and that the cybernetic effect of feedback may shorten an individual's time of movement through these phases, particularly as he grows in age and experience. Also, once all of these processes are operative, an individual will be using all three at the same time and will continue to develop and refine them as he grows older.

Effective model development also must focus on the nature of the material to be learned in the model, with attention being paid to predisposition, structure, and sequence. (Bruner, 1966). The proposed content must contain something to activate the learner, something to keep him going, and something to keep him from random actions. A consideration of the structure of knowledge to be learned also is necessary. The structure of the knowledge contained in any model may be characterized by the mode of knowledge representation (actions, pictures, and symbols), its economy, and its effective power. The impact of the variables will vary according to the individual, his age (phase of development), and the subject matter under consideration. Finally, model development must concern itself with the sequence in which the knowledge to be gained is arranged. It must be arranged in such a way so as to increase the learner's ability to grasp (perceptualize), transform (conceptualize), and transfer (generalize).

Figure 1

Suggested Content and Activity Emphases in Career Exploration Programs

Grades K - 9



Career Development Profile

In addition to knowledge about the learner and about the organization of the content to be learned as necessary prerequisites for the development of a career development model at the elementary and junior high levels, there needs to be some way of monitoring the progress of an individual's career development and of providing feedback concerning the impact of the model to program administrators. The contents of the profile would provide a longitudinal look at the career development of an individual in terms of his interests, abilities, and values as well as cross sectional checks against group normative data. Also rather than being encased in the traditional manila folder, the contents of the career development profile should be stored on magnetic computer tape ready, at an instants notice, to be flashed on any one of a number of monitors in the school.

Individual Development Versus Manpower Needs

The emphasis of career exploration programs at the elementary and junior high levels should be on the individual development of all individuals rather than on the early selection of some to fill certain occupations. The objectives of career exploration activities should be based on and directed toward filling the needs of individuals rather than on meeting the demands of the labor market. Career exploration programs at this level should not be seen as strictly a mining operation in which only those with certain talents are chosen but as more of a farming approach in which all individuals are provided with opportunities to grow and develop. (Goslin, 1965). Career exploration activities at the elementary and junior high level should be those which broaden and strengthen an individual's base of experiences in those areas which need development as well as building on an individual's areas of strength. In this context and at this level (elementary and junior high), the assumption is made that all students are potential school dropouts and that all are potentially disadvantaged, in varying degrees, with regard to their knowledge and understanding about the work world. This assumption is derived from group generalization type data about the common needs of groups of individuals at the elementary and junior high levels. It is important to recognize, however, that generalizations can and should be made about specific individuals and thay any program must take such generalizations into account. Because of this, the application of instructional experiences should be by prescription--some activities are useful for all individuals to experience while other experiences need to be provided to only certain individuals on

the basis of need.* To do this requires adequate knowledge concerning the nature and characteristics of the population to be served by a given program.

Suggested Emphases for Career Development Programs

For this paper the suggested content emphases of career exploration programs in the elementary and junior high school years will be based on three learning phases (perceptualization, conceptualization, and generalization) suggested previously and which have been hypothesized to occur during these years.

Kindergarten - Grade Three

As indicated in Figure 1, it is suggested that in kindergarten through grade three, career exploration experiences should be provided which will expand the perceptual base of an individual in all aspects of the work world. Beginning in kindergarten, experiences should be provided which focus on helping individuals find out who they are, how they are alike and different from others, and on finding a satisfactory place for themselves in their school and home from which they can relate to others. In grades one, two, and three, the emphasis on the home and school environments should be continued and deepened. Attention should be paid to workers in the home and school. The surrounding community also should be explored in increasing detail with attention being given to the wide variety of occupations and the interrelatedness of these occupations in the working community. The content of these experiences should focus on the nature of work, who works, where people work, and why people work. Such content should be presented through a multimedia approach--literature, visual aids, manipulative activities, field trips, and visitations from a wide variety of occupational role models--in carefully arranged sequences. (Bank, 1969). These experiences should be designed to develop the skills of listening, observing, contrasting, differentiating, thinking, and manipulating to provide a base for the next learning level. The Technology for Children Project, New Jersey State Department of Education, is an example of an experimental program designed to provide exploratory experiences in technology for children beginning in the lower elementary grades. One goal of the program at this level is to help children gain knowledge about themselves and their relationships with people in the work world (perceptual level). The activities in this project

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*For an example of a career guidance program to meet the needs of urban elementary age youth see pages 372-376 in Guidance for Children in Elementary Schools, by Hill and Luckey, Appleton-Century-Crafts, 1969

include field trips, films, and discussion. A major objective of programs at this level should be to "fund" students with a broad range of perceptual experiences (skills) concerning the work world so that when the conceptual phase occurs, they will be able to base their actions (conceptions) on a wide range of meaningful experiences--they will have the necessary skills to begin to conceptualize the work world and their place in it.

Grade Four - Grade Six

During grades four through six, the content emphases of career explorations experiences should continue the exploration of self in regard to an ever widening range of occupations and perceptions about work, begun in the earlier grades. During this period the content also will become somewhat more abstract. Subtle differences in the meanings that people attach to work not previously noted may now be apparent. For example, they may note that during visits from occupational role models, some role models value certain aspects of work (the associations with fellow workers) while others may emphasize the content of the job itself. Such differences should be discussed. The emphases of program activities at this level also need to change somewhat and become more action oriented. Based on the experiences the students gained in perceiving, differentiating, and contrasting work world phenomena and their relationship to them, knowledge and skills concerning the processes involved in career decision making need increasing emphases. The same type of media used in the early elementary grades should be continued, but in addition, life career gaming and work simulation techniques should be added. These techniques provide the opportunity to take advantage of the increased action orientation found at the conceptualization learning phase by having the students participate by doing. The life career game approach for example, will help an individual focus on and discuss the many variables which may impact on him as he plans his future. Simple work simulation experiences using selected industrial arts type concepts also should be begun at this stage to help students in acquiring the basic necessities of the work world such as effective time organization patterns, good work habits, and cooperation with others. Role playing activities which focus on work situations and the behavior of workers and work groups should be encouraged. For example, the school itself could be used as a work setting (Leonard and Stephens, 1967). The typical duties students perform in the classroom, the principal's office, and around the school grounds could be organized to provide work experiences. Perspective employees (the students) would apply for work, go through job interviews, and perhaps be hired, depending on their

qualifications for the job. If hired they would work under supervision experiencing the same direction they might expect on a regular job. Such experiences, when coupled with group guidance designed to help these students understand and appreciate what it means to work, would add to their ability to conceptualize and generalize work world phenomena.

Grade Seven - Grade Nine

The content emphases of career exploration programs in grades seven through nine should provide increasing emphases on the elements which influence career decisions. Relevant content for students at this level include a study of the purposes and types of educational opportunities which may be available to them; the status of their career planning; a developmental perspective on their self-concept (variations among people due to heredity and environment dimensions of self, self perceptions); knowledge of the wide range of occupations (relationship of personality characteristics to occupations, occupational stereotypes, requirements and opportunities related to current career interests); and the factors involved in career exploration (responsibility for planning and decision making, values and goals in decision making) (Sherman, 1967). The activity emphases in grades seven - nine should continue to be action oriented (career game and simulation type experiences) with particular focus on try-out work experiences. As an example, some try-out activities perhaps could be conducted within an expanded industrial arts type curriculum. Work simulation techniques such as organizing a typical manufacturing company within a class setting and having the students perform the various personal functions involved in selecting, designing, planning, tooling, producing, and marketing a product would be encouraged. Counseling sessions should be an integral part of this and similar activities so that the experiences could be used as a context to explore student values and attitudes--both personal and work related. Opportunities for exploring the wide range of occupations (using the job cluster approach) located in businesses and industries other than manufacturing also would be necessary. Still another activity at this age level, and in the environmental context of the school, are occupational oriented extra curricular interest clubs for purposes of career exploration. Finally Purcel and Klaurens (1968) suggest these additional techniques:

1. When a student learns an operation he is given the opportunity to instruct other students and thereby test and improve his ability to give instructions. This technique also gives the student recognition

and a sense of achievement, stimulating his interest in the further development of skills.

2. When learning new operations, students are shown how these operations contribute to the well-being of society. For example, good carpentry or mechanical work adds to people's comfort, efficiency and safety. Students value their own work and that of others when they perceive its social contribution.

3. When a student shows interest or skill in a particular operation performed in class, he is encouraged to become familiar with the occupations in which the operation is performed. This may be accomplished by having him study job descriptions to identify related occupations or by letting him interview local industrial firms to find out what job opportunities are available for a worker with this skill and interest.

4. Industrial arts classes are organized as work groups with students rotating in the role of foreman. A board of directors might determine what policies and procedures would be established to run the shop (class) efficiently. The students might also develop a procedure for evaluating performance and thereby gain an appreciation for the standards industry requires.

5. Students in industrial arts classes are encouraged to explore surrounding industries. Craftsmen and other workers might be invited to discuss their jobs before the class or specific members of the class might visit selected industries and report to the class of their experiences. (Students should be encouraged to formulate questions to be asked of persons in industry. These questions should be designed to explore the work requirements and job opportunities and to learn about the psychological and sociological dimensions of the work-role relationships, social demands on the workers, satisfactions, degree of independence, and so forth.)

Although these activities listed by Purcel and Klaurens are industrial arts based, similar types of activities could be conducted in other career exploration type classes (introduction to vocations classes, home economics classes, group guidance classes).

The major objective of all of these techniques at this learning level should be to help students effectively generalize (translate and transfer) their perceptions and

conceptions of themselves and their understandings of the work world into reality through meangful career decision making concerning future educational and occupational plans.

Selected Resources

The second part of this paper will provide an annotated listing of references which may be helpful to those who have the responsibility of developing exemplary programs of career exploration at the elementary and junior high level. Unfortunately none of the references to be cited are complete resources by themselves. Each contains portions which may be useful, however, to prospective model builders. Also, the listing is not exhaustive, but will attempt to provide coverage of some promising career exploration program practices in vocational education and counseling.

Journal Articles

1- Cook, H. E., "Vocational Guidance Materials: A Survey for Teachers," American Vocational Journal, 1968, 13, 25-28.

Materials which may be of use to planners of career exploration programs are listed in this article. Of specific interest are the following:

Curriculum Units, Robert L. Frank, University of Northern Iowa, had graduate students in an NDEA Institute develop curriculum units for grades K-12. The attempt is to provide a guide to help classroom teachers relate to the world of work through the ongoing curriculum. "The focus is placed on the human, the personal area of each job, instead of the position itself," Dr. Frank says. Materials include lesson plans, bibliographies, and lists of motion pictures and filmstrips, for all grades. This work is still in the experimental stage; however, the materials show great promise for general use and serve to illustrate the concern that educators have in providing career development materials and processes for all school children.

Countdown to the 70's, a TV series for upper elementary grades, is scheduled for the 1968-69 school year. Initial programs include health careers and careers in education. A teachers guide, vocabulary list, and glossary are among materials used to reinforce telecasts. Children's interest and knowledge, the national and local occupational outlook,

and the availability of training facilities were criteria for selection of the occupational areas to be telecast.

When I Grow Up, a 25-minute operetta by L. Lenski, with music by C. R. Bulla, can be used to advantage in grades K-3. Teachers report that it gives children the opportunity to develop an awareness of the different work-roles, and in some instances, improves their self-concept. One teacher adapts it to her class no matter what its size. Carpenter, nurse, fisherman, clown, soldier, cowboy, and farmer are the occupations portrayed.

2- Hansen, L. S. Theory into practice: a practitioner looks at career guidance in the school curriculum. The Vocational Guidance Quarterly, 1967, 16, 97-103.

A framework for school personnel on which to build career guidance programs is presented in this article. Selected career exploration activities were presented.

3- McDaniels, C. Youth: too young to choose? The Vocational Guidance Quarterly, 1968, 16, 242-249.

The author raises the question about youth being too young to choose. His answer is that youth are not too young and much should be done in the school to encourage career development.

4- Purcel, David J., and Klaurens, M., "The Guidance Objective in Industrial Arts," American Vocational Journal, 1968, 43, 17-18.

This article discusses techniques for integrating career development concepts into the industrial arts program to provide meaningful exploratory experiences for youth. It suggests that industrial arts should provide students with opportunities to (1) evaluate their interests, abilities, values, needs, and other personal characteristics as they relate to occupational roles; (2) explore the psychological meaning of work and its value in the human experience; (3) explore broad occupational areas in terms of opportunities, potential satisfactions, required roles of workers, and other related considerations; (4) develop an awareness that the individual's role in work is tied to the well-being of the community; (5) exhibit planning ability in striving to achieve occupational goals and objectives; and (6) develop the concept that they are productive persons in a work-centered society. To accomplish this, the article suggests a number of techniques which could be used to help students appraise themselves and the world around them.

5- Smith, E. D., "Innovative Ideas in Vocational Guidance," American Vocational Journal, 1968, 13, 19-22.

The author summarizes a number of programs which have implications for career explorations programs. Among them are:

Career Development Activities for Grades 5, 6, and 7. Abington School District, Abington, Pennsylvania; Elmore E. Pogar, Director

The guidance department of this southeastern Pennsylvania school district initiated a project designed to develop learning experiences and guidance techniques in the area of career choice which could be implemented through the existing curriculum and guidance program.

Working from the assumption that the school is a potent force for the student in terms of his untimate choice of a career, they designed activities that would provide meaningful learning experiences for the student and at the same time focus on some of the heretofore nebulous aspects of the career choice process.

After a review of the literature in the area of career development, three themes (interest, change, values) were selected and one was assigned to each grade level, as follows:

Grade 5: How Our interest Developed and Their Importance in Our Lives.
Grade 6: Changes That Are Taking Place, Decisions Which Are Made, and How They Affect Our Lives.
Grade 7: Our Values--How They Influence Our Decisions and Our Lives.

The themes provided the focus for the activities of each grade but were not necessarily a limiting activities (a card game, an interest inventory, a two-act play, a simulated panel discussion, tapes, skits and roleplaying situations) were developed for each theme.

Perhaps the most striking feature of this endeavor was the ability of the project personnel to identity a specific need--a viable program of activities in the vocational aspects of guidance for children in the intermediate grades--then successfully bridge the gap between research and the application of research findings. The active student involvement and the joint efforts by teachers and counselors are other significant features of the Abington project.

Project PACE (Preparing, Aspiring, Career Exploration), Dayton City School District; William H. Goff, Director.

The PACE Project was implemented during the 1966-67 school year to determine if measureable increments in occupational choice could be achieved in predetermined situations at three grade levels in two elementary schools with socio-economically different student populations. A secondary purpose of this project was to develop, for future elementary-school counselors, a role model having a developmental framework instead of a problem-centered orientation.

The program plan was developed by two counselors for the three grade levels (second, fourth and sixth) in each of the elementary schools. All available resource materials were assembled and a teaching outline was written prior to the beginning of the more formal aspects of classroom work.

The instructional plan for each school and each grade level was implemented in three different ways in an effort to determine the effectiveness of the various approaches. The research design called for three experimental groups and one control group. The measured effectiveness of each group--the teacher-only group, the counselor-only group and the teacher-counselor group--was then analyzed.

Project PACE was continued for a second year on an experimental basis. After thr thorough evaluation now underway is completed, a curriculum guide of activities designed to enhance the vocational awareness of students will be prepared for use by teachers and counselors in the elementary schools of Dayton.

Books

1- Adams, J. F. (Ed.), Understanding adolescence. Boston: Allyn and Bacon, Inc. 1968.

This book contains several excellent papers on adolescense including a chapter by Henry Borow on "The Adolescent in a World of Work."

2- Amos, W. E. and Grambs, J. D. (Ed.), Counseling the Disadvantaged Youth. Englewood Cliffs, New Jersey: Prentice-Hall, Inc. 1968.

A number of excellent papers are contained in this volume. Several in particular focus on the relationship of disadvantaged youth to the work world.

3- Gilbert, H. G., Children study American Industry. Dubuque, Iowa: William C. Brown Company, 1966.

The purpose of this resource book is to aid elementary school teachers in directing learning activities that involve the tools, machines, materials, and processes of industry.

4- Hill, G. E. and Luckey, E. B., Guidance for Children in Elementary Schools. New York: Appleton-Century-Crafts, 1969.

Chapter 10 in this book is an excellent source for concepts and ideas concerning career exploration programs in elementary schools. An excellent bibliography of related books and resource materials completes the chapter.

5- Norris, W., Occupational Information in the Elementary School. Chicago: Science Research Associated, 1963.

This book contains lists, books and pamphlets, films, recordings, poems, and songs which can be used in the elementary grades. Suggested lesson plans also are provided.

6- Scobey, M. M., Teaching Children About Technology. Bloomington, Illinois: McKnight and McKnight, 1968.

Part I of this book presents a philosophical background concerning the field of industrial arts. Part II examines the characteristics of American industry. This examination is organized in terms of human activities. Part III offers suggestions to help a teacher provide curriculum related experiences.

7- Tennyson, W. W., Soldahl, T. A., and Mueller, C., The Teacher's Role in Career Development. Washington, D. C. National Vocational Guidance Association, 1965.

This booklet is addressed to teachers as a guide to their work in developing and teaching units on the world of work.

Eric Documents

ED 016268
Barbula, P. M., Isaac, Stephen W. Career Simulation for Adolescent Pupils. Final Report.
San Diego County Dept. of Education, California.

The purpose of this study was to assess student acquisition of knowledge about vocations after participation in a career simulation game and to determine attitudinal change toward vocational concepts. Data was collected through a pre-test and a post-test. A sample of sixth- and eight-grade students was drawn for the treatment and the control groups.

The treatment groups participated in the career simulation game while the control groups received the usual curriculum program. No statistically significant differences were found between the groups on a 10-item questionnaire on vocational insightfulness. A general trend to increase hours of study on the post-tests was evident for the treatment groups, although no statistically significant patterns were found. The negative results may be due to insenitive instrumentation. The investigators believe that further developmental work is indicated to explore simulation as a method of teaching career development principles to adolescents.

ED 012 934
Goff, William and others. Project P.A.C.E. (Preparing, Aspiring, Career Exploration).
Dayton City School District, Ohio.

Certified school counselors were assigned to two elementary schools to develop, use and test vocational and occupational materials. Aspiration levels of students in one class each in the second, fourth, and sixth grades in each school were also explored and related to occupational potential. Methods of using occupational materials effectively were also tested, pre- and post-tests were given to assess pupil knowledge of occupations. Achievement and ability measures were obtained early in the school year. Questionnaires were given to teachers and parents of children in the experimental groups. Some findings were--(1) the students assimilated vocational and occupational information, (2) older elementary students exhibited greater vocational awareness, (3) changes in level of aspiration as a function of learning potential were not differentiated between the experimental and control groups, (4) the Dictionary of Occupational Titles was used successfully by the counselor and older elementary student, and (5) parents and teachers were enthusiastic about the program.

ED 016 265
Krumboltz, John D. Vocational Problem-Solving Experiences for Stimulating Career Exploration and Interest, Phase II. Mid-Project Report, December 1, 1966-April 30, 1967.
Stanford University, California School of Education.

New occupational career kits are designed to provide realistic occupational experiences in the fields of appliance repair, law enforcement work, and electronics. The work involved in developing and testing each kit is delineated. The two major experiments designed to test hypotheses about the optimal use of these kits are described. The first experiment investigates the effect of occupational simulation materials of three levels of difficulty on students

of three levels of ability and differing occupational interests. For the second experiment, specific ways were tested of tailoring occupational problem-solving materials to the preferences and interests of the individuals.

ED 015 517
Krumboltz, John D. and others
Vocational Problem-Solving Experiences for Stimulating Career Exploration and Interest. Final Report. Stanford University, California, School of Education.

To motivate interest in career exploration, five sets of job simulation materials were developed and tested for accounting, X-ray technology, medical laboratory technology, sales, and banking. Each "Career Kit" presented problems representative of each occupation and the background information needed to guarantee that most subjuect could solve them. Hypotheses comparing problem-solving approaches with alternative approaches were tested in three studies. It was concluded that--(1) problem-solving "Career Kits" consistently produced more interest and more occupational information seeking than control treatments, and (2) subjects from lower socio-economic schools consistently gave more positive reactions than subjects from middle-class schools, particularly in response to the problem-solving materials.

ED 013 456
Leonard, George E.
Developmental Career Guidance in Action, the First Year. Wayne State University, Detroit, Michigan

The Developmental Career Guidance in Action (DCGA) project sought to (1) broaden and raise the educational-occupational levels of aspiration of a selected group of Detroit inner-city public school students, (2) develop a pilot program to better meet their needs through emphasis of developmental educational-occupation career guidance in grades one through 12, and (3) to involve the staffs of the participating schools in the program through cooperative planning and development. In phase 1, 40 representatives from the schools met with resource personnel to discuss economic and social trends, visited industry, colleges, and community agencies, discussed ways of improving education, and developed plans for program improvement. In phase 2, a three-person team was placed in each school to work with the school staff, the community, and the students to carry out a program meeting program objectives. Results indicate that the level of student aspiration increased. Students showed more growth in regard to occupational knowledge and planning, re-examined their value structure, showed a more acceptable attitude toward counselors, and perceived

a greater need for professional help. The project was evaluated by Dr. Charles Morris who concluded that the idea and strategy for implementation of DCGA had made "a significant contribution to the young people in the project schools."

ED 013 318
Morrison, Edward J., Lecznar, William B.
Development and Evaluation of an Experimental Curriculum for the New Quincy (Mass.) Vocational-Technical School, the Sequencing of Learning Units. Seventh Quarterly Technical Report.
American Institute for Research in Behavioral Sciences
Report No. BR-5-0009
Public Date 31 Dec. 1966

The principal goal of project able is to Demonstrate the increased effectiveness of instruction where the content is derived from an analysis of desired behavior after graduation. It also attempts to apply newly developed educational technology to the design, conduct, and evaluation of vocational education. This report considers the problem of selecting sequences for learning units so that students acquire the desired performance capabilities systematically and efficiently. Section one reviews a plan which allows students to qualify for successively higher-level jobs and provides a series of points at which students may leave the curriculum in accordance with their capabilities and needs. Section two discusses an analytic procedure for deriving learning structures, first described by R. M. Gagne. It provides an analysis of the kinds of performance capabilities which must be acquired, rather than an analysis of subject-matter logic. Section three reviews the major factors affecting a sequence through the exercise of available sequence options and by the addition, repetition, and deletion of units from the sequence. The final section of the report concerns empirical test and revision of the initial sequence design.

ED 010 624
Norris, Eleanor L. Sherman, Vivian S.
Source Data on Perceptions of Parents and Children Regarding Career Planning. Planning and Develoment of Research Programs in Selected areas of Vocational Education, Volume II.
American Institute for Research in Behavioral Sciences.

Responses to a questionnaire developed to gather data on plans, attitudes, interests, and aspirations of students and parents relevant to career planning were presented. The questionnaire was administered to 404 boys and girls (grades 6, 8, 10, and 12) and their parents. The gathered

data were compared to show the influence of parents on their children's career thinking and the agreement and disagreement between parents and children on a number of items related to vocational planning. High agreement was found between parents and children on questions dealing with the need or desire for parental help and involvement. Conversely, low agreement was found on several items which required concrete information about the child's career and educational plans and about attributes of the child which suit him for a particular occupation. There was also little agreement about persons and events which influence the child in his career thinking. The implications of attitudes of parents and children toward some educational-vocational related concepts were discussed.

ED 010 626
Guidance Curriculum for Increased Self-Understanding and Motivation for Career Planning. Planning and Development of Research Programs in Selected Areas of Vocational Education Volume III, Appendix
By Shermen, Vivian S.
American Institute for Reaserch in Behavioral Sciences

Experimental meterials that were developed for the vocational guidance of junior high school students were presented in this appendix to ED 010 625. These materials were planned to enable students to thoroughly and systematically explore their own self-perceptions, attitudes, personal values, achievement, abilities, and diverse career possibilities. Development of the materials was guided by the hope that they would enable the students to emerge from learning experiences with clearer conceptions of who they are and where they are going. Sample student work sheets, questionnaires, and reading and writing materials were included for all lessons. The questionnaire responses of approximately 100 boys and girls (grades 6, 8, 10 and 12) were presented in graph form to allow students using these study materials to look at the career plans and attitudes of a sample of their peers while simultaneously viewing and evaluating their own. Although developed for use with junior high school students, the author suggested the materials were also suitable for use by students in the upper elementary grades or at the senior high school level. Included with the materials were teaching guidelines and evaluation sheets for a recommended followup evaluation of the empirical effects of the curriculum materials. Related reports are ED 010 623 through ED 010 625

ED 020 554
Sherman, Vivian S.
Trial and Testing of an Experimental Guidance Curriculum. Final Report.

American Institute for Research in Behavioral Sciences

Innovative vocational guidance curriculum materials were designed to increase self-understanding and motivation relative to career exploration and planning. These materials stemmed originally from a survey of attitudes and planning relative to career development in the Palo Alto Unified School District. The research data was used as curriculum content, focusing upon the self as a crucial variable in career motivation. Detailed background on the material is given in Section I. Section II describes the setting, design, methods employed for teacher orientation, instruments, scoring procedures, rater reliability for handlingsubjective data, testing procedures and problems, and method of analysis. Though some statistically significant results emerged as evidence that the curriculum experience did have some desired effects, certain limitations lead to the conclusion that, in effect, the materials in their present form have not been adequately tested. Other finding, such as sex differences and some grade interactions, tended to suggest directions for curriculum innovation, educational practices, and further research. These are discussed in detail in connection with each significant variable in Section III. Section IV includes a brief overview of the statistical results and their implications for educational practices and curriculum development, specific consideration of the instruments used, and general research recommendations.

ED 012 939
Varenhorst, Barbara
Information Regarding the Use of Information Regarding the Use of the Life Career Game in the Palo Alto Unified School District Guidance Program

A program to teach decision-making skills to ninth and 11th grade students using local research data, visual aids, and other materials was undertaken. In group guidance sessions, these problems were discovered--(1) some decisions are never consciously made, (2) the emotional bases of decisions are not considered, (3) many students avoid making decisions because they fear lasting consequences, and (4) provisions for practice in decision-making are needed. To alleviate some of these problems, the life career game developed by Boocock and Coleman, was employed. Using two groups comprised of 10 and 18 students respectively, teams of two students were formed. Each team planned a fictitious student's life for 20 years, including education, occupation, family life and leisure time. Teams competed for the highest number of points in the game. The games were successful because they provided motivation and involvement, illustrated future factual realities, and led to discussion.

Since the game meets some needs which were lacking in group guidance sessions, it can be used in conjunction with the sessions. Plans call for its extended use in the high schools as well as implementation in junior high schools.

ED 014 119
Wilson, Eugene H.
A Task Oriented Course in Decision-Making. Information System for Vocational Decisions, Project Report Number 7. Harvard University, Cambridge, Mass.

A course in decision-making, built around the Tiedemen-O'Hara Paradigm, was taught at a junior high school to test materials. The three essential aspects of teaching decision-making are--(1) learning the language of the decision-making process, (2) practicing decision-making while under supervision, and (3) formulating criteria for a decision. A booklet, "You, the Decider," containing relevant theory, activities, tasks, and cases resulting in explicit criteria for choice was given to students. Weekly workshops for teachers were held six weeks before the course began. A sharing of competencies by research personnel, counselors, and teachers took place at the workshops, which were continued through four weeks of actual teaching. Resource materials included the "Occupational Outlook Handbook" andKatz's "You, Today and Tomorrow." Results of the evaluation of the course are not presented, although a definite research program has been designed. A copy of "You, the Decider" and various evaluation instruments are included.

Computer Based Systems

TITLE: Development of a System of Vocational Exploration through the use of the Dictionary of Occupation Titles (Third Edition) and the Ohio Vocational Interest Survey

INVESTIGATORS: Ayres D'Costa, David W. Winefordner, John G. Odgers

LOCATION: Division of Guidance and Testing, Ohio Department of Education, 751 Northwest Boulevard, Columbus, Ohio 43212

FUNDING: Ohio Department of Education and Harcourt, Brace and World, Inc.

COOPERATING AGENCIES: Harcourt, Brace & World, Inc.; Division of Vocational Education, Ohio Department of Education; and selected Ohio and Florida schools.

WORKING PAPERS: Yes

PROJECT FORMULATION DATE: January, 1966

COMPLETION DATE: December, 1968

OBJECTIVES: To provide a system for vocational exploration and work orientation based upon the Dictionary of Occupational Titles (Third Edition) and the Ohio Vocational Interest Survey. More specifically to: - enable students to use the D. O. T. in a practical vocational decision making process; - provide indexes of strength and clarity of interests in the areas of the world of work as defined by the Cubistic Model of Vocational Interests and the Ohio Vocational Interest Survey; - provide a framework for orienting students to clusters of jobs with similar involvement of data, people, things and other job characteristics such as interests, temperaments, and aptitudes as provided by the D. O. T.; and - to enable students to achieve a useful level of self-insight in relation to the basic elements of the world of work-data, people and things.

AREA AND USERS: Nationally for grades 8 through 12.

TITLE: Project PLAN

INVESTIGATOR: John C. Flanagan

LOCATION: American Institutes for Research, Palo Alto, Calif.

FUNDING: Westinghouse Learning Corporation, American Institutes for Research, U. S. Office of Education, cooperating school systems.

WORKING PAPERS: Yes

PROJECT FORMULATION DATE: 1967

COMPLETION DATE: 1970

OBJECTIVES: To create a modular individualized computer assisted program for learning in accordance with needs.

The Guidance and Individual Planning Division of Project PLAN has a responsibility for orienting students to Project PLAN, its philosophy and system of operation, to inform the child regarding the world of work, leisure and citizenship, to help him in his formulation of his educational, vocational and life goals, to ascertain and counsel with him regarding the nature of his developed abilities and the implications of those abilities for his chosen goals, to assist him in the

development of plans to attain those goals and in the acquisition of skills in self-management so that he might be more independent in the pursuit of those plans and to assist him in the continual reappraisal of the goals he has set for himself in the light of the progress patterns he is manifesting.

AREA AND USERS: Elementary and Secondary Schools

TITLE: The Communication in Guidance project

INVESTIGATOR: Ann M. Martin

LOCATION: Indiana State University, Terre Haute, Indiana

FUNDING: U. S. Office of Education through 1967.

COOPERATING AGENCIES: Indiana State University, New York State Education Department, Bureau of Research, and cooperating school districts.

WORKING PAPERS ABAILABLE: Yes

PROJECT FORMULATION DATE: 1966

COMPLETION DATE: Work is ongoing but materials are available now.

OBJECTIVES: The development of a multi-media educational method to motivate students to understand and think about themselves and how to cope with their educational, and later, work problems and environment. Specifically: to communicate guidance concepts to students through image and sound in a manner that stimulates students to relate the elements in the communication to their own existing personal knowledge and experience; to stimulate and reinforce an awareness in the student of a rational and logical course of action to enable him to achieve a beneficial and satisgying adult and work life; to increase the oral language ability of students, their ability to learn about their environment through verbal exchange and interchange, and their ability to engage in prolonged verbal contact with others to establish their own point of view; and to increase the student's ability to integrate other points of view that differ from his own into his thinking about himself, his educational and later work problems and environment. Motivational audiovisual "slice of life" material will be presented via the appropriate media, e.g., 16mm film. Upon presentation of the "slice of life" film, each student discusses, preferable before the group his reaction to the elements

of the audiovisual stimulus materials as it relates to his own experience. The verbal exchange and interchange is guided by the instructor to include those guidance concepts presented by the "slice of life" film. A manual and guide for professionals will include easily understood discussion of the guidance concepts presented by the elements of the "slice of life" material and the kinds of responses to be expected from the students. The student will tape record his discussion and remarks so that at a leter date he may review his original responses and compare them on an objective basis with the responses of other individualy in the group, or his own response made at a later period in time to the same or similar stimulating media. Further objective evaluation will be obtained by administering a written evaluation to each individual the items of which are directed to measure specific behavioral elements stimulated in the individual by the audiovisual presentations. Supplementary materials for students and teachers will be developed.

AREA AND USERS: Secondary schools throughout the country.

TITLE: Rochester Career Guidance Project (A Multi-medium Support System for Career and Educational Planning)

INVESTIGATOR: David B. Youst

LOCATION: Rochester City Schools, 13 Fitzhugh Street South, Rochester, New York, 14614 Phone (716) 454-5360

FUNDING: New York State Education Department Bureau of Guidance; Eastmen Kodak Co. - Research Laboratory; New York State Employment Service; and Rochester City Schools

COOPERATING AGENCIES: All of the above plus Industrial Management Council, Junior Chamber of Commerce, and Rochester Council of Scientific Societies

WORKING PAPERS AVAILABLE: Yes

PROJECT FORMULATION DATE: September, 1967

COMPLETION DATE: June, 1969

OBJECTIVES: To allow and encourage access to currently available Career Guidance information; to develop new materials in visual and auditory form and to provide role models; to develop a systematic approach to Career Guidance in schools.

Project has developed a microfilm file and has computer managed data files. Also has produced visual studies of people in careers and in cooperating in the development of a multi-occupations laboratory which combines an information center with an experience center using "real" equipment and tools.

RECENT PUBLICATIONS: Burnham, R., Johnson, D., and Youst, D., Youst, David B., "The Rochester Career Guidance Project." Educational Technology, March, 1969. Some applications of educational media in a multi-medium support system for educational and career planning in Walter Lifton (Ed.), Educating for Tomorrow: The Role of Media, Schools, & Society. Wiley (In press). APGA Detroit Convention Abstracts, 1968.

AREA AND USERS: As meterials become available the Rochester City School System, the N.Y.S. Employment Service in Rochester, and local employers will be the prime users. However, almost all materials will have broad applications. A new Junior High School is the target population for field testing during the 1968-69 school year.

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OCCUPATIONAL GUIDANCE, COUNSELING, AND JOB PLACEMENT FOR JUNIOR HIGH AND SECONDARY SCHOOL YOUTH

Gene Bottoms
Associate State Director
Division of Vocational Education
Georgia State Department of Education

Kenneth B. Matheny
Georgia State College

For large numbers of American youth the public school system represents a maze of meaningless activity leading nowhere. They fail to see any relationship between their current school experience and some identifiable next step beyond school. Such a view is especially common to the large percent who do not continue on to higher education. It is the position of this paper that education at any level should be evaluated in terms of the extent to which students are prepared for, and are assisted in taking, the next step. While it may be argued that the liberalizing effects of an academy education is the best possible preparation in a period where rapid change is the order of the day, nevertheless, it is all too clear to work-bound youth that there is little direct relationship between such preparation and the next step for them; ergo, the high drop-out rate and the lethargic complacency of large numbers of failing youth.

The complexities of modern society have rendered obsolete the socialization process through which many individuals in the past move from childhood to the world of work. The prolonged period of dependency required of today's youth by certification requirements and union regulations exacebates the feeling of uselessness and alienation which many experience as a result of their school experiences. Many youth have limited contacts with work role models from which they might pattern their behavior and aspirations. With the passing of the guilds farm work, or small businesses within the home the sight of formal work has become farther and farther removed from the lives of modern youth. Perhaps the school is the single most appropriate agency for systematically exposing youth to broad vistas of the world of work. It is contended that such a systematic effort offers a promising tack for bridging what many youth see as a "credibility gap" between the announced purposes and the actual purposes of public education.

Since work is the next step for nearly 60 percent of the nation's youth, this transition is too important to be left to "chance." Activities provided by the school to facilitate the student's transition to the next step must be more than a simple matching of student with employer. Each student must be assisted in gaining those skills, attitudes, and understandings which will aid him in locating the most appropriate job. The school must assume responsibility for assisting a student in the clarification of his goals; providing him with knowledge about the labor market; helping him in evaluating his qualifications and abilities in terms of job opportunities; assisting him in developing the flexibility needed for adjusting to a fluctuating society; and, for many students, special assistance in adjusting to and retaining a job. Assisting each individual in making the best possible transition will require a total school effort on a fully organized basis. The focus in this paper will be on the development of systematic and sequential guidance experiences for junior and senior high school students with primary emphasis on non-college bound students. Focusing on these students was not to deny the need for improving the guidance program for other youth. Rather, our intent was to take a narrow focus in order to gain greater perspective regarding ways of meeting needs of these youth. The need for such a narrowing of focus was indicated by Congress in Section 141 (Exemplary Programs and Projects) of Vocational Education Amendments of 1968. "The Congress finds that it is necessary to reduce the continuing seriously high level of youth unemployment by developing means for giving the same kind of attention as is now given to the college preparation needs of those young persons who go on to college, to the job preparation needs of two out of three of these young persons who end their education at or before completion of the secondary level, too many of whom face long and bitter months of job hunting or marginal work after leaving school."

This paper will be developed by first presenting certain general principles which must be considered in the guidance needs of students and secondly, by presenting a capsule description of different models for assisting these youth.

GENERAL PRINCIPLES

First, the guidance point of view must permeate the total school environment. Guidance must not be viewed as a function performed within the confines of the counselor's office. Rather it must be viewed as a vital force permeating the environment, valued and nourished by the entire school staff. Anything short of a total school committment is likely to prove inadequate in providing meaningful, individualized experiences for students with varying interests and abilities. The further recruitment of counselors unaccustomed and ill-equipped to enlist the total school and community in the guidance effort is likely to prove disappointing.

The goals of guidance are sufficiently broad and expansive to preclude their accomplishment by any single worker however well trained. Such goals frequently include: (a) helping the student to view himself as a worthwhile person; (b) assisting the student to experience success in his own eyes; (c) assisting the school in providing meaningful experiences for all students; (d) helping the student to consider, understand, and either accept or reject the values of a work oriented society; (e) assisting the student to develop an understanding and appreciation of his own talents and interests; (f) helping the student to make appropriate choices from the widest possible range of alternatives available; (g) helping the student to formulate plans for implementing decisions which he has made and, (h) helping the student to accept personal responsibility for such decisions. Any casual persual of such goals suggests the absolute necessity of enlisting the active support of personnel both within and without the school for their attainment. The herculean nature of the task is further compounded by the sagging self-concepts of slum children, the limited range of experiences, work and otherwise, available to minority groups and students in rural areas, and the increasingly crowded conditions within urban schools.

Secondly, a greater use must be made of simulated or direct work experiences as a means of assisting students to "experience" work roles. Traditional, vicarious, approaches via printed material, audio-visual aids, etc., are of themselves inadequate. Once the student has a work "experience" it will be much easier for him to assess the suitability of such a work role for himself. From this base of experience the student could more easily predict the suitability of jobs which offer similar satisfactions, and from this understanding, he could identify the type of education needed to obtain a particular job.

Third, a merger of the concrete simulated or direct work experiences provided in vocational and practical arts education with the process techniques of counseling offers a strategy for improving the students' self-understanding. It cannot be assumed that such experiences will be automatically internalized and contribute to a more adequate perception of oneself in terms of the world of work. Not only do youth need appropriate information and experiences, but attention must also be given to the individual's capacity to receive, process, and use information in an insightful manner. Too often counselors have failed to realize the frame of reference such experiences provide students as a basis for meaningful counseling. Guidance and vocational education must be merged if the full value of such experiences is to be realized by the student. A team approach involving the counselor and other teachers, partiularly the industrial arts teacher and the work experience co-ordinator, offers great potential for enhancing the career development of students. While the emphasis of this paper is upon vocational experiences, it should not be overlooked that students

also need many other varieties of life experiences. Seen in this broader context, the work of the counselor involves prescribing experience of various kinds, expediting their availability, and helping the student to derive personal meaning from them.

School counselors must develop strategies for making use of school and community resources in promoting the career development of students. The counselor's role must include the roles of a catalyst, organizer, and coordinator of all those resources that could be brought to bear upon the career development of youth. Too often, however, the traditional training of counselors has focused so narrowly upon the one-to-one relationships as to neglect knowledges and skills for utilizing school and community resources.

Fifth, experiences to promote career development for youth must be sequentially organized. Such an effort cannot be a one-shot approach that takes place at the junior high level. It is too late when the student reaches the point of making the transition from school to work. Career development should be conceived of as a pyramid offering a broad base of exploratory experiences at the elementary and junior high school levels and gradually narrowing to a decision point as the student approaches his next step beyond school. Assistance provided the work-bound youth must be as highly developed as that provided the college-bound since immediate alternatives available to work-bound youth are perhaps broader and more complex. Furthermore, assistance must be extended to such youth beyond the point at which they leave the school (Wrenn, 1962). Many youngsters will need special assistance in maintaining their employment while others will need special assistance in moving up the career ladder beyond the dead-end entry level jobs.

Sixth, school experiences must become more meaningful to students. The curriculum must be psychologically organized as well as logically organized, i.e. subject matter fields must be viewed horizontally with respect to other subject matter areas so as to promote meaningful generalizations. One approach would be to structure much of the curriculum around career development as a theme. There are many other experiences, such as recreational or social, that could also be called upon to promote student motivation.

Seventh, counselors need more of the training of vocational educators, and vocational educators need more of the training of counselors. Vocational guidance in the schools suffers because school counselors possessing interpersonal skills lack first hand knowledge of the world of work and vocational teachers with first hand knowledge of the world of work lack interpersonal skills. The missing dimension so often in vocational education is sophisticated guidance skills helpful in enabling students to personalize their work experiences.

The current training of counselors, on the other hand, places too little stress on first hand work experience. Before counselors prescribe work exploration for students, they, themselves, should seek to broaden their knowledge of the world of work. Unfortunately, either the student selection process or the "press" of the training program tends to produce counselor education students who devalue the importance of work experience. One way around this dilemma might be a common core of training to be provided some counselors and vocational teachers.

GUIDANCE MODELS

Students in junior and senior high schools are in what Super (1963) has referred to as the Exploratory Stage. Vocatinnal exploratory behavior refers "to activities, mental or physical, undertaken with the more or less conscious purpose of hope of eliciting information about oneself or one's environment, or of unifying or arriving at a basis for a conclusion or hypothesis which will aid one in choosing, preparing for, entering, adjusting to, or progressing in an occupation" (Jordan, 1963, p.59). Super breaks the exploratory stage into three substages: (a) tentative, (b) transition, and (c) trial. During the tentative substage the individual is expected to begin to formulate ideas as to fields and levels of work which are appropriate for himself and occupational concepts which will enable him, if necessary, to make tentative choices, that is, to commit himself to a type of education or training which will lead him toward some partially specified occupation (Super, 1963, p.82). The transition substage is one of specification of a vocational preference. The individual is expected to convert a generalized choice into a specific choice and to make a final committment by embarking upon the trial substage through specialized educational and training programs or by taking a beginning job designed to serve as an entry to a chosen field (Super, 1963, p.82). The trial substage is the implementation of a vocational preference. It is at this substage that the individual makes the transition from general education to specialized education or training, from school or college to employment, and is expected to convert his specified vocational preference into a reality(Super, 1963, p.83).

The objectives of the school should be to assist all youth to move successfully through the exploratory stage to enter what is considered to be an appropriate field of work for them. In order to better understand those strategies which the school might need to employ in order to insure that <u>all</u> students will move smoothly through the exploratory stage and into the gainful employment one should be reminded that the duration of each substage is dependent upon the point at which the student leaves the school. (see Illustration I): Whereas, the strategy most typically employed by the school was designed for,

and is appropriate to, the needs of college-bound students, the school has almost entirely overlooked the differing needs of early school leavers. Since the substages of the Exploration Stage are greatly compressed for such students, the school cannot afford the leisurely pace with which it typically moves students through these experiences.

Furthermore, the achievement level of many of these students terminating at high school graduation is from two to four grade levels under their actual grade placement. They experience grave difficulties in a school setting where most learning experiences are of an abstract nature, and thus they have little motivation for traditional school learning. Most of the extra curricular activities of the school are not designed for these students. Too often the school, with its emphasis on the abstract learning task, deferred gratifications, and middle class extra curricular activities, has failed to provide for these students a setting in which they might acquire a positive identity and some sense of control over their destinies. Moreover, such youth are forced to retreat from the school to find meaning.

For terminal students the school must provide a structured sequence of activities designed to move these students through the substages more rapidly in order to gain greater perspective, suggested models will be examined at each of the following levels: junior high (7,8, and9); middle high school (9, 10, and 11); upper high school (11 and 12).

Junior High School Level (grades 7, 8, and 9)

The junior high school should provide activities and experiences which would enhance greatly both the quality and scope of self-understanding in relation to the world of work. While the increasing complexities of modern living suggest the desirability of the school strengthening its holding power upon early school leavers, the school should recognize that in spite of all of its efforts, some students will leave prematurely. For such students the school must devise strategies for compressing experiences normally offered students over a period of several years into a one or two year period. Thus the experiences provided the terminal student at this level must include the acquisition of the basic habits of industry and the assistance needed to enter and adjust to some type of job. For the college-bound youth, the intent of the program at this level is not to force the student to commit himself to an educational and occupational choice, but rather to acquire the basis upon which future educational and occupational decisions can be made. For other continuing students, the intent becomes one of assisting them to move into the transition substage so that they can explore a particular area in greater depth. In other words, the program enables the student to

narrow down his next step. For example, for some students this might include distinguishing between business curriculum, industrial arts or agriculture. Well planned experiences for such youth can contribute significantly to the students regarding the following six dimensions of career development:

(1) Evaluating Self-Characteristics: Experiences provided students would include those designed to assist them in evaluating their interests, abilities, values, and needs as they relate to occupational roles.

(2) Exploring Broad Occupational Areas: Students would be assisted in seeing the broad array of occupations available and the potential satisfaction of different work roles.

(3) Appreciating the economic and social values of work: Students would be assisted in recognizing the economic and social values that different forms of work have in our society.

(4) Appreciating the psychological and sociological meaning of work: Students would be instructed in the personal and social significance of work. They would see work as a way of adding meaning to the lives of most persons and as a way of gaining many social rewards.

(5) Recognizing appropriate educational avenues: Students would be helped to see the relationship between educational avenues and career opportunities.

(6) Practicing decision making skills: Students would be instructed in the proper manner of making decisions. Opportunities for decision making with group review should be provided. Students would be shown how to locate available resources.

The following are examples of different models for accomplishing the above mentioned guidance goals at the junior high school level for both terminal and continuing students.

I. Program of Education and Career Exploration (PECE)

A program of education and career exploration (PECE) is to be initiated in the fall of 1969 in twenty Georgia High Schools. One may note some similarity between this model and the old occupational course. However, Hoyt (1969) identified several factors contributing to the demise of such past efforts which include: (a) an approach that only provided experiences of a vicarious nature and a telling-teaching technique; (b) lack of teacher preparation: (c) lack of clear understanding regarding expected outcomes; (d) lack of commitment regarding the importance of the course; and (e) inadequate materials. In this model several steps are being taken to avaid making the same mistakes. Some of these follow.

The content and activities of the TECE program are to be organized around work roles. Using Roe's (1956) occupational classification system, occupations will be divided into six categories of interest which are to some extent arranged in a continum from an oreintation of working with people to working with things. The six major occupational groupings are: (a) service (b) business (c) organizational (d) expressing ideas (e) outdoors (f) technology.

Secondly, students will be provided an opportunity for simulated or direct work experience in each of the six occupational groupings. this way students will gain first-hand knowledge of the world of work; they will experience the smells, sounds, and sights of the working environment as well as the pride that comes from a finished product. How much better this experiential learning is outdated form of the printed page! From this base of experience it will be much easier for students to predict their own suitability for similar types of jobs and more easily.

Thirdly, after students have experience a particular work role in one of the six areas, organized group sessions will follow the purpose of assisting them in examining that particular work role in terms of the six different dimensions of career development. The six different dimensions as has been shown earlier include:

(1) Self-understanding
(2) Decision making
(3) Other related work roles
(4) Educational avenues
(5) Psychological and sociological meaning of work
(6) Economic and social values of work

Such group sessions would enable students to focus on questions such as: How did I feel about myself while involved in the work role? What are other jobs in our society that might provide similar satisfaction? What are the different decisions one would have to make in order to enter a particular job? What value does the work role under question have economically as well as socially to our society? What educatinnal avenues could prepare one for a particular job? The actual experience of participating in a work role would offer a springboard from which a student could assess himself in relation to the dimensions of career development. This process would be repeated each time the student experienced a work role. Such an approach enables the content of such a course to be integrated around a particular work role. It offers a vehicle for integrating the different dimensions of career development around a core of concrete experiences rather than the traditional approach of taking each dimension of career development as a separate entity within itself. Thus is does provide for a spiral of ever-increasing understanding of the self in relation to work.

Fourthly, seven educational television programs will be prepared and shown statewide at three different periods of time for the purpose of supplementing this program. Each program will deal with one of the occupational groupings previously identified. They will show examples of jobs at various levels within these groupings. These films will be purposefully structured to communicate certain concepts and understandings to students. For each of the seven films there will be six follow-up group guidance units, one for each of the six different dimensions of career development.

Fifthly, the well developed interpersonal skills of counselors as well as a keen understanding of the world of work are direly needed for the success of this program. To insure that coordinators will have a minimum of these skills and understandings, they will be required to attend a nine week, summer training session that well simulate those experiences to be required of students during the following year. It is not at all presently clear just what the eventual training program of such persons should be. A concerted effort will be made to identify those skills, knowledges, and understandings which prove most helpful, and recommendations will be offered to training instititions.

II The Full-time Counselor Who Conducts and Coordinates an Exploratory Program in Grades 7, 8, and 9

In this model the counselor utilizes both personal contact with students and environmental manipulation for the purpose of promoting the career development of youth. Not only would the counselor organize a systematic and developmental program of individual and gourp activities with students in grades 7, 8, and 9, but he would also serve as a catalyst, organizer, and coordinator in planning a systematic and developmental program of activities utilizing teachers, the curriculum, peer groups, clubs, and community resources for the purpose of promoting career development. This program would need to be planned in such a way that the activities of all those involved are being directed toward common goals. Maximizing the use of direct and indirect approaches for promoting career development may require counselor education programs to place as much emphasis on environmental strategies as is now being placed on one-to-one counseling. This model was developed as part of the national conference held during the summer of 1969 at West Gerogia College.

It was suggested at the conference that the data, people, thing conceptual framework (D.O.T., 1965) as the basis for students relating themselves to the world of work. The conference identified both knowledge and behavioral objectives for six dimensions of career development: self-understanding, work, educational avenues, economic and social value of work, decision making, and employability skills.

Activities for accomplishing each objective were identified at the 7th, 8th, and 9th grade levels. Thus, at each level the student would gain greater insight. The activities were further subdivided into those to be performed by the counselors and those activities to be performed by others.

The influence of the counselor could be multiplied many times through effective use of community and school environmental resources. Such an approach may serve to make the entire educational program meaningful for students. This approach enables the counselor to pull from the special resources that are possessed within the school and community. Furthermore, it provides flexibility in dealing with the different subpopulation within the school. (David Winefordner, 1968).

IV. Using Existing Vocational Programs for Providing Exploratory Experiences

The intent of this model is to utilize the existing vocational curriculum as a medium for providing students with exploratory experiences prior to their entrance into a particular vocational curriculum. Such experiences might be provided logically at the 7th or 8th grade levels.

In order to implement this model, a close working relationship must be initiated between the counselor and vocational teachers to insure appropriate planning and scheduling. The program should be divided into three phases: PhaseI, the orientation phase, would be conducted by the counselor and would last for approximately 10 hours. A number of vicarious experiences would be used to facilitate the student's quest of self-understanding and to intooduce him to broad areas of the world of work. In Phase II, the exploration phase, the student would rotate through each of the occupational areas and perform certain tasks for reality testing. The student will spend between 5 - 10 hours in each vocational area offered by the Phase III conducted simultaneously with Phase II, offers follow-up counseling services after each vocational experience. The student would be assisted in deciphering the meaning of his personal responses to his vocational experiences in terms of a "Goodness of Fit" test. Furthermore, he would assist in gaining additional vocational knowledge regarding occupational areas through a variety of vicarious activities.

Forsyth Program

The Forsyth Program currently conducted in Forsyth County, Georgia is similar to the Richmond Plan (1962). It represents an attempt to reconstruct the total educational environment to render it meaningful to socio-economically disadvantaged students. Such youth appear unready to benefit from the schools' abstract curricula. Furthermore, many of these youth, for a lack of adequate worker models,

have developed basic attitudes of indifference toward work. The Forsyth Plan was designed to get to these two factors. The concrete elements of a particular vocational program such as industrial arts, home economics, or agriculture is used as the core around which the basic academic curriculum (math, science and communication skills) is centered. Students are placed in work stations either within the school or outside the school, and the experiences obtained by the student within the work setting and those enountered within the school are used as the basis for daily group counseling sessions. The group counseling sessions are conducted by an Educational and Work Experience Coordinator who also places and supervises students in their work stations and coordinates the activities of those teachers assigned to work with students enrolled in the project.

The major focus of the Forsyth Program has been upon grades 7, 8, and 9. The State of Georgia plans to initiate ten such pilot programs for the coming year. A special training program containing elements from vocational education, general education, and counselor education would appear necessary for training the Education and Work Experience Coordinator. (Bottoms and Reynolds, 1969).

Middle High School (Grades 9, 10, 11)

Grades 9, 10, and 11 represent the highest concentration of school exodus prior to high school graduation. The school during these grades should provide appropriate opportunities for allowing students to explore in greater depth those areas of interest for the purpose of enabling students to convert a generalized choice into a specific choice. The school must provide the range of experiences and activities necessary to aid students in the clarification and further differentiation of an area so that a specific choice can be made. This exposure should be at such depth that students are exposed to the content, tools, settings, products, or services of a particular occupational field as well as to the range of opprotunities available to enable students to further differentiate choices available within the area. The experiences provided during this level should be designed to further increase student's understandings regarding the six different dimensions of career development previously identified.

For the college-bound youth the transition substage may extend itself through two to four years of college. For students considering post-secondary vocational-technical education they may remain in the transition substage until their senior year of high school. For the continuing students who may terminate their education upon the completion of high school, the transition substage should provide an opprotunity to explore in greater depth occupational areas that they feel might be more appropriate for them. Such programs sould enable students to acquire a clearer perception of themselves in different

work roles within an occupational grouping and enable them to select a specialized education or training program for employment upon completion of high school. The experiences provided during the transition substage for terminal students should be of such depth that they acquire certain elementary skills that would make them employable at some level.

I. Maximizing the Use of Industr al Arts in Career Development

It is proposed that the induatrial arts curriculum provide a vehicle, a frame of reference, a base of experience through which students are able to gain greater self-understanding in relation to manufacturing occupations provided they are given an opprotunity for appropriate reflection. The industrial arts curriculum is diversified and offers a variety of experiences in an organized laboratory. Students are provided with basic exploratory experiences in using many of the tools, materials, processes, and products of major industries. Thus the nature of the industrial arts curriculum offering is such that it provides an opportunity for students to try themselves out in a variety of simulated work roles. To maximize the use of such experiences of career development,time must be provided for the student to examine the experience in terms of the several dimensions of career development. This could be accomplished through a team approach involving the counselor and industrial arts teacher. To implement this model would require the identification of acitivities to be performed by the counselor for the industrial arts teacher as well as specific follow-up activities the counselor will perform with students must be spelled out. The contact with role models and working environments should prove especially helpful to youth handicapped by their attitudes toward work as a result of unfortunate models presented by their parents.

Upper High School (Grades 11 and 12)

Students who terminate their education upon completion of high school must be provided with the assistance necessary for making a successful implementation of their vocational preference. The fact that one objective is to continue to reduce the proportion of students who leave the secondary school for work rather than continuing post-secondary education does not lessen the need for an appropriate job placement program for terminal students regardless of the point of departure from school - be it at high school graduation, before, or after.

Guidance programs for non-college-bound youth should primarily be concerned with assisting the student to make a satisfactory transition from school to work or to a post high school training program. There are two primary objectives of a job poacement program: First,

of appropriate attitudes and skills for making a successful transition to the world of work; and second, the development of a placement service whereby students and employers are brought together. The first objective is one to which the total school must contribute. The effort must begin upon the student's entrance into the school. The point at which the student makes the transition from school to work is often too late for the school to substantially contribute to this objective.

The second objective, development of a vehicle,should be attacked with the same degree of intensity with which counselors help place students in college. Accomplishment of this objective could result in appropriate changes within the school to better acoomplish the first objective. Imagine the effect of having 25 employers entering a school to intreview students for jobs. Would this not suggest to students that the school is the best place to be in our society in order to get a job? Would it not help teachers to better appreciate the non-college-bound students? Would it not couse teachers and administrators to review the appropriateness of much of the school's program for the neglected majority? The entire secondary school program is typically geared to college-bound youth. This can be clearly seen in the following practices of the school:

First, the students have been reminded onstantly that mastering certain curriculum experiences is necessary in order to get into college. Why can't the same relationship be built between the school and work? Would this not be meaningful to the terminal student?

Secondly, the counselor usually has an in-depth knowledge about the college their students are most likely to attend, and they spend many hours assisting students to study the pros and cons of different colleges. Would not the same be required in order for a counselor to do an effective job in assisting students in making the transition from school to work? The counselor must have similar knowledge of businesses and industries which the students may enter, and he must assist them in examining the pros and cons of each in relationship to the student's abilities and interests.

Thirdly, volumes of college catalogues are available which provide information on entrance procedures, requirements and options available within the college, etc. Why not develop profiles of major businesses and industries within a given region to provide the student with detailed information about entrance requirements, slariess, and procedures for job offered by these concerns. Through the years, we have ha occupational information. Most have recognized its limited usefulness of current occupational information in helping students make specific decisions about their entrance into the world of work. When compared to the college materials, it falls far short of

assisting youth in making detailed plans for job entrance. The SOS models developed by Hoyt (1966) offer an excellent example of ways in which such information on businesses and industry can be collected.

Fourth, college-bound students are assisted in making every decision involved in entering college: completing the application form, taking the College Boards, being interviewed by the college admissions officer, etc. Should we not also provide the student who plans to enter work with such needed assistance? Surely we can determine ways of providing work-bound students with such detailed assistance. They are probably more in need of it than the college-bound since the maze of business and industrial oppurtunities available today must appear extremely fuzzy when viewed from the perspective youth who have never been in the world of work.

To assume that a single high school counselor can develop and implement a full-fledged job placement program without some outside resources and assistance is but a dream. There must be some central staff or agency which cuts across two or more schools that could provide supportive services needed to enable a given school to implement an effective job placement program. It may be possible for the employment service to play a major role here. In most instances, they have not seen fit to perform such a role.

For those youth who plan to continue their education in a post-secondary institition the 11th and 12th grade should continue to assist them in deciding upon a specific choice to pursue. Unlike colleges, post-secondary vocational-technical schools require the student to have a firm choice upon entrance.

Three models for upper high school are presented: job placement, remedial experiences for those who reach the implementation phase without appropriate background, and a model dealing with articulation between secondary and post-secondary vocational-technical schools.

I. A Model for Entry Job Placement and Follow Through For a Single School or Multiple Schools

The job placement models are based on the belief that the school has the responsibility for assisting each youth in preparing and successfully implementing his plans for the post school years. It is essential that the school accept this repoonsibility for the work-bound youth with the same vigor and energy it has exhibited for the college-bound youth. Just think what it might mean to a group of students to know in reality that the school is the mest place to be in order to get a job! It seems that there is no better way of illustrating this than to assist each student to obtaining appropriate employment.

The implementation of a job placement and follow-through program within a single school may be impossible within the existing framework and resources of most schools. To do so would require reorganization of the thinking of the currently employed staff to become oriented to job placement of the students in their charge. It is suggested that a cooperative job placement strategy be initiated, one in which teachers and guidance specialists share in the responsibilities for providing an organized and systematic job placement program. The teachers provide experiences and activities designed to enable students to develop attitudes needed to enter and adjust to the work world, while the guidance specialist coordinates the total job placement effort, provides teachers with resources and consultative assistance, and provides the student with counseling and other assistance as needed. Three sequential steps are suggested for the job placement program: first, preparation for entrance into the world of work which includes assessments of one's own desires, abilities, etc., and the acquisition of knowledge about occupations and what is expected of a person in a work setting. Second, locating and accepting a job which includes making plans for moving from school to work and in implementing plans as well as contacting potential employers. Third, follow through personal contact and counseling for students once they are placed on a job to assist them in retaining the job in establishing plans for moving up the job ladder. The third step is seen as being significant for many students, particularly for the culturally deprived, for not only do they need assistance in obtaining a job but they also need assistance in retaining the job.

The model for a job placement service for a multiple system that might cut across several systems differs from the model for a single only in that a central coordinator and resource office would be established. The functions performed by such an office would have as their major purpose increasing the potential of local school staffs to adequately conduct an effective job placement program with responsibility for job placement remaining within the school. This office would function as a service and resource center to the surrounding schools for the purposes of (a) gathering and disseminating information about job openings, (b) conducting broad job promotions, (c) doing job clearance, (d) conducting follow-up and evaluation studies, and (e) providing in-service training for staff development. The staff for such a central office could be under the direction of a board of education or under the department of labor. The model is based on the belief that it is virtually impossible for a single school to employ the staff necessary to acquire resources necessary for an effective placement program. This concept has considerable merit for rural areas because several school systems could be served

by a central office. (Georgia has an example of a statewide job placement system for post-secondary vocational-technical schools; also Cleveland, Ohio, has a city wide job placement program.)

II. Learning, Earning Educational Program LEEP

One of the major problems confronting education is the need to develop a remedial approach to serve those youth who separate themselves from school without the necessary skills for obtaining and maintaining a job. The LEEP program was initiated in Georgia as a short-term program for those youth:

--who have been conditioned by ten to twelve years of failure in a public education system;

--who have been confronted with educational experiences which seem irrelevant in terms of the kind of world in which he finds himself;

--who have been conditioned to believe that only certain types of work are worthwhile, and that the kind of work which he seems destined is not within the acceptable categories;

--who have been led to believe that they really can't learn and that they really have no control over their destiny; and

--who have been exposed for the most part to inadequate work models.

There are many such youth in our society today who reach the point of transition from school to work without appropriate behavioral patterns. For these students, job placement cannot end upon placement in a job. Such students will need continuous support and counseling for a period of time to develop the behavior patterns necessary for adjusting to a job. With such a continuous contact with students, it is possible for the counselor to assist them in seeing the possible career ladders existing in the area in which he is employed, and to foresee how he could plan to re-enter appropriate educational avenues to move up the career ladder. As long as 35 per cent of our youth never complete high school in this country, concentrated programs at the point of transition will be a must.

There are, no doubt, many approaches for assisting such youth. I would like to describe one briefly. A short-term

program has been iniated in four post-secondary area vocational-technical schools in Georgia. A counselor-type has been employed as the LEEP coordinator with responsibility for the recruitment of students, for providing group counseling, for coordinating other phases of the educational programs, and for locating, placing, and maintaining students on the job. The educational phase lasts for eight weeks and consists of three aspects: (a) basic education, (b) group counseling and (c) general vocational training in a career area. Two hours a day is devoted to each phase. This program has as its motto, "nobody fails". During the first week students are assisted in establishing goals capable of being achieved within an hour, thus providing for immediate success. The program stresses the building of confidence through a cariety of approaches. At the end of eight weeks students are placed in entry-level jobs or enroll in the on-going vocational program. The key to the success of the program is the coordinator. He must have strong commitments and concerns for these individuals. Seventy-five percent of these students enroll only after one or more personal contact by the coordinator.

Georgia initiated four such pilot programs this past fall and plans to extend the number to ten for the coming year. This addition will enable us to serve approximately 600 individuals next year at a cost of less than $300 per enrollee. In the four pilot programs this year, over 80 percent have completed the program and over 80 percent of those placed in jobs are still working. Several decided to attend school full-time. The LEEP program represents an excellent example of how counselors can be deployed in new ways to attack the problems of select groups.

III. Establishing Formalized Procedures for Entering Post-Secondary Vocational-Technical Schools

Vocational educators must devise means through which students can make and implement long-range plans for enrolling in a vocational school or program just as other students are able to do for college. Slocum and Bowler (1967) found that students were far more certain of their desire to obtain vocational education than they were about making specific plans for reaching this goal. Could the above disparity result in part from the failure of vocational educators to devise and advertise procedures through which students can enroll in vocational-technical programs? A few years ago I was confronted by a group of high school counselors who charged that it was easier for a student to enroll in college than in a

vocational-technical school. This incident clearly indicated to me the importance of formalized procedures for entrance into vocational-technical programs. Vocational programs at both the secondary and post-secondary levels should develop admission procedures that enable the high school counselor to provide potential vocational students with the same assistance in planning for their next step as he now provides the college-bound. For example, the post-secondary vocational school that processes applications in October for acceptance in September is more likely to encourage students to make concrete plans for the vocational schools early than are those schools which become concerned about September enrollments in August. Such a procedure enables prospective students to approach the vocational school with more pride in their vocational choices (Bottoms, 1968).

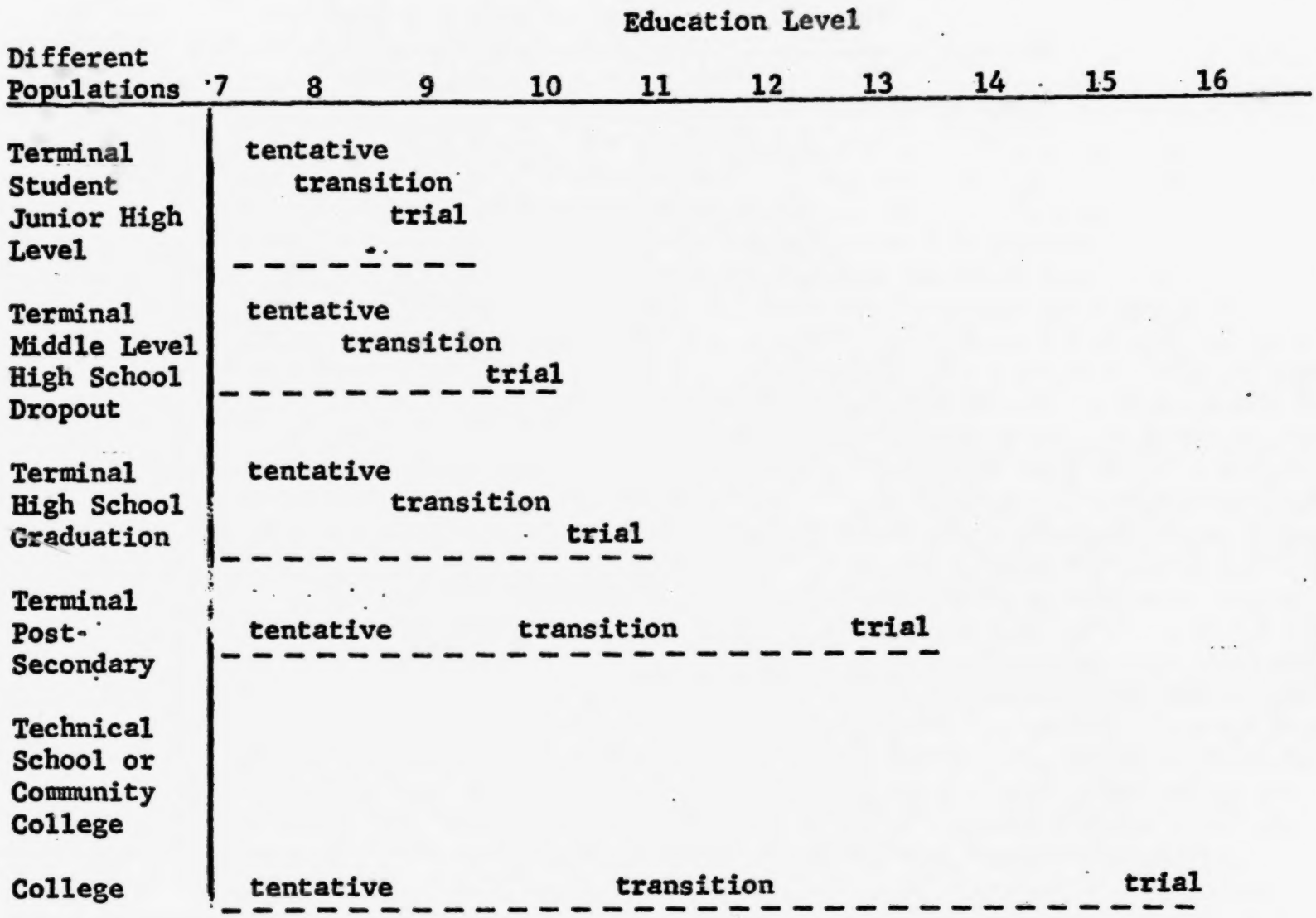
The Educational Testing Service and College Entrance Examination Board and developing and validating a test battery that can be used to predict student success in the different offerings of the vocational-technical schools. College-bound high school students have available to them more predictive information in regard to their chances of success in college than do their counterparts who plan to enroll in technical programs. Secondary school counselors and guidance personnel in technical schools have been handicapped by a lack of information concerning reliable predictors of success in vocational-technical schools. When this test battery is completed, local vocational schools could have it administered in the high schools in a manner similar to the manner in which the College Board is presently administered. While some high school students were prepared to take the College Board, others would prepare to take the Vocational-Technical Boards.

Summary

The schools must not neglect the need of work-bound students for proper guidance any longer. It must organize its responsibility for offering an interesting, meaningful, and useful set of experiences for all students. Furthermore, it must accept the responsibility for helping all students to take the next step beyond high school in the smoothest possible manner. Work-bound students have been groosly neglected by guidance personnel. More adequate guidance programs will involve: (1) efforts to render the curriculum more meaningful; (2) the arranging of work (and perhaps other types of) experiences

accompanied by group counseling sessions whereby students are better enable to understand themselves through experencing work roles; and (3) the provision of job placement services and continued counseling to enable the new worker to maintain his employment and set reasonable goals for career development. Several models for delivering such services were suggested in this paper.

Illustrations of the Exploratory
Stages for Different Populations
by Educational Level



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WORK-EXPERIENCE EDUCATIONAL PROGRAMS FOR SECONDARY YOUTH

George W. Burchill, Ed. D.

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WORK EXPERIENCE EDUCATIONAL PROGRAMS FOR SECONDARY YOUTH

Americans, despite the evidence of sometimes marked turmoil in our society during recent years, share many common values and concerns. One of these values is the importance of educating the young. Social, economic, and racial differences notwithstanding, we unite in recognizing the importance of providing educational opportunities and experiences for our children. While the goal of providing educational opportunities for youth is a universally recognized one, agreement on the equally important objective of providing young people with appropriate educational experiences, which will insure their development into competent, productive adulthood, is attained only with great difficulty. Views regarding this goal's achievement vary as much as individuals differ one from another. Educators are not exempt from the dilemma. Agreement in identifying experiences and in accepting strategies necessary to implement the learning derived from the experiences is perhaps more difficult to attain from educators than it is from any other group. We recognize only that opportunities must be provided and that these opportunities must be as diverse as are individuals. The abundance of psychological research in recent years into human development and learning differences concentrates different perspectives on little more than the common acceptance of the need for variety.

In directing concern to the difficulties of providing educational opportunities and experiences for young people, it is necessary first of all to recognize the population. Who do we educate in our American system of education? Limiting attention to the junior and senior high school age groups, general categories can be noted: the small "academically able" youth, the very large "middle group", the "educably handicapped" classification, and, finally, the group that has received such national attention in recent years--the "alienated" young people. Without attempting to define with precision the differences that exist between these major groupings, it is appropriate to consider some of the educational experiences that all of these students require in their growth toward adulthood in today's world.

The attainment of adulthood is not an easy one in Space-Age American society. Fifty years ago in this country, youth achieved adulthood via the path to work. Boys prepared for vocations in a primarily agricultural society. Girls

prepared for the work of homemaker, motherhood and, many times, co-worker on the family farm. In such a setting, the sequence of steps toward these goals was recognizeable. Young people progressed as they achieved the developmental levels toward independence and maturity identified by Havighurst as necessary to adult adjustment. Also identifeable were the psychological career development stages researched by Super and others. Youth attained maturity as they moved from childhood fantasy through vocational reality testing and on to the vocational maintenance stage in the community and work structure of their era. How much more complex is today's world for young people! In a growing urban society, beset with the advantages and ills that evolve from industrial, technological and knowledge expansion, adolescents develop in a fluid society. The acquisition and development of an adequate self-concept is not an easy task for today's teenagers--witness their appeals for assistance reflected in rebellion, drug experimentation and law defiance.

Adult society, although slow in reacting at times, is becoming increasingly cognizant of youth's plight. Unfortunately, initial concern was in many instances prompted by the "acting out" of young people. During the last decade the rate of delinquency among the country's youth has increased alarmingly. In 1957, the number of juvenile delinquency court cases was double that reported in 1948. More than 600,000 juvenile offenses were serious enough to require court action. They involved approximately half a million individual young people, or almost 2.3 per cent of all children living in the United States in the ten-to-seventeen-year age group.[1] In the decade that has passed, delinquency has increased even more. There is hardly a community in the United States that does not admit its concern for youth's adjustment problems in their striving for adulthood. Juvenile delinquency is one of the United States most unnecessary problems. Society has provided neither the opportunities nor the experiences required for youth to achieve adulthood in socially acceptable ways. Moreover, it is not just a reflection of urban ills. Despite its reputation as an affliction of the metropolis, delinquency is far from contained within the city limits.

Delinquency and the larger problem of youths' dilemma in a world they do not understand, and which does not understand them, has caught the attention of numerous individuals interested in the psychological development of young people.

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1. R. L. Pertman, "Delinquency Prevention", Juvenile Delinquency, Facts and Facets, No. 4, Government Printing Office, Washington D.C., p. 3.

The phenomenan of human behavior is a fasceinating and elusive study. Continued evaluation of findings in light of changing environments and eras is mandatory. Researchers such as Erikson and Havighurst have for some years concerned themselves with adolescents' developmental patterns. Their findings indicate that much of the personality development of youth evolves through their psychological adjustment to the developmental tasks imposed upon them by society. As distorted patterns evolve in the lives of certain individuals, anti-social reactions may result. The development of the self-concept, especially during adolescent years is crucial. The reconciliation of youths' actual self-concept with the ideal vision of adulthood is difficult in a society such as ours. In addition to the pressures of society, Havighurst points out "the turmoil and conflict which accompany the adolescents crisis is further complicated by the task of achieving emotional independence of parents and other adults, making it difficult for the adolescent to rely on these older sources for guidance".[2]

All of youths' "acting out" is not delinquent behavior. Instead, as Erikson believes, adults brand as delinquent some behavior youth exhibit as they experiment with role development. Such reality testing may be very necessary for some adolescents. Unfortunately, during the process, many young people are classified by a society which is caught in the paradox of attempting to maintain order while at the same time attempting to develop perspective toward youths' adjustment stages. The response toward young people that society must adopt is a constructive attitude toward the development of our progeny and the utilization of its own resources to enable them to achieve worthy adulthood. Such a positive and constructive approach can do much to enhance the successful development of individual youth and the society.

One of the avenues being utilized to aid youngsters achieve adequate self-concepts and accomplish the developmental tasks of growth is work-education. A blend of work and study in the formal education experience of high school age students may enable young people to achieve adjustment during their adolescent development. Curriculums based on academic preparation and supervised work experience can do much to satisfy a student's need for recognition. In work study settings, they can develop feelings of individuality in roles which are satisfying to them, both in the present

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2. R. J. Havighurst, Developmental Tasks and Education, University of Chicago Press, Chicago, 1948, p. 242.

and in the future adult stations they may occupy in life. Identification with meaningful work can provide youth with the means of recognizing their individual maturity along with its responsibilities.

Various work-experience approaches exist in secondary schools in the United States. The majority of these programs are designed for the non-delinquent student. More specialized programs developed for the handicapped and the identified delinquent exist in smaller numbers. With the thesis that work education can be incorporated into the school experience of junior and senior high school students from any of the classifications noted previously, i.e. the academically elite, the average student, the educably handicapped youth and the alienated youngster, it is well to review the salient characteristics of some exemplary work-education programs researched a few years ago under a Ford Foundation grant to Phi Delta Kappa and reported in the publication, Work Study Programs for Alienated Youth: A Casebook:

Example I

SECONDARY WORK-EXPERIENCE EDUCATION PROGRAM
Santa Barbara, California

The work-education program in the city high schools of Santa Barbara is designed to give students an opportunity to try out jobs. It is a distinctive program--well organized and broad in scope.

The secondary work-education program in the Santa Barbara city schools developed from the Santa Barbara County High School Program which was started in February, 1953 to provide vocational counseling help, job placement, and work experience for the senior high school students in the co-operating schools. The needs of youth were studied by a citizens committee composed of school administrators, counselors, teachers, and private citizens. They concluded that schools should make curricular provisions to help students bridge the gap between school and work. Furthermore, they concluded that the transition of youngsters from school to work could be successful only with the co-operation of the schools, parents, students, and community residents.

A philosophy, developed by the committee to guide the establishment and development of the work-education program, stated the project's purpose: to give young people the opportunity to discover their vocational

interests while doing actual work in business, industry, and the professions. The program is also intended to help students to make better occupational choices, to gain the necessary prepartion for their chosen work, to find placement on the job, and to adjust and grow on the job.

The work-experience program, school-sponsored as part of the regular curriculum has three distinct parts: exploratory work-experience education, general work-experience education, and vocational work-experience education.

The exploratory work-experience education phase includes work done on school time. The program is designed to offer high school students an introduction to the world of work, permitting them to explore their vocational interests and discover their aptitudes through a variety of part-time jobs in industry, business, or the professions. Students are supervised by school personnel and receive school credits toward graducation, though they do not receive any pay.

The general work-experience education phase is intended to give students experience in bona fide work settings where they meet regular work standards. They work for pay and school credits, during or after school hours, on part-time jobs supervised by school authorities. Their job assignments, however, do not have to be related specifically to the careers for which they are preparing.

The vocational work-experience education phase is set up to provide students paid jobs in the field directly related to the occupation they want to enter after they leave school. It is a laboratory experience for them while they are still enrolled in school.

Each student's assignment in the program is made on the basis of a number of criteria: the student's personal desire, the coordinator's evaluation of the appropriateness of a particular work station, the parents' approval, and state regulations.

The participants range from boys and girls of sixteen years of age to college students in their early twenties. The largest group includes high school juniors and seniors. The program does not specify that pupils exhibit special characteristics other than those required

under the California Administrative Code (i.e. A pupil must have attained junior standing in high school or sixteen years of age, except those with specific authorization by the principal. Pupils with exceptional need who are fifteen years of age may be enrolled. Students must be enrolled as full-time pupils).

The administration of the program requires a close working relationship between school, state employment services, and employers. The school district employs a co-ordinator to supervise the over-all program. In addition, a full-time school co-ordinator is assigned to each of the three city high schools. He and his staff of counselors and teachers oversee the placement of students, supervises on their work stations, co-ordinates their activities with parents and employers, and reports on the progress of each student. The number of staff personnel assigned to the program varies with each school. Staff members are chosen because of their interest in the program and their ability to work with students, parents, and employers. Specific professional qualifications are not a requirement for appointment.

At all schools, monthly staff meetings are held to keep the personnel up to date on the progress of the total program. Individual school co-ordinators hold frequent district meetings to share information and to co-ordinate activities to insure a program of maximum flexibility.

The program has been evaluated thoroughly, both by outside evaluators and district personnel. Studies have been conducted by representatives from the School of Education, University of California, Los Angeles and by a Santa Barbara Youth Conference Planning Committee. The latter group concluded their evaluation of the program in positive terms:

The program has value:

To the students. Working in the adult world has given students a new feeling of "belonging". Being given responsibilities has in turn made the student accept those responsibilities in a more mature way. The young person who has "tried out" in a variety of work situations is more able to choose the career for which he is best suited and in which he can contribute the most as a citizen. The work-education program has resulted in bringing youth and adults closely together in a way that has not been possible before.

To the community. This organized approach to work-education has been received with great favor by the citizens of Santa Barbara County. Young people have demonstrated that they can be relied upon for really important work. Giving them such meaningful activity as part of the community has meant that they are less likely to get into trouble.

To the schools. The close association of school and business that resulted from work-education--school supervision, conferences between school personnel and employers and between students and co-ordinators, and work evaluation--all help the schools become aware of needed changes in the curriculum to prepare young people for the demands of the working world. The work-education program is one of the best ways for the schools to learn about rapid changes and advances in work methods and to revise educational programs in accordance with these advances.

To the future of the country. The great scientific and technical advances in the United States today have brought about the age of automation--an age in which every worker must be a specialist. Young people who have been trained in work education during their high school days will be more able to make effective contributions to the adult world when their school days are over.[3]

Example II

PREVOCATIONAL SERVICES FOR HANDICAPPED YOUTH
Champaign, Illinois

Another phase of education is necessary for those who are potentially maladjusted because of physical or mental handicaps. A program for this type of younster has flourised in Champaign. In a complete special education program within the public schools, rehabilitation is accomplished through a prevocational curriculum designed to offer the educational, vocational, and psychological support these boys and girls need to make a satisfactory transition from school to work.

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3. G. W. Burchill, Work Study Programs for Alienated Youth: A Casebook, Science Research Associates, Chicago, 1962, pp. 54-61.

Handicapped youngsters are enrolled in small, special classes where they are instructed by teachers trained to work with socially maladjusted children. In sheltered class environments, youngsters are helped to understand themselves and their social responsibilities. Those who make the social adjustment are placed on part-time work assignments in school and are supervised by school personnel. Work assignments and classwork are co-ordinated to help students appreciate the value of work and understand their obligations to others.

Children succeeding in the first stage are released from school for half-day job assignments in the community. Their adjustment is helped by co-ordinated efforts of employers, program supervisors, state rehabilitation counselors, school social workers, and special teachers.

Students who perform adequately on part-time jobs receive help from school personnel in finding regular employment when they leave school. Their successful transition from school to work is enhanced by regular follow-up visits.

The prevocational services for handicapped youth program has been developed from this philosophy:

> All youth, regardless of their intellectual, physical, social, or emotional status, need the best possible prevocational education and services to assure adequate vocational adjustment. Even more careful planning must be carried on and more intensive services must be provided the handicapped to assist them in developing their potential and in making the transition from the school to full-time employment in the community. If the school does not accept its full share of the responsibility for helping the handicapped develop the attitudes, habits, and skills necessary for good vocational adjustment; modify problems that may interfere with adequate vocational adjustment of the handicapped; and, if definite plans are not made and services not rendered to help the handicapped bridge the gap between school and full-time job placement, the handicapped are going to continue to drop out of school early and to be among the unemployed.
>
> The unemployment of the handicapped is an intolerable waste of human resources; it contributes

to a mounting financial burden to society; a fertile breeding ground for fostering the development of antisocial behavior may be the result. It is part of our cultural heritage that persons must be gainfully employed to be accepted into our society.

Prevocational education of the handicapped becomes a responsibility of the schools the first day the child enrolls. We in the Champaign school system contend that it cannot be postponed until he reaches adolescence. Prevocational education involves all those experiences which foster the acquisition of desirable attitudes, habits, skills, and knowledge necessary for effective vocational adjustment. It is an extension of, as well as an integral part of, the special services program.

From this philosophy the department of special education identified their initial objectives to be:

Development of policies and procedures to facilitate a close working relationship between the school and the Division of Vocational Rehabilitation to help handicapped pupils bridge the gap between the school and further training and/or full-time job placement in the community

Utilization of community resources that can contribute to the vocational development of the handicapped

Improvement of the prevocational curriculum for the handicapped

Formulation of a five-year plan for follow-up of handicapped youth after they leave school

Establishment of a committee to supervise the project, made up of representatives from the Illinois Division of Vocational Rehabilitation, the Champaign School Board, and the Champaign school staff

The Champaign system provides a developmental work-experience program in three categories: in-school work experience, part-time work in the community (the work-study program), and full-time employment.

In the primary grades, learning experiences in the

special classes are designed to foster the development of socially acceptable personal habits, attitudes, skills, and work habits communsurate with the capabilities of each youngster. Typical goals are: perseverance until a task is completed, efficient use of time, ability to follow directions, and ability to work both independently and with a group.

As children progress through the special education curriculum, some become identified as needing professional help to ready themselves for employment. Others not in special classes may need similar services. All such pupils are referred to the prevocational co-ordinator or the vocational counselor. Any staff person may originate such a referral.

Any child identified by school authorities as handicapped is eligible for the work-study program. Once a child has been identified, the prevocational staff oversees his case. A conference is arranged to review the appropriateness of the referral and to determine the best way to help the child.

Pupils accepted in the program undergo complete diagnostic study including medical, psychological, educational, and social appraisal. Each child's characteristics are evaluated for his placement in the work-study program and for assignment of appropriate staff members to work with him.

Handicapped pupils who can profit from work experiences outside of the special classroom are considered for assignment to the in-school work program. Levels of maturity, specific vocational assets, and personal needs are the criteria used to determine a child's readiness for such a task. Age is not a primary consideration. Some children enter the program at the age of ten, whereas others may not be ready to participate until they are teen-agers. Flexibility is stressed, beginning with the child's first assignment.

Work experience gives handicapped pupils opportunity to transfer habits and attitudes acquired in special classes to extra-classroom work situations within the school setting. Exploratory work experiences--taks performed near the students' special-class teachers--give handicapped pupils opportunities to expand their horizons and still maintain close ties with a person who can understand and help them. In this way pupils receive closer guidance and supervision than they would be likely to receive while

employed on community jobs. In this phase the prevocational co-ordinator works closely with pupils and teachers to become well acquainted with each child, so that subsequent work experiences can be planned.

In-school work assignments include: cafeteria helper, one hour a day; vending machine maintenance, one hour a week; and custodian helper, one hour a day.

When a child is assigned a school task, the child becomes the responsibility of a school employee. This person is to provide a meaningful work experience for the pupil. The staff member plays an important role in helping handicapped youth develop behavior traits necessary for successful vocational adjustment. Stressed are traits such as punctuality, acceptance of authority, acceptable personal appearance, constructive use of time, proper use and care of tools, equipment, and materials, orderly completion of tasks, and an appreciation of the value of work. Work experiences of the child and procedures used in handling him are similar to the experiences and supervision he will encounter on a job in the community. Since the in-school work is a part of the total education of youngsters involved, children do not receive any pay, though school credit is granted.

In addition to his work with individual pupils, the co-ordinator meets with groups of handicapped children in weekly group guidance sessions. These conferences help the children gain better understanding of employers' expectations. Information is imparted through group discussions, role playing, and the use of audio-visual equipment.

School representatives meet periodically with the prevocational co-ordinator to discuss problems encountered in work with the handicapped youngsters. In the beginning stages of a pupil's in-school employment, the co-ordinator meets weekly with a school representative. Later the frequency of conferences is reduced. Handicapped children on jobs are seen by the prevocational co-ordinator on a scheduled basis, at least once a month.

A handicapped child's progress on an in-school job is evaluated systematically and continuously by the school employer, the special teacher, and the prevocational co-ordinator using written reports and test results. These evaluations are kept by the co-ordinator in the prevocational offices.

In-school work experience is an abbreviated work

orientation differing from the next level--part-time work experience in the community--by the nature of the work, the length of time the student is involved, and the amount of supervision each child needs.

Pupils perform part-time work in the community under supervision of understanding employers. This entails considerable preparation by parents, pupils, and employers. The prevocational co-ordinator works closely with the vocational rehabilitation counselor in the placement of each handicapped child, aided by the Community Council on Employment of the Handicapped.

The child is prepared for his transfer to a part-time job from an in-school assignment by the co-ordinator and the vocational counselor. Assistance is offered in frequent counseling sessions with each handicapped youth. The pupil's interests and aspirations, and the counselor's understanding of the child, are the basis for selecting individual programs. Although the pupil's desire are an important consideration, the co-ordinator is responsible for final placement. He may assign youngsters to part-time jobs such as:

tray girl (hospital)	2 hours a day
housekeeper (private home)	½ day
Ditto machine operator (university)	2 hours a day
bus boy (hospital)	½ day
maintenance (private home)	½ day
sacker (grocery store)	2 hours a day
newspaper route	2 hours a day
usher (movie)	3 hours a day

Initial planning for placement of each pupil on a part-time community job is considered the most crucial element in the program. The co-ordinator counsels the employer, enabling him to acquire an accurate perception of the child he accepts as an employee.

The placement of children on community jobs does not reduce the co-ordinator's responsibilities. He holds frequent conferences with parents, teachers, and employers, the number depending on the child and on the problems arising in the child's adjustment to part-time work. Special services needed by a child at any time in his progress may be identified by anyone working with him and these services must be provided by the co-ordinator.

The co-ordinator also helps co-operating employers accord handicapped youngsters the same consideration given to any employee. Building respect for the individual does not mean preferential handling of the children. Instead,

the co-ordinator helps work supervisors understand that permitting handicapped youth to "get by" either in performing a job or in behavior is not helpful. The success of subsequent full-time employment of these young people depends on whether or not their tryout experience is successful. Consequently, employers are accustomed to expect handicapped children to comply with regular employee standards. The only aspect of the child's job experience that might set him apart from his fellow employees is that the employer may understand him better than the other workers.

Since handicapped youth on part-time jobs are paid by employers, overseers inform the co-ordinator when work fails to meet expectations. The difficulties facing a child in adjusting to a work situation structure the co-ordinator's action. A child may be counseled by the co-ordinator or the employer, referred to the vocational rehabilitation counselor, transferred to another assignment, or returned to the special classroom.

As in the in-school work-experience phase, continuous evaluation is made of pupil progress both in school and on the community job. Special evaluation forms are filed with the co-ordinator by teachers and employers. To complete records, the prevocational co-ordinator accumulates relevant information obtained from interviews with employers, school personnel, handicapped youth, and parents, and shares the information with the vocational rehabilitation counselor. When a child leaves school, either through graduation or as a dropout, the vocational rehabilitation counselor assumes responsibility for the vocational placement of the child.

Handicapped children who have progressed satisfactorily on community jobs are not abandoned when they leave school. Most of the pupils are helped to obtain full-time employment. Others benefit from a comprehensive evaluation by the vocational rehabilitation counselor as a final determination of their vocational potential. He reviews cases to evaluate students' in-school and part-time work achievement and may administer achievement and vocational aptitude tests. A number of handicapped pupils interested in further training are sent to trade schools. Others having the intellectual ability and the desire to continue academic study may be counseled toward college entrance. When youngsters attain this level, the Division of Vocational Rehabilitation handles their cases.

The Community Council on Employment of the Handicapped is most helpful when children are ready for full-time placement. Members identify employers and jobs for candidates, carrying out this task as another segment of their interpretation of the program to the community.

A systematic follow-up of handicapped youth is an integral part of the prevocational service and is a joint responsibility of the vocational rehabilitation counselor and the prevocational co-ordinator. They interview former pupils and their employers several times during the first year. Though the number of contacts depends on how well the former students adjust, a minimum of four contacts are made the first year and at least two are made annually for the next five years. The follow-up information available in the prevocational co-ordinator's office helps the staff evaluate the curriculum and improve the program.

Example III

CO-OPERATIVE SCHOOL-HOSPITAL EDUCATION PROGRAM
Cranston, Rhode Island

Cranston High School's Co-operative School-Hospital Education Program prepares non-college-bound girls for post-high-school employment as nurse's aides, ward secretaries, and medical secretaries. This is an excellent example of how a school can utilize a community resource to offer some of its young people a work-study program. The program's typical yearly enrollment is twenty to twenty-five students, senior girls exploring and learning nonprofessional-level vocations in hospital settings. Some are good students with definite vocational goals. Others use their experiences to explore medical vocations. Still others are potential dropouts who see the worth of continued education in a practical work-study curriculum. Some of these girls are alienated. They are helped to explore the adult vocational world while learning acceptable work habits and an appreciation of their civic responsibilities.

In the one-year program, students alternate two-week periods of class attendance with two-week periods of work in local hospitals. Each girl receives a certificate and a diploma when she completes the program.

School and hospital representatives planned a definite

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4. Ibid., pp. 88-101.

program built on the philosophy of using job assignments in hospitals to provide boys and girls with an opportunity to experience responsibilities of work. The job assignments were arranged to permit young people to explore hospital-related vocations while studying appropriate school subjects. These objectives were determined:

To introduce students to jobs related to medicine.

To help students gain a better appreciation of the functions of hospitals and of the way in which they might contribute their individual skills to institutions performing these functions.

To prepare and encourage students to enter hospital-related vocations after high school graducation by teaching them the pracical skills necessary for particular occupations in the hospital.

To provide a school curriculum closely related to the work the students would be performing in the hospitals.

The program provides students with an overall orientation to vocations associated with hospitals and specific training for three jobs: nurse's aide, ward secretary, and medical secretary.

Senior students interested in vocational opportunities in hospital work and having at least 57 points toward graduation are eligible to participate after obtaining parental consent. Although boys have not taken advantage of the program, they are elibible. Though the maximum enrollment is forty, usually twenty to twenty-five girls participate each year.

Student applications are reviewed by the co-ordinator or assistant co-ordinator, who appraises school records and confers with teachers and parents to determine whether hospital work is an appropriate experience for the interested students. College-bound pupils are discouraged from entering the program unless they have established definite vocational objectives that would be furthered by the course content.

The class is divided into two sections to permit rotation of students in the work-study plan. While one group works in the hospitals, the other group attends classes for school credit. Academic work is in four areas: English, science, home economics, and social studies.

The English course, taught in a double period, includes the regular senior-year material and units designed especially for work-study students. Medical terminology, report writing, and vocabulary development are stressed. Material is introduced as an integral part of the work experience. The sequence of subject presentation parallels the girls' work progress.

Science includes units on arithmetic review, the metric system, principles of first aid, common diseases, fundamentals of physiology, and an introduction to basic pharmacology.

Home economics covers these units: grooming, health and personality, patients' needs, medical records and charts, food and nutrition, mental health, principles of art, expenses of illness, spiritual needs of patients, and the nurse as a person.

The social studies course deals with the fundamental concepts and skills, attitudes and resultant ideals, and appreciations that all citizens of a democracy should acquire. Besides regular classroom work and discussions, teachers and students take field trips. To round out the program, various speakers address the class on religious dietary laws, the clergy's visits to hospitals, ethics of the nurse, community services, and juvenile delinquency.

Girls working as nurse's aides wear a uniform with a circular patch on the left shoulder identifying them as program participants. Each fall, when a new group of girls begin their hospital training, a special school assembly is held to recognize their entrance into the program. At this time each pupil receives her patch in a ceremony not unlike the traditional capping of beginning student nurses in many hospital training programs. The uniforms worn by the girls are provided by the hospitals, but each youngster must provide her own hospital-type shoes and a wrist watch with a sweep second hand similar to those worn by registered nurses. Girls working in hospital offices wear regular clothing.

While the girls are on their jobs, they receive a weekly stipend from the hospital. At the large hospital, each student receives $15 a week. At the small one, girls receive $12.50 a week and their lunches.

On completion of the senior year, girls who have earned sufficient credits for graduation receive a regular

high school diploma. In addition, they are granted a certificate identifying the work-study program completed. The certificate carries the course title, since the school also offers a retailing work-study program and an experimental co-operative business education program.

The courses in the program are taught by the regular school faculty. Since the girls are grouped into two sections, the general school curriculum is not disrupted. The supervisor co-ordinates job assignments and schoolwork, informing teachers of the students' experiences on their job assignments and informing hospital authorities of the girls' class activities.

The students' hospital training is supervised by registered nurses or hospital personnel officers, depending on whether the youngsters are assigned as aides or as office workers. While in the hospital phase, students are introduced by supervisors to all the job opportunities available in the institution. In addition, a supervisor oversees each student's work to assure acquisition of skills necessary to perform a particular task. A student on a work assignment is required to complete a program identical with the one expected of an adult trained by the hospital personnel. At both participating hospitals, for example, nurse's aides receive twelve weeks of varied work experience. Cranston students' hospital work assignments are for a twenty-week period.

The co-ordinator visits the hospitals frequently to confer with staff members regarding the students' progress. Meetings are regularly held throughout the school year.

Evaluation of the Cranston program consists of annual follow-ups of graduates. Results of the surveys are most encouraging regarding both graduates' vocational success and job stability. Unfortunately, enrollment in the program has decreased somewhat during the past two years. School officials speculate that the affluency evident in our society prompts many young people to by-pass training such as that available in the program. Administrators and counselors plan to devote renewed emphasis to the program during the next school year. They hope to raise the interest of more of their students, especially the boys who have been reluctant to take advantage of this work-education opportunity.[5]

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5. Ibid., pp. 117-121.

Example IV

WORK-STUDY PROGRAM TO PREVENT JUVENILE DELINQUENCY
Kansas City, Missouri

The Kansas City work-study program differs somewhat from the other cases in this report. It is unique because it is an experimental project designed specifically for children fitting the definition of alienated youth.

The program was started in September 1961 after two years of preliminary planning by a committee composed of Kansas City school personnel, civic leaders, representatives of a mental health foundation, and the consultant, Dr. Robert J. Havighurst. Interest in the experiment has been nationwide. Representatives of school work-study programs from many parts of the country contributed ideas to the committee and participated in a related workshop conducted by the Kansas City schools in August 1961. The interest of nonschool groups is evidenced by the financial support granted the experiment by the Ford Foundation. This philanthropic organization is sharing the cost of the project with the Kansas City Board of Education.

Two hundred boys were selected for the experiment from the 1960-61 seventh-grade classes of the four junior high schools participating in the program. They were chosen because they had exhibited the behavior characteristics of alienated youth. Two hundred more were selected in 1961-62, making a total of four hundred boys, which was split into an experimental group and a control group. Half of the boys in the former category started the school-work program in September 1961. Those in the control group were not removed from the regular educational program. As the experiment progressed, the boys in both groups were studied and their progress contrasted to determine the influence of the main variable in their school experience--the work-study program--and the behavior of the experimental boys compared with the behavior of the boys in the control group.

The program for the experimental group has three stages. The first is a general orientation period consisting of half-day classes and half-day group work assignments. At this level most boys are in the thirteen-to-fifteen age range. After they complete the first or second year, according to age, they enter stage two. In this stage they continue school studies on a half-day basis and spend the other half of each school day working as part-time paid employees in the community. When they

attain the age of seventeen or eighteen and have completed the first two stages, they will begin stage three--full-time employment on regular community jobs. While on such assignments, boys are to receive regular school supervision from personnel who have worked with them during the preceding four years.

The major purpose of the experiment was to create a new school-work experience for alienated youth that would offer boys a realistic and worthwhile avenue to adulthood. The objective was:

> To reduce the amount of juvenile delinquency by providing boys who are vulnerable to delinquency with a better opportunity for growth into adulthood through combining school with work experience.

The experiment was designed to test the following hypothesis:

> Boys vulnerable to delinquency will become less delinquent if they are given a systematic work experience commencing as early as age thirteen or fourteen and continuing until they reach seventeen or eighteen.

The experimental group participated in the following program:

Work-Study Stage I. This first stage, for boys aged thirteen to fifteen, consists of two parts. They perform socially useful work in and around the school for half of each day. Groups are limited to twenty-five boys and are under the supervision of a skilled worker. During the other half of the day they study an academic program geared to their level and interests.

Work-Study Stage II. The second stage is for boys from fifteen to seventeen years of age who have completed the first stage. Youngsters are placed on community jobs for half of each school day. Co-operating employers and the school employment co-ordinator supervise them on their jobs. Students continue academic classroom work during the other half of the school day. At this level the committee expects boys to drop from school. Some will terminate because they will have reached legal school-leaving age. While efforts will be made to keep them in the program, restrictions will be few and will be kept flexible. Other boys may transfer to a regular course of study. Those desiring to do so will be encouraged to make the transition, though it is not anticipated that many boys

will fall into this category. For the most part, pupils in the school-work program at this level will be boys expected to drop out of traditional curriculum.

Work-Study Stage III. Boys are eligible for this stage if they are between the ages of sixteen and eighteen and have completed stage two successfully. The employment co-ordinator-supervisor will help them find full-time employment. When they are on jobs, he will oversee their satisfactory adjustment from school to work. In accomplishing his task, the co-ordinator will check each student's progress through personal contact and through employers' evaluations. Boys officially complete the program when they reach the age of eighteen and when the supervisor has completed a final comprehensive evaluation of their competence. This step is the final one in the experiment.[6]

In the Progress Report Number Four, compiled by the Work-Study Program evaluators, the following results were summarized:

> In Group I, 87 experimental boys were distributed among five schools. In Group I, 60% of the boys were Negro and 40% were white. In the second group, a more equal racial balance was obtained.
>
> During the first three years of the program over 90% of the experimental youth in both groups had some supervised grou-work experience. About half of them had two or more years experience in working in such group-work projects. In the paid-work experience phase following group work, 79% of experimental boys in Group I and 69% in Group II were placed in a total of 508 jobs with private employers.
>
> Eighty-five percent of paid-job placements were terminated with the highest percentage of terminations due to boys being fired (26%) and boys quitting (25%). Many terminations the first year or two were also due to jobs being seasonal (19%). Boys differed in the number of jobs held and lost. A relatively smaller number (41%) accounted for 70% of all placements made and terminated. Youth also varied widely in the amount of time spent in paid work. In Group I, half of the boys have had over 10 months of paid-work experience, one-fifth

6. Ibib., pp. 133-136.

have been employed in such work for one and one-half years or longer, and better than one-tenth have been consistently employed for periods ranging from two years to three and one-half years. In Group II, half of the boys have had seven or more months of paid-work experience with one-fifth having had a year and one-third of such experience.

The experiment in part was concerned with testing hypotheses that (given conditions existing in school at the beginning of the Work-Study Program) supervised and graded work experience beginning early in adolescence would reduce (1) early school leaving and (2) rates of delinquency among experimental youth in the program.

The results show that while the rate of dropping our for experimental youth was reduced somewhat over that of their controls during the first two years of the program, it was accelerated following the end of the three-year Work-Study school program. This was anticipated since it was at this point that experimental boys were to be assisted by the employment co-ordinator in making the transition from school to full-time employment. It was not anticipated that many control group youth would continue in school past the 10th grade. However, 50% of the boys in control Group I and 56% of the boys in control Group II remained in school in May 1966. This was considerably greater than expected.

In terms of reducing delinquency it appears that in the first two years of the program there was actually an increase of delinquency among experimental boys. A study of this phenomenon reveals that experimental groups were comprised of both serious delinquent and non-delinquent youth from the beginning and that a kind of contagion effect within experimental groups, i.e., delinquent youth influencing non-delinquent youth, was occurring. However, the incidence of delinquency among experimental boys was minimal when they were employed in paid jobs. When the factor of experimental groups being more highly weighted with serviously delinquent youth from the onset is controlled, differences between experimental and control groups in rates of delinquency are minimal.

Within the experimental groups several adjustment subgroups have been identified. One of these is

comprised of approximately one-fifth of experimental youth for whom the Work-Study Program appears to have been particularly valuable. These youth appear to be making very adequate progress in their work-role development. Another subgroup, comprised of about one-fourth of experimental youth, appears to be making progress in work-role development but at a somewhat slower rate while another subgroup of about 20% of boys seems oriented toward school with work playing a secondary role. The remaining group of boys appear apathetic and disinterested in school and work or seriously socially maladjusted, having experienced one or more periods of confinement in institutions for delinquency.

Several factors appear likely involved in some of the findings presented in this progress report. There is some indication that conditions and attitudes existing at the beginning of the program facilitating dropping out of school among this group were undergoing change during the program's operation. In interviews with both experimental and control group boys and their parents at various times during the program, there was an increasing emphasis upon need for high school education expressed which seemed to reflect the theme being presented by radio, television and the press at the time. Experimental youth seemed somewhat less influenced by this kind of social pressure since they saw alternatives to unsuccessful school experience such as being helped to find a full-time job once they terminated school. However, almost 70% of experimental boys did make one or more attempt to continue in school in regular programs following completion of the 10th grade Work-Study Program. For most, the transition from the Work-Study curriculum to the regular program was very difficult. Additionally, there was some confusion and uncertainty concerning grade placement for experimental boys returning to regular school programs and questions concerning the units of credit which should be assigned Work-Study. Most experimental youth were unsuccessful in regular programs, quickly discouraged, and soon dropped out of school. However, in Group I, 25% and in Group II, 42% of experimental youth were in regular school programs as of May 1966, a considerably higher number than was anticipated. Several of these youth are showing considerable progress.

While control group youth tend to remain in school longer than had been anticipated, many of them

appear to be having difficulty. In April 1966, 48% of control group boys still in school were identified as among the three poorest adjusted boys in their classrooms by teachers who were not aware that these were control group boys. Thus, while boys appear to be staying longer in school, many of them do no appear to be making progress in this setting. In assessing differences between control and experimental youth it has become evident that parental attitudes reflected in consent and non-consent for their boys to participate in Work-Study are associated with school adjustments. The evidence suggests that boys whose parents refused to allow them to participate (control non-consents) showed much better adaptations to school than the larger control group, and particularly better than the experimental group. Also, control non-consents had much less childhood delinquency than did boys for whom parents gave their consents for enrolling in Work-Study.

Since 1961, a major part of research activity has been focused upon a systematic on-going collection of information on each individual boy screened for the program. Data collected have been of two kinds, (1) those concerned with describing behavioral outcomes relevant to the purpose of the experiment and (2) data which permit description and some assessment of the conditions, circumstances, attitudes and values associated with these behavioral adjustments and outcomes. Information of the first kind has been collected from schools, police, juvenile court files, records of employment. Information of the second kind has been collected from the boys and their parents through interviews, first at the time the boys were screened, then when they were 15½ to 16 years of age and with a final interview with the boys when they were about 17 years old. Other sources of these kinds of self-descriptive data have been various measures of self-concept, written compositions, opinion questionnaires, etc.

The interview is considered to be a primary source of information concerning the circumstances and personal orientations associated with the kinds of adaptations occurring among these youth. At present, almost 1000 sets of interviews have been collected representing two sets of parental interviews and two sets of interviews with the boys. The focus of

research is now shifting from data collection to data analysis.[7]

A final comprehensive report on this significant work-education experiment will be completed in late 1969 or early 1970.

These reported exemplary work-education programs reveal what can be done in blending vocational preparation with the educational experiences of young people--the academically elite, the middle group, the handicapped, and the alienated. These examples are representative of many successful programs operating in today's American secondary schools. Educators can use such models to institute or re-structure existing curricula. Caution, however, must prevail. Proto-types can provide useful general patterns but cannot be duplicated in entirety in different settings. Work-education programs that will result in success for the participants must evolve in creative ways from their own environments.

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7. Work-Study Program, Progress Report Number Four, Kansas City Public Schools, Kansas City, Missouri, 1967, pp. 55-58.

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NEW AND IMPROVED CAREER CENTERED CURRICULUM MODELS TO SERVE COLLEGE AND NON-COLLEGE BOUND STUDENTS, AND YOUNG WORKERS[1]

This paper will focus on examples of efforts to make the educational program more relevant for all students. Particular emphasis will be placed on programs designed to interlock the concrete experiences of vocational education with the more abstract experiences of other school disciplines.

Introduction

The programs selected for use in this paper have been chosen because they describe an attempt or show great promise of meeting a particular emphasis of the Vocational Education Act. Because of the recency of these special efforts many worthy programs have not become fully recognized and evaluations have not yet presented objective data to conclusively select curriculum models.

The Vocational Education Amendments Act of 1968 reaffirms the need established by the Vocational Education Act of 1963 to make vocational education opportunities available to all citizens in all communities that is consistent with their needs. It further recognizes that vocational preparation and retraining is literally a "cradle to grave" need. Part D--Exemplary Programs and Projects of the Act has two fundamental purposes. One purpose is to identify effective on-going programs, developed prior to this legislation which can serve as models for use in vocational education programs.

The second fundamental purpose of this part of the Act is to provide the means and stimulate interest in creating new more efficient and effective methods for providing job preparation needs.

In order to accomplish these two broad purposes it is essential that freedom must be allowed to trespass beyond traditional limitations. If vocational education is an end unto itself per se, little progress can be made in attaining the imaginative potential goals invisioned by the creators of the 1963 Vocational Education Act. The creators of this legislation were able to percieve that while vocational education was essential for developing the economic power of the nation it was not inimical to development of the ultimate potential

[1]Presented by Dr. George Champion, Director, Center for Technological Education, San Francisco State College, San Francisco, California.

of individual citizens. To the contrary, it was seen that these two adjuncts of vocational education could be greatly enhanced when programs were developed to compliment and reinforce each other.

The expanded function of Vocational Education: Through present legislation vocational education must serve two broad purposes. The first is to be responsive to the talents and skills required by business and industry. The second purpose is in developing human resources so that every individual has the opportunity for developing and utilizing his optimum capacities.

It is no longer possible to speak sensibly of education as being compartmentalized into general or academic and vocational components. This costly division in American education has on the one hand, produced high school graduates without even the basic language and mathematics skills required to function in the workaday world and, on the other, has pushed 40% of all children out before completion of high school.

American education has long professed to recognizing two basic needs common to all people. First, it recognizes the need for basic general education required to participate fully as a socially responsible citizen. Secondly, it recognizes the need for each person to possess those specialized skills and knowledges required for economic productivity.

For too long these two basic needs have been separate programs within the curriculum. Through such separation both suffer. Special or occupational preparation is almost invariably considered lesser than or inferior to general or academic preparation, and for many students general preparation loses much of its meaning when he sees no practical application for the information.

Programs should be planned to avoid this artificial separation and fuse them together so that each serves to compliment and reinforce the importance of the other.

Vocational Education for all: If the premise is accepted that vocational education is a need for all persons and must be available in terms of their own needs, it is, therefore logical to assume that the career development component of the curriculum must be greatly expanded. Opportunities for career development must be established to encompass the interest and ability range of all. Programs must be planned which are appropriate in terms of age, ability, interest, and other special circumstance.

The scope of such a challenge extends beyond the educational system. Educational and community leadership is required to cope with the dynamic challenges of preparing youth and adults to function at an optimum level in a complex and rapidly changing technological age.

A totally functional system of education depends upon the full utilization of all community resources. These include business and industry, public and private agencies, and public and private institutions. The system must provide a linkage between the many community resources affected by or affecting the educational process and provide the means for immediate and continuous interaction. The system must also be devised to bring the community resources to the educational process, but also provide these same resources to individuals as their needs may demand

New Directions

The 1963 Vocational Education Act mandated new programs to meet new needs and to serve new purposes. Emphasis of the Act was focused upon those persons both in and out of school who needed occupational preparation but were not being served by regular vocational programs. This focus emphasized the social and economic problem of long-standing caused by those persons leaving school unprepared to enter the labor market. These young persons faced long periods of unemployment or marginal employment. Concurrent with the mandate for new programs to meet new needs there continued the obligation to maintain, expand, and improve ongoing programs.

Freed from rigidly defined program lines, intensive efforts have and are now being exerted to devise new programs and to develop more efficient and effective means of attracting students and preparing them for employment. Such new and innovative efforts do not necessarily compete or challenge ongoing programs, however, in many instances they do have a residual benefit that in addition to meeting their primary purpose they also offer ways and means for improving existing programs. The converse of this is also true, that is, successful practices which have been developed in vocational education over the years can be drawn upon and utilized for new programs.

In assessing the literature it soon becomes evident that while there has been a flurry of activity at improving the program and process of vocational education there has been little done to systematically develop a prototype curriculum model. While the research and developmental efforts have been focused on programs, and the ancillary requirements of programs they are fragmented and the elements have not been pulled together into a total package.

The following programs which are reviewed have been extracted from the Advisory Council on Vocational Educations' report on vocational education.[1]

These programs reflect some of the new and innovative practices which appear to have significant implication for vocational education. They stress the intent of vocational education to be broadened to include new groups of persons to be served and new methods to be employed.

Comprehensive Planning: The "zero-reject" concept developed for curriculum planning in the San Mateo Unified School District, San Mateo, Calif., is an example of one approach to comprehensive planning. The zero-reject concept assumes: (1) That the state of the art in education today makes it possible for every student to earn a high school diploma with significant standards and a broad liberal and vocational education; (2) that more individualization of education is possible through a wider variety of known learning strategies, even though much more research is needed in this field; (3) that vocational education and general education are mutually supportive and equally necessary; one does not take precedence over the other; (4) that work in and of itself can be a rewarding element of the full life beyond economic independence, and it is a common denominator of concern for all Americans; (5) that practically speaking, there are no unskilled jobs, only unskilled people; (6) that the schools have the responsibility for seeing that students are employable whenever they choose to leave school; that may be as a dropout from grade 10, or with a doctorate after 23 years of education; (7) that educational goals can be expressed in terms of cognitive, affective, and psychomotor skills, and that each occupation requires a differing mix; (8) that occupations can be grouped by clusters and by levels, and that they form ladders of progression through the various educational levels; and (9) that education is a lifelong process and that the school provides the direction and climate for continued learning. Within the context of the zero-reject concept, disciplines are established for the benefit, convenience and development of trends for improvement

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1. Vocational Education--The Bridge Between Man and His Work. General report of the Advisory Council on Vocational Education, 1968. U. S. Department of Health, Education and Welfare., U. S. Office of Education, OE 80052, 1968.

of teaching and understanding. The fact that they have become institutionalized into separate watertight compartments in the schools has been largely for the convenience of administration. If performance objectives can be stated clearly, it is then possible to utilize discipline components to build a mix amendable to the student's own learning strategy. By progress checks built into evaluation and achievement in each small learning package, it is possible to know where the student is and how he can be helped. In this way, the teaching process becomes the institutionalized management of learning instead of the vehicle for surveying abstractions.

Earlier Introduction to Vocational Information: The question about when vocational education should start in the education process is one of serious concern. There are those who advocate, in light of the trend for students to stay in school longer, that vocational preparation should be postponed until the post-high-school level. Others point to the large numbers of persons who do not complete or go beyond high school, and they maintain that vocational education should be a function of the high school. From both points of view, vocational education is seen within the limited perspective of entry level job training. But there is also a growing acceptance of the need for a continuous vocational education from early childhood throughout life. This can be inferred from a report prepared for the Commission on Technology, Automation, and Economic Progress. It stated that:

> Nothing short of education throughout the entire lifespan is sufficient to provide individual fulfillment and mastery of the environment. Because culture changes which once encompassed centuries occur now in a decade, man's ability to manage change requires continuing education throughout life. The general educational level of the public governs the pace with which new knowledge can be absorbed, adjustments made to new developments in science and technology, and solutions reached to concomitant social, political, and economic problems. There is no such thing as terminal education. Lifelong learning is a universal necessity since we are living in a learning society.[2]

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[2] Educational Implications of Technological Change, app. Vol.IV, "Technology and the Human Economy." Studies prepared for the National Commission on Technology, Automation, and Economic Progress, pp. 67-68, 1966.

A project underway in New Jersey supports the potential values of vocational education for its informational and motivational values, and its relevance to the elementary school level.

"Technology for Children", a project sponsored by New Jersey State Department of Education and the Ford Foundation, exemplifies the mutual value of vocational information and general education. This project was initiated with two basic objectives: (1) To enhance learning at the elementary school level, and (2) to enlarge the child's understanding of vocational choice and to develop his economic competence in a changing world of work through establishing a systematic program of occupational education throughout grades K-12. The rationale for the program was an attempt to help children develop a way of thinking where design is construed to mean the seeking of the simple, direct solution to a problem. The program also provides an environment where children can test their solutions, as well as try out and increase their effectiveness in dealing with the materials of the environment.

It should be noted that as the emphasis moves from vocational training for a specific occupation to vocational education in the broader sense, it begins to encompass the entire spectrum of the educational system. Early experience from MDTA and other remedial programs has demonstrated that this is an essential characteristic necessary to render people employable. The initial MDTA programs were designed for specific job placement training. It was discovered that for many, vocational preparation was ineffective because they lacked a sufficient development of basic educational skills, and it was necessary to incorporate basic education as an integral part of the program. This same condition has been reported as a problem in ARA and OEO programs as well. It should also be noted that the experience derived from these same sources suggests that there has been a positive response by students to the inclusion of basic education in the program. As it becomes a part of his vocational preparation, the relevancy of the basic education becomes clear and is accepted, whereas the same information formally presented in isolation was rejected.

The problem appears to be more in the nature of variety, scope, and sequence. As orientation and informational programs are developed at the elementary and junior high school levels, the need for articulation between all levels and all disciplines will increase, and as articulation between levels takes place, it will reflect the type and structure of programs needed for the elementary, secondary, post-secondary, and adult levels.

Partnership Vocational Education Project: A number of efforts are currently being made to bridge the separation between educational levels. One such program is the Partnership Vocational Education Project at Central Michigan Universit Mount Pleasant, Mich. Here emphasis is placed upon the articulation between levels of education as well as between disciplines. This program is structured much the same as the Pre-Tech Program, to be discussed later, but it has been fully planned and articulated, beginning in the high school and continuing through the community college, and the university. Students may progress through the educational levels with minimum loss in time at the beginning of each level. The high school program begins with a relatively broad approach to the study of American industry, with opportunities for exploration and attaining an understanding of vocational opportunities and the required preparation needed for various occupations. The high school program is aimed at accommodating three levels of students. Graduates from the first group--those who have ability and interest for college--are seen as recruits for teaching and for careers in the areas of technology and applied sciences. The intermediate level students are those who may want to enter the labor force upon traduation or enter the community collete for the post-high-school technical training. The third level will accommodate students who are probably not capable of college success and who will enter the labor force on graduation. None of the students are locked into a level, and all may shift to another program if it meets their needs better.

The community college program is designed to give the students special proficiency in his selected field. The proficiency preparation at this level is augmented with other subjects which are also correlated through interdisciplinary planning. Students completing the 2-year community college may elect to go into the work-force or transfer to the university.

The program at the university level continues the interdisciplinary, team planning approach.

The Cluster Concept: Articulation may also be accomplished through an interdisciplinary structure of the curriculum. Through organization of the common elements of diverse occupations, a core of information or cluster of conceptual relationships can be established.

The cluster concept as an approach to vocational education is developing wide interest. A research project based on the cluster concept is presently under way at the University

of Maryland, College Park, Md. This project recognized the delimma and controversy about whether vocational education should prepare highly skilled students for specific occupations or should provide broad programs of general training for a wide variety of occupations. The cluster concept program being developed at the university is aimed at a middle ground between these two points.

Two of the major objectives of the cluster program are:

1. To provide the student with greater flexibility in occupational choice patterns. This provides the student with an opportunity to obtain skills and knowledge necessary for job entry in several related occupations, and also an opportunity to appraise his own interests and abilities in relation to the several occupations in the cluster.

2. To provide the student with vocational competence that affords him a greater degree of mobility. The opportunity for mobility is seen as both geographic and on the job. The skills developed are seen as being both employable and transferrable. The student who has the opportunity to prepare in a cluster of occupations will probably be better prepared for technological change. Changes on the job will be expected rather than feared as in the past.

Within this program, the students are prepared to enter a family of occupations. While there is sacrifice in depth compared to specific job preparation, the students retain an element of final choice. The program also avoids the danger of closure if any one of the specific occupations within the family becomes obsolete or eliminated through technological advance, and allows a relatively easy adaptability as job requirements change.

Pre Engineering Technology: The Pre Engineering Technology Program, also known as the Richmond Plan or Pre-Tech Program, was initiated by the Richmond, California., High School District and Cogswell College, San Francisco, Calif. It was established as an interdisciplinary program oriented toward preparation as an engineering technician. The initial population selected for the program were students who, by criteria available, were capable and average, but were achieving at a rate lower than should be expected by their ability--a common and often neglected population found in most schools.

The contributing disciplines were selected for their relevancy to the preparation required of an engineering technician. An analysis of this occupation identified the need

for persons who were well founded in basic science and mathematics and could manipulate the concepts of these fields mechanically. It was also found that effective communication was an essential element in the technician role. Hence, mathematics, science, English, and technical laboratory were selected as areas, and a teacher from each of the areas and a counselor constituted the teaching team. The team was assigned a common preparation period for planning curriculum units. Emphasis in planning was placed on developing maximum reinforcement of the disciplines through emphasizing their interrelatedness.

The curriculum objectives of the program are clearly defined in measurable terms. As a result, students not only know what they are doing, but more importantly, why they are learning a particular thing at a given time.

A functional objective of the program is to prepare and motivate students for continued education toward a career. The program establishes salable skills for each level of education, but is planned to be articulated and nonblocking.

One of the significant results of this project has been the demonstration of the effectiveness of the interdisciplinary process in program development. Presently there are approximately 40 schools in the San Francisco Bay Area with programs using the interdisciplinary process adapted to 12 different occupational goals.

Project FEAST: One of the more effective adaptations has been the program in commercial food services. This program, Food, Education, and Service Training (Project FEAST), draws upon home economics, science, English, and mathematics as the discipline elements. The program was developed to test the adaptability of the Pre-Tech Program to other occupational fields or clusters. It was developed cooperatively by the Hotel and Restaurant Foundation of San Francisco City College, Pacific High School, San Leandro, Calif., and Oakland Technical High School, Oakland, Calif.

The occupational objective of Project FEAST was prepation for the rapidly growing hospitality and service industry. The program is designed to accommodate students with all ranges of ability. This program, like the Pre-Tech Program, is planned to establish salable skills at each transition level, and also to prepare for the next level of education. The project makes effective use of a strong industry-labor advisory committee. Through this committee, the program has been benefited in two important ways: through (1) the benefit of the members' experience for continued program improvement and (2) the opportunity to place students in work experience

during their program and job placement upon completion of their program.

A New Discipline: The Nova Schools, Fort Lauderdale, Florida., and the American Industries Project approach curriculum innovation from the point of view that American industry or technology represents a body of knowledge which can and should be formulated and structured as a discipline. The rationale for the Nova approach and the implications for vocational education have been reported as follows:

> In this scientific age, technology exerts a powerful force upon society. To some degree technology affects everybody every day. All of us are dependent upon the goods and services that modern technology makes possible. As a body of knowledge, technology is not the exclusive possession of engineers. A safety pin is just as important as the Apollo spacecraft. It all depends on what your need is.
>
> Without technology our lives would be vastly different. The potential of technology for good or evil is awesome. It is certainly important, perhaps vital, for all of us to be aware of the origins, principles, concepts, processes, and products of technology. To encourage maximum development of the potential of technology for good, renewed efforts should be made:
>
> 1. To develop a curriculum in technology for all levels of learning from the very early elementary grades onward.
>
> 2. To study technology as a new academic discipline designed with appropriate balance between theoretical understanding in a conceptual arrangement and the development of manual skills.
>
> 3. To give equal status to the discipline of technology in the school curriculum, on a par with the traditional disciplines.
>
> 4. To correlate the areas of science, mathematics, social studies, and language arts with the technology curriculum. For the development of attitudes and values relating to the responsible use of technical skills, there cannot be any clear delineation between disciplines.

Technical and Vocational Implications of the Nova Pre-Employment Program:

1. Every Nova student will be required to elect one of the technical science courses each year he is enrolled.

2. A student will participate for a varying amount of time. The modular schedule at Nova gives each student about 25 percent unscheduled time. This time can be used for technical and vocational courses.

3. Each student will be enrolled in science, social studies, English, mathematics, and foreign language in addition to technical science. There is some flexibility in time in these courses. There will be units and activities in these disciplines which directly relate to the student's interest field.

4. Achievement in technical and vocational skills will be measured by competency rather than by time in class. The advisory committee will help determine competency levels.

5. Materials are being developed to a sophistication level which will allow each student to progress at his own best rate. He will have a choice of activities to reinforce his knowledge and skill development.

6. Teachers who are involved in the technical and skill development phases of the program will be vocationally certified. They will be teamed with other certified personnel for curriculum development and related material presentation. This teaming will provide needed in-service help for each team member.

7. All goals or objectives are stated behavorially. Evaluation devices will emphasize visible behavorial changes.

8. Emphasis will be placed on the attitudes and habits which go with successful job performance which should help the prospective worker understand how he fits within the economic and civic institutions of our country.

9. By teaching concepts and by employing the problem-solving techniques of instruction, the school will help the student cope with the changing labor market. An awareness of the concepts of the machinery and processes in his work world will prepare him for retraining when it becomes necessary. The worker's confidence in himself should also be strengthened through an understanding of the basic concepts of his field.

10. Every attempt will be made to offer instruction which

is so closely identified with current industrial and business techniques, that the student will be prepared to enter the real world of work.

11. Nova students will be prepared and encouraged to continue their technical education at college. Laboratory facilities at Nova will be available to the junior college students when necessary. Very close cooperation between schools is anticipated.

The American Industries Project, at Stout State University in Minnesota, assumes the same basic orientation as the Nova approach. That is, that American industry provides a body of knowledge which can be analyzed in terms of identifiable concepts.

This program views American industry from a global perspective as representing a body of knowledge from which content for the curriculum can be derived, and, secondly, that from the total body of content, organization into specific curriculum objectives can then be based upon the general objectives of that curriculum.

While the theoretical structure and body of knowledge are still in the process of development, three distinct levels have been identified and courses are now being developed. The broad objectives of the first level, to begin at the eighth grade, are to (1) develop a knowledge and understanding of the major concepts of industry and their relationships, and (2) develop the ability to solve simple problems related to industry. At the second level, the objectives are to (1) develop in-depth understanding of the concepts of industry and to refine the relationships among the concepts, and (2) expand the ability of recognizing and solving the complex problems of industry. The third level is concerned with the development of knowledge and problem solving skills within a concept area or cluster of concepts appropriate to the individual's interest and abilities.

Teacher Education: An inherent characteristic of the programs cited is a common concern for programs which meet both a social and individual function. They recognize that knowledge and technological development depend on each other, and are accepted as good in the life and progress of man. Each of the programs has drawn heavily from the disciplines of psychology and sociology in developing the programs and has also relied, to a great extent, upon the natural curiosity and motivation of students.

Teacher training or retraining is a functional part of each project. The need for teacher reeducation in light of rapid change is becoming apparent. The need is especially notable when different disciplines are brought together in

program development. Experience in interdisciplinary programs has demonstrated that teachers must develop a genuine understanding of the other disciplines involved for effective interdisciplinary teaching. It has also been demonstrated that teachers must learn to become more flexible in adapting and adjusting their teaching methods and timing to coordinate with the other disciplines. They must develop a freedom from defensiveness regarding their lack of knowledge in the other disciplines.

It is significant to note the emphasis which has been placed on eliminating the barrier between vocational and general education. In describing his role in an interdisciplinary program, an English teacher made this type of summary:

> Few teachers know or care what the teacher next door is doing if he is from another department. Most high school education is compartmentalized--not only watertight--but idea-tight. * * * Teachers widen their own knowledge by crossing subject lines * * * and students are motivated when they see that their teachers are interested in all of their subjects.[3]

One of the common mistakes of curriculum development and change is failure to anticipate the future professional staff needs as the programs move from the experimental phase into the implementation phase. In most innovative programs, development and implementation are carried out by the same staff. Too often, however, the innovation fails as the program is implemented beyond the original staff because teachers, counselors, and other professional staff expected to carry on the program are unfamiliar or vaguely familiar with the philosophy, concepts, and methods which underlie the program.

In each of the foregoing projects the need for professional staff preparation is recognized and planned for as part of the development process of the specific program. While this is essential and necessary for the success of the specific programs, it fails to provide an adequate base for teacher education in general.

In recognition of the need for a more comprehensive approach in professional staff preparation the Improvement of Teaching Project at Mississippi State University, State College, Miss., has initiated a teacher education program to prepare and retrain teachers for vocational education. The program

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[3] Curriculum Programs in Action: Report of a conference sponsored by San Francisco State College and University of Wisconsin, San Francisco, Calif., February 1967, p. 24.

places emphasis on the preparation required for coordination and articulation between the levels of education. It recognizes the variety of teachers required and provides flexibility to meet this need through individualized programs of study for those in training.

The project aims at upgrading and retraining through planning new programs. As research indicates a need or provides evidence which supports a program or process, planning is initiated to develop the curriculum materials necessary for implementation. The professional staff preparation also provides for internships, faculty exchange between the high schools and junior college, and assistance for training currently employed teachers.

One of the techniques used in the program which appears to be effective in the improvement of teaching is the team planning concept. The team, representing several disciplines, plans programs or units of work which coordinate the disciplines. It appears that teachers involved in team planning develop a greater flexibility and are better able to adapt to changing conditions.

Trends, Objectives, and Assumptions: While there were marked differences among the projects in terms of content, organization, educational level of the program, type of population to be served, approach, and methods employed, there were also commonalities. Through conference and discussion the representatives identified what they felt were common elements of the programs and might be considered as indications of trends.

Some of the more significant trends and directions would appear to include:

1. Greater individualization of instruction.

2. More comprehensive programs in which the disciplines are brought into interaction to maximize reinforcement and to highlight the relatedness of the disciplines.

3. Programs which recognize that the separation of vocational and general education detracts from both and when they are brought together, they serve to improve and enhance each other.

4. Planning which accepts the fact that not all students learn in the same way, nor will they learn the same things under the same circumstances.

5. Program planning based upon the assumption that schools fail students rather than students fail school.

6. Programs which place greater responsibility upon the student for his own education and for making decisions.

7. More comprehensive programs to accommodate a greater variety of individual needs and differences.

8. Recognition that teacher training and retraining in line with specific objectives or conditions is an essential element when change is required.

9. Teachers are becoming managers of the learning environment rather than purveyors of information.

10. Systems are slowly beginning to reorganize to accommodate the learning process rather than the teaching function.

11. As education, like society, becomes more complex, the team strategy for planning becomes essential.

12. Curriculum designed and developed through an interdisciplinary approach is more likely to meet the needs and interests of students than that developed within the constraints of a single discipline.

13. Curriculum developed in terms of a total program in contrast to course development.

14. Recognition that education can no longer be planned within the confines of the school, but must coordinate with community resources and agencies.

15. Recognition that funds and time must be provided for program development, and programs must be planned and evaluated to reflect constant interest in maintaining maximum economic and educational efficiency.

16. Earlier introduction to the world of work and to the many opportunities which exist.

These trends appear to identify some of the objectives to be considered in planning programs with new directions. Such planning would call for and support:

1. A curriculum plan that embodies and stresses methods of inquiry, techniques of learning, and educational procedures that will maximize learning opportunities for students at all educational levels.

2. A flexible, varied program that recognizes the individualized selection of applied fields of knowledge and provides for guidance to realistic career choice involving

local resources and institutional philosophy as the context for school learning experiences.

3. Emphasis in the design of integrated curriculum directed toward enabling the student to derive beneficial intellectual concept experiences, productive, behavioral attitudes, and attendant psychomotor outcomes.

4. Identification of the goals of education in terms of specific student behavior in a developmental program.

5. The opportunity to identify specific objectives for education in terms of curriculum, personnel, and facilities.

6. Provisions that foster maximum teacher flexibility, innovation, and experimentation in the development of instructional materials commensurate with expressed educational aims.

The trends identified exemplify methodology and techniques that are presently being tested in practice and are being examined for applicability on a larger scale. This attempt to utilize existing successful approaches may prove valuable in (1) fusing vocational and general education curricula and implementing a workable educational system that focuses on a continuous process of career development, and (2) providing for the optimum development and utilization of human resources in our changing society.

While it is accepted that occupational preparation leading to employment is fundamental to vocational education, it is also apparent that technological changes and Federal legislation have greatly expanded the base for selection of occupational preparation. It is generally agreed, as suggested in the preceding discussion, that vocational education must serve two general purposes: (1) To prepare persons to meet the demands for the labor market, and (2) to help develop human resources to their optimum potential.

In view of the expanded role, the frame of reference of vocational education should shift from job-centered training to that of employability which includes other educational characteristics essential for job attainment and career mobility.

For effective planning within the described framework, a number of assumptions must be made:

1. Vocational education is the right of everyone who desires and can profit by it, and it is the responsibility of the schools to provide for it within the curriculum.

This assumption precludes program limitations as they

now exist in many instances, and establishes the need for a broader and more inclusive vocational program based upon individual needs and work opportunities. Such planning establishes the base for the schools to become responsible for the student in transition to the next level of education or to work.

2. Vocational education is a continuous process from early childhood throughout life.

The process can be roughly divided into four phases which prescribe themselves to general levels of education. The types of programs which are appropriate and can be planned for each level are:

a. Informational and orientational;
b. Orientational and exploratory;
c. Exploratory and preparational;
d. Upgrading and retraining.

The phases, of necessity, do and should overlap to accommodate individual needs at a given time.

3. Vocational education, like general education, is a responsibility of the total school and cannot be limited to a single discipline or department.

While administrative responsibility for vocational education may be centrally located, it is the responsibility of the administration to encourage all elements of the school to contribute to the vocational commitment.

4. Vocational education programs can be developed which serve as nonblocking career ladders, and they can be planned to be consonant with the goals of both general and vocational functions of education.

This will require vocational planning which articulates between the levels of education and provides maximum opportunity for the student to attain his desired and optimum development. Through such articulation, the transition of the student to the next educational level or to work will be more efficient and effective.

These assumptions establish vocational preparation as a total school responsibility and eliminate the artificial barrier existing between vocational and general education. They establish the fact that vocational education cannot take place without sound general education, and general education does not exist when it does not include vocational education. Thus, education is required to assume responsibility for every student in the transition between educational levels and from education to work.

The foregoing programs are in-school attempts to make education more relevant and attractive to students. Through these programs it is hoped that the schools can retain the students for longer periods of time and that the students will profit from better and more meaningful education. Significant also is the attempt to provide a salable skill for all students and also the basic educational preparation necessary for entry into the next level of education.

Programs for Out of School Youth: It is becoming more and more evident that in our society the opportunity for the high school dropout to obtain meaningful full-time employment without training is virtually impossible. While programs aimed at this problem have not been generated as rapidly as in-school programs there is beginning to emerge some evidence of success in meeting this challenge.

There appears to be great merit in public service radio and television commercials encouraging students to remain in school, and those which direct students to employment counselors where job training and job opportunities can be explained.

A major "out-reach" thrust is aimed at the high school dropout in the state of Iowa.[4] Now in its second year, the "Governor's School Dropout Program" attempts to reach every youth who leaves school before receiving a diploma. Each reported dropout receives a letter from the Governor, first asking him to reconsider his decision about leaving school. If this does not appeal to him he is then asked to visit the nearest Employment Service Office for assistance in obtaining employment or entering one of the manpower training programs.

The plan requires the cooperative efforts of the Governor's office, local school district offices, the Manpower Council, the Iowa Employment Security Commission with its local office, and the various training components available in the State. Specially designated counselors are assigned to the program to explain the various opportunities for employment or training.

While the follow-up of this study has not been completed there are enough responses to conclude that:

1. Outreach services are definitely needed to contact dropouts.

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[4] Project Profiles No. 15, Iowa State Manpower Development Council, State Capitol Building, Des Moines, Iowa.

2. Community Action Agencies can provide further services once the contact has been made.

3. Of the youths reported, a significant number had found jobs on their own, however, most of these jobs are in the unskilled labor area such as waitresses, laborers, farm hands, etc.

The program has shown enough promise that the United States Department of Labor has urged all State Employment Security Agencies to adopt this plan at the State level through the Governor or at the community level through the Mayor.

Ancillary Program Requirements: All too often excellent experimental programs fail to continue or expand after the experimental period. This is usually caused by failure to consider the ancillary aspects of the program. An experimental program is most often conducted by persons involved in developing the original idea. This same degree of enthusiasm will not be found when the program is attempted with other personnel. Therefore, as new programs begin to show promise, plans should be made to implement a complimentary teacher education or re-educational program.

Other related considerations which effect the transmissibility of programs from one location to another include assessment and evaluation, curriculum and media materials, alternative teaching methods, financial requirements, etc.

Summary

The Vocational Education Act of 1963 coupled with current social and economic problems stimulated intensive efforts directed at developing, testing, and implementing new vocational programs. Through these efforts many programs offer promise for greatly improving the quality and availability of vocational education.

Because of the relatively recent emphasis placed on this area of education the results are fragmentary and time has not permitted adequate evaluation and assessment of new programs. There are, however, a number of innovative programs which appear to have significant implications for vocational education.

The programs identified in this paper are representative of programs which can be considered innovative and directed at meeting the needs of new groups of persons to be served by vocational education.

Programs of long standing and those for new occupational fields modeled after conventional programs were not reviewed

in this paper because they are already well known and possess high visibility. It should not be implied that they have less value in serving as exemplary programs than those cited. Careful consideration must be given to both new attempts and traditional practices, to insure that the best is retained and only the obsolete and less effective elements are deleted.

The role and importance of vocational education takes on new dimensions as the labor market demands change to require higher levels of preparation. There is growing recognition that far too many youth are leaving school inadequately prepared to enter the labor market. Therefore, education must assume responsibility for the occupational preparation for a much larger portion of the school population than they are now serving.

Further, there must be constant out reach for those persons who have left school and are poorly prepared for anything but marginal employment.

It is imperative that continuous efforts be devoted to seeking new, more effective means for meeting the vocational needs of every person.

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NATIONAL CONFERENCE ON EXEMPLARY PROGRAMS
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PERSONNEL, RESOURCE MATERIALS, AND OCCUPATIONAL INFORMATION EXCHANGE PROGRAMS -- SCHOOLS, MANPOWER AGENCIES, INDUSTRY, AND OTHER PUBLIC AND PRIVATE AGENCIES AND ORGANIZATIONS

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Rutgers University

PART I INTRODUCTION

The theme of this part of the National Conference on Exemplary Programs and Projects deals with topics mainly derived from Subsections 143 (E),(F), and (G) of the Vocational Education Amendments of 1968, which provides that federal funds may be used for exchanges of personnel between schools and other agencies and organizations; programs and projects for young workers released from their jobs on a part-time basis; and programs and projects at the secondary level to motivate and provide preprofessional preparation for potential teachers. The assignment also calls for study of exchange programs for resource materials, and the exchange of occupational information.

The objectives of this presentation are:

1. To trace some of the background work of the Advisory Council Report and other testimony which relate to the exemplary section of the Vocational Education Amendments of 1968.

2. To review studies and recommendations found in literature which relate to personnel, resource materials, and occupational information exchange programs.

3. To describe four specific programs, drawn from experience, which appear to have exemplary aspects.

4. To summarize the material treated and present some tentative guidelines for further implementation of exemplary practice in vocational education.

Roots to Federal Legislation

Roots to the exemplary sections of the new Vocational Education

Act may be traced back to the recommendations of the 1968 Advisory Council Report, and to testimony presented before congressional subcommittees. Specific examples of the direct lineal relationship between testimony and Law may be seen in the Advisory Council's Legislative Recommendation number 14, the testimony of Burkette, Burt, Hoyt, Essex, and Evans, and many others who would make the bridge between man and his work a living reality.

The Advisory Council Report, prepared for the Subcommittee on Education of the Committee on Labor and Public Welfare, United States Senate, made 26 legislative recommendations. Number 14 of these recommendations stated that:

> The Act recognize the need and provide support for professional and paraprofessional staff recruitment, preparation, and upgrading at all levels, including leadership, administration, teacher education, and counseling and guidance on a state, regional, and national basis...
>
> In recognition of the new and emerging occupations, the growing importance of work experience in education, the need for closer liaison and cooperation between industry and education, the rapid change in the skills needed within specific occupations, and the need for continuous curriculum revision and development; provisions are needed which will permit preservice and inservice programs for preparation and upgrading of professional and paraprofessional personnel... The provision should include fellowships, leaves, internships, the exchange of personnel between industry and education, and between federal and state offices.[1]

Burkett's testimony before the U.S. House of Representatives General Education Subcommittee on May 1, 1968, endorsed passage of the Vocational Amendments Bills then before Congress. When asking for the authorization of federal funds for exemplary programs in vocational education, Burkett recommended that such projects could include programs designed to familiarize post-elementary students with the broad range of occupations for which special skills are required, and the requirements for careers in these occupations, and among other recommendations, programs to provide for exchange of personnel between schools and other agencies, including manpower agencies and industry.

The March 14, 1968 testimony of Samuel M. Burt, Senior Staff Member, W.E. Upjohn Institute for Employment Research, before the House Subcommittee, mentions the unique character of vocational and

At Rutgers University, the internship is a required portion of the doctorate in vocational-technical education. In each of the three main areas of concentration -- college teaching, research, and administration -- the doctoral candidate is given a "tailor-made" learning experience with a cooperating industry, educational institution, governmental agency or research organization for a period of one term. It is designed to insure that each candidate possesses the skills, abilities, and understanding considered essential to the practitioner of his particular area of specialization. Secondly, it insures that the intern is capable of performing with confidence and authority the tasks associated with his chosen field; it is a means for mixing theory with practice, serving as a realistic avenue of the transition from past employment to future leadership positions.

Two other cooperative programs for professional personnel are conducted at Rutgers. These are the Cooperative Work Experience (COPE) Program and the Master Teacher Externship. The COPE program is designed to provide high school and technical institute graduates with the opportunity to combine supervised work experience in a chosen trade or occupation with a baccalaureate degree program. After the student accrues a minimum of 5,000 hours of approved work experience, he is required to pass an occupational competency examination. Satisfactory completion of the work-experience element of the COPE program, together with appropriate professional and academic subjects also allows the student to meet state certification requirements for teaching a vocational subject.

The Master Teacher "Externship" at Rutgers is especially designed to provide a post-graduate updating kind of experience which cannot be acquired in the setting of the classroom. Specifically, the program provides for occupational experiences to vocational-technical graduate students who are in need of strengthening and updating their competency in a particular trade or occupation. Prescribed through advisement, the externship phase of the Masters program is an opportunity for learning by doing - and for receiving graduate credit in the process.

Inter-Institution Sharing

The Whittier-Somerset Project is described as a case study in urban-suburban school cooperation. It shows how parents and community leaders of both an affluent suburb and an inner-city community use their respective schools as the foci of cultural exchanges and social understandings. Two schools - one where children must learn under the pressures of an urban society, the other removed from such pressures but at a disadvantage because of its insulation, are paired together to embark on a program of common experience, common planning, common understandings, to achieve common goals.

Among other reports of institutional cooperation are Hurt's description of cooperation between vocational educators; Stoffel's account of "Project Interchange" in Ohio schools; and Salwak's "New Patterns of institutional cooperation," which reports on the status of inter-institutional sharing of educational resources. Hurt's article, which tells of joint activities between home economics, business and distributive education teachers in Colorado and California, suggests that more cooperative efforts between various vocational education divisions will result in more relevant programs. Another proponent of incorporating an occupation mix into vocational curriculum is Struck who urges teachers and supervisors to coordinate their unique competencies in each area of specialization. According to Struck, administrators have not taken the initiative to achieve the occupational mix and the coordination and cooperation between teaching areas of vocational education which is desirable and much needed.

Kelly speaks of the Ford Foundation supported program in San Francisco in which cooperation between business, industry, government, and education is focused on the organization and administration of two-year college programs for high ability problem youth at Golden Gate College. The cooperation of a dozen leading companies in San Francisco had been assured prior to the college's grant application to the Ford Foundation, it was reported. The UCLA program for the improvement of trade-technical teacher education provided an opportunity for selected teacher educators from southern colleges to get away from their local and immediate problems and observe an extensive operation involving more than 500 California Trade and Technical teachers. Included in the program were periods of observation of the UCLA team approach to teacher education.

Gorman's investigation of characteristics, background and job experiences of successful and unsuccessful entry workers in mining, lumbering and construction had an interesting component. Four teen school guidance counselors took part in the study by gaining active employment in the three heavy industries. It was reported that the major goal of the project was to provide school guidance counselors with a work-research experience which, as they returned to their positions, would contribute to their becoming more competent vocational counselors of non-college bound youth. As might have been predicted, the counselors, quickly thrust into hard, heavy and dangerous employment appeared to need more time for acclimation. In spite of blisters and aching backs gained from the experience, however, participants strongly endorsed the idea that guidance counselors do need practical work experience. Counselors also proposed the establishment of a joint industry-education board to facilitate evaluation of vocational education curricula and to ease the student's transition from school to job.

Nyquist's paper on emergent functions and operations of State Education Departments, prepared for a conference at the National Center for Vocational Technical Education, says that increasing national interest in Education; the growth of Metropolitan areas which cross state lines; the nature of educational problems which cross district and state boundaries; and the establishment of research and development groups over wide geographical areas are tending to break down earlier state positions of sovereignty and isolation. According to Nyquist, the direction of the future is clear. Regional and National cooperation between the states; the gradual relinguishment of territorial imperatives, and rising level of competence in all State Education Departments may be expected.

Cooperative Education: The Sleeping Giant

The cooperative system of school and work instruction is finally getting the recognition and support it deserves. It is a powerful stimulating experience to students, especially those who have inadequate opportunities to otherwise learn about the working world. John Dewey, who was one of the early proponents of school-work fusion, believed that the only adequate training for occupation is training through occupations. Calling cooperative education a "sleeping giant" American Vocational Association Executive Director, Lowell A. Burkett testified before the House of Representatives Subcommittee on Education that this concept of education has been present for a long time, but we have yet to institute it in the massive proportions that are needed.

The Chamber of Commerce of the United States, until a few years ago, held a rather aloof position toward vocational education. Spokesmen for the National Chamber, made a distinction between education and training, and called for broad general education rather than vocational training in schools. Apparently this earlier misconception has been clarified, for the Chamber now supports both, in an integrated whole.

Increasingly aware of the business community's stake in American social problems, the National Chamber of Commerce established a Task Force on economic growth and Opportunity in 1964. A result has been a series of scholarly investigations which deal with the problems of urban poverty, inner-city education, and the role of business in community affairs. One of the Chamber of Commerce publications, "What is the Responsibility of Business in Modernizing Education",

attests that responsibility for making education relevant to the living conditions, the economic opportunities, and the responsibilities of citizenship in a changing society is community-wide, and that failure to bring about the needed "revolution" can be blamed on the business community as well as educators:

> Subject matter academicians seldom collaborate with vocational teachers, and the false dichotomy between knowledge and the application of knowledge, the'knowers' and the 'doers', continues to divide both the courses and the personnel of education...
>
> Yet businessmen have seldom pressed boards of education, administrators or teachers to expand and improve guidance programs, work-study programs or on-the-job training, and thus build a prestige for functional education comparable to that of college preparatory courses. 5

Calling for much greater use of cooperative education for both teachers and students the Kerner Report on civil disorders gives eloquent testimony to the general low quality of education in ghetto schools. Specifically, the Kerner report recommends the building of new lines of communication between schools and the communities they serve by greatly expanding various work experience and other forms of cooperative programs for students, by expanding opportunities for community and parental participation in school affairs, and through intensive in-service training programs for teachers and pre-service experience for teacher candidates which are designed to bring both teachers and candidates into frequent and sustained contact with inner-city schools.

PART III THE EXCHANGE OF RESOURCE MATERIALS

Resource materials for vocational education, such as curriculum materials and curriculum laboratories, research and development centers, systems and strategies for teaching, and programs for the evaluation of student and teacher competencies, are among the high priority items cited by national advisory panels for vocational education. The 1962 Report of President Kennedy's Panel of Consultants, for example, recommended large unit curriculum laboratories, greatly expanded programs of vocational education research, and the improvement of teacher education. Since The Panel of Consultant's Report, a great amount of progress has been made, especially in the organization of national and state research agencies. But as reported by the 1968 Advisory Council on Vocational Education, a national plan for curriculum development and dissemination is still badly needed. When speaking of needed areas of service, the Advisory Council stated

that instructional materials are limited or nonexistent for many vocational education curriculums. Commercial publishers often cannot justify the development of materials because of limited numerical demand. Curriculums have not been developed for many of the newer occupational specialties, and local and state vocational education agencies have only developed curriculum and instructional materials for a limited number of programs.

When referring to the limited ability of many states and school districts to generate the capacity for appropriate curriculum development, the 1968 Advisory Council Report proposed that help from the federal government was essential. A national plan for coordinating the development of curriculums, courses of study, and instructional materials, requiring interstate and federal cooperation, was recommended.

Occupational Competency Testing

Among the limited number of reports discovered which relate to the development and exchange of vocational resource materials, the Griesse trade competency study and Larson's project to develop a model for a university Technology Resource Center have special significance to the realm of vocational teacher education.

Griesse's exchange of information study on the feasibility of providing trade competency examinations on a national basis calls attention to a persistant problem in vocational schoolwork. If the focus of vocational instruction is closely related to the preparation of students for occupational competency, what competency derived from occupational experience and training is needed on the part of teachers? Just what constitutes job-related competency to teach a vocational subject, and how may it best be measured?

The use of examinations to assess the proficiency of prospective trade and industrial teachers has long been common practice in some of the more populous industrial states, such as California, New York, Ohio and Pennsylvania. The majority of states, however, have no system of competency examination at all. Typically, the only assurance a school district or teacher certification agency can have concerning knowledge of occupational subject matter, when no objective test of knowledge and skill is made, is to measure a candidate's qualifications strictly by time -- the number of years employed in the occupation. As more states, community and technical colleges, and school districts seek out young and adaptable candidates for vocational teaching positions, and less reliance is given to "years spent in the occupation", the need for an adequate system for evaluating occupational competency will surely grow. One of the serious problems associated with occupational competency testing in the past has been the proliferation of state or local efforts

and the concomitant lack of national or even statewide norms. Judicious use of the computer should materially reduce this problem. Through the computerization of test item pools, it should be possible to constantly analyze, refine and update test items, as well as manufacture examinations for any specific purpose on short order.

Resource Center for the Preparation of Teachers

Whenever the quality of teachers and the teaching process are considered, the role and function of the teacher education institution is a vital concern. If the work of teachers in classroom or shop is to be materially strengthened, and if the strategies for combining educational media with differentiated staffs are to be adequately tested and developed, then it will be necessary for the institutions that prepare teachers to take the lead. There is much room for exemplary practice here. Schools of education need to look on their own activities with a much greater degree of objectivity -- to establish behavioral goals; to provide future teachers with opportunities to work in new environmental settings, with a variety of materials and devices; and to provide a focal point of communication between schools and industry, where the essential highlights of technological change may be constantly and quickly brought to teachers and students.

The Rutgers University project to develop a model for a Teacher Technology Center represents an important step in the movement toward the regeneration of vocational teacher education. Specifically, the Resource Center was planned to provide the ultimate in"innovations and advanced hardware", such as closed circuit TV and a data retrieval system. Designed in flexible modules of key instructional space, the plant is suitable for short and long time spans, lectures and conferences, and the combination of teacher learning with teacher teacher training.

Also designed for the development of modern curricula and mass media teaching materials, the research oriented resource complex provides for a library, a curriculum and evaluation center, and a materials reproduction area. At the present time, efforts are underway at Rutgers to bring together the necessary funds, from State, Federal, University and foundation sources, to make the conceptual design a functional reality.

PART IV OCCUPATIONAL INFORMATION EXCHANGE PROGRAMS

Time was when the vocational guidance counselor could, with some degree of security make periodic assessments of the local employment situation, and relating information thus obtained with regional and national trends obtained from published labor market estimates, transmit occupational information to students. Although the vocational guidance function continues to operate along these general lines, there is a growing cry for its complete overhaul. First, it is held to be far too slow and cumbersome to allow the counselor to keep abreast of modern technology. At about the time when he would have developed some level of knowledge about occupational information, all of his material is obsolete. Also, earlier concepts about the selection of proper clients for vocational counseling, generally identified as those persons labeled "non-college", are now undergoing a hard and abrasive reassessment. The counselor who assigns career goals to students, in conformity with the school's grouping system, and who can not see why all students are in need of occupational information and counseling may still be a common figure, but as the principle of career development penetrate the public schools, it may be expected that the more stratified and discriminatory forms of occupational counseling will fade into the background.

Use of the computer in occupational information retrieval is receiving wide attention. Major investigations are taking place at several campuses, including Harvard, University of Pittsburg, and Penn State. Other developments in information retrieval systems include the "View" approach employed in San Diego County, and Kunze's study of industry resources.

The "View" system of providing occupational information to students, reported by Glaeser in "School Shop", Smith in the "American Vocational Journal", and Pierson et al in "Vocational Guidance Quarterly", employs the use of microfilm aperature cards. Reporting that the work completed had concentrated on trade and technical occupations, Pierson spoke of the need for expanding the system to cover the total field of career information, with the next goal for the project the refinement of a storage and retrieval system.

Kunze's review of industry resources available to counselors relates that a communications block appears to exist between counselors and people in industry. Saying that counselors don't seem to know what questions to ask industrial people, and industrial people provide information so particularized that it is misleading, Kunze provides the

intelligence that industry is in the position to offer a variety of resources of occupational information data, which may be valuable to either counselors or to their student clients: (In order of Directness)

1. On the job tryout: part-time, summer jobs, work-study
2. Directed exploratory experiences: work samples, work evaluation tasks
3. Direct observation: visits to work settings
4. Synthetically created work environments: combination of stimuli and environmental manipulation
5. Simulated situations: career games, role play
6. Interviews with experts: questioning representatives of occupations, career days
7. Computer based systems: systems which store, retrieve and process occupational data in response to individual requests
8. Programmed instructional materials: books and workbooks
9. Audio-visual aids: films, tapes, slides, etc.
10. Publications: books, monographs, charts, etc. [6]

Computerized Informational Retrieval Systems

Impellitteri's study of computer assisted guidance at Penn State University seeks to develop an application of the computer which can serve as a high-powered resource of the guidance counselor. The objective of this system is to allow young people to broaden knowledge about the working world, and be able to identify appropriate opportunities for them in it.

Among other recent studies of computerized occupational information retrieval systems are ones conducted at Universities of Wisconsin, and Ohio State, and the exploratory study of information processing procedures and computerbased technology conducted by the Systems Development Corporation in Santa Monica, California. The University of Colorado 's analysis of methodology for projection of occupational trends in the Denver area, the U.S. Employment Service publication on a short-cut approach to long-range forecasting, and the Illinois RCU Computerized Vocational Information System are also relevant.

The University of Wisconsin Conference on Occupational Data Requirements held in June 1965 and reported by March revealed that at least two distinct schools of thought existed relative to the evaluation of occupational data and their use in occupational planning: One group felt that the need for occupational data is urgent. Their arguments were that information on labor demands is essential for the use of guidance services and as background for legislative measures and school planning.

On the other hand, an equally vocal group of conferees denied that increased efforts to provide occupational data would improve educational planning. Because of the weaknesses in the methodology of current occupational studies, and because of the difficulties inherent

in obtaining accurate information from employers on current and projected job vacancies, this group felt that further expansion of studies of occupational data would be a questionable investment of government funds.

The Ohio State research exchange conference on systems under development for vocational guidance was reported to be a unique experiment in research stimulation and coordination. Although the 21 researchers who participated felt they had just scratched the surface in identifying problems and issues, they did raise some important questions:

Model of Counseling Functioning - As the building of a system progresses, theoretical decisions have to be made as to how people make vocational choices, the role of diagnosis, amount of self direction. In building a model does the researcher operationally simulate observed counselor activities, or does he develop a new model?

Data Base Construction - What kinds of information will a system need in order to accomplish its goals?

Battery of Measurement Instruments - What kinds of information should be obtained through tests and which tests are most appropriate to measure appropriate traits?

Taxonomy of Occupations and Descriptions - This is basically a problem of how to classify and present educational and occupational information.

Other concerns expressed at the conference related to the monitering of systems by counselors and teachers; the influence that variations in educational settings and student populations would have; and the fundamental differences that exist between a taxonomy of occupations and a comprehensive examination of the world of work.

Cogswell's exploratory study of information processing procedures and computer-based technology in vocational counseling conducted for the systems development corporation, sought to conduct a system analysis of the counseling procedures employed at a selected field site; design and test a man-machine system; formulate and develop computer programs and collect initial evaluation data. A marked difference existed between what counselors are doing and what they would like to do, this study revealed. Ideally, counselors reported, they would like to change their activities in the humanistic direction of working more with students. However, when speaking about dangers of computer systems for guidance work, the report stressed three serious problems; Privacy of personal data; Misuse of predictive systems; and Alienation of humans subjected to computer processing.

The summary statements of Cogswell's study seems to have implications for the study of occupational information exchange, or any other phase of vocational counseling. Here the investigators say that despite our efforts to focus the design on the functions that both the men and the machine would play in the new system, it was found the major ideas that were developed in the design meetings were for the computer. Very little attention was given to what the counselor's role would be in the new system. Concern for the role of the human became more acute when analysis of data suggested that actual experience working as a guidance counselor in schools tend to increase the positive value placed on data manipulation. This observation caused the investigators to fear that once the computer is installed the counselors will use the extra time that would be gained to become more involved with data than with students.

PART V, ADVENTURES IN EXEMPLARY PRACTICE

The term exemplary connotes something which may serve as a pattern or model; deserving to be proposed for imitation; commendable. Clearly an exemplary practice is not of necessity new and innovative, or grand in scope or financial investment. While seeking to find direction and inspiration from the studies and actions of others, it occurred to me that exemplary practice begins at home. Something should be said for the unsung local effort of teacher or administrator, who's at the growing edge of educational progress. On this principle, I am here relating four operations with which I have been involved, and which appear to have some exemplary aspects. One report describes an administrative structure; another a major financial investment in leadership training; the third experience is with the AVA project to bring research information to typical journal readers; and the fourth item relates a personal experience in teaching, a twelve year adventure in individualized instruction.

Shared Time Education: A Vigorous Hybrid

The Lewis A. Wilson Area Center of Technology in Suffolk County New York represents a prototype, along with prestigious counterparts in Pennsylvania, Ohio and a number of other states, for the efficacy of shared-time education. Implicit in the rationale for a shared-time program is the concept that a truly comprehensive program of education, one which has a legitimate vocational component as well as a full spectrum of cultural and educational options for individuals, may indeed be made possible for allyoung people in all locations through cooperative arrangements between general high schools and area centers of technology and education.

Administered through a board of cooperative educational services, which is itself a shared-service operation, the Wilson Tech Center

serves 18 suburban high schools with over 20 vocational education programs. Students who attend the Area Center half of each school day are also enrolled in home high schools, where each may engage in any combination of social and educational activities.

Opened in 1963 with 200 students, Wilson Tech now has 1,200. Extensive construction now underway at its central campus location will provide for double the number of vocational programs and double the present enrollment. The new building design provides for a flexible allocation of student time in a variety of occupational clusters. Guidance, cooperative education, and graduate placement programs are integral parts of the Center's operation. Manpower programs and locally sponsored apprentice training, adult pre-employment and occupational extension classes are also provided by the area school.

Wilson Tech may be thought of as exemplary in the sense that it is a vigorous hybrid, combining some of the advantages of the full-time vocational school as well as benefits associated with the so-called comprehensive high school. At the time when Wilson Tech opened in 1963, there were about five other shared-time programs in operation throughout the state, mainly with limited enrollments in rented facilities. Today, there are over 50 such Area Centers of Technology for high school students, providing diversified vocational education opportunities in every region of the State. All of these programs, even the ones in the most sparcely populated sections of the Catskills and Adirondacks,are conducted on a shared-time basis.

Leadership Training Breakthrough in N.Y. State

A significant corollary to the dramatic expansion of new area vocational programs in New York has been the "Leadership Training Program". Conducted by State University College at Oswego, for a total of 45 administrative interns over a three year period, this bold adventure in management manpower was a vital ingredient in the rapid development of new Area Centers for it was the administrative trainees themselves who took a major responsibility in getting new schools into operation.

The first leadership training program began in the Spring of 1964 with about 15 trainees, and it was followed by two more sections of about the same size. Each group spent the better part of a year in the program. The three leadership training programs each had three main components: college instruction in a block of graduate courses relating to vocational education administration; an extended field visitation phase; and a period of supervised internship.

The field visitation phase of the leadership program was done on a large scale. Administrative trainees were flown to such widely

dispersed places as California, Manitoba, Georgia, Massachusetts and Wisconsin to meet with vocational education leaders and visit various kinds of vocational facilities. As the person in charge of the 1966-67 leadership training program, it was my privilege to conduct one of these international junkets, as well as teach the basic core of graduate classes and supervise the internship programs of 17 participants.

An essential fulcrum in the implementation of new vocational programs in areas of the State not previously served was the %100 subsidy of intern-director salaries. Without doubt, many of the local school boards would not have seen the urgency for having a multi-phase vocational program without such financial inducement.

In business and industry, the practice of making substantial financial investments in management training is commonplace. But for educators to spend over one million dollars on the training of 45 vocational administrators, there is no precedent and no parallel. The most exemplary aspect of the N.Y. Leadership program is not its unique combination of college, field visitation and internship, although these activities certainly had some commendable aspects, but rather, the blunt fact that educators, for once, had spent real money on a human investment!

Research Visibility

As interest in research has been stimulated in recent years, so also has the problem of getting fruits of research to school practitioners. Recognizing the need to provide some method of communication by which vocational educators, especially those outside of the community of research specialists, could know more about the nature and focus of vocational education research, the American Vocational Association proposed a synthesis and dissemination project to the U.S. Office of Education. The result has been "Research Visibility."

"Research Visibility," now in its second year, is a 16 page section which appears in each monthly edition of the American Vocational "Journal." Cooperatively financed by AVA and the U.S. Office of Education, the purpose of "Research Visibility" is to give national exposure to significant research; experimentation; demonstration and pilot programs; upgrading institutes, seminars and workshops; and other leaderhip development activities for teachers, supervisors, and administrators.

The organization of topics treated in Research Visibility was in its first year derived from the specific recommendations for change contained in the 1962 Panel of Consultants Report. One hundred and

forty-seven Reports, mainly of studies generated through Title 4(C) of P.L. 88:210, were treated. Each of the nine "Journal" editions for 1967-68 has approximately 15 to 20 reports. The nine main topics, used as a basis for the organization and review of materials are:

September	"High School Age Youth"
October	"People With Educational Needs Beyond High School"
November	"Youth With Special Needs"
December	"Youth And Adults Unemployed And At Work"
January	"Toward Teaching Excellence"
February	"Curriculum Development and Instructional Materials"
March	"Vocational Guidance"
April	"Leadership and Administration"
May	"Research and Evaluation"

A Twelve Year Adventure in Teaching

This report of a twelve year experience in individualized teaching is here given to illustrate a fundamental precept in education. The ultimate place for testing educational theory is where teachers meet students. Also proposed is the concept that teaching for individual learning is as fresh and innovative as the one-room school.

In this experience, efforts were made to give high school students, mainly 10th graders, who typically had no other courses in mathematics, an open-ended student-centered individualized program of instruction. The prevalent mode of teaching was supervised study, with students working independently toward achievement goals which each had established for himself. The experience began in 1950, and ended in 1962.

During a great part of this experience, the teacher was free of outside influence, either from the local administrators, the school's mathematics department, or the State Education Department. As the students were generally persons who were not considered capable or properly motivated for taking more "rigorous" math classes, and as the class satisfied the State's mandate for one unit of high school Math, all figures in the educational organization were content to leave the program completely in the hands of the teacher.

During the first week of school in September all students who appeared were tested with a combination of standardized general Math and teacher-made examinations. Students were advised that the class, usually of about 30 in size, represented a substantial range in Mathematics skill and comprehension - typically the groups ranged from about the 5th to the 80th percentile on national norms.

Students were asked to think of a classroom situation different from what they had usually experienced. There would be no body of subject matter that had to be mastered; no outside assignments; the teacher would not present a lesson, but rather once everyone was under way, he would move about the class helping individuals; the teacher would not correct papers - students would; the teacher would not help a student who could help himself - or who could be taught by another student; the teacher would not even determine what was satisfactory progress as student would do all that - based on goals that they set for themselves, subject to their own reappraisal throughout the year. In this vein, students even prepared, administered, corrected and recorded their own final examinations.

The multi-media materials for this open-ended math class were in the main standard vocational math textbooks - a considerable variety of them. Especially valuable were the ones which had been developed for Home study or apprentice training work.

The result of this experiment with individualized instruction improved over the years as did the style and resources of the teacher. Although the instructor did not have the foresight to carefully analyze and document the procedures employed and the results derived, there did appear to be a number of tangible benefits. The areas in which appreciable gains appeared to be made were in students' attitudes toward school as determined by school attendance, Mathematics skill, Mathematics comprehension, and Reading. In some cases, students improved over 50 percentile points in the course of a year. Another measure of success was in the number of "drop-ins" - students who graduated from "Shop Math" to College Prep or Technical Math courses during the year.

There is really nothing new about any part of this experience in individualized teaching. Every element of the process - from pre-testing to student participation in the articulation of behavioral and achievement goals to group process in the determination of the tone, tempo and focus of a class -- are well established precepts in the theory of pedagogy. But in this mechanistic age, when each day brings some new and often impersonal model for individualizing the instructional process it is good to keep in mind that the focal point of any system of education is where teachers and students meet in the shop or classroom.

PART VI SUMMARY AND HIGHLIGHTS

This narrative began with a review of the relationship that exists between Advisory Panel recommendations, together with other testimony, and the Law, the Vocational Education Amendments of 1968.

Attention was then directed to literature relating to exchange programs and projects having to do with personnel, with resource materials, and with occupational information. Also reported were four episodes taken from experience which appear to have some exemplary aspects. Highlights of the material treated, together with some tentative guidelines for further action are presented in the statements that follow.

1. The internship in education, although plagued with some administrative and operational problems, appears to be moving toward a position of general acceptance. A key to success in any internship appears to hinge on the question of its status in the university or certification program. Where it is a mandate, the internship is strong; where provided on a permissive basis, internship has generally failed to be effective.

2. There appears to be more talk than action regarding the exchange of personnel between different kinds of organizations. Many studies and articles support the idea of having better school industry and school government coordination, but the amount of hard information about the regular exchange of personnel on any permanent basis is negligible. Limiting factors for more effective school-industry cooperation are given as:

1. Fear of school administrators that industry groups will become special interest pressure groups.

2. Unwillingness by school administrators to provide special staff to work with industry; and

3. Confusion on the part of industry concerning how to effectively work with schools.

Another factor which has probably inhibited a more extensive movement of personnel from one organizational setting to another is the lack of safeguards or guidelines for the protection of employment status and employment benefits. With respect to this problem, Section 553 of the Vocational Education Amendments of 1968 contains the provision that federal funds may be used for exchange of vocational education teachers and other staff members with skilled technicians or supervisors in industry (including mutual arrangements for preserving employment and retirement status, and other employment benefits during the period of exchange). If significant progress is to take place in Personnel Exchange programs - there needs to be a dual commitment, that makes personnel exchange a regular part of each institution's operational design.

3. The Master Teacher Externship appears to be an idea which deserves more wide spread attention. In this program teachers who are in need of occupational upgrading receive college credit for appropriate employment experience. Such a provision breathes vitality

into the college of education curriculum by giving teachers the opportunity to learn by doing as a regular part of their program. Could not the externship plan also benefit the guidance counselors, curriculum coordinators and persons in administrative positions?

4. The role and function of State Departments of Education, are in a state of transition. According to Nyquist, there will be much less sovereignty and isolation, and a much greater degree of regional interstate and national cooperation. With a gradual relinquishment of "Territorial Imperatives" and a guarded but growing partnership with the Federal Government, a rising level of competence and a trend toward greater uniformity in all State Education Departments may be expected.

5. Cooperative Education, called "A Sleeping Giant" by Lowell A. Burkett, appears to be on the threshold of a major expansion in schools and colleges. The U.S. Chamber of Commerce endorsement of the work-study approach to education as well as its position that chamber members should take a more active part in school affairs should be an important stimulant.

6. The 1962 President's Advisory Panel recommendation for a greatly expanded program of vocational research has been to the establishment of National Research Centers and research coordinating units within states, but the widespread penetration of research findings and research thinking into the schools has yet to be achieved.

7. The 1962 Advisory Panel recommendation for large unit laboratories for the development and dissemination of curriculum materials for vocational education has yet to be achieved. According to the 1968 Advisory Council on Vocational Education, a national plan for coordinating the development of curriculum is still badly needed as instructional materials in some vocational fields are virtually nonexistent.

8. The use of occupational competency testing programs are now mainly determined by the capacity and commitment of State and Local institutions. Over half of the States have no organized program for producing and using competency examinations. As complete dependence on the "years in the occupation" measure of competence to teach an occupational subject becomes less widely employed, the value of having a computerized pool of test items and performance tasks for each occupational field will be increased.

9. The education of vocational education teachers continues in many colleges to fall far short of what is needed. The proposed

Teacher Technology Center at Rutgers, planned to provide the ultimate in innovative and advanced hardware and flexible space utilization, is designed to move vocational teacher education away from being a mere accumulation of courses. A national research and development commitment toward the improvement of teacher education seems to be needed.

10. The computer-assisted systems approach to occupational counseling is currently receiving a great amount of attention. Among the studies reported a number of rather fundamental problems were discussed. These problems relate to the efficacy of occupational data, the population of students to be served, the dangers inherent in matching students with jobs or in predicting future job success. Perhaps the most significant concern was found in Cogswell's exploratory study of information processing procedures in which the investigations found that the computer caused counselors to become more involved with data - than with students.

11. Shared-time for vocational instruction is reported as a vigorous hybrid, a system by which the well known advantages of full-time vocational schools and general high schools are combined to produce a comprehensive program of education. The Lewis A. Wilson Tech Center of Suffolk County, N.Y. is reported to be one of the prototype schools in N.Y. State from which a network of over 50 area centers of technology on a shared-time basis have been established. Comparative studies of shared time, "comprehensive", and full-time vocational schools, using cost-benefit analysis and other criterion measures may help dispel some of the myths and fantasies that now prevail.

12. The "Leadership Training Program" of N.Y. State is reported to be "A breakthrough in management power". Closely associated with the rapid development of over 50 new area centers of technology, the three year program to train 45 "instant administrators" is exemplary in the sense that educators have here made a major financial expenditure on a human ivestment.

13. "Research Visibility", the 16 page section appearing in each edition of the "American Vocational Journal", was designed to give the average reader -- the person typically not associated with research activities -- a chance to know more about the nature and scope of research. The main objective of this information exchange project has been to help bridge the gap that persists between research and practice in vocational education.

14. A personal accounting of a 12 year experience in individualized teaching is presented as a reminder that the essential ingredient for humanizing and individualizing the instructional process is the teacher. Although some research of supervised study techniques has been conducted, its special relevance to situations in cooperative and other forms of vocational education needs further investigation.

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PATTERNS AND GUIDELINES FOR ADMINISTERING EXEMPLARY PROGRAMS AND PROJECTS AT THE STATE LEVEL

A Position Paper Prepared by

JOHN K. COSTER

Director, Center for Occupational Education

North Carolina State University at Raleigh

And Presented at

THE NATIONAL CONFERENCE ON EXEMPLARY PROGRAMS

Georgia State College

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PATTERNS AND GUIDELINES FOR ADMINISTERING EXEMPLARY

PROGRAMS AND PROJECTS AT THE STATE LEVEL

This paper is addressed to the problem of developing functional guidelines by and through which the provisions of Part D of the Vocational Education Amendments of 1968, entitled "Exemplary Programs and Projects," may be incorporated into the policies and plans of State Boards for Vocational Education. The problem merits attention to three major areas of concern:

1. The establishment of a basic posture of State level responsibility concerning exemplary programs and projects.

2. The establishment of an organizational and administrative structure for implementing the provisions of Part D of the Act at the State level.

3. The establishment of an exemplary program management and resource allocation system at the State level.

The Framework of State Responsibility

The 90th Congress, through Senate Report No. 1675, House Report No. 1532, and the Joint Conference Report, published as House Report No. 1938, set forth in broad, sweeping strokes its concerns for the development of occupational education programs designed to meet changing occupational demands and to serve all persons who need training or retraining for employment. These reports, and the Act itself, convey a sense of urgency about the changes needed to make occupational education more adaptive and responsive to the needs of American society and the American people. Of the several provisions included in the Vocational Education Amendments, none offers more promise for the future of occupational education than the exemplary programs and projects provision.

The purposes of Part D of the Act, as set forth in Section 141, ". . . are to stimulate, through Federal financial support, new ways to create a bridge between school and earning a living for the young people, who are still in school, who have left school either by graduation or by dropping out, or who are in postsecondary programs of vocational preparation, and to promote cooperation between public education and manpower agencies." To achieve these purposes, Congress has established a joint venture between State and Federal agencies to facilitate the development of new models for

occupational education. By allocating 50 per cent of the funds authorized under Part D of the Act to State Boards for Vocational Education, Congress (1) has made it possible for the States to participate more effectively in the development of new models of occupational education to resolve the array of problems which were identified in the Senate and House Reports, (2) has provided the opportunity for State personnel to exercise enlightened leadership and educational statesmanship in the resolution of problems and the development of new programs, (3) has provided the opportunity for the States to develop their plans for the implementation of this part of the Act in accordance with the priorities peculiar to a specific State, and (4) has disaggregated the total program so that the States can become an effective instrument in soliciting the efforts and energies of the best qualified professional personnel to attack the problems and evolve new solutions. Although the Act makes clear that National purposes and intent are to be served, it also provides that the States shall be responsible both for developing their own policies and plans for accepting and administering the program.

Obvious hazards exist in attempting to present a policy statement for adoption by all States in this paper. And no precise statement regarding the preparation of the section of the State Plan relative to exemplary programs and projects may be made until Federal guidelines for the development of such plans have been issued. This section of the paper is limited, therefore, (1) to setting forth basic considerations that should govern the development of a policy statement, and (2) to listing the minimum elements that should be considered in preparing the section of the State Plan relative to exemplary programs and projects.

The Development of a Policy Statement

It is suggested that each State Board for Vocational Education develop and adopt a policy statement relative to exemplary programs and projects and that consideration be given to including the following elements in the policy statement:

1. A statement of the acceptance of the concepts and principles of exemplary programs and projects.

2. A statement directing all persons engaged in occupational education in the State to encourage, facilitate, and assist in the development of exemplary programs designed to improve the quality and quantity of occupational education in the State. This statement would include an emphasis on making occupational education more accessible to all persons whose academic, socio-economic, and other handicaps prevent them from succeeding in regular programs of vocational education.

3. A statement designed to foster the creation of a climate for innovation within the program. Imagination is a quality highly prized in the development of exemplary programs. Thus, it is essential that such a climate be manifested in the policies of the State Board, the elements of the State Plan, the organization and administration of the program, and, finally, in coordinating the exemplary program with program development and operation.

4. A statement describing the nature of cooperative and coordinative linkages between those concerned with the exemplary programs and those concerned with program development, management, and operation.

5. A statement providing for the articulation between research and operational problems in vocational education. Such a provision would be consistent with the criticisms of research that have been mentioned in the report of the Advisory Council on Vocational Education, entitled Vocational Education: The Bridge Between Man and His Work, and in the Senate and House Reports. The Advisory Council's recommendation to establish exemplary programs and the Senate Report, referred to earlier, indicated that these programs should be developed that feature designs to synthesize the findings of research and related projects and incorporate these findings into new models of occupational education.

6. A statement providing that Federal funds available under Section 142(d) of the Act will not be commingled with State or local funds.

Elements of the State Plan

Preliminary attention may be given to the preparation of the section of the State Plan relative to exemplary programs and projects. It is reasonable to assume that the following elements should be included in the Plan:

1. The establishment of an Exemplary Program Advisory Council to formulate the State priorities for exemplary programs.

2. The designation of responsibility for the administration of funds made available under Part D of the Act, and the qualifications of persons who will be responsible for administering the programs.

3. The relationship of the office responsible for administration of exemplary programs to the State Division of Vocational Education.

4. The organizations, institutions, and agencies, including nonprofit public schools, that may participate in the program.

5. The system of coordinating efforts under the programs.

6. The system of contracting procedures for funding proposals.

7. The system of quality control developed to ensure work of high quality.

Organization and Administration

This section of the paper deals with the organizational and administrative structure in the State Division of Vocational Education for administering exemplary programs. More specifically, it relates to assigning the responsibility for administration, identifying the functions of the administrative body, and staffing the State office in charge of exemplary programs.

Responsibility for Administration

If research and related activity may be defined to include such activities as basic and applied research; developmental, experimental, pilot, and demonstration projects; and exemplary and innovative programs, as well as research utilization and dissemination; then it appears appropriate that one office be established within the structure of the State Division of Vocational Education to stimulate, coordinate, manage, and disseminate the products by these activities and incorporate them into existing programs of occupational education.

The preferred option for administering exemplary programs is to lodge this responsibility with the Research Coordinating Unit within the State. The option of establishing a new unit to manage the exemplary programs is rejected due to proliferation and redundancy. The Research Coordinating Units, which were formed initially in 1965, have been established as a viable mechanism for stimulating, coordinating, and interpreting research and related activity. Their mention in Part C of the Vocational Education Amendments of 1968 constitutes a congressional endorsement of the principle underlying their establishment and the effectiveness of their operation. Parenthetically, the preferred option for managing the State research program established under Section 131(b) of the Act is to lodge this responsibility with the Research Coordinating Unit.

The issue of the location of the Research Coordinating Unit may be raised in connection with the preferred option. Regardless of where they are located, the Units are established to serve the State Division of Vocational Education. When located outside of the administrative structure of the State

Division of Vocational Education, there is need for a coordinating or liaison officer to effect a working relation between the Unit and the State Division. The location of the State office in charge of exemplary programs should present no problem with regard to grant negotiation, since grants will be negotiated by a State fiscal officer upon recommendation by the State Board for Vocational Education or its designated officer regardless of where the State office in charge of exemplary programs is located.

Functions of the Administrative Office

Within the administrative structure established to implement the exemplary programs, four major functions may be identified which not only guide the operation of the program but also serve as the basis for staffing. These functions are listed as follows:

1. The priority determination function. The priority determination function relates to the need for a continual study to be made within each State to identify the problems confronting occupational education and to establish priorities for exemplary programs. The responsibility for this function should be assigned to the manager of exemplary programs. In addition, an Exemplary Program Advisory Council should be established by the State Board for Vocational Education, charged with the responsibility for assessing the problem areas of occupational education and with determining the priorities for exemplary programs subject to review by the State Board for Vocational Education. At least one member of the State Advisory Council on Vocational Education should be appointed to the Exemplary Program Advisory Council. Other members of the Exemplary Program Advisory Council should include the State Director of Vocational Education or his designee, the Director of the Research Coordinating Unit, and the representatives of local school units, teacher education staffs, counselor education staffs, and members of the business and industrial community.

2. The consultative function. The consultative function relates to providing consultation services to assist personnel from local school units, colleges and universities, nonprofit private agencies, and other organizations that are eligible to participate in the program in developing adequate proposals for exemplary programs, and, especially, in developing adequate plans for the evaluation of the programs. The purpose of the consultative function is to ensure that viable ideas for exemplary programs are not rejected due to the inability of the innovator to communicate clearly his ideas. The producer of ideas may not necessarily be an effective packager of ideas. This function is analogous to the stimulating function of the Research Coordinating Units. The consultative function establishes a link between the State office in charge of exemplary programs and the prospective innovator by providing a channel through which ideas may flow from the

innovator to the State office in charge of exemplary programs.

3. The management function. The management function involves the establishment of criteria for the evaluation of proposals; the reception, review, and disposition of proposals; and the requisite fiscal arrangements for implementation, as well as monitoring the programs that are created. The management function will be shared with the designated fiscal officer of the State. Where the Research Coordinating Units are independent of the State Division of Vocational Education, the management function may be shared by the designated officer of the Research Coordinating Unit and a liaison officer of the State Division of Vocational Education.

4. The coordination and actuation function. The coordination and actuation function relates to the coordination of projects in terms of the interrelationship among programs to produce a massive impact on problems identified in the priorities of the State and includes responsibility for seminars and training programs for directors of exemplary programs. It also relates to coordination between the Unit and the other sections of the State Division of Vocational Education and with local units. In addition, this function relates to the development of strategies for introducing the products of the exemplary programs into the mainstream of program development and operation within the State, as well as the development of strategies for dissemination.

Staffing the State Office in Charge of Exemplary Programs

Effective implementation of the provisions of Part D of the Act within the State is contingent upon the recruitment of a competent and qualified professional staff to perform the functions ennumerated above and the necessary supporting staff to provide research and clerical assistance. In addition, it will be necessary to establish a budget for the maintenance of the office for travel and for other costs.

If the preferred option for lodging the State office in charge of exemplary programs in the Research Coordinating Unit is accepted, then it seems logical for exemplary programs to be established and that these persons be assigned the responsibility for managing the State's exemplary program. The associate director in charge of exemplary programs should have the assistance of at least one full-time professional assistant, with the suggested title of Program Consultant. The minimum staff complement for the office would include at least one full-time secretary and one or two part-time research assistants plus the associate director and program consultant.

The associate director in charge of exemplary programs. The associate

director in charge of exemplary programs would be responsible for the performance of the priority determination and the management functions. In consultation with the State Director of Vocational Education and the director of the Research Coordinating Unit, he would be responsible for organizing the Exemplary Program Advisory Council and for the establishment and dissemination of priorities for the program. He also would be responsible for managing the program, including the recommendation of proposals for funding, the monitoring of progress of planning grants and exemplary programs, and for ascertaining that funded programs are progressing satisfactorily.

The minimum qualifications of the associate director are:

1. Hold the master's degree or equivalent and preferably the doctorate in occupational education or a related field.

2. Had a minimum of two years experience as a teacher, supervisor, or administrator.

3. Had experience as a director or co-director of a research or related project.

The program consultant. The program consultant would be responsible for the consultative and coordination and actuation functions. He would assume the initiative for establishing contact with persons in the State interested in planning exemplary programs, provide technical assistance in the preparation of applications for planning grants and the development of proposals for exemplary programs, and interpret the priorities and guidelines to persons interested in participating in the program. He also would assist in reviewing applications for planning grants and proposals for exemplary programs. Once the program is underway, he would assume responsibility for coordinating the exemplary program with other programs in the State Division of Vocational Education and with other agencies. He also would be responsible for developing strategies for disseminating the results of the exemplary programs and for introducing the results into the operational programs of occupational education in the State in cooperation with professional personnel in the State Division of Vocational Education.

The minimum qualifications of the Program Consultant are:

1. Hold the master's degree or equivalent and preferably the doctorate in occupational education or a related field and have had formal training in the design and evaluation of research projects.

2. Have a minimum of two years of experience in education, research, developmental work, or related fields.

3. Had experience in conducting a research or related project, either as a director or as a research associate, preferably in projects closely related to exemplary programs.

Exemplary Program Management and Resource Allocation System

The ultimate effectiveness of the State's exemplary program is based on (1) the establishment of a channel through which personnel who conceive of ideas for exemplary programs may communicate these ideas to the State office in charge of exemplary programs, (2) assessing the practicality, potential value, or feasibility of the idea, (3) developing an adequate proposal as the vehicle for bringing the idea into fruitation, (4) conducting the program so that the idea is translated into a model for improving the quality and quantity of occupational education in the State, and (5) incorporating the results of the exemplary program into operational programs of occupational education.

The consultative function of the State office in charge of exemplary programs provides for informal lines of communications between innovators and the office. This provision enables prospective initiators of exemplary programs to obtain a hearing with regard to the feasibility of ideas in terms of their potential relevance to the priorities of the State. Prospective initiators should be encouraged to submit brief synopses of ideas for exemplary programs to the office for review and reaction. In the operation and implementation of the program, however, a more formal system of communication of ideas and management of resources is needed.

This section of the paper presents a system for managing the State's exemplary programs and allocating resources available to the State to these programs. Two assumptions underlie the Exemplary Program Management and Resource Allocation System described herein:

1. The Federal funds that are made available to States under the provisions of Section 142(d) of the Vocational Education Amendments of 1968 are to be managed as scarce resources, so that it is imperative that the management system direct these resources toward problems of high priority.

2. The management of resources for exemplary programs dictates that quality control procedures be instituted. These procedures would provide for periodic reviews of progress and for the termination of programs whenever satisfactory progress has not been made.

The Exemplary Program Management and Resource Allocation System is based in part on the conditions of grants expressed in Section 143 of the

Act. According to this section, grants may be provided to fund all or part of the cost of (1) planning and developing exemplary programs, and (2) establishing, operating, or evaluating exemplary programs. This system provides for the initiation of proposals, the development of proposals under a planning grant, review of proposals, the monitoring of grants, the termination of programs, and the introduction of the products of the programs into the operational programs of occupational education.

The system, shown schematically in Figure 1, is divided into two subsystems: the exemplary program conception, feasibility, and development subsystem; and the exemplary program actuation and execution subsystem.

Exemplary Program Conception, Feasibility, and Development Subsystem

The exemplary program conception, feasibility, and development subsystem provides for (1) the receiving of applications for planning grants, (2) the evaluation and disposition of these applications, (3) the approval and funding of planning grants, (4) the monitoring of progress of the grants, (5) the receiving of proposals for exemplary programs, (6) the evaluation and disposition of these proposals, and (7) the funding of exemplary programs.

The subsystem is divided into two phases. Phase I involves receiving and disposing of applications for planning grants. A suggested guideline for submitting applications for these grants is attached to this paper as Appendix A. The application requests the following information:

1. The problem to which the proposed exemplary program is addressed and its relation to the priority areas for the State.

2. The objectives of the program, expressed in terms of the product to be produced at the termination of the project.

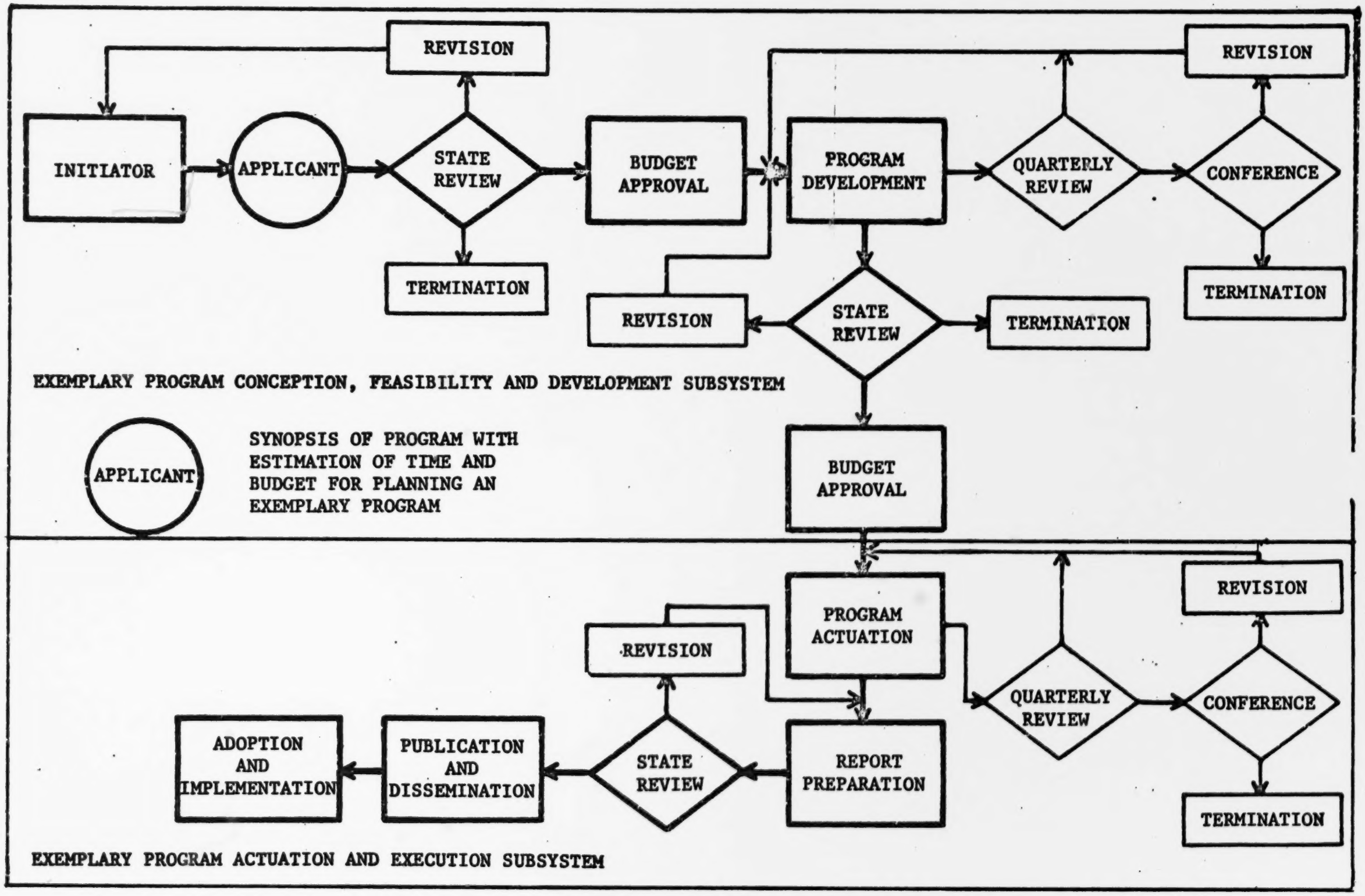
3. A brief description of activities and procedures proposed for conducting the exemplary program.

4. A brief description of activities in which the initiator plans to engage during the planning period.

5. The qualifications of the personnel who will direct the program.

6. An estimate of the cost required to plan or develop the proposal for the exemplary program.

The application will be submitted to the State office in charge of



EXEMPLARY PROGRAM MANAGEMENT AND RESOURCE ALLOCATION SYSTEM

FIGURE 1

exemplary programs. After initial screening for completeness, the application will be referred to an ad hoc review panel of three or more members for evaluation and recommendations. Suggested criteria for evaluating applications for planning grants are attached to this paper as Appendix B. The options to the members of the review panel are (1) approval, (2) provisional approval with specific recommendations for revision, and (3) disapproval. Applications that are provisionally approved by the review panel may be approved by the manager of exemplary programs if the recommendations are fulfilled. If the application is approved, then a recommendation for awarding a grant to the contracting organization will be made to the State Board for Vocational Education or to the officer designated to give financial approval and authorize the issuance of a grant. The planning grant then will be negotiated by a State fiscal officer.

Phase II of the subsystem pertains to the preparation of the proposal for the exemplary program. It provides for the monitoring of the planning grant to ensure that satisfactory progress is being made toward the development of an exemplary program and requires quarterly progress reports. The management procedures include an option for terminating the planning grant where there is lack of evidence of satisfactory progress. The termination of a grant should be an action of the last resort, but it should be an option open to the manager of the exemplary programs. The suggested termination procedures are:

1. A conference of the State exemplary program manager, the program director, and the appropriate officer of the applicant organization will be held to discuss the evidence of lack of satisfactory progress toward the planning of the exemplary programs.

2. The results of the conference will be reported to the Exemplary Program Advisory Council, together with a recommendation for termination.

3. Subject to concurrence of the Exemplary Program Advisory Council, a recommendation for termination will be submitted to the State Board for Vocational Education or its designated officer.

4. Subject to the acceptance of the recommendation for termination, the State Board for Vocational Education or its designated officer shall instruct the State fiscal officer to terminate the grant and suspend payment of additional funds.

The end product of the planning grant is a proposal for an exemplary program. Suggested guidelines for the preparation of exemplary programs and projects are included in this paper as Appendix C. These guidelines require that information be provided relative to:

1. The specification of the exemplary program, including the definition of the problem area toward which the program is directed, a description of the program, the rationale on which the program is based, and the objectives of the program stated in terms of the product to be produced at the termination of the program.

2. The activities and procedures to be undertaken, including the overall plan or design, the setting in which the exemplary program will be conducted, the participants in the program, and the organization and administrative arrangements.

3. The proposed plan for evaluating the effectiveness of the exemplary program in light of the objectives of the program, including the evidence that will be obtained to demonstrate the efficacy of the model, how the evidence will be obtained, and how it will be analyzed and presented.

4. The plan for introducing the results of the program into the operational structure of the applicant organization, the plan for demonstrating the products of the program, and the plan for disseminating the results in addition to the final report and publication of results in periodicals and journals.

5. A time schedule for indicating the estimated dates for completing major events occurring in the program, such as the completion of the preparation of preliminary drafts of instructional materials, the completion of field testing, or the completion of the preparation of the preliminary draft of the final report.

6. A plan of financing the program prepared as a budget to support the request for funds, subdivided by major categories such as personnel, travel, supplies, and communications.

The completed proposal will be submitted to the office in charge of exemplary programs. Proposals will be screened initially by the members of the professional staff of the office for completeness. If the proposal is complete, it will be referred to the review panel for evaluation and recommendations. The procedures for disposing of proposals for exemplary programs are the same as the ones given earlier for the application for planning grants.

Exemplary Program Actuation and Execution Subsystem

The exemplary program actuation and execution subsystem provides for the management of exemplary programs from the point of time when the grant award is made through the publication of the final report to the adoption and implementation of the new model developed pursuant to the provisions of

1. The specification of the exemplary program, including the definition of the problem area toward which the program is directed, a description of the program, the rationale on which the program is based, and the objectives of the program stated in terms of the product to be produced at the termination of the program.

2. The activities and procedures to be undertaken, including the overall plan or design, the setting in which the exemplary program will be conducted, the participants in the program, and the organization and administrative arrangements.

3. The proposed plan for evaluating the effectiveness of the exemplary program in light of the objectives of the program, including the evidence that will be obtained to demonstrate the efficacy of the model, how the evidence will be obtained, and how it will be analyzed and presented.

4. The plan for introducing the results of the program into the operational structure of the applicant organization, the plan for demonstrating the products of the program, and the plan for disseminating the results in addition to the final report and publication of results in periodicals and journals.

5. A time schedule for indicating the estimated dates for completing major events occurring in the program, such as the completion of the preparation of preliminary drafts of instructional materials, the completion of field testing, or the completion of the preparation of the preliminary draft of the final report.

6. A plan of financing the program prepared as a budget to support the request for funds, subdivided by major categories such as personnel, travel, supplies, and communications.

The completed proposal will be submitted to the office in charge of exemplary programs. Proposals will be screened initially by the members of the professional staff of the office for completeness. If the proposal is complete, it will be referred to the review panel for evaluation and recommendations. The procedures for disposing of proposals for exemplary programs are the same as the ones given earlier for the application for planning grants.

Exemplary Program Actuation and Execution Subsystem

The exemplary program actuation and execution subsystem provides for the management of exemplary programs from the point of time when the grant award is made through the publication of the final report to the adoption and implementation of the new model developed pursuant to the provisions of

Summary

The Vocational Education Amendments of 1968 provide for States to participate in the process of reshaping occupational education by making available Federal funds through authorization of Part D of the Act to State Boards of Vocational Education to finance exemplary programs and projects selected by the State Board or its designated agency. The opportunities for the States to participate in the venture necessitates that the States accept the implied responsibility for encouraging the development of new models of occupational education and to adopt the necessary policies and develop the appropriate sections in the State plan to govern the activities in the States. Special emphasis is placed on creating a climate for innovation in the State and on utilizing the products of research and related projects in planning, developing, and executing exemplary programs.

In addition to accepting the provisions of the Act relating to exemplary programs, it is necessary for the State Board for Vocational Education to establish a State office in charge of exemplary programs. The preferred option is to lodge the State office in charge of exemplary programs within the State's Research Coordinating Unit. The office, to be headed by an associate director of the Research Coordinating Unit in charge of exemplary programs, is assigned four functions, including a priority determination function, a consultative function, a management function, and a coordination and actuation function. The importance of adequate staffing of the office and adequate budgeting for operational expenses is stressed. It is recommended that an Exemplary Program Advisory Council be established by authority of the State Board for Vocational Education to make a continual assessment of the long-range operational problems of the State and to establish priorities for exemplary programs.

An Exemplary Program Management and Resource Allocation System is presented in the body of the paper which details a systematic approach to soliciting, receiving, evaluating, funding, and monitoring planning grants and fully developed proposals for exemplary programs. The system is designed to facilitate the submission and review process, to provide for the allocation of resources, and to provide for quality control of the work to be undertaken with options of terminating programs whenever there is lack of evidence of satisfactory progress. The system also provides for the dissemination of results and for incorporating the results of the programs into operational programs of occupational education.

APPENDIX A

GUIDELINES FOR SUBMITTING AN APPLICATION FOR A PLANNING GRANT FOR DEVELOPING AN EXEMPLARY PROGRAM OR PROJECT

I. COVER PAGE

APPLICATION FOR A PLANNING GRANT TO DEVELOP AN EXEMPLARY PROGRAM OR PROJECT SUBMITTED TO THE STATE BOARD FOR VOCATIONAL EDUCATION UNDER THE AUTHORITY OF SECTION 142(d) OF THE VOCATIONAL EDUCATION AMENDMENTS OF 1968, P. L. 90-576

TITLE OF PROGRAM:	(Be concise; avoid technical terms)
APPLICANT ORGANIZATION:	(Name and address of College or University, School District, Nonprofit Private Agency, or other unit.)
INITIATED BY:	Signature (Full name of person responsible for developing the application; position; telephone area code, number, and extension.)
PROGRAM DIRECTOR:	Signature (Full name of person in charge of the planning grant; position; telephone area code, number, and extension.)
CERTIFICATION OF COMPLIANCE:	I certify that an Assurance of Compliance with Title VI of the Civil Rights Act of 1964 has been filed with the U. S. Department of Health, Education and Welfare, and that it applies to this application for a planning grant.
CERTIFICATION OF NEED:	I certify that funds are not available for the application organization to develop a proposal for the exemplary program described in this application.
TRANSMITTED BY:	Signature (Full name and position of person committing the applicant organization to the planning grant; telephone area code, number, and extension.)
DURATION OF PLANNING GRANT:	(Proposed beginning and ending dates)
TOTAL FUNDS REQUESTED:	
DATE TRANSMITTED:	

II. THE APPLICATION FOR THE PLANNING GRANT

The purpose of the planning grant is to provide funds to qualified applicant organizations to pay the cost of developing a viable proposal for an exemplary program or project. Funds may be requested to pay the salaries of personnel who are released from their regular assignments in the applicant organization to develop an adequate proposal for an exemplary program. Funds also may be requested to pay travel costs and other expenses incurred in the preparation of the proposal. Applicant organizations must certify that funds are not available locally to develop the proposal for the program described in the application for the planning grant.

The application is an instrument for the communication of an idea for an exemplary program. In the application, the initiator is requested to describe the idea, define the problem area to which it is related, indicate the relation of the problem area to the State priorities for exemplary programs, state briefly the objectives of the program in terms of the product to be produced at the termination of the program, describe briefly how the program will be conducted, indicate the activities to be undertaken during the period covered by the planning, state the qualifications of the program director, and provide an estimate of cost for preparing the proposal.

Information regarding each of the following points should be included in the application for the planning grant.

Problem Area: State briefly the problem area to which the proposed exemplary program is addressed, describe briefly the exemplary program, indicate the target population, justify the significance of the proposed program in terms of State priorities for exemplary programs, and delineate briefly the exemplary features of the idea.

Objectives: The objectives of the exemplary program should be stated in terms of the product to be produced at the termination of the program, insofar as this is possible in the initial planning stage. The end product may be a new curriculum, a new structure for occupational education in a local school, or a system for introducing occupational education into elementary schools.

Description of Activities and Procedures: Describe briefly how and where the program will be conducted, and the procedures that will be employed in conducting the program.

Description of Activities During the Planning Period: Describe briefly the activities in which the program director will engage in the development of the proposal for an exemplary program, during the period covered by the planning grant.

Personnel: Provide a brief resume of the qualifications of the person(s) who will be responsible for planning the program, and indicate special qualifications and experience which should be considered in evaluating the application.

Budget: Submit an estimate of costs requested to plan the proposal for the exemplary program, and attach to the application a brief statement to justify the funds requested. Budgets will be negotiated by a state fiscal officer, subject to recommendations of the review panel and in consultation with the initiation of the application.

Start the budget on a separate page, and follow the format shown on the budget worksheet.

BUDGET WORKSHEET FOR APPLICATIONS FOR PLANNING GRANTS

Initiator_____ Duration of Proposed Program_____

Institution or Agency_____ Beginning Date_____ Ending Date_____

Category	Project Costs by Line Items	
	State-Federal	Local
I. DIRECT COSTS A. Personnel (List all position titles such as program director, secretary, consultants*, etc. State percent of time on program, per annum salary, and beginning and ending dates for each person.)		
B. Employee Benefits (Summarize benefits such as Social Security, Retirement, etc.)		
C. Travel (Indicate fares and/or mileage at allowable rates; number of days per diem* and rate.)		
D. Supplies and Materials (Give costs for office supplies.)		
E. Communications		
F. Services (Give costs for duplication and other services required in the development of the exemplary program.)		
G. Final Report Costs	N/A	N/A
H. Equipment	N/A	N/A
I. Other Direct Costs (List and justify)		
J. Subtotal, Direct Costs		
II. INDIRECT COSTS (Give basis on which local overhead is computed, who established the rate, when, and period covered.)		
III. TOTAL COSTS		
IV. COST SHARING (Give per cent)		

*Consultants: Show rate and number of days under Personnel; transportation and per diem under Travel.

APPENDIX B

SUGGESTED CRITERIA AND PROPOSED FORM FOR EVALUATING APPLICATIONS FOR PLANNING GRANTS TO DEVELOP EXEMPLARY PROGRAMS OR PROJECTS

SUGGESTED CRITERIA AND PROPOSED FORM FOR EVALUATING APPLICATIONS

FOR PLANNING GRANTS TO DEVELOP EXEMPLARY PROGRAMS OR PROJECTS

Title of Program_____

_____

Initiator_____

Title or Position_____

Applicant Organization_____

The criteria to be considered in evaluating the application of the planning grant are listed under the categories of significance and relevance, activities and plans, personnel, and economic efficiency. Review panel members are requested to indicate whether each criterion is judged to be satisfactory, and to comment briefly (attach additional sheets) on the adequacy of the application relative to each category.

Significance and Relevance	Yes	No
1. The application is addressed to a significant problem area that is relevant to the State priorities for exemplary programs.	___	___
2. The idea for the exemplary program described in the application has promise for developing new models for occupational education in the State.	___	___
Activities and Plans		
3. The overall plan presented in the application merits support for a planning grant.	___	___
4. The activities in which the initiator proposes to engage during the planning period are designed to produce an adequate proposal for an exemplary program.	___	___

Personnel	Yes	No
5. The personnel are qualified to plan the exemplary program based on evidence of training and experience.	___	___
Economic Efficiency		
6. The costs for planning the exemplary program are reasonable and justifiable.	___	___
7. The ratio of costs to probable outcomes is satisfactory.	___	___

Recommendation (Check one)

_____Approval

_____Provisional approval. State the provisions (attach additional sheets) to be satisfied by the initiator in order for the application to be approved.

_____Disapproval

_____

Signature of Reviewer Date

APPENDIX C

GUIDELINES FOR PREPARING PROPOSALS FOR EXEMPLARY PROGRAMS AND PROJECTS

I. COVER PAGE

PROPOSAL FOR AN EXEMPLARY PROGRAM OR PROJECT SUBMITTED TO THE STATE BOARD FOR VOCATIONAL EDUCATION UNDER THE AUTHORITY OF SECTION 142(d) OF THE VOCATIONAL EDUCATION AMENDMENTS OF 1968, P. L. 90-576

TITLE OF PROGRAM:	(Be concise, avoid technical terms)
APPLICANT ORGANIZATION:	(Name and address of College or University, School District, Nonprofit Private Agency, or other unit.)
INITIATED BY:	Signature (Full name of person responsible for developing the proposal; position; telephone area code, number, extension.)
PROGRAM DIRECTOR:	Signature (Full name of person in charge of the program; position; telephone area code, number, extension.)
CERTIFICATION:	I certify that an Assurance of Compliance with Title VI of the Civil Rights Act of 1964 has been filed with the U. S. Department of Health, Education, and Welfare, and that it applies to this program proposal.
TRANSMITTED BY:	Signature (Full name and position of person committing the applicant organization to the program; telephone area code, number, extension.)
DURATION OF PROGRAM:	(Proposed beginning and ending dates)
TOTAL FUNDS REQUESTED:	$_____for first year $_____for duration of program
DATE TRANSMITTED:	

II. ABSTRACT

Starting on a separate sheet, provide a one-page abstract of the program. Insert the abstract immediately following the cover page. Provide the following information:

Title of Program:

Program Director:

Applicant Organization:

Total Funds Requested:

Beginning Date:_____ Ending Date:_____

Objectives: State briefly the purpose, objectives, or nature of the program and indicate briefly the principal exemplary feature of the program.

Activities or Procedures: Give a brief description of the overall design or plan of the program.

Expected Contribution to Developing New Models of Occupational Education: Indicate briefly how the proposed program will contribute to the improvement of the quality and quantity of occupational education, and its implications for developing new programs in the State, or for extending and expanding occupational education to persons not currently being adequately served.

III. THE BODY OF THE PROPOSAL

The proposal is an instrument of communication of intent and commitment. In the body of the proposal, the initiator is expected to indicate clearly the nature and scope of the exemplary program or project which he purports to conduct, to relate the program to the problem(s) or conditions that generate the needs of a new addressment to existing programs and conditions, to describe and synthesize the products of research and related programs that are to be incorporated in the exemplary program, to specify the objectives of the program, to describe how, when, and where the program is to be conducted, to describe how the program is to be evaluated, to indicate how the product of the program is to be implemented, and to prepare an estimate of the cost for conducting the program.

The subheadings under the guidelines define the information desired for an adequate appraisal of the proposed program. Appropriate information should be presented under each major section of the body of the proposal; however, within a section, the initiator is free to present the information in the manner that will enable him to communicate most effectively and forcibly with the persons who will be responsible for reviewing and evaluating the proposal.

Specification of the Program or Project

This section of the proposal indicates why the program or project should be undertaken. It begins with a definition of the problem area, includes the description of the proposed program or project, presents a rationale underlying the program, and concludes with a statement of the objectives of the program expressed in terms of the product resultant at the termination of the project.

Problem Area

State and delineate the problem, complex of problems or area(s) of concern toward which the program is directed and relate the problem area to the priorities for exemplary programs in the State and to the need to develop new models for occupational education. Present background information relevant to the problem and cite references and data which support the significance of the problem. Describe the target population, where appropriate.

Program or Project Description

Describe the proposed program or project in sufficient detail to indicate (1) the nature and scope of the program or project, (2) the exemplary features of the program, (3) the potential impact of the program toward improving the quality and quantity of occupational education in the State, (4) the feasibility of the program in terms of potential adoption into the state program of occupational education, (5) the potential contribution of the program toward resolving the problem area or areas of concern defined in the preceeding subsection, and (6) the justification for requesting Federal and State funds to conduct the program.

Rationale

State the operational framework or rationale that buttresses the proposed program. Present a review and summary of the findings and products of research and related programs and projects which form the basis for the proposed program, and demonstrate how the products of these programs and projects will be introduced into the program described in the preceeding subsection.

Objective(s)

State the objective(s) of the program in terms of the product--i.e., new curriculum, organizational models, new work experience programs--to be produced at the termination of the program, and delineate the objectives to the extent that the delineation may serve as a guide to the design or plan of the program and for evaluating the efficacy of the program.

Activities and Procedures

This section of the proposal indicates what is to be done: how the proposed exemplary program or project is to be conducted. It provides information regarding the design or plan of the program, the setting in which the program will be conducted, the participants in the program, and organizational and administrative arrangements for conducting the program.

Overall Design or Plan

Describe the overall design or plan for the program in sufficient detail to demonstrate clearly that the design or plan is appropriate for attaining the objectives set forth in the preceeding section. Justify the design or plan in terms of its appropriateness for attaining the objectives. Where appropriate, indicate options for alternative courses of action that may be employed if the need arises.

The Setting

Describe the setting in which the exemplary program will be conducted, including such information as the communities, schools, or classes which will be used in conducting the program; the appropriateness of the

units for conducting the program; and demographic characteristics of the communities, schools, or classes which may be useful in assessing the appropriateness of the setting.

Participants

Describe the participants in the programs in terms of the special or unique features of the program and the criteria for their selection. For example, in a curriculum development program or in a work experience program, describe the characteristics of the students who will serve as subjects in the development and testing of the program.

Organizational and Administrative Arrangements

Describe the organizational and administrative structure for conducting the program. Indicate the relationship between the proposed program staff and local administrators, supervisors, teachers, guidance counselors, community personnel, and advisory committees. Indicate the commitment of the local administrative unit--university, college, community college or technical institute, or local school unit--in conducting the program. Describe special cooperative arrangements with other agencies, institutions, or the business and industrial community.

Evaluation

This section of the proposal presents the plans or strategies for evaluating the program in light of the stated objectives. It indicates that evidence which is to be submitted to demonstrate the objectives have been attained, how the evidence is to be collected, the instrumentation and data collecting instruments to be used, and the proposed method of analyzing the data. Where the programs involve field testing, the description should include information regarding the base line data to be collected for evaluation and/or the use of experimental and control groups in the evaluation process. The evaluation should provide for assessing the appropriateness of the process of developing the exemplary program as well as for assessing the product of the program.

Utilization and Dissemination

This section of the proposal indicates the plans for incorporating the results of the exemplary program into the operational framework of the applicant organization, and the plans for disseminating the results of the program.

Utilization

Describe the plans for incorporating the results of the exemplary program into the operational framework of the application organization or consortium of units participating in the exemplary program. Indicate briefly the feasibility and practicality of the exemplary features of the program, and provide evidence that the applicant organization is willing to finance the program once the program has been terminated.

Dissemination

Describe the plans for disseminating the results of the program, in addition to traditional methods of dissemination such as the preparation of a final report or the preparation of articles for periodicals. Give particular attention to making provisions for demonstrations of the exemplary features of the program during the process of the program, and for seminars, conferences, and workshops to be conducted when the program has been completed.

Time Schedule

This section of the proposal presents a time schedule for the completion of the major events in conducting the program.

Personnel and Facilities

This section of the proposal presents information regarding the qualifications of the personnel who will conduct the program and the availability of adequate facilities for conducting the program.

Personnel

List the names, titles, and a brief statement of the pertinent experience and unique qualifications of the personnel who will conduct the program, especially the program director. List the names and qualifications of consultants whenever possible. Indicate whether the key personnel and consultants have agreed to serve on the program.

Facilities

Indicate any special facilities available which will enhance the successful completion of the program.

The Budget

This section of the proposal presents the proposed plan for financing the program. The budget should be prepared for the duration of the program subdivided according to fiscal years beginning July 1 and ending on June 30. Programs are limited to three years duration, but a program may encompass four fiscal years. Budgets will be negotiated by a state fiscal officer, subject to recommendations by the Review Panel and in consultation with the initiator of the program.

The budget worksheet provides for local cost sharing of the costs of the program, and local contributions should be shown regardless of the policy of the State Board for Vocational Education to require local contributions.

Start the budget on a separate page, and follow the format shown in the budget worksheet. Attach additional sheets where needed to explain unusual costs of the program.

BUDGET WORKSHEET FOR EXEMPLARY PROGRAMS

Initiator_____ Duration of Proposed Program_____

Institution or Agency_____ Beginning Date_____ Ending Date_____

Project Costs by Line Items

Category	First Year		Second Year		Third Year		Total	
	State-Federal	Local	State-Federal	Local	State-Federal	Local	State-Federal	Local
I. DIRECT COSTS A. Personnel (List all position titles such as program director, secretary, research assistants, consultants*, etc. State per cent of time on program, per annum salary, and beginning and ending dates of employment for each person.)								
B. Employee Benefits (Summarize benefits such as Social Security, retirement, etc.								
C. Travel (Indicate fares and/or mileage at allowable rates; number of days per diem* and rate.)								
D. Supplies and Materials 1. Project Materials 2. Office Supplies								
E. Communications								
F. Services 1. Duplication 2. Statistical 3. Testing 4. Other								
G. Final Report Costs								
H. Equipment (Where allowable)								
I. Other Direct Costs (List)								
J. Subtotal, Direct Costs								
II. INDIRECT COSTS (Give basis on which local overhead is computed, who established the rate, when, and period covered.)								
III. TOTAL COSTS								
IV. COST SHARING (Give per cent)								

*Consultants: Show rate and number of days under Personnel; transportation and per diem under Travel.

APPENDIX D

SUGGESTED CRITERIA AND PROPOSED FORM FOR EVALUATING PROPOSALS FOR EXEMPLARY PROGRAMS AND PROJECTS

SUGGESTED CRITERIA AND PROPOSED FORM FOR EVALUATING

PROPOSALS FOR EXEMPLARY PROGRAMS AND PROJECTS

Title of Program _____

_____

Initiator _____

Title or Position _____

Applicant Organization _____

The criteria to be considered in evaluating the proposal for an exemplary program are listed under the categories of significance and relevance, activities and plans, utilization, personnel and facilities, and economic efficiency. Review panel members are requested to indicate whether each criterion is judged to be satisfactory, and to comment briefly (attach additional sheets) on the adequacy of the proposal relative to each category.

Significance and Relevance	Yes	No
1. The proposal is addressed to a significant problem area that is relevant to the State priorities for exemplary programs.	___	___
2. The idea for the exemplary program described in the proposal has promise for developing new models for occupational education in the State.	___	___
Activities and Plans		
3. The problem area and the objectives are clearly defined and the objectives are stated in a manner to facilitate the evaluation of the program.	___	___

Activities and Plans (Continued)	Yes	No
4. The rationale on which the program is based is sound, adequately developed and the products of research and related activities on which the program is based are adequately delineated, synthesized, and relevant to the proposed program.	___	___
5. The procedures necessary to attain the objectives are appropriate and technically sound.	___	___
6. The working arrangements, denoted in the setting, the participants, and the organizational and administrative arrangements, are conducive to attaining the objectives of the program.	___	___
7. The plan of evaluation is complete, technically sound and the analytical procedures are appropriate for the evaluation.	___	___
Utilization		
8. The proposal clearly indicates the feasibility of utilizing the results of the program in improving the quality and quantity of occupational education.	___	___
9. The proposal clearly indicates that the applicant organization is committed to introducing the results of the program into its operational program.	___	___
10. The plans for disseminating the results of the program and for demonstrating the exemplary features of the program are adequate.	___	___
Personnel and Facilities		
11. The personnel assigned to the program are qualified to conduct the program.	___	___

Personnel and Facilities (Continued)	Yes	No
12. The proposal provides for the use of professional personnel outside the field of education where appropriate.	___	___
13. The facilities for carrying out the program are adequate.	___	___
14. The nature of the cooperation for participating schools or other agencies is clearly identified, and adequate evidence of committment is presented.	___	___
Economic Efficiency		
15. The costs for conducting the program are reasonable and justifiable.	___	___
16. The ratio of costs to probable outcome is satisfactory.	___	___

Recommendations (Check one)

_____ Approval

_____ Provisional approval. State the provisions (attach additional sheets) to be satisfied by the initiator in order for the proposal to be approved.

_____ Disapproval

_____

Signature of Reviewer Date

STRATEGIES FOR IMPLEMENTING EXEMPLARY PROGRAMS AND PROJECTS IN ORDER TO MAKE MAXIMUM CHANGE IN THE EDUCATIONAL PROCESS

Samuel A. Moore, II
Michigan State University

It is both ironic and understandable that vocational educators are concerned with strategies for implementing change. It is ironic because vocational educators, particularly those concerned with changing agricultural techniques, have had dramatic success with invoking change. Too, they have been in the forefront in conducting research into the change process. But is it not also understandable that they should be concerned? The very fact that change has been wrought suggests that those who have been most successful would also be most sensitive to the problems of change -- particularly the problems associated with implanting changes which make a desired difference.

While it has become trite to say it -- nothing is more inevitable than change. Whether evolutionary or revolutionary, change will occur -- it does occur. The main problem for the educator has been one of selecting or generating desired changes and then implementing them in such a manner that they have maximum impact on the educational scene. And it is here that one finds the heart of Exemplary Programs and Projects. It is extremely important that one keep in mind the purpose of Exemplary Programs and Projects -- "... to stimulate, through Federal financial support, new ways to create a bridge between school and earning a living for young people, who are still in school, who have left school either by graduation or by dropping out, or who are in postsecondary programs of vocational preparation, and to promote cooperation between public education and manpower agencies."

Purpose is critically important since our broadly based educational program is conceived to meet many purposes. If the Exemplary Programs and Projects are to keep faith with the intent of the 1968 Amendments, they must demonstrably fulfill the purpose set in the legislation. Grant that there may be peripheral and spin-off gains which have great import for our broad educational program -- but, if the specific intent of the Amendments is not realized, vocational educators will have measurably failed.

The specific purpose of this paper is to suggest what might be useful strategies for the implementation of Exemplary Programs and Projects. It should quickly be added that the writer is not a professional vocational educator. He is a professional educator and one who is especially concerned with strategies and tactics which may be functional in program implantation. In a sense, this paper is a micro-model of its own thesis.

The writer must establish his own credibility and the relevance of what he has to say. He must be persuasive in arguing that the strategies suggested are, in fact, useful and practical for a real-world application.

And so it is for the vocational educators and others concerned with vocational education who will read and discuss this paper. They too will have to give careful consideration to the givens and the variables which will impact upon their success or failure in carrying out the purpose of the Amendments.

Inherent in a strategy for program implementation is the problem of communication. And when one considers communication he often thinks first of the source. The initial source is, of course, the United States Office of Education which will administer the Act as amended. And there are sources at the state and local levels. Vocational educators in teacher training institutions are also sources. There is no assurance that these sources will agree -- even among themselves -- upon what are Exemplary Programs and Projects. This is one of the reasons why considerable care is taken to define and set guidelines when legislation is enacted and funded. In a sense, the definitions and guidelines say to state and local vocational educators "these are the conditions which must exist if you are to participate in the use of the money." If state and local educators wish to participate in the use of these monies, they must demonstrate that conditions exist which qualify them for access to participation.

And it is precisely at this point that state and local vocational education units may hit their first snag. One of the salient characteristics of vocational education since the inception of federal assistance has been the development of a tightly knit bureaucracy -- a bureaucracy which has been profoundly successful in the development and implementation of programs of vocational education. However, one of the dominant characteristics of a bureaucratic structure is its nearly fanatical resistance to change. One of the specific purposes of organizing a bureaucratic structure is to routinize administration. An immediate byproduct of this is the ritualization of procedures, the stratification of statuses, and the diminishing of discretion extended to individuals within the bureaucracy.

Of course, this is not all bad. While the bureaucratic structure does tend to become quite impersonal, it, at the same time, strives toward being equitable in the administration of its affairs. Much of this administration is done by written policy, rule, and regulation -- and, while this does constrain educators within the organization from freely using their professional judgment, it does tend to keep the organization pointed toward the specific purposes for which it exists.

The problem with source personnel should be apparent. No program or project, exemplary or otherwise, stands to have much chance for acceptance or success unless there is a persuasive assurance that present personnel will not lose status. Statuses are both obvious and subtle. They are obvious in the formal network of organizations (i.e., titles and number of subordinate personnel) and they are subtle in the informal

relationships among personnel (i.e., a staff specialist may have the ear of the director and may, in fact, very much predicate what the director decides to do). From this might be derived a first element of necessary strategy -- EXEMPLARY PROGRAMS AND PROJECTS MUST NOT THREATEN THE ESTABLISHED STATUSES OF PERSONNEL WHO WILL ADMINISTER THEM.

This strategy element is not at all as simple as it may sound. In the first place there will be many people involved with the implementation and administration of Exemplary Programs and Projects. Not only will these people have different statuses within their own organizations but they will represent different groups and they will be geographically separated from one another. The specific triad one thinks of most often in vocational education includes vocational educators in teacher training institutions, state supervisors, and local vocational teachers. Compounding this are the six or more relatively specific areas within which vocational programs are offered. Simply put, within the organizations administering the vocational education program, status moves toward where the money is. What are the implications of this? They are difficult to predict with exactness. However, some general statements might clarify the problem. It is entirely possible that Exemplary Programs and Projects will be effected -- that they will be operational in the field -- before the vocational educators in teacher training institutions are able to institute necessary changes in their curricula which might insure that new teachers entering the field will be able to service these programs and projects. It is also possible that teacher trainers and state supervisors will not be able to augment their programs rapidly enough to provide needed in-service experiences for field personnel who are managing the programs in the schools and communities. In itself, this is potentially threatening and may lead to some foot-dragging among critical personnel -- personnel who must <u>support</u> the programs and projects if they are to be implemented at all.

A subordinate tactic which might be considered at this point involves soliciting the involvement and support of vocational educators who are relatively new in the field -- or, for that matter, personnel who are relatively new in teacher training institutions and state departments of education. The reasoning here is simply that these people who are new to their positions and new in the bureaucracy will be striving for status and they may see that through Exemplary Programs and Projects there is a unique opportunity to open up the system -- an opportunity for them to ascend more rapidly than they might have through the traditional structure of the organization. But, even with this tactic, a caution must be offered. The use of new personnel who are aspiring to higher status must be accompanied by at least the tacit approval and support of high status personnel in the formal structure of the organization.

In a way, the endorsement of present leaders in state education departments, teacher training institutions, and among the field practitioners is a test of the real status these men enjoy. Their endorsement and forceful support of Exemplary Programs and Projects suggest

that they feel secure enough not to be especially threatened by a new order of things.

Nevertheless, it remains that the funding of any Exemplary Programs and Projects means that other activities will not be receiving equivalent support. And, in turn, this means program and project directors must accept that there will be some of their professional colleagues who will not be particularly happy.

The initial focus of these comments has been upon the professional personnel who will identify and implement the Exemplary Programs and Projects. The initial focus was no accident. While Rogers[1] states that "It is the characteristic of a new product not as seen by experts but as perceived by the potential adopters that really matters," it remains that the complex organizational structure which exists to deliver vocational education systems must also desire change before any significant change can be implemented.

Once one has considered the source of communication, he then must become concerned with the message to be transmitted. Again, the purpose stated in the 1968 Amendments makes it abundantly clear what the message is -- "... (to) create a bridge between school and earning a living ..." But this is a broad statement -- and, wisely so since it gives vocational educators a great deal of latitude in devising or selecting programs and projects which are truly exemplary. But it remains for professional vocational educators to designate which programs and which projects are exemplary. While the language of the Amendments specifically states "new ways," one might suggest that there may already exist activities which are exemplary. In fact, one approach to maximizing change might be to capitalize upon some of the very fine program elements which already exist rather than frantically jumping from one change to the next using the premise that change per se is good.[2]

Zander[3] cites the urgency for the message to have clarity when he discusses conditions which are conducive to resistance to change. He states, "Resistance can be expected if the nature of the change is not made clear to the people who are going to be influenced by the change.... Many people fear incomplete information about changes which influence them." One might speculate on how the message pertaining to the 1968 Amendments could be incomplete or confusing -- creating "mixed messages." For instance, are Exemplary Programs and Projects going to require that there be constructed and used a carefully developed linkage system among the many individuals and agencies interested in what is done? Or, will it be possible for the entrepreneur to strive for an exemplary program -- will it be possible for individuals and small groups to work from a base of dedication and commitment when there is no "hard" evidence to suggest that they have a chance to succeed? Or will it be that any program which endeavors to treat the population specified in the Amendments shall be supported?

It also can be asked whether there must be some formal plan for evaluating the consequences of the program or project so that there may be some relatively hard data generated -- data which may serve to improve the liklehood that further funds will be available to increase the possibility that the endeavor is firmly implanted. All these questions are intimately involved with the message that goes out to both the administering personnel -- professional vocational educators -- and to the people who will be the recipients of the programs and projects. As always, there is the risk of over-simplification and over-generalization. The 1968 Amendments can be interpreted in a manner which so constrains application that impact will hardly go beyond "salting" existing programs or, they may be interpreted so broadly that whatever programs and projects are funded will defy administration and may fall prey to the opportunist who in the modern vernacular wants to "do his thing" but, who often has no desire to assume a responsibility for the efficacy of the program or to work toward the integration of the activity within the broadly based educational program of the school-community.

A second element of strategy may evolve from this consideration -- ACCEPTANCE OF EXEMPLARY PROGRAMS AND PROJECTS WILL DEPEND UPON THE EXTENT TO WHICH THEY ARE DESCRIBED IN A STRAIGHT-FORWARD MANNER AND UNDERSTOOD BY BOTH THOSE WHO WILL ADMINISTER THEM AND THOSE WHO WILL BE THE RECIPIENTS. While the analogy is imperfect, it is useful to remember that the United States Department of Commerce has estimated that some ninety per cent of all the new products put on the market fail to succeed within four years of their release.[4] Here is the risk that we may become infatuated with our prolific cultural adaptability -- the risk that we may lose sight of the magnitude of our failures; not because all that failed was really desirable and should have been adopted but because we still lack the technical and procedural know-how to assure that a program of change can be implemented and that it can make a difference over a period of time.

It would seem that the 1968 Amendments are extremely clear on this point -- the intent is that Exemplary Programs and Projects be funded so that they do not fail; so that they will generate maximum change over time in the educational process. However clear and understandable the message may be, it is of little consequence unless appropriate channels of communication are selected for the transmission of the message. Assume for the moment that those who will administer the programs and projects are convinced that they have merit -- how then are the community and the direct recipients persuaded to support and participate? "Ultimately, youth will decide what is relevant and what is not."[5] However, Exemplary Programs and Projects must consider both the short and the long haul. It is not enough to "promise" youth that staying with it will increase their life earnings potential by X dollars. The message and the channel by which it is communicated are essential because if they do not touch youth now, they will not participate in the programs and projects -- they will not be recipients and whatever the future might have held will in reality have no meaning for them.

Might it not be assumed that we have not done a particularly effective job of reaching youth today? Possibly it has been the message; possibly the programs and projects which presently exist are not seen by youth as being particularly relevant to them as they see their lives; and possible we have made an error in strategy when we have resorted to relatively traditional means of communicating with youth. Is it not possible that we must create new channels of communication if we are effectively to reach youth? "What is worthy of belief and who is worthy of belief are key influences in the individual's acceptance or rejection of an idea."[6] A specific case may make the point more didactic. "Water Boiling In A Peruvian Town"[7] was a study of an innovation which failed. Nelida, a change agent, was sent to Los Molinas to instruct the natives in certain health measures. Her specific effort was directed toward getting the natives to boil water so as to sterilize it with the hope that this practice might reduce the high incidence of illness being caused by polluted water. After weeks of effort only five per cent of the families had adopted the practice of boiling water. Some of the factors associated with Nelida's failure were:

1) Most of the peasants associated Nelida with the middle class. The few who adopted the practice were higher status in this community.

2) Those who adopted the practice were not the influentials or opinion leaders.

3) Water boiling as a health measure was not a part of the experience of the villagers. Because the boiling of water in this village was associated only with the sick, those who were not ill at the moment did not perceive a need to boil their water.

4) The change agent was not accepted into the culture of the village. She was considered an outsider.

What does this say about implementing Exemplary Programs and Projects? From this failure to invoke change several strategies are suggested:

EXEMPLARY PROGRAMS AND PROJECTS MUST BE ACCOMMODATED TO THE CUSTOMS OF THE INTENDED RECIPIENTS -- AT LEAST INITIALLY AND UNTIL OTHER VALUES AND ATTITUDES CAN BE GENERATED.

EXEMPLARY PROGRAMS AND PROJECTS MUST BE POINTED TOWARD REACHING AND IMPACTING UPON "INFLUENTIALS" AMONG THE RECIPIENTS.

EXEMPLARY PROGRAMS AND PROJECTS MUST EMPLOY CONTACT PERSONNEL WHO HAVE CREDIBILITY WITH THE INTENDED RECIPIENTS.

Each of these strategies suggests some specific tactics. For instance, where the intended recipients of programs and projects are youth who have already demonstrated that the school environment has alienated them, using a school-based person as the contact with youth may be a tactical error -- it may breed even more hostility and doom a well conceived program before it gets off the ground. Where the school per se

and professional educational personnel enjoy little or no credibility with youth it may be desirable -- even essential -- that Exemplary Programs and Projects be mounted through contact persons who we may call, for lack of more accurately descriptive language, paraprofessionals. When the intended recipients of Exemplary Programs and Projects are indifferent and dissident youth it is even more imperative that vocational educators sense the urgency for entering into whatever may be the "life style" of the participants to be served. Probably nothing can be more deadly than attempting to initiate change from the position that one is going to save youth from the iniquitous future they face. Tactically, this approach punishes youth for what they are and what they have become -- and, at least in part, we are responsible for what they have become. Rather than a "do-gooder" approach, might not it be wiser to accept what youth are and to capitalize upon what are their present interests and aspirations?

Admittedly, we are being judgmental. When the 1968 Amendments speak of bridging between the school and earning a living for young people, they are saying that earning a living is "good" and that it is desirable -- as we see it. But to implement Exemplary Programs and Projects (and, especially for the youth designated) it must be remembered that there are many youth who have had extensive experience with ADC, with "hustling" as an alternative to earning a living, and with both prolonged and incipient indigency. If Exemplary Programs and Projects hope to impact upon these populations they must do more than offer promise and hope. They must offer a viable alternative for the immediate moment.

Tactically, what is being suggested is that Exemplary Programs and Projects must enter the marketplace and vigorougly vie for the lives of these youth. It could be argued at this point that too little attention has been given to the youth who want -- who seek -- avenues by which they can become gainfully employed. The counter argument is that youth who seek this will find it -- either through existing programs of vocational education or outside this sphere. Those who are strongly motivated will find a way --and, it should be remembered that present vocational programs are right now serving no small number of youth who are so motivated. Many of these youth are enduring no small hardship to continue with their education. The problem is less with those have chosen to continue their education than it is with those who have abandoned it.

If the primary concern of the 1968 Amendments is to reach youth -- especially the "hard-to-reach and the hard-to-teach" -- then careful consideration must be given to the channels of communication which are used by these people. For example, there is some evidence to suggest that students presently engaged in pre-service vocational programs have themselves been effective channels of communication. Where the vocational program has been conducted in conjunction with local industry which is a potential employing source -- often, conducted as a "partnership" between the school and the industrial complex -- the student who is in school has demonstrated that he can be an important communications link with older brothers and sisters, other members of his peer group and even with his parents and other adults in the community who may be out-of-work or who

may be very much aware that their present vocational skills are less and less marketable.

Again, this message has relevance only for those who want to work. But, for these people the message is clear. The kinds of tasks being performed by salaried and hourly employees are being taught through the vocational program. Teaching specific skills also presents a paradoxical problem for the vocational educator -- and, ultimately, for potential employers or the individual if he becomes self-employed. The paradox lies with the understanding that teaching for specific skills quickly loses efficiency in our complex world of work when re-vocationalization is one of the anticipated consequences of one's being a member of the work force for any period of time.

Facing this problem, vocational educators in conjunction with professional counselors have striven toward developing in students desirable attitudes about work -- attitudes which will make them less resistant to changing tasks as old skills become obsolescent and new skills are required to perform new tasks. But, here is the paradox. Youth must somehow develop some skills for existing tasks if they are to gain their first employment. While industry may be more than willing to teach the specific skills necessary to perform their tasks, hard-to-teach and hard-to-reach youth may not find training for "attitude development" very acceptable to them. And why not? Some of the very reasons why they are hard-to-reach and hard-to-teach result from the values and attitudes which they presently hold.

Corollaries for some of the strategies suggested might be:

EXEMPLARY PROGRAMS AND PROJECTS MUST DEVELOP PRESENT AND POTENTIALLY SALEABLE SKILLS BEFORE UNDERTAKING REMOLDING THE ATTITUDES OF THE RECIPIENTS.

EXEMPLARY PROGRAMS AND PROJECTS MAY REACH MORE "INFLUENTIALS" AMONG THE INTENDED RECIPIENTS WHERE THERE ARE HIGHLY DIVERSIFIED ACTIVITIES AND WHERE AN ATTEMPT IS MADE TO SATURATE THE POPULATION.

RECENTLY EMPLOYED AND PRESENT PRE-SERVICE VOCATIONAL STUDENTS MAY HAVE MORE CREDIBILITY -- AT LEAST INITIALLY -- WITH THE "HARD-TO-REACH AND HARD-TO-TEACH" THAN MIGHT VOCATIONAL EDUCATORS, PROFESSIONAL COUNSELORS, PERSONNEL MEN FROM INDUSTRY, OR THE EMPLOYED INDIVIDUAL WHO HAS "MADE IT BIG" IN THE WORLD OF WORK.

The very fact that Exemplary Programs and Projects propose to "take students and others where they are and as they are" will generate another problem when it comes to maximizing change in the educational process. It must be conceded that there is already some hostility between the so-called academic areas of the school and the vocational training programs. Part of this may be the result of vocational programs demonstrating more immediate and direct relevance for the student as he views his post-school life. The school too is a complex organization and, as such, it is highly bureaucratized. When some relatively

traditional elements of the educational program still require that students perform particular rituals and acquire some specific substantive knowledge, these same elements may become increasingly resistant to programs which permit more freedom for divergence from the usual format. The problem for implementing Exemplary Programs and Projects is especially critical since the invocation of "maximum change in the educational process" necessitates the full support of all personnel in the educational establishment.

One strategy which might be useful in the development of Exemplary Programs and Projects would be to design activities in such a manner that they served more than the youth who are touched by the traditional vocational education program. While unfortunate -- if not tragic -- many K--12 teachers may still look upon vocational education programs as preparatory for what has been thought of as "blue-collar" types of positions. And while this is obviously not true, there is the continuing myth that the only reason a "college-bound" student would take courses in vocational programs would be for the development of skills which he might later employ in his avocational interests. The fact would seem to remain that too many people -- among them many professional educators -- respond to vocational programs in schools as if they were an alternative to the "regular" educational program. Specifically, then, a strategy might be the following.

EXEMPLARY PROGRAMS AND PROJECTS MUST BE PRESENTED AS COMPLEMENTARY, NOT SUPPLEMENTARY, TO THE OTHER ELEMENTS OF THE EDUCATIONAL PROGRAM OF THE SCHOOL.

Again, there are parallel populations for whom this strategy will have to be persuasive; both the professional educational personnel within school systems, teacher training institutions, and state educational departments and the potential recipients of the programs and projects. Either population segment alone is not enough -- changing the educational process requires that both the "doers" and the "receivers" be persuaded that vocationally oriented program elements are, in fact, integral elements in the educational program.

Concern with program and project administrators and recipients is a further stage in the communication process which is so essential to the dissemination and implantation of a desired change. These people are the receivers of the messages sent by sources through the channels which have been selected for maximum impact. There remains in the communication process one other concern. Ultimately, this concern is the heartstone of programs and projects to maximize change in the educational process. The concern is effect. Effect really speaks to the difference between implementation and implantation. With Exemplary Programs and Projects there are a variety of ways by which activities can be started or implemented. But, what of the strategies which will assure that these activities persist through time? Seed monies may get them off the ground but it remains for activities to demonstrate sufficient merit that they will be sustained over a period of time -- and, not just sustained as separate entities rather that they become integral elements of the total educational program.

Effect can be viewed in a broad perspective (i.e., do the Exemplary Programs and Projects significantly reduce the numbers of unemployed or unemployable in a specific geographic region?). And it cannot be gainsaid that this broad view will be important if vocational educators hope to persuade legislators to continue to fund programs and projects. However, there are also other perspectives -- often, perspectives which are much more subtle and which frequently defy careful assessment and quantification. While gross statistical data give something of a national and state picture, in the final analysis Exemplary Programs and Projects will have to "make it" with real, individual people.

Strategy recommendations to this point have attempted to persuade that programs and projects must be acceptable to both those who will administer them and to those who are the intended recipients. And inherent in this may be a problem. Is it not possible that some of the more successful Exemplary Programs and Projects may come to owe their success to the recipients finding the activities especially functional for them as they see their lives? And is it not also possible that these same programs and projects may be unpopular with -- even repugnant to -- legislators because of conflicts between their values and attitudes and those of youth groups which we have already labeled as "hard-to-reach and hard-to-teach?"

In essence, how are we to answer the question of which group is to be served when there are differences of opinion on the worth of programs and projects? A strategy which might at least get at the problem could be the following.

EXEMPLARY PROGRAMS AND PROJECTS SHOULD HAVE AT LEAST A TWO-FOLD GENESIS -- SOME SHOULD BE PURPOSIVE AND THE RESULT OF PROFESSIONAL JUDGMENT AS TO WHAT IS NEEDED AND OTHERS SHOULD BE MORE OF THE "RISK" VARIETY WHERE THE INTENDED RECIPIENTS ARE THE MAJOR ARCHITECTS.

If this strategy is followed, there is the real danger that there will be hidden agenda -- agenda which say, in fact, that evaluation procedures will"demonstrate" that professionally conceived programs and projects have been those which really "worked." Implicit in the strategy of taking some risks with the recipients -- the "hard-to-reach and the hard-to-teach" -- is the notion that they too may have some excellent notions as to how they might move toward making their lives more meaningful. And, it can be argued, if the recipients of Exemplary Programs and Projects do not find their lives to have meaning, no activity professionally conceived or otherwise is going to really carry the day.

If the risk is taken it becomes essential that <u>all</u> parties to Exemplary Programs and Projects -- including potential employers -- actively support these programs as much as they do those which have been professionally conceived and implemented. Unless we wish to take the position that we, as professional educators, have some special omniscience for maximizing change in education (and, our present won-lost record hardly supports such a position) there would seem to be

some room for our carefully observing some "other ways" of getting the job done. And possibly it will be discovered that some of the present vocational programs and projects which we have underestimated in terms of their impact upon the educational program are the very activities which are having the greatest impact upon youth. The point is, do we really know? Until we have some sure knowledge of what are Exemplary Programs and Projects, exemplary in the sense that they are effectively reaching the intended recipients, it would seem that a good tactic might be to keep an open mind.

The question of taking risks and ascertaining effect has yet another dimension which involves strategy. Particularly with high-risk programs and projects (but, certainly not limited to these) there is often a pressing desire -- if not need -- to demonstrate results which tend to agree with the general objectives which were outlined for the activities. The problem is one of latency and measurability. Many of the effects of Exemplary Programs and Projects may be latent -- they may just not appear at the surface and be observable as changes in behavior either among the recipients or within the educational process itself. An example of this is the student who seems to demonstrate no increase in skill activity or remains at about the same level of achievement. He appears to have reached his "limit" or be on a "plateau." Then, often very much to the surprise of the individual himself, at a later point in time it is demonstrated that skill gains have been made and that achievement goes up. Problems of latency are inextricably tied with measurement. Our available tools of measuring "what happens" to youth in an educational process are just not refined to the point where we can immediately tease-out with any great precisions what has happened or what is happening.

Strategically, then:

EXEMPLARY PROGRAMS AND PROJECTS MUST NOT BE PERMITTED TO RISE OR FALL AS A RESULT OF IMPETUOUS DESIRES TO DEMONSTRATE THAT THE INTENDED CHANGES DID, IN FACT, OCCUR.

And, there is a corollary for this strategy:

EXEMPLARY PROGRAMS AND PROJECTS WHICH DEMONSTRATE IMMEDIATE GAINS SHOULD NOT NECESSARILY BE ASSUMED TO HAVE THE CAPABILITY OF DELIVERING INTERMEDIATE OR LONG-TERM GAINS.

This should in no way be construed as an argument for not bothering to assess or evaluate the Exemplary Programs and Projects. The fact that our tools of inquiry are imperfect makes it all the more imperative that an especially diligent effort be made to assess with care. But it must be remembered that these tools are imperfect and that timing is also a variable -- no visible evidence of gains at the moment does not necessarily mean that no gains have accrued.

The 1968 Amendments propose national programs -- but, when conceived, they will probably vary greatly depending upon which region or state is directly administering the program or project. It seems

logical to assume that professional personnel will assess their capability to deliver the particular support systems necessary to invoke Exemplary Programs and Projects. And it is likewise reasonable to expect that local or area data will be used to predicate the nature of the programs and projects. Such variables as the incidence of unemployment, the relative holding power of the schools, the types of employment opportunities which presently exist and which are projected for the immediate future, and an assessment of what are believed to be the necessary characteristics of activities which will provide a linkage between the school and earning a living for youth.

What may be overlooked is the pattern of mobility of particular population segments in the United States. The over-simplified statement is that we have become a highly mobile people, etc. We have and we have not -- it depends very much upon which population segments one is talking about. Obviously, having unemployed persons move from one geographic area to another without yet finding or being capable of gaining employment does little more than shuffle the problem around the nation. And what of the socially alienated youth who choose not to move to an area where they might be able to find employment? What of the potentially employable individual who is unwilling to move to a new area where there may be a critical shortage of personnel possessing the skills he already has? If Exemplary Programs and Projects are to have any real hope for impacting upon the social scene through the invocation of maximum change in the educational process, they must attack the problems at the national and local level simultaneously.

The individual's aspirations and society's expectation that one will somehow become gainfully employed can be made a value taught for by the school only if the school is willing to accept that there are only a short few years during which a major portion of the youth population must be in attendance. If the strategy decided upon is one of waiting until youth are "old enough" to fully comprehend what this value means in our society, the educational process will have failed. It will have failed because the very youth we describe as "hard-to-reach and hard-to-teach" are no longer in school at that point. And the few who may still be in attendance may be so alienated that presenting them with a societal value which runs quite contrary to their own may only serve to increase their alienation.

If Exemplary Programs and Projects in vocational education are to impact upon a broad front, it seems clear that persuasive and meaningful activities will have to be implemented in the early years of schooling -- even the middle, intermediate or junior high school may be too late. It might even be suggested that one of the reasons we have "hard-to-reach and hard-to-teach" youth is because society -- parents, educators, and others -- failed to reach youth effectively and soon enough. Or, could it be that we did reach them and that the message they heard from us assisted in creating the problem? While with older youth it may be necessary to develop some specific work skills before the problem of attitudes toward work can be attacked, with elementary school age youth the possibility exists that attitudes can be attacked first and that

there should be some reasonable hope for success with such a program. Strategically this suggests that:

EXEMPLARY PROGRAMS AND PROJECTS MAY BE ABLE TO EFFECTIVELY IMPACT UPON ATTITUDE DEVELOPMENT IN YOUTH IF THESE ACTIVITIES ARE UNDERTAKEN EARLY ENOUGH IN THE EDUCATIONAL PROGRAM AND ESPECIALLY IF VIGOROUS EFFORTS ARE MOUNTED IN ELEMENTARY SCHOOL PROGRAMS.

Such a strategy also means that a major effort will have to be made to train and make available professional counselor personnel who are specifically prepared to work with youth in the elementary school. Such training programs do exist today but there is a paucity of personnel available to take positions in the field. Possibly some of the Exemplary Programs and Projects in vocational education will represent efforts to creatively link counselor training institutions with vocationally oriented programs in elementary schools. If vocational education is a basic objective of all education and fundamental to each individual's education, such exemplary activities would seem to be very much in order.

One of the reasons for mounting a nation-wide program for improving the impact of vocational education upon the whole educational process is that the problem itself is nation-wide. At the same time, the problem demonstrates similarities and differences -- while many rural and ghetto dwellers may be out of work and may not be employable because of the skills they do or do not possess or because of where they reside, delivering vocational education systems to these people presents quite different problems. If any one thing <u>is</u> clear, it is that our <u>present</u> vocational programs and projects are not proving to be sufficient to meet today's demands -- both the demands of people needing to be employed and the demands of potential employers.

This does not mean, however, that all Exemplary Programs and Projects should necessarily represent activities which have not been tried before. It may mean that if we wish to have a maximum impact upon change in the educational process some of the presently conceived programs and projects -- particularly those which have demonstrated some measure of success (or, promise for it) -- should be more liberally funded. Of course, if this tactic is used, vocational educators will make themselves vulnerable to criticism on the grounds that all they are really doing is "spending more money on the same old programs." But sight should not be lost of the fact that spending more money --or, as some of us might prefer to put it, making a larger investment -- is in itself a change. It is entirely possible that numerous excellent programs and projects are already in operation and that they have failed to have a marked visible impact upon the educational process for the simple reason that they have not yet been adequately funded.

Hence, the following strategy is suggested:

EXEMPLARY PROGRAMS AND PROJECTS MUST IDENTIFY AMONG EXISTING VOCATIONAL EDUCATION ACTIVITIES THOSE WHICH HAVE ALREADY SHOWN A MEASURE OF SUCCESS -- CAPITALIZING UPON THIS MIGHT MEAN AN UP-GRADING OF FUNDING FOR SPECIFIC

ACTIVITIES AND THE BORROWING OF PARTICULARLY SUCCESSFUL ELEMENTS SO THAT THEY MIGHT BE INCORPORATED INTO NEW PROGRAMS AND PROJECTS.

As with most strategies, there are some cautions to be observed. An obvious problem already suggested in conjunction with other strategies involves the matter of funding or, to be more crass, money. While we know that it is necessary to have differential expenditures to reap equivalent outputs -- especially where the treatment groups distinguish themselves by their heterogeneity -- we also are very much aware that emphasis, thrust, prestige, and status tend to gravitate to those programs and projects where the larger amounts of money are being invested. The heart of the problem lies with the fact that people in general somehow expect that there will be dramatic gains where there has been a massive infusion of resources. It is difficult to persuade that one of the reasons for the massive infusion of resources is that the problem being attacked is especially vexing and that as a result of this nominal gains in the comparative sense may be a more signal achievement than one assesses at first glance.

Conversely, and compounding the immediately preceding problem, some Exemplary Programs and Projects may require a comparatively smaller investment (possibly because of the nature of the problem -- i.e., the lack of complexity or the homogeneity of treatment group) and yet may give visible evidence of impacting dynamically upon the educational process. What is the consequence of this paradox in the perception of program and project outputs? One possible consequence is that resources will be diverted to relatively simple problems which can be solved in a manner promising to yield highly visible, positive outputs -- specifically, the types of gains enumerated as "desirable" in the purpose of the 1968 Amendments. This could also be seen as a strategy of "running scared" when one discovers that the really difficult problems do not have simple solutions and tend to produce low yields.

It might be remembered that Congress enacted the 1968 Amendments because the general problem is complex and vexing. It might even be well for us to focus for a moment upon what is the intent of "... maximum change in the educational process." While this may refer to the magnitude of change, it might also allow for a nominal change if that nominal change has great significance. An analogy, while it is imperfect, might serve to make the point clearer. Educators often dote upon measuring or assessing those activities in the educational process which lend themselves to easy quantification -- they are manipulable. But those things which lend themselves to easy measurement may not be the crucial elements of the program. Measurement of some outcomes of the educational program is extremely imprecise -- but, these same outcomes which are difficult to quantify may be among the most important outcomes of the educational process. Simply put, nominal gains in some programs and projects may be extremely significant and estimates of change which appear to be crude and nebulous may have much greater import than highly precise data on less pivotal activities.

The following strategy is, among other things, a test of how secure vocational educators really feel in attacking the specific problems outlined in the 1968 Amendments.

EXEMPLARY PROGRAMS AND PROJECTS MUST BE QUICK TO IDENTIFY DIRECTIONAL CHANGES IN THE EDUCATIONAL PROCESS -- ESPECIALLY WHERE THESE DIRECTIONAL CHANGES SIGNIFY GREATER GAINS THAN DO HIGHLY VISIBLE ACCOMPLISHMENTS WHICH HAVE A LESSER ORDER OF IMPORTANCE.

The persuasion of the foregoing strategies and comments remains to be tested as Exemplary Programs and Projects are identified and implemented. However, there will never be a test unless enough confidence is placed in the strategies to deem them worthy of trial. Many of the strategies are really statements of common sense and, as such, many of them are now in use -- many have already demonstrated their worth to vocational educators. Acknowledging that Exemplary Programs and Projects will be both already established and newly conceived activities, it seems essential that careful attention be given to the critical problem of communication. It cannot be assumed, for instance, because a program or project already exists that it is fully or accurately understood. It is possible that a newly conceived activity may come to be more readily understood and implemented than a counterpart established activity.

It is imperative that Exemplary Programs and Projects gain credibility with intended recipients. However, before concern with recipients can be dealt with, concern must first be given to recruiting the support of those who will administer the activities. Rogers and Jain[8] argue this concern when they state "...relatively little emphasis has been placed upon diffusion within organizational structures." Some of the specific questions which arise include; how shall Exemplary Programs and Projects be identified or conceived -- from within the group of professional vocational educators, from without of this group, from the state level, from individual schools, or from many or all of these sources? If it is not clear from whence programs and projects may emanate, petty bickering and unnecessary competitiveness may replace a unified striving for success. The problem is already enough complex and vexing that we do not need to add to it by creating divisiveness among ourselves.

The educational process will change -- it is changing. Whether vocational educators through Exemplary Programs and Projects will influence the direction of this change will very much depend upon how willing they are to invoke strategies which offer the promise of success. Vocational educators can influence change. The evidence is clear -- the basic data on diffusion and the adoption of new, improved programs have been generated by vocational educators. It would be tragic indeed if the very group which has seen so much success in influencing change were to be the one which failed when challenged with the implementation of Exemplary Programs and Projects.

NOTES

1. Everett M. Rogers, Diffusion of Innovations, New York: The Free Press, 1962, p. 123.

2. Samuel A. Moore, II and James E. Heald, "Resistance to Change: A Positive View" Phi Delta Kappan L, 2 (October 1968), 117-8.

3. Alvin Zander "Resistance to Change -- Its Analysis and Prevention" in Warren Bennis, Kenneth Benne, and Robert Chin (ed.), The Planning of Change, New York: Holt, Rinehart and Winston, 1961, p. 544.

4. Rogers, op. cit., p. 122.

5. Samuel A. Moore, II, "Youth Will Become: With or Without Schools" The National Elementary Principal XLVIII, 3, (January, 1969) 42.

6. Samuel Moore and Kiyoto Mizuba, "Innovation Diffusion: A Study in Credibility" The Educational Forum XXXIII, 2, (January, 1969), 181.

7. Edward Wellin, "Water Boiling In a Peruvian Town" in Benjamin Paul (ed.) Health, Culture, and Community (Documents Diffusion Center, East Lansing, Michigan, Michigan State University, 1955).

8. Everett M. Rogers and Nemi C. Jain, "Needed Research on Diffusion Within Educational Organizations," (A paper presented at the National Conference on the Diffusion of Educational Ideas, East Lansing, Michigan, March 26-28, 1968) p. 28.

BASIC ELEMENTS AND CONSIDERATIONS IN
PLANNING AND DEVELOPING EXEMPLARY PROGRAMS

By *V. E. Burgener*, Director of Research Coordinating Unit
Board of Vocational Education and Rehabilitation
Vocational and Technical Education Division
Springfield, Illinois

Introduction

This paper is the last in a series of ten which have explored implications, philosophy, priorities, models, resource materials, guidelines, administrative patterns and human relations impinging upon exemplary programs. I hope to outline for you, based primarily on past experience, *how a system can operate.* I have no review of literature to determine what research has been done in getting an idea, refining it, and bringing it to the culmination of a proposal which could be presented for possible approval and funding. Therefore, I have no bibliography. I did not consult Webster to distinguish between exemplary or innovative programs and, consequently, you will have to rely on definitions established in the early parts of this conference. I have not read what is probably the best approach to developmental processes because I have been trying since December to get a copy of The Enterprising Man, by Collins and have not yet been able to find it.

Instead, I reviewed with my colleagues the procedures we use to move exemplary and experimental programs from *idea* to *implementation.* Therefore, almost all of what I have to say to you is based entirely on our experience in Illinois with more than 50 separate projects that we arbitrarily, and perhaps incorrectly, have called experimentation. For the most part, they have been exemplary in nature although some of the failures have proven that not all were necessarily usable nor could all eventually be implemented. My suggested system follows a continuum of progress from the establishment of an idea through the development of a proposal, approval action, and further activity that leads to regularization or final disposition. One of the consultants in our Illinois Research Coordinating Unit puts it in the context of "What Happens To An Idea." This may be of value to you and is available as a separate paper. We call the procedure that I shall attempt to outline for you today, "vocational *imagineering.*" It is the method by which an idea can be transformed into reality. The *imagineer* is an imaginative designer of educational processes.

Body

We must first start with an idea. What the mind of man can conceive, the intelligence of man is able to produce. I believe an idea should not have to wait until it fits into a schema of prearranged priorities. For a considerable length of time there has been a conflict in relation to the importance of priorities for educational ideas.

The problem may be greater in research, because presumably many exemplary ideas will already have been tried, evaluated and recommended. Such exemplary ideas will already have had a sufficient demonstrated value to establish their own priority. You have had presented to you during the last two days a number of models, all of which have certain merits, and which can be utilized, adapted, or adjusted into an exemplary program in some other situation than the one in which it originated. Priorities can serve as controls but also can prevent dissipation of funds. Dissipation can occur by doing those things which are already operational or which could be done to a sufficient degree by regular conventional methods. These should not be classified as exemplary.

Ideas which are outside any priority area can be so irregular, unmanageable, or unusable that the return from them is very speculative and perhaps so nearly subject to failure that approval by any governmental agency is not likely. Neither State nor Federal agencies are notable "risk takers." A system of priorities will often welcome an Edsel but refuse Xerography.

In 1965, we tried to establish a system of priorities for the greatest needs of vocational education in Illinois. Dr. Venn will remember his participation with us in that effort. We first considered the types of priorities which Dr. Venn outlined in his book Man, Education and Work. Our effort then was to determine those areas of greatest concern in our "Planning for Measured Change."

There was almost unanimous agreement

- that vocational education had not been relevant to many of the populations it was expected to serve;
- that we had not provided sufficient programs to meet the needs of the disadvantaged;
- that skill training had been too restrictive;
- that teachers should be more cognizant of individual needs of students;
- that vocational education needed a new image;
- that it must enroll greater numbers of students;
- that curricular changes were long overdue;
- that teaching methods were outdated; and
- that equipment was obsolescent.

We then established general parameters within which we would solicit "experimental projects" that would cause *measured change* in vocational education. As long as those changes were applicable at the local level, everything was satisfactory.

When suggestions were made that teacher education needed a complete overhaul because teachers were not being properly prepared to provide placement service; guidance and counseling assistance at the elementary level; new curricula; or many other activities that were admittedly needed, the teacher educators rather forcefully resisted such changes. They pointed out that it would be possible to achieve better teacher education if enrollees just had time to take all the "goodies" their college catalogues now offered. Their solution was additional time and additional enrollment in additional work. When we proceeded to the third portion of the triangle and attempted to suggest projects that would lead to a changed administrative structure for vocational education at the state level, we were really in trouble. Most of the leaders of vocational education thought we were becoming like the minister who had exhorted against sin in a very fine and long sermon. Eventually, he castigated those who were back-biting, gossiping, and carrying false tales about their neighbors. At the end of the service, one little old lady said, "Preacher, when you fight against sin, that's real *preachin'*, but when you start talking about our personal lives, that's *meddlin'*." And so it was with projects that proposed changes in administrative structure or with projects that would suggest replacing an outmoded structure of teacher education.

Most projects which have been funded since the inception of the Research Coordinating Unit in Illinois, have been developed from an idea by a local person to improve local programs. They are characterized by their diversity and futuristic objectives. In this spectrum of projects there is a land laboratory for students with special needs and a university microteaching project. As the spectrum broadens, other ambitious innovations are exposed - courses which lead into the growing aerospace industry; new approaches toward a more generalized cooperative vocational education; visual communications as an occupational opportunity; vocational guidance by television; and field testing a high school concrete curriculum. Controlled occupational-experience laboratories have been successful as have motivational activities for potential dropouts, the disadvantaged, the handicapped, and slow learners. Other examples are projects in data processing, health aides, ornamental horticulture, child care, and food service.

This variety of exemplary and innovative projects was fragmented, and did not contribute to any one priority area of vocational education. As a result, even though not intentionally, such projects now provide a very good base of experimentation which can lead to replication, duplication, and modification for numerous exemplary programs in Illinois as well as other states. The Appendix (A) lists all of the different kinds of projects which we have conducted as experimental and demonstration projects since 1964. Most of these projects have

been one to three years in length but a few have continued for as long as four years before regularization or termination.

Not all have been successful, of course, and this is perhaps our greatest argument for calling them experimental. Some of them have been unsuccessful but most of the "unsuccessful" ones are those that have proposed *meddlin'* with some administrative or teacher education structure at the state level.

The most exceptional ones are those which have adjusted or changed a situation within a local school. This leads me to believe we should concentrate on local change as we attempt to develop a nationwide system of exemplary programs. Another principle is involved, however, which we learned from experience. Some sort of an operational structure must be established at the state level specifically to administer and operate such programs. The nationwide effort to operate programs for the disadvantaged through the traditional organizational structure of subject matter areas has been very unsuccessful even under the mandate of PL 88-210. For example, a representative of the U. S. Office of Education recently told members of our state staff that it would be no particular problem to increase the reported number of *Persons With Special Needs* because there must be some who could be so categorized within the regular operational structure of every vocational education class now being conducted. However, the only spots where we and many other states have shown any real growth in programs for *Persons With Special Needs* have been where special efforts, special programs, and special curricula have been developed and offered. We now have, for example, a consultant on our state staff whose responsibility is the development of programs for *Persons With Special Needs*. We have another consultant whose responsibility is the development of cooperative vocational education programs. One type which we call CWT, Cooperative Work Training, originated in the City of Chicago, was first funded through the Research Coordinating Unit as an experimental program and now has been regularized. Within a three year period it has grown to a larger number of enrollees than any other existing cooperative educational program. By next year it will likely exceed in size all of the other cooperative education programs in Illinois. This has been possible because an operational and administrative structure at the state level promotes, develops, works with and approves teachers and coordinators in that special area.

I am convinced that exemplary programs will be dissipated unless each state assigns an organizational structure to give specific leadership. It may be the RCU; it may be a planning division; it may be a part of the operational division. A separate organization charged with the responsibility for administering exemplary programs is imperative or efforts will be diverted to extend programs which are already in operation.

After finding and accepting an idea, we must locate and identify personnell to develop it. How do you recognize an educational *imagineer?* We challenge them to INNOVATE or STAGNATE. Exemplary

programs imply by their very nature the necessity for doing something new and different. Standing still becomes stagnation.

There may no greater sin than knowing what changes need to be made, but making none. Nothing is more sure than change and nothing is more disturbing than change. No one is more threatening than the change agent. No one is more necessary to the continued health and welfare of vocational education than the free wheeling, far thinking, rabble rousing, dissatisfied educational *imagineer*. He is the initiator, the irritator, the instigator, the inventor, the innovator, the improvisor, the improver, the inducer, the inciter, and the incipient trouble maker. We often think we can't get along with him, but we could hardly do without him.

The *imagineer* is often at a loss as to how we may operate because he finds that administrators of research and educational administrators especially usually prevent all but evolutionary change. A good administrator is usually not an innovator at heart and does not welcome change, for it adds to problems of control in his group or agency. He is committed to efficient product output which is maintained by an ongoing, relatively stable agency. The educational administrator tries to repair the bicycle while riding it. The educational designer is meanwhile fashioning a new wheelless vehicle to travel on a cushion of air. Then he can't sell it, (and generally doesn't really try) because educational practitioners have accumulated a 20 year supply of bicycle repairs and by now have trained everyone to ride bicycles.

We have not yet concerned ourselves in vocational education with the training of developers - middlemen - or transition experts who can bring principles or theories of change to the level of implementation. We must search for such persons to establish and conduct exemplary programs. When selecting individuals to work in this type of activity, I look for persons who are unsatisfied with the status quo, who are disillusioned with what vocational education has been able to achieve and who are action oriented. With this philosophy they are generally eager to revise procedures and use new methods.

Next, we should determine how an acceptable idea can be developed into a usable activity. Generally, the first step is to modify, adjust, discuss, and change the idea into a form that can be made into a proposal. In the process of refining, modulating, or massaging an idea it is good strategy to utilize groups of peers, other individuals in the community who may have some ideas for modification, and persons at the State and Federal level who have had experience relating to the problem at hand. At this time it is valuable to review prior educational inventions. Committee action is not usually a practical way to develop or modulate ideas. In a committee, the will of one individual may be dominant or consensus may not be obtained. A group structure that might be

quite usable in the preparation of an idea is included in Appendix (B).

Although it is generally better for an individual to develop an idea and subject it to reactions from other individuals, this is dangerous for the originator, too. I am reminded of a story reported in the Phi Delta Kappan of the researcher whose proposal was disapproved after being sent to three very skilled readers. The rejection note said, "We are sorry your project could not be funded but we are approving *three* feasibility grants to determine the validity of the idea." An idea can be stolen, adjusted, or modified without giving due credit. This is a risk most innovators are willing to take if the idea is accepted even though credit is lost to them personally. We attempt to respect the confidentiality of all proposals until approved.

An idea must be ordered into a certain usable and understandable structure before it takes sufficient form for operation. This structure usually starts with some form of a preliminary letter or statement. We ask for a beginning statement of an idea and then work with the individual to develop it into proposal form. A sample preliminary statement is included in Appendix (C). As the proposal is planned it should emphasize certain points. Krathwohl points out that the actual physical structure of a proposal is important. The eye transmits more easily to the brain those points which are underlined, capitalized, or indented for special emphasis. Many proposals are really not understandable because the originator does not communicate well in written form or the idea is not presented in a logical way.

We require a standard form for the proposal document based on instructions contained in a procedure manual. Application for support is made by submitting the properly executed application form and the formal proposal in triplicate. If the request for support is approved, the application form serves as the contractual agreement between the identified school or agency and the State.

The writer should address himself to the vocational education significance and economic efficiency of the proposed project. The design, purpose, content, and procedures should reflect his awareness of such criteria.

The following guidelines are generally applicable, regardless of the magnitude of the proposed project, the area of investigation, or the authorization under which the project may be funded. The applicant is expected to make judicious adaptations of this format to accommodate the kind of activity he proposes to undertake.

I The Cover Page. Use the standard Application form. Appendix (D)

II The Abstract occupies a single page, identifies the proposal, and concisely and simply summarizes the contents. The summary portion of the abstract has

three parts: A statement of the purposes, objectives, or nature of the project; an indication of the expected contribution to education; and a compendium of procedures or description of what is to be done.

III The Rationale will include the identification, relationship to vocational education, background, definition, objectives, delimitation, and need for the project.

IV The Body of the proposal communicates the Project Director's plan and its probable effectiveness. This will include the activities and curricular content to be used in the classroom or field experiences. The procedures will include the plan of action envisioned to investigate, coordinate, and implement the proposed activities. The population to be studied or treated as well as facilities should be given attention.

V Personnel will include the name, title, and a brief statement of the pertinent experience and unique qualifications of the principal investigator (s). Include information about other key personnel when possible. State percent of time on the project and per annum salary.

VI The Evaluation will include the techniques to be used in determining effectiveness. Expected findings may be suggested.

VII Dissemination. Indicate how important findings should be disseminated and the audience that should receive this information.

VIII The Budget, should follow guidelines established for fiscal management of educational funds. The code numbered items shall be considered as line items in the project. Estimated expenditures should be itemized under each line item. The applicant should show reasonable estimates but be detailed enough to suggest careful analysis of expected costs and understanding of fiscal responsibilities in connection with conduct of the proposed activity.

520.1 Salaries

520.2 Contractual Services

520.3 Materials and Supplies

520.7 Travel

520.9 Other

In proposals for exemplary programs, the rationale for need or background may often be achieved by reviewing a similar activity or a prototype which has already been used in another setting. This would be followed by a plan to modify, adjust, or replicate the project within your own situation. As you have heard earlier this week, exemplary programs are not always ariginal. Definition of the problem can be based on the report of findings from a previous project. A report of an experiment which was used as an acceptable rationale for a funded exemplary project is included in Appendix (E).

Someone has to put a proposal together. Although many people can prepare parts of a proposal, individual effort by one person will make it an entity. As an example of the kind of thing not to do, I refer to an Illinois conference on research methodology, which we conducted a few years ago. We divided our group into committees of approximately 15 each and asked them to prepare the abstract of a developmental project. In one group we had almost all school administrators, and I remember well that it took them over three hours to decide on a problem and how it should be stated. It ended up with this title: "An Experimental Program to Escalate the Economically and Sociologically Disadvantaged Youth at the Secondary Level." In that committee, the arguments were strong and long about whether the project would be experimental, whether they should say escalate, whether it should be limited to the secondary level, whether both economically and sociologically disadvantaged should be included, and so on *ad infinitum*.

Instead, let me report to you excerpts from a very excellent proposal which was submitted primarily as the idea of one individual. Adjustments and modifications were made by our staff as well as by other experts whom she chose to involve in the development of this proposal. Her "experts" ranged from a high school sophomore to Dr. Donald Super and Dr. Anne Roe. The original activity outline was presented by Miss JoAnn Harris as an idea for computerizing vocational guidance services at Willowbrook High School. Her proposal outlined the problem by stating:

> "It has long been recognized by guidance personnel that counseling young people about vocational choices and job opportunities is one of the most difficult facets of their work. Besides the changing nature of the students' interests, we face the problem of gathering, organizing, updating, and making readily available the mass of general vocational information, specific job opportunity

data, and training opportunities. We cannot minimize the "growing pains" which the student must experience, but we can effectively grapple with the mass of information by use of modern computer technology. We propose, therefore, to lay plans for the gathering of all such information; conversion of it into data processing form; and relation of it to all that we know about each student for the purpose of more accurate and extensive vocational counseling. We do not propose to replace the counselor by a machine, but rather to make accurate, updated, comprehensive information immediately available for human consideration."

She listed objectives:

1) To continually gather general occupational information and to keep it current and updated.

2) To make all such information immediately available to counselors and students, as individuals or in groups.

3) To help prevent dropout and to help students make wise choices in regard to vocational offerings by the effective presentation of such material early in the student's high school experience.

4) To keep information about vocational schools, apprenticeships, and other training opportunities current and readily available.

5) To gather, organize, and communicate information about local entry positions and training opportunities, including at least all of DuPage County.

6) To make and evaluate full and part-time job placement.

7) To improve the basic skills of the culturally deprived to at least minimum employment level.

8) To continually gather and quantify information about the vocational placement and success of our graduates and school-leavers for the purpose of evaluation of guidance and adjustment of curriculum.

9) To provide continuous in-service training for administrators, counselors and teachers.

10) To be able to make meaningful relationships between the information we know about each student and his vocational choices.

She listed the plan of the study in very short form and then divided into several phases the programming and operation of a computerized system. Personnel and budget were included as well as the facilities and hardware which were needed and available. From a very small original proposal of approximately four pages has come a COMPUTERIZED VOCATIONAL INFORMATION SYSTEM which is probably the most advanced system of its kind at the present time in the United States. It is now in operation at a cost of approximately $150,000.

Many proposals surely are written to provide ego value for the individual who is named as the principal investigator, or the project director who has the responsibility for implementing the idea. The best proposals are concise, cogent, and written in relatively simple language. Some are "tricky" and rely on popular key words and phrases. Not long ago taxonomy, experise, praxiological, vertical, schema, variables, modular, validity, and paradigm were "in." Now a new set certainly includes cybernetics, the systems approach, sensitivity, self renewal, involvement, simulation, and surely will soon include, exemplary. This can easily be overdone. A "Systematic Phrase Projector" patterned after a recent article in Time magazine uses any three digit number to select a word sequence. The phrase can be dropped into virtually any proposal to give it a ring of decisive authority. But a problem arises when no one has any idea what the combination means. I like 705 which is synchronized management concept. Such a system offers unlimited combinations!

Column I	Column 2	Column 3
0. integrated	0. management	0. options
1. total	1. organizational	1. flexibility
2. systematized	2. monitored	2. capability
3. parallel	3. reciprocal	3. mobility
4. functional	4. digital	4. programming
5. responsive	5. logistical	5. concept
6. optional	6. transitional	6. time-phase
7. synchronized	7. incremental	7. projection
8. compatible	8. third-generation	8. hardware
9. balanced	9. policy	9. contingency

It seems to me that one of the desirable facets of proposal preparation is its condensation into a one page abstract form. It is quite unlikely that most proposals can be presented fairly in such a small space but it is possible to condense the significant portions into a one page summary. I heard some time ago of an industrial concern which insisted that every proposal, even if it projected an expenditure of as much as a million dollars, should be no more than one page in

length. This is probably too restrictive but many proposals are much too long. Proposal writers sometimes seem to have a general constipation of ideas which they try to cure with a diarrehea of words. I suggest, "As you prepare your proposal, unencumber from ambiguity and make perspicuous for thus, in excising the superfluous your treatise becomes succinct and compendious. In other words, be *clear, concise,* and *brief.*" Our short but simple advice is COMMUNICATE or EXCOMMUNICATE.

Many exemplary programs may in reality be a part of the spectrum of research. If research is defined as those activities from theory development to the implementation of new procedures, then exemplary, innovative, experimental or field test activities are all a part of this spectrum. In any case, the research syndrome is likely to apply to requests for funding of exemplary projects. This research syndrome is characterized by the story of the research director in an industrial research center. He seemed to have all of the material things that any researcher could wish for. And when his visitor commented about this obvious affluence his answer was, "No, I do not need unlimited resources for good research. All I need to carry on significant research is what I ask for." It is unrealistic to believe that exemplary programs will be successful in every case. It is equally unrealistic to believe that unlimited resources will guarantee exemplary programs which are excellent. For example, the student treatment programs which we have funded added an average of approximately $330 per school year to the normal per capita cost. This is more realistic than the $9000 per year reputed to be the cost of an average Job Corps enrollee. Exemplary programs can and should be budgeted at reasonable added cost.

When a proposal is submitted to the funding agency which will generally be a State department of vocational education, or through a State department of vocational education to the Commissioner of Education, then a certain amount of review, revision, and pain of adjustment is always necessary. The proposal preparer should be ready to *review, revise,* and *reflect.* Almost always a reduction of funding is requested and hard decisions have to be made on what is most important and what to cut out. This has established another facet of grantsmanship that is often characterized by "ask for more than you need because when you get cut down you can still live with the contract." This works if the original asking is not so great that it causes disapproval on the first submission. There must be a fine line somewhere to determine what the maximum asking will allow, and at the same time be prepared for the minimum on which to operate. A more realistic approach is often to search for supplemental funds from other sources. We have been very successful in obtaining 25% the cost of exemplary projects from local funds. We do not believe it is reasonable to expect a local school to experiment, to try expensive ideas which may not prove workable at their sole expense. And so, as we provide some of the risk money, local people have willingly accepted the additional costs. Often this is no more than they would otherwise be paying for traditional, regular, and in many cases, relatively unsatisfactory programs.

Every proposal should include in its structure the objectives and how the project will achieve those objectives. Evaluation can be based on the degree to which objectives are achieved. There must be some escape valves, there must be some freedom. The person who is attempting to conduct an exemplary program must be provided sufficient freedom to change, adjust, and modify during the course of a project. Exemplary programs, like many other kinds of research, will likely never be completely regularized in their existant form. Some will be modified to existing formats and procedures, others will be fitted to operational structures, and still others will cause the change of formats and administrative procedures in order to accommodate them.

The true *imagineer* who has developed an exemplary program must not have spastic tenensitis. He must be willing to let go; he must be willing to turn an idea over to another who will continue to operate it; he must use his talents back at the drawing board to start over with a new and refined or adjusted and an improved idea that will offer still greater results. This necessitates that exemplary programs not become *my* project, from *my* proposal, with *my* students. The person who operates an exemplary program must have some other kind of security blanket than self identification with one specific idea. I mentioned earlier the ego value of a proposal. There is an ego value in being able to move from one idea to another. The "idea man" is much in demand as a developer. He does not stay with the same idea for his entire life. I knew a man who a few years ago took credit for an idea and most of its development which led to a specific vocational program in Illinois. It was started forty years ago. Unfortunately, when he died in 1967, the program was almost identical to its inception in 1927.

The operator of exemplary programs must be committed to putting ideas to work. An excellent national conference was held not long ago for governmental employees entitled Putting Research, Experimental and Demonstration Findings to Use. I have included a two page summary from that report in Appendix (F). Until exemplary programs for vocational education are put to work and in turn put people to work, we have failed!

The complete system we used to administer and operate research and developmental projects is diagrammed by a flow-chart covering the continuum from *idea* to *implementation* in Appendix (G). It is a system I commend to you from experience, trial, and error for the administration and operation of exemplary programs.

Summary

Once an exemplary program works, where do we look for the next idea? Probably to the same person who started one a few weeks, months, or years back. Some people are creative, others prefer to be implementers. *Imagineering*, like many other activities, becomes easier

with each passing experience. An exemplary program can be the training ground where another individual is imbued with the spirit of innovation, improved methods, and new ideas. If an *imagineer* develops and trains another person to structure an exemplary idea into a workable form this may be a greater achievement than implementing his original idea.

Most of us must admit that we steal more ideas than we originate. Many exemplary programs are waiting to be stolen and modulated from previous ideas that have been tried, field tested, or dreamed by others. I hope you feel a responsibility to support, modify, adjust, administer, and operate the ideas and prototypes that have been reported to you at this seminar. If you go home with a dedication to utilize these models, or to develop others, and then to establish a system of operation for exemplary programs, we have made a great forward leap toward the implementation of this part of the Vocational Education Amendments of 1968.

What are we searching for?

Where is the great idea?

Which exemplary program will remake vocational education?

If $13,000,000 is appropriated by Congress for Part D of the Vocational Educational Amendments of 1968, this will only give us the money to start a search for the *Holy Grail* of vocational education. We have not yet found that one proposal, one project, one man, one idea, one speech, one action, or one program that is a gleam of the millenium for vocational education. Exemplary programs offer us the chance to go home and search.

APPENDIX

A Approved Experimental and Demonstration Projects

B I D E A

C "Preliminary Statement," Project "11-ON"

D Application for Support of Research and Developmental Activities in Vocational Education

E Interim Report of An Experimental Vocational Education Program in Urbana Junior High School

F Putting Research, Experimental and Demonstration Findings to Use

G An Administrative Flow-Chart for Research and Developmental Proposals

Appendix A-i

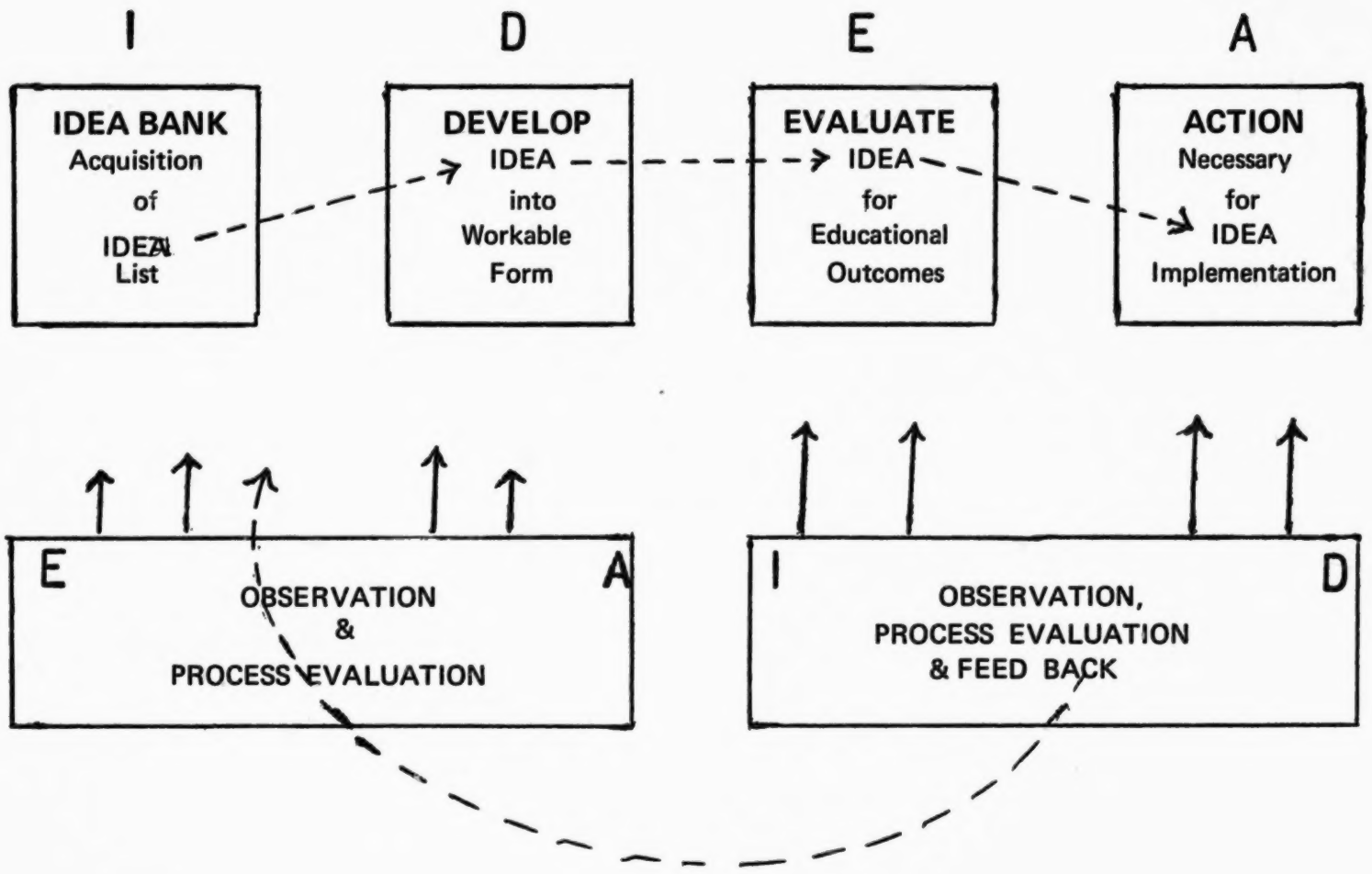
Experimental

Project No.	Name	Title	Budget
00016-C7 Olive Branch	Lavere Windhorst	Retaining Potential Dropouts through Coop. Vocational Education	$ 58,402.00
00018-C7 East Aurora	David Helgager	The Learning Center Program-Vocational Program for Slow Learners-Potential Dropouts	82,600.42
00022 Winnebago	Sig Rimestad	Experimental Coop. Voc. Educational Program	7,336.57
00023-C7 Chicago	John Craig	Experimental Program in CWT	721,208.00
00024-D8 Chicago	Lucile Broadwell	Survey of Currently Employed Nurse Aides in Chicago	257,069.00
00025 Decatur	Wanda Turner	Developing a Wage-Earning Program	51,700.00
00029 W. Wilson Jr. College	Charles Monroe	Child Care Aide Project	1,579.24
00037-C7 Alton	George Abner & C. R. Wright	Project for Slow Learning Boys in Alton Senior High School	26,566.00
00052-C8 Marengo	E. C. Nichols	Marengo Vocational Experimental Program	127,700.00
00053-C8 Urbana Jr.	R. H. Braun & W. G. Anderson	Special Vocational Orientation Program for Slowlearners and Potential Dropouts	58,555.00
00055-B7 Evanston	Lloyd Michael & W. S. Bobkiewicz	Participating Occ. Experimental Program	74,503.00
00056 Thornridge H.S.	James Logsdon	Vocational Education Program for Slow Learners	76,546.00
00057-A6 Argo	J. W. Lewis	Occupational Training Program	533.00
00058-C8 Mt. Prospect	Warren Collier & E. H. Gilbert	A Work Orientation Program	274,480.00
00059-C8 Champaign	Duane Patton	Program for Wage Earning Classes	195,738.00
00060-D9 Sterling	Jack Watts & Wm. Tonkin	Vocational & Guidance Information Through Television	96,935.00
00061-A6 Anna-Jonesboro	Byron Dodd	Exp. Program of Vocational Education	2,700.00
00062-C8 Cairo	Grace Duff	Alexander County Adult Ed. Exp. Counseling and Guidance Program for the Disadvantaged	94,661.00
00063-C8 Evanston	Wm. Carpenter	Experimental Program in Electronic Data Processing	45,650.00
00064-B7 Glenbrook	Lavere McMillon Norman Haweeli	Bus. Education and Ind. Education with Occ. Orientation	15,581.94

00065-A6 U. of Ill.	Robert Campbell	An Experimental Program to Prepare Voch-Tech. Teachers for Lab. Classes Designed for Dropout-Prone Youth	$ 70,350.00
00066-C9 Orland Park	Pat Cote	A Visual Communications Program for Slow Learners	68,037.00
00067-B7 Springfield	David Gates & Helen Ryley	An Experimental Program in Vocational Education	14,256.00
00068-C9 Carbondale	Arthur Black and Geo.Kuhn	A Specific Program to Motivate Vocationally Oriented Students to Complete their High School Education	30,493.00
00069-C8 Peoria	Don Serup	Program to Reach and Motivate Potential Dropouts	97,388.00
00070-C9 Urbana Sr.H.S.	John Robertsen	Urbana Experimental Vocational Program	159,977.00
00071-B8 Woodland	Thomas Bryan	Occupational Orientation Program for Potential Dropouts	32,079.00
00072-C9 Dupo	Wm. Reynolds	A Vocational Aerospace Studies Program	48,390.00
00073-A8 Charleston	Gail Richardson	A Vocational Administrative Unit	74,300.00
00074-B8 Hanover	Robert Stark	Hanover Experimental Vocational Education Program	31,397.82
00075-A8 Quincy	Marvin Rull	Work Experience Program for Dropout-Prone Students	10,191.45
00076-A8 Decatur	Wm. Reynolds	An Occ. Program for the Potential Dropout	51,700.00
00077-B9 Chicago	Laurie Ostrowiak	Teacher Aide-Trainee Coop. Training Program	64,227.50
00078-B9 Barrington	Frank Lentz	Career Development Program	175,175.00
00079-B9 Toledo	Harold Garner	Vocational English	22,005.00
00080-A8 Warren	Thomas Welsh	Conservation and Recreation Training	9,600.00
00081-A8 Villa Park	Joseph Weber	Aerospace Program	5,846.00
00082-B9 Warsaw	James Trotter	Enriching the Basic Scholastic Skills of Slow Learners and Underachievers Through Vocational Centered Lab. Learning	35,049.44
00083-B9 Havana	Kenneth Weeks & Walter Karrick	Experimental Program in Vocational Education	30,995.00
00084-B9 Villa Park	JoAnn Harris	Computerization of Vocational Information for Guidance Use	187,737.00

00085-B9 Cahokia	Edward Blue	Aerospace Studies	37,679.00
00086-A8 East St. Louis	Vernon Leirer	East St. Louis Health Careers Center Experimental Phase	12,275.00
00087-A8 Chrisman-Newman	Cecil E. Smith & E. B. Dunn	Training for Gainful Employment in Child Care and Food	8,374.00
00088-A8 Charleston	Charles Joley & Paul Seitsinger	To Develop a Curriculum for the Concrete Industry	37,096.00
00089-A9 Champaign Parkland College	Paul Thompson	Technical Mathematics	10,191.00
00090-A9 Evanston	William Carpenter	Demonstration Workshop Series in Data Processing	8,030.00
00091-A9 Joliet	Robert Beach	A Work Adjustment Training Program for High School Dropouts	52,750.00
00092-A9 Libertyville	Paul Doescher	Joint Occupational Orientation Project	18,147.00
00093-A9 City College Chicago	James Zigerell	Recorded Television Series in Occ. Guidance and Counseling	67,630.00
00094-A9 Marion	Larry Vincent	The Marion Demonstration Project "Adjustment" for Special Needs Voc. Needs	17,809.00
00095-A9 Carbondale	Richard Pooley	Delinquency Intervention Project	29,,210.00

Appendix B



SubGroup	I	is involved in the origination of ideas that could become exemplary activities.
SubGroup	D	works at developing an idea into a workable exemplary proposal.
SubGroup	E	concerns itself with educational outcomes and evaluation of ideas presented and developed.
SubGroup	A	outlines the program of action necessary for implementation.

IDEA Developed by
ALEX URBAN
Research Associate,
Illinois RCU

Appendix C-i

"PRELIMINARY STATEMENT"

Project "II-ON"

RATIONALE

As programs for the education of retarded and slow learning students develop, the need for more emphasis on preparation for employment becomes increasingly apparent. All to often this emphasis is ignored until the student is in high school. A vocational program which serves as an effective preparation for and as an adequate transition to employment should begin at the elementary level. Needed pre-vocational skills, abilities, and attitudes do not develop on their own, but require a comprehensive program to facilitate their development.

PROJECT ACTIVITIES

Develop a curriculum that is vocationally orientated commencing at the fifth grade level or within the eleven year old age range and proceed in an organized fashion through the high school phase. This will necessitate changes in administrative views as well as teacher philosophy and require changes in classroom design. Expand the present high school work study program to offer more diversified experiences by creating job training facilities that are not available in this area. To insure the maximum development of students' vocational potential it is deemed feasible to plan a summer program which will continue and supplement the regular school program.

PROCEDURES

At the elementary level four (4) intermediate EMH classes will be housed in new classrooms which are designed to include pre-vocational training areas. (See attachement I)

This physical plant will enable pre-vocational training to become a planned and an integral part of the students' daily program.

At the junior high level an integrated program for the EMH and slow learning students will contain daily class sessions in occupational training which will include a session of time each semester for a job work experience within the junior high plant.

At the high school level the present EMH work-study program will be expanded in two (2) areas: The first will add junior and seniors who are not eligible for EMH placement but who are failing to achieve in the regular curriculum. The second area of expansion will be in types of job training stations. Areas which are not available in the community for training will be developed within the school setting. Initially this will include programs in cabinet making, electrical repair, machine shop and printing. In the long range plans it is hopeful that other areas will be included primarily those in the building trades.

MEANS OF EVALUATION

Periodical testing to include manual dexterity development, visual motor, and interest aptitude test will be administered. Development of norms which are meaningful to retarded and slow learning students in the above areas was begun under a Title VI grant during the summer of 1968 and hopefully will be finalized under a continued grant during the summer of 1969. This along with teacher observation and progress reports will constitute the basis for evaluating the program.

PROFESSIONAL STAFF BUDGET

September 1 through July 31

4 Elementary Vocational Teachers	10½ months @ $5,250	$21,000	
4 Junior High Vocational Teachers	10½ months @ $5,250	$21,000	
7 High School Vocational Teachers	11 months @ $5,750	$40,000	
			$82,250
75% of Student Wages			$10,000
80% Travel			$ 576
75% Supplies			$ 1,200
		TOTAL	$94,026

Appendix D-i

Submit in Triplicate
to
Research Coordinating Unit
BOARD OF VOCATIONAL EDUCATION AND REHABILITATION
405 Centennial Building
Springfield, Illinois 62706

APPLICATION FOR SUPPORT OF RESEARCH
AND DEVELOPMENTAL ACTIVITIES IN VOCATIONAL EDUCATION

I. School or Agency _____

Superintendent or Responsible Administrator _____

Address _____ Telephone _____

Project Director or Principal Investigator _____

Address _____ Telephone _____

Project Title _____

_____

_____

Estimated Budget _____ Duration _____ to _____

II. Abstract.

III. Problem and Objectives. Outline the rationale which initiates and supports this proposal.

IV. Procedures and Activities. Includes the plan of action and outline of methodology. Attention should be given to population and facilities.

V. Personnel and Qualifications. Experience, skills, training, and time allotted.

VI. Evaluative Procedure to be followed.

VII. Method and Scope of dissemination of pertinent data and results.

VIII. Estimated budget requested for this proposal itemized by major headings.

Project Classification by RCU _____

IX. Agreement

Approval for reimbursement from vocational funds is requested as described in Sections I and II of this application. This project is designed to advance existing vocational and technical programs and/or to develop new concepts of vocational education. Teaching personnel involved in the project will meet State of Illinois certification standards.

_____
Superintendent or Responsible Administrator

_____
Title

_____
Date

X. Approval

Approval is hereby recommended for the foregoing proposal based on review, discussions, and/or on site investigation.

_____ _____
RCU Consultant Date

Reimbursement will be made from State and/or Federal vocational education funds at the rate of _____ % for expenditures within the limits of the $_____ estimated in Sections VIII. Reimbursement will be made upon receipt of claim showing expenditure. Transfer of funds between line items in the budget is allowable (not to exceed 10% of any line item) providing this does not change the intent of the proposal nor increase the total budgeted figure. Money can not be transferred for purchase of equipment. Other adjustments and/or modifications are subject to review by the RCU and approval by the State Director.

_____ _____
Coordinator Director
Research Coordinating Unit Vocational and Technical Education

_____ _____
Date Date

AN EXPERIMENTAL VOCATIONAL EDUCATION PROGRAM IN URBANA JUNIOR HIGH SCHOOL

Basic History

The vocational education program at Urbana Junior High School, Urbana, Illinois, was designed basically as a sheltered workshop experience for 8th and 9th grade boys and girls who were potential dropouts. (Operation began with the opening of school in September, 1966.) Last year the students were scheduled for 2 hours of class in the shop (Phase I) or 2 hours of in-the-building cooperative job training experiences. (Phase II). In Phase I the vocational shop training consisted of experiences designed to teach the students how to use hand tools and basic production machines by means of both individual and production type work. Phase II consisted of on-the-job training in cooperation with the academic staff and the non-academic staff in the cafeteria, physical education department, library, bus lot, offices (administration and guidance) and the custodial division. These students spent the remainder of the school day in classes, such as English, math, social studies, P.E., and science. These students are grouped with other students who have similar achievement and ability levels.

OBJECTIVES

The nine objectives of the program consist of the following:

1) to develop skills in reading, writing, spelling, speaking and computing to maximum levels for each individual as they relate to vocational competence;
2) to develop good work habits;
3) to develop a better understanding and acceptance of himself, his family, the school and community;
4) to improve attitudes toward himself, his peers, his teachers and his parents;
5) to provide real and practical work experiences;
6) to meet the needs and interests of students;
7) to improve social skills — appearance, manners, and social participation;
8) to establish realistic educational and vocational goals;
9) to achieve improvement in concept of self.

IDENTIFICATION OF NEW STUDENTS CRITERIA

Criteria used in the selection and identification of the students who would participate in the program are listed below:

1. overaged and/or educationally retarded;
2. teacher referral for:
   a. slow learner
   b. lack of goals
   c. refusal to accept existing program
   d. refusal to work in group assignment
   e. poor social adjustment
   f. extreme discrepancy between achievement and measured ability
3. showing potential dropout characteristics:
   a. a broken home
   b. an irregular attendance pattern in school
   c. parents are unemployed or in unskilled jobs
   d. parents were dropout themselves
   e. attendance at several elementary schools
   f. low economic level

Appendix F-i

PUTTING RESEARCH, EXPERIMENTAL AND DEMONSTRATION FINDINGS TO USE

U. S. Department of Labor, November 28-29, 1966

1. Stimulate good research proposals by (a) streamlining grant and contract procedures, including providing a small planning stipend after approval of an informal proposal, and by (b) inviting and reaching out for submission of proposals in a given field to assure desired complementary studies and needed coverage of given subjects, not just waiting for proposals to be submitted.

2. Prepare and distribute to potential users comprehensive but succinct periodic reviews of the state of the art/knowledge in given fields. In these reviews, point up gaps which might be filled by Research and Development (R & D) or Experimental and Demonstration (E & D) projects.

3. Ask and try to answer continuously, from inception to completion of a project, the questions of its aims and ultimate use of results. Whom is the demonstration intended to influence? What are the obstacles to the good use of results, and how can these obstacles be overcome? What criteria should be used to evaluate the results? When these questions have been tentatively answered, either before the project begins or at the start, bring in representatives of the identified program group who might be expected to utilize the findings (in addition to requiring that each proposal include recommendations by the sponsor on how to implement the findings of his project). The representatives will meet with the project staff and funding agency program officer, for consultative reactions to the tentative answers. These persons may well be helpful with practical advice not only regarding possible improvement of the project, but also regarding appropriate ways of interesting potential users or colleagues in their own field.

4. Provide for continuous interaction between grantor or contractor and grantee, from the beginning of the project through the period of dissemination and efforts to apply results. This may imply more technical training for Washington agency staff; more staff devoted to keeping in contact with projects and stimulating use of results; better interagency coordination; development of a clearinghouse and data retrieval system similar to that now in use by the Office of Education.

5. Provide in the project methodology a built-in component on reporting procedures and statistical data which would permit subsequent evaluation and utilization.

6. Summarize findings in separate, brief, nontechnical, and very readable reports, in addition to the full technical reports. Get criticisms of at least the summary reports from key representatives of potential users before they are put in final form. Then disseminate them widely to members of the various groups of potential consumers.

7. Conduct seminars in conjunction with site-visits, where potential users can discuss the innovation, perhaps see it and "feel" it as something alive, and consider its applicability to other situations. The participants could have small group discussions of ways to adopt

and perhaps to improve the innovation. Encourage each participant to tell about innovations in his own facility. Thus, each participant can become a giver as well as a receiver of information.

8. Reduce wasteful proliferation and fragmentation of research, demonstrations, services and research utilization efforts by developing better interagency exchanges to discuss policies and problems as well as projects already underway or needed to help fill gaps in knowledge. Agencies also could work out common as well as unique strategies for utilization of promising findings. The more complex our society becomes and the more specialized the focus of different groups, disciplines and agencies, the greater the need for system integration to relate the parts to the whole.

9. Replicate important demonstrations as a means of accumulating more experience and, through reaffirmation, giving them more impact.

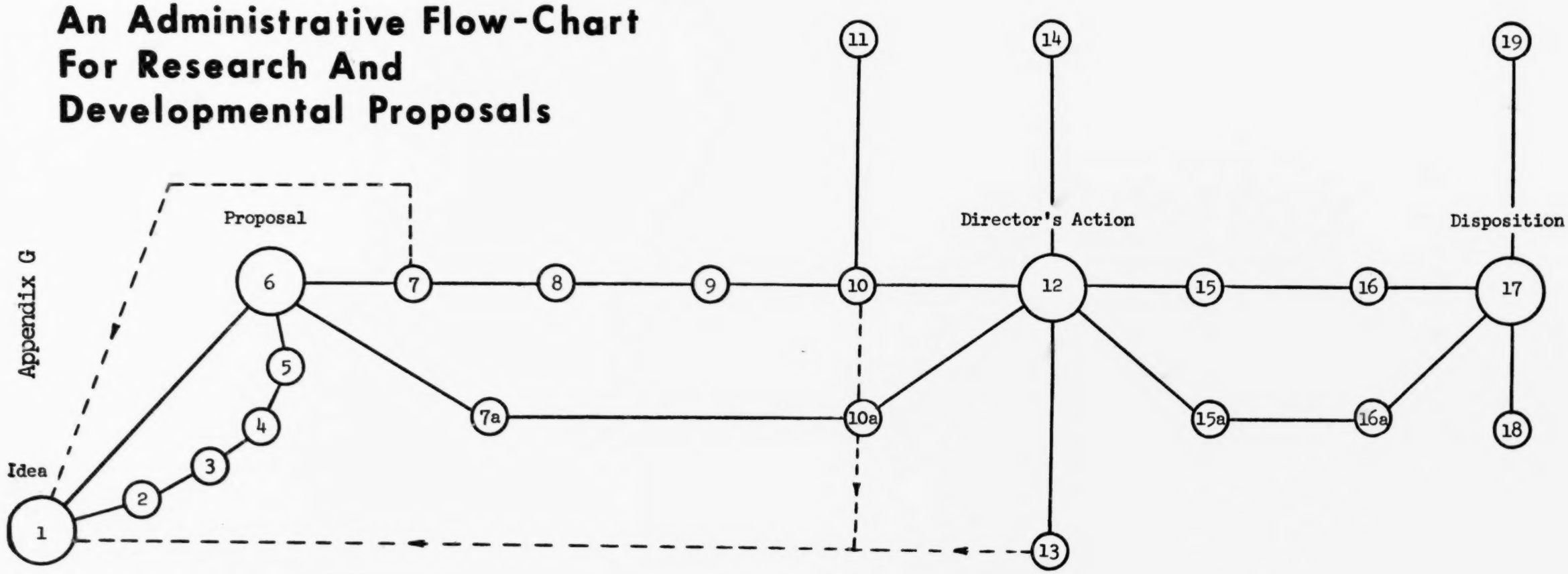
10. Identify and recruit key practitioners in various localities to apply the innovation to their own settings. Their example might be expected to foster adoption among others with whom they are influential. To facilitate application of the innovation, provide human links or change agents who are thoroughly familiar with it to serve as consultants to the institution which is interested in exploring, adopting or adapting the innovation. Use the project staff, where appropriate, for this change agent and consultant function.

11. Invite attention to the potential rewards of adopting the innovation — for example, winning approval from key persons or sources, gaining prestige, reducing costs, improving services — so that the potential user can identify them with his self-interest.

12. Obtain policy commitment from funding agencies to the idea that dissemination and utilization functions are an integral part of their research program. Implement this commitment by providing each research-support operating division with a dissemination and utilization staff of its own, in addition to an overall Bureau or Office capability. This operating division staff would work with agency program officers and sometimes with the demonstration project staffs to see that their procedures contain evaluation, dissemination, and implementation components. Unless steps are taken to promote implementation after research and development, and unless someone is responsible for seeing that such steps are taken, considerable lag can be expected.

13. Evaluate the financial considerations involved in putting project findings to use; e.g., the extent to which the project might supplement or support existing, ongoing practices or services; the cost-benefits involved; the distinctions between the costs of adopting the critical or essential elements of a project and adding those which are marginally valuable.

An Administrative Flow-Chart For Research And Developmental Proposals



EVENT IDENTIFICATION

1 - Idea generated by local researcher or project director.
2 - Completion of a brief summary of Idea.
3 - RCU consultant reviews Idea.
4 - RCU Coordinator approves continuing work to develop Idea.
5 - Amplification of details for use in preparing Proposal.
6 - Proposal developed; approved by local board; signed by chief administrator; and submitted.
7 - Proposal checked for validity, completeness, acceptability, allowable expenditures by RCU consultant.
7a- Status report reviewed and evaluated.
8 - Research or experimental committee reviews Proposal.
9 - Review committee obtains pertinent information from substantive speciality and other experts.
10 - Proposal signed by coordinator and prepared for submission to Director or return to originator.
10a- Request for revision, adjustment or continuation prepared for further action.
11 - Submit to other funding agency.
12 - Director receives proposal for consideration and action including revisions and technical adjustments.
13 - Disapproval and return to originator.
14 - Director informs Board of Vocational Education and Rehabilitation of projects approved and continued.
15 - Letter for original project approval from Director with specifics of the authorization.
15a- Letter from RCU consultant transmitting extension, continuation, or amendment as approved by State Director.
16 - Reimbursement based on claim of expenditures.
16a- Reimbursement based on amendment, adjustment, or continuation.
17 - Disposition through continuation, regularization or termination.
18 - Audit of reimbursed expenditures (State and Federal).
19 - Final report (at conclusion of project only).

What Happens To An Idea?

Edward M. Vass
Project Development Consultant
Illinois Research Coordinating Unit

Before I answer the question "What happens to an idea?" let me answer the question "What is an idea?" I contend that an "idea" is an activity which is subject to research.

When I discuss what happens to an idea, I am discussing people; because an idea, as an activity subject to research, is a human activity. Consider an idea in its infancy as a verbal or nonverbal manifestation of a particular intellectual refinement. Identify the intellectual refinement as a mental set resultant of training, education, and/or experience. As the idea takes form, the mental set responds; and, collectively, the responses will determine the order of the action to be taken. Responses are also indicative of the personality, which will meet the task of adjusting to the existing environment to which the action is directed. Therefore, I remind the reader of the basic psychological and physiological inputs which affect what happens to an idea.

The application and utilization of research designs denote an activity with value. An idea being researched acquires the nuances of an educational endeavor requiring certain value judgements. Quantitatively, an idea has educational value when it becomes an operational activity. I

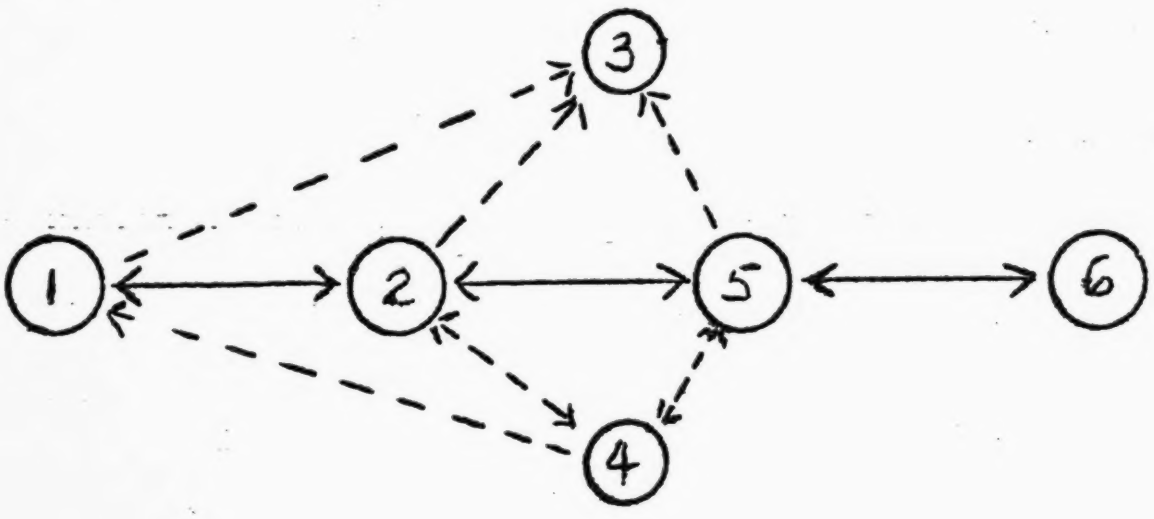
feel the majority of my colleagues would agree that an activity must be measurable if educational value is to be established. The difficulty is that, many times, when one classifies an activity as operational, one is closing the curtain on the final act of intellectual inquiry. I believe that the implementors of ideas take a value-free posture and maintain that posture to the point where they will reject reality to save the model which made an idea operational.

How important is the truth of reality? If there is no correlation between the activity and the basic needs of the population for which the activity was structured, can the educational value be measured? Shouldn't ideas which have taken operational form contribute to or correspond with those needs? No activity should be above continuous evaluation and research. To develop and maintain a meaningful correlation between an activity and the needs being served, educational models must provide research mobility in any direction.

I submit that, to develop such a model, one must:

1. Subject an idea to basic research; evaluate, terminate, or modify the idea as the findings dictate;
2. Subject the modified idea to applied research;
3. Subject the findings to evaluation; terminate, modify for additional basic or applied research, or phase into an operational format;
4. Subject operational activities to a re-cycling on the continuum, thus providing mobility in either direction.

The design need not be complicated. Observe:



1. Basic Research
2. Applied Research
3. Termination
4. Modification
5. Evaluation
6. Operational

Conceptually, a research continuum which provides mobility is educationally significant because an idea can be evaluated at any point on that continuum, modified, and/or subjected to additional research. Consequently, the value of research is enhanced and operational activities become more meaningful. Few researchers believe that an idea which has become an operational activity is an absolute or destined to remain as a universal truth forever. When an educator realizes that an operational activity has no contemporary value or need, he should subject that activity to the same processes which brought it to an operational state.

Consider the following propositions:

1. Education is an idea in action.

2. Educational standards provide the environment which will enable an idea to flourish or cause it to perish.

Historically, concerned men have accepted the challenge of education and provided an environment in which it would flourish. Other men, with more selfish concerns, have tried to bring about its demise; and in some instances, education perished. I realize it is an over-simplification, but that is what happened to one idea.

To utilize the model I have developed, certain judgements must be made. These judgements are dependent on the individual's responses to stimuli. I must regress to sum up the total of that activity called an idea. Thinking is not based on external stimuli alone. There is a constant interface between internal judgement and external sources of data. To understand this relationship, one develops a sensitivity to problems which engenders ideas. If a person does not possess this sensitivity, he lacks what some call "problem awareness," and as a result, suffers from "problem blindness." What happens to his ideas? Many accuse researchers who research for other researchers of problem blindness. Curiously, this condition might result from one's attempt to become sensitive to problems; because the only way it can be accomplished is by making a number of value judgements. Those who employ the scientific approach to an idea may be guilty of problem blindness. The scientific approach should not be overemphasized where value judgements are prominent. Education and the research of educational activities are laden with value judgements. Anyone who interprets research data as a basis for action within the educational community is making a value judgement.

Pragmatically, it is impossible to postulate without concern for the value of the initial idea. The most sophisticated dialectician is subjective in his methods, and critical study is only a study of the data which are available.

I feel, in addition to the need for research mobility, engineers of educational activities should emphasize not the permanency of those activities, but their applicability at that particular time--the idea being a timely answer to a dated question. What happened to that idea?

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Of The

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U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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VT008203

MEETING SPECIAL NEEDS OF THOSE WHOM WE SERVE

by L. C. Dalton
State Supervisor, Agricultural Education
University Park, New Mexico

In preparing for this symposium, I could see where the subject could cover many different facets of our Agricultural Education Program. I am going to confine my talk to those special problems that teachers of Vocational Agriculture in my State have to cope with, which are similar to problems that teachers have in other States.

A large percentage of the students in Vocational Agriculture in New Mexico are from low-income families, which earn less than $3,000 per year, and who also have language barriers that would not be found in other States. A large percentage of the parents of these students are on the relief rolls of the State and have been on relief for more than two generations. In coping with the problem of poor attitude, lack of responsibility, letting somebody else make the decisions and furnish the money, the students of these parents have a problem in our Vocational Agriculture Program to do the things that we expect from a regular student from a farm family who receives all of the income from the efforts of their labor. The students from these families do not have money to pay FFA dues, buy an FFA jacket, secure a farming program or buy materials to build equipment in the Farm Mechanics Program.

Some of the schools paid the dues for these members thinking that this would motivate and develop them as good citizens, but it did not take us long to find out that they thought this was another give-me, and did not respect the organization.

The next approach that teachers tried was providing jobs around the school or in town for these students so they could make enough money to pay their FFA dues and purchase their FFA jackets. This method developed some responsibility, involvement in FFA activities, and they became better members of the Vocational Agriculture classes and the FFA.

Another innovation that is being used in New Mexico and other States to get involvement of all the members in the chapter is to have each member assigned to one or more activity during the year to plan and carry out the activity, make reports

and receive commendations. This procedure has made this segment of our membership in the FFA become stronger, better educated with more responsibility and a chance of becoming better citizens.

So many times these low-income students have no knowledge or background of the subject that is being discussed in the classes so more field trips, laboratory exercises, learning by doing is a procedure that will get them involved in the learning process and through motivation they become more interested in the problems and in learning to make decisions, which they have never had to do before.

We believe that segregation of these students from the high achieving students is wrong since they would not have to compete with anybody but themselves and they would see no higher goals or different ways of doing things.

Teachers motivate these students by improved methods of instruction, transparencies, slides, pass-out material, along with the field trips and demonstrations. The teachers also spend more time on inidividual conferences and visitations with these boys and their families than they do the others to get them to the level that is expected.

The Farm Mechanics Program is another problem area since these students have no funds, no background, no initiative, to build or make or do anything. In New Mexico, the course of study in Farm Mechanics during the first two years is built mainly around developing skills in which all the supplies are furnished. This creates no problem as far as the low-income student is concerned for the only thing that is necessary is to motivate better workmanship and safety among these students. They have the habit that if it is half done, it is good, but the teachers in New Mexico are emphasizing through contests and other procedures the value of craftmanship, neatness, and safety in the work.

In the third and fourth years, when the students begin to build individual projects that we require in our course of study, is where the main problems in Farm Mechanics with this student starts. The teachers in New Mexico through extra work and effort, locate farmers and ranchers or other people who need projects constructed, to furnish the materials for these students to construct, and in many cases pay the

students for their work.

Another innovation in many of the schools is to furnish the materials to construct such items to be sold or auctioned to people in the community, the proceeds being used to pay for the materials and the remainder to go to the FFA fund or being paid to the members constructing the projects.

The farming programs or supervised practice programs of students of this group cause more problems for the teachers in New Mexico than any other area. The teachers use pig chains and sheep chains to provide animals for the students. They become enthused and do an excellent job until the project grows to such an extent that the parents are afraid that they will be removed from the relief rolls by their sons having these enterprises and making money, so the next thing we know, they are sold, eaten, or gone, and the enthusiasm of the students drops to rock bottom because of the evils of relief.

Some of the departments are setting up cooperative enterprises either in feeder swine, feeder sheep, or feeder beef using the FFA fund to purchase the animals and buy the feed for the enterprise with the low-income students feeding them, keeping books, taking care of them during the feeding period, and when the animals are marketed, the money goes to pay the cost of the feeding, with the remainder going to the students. This has developed a lot of leadership, responsibility, and initiative that would not be accomplished if the cooperative enterprise had not been used. The teachers have found that they can get better results by having the students in a cooperative effort on the livestock and being responsible for feeding, taking care, management, and marketing of their animals than they would if the school owned the enterprise and the students just worked for the school in care and management of the animals.

Another method that is being used in the State, although it does not develop as much enthusiasm and responsibility as a cooperative enterprise, it develops good work habits, relationships, and a sense of doing something worthwhile, and that is the placement of students on a farm or ranch for experience. The only

problem in the areas where we have low-income students, there are few farms or ranches in that area large enough to use students. Many schools do not have finances in their FFA fund or school fund to carry on many of the activities that are necessary for the low-income students, so it is necessary to secure finances from banks, individuals or groups of individuals to finance these programs.

Another need of many of the students who are low achievers or who have poor reading ability is to get them to comprehend what is being taught in the class. This is where teachers use individual efforts, individualized instruction, and resource people to meet the needs of the low achievers and high achievers. The teachers in New Mexico are finding in working with these special groups that they are having to use more programmed instruction to keep the students at the level of their ability without them losing interest and dropping from the program.

We have found that we can get better results in developing these students when we make them feel they have a place in society and that they can become an educated person with chances to succeed and make money, and they have a place in class and are involved in the activities of the FFA and the class and help make decisions and carry out activities, they become good citizens the same as those who come from families who have higher incomes. It takes a teacher with more patience, more perserverance, more initiative and willingness to try out new methods and innovations and spend more time preparing instructional materials so that they will be able to motivate students from this group. In the end, they can see more progress from working with this group even though it is not as satisfying as working with families who appreciate it more than families from this group.

If we are to combat the inertia, the mental attitude of the people of this group, we need to spend extra effort, work and use every avenue we can think of to make tax-paying citizens out of these youngsters.

Individualized Instruction
in Vocational Agriculture

Raymond M. Clark

Presented at the Agricultural Education Section
AVA Convention - December 13, 1968

I think it is just ten years ago that I was given the opportunity to report to this group on a little study we had done to determine the "Need for Training for Employment in Non-Farm Agricultural Business in Michigan." There is no point in reminding ourselves of this except to emphasize how far the vocational agriculture professional group has gone in these past ten years. As a professional group, we have moved from the point of trying to identify what employees in non-farm agricultural businesses need that is the same, or different, from that needed by those planning to farm, to a point where we have deluged ourselves with curriculum guides and lists of competencies needed by workers in agricultural occupations. We have expanded the vocational-technical training to a very extensive post-high school system of area vocational schools and community colleges, so that we now have a six-year vocational-technical program of agricultural education, plus the more or less traditional young farmer and adult-farmer classes. We not only have expanded our offerings, but also we have opened our doors to any one, boy or girl, farm or urban, regardless of race or creed, who has an occupational objective in which a knowledge of agriculture is desirable.

In the few minutes we have today I would like to describe (1) the situation as I see it today, (2) the project on individualizing instruction at Michigan State University and (3) finally to express some thoughts as to next steps in the development of our agricultural education program.

As a result of these changes, we have in high school classes today individuals with a wide range of occupational objectives. We may find in the same class students with such occupational objectives as:

1. Livestock farming
2. Dairy farming
3. Crop farming
4. Truck farming
5. Nursery operation
6. Feed store employee
7. Garden Center employee

and many others. Even if we are able to offer a fair number of "specialized" courses, we will still have a variety of occupational objectives among students in a class. For example, the Center for Research and Leadership Development in Vocational-Technical Education at Ohio State suggests the following modules for a course in Agricultural Business - Sales and Service. Think of the great variety of occupational objectives possible in the suggestions for this one course. The modules included in the course are:

Feeds	Agriculture Salesmanship
Fertilizer	Organization and Functions of agricultural Business
Petroleum	Crop and Garden Seeds and Supplies
Business Procedures	Horticulture Sales and Service
Human Relations	Miscellaneous Agricultural Supplies-Sales and Service
Agricultural Chemicals	Orientation to Occupational Experience

This background is sufficient to indicate that a point has been reached where we must develop ways to meet a wide variety of occupational objectives in the same class.

At Michigan State we are working on programs to individualize instruction so that students in the same class may study different materials, make application of materials to different situations and in different occupations and yet remain as members of the class by having opportunity to report from time to time on significant activities in which the individual has been engaged.

Our first attempt was reported in February 1968, at the Central States Seminar in Chicago. It was titled, "A Pattern for Individualized Instruction in Grain Grading." In August the Vocational Education Office of the Michigan Department of Education subsidized ten selected teachers of agriculture to attend a workshop conducted by the university in which each man prepared a manual on one unit of an Agricultural Business-Sales and Service program. The units are all built on the same format. They include the items shown on the transparency.

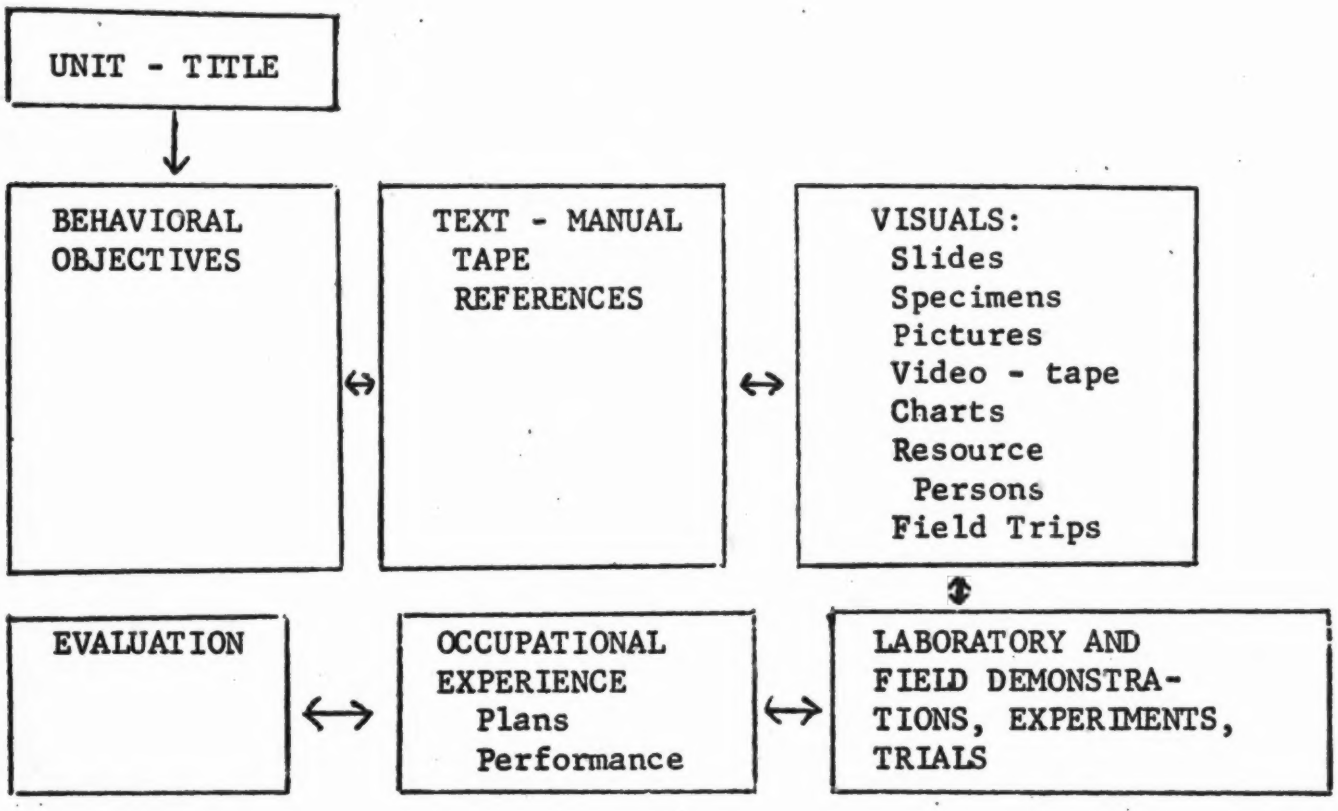
Transparency 1:

These involve:

1. The statement of the unit or problem (transparency 1)
2. The statement of objectives
3. The introduction to the unit --- a list of lessons
4. For each lesson
   a. Text material
   b. Suggested instructional materials
   c. Suggested student activities
   d. Evaluation activities and procedures
5. References

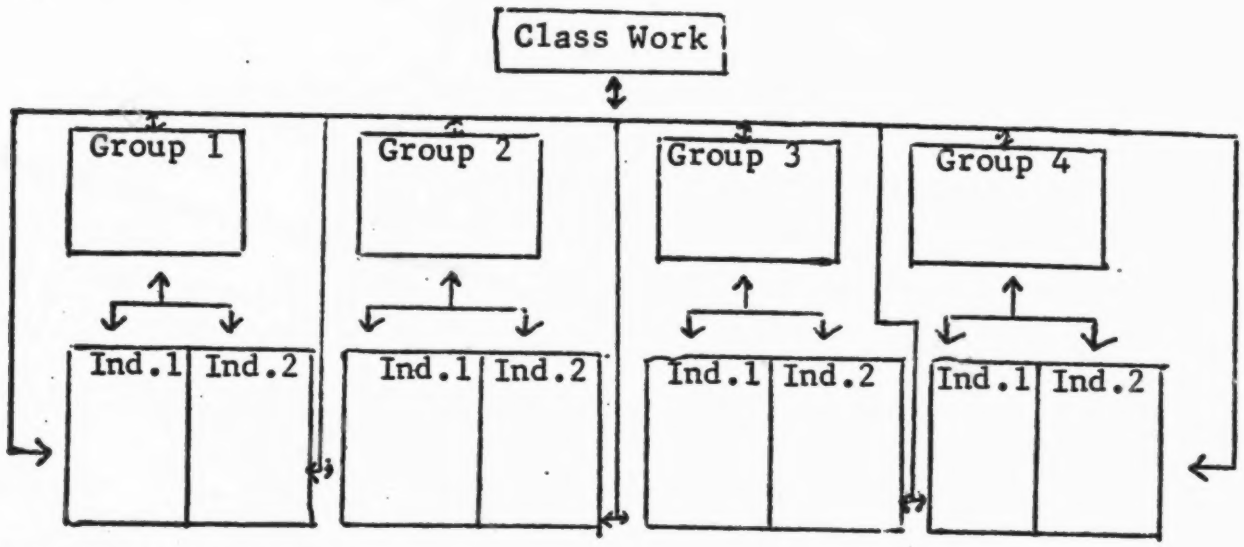
We think of the pattern in diagramatic terms as shown in this transparency (2).

Transparency 2:



You will note that here we list the title and a series of behavioral objectives---the kind of thing that we expect students to be able to do and to apply when they have finished the unit. The text or reference material may be either on tape or in printed form or both. We expect the student to work from his manual to a series of visuals including such things as slides and specimens, field trips, etc. He may work back to his manual and then go into a laboratory or field demonstration where he can put some of his information into practice. We would expect him to work on plans for his occupational experience and finally into evaluation. Note that we aim to develop a manual together with a "package" of all the references, visuals, audio visuals, demonstration materials and other items to enable a student to follow through the unit on his own, but always under the guidance of the teacher.

Transparency 3:



Transparencies 3, 4, 5:

In transparency (3), our idea is that some of the student activities will be carried out as a total class program; some in small groups; and some as individual activities and in transparency (4). In the example, in a unit on salesmanship, the whole class might be working on such things as pre-approach, attitude of the salesman and personality factors. Small groups might work on application to Feeds; Fertilizers; Power Machinery; etc, according to the occupational objectives of individuals and as shown in transparency 5 individuals might work out plans for sales or service in more or less real situations.

I want to emphasize the cooperation we have had in the development of these units. We not only have the wholehearted support of the staff in vocational agriculture at the university and in the State Office, we also have cooperation of appropriate technical people in agriculture and in the distributive education staff.

Many times these people point out that we need to modify and up-date our materials. In some cases they point out that the material prepared by the teachers is inaccurate in terms of the most recent research. This has been true for both the Distributive Education staff and the technical staff in agriculture. It emphasizes the necessity to keep our technical materials in tune with local agricultural technology.

In all cases, however, we have held to the idea that the agricultural education staff would control suggestions regarding methods of teaching and learning activities of the students.

During this year the ten teachers are trying out some of these units in their classes and will report on their use next spring. We plan then to re-edit the units, making as complete packages as possible and to prepare them for distribution to all the teachers in the state.

Transparency 4:

Classwork

↓

How to Meet the Customer
1. Pre-approach
2. Attude of Salesman
3. Personality Factors

Small Group Work

↓

Feed Business	Fert. Busin.	Farm Power Machinery	Nursery	Farm Credit	Others
How product will be used					
Presenting the product					
Displaying the product					

Transparency 5:

↓

INDIVIDUAL WORK

↓

Feed Business	Fert. Busin.	Farm Power Machinery	Nursery	Farm Credit	Others
For One Product: 1. Prepare Plans For: --Demons. --Talks					
2. Develop Case Studies: a. analysis of a customer b. potential of an area c. self analysis					
3. Analyze Grain					

Obviously, as a professional group of teachers, teacher educators and supervisors, we have a long way to go. We need to revise our teacher education program to help teachers handle an individualized instructional program; we must continue to develop instructional materials which are specifically adapted to meeting needs for instruction in very specific areas and with specific objectives in mind; we need to sharpen up our own concepts and understandings of what students need for entry occupations so we can help students make application of principles to specific occupations -- not merely memorize the principles.

We do not have time to discuss the implications here, but as a professional group of teachers, supervisors and teacher educators we must decide what kinds of materials can appropriately be produced in regional centers and what materials must be prepared for use within individual states.

Regardless of the problems and the magnitude of the task, I am optimistic about the future. The provisions of the Vocational Education Amendments of 1968, Report 1938, provide a basis for optimism. These amendments include an authorization for appropriation of sizable sums "to promote the development and dissemination of vocational education curriculum materials---."

This kind of support by the Congress, together with the enthusiasm of educators in vocational agriculture gives me confidence in the ability of our group to provide more adequate and much improved programs of vocational agriculture in the future.

To summarize briefly---(1) The expansion of the vocational agricultural program has caused us to include students with a wide range of occupational objectives in each class. (2) To help students prepare for and meet their occupational objectives in vocational agriculture educators need to develop individualized instructional programs. (3) The staff in vocational agricultural education including State Office personnel, teacher educators and teachers in Michigan is working on manuals and "packages" of instructional materials

to help teachers individualize instruction in vocational agriculture. (4) Education in Vocational agriculture has a high and challenging future with many opportunities for the development of improved programs to meet the needs of students.

TEACHER COMPETENCY FOR SUPERVISING NEW STUDENT OCCUPATIONAL EXPERIENCE PROGRAMS

Ralph J. Woodin, Professor, Agricultural Education
The Ohio State University

Occupational experience was never more important in agricultural education. Our students are seeking a wider variety of employment in agriculture and entering more challenging careers in farming and ranching. Their problems in entering an agricultural occupation stem largely from these difficulties, most of which can be met through well planned individual programs of occupational experience. These are their shortcomings as high school graduates:

1. Lack of ability and skill
2. Limited experience in decision making
3. Uncertain career choices
4. Physical and mental immaturity
5. Lack of reputation as workers and producers
6. Inappropriate plans for further education
7. Lack of capital

The teacher needs to see himself as a guide to each of his students as they plan and develop individual occupational experience programs in agriculture. Teachers must help students understand their shortcomings as future employees or as beginners in farming and to select a sound program of occupational experience. Four different possibilities are generally available, including the traditional farming programs, the operation of a farm on a share basis, cooperative placement in farming or in off-farm agricultural occupations and experience secured on the school site, shop, greenhouse, school farm, and land laboratory.

As the teacher looks at his responsibility of supervising occupational experience, he needs to think in terms of:

1. Guiding each student to <u>select</u> the best possible program of occupational experience
2. Assisting each student in <u>planning</u> how he will carry out his occupational ex-
2. perience before it begins.
3. Helping the student as he <u>carries out</u> his plans for his experience.
4. Helping the student to <u>evaluate</u> and <u>replan</u> his occupational experience.

Each of the types of teachers listed below requires a different type of preparation for supervising his student's occupational experience programs.

* The technically prepared teacher needs:

1. An orientation workshop of approvimately 3 weeks duration providing graduate credit with a generous section on supervision of occupational experience
2. Special supervision and visitation. Individual help will probably be needed by this teacher in order for him to understand the opportunities and procedures which he has in supervising occupational experience.
3. Publications for teacher and student use.
4. A planned sequence of professional courses in agricultural education including one on supervising occupational experience.

* The undergraduate in agricultural education needs:

1. Summer work experience should be broadened to include experience in off-farm occupations.
2. Study of all types of occupational experience prior to student teaching. Students should be acquainted with farming programs, with cooperative training programs and with school provided occupational experience
3. Student teaching which includes supervision of a variety of student occupational experience programs
4. Special supervision and follow up of the new teacher during his first year teaching.

* The experienced teacher of production agriculture who is undertaking new agricultural program or who is broadening and updating his students occupational experience needs:

1. An orientation workshop similar to those listed above.
2. Special supervision and visitation.
3. Publications for teacher and student use.
4. Work experience in an off-farm agricultural occupation or in some cases, in modern farming and ranching.

This last approach is particularly important because many teachers' work experience was secured years ago and needs to be updated.

The following are guidelines for developing student programs which should be helpful to all teachers.

A presentation to the Agricultural Education Division of the American Vocational Association.

Dallas, Texas 12/13/68

GUIDLINES FOR DEVELOPING STUDENT PROGRAMS
OF OCCUPATIONAL EXPERIENCE IN AGRICULTURE

The occupational experience program should:

Provide the experience necessary for the development of abilities important to the student's success in an agricultural occupation.

Be planned cooperatively with the student, his parents, and his employers under the guidance of the teacher.

Be planned soon after the student is enrolled.

Be commensurate with the interests, and capabilities of the student as well as his resources in terms of labor and capital.

Be continued and expanded, so as to increase size, scope, and managerial responsibilities during the high school years.

Include a financial arrangement providing an equitable division of the costs and returns, salaries and wages for the parties involved.

Provide opportunity for a financial return to the student each year.

Provide experience in money management including budgeting, recordkeeping, saving, risk bearing, financing, marketing, and the use of credit.

Provide opportunities for experience in decision making as well as managerial skills.

Improve the facilities for family living, making the home a more comfortable and attractive place in which to live.

Cover a period of several years rather than be planned for one year at a time.

R.J.W.
11/15/68

ADULT EDUCATION FOR PERSONS EMPLOYED IN OFF-FARM AGRICULTURAL OCCUPATIONS *

David R. McClay
Head, Department of Agricultural Education
The Pennsylvania State University

Agricultural education courses for adults in farming have been taught by vocational agriculture teachers for nearly half a century. However, courses for adults employed in agricultural occupations other than farming ~~is~~ are new. The four courses described below have been or currently are being offered for adults in Pennsylvania. They are examples of the agricultural courses for adults emerging over the nation taught by agricultural teachers.

COURSE - Adult Education in Agricultural Supplies (Ag Business)

Fred D. Dillner, Agriculture Teacher
Shippensburg High School, Shippensburg, Pa. 17257

Enrollees: Adults, 23 to 55 years of age, including store managers, department managers, field representatives, salesmen, and key workers in feed, seed, fertilizer, agricultural chemicals, and farm and industrial machinery businesses.

Course length: Six two-hour weekly sessions

Course content: "Human Factors in Management"

1. What are the functions involved in managing an agricultural supplies business?
2. What is a successful business? What factors contribute most to its success?
3. What factors most frequently cause business failure?
4. How can problems encountered in an agricultural supplies business be identified and simplified?
5. What human factors are most important in managing and operating an agricultural supplies business?

* Presented to the Agricultural Education Division, AVA Convention, Dallas, Texas, December 13, 1968.

Worksheets consisting of management evaluations and sample problems involving decision making were used as part of the teaching procedure. Discussion was developed from the worksheets and time was provided the learner to ask questions and develop his own thought patterns. The program materials attempted to define, develop, and improve the attitudes, values, and skills necessary in managing oneself, other personnel, and the trade or business. The course emphasized that the most important part of the word management is "man" -- man's ability to cope successfully with the many decisions or adjustments that must be made in today's business activities.

Courses given and planned for adults in agri-business:

1967-68, Dairy Cattle Nutrition
1968-69, Credit Management

COURSE - Nursery and Landscape Practices for Horticulture Employees

Ben Horowitz, Agriculture (Horticulture) Teacher
Lower Bucks County Vo-Tech School
Fairless Hills, Pa. 19030

Enrollees: Employees of ornamental nursery and landscape businesses

Course length: Ten two and one-half hour weekly sessions

Course content:

1. Lawn Management
2. Growing Desirable Shrubs
3. Growing Desirable Trees
4. Pruning Trees and Shrubs
5. Propagating Nursery Stock by Seeds
6. Propagating from Cuttings
7. Humidification and Mist Systems
8. Layering and Division
9. Propagating Procedures for Azaleas
10. Propagating Rhododendrons from Cuttings
11. Controlling Insects and Diseases
12. Fertilizing Trees and Shrubs

Other courses given or planned:

1. Seminar in Small Business Management for Ornamental Nursery and Landscape Business employees. (Given in cooperation with Small Business Administration, Philadelphia, during the Fall, 1968).

   Course consisted of ten two-hour sessions.

2. Commercial Flower and Plant Production (to be given during the Winter of 1969).

COURSE - Turfgrass Maintenance

Kenneth B. Rhodes, Agriculture (Horticulture) Teacher
Eastern Montgomery County Vo-Tech School
Willow Grove, Pa. 19090

Enrollees: Salesmen, landscapers, groundskeepers, and golf course employees

Course length: Fifteen two-hour sessions

Course content:

1. Identification of the Grasses
2. Effects of Height of Cut and Mowing Stress on Turfgrass
3. Preventing and Correcting Thatch Build-up
4. Recognizing, Preventing, and/or Correcting Compaction on Lawn Areas
5. Irrigation of Lawn Areas
6. How Fertilizer Rate, Grade, and Analysis Affect the Turfgrass
7. Identifying and Controlling Weeds
8. Insect Control
9. Recognizing and Controlling Turfgrass Diseases
10. Use of Special Equipment Designed to Maintain Lawn Areas
11. Diagnosing Law Problems

Other courses underway or planned:

Fall, 1968 - Developing and Maintaining the Landscape with Nursery Stock

Fall, 1968 - Floral Design (for employees of the floral industry)

Winter, 1969 - Power Mechanics (Ornamental Horticulture)

Turfgrass Technology

Winter, 1969 - Ten weeks of instruction (full-time) at the school

Spring and Summer, 1969 - Supervised occupational experience on-the-job

Fall, 1969 - Ten weeks of instruction (full-time) at the school

COURSE - Laboratory Animal Technicians

S. S. McDonough, Agriculture Teacher
Walter Biddle Saul High School of Agriculture
7100 Henry Avenue
Philadelphia, Pa. 19128

NOTE: Course was conducted in cooperation with the American Association for Laboratory Animal Science

Enrollees: Animal technicians (employees of drug companies, hospitals, laboratory animal breeders) who:

a. had at least three years experience with laboratory animals
b. had earned certification by AALAS as junior animal technicians
c. had an interest in preparing for the National Senior Animal Technician Examination offered by AALAS

Course length: Fourteen two-hour sessions

Course content:

1. Role of the Laboratory Animal Technician
2. Life, Living Matter and Biological Organization
3. Structure and Function
4. Genetics and Mating Systems
5. Summary of Breeding Data for Laboratory Animals
6. Nutrition and Metabolism
7. Handling
8. Animal Health and Disease
9. Sanitation
10. Animal Facilities Design
11. Bedding Materials
12. Administration, Management, and Record keeping
13. Shipping and Receiving
14. Safety (general)
15. Safety (radiobiological)
16. Animal Experimentation
17. Examination

NOTE: The school offers the following courses or "options" for their high school students:

a. Animal Technicians
b. Agricultural Business
c. Agricultural Machinery Sales - Service
d. Agricultural Production
e. Horticulture
f. Turf Technology
g. Agricultural Sciences
h. Meat Cutting

STATEWIDE INTER-RELATED PROGRAMS IN VOCATIONAL EDUCATION[1]

The Vocational Education Act of 1963 and its amendments of 1968 make it mandatory that all recognized disciplines in Vocational Education work together in establishing inter-related programs to meet the needs of all students, as well as the manpower needs of tomorrow's industries. In doing this, it is necessary to consider the inter-mingling of commonalities in all sectors of our economy.

In the short time that's given me today, instead of citing examples of innovative programs at the local program level, I am going to present some ideas on an organizational structure at the state and regional levels which will bring about innovative activities at the local level to inter-relate vocational programs. It has been the thoughts of some vocational educators that we must eliminate the vertical approach to operation of programs such as Agriculture, Home Economics, T & I, etc., and go toward a complete horizontal approach. This idea is to organize the state staffs to administer programs by levels of education such as special needs, secondary, post-secondary, adults, etc., and treat occupational areas at these levels in an across-the-board program planning, development, supervision, and implementation. It is my opinion that we can maintain the identity and integrity of individual section disciplines, while at the same time establish a process for horizontal planning at the state and local levels. I'd like to illustrate this by showing you what we in Florida want to establish in the years ahead as our organizational pattern for state staffing.

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[1]Presented by C. M. Lawrence, Director, Agricultural Education, State Department of Education, Tallahassee, Florida, at the AVA Convention, on December 13, 1968, at the Agricultural Education Division General Session, Baker Hotel, Dallas, Texas.

Let us take a look at the organizational structure of the Agricultural Education Section first and then tie it in with the organizational structure of the total Vocational, Technical, and Adult Division. You will note that the total function of the Agricultural Education Section is to provide planning, development, supervision, and implementation of all educational programs in Agriculture. This will give us a procedure for vertical operation of agricultural programs so that we can maintain articulations among all levels of instruction.

The Agricultural Education Staff is then divided into three functional groups. One group being the Area Supervisors who are responsible for the supervision and implementation of all Agricultural Education programs in a geographical area. Later you will see how these staff members work horizontally with other division personnel. The second group is listed as program consultants for the various levels of instruction, such as special needs, secondary, post-secondary and adults. These staff members will have the responsibility of planning and developing programs, working both at the division and sectional level to plan for research and innovative approaches to program development. The third group in addition to being part of the total planning group for the section will serve as youth club operation consultants. We anticipate that this will include the FFA plus any post-high school agricultural leadership organizations which may be organized.

Now let us take a look at the division organizational structure and see how the vertical operation of Agricultural Education programs can fit into a horizontal approach for division-wide planning and

operation. You will note that the division is broken down into five primary areas: program operation, program planning and development, program supportive services, administrative services, and a fifth area, supervision and implementation at the regional level.

The various sections are placed in the program operation area. By maintaining the sectional structure, programs such as Agricultural Education can continue to operate at the state level. The horizontal operation is brought about by all program directors serving as a Coordinating Committee to determine policies for all programs.

In the program planning section of the division, special program consultants from each of the sections will work with a division program planning director for horizontal planning of all programs.

In order to provide adequate supervision of programs at the local level, our State has been divided into five regions and each of the Area Supervisors in Agriculture, Home Economics, T & I, etc., will serve under a regional director to coordinate activities of all programs. Please remember that these same area supervisors will be directly responsible to the Agricultural Education Program Director for administration of all agricultural programs.

Let me briefly summarize what I have tried to say. No longer can we continue to operate as an Agricultural Section or any other section for that matter, without fully cooperating with all other sections of Vocational, Technical and Adult Education. On the other hand, it seems foolish to me to abandon completely old approaches of section operations and set up a structure horizontally at the division level. It is feasible to so organize state staffs that

the identity and integrity of individual disciplines will be maintained and still provide horizontal planning among all sections. This type of structure will provide a climate for local personnel to develop inter-related programs in Vocational Education.

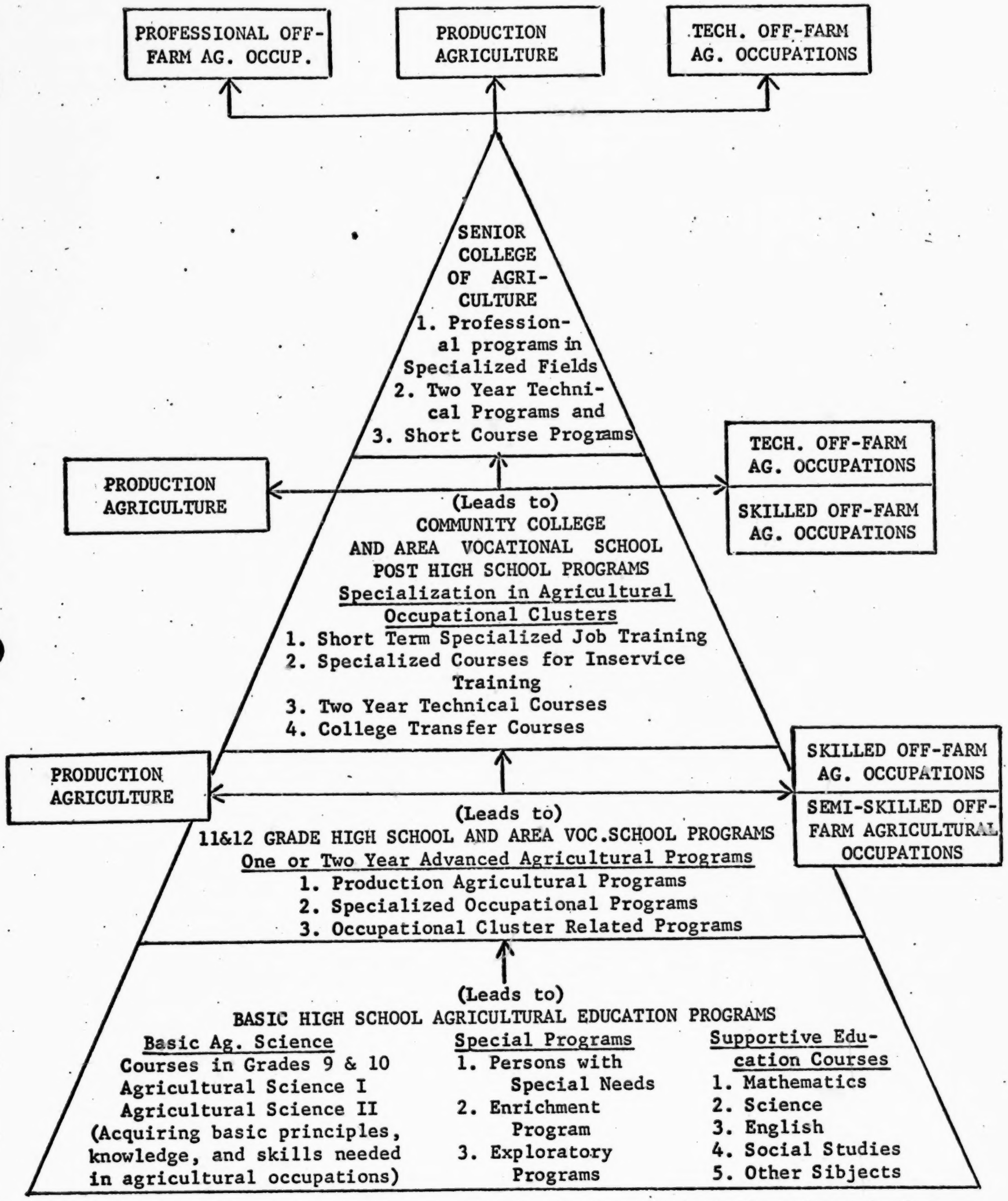
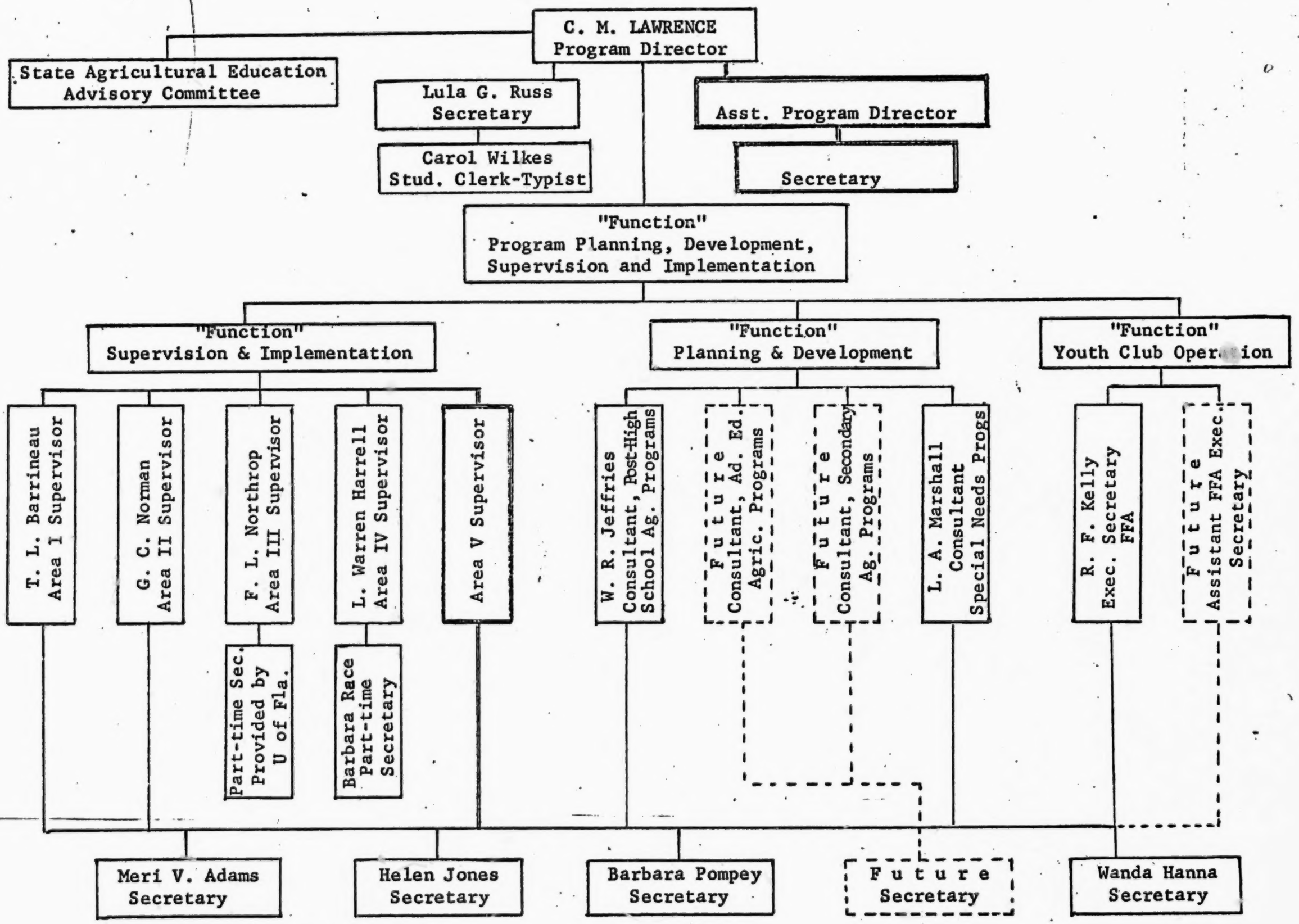
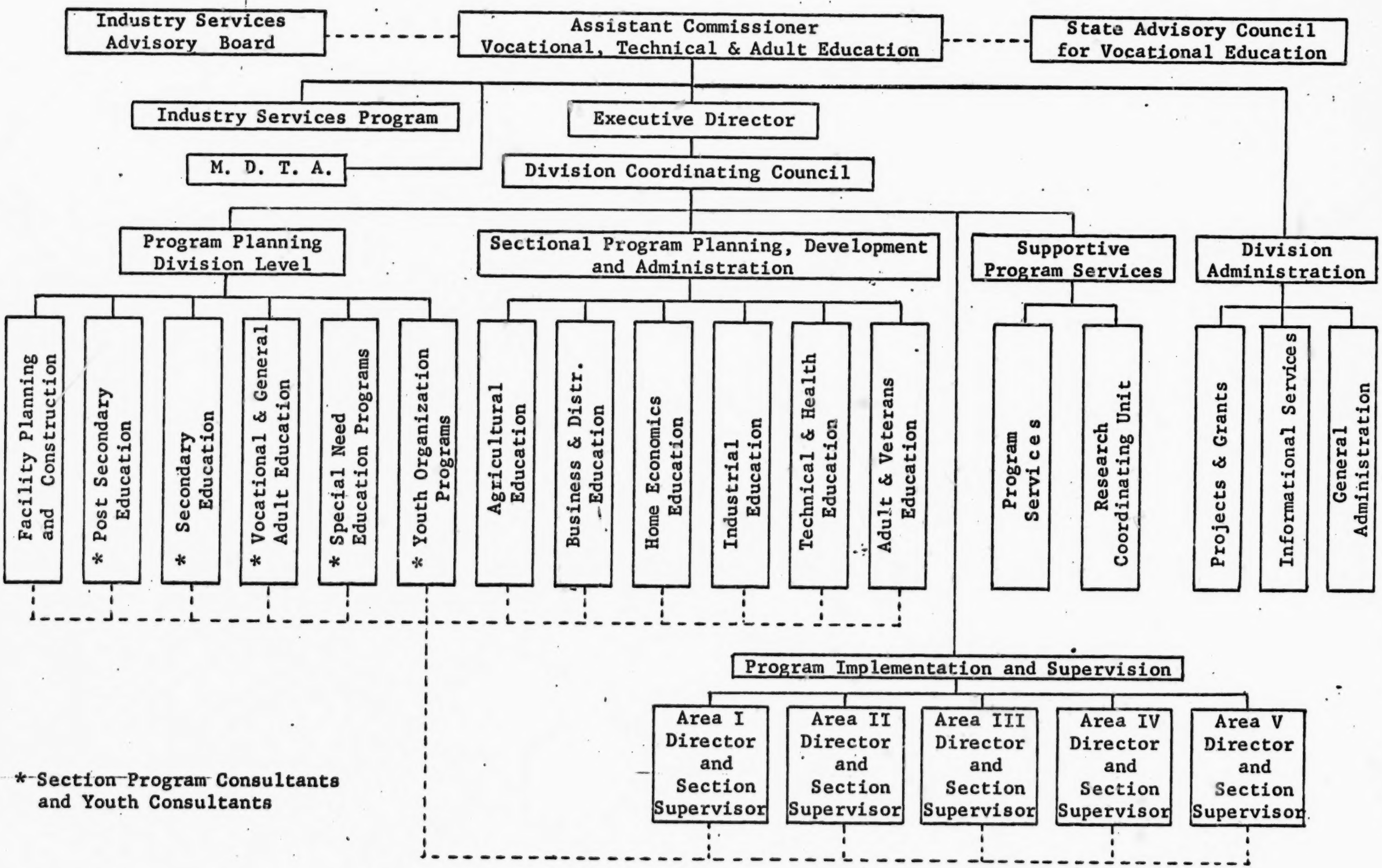


Figure 1. Educational Progression and Entry into Various Agricultural Occupations Through Different Programs of Instruction in Various Institutional Settings (Developed by C. M. Lawrence, Director, Agricultural Education, State Dept. of Education, Tallahassee, Florida 32304)

ORGANIZATIONAL CHART
AGRICULTURAL EDUCATION



Proposed Organizational Chart
VOCATIONAL, TECHNICAL, AND ADULT EDUCATION DIVISION
FLORIDA STATE DEPARTMENT OF EDUCATION



* Section Program Consultants and Youth Consultants

CML/ma

PROFESSIONAL PERSONNEL DEVELOPMENT IN AGRICULTURAL EDUCATION*

Because of a long-standing interest in staff development in the fullest meaning of the term, I am pleased to have a part on this program. As NVATA President Tom Devin knows, and partially upon his counsel, it was in vocational agriculture and in this state some fifteen years ago that my professional development was shaped which led to graduate study and to the various roles in teacher education and activities in the several national leadership development and staff development programs. For this reason, I am particularly gratified by the invitation to speak to the Agriculture Education Division of the AVA.

Time does not permit to reconstruct recent history wherein the need for leadership development has become most critical or to discuss theories of leadership or the nature of leadership. Of necessity, my comments will be of a very practical nature, outlining some of the current needs of the profession and suggesting development programs which are more broadly based than currently provided in most agricultural teacher education departments, or in a set of seminars or institutes currently supported by the Office of Education.

Let me place the challenges in perspective by reviewing a few statistics:

* 65,000 teachers of vocational education were employed in 1965. This number need in 1975 will be 350,000 as projected by the Office of Education. For each local supervisor or administrator in 1965, there will be two in 1975.

* There are over 10,000 teachers of vocational agriculture in the United States. We experience an annual turnover rate of approximately 12%.

* The number of vocational agriculture teachers needed in the United States by 1970 is estimated to be about 11,250.

* In 1967, 117 departments of vocational agriculture could not open because of a shortage of qualified teachers.

* Only 60% of those qualified for teaching vocational agriculture in the United States enter the profession.

* Our host state, the state of Texas, is the one requiring the largest number of teachers of vocational agriculture. A total of 1,140 vocational agriculture teachers were employed in 1967.

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Symposium presentation by Clodus R. Smith, Associate Professor of Agricultural and Extension Education, Director of the Leadership Development Seminar for Vocational and Technical Education Personnel, and Director of the Summer School, University of Maryland, College Park, Maryland; to the Agricultural Education Division, American Vocational Association, Adolphus Hotel, Dallas, Texas, December 13, 1968.

* The most acute shortages of teachers of vocational agriculture as reported in 1967 were in Florida, Minnesota, Texas, North Carolina, and Michigan. All but ten states reported a shortage of teachers of vocational agriculture for that year.

* Enrollment in departments of agriculture education located in the central states dropped 28.9% from 1965 to 1967. During the same period of time agricultural colleges increased their enrollment 33.8%.

The recruitment of teachers of vocational agriculture must be shared by the people in this room -- the teachers, the supervisors, and the teacher educator understanding of the various roles and responsibilities and recognizing that concessions are likely to be made by each of the three groups if the demand for teachers of vocational agriculture is to be met. The failure to satisfy this need for personnel will result in the failure to meet the educational needs of rural youth, the closing of departments, and a reduction in the prestige for our professional field of service. We can meet these challenges. We can overcome these problems. It has been estimated by the AVA recruitment committee that the shortage of teachers of vocational agriculture would be met if each teacher would recruit one student every four years to prepare for a teaching career.

I should like to bring into focus the staff development needs in agriculture education as compared to other fields of services. Table I shows the actual and projected enrollments and percentages in vocational and technical education by type of training program. Although it has been of great concern to agriculture educators that vocational agriculture does not maintain a pro-rata of the enrollment over the projected time period, it is interesting to note that in terms of enrollments, vocational agriculture appears to be a healthy program with a future showing an acceptable growth pattern. This material was developed in 1965 at which time it was projected that enrollment in vocational agriculture courses in 1975 would almost double the enrollment in 1960. Experience since 1965 would indicate that the 1975 projection is probably conservative.

Although not shown by type of program, Table II does reveal the actual and projected enrollments and percentages over the same time period by purpose or level of program. We observe that program growth is projected for post-secondary programs and in programs identified for persons having special needs.

Staff development responsibilities are not confined to the pre-service or in-service training of teachers. Staff development includes the professional preparation of personnel for local administrators for positions in state departments of education and for professional personnel in regional and national offices employed by the Federal Government. Table III indicates the actual and projected number of teachers and federal, state, and local professional personnel. The one concept I would like to leave with you from this table is that although we have experienced a "vacuum" in the number of persons preparing for professional careers in vocational and technical education in general, and in vocational agriculture in particular, we will need twice as many persons to fill responsible positions if we are to have an effective and efficient system of vocational and technical education in 1975. The challenge to teacher educators, and to all of us, is a very real one. Only by satisfying this need may we have a viable program of vocational and technical education in American public schools.

Although the situation appears blique, there are hopeful signs and some new approaches and strategies that show promise. The AVA Program of Work and AVA Teacher Education Council, the National Deans Conference held at the University of Nebraska, and the 1968 amendments which include vocational and technical education as a part of EPDA activities will be discussed.

1. The AVA should be congratulated for its recognition of staff development problems which confront the profession. It has developed, as a part of its Program of Work, a plan designed to develop and strengthen professional personnel in vocational and technical education.

I commend to your reading that section of the AVA Program of Work which appears in the February, 1968, issue of the American Vocational Journal under the guidance of Robert Worthington, Assistant State Superintendent of Public Instruction for New Jersey, the Teacher Education Council has become an effective unit. It has developed a brochure, recruitment guidelines, and planned two sessions which have been presented at this convention, and has developed plans which should lead to a strengthened program involving state teacher education coordinating councils.

The Agriculture Education Division of the AVA is an outstanding example of shared leadership for the solution of staff development problems at the national level. The structure that makes this leadership possible involves teachers, supervisors, and teacher educators. It will take all three to solve some of the problems which confront the profession by providing new teachers which may become involved in staff development programs to become supervisors, teacher educators, research personnel, specialists, and local personnel needed to develop and staff the comprehensive programs required in today's agriculture education program.

2. The National Conference of College Deans may find its place in the annals of major activities which will have charted the course of vocational and technical development programs. Planned and conducted by agricultural educators, Jim Horner and Roy Dillion at the University of Nebraska, the implication of recommendations of the several task force groups have relevance to all facets of vocational and technical education. It was encouraging to the leadership of the conference that a disproportionate number of leaders, consultants, and participants represented colleges of agriculture and agricultural education.

I should like to mention some of the recommendations:

a. There is a common core of knowledge in vocational and technical education that should be a part of the education of all teachers. Organizational and operational strategies which aid in the inclusion of such a component in the education of all teachers should be sought.

b. Consideration should be given to the placing of basic concepts of vocational and technical education in common elements such as courses, units of instruction, and other training activities.

c. State councils of teacher educators in vocational-technical education should be established to articulate and coordinate program development across the vocational fields. Such state councils should involve the total program of vocational and technical teacher education and should work toward the improvement, expansion and coordination of efforts among all vocational and technical teacher educators within a given state.

d. A master plan for vocational-technical teacher education should be developed for each state by a broadly representative commission or group with long range projections for the future development and financing of these programs. This master plan should include projected teacher education enrollment, programs, and institutional responsibilities for specific vocational-technical areas. A systematic method for anticipating professional staff needs should be balanced by plans for optimal utilization of available resources.

e. The strategy for professional staff development and the organizational patterns within institutions may be best served when all fields of service within vocational and technical education are coordinated through a single unit. Such a unit may be a school, division of a college, or a large, comprehensive department administered by a dean, assistant dean for vocational and technical, or a department head.

You will want a copy of the report of this highly successful and significant Conference.

3. Recent legislation amended the Education Professions Development Act to provide for leadership development and the strengthening of vocational teachers and other personnel. Twenty-five million dollars were authorized for Fiscal Year 1969, and thirty-five million dollars for FY 1970.

This action should permit the fulfillment of the recommendations of the 1968 National Outlook Conference in Agriculture Education and satisfy some of the wishes of the profession by providing institutes, fellowships, and the implementation of comprehensive, coordinate staff development programs for supervisors, teacher educators, and specialists as well as the in-service training of teachers.

To implement action and to assist the development of guidelines for receiving and considering EPDA proposals, Mr. Robert Worthington, Assistant Superintendent in New Jersey, is chairing an advisory group for the Bureau of Educational Personnel Development. Additional information will soon be available on this new and valuable staff development resource.

A Suggested Leadership Development Program

We must accept the responsibility for identifying potential leaders to provide quality occupational training at the secondary, post-secondary, and adult levels. I should like to suggest six phases in a leadership development program in which you may become involved. Here we are not speaking of leadership development seminars, but something much more comprehensive. The first three of these are routine procedures in such a program, while the final phases relate to more subtle aspects of the program.

1. An inventory of possible leaders based on personal contact.

It is essential that persons responsible for staffing or manning an organization have wide contact with possible leaders both within and outside the organization. These contacts must be more than casual or superficial in nature and must be sufficiently intimate to facilitate judgment for the kind of contribution these persons could make to the organization.

2. An audit of all tasks within the organization for which leadership is required.

This is, in essence, utilization of the vocational concept of job analysis. The audit should be a discriminating list which indicates the specific requirements of each leadership skill to be developed. This "situation theory" of leadership is useful at this point where it places emphasis upon the various aspects of the situation--the task, the group, the culture which is essential in placing and assigning leaders. This audit of leadership positions will identify specifics for each position where special characteristics of leadership, such as imagination, consideration, and initiative, are required.

3. Planned strategy for placing and developing leaders.

The essence of this step is to mesh the first two steps. Good strategy here calls for the initiation of a program that recruits persons with ability or potential ability to prepare them for leadership roles in the situations in which leadership is now required or likely to be required.

What has been suggested as the first three steps are mechanics of the program. They are simple, uncomplicated in nature and widely known. The next three steps stress the importance of the intricate task of helping leaders develop.

4. Develop a framework for appraising groups, tasks, and leaders.

This is an essential and critical requirement for staff development programs. The qualitative aspects must not be overlooked. We must pay close attention to what we expect of our potential leaders -- that is what the leader must be and what the leader must do.

5. The development of a program of supervision.

There is a definite need of an appropriate organization within which developing leaders can continue to be supervised and developed within the field of vocational education. Through such an arrangement, recognized educators should spend some time with developing leaders to release the capacity for new skills, new insights and new abilities. A skilled and supportive adviser, through regularly arranged leadership development meetings, holds perhaps the greatest promise to provide the most fruitful means of leadership development at this level. The

degree of formality of this arrangement and activity may well depend upon the personality of the supervisor and the psychological atmosphere of the organization. Regardless of these qualities, the need for such activity is not lessened.

6. The development of leadership courses, seminars and institutes.

There are several important dimensions which should be a part of leadership courses, seminars, and institutes. These are: (a) actual knowledge including organizational functions and procedures and resources available in the organization; (b) understanding of people, their needs and relationships, the characteristics of group life and the requirements of leadership in the various types of group settings; and (c) developing and using leadership skills.

Summary

In summary, it seems certain that a society which supports education as one of its tools of self-preservation and self-improvement will not long be patient with that sector which is no longer able to fulfill its role in society. It is clear that educational leaders are faced with challenges which will not diminish and which cannot be ignored or taken lightly.

The importance of selecting men of potential ability, of giving them responsibility, consistent support, opportunity of sharing their problems with their peers, and the friendship and counsel of an experienced leader may indeed be the key to the success of a leadership development program.

The need is great for a quantity of high quality leaders. So are the opportunities for interested educators. But with the expanded opportunities must come assurance that the quality of leadership is commensurate with the increased responsibility of the individual and expanded goals of education.

PRIORITY GOALS	SUGGESTED WAYS TO ACCOMPLISH GOALS	
	AVA	AFFILIATED STATE ASSOCIATIONS
Developing and Strengthening Professional Personnel		
1. Coordination of teacher education—each state should develop a plan for coordinating teacher education in vocational, technical, and practical arts education on a continuing basis.	a. AVA Council on Teacher Education assume a communicating and coordinating role for state councils, including a program at the annual AVA Convention.	a. Form a state council for better communication and coordination of teacher education in all areas of vocational, technical, and practical arts education. b. The state council should coordinate efforts with state association and AVA Council on Teacher Education. c. The state council should communicate with state and local leaders in administration and supervision of vocational, technical, and practical arts education.
2. Recruitment of teachers—all people now in vocational, technical, and practical arts education should become active in recruiting teachers and prospective teachers.	a. Encourage research and pilot programs in new approaches to qualify teachers. b. Encourage publication of information about current practices in qualifying and using assistant teachers, special teachers, teacher aides, and other means of extending the services of fully qualified vocational teachers. c. Support legislation to fund programs of training and support for teachers, teacher educators, supervisors, and administrators.	a. Establish a continuing committee on recruitment with representatives from all divisions and areas of interest. b. Each division establish a continuing committee on recruitment with representatives from teachers, supervisors, and teacher educators. c. Program goals should be established by recruitment committees and made a part of the state program of work. d. Study certification requirements, admission to teacher education, and other policies relative to preparation for vocational teachers. Make recommendations of needed changes to state board and other policy-making groups. e. Develop a student trainee program for prospective vocational teachers (patterned after civil service) and present to state boards.
3. Orientation to vocational education for all school personnel to give them knowledge and understanding of the process for preparing individuals for the world of work.	a. Transmit resolution entitled "Orientation to Vocational Education for School Personnel" and other information to colleges of education and state departments of education to support need for all school personnel to understand the world of work. b. AVA divisions should be encouraged to develop proposals for providing opportunities for all school personnel to become acquainted with their programs for the world of work.	a. Work with other state education associations to develop a statement on orientation of all school personnel to the world of work. b. Encourage state councils on vocational teacher education to develop a statement on orientation of school personnel to vocational education to be transmitted to institutions engaged in the preparation of teachers. Proposals might be developed for inservice education programs for teachers on the job. c. Each division is urged to develop proposals for local teachers and coordinators to acquaint all teachers with vocational programs.

Table 1
ACTUAL AND PROJECTED ENROLLMENTS AND PERCENTAGES
VOCATIONAL AND TECHNICAL EDUCATION

	1960		1965		1970		1975	
Total Enrollment and Percentages	3,768,419	100.0	5,430,611	100.0	9,676,415	100.0	14,000,000	100.0
Type of Training Program	Enrollment	%	Enrollment	%	Enrollment	%	Enrollment	%
Agriculture	796,237	22.0	887,529	16.0	1,064,406	11.0	1,230,000	9.0
Distribution and Marketing	303,784	8.0	333,342	6.0	870,875	9.0	1,440,000	10.0
Health	40,250	1.0	66,772	1.0	677,350	7.0	1,450,000	10.0
Home Economics	1,583,109	41.0	2,098,520	39.0	2,322,340	24.0	2,100,000	15.0
Office			730,904	13.5	1,499,844	15.5	2,400,000	17.0
Technical	101,279	3.0	225,737	4.5	675,500	7.0	1,260,000	9.0
Trade and Industry	938,490	25.0	1,087,807	20.0	2,566,100	26.5	4,120,000	30.0

Table 2

ACTUAL AND PROJECTED ENROLLMENTS AND PERCENTAGES BY PURPOSE
VOCATIONAL-TECHNICAL EDUCATION

Purpose	Actual 1964 Enrollment	%	Actual 1967 Enrollment	%	Projected 1970 Enrollment	%	Projected 1975 Enrollment	%
Secondary	2,140,756	46.9	3,500,000	50.9	4,525,000	47.1	5,500,000	39.3
Post- Secondary	170,835	3.7	525,000	7.6	650,000	6.8	1,250,000	8.9
Adult	2,254,799	49.4	2,700,000	39.2	4,050,000	42.2	6,500,000	46.4
Special Needs	---------	----	155,000	2.3	375,000	3.9	750,000	5.4
TOTAL	4,566,390	100.0	6,880,000	100.0	9,600,000	100.0	14,000,000	100.0

Table 3

ACTUAL AND PROJECTED NUMBER OF TEACHERS AND FEDERAL, STATE, AND LOCAL PERSONNEL

Year	Teachers	Federal	State	Local
1964	85,102	83		
1965	109,136	83	3,045	4,108
1966	124,792	83	3,802	4,941
1967	146,383	98	4,125	4,986
1970	213,300	133	4,738	5,510
1975	350,000	146	6,015	7,525

VT 008 205
Wiersteiner, B.R.; Cummens, W.G.
Speeches Presented at the Annual Vocational Convention of the American Vocational Association (62nd, Dallas, Tex., Dec. 12-13, 1968). Apprenticeship and Manpower Training Programs.

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*SPEECHES; *TECHNICAL EDUCATION; *EXPERIMENTAL CURRICULUM; *RESEARCH PROJECTS; *SCHOOL INDUSTRY RELATIONSHIP; ELECTRONICS
*AMERICAN VOCATIONAL ASSOCIATION CONVENTION, DALLAS, TEXAS, DECEMBER 9-13,1968

"Technician and His Job" by S.R. Wiersteiner, reports a Pennsylvania study entitled, "Effects of Field and Job Oriented Technical Retraining on Manpower Utilization of the Unemployed" which began in 1964. "Industry, Education, and Government Cooperation" by W.G. Cummens reports on cooperative efforts in the field of electronics. (EM)

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Speeches Presented At The

62nd Annual Vocational Convention

Of The

American Vocational Association

Dallas, Texas

December 12-13, 1968

Apprenticeship and Manpower Training Programs

VT008205

THE TECHNICIAN AND HIS JOB

S.R. WIERSTEINER

DEPARTMENT OF VOCATIONAL EDUCATION
THE PENNSYLVANIA STATE UNIVERSITY
UNIVERSITY PARK, PENNSYLVANIA

A PAPER PRESENTED AT THE
AMERICAN VOCATIONAL ASSOCIATION
ANNUAL CONVENTION
DALLAS, TEXAS
DECEMBER 13, 1968

The research reported herein was performed
Pursuant to a contract with the Office of Education,
U. S. Department of Health, Education, and Welfare.

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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My topic concerns a research project carried out by the Department of Vocational Education of The Pennsylvania State University, pursuant to a contract with the Office of Education, United States Department of Health, Education, and Welfare. This project, entitled Effects of Field and Job Oriented Technical Retraining on Manpower Utilization of the Unemployed, was initiated early in 1964 and was completed in September of this year. The two specially designed training programs which were the subject of this research were operated under provisions of the Manpower Development and Training Act. Dr. David C. Bjorkquist, now at the University of Missouri, was project director.

As indicated by its title, the project was designed to determine what effects, if any, field and job oriented technical retraining would have on a selected sample of unemployed Pennsylvanians. Briefly, the two training programs had the following characteristics:

The job-oriented program prepared men for positions as tool design technicians, while the field-oriented program preparation was for machine and tool designers in mechanical technology. The emphasis on the job-oriented training was depth in tool design preparation. Courses were selected which would contribute to the preparation of a tool design technician. The objective was to produce a person who could immediately, after the completion of training, contribute to the cause of his employer as a tool designer. This course was taught in a vocational-technical school and was, in many ways, similar to grades thirteen and fourteen in technical programs. School personnel, together with a local industrial advisory committee, prepared the curriculum.

The field-oriented training program emphasized breadth in mechanical technology with preparation pointed toward making the individual flexible in this field and ready to accept future opportunities for advancement and change. It was recognized that the product of this program may well need additional training after securing a job, but it was held that a wider variety of opportunities for employment would be open to him. This course was taught on a Commonwealth Campus of The Pennsylvania State University. This program bore some resemblance to an associate degree program or an evening school extension program. The curriculum was prepared by the College of Engineering in consultation with practicing engineers.

The samples of unemployed persons were selected and initially screened by the Pennsylvania State Employment Service.

This screening was done according to these criteria. Only persons eligible for MDTA training were considered. This meant that, among other things, each applicant must have been unemployed or underemployed and he must have spent at least three years in the labor force. All applicants were graduated from high school or had a high school equivalency. Some familiarity with mechanics or machine operation and an expressed desire to become retrained as a technician were also required. The General Aptitude Test Battery was used to measure aptitudes. The three pertinent measures which were used for selection were General, Numerical and Spatial abilities. An interview was used to confirm the aspiration of each of the applicants.

On the basis of aptitudes, interview evaluation, work history and previous education, a pool of qualified applicants for the two training programs was formed. From this pool persons were assigned to programs

on the basis of their preference for training location. With the exception of perhaps half-a-dozen cases, students were assigned according to their first choice. There tended to be geographic factor working in assigning students, inasmuch as most of them chose the training facility closest to home. Students were not randomly placed. Thirty-five trainees were assigned to the job-oriented program and 40 were assigned to the field-oriented program. There were 109 original applicants.

In most respects we were unable to measure differences between the two groups. There was no significant difference in the General Aptitude Test Battery scores. With a mean of 100 and standard deviation of twenty on the GATB, both groups were near one standard deviation above the mean on all three measures.

Approximately one-third of the students in each of the programs had completed some education beyond high school. The mean number of years of formal education were 12.4 and 12.2 years. The age of the students was about 23-1/2 years at the beginning of training. About one-third were teenagers, 18 or 19 years old. The oldest man in the job-oriented program was 43 and the oldest in the field-oriented program was 47. Since these were retraining programs, we had expected that the mean age of the group would be somewhat higher, perhaps about thirty. But since we are currently in a period of high employment, there do not seem to be as many older men who are available for retraining. About one-third of the men were married and many of them had graduated from high school in the spring of 1964.

Initial Placement

One factor commonly associated with training success is the successful placement of graduates. Of the twenty-five students who graduated

from the field-oriented program, nineteen (or 76 percent) had accepted jobs which, by job title, seemed to be related to their training. Three students (12 percent) entered the military service and one student (4 percent) enrolled in a four-year college program. Two students (8 percent) had not accepted employment as of the completion of the training. Of the 32 job-oriented graduates, 24 or (75 percent) had accepted jobs related to their training, one (3 percent) entered the military service and seven (22 percent) had not accepted jobs as of the completion of training. There were many positions open to the graduates, however, some chose to remain in their "home town" area where jobs were not plentiful. This was particularly true of those graduates who were from the coal belt region of the State. Consequently, some of those who graduated accepted compromise positions or remained unemployed.

Although many graduates reported to work immediately after training, it required an average of almost four weeks for them to begin their first job. The job-oriented graduates averaged 3.93 weeks while the field-oriented graduates averaged 3.76 weeks before becoming employed. The time required by industry for the screening and selection of individuals hired for technical positions was reflected by this four week figure. Time lapse from initial job application to beginning work often was two or more weeks. Many employers were hiring for the "long haul" and wanted to be assured that the right man was selected; i.e., it might take from three to six years for an individual to become a full fledged designer.

Of the 27 job-oriented graduates employed in industry, eight changed their place of residence to secure their first job. Percentage-wise, more than twice as many in industry from the field-oriented program changed their place of residence after completion than those from the job-oriented

course. There was a significant difference (p .01) in the mean number of weeks (.81 weeks for those who moved) than was required for those who didn't (5.53 weeks).

An analysis of variance was used to determine whether there was a difference in the mean age of those who moved and those who did not. Also the difference in the mean age of graduates of the two programs employed was tested.

The mean age of the 21 graduates of both programs who moved to secure their first job was 22.23 years and the mean age of 26 graduates who did not move to secure their first job was 25.81 years. This difference in ages was significantly different. The mean ages of graduates of the two programs was not significantly different. Married graduates did not move more or less to secure their first job than did the single graduates.

Additional interviews with the graduates were conducted one and two years after graduation. Of the 28 job-oriented graduates employed in industry, 12 made a total of thirteen moves during the first year after graduation. During the second year, three job-oriented graduates made one move each.

Thirteen of 20 field-oriented graduates in industry moved a total of 20 times during the first year after graduation. During the second year, one move was made by each of four field-oriented graduates.

During the first year following graduation there were 16 job-oriented and nine field-oriented graduates who experienced some unemployment. A total of 28 design graduates from the job-oriented program employed in industry had a mean of 3.75 weeks of unemployment during the first year. Twenty field-oriented graduates employed in industry averaged 3.63 weeks of unemployment during the first year. One job oriented graduate was

unemployed for 26 weeks, while the longest unemployment for a field-oriented graduate was 21 weeks.

Two job-oriented graduates were unemployed an average of two weeks each during the second year after graduation. During this same period, four field-oriented graduates were unemployed an average of 5.50 weeks each. The longest period of unemployment for any individual during the second year was nine weeks.

To determine the relative salary position of the graduates in relation to their job peers, comparisons were made between the average salary of Class B Draftsmen in each metropolitan area in which there were three or more graduates from one of the two training programs. At the end of the first year, the job-oriented graduates were earning eleven to twenty-two dollars less per week than Class B Draftsmen in the area. The field-oriented graduates were earning about twenty-five dollars more than Class B Draftsman in two metropolitan areas, and fifty dollars less per week in a third metropolitan area during the first year. A year later, the job-oriented graduates had salary increases of fifteen to twenty dollars more per week, but were still earning somewhat less than Class B Draftsmen in the area. The field-oriented graduates were earning about eight to ten dollars more per week during the second year.

Employer Ratings

After graduates had been on the job for one year and again after two years on the job they were rated by their supervisiors on four aspects of their job performance.

More than 50 percent (52 percent-77 percent) of the graduates of both programs were rated above average or outstanding during each rating on "manipulative work," "personal and social qualities," and "work

qualities and habits." In "occupational technology," graduates of both programs tended to be rated average or above average. Smaller percentages (3 percent-12 percent) were rated below average or unsatisfactory.

With the exception of ratings for the field-oriented group on "manipulative work," there were larger percentages of graduates rated above average or outstanding after two years on the job than there were a year previous. These shifts were accompanied by decreasing percentages of average ratings.

During the first interview contact a job analysis was used to gather data about skills used on the job, work aids used, work field, and to describe job functions. The analysis technique used was one structured by the United States Bureau of Employment Security and used in their preparation of the 1965 Edition of the Dictionary of Occupational Titles (Dictionary, 1965).

Each interview required about 45 minutes, of which, approximately 30 minutes were spent for the job analysis. By observing the output of the worker and asking questions about what he did, how and why he did it, and what skill was involved the job analyst prepared a job description. A sentence analysis of each job description was prepared to identify the worker's function, relative to data, people, and things. In general a hierarchy has been established in each of these three areas in which a lower code number identifies a higher level of involvement required by the job. Thus a job of compiling data requires a higher level of involvement by the worker than does a job of computing. The code numbers derived by use of the hierarchy constitute degits 4, 5, and 6 of the six digit DOT code number.

The most difficult judgments concerned the worker's level of involvement with data. Operationally, the worker's responsibility in making decisions was used to determine his data involvement. For example, a worker who manipulated data and then referred to a company reference manual for a prescribed action was considered to be "computing" data. If his job required that he collects and summarizes data, report these data, and carry out an action based on this, he was considered to be "compiling" data.

Although none of the jobs analyzed required the worker to perform in isolation, seldom was a specialized skill in dealing with people necessary to the performance of the job. In a few instances workers were required to direct the activities of others at the "speaking-signaling" level.

All jobs requiring the use of drafting instruments were considered to be at the "precision working" level with things.

Of 27 job-oriented graduates employed in industry, 25 were employed in the area of drafting and engineering. Two others were employed as inspectors. Sixteen of those employed in drafting and engineering held jobs which required them to compile data. Only two individuals had jobs requiring a significant involvement with people at the speaking-signaling level. Precision working with things was involved in the jobs of 24 of the 25 graduates employed in drafting and engineering jobs. The jobs performed by 14 job-oriented graduates in drafting and engineering required a level 3 (compiling) involvement with data, a level 8 (no significant relationship) involvement with people, and a level 1 (precision working) involvement with things.

Eleven of 20 field-oriented graduates working in industry were

employed in drafting and engineering. Other graduates were employed in three other work fields - machining, researching, and investigating. Nine of those employed in drafting and engineering compiled data. One of the eleven in drafting and engineering held a job requiring speaking-signaling with people. All others were not required by their jobs to be significantly involved with people. Precision working with things was required in all the jobs.

One and two years after training. Twenty-four job-oriented and 15 field-oriented graduates were employed in the work fields of drafting and engineering. These were jobs in which the individuals had varying responsibilities designing and drafting. Those graduates in the work field of researching were involved primarily in data collection in engineering experimentation. The individuals in the work field of appraising were working as inspectors. The individual in administering was responsible for negotiating contract changes. One individual was a materials handler in the field of loading-moving. Three graduates operated machines in the field of machining.

The jobs of all 24 job-oriented graduates employed in drafting and engineering one year after training required computing or compiling of data, speaking-signaling or no significant relationship with people, and precision working with things.[1] One year later, the level of involvement with data had increased for six individuals and decreased for one. Five individuals held jobs requiring the analyzing of data. Between one and two years after training the level of involvement with people had increased for five job-oriented graduates. Two individuals were responsible for persuading people and five others had speaking-signaling responsibilities. All job-oriented graduates in drafting and engineering

continued precision working with things two years after training.

There were 15 field-oriented graduates employed in the work fields of drafting and engineering one and two years after training. After one year on the job, three graduates were analyzing data, eleven were compiling data, and one was copying data. After two years at work, the level of involvement with data had increased for two persons and had decreased for one. One year after the completion of training one graduate was persuading people, five had speaking-signaling responsibilities, and eight had no significant relationship with people. A year later the level of responsibility in dealing with people had increased for three field-orientated graduates. One year after the completion of training one graduate in the work field of drafting and engineering was responsible for handling things.

All other graduates, one and two years after training, were responsible for precision working with things. There was no significant difference in the number of graduates of the two programs in the levels with which they worked with data, people and things two years after the completion of training.

With the exception of one graduate, who was in the work field of loading-moving one year after the completion of training, all graduates used many of the work skills which were specifically taught in the training programs. This was evidenced by their job descriptions and by their use of drafting, designing, and mathematics.

Changes in the percentages of graduates using the various drafting skills which occurred between one year and two years after training were relatively small. The largest percentage of change was in the use of graphs by field-oriented graduates. Eleven percent used graphs one year after training and 50 percent used them a year later. In actual numbers

this percent increase equals six individuals. The drafting skills used by the largest percentages of graduates were freehand lettering, sketching, dimensioning, sections, scale drawing, and orthographic projection. Two years after graduation all of the industrially employed field-oriented and 93 percent of the job-oriented graduates were using some drafting. skill.

Most noticeable changes in the percentage of graduates using design skills one year and two years after training were increases in the designing of tools for both groups, and fixtures, jigs, dies, and layout for field-oriented graduates. The percentage of individuals using no design skills was reduced during that period of time for both groups.

Among mathematics skills, arithmetic was used by all graduates, except one, a year after training. More specialized forms of mathematics - right triangle trigonometry, algebra, and plane geometry - were used by large percentages of graduates. None of the industrially employed graduates used calculus and less than one-half used solid geometry. It was interesting to note that at the end of year one, fewer job-oriented graduates reported using algebra than reported using right triangle trigonometry. A mathematician might argue that this was an impossibility, however, it seems probable that algebra was interpreted as algebra per se by those answering the inquiry about its use.

SUMMARY

In summary we feel that the project served to demonstrate several important aspects of technical training and employment: (1.) It is possible to reduce what is essentially a two-year technical curriculum to intensive one-year programs; (2.) Students will successfully adjust to

the intensive work-load of such programs; (3.) Graduates of such programs can compete successfully for job opportunities in industries.

Very few significant differences could be detected between the two groups of graduates. This we have concluded, is the result of the demand by industry for technically trained individuals. Employers acceptance and evaluation of the graduates was generally very favorable and several companies inquired as to the possibility of further training programs of this type.

The graduates themselves were well satisfied with their training and subsequent employment. Several of the Graduates continued their studies at the collegiate level. Graduates were making much more money than they were before training and living standards had moved upward.

PRESENTATION

A.V.A. Convention, Dallas, Texas
W. G. Cummens, Senior Program Officer
Region VII, U. S. Office of Education

in Cooperation With the

Electronic Industry Association
John Borlaug, Chairman, EIA Service Committee
Ray Yeranko, National Service Manager Magnavox Co.
Paul B. Zbar, Electronics Technology
Voorhees Technical Institute

INDUSTRY, EDUCATION AND GOVERNMENT
COOPERATE

I WISH TO EXPRESS APPRECIATION TO THE PANEL SPEAKERS AND TO THIS AUDIENCE FOR ALLOWING ME THIS OPPORTUNITY TO SUBSTITUTE FOR MY GOOD FRIEND AND FELLOW TRADE AND INDUSTRIAL EDUCATION ASSOCIATE ERNIE STUDEBAKER OF OUR WASHINGTON OFFICE WHO WAS UNABLE TO APPEAR TODAY WITH US. MR. STUDEBAKER EXTENDS HIS PERSONAL REGRETS TO ALL OF YOU AND THE ASSOCIATION AND WISHES EACH OF YOU A MOST PROFITABLE CONFERENCE.

I AM EXTREMELY PLEASED THAT I WAS ASKED TO SUBSTITUTE FOR MR. STUDEBAKER AND REPRESENT VOCATIONAL EDUCATION.

IT IS MY UNDERSTANDING THAT THIS STRENGTHENED RELATIONSHIP BETWEEN INDUSTRY, GOVERNMENT, AND EDUCATION, AS IT INVOLVES THE ELECTRONICS INDUSTRY, WAS ACTUALLY FORMALIZED BACK IN MARCH OF 1967 WHEN HENRY PAISTE, WHO WAS WITH PHILCO CORPORATION CALLED ON THE WASHINGTON OFFICE IN THE INTEREST OF THE ELECTRONICS INDUSTRY AND THE E.I.A. WE ARE VERY GRATEFUL THAT MR. PAISTE AND YOUR ASSOCIATION HAD THE EARLY FORESIGHT TO RECOGNIZE THE IMPORTANCE OF COORDINATION AND THE

SPIRIT OF TEAM WORK SO NECESSARY TO THE DEVELOPMENT OF THE PROGRAM.

AN IMMEDIATE FRIENDSHIP BETWEEN ORGANIZATIONS RESULTED FROM THIS EARLY MEETING AND OUR OFFICE CONTINUES TO BE EXTREMELY PROUD OF OUR CONTINUED WORKING RELATIONSHIPS WITH THE ELECTRONIC INDUSTRY ASSOCIATION. WE HAVE CALLED UPON YOU MANY TIMES AS A JOINT PARTNER AND YOU FOLKS HAVE ALWAYS RESPONDED IN AN EXEMPLARY MANNER WITH FULL KNOWLEDGE AND INTEREST IN THE GOVERNMENTS AND STATES RESPECTIVE ROLES IN THE INTEREST OF TRADE AND INDUSTRIAL EDUCATION AS WELL AS THE ELECTRONICS PROGRAMS SPECIFICALLY.

WE HAVE EXPERIENCED IN VOCATIONAL EDUCATION OVER THE YEARS MANY PERIODS OF STRENGTHS AND WEAKNESSES, MANY DROUGHTS AND MANY BOUNTIFUL HARVESTS. WE HAVE WITHSTOOD THE PRESSURES OF EDUCATIONAL GENERALISTS, OF MANY LOCAL SCHOOL ADMINISTRATORS WHO WOULD CHOOSE TO WATER DOWN VOCATIONAL EDUCATION AND FAVOR A SINGLE PREPARATORY PROGRAM FOR ALL STUDENTS AIMED AT STRICTLY THE FOUR YEAR BACCALAUREATE DEGREE. I HOPE YOU WILL FORGIVE ME IF I USE A PERSONAL EXAMPLE TO ILLUSTRATE MY POINT:

THIS EXPERIENCE CAME RATHER QUICKLY TO ME AS A NEWLY ASSIGNED STATE T & I SUPERVISOR IN THE SOUTH TEXAS AREA WHEN I EXPERIENCED MY FIRST TELEVISED SCHOOL BOARD MEETING WHERE I FELT BASIC VOCATIONAL EDUCATION PRINCIPLES WERE BEING CIRCUMVENTED BY BOARD DISCUSSIONS AFFECTING THE CONDUCT OF VOCATIONAL EDUCATION IN THE AREA. AND THIS IS WHERE I CALLED ON AND RECEIVED SOME SAGE ADVISE FROM A LOCAL VOCATIONAL REPRESENTATIVE I RESPECT MOST HIGHLY.

I WAS ADVISED THAT VOCATIONAL EDUCATION SINCE 1917 HAS BEEN MUCH LIKE THE PENDULUM ON A CLOCK, WITHIN THE TOTAL EDUCATION ENDEAVOR, AND THAT CYCLES MAY COME AND GO JUST AS THE PENDULUM ON A CLOCK SWINGS BACK AND FORTH, BUT WE SHOULD NOT SOUND THE ALARM TOO QUICKLY BECAUSE WE WILL HAVE OUR DAY UNDER THE SUN IN DUE PROCESS AND VOCATIONAL EDUCATION WOULD THEN CONTINUE TO TAKE ITS PROPER COURSE. IN THE MEANWHILE OUR JOB IS TO CONTINUE IN VOCATIONAL EDUCATION UTILIZING THE ESTABLISHED "CARDINAL PRINCIPLES" AS OUTLINED BY PROSSER TO THE BEST OF OUR ABILITY AND WATCH FOR THE TURN OF EVENTS THAT ARE INEVITABLE. I BELIEVE EACH OF US NOW HAS WITNESSED THIS TURN OF EVENTS.

WHAT DOES THIS ALL MEAN AND WHAT RELATIONSHIP DOES THIS DISCUSSION HAVE TO THE SUBJECT AT HAND OF COOPERATION BETWEEN GOVERNMENT, INDUSTRY AND EDUCATION AND I WOULD EXPLAIN AS FOLLOWS:

BASIC PHILOSOPHIES AND CONCEPTS OF SOUND VOCATIONAL EDUCATION ARE UNYIELDING. I WOULD USE AS AN EXAMPLE THE REQUIRED COORDINATION BETWEEN VOCATIONAL EDUCATION AND INDUSTRY IN UTILIZING TRADE ADVISORY COMMITTEES TO WRITE AND DIRECT AN ACCEPTABLE CURRICULUM THAT IS RELEVANT TO THE INDUSTRY SERVED AS WELL AS THE STUDENT SERVED. WE SOMETIMES ARE ACCUSED OF BEING OLD FASHIONED BY REQUIRING THE USE OF SUCCESSFUL TRADES PEOPLE FROM INDUSTRY AND INSTRUCTORS IN OUR T & I PROGRAMS REGARDLESS IF THEY ARE SECONDARY OR POST-SECONDARY TEACHERS, BUT THIS IS EASILY REFUTED BY ALL CONCERNED. OUR TEACHER TRAINING IS SPECIALIZED TOWARD THE SELECTION OF INDUSTRY QUALIFIED PERSONS. (EXPLAIN)

WE ALSO BELIEVE THAT THE TOOLS AND EQUIPMENT USED IN VOCATIONAL EDUCATION CLASSES SHOULD SIMULATE AS NEAR AS POSSIBLE THOSE THE STUDENTS WILL ENCOUNTER IN THE INDUSTRY SERVED, AND WE CONTINUE TO BELIEVE THAT NO POLICY DIRECTED TOWARD SUCCESSFUL VOCATIONAL EDUCATION SHOULD BE ATTEMPTED WITHOUT THE ADVISE AND COUNCIL OF AN ADVISORY COMMITTEE PROPERLY CONSTITUTED WITH REPRESENTATION OF LABOR, MANAGEMENT AND THE PUBLIC.

(GIVE AN EXAMPLE OF AN INDUSTRY WHO ATTEMPTED TO GO IT ALONE.)
(GIVE AN EXAMPLE OF A VOCATIONAL SCHOOL THAT ATTEMPTS TO PROCEED WITHOUT THE INDUSTRY PARTICIPATION.)

THE WORK OF YOUR ASSOCIATION EPITOMIZES THE VERY PRINCIPLES VOCATIONAL EDUCATION WAS FOUNDED UPON--YOU ARE ENCOURAGING YOUNG PEOPLE INTO A RICH AND REWARDING VOCATION -- YOU HAVE DEVELOPED INSTRUCTIONAL MATERIALS AND MEDIA THAT ASSISTS OUR INSTRUCTORS DAILY -- YOU HAVE STAFFED AN ASSOCIATION WITH HIGHLY QUALIFIED PERSONS TO RELATE TO AND COUNCIL WITH EDUCATORS ON PERTINENT INDUSTRY NEEDS AND REQUIREMENTS AND MORE THAN THAT YOU HAVE SUPPORTED VOCATIONAL EDUCATION AND OUR ATTEMPTS AT DIRECTING THE TRAINING OF YOUNG PEOPLE IN HIGHEST TRADITION OF CRAFTSMANSHIP.

DURING FY 1967 STATE DEPARTMENTS OF EDUCATION TRAINED, THROUGH TRADE AND INDUSTRIAL EDUCATION 10,847 PERSONS IN ELECTRONIC OCCUPATIONS, 21,100 IN RADIO/TELEVISION SERVICING AND APPROXIMATELY 4,000 IN OTHER ELECTRONIC OCCUPATIONS OR A TOTAL OF 35,000 PERSONS AND I CAN ASSURE YOU THAT THIS COULD NOT HAVE BEEN DONE WITHOUT YOUR INDUSTRY, YOUR ASSOCIATION AND EDUCATION STANDING SIDE BY SIDE IN THE PROCESS. WE IN GOVERNMENT AT THE LOCAL, STATE AND FEDERAL LEVEL LOOK FORWARD TO A LONG AND CONTINUED PARTNERSHIP IN THIS TRADITION. THANK YOU.

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Abbott, Ellen M.
Dynamics of the Organizational Power Structure.

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Power is a necessity in modern organizational relations. Favoring the participation of women is the fact that both sexes are finding greater freedom to express their own potential for personal development through the more realistic evaluation of their own individual differences. Each individual is experiencing greater spontaneity and greater satisfaction in being himself or herself. In order to fully utilize her potential to exercise power, each woman should: (1) make use of existing opportunities to utilize ability, (2) secure the training or education to qualify for high-level jobs, and (3) develop a vision of what she wants for herself and other women. The appendix includes brief discussions of structural, process, decision-making, and systems approaches to administrative organization. (JK)

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Of The

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Dallas, Texas

December 12, 1968

T & I Women's Section Luncheon

and

General Meeting

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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VT008206

Given by Ellen M. Abbott
AVA Convention, Dallas, Texas
Thursday, December 12, 1968
Luncheon Theme: "FOCUS ON WOMANPOWER IN OUR TOTAL EDUCATIONAL ENVIRONMENT"

DYNAMICS OF THE ORGANIZATIONAL POWER STRUCTURE

> "Organization structures set people in certain relationships of authority, influence, and dependence; is communicated to members by delegation of duties, responsibility, and (levels of) authority; and the amount of each should be relatively equal. Structure focuses on the job rather than the person who fills it....while organization sets the relationship between people, work, and resources."[1]

It has been evident to me for some years that policies on vital matters affecting large organizations seem to appear suddenly. They are acted upon at a "house of delegates", perhaps, but with no precise knowledge on the part of the majority of members as to how these policies originated or by whom they are really sponsored. Much is done, but much is left undone. Some of the things done appear to be manipulated to the advantage of relatively few. There usually appears to be a tenuous line of communication between the governors of such an organization and the governed.

The term power is no reified concept, but an abstract term denoting a structural description of social processes. Or, in simpler terms, "power is a word that will be used to describe the acts of men going about the business of moving other men to act in relation to themselves."[2] Peter F. Drucker states, "An institution is like a tune; it is not constituted by individual sounds but by the relations between them." (Davis, p. 305) Wherever groups of people exist in a common effort, organization must be employed to get productive results.

Organization structure is significant because it partly determines the power of people and their perceptions of their roles. In other words, individuals use organizations as instruments to achieve their goals just as much as organizations use people to reach objectives. One hypothesis

taken is that power is a necessary function in the organization, for it involves decision-making and it also involves the function of executing predetermined policies - or seeing to it that things get done which have been deemed necessary to be done.

In our society, people of authority are called power and influence leaders. Such leaders are men and women very like other men and women in many respects. The difference between the leaders and other members lies in the fact that social groups have apparently given definite social functions - those related to power - over to certain persons and not to others.

The descriptions of the workings of the power structure may not always look "good," but suggesting alternatives is not a primary concern here. Once power is defined - as the ability of men to command the services of other men - it is tempting to speculate on what commands should be, or should not be, given at any particular time.

Power is a relatively constant factor in social and organizational relationships with policies as variables. Variation in the strength between power units, or a shift in policy within one of these units, affects the whole power structure. Power of the individual must be structured into associational or clique patterns to be effective, thus most of the powerful national organizations have roots in smaller local groupings and interest groups. If the individual is interested in policy decision, representative democracy offers the greatest possibility of assuring the individual a voice in policy determination and extension. In fact, it may be the only course that appears open to him for possible inclusion in the upper power

groups. There is, perhaps, no other sure road to power participation.

This is not to say, by any means, that inclusion in an interest grouping will automatically catapult an individual into the realm of policy decision. He may never get there, but at least the road is still open. This holds true for the women particularly, who traditionally have been among the most neglected elements in the power picture. The gains in power participation by women have been through bitter struggles. There is no doubt that further gains will be made and with more bitter struggles. The leaders in the policy-making realm are not going to open the doors of participation with charitable graciousness.

It is true that the women in a group are the most inclined to lament their fate and the least inclined to participate in organizing activities which would allow them a voice in policy decision. Studies of job satisfaction show that women's dissatisfactions focus primarily on lack of promotional opportunities. It is here that they have their greatest difficulty securing equal opportunity with men. Its meaning, in this case, comes from the world of science and from the larger American culture.[3] It uses the rationale, found elsewhere in our culture, that women do not have to work, as do men, and that women therefore do not have the same commitment to their jobs. That this is rationalization rather than reality is evident; just ask any woman. Women clearly express chagrin at their difficulty in pursuing organizational careers.

In spite of the limitations that confront women in relation to organizational participation on the level of policy decision, salary is based on factors other than sex: the organization does not subscribe to the definition

current in science of the role of the professional woman or the career woman so far as salary determination is concerned. It might seem that because service activities are negatively valued, women who perform them would be paid less. Apparently no relation between salary and performance of service activities exist; it is a no-system, a many-splintered thing. While her door displays the same title, and her salary check discloses the same monetary worth as on that of her fellow male junior executives, much of her time is spent in doing menial tasks or services not performed by them - so salary discrimination is not always the burning issue. The issue is that she doesn't find herself being invited with them to participate in the executive suite at the policy-making sessions. However, with proper attention given to structural arrangements of power in the organization, she may find ways of having a voice in determining who should be at the top. She may even be able to convince them it should be her!

It is not contended here that policy is determined entirely by behind-the-scenes manipulation, although the policy-makers tend to operate as a closed group. To the policy-makers, their activities are thought to be open and above board in relation to each other. Because of the structural hierarchy of command and decision, policy just appears to be determined behind closed doors. The situation, as I've observed it more closely these past few weeks, is that the policy-makers have a fairly definite set of settled tactics or policies at their command, which have been historically functional in the organization. New problems which may arise are measured by the standards of older policy decisions, and adjustments are made to fit new conditions whenever the situation warrants revision of older policy determination.

Often the demands for change in the older alignments are not strong or persistent, and thepolicy-makers do not deem it necessary to go to the people with each minor change. This pattern of manipulation becomes fixed, thus it is functional, and the ordinary individual (especially the female individual) in the organization is willing that the process continue. This is then carried over from the minor adjustments to the settlement of major issues.

In a given unit such as the organization, a smaller number of individuals will be found formulating the extending policy than those exercising power. All "men of power" are not, per se, policy makers.[4] Regardless, of such ideology, power is a necessity in modern organizational relations. No utopia will disband all organizational power relations. Some men and women will rule, others will be ruled. Or as the late Charles Kettering once said, "One composer can keep 10,000 fiddlers busy."[5]

The concept of organizing is simple, but it is difficult to effectuate. What is organization but the connection of parts in and for a whole, so that each part is at once an end and a means? A law circulated by Fred Allen on his radio show stated that "most things are more complicated than they seem to most people." Because power involves such complications - especially relationships between individuals and groups, both controlled and controlling - it can be described structurally, as I have done in the attached Appendix.

Concepts about womanpower and administration are shifting away from ideas about discrete roles and positions to a new focus on dynamic interchange, woman's output, and the benefits or services to be derived from her activity in concert with others. Women are the greatest potential

resource available for organizational building, yet in very few organizations are their skills being fully utilized, or are they making their full contribution to the groups to which they belong. What are some of the obstacles standing in way of full participation? What are some of the needs which must be met in order to make possible the development of their full potential in today's organizational world of work and group action?

All week we have looked at the kind of work world in which we are living; one of accelerated, radical, and irreversible change. The role of the woman in public life and some of the complexities she faces as a result of these changes, has taken on newer dimensions whether the woman is the owner, the manager, or the worker. But then the nature of woman and "woman's place" have always been controversial subjects.

Ranged on one side in the age-old arguments are those who believe that her uniquely female biological attributes do determine and should determine, every aspect of a woman's life. Strongly opposed to this point of view are those who emphasize the fact that sex is only one attribute of every complex human being, either male or female.

Perhaps some of these contradictions can never be fully resolved for all female human beings just because they are female as well as human. But little is to be gained by proposing solutions which fail to recognize that the world has changed in many ways since grandmother was a girl. Led by a small handful of indomitable women, the long, slow revolution which overthrew the undemocratic tradition of a legal double standard was accomplished without bloodshed or gunfire. When the final history of civilization is written, this declaration of feminine independence may well prove to be the

most enduring achievement of the twentieth century. Not only did it extend the concept of democracy to include a once excluded half of the population of the United States, it also forced upon every other country recognition of the truth that women, too, are endowed by their creator with certain inalienable rights. Now that is what I call dynamic organizational power structure!

In the solemn council halls of the United Nations the status of women has been established! In far-away lands, half-starved, illiterate women who have never heard the name of Susan B. Anthony have been granted equal suffrage. And around the conference tables of governmental and global planning, every decision made is in some way influenced by the implications of women's rights to political equality with men.

Women have become a political force to be reckoned with, and no office seeker can now afford to ignore them. Today, every political party has women on its local, state and national committees and men who once opposed women's suffrage on the grounds that female intelligence was too limited to grasp political issues have found it increasingly expedient to woo the "women's vote." They are not always wise in their wooing. Women candidates for public office are subjected to sly innuendo thinly veiled with flattery, while intelligent women voters are inundated with "guff for the girls" instead of platforms and policies. Inevitably women often feel themselves debased. Well aware that they are the equals of men in intelligence and anxious to use their training and ability in constructive or organizational or political activity, they must discharge their responsibilities as citizens by listening to men who consider them fools, men who find their bodies much

more interesting than their minds or souls.

Perhaps the most far-reaching change affecting women has been the new recognition of the worth of the individual. There can be little doubt that as women have found their way - or should I say - forced their way into the redoubts of business and the professions, the men have yielded inch by inch, especially in the hidden hierarchies of the professional associations. I guess it has something to do with the psychology of the male-commanding-elite who feel they have gone down the line in acceding to women's demands on many scores, but they'll be danged if they will let them take over the "holy of holies" in the command post of the executive suite.

No proclamation comparable to the Nineteenth Ammendment heralded the entrance of women into the organizational structure; the power for that frontier proved to be the typewriter. The typist became the career girl. Gradually time, familiarity, and necessity tempered early masculine hostility to a resigned shrug of the shoulders and the admission that "women are here to stay." While the hinges on many doors leading to economic and professional status for women are still a bit stiff and resistant, there is now no era of employment from which women are categorically barred.

What makes it worse is that after a succession of revolutions (suffrage, mores, job, kitchen, sexual) which left her liberated but wondering about the results of her freedom, the American woman is finally finding a life-style that suits her tolerably and makes a dent in her ancient problems. That problem has been variously phrased: whether to stick to the home or build a career; whether to compete with men or build a life around them.

However you put it, the fact is that the new American woman rejects the

need for making so stark a choice. She sees no reason why she and the male cannot join the functions of life that are best done together: the sexual, family, social, and work functions. And never has the need for the services of women been greater at the executive level - their skills, their judgement, their sense of fairness, their compassion, and their sense of commitment to build a better organization - a better future in which to work.

With the need so evident, and obstacles being removed, why do we then still talk about full utilization of womanpower? Why on examination of any situation do we find that women's full potential is not being used? New laws are being adopted but a law does not always become a fact in practice. Declarations against discrimination even agreed to by fifty states do not change everyone's attitudes or suddenly usher in new ways of thinking about the ability of women.

Never in the course of human history have men and women been entirely satisfied with the world in which they live. Motivated by restless impatience with the imperfections in their human situation, they have continually sought for ways to improve it. Through political rebellion, industrial revolution, and social evolution they have repeatedly discarded ways of their parents and ancestors in attempts to find new developments which seem to promise them a better way of life.

Our modern age is a time of transition between a past and a future. It differs from other eras only in the nature of the changes which have occurred and the rapidity with which they are changing. In this dynamic environment of change which characterizes their power structure, we must examine these relative values of democracy founded upon the belief in equal

rights of all men to participate in making decisions which affect their lives. This is because privilege without responsibility has never been available to human beings and the appeals of freedom and independence have never been compatible with conformity and reliance upon authority.

With every facet of our culture changing, the exact roles their parents played no longer have the same meaning in the new social pattern. This is what has happened to the young people of our time. They have been tinkering with the world in which their elders lived, urbanizing, industrializing, educating, and trying to democratize it, and as a consequence their parents' world isn't meaningful to them. Many of them are confused and angry about their inability to understand the new meanings now proposed for masculinity and femininity. Many seek to justify their behavior by trying to blame it on someone else, and when they can find no logical way to defend themselves from their own illogical accusations, they become angry even more. And their anger is directed at anyone they can accuse being the cause of their failure. But inwardly this anger is directed at themselves because they can find no way to counter the accusation of the ego-images they acquired from their parents. Forced by circumstances to accept this new role, they rebel against it emotionally because it is something they believe they should not be required to do; they are angry or fearful because they feel that what they are not doing is not right. This is organizational power structure, too. And it is not a power structure of juvenile delinquents or escapees of the "generation gap" but indolent misfits and law-defying miscreants given instant notority by omnipresent TV cameramen and headline seeking newscasters. Gradually, as new customs become established, attitudes towards them are

modified. I believe this would take place a lot sooner if we could keep the TV newseekers busy elsewhere.

Despite this illplaced power structure being exploited by a few, both sexes are finding greater freedom to express their own potential for personal development through the more realistic evaluation of their own individual differences. They are loosening the strings of their own self-imposed straitjackets to allow each individual greater spontaneity and greater satisfaction in being himself or herself, as he is or she is.

The first answer to the full utilization of women's potential is found in what women themselves do through their own efforts - the extent to which women take advantage of progress that has been made. It is found in their ABILITY to make use of available opportunities and their willingness to make laws work. We have the vote. How many use it? Forty percent of the women have never voted in the United States. Do the women who do vote insist on persons qualified to administer, willing to consider women's needs, with judgement to use our national wealth wisely to build an economy where there are firm job opportunities? We talk about women in decision-making posts but are we willing to stand for election ourselves to get into the party of our choice and work for higher standards? Yes, a few, despite the rigors of political campaigning and nonsupport from a good portion of the women who represent one-half of the population in the United States.

In economic affairs there is more prejudice to overcome. Dr. Reider points out it "takes a high degree of motivation to withstand the indignities to which women are subjected in the work world of women." The saying "pretty

good for a woman" makes us afraid to try, knowing twice as much is expected of a woman than of a man.

Granted there are top jobs women have refused because they don't want the extra responsibility required; more often it is that they don't have the qualifications - so the second answer is TRAINING: vocational training, technical training, professional training, specialized training. The revolutions of knowledge and technology have made most work highly technicized, and the male find refuge in his superiority in his specialty. The woman who has taken time (he says) to raise her children, and who now wants to come back has a whole vacuum of knowledge to catch up with. While she was raising her children, things have been happening that she doesn't know about, and that only the male - the glorious male with his unbroken continuities - can master. But this is hogwash, and the males know it. The American male is caught in a masculinity trap, wanting to show how male he is exactly when he wonders most about it. Give a smart woman the chance, and she'll catch up - vacuum and all.

The third answer is the VISION of what it is a woman can do with her ability, the need to think big with self confidence. It is not enough to want for oneself - one can't be human alone. A willingness to give of oneself for something bigger than oneself spurs one on to new undreamed of accomplishments. We all know that no joy equals the excitement of finding the real dimensions of ones own full potential, and the helping of other women to find and use theirs in order to raise the general level of participation. This means sharing skills and experience with the young women "coming up" in the organization as well as the young women in all your

Professional settings and in all your classrooms and counseling opportunities. Crossing the frontiers of ones own mind as well as ones country can be an exhilerating adventure. It means not only a global outlook but a sense of values that will serve as a balance wheel as new economic patterns are evolving.

It means the self discipline to act with direction to eliminate the many things not related to the primary interests; too much time is spent by women on unproductive but pleasant activities that deter them from reaching their goals. Equipped with these three, ability, training or education, and vision, women have the mechanics to exercise power and activate the forces to produce room in the executive suites. This exercise of power might be thought of positively, as following a plan or a program, rather than negatively, as waging a war with men. Too, practical effectiveness may well increase of women concentrate more on what actions are possible in the light of what they can do in any given context with their capacity rather than on what they are not allowed to do or what others should not do. For some crazy reason deep in man's mystique, having to do with his biology, man wants power and command, whether in the jungle of business or the real war of the jungles. The success and progress of any organization is dependent on such momentum and power. Let him have it.

Womanpower has within itself so marked a force to determine equal relationships with all members of the organization which reflect not only office in the organization but also personal attributes meaningful in a non-organizational frame of reference. It means the need for faith in women and the future of their work - knowing that the two great forces in

their lives are Eros and work - each in the broadest sense. Gradually, this same quality of interaction is beginning to be felt in every area of life where men and women work together. In organizations, in business and industry, in schools, and in research laboratories, women are making a contribution which is adding an important new dimension to the thinking of men. Not that the thinking of women is necessarily different in either quality or kind from the men, but the very fact that men are valuing the thinking of women is gradually deepening the insight of both sexes into the larger values to be found in a democracy which utilizes the contribution of all of its citizens.

APPENDIX

THE STRUCTURAL APPROACH

The modern approach to administrative organization started with a focus on how work should be divided and how this division of labor could be made more rational. The bureaucratic model of Max Weber,[6] the scientific management approaches of Gulick and Urwick,[7] the so-called "principles of administration" of Mooney and Reiley,[8] and the human engineering model of Frederick Taylor[9] all emphasized structural rationality. The underlying assumption was that all tasks could be separated into discrete parts and that job functions could be delineated by clear-cut boundaries between positions. These separate tasks to be coordinated through a hierarchial structure of authority. The superior in the scalar hierarchy had authority over the subordinate, but in a legitimate sense by reason of position rather than because of personal qualities. Thus, the smooth functioning of the organization was dependent upon how well the jobs were defined to prevent overlapping of function, and coordination was effected through the authority of the superior.

THE PROCESS APPROACH

As the scientific management model was gaining popular acceptance, we began to learn, through works such as those of Mary Parker Follet, that the social process within an organization must be taken into account. She presented this line of reasoning: "...our happiness, our sense of living at all, is directly dependent on our joining with others. We are lost, exiled, imprisoned until we feel the joy of unity."[10] In the literature on organization, references to the informal structure as separate from the formal

structure became popular. A great rash of studies on social process appeared, and concepts such as "human relations," "participative management," "interpersonal communications," and "motivation" became popular. Underlying most of this emphasis was the assumption that there is conflict between the individual and the organization, and the social process movement assumes that the needs of the individual should have primacy over the needs of the organization.* The problem of reconciling the structural orientation and the social process orientation has been difficult and has not been solved.[11]

THE DECISION-MAKING APPROACH

Simon, in focusing on the administrative process as a decision-making process, opened a new way of looking at the organization.[12] On the assumption first suggested by Barnard[13] that one could look at the organization as a cooperative system, Simon developed the concept of the "principle of bounded rationality," and outlined different kinds of objective rationality, arguing that the central core of administration was the decision-making process. The literature on organizational decision-making is extensive, but the major issues evolved around the economic model of rationality, with arguments about whether it is an effective model in considering organization behavior.

THE SYSTEMS APPROACH

In the late 1940s some new concepts began to emerge and generated new ways of thinking about the administrative organization. Cybernetics, information

*Chris Argyris probably represented the extreme in this point of view, although his current work does not take such an extreme position.

theory, mathematical decision-making, and particularly the idea of systems brought completely new conceptual orientations to the world of management. In attempting to solve certain operational problems, they were perceived as created by a system of interacting variables rather than discrete causative relationships. The techniques of "operations research," or the systems approach, are based on the underlying assumption that the whole consists of interacting systems that are in dynamic equilibrium. An organization is therefore a dynamic system focused on the process of guiding the organizational output. With these conceptual developments of system, feedback, and control, the individual is incorporated as a dynamic sub-system in the organization, or, "depending on the problem or sub-system under study, the individual might be viewed as a decision-maker, as an information-processing unit, as a constraint, etc."[14] Most importantly, this new dynamic model focuses attention on the output of the system rather than on a rational structure or a social process. We are no longer tied to an attempt to reconcile the inconsistencies of the old, so-called "principles of administration" with conflicting theories of individual needs. This change does not eliminate the problem of administrative integration, coordination, and control. It does, however, open the way for learning a great deal about organizational behavior and for finding new and more effective organizational forms. With the focus of attention on output, such a change should profoundly affect our assumptions and ideas about the functions and roles of womanpower, especially in the situations in which women are members of an administrative organization.

Ellen M. Abbott

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*AMERICAN VOCATIONAL ASSOCIATION CONVENTION, DALLAS, TEXAS, DECEMBER 9-13, 1968

Five speeches presented at three general meetings are on the topics of joint fellowships with industry and education, the changing image of work, and safety. "The Development of a Fellowship Proposed" by George J. Brown suggests the needed ingredients of a fellowship proposal. "Conducting an Experienced Teacher Fellowship Program" by G. Harold Silvius presents the major elements of a fellowship program at Wayne State University. "Instructional Methods and Media for Implementing New Industrial Concepts" by Jack Kirby relates the role of instructional materials development in the fellowship program at Wisconsin State University at Platteville. "The Changing Image of Work in Our Society" by Howard F. Nelson reviews sociological and psychological factors involved in the concept of work. "Safety: In School and on the Job" by Herbert Siegel relates safety to the industrial arts instructional program as taught in New York City. (EM)

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Speeches Presented At The

62nd Annual Vocational Convention

Of The

American Vocational Association

Dallas, Texas

December 12, 1968

Industrial Arts General Meetings

VT008207

FELLOWSHIP PROGRAMS IN THE INDUSTRY--EDUCATION PARTNERSHIP

TOPIC:

"The Development of a Fellowship Proposed"

PRESENTED BY:

George J. Brown, Dean
School of Industry
Wisconsin State University--Platteville
Platteville, Wisconsin

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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December 12, 1968
Dallas, Texas

Program Chairman
Leslie H. Cochran

THE DEVELOPMENT OF A FELLOWSHIP PROPOSAL

INTRODUCTION - Why a fellowship proposal?

Possibly the question should be reversed and stated: Why are you here this morning? It would appear the lure of outside funding is most attractive, but in addition to the funding, the opportunity to improve, to innovate, to constructively change, to research, and to profit by outside help are also significant motivating factors. In part, your goal may be to become a participant and add to your educational preparation. Regardless of your goal, the opportunities are many.

The technological advances of recent years along with the increasing pace of technological change has placed industrial-technical education in direct focus of industry. Industry is concerned with what you are teaching. Their concern extends beyond a simple verbal expression; and for those of us who care to try, the technological gap may be spanned with an industry-education partnership. The partnership has undergone a recent revival. The revival of this partnership has possibly been stimulated in-part by the various federal acts under which proposals may be made. The recent federal acts to consider in the future includes: The Professional Development Act of 1968, the 1968 Amendments to the Vocational Education Acts, and the 1968 Amendments to the Higher Education Act. In addition, there are many foundations, industries and other services.

The industry-education partnership is a dynamic way of placing a static educational situation on the move. Let us look at four basic questions associated and closely related to the proposal.

How Extensive Should a Proposal Be?

The extensiveness of a proposal should be exemplified by evidence of planning. How much planning should really be done before a proposal is submitted. A proposal could certainly vary from a simple verbal expression to a rather detailed and worked out plan. For example, I might propose an eight-week institute in the area of Techniques of Material Testing and Analysis for this summer. Further, I might state intent to have speakers, equipment, etc; but compare the other extreme with all speakers tentatively contacted, equipment scheduled, etc. The proposal gains in pot ential with the level of planning.

The crux of the problem is what happens if the proposal is not approved. Should all the work be lost? Benefits are derived from planning. Possibly the proposal may be operated without funding, shortened in length or portions may be converted into the regular program. Certainly the local situation will provide the environment in which this problem may be answered.

What Criteria Should Be Considered?

What makes a proposal a good proposal? Many ingredients could be stated. One, however, stands out. The uniqueness of the proposal to provide for educational innovation. It is not

the intent here to be critical of what is taught now, but rather to point to the fact that generally industry-education partnership is seeking more from the school than what has previously been offered. Therefore, the program proposed must be unique by providing for tomorrow.

Uniqueness may well be keyed on a method of teaching, content relationship of industry-education or program articulation patterns.

For example, where are the institutes associated with simulation, gaiming, teaching machines, educational systems and other instructional media.

Is it absolutely necessary to remove stock on a lathe, or might a simulation lathe be designed to provide the same educational experience? Is student teaching experience absolutely necessary or might a prospective teacher present his lecture to a system which analyzes it for content, provides a play-back, and offers a student-teacher dialog. Such response could well be in terms of discipline and as well as content.

The seventies will be marked with progressive change. Today's unique proposals will lead the way for tomorrow's educational programs.

What Costs Are Involved?

To a great extent, costs are closely associated with the institution, the type of proposals, etc. Generally, costs may be divided into direct and indirect costs. Direct would normally be defined as salaries, stipends and material or equipment costs.

Indirect would typically include general institutional overhead costs. A proposal must be measured in terms of the school's participation.

The importance of cost should be stated in terms of a question? What is your university, school or department willing to support. As a typical expression, is your proposal willing to go "dutch", or is your hand extended all the way?

What Are The Staff Requirements?

The educational staff becomes most important. To write a proposal is by far the smallest part. To direct and supervise the on-going operational phase, to account for funding and seeking institutional arrangements require a staff willing to work. I recall well the morning the guest speaker was late, the company that cancelled the field trip because of their strike, and the business office which charged the wrong account and so on.

Summary

To attempt in a few minutes to cover all the details of a proposal is, of course, impossible. The industry-education proposal must, however, exemplify careful planning, uniqueness in educational advancement, financial willingness of the institution to participate, and a qualified staff willing to work. The final success of a proposal may be equated in many ways, but the worth must be measured in the final educational value to the participating student.

Dallas Convention

American Vocational Association

December 12, 1968

FELLOWSHIP PROGRAMS IN THE INDUSTRY-EDUCATION PARTNERSHIP

Participants:

Leslie H. Cochran, Wayne State University, Chairman
George J. Brown, Wisconsin State University-Platteville
G. Harold Silvius, Wayne State University
William D. Wolansky, Oregon State University
Jack Kirby, Wisconsin State University-Platteville
Orin L. Buchleiter, Albuquerque, N.M.-Public Schools

Topic #2:

"Conducting an Experienced Teacher Fellowship Program"

by

G. Harold Silvius

Because of the limited time that could be devoted to such an involved topic, my remarks will be delimited to three major considerations:

I. It is essential that the program be closely associated with one or more community school systems so that developed instructional material may be field tested.

A. The WSU Program is identified with the two job clusters of the Galaxy Plan of the the Detroit Public Schools for Career Preparation (See attached Tables 1, 2, and 3).

B. Teams of Fellows and Detroit teachers from four selected inner-city schools, with assistance from the Department heads in these schools, develop units of instruction to be field tested with the regular scheduled classes in these schools.

1. Selected students from classes where the instruction will be later presented, assist with the Micro-Teaching process employed in the development of this instruction.

2. The resource materials developed to support these instructional materials are then made available to all of the regular Detroit teachers in inner-city schools, as well as to the Fellows for use in their urban school systems.

C. With differentiated staffing, flexible modular scheduling, computerized program instruction loopfilms and other visuals, closed circuit television, and an information retrieval system, it is now possible to provide an individual student, a small group of learners, or a complete section of students with a needed exploratory or depth experience in some one subject area. Such methods and instructional aids are essential to a broad-based approach to occupational education, now so essential at the comprehensive high school level (illustrated by Figure 1, attached).

II. A concomitant of the program has been leadership development. This comes as the Fellows get involved in (1) the planning, the conducting, and the evaluating of the conferences scheduled as national leaders come to the campus; (2) helping other Fellows in need of remedial instruction; (3) assisting a professor with some aspects of instruction,where the competence and experience of a Fellow might well be employed and featured; (4) helping with the program and activities of the Industrial Education Guild (the departmental organization that provides social and professional activities for all of the active students in Industrial Education at WSU); (5) assisting with the internal evaluation of the on-going program; planning and making video tapes for the WSU informational retrieval program; and (6) preparing copy for the Guild News published by the Department and sent to life members of The Industrial Education Guild and selected national leaders in the field.

III. It is believed that the "En Bloc" experiences, suggested by the U.S. Office of Education, have been a major factor in the success of the WSU Program. This is illustrated with selected slides taken in the headquarters facility provided for the exclusive use of the Fellows at WSU.

TABLE 1 -- THE OCCUPATIONAL CLUSTER IN MATERIALS AND PROCESSES OF THE DETROIT GALAXY PLAN FOR CAREER PREPARATION

All Students (Exploratory) Grade 10	Science Engineering — Further Education Essential Grades 11-12, CO-OP		Technician — Further Education Recommended Grades 11-14, CO-OP		Pre-Trade Preparation — Further Education Valuable Grades 10-12, CO-OP		Occupational Prep. — Further Education Opt. Grades 10-11-12 CO-OP and Work Experience	
	Note: The job titles and DOT numbers are representative examples only							
MATERIALS AND PROCESSES — 1	Cybernetics	007.168 012.168 020.088	Machine Tool Layout Tape Control Tech. Automation Tech. Data Process Tech.	606.150 012.288 638.231 020.088	Machinist Tool-Die Maker Machine Repair Machine Tool Set-up	600.280 601.280 632.281 600.380	Machine Operator Press Operator Rigger Millwright	600.286 610.619 921.887 638.281
2	Metallurgy and Microanalysis	011.081 010.081 024.081	Fabrication Tech. Metallurgy Tech.	619.380 011.281	Pattern Maker Welder Sheet Metal Pipe Fitter	693.281 810.884 804.281 862.381	Assemblers Production Welder Metal Finisher Burner	806.781 813.885 705.884 816.782
3	Structures	005.081 007.081 019.081	Inspector Wood Products Tech. Concrete Technician	182.287 040.081 570.532	Lather Carpenter Model Maker Roofer Furniture Upholsterer	842.781 860.281 661.281 304.281 780.884	Millman Construction Laborer Carpenter's Helper	669.380 809.887 869.884
4	Landscape Architecture	001.081 018.168 040.081 059.086	Nurseryman Landscape Tech. Planner Park Foreman	406.168 168.168 199.168 407.134	Vegetable Grower Lawn-Shrubbery Landscape Gardener Nursery Man	403.181 406.887 407.181 406.168	Farm Hand Laborer, Nursery Garden Equipment Operator Flower Grower	421.883 406.884 409.883 406.181
5	Industrial Chemical Applications	022.081 006.081 010.081	Ceramics Foreman Plastics Foreman Prototype Foreman	775.131 556.130 754.137	Cement Worker Bricklayer Layout Man Plasterer	844.884 861.131 751.381 842.381	Chemical Process Operator Plastics Repairman Machine Operator (Plastics) Batch Still Oper.	559.380 754.884 559.782 552.782

TABLE 2 -- THE OCCUPATIONAL CLUSTER IN ENERGY AND PROPULSION OF THE DETROIT GALAXY PLAN FOR CAREER PREPARATION

All Students (Exploratory) Grade 10		Science Engineering — Further Education Essential Grades 11-12, CO-OP		Technician — Further Education Recommended Grades 11-14, CO-OP		Pre-Trade Preparation — Further Education Valuable Grades 10-12, CO-OP		Occupational Prep. — Further Education Opt. Grades 10-11-12 CO-OP and Work Experience	
		Note: The job titles and DOT numbers are representative examples only							
ENERGY AND PROPULSION	1	Ground and Water Systems Power Systems	014.081 015.197 187.198	Automotive Technician Automobile Service Technician Marine Technician	620.131 620.281 623.131	Locomotive Engineer Auto Mechanic Auto Body Repairman Outboard Engine Serviceman	910.383 620.131 807.381 625.281	Assembler Gas Station Operator Vehicle Driver Truck-Tractor Operator	806.887 915.867 913.873 892.883
	2	Aero-Space Systems	002.081 021.088 013.081 025.088	Pilot Flight Engineer Inspector Meteorology Tech.	196.168 621.281 722.381 025.088	Air Frame Mechanic Power Plant Mech. Air Traffic Controller	621.281 621.281 193.168	Assembler Plane Washer Counterman	806.381 919.887 289.358
	3	Instrumentation and Measurement	018.188	Instrument Technician Instrument Foreman	003.281 710.131	Office Machine Repairman Watch Repair Instrument Maker Instrument Repair	633.281 715.281 600.280 710.281	Helper Instrument Assembler Cleaner	710.884 706.884 919.887
	4	Energy Source System	012.081 007.081 015.081 023.081	Maintenance Mechanic Power Plant Tech. Stationary Engineering Tech. Service Supervisor	631.281 638.281 950.131 187.168	Stationary Engin. Appliance Repairman Refrigeration Mechanic Air Conditioning Serviceman	950.782 723.781 637.281 637.381	Oiler Firetender Rigger Furnace Repair.	699.887 951.885 921.280 869.281
	5	Electronic Systems	003.081 003.151 003.187	Electronic Tech. Electronic Systems Tech. T.V.-Radio Tech.	726.281 024.288 720.281	Electrician Industrial Elect. Electronic Repair. T.V. Repairman Radio Repairman	821.381 825.281 828.281 726.781 720.281	Meter Readers Solderer Frameman Assemblers	239.588 726.781 822.884 729.884

TABLE 3 -- THE DETROIT GALAXY PLAN FOR CAREER PREPARATION IN GRADES SEVEN THROUGH TWELVE (Tables 1 - 2 - 3 were reproduced from the 1968 Experimental Edition of the Detroit Plan for Career Preparation, distributed by the Department of World of Work Education--Vocational Education, Detroit Public Schools, 5057 Woodward, Detroit 48202 -- A request for a copy of this bulletin should be addressed to Carl H. Turnquist, Director of Vocational Education)

GRADE	CLUSTER 1 MATERIALS AND PROCESSES LABORATORY	CLUSTER 2 VISUAL COMMUNICATIONS LABORATORY	CLUSTER 3 ENERGY AND PROPULSION LABORATORY	CLUSTER 4 PERSONAL SERVICES LABORATORY
	JUNIOR HIGH SCHOOL			
7B	20 WEEKS ONE PERIOD			
7A			20 WEEKS ONE PERIOD	
8B		20 WEEKS ONE PERIOD		
8A				20 WEEKS ONE PERIOD
9B	10 WEEKS ONE PERIOD		10 WEEKS ONE PERIOD	
9A		10 WEEKS ONE PERIOD		10 WEEKS ONE PERIOD
	SENIOR HIGH SCHOOL STUDENT MAKES VALIDATED CHOICE OF TWO OF THE FOUR CLUSTERS			
10B	20 WEEKS, TWO PERIODS, 1ST CHOICE OF TWO CLUSTERS			
10A	20 WEEKS, TWO PERIODS, 2ND CHOICE OF TWO CLUSTERS			
11	DEPTH CAREER DEVELOPMENT IN ONE GALAXY LABORATORY 80 WEEKS			
12	PROGRAM		GOAL	
	ONE PERIOD/DAY		SCIENTIST, MANAGER, ENGINEER/FURTHER EDUCATION NECESSARY	
	TWO PERIOD/DAY		TECHNICIAN/FURTHER EDUCATION NECESSARY	
	THREE PERIOD/DAY		SKILLED TRADES, SERVICE, SALES/FURTHER EDUCATION VALUABLE	
	FOUR PERIOD/DAY		SINGLE OPERATION OPERATOR/WORK EXPERIENCE VALUABLE	

STUDENT DEVELOPMENT ~
Exploration ~ Depth Experiences

EXPLORATION →

A_1	B_1	C_1	D_1	E_1
A_2	B_2	C_2	D_2	E_2
A_3	B_3	C_3	D_3	E_3
A_4	B_4	C_4	D_4	E_4
A_5	B_5	C_5	D_5	E_5

DEPTH ↓

A, B, C, D and E represent the possible major units or activities within an industrial education subject area.

1, 2, 3, 4 and 5 represent depth study (through individualized or small-group instruction) in any one major unit or activity.

A_1	B_1	C_1	D_1	E_1

EXAMPLE ONE

A STUDENT WITH EXPLORATORY EXPERIENCES ONLY IN FIVE MAJOR ACTIVITIES

A_1	B_1	C_1	D_1	E_1
	B_2		D_2	

EXAMPLE TWO

A STUDENT WITH GENERAL EXPLORATORY EXPERIENCES IN FIVE MAJOR ACTIVITIES AND WITH SOME DEPTH IN TWO OF THEM

	B_1	C_1	D_1	
	B_2		D_2	
	B_3		D_3	

EXAMPLE THREE

A STUDENT WITH EXPLORATORY EXPERIENCES IN THREE MAJOR ACTIVITIES AND WITH CONSIDERABLE DEPTH IN TWO OF THEM

			D_1	
			D_2	
			D_3	
			D_4	
			D_5	

EXAMPLE FOUR

A STUDENT WITH DEPTH EXPERIENCES IN ONE MAJOR ACTIVITY (LIKE ELECTRONICS)

These illustrations show the possibilities for individual student development through either exploration or depth experiences in a multiple activity program.

Fig. 3 -- These illustrations show the possibilities for individual student development through either exploration or depth experiences in a multiple activity program.

rendered by M. Beauregard-Bezou
WESTERN HIGH SCHOOL
DETROIT

FELLOWSHIP PROGRAMS IN THE INDUSTRY - EDUCATION PARTNERSHIP

TOPIC:

Instructional Methods and Media for Implementing New Industrial Concepts

PRESENTED BY:

Jack Kirby, Head
Department of Industrial Education
Wisconsin State University-Platteville
Platteville, Wisconsin

December 12, 1968
Dallas, Texas

Program Chairman
Leslie H. Cochran

Fellowship programs, as I see it, have one prime objective--to better prepare teachers for their work in educating students. This is accomplished in two ways. First, the knowledge of the teacher is increased - knowledge of the subject area and knowledge of teaching techniques related to that subject area. Secondly, the teacher's ability to impart this knowledge is improved.

I would like to discuss with you briefly some points in connection with the second part - the teacher's ability to impart this knowledge. To aid in this aspect of a fellowship program, instructional materials become vitally important. In order to do an effective job of teaching, a teacher needs tools with which to work. Fellows in a fellowship program look for these tools as outcomes of the program. Let me comment on three main points in connection with instructional materials - (1) developing them, (2) trying them out, and (3) dissemination.

Since our programs deal with studying industry or some aspects of it, industry becomes a very valuable resource for developing instructional materials. Industry, at the present time, is most cooperative and in most cases, will make their facilities and/or personnel available for the development of these materials. My experience has shown that this relationship with industry is desirable in connection with getting a proposal approved as well as a desirable relationship insofar as the staff and participants are concerned.

What types of materials am I referring to? Let me briefly describe the materials that we have developed as a part of our fellowship programs at Platteville. First, there are many types of written materials which can help the participant as he works in the program or when he returns to his school to teach. These materials map out the content to be covered and/or describe methods of presenting the material to the students. Materials such as study guides, teaching plans, bibliographies, activity sheets, etc. fall into this category. While some of this needs to be done prior to the arrival of the participants, it is most desirable if they can get involved in the development of these materials.

Industry becomes involved in this insofar as the materials developed are a result of the study of industry or some aspect of it. In the program at Platteville, extensive visits to a wide variety of industries were made with the Fellows and the written materials were developed based on these visits supplemented by other study methods.

Along with the visits, we requested the opportunity to take colored slides. Initially, these slides were to help us develop the written materials by allowing us to throw a slide on the screen and help us recall that part of the industry. However, it appeared that these slides could also have instructional value at the secondary level; consequently, colored slide series were developed, with scripts, that could be used by the Fellows in the program. Industry was most cooperative here and personnel from the various industries edited the scripts so that they are technically correct. Colored slides bring industry into the schools and provide an instructional aid that has proven to be quite effective.

One final instructional media which I believe has tremendous possibilities is video tape. Video tape permits a realistic view of industry. In developing a video tape, industry most certainly must be a partner since considerable cooperation and help is needed. It is also necessary to have the necessary equipment for this as well as a technical crew to operate the equipment. Both are possible and video tape appears to be a desirable instructional media, both from the standpoint of value to the Fellows as well as a good feature for getting a proposal funded.

The utilization of these instructional materials also becomes an important part of a fellowship program. While not always possible, it is most desirable to utilize these in a real situation during the on-going stages of the program. This requires the co-operation of local schools in the area or a campus laboratory school. In our program at Platteville, we had an internship built into the program in which the Fellows actually taught for a period of time using the instructional materials that had been developed. This gave them a chance to try them out under the supervision of the program staff. If this is followed by a re-evaluation session by the Fellows prior to their return to their schools, then the materials should be ready to use when they return.

The dissemination of these materials may take on two forms. Written materials generally would be taken with the participants in the program as the program is completed. In some cases, slides may also be taken with the participants. However, generally slides,

video tapes, etc. would be retained by the school and made available on request by the participants or any others who may wish to use them.

Funds for the development of these materials might well be a concern at this point. Generally, the fellowship program will have support funds to provide the materials, technical support, and some equipment for this purpose. In addition, industry will also aid by providing resource people, slides, literature, and other support.

In summary, the development of instructional materials for a fellowship program is a most desirable outcome and will aid in the achievement of the goals of the program. The partnership of industry and education in this endeavor is both desirable and necessary.

The Changing Image of Work in Our Society[1]

The image of the world of work in America and the very image of work itself is radically different today than anything in any country at any time in history.

In this short presentation today, I do not propose to belabor you with a detailed characterization of the world of work because all of you have been deluged with discussions about the new developments in automation, science and technology. You are aware of the heavy increase in the number of female workers entering all fields. You have heard the estimates given far and wide that two-thirds of the next generation of workers will be occupied in jobs which do not exist today. You have come to know about many of the perfectly fantastic kinds of innovations which are upon the technological threshold just waiting for exploitation. Actually, you are witness and participant to many of these changes. You hold membership in an affluent society in which financial security and available work upsets the long-held view that hard work was firmly founded in an economy of scarcity. This development in turn upsets our former understanding of patterns of labor supply and demand.

But I haven't been asked to discuss the world of work, but rather, the changing image of work itself. This topic alone is a multi-faceted conglomerate of variable dimensions and aspects quite difficult to describe. There are simply so many different

[1]Presented by Howard F. Nelson, Professor and Chairman, Dept. of Industrial Education, University of Minnesota.

meanings associated with work.

Perhaps before I continue further and attempt to isolate changes in the image, it would be wise to provide a definition of work as a base for our discussion. Personally, I prefer Wrenn's[1] definition in which he tells us, "Work is activity calling for the expenditure of effort toward some definite achievement or outcome. Paid or not, hard or easy, it is always effort toward a specified end." I like this definition because it seems to be socially and religiously neutral in orientation.

Historically, of course, the meaning of work has derived from two main sources, one social and one religious. The social derivation of work as a worthwhile activity which possesses virtue for its own sake, is easy to comprehend. Work has always served man as the basis of his dignity as an individual. Even though he possessed little more than brain and muscle, he belonged to society because he performed services needed by it.

From the religious standpoint, the meaning of work is derived from a mixture of emphases. The Catholic view that work is essential, but subordinate to living for the next world, and the Protestant view that one must work hard in this world and get ahead because God condoned and even expected it, have become intermixed to constitute our presently held concept of work.

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1. Henry Borow, ed. Man In A World At Work. Boston, Mass.: Houghton Mifflin Company, 1964. p. 27.

While this may be an overly-simplified conception of the roots of our beliefs about work, there remain many dimensions worthy of exploration. Work is ubiquitous. In many respects, it constitutes the umbilical cord between man and society. It determines a person's way of life, especially as it applies to one who heads a household. There are the obvious, conscious, psychological justifications for work--self-preservation, if you will, the normal desire to have, support and raise a family, and the basic satisfaction derived from occupational relationships associated with a type of work. No doubt, this aspect would be of greatest interest to the economist who sees work as a means to an economic end.

But it may also intrigue the psychologist or psychiatrist when attitudes toward work become the focal point of examination. While its origin is unknown, all of us have read the statistic that between 60 and 80 per cent of all persons who have been dismissed from work have been dismissed not for lack of competence and technical skills, but rather for reasons which are largely attitudinal in nature. These are persons who have never really learned to work as we presently define that activity.

At the same time, work affords a psychological outlet for a person's energies whether they be hostile or aggressive. Work is always directed toward something as Wrenn has stated--always toward an end. And in many cases, the person involved may only strive to satisfy a need for approval--perhaps of his

supervisor, fellow workers, or some other assumed important individual.

For people who have somehow failed to learn the basic lessons concerning how to get and hold a job, and how to get along with colleagues--persons who wander aimless paths from job to job and who flail about in all directions seeking their solution--these are another population who are handicapped as surely as those who lack the basic competencies of work.

Although I alluded to this earlier, Miller[2] has raised another interesting contradiction between work and leisure which originates with, but is not relevant to the present affluent circumstances in which we live today. He tells us:

> We believe that man's purpose in life is to demonstrate his worth through work. Man should save and build for himself, his family, and his future. But we are told that we should live well and accept the promise of ever greater leisure and prosperity. Work occupies fewer hours and years in the life of most people. What work there is grows less like work every year. The virtues of hard work and profit are rooted in scarcity. They have no relevance in an affluent society.

The time allowed for this presentation will not permit further pursuit into additional varieties of worker dislocation and difficulty, but perhaps it will provide a sufficient overview for the moment so that we may focus on some specific implications of the main topic.

For my assignment today, one of the most significant contributions to the literature has been Seymour L. Wolfbein's[3]

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2. Ibid., p. 101

3. Ibid., Chapter VII, pp. 155-168.

discussion of, "Labor Trends, Manpower and Automation", in which he provides an assessment of changes and how these have affected the present scene and are bound to affect the future. I have leaned heavily on this Chapter Seven for my talk and have even adopted his discussion titles and charts.

Wolfbein analyzed seven major faces of change which he dealt with under the following questions: (1) What part of a person's life is spent in work? (2) Who works in the United States of America? (3) What do they produce in their work? (4) What kinds of jobs do they perform? (5) Where do they work? (6) How efficiently do they work? and (7) What kinds of preparation and background do they bring to work?

1. The Changing Length of Working Life

Perhaps there is no index of greater significance to a nation's social and economic welfare than an analysis and charting of the years of expected working life. From such an analysis, one can determine the duration of that portion of a person's life-span which is devoted to work. In addition, one can learn at what age the new worker enters the labor market, the time spent in education and training, and the time of exit from formal work.

Table 1

LIFE EXPECTANCY AND WORKING LIFE AT BIRTH IN THE UNITED STATES, 1900–1955

Year	Men			Women		
	Life Expectancy	*Work Life Expectancy*	*Years Outside Labor Force*	*Life Expectancy*	*Work Life Expectancy*	*Years Outside Labor Force*
1900	48.2	32.1	16.1	50.7	6.3	44.4
1940	61.2	38.3	22.9	65.9	12.1	53.8
1950	65.5	41.9	23.6	71.0	15.2	55.8
1955	66.5	42.0	24.5	72.9	18.2	54.7

Table 1 summarizes this kind of information for us. By reference to it, a baby boy born at the turn of the century would be expected to live twenty years less than one born today. Girls gain another two years. Since these data are based on averages, one of every eight men may expect to reach eighty-five years and one in four women are reaching that age now. The major change here is in the duration of life and the accompanying changes in outside-the-work activities which includes education and training at the beginning of the life-span and the increased period of retirement at the end of work.

The average young man of twenty today can expect at least fifty more years of life with about forty-three in work and seven in retirement. Fifty years ago, there was little difference in years between the work-span and the life-span. Yet a young person today will work many more years because of the increased life-span. Since 1900, ten years of working life have been added for men and twelve for women. One can multiply these gains by the number of young people entering the labor market per year and get an estimate of the total gain to the work force.

What may we draw from these kinds of data? Certainly the enormously increased work-life-time, greater amounts of time for education, leisure and recreation represent the major elements.

2. The Changing Composition of the Work Force

Table 2 summarizes pertinent data to show a decreased

amount of participation in work by men at the beginning of the work-span and at the end, a circumstance which is then counterbalanced by the sharply increased number of women in the work force.

Table 2

LABOR MARKET PARTICIPATION RATES BY AGE AND SEX, 1900, 1950, 1960
(per cent)

Age	Both Sexes			Male			Female		
	1900	1950	1960	1900	1950	1960	1900	1950	1960
All ages	53.7	54.0	55.3	85.7	79.4	77.4	20.0	29.3	34.5
14–19	44.4	31.6	26.9	62.1	39.9	32.0	26.8	23.0	21.8
20–24	60.8	62.6	61.9	90.6	82.5	83.2	31.7	43.6	44.3
25–34	58.3	61.7	64.5	94.9	92.5	94.9	19.4	32.0	35.4
35–44	57.1	64.8	68.5	94.5	95.2	95.5	15.0	35.2	42.7
45–54	56.0	62.7	68.5	92.8	92.5	92.7	14.2	33.1	46.3
55–64	50.5	53.7	59.2	86.2	83.9	85.1	12.6	23.6	34.3
65 and over	36.0	23.8	19.0	63.1	41.5	29.7	8.3	7.9	10.1

Thus, the proportion of persons of labor force age who are engaged in the labor force has changed very little. You will observe that in 1900, 53.7 per cent of all persons 14 years of age and older were working; in 1950, the figure stood at 54 per cent, and in 1960, it amounted to 55.3 per cent--virtually no change. While there has been little external change, the internal change has been revolutionary.

One of the most dramatic changes shown in Table 2 is the reduction in numbers of teen-age boys employed in the work force. In 1900, two of every three were workers; today, only one-third are so engaged, and there appears to be no abatement in the trend.

As a counterbalance to this trend has been the marked

increase in female workers in every age bracket except among the teen-agers. One should note especially, the rise in employment of women, thirty-five years of age and older, and the heavy increase in numbers of women from the 45 to 54 age group. On the average, a present day American high school girl can expect to devote twenty-five years of her life to work after taking time out for marriage, child bearing and similar diversions.

3. The Changing Industrial Structure

If one were to pin-point one factor as perhaps the most important change in the industrial structure, it would have to be the flow of people from the rural, farming areas into the urban centers with their manufacturing service producing activities. As recently as 1940, one-fifth of our workers held farm jobs while today, that proportion has been sliced in half.

If a second characteristic change in industry were to be isolated, it would have to be the markedly increased productivity per worker. As of about 1950, we became the first major nation in the world to employ more persons in the service-producing industries than in the goods-producing part, and the trend seems to be continuing.

Table 3

WAGE AND SALARY EMPLOYMENT BY INDUSTRY IN THE UNITED STATES, 1960
(thousands)

Goods-Producing Industries		*Service Producing Industries*	
Agriculture*	5,723	Transportation and public utilities	3,923
Construction	2,882	Trade	11,365
Mining	709	Finance, insurance	2,748
Manufacturing	16,762	Service	7,514
		Government	8,831
Total	26,076	Total	34,381

* Includes self-employed and unpaid family workers.

Table 3 presents this kind of dramatic evidence; the left-hand division shows the number of workers deployed in the goods-producing activity while the right-hand block records the service-producing group. Persons who are self-employed are not tallied here, and since most of them are in the service industries, the actual difference in numbers would be more startling than Table 3 now shows.

What does all this mean? For one thing, it tells us that our capability for producing is so refined that we alone as a nation, can afford to have this kind of worker distribution.

4. The Changing Occupational Standings

As we have discussed the three previous elements of change, one may not assume that each one is a separate entity in itself because the impingements of each element, within and between can be subtle as well as massive. In any event, when the three previous sets of factors are poured together, the picture depicted in Table 4 emerges.

Table 4

OCCUPATIONAL DISTRIBUTION OF EMPLOYED PERSONS
(in per cent)

	1910	1950	1960	1970*
White-collar	22	37	43	45
Professional, technical	5	9	11	13
Proprietary, managerial	7	9	11	11
Clerical, sales	10	19	21	21
Blue-collar	37	41	36	36
Skilled	12	14	13	13
Semiskilled	14	21	18	18
Unskilled	11	6	5	5
Service	10	10	13	13
Farm	31	12	8	6
All workers	100	100	100	100

* Estimated figures for 1970 based on projections.

Because of developments, it is inevitable that we would find more people in the white-collar occupations than in the blue-collar jobs. Part of this occurs because of the enormous reduction in the unskilled job categories and the escalation of education and training necessary for employment in almost every work classification.

In conjunction with this situation, one is reminded of the statement quoted in the April, 1965 issue of Phi Delta Kappan to the effect that, "The machine now has a high school education in the sense that it can do most jobs that a high school graduate can do, so machines will get the jobs because they work for less than a living wage. A person needs fourteen years of education to compete with machines." Willard Wirtz who made the statement, suggests that any high school senior who has doubts about whether to seek a higher education faces this rather unflattering proposition.

Table 4 gives us several major lessons which need identifying. The skill level of the entire work force is increasing and will continue; more education and training must be provided if the present increase in productivity per worker is to keep pace with the need for greater production of goods and services.

5. The Changing Georgraphy of American Industry

One of the most interesting and significant changes in work relates to the geographic dispersion of industry throughout the country. Since 1947 and up to the present, the

non-agricultural installations have made dramatic moves toward some areas and away from others.

Table 5

NON-AGRICULTURAL EMPLOYMENT IN THE UNITED STATES, 1947 AND 1960

Geographic Division	Number (thousands) 1947	Number (thousands) 1960	Per Cent Change 1947–60
Continental U.S.	43,329.2	53,708.6	24.0
New England	3,331.4	3,707.3	11.3
Maine	262.8	277.5	5.6
New Hampshire	166.7	197.6	18.5
Vermont	99.0	107.0	8.1
Massachusetts	1,731.1	1,916.7	10.7
Rhode Island	298.0	291.7	−2.1
Connecticut	773.8	916.8	18.5
Middle Atlantic	10,813.2	11,901.5	10.1
New York	5,557.7	6,170.8	11.0
New Jersey	1,621.6	2,011.6	24.1
Pennsylvania	3,633.9	3,719.1	2.3
East North Central	10,005.9	11,522.2	15.2
Ohio	2,666.7	3,147.2	18.0
Indiana	1,194.2	1,431.4	19.9
Illinois	3,145.4	3,417.4	8.6
Michigan	2,013.7	2,334.3	15.9
Wisconsin	985.9	1,191.9	20.9
West North Central	3,404.4	4,194.5	23.2
Minnesota	765.8	959.8	25.3
Iowa	576.7	678.8	17.7
Missouri	1,126.8	1,347.9	19.6
North Dakota	97.4	126.3	29.7
South Dakota	109.5	141.5	29.2
Nebraska	301.4	381.2	26.5
Kansas	426.8	559.0	31.0
South Atlantic	5,261.2	7,216.0	37.2
Delaware	110.5	153.8	39.2
Maryland	673.3	896.4	33.1
District of Columbia	476.6	535.7	12.4
Virginia	772.1	1,017.6	31.8
West Virginia	512.3	459.9	−10.2
North Carolina	879.6	1,195.5	35.9
South Carolina	436.0	582.5	33.6
Georgia	759.4	1,051.1	38.4
Florida	641.4	1,323.7	106.4
East South Central	2,123.3	2,751.4	29.6
Kentucky	521.2	653.6	25.4
Tennessee	700.5	918.0	31.0
Alabama	610.4	776.4	27.2
Mississippi	291.2	403.4	38.5
West South Central	3,049.8	4,270.4	40.0
Arkansas	286.1	367.3	28.4
Louisiana	592.4	789.8	33.3
Oklahoma	437.3	581.6	33.0
Texas	1,734.0	2,531.7	46.0
Mountain	1,169.5	1,871.9	60.1
Montana	138.2	166.7	20.6
Idaho	122.6	155.2	26.6
Wyoming	73.2	97.3	32.9
Colorado	335.0	514.4	53.6
New Mexico	122.7	236.3	92.6
Arizona	145.7	333.8	129.1
Utah	178.5	264.8	48.3
Nevada	53.6	103.4	92.9
Pacific	4,170.5	6,216.8	49.1
Alaska			
Washington	670.9	812.6	21.1
Oregon	419.6	509.2	21.4
California	3,080.0	4,895.0	58.9

The per cent of changes of this type are well illustrated in Table 5 in which States like Arizona, Florida, New Mexico, and California exhibit startling growths in employment, while States like West Virginia, Rhode Island have lost ground, and Pennsylvania, Maine, Illinois, and others have been virtually static so far as employment is concerned.

By simple calculations from this table, it will be observed that one out of every six jobs in this country is found in California, Texas, and Florida. Of course, these data obscure growth of another nature. For example, New York, which

now has the lion's share of employment in non-agricultural occupations, shows little growth. Table 5 fails to show the increase in financial institution employment, and in the case of Connecticut, the employment in insurance related occupations.

What do these data suggest? The principal lesson seems to be that the population moves to where industry locates, and secondly, industry often builds where there are skilled or trainable people to man the plants. All of this adds up to a fine illustration of the internal mobility of Americans.

6. The Changing Productivity of the American Worker

When one studies the production achievement of people, world wide or in America, there are two typical ways in which to increase worker production. One involves an increase in the proportion of people deployed to the production of products and the second involves lengthening the work day and week to get more production out.

Neither of these techniques has been used here. What has happened is that we have tripled our production per capita of employed persons and have not increased the proportion of population engaged in production. And in almost all cases, the hours per week involving work have been reduced, whereas the rate of production per person has been improved.

Table 6

INDEXES OF OUTPUT PER MAN-HOUR, 1947–61
(1947–49 = 100)

Year	Total Economy	Agriculture	Non-Agriculture	Manufacturing	Non-Manufacturing
1947	96.7	90.5	97.5	97.5	97.2
1948	100.2	107.1	99.4	100.2	98.9
1949	103.1	102.2	103.2	102.5	103.8
1950	110.4	116.2	108.7	109.2	108.4
1951	113.1	114.5	110.5	111.2	109.9
1952	115.6	124.5	111.9	112.8	111.3
1953	120.2	138.6	114.9	118.1	112.7
1954	122.3	148.3	116.7	117.1	116.5
1955	127.6	153.5	121.6	125.3	119.7
1956	127.9	156.4	121.1	126.5	118.4
1957	132.4	166.7	124.7	126.8	123.7
1958	135.5	181.6	126.8	129.1	126.3
1959	140.3	181.1	131.4	138.7	128.1
1960	143.3	191.3	133.7	141.9	130.2
1961	148.2	205.6	137.6	146.5	137.6

This kind of development has been due for the most part to the mechanization revolution in which man and animal work has been largely eliminated by mechanical developments.

If one uses an index of 100 as a per man hour bench mark for production as of 1947-1949, and chart this kind of change through 1961, one can begin to understand the impact of this trend on productivity. From Table 6, one can readily see that agriculture has made the main increase in out-put and the smallest growth occurred in the non-manufacturing industries.

7. The Changing Educational and Training Prerequisites for Employment

When a country has a working population in which one in ten workers is unskilled and one in twenty is a professional person, and in a short period of time, this picture is flipped over where one in ten is a professional person and one in twenty is unskilled--this kind of educational change becomes

starkly delineated.

Not only have the educational requisites been rising in all fields where post high school preparation is necessary, but the occupational structure has also been exploding upward as well. The advent of automation and technological development can do only one thing in this situation, it must accelerate the need for better and more extensive preparation of people.

Table 7

AVERAGE YEARS OF SCHOOL COMPLETED AND EXPECTED PERCENTAGE CHANGE IN EMPLOYMENT BY MAJOR OCCUPATIONAL GROUPS

Occupational Groups	Average Years of School Completed (1959)	Expected Percentage Change in Employment (1960-70)
Professional and technical	16.2	40
Proprietors and managers	12.4	22
Clerical and sales	12.5	28
Skilled	11.0	22
Semiskilled	9.9	18
Service	9.7	26
Unskilled	8.6	0
Farmers and farm workers	8.6	−18

If one were to attempt to assess the impact of automation, another whole session like the present would be necessary. Fortunately, almost everyone in this audience knows a good deal about sensing devices, control mechanisms, feedback, computers, numerical control of machine tools and programmed assembly so that we needn't deal with them here.

For the most part, these automated mechanisms and devices have been applied thus far in the manufacturing industries and to a much lesser extent in all other areas. When these

developments do take place, then the educational and training requirements of workers must leap ahead again, even further than we have come in the last decade.

These are the major changes in the image of work in America, and for the data with which to make this presentation, a sincere expression of gratitude for the previous work of Seymour Wolfbein.

AMERICAN VOCATIONAL ASSOCIATION

Dallas, Texas

December 8 - 13, 1968

"SAFETY: IN SCHOOL AND ON THE JOB"

Prepared by: Mr. Herbert Siegel, Director

Thursday, December 12, 1968

2:00 - 3:30 p.m.

SAFETY EDUCATION

An important objective of industrial arts education is to provide for the development of safety habits in the school, home and community through the application and correct use of safe procedures in all shop activities.

School shop safety has always been an integral part of the shop instructional program. The inherent hazards of shop work with its machines, tools and materials requires that a considerable amount of attention be devoted to safety and accident prevention. The kind and amount of safety education is greatly dependent upon the attitudes, initiative, background and skill of the individual teachers. We as supervisors and directors should always be cognizant of this by stressing correct teacher attitudes. Instruction in the safe operation of machines and in the prudent use of tools and materials are a necessary part of all instruction given in the shop (laboratory). Verbal and written instruction should accompany each new process and operation as it is presented to the student and the teacher should be satisfied that the information is understood and will be utilized by them. Practically all examinations should contain questions on the proper use of tools and equipment.

Safety instruction given during the first days of the term should be designed to establish general safety practices in the shop. It should not be considered as the complete safety program for the term but rather as a brief introductory device for establishing learning and working conditions.

Suggested rules should be adapted to the specific shop situation, should be carefully explained, demonstrated, and if necessary dramatized, so that the reasons for them will be thoroughly understood by the students.

Emphasis should be given to the importance of relating safety instruction to the daily life of the student both in and out of school.

The ideal program includes not only safe environment and enforcement of official safety regulations, but also thorough instruction to the student, so that he will acquire the attitudes, knowledge, skills, and resultant safe behavior pattern to enable him to work safely, thereby avoiding accidents.

This publication "The School Shop Safety Manual" published by the Board of Education, City of New York, is a curriculum bulletin developed by teachers, supervisors and directors of our school system. It includes the

safety rules and approved safety practices pertinent to our schools. The regulations which are an integral part of this manual must be followed in all our schools. All teachers and other school personnel in charge of shop activities are responsible for the faithful and continuous observance of these regulations. These regulations have been promulgated as a result of continuous studies of the causes of school shop accidents. They are intended to reduce shop accidents through intelligent compliance. We also use a safety reporting system that alerts the principal and the Director of the subject area as to unsafe conditions that exist and a record of follow up procedures taken to remedy the situation.

IN CONCLUSION

Schools in general and school shops in particular have become increasingly more safety conscious. Learning safe work habits is imperative for safe living. The most effective safety education is that which is an integral part of the curriculum. Students learn best doing processes and operations correctly. Practice makes for perfection provided it is correct practice. Broad and successful learning experiences directed by competent instructors will produce safety conscious citizens.

School shops vary in layout and equipment. The student body also includes many variables. Therefore, safety education cannot be prescribed as uniform practices applying to every school and student situation. It is the purpose of the program to provide broad application with the understanding that specifics be developed to fit each situation and student.

"Custom-made" programs must be constantly revised to keep abreast of latest developments. Nothing but the best is good enough; nothing but the best will serve the purpose of developing in students those habits of safe practices upon which their health, happiness and usefulness will often depend. In terms of human suffering

one accident prevented repays the time and effort expended on safety programs.

Is Your Safety Program Up-To-Date?

VT 008 208
Jeremias, Hermine, And Others
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This document contains one speech and the outline of two other speeches that were presented in business and office education general meetings at the annual American Vocational Association convention in 1968. Hermine Jeremias spoke on "Business Education Research in the Philadelphia Public Schools," a speech directed at ways in which research can assist in the elimination of trouble spots in business education. Garth A. Hanson described the use of simulation in conducting simulated office programs in Utah. Outlines titled, (1) Four Reasons for Having a Cooperative Program, (2) Five Phases of Selecting and Developing Training Stations, (3) Where to Go to Look for Training Stations, (4) Developing the Training Station, and (5) A Summary of What Does It All Accomplish? are included from a speech by Maxine Emery. (MM)

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Speeches Presented At The

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Business and Office Education General Meetings

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BUSINESS EDUCATION

RESEARCH IN THE

PHILADELPHIA PUBLIC SCHOOLS*

Hermine Jeremias, Research Associate
Department of Instructional Research and Development

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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THE SCHOOL DISTRICT OF PHILADELPHIA
Office of Research and Evaluation

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*Address given at the American Vocational Association Convention
Dallas, Texas
December 12, 1968

I believe my charge today was to discuss the ways in which research can assist in the elimination of trouble spots in business education. Let me first take a moment to discuss the challenge of today's world to education generally and let us take a moment or two to remind ourselves of the place of business education, indeed all vocational education, in our schools.

The United States, the most affluent nation in the world, suffers from social unrest which is due in large measure to the steady decrease in the availability of jobs for the unskilled, and a simultaneous increase in the number of young people who are totally unprepared to meet the demands of skilled employment in our technological age. Philadelphia, in particular, while experiencing continued expansion and growth has, at the same time, been subject to persistent unemployment, especially among the city's youth. While young people, ages 14 to 24, comprise 18 per cent of the labor force, they account for 40 per cent of the total unemployed in the Philadelphia area.

Especially in times of crises, it is the schools in which solutions to these problems are sought. It has long been recognized that the skills, knowledge, and attitudes which are developed in many business education courses influence vocational success. Therefore, business education has both a responsibility and an opportunity; it seeks to provide students with salable knowledge and skills and assists in the transition from school to the world of work.

Because well-conceived programs can meet the vocational needs for nearly 70 per cent of our high school students, they are critically important curricula in secondary education, and, as such, merit periodic examination and evaluation. Obviously, in this context, business education as a part of the entire gamut of vocational education programs must meet the same criteria for examination. Additionally, pre-vocational exploration programs designed to foster healthy career development patterns at the elementary level also warrant serious consideration.

However, before changes in curricula, instructional practices and procedures can occur, an objective appraisal of existing conditions and practices--both strengths and weaknesses--must be made.

Generally, one might say that the identification of problems would be an important first step. I disagree. I believe we not only must think more positively about the role of the school, and the role of research in the service function to the schools, but we must first look at the forest and not the trees. Therefore, I believe that a thorough examination of the short and long-range objectives of business education curricula in the schools is an imperative ongoing process for business educators. To assist these curriculum developers define these objectives in behavioral terms becomes one of the major responsibilities for personnel in research. To this end, members of the Divisions of Vocational Education and Research meet periodically to define these objectives and determine priorities for research projects in the broad area of business education and to assist in defining individual project objectives.

I said previously, objectives must be defined before meaningful curriculum decisions can be made and problems can be defined. Consequently, the Research Division took as its first responsibility a broad examination of what vocational in general and business education specifically is expected to provide for its graduates. What are the goals of business education? To determine the objectives to which the Division should direct their immediate attention, a follow-up study was conducted of the 1966 graduates. The choice of this population for study was undertaken for several reasons. The Division of Research as it is currently functioning is a young organization. One year after graduation appeared to provide sufficient time to permit most students to have obtained employment and remain on the job long enough to describe their employment experiences. Employers too would be in a similar situation.

At this point, let me make an important distinction. Such evaluations of vocational business programs mean just that. While such programs as personal use typewriting and consumer education are admittedly valuable and have a distinct place in our high school curricula, it is not to these programs that our criteria for examination were based. Rather, students enrolled in traditional vocational programs which are designed to prepare students for the world of work were the focus of our study. Instead of the frequently-used mail questionnaire with its resultant problems, personal interviews were conducted with a random sample of graduates from all business curricula.

In addition to employment status, additional information was collected concerning gaps in training. Of interest to curriculum decision makers were the results of our statistical placement reports. While all business education programs accounted for 35% of the graduates, about 60% of all vocational graduates were engaged in some type of clerical activity as defined by the U. S. Census. Consequently, curriculum decision makers have sufficient data with which to make the types of school related activities relevant to the world of work. Additional information which was obtained from the follow-up study concerns the types of equipment utilized on the job. When it was discovered that many graduates found, from their employment experiences, that outdated equipment was one area in which the schools were found wanting, steps could then be taken to correct these errors. It should be added here that while purchase of new equipment might seem to provide a logical answer to combat this problem, other steps are being taken which, in the long run, may provide better assistance to combat this and other problems.

Philadelphia has long led the way in providing a comprehensive school work program to assist students make the transition from school to work. Not only do they have the opportunity to train on new and specialized equipment which the school is not always able to provide, but the variety of tasks which the students perform can assist in the development of a wide variety of work related skills for the

growing numbers of students to whom the world of work is an unfamiliar place. Such work programs can help narrow the gap between the skills required by industry and the ability of the school to provide realistic training, not only in basic skills required for all jobs in the area of business, but the immediate entry skills necessary for satisfactory job performance.

With this descriptive information as a basis for determining individual program objectives in specific terms, additional studies of a descriptive nature were undertaken in specialized curriculum areas. In addition to research of a descriptive nature, experimental research is also being conducted. The studies which have been developed answer basic questions and issues raised by current instructional practices or develop out of basic educational needs as evidenced by recent questions raised in the literature. They provide critical information needed by curriculum experts to make decisions concerning the use or inclusion of new and innovative methods. These studies are extensive and require strict research procedures and methodologies.

Among our major efforts in this area was a study, the major purpose of which was to compare two methods of teaching advanced shorthand with the ability to transcribe shorthand notes. May I say here that we believed this study to be imperative because of the basic nature of shorthand as a skill in office occupations. Since our study met the criteria of a true experimental design, and our results were so significant, I should like to take a few moments to describe it to you.

Since 1963, the Philadelphia School District has been installing laboratories for use in advanced shorthand classes in selected high schools throughout the city. These labs have been designed to accomodate programmed tapes of materials, both from original sources as well as from standard texts which are used in schools where both the lab and traditional methods are used. While the intrinsic values of laboratory techniques are evident, research was necessary to determine differences in achievement between the laboratory and traditional methods of instruction. By

accident, it was found that these labs had been installed in about half of the high schools in the city. As a further check, however, we compared the intelligence of the students using the labs with those who didn't, in order to be certain that our results were due to the type of instruction given and not to higher ability of one group over the other. From the results of this study it was found that the students who learned advanced shorthand by the laboratory method achieved significantly higher scores than did those students who were taught by the traditional method. Thus, it can be seen that the application of a technique long used in the teaching of foreign languages has excellent promise in the area of business education.

Another project which we are just beginning to get involved in deals with a comparison of techniques for the instruction of bookkeeping. Although it must be considered only a pilot project, this effort has two interesting aspects. First, the comparison involves a traditional versus a simulated method of supplying source document information. In the traditional approach, this information is contained in text book narratives. Whatever realistic aspects are present in this method are due to either textbook figures showing examples of business forms or problem sets included as culminatihg exercises. In the simulated source document method, a wide variety of sample forms are used to provide information for bookkeeping students. This information is entered into the customary journals. It is anticipated that students receiving the more realistic bookkeeping instruction will not only have a better understanding of bookkeeping principles but will be able to put these principles into a wider range of practical situations.

The second interesting aspect of this project involves the method of evaluation. Two examinations will be given to both the traditionally taught and specially taught groups of classes. Both of these examinations will cover the required material but one will test in the conventional manner while the other will use the source document technique to present material. Each test will test for

competencies in two areas: computational accuracy and journal entry placement accuracy. In this way both groups of classes have an opportunity to show what they learned under their method of instruction.

Since more than one dependent variable is being used in this evaluation, two courses of action are available. First, separate t tests may be used for each dependent measure. However, this has problems. Statistically speaking, the probability distributions of several dependent measures are not independent (i.e. they are correlated), and the error components of each tend to confound any inferences we may make. In the second technique, multivariate analysis of variance, correlations of measures are taken into account and we can make inferential statements concerning the joint probability distribution of our variates. Consequently, we will use multivariate statistical approaches in the examination of our data.

Last, I should like to take a few moments to discuss some plans for the future. As industry changes its requirements, as new jobs are being created, the schools if they are to progress must add courses, change long range objectives, modify short term objectives and generally, remain current. Within a short period of time, our Division will begin to expand its function to include an ongoing Research Development function. Instead of the current one-shot or single limited time research projects so necessary as a beginning step, its role and responsibility will be expanded to include longitudinal studies involving curriculum development, alternative ways of testing curriculum objectives, revisions and retesting functions. In a world changing so constantly, this is the only type of research which does not date itself. Another factor also which must be mentioned is the role research must play in helping business education help itself. Not only must we assist in defining objectives in behavioral terms to see perhaps more clearly where business education is going, but we must also help develop the tools which are necessary to evaluate the programs.

Research is costly, and efforts must be spent where the need is greatest. Because manpower and money is scare, priorities must be set but this does not mean nor should it imply a neglect of the less pressing concerns. Research personnel can and should play an educative role in helping business supervisors, particularly those who work with the grass roots level, develop competencies which they can apply on perhaps a limited basis. If you think I believe the researcher has some magic formula up his sleeve which he can dispense like some pill, I don't. I am firmly convinced, however, that the researcher and curriculum specialist can learn a great deal from each other. Like a good marriage each has a contribution which will not only ease the burden of the other, but can, working together, achieve a much greater degree of success than would have been possible working apart.

THEME: Its a changing world. . . . . In business Education

TOPIC: A new pattern is developing for in-school programs.

SPEAKER: Garth A. Hanson, Assistant Professor, Business Education, Logan, U tah
Utah State University

Simulation began in Utah in 1965 when lo teachers met together in a one week workshop at Utah State University. Their purpose was to develop a guide for teachers in Utah to use in conducting simulated office programs. The need for simulation arose due to 2 basic reasons.

1. There were 25 so-called Co-operative office education programs in the state. Only 5 or 6 of these were close to the correct concept. Many of the programs were conducted in areas not really suitable for the Co-op program.
2. Teachers were rebelling against pressures from state specialists to establish co-op programs. They either:
    1. Did not want to leave the classroom for the co-op program.
    2. Did not want to spend the extra time co-ordinating the co-op program
    3. Felt they did not have a large enough community to support the program.

In an effort to correct some of these problems, simulation became a method of teaching in Utah. After the 1965 workshop, only one teacher really got a simulation off the ground. This teacher taught a conventional office practice program during the first three-quarters of the school year during which time she prepared letters, invoices and other office input material. Then, during the last quarter of the year, she re-arrange the room and conducted the simulation.

The next three years were spent in finding better ways of conducting simulations. Finally, the Mobile Office Education (MOE) laboratory was established to servefour

rural high schools in the state. During the summer this unit was used to teach the children of migrant farm workers in a local farm worker camp.

On the strength of these experiences, Utah State University at Logan, U tah submitted a proposal to the U. S. Office of Education entitled "Practicum for Simulated Methods in Office Ocuppations Education. The proposal was funded and 36 participants and 3 observers were brought to Logan during July, 1968 to learn more about Simulation. The Practicum Participants were introduced to three applications of Simulation

1. Mobile Office Education - MOE had two basic objectives. One was to test the use of a mobile laboratory in its different applications. The second was to test Simulation as amethod of teaching. The participants were given the opportunity to work in MOE and see how it functioned.
2. R ich Man's offic e - An office was constructed in the Practicum facility to show how a simulation would be set up if money was no major problem. The set-up included a telephone system, office style furniture, and the latest of office equipment.
3. Poor Man's Office - Simulation is not completely dependent upon equipment and it can be carried on in an office education classroom equipped only with typewriters and tables. In this case however, a telephone system needs to be added as quickly as possible.

Procedures of Simulation were discussed at length and the participants went to work developing their own simulations. The Practicum was a huge success and the ramifications have been felt country-wide.

FOUR REASONS FOR HAVING A COOPERATIVE PROGRAM

by Maxine Emery[1]

1. To secure a better opportunity or related experiences for your students

2. To secure a close curriculum training tie-in

3. To get better production out of our students

4. To establish a system to discover "hidden talents" that exist in our students

[1] Consultant, Vocational Office Education, Texas Education Agency, Corpus Christi, Texas.

FIVE PHASES OF SELECTING AND DEVELOPING TRAINING STATIONS

I - Designation

Inform: - Administration and Faculty
Management
Students
Civic Groups

II - Class Organization

Do: - Enroll
Teach-Train
Correlation of Materials with Jobs

III - Job Training

The Program
How to Supervise
How to Train
How to Correlate Job Training with Classroom Learnings

IV - Coordination

Visitation
Coordinating Employer's Suggestions with Classroom Instruction

V - Individual Visits

Visits
Application
Handling
Problems

The teacher-coordinator should have knowledge of the type of skills her students may offer employers and then try to match the training station with the student's specific skills and career objectives.

The selection of training stations are carefully selected by the following objectives:

1. Type of training the student will receive
2. Meeting moral and ethical qualifications
3. Pay
4. Hours
5. Mutual understanding and agreements among the employer, the school, the teacher and the prospective student-learner

The training station must serve primarily as a training medium - rather than merely as an opportunity for remunerative employment for the student or for an employer to obtain part-time help.

The experience should be towards the development of knowledge, skills and attitudes needed for the occupation for which the individual's training program is designed and which fits his career objectives.

WHERE TO GO TO LOOK FOR TRAINING STATIONS? ?

1. Personal contact with prospective employers
2. Telephone (although personal contact seems to be more worthwhile)
3. News media
4. Civic clubs
5. Other faculty members and administration
6. Other vocational teacher-coordinators
7. Contact former employers

There are several places of employment that cannot be considered an applicable training station because of the environment being dangerous to the students' health or morals. Many places also demand that a student be at least eighteen years of age.

The selection of training stations should be carefully selected by the following guideposts:

1. Is the job commensurate with the students ability and career objectives?

2. The nature of the work and the type of training the student will receive.

   . Activities, duties and responsibilities?

   . Occupational intent matched with job?

3. Mental Requirements

   . Verbal comprehension

   . Reasoning

   . Numbers ability

4. Personality Requirement

   Will the job require the student to be:

   . Sociable

   . Energetic

   . Persuasive

   . Careful about details

   . Persistent

5. Educational and Training Requirements

   . Skills necessary

   . Level of training necessary

   . In-service training on job? What type?

   . Length of training on job?

   . Salary?

6. Entrance into the job

   . Any formal examination required?

   . Who conducts the examination

   . Are there costs entailed in taking the examination

7. Possible restrictions

   . Age

   . Men only, women only

   . Race or nationality

   . Physical handicaps

   . Background dangerous to student's ethics or morals?

   . Personal appearance

8. Working conditions

   . Hours of work

   . Regular or irregular hours

   . Is there any overtime? Are there busy seasons when the work is particularly heavy?

   . What kind of machines are used

   . Does the job involve a rush and a continuous working against time? Tension?

   . Is there a required output per unit of time?

9. Is the work highly routine in nature?

DEVELOPING THE TRAINING STATION

Just as the coordinator has definite responsibilities in teaching his students, so does the on-the-job training sponsor have definite responsibilities in teaching his student-trainee. The employer might be referred to as the "downtown teacher."

A. What teaching responsibilities does the "downtown teacher" have?

1. Understand the goal of the training program
2. Know units being studied in the classroom
3. Know enough about student-trainee to be able to teach him effectively
4. Work in partnership with coordinator
5. Give accurate information about the student-trainee to the coordinator
6. Take time to be a teacher
7. Provide "learning by doing" experiences
8. Give support to the Club program
9. Teach specific job skills
10. Teach "values" in human relations
11. Teach technical information
12. Teach business ethics, responsibility
13. Teach policies, systems, methods of training agency
14. Help student develop judgment and a mature outlook

B. How can we help the "downtown teacher" carry out his teaching responsibilities?

1. Develop a plan to follow in training the employer or supervisor

2. Keep the employer's training needs in mind during all coordination activities

3. Show Co-op Program film

4. Review unit content throughout the year

5. Develop projects in relation to job and class discussions

6. Give personal data on the student-trainee with discretion

7. Interpret school policies

   a. Calendar (vacations, schedules, events)
   b. Regulations

8. Suggest experiences student is ready for in the training agency

   a. Give student an opportunity to learn by doing
   b. Find ways for student to develop in the job assignments

9. Suggest evidences of progress to look for in student's performance

10. Analyze the job in terms of the student's needs for training

    a. Skills
    b. Technical information
    c. Systems, regulations, policies of the companies
    d. Physical requirements

11. Suggest additional training directed towards promotional opportunities

SUMMARY

WHAT DOES IT ALL ACCOMPLISH?

In a speech of this type, we can only touch briefly on some of the more obvious features of cooperative office programs. As time goes on, its ramifications and advantages will become more and more evident.

But even on the basis of what we know now, it is clear that, along with the other ideas of the business education curriculum, cooperative office education will be held together in a tight network that will bear little resemblance to anything that we have known before.

Great days are ahead for business educators who are not afraid of the vocational label. The opportunity is there; the challenge is there; and the responsibility is there, too. Can we share in the crusade to eliminate poverty in the midst of prosperity?

People in our field have said that we could solve many of the problems of our economy if only we were given the right tools. The funds from the Vocational Education Act of 1963 is holding out the tools and telling us to take them if we want them.

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*VOCATIONAL ADJUSTMENT; *EDUCATIONAL RESEARCH; *YOUNG ADULTS; *VOCATIONAL COUNSELING; *SPEECHES; VOCATIONAL DEVELOPMENT; VOCATIONAL EDUCATION; COUNSELOR PERFORMANCE; RESEARCH REVIEWS (PUBLICATIONS); ROLE PERCEPTION; YOUTH; YOUTH EMPLOYMENT; EMPLOYMENT PROBLEMS
*AMERICAN VOCATIONAL ASSOCIATION CONVENTION, DALLAS, TEXAS, DECEMBER 9-13, 1968

"A Transition from School to Work, An Interim Report of Research Findings" by Robert E. Campbell describes seven studies related to the adjustment problems of young workers. The four studies which are completed are: (1) an annotated survey of the literature on the transition from school to work, (2) problems in the transition from high school to work as perceived by vocational educators, (3) problems in the transition from school to work as perceived by youth opportunity center counselors: a national survey, and (4) changing the responses of vocational students to supervision. The last three of these are described in detail. Three studies still in progress are: (1) experimental attempts to improve the adjustment of vocational trainees to supervision, (2) a survey of worker adjustment problems as perceived by youth on the job, and (3) applications of role theory to occupational choice and adjustment. "The Things-Data-People Vocational Counseling Interview" by Sidney A. Fine, describes the total performance counseling interview, one by which a counselor can explore those activities and decisions in a person's life which form the basic background for input for his ultimate choices and adaptations. (CH)

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THE TRANSITION FROM SCHOOL TO WORK

AN INTERIM REPORT OF RESEARCH FINDINGS*

Robert E. Campbell
The Center for Vocational and Technical Education
The Ohio State University

Although only four per cent of the American labor force is presently unemployed, job opportunities are not evenly distributed throughout the social structure. The youthful worker composes one group which is disproportionately represented among the "structurally unemployed." In recent years, the 14 to 19, and 20 to 24 age groups have ranked first and second respectively, as having the highest rates of unemployment. Combined, these two age categories have an unemployment rate two to three times higher than the national average (U. S. Department of Labor, 1968). Thus, it is not surprising that this problem has become of national concern.

These high unemployment rates document the fact that many youth are experiencing considerable difficulty making the transition from school to work. Unemployment rates of youth represent a fairly reliable indicator of the extensiveness of the problem on which this research is focused, namely, the adjustment problems of young workers. As one of its research thrusts, The Center for Vocational and Technical Education at The Ohio State University is engaged in a series of studies on the transition from school to work. The overall project has three primary objectives as follows:

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* Presented at the Annual Meeting of the American Vocational Association, Dallas, Texas, December 11, 1968.

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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1. To identify the major socio-psychological problems facing youth (16-25 years old) making the transition from school to work.
2. To develop and test solutions which will be instrumental in alleviating some of the most crucial worker adjustment problems.
3. To encourage the adoption of new instructional materials by vocational programs and the adoption of other programmatic solutions which will facilitate worker adjustment.

The purpose of this presentation is to give an interim report of the status of our research efforts. Thus far, we have initiated 7 studies on this problem and most of these have focused on objectives one and two, i.e., identification of major problems and developing solutions. Four of the seven studies are completed and three are in progress. The seven are as follows:

1. An annotated survey of the literature on the transition from school to work. (Completed)
2. Problems in the transition from high school to work as perceived by vocational educators. (Completed)
3. Problems in the transition from school to work as perceived by youth opportunity center counselors: a national survey. (Completed)
4. Changing the responses of vocational students to supervision. (Completed)
5. Experimental attempts to improve the adjustment of vocational trainees to supervision. (In progress)
6. A survey of worker adjustment problems as perceived by youth on the job. (In progress)

7. Applications of role theory to occupational choice and adjustment. (In progress)

I would like to devote the remainder of my presentation to the findings of our 3 completed studies in this series. The first of these was a study of the problems in the transition from high school to work as perceived by vocational educators. The objectives of this particular exploratory study were to survey vocational educators on three major questions (1) the identification of major problems faced by youth in the transition from school to work; (2) to compile a list of curriculum materials, teaching aides and the like currently being used by vocational educators which are considered to have some potential for alleviating major transitional impediments; and (3) obtain suggestions or recommendations concerning what is needed, e.g., curriculum materials, programs, and teaching aids which would facilitate the school to work transition.

Three major criteria were used in the selection of respondents. First, the vocational educators were selected from a variety of places throughout the country since it is likely that adjustment problems differ from one area of the country to another. Second, only urban communities were sampled. Exclusion of rural areas was based on the rationale that most youth are presently working, or will be employed, in urban communities. Third, it was desired that the sample of vocational educators have considerable insight into young worker adjustment problems. Consequently, only those subjects were selected who met various criteria which suggested they should have considerable knowledge of problems relating to the adjustment of young workers.

Within each of the major Census regions of the United States, specific urban localities were identified which tended to be characterized by certain demographic, economic, and socio-cultural factors, considered to be possible contributors to the problem of young worker adjustment in the area. These factors included: (1) high unemployment; (2) high outward migration; (3) high inward migration; (4) limited industrialization; (5) racial-ethnic problems; and (6) low educational investment.

Five primary characteristics were sought in respondents: (1) at least two years of experience as a vocational educator; (2) realistic exposure to the world of work, close liaison with industry, and maintenance of both informal and formal follow-up data on graduates; (3) innovative-dynamic and dedicated to his job; (4) considerable insight into problems related to young worker adjustment; and (5) collectively, the sample should constitute a balanced distribution of positions in the educational structure.

Twenty-two cities representing considerable population and geographic diversity provided a total of 69 respondents. The respondents were selected by directors of vocational education in accordance with the 5 criteria specified above. Most of the respondents were teacher coordinators and encompassed the full range of vocational education specialties. Each respondent was interviewed for approximately two hours by a trained interviewer. A structured interview schedule was developed specifically for this task which provided a standardized interview format for all respondents.

The vocational educators enumerated 49 specific worker adjustment problems which were subsumed under 12 broad headings. The first 6 of

these broad categories relate primarily to the young worker, both as an individual and product of his socio-cultural experiences; they include his personal characteristics, attitudes, preparation for work, behavior, family background, and military status. The next two categories include factors inherent in the high schools attended by the youths, e.g., inadequate curriculum, teaching, and guidance services. The next three categories cite factors inherent in the communities in which the youngsters lived and in the job situations they entered. The final category includes conditions falling outside the three major groupings.

Of the 12 broad worker adjustment categories, 5 were listed by the majority of the respondents. Problems in job preparation, e.g., lack of experience, unrealistic job expectations, and lack of basic job skills were most frequently mentioned by 85 per cent of the respondents. The next three most frequently mentioned categories related to negative attitudes and personal habits on the job, e.g., immaturity, irresponsibility, absenteeism, poor work habits, and inability to follow directions. The fifth dealt with inadequacies in school programs and services.

The second objective of the survey asked vocational educators to describe teaching materials which they have used to alleviate worker adjustment problems. The information offered by the respondents provided only an incomplete and sparse list of materials and methods. Lecturing was the most prevalent teaching method used for presenting students with a general picture of the world of work. Field trips, visiting speakers, and personal conferences with the students and/or employers were also cited as popular methods.

The third and final objective of the survey sought suggestions for the development of teaching and curriculum innovations to facilitate the transition from school to work. The numerous suggestions were classified into 5 major clusters as follows:

1. The development of books, pamphlets, and booklets.
2. The preparation of audio-visual materials.
3. The development of services and facilities. For example, a centralized placement service within the school; provide a vocational-technical education library within the school; and the use of local advisory committees.
4. Improvement of programs and curriculum. For example, simulated work experiences, a course on labor economics, and sequenced courses on career information beginning in junior high and extending through senior high.
5. The development of projects, kits, and tests. For example, student fact finding studies of local businesses, pre-employment readiness tests, and career books written by students.

The second study is entitled the "Problems in the transition from school to work as perceived by youth opportunity center counselors: a national survey." The objectives and procedure are basically the same as the vocational educators' survey except that it looks at the problems in the transition from school to work from a different perspective, i.e., that of the Youth Opportunity Center counselor. The YOC counselor is in a unique position to observe transition problems in that the YOC's major focus is to provide vocational guidance to youth planning to enter the labor force. At the time of this survey (fall, 1967) there were 167 YOC's in operation.

YOC's are restricted primarily to urban areas and their client population is not representative of the total youth population. It is probably safe to say that the average YOC counselor is serving a client population of urban youth of below-average educational attainment with an above-average number of occupational problems and is increasingly concerned with affecting change in his clientele or in the environment of his clientele rather than just finding jobs for them.

Questionnaires were sent to all 167 Youth Opportunity Centers. The questionnaire had four major sections and was basically the same as the one used in the vocational educator's survey previously described. The first section asked each respondent to indicate what he saw as the major problems facing youth in the transition from school to work. The second section asked the respondent to list the kinds of things the schools could do to enhance the adjustment of youngsters to the world of work. The third section asked the respondent to list materials useful in dealing with the problems identified in section one. Finally, the fourth section requested respondent background information.

Completed questionnaires were returned from 48 states and 150 of the 167 YOC's. The return represented 763 completed counselor questionnaires and constituted an estimated 59 per cent of the total population of YOC counselors. Due to limited time, I will not present the detailed data describing the characteristics of YOC counselors. This data is available and can be obtained from our final report.

The 763 YOC counselors identified 50 problem categories which were subsumed under 9 broad problem clusters. The 9 problem clusters varied as to the frequency with which they were listed by the counselors ranging from

a high of 86 per cent to a low of 6 per cent. In order of decreasing frequency of mention, the 9 clusters are as follows: (1) Inadequate job preparation and knowledge of the world of work (mentioned most frequently); (2) personality variables (primarily attitudinal and personal expectancy problems; (3) vocational behavior (e.g., inability to accept supervision, and poor work habits); (4) deficiencies in school programs; (5) discriminatory factors (e.g., racial, ethnic, and child labor laws); (6) family background (e.g., cultural deprivation and parental pressures); (7) community factors (e.g., lack of job opportunities, and training opportunities); (8) factors inherent in job (e.g., job requirements in excess of what is needed, and the impersonality of large organizations; and finally (9) military obligation.

In response to the second section of the questionnaire, asking the counselors to suggest things the schools could do to enhance the adjustment of youth in transition, the counselors offered 28 suggestions which were classified into 3 broad clusters. The first cluster suggested by 81 per cent of the counselors dealt with improved guidance services. This cluster included such suggestions as the provision of better occupational information, increased cooperation between the school and the employment service, and specialized counselors for non-college bound youth. The second cluster involved suggestions for improved vocational education. Teaching pre-vocational skills, i.e., worker adjustment skills, upgrading of vocational programs, and more cooperative training were examples of the suggestions most frequently mentioned in this cluster. The third cluster offered suggestions for improving general education. Better preparation in the basic courses and individualized instruction were recommended.

The third section of the questionnaire asked the counselors to list materials useful in dealing with the problems in the transition from school to work. The counselors listed approximately 100 titles of books, pamphlets, and films. Time does not permit reciting the 100 titles, but suffice it to say that the 100 titles represent the traditional occupational information materials such as references for the counselor on how to counsel, the nature of adolescence, and measurement; and references for the counselee, e.g., films and literature. Although the list of titles was traditionally comprehensive, it was disappointing in that we were hoping to identify innovative techniques in helping students in this transition period, but unfortunately few were identified.

The final finding of this second study compared the list of problems identified by the YOC counselors with the list compiled by the vocational educators in the first study. The comparison was accomplished by rank ordering the problems by frequency of mention for both groups. The problems were ranked by specific problems and not by broad clusters. The two samples had moderate similarity in the relative frequency of problems listed; the rank order correlation was .61. Larger percentages of YOC counselors than vocational educators mentioned inadequate training, lack of job skills, and lack of information about work and job opportunities as being problems; whereas, vocational educators mentioned non-skill related problems (e.g., work attitudes and coping with the demands of work,) and academic overemphasis in the schools more frequently. Most of the notable differences between the two samples can probably be attributed to the different populations of youth with whom the respondents have worked. The vocational educators have probably worked with youth who are in the latter years of high school, have chosen a field of training and are receiving skill

training whereas, YOC counselors typically are serving youth who are dropouts or graduates of general academic programs and are deficient in job skill attainment.

The third study I would like to discuss is entitled "Changing the response of vocational students to supervision: the use of motion pictures and group discussion." This study focused on a specific worker adjustment problem and represents an attempt to facilitate worker adjustment as it pertains to subordinate-supervisory relationships. Our exploratory surveys emphasized the importance of satisfactory subordinate-supervisory relationships as a critical key to making the transition from school to work. In most instances, youth have difficulty accepting supervision, e.g., being told what to do by the boss, accepting criticism, and following orders. The purpose of this study was to determine whether viewing and discussing five movies, each depicting a different pattern of supervisory behavior, will enable maladjusted students to react more favorably to supervision.

Scenarios were prepared and movies produced to depict the following patterns of supervisory behavior: Consideration of Employees, Structuring Expectations, Tolerance of Freedom of Action, Production Emphasis, and Speaking as Representative of the Group. The movies were shown to small groups composed equally of well adjusted and poorly adjusted students, as determined by teachers' ratings. After seeing the movies, the students engaged in free discussion without any attempt by the researchers to influence students attitude toward the supervisory role being discussed. Some groups expressed favorable attitudes, while others expressed unfavorable attitudes, toward the same role. Approximately eight weeks after discussing the movies, the students were again rated by their teachers on adjustment to supervision.

Poorly adjusted boys who discussed the movies in three different schools gained more in ratings of adjustment to supervision than did the poorly adjusted control groups who did not see the movies. The differences were not statistically significant. Poorly adjusted girls in one school only were rated lower in adjustment to supervision after seeing the movies than before. However, the control group of girls lost more in adjustment ratings than did their control group. All well adjusted groups were rated lower on the second rating than on the first as a result of a tendency by the teachers to adjust their second ratings downward. However, the experimental groups of boys lost less than the control groups.

All poorly adjusted experimental groups of boys gained more in adjustment to supervision than did the control groups. All well adjusted experimental groups of boys lost less than did the control groups of well adjusted boys. The experimental group of poorly adjusted girls lost less than their control group, but the reverse was true for well adjusted girls. The results for all groups, except well adjusted girls, favor the experimental groups that saw and discussed the movies. It is concluded that the above results justify further use of the movies in training and research.

In summary The Center is engaged in a series of studies focusing on the identification and amelioration of the problems of youth in the transition from school to work. We have initiated 7 studies on this problem, four of which are completed and three are in progress. I have reported on three of the completed studies; two of these were exploratory surveys sampling vocational educators and Youth Opportunity Center counselors about the kinds of problems encountered by youth as they enter the world of work. Both sample groups listed similar problems such as inadequate job preparation, worker attitudes, and on the job adjustment difficulties. Differences between the two groups of respondents were attributed to the differences in the youth populations they serve; the YOC counselors more frequently work with school dropouts and graduates of general academic programs who possess no clearcut marketable job skills.

The third study represented an attempt to alleviate a particular on the job worker adjustment problem that of adjustment to supervision. Five films were developed depicting 5 different supervisory styles. The films were used in association with group discussion to train vocational trainees to understand different supervisory styles which might result in improved subordinate-supervisory relationships. The pilot test of this approach indicated that the film-discussion technique can produce adjustment improvements. Further testing of this approach is in progress.

In conclusion, I believe that the studies I have reviewed suggest that there is much to be done to facilitate the transition from school to work. Although it is clear that youth especially non-college bound youth must have marketable job skills to successfully survive in the labor market, it is equally clear that youth also need non-technical skills to achieve a successful transition. We need to expand our course offerings to include training in the non-technical aspects of work as well as the technical aspects.

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Sidney A. Fine, Ph.D.
The W. E. Upjohn Institute
for Employment Research

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THE THINGS-DATA-PEOPLE VOCATIONAL COUNSELING INTERVIEW

The big problem we have in vocational counseling is that, even though we go far beyond the securing of quantitative data (refuting what many critics have to say on that score), even though we acquire the most detailed and comprehensive information about the individual, our dilemma remains -- what do we do with it? How do we help the client to make use of it? How do we establish the relevance of so much data? How do we aid the counselee in organizing his thinking about himself and assessing the relative significance of the facts about himself that we array? How do we finally help him to solve his problem of occupational choice and the pursuit of opportunities in the world of work so that they are in line with his self-concept?

What we need is a "transformation formula" whereby we can start with people as they are at a given time, whatever their level of life experience, and help them to discover the main trends in their lives which may be significant for vocational adjustment. Such a "transformation formula" can help us as counselors to develop the skill, capacity, perception -- call it what you will -- to detect those major themes in work and nonwork experience which characterize a given life.

The Things-Data-People or total performance counseling interview that I have structured is one by which a counselor can explore

those activities and decisions in a person's life which form the basic background or input for his ultimate choices and adaptations.

The Things-Data-People concept is little dependent upon verbal and other symbolic skills for understanding. Any person, at any stage of his development, can take a good hard look at himself and reflect upon the choices he has made in terms of things, data, and people all his life. In thousands of little ways, consciously and unconsciously, all individuals have had experience in making choices which are essentially Things-Data-People choices. Through the Things-Data-People interview, the counselee can explore his reactions to daily experiences and activities and project them with the help of the counselor onto the screen of occupational significance. This can help him to express his aspirations and also to get a realistic picture of how he feels about himself in relation to the world of work. A relatively inarticulate counselee can find significant identity in the Things-Data-People aspects of his experience.

In this interview, vocational ability is conceived in terms of adaptive, functional, and specific content skills. But there is more to occupational life than the skills which the worker has to offer -- there is also what the work brings to him in terms of satisfaction and fulfillment.

The client is encouraged to explore himself in terms of his characteristic pattern of adapting, such as how he feels about relating to authority figures, accepting tedium in a job, relating to a group, coping with many things at once, and being accommodating toward people. He is led to think about how he has responded to

his opportunities for discretionary tasks as contrasted with prescribed tasks and to assess his functional skills such as compiling data, doing precise work with things, or supervising people.

Finally, as the counselee begins to more clearly visualize himself in answer to the question, "Who am I?", specific content possibilities which go with the kinds of work he is considering are brought to the fore and mutually explored.

In this type of interview, the counselor acts as a sort of radar that beams back to the counselee interpretations of the meaning of the client's experiences. The counselor can do this on the basis of a course of study that has translated what goes on in the world of work into terms of Things, Data, and People, the various type of skills involved in successful work adjustment, and his understanding of his own life in these terms.

Outline of the Things-Data-People

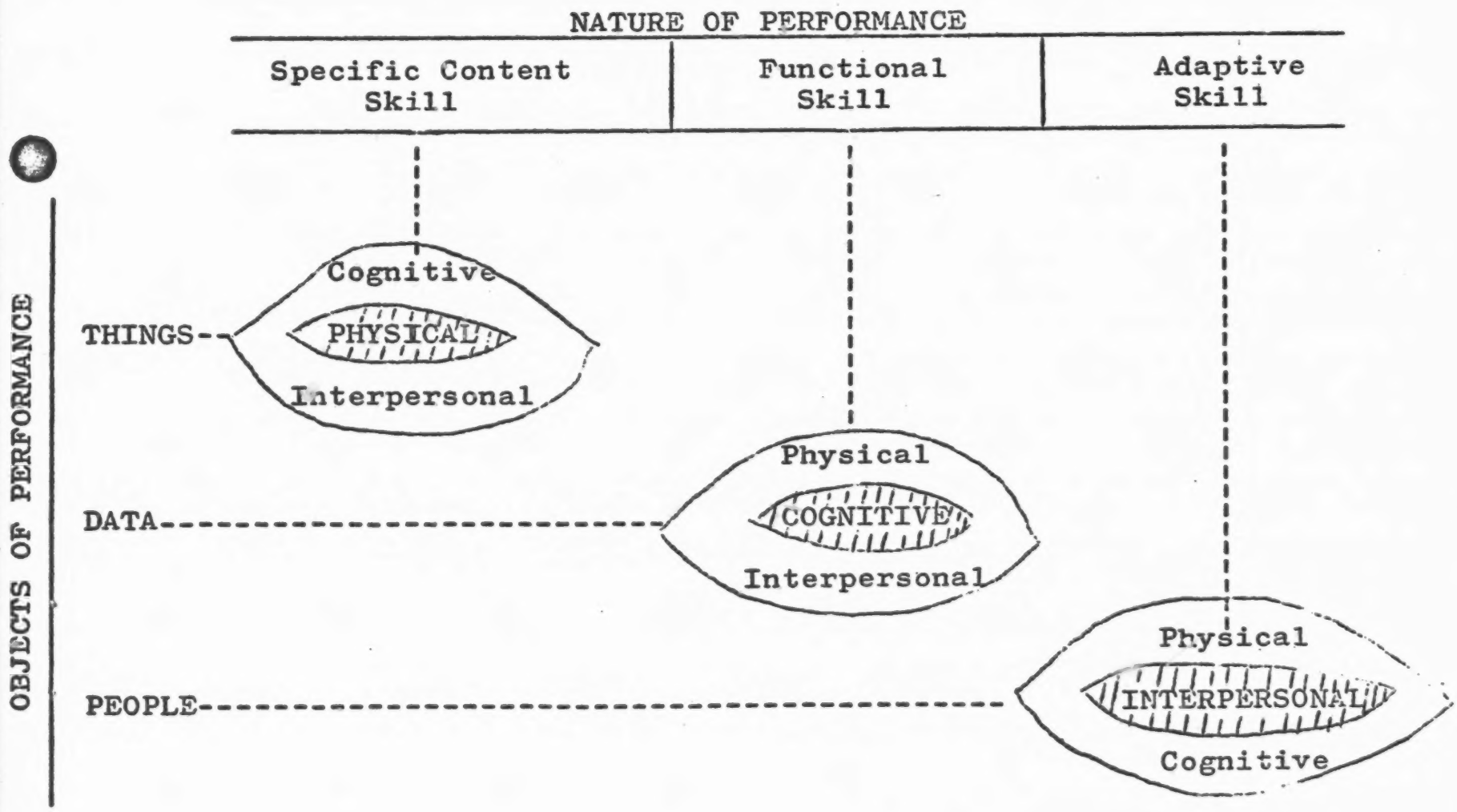
Vocational Counseling Interview

1. **Objective**

To provide the counselor with a frame of reference eliciting information from the counselee that has immediate and direct applicability to information relevant to the world of work.

More specifically, to enable the counselor to work toward a formula which transforms the percepts of the counselee's experience to the concepts that are significant for vocational choice.

2. **Figure and Ground in Job Perception**



3. Method

a. Counselee is given a brief description of method. Image: Projection of self on a screen such as an oscilloscope.

b. Probes are made.

(1) Three probes into educational experience: "How would you describe yourself as a person in terms of Things-Data-People?" The counselee is asked to answer the above question in relation to three significant points in his individual development. Assuming the counselee has a school background, the times would be as follows: for a 17-year-old, 5th grade (age 11), 8th grade (age 14), and 11th grade (age 17); for a 24-year-old or older, 7th grade (age 13), 11th grade (age 17), and college junior (age 21). If the counselee lacks a formal schooling background, the inquiry is addressed in terms of age alone.

(2) Three probes into work experience:

(a) "What work or tasks have you liked least?" Describe in terms of Things-Data-People. Explore in terms of frame of reference.

(b) "What work or tasks have you liked best?" Describe in terms of Things-Data-People. Explore.

(c) "In the same terms of Things-Data-People, how would you describe what would be an ideal job now?" Explore.

4. Derived Measures

a. Orientation - Relative preference for Things, Data, or People.

b. Level - Indicated experience and capability to function adequately at one or another degree of complexity.

c. Structure - Indicated combination of prescribed and discretionary instructions for optimum functioning.

d. Style - Conditions under which adaptive skills engage specific content requirements for optimum functional performance (physical demands, time, temperament, size of organization, etc.).

VT 008 210
Jones, Brian G., And Others
Speeches Presented at the Annual Vocational Convention of the American Vocational Association (62nd, Dallas, Tex., December 10-11-13, 1968) Research Section Meetings.

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*VOCATIONAL EDUCATION; *EDUCATIONAL RESEARCH; TECHNICAL EDUCATION; ACHIEVEMENT TESTS; TRADE AND INDUSTRIAL EDUCATION; APTITUDE TESTS; *OCCUPATIONAL GUIDANCE; PROGRAM PLANNING; *SPEECHES; *PROGRAM EVALUATION; TEACHER CHARACTERISTICS; DEMONSTRATION PROGRAMS; RESIDENTIAL SCHOOLS; EVALUATION METHODS; SYSTEMS ANALYSIS *AMERICAN VOCATIONAL ASSOCIATION CONVENTION, DALLAS, TEXAS, DECEMBER 9-13, 1968; AMERICAN INDUSTRY PROJECT; PROJECT TALENT; GATB; GENERAL APTITUDE TEST BATTERY

Some major speeches presented in the Research Section Meetings of the American Vocational Association included: (1) "Using Project TALENT to Improve Vocational Guidance," by G.B. Jones, (2) "Municipalities as a Model for New Careers and Redirection of Vocational-Technical Education Programs," by R.H. Hamilton, (3) "The Evaluation of Residential Schools and the Essential Factors which Contribute to Their Operation," by G. Parkinson, (4) "Study of Career Patterns and Curriculum Emphasis in Public Education," by E.P. Godfrey, (5) "The Evaluation System for the American Industry Secondary School Courses," by O. Nelson, (6) "Applying Systems Analysis Techniques to the Evaluation of Vocational Programs," by A.G. Robertson, (7) "The Development of Achievement Tests for Trade and Technical Education: A Three-Year Summary," by T.S. Baldwin, and (8) "New Research Techniques for Validation of the General Aptitude Test Battery," by R.C. Droege. (DM)

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Speeches Presented At The

62nd Annual Vocational Convention

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American Vocational Association

Dallas, Texas

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Research Section Meetings

VT008210

USING PROJECT TALENT TO IMPROVE VOCATIONAL GUIDANCE

G. Brian Jones

Guidance Research Program

American Institutes for Research

This paper is based on a project currently being conducted pursuant to a contract with the Office of Education, U.S. Department of Health, Education, and Welfare, (Contract No. OEG-0-8-070109-3530 (085), Research Project #7-0109).

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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Presented at the 62nd Annual American Vocational Association Convention, Dallas, Texas--December 10, 1968.

During recent months we have been giving some thought to a guidance-related problem brought to our attention by vocational educators at an area vocational center. This is a problem of assisting students to consider vocational-educational opportunities if these represent viable decision-making alternatives for them. A pilot investigation led us to conclude that to meet the needs of prospective vocational education students a guidance system must help these students in educational and vocational planning, interest them in the exploration of the training opportunities for skilled trades, and motivate them to seek information and perhaps pursue enrollment in the vocational-educational opportunities offered at such institutions.

Vocational counselors often find that there are at least three inter-related factors adversely affecting student interest in vocational education. First, vocational education programs are considered as a "dumping ground" for many school systems (Snedden, 1938, Passow, 1968). Students unable to meet the demands of college preparatory or general education curricula are often "counseled" toward vocational education curricula (Conant, 1961). Second, many parents, teachers, and school administrators not directly involved in vocational education programs consider them "less respectable" than college preparatory programs (Wenrich & Crowley, 1964). Third, students themselves frequently develop pejorative attitudes--probably conditioned by their parents and other adult models--toward vocational education teaching, and toward the students and the values of terminal training programs (Silverman, 1963).

Our recommendation to the vocational educators concerned is that a well-developed comprehensive vocational guidance system, aimed not only at assisting students to formulate their educational and vocational goals, to plan the achievement of these goals, and to manage their performance toward these goals, but also at involving parents in these processes, can be a necessary condition for countering negative attitudes toward vocational education. This paper

briefly outlines possible components of such a guidance system and indicates how the findings of Project TALENT can contribute to the improvement of some of these components.

A Comprehensive Vocational Guidance System

A grant to Dr. John C. Flanagan by the Division of Comprehensive and Vocational Education Research of the U.S. Office of Education is enabling us to capitalize on the Project TALENT data in order to develop a comprehensive guidance system. We are attempting to concentrate on the type of system which would be an integral part of a program of individualized education such as that visualized by Morgan and Bushnell (1966) in their proposal for designing an "organic curriculum."

To be comprehensive such a guidance system must serve the needs of all students. By integrating it closely with the basic instructional system at all academic levels, educators will be able to assist each student to acquire necessary personal information, information about life opportunities available to him or her, prerequisite problem solving skills in planning, decision making and management so that each one will be helped to formulate and pursue appropriate goals. Within such a framework, guidance becomes "the professional use of a science of purposeful action within a specific structure of education (Tiedeman and Field, 1962, p. 483)." Included also are assumptions that students are capable of learning how to contribute to planning their careers and should be involved in making decisions which influence their destinies.

A second way in which such a guidance system must be comprehensive is that it must complement the other activities of the educational program in which it functions so that the total program attempts to meet all the needs of all students. By labelling this system as "vocational guidance" while defining it as a system which seeks only to help students select an appropriate vocation, we would be limiting its comprehensiveness. To avoid any such restriction perhaps

we should follow Katz's (1968) suggestion and label it as "career guidance" instead. His paper prepared for the National Vocational Guidance Association's "Reconceptualization Project" indicates that he believes the word "career" incorporates all possible patterns of choice at any given point in time and refers to the totality of life style. Lewis (1968) suggests that the term vocational guidance is much preferred by those who see the function of guidance as being the efficient allocation of the nation's human resources. On the other hand, the advocates of guidance, without the modifier "vocational", view its function as involving the provision of any assistance necessary for helping each student develop his potential.

By focusing on students' needs in order to help us specify the system's objectives and evaluative criteria, we are attempting to use a systems approach to the design, development, and evaluation of this comprehensive guidance system. To identify general groupings or clusters among the student needs, our preliminary investigation has included review of existing guidance programs and of the professional literature--including follow-up studies of school graduates and dropouts--as well as observation of the decisions faced by students currently enrolled in individualized and regular instructional programs. We are postulating on the basis of this investigation that a comprehensive guidance system must contain the 12 components listed below.

1. Orientation-in.

   Goal: for each student to acquire the various kinds of information, understandings, overt behaviors, and attitudes they need in order to function successfully both in a new educational system and in the specific school setting in which that system operates.

2. Personal assessment.

   Goal: for each student to know and understand the status of his development with respect to abilities, interests, physical and social characteristics and values in the areas of education, vocations, social behaviors, citizenship, learning behaviors, and use of leisure time.

3. Personal choice opportunities.

Goal: for each student to know and understand the variety of opportunities available for personal involvement. The six areas for consideration encompass vocational, educational, citizenship, leisure-cultural-recreational, learning, and social opportunities.

4. Personal problem solving skills.

Goal: for each student to develop and use skills which enable him to solve problems by making decisions and plans wisely and implementing these.

5. Personal problem solving.

Goal: for each student to make and implement personal decisions and plans by integrating the knowledge and skills achieved in guidance components 1 through 4, Important here are experiences which enable students to formulate their goals and their plans for meeting these goals. Students must be aided to relate the instructional objectives in their programs of studies to their long-range goals. As students manage their performance toward these immediate and long-range goals, the continuous progress characteristic of individualized education is attained.

6. Prescribed learning experiences.

Goal: for each student to have assistance to resolve specific learning, intrapersonal, and interpersonal problems which are impeding his or her current progress and development. The number of such learning experiences is manifold. Examples are activities for behavior assessment and modification as well as for providing information on specific jobs, schools, courses, etc.

7. Orientation-out.

Goal: for each student to acquire the various kinds of information, understandings, overt behaviors, and attitudes they need in order to function effectively when they exit from an educational system or a specific school setting. Student needs here will vary, dependent upon what they anticipate doing after they terminate--e.g., entering the world of work, attending an institution of higher education, dropping out without specific plans, having a family, enlisting in the military.

8. Monitoring and possible modification of aspects of the educational system.

Goal: to provide assistance from adults and technology so that each student in that system will be able to formulate and to progress toward agreed-upon goals.

9. Monitoring and possible modification of school personnel.

Goal: to provide assistance from adults and technology so that communication with, and possible in-service training of, school personnel will be maintained so that each student will be able to formulate and to progress toward agreed-upon goals.

10. Monitoring and possible modification of home and neighborhood factors.

Goal: to provide assistance from adults and technology so that communication with, and possible learning activities for, parents will be maintained so that each student will be able to formulate and to progress toward agreed-upon goals.

11. Monitoring and possible modification of community resources.

Goal: to communicate with community representatives (e.g., health, social, and welfare agencies; businesses and industries) so that each student will be able to formulate and to progress toward agreed-upon goals.

12. Research and evaluation.

Goal: to conduct experimentally-controlled studies for the evaluation of guidance and counseling techniques and procedures, follow-up studies of graduates and dropouts, analyses of changes in the characteristics of the student body so that each student will be provided with up-to-date, evidence-supported information and assistance.

We are attempting to compile a body of techniques and procedures which can be used to implement these possible components of a comprehensive guidance system. Teaching learning units, counseling personnel contact with individual students or with groups of students, computer monitoring, or on-line computer assistance are some of the available techniques. We hope to be able to integrate, and evaluate the effectiveness of, some of the currently available techniques and procedures related to each component. Where ones are not available we anticipate doing some developmental work not to exhaust the range of possible strategies but to provide ones which will permit experimental comparisons of the relative effectiveness of a few alternate strategies. Such experimentation necessitates the development and refinement of criterion instruments related to the behavioral objectives and student outcomes outlined for each system component.

Examples of Project TALENT Implications

The Project TALENT data bank of information collected from schools and students regarding student characteristics, educational experiences, and subsequent activities is facilitating analyses which suggest improvement in educational policies and practices and in guidance programs. In addition TALENT data can provide an on-going accessible base for the career-guidance and counseling of students. In order to illustrate the possible implications of the TALENT findings for improvements and developments in a guidance system, four of the aforementioned components will be briefly reconsidered.

1. Research and Evaluation. Project TALENT serves a two-fold function here. First, its findings vividly clarify some of the major guidance needs of students. These findings provide school personnel with evidence against which to check, and perhaps recommend changes in, their existing guidance programs.

For example, the Project TALENT study indicated that only 18.9% of boys who indicated in the tenth grade that they were planning one of thirty occupations as a career following graduation planned to pursue that occupational goal three years later. Only 31.4% of the twelfth grade boys reported that their goals were the same one year later. These findings which have been validated by studies other than TALENT (cf. Hansen, 1967; Donaldson, 1968) suggest that students need more effective career-guidance assistance.

A second function of Project TALENT relevant to this component is that it provides a prototype of a follow-up study. School districts desiring to conduct follow-up research on their students can profit from a close study of the methodology behind TALENT and might wish to implement selected parts of this monumental study.

2. Personal problem solving skills. In order to help students acquire and practice planning and decision making skills required for making career choices wisely, a "decision-making simulation experience" using the Project TALENT data bank has been proposed. As one part of this activity, a student will be given information on the personal characteristics (e.g., abilities, interests, values, physical characteristics, etc.) of a hypothetical person and will be asked to use appropriate TALENT data to make key decisions which formulate career goals and plans for that person. This student will be able to check the reality-value of these decisions by comparing them with those actually made by a composite group of Project TALENT subjects who had personal characteristics like those of the hypothetical person. By eliminating the need for partners or groups, we hope to be able to avoid the unrealities of the "game" concept and, therefore, have students perceive this as a reality-testing experience not confounded by unnecessary competition.

3. Personal problem solving. The guidance programs of many schools can provide only limited individual planning assistance to students because of the lack of expectancy data based on follow-up studies of former students. If tests similar to those used in Project TALENT are administered, data from Project TALENT can be utilized until such time as more localized predictive-discriminative information is available. Normative data such as are available in the TALENT study serve useful comparison purposes allowing students to investigate their profiles of developed abilities and interests in terms of the actual educational and vocational choices made by TALENT students with similar characteristics.

Similar comparisons of test scores can result in students receiving probability information estimating their probabilities for entering different career fields. Students must be helped to accept a balance of confidence and skepticism relative to such information as well as to

understand that their present performance levels can be changed. Those who find themselves faced with low-probability goals must be given opportunities to identify the abilities which produce these probabilities and be allowed to improve their status levels if they so desire.

4. Prescribed learning experiences. With the type of utilization of Project TALENT data described under the previous component, consideration can be given to the development of guidance programs which capitalize on the information processing capabilities of a computer. Here a computer would be programmed to match student test data and TALENT predictive data and to combine this with student goals and plans. On the basis of this processing specific recommendations would be made to students. These recommendations would be prescribed learning experiences intended to help them resolve educational and vocational planning problems they might be experiencing. For example, specific job information, direct reference to resource materials or to community resource personnel available for job visitations, or notification of a group counseling activity on vocational problem solving might be some of the recommendations stored in the computer. A computer monitoring system such as this would constitute an effective detection device for alerting counseling personnel to students who seem to be experiencing personal career planning problems.

A Recommendation to Vocational Educators

One of our basic purposes in developing and evaluating parts of a comprehensive vocational guidance system for individualized education is to identify behavioral objectives and related student outcomes for all system components. Using these as references, school personnel should be able to compare them with objective indicators of their students' needs in order to select system components and specific guidance techniques and procedures to consider implementing in local school settings.

The vocational educators connected with the area vocational center noted earlier in this presentation are following this approach using some of our initial work. Guidance personnel from the school districts involved are recommending research and development on parts of four of the twelve components in order to try to help prospective vocational students meet their educational and vocational planning needs. It is anticipated that elements of the following four components will be individualized to their students' characteristics and investigated: personal assessment, personal choice opportunities, personal problem solving skills, and personal problem solving. The Project TALENT data bank will be utilized to develop a discriminative-predictive tool to assist student goal selection and planning.

If this investigation is conducted, it is hoped that vocational educators in other settings will study this type of approach and be able to use this investigation's findings to improve guidance programs. Apparently this guidance-related problem exists not just in one California vocational center. A survey of fifteen Georgia area vocational schools came to this conclusion:

> The data indicated that the current performance of student personnel services in area schools was inadequate and was not meeting the needs of the students. (Bottoms, 1966, p. 42)

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American Vocational Association, 1968 Conference
Theme: DCVER-Sponsored Research and
Development Projects - Topic II: New Careers
Randy H. Hamilton, December 10, 1968, 2 P.M.
Adolphus Hotel, Dallas

MUNICIPALITIES AS A MODEL FOR NEW CAREERS AND REDIRECTION OF VOCATIONAL-TECHNICAL EDUCATION PROGRAMS

An Introductory Thought:

It is written in the BOOK OF DANIEL: "Many shall run to and fro and knowledge shall be increased."

But DANIEL does not say whether this is good or bad. Certainly in modern times the results are not always worth the effort. These are the days of frequency of contact; yet one of our tragedies is that improvement in the techniques of communication has not appreciably bettered the product but has made the communicators more nervous. We are more busy without necessarily being more thoughtful.

These are also the days of accelerated fact-gathering and vast stores of information; yet much of it is unused or misused because, contrary to the popular notion, facts seldom speak for themselves and are not always understood when they do. Nor, when understood, are they always accepted or acted upon. To publish the truth is not enough. Facts must have people to speak for them.

These are especially the days of number gathering. Indeed so eager is the pursuit of the splendid game of "quantifying" that we have a new kind of academic man who presumably would count the very buttons on his executioner's vest. Knowledge is increased and great movements are started -- or are said to be started -- by pollsters, those scientists of the arcane who, after packaging the great issues of the day for quick and easy consumption, rush about in search of instant public opinion: in five minutes or less answer yes, no or maybe to the latest burning questions.

The research and allied activities of the Institute for Local Self Government, Claremont Hotel, Berkeley, California, provide a bridge between the academic community and the local government practitioners. They are broad-based, flexible and keyed to operational realities. They are intended to result in "Designs for Action," to promote and strengthen the institutions and processes of local self government.

American Vocational Association, 1968 Conference
Theme: DCVER-Sponsored Research and Development Projects - Topic III: New Careers
Randy H. Hamilton, Executive Director
Institute for Local Self Government, Berkeley
December 10, 1968 - 2 P.M.
Adolphus Hotel, Dallas

Municipalities as a Model for New Careers and Redirection of Vocational-Technical Education Programs

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LADIES AND GENTLEMEN:

The 26 million youth who will be seeking entry into the labor market during this decade are a far greater number than the United States has ever had to educate, train and absorb into employment than any previous ten-year period. Finding employment for young workers -- entering at the rate of 50,000 a week -- at a time when the new technology is reducing the traditional entry jobs posits grave responsibilities for even so resourceful a group as the nation's vocational educators.

The nation's most rapidly growing employment opportunity is State and Local government employment. There were 12.0 million civilian public employees in the U.S. in October, 1967, or 548,000 more than a year before. The increase was accounted for mainly by State and Local governments which had 9.0 million employees as against 8.6 million in October 1966.

Public civilian payrolls for October, 1967, were $6.1 billion, or about $634 million more than the same month the previous year. The Federal portion amounted to $1.8 billion with payrolls of State and Local governments at $4.3 billion a month.

Total government employment in the United States has risen each year since 1947, with State and Local governments accounting for most of the changes in this 20-year period. From a peak of 3.4 million in World War II, federal civilian employment fell to 2.0 in 1947, then rose to 2.5 million in 1951 and as of October, 1967, stood at 3.0 million, with the recent increase mostly for national defense and postal services.

State and Local government employment dropped slightly during World War II from 3.4 million in 1941 to 3.2 million in 1945. Since then it has shown significant increases every year. During the 16-year period ending October, 1967, the full-time equivalent number of State and Local government employees rose 99% and the October payrolls of these employees went up 323%!

There is no reason to think that these trends will not continue. The Bureau of Labor Statistics estimates that during the next seven years, State and Local governments will need to recruit 2.9 million new administrative, professional and technical employees (excluding teachers) to fill new positions and replace those retiring from Local government public service. The great bulk of the present Local government department head and higher level was recruited during the depression and will soon be retiring. Assuming an annual work year of 250 days, this means that State and Local governments must recruit 1,000 new APT employees every working day for the next decade!

The biggest increase will be in jobs that presently require the most education and training to enter. According to the U.S. Department of Labor, Occupational Handbook, 1968-69, professional occupations presently requiring the most education and training will grow twice as fast as overall Local government public employment, (already noted as growing at the rate of 1,000 APT people per working day). Scientific and engineering employment will be the fastest growth segment, over 30% greater than the administrative, professional,technical group as a whole. As with the rest of the economy, public service jobs involving purely routine tasks are decreasing as a percentage of total jobs.

These changes have been aptly described by Norman C. Harris of the University of Michigan:

Professional jobs, making up six percent of the labor force in 1930 will probably constitute 12 percent by 1970. At the other extreme, unskilled, semi-skilled and service jobs, which together accounted for 56 percent

of the labor force in the 1930's will by 1970 decrease to only 26 percent of the labor force. But the really significant changes in our labor force, and in society in general, have occurred at the level of the semi-professional and technical... . These jobs taken together, will account for over 50 percent of the labor force by 1970. 1/

Continuation of present academic preparatory programs, as now constituted, gives us no reason to believe that there will be any tremendous upsurge in the number of people being prepared for APT careers in Local government. The statistics that are available indicate a relative decrease during the past five years. Consequently Local governments need more APT people and the educational institutions are providing relatively fewer such persons for the local public service.

Local government manpower in types and numbers needed simply will not be available unless alternative, innovative strategies for filling the needs are adopted. One answer to the dilemma is the utilization of subprofessionals for whom New Careers in public employment can be developed.

New Careers offers a very bright hope for utilizing subprofessional personnel for those tasks which require something less than fully professional attributes and skills; which, at the same time, will allow professionals to devote themselves to professional activities instead of taking up their time with less than professional ones. The manpower equivalent of a fully operational New Careers program in a municipality should increase the professional availability of employees by at least 20%, at a cost of less than half of hiring one new professional for every five now employed. Not only will New Careers be created,

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1/ Harris, in Higher Education in an Age of Revolution, ed. G. K. Smith (Washington: Association for Higher Education, 1962), p. 111.

but local government better and newer services and functions now being neglected because of manpower shortages can be provided to urban residents.

The utility and importance of New Careers has increased because there has been no noticeable improvement in the municipal manpower picture since it was characterized in the Manpower Report of the President to the Congress of the United States, in March, 1965:

"The great growth in cities and the increased demands for services that derive from such growth underlie the shortages of qualified prpfessional, technical and administrative personnel in this branch of government. City governments have manpower shortages not only in occupations where personnel is generally scarce ... but also in new occupations resulting from urban growth.

"The result is that many urban dwellers do not receive all the services they need and that many of the services they do receive are of poor quality. ..."

From the viewpoint of the Institute for Local Self Government which is a unique nonprofit research and educational institution whose natural and only constituency is the operating local government official but which nevertheless maintains intimate relationships with vocational counselors, educators, and institutions of higher education in California; it became apparent that a trailblazing project was in order to harness the twin conditions of local government manpower shortages with the untapped potential of the educational institutions in educating and training subprofessional personnel for New Careers in municipalities. We sought and obtained assistance from the Division of Comprehensive and vocational Education Research, Bureau of Research, U.S. Office of Education (here gratefully acknowledged) to undertake a two-year project which would open new entry level career lines in local government based upon properly prepared subprofessionals.

The project combines the realities of local government public service with the efforts of educational institutions to provide curricula fitted to the needs. During the past year working through nine task forces composed of the leading, active, professional personnel selected from the city halls on the basis of recommendations from the League of California Cities, we have microscopically examined the most common municipal professions and extracted from major omnifarious duties the various subprofessional tasks which can be grouped together to provide an entry-level subprofessional job that has utility and meaning as the basis for redirection of Vocational-Technical education. These have been networked into career ladders which, depending on the motivation, aptitude and abilities of the New Careerist himself can lead to lifetime, fully professional work.

It is not an easy task. It is not a simple matter to get a professional to admit that some of his roles are paraprofessional or subprofessional; and, once having overcome that hurdle it is not easy to acquire their assistance in laying out a continuum in which advancement from entry to full-fledged professional level can be negotiated by those entering New Careers programs. Because of the active cooperation of city halls in California, I am pleased to report that in all nine professional areas we have accomplished these goals primarily because the process was conducted by an institution in whom the professionals had faith built on years of tandem tilling in the local government vineyards of California. Based upon the experience and from our study of other agencies which have been involved in breaking out and cluster-grouping tasks from the entry to fully professional levels, it is our finding that the job cannot be done satisfactorily by outside consultants or one-shot contractors who have scant knowledge of the nature of local government conditions and who lack working intergovernmental relationships.

To illustrate the latter point, I must mention the extremely able help, assistance, support and sound advice which we have received from the

Division of Vocational Education in the California State Department of Education. Because the Institute is recognized in California as working for and with local government public agencies as a nonprofit research and service organization, there has never been any question of our freedom to ask for such cooperation. Intergovernmental internecine warfare is alien to California's governmental climate.

The project's main purpose is to make a contribution to education by providing models for curriculum experimentation to prepare individuals for roles as employed adults in work of social and societal significance. Educational institutions and vocational educators in particular can thus become better attuned to the local government public service needs and be assisted in upgrading their competences in that regard. It is our intention to broadly broadcast known employment needs and proposed curricula to fulfill them.

By mid-1969, the Institute for Local Self Government will have a fairly comprehensive series of curricula which can be readily adapted by any junior college in the country for the purpose of educating and training the required subprofessionals. These optional course groupings are intended to be of benefit and assistance to the counselor at the junior college and high school level. The course work will have been suggested as a result of a year's liaison with both educators and practitioners. This is one of the unique features of the Institute's project. It has been consciously, painfully and perhaps somewhat slowly done in order to make as certain as possible that any potential flak from professionals at work in the city halls will not result in shooting down the proposals. The curricula are not those of the Institute, nor of the educators, but primarily those of the professionals whose task analyses form the skeleton for them. These analyses and our knowledge of what local government employees do in their daily work have been reviewed by the educators, as well as during many discussions with the State's Division of Vocational-Technical Education and

there is every reason to believe that the resultant blend will go smoothly down all palates concerned.

One of the interesting developments of the project has been to note the changes that have taken place at every leg of the working network which might take the form of a triangle : operating municipal officials, vocational educators and curriculum planners, all of whom have had a tendency to proceed in three unrelated and uncoordinated (not to say discombobulated) directions. If nothing else, we have at least succeeded in bringing these three groups together to talk about the same goal in the same terms at the same time.

For fulfillment of modern manpower and social goals, a New Careers program should revolve around the following elements, supported by a policy commitment from legislatures and city councils:

-- Productive entry-level positions, not "make work jobs".
-- Training immediately available, integrally connected to entry-level positions and supported by a commitment of the local government's personnel, time and funds.
-- A clearly defined career ladder between entry-level positions and through the hierarchy to fully professional and career ranks.
-- Relevant training for higher positions available through the job with released time when and where necessary.
-- A close link between training in job skills and general continuing education necessary for career upgrading.
-- Definition of training programs and their packaging as part of local government's responsibility to insure employee upgrading.
-- Creation of career pathways upwards for both old and new careerists.

None of the elements noted above are anything more than positive aspects of a modern municipal personnel system applicable to all persons in the local government public service.

From the examination of typical local government services and functions the utility of New Careers to the total operational setting in the world of administrative and political reality has been proved at the local level. We are about to embark on the second year of the project, early in which our curricula recommendations based upon dozens of task force meetings

will be suggested for implementation through educational institutions so that they can be of assistance to the local governments in their communities. From the view on the local government bridge, there will be provided to vocational counselors and educators a complete package consisting of three major elements: (1) a breakdown of professional tasks into meaningful job descriptions which describe work as it actually goes on in typical municipal professions, (2) a sequential career ladder consisting of realistic clusters of increasing professional consequence from entry to fully professional status; and, most importantly, (3) the coupling of readily adaptable curricula to fulfill the subprofessional manpower needs of our local government sector.

We believe this activity will help solve pressing manpower problems and provide the opportunity to initiate constructive local government policies which can also assist the disadvantaged members of our society. Local government requirements and desires for more efficient public service can be wedded to the quest for constructive and socially useful employment by initially unskilled and semi-skilled people. It is not stopgap employment, but the addition of a more permanent resource and new dimension to long range manpower needs and the job needs of our increasingly youthful population.

Not neglected should be the obvious pathway which New Careers offers for educational institutions now seeking "involvement" with its own community and the manifestations of our country's major domestic problem areas. The information, techniques and suggestions developed in our fashioning "Municipalities as a Model for New Careers and Redirection of Vocational-Technical Education," provide opportunity for educational systems and vocational counselors to redirect their vocational-technical curricula and preservice programs, particularly as they seek relationship with and to the disadvantaged against the background of the rapidly developing new occupations caused by the changing conditions in local government functions.

New Careers can bring to both the educator and the public personnel administrator the most stimulating post World War II catalyst for rethinking and reorganizing processes and techniques which may have become hidebound and obsolete bearing little relation to the purposes of either sound public personnel policy or vocational-technical education. While the concept is relatively new and there is little hard data from which to make positive predictions, the results of the activities during the past three years can be seen in various public agencies which generally report favorable experiences of lasting value:

- -- Improvements in the delivery of local government services to the populace both in terms of existing programs and functions as well as forecasted new ones.
- -- Improvements in overall training policies and programs by development of comprehensive on-the-job skill training coupled with continuing education opportunities for all personnel.
- -- Catalytic activities in personnel systems including less emphasis on written examinations for some unskilled and semi-skilled positions; "outreach recruitment," elimination of cultural biases in written examinations, installation of comprehensive employee orientation programs, modification of arbitrary initial credentials such as a high school diploma when such are unrelated to job performance or skills necessary for efficient and economical public service.
- -- Increases in the supply of manpower necessary to meet local government needs as well as enhancement of the role of professionals by allowing them to eliminate less-than-professional tasks and activities from their jobs, thus effecting the economies that result from not wasting expensive professional talent on unskilled work.

As noted by Grant Venn, guidance in vocational and technical education is not an issue but rather a problem that is manifest when virtually every study of the field decries the wide gap between what is said about guidance and what is done.[2/]

2/ Venn, Man, Education and Work, (Washington: American Council on Education, 1964) p. 147 ff.

The National Manpower Commission put it this way:

> Although a youngster often reads about different kinds of work with which he can have no firsthand experience, when he thinks about choosing a field of work he is most influenced by occupations he has actually encountered. Generally, these occupations are limited to the principal professions and the services and trades he becomes acquainted with in the course of his daily life.... 3/

In a nation 70+% urbanized, there are very few young people, indeed, who have not "actually encountered" local government nearly every day of their lives. If the National Manpower Council is right, and as education more and more becomes the bridge between the individual and his work, vocational guidance and educational guidance become inseparable. Consequently, it behooves the educator and counselor to know and understand New Careers as an important new ingredient in the counseling/placement process because of the many new doors which the concept opens. New Careers falls well within the recently assumed new importance of vocational and technical education. The dramatic rise in youth unemployment and underemployment, the shortage of badly needed personnel in many technical, semiprofessional and skilled occupations and the rising demand for new educational opportunities both at the secondary and post-secondary levels bring the spotlight to bear on the performance and relation to reality of both the educational establishment and its counselors.

The redirection of vocational-technical education becomes an imperative because modern conditions create a new relationship between man and his work in which education is placed squarely between man and his employability. Although this is nothing new for some men and some work such as for professionals in the local government public service, the relationship may now be said to exist for all men and for all public service. And, that's where the necessity for vocational-technical educators to understand and utilize New Careers concepts comes in.

3/ National Manpower Council, A Policy for Skilled Manpower, (New York: Columbia University Press, 1954), p. 266.

In the process of such understanding the vocational educators should take it upon himself to visit local governments in his community to determine what the particularized employment opportunities are within the global, nationwide figures mentioned in the opening paragraphs of this paper. While State and local government employment has the "growth industry" dimension noted earlier, it will, of course, be manifested in different ways in different local areas. Armed with that finite information, the vocational educators can,hopefully, influence the curriculum planners to redirect vocational-technical education suited to the local needs. One hopes that Public Service Education would become at least as widely offered in junior college curricula as Cosmetology, which our research has shown, for example, to be the most widely offered course in California's vaunted junior college system.

The project "Municipalities as a Model for New Careers and Redirection of Vocational-Technical Education" has a potential of achieving at least a dozen goals. They are:

1. Assist in overcoming persistent manpower shortages in the local government public service ...

2. Create not jobs which can easily lead to nowhere, but careers; a sequence of jobs firmly integrated in the professional structure of local government which offer both permanence and the possibility of advancement ...

3. Identify newly developing occupations in local government's fast-changing occupational needs in order to orient educational institutions, curricula developers and vocational counselors to those needs ...

4. Recommend courses, programs and curricula that will provide the necessary subprofessional personnel ...

5. Improve the quality and quantity of services for urban residents ...

6. Provide job and New Career opportunities that contribute to the well-being of society ...

7. Provide models for curriculum experimentation to prepare individuals for roles as employed adults in work of social and societal significance ...

8. Increase the use of professional, administrative and technical personnel time on those tasks and roles which best utilize their scarce competences and thereby allocate routine and other tasks to provide entry level jobs for New Career people with less formal education and training than the professionals ...

9. Provide an opportunity for the education and training of the disadvantaged members of our society ...

10. Institutionalize and evaluate the results both in terms of a pilot city hall and several educational institutions in California ...

11. Provide a model useful and utilizable by both local governments and education systems throughout the country ...

12. Through the utilization of New Careers concepts, provide a direct link between the educational institutions and their surrounding communities and thus provide a meaningful avenue of "involvement" in keeping with the things educational institutions do best --- education and counseling.

With this somewhat full background, let me close the formal presentation of the ideas, concepts and goals of "Municipalities as a Model for New Careers and Redirection of Vocational-Technical Education" by listing what may be considered the half-dozen principal issues for educators and counselors. Perhaps this will serve as a kickoff point for the discussions by Drs. Smith and Worthington, our "reactors" this morning:

1. What tasks currently being performed by professional personnel are routine and can be performed as well, or better, by other staff, specifically trained to perform them, specifically New Careerists.4/

2. What opportunities for further education and growth can be offered to the professional now functioning in a traditional role which will make maximal use of his specific talents and build on his acquired knowledge and experience?

3. What will this ultimately mean in terms of the cost of service and the social economy?

4. What steps can be taken to reach out into the community and make available to youth the stepping stones of education and training that are relevant, integrated and realistic?

5. How can educational content be presented in different forms which will make it comprehensible and vital to an enlarged and varied student body?

4/ Adapted from Steinberg & Shatz, "Junior Colleges and the New Careers Program," Junior College Journal, (Washington: American Association of Junior Colleges, February, 1968) pp. 12-17.

6. How will institutions of higher learning meet the demands of current legislation and the determination of the poor for postsecondary education with opportunity to make a significant and recognized contribution to society?

There may be a disquieting absence of leadership among colleges and universities in coming to grips with these central concerns. There is no group better suited in terms of philosophy and past performance, nor better qualified in terms of background and commitment. The issues, however, are still in doubt.

Thank you.

Research Division, A. V. A.
Adolphus Hotel
1968 Convention
Tuesday, December 10, 1968

Presented by
Dr. George Parkinson
Director Emeritus
Milwaukee Technical College

Report on "The Evaluation of Residential Schools and the Essential Factors Which Contribute to Their Operation"

In Title I of the Vocational Education Amendments of 1968, Part E, Section 151, paragraphs (a) and (b), there is provision for demonstrating the feasibility and desirability of Residential Vocational Education schools for certain youths of high school age.

There are authorized to be appropriated for the purpose of this section $25 million for the fiscal year ending June 30, 1969; $30 million for the fiscal year ending June 30, 1970; $35 million for the fiscal year ending June 30, 1971, and for the succeeding fiscal year. There had been provision or authorization for such schools dating back to the Vocational Education Act of 1963, but no funds.

In July of 1968 the Department of Health Education and Welfare funded a project with the Milwaukee Technical College for "The Evaluation of Residential Schools and the Essential Factors Which Contribute to Their Operation." This contract began on July 1, 1968 and will terminate on March 1, 1969. The purpose of the project is:

1. To study and evaluate a number of residential schools in terms of the factors which have contributed to their successful operation.

2. To prepare guidelines which reflect the findings of the study and evaluation and which may be helpful in planning a model residential school.

3. Eventually to have the guidelines tested against the experience of developing a model residential school.

The following procedure was implemented by the Milwaukee Technical College in carrying out the terms of this contract. A task force was created which would carry out the study indicated. One of the first points which they addressed themselves to was the development of an instrument which could be sent to the schools to be visited and which would provide much preliminary information. This instrument was to be followed by an on-site visit by the task force and in-depth interviews with the head of the school and the heads of the various divisions of the schools, particularly in terms of the instrument which had already been sent to them.

After these visits will be completed this week, there will be an in-depth study with the consultants of the visits to these various schools, each of which was different from the other and each of which has something to contribute to the total problem under consideration.

All together there will have been visited thirteen (13) residential schools in the United States covering the western part of our country, the southern part, the central part and the eastern part. The study has involved tax-supported schools, independent institutions, and church-related institutions. The study also involves large schools and small schools; co-educational and strictly men's schools, so that all aspects of the problem will have been considered in the careful study and analysis which will be reported to the Department of Health Education and Welfare this coming spring.

The final phase of the report will involve a proposal of one or several types of residential schools which have all of the elements which are necessary for the successful operation of such schools and which will to the maximum extent possible avoid the pitfalls which have been found by the various school administrators of the schools which have been visited.

In addition to this there is currently under development a proposal for a workshop on planning residential schools to be carried out jointly by the Vocational Division of the Department of Public Instruction of the State of Ohio, the State Vocational Office of the State of Wisconsin, and the Milwaukee Technical College, during the coming spring. This would give the planning administrators from over the country an opportunity to gather together and discuss certain aspects of the planning problems which they will meet. This joint project plans to use as a resource agency the Mahoning Valley Vocational School near Niles, Ohio, and will also be based in part on the results of the study currently being carried out by the Milwaukee Technical College. This proposed project will of course have to compete with all of the other proposals for workshops for next summer which will be submitted for consideration.

Copies of the proposal for the present study, of which this is a report, are available for distribution at the end of this meeting.

BUREAU OF SOCIAL SCIENCE RESEARCH, INC.
1200 Seventeenth Street, N. W.
Washington, D. C. 20036

STUDY OF CAREER PATTERNS AND CURRICULUM EMPHASES IN PUBLIC EDUCATION

Eleanor P. Godfrey, Study Director

Paper presented at AVA Convention, December, 1968

TEACHER BACKGROUND, TRAINING, AND OPINIONS

In 1967, the Bureau of Social Science Research, supported in part by funds from the U. S. Office of Education, conducted a nationwide survey of career patterns and curriculum emphases in education. A major purpose of the study was to compare the backgrounds, training, and opinions on some important educational issues of secondary and postsecondary academic and vocational teachers. This report presents some of the results in these areas of inquiry.

The Sample

Four major institutional types were represented in the sample of schools--comprehensive high schools, vocational high schools, vocational-technical centers, and junior or community colleges.

Secondary sample.--The basic sample consisted of approximately 180 public school districts, stratified by secondary enrollment size, drawn at random from the latest available (fall, 1965) Directory of Public School Systems provided to us by the U. S. Office of Education. Only those districts whose estimated secondary enrollments were 600 pupils or more were included in the study population. At least one comprehensive high school was chosen at random from each of the 180 districts. In addition, a vocational or technical high school was selected in each of the 40 sample districts that operated such specialized facilities.

Postsecondary sample.--For each school district at least one public postsecondary two-year institution providing occupational training (area vocational center, technical institute, junior or community college) was identified according to one of the following criteria: (a) designation by the state education agency as the postsecondary institution serving the geographical area in which the sample school district is located, or (b) within "reasonable commuting distance of secondary schools within the district. Approximately 90 of these institutions were selected to represent the range of postsecondary programs available.

The response by type of school and class of respondent is given below:

	Sample Number	Usable Returns	Percent
SCHOOLS	310	249	80%
Comprehensive high school	183	147	80
Vocational high school	39	29	74
Vocational-technical center	34	26	76
Junior college	54	47	87
RESPONDENTS FROM THE 249 SCHOOLS			
Chief administrator	249	220	88
All administrators	820	680	83
Counselors	930	807	87
Teachers	15,300	11,649	76

The distribution of the teacher respondents for each type of school and subject taught is given in the attached Table B-1. Tables B-2 through B-4 present background characteristics. Tables CO-1 through CO-6 present opinion data.

TABLE B-1

TYPE OF SCHOOL WHERE TEACHING BY SUBJECT TAUGHT
(In Percentages)

Subject	SECONDARY TEACHERS						POSTSECONDARY TEACHERS			
	Number	Small High School[a]	Medium High School	Large High School	Very Large High School	Vocational High School	Number	Vocational-Technical Center	Small Junior College[b]	Large Junior College
TOTAL	8648	14.4	17.5	20.8	32.4	14.8	3001	22.6	28.9	48.5
Total academic	6345	15.2	19.0	22.0	34.7	9.1	1539	8.1	40.9	51.0
Science	916	15.4	17.7	21.0	35.7	10.3	327	11.6	38.2	50.2
Mathematics	901	17.1	18.1	20.2	34.7	9.9	236	14.8	40.3	44.9
Social studies	1153	14.7	19.3	22.8	33.3	9.9	322	6.8	41.0	52.2
English	1626	14.7	18.9	22.4	34.6	9.4	350	5.7	44.9	49.4
Foreign language	537	14.0	21.8	23.3	39.9	1.1	71	1.4	53.5	45.1
Fine arts	411	16.8	21.7	20.4	32.8	8.3	99	2.0	43.4	54.5
Physical education	707	14.6	17.7	23.6	33.2	10.9	117	4.3	27.4	68.4
Other	94	14.9	22.3	20.2	31.9	10.6	17	6.0	47.0	47.0
Total vocational	2303	12.2	13.5	17.6	26.0	30.7	1462	38.0	16.3	45.8
Engineering technology	256	5.1	10.5	15.2	19.5	49.6	399	40.4	24.1	35.6
Automotive	188	5.9	5.9	9.6	17.6	61.2	164	62.8	10.4	26.8
Trades	296	12.2	16.6	15.2	23.0	33.1	87	60.9	3.4	35.6
Graphics	98	3.1	7.1	11.2	31.6	46.9	58	27.6	10.3	62.1
Service trades, police	57	-	1.8	5.3	5.3	87.7	65	32.3	7.7	60.0
Agriculture	49	53.1	12.2	8.2	12.2	14.3	24	12.5	29.2	58.3
Home economics	350	16.6	16.9	24.0	29.4	13.1	38	44.7	13.2	42.1
Business education	885	13.8	14.9	21.0	30.3	20.0	392	27.0	19.6	53.3
Distributive education	81	12.3	17.3	19.8	30.8	19.8	62	17.7	16.1	66.1
Health	43	2.3	11.6	-	27.9	58.1	173	37.0	6.9	56.1

[a]Code for comprehensive high school
small: fewer than 1,000 students
medium: 1,000-1,499 students
large: 1,500-1,999 students
very large: 2,000 or more students.

[b]Code for junior college
small: fewer than 150 faculty
large: 150 or more faculty.

TAP B-2

BACKGROUND CHARACTERISTICS OF TEACHERS BY TYPE OF SCHOOL

Type of School	Number	Median Age	Median Years: Teaching Experience	Median Years: Full-Time Outside Employment: Male	Median Years: Full-Time Outside Employment: Female	Degree Status
Small High School						
academic teachers	2243	35	6	0	0	BA (64%) MA (32%)
vocational teachers	587	35	9	0	0	BA (65%) MA (29%)
Large High School						
academic teachers	3638	35	9	0	0	BA (51%) MA (46%)
vocational teachers	1003	35	9	0	0	BA (54%) MA (39%)
Vocational High School						
academic teachers	594	35	9	0	0	BA (54%) MA (41%)
vocational teachers	702	48	9	8[a]	1	BA (36%) HSD (21%) MA (22%)
Technical Center						
academic teachers	133	35	5	5	0	BA (60%) MA (30%)
vocational teachers	555	48	5	9[a]	2	HSD (31%) BA (35%) MA (11%)
Small Junior College						
academic teachers	643	35	7	1	0	MA (76%) BA (14%)
vocational teachers	237	35	5	5[a]	0	MA (51%) BA (37%)
Large Junior College						
academic teachers	821	48	12	0	0	MA (74%) PhD (15%)
vocational teachers	665	48	9	8[a]	1	MA (50%) BA (30%)

[a]Bimodal distribution showing 0-1 years experience or more than 10 years experience.

TABLE B-3

MAJOR OCCUPATIONAL EXPERIENCE OUTSIDE EDUCATION BY SUBJECT TAUGHT

Subject	SECONARY TEACHERS		POSTSECONDARY TEACHERS	
	Number	Occupational Areas[a]	Number	Occupational Areas[a]
TOTAL	7001[b]	Business (40%) Sales (31%)	2682[b]	Business (32%) Sales (22%) Trades (20%)
Total academic	4942	Business (38%) Sales (32%)	1285	Business (31%) Sales (24%)
Science	751	Sales (30%) Construction (21%) Business (20%)	289	Engineering (27%) Sales (21%)
Mathematics	691	Business (36%) Sales (26%) Construction (21%)	199	Engineering (31%) Business (29%) Sales (20%)
Social studies	926	Sales (37%) Business (37%) Construction (20%)	270	Business (39%) Sales (28%)
English	1238	Business (53%) Sales (36%)	287	Business (43%) Sales (25%)
Foreign language	398	Business (52%) Sales (27%)	55	Business (53%) Sales (24%)
Fine arts	300	Sales (33%) Business (32%)	81	Sales (26%) Business (25%) Graphics (25%)
Physical education	563	Youth (46%) Sales (28%) Business (27%)	91	Youth (37%) Sales (24%) Construction (24%)
Other	75	Business (36%) Sales (32%)	13	Business (31%)
Total vocational	2059	Business (44%) Sales (28%) Trades (29%)	1397	Business (32%) Trades (28%) Engineering (22%)
Engineering technology	236	Trades (61%) Engineering (32%) Construction (28%)	382	Engineering (66%) Trades (34%)
Automotive	182	Trades (79%)	155	Trades (78%) Construction (19%)
Trades	272	Trades (62%) Construction (46%)	85	Trades (72%) Construction (31%)
Graphics	93	Graphics (50%) Trades (40%)	55	Graphics (46%) Trades (26%)
Service trades, police	56	Trades (66%)	60	Trades (43%) Police (40%)
Agriculture	40	Farming (88%)	21	Farming (90%)
Home economics	259	Food service (38%) Sales (38%) Business (37%)	33	Business (45%) Food service (27%)
Business education	801	Business (88%) Sales (30%)	374	Business (81%) Sales (28%)
Distributive education	80	Sales (88%) Business (30%) Construction (20%)	62	Sales (68%) Business (61%)
Health	40	Health (72%) Sales (18%)	170	Health (87%)

[a]Only areas in which approximately 20% or more of the respondents in a given category have had experience are listed.

[b]Base number includes only those teachers with occupational experience outside education.

TABLE B-4

LOCUS OF PRINCIPAL OCCUPATION IMMEDIATELY PRIOR TO PRESENT JOB BY SUBJECT TAUGHT
(In Percentages)

Subject	SECONDARY TEACHERS					POSTSECONDARY TEACHERS				
	Number	Undergraduate Student	Graduate Student	Another School	Outside Education	Number	Undergraduate Student	Graduate Student	Another School	Outside Education
TOTAL	8648[a]	29.3	12.0	24.1	32.2	3001[b]	5.5	15.7	30.9	46.1
Total academic	6345	31.6	13.8	25.6	26.6	1539	5.3	24.0	41.8	27.2
Science	916	30.3	15.4	22.7	28.7	327	4.6	23.2	37.6	34.4
Mathematics	901	33.5	12.1	25.0	27.4	236	7.2	19.5	41.1	29.6
Social studies	1153	31.2	16.9	23.9	25.9	322	3.1	30.1	32.9	31.8
English	1626	30.4	12.6	26.8	27.6	350	3.7	24.3	48.0	22.5
Foreign language	537	29.6	13.0	26.6	27.5	71	4.2	33.8	46.5	15.4
Fine arts	411	28.2	13.4	31.9	23.8	99	4.0	16.2	61.6	16.1
Physical education	707	38.6	12.0	26.4	20.9	117	12.8	20.5	44.4	21.4
Other	94	25.5	14.9	23.4	35.2	17	23.5	5.9	23.5	35.3
Total vocational	2303	23.0	7.1	20.0	47.3	1462	5.8	7.0	19.3	66.2
Engineering technology	256	16.8	9.0	19.1	53.1	399	7.8	4.8	14.5	70.8
Automotive	188	8.5	3.2	11.2	76.1	164	3.0	1.2	11.6	81.7
Trades	296	22.6	5.4	18.6	51.0	87	-	-	5.7	93.0
Graphics	98	14.3	10.2	13.3	59.1	58	6.9	5.2	17.2	68.8
Service trades, police	57	-	1.8	7.0	87.8	65	1.5	6.2	10.8	78.5
Agriculture	49	34.7	12.2	28.6	24.5	24	4.2	4.2	41.7	50.0
Home economics	350	24.0	7.4	23.4	41.8	38	7.9	5.3	21.1	65.8
Business education	885	30.4	7.3	22.4	36.9	392	6.9	12.8	31.4	46.9
Distributive education	81	21.0	9.9	21.0	45.1	62	8.1	11.3	21.0	59.6
Health	43	4.7	4.7	16.3	74.5	173	4.6	8.1	16.8	70.0

[a]Two hundred thirteen nonrespondents (2.5%).

[b]Fifty one nonrespondents (1.7%).

TABLE B-5

TYPE OF CERTIFICATION BY SUBJECT TAUGHT
(In Percentages)

Subject	SECONDARY TEACHERS						POSTSECONDARY TEACHERS					
	Number	None	Provisional	Standard; Permanent	Vocational	Advanced	Number	None	Provisional	Standard; Permanent	Vocational	Advanced
TOTAL	8648[a]	0.9	11.2	63.1	8.8	10.9	3001[b]	22.1	5.5	28.4	21.5	18.6
Total academic	6345	0.8	11.9	72.8	0.9	11.8	1539	21.2	3.9	38.3	5.9	26.4
Science	916	0.4	11.6	74.1	1.4	11.1	327	27.2	4.3	31.7	10.1	22.9
Mathematics	901	1.3	13.2	72.0	1.2	11.4	236	19.5	3.0	42.8	11.9	19.0
Social studies	1153	0.8	9.4	75.3	0.7	12.0	322	23.9	4.0	31.3	4.3	32.6
English	1626	0.6	13.8	70.8	0.2	11.9	350	20.0	2.9	37.5	3.7	30.3
Foreign language	537	1.3	16.2	69.1	0.8	10.2	71	28.2	5.6	36.6	-	23.9
Fine arts	411	1.2	7.1	73.0	1.2	14.1	99	13.1	4.0	49.5	1.0	29.3
Physical education	707	0.3	8.8	75.5	0.6	11.9	117	6.0	6.0	62.4	1.7	21.3
Other	94	-	19.2	67.1	1.1	12.8	17	29.4	5.9	29.4	-	23.6
Total vocational	2303	1.3	9.4	47.8	30.7	8.6	1462	23.0	7.2	18.1	37.9	10.5
Engineering technology	256	1.6	11.3	36.0	42.6	7.5	399	27.6	7.8	11.1	39.8	8.5
Automotive	188	1.6	8.0	22.3	61.0	5.4	164	23.2	7.3	4.2	60.4	1.8
Trades	296	1.0	9.1	43.9	36.4	7.8	87	25.3	3.4	5.7	62.0	-
Graphics	98	3.1	8.2	43.8	37.7	5.1	58	13.8	10.3	5.2	53.4	15.5
Service trades, police	57	3.5	12.3	17.6	61.4	1.8	65	12.3	10.8	12.3	50.8	10.8
Agriculture	49	-	-	46.9	38.7	14.2	24	25.0	12.5	25.0	16.7	12.4
Home economics	350	-	6.6	45.5	35.5	8.3	38	15.8	2.6	31.6	26.3	18.4
Business education	885	1.4	10.3	63.4	12.1	10.8	392	19.1	6.4	36.2	20.4	16.5
Distributive education	81	1.2	9.9	37.0	42.0	9.8	62	16.1	4.8	24.2	35.5	16.1
Health	43	7.0	18.6	25.6	44.2	-	173	30.6	8.1	12.7	36.4	8.7

[a]One hundred eighty six nonrespondents (2.2%).

[b]One hundred fourteen nonrespondents (3.8%).

▫ EDUCATIONAL ISSUES ▫

The last group of questions concern a number of important issues currently being debated by educators (and the general public). Because the issues are controversial, we have summarized two or three major positions on each and are asking you to choose the statement which compares most closely with your own thinking. *Please circle one number for each statement* and *add any comments you desire.*

20. The best way to train for jobs requiring less than a bachelor's degree is to:

Table CO-1

Emphasize general education through grade 12, reserving occupational training for grades 13 and later 1

Give high school students the opportunity to explore various occupations, but let industry provide specialized skill training "on the job" 2

Provide intensive occupational training in the high school 3

21. The rapid increase in the number of two-year colleges raises serious questions about the functions these institutions should serve.

Table CO-2

A two-year college can not have both a high quality academic program and a high quality occupational program. Each institution should specialize – – either in lower division college work or vocational and technical training 1

Although one institution can provide both an academic and an occupational program, it is poor educational policy to teach both types of students in the same classes 2

A two-year college has the obligation to provide all students with the same general education courses. Taking classes together is beneficial to those in both occupational and bachelor's-oriented programs 3

22. More intensive vocational training and guidance in the junior high school would:

Table CO-3

Enable students to become acquainted with the world of work earlier and therefore make more realistic educational and occupational choices 1

Encourage students to make up their minds too early and restrict their future educational and occupational careers 2

Be impractical – junior high school students are not mature enough to profit from such experiences 3

Table CO-4

26. Critical evaluation of current occupational programs suggests that they:

Are suited to the abilities of the enrollees and train people for jobs that exist 1

Are based on an out-of-date philosophy and serve neither the student nor the community well 2

Do a good job with the average student but neglect both the slow and the sophisticated learner 3

Table CO-5

27. Introduction of more rigid entrance requirements for occupational programs would:

Raise the prestige of the field. Occupational programs have too often been the "dumping ground" for academic failures 1

Exclude the very students these programs should serve and still not attract the high ability student because of the general public emphasis on the importance of a bachelor's degree 2

Table CO-6

24. The charge that students with a vocational major in high school cannot "make it" in college:

Is more apparent than real because students in both college preparatory and vocational programs take the same basic prerequisite courses 1

Is a serious one because the "academic" subjects taught vocational students do not meet standards for college entrance 2

Is true, but beside the point, because most vocational graduates do not have the ability to handle college work 3

BEST PLACE FOR OCCUPATIONAL TRAINING FOR JOBS REQUIRING LESS THAN BACHELOR'S DEGREE
COMPARISON OF OPINIONS OF ADMINISTRATORS, COUNSELORS, AND TEACHERS
(In Percentages)

SECONDARY					POSTSECONDARY				
Type of School	Number	Post-secondary Institution	On the Job	High School	Type of School	Number	Post-secondary Institution	On the Job	High School
TOTAL	9637[a]	15.6	47.3	33.5	TOTAL	3500[b]	46.0	31.3	18.5
Small High School	3059	15.7	51.5	29.7	Technical Center	775	52.3	17.7	26.2
administrators	131	22.1	55.0	21.4	administrators	62	56.5	9.7	24.2
counselors	166	19.9	53.6	22.9	counselors	34	50.0	17.6	32.4
academic teachers	2171	15.0	52.5	29.4	academic teachers	124	50.8	24.2	24.2
vocational teachers	591	15.6	46.4	34.5	vocational teachers	555	52.3	17.1	26.5
Large High School	5114	15.5	50.3	30.8	Small Junior College	1021	42.7	37.9	15.2
administrators	184	14.7	62.0	21.2	administrators	90	60.0	27.8	8.9
counselors	328	20.4	50.6	25.6	counselors	63	36.5	42.9	14.3
academic teachers	3597	15.8	50.8	30.1	academic teachers	630	38.4	43.0	15.2
vocational teachers	1005	13.0	46.4	36.7	vocational teachers	238	49.2	26.9	17.6
Vocational High School	1464	21.9	27.9	50.8	Large Junior College	1704	45.1	33.4	17.0
administrators	90	15.6	14.4	66.7	administrators	123	56.1	26.0	13.8
counselors	90	18.9	32.2	45.6	counselors	126	38.9	38.1	19.0
academic teachers	577	15.4	35.9	43.0	academic teachers	786	42.6	38.3	15.1
vocational teachers	707	15.6	22.6	55.7	vocational teachers	669	47.1	28.3	19.4

[a] 349 nonrespondents (3.6%)

[b] 149 nonrespondents (4.3%)

TABL CO-2

BEST INSTITUTIONAL ARRANGEMENT FOR TWO-YEAR COLLEGE ACADEMIC AND VOCATIONAL PROGRAMS
COMPARISON OF OPINIONS OF ADMINISTRATORS, COUNSELORS, AND TEACHERS
(In Percentages)

SECONDARY					POSTSECONDARY				
Type of School	Number	Separate Schools	Separate Classes	Same Classes	Type of School	Number	Separate Schools	Separate Classes	Same Classes
TOTAL	9637[a]	36.8	24.3	34.4	TOTAL	3500[b]	19.3	32.9	42.9
Small High School	3059	38.2	25.9	32.1	Technical Center	775	42.6	25.9	27.2
administrators	131	33.6	29.0	35.1	administrators	62	38.7	22.6	33.9
counselors	166	31.3	32.5	31.9	counselors	34	41.2	14.7	41.2
academic teachers	2171	40.1	26.3	29.5	academic teachers	124	37.9	29.8	29.8
vocational teachers	591	34.2	21.8	40.9	vocational teachers	555	44.1	26.1	25.0
Large High School	5114	36.1	25.2	34.6	Small Junior College	1021	15.8	35.9	43.5
administrators	184	25.0	25.5	45.1	administrators	90	12.2	35.6	43.3
counselors	328	29.9	25.6	40.9	counselors	63	9.5	34.9	50.8
academic teachers	3597	38.6	25.9	31.3	academic teachers	630	14.9	39.0	42.4
vocational teachers	1005	31.3	21.4	42.2	vocational teachers	238	21.0	28.2	44.5
Vocational High School	1464	36.2	18.6	38.6	Large Junior College	1704	10.9	34.3	49.8
administrators	90	25.6	15.6	56.7	administrators	123	4.1	22.0	65.9
counselors	90	38.9	18.9	36.7	counselors	126	6.3	33.3	54.8
academic teachers	577	37.4	18.7	37.8	academic teachers	786	12.0	40.1	43.4
vocational teachers	707	36.2	19.0	37.3	vocational teachers	669	11.8	30.0	53.4

[a] 436 nonrespondents (4.5%)

[b] 167 nonrespondents (4.8%)

DESIRABILITY OF MORE INTENSIVE VOCATIONAL TRAINING AND GUIDANCE IN THE JUNIOR HIGH SCHOOL
COMPARISON OF OPINIONS OF ADMINISTRATORS, COUNSELORS, AND TEACHERS
(In Percentages)

SECONDARY					POSTSECONDARY				
Type of School	Number	Helpful	Injurious	Impractical	Type of School	Number	Helpful	Injurious	Impractical
TOTAL	9637[a]	52.4	11.8	32.2	TOTAL	3500[b]	49.1	14.7	32.6
Small High School	3059	52.1	13.0	31.5	Technical Center	775	58.5	12.6	26.5
administrators	131	45.8	10.7	40.5	administrators	62	69.4	8.1	19.4
counselors	166	65.7	6.0	24.7	counselors	34	76.5	2.9	20.6
academic teachers	2171	51.0	14.6	30.8	academic teachers	124	55.6	12.1	30.6
vocational teachers	591	53.8	9.3	34.0	vocational teachers	555	56.8	13.7	26.7
Large High School	5114	51.4	11.7	33.4	Small Junior College	1021	45.0	16.1	34.8
administrators	184	51.6	7.1	38.0	administrators	90	56.7	10.0	28.9
counselors	328	62.5	9.5	25.6	counselors	63	57.1	12.7	25.4
academic teachers	3597	50.8	13.0	32.7	academic teachers	630	40.8	19.2	36.2
vocational teachers	1005	50.0	8.6	37.4	vocational teachers	238	48.3	10.9	35.7
Vocational High School	1464	56.1	10.1	29.4	Large Junior College	1704	47.3	14.8	34.0
administrators	90	73.3	4.4	21.1	administrators	123	61.0	5.7	30.1
counselors	90	66.7	7.8	22.2	counselors	126	57.1	12.7	28.6
academic teachers	577	49.7	13.7	32.4	academic teachers	786	39.4	19.1	37.3
vocational teachers	707	57.9	8.2	29.0	vocational teachers	669	52.2	11.8	32.0

[a] 345 nonrespondents (3.6%)

[b] 127 nonrespondents (3.6%)

EVALUATION OF CURRENT OCCUPATIONAL PROGRAMS
COMPARISONS OF OPINIONS OF ADMINISTRATORS, COUNSELORS, AND TEACHERS
(In Percentages)

SECONDARY					POSTSECONDARY				
Type of School	Number	Realistic	Out of Date	Neglect Nonaverage Student	Type of School	Number	Realistic	Out of Date	Neglect Nonaverage Student
TOTAL	9637[a]	32.6	19.9	38.4	TOTAL	3500[b]	38.5	15.5	35.5
Small High School	3059	31.3	19.4	40.0	Technical Center	775	51.4	8.9	34.6
administrators	131	32.8	19.1	41.2	administrators	62	43.5	17.7	27.4
counselors	166	26.5	20.5	44.0	counselors	34	55.9	11.8	32.4
academic teachers	2171	30.3	20.8	39.2	academic teachers	124	40.3	7.3	50.0
vocational teachers	591	35.9	14.0	41.6	vocational teachers	555	54.4	8.1	32.2
Large High School	5114	30.5	22.3	37.5	Small Junior College	1021	31.0	20.3	33.4
administrators	184	28.3	20.1	44.0	administrators	90	37.8	22.2	30.0
counselors	328	25.0	22.9	46.6	counselors	63	20.6	31.7	42.9
academic teachers	3597	29.3	23.9	36.0	academic teachers	630	27.5	21.0	33.8
vocational teachers	1005	37.0	16.5	38.7	vocational teachers	238	40.8	14.7	31.1
Vocational High School	1464	42.2	12.9	38.4	Large Junior College	1704	37.0	15.7	37.1
administrators	90	43.3	14.4	40.0	administrators	123	40.7	17.9	32.5
counselors	90	31.1	11.1	52.2	counselor	126	34.9	17.5	41.3
academic teachers	577	32.6	16.5	42.5	academic teachers	786	32.8	18.7	35.9
vocational teachers	707	51.3	10.0	33.1	vocational teachers	669	41.7	11.5	38.6

[a]877 nonrespondents (9.1%)

[b]369 nonrespondents (10.6%)

TABLE CO-5

PROBABLE OUTCOME OF MORE RIGID ENTRANCE REQUIREMENTS FOR OCCUPATIONAL PROGRAMS
COMPARISON OF OPINIONS OF ADMINISTRATORS, COUNSELORS, AND TEACHERS
(In Percentages)

SECONDARY				POSTSECONDARY			
Type of School	Number	Enhance Prestige	Exclude Target Population	Type of School	Number	Enhance Prestige	Exclude Target Population
TOTAL	9637[a]	39.0	55.6	TOTAL	3500[b]	30.4	63.1
Small High School	3059	36.8	58.7	Technical Center	775	46.1	49.3
administrators	131	22.9	74.8	administrators	62	43.5	45.2
counselors	166	23.5	74.1	counselors	34	44.1	50.0
academic teachers	2171	36.0	59.0	academic teachers	124	37.9	60.5
vocational teachers	591	46.5	49.9	vocational teachers	555	48.3	47.2
Large High School	5114	35.6	58.5	Small Junior College	1021	23.8	68.6
administrators	184	22.3	72.8	administrators	90	15.6	81.1
counselors	328	20.7	75.0	counselors	63	19.0	76.2
academic teachers	3597	34.6	59.0	academic teachers	630	23.5	68.3
vocational teachers	1005	46.4	48.8	vocational teachers	238	29.0	62.6
Vocational High School	1464	55.3	38.5	Large Junior College	1704	27.2	66.2
administrators	90	52.2	44.4	administrators	123	15.4	80.5
counselors	90	45.6	50.0	counselors	126	17.5	80.2
academic teachers	577	48.9	43.8	academic teachers	786	24.8	68.1
vocational teachers	707	62.1	32.0	vocational teachers	669	33.9	58.7

[a] 531 nonrespondents (5.5%)

[b] 230 nonrespondents (6.6%)

TABLE CO-6

VALIDITY OF THE CHARGE THAT VOCATIONAL HIGH SCHOOL MAJORS CANNOT "MAKE IT" IN COLLEGE
COMPARISON OF OPINIONS OF ADMINISTRATORS, COUNSELORS, AND TEACHERS
(In Percentages)

SECONDARY					POSTSECONDARY				
Type of School	Number	Untrue	True	Irrelevant	Type of School	Number	Untrue	True	Irrelevant
TOTAL	9637[a]	35.8	28.3	29.4	TOTAL	3500[b]	36.2	32.7	22.0
Small High School	3059	33.5	28.6	31.6	Technical Center	775	46.1	28.6	19.1
administrators	131	41.2	22.9	29.8	administrators	62	74.2	12.9	4.8
counselors	166	38.6	23.5	31.3	counselors	34	76.5	5.9	11.8
academic teachers	2171	28.4	30.7	34.3	academic teachers	124	30.6	46.0	21.8
vocational teachers	591	49.1	23.7	22.0	vocational teachers	555	44.5	27.7	20.5
Large High School	5114	33.5	29.4	30.3	Small Junior College	1021	29.4	34.6	26.1
administrators	184	50.0	22.8	19.0	administrators	90	35.6	30.0	22.2
counselors	328	43.0	21.0	30.8	counselors	63	41.3	30.2	20.6
academic teachers	3597	28.4	32.0	32.9	academic teachers	630	24.4	37.6	27.6
vocational teachers	1005	45.7	23.9	23.1	vocational teachers	238	37.0	29.4	24.8
Vocational High School	1464	48.9	22.8	21.9	Large Junior College	1704	35.8	33.5	21.0
administrators	90	61.1	23.3	15.6	administrators	123	45.5	30.1	15.4
counselors	90	50.0	30.0	17.8	counselors	126	28.6	39.7	20.6
academic teachers	577	44.7	25.5	23.2	academic teachers	786	30.3	36.3	22.5
vocational teachers	707	50.6	19.7	22.1	vocational teachers	669	41.9	29.7	20.3

[a]636 nonrespondents (6.6%)

[b]315 nonrespondents (9.0%)

"APPLYING SYSTEMS ANALYSIS TECHNIQUES TO THE EVALUATION OF VOCATIONAL PROGRAMS"

American Vocational Association Conference
Dallas, Texas
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Alan G. Robertson, Director

University of the State of New York
The State Education Department
Division of Evaluation

The purpose of our discussion with you this afternoon is to present in elementary form, a way of organizing an evaluation program or project so that the subject of the evaluation can better facilitate the measurement process and so that the results of measurement can be directly applied to change or modify the program itself.

To start, we seem to hear from those who are promoting an awareness of evaluation and writing guidelines for standards and the like that the first order of evaluation is to define the objectives of the program in so-called "behavioral terms". This basic technique is supposed to unlock the doors of understanding so that all we have to do is select valid measurement techniques, including tests, questionnaires, rating scales and the like, apply them to the correct segment of the project outcome, tabulate the data, draw the influences and go off to new bigger and better evaluations thereafter.

While we have heard the cliche "write objectives in behavioral terms" over and over again, most of the time it seems to stop at this point without going any further. When we press the point, "behavioral terms" by context is thought to be purely human behavioral and most often individual human behavior.

First of all, all behavior in the evaluative usage isn't always individual - it is more often in terms of small groups and sometimes in mass populations; very often this behavior does not include any physo-motor or cognitive learning changes in the subject matter achievement sense or context. For example, in a broad sense, a change in attitude of a shop teacher toward the vocational readiness or aptitude of a group of inner city black students is behavioral - it can be thought of as "inward behavioral" instead of "outward behavioral". Or suppose we have an industrial evaluation project in which we are trying to determine if controlled variations in frequency and angle of incidence of the illumination of the work stations where metal burnishing operations are carried out will reduce the number of rejections of the pieces and perhaps improve texture uniformity. Now if we think in the most common meaning of "behavioral" we are tempted to focus on workers and work methods as the variable to be manipulated or the object of what our measurement should be. In this illustration it would not be since theoretically work methods or processes are not changing. However, the nature, or characteristics or if you please "behavior" of a lot (given quantity) of similar metal products is the object of measurement and in fact a given characteristic or characteristics of a similar lot (in quantity), namely the number of rejected pieces for a given reason is our baseline criterion measure against which we decide if behavioral changes are taking place.

As a matter of personal preference, I would rather talk about "objectives" expressed in terms which express, imply, or lend themselves to the measurement of change (of any kind) and leave the "behavioral" terminology to the psychologists.

Where systems analysis techniques assist the vocational education evaluator is that they enable him to better pick out the stage (time sequence) of the program operation he wishes to evaluate, identify the relevant elements in the piece of the program under scrutiny to the outcome changes we are trying to measure. Of course, we very often have to measure a vocational program from start to finish, and account for all elements in its success or failure. In this case, systems analysis techniques help us to compartmentalize or classify these elements, string them together in a series of circuits so that interrelationships may be established and judgments can be made about their relative affect on the nature of the end products.

Now before we begin to walk through some analysis models, let me say that application of systems analysis techniques to evaluation differs from PERT or Program Evaluation Review Technique, in that PERT focuses on the steps and time and other expenditures in the identified evaluation or research processes, while what follows is to be thought of in terms of the operating program not the evaluative process per se.

Furthermore for the sake of keeping ourselves pragmatic and less theoretical, let's pretend that we are involved in evaluating a state system of brand new area vocational programs, which all started from scratch in 1965 (PL 88-210 "scratch" that is) and already at the close of 1968 are showing variations in program quality and effectiveness even though they have identical plants, equipment, and programs. Let's also assume that we have the necessary staff (our own or under contract) and funds to do a total evaluation. However as we walk through these models, remember that we can also use each separately, if we were only going to evaluate a single aspect or cluster of influences on the program's success.

These can be divided into four areas:

I - CONTEXT EVALUATION - A look at the ecology or environment in which each program was started and is currently operating. Two similar programs operating for a period of time under different conditions may have different program results and in fact <u>appear</u> to be different.

II - INPUT EVALUATION - Examination of student characteristics, public relations techniques, admission and course selection policies, teacher recruitment and characteristics etc. to determine affect upon program success variations.

III - PROCESS EVALUATION - To identify critical elements in the on-going program over a period of time such as administrative policies, in-service training, teacher supervision, allocation of discretionary funds for instruction, use of advisory committees, pupil grouping, etc. which may have had a major influence on program outcomes.

IV - PRODUCT EVALUATION - Identification of program success criterion measures such as student proficiencies, program holding power, rapidity and nature of initial placement, student performance ratings of employers, etc. and their relation to Context, Input, and Process variables.

The following visuals expand upon the above further.

A Classification System for Evaluating Long Term Progress or Change

I - Context Evaluation

	*THEORY	OPERATION
A - OBJECTIVE	To define the operating context or environment at different stages in time; to identify and assess needs or problems in the environment which the program product was intended to supply or alleviate.	Identification of the component parts of the geographic area for which the program was designed such as economy, population, labor markets, competitive educational opportunities, financing, community interest and community elements leadership roles.
B - METHOD	By individually describing the major sub-systems of the context in their relevant perspectives and by analyzing the intended versus the actual inputs, it is hoped that causes of discrepancies between intended and actual system inputs can be determined.	Break up the objective operations into clusters of sub-problems. Identify what would have been the ideal program solution for each, if the climate and resources were unlimited and each was not related to the other. Compare with the actual program characteristics which were adapted. Test for relevancy to the operational objectives above, examine feasibility of alternates, and estimate cause and validity of the limitations on what would have been the ideal program.
C - APPLICATION	For determining if the operating program is a direct outcome of the original program need; for validating if the original contextual elements still are valid for the program today and in the same degree; for revising original goals and objectives.	Basis for determining if initial planning for program needs to resurveyed or reevaluated (area study). Basis for determining if contextual element changes are serious enough to warrant program modifications or drastic revisions.

*Adapted from the Clipp Evaluation Model - Ohio State University.

A Classification System for Evaluating Long Term Progress or Change

II - Input Evaluation

	*THEORY	OPERATION
A - OBJECTIVE	To identify and assess the capabilities of the instructional system, the input strategies, and the administrative and supervisory designs for implementing the strategies in terms of program inputs.	Compare actual inputs into the school program versus those which were identified in the program planning stages and for which the area instructional program was designed. Determine continuity of policy and program if actual inputs have differed from those which were estimated.
B - METHOD	By describing and analyzing available and material resources, solution strategies and procedural designs for relevance, feasibility and economy, the best program course of action may be determined.	Survey or estimate what is needed: policy, plant, staff, equipment, supplies, communications, transportation, students. Determine what is available in light of necessary changes in that which must be obtained at varying degrees of cost. Set up a timetable of input changes versus the practicality of their implementation so that the educational system does not function less efficiently during the changeover or program strengthening processes.
C - APPLICATION	For selecting those sources of additional support appropriate to the segment of the instructional program which needs to be strengthened, or for selecting sources of support from I A and B (Context Evaluation) operations, solution strategies, and procedural designs for programming instructional change activities if needed.	To determine which student, faculty, and other inputs selection policy and procedural changes need to be made to update a program of instruction. To determine if variances in input policies, strategies, and implementation practices can account for variances in school quality.

*Adapted from the Clipp Evaluation Model - Ohio State University

A Classification System for Evaluating Long Term Progress or Change

III - Process Evaluation

	*THEORY	OPERATION
A - OBJECTIVE	To identify or predict in process, those variances or defects in the implementation or procedural design which can account for differences in program quality, between schools or between the planned program quality level and that which is being achieved.	To recognize when critical points vital to program quality have arisen, to be able to identify the basis for administrative judgments made at these points and to determine which process changes made as a result markedly affected the success or non-success of the whole vocational program.
B - METHOD	By identifying past and present barriers or implementation agents to the present program of instructional activities.	Reconstruct a time line or log of important activities or developments since the program began; compare against original planning and procedures documents, examine annual budgets for shift in program purposes, interview former and present staff, students, advisory committees and the like, relate to perceptions of program development nature and quality.
C - APPLICATION	For implementing and refining program changes; for establishing valid criterion measures as the basis for a system of program quality control.	For on-going decision making whether to continue the present program as originally planned or shift to alternates which are suggested by results of operations under A and B above; for monitoring adherence to program development timetables, for determining if outside experts need to be called in, or if major budget shifts or revisions need to be made.

*Adapted from the Clipp Evaluation Model - Ohio State University

A Classification System for Evaluating Long Term Progress or Change

IV - Product Evaluation

	*THEORY	OPERATION
A - OBJECTIVE	To relate program outcome information to its objectives and to context, input, and process evaluation resultant information.	To have a valid basis for judgments as to the success of the entire program as a whole versus each of its stated objectives; to determine accuracy of previous estimates of student-faculty-community environment variables and input resources, and the total cost-benefit of the operational processes.
B - METHOD	By defining operational and measurement criteria associated with the objectives, by comparing these measurements with predetermined success standards or inter-school comparative bases, and by interpreting the outcomes of the program in terms of recorded context, input, and process evaluation information.	Collect, classify, and assign judgmental weightings to the evaluation results obtained from context, input, and process evaluations. Involve panels of students, faculty, business people, parents, labor, outside experts, to pass upon these judgments before final accounts of evaluation results are written.
C - APPLICATION	For making long range program plans based on evaluation outcomes, for deciding to continue, modify, or refocus, on-going change activities or identifying needed new ones.	Basis of recommendation that original or evolving program of vocational activities needs to be continued, drastically modified or terminated as completed or ineffective in light of objectives. Basis for pinpointing where short and long range program change planning should take place, estimating timetables, and designing a foresight, rather than hindsight system of evaluation which can yield needed feedback information as it is going on as a built in program element.

*Adapted from the Clipp Evaluation Model - Ohio State University

THE DEVELOPMENT OF ACHIEVEMENT TESTS FOR TRADE AND TECHNICAL EDUCATION: A THREE YEAR SUMMARY

THOMAS S. BALDWIN
UNIVERSITY OF ILLINOIS

The initial few months of the project were devoted to meetings to orient the project staff to the area in which we would be working and to discuss special problems that might arise. Meetings were held with a number of technical institute presidents as well as with members of the North Carolina Curriculum Laboratory to familiarize all concerned to the purpose of the research and to provide insight into the methodology. Several discussions were also held with psychologists and master tradesmen about the proposed development of a conceptual framework for the research on skilled psychomotor behavior.

During the summer of 1966, all institutions that had been invited to participate in this project were visited. Information as to the objectives of our research as well as the actual operating procedures were outlined. Wherever possible, instructors in the institutions involved were included in the explanation of the project and over twenty were placed under contract, having agreed to detail and analyze the curriculum they teach. Also, some instructors began writing test items for later use; as a pool of items was developed, guidelines for a very preliminary form of the tests became established. The area of psychomotor research also received much attention as several trips were made to consult with the military about any achievement measurement underway at the time. Since no work had been done in this area, the majority of people visited could only offer suggestions.

During the next several months, all additional instructors needed as field consultants were procured, thus each curriculum had approximately five instructors analyzing it. The last three weekends in October, 1966 were devoted to meetings with the field consultants, the purpose of which was first to arrive at a consensus concerning the curriculum analysis; secondly, to plan ways and means of developing performance tests; and thirdly, to evaluate items which had already been developed for the test item pool. Detailed outlines of each curriculum were developed and a system was decided upon for the classification of the various levels of learning and behavioral objectives. The system was a modification of Bloom's Taxonomy of Educational Objectives, Cognitive Domain, and was classified at four levels: knowledge, understanding, and two levels of application. In order to have some means of comparing student scores on the preliminary forms of the achievement tests, it was decided that each achievement test should contain a battery of reference tests which possess a high degree of reliability and a known validity. An extensive review

of aptitude and achievement tests in print was undertaken. Also, problems concerning methods and techniques of evaluation of the tests were considered and it was decided that various factor analyses would be performed between the subtests and any reference tests utilized. The area of performance tests received considerable attention as well.

In the final quarter of the first year of operation the item-writing committees developed a pool of test items of from 500 to 800 for each curriculum. These items were constructed to represent each topic into which each curriculum had been divided, and at the same time to be representative of the four different levels of learning and behavioral objectives. The two technological areas, which had students graduating in the spring, Electronics and Data Processing, were prepared for administration. In order to examine a maximum number of items, two "analogous" forms of the test in each area were developed. Item analyses would determine, in the future, the most appropriate items from each form to be used on the final form of each test. Scheduling of institutions for both spring technological and summer trade testing was accomplished. Institutions in North and South Carolina, Connecticut, Delaware, New Jersey, and Georgia had agreed to participate. Contact was also made in several other states, notably Colorado, California, Florida, and Wisconsin. In order to help identify the factors isolated through factor analysis, a battery of research instruments entitled "Reference Tests for Cognitive Factors" developed by Educational Testing Service in cooperation with the U.S. Office of Naval Research, was selected. The project staff, in consultation with subject matter specialists and other behavioral consultants, selected from five to eight of these short tests for administration with each of our achievement tests. While basic research in tactile-kinesthetic sensitivity was being conducted, much time was also devoted to designing tactile-kinesthetic sensitivity tasks which were more directly applicable to the manipulative skills required in the trade curricula included in the project. In addition to the work being done in the psychomotor performance area, studies such as automobile auditory diagnosis, a tool identification test, an automobile electrical system trouble shooting test, a static and dynamic analyzation test of television malfunctions, and a diagnostic test utilizing an electronic engine analyzer were under development.

The next several months witnessed a very extensive testing program. The two technologies, Data Processing and Electronics, were completed with testing having been accomplished in five states, 29 institutions, and over 500 subjects being examined. Preparation was underway to begin trade testing in Auto Mechanics, Air Conditioning Heating and Refrigeration, Electrical Installation and Maintenance, Machinist, and Radio-Television Repair. The scoring of the paper-and-pencil achievement tests in the technologies was begun with the aid of an IBM-1230 test scoring machine. Results were punched on data cards for later use in computerized analysis. The reference tests, however, had to be hand scored and this task was also begun. The

performance tests were prepared for use in the various trades, with several of the areas having from four to seven of these in addition to their achievement and reference tests. Performance tests were scheduled separately such that the demand on the students would not be too great.

In the summer achievement testing of the trade areas was conducted. Paper-and-pencil testing teams, as well as the performance testing teams, were occupied much of the time. When the testing had been completed in late August it was found that we had visited 49 different institutions in six states. The total sample for all seven curricula areas came to over 1600 students. During this period the hand-scoring of the reference tests occupied much of the staff that was not out testing. Since each student generated from five to ten tests that required hand scoring, it is conservatively estimated that over ten thousand tests were thusly scored. The data from the two technologies were sent to the computing center for analysis. Computer analysis included, among other things, means and standard deviations for all subtests, performance tests, and reference tests; reliabilities; item difficulty; biserial correlations for each item; response count for each detractor both above and below the means; and subtest intercorrelations. As the trade area answer sheets were returned they were scored and data cards made ready for the computer.

In September, 1967 the principal investigator accepted a position on the University of Illinois faculty. That portion of the project dealing with the experimental investigations in the performance domain was also shifted to Illinois. Thus, the faculties and facilities of two universities were closely coordinated toward the revision and improvement of the experimental achievement measures. The Illinois portion of the project concerned itself primarily with the development and modification of tasks to evaluate the relationship of certain perceptual abilities to the learning of skills in the various trades that are presently being studied. Construction of auditory diagnostic tests in both the automotive and machinist areas was well underway and plans made for modification of the previously unreliable television performance test. The North Carolina State portion of the project concerned itself with the statistical analysis of the test data, dissemination of it to the participating states and institutions, and revision of the tests based on the knowledge obtained from statistical analysis and experience of administration. Committees were again brought together to study the results of the analysis and make recommendations for item inclusion on the final form of each test. The only area where a complete revision was undertaken was in Data Processing wherein it was found that the use of Fortran language almost exclusively was in direct contrast to most of the institutions which used the Cobol language. It was decided, by the committee, to have a Business Option (Cobol) and Scientific Option (Fortran) test made available to administer in the forthcoming year.

The following quarter was devoted to the continued redesign of the performance and paper-and-pencil achievement tests. The results of the performance testing from the previous year were examined for their reliability and decisions were made whether to eliminate, revise, or design new tests for administration. The committees meeting on the paper-and-pencil tests submitted their recommendations and the revisions of the achievement tests were completed. Plans were made for scheduling of the spring technology testing. It was decided that a one-day testing session with two two-hour periods would well accomplish the achievement testing. With the omission of the experimental reference tests from the second administration, six hours were not required as in the previous year.

The Spring quarter at the Illinois portion of the project was devoted to the development and administration of several different types of performance tests. The preliminary form of these tests encompassed three major sensory modalities: tactile-kinesthetic sensitivity, auditory, and visual. The instruments used in the tactile-kinesthetic research were refinements and extensions of experimental investigations in the performance area engaged in earlier on the project. The auditory diagnostic test for automotive mechanics was completed and administered to a sample of about 150 students. The television diagnostic test and machinist auditory diagnostic test were prepared for summer administration. The North Carolina State portion of the project devoted itself almost solely to the administration of the revised achievement tests. The Electronics Technology test was administered to over 370 students from five states, the two Data Processing tests to a collective sample of over 225 students, also from five states. All scoring was done by computer at the University of Illinois and the statistical data were made available in a relatively short period of time.

The summer quarter was devoted to the administration of the achievement tests to the five trade areas. Trade testing was done in seven states with both paper-and-pencil as well as performance tests being administered. The automotive electrical system diagnostic test and the two tests brought to the southeast from Illinois, the machinist auditory and television diagnostic test, were also scheduled during this time. Since these performance tests required significant amounts of time, they were scheduled separately from the paper-and-pencil tests. Computer analysis of the data from the spring technological testing was completed early during this period, and the results were made available to the participating institutions. When all of the trade testing was completed, the sample totaled over 2300 students for the paper-and-pencil tests and 530 for the performance tests.

The next quarter and to the present time has been devoted solely to the tabulation and dissemination of the statistical data. All data has originated from the University of Illinois, where it

has undergone some analysis, and disseminated from North Carolina State, where all of the contacts were originally formulated. Data compilation has taken the majority of the time; however, the results have been personally delivered to each participating institution, thus insuring understanding of the findings and their limitations. An overview has been undertaken so as to make available to all concerned a complete assessment of the purposes and findings. The reliabilities and intercorrelations of each of the subtests of the revised test in each curriculum area is attached.

BREAKDOWN OF PENCIL AND PAPER ACHIEVEMENT MEASURES

MACHINIST TRADE

Part of test	Number of items	Time limit	Area Sampled (Subtest)	Reliability K-R (14)
Part I	25	25 min	Hand Tools & Applications	.65
Part II	80	70 min	Measuring Tools & Processes	.87
Part III	30	25 min	Cutting Tools	.72
Part IV	30	25 min	Milling Machines	.75
Part V	40	35 min	Lathes	.82
Part VI	30	20 min	Grinding Machines	.80
Part VII	25	20 min	Minor Machines	.65
Part VIII	25	20 min	Metallurgy	.31
	Total test			.95

	Total	I	II	III	IV	V	VI	VII	VIII
Total Score	-	.66	.88	.81	.85	.85	.81	.67	.57
Part I		-	.47	.56	.49	.55	.52	.35	.31
Part II			-	.63	.70	.67	.59	.53	.41
Part III				-	.62	.63	.65	.47	.46
Part IV					-	.74	.64	.50	.46
Part IV						-	.64	.45	.44
Part VI							-	.56	.44
Part VII								-	.36
Part VIII									-

AUTOMOTIVE MECHANICS (AUTO)

Part I	60	55 min	Engines	.89
Part II	30	25 min	Fuel Systems	.80
Part III	45	40 min	Electrical Systems	.85
Part IV	50	40 min	Chassis & Suspensions	.84
Part V	45	30 min	Brakes	.85
Part VI	25	20 min	Air Conditioning	.87
Part VII	40	30 min	Power Trains	.56
	Total test			.97

	Total	I	II	III	IV	V	VI	VII
Total Score	-	.89	.83	.88	.90	.88	.57	.65
Part I		-	.79	.75	.76	.72	.36	.50
Part II			-	.74	.69	.67	.29	.47
Part III				-	.76	.74	.39	.50
Part IV					-	.75	.47	.56
Part V						-	.48	.55
Part VI							-	.38
Part VII								-

Part of test	Number of items	Time limit	Area Sampled (Subtest)	Reliability K-R (14)
RADIO AND TELEVISION SERVICING (RTV)				
Part I	35	25 m.	Fundamentals of Direct Current	.81
Part II	45	40 m.	Fundamentals of Alternating Cur.	.81
Part III	30	25 m.	Fundamentals of Vacuum Tubes	.78
Part IV	35	30 m.	Semi-Conductors	.79
Part V	50	40 m.	Circuits	.84
Part VI	35	30 m.	Radio	.82
Part VII	70	50 m.	Television	.86
	Total test			.96

	Total	I	II	III	IV	V	VI	VII
Total score	-	.76	.78	.85	.80	.90	.87	.84
Part I		-	.55	.58	.56	.62	.62	.57
Part II			-	.60	.62	.63	.57	.58
Part III				-	.70	.77	.74	.63
Part IV					-	.66	.68	.55
Part V						-	.80	.72
Part VI							-	.66
Part VII								-

AIR CONDITIONING, HEATING & REFRIGERATION (AHR)				
Part I	30	30 min.	Principles of Refrigeration	.71
Part II	60	60 min.	Refrigeration Applications	.83
Part III	30	30 min.	Controls	.72
Part IV	80	75 min.	Air Conditioning	.89
Part V	25	25 min.	Blueprint Reading & Estimating	.70
Part VI	25	20 min.	Materials, Tools & Safety	.62
	Total test			.95

	Total	I	II	III	IV	V	VI
Total Score	-	.81	.83	.81	.91	.58	.67
Part I		-	.74	.60	.64	.40	.45
Part II			-	.61	.62	.32	.47
Part III				-	.74	.42	.43
Part IV					-	.48	.60
Part V						-	.35
Part VI							-

Part of test	Number of items	Time limit	Area Sampled (Subtest)	Reliability K-R (14)
ELECTRICAL INSTALLATION AND MAINTENANCE (EIM) *				
Part I	30	30 min.	Basic Elect. Theory	.79
Part II	45	50 min	Machines and Controls	.87
Part III	30	40 min.	Construction Wiring	.80
Part IV	30	25 min.	Basic Electronic Theory	.35
Part V	30	30 min	Industrial Elec Applications	.71
Part VI	45	45 min.	Diagnosis of Electrical Mal.	.75
Part VII	25	20 min	Safety - Personal & Equipment	.70
		Total test		.94

	Total	I	II	III	IV	V	VI	VII
Total Score	-	.78	.77	.69	.83	.69	.85	.70
Part I		-	.69	.48	.54	.41	.55	.50
Part II			-	.53	.48	.34	.56	.48
Part III				-	.48	.33	.51	.32
Part IV					-	.70	.66	.54
Part V						-	.60	.38
Part VI							-	.60
Part VII								-

ELECTRONICS TECHNOLOGY (ELN)				
Part I	40	45 min.	Fundamentals of Electricity	.85
Part II	45	45 min.	Fundamentals of Electronics	.84
Part III	30	30 min.	Instrumentation	.81
Part IV	45	45 min	Application of Electronics	.86
Part V	45	45 min	Special Circuitry	.81
Part VI	30	30 min.	Systems Analysis	.76
		Total Test		.96

	Total	I	II	III	IV	V	VI	VII
Total Score	-	.78	.85	.83	.84	.88	.74	
Part I		-	.65	.63	.50	.62	.47	
Part II			-	.73	.68	.69	.55	
Part III				-	.59	.65	.55	
Part IV					-	.73	.58	
Part V						-	.64	
Part VI							-	

*In some states this curriculum is titled Industrial Electricity, in others, Industrial Electronics

Part of test	Number of items	Time limit	Area Sampled (Subtest)	Reliability K-R (14)
BUSINESS DATA PROCESSING TECHNOLOGY (EDP-B)				
Part I	70	60 min.	Data Processing Systems Fundam.	.73
Part II	60	60 min.	Programming Lang. Appl. Cobol	.88
Part III	25	30 min	Statistics	.66
Part IV	25	30 min.	Mathematics	.67
Part V	40	30 min	Accounting - General	.75
	30	30 min.	- Cost	.71
	Total test			.92

	Total	I	II	III	IV	V	VI
Total Score	-	.79	.84	.51	.42	.74	.51
Part I		-	.55	.35	.41	.37	.33
Part II			-	.34	.24	.62	.21
Part III				-	.32	.29	.06
Part IV					-	.11	-.05
Part V							.37
Part VI							-

SCIENTIFIC DATA PROCESSING TECHNOLOGY (EDP-S)				
Part I	70	60 min..	Data Proc. Systems Funda.	.91
Part II	60	60 min.	Prog. Lang. Appl. Fortran	.95
Part III	25	30 min.	Statistics	.62
Part IV	40	60 min.	Mathematics	.88
Part V	40	30 min.	Accounting - General	.81
	Total test			.97

	I	II	III	IV	V	VI *
Part I	-	.80	.64	.69	.56	.33
Part II		-	.60	.68	.32	.01
Part III			-	.70	.53	.31
Part IV				-	.59	.31
Part V					-	.68
Part VI						-

No total score correlation by design

* Cost Accounting taken by Connecticut students only.

American Vocational Assn
Convention
Dallas, Texas
December 13, 1968
9:00 A. M.

NEW RESEARCH TECHNIQUES FOR VALIDATION OF THE GENERAL APTITUDE TEST BATTERY[1]

My topic has to do with new research techniques for validating the General Aptitude Test Battery. But first a little background about the GATB.

The GATB has a long history of research. It was developed from occupational validation and factor analysis studies conducted in the late 1930's and in the 1940's. The nine aptitudes measured by the GATB are General Learning Ability, Verbal Aptitude, Numerical Aptitude, Spatial Aptitude, Form Perception, Clerical Perception, Motor Coordination, Finger Dexterity, and Manual Dexterity.

The GATB was developed by the U. S. Employment Service, so its primary use has been in the public employment service. About 700,000 applicants per year are tested by the employment service. Typically these are applicants who have no significant work experience, or who want to explore occupations that differ from those in which they do have experience. Many are high school seniors who are about to enter the labor market.

Since 1959 there has been increasing use of the GATB by school counselors to help students in lower high school grades make

[1]Presented by Robert C. Droege, Research Psychologist, Bureau of Employment Security, U.S. Department of Labor, Washington, D. C.

tentative selections of vocational goals as a basis for planning courses of study in high school. Many State Employment Services have made arrangements with their State Department of Education for State-wide release of the GATB to schools with qualified counselors.

Since its publication in 1947, the GATB has been included in many studies to validate it against overall success in specific occupations (U. S. Department of Labor, 1967).

These studies have been of the traditional kind, involving administration of the GATB to a sample of workers all performing the same job duties, obtaining measures of their job performance, correlating the measures of test and job performance, and selecting the combination of aptitudes with the best validity for operational use in personnel selection and counseling.

So much for background. In recent years we have begun to use new research strategies to refine the validities and to broaden the scope of the studies. The new strategies are being used in validity generalization designs, validity extension designs, and moderator variables are being used as refinements in the research.

Validity Generalization

First of all, we are using some new approaches in the area of validity generalization. Our objective is to develop a compre-

hensive and meaningful aptitude-oriented occupational structure for use by vocational counselors. The adjectives "comprehensive" and "meaningful" are the key words. Neither characterizes the presently operational USES Occupational Aptitude Pattern Structure (U. S. Department of Labor, 1966).

Before getting to the research the USES is doing in validity generalization, I would like to take a little time to discuss some comments on the subject that were made by Ghiselli in a symposium at the 1957 Chicago meeting of the Midwestern Psychological Association (Ghiselli, 1959).

Dr. Ghiselli was very pessimistic about the possibilities for generalizing validity based on traditional validity studies because of the great variability he found in validity coefficients for similar jobs. He attributed this variability in results to three factors:

1. Differences in range of talent in different investigations arising from differences in hiring procedures and in the locally available labor market.

2. Differences in criteria which can vary considerably in psychological meaning even though they appear to be similar.

3. Differences in the jobs themselves from one establishment to another. Two jobs with the same title can differ considerably in aptitude requirements.

He concluded that "Under these circumstances how is it at all possible to collect and integrate data concerning the validity of a test for a particular job? Obviously if the data is inconsistent we cannot set up any general principles about the usefulness of tests in worker selection and placement."

The USES work on validity generalization is being done in a framework that involves the General Aptitude Test Battery and the occupational classification structure of the 3rd edition of the Dictionary of Occupational Titles (U. S. Department of Labor, 1965).

The first USES attempt at validity generalization was made in the 1950's, using validity data accumulated from GATB studies on specific occupations. This effort resulted in an Occupational Aptitude Pattern Structure of 36 groups of occupations with similar aptitude requirements. However, the occupational coverage of the structure is limited, and many of the jobs appearing in the same OAP are quite dissimilar on other dimensions. It does not meet the important requirements of comprehensiveness and meaningfulness.

In general, then, we find little positive evidence of validity generalization from Ghiselli's work or our own initial work in USES. Ghiselli found inconsistencies in validity data for similar jobs; the USES was able to form groups of occupations that had similar patterns of validities, but the occupations

within the resulting groups had little else in common.

Since our original attempt to generalize the validities, we have accumulated much more validity data on many more jobs. We now have data of this kind for more than 500 jobs. Another important new factor is that we now have a new occupational classification structure in the 3rd edition of the Dictionary of Occupational Titles. These two factors have encouraged us to make another attempt at validity generalization.

We started with the proposition that, to be of maximum usefulness to a vocational counselor, any job groupings to be established on the basis of validity generalization data must be psychologically meaningful job families. This is of first importance. Secondly, the structure should be as comprehensive as possible so as to cover at least all of the major occupations. The Worker Traits Arrangements of the DOT is comprehensive and meaningful. It consists of 114 groups of occupations that have similar trait requirement and also tend to involve the same worker functions. The groups may be described as families of occupations that are conceptually meaningful to the counselor.

Our research question was this: When our 500-odd studies are distributed into the Worker Trait Groups, do we get similar patterns of validities for the occupations within each group? If so, we have a basis for generalizing from the studies we have to other occupations on which we have no data.

Preliminary results are promising, and here are two examples. The first example involves two Worker Trait Groups in the Area called "Elemental Work." We have done 53 GATB test development studies on occupations in these groups. There was statistical evidence from 43 of these studies for Motor Coordination, 41 of the studies for Finger Dexterity, and 50 of these studies for Manual Dexterity. This is good evidence for validity generalization for an aptitude pattern involving these three aptitudes. The other example is for the Worker Trait Group "Technical Work, Engineering, and Related Fields." All eight of the studies we have done on occupations in this group showed statistical evidence for General Learning Ability, Verbal Aptitude, Numerical Aptitude, and Spatial Aptitude. Other Worker Trait Groups are being studied in the same way.

Although this approach appears promising, others should also be explored so that the best possible system can ultimately be adopted.

Chiselli's solution was to abandon the traditional procedure of attempting to predict over-all job success and turn to an analytic approach. This would involve isolating job functions and studying their interrelationships and their predictability separately. He goes on to suggest development of standard work samples of different functions; for example alphabetical filing, rough grinding and engine tuning, against which test scores would be validated. I think that this approach has promise and should be studied further,

preferably in a laboratory setting which would permit better control over the samples and the experimental variables.

The specific framework could consist of the DOT-defined worker-function hierachies. Worker functions reflect what workers do and these worker functions can be identified in terms of relationships with data, people and things. Further, the worker functions have been arranged in hierarchies of increasing complexity of function, and this has been done separately for data, people and things-related functions.

Since three functions, one from each hierarchy, express the total activity requirements of jobs in broad terms, we have a comprehensive model to use in developing work samples that reflect these activities. One or more work samples could be constructed for each function and studied in the laboratory as potential criterion measures. Once refined through tryouts and factor analyses, these work samples could serve as criterion measures against which aptitude and other types of tests could be validated under controlled conditions.

Consider the possibilities. We select an experimental test battery and administer it to a sample of individuals representative of the type of counseling population we are interested in. These individuals are also administered the criterion battery of work samples. All of our subjects have taken all of the experimental predictor tests and all of the criterion work sample measures. Thus,

validation of the predictors can be done separately for each of the work samples. Comparability of results is achieved because only one group of individuals is involved and they all are measured with the same instruments.

After the predictor tests most highly related to each of the criterion work samples are identified, we have the basis for taking the next step validating the predictor tests for combinations of work samples representing combinations of worker functions characteristic of occupational groups. Various techniques for doing the validation analysis could be used. The most useful for the employment service would be one that involves a multiple hurdle approach on both the predictor and criterion variables.

As I indicated before, we are getting promising results with a validity generalization approach. But the more analytic approach, using work samples corresponding to worker functions deserves attention even though a project that would provide a good initial evaluation of it would be quite expensive. A vocational high school would be an ideal setting for the project. Such a school would have the facilities required to administer the work samples and tests, and would have students readily available for use as subjects. I would be glad to discuss this further with anyone who might be interested in participating in such a project.

Validity Extension

Now let's turn to research we have been doing to validate the GATB against vocational course criteria.

I would like to begin by saying something about a relatively small-scale study, but one that is of significance to GATB users in the schools. It has to do with "validity extension." Let me explain what I mean by the term "validity extension." Let's say that a test battery is developed on an occupational sample using a criterion of occupational success. When this battery is applied to data for a similar sample and the same kind of criterion is used to see how it works in that situation, we have a study of cross validation. The battery is developed on one sample and we check its validity on another similar sample. But suppose we want to take the test battery out of context, so to speak, and see how it works in a situation where the sample is quite different and the criterion of performance is also quite different. This would be a study in validity extension. Now let me describe to you briefly the specific study in validity extension I had in mind.

We have in operational use in the employment service an aptitude test battery for Compositors. This test battery, based on two samples of employed workers, was developed some time ago. In Indianapolis there is a vocational high school and they have a printing curriculum. The compositor test battery was administered to 70 students enrolled in this curriculum and instructors rated

their performance in printing courses during their first year of study. Analyses of these data showed that the compositor battery, when applied to the test scores and measures of course success of the Indianapolis students, did a relatively good job in differentiating the good from the poor students. This study is part of a larger study involving a school in Connecticut and Central High School in Cincinnati. The results we have from Central indicate that an aptitude test battery for Lithographic Plate Maker gives good prediction of success in the eleventh grade printing curriculum for 55 students receiving lithographic training.

There are more ambitious studies that will provide data on validity extension. One of these is being done by Dr. Pucel, the chairman of this session. His study involves use of the GATB and other instruments to determine whether any of these instruments can differentiate groups of students applying for different vocational-technical curricula in the area vocational-technical schools of Minnesota. Both school and occupational criteria are being obtained on a longitudinal basis. We in the employment service look at this as a very significant study which could have wide implications for further research and use in the schools.

If any of you are in a position to obtain the necessary data for studies of this kind, let me encourage you to do so. It will make the GATB more useful in the schools and will add to knowledge in this important, but little studied, area of validity extension.

Moderator Variables

Recently, we have done some research involving moderator variables. A moderator variable is one that influences the degree and kind of relationship between other variables. For example, a given test may be a better predictor of criterion performances for men than women, or a better predictor for applicants from a lower than for applicants from a higher socioeconomic level. In these examples sex and socioeconomic level are known as moderator variables, since they moderate the validity of the test.

Some time ago the U. S. Employment Service did some research on the question of whether "age" was acting as a moderator variable in validity studies on specific occupations (Droege, 1967). We knew from previous studies on adults that scores on most aptitudes decline with age, but we did not know what effect the decline had on validity of prediction. Our approach to this question was to select for further analysis 11 longitudinal occupational validation studies with a wide age range represented in the samples. For each sample we obtained two sets of scores. One set consisted of the scores on the 9 GATB aptitudes. The other set consisted of these scores adjusted for decline with age, done in such a way that the average adjusted score was the same for all age groups. Some significant differences in validities were found but the differences between the validities of unadjusted and age-adjusted scores tended to be small.

We are now planning similar analyses using a measure of cultural exposure as a moderator variable. We hope that this analysis will help us to determine to what extent the limited cultural exposure of many of our applicants should be a factor in interpreting test results.

In conclusion, some of the new approaches we have used in validating the GATB have begun to pay off. And we expect that as these new techniques demonstrate their usefulness, they will become standard parts of our research program.

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THE EVALUATION SYSTEM FOR THE AMERICAN INDUSTRY SECONDARY SCHOOL COURSES

By

Orville Nelson
Research Specialist
American Industry Project
Stout State University
Menomonie, Wisconsin

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Co-Directors:
Dr. Wesley L. Face
Dr. Eugene R. F. Flug

THE EVALUATION SYSTEM FOR THE AMERICAN INDUSTRY SECONDARY SCHOOL COURSES

Introduction

Throughout the last three years the American Industry Project has been developing and field testing a secondary school curriculum which has as its central purpose the study of industry. An evaluation system was designed and refined in concert with the curriculum development activities to provide data for the various curriculum design decisions and to measure the effects of the study of American Industry. This evaluation system is described in later sections of this paper. The following section gives a brief overview of the American Industry rationale for those who have not been exposed to it before. If the reader has already heard or read this material, he may desire to page directly to the section entitled "Evaluation of American Industry Courses." This section gives the rationale for the evaluation system developed for the Project and outlines the types of data collected. The concluding part of this paper presents several studies based on selected portions of the information gathered.

Rationale for the Study of American Industry

During the 1962-63 school year, several professors at Stout State University initiated a series of meetings to discuss their concerns related to the content and scope of the existing industrial arts curriculum. Out of these discussions grew the rationale for the study of American Industry. Embodied in this rationale were four basic tenets related to the source and nature of content to be studied.

The first tenet identified Industry as the source of content. Industry was subsequently defined as "an institution in our society which, intending to make a monetary profit, applies knowledge and utilizes natural and human resources to produce goods or services to meet the needs of man." Obviously this definition encompasses a wide variety of business enterprises. To study each one would be impossible. However, the discussion group noted a number of similarities among all enterprises. For example, merchants, automotive dealers, manufacturers, contractors, service station owners, and farmers have to apply management techniques in their businesses.

The trend to the study of concepts in other curriculum areas reinforced the conclusion that a diverse set of enterprises could be reduced to a set of meaningful concepts. In addition, Bruner's work (1960) indicated that a discipline has an underlying structure which interrelates the basic ideas found in the discipline and lends considerable explanatory power to its postulates, concepts, and principles. On this basis, the decision was made to analyze a variety of industries,[1] to isolate the concepts common to them, and to identify the relationships among the concepts. After considerable

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[1]When used in this manner, industry refers to a group of enterprises or businesses engaged in producing or servicing the same type of product such as the auto industry or the TV repair industry. American Industry refers to the institution identified in the Project's definition of Industry and includes all industries that exist to make a monetary profit.

study, several hundred contacts with industry and labor leaders, and considerable discussion on the part of the American Industry staff, the concepts and structure depicted in Figure 1 were delineated. The concepts on the inner ball are the ones Industry uses directly to accomplish its goals. The concepts listed in the outer ring identify the environment in which Industry operates. An interaction relationship exists between the concepts on the ball and those in the ring.

Tenets two and three of the four mentioned previously are related to this structure: (2) the study of American Industry will be concerned with the structure of the knowledges of Industry, and (3) this study will also concentrate on the concepts of Industry. The remaining tenet stresses the inclusion of problem solving experiences in the American Industry curriculum.[2]

Three secondary school courses have been designed on the basis of this rationale and the structure. The first course, Level I, introduces the student to the basic concepts of industry listed in Figure 1 and gives him experience using these concepts to solve industrial problems. In the second course, Level II, the student goes into greater depth in each of the concept areas and becomes more involved with the actual flow of activities and events in an industry. At this level, he also encounters more sophisticated industrial problems. Level III provides the student an opportunity for individual study and an in-depth problem solving experience. He is encouraged to select a suitable problem and investigate it in terms of the conceptual structure of industry.

All three levels are viewed as transitional subjects between general and vocational education. Their goal is to provide experiences that assist the individual to make wise vocational choices, to understand his chosen role in our complex industrial society, and to be a productive member of society. Only the first level is viewed as a required course. After this point a student may decide to continue in the American Industry sequence or elect to take any of the other programs available in his school.

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[2] A more detailed description of the American Industry Project's rationale may be found in 'The Establishment of American Industry as a Transitional Subject Between General and Vocational Education" authored by Wesley Face and Eugene Flug, Co-Directors of the American Industry Project.

Figure 1

A CONCEPTUAL STRUCTURE OF THE KNOWLEDGES NECESSARY TO UNDERSTAND AMERICAN INDUSTRY

672C

Evaluation of the American Industry Courses

Purposes of the Evaluation

Will students have significantly different competencies after studying this course? Can eighth grade students read this material? Should this lesson contain more detail? Why was this activity successful while the first one failed? These and similar questions challenge curriculum developers and evaluators. And, the American Industry Project was not unique in this respect in that it had to answer the same questions.

The first question may be answered by measures of terminal behaviors in experimental, quasi-experimental, or time-series experimental studies. However, the other questions listed require additional information. Most of this information is related to the inputs into the instructional setting and the teaching-learning activities that transpire in this same setting. In many ways this information is analogous to the data required to make scientific management decisions.

As the Project began the research specialist identified several questions germane to the evaluation. Most of these were associated with the outcomes of the study of American Industry such as the ability to think conceptually and solve problems. However, after the data for the first term had been analyzed, a mixture of positive and negative results caused a further examination of the scope of the evaluation. Additional questions which emphasized the gathering of data pertaining to the factors that influenced the terminal behaviors of students were defined. Then the evaluation system was revised to provide the means to collect the information required to answer these questions. Not only did these additional data assist in illuminating the critical factors related to the end results but they helped to identify problems in time to take corrective action prior to the end of the school term.

The complete evaluation system presently employed by the Project is described in the next section. Remember that it was developed to assess the outcomes of the study of a new curriculum and to provide management information to the Project staff. Each instrument and data gathering device was selected and designed to provide the information required for decision making and answering the critical questions associated with the development and teaching of these courses.

It is impossible to overemphasize the importance of distilling the critical questions and identifying the essential decisions as the basis for the design of an evaluation system. Even if it proves difficult to obtain information for some of them, this very fact will stimulate the researcher to further development and encourage creative ways to garner the needed data.

Evaluation Domains and Procedures

Early in the design of the evaluation system three domains were defined in which to collect data. The ingredients domain encompasses all of the inputs into the learning situation. Examples of these inputs are the quality of the instructional materials, abilities and interests of the students, characteristics of the participating teachers, and the intellectual climate of the school and the community.

As a course is being taught, a number of instructional processes are applied to and interact with these inputs. Students are exposed to instructional media, activity sheets, and booklets in the American Industry course. Teachers are exposed to new materials and ideas and their associates become aware of a new curriculum. All of these on-going actions and activities are embraced in the processes domain. This domain can generate a continuous flow of vital information during the time the course is in progress. However, it requires systematic monitoring and a relatively rapid feedback process.

The third domain consists of the products or outcomes of the study of American Industry. It is concerned with the nature of the student at the end of the course, impressions of the teachers, reactions by administrators and staff members at the school, and opinions of the parents.

Figure 2 gives a graphic presentation of these domains and illustrates the relationship between them. Examples of data collection procedures and instruments for each domain are presented in the next section.

The evaluation domains identify the sources of information in the evaluation. Equally important are the types of data collected and the collection schedule. Figure 3 depicts the strategy utilized in developing and evaluating learning expedients. The ball at the left symbolizes the basic role the Project's rationale plays in each action and decision. Initial tryouts of materials, learning activities, or instructional methods probably will not provide optimum solutions; however, they will provide feedback for further refinements. These results and relationships are indicated by the spiral line around the solution axis and the decreasing distance between the two with each succeeding spiral. This strategy may be applied to an entire course, a unit in the course, or a sub-part of the unit. Its application will depend on the data required by the researcher.

The relationships of the linear distance traversed along the solution axis during each succeeding spiral is denoted by $X>Y>Z$ in Figure 3. In other words, progress becomes more difficult with each successive spiral. The first trial identifies obvious areas in which improvements can be made. As these changes are made, smaller and more subtle problems come to the forefront.

EVALUATION DOMAINS IN THE AMERICAN INDUSTRY PROJECT

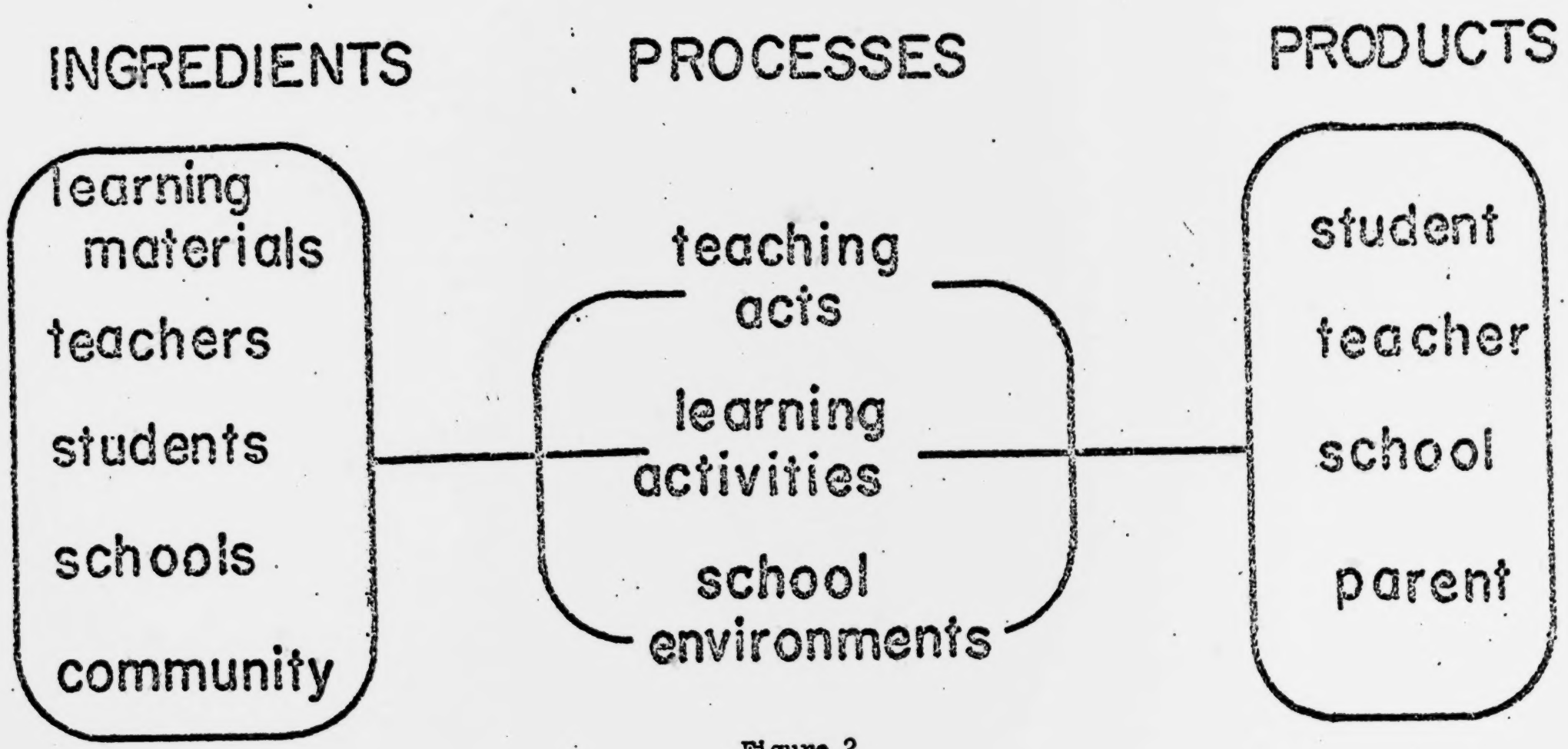


Figure 2

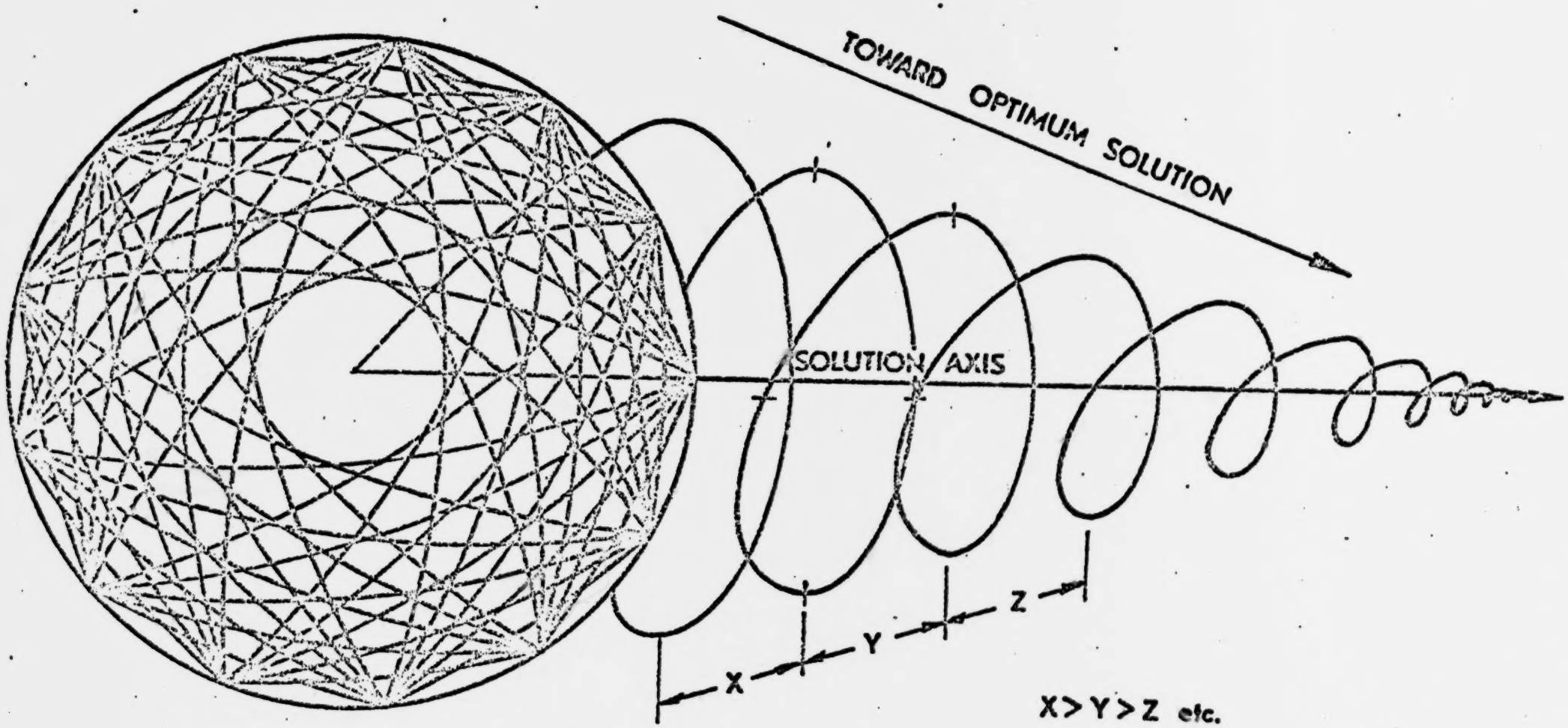


Figure 3

Research and Development Strategy[3]

[3]The Research Specialist is indebted to Dr. Martin I. Taft of the Department of Mechanical Engineering at UCLA for the idea for this graphic representation of the Project's research and development strategy.

Each spiral along the solution axis contains five distinct segments that represent specific steps in the development and evaluation of a curriculum or a sub-part of it. The first step is to state the objectives for the course or segment of instruction in as lucid terms as possible. Once the objectives are stated learning expedients can be selected or developed to meet them. At this point the learning expedients are ready for a tryout in an instructional situation. This may be in a regular classroom or a special group of students may be selected on which to run the first trials. Data are collected prior to, during, and at the end of the tryout to provide the basis for the evaluation. The domains noted previously identify areas in which to collect information. Interpretation of the products data is made in relation to the ingredients and processes data as well as in comparison with the performance of the control group. A graphic illustration of a specific spiral is given in Figure 4. The ring which envelopes the spiral connotes the role of the ingredients and processes data in evaluating the outcomes of the test of the learning expedients.

Upon completion of the evaluation, the researcher must decide whether the objectives were met and if not, the reason(s) for not attaining them. If the decision is made to continue into another cycle, the same five steps would be employed. This process would be continued until a satisfactory level of achievement is reached. "Satisfactory" as used in this context does not imply that the instructional materials are perfect, rather, it means that in relation to the other elements of instruction being developed the one under consideration has been improved to the point where it would be more efficient to work with another one.

To the degree time and resources permit, a variety of measurements should be made during each evaluation. Each type of measurement has its biases. Use of several will hopefully isolate the factual information from the random error and bias factors present in specific types of measurement. For instance, objective tests allow the evaluator to sample a prescribed set of behaviors but they penalize the nonverbal student. Whereas essay tests allow the student to freely express himself, they suffer from the lack of scope in the behaviors sampled and the objectivity of the scoring process. Observation of students in the "normal" classroom setting and engaging them in discussion can also help to assess their competencies, but this procedure in itself alters the "normal" classroom situation and is open to rater bias. However, use of the data from all three sources in the analysis can help to identify the true outcomes.

When using this approach care must be taken to avoid overloading any one person with evaluation forms. Students could be inundated with tests and rating sheets. Since there are a variety of sources of information, this situation usually can be avoided by some careful planning. The American Industry Project, for example, obtains information from the participating teachers, students, guidance counselors, administrators, the Project's supervisor of participating teachers, and the instructional materials. Where possible, simple forms are designed to facilitate responding and direct duplication of data is avoided with the exception of some collected to use in determining the reliability of the measuring techniques.

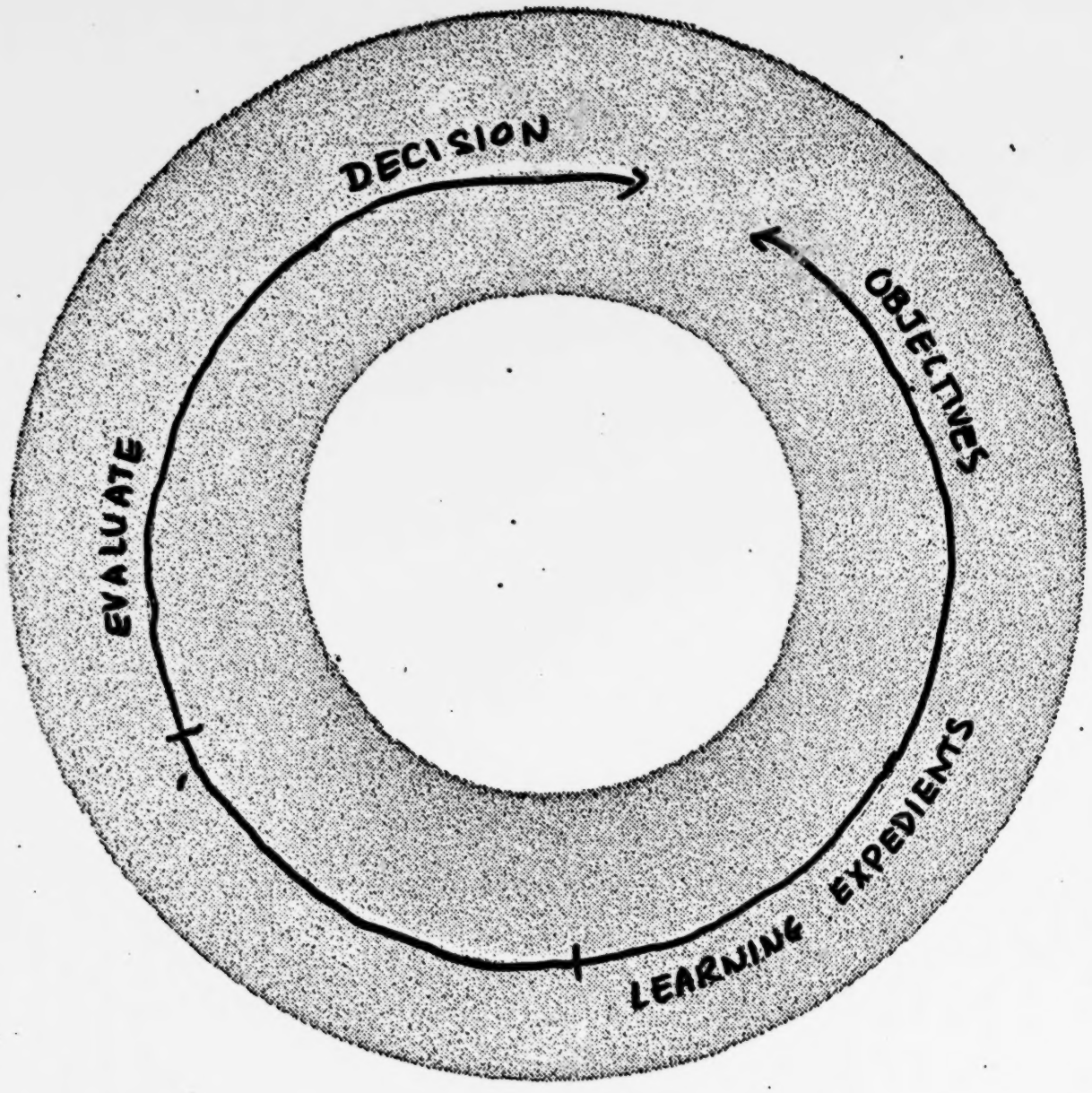


Figure 4

A Specific Research and Development Spiral

The following are some examples of the data contributed to the Project and their source. Individual lessons and other instructional materials are rated by the participating teacher. Rating sheets are placed after each lesson in the instructor's guides and accompany the instructional media. These forms require two to three minutes to complete and provide useful information on the structure, contents, and utility of the material rated. Also, the placement of the rating sheets provides systematic feedback which is important in the evaluation. The time intervals between feedback provide an indication of the progress of the course. Workshops and the end of the year report also provide the teachers with opportunities to communicate their questions, problems, and opinions of the courses.

Students express their opinions of American Industry courses on two forms. A free response opinionnaire is completed at the end of the course. In this form, the student lists the classes he likes and dislikes and the reason(s) for his listing. In addition, he is asked to list his likes and dislikes related to the American Industry course. Several statements in the rating form employed to evaluate the written materials focus on the students' opinions of the quality and utility of the instructional materials. The students' knowledge of industry and problem solving skills are assessed by means of the Project's achievement test. This test has objective and essay portions. Their interests and activities are recorded on the Project's Student Questionnaire which is comprised of items selected from Project TALENT'S Student Information Blank (1964).

Guidance counselors provide ability and reading test scores to the Project. Administrators complete a form which describes the resources available in their schools and the curriculum offerings. They also comment on their school's relationship with the Project and raise any questions they may have.

The supervisor of participating teachers attempts to visit each participating teacher once a month while school is in session. During these visits he records the progress and problems identified by the participating teacher. He also notes the activities of the classes and interviews individual students.

A more subtle but very appropriate source of information is the condition of the instructional material when it is returned to the Project. Materials that have been used will show signs of wear, pencil or pen marks, and smudges. For example, several of the Project's overhead transparencies have a place to write in comments as the class discussion progresses. A clean transparency and mask indicate that it was not used in the manner it was designed for. Booklets with clean covers and tight bindings suggest that they were not opened very frequently.

The data collected are channeled to the research specialist for analysis and interpretation. During this stage of the evaluation, several comparisons are completed. Comparisons are made between the students in the American Industry classes and the students in the control groups. In as many schools as feasible, experimental designs are used for the evaluation. However, in some situations this is not possible and quasi-experimental designs have to be substituted.

Data from American Industry classes during previous school terms are also used in the analysis to identify any improvement or deterioration in performance over the given time period. These changes can then be correlated with revisions made in the courses, instructional materials, and teaching methods.

The effects or products of the study of American Industry can also be associated with the appropriate ingredients and processes. An example of the interrelationship between the three domains is provided by the evaluation of the student booklets used in American Industry classes. The following data are collected:

Ingredients	Processes	Products
Reading level of each booklet (Dale-Chall formula)	Teacher descriptions of uses made of the booklets (Feedback form)	Student opinions on reading level and content (Reading form)
Reading ability of the students (Reading test)	Supervisor's of Participating Teachers observations of the classroom use of the booklets	Teacher opinions of the utility of the booklets (Feedback form)
General ability of the students	Signs of wear and usage on the booklets	Student achievement

If student achievement is low in an area thoroughly discussed in the booklets, the possible cause or causes can be defined and evaluated. For instance, the students may not be able to read the material. This can be assessed by comparing the reading level of the material, the students' reading abilities, and their opinion of the readability of the material. In like manner, other causes of variations in performance may be determined.

Most of this information is very important to the curriculum specialist. In some instances it will verify his decisions--in others it will point out new directions or problem areas which need attention. Hence, it is important that the researcher work closely with the curriculum developer and that they comprehend each other's problems. On the American Industry Project this has been accomplished with substantial benefits to both functions.

Selected Evaluation Procedures, Instruments, and Outcomes

Previous pages have described the general nature and purpose of the evaluation system developed for the American Industry Project. Some of the evaluation procedures, data gathering instruments, and results will now be presented to illustrate how the system works and the type of outputs generated by it. This is not a complete enumeration, rather, it is a sample to demonstrate the characteristics of the system and the types of data collected. A full report on the research carried out by the Project will not be available until late in 1969.

Organization of the Instructor's Guide for Level I

One of the first problems encountered by the curriculum specialist was the design of a functional instructor's guide. This guide had to be flexible enough to be employed in a variety of industrial arts laboratories by industrial arts teachers with diverse backgrounds. At the same time, it had to embody the American Industry Project's rationale and take into account the nature of the learning process.

Three separate aspects were involved in designing the guide: (1) design of the format, (2) selection of the content, and (3) specification of the sequence of material. All three of these elements are discussed in detail in a paper by Richard Gebhart (1968). Thus, this paper will review them to the degree necessary to make the data gathering procedures and the resulting data meaningful.

The lesson format evolved over a three year period of experimentation with various forms. In the present form, each lesson consists of objectives, scope of the lesson, references, and content outline. The content portion of the lesson is written in narrative form. Material that is to be discussed or covered in discovery mode is set off in parentheses. Lessons vary in detail depending upon the teachers' backgrounds in the area involved. For example, the marketing lessons were written in a very detailed fashion while the processes lessons contained concise outlines. Another feature of the content portion of the lesson was the provision for utilizing instructional media. Instructions for using, the narration, and the discussion questions were placed at the point in the lesson where the instructional media was to be used.

Evidence on the utility and effectiveness of this lesson format and the design of the lesson content is presented in Table 1. The two items directly related to the format of the lessons in the guide, numbers seventeen and thirty-nine indicate that the format is functional and easy to follow. There is evidence that the teachers had some problems interpreting the parentheses (item twenty-two).

Table 1

Responses on the 1967-68 End of Year Report
Related to Lesson Format and Content

Item No.[4]	Statement	Responses					
		SD	D	U	A	SA	NR
8.	I could not understand the material in the Instructor's Guide.....	9	3	4	1		
17.	The format of the guide is easy to follow.....			1	10	6	
21.	The narrative in the lessons did not give enough content.....	4	5	5	3		
22.	I could tell by the narrative in the lessons when I was to use discussion or other student involvement.....		2	5	3	2	
33.	The lessons did not go into enough depth.....	6	7	3	1		
34.	The instructional media were effectively correlated with the lessons.....		1	2	12	2	
39.	The format of the lessons is functional..			1	12	4	

Key to Responses: SD = Strongly Disagree, D = Disagree, U = Uncertain, A = Agree, SA = Strongly Agree, NR = No Response

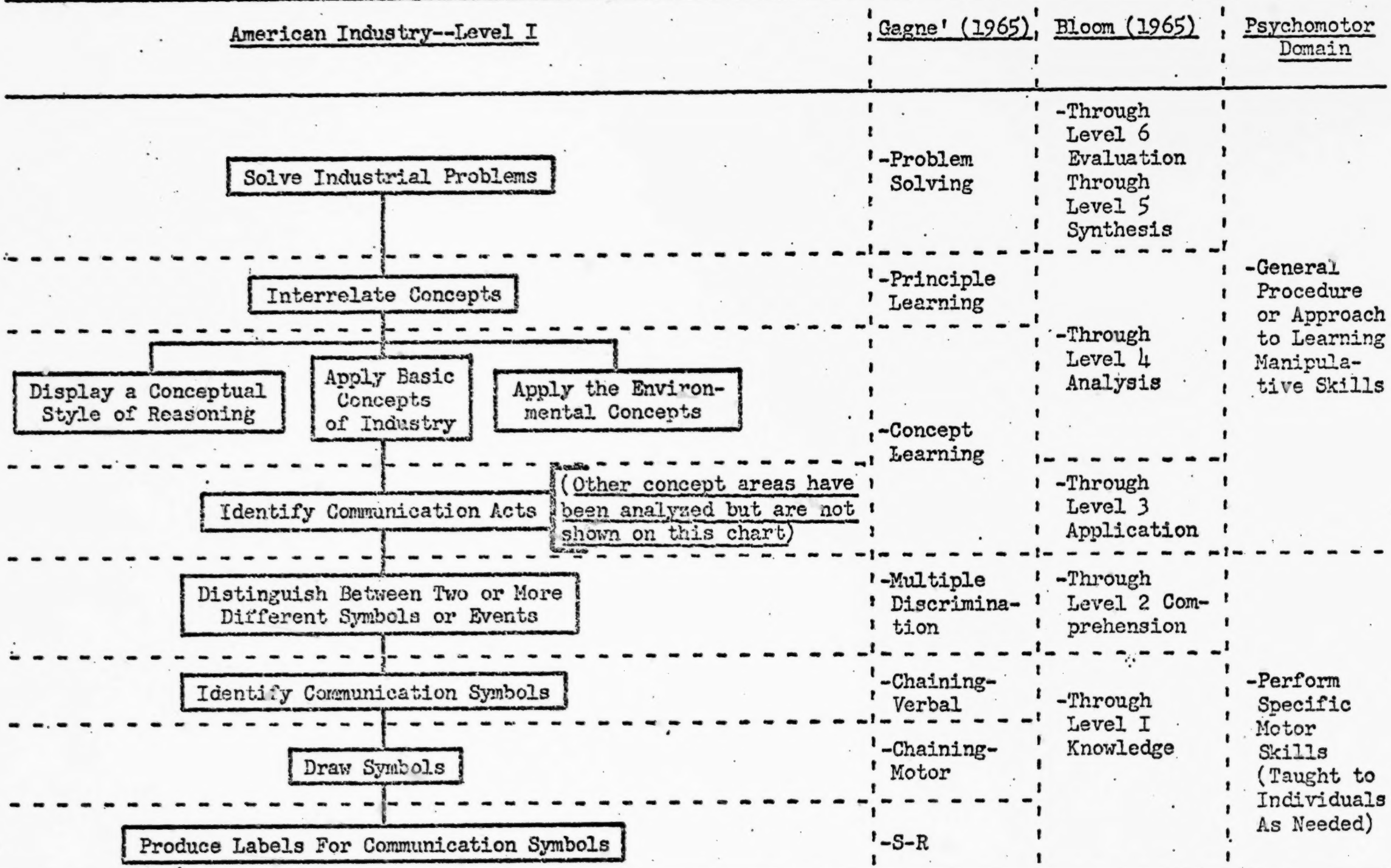
[4] Item number in the End of Year Report.

Most of the teachers felt that the lessons went into sufficient depth and provided enough information (items twenty-one and thirty-three). However, there were enough uncertain and agree responses on item twenty-one to stimulate further investigation of specific weaknesses. As a result, additional instructional materials were mailed to the teachers and workshop presentations were selected to provide more content background for the participating teachers. About seventy per cent of the teachers responded that they could understand the material in the guide (item eight). The actions mentioned above should also help the thirty per cent who had problems comprehending some or all of the guide.

Over eighty per cent of the participating teachers had little or no trouble integrating the instructional media with the lessons during their instruction (item thirty-four). This information substantiated the decision to include the scripts and directions for the utilization of the media at the point in the instructional sequence at which they were to be used.

A more difficult and intriguing problem was posed by the question of the best sequence in which to study the concepts and structure of industry. Psychological research suggested that a cyclical presentation of the subject matter would be most efficient. Through encounter with learning experiences related to a concept in a variety of situations and contexts the student has a chance to periodically refresh his memory and embellish this concept of the material being studied. To illustrate this point, consider the cyclical study of the concept of communication. In his first contact with the materials and activities related to this concept, the student will have only a slight knowledge of the other concepts in the structure of industry. Hence, the concept of communication formed by this student will be relatively simple and will be connected to only a few industrial referents. However, as the study of American Industry progresses throughout the school year, communication in its various forms will be revisited on several occasions. By means of this sequence, the student will experience communication activities in such areas as planning, production, management, procurement, and marketing. Thus, instead of forming a unidimensional concept, the student's concept of communication will have n dimensions where n should at least approach twelve and may exceed this number.

Two techniques developed by Gagne' (1965) were employed to determine the information and sequence of information to present in each cycle. Starting with the problem solving and knowledge of industry objectives established for the first course, the curriculum specialist and the research specialist determined the knowledges, concepts, and skills required to attain these objectives. The analysis proceeded from the two broad objectives back to the characteristics of the incoming students. Care was taken to identify logical and complete sequences of learning. Figure 5 presents a very brief summary of the taxonomical breakdown that resulted.



Some Beginning Competencies - Typical 8th Grade Students

1. Reading and Communication Skills
2. Mathematics Skills
3. Normal Psychomotor Development
4. Exposure to Local Enterprises
5. Experience in Handling and Spending Money
6. Etc.

Figure 5

After this analysis had been completed, the course outline was established in final form. (Figure 6 gives the Level I course outline and identifies the cycles in red.) Lesson themes were delineated and specific skills and information were allocated to the lessons on the basis of the analysis discussed in the previous paragraph. The information in the lessons included the appropriate interrelationships among the concepts. These interrelationships are vital to the study of the complete structure of industry. Writing assignments were then made.

Although care had been taken in planning and analyzing the content prior to writing, there was still a question as to the structure and content of the output. With several writers and pauses to complete other jobs there was a distinct possibility that some elements had been left out or placed in improper perspective. To evaluate this possibility, a lesson analysis procedure was developed by the research specialist.

An analysis matrix was developed with numerical labels for each concept, the attributes of the definition of industry, and the basic terms on the horizontal axis. The vertical axis in part one of the analysis sheet listed the major portions of the lesson. In the second part, which was concerned with the interrelationships established with other concepts, the vertical axis had the same categories as the horizontal axis.

Table 2 presents the concepts, attributes, basic terms and the numerical labels used in the analysis. Output from an analysis of the first communication lesson in Unit III is given in Table 3. Figures within the matrix represent levels in the taxonomy for the cognitive domain developed by Bloom. The left-hand column identifies in order the low taxonomy level present in the introduction, the high taxonomy level present, the number of instances at each taxonomy level, any introductory activity utilized, and the industrial problems included. The same sequence is utilized for the body and summary portions of the first part of the analysis.

A further explanation would probably be helpful in conveying the meaning of "instances" as employed within the context of this analysis. By instance is meant a unitary bit of instruction which can stand by itself. Consider, for example, a specific illustration of communication in industry such as producing too few parts because of faulty instructions. This provides an "instance" to discuss in introducing the study of communication. As soon as the class directs its attention to another illustration or topic, a new "instance" is encountered.

A review of the output in Table 3, discloses that the introduction contained one instance at the first level in the cognitive taxonomy related to communication. In addition, there is one reference to industry indicated by the 1 in column 40. The body of the lesson starts at level one in the cognitive taxonomy and moves into the second level. In other words, the students are required to interpret and translate material related to instruction. Also, the attributes of communication are mentioned (note the 1 in the column labeled 50).

Finally, in the summary the students review the material and the teacher tests their concept of communication by asking them to apply it to a unique situation. This "test" is indicated by the three at the high taxonomy level.

LEVEL I - AMERICAN INDUSTRY COURSE OUTLINE

TEACHER DIRECTED

	Units and Features	Unit Theme
Unit I	Industry Today 1. Introduction to American industry 2. Resources of industry 3. The environment of industry 4. The basic parts of industry	- Let's analyze industry.
Unit II	The Evolution of Industry 1. The needs of man 2. A search for greater productivity 3. Some effects of man's quest for productivity	- The needs of man and why he progressed.
Unit III	Organizing an Enterprise 1. Communication 2. Research 3. Management 4. Finance 5. Property 6. Energy	- Let's start a business.
Unit IV	Operating an Enterprise 1. Relationships 2. Procurement 3. Materials 4. Processes 5. Production	- Let's produce using modern production methods.
Unit V	Distributing Products and Services 1. Marketing 2. Transportation	- Why does a product sell?
Unit VI	The Future of Industry 1. State of the art 2. Reasons for change 3. Future expectations	- Where do we go from here?
Unit VII	The Students' Business Venture 1. Development 2. Fabrication 3. Marketing 4. Evaluation	- The students organize, produce, and sell.

STUDENT DIRECTED

Figure 6

Table 2

NUMERICAL LABELS FOR THE AMERICAN INDUSTRY
STRUCTURE AND DEFINITION

A. Ball Concepts

Numerical Label	Concept
1	Communication
2	Transportation
4	Finance
5	Property
6	Research
7	Procurement
8	Relationships
9	Marketing
10	Management
11	Production
12	Materials
13	Processes
14	Energy

B. Ring Concepts

Numerical Label	Concept
20	Government
21	Private Property
22	Resources
23	Competition
24	Public Interest

C. Attributes of the definition of industry:

Numerical Label	Concept
40	Institution in our society (also indicates the entire definition of industry)
41	Applies knowledge
42	Utilizes resources (human and natural)
43	Produces goods and services
44	Meets needs of man
45	For monetary profit

D. Other basic terms used:

Numerical Label	Concept
50	Attributes, characteristics, or similarities
51	Concept, conceptual
60	Productivity
70	Student booklets and/or reading materials

```
LESSON ANALYSIS FOR.   LEVEL 1   UNIT 3   LESSON 1   DATE 12/13/67        1301001
THEME.   INTRODUCTION TO COMMUNICATION                                     1301002
TIME.  010 PERIOD                                                          1301003
                    CONCEPTS.  BALL            RING       ATTRIBUTES        1301004
PORTION.            1 2 4 5 6 7 8 910111213142021222324404142434445505160701301005
INTRO LO TAX LEV    1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 01301006
INTRO HI TAX LEV    0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 01301007
INTRO NO AT LO      1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 01301008
INTRO NO AT HI      0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 01301009
INTRO ACTIVITY      0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 01301010
INTRO IND PROB      0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 01301011
                                                                           1301012
BODY LO TAX LEV     1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 01301013
BODY HI TAX LEV     2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 01301014
BODY NO AT LO       3 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 01301015
BODY NO AT HI       3 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 01301016
BODY ACTIVITY       0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 01301017
BODY IND PROB       0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 01301018
                                                                           1301019
SUMMARY LO TAX      1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 01301020
SUMMARY HI TAX      3 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 01301021
SUM NO AT LO        1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 01301022
SUM NO AT HI        2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 01301023
LESSON ACTIVITY     0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 01301024
INTERRELATIONSHIPS MATRIX                                                  1301025
                    CONCEPTS.  BALL            RING       ATTRIBUTES        1301026
CONCEPTS ATTRIB     1 2 4 5 6 7 8 910111213142021222324404142434445505160701301027
01 LOW TAX LEVEL    0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 01301028
01 HI TAX LEVEL     0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 01301029
01 NO AT LOW TAX    0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 2 0 0 0 0 0 0 0 0 01301030
01 NO AT HI TAX     0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 01301031
```

Table 3

Lesson Analysis Output

A look at the interrelationships matrix in the bottom portion of Table 3 reveals that the concept of communication was related to industry. During Unit I the students acquired a concept of industry, now, in Unit III they start to study the major concepts encompassed in the Project's structure of industry. Hence, this interrelationship is logical and is in proper sequence to demonstrate the role of communication in industry.

All of the lessons in the Level I instructor's guide have been analyzed with this procedure. In addition to the output for each lesson, the data cards can be sorted to provide a listing of each lesson in which a concept appears. Placing these in the sequence in which the lessons appear in the guide reveals the sequence and distribution of the instructional materials related to each concept. These can then be checked against the original design of the guide. For instance, on a previous page it was noted that the guide would be written to present materials related to communication at several points within the course. One example given was the role of communication in advertising, thus, one should find this noted in the analysis for one or more of the marketing lessons. Indeed, the analysis for lesson four in Unit IV indicates that the marketing concept, number 9, is interrelated to the communications concept, number 1, as shown in the portion of the interrelationships matrix reproduced below.

INTERRELATIONSHIPS MATRIX

	CONCEPTS.							BALL									RING							ATTRIBUTES						
CONCEPTS ATTRIB	1	2	4	5	6	7	8	9	10	11	12	13	14	20	21	22	23	24	40	41	42	43	44	45	50	51	60	61
09 LOW TAX LEVEL	1	0	2	0	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0
09 HI TAX LEVEL	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0
09 NO AT LOW TAX	1	0	1	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0
09 NO AT HI TAX	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0

Interpretation of the numbers in this matrix indicates that students study the relationship of communication to advertising starting at the first level in the taxonomy and progress to the synthesis level (level five). This synthesis is attained through the actual design and production of advertising.

The data from this analysis have been helpful in making minor revisions in the guide during the past year. From this experience, it was also evident that this information will be very useful when a more complete study and revisions of the guide are made.

Up to this point the techniques for structuring instructional materials and reviewing the characteristics of the completed materials have been described; however, one of the most critical tests remains--the teachers' evaluation of their effectiveness in the classroom. To acquire this information, feedback sheets were placed at the end of each lesson. Item eight in this form asked the teachers to indicate if the lesson rated fit into the overall instructional sequence. There were 571 responses to this item with 547 of these responses indicating that the lesson rated fit into the instructional sequence. Eight responses evaluated a lesson as not being in proper sequence. And, on sixteen sheets this item was left blank. Item five in the feedback form provides information on the structure of the lessons. Only eleven of the 564 responses to this item said that the lesson was not logically structured. Thus, the data provide conclusive evidence of the logical structure and sequence built into the instructional materials.

Whereas the instructional materials discussed in this section had to be constructed on the basis of techniques that had not had extensive use or formal evaluation, the data collected during the development and tryout phases provided an essential source of information for evaluating the quality of these materials. In addition, these data can also be used to assess the validity of the procedures employed in developing the instructional materials. The operating characteristics of the data collection procedures provide evidence on their efficiency and utility. Thus, relevant information exists for further revisions of the materials, the procedures used in constructing them are substantiated by empirical evidence, and the characteristics of the data gathering system are known.

Products of the Study of American Industry--Student Outcomes

Two aspects of the evaluation of student outcomes will be reviewed in the ensuing pages. First, a brief description of the Project's achievement test and a general overview of the performance of the experimental and control groups on the test will be given. Second, selected attitudes, interests, and opinions of a sample of the students involved in the evaluation will be summarized and discussed.

Since the American Industry courses were based on a unique set of concepts and structure of the knowledges of industry, an achievement test had to be constructed to measure these constructs and content. As the specifications for the test were distilled the decision was made to limit the time required to complete this instrument to approximately fifty minutes. This was done to reduce the amount of time the students spent completing evaluation forms and to deter an overemphasis on one evaluation technique. If the group of students in the evaluation had been larger, tests could have been made for each concept area and administered to sub-samples of the group.

The basic task in writing the test was one of devising items that would efficiently sample behaviors critical to the objectives of the American Industry courses. Since the essential aspects of these courses were the study of concepts, the solving of problems, and the study of structure, the majority of the items in the test were related to one or more of these elements. In addition, some items at the knowledge level were included to assess the validity of the taxonomical structure of the levels of learning posited in Figure 5.

Items were written for each conceptual area and problems were defined which would cut across several conceptual areas in order to test the knowledge of the interrelationships of the concepts. In addition, several items were written which could be answered on the basis of "pure" conceptual thinking without recourse to the concepts of industry. Approximately eighty per cent of the items in the final form of the test were concerned with applying the concepts and structure of industry to problems or situations in industry. Five per cent tested conceptual thinking and the remaining fifteen per cent assessed factual knowledge.

The items in the objective portion of the test are four choice multiple-choice questions. In most instances a problem situation provides the basis for the item stems. When possible the alternative responses for an item were constructed to provide information on the responder's cognitive structure or lack of knowledge. An illustration of this is given by the test item reproduced in Table 4. In this problem, the distractors disclose whether the student has information on the cost, insulative qualities, and strength of common materials. If, for example, a student thought that materials were selected for their strength, he would select D as the appropriate choice.

The response distributions for all of the American Industry and control group students on this item are:

Response	American Industry	Control
A	7.3%	11.4%
B	74.1%	57.0%
C	13.9%	21.2%
D	4.7%	10.4%

These data indicate that the control group students are more likely to base their choices on the more salient characteristics of materials.

Comparisons can also be made between a control group and the classes taught by a specific teacher to determine if a particular bias is inherent in his instruction. For example, last year it was found that the students in one school were prone to select the distractor based on the finance concept when it was included in an item. This fact was communicated back to the teacher. In addition, this information suggested a need for problem solving exercises to develop the students' ability to deal with several relevant factors when solving a problem.

Table 4

CATEGORIZATION FORM FOR EVALUATION ITEMS

Directions: Fields are defined by capital letters, card columns by numbers reproduced on the master sheet. Numbers or signs written on this form are to be punched in the columns designated under the blank.

A. Item number; b 0 4 5 0
1 2 3 4 5

Concepts evaluated: B. First order: b 1 2. 0 0 0
6 7 8 9 10 11

C. Second order: b 0 1. 0 0 0
12 13 14 15 16 17

D. Third order: b 0 8. 0 0 0
18 19 20 21 22 23

E. Fourth order: b 0 4. 0 0 0
24 25 26 27 28 29

F. Relative Emphasis on concept order: b 0 1
30 31 32

G. Taxonomy level: b 4. 0 0 0
33 34 35 36 37

H. Type of item b 0 1
38 39 40

I. Difficulty: b 6 5. 6 (%)
41 42 43 44

J. Discrimination: b . 5 3 6 1
45 46 47 48 49

Author of item: _____

Why would mahogany paneling be used in the office of the president of an enterprise?

A. To reduce building costs
*B. To communicate his status
C. To improve the insulation of the office
D. To strengthen the office walls

Each test item was written on the form presented in Figure 4. The information recorded in the first portion of the form identifies the concept or concepts related to the question. In this example the concepts are materials (12), communication (1), relationships (8), and finance (4). Each of these would have an equal bearing on the solution; thus, the relative emphasis is rated as equal (1).

This item requires analysis of the situation given in the stem. Therefore, it is placed at level four in the cognitive taxonomy. Naturally, this assumes that the students have not seen this problem before. To insure this, the Project maintains the achievement test as a secure test and does not distribute it with the instructional materials or release it for review. Item type is listed as multiple-choice (1). The numbers representing the various types of items are arbitrarily assigned labels.

Difficulty and discrimination values accrued as the item was administered to various groups. Whenever possible, test items were tried out on a pilot group prior to their use in the formal evaluation. After an item was placed in the achievement test, information on its operating characteristics was obtained from the Generalized Item and Test Analysis Program (GITAP) developed by Dr. Baker at the University of Wisconsin (1966). A sample of the output from this program for the item in Table 4 is reproduced below.

ITMNO	CHOICE	WT	NR	DIFFICULTY	R	X50	BETA
36	1	0	2	.0444	-.1729	-9.8411	-.1755
36	2	1	29	.6444	.5408	-.6802	.6430
36	3	0	10	.2222	-.5728	-1.3305	-.6987
36	4	0	4	.0889	-.0900	-14.9671	-.0903

Starting at the left, the first three columns identify the item, the response choices, and the weight given to each response. (A weight of 1 is given to the correct response in this example.) The next two columns list the number of students selecting each response and the proportion represented by these numbers. Column five gives the biserial item-criterion correlation. In this analysis, the test score is the criterion. The last two columns present the parameters for the item characteristics curve (Baker, 1964). X_{50} identifies the point on the criterion scale, distribution of total test scores, at which half of the people with the given criterion score selected the response under consideration. These values are in the standard deviation units of the total test score distribution. Hence, fifty per cent of the people with test scores .68 standard deviation units below the mean test score would select the correct choice for this item. Beta gives an approximate value of the scope of the item characteristics curve at X_{50} and indicates the discriminating power of the item. For this administration of the item, these parameters indicate that the item is relatively easy and has positive discrimination.

GITAP also calculates test reliability utilizing the Hoyt analysis of variance method. Reliabilities for the Project's achievement test calculated on the basis of test results from individual American Industry classes range from .74 to .91. The median value of these reliabilities is .82. No doubt these reliabilities could be improved by discarding the items which usually discriminate poorly. However, the decision to keep or discard has not been made on this basis alone. Equally important was the nature of the item and the information it contributed to the evaluation. In other words, if there was no observable defect in the item and it provided important data, the item was kept in the test and questions were raised concerning the reasons for the poor results on this item. Most of these questions lead to a review of the ingredients and processes information related to the output being studied.

Content validity of the achievement test was relatively easy to establish. The item form shown in Figure 4 clearly defines the concept areas and interrelations measured by each item. And, the taxonomy level is identified. With this information items can be selected to evaluate all of the concepts and a portion of the interrelationships in the Project's structure of Industry. Determination of construct and criterion-related validity will have to await further data collection.

A general analysis of the test results during the 1967-68 school year disclosed the following outcomes for the eighteen and thirty-six week courses.

Length of Course	Outcomes of Comparisons: American Industry vs. Control Groups			
	A.I. Lower	Same	A.I. Better--Not Significant	A.I. Significantly Better, $P < .05$
18 Week Course		5	3	3
36 Week Course	1	0	3	4

As could be expected, the thirty-six week courses produce proportionally more significant results than the shorter course. Likewise, the longer course has proportionately more comparisons that favor American Industry but do not attain significance (differences between test means in this category range from 1.5 - 4 points). In contrast, the eighteen week course has several comparisons in which the means of the experimental and control groups are for all practical purposes the same (differences in this category are less than one point). One

American Industry class achieved less than the control group ($\bar{X}_E - \bar{X}_C = -1.5$). However, this comparison was made in a quasi-experimental design in which the control group had higher ability scores.

More detailed analyses may change the composition of the "A.I. Lower," "Same," and "A.I. Better" categories. However, there should be little if any change in the "Significant" category. At the present time, the data collected in the evaluation are being placed on a disk file for efficient retrieval and more sophisticated analyses. These analyses should produce a more definitive picture of the effects of the study of American Industry and the causes of these effects.

The ensuing paragraphs present and discuss responses on a student opinionnaire completed at the end of the school term. Some interesting differences appear and the data also provide the basis for establishing some correlates between performance on the achievement test and the learning activities encountered by the students.

At the end of the 1967-63 school year students in a sample of the American Industry and control classes, were asked to respond to the forty statements listed in Tables 5 and 6. Five responses were designated on the response sheet: "strongly disagree," "disagree," "undecided," "agree," and "strongly agree." In Tables 5 and 6 these responses are represented by SD, D, U, A, and SA respectively. The sixth heading, NR, indicates the number not responding.

Table 5 gives a summary of the responses made by the American Industry students who completed the opinionnaire. Table 6 presents a similar summary for students who did not take American Industry. In both tables the first figure in each column gives the total number of students marking the given response. The second figure in parentheses, lists the per cent of the group that marked the response.

Data in these tables do not represent all of the students encompassed in the Project's evaluation. A random sample of schools was selected in order to reduce the total time required to complete evaluation instruments in the participating centers. Also, the variation in evaluation designs within the selected schools resulted in the difference in number between the American Industry and control groups.

The analyses reported in subsequent paragraphs are based on the data in Tables 5 and 6. As noted above, these data are summed over several schools and grade levels. In addition, it was assumed that the level of measurement represented by the response area between SD and SA was ordinal. Hence, statistical tests were selected to evaluate ordinal data and the analysis in general was kept at a gross level. These are two important constraints but they do not reduce the value of the data in answering certain important questions as will be pointed out later.

Four general areas were designated within which to construct items for the opinionnaire. These areas were occupational behaviors, attitude toward

industry, interest in industry, and class activities. Each of these areas was selected because it would provide relevant data. The first three pertain to general outcomes of the course. Tha last category, class activities, concerns specific opinions related to the nature of industry and the structure of the American Industry course. It was included to assess the effects of various learning conditions and activities built into the course.

The areas and the numbers of the items encompassed in each are listed below:

Occupational Behaviors	Attitude Toward Industry	Interest In Industry	Class Activities
8	4	1	3
13	7	2	11
35	9	5	12
38	10	6	16
39	14	15	17
	18	20	23
	19	22	24
	21	29	26
	25	34	27
	28		32
	30		37
	31		
	33		
	36		
	40		

Two statistical comparisons were made using the data that appear in Tables 5 and 6. First, chi square values were calculated for the American Industry and control group data on each item. Next, the two groups were compared on the complete set of responses in each category.

The values obtained for the chi square statistic disclosed significant differences, $P<.05$, on ten items. Further investigation of these items revealed that in each case the response patterns favored the American Industry students. The significant items and the categories in which they

are located are listed below.

A. Occupational behaviors

Item 13. I will probably work in industry.

Item 38. There are many job opportunities in industry that I did not know about before taking this class.

B. Attitude toward industry

Item 21. Industry has little influence on me.

Item 25. Industry charges too much for its products.

Item 28. Industry offers a variety of job opportunities.

Item 31. I have greater appreciation for industry after studying it in class.

Item 36. Products produced by industry are usually of low quality.

Item 40. Industry provides an opportunity for people to develop their abilities.

C. Interest in industry

Item 6. I find it interesting to look at the designs used used in the products sold in local stores.

D. Class activities

Item 26. I had a chance in this class to develop some of my ideas for products.

Of the four categories, attitudes toward industry and occupational behaviors apparently are influenced most strongly by the study of American Industry. However, the significant items in the remaining two categories also shed light on the outcomes of the study of American Industry. For instance, the responses on item 26 indicate that the American Industry students had a greater opportunity to solve problems in class.

The second analysis entailed a comparison of the total set of responses within each category. For this analysis, the responses SD, D, U, A, and SA were given the values 1, 2, 3, 4, and 5 with five being assigned to the most favorable response. The mean response was then calculated for each group on each item. Comparisons were made on each item to determine which group responded more favorably. In addition, the response patterns were checked to determine what effect a change in scale values would have on the results. In other words, if the extreme responses received more weight, what would happen to the results? These effects were also recorded. Table 7 presents

a summary of these data and the comparisons on individual items.

The exact probability of obtaining the results found in each category was calculated by employing the binomial expansion. Use of this statistic was based on the null hypothesis that the responses of the American Industry and control groups represent the same opinions and behaviors. If this hypothesis is true, then either group should have an equal chance of responding more favorably to any given item in the opinionnaire. To illustrate this, consider the items in the attitude toward industry category. If the conditions in the null hypothesis were true, one would expect that each group would have about the same number of items on which its members responded more favorably. However, in this administration the American Industry group responded more favorably on twelve of the fifteen items. The probability of attaining this result if the null hypothesis were true is less than four chances in a thousand.

Outcomes of two of the analyses remain the same under both scaling procedures. American Industry students exhibit a significantly more favorable attitude toward industry ($P < .004$) and response to the items related to their class activities ($P < .033$).

No significant differences were observed in the remaining two categories. Neither scaling procedure would appear to affect these results. The occupational behavior category contains only five items and, thus, all of the comparisons would have to favor one group in order to attain a significant difference. In the interest in industry category, the comparisons favor the American Industry students, $P < .09$, but do not exceed the commonly accepted significance level of .05.

An analysis of these results reveals several interesting outcomes. The chi square tests identify ten items in which there is a significant difference between the response patterns of the American Industry students and the control groups. All of these differences favor the American Industry students, a fact that is of considerable significance in itself. Moreover, each category in the opinionnaire has one or more items on which a significantly different response pattern was found. This indicates that the study American Industry had some effect in each of these areas.

Analysis of the complete set of individual item comparisons for each category indicated that the American Industry students responded more favorably on the attitude toward industry and class activities items. Hence, it would appear that the American Industry students have had a positive shift in their attitudes toward industry. They also show a more positive attitude toward the opportunities and products associated with industry. No doubt some of this positive effect carries over to item 13 in which a significantly larger number of American Industry students express a preference for working in industry.

The significant difference found in the set of items related to class activities may be of greater interest to the Project staff than to other people since these items are somewhat specific to the design of the American Industry courses. However, few people will probably quarrel with

with the educational relevance of the significant difference found on item 26 which reads "I had a chance in this class to develop some of my ideas for products." These data are germane to the Project's objective to develop the problem solving ability of students. The reader is encouraged to review the results on the remaining items in this category and judge their relevance for his work.

In the area of occupational behaviors, the two items, 13 and 38, which were significantly different in the chi square tests indicate that the study of American Industry increases the students perspectives of the jobs available in industry and their interest in seeking employment in one of them. Both of these effects are important and relevant to the contemporary educational scene.

As noted in the first part of this report, the data in Tables 1 and 2 were obtained from several schools. There was some concern that one or two schools might contribute most to the effects observed. However, review of the results in the individual schools indicated that the statistics for individual classes varied only slightly from those given in Tables 5, 6, and 7.

Other interesting facts of a noncomparative nature can be found in the data reported. Student interest in visiting a business, for example, was very high in both the American Industry and control groups. This would appear to be a good learning activity to satisfy student interests and develop new insights into industry. Also, a large number in both groups, about 75 per cent, were aware of the changing nature of jobs in industry. The reader's interest may delineate further items and data of interest as he reads the tables.

Summary

The evaluation system described in this paper was designed to provide data for evaluation and curriculum decisions. Outcomes of the study of American Industry form the basic criteria for making judgments and decisions. In addition, data related to the characteristics of the ingredients and the learning and instructional processes are collected. This information provides a basis for defining the causes of the outcomes, determining differential effects of the study of American Industry, and isolating the elements that need further study. Specific data collection procedures and instruments were developed to acquire the needed information. Thus, for example, the achievement test was designed to provide data on the essential elements in the Project's rationale instead of selecting items that would maximize differences between the experimental and control groups.

Studies reported in the previous section illustrate the types of data collected. Also they give some evidence of the effects of the study of American Industry. These reports, however, are based on a general analysis of the data. A complete evaluation report will be completed next year.

TABLE 5
UNIT 7 TEST, PART II:
Summary of Responses Made By 1967-68
American Industry Students

STATEMENT	RESPONSE#					
	SD	D	U	A	SA	NR
1. I would like to visit a business to see how it operates.	14(3.3)	17(4.0)	32(7.5)	178(41.7)	175(41.0)	11(2.6)
2. I like to look at products produced by industry . . .	5(1.2)	22(5.2)	72(16.9)	224(52.5)	90(21.1)	14(3.3)
3. All jobs in a business contribute to its profits. . .	19(4.4)	42(9.8)	86(20.1)	155(36.2)	111(26.0)	14(3.3)
4. Industry has interesting jobs to offer.	7(1.6)	25(5.9)	52(12.2)	180(42.2)	148(34.7)	15(3.5)
5. I look at advertising to see what sales appeals are used.	23(5.4)	81(19.0)	111(26.0)	156(36.5)	40(9.4)	16(3.7)
	SD	D	U	A	SA	NR
6. I find it interesting to look at the designs used in the products sold in local stores.	18(4.2)	59(13.8)	106(24.8)	187(43.8)	41(9.6)	16(3.7)
7. Industry cannot use creative people.	275(64.4)	56(13.1)	44(10.3)	24(5.6)	12(2.8)	16(3.7)
8. Some day I might start a business of my own	30(7.0)	55(12.9)	184(43.1)	91(21.3)	50(11.7)	17(4.0)
9. Industry provides products I need.	14(3.3)	18(4.2)	25(5.9)	154(36.1)	200(46.8)	16(3.7)
10. Industry does not need people with skills	278(65.1)	60(14.1)	26(6.1)	27(6.3)	18(4.2)	18(4.2)
	SD	D	U	A	SA	NR
11. Getting along with other people is important in industry.	10(2.3)	19(4.4)	42(9.8)	141(33.0)	198(46.4)	17(4.0)
12. Selling products is an important part of industry . .	11(2.6)	12(2.8)	19(4.4)	159(37.2)	208(48.7)	18(4.2)
13. I will probably work in industry.	32(7.5)	64(15.0)	161(37.7)	105(24.6)	48(11.2)	17(4.0)
14. Industry does an efficient job of producing products.	14(3.3)	23(5.4)	74(17.3)	237(55.5)	60(14.0)	19(4.4)
15. When I am in a store and have time, I look at construction of the products displayed.	25(5.9)	86(20.1)	90(21.1)	174(40.7)	36(8.4)	16(3.7)
	SD	D	U	A	SA	NR
16. People have to be able to follow orders in industry .	15(3.5)	17(4.0)	25(5.9)	169(39.6)	182(42.6)	18(4.2)
17. I like to compare products before buying one.	15(3.5)	24(5.6)	43(10.1)	191(44.7)	135(31.6)	19(4.4)
18. Industry needs people who have knowledge.	10(2.3)	14(3.3)	38(8.9)	152(35.6)	198(46.4)	15(3.5)
19. The more skilled a worker is the more pay he receives.	26(6.1)	38(8.9)	63(14.8)	162(37.9)	122(28.6)	16(3.7)
20. I like to look at the way materials are used in various products sold in the local stores	19(4.4)	55(12.9)	129(30.2)	168(39.3)	35(8.2)	21(4.9)

#The first figure indicates the number of individuals that selected the response. The number in the parenthesis is the percent of the total group that selected the response.

Table 5--Unit 7 Test, Part II (cont'd)

STATEMENT	RESPONSE#					
	SD	D	U	A	SA	NR
21. Industry has little influence on me.	183(42.9)	128(30.0)	46(10.8)	37(8.7)	16(3.7)	17(4.0)
22. I want to find out more about industry	21(4.9)	37(8.7)	139(32.6)	159(37.2)	53(12.4)	18(4.2)
23. Industry continuously develops jobs that require new skills	7(1.6)	19(4.4)	39(9.1)	196(45.9)	145(34.0)	21(4.9)
24. I have some ideas for products that could be sold.	26(6.1)	82(19.2)	140(32.8)	108(25.3)	45(10.5)	26(6.1)
25. Industry charges too much for its products	27(6.3)	102(23.9)	171(40.0)	64(15.0)	42(9.8)	21(4.9)
	SD	D	U	A	SA	NR
26. I had a chance in this class to develop some of my ideas for products	31(7.3)	50(11.7)	80(18.7)	192(45.0)	51(11.9)	23(5.4)
27. All jobs in an enterprise are important.	11(2.6)	24(5.6)	55(12.9)	212(49.6)	100(23.4)	25(5.9)
28. Industry offers a variety of job opportunities . .	7(1.6)	16(3.7)	37(8.7)	219(51.3)	123(28.8)	25(5.9)
29. I have read several news articles on the strikes held this year	40(9.4)	63(14.8)	62(14.5)	186(43.6)	53(12.4)	23(5.4)
30. Industry is not an important part of our society .	239(56.0)	76(17.8)	27(6.3)	38(8.9)	20(4.7)	27(6.3)
	SD	D	U	A	SA	NR
31. I have greater appreciation for industry after studying it in class	22(5.2)	25(5.9)	101(23.7)	172(40.3)	77(18.0)	30(7.0)
32. A successful business depends on a variety of jobs done well	17(4.0)	21(4.9)	37(8.7)	189(44.3)	136(31.9)	27(6.3)
33. Industry could survive without profits	206(48.2)	91(21.3)	47(11.0)	32(7.5)	19(4.4)	32(7.5)
34. I sometimes look at products in local stores to see how they are made.	17(4.0)	63(14.8)	87(20.4)	177(41.5)	51(11.9)	32(7.5)
35. This class has changed my thinking about the work I will do after my schooling has been completed. .	50(11.7)	90(21.1)	124(29.0)	87(20.4)	42(9.8)	34(8.0)
	SD	D	U	A	SA	NR
36. Products produced by industry are usually of low quality.	93(21.8)	165(38.6)	74(17.3)	47(11.0)	11(2.6)	37(8.7)
37. Producing the product is the most important part of a successful business	35(8.2)	93(21.8)	100(23.4)	125(29.3)	38(8.9)	36(8.4)
38. There are many job opportunities in industry that I did not know about before taking this class. . .	13(3.0)	64(15.0)	72(16.9)	185(43.3)	53(12.4)	40(9.4)
39. This class has started me thinking about the work I will do after my schooling is done	38(8.9)	67(15.7)	118(27.6)	126(29.5)	38(8.9)	40(9.4)
40. Industry provides an opportunity for people to develop their abilities.	10(2.3)	18(4.2)	46(10.8)	208(48.7)	105(24.6)	40(9.4)

TABLE 6
UNIT 7 TEST, PART II:
Summary of Responses Made by 1967-68
Control Group Students

	STATEMENT	RESPONSE#					
		SD	D	U	A	SA	NR
1.	I would like to visit a business to see how it operates.	7(4.5)	3(1.9)	15(9.6)	93(59.2)	34(21.7)	5(3.2)
2.	I like to look at products produced by industry . . .	3(1.9)	14(8.9)	27(17.2)	82(52.2)	27(17.2)	4(2.5)
3.	All jobs in a business contribute to its profits. . .	7(4.5)	21(13.4)	30(19.1)	68(43.3)	28(17.8)	3(1.9)
4.	Industry has interesting jobs to offer.	4(2.5)	18(11.5)	15(9.6)	72(45.9)	41(26.1)	7(4.5)
5.	I look at advertising to see what sales appeals are used.	15(9.6)	37(23.6)	44(28.0)	50(31.8)	7(4.5)	4(2.5)
		SD	D	U	A	SA	NR
6.	I find it interesting to look at the designs used in products sold in local stores	19(12.1)	24(15.3)	34(21.7)	59(37.6)	17(10.8)	4(2.5)
7.	Industry cannot use creative people	86(54.8)	33(21.0)	16(10.2)	11(7.0)	6(3.8)	5(3.2)
8.	Some day I might start a business of my own	14(8.9)	18(11.5)	67(42.7)	26(16.6)	26(16.6)	6(3.6)
9.	Industry provides products I need	8(5.1)	5(3.2)	7(4.5)	62(39.5)	69(43.9)	6(3.8)
10.	Industry does not need people with skills	93(59.2)	24(15.3)	13(8.2)	21(13.4)	2(1.2)	4(2.5)
		SD	D	U	A	SA	NR
11.	Getting along with other people is important in industry.	6(3.8)	12(7.6)	12(7.6)	60(38.2)	61(38.9)	6(3.8)
12.	Selling products is an important part of industry . .	3(1.9)	5(3.2)	7(4.5)	61(38.9)	75(47.8)	6(3.8)
13.	I will probably work in industry.	34(21.7)	18(11.5)	67(42.7)	26(16.6)	8(5.1)	4(2.5)
14.	Industry does an efficient job of producing products.	6(3.8)	16(10.2)	28(17.8)	71(45.2)	29(18.5)	7(4.5)
15.	When I am in a store and have time, I look at the construction of the products displayed.	7(4.5)	33(21.0)	31(19.7)	70(44.6)	8(5.1)	8(5.1)
		SD	D	U	A	SA	NR
16.	People have to be able to follow orders in industry .	4(2.5)	4(2.5)	13(8.3)	53(33.8)	79(50.3)	4(2.5)
17.	I like to compare products before buying one.	4(2.5)	14(8.9)	13(8.3)	71(45.2)	51(32.5)	4(2.5)
18.	Industry needs people who have knowledge.	2(1.3)	10(6.4)	20(12.7)	58(36.9)	61(38.9)	6(3.8)
19.	The more skilled a worker is the more pay he receives.	9(5.7)	17(10.8)	24(15.3)	51(32.5)	48(30.6)	8(5.1)
20.	I like to look at the way materials are used in various products sold in the local stores	5(3.2)	23(14.6)	45(28.7)	60(38.2)	16(10.2)	8(5.1)

#The first figure indicates the number of individuals that selected the response. The number in the parenthesis is the percent of the total group that selected the response.

Table 6--Unit 7 Test, Part II (cont'd)

STATEMENT	RESPONSE#					
	SD	D	U	A	SA	NR
21. Industry has little influence on me.	42(26.8)	58(36.9)	30(19.1)	14(8.9)	8(5.1)	5(3.2)
22. I want to find out more about industry	10(6.4)	24(15.3)	40(25.5)	57(36.3)	18(11.5)	8(5.1)
23. Industry continuously develops jobs that require new skills	2(1.3)	9(5.7)	25(15.9)	64(40.8)	51(32.5)	6(3.8)
24. I have some ideas for products that could be sold. . .	13(8.3)	39(24.8)	44(28.0)	37(23.6)	17(10.8)	7(4.5)
25. Industry charges too much for its products	6(3.8)	20(12.7)	52(33.1)	37(23.6)	31(19.7)	11(7.0)
	SD	D	U	A	SA	NR
26. I had a chance in this class to develop some of my ideas for products	18(11.5)	33(21.0)	36(22.9)	50(31.8)	9(5.7)	11(7.0)
27. All jobs in an enterprise are important.	6(3.8)	15(9.6)	18(11.5)	69(43.9)	35(22.3)	14(8.9)
28. Industry offers a variety of job opportunities	9(5.7)	15(9.6)	12(7.6)	72(45.9)	38(24.2)	11(7.0)
29. I have read several news articles on the strikes held this year.	12(7.6)	17(10.8)	17(10.8)	64(40.8)	34(21.7)	13(8.3)
30. Industry is not an important part of our society . . .	79(50.3)	26(16.6)	18(11.5)	15(9.6)	2(1.3)	17(10.8)
	SD	D	U	A	SA	NR
31. I have greater appreciation for industry after studying it in class	15(9.6)	23(14.6)	36(22.9)	43(27.4)	25(15.9)	15(9.6)
32. A successful business depends on a variety of jobs done well.	4(2.5)	6(3.8)	20(12.7)	69(43.9)	41(26.1)	17(10.8)
33. Industry could survive without profits	73(46.5)	39(24.8)	14(8.9)	10(6.4)	6(3.8)	15(9.6)
34. I sometimes look at products in local stores to see how they are made.	8(5.1)	23(14.6)	29(18.5)	57(36.3)	26(16.6)	14(8.9)
35. This class has changed my thinking about the work I will do after my schooling has been completed. . . .	24(15.3)	34(21.7)	48(30.6)	27(17.2)	11(7.0)	13(8.3)
	SD	D	U	A	SA	NR
36. Products produced by industry are usually of low quality.	18(11.5)	51(32.5)	34(21.7)	29(18.5)	10(6.4)	15(9.6)
37. Producing the product is the most important part of a successful business.	18(11.5)	25(15.9)	26(16.6)	58(36.9)	17(10.8)	13(8.3)
38. There are many job opportunities in industry that I did not know about before taking this class.	7(4.5)	27(17.2)	40(25.5)	42(26.8)	27(17.2)	14(8.9)
39. This class has started me thinking about the work I will do after my schooling is done	20(12.7)	33(21.0)	38(24.2)	36(22.9)	17(10.8)	13(8.3)
40. Industry provides an opportunity for people to develop their abilities.	12(7.6)	11(7.0)	23(14.6)	64(40.8)	34(21.7)	13(8.3)

TABLE 7

Comparison of Average Response Values

Item	Category	Average Response Values			Effects of Rescaling	
		American Industry	Control	Result of Comparison	Effect on A.I.	Possible Result of New Comparison
	Occupational Behavior					
8		3.19	3.21	C	-	C
13		3.18	2.71	A.I.	+	A.I.
35		2.95	2.77	A.I.	+	A.I.
38		3.51	3.38	A.I.	-	?
39		3.22	2.98	A.I.	+	A.I.
	Attitude Toward Industry					
4		3.96	3.85	A.I.	+	A.I.
7		3.42	3.20	A.I.	+	A.I.
9		4.24	4.19	A.I.	+	A.I.
10		3.42	3.25	A.I.	+	A.I.
14		3.75	3.67	A.I.	-	C
18		4.25	4.10	A.I.	+	A.I.
19		3.77	3.75	A.I.	-	C
21		3.04	2.74	A.I.	+	A.I.
25		3.02	1.54	A.I.	+	A.I.
28		4.08	3.79	A.I.	+	A.I.
30		3.19	3.18	A.I.	+	A.I.
31		3.64	3.28	A.I.	+	A.I.
33		3.10	3.15	C	0	C
36		2.73	2.27	A.I.	+	A.I.
40		3.98	3.67	A.I.	+	A.I.
	Interest in Industry					
1		4.16	3.95	A.I.	+	A.I.
2		3.90	3.76	A.I.	+	A.I.
5		3.27	2.98	A.I.	+	A.I.
6		3.42	3.20	A.I.	0	A.I.
15		3.27	3.26	A.I.	+	A.I.
20		3.36	3.40	C	-	C
22		3.45	3.28	A.I.	+	A.I.
29		3.36	3.66	C	-	C
34		3.46	3.49	C	-	C
	Class Activities					
3		3.72	3.58	A.I.	+	A.I.
11		4.21	4.05	A.I.	+	A.I.
12		4.32	4.32	Even	0	C
16		4.18	4.30	C	-	C
17		4.00	3.99	A.I.	-	C
23		4.12	4.01	A.I.	+	A.I.
24		3.16	3.04	A.I.	0	A.I.
26		3.45	2.99	A.I.	+	A.I.
27		3.91	3.78	A.I.	+	A.I.
32		4.02	3.98	A.I.	+	A.I.
37		1.90	1.78	A.I.	+	A.I.

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VT 008 211
Witherow, Mary, And Others
Speeches Presented at the Annual Vocational Convention of the American Vocational Association (62nd, Dallas, Tex., December 10-11, 1968). Secondary Department General Meetings.

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*SPEECHES; *INSTRUCTIONAL INNOVATION; OFFICE OCCUPATIONS EDUCATION; DISTRIBUTIVE EDUCATION; INDUSTRIAL ARTS; *STUDENT NEEDS; DISADVANTAGED YOUTH; EMPLOYER ATTITUDES; *VOCATIONAL EDUCATION; *EXPERIMENTAL PROGRAMS *AMERICAN VOCATIONAL ASSOCIATION CONVENTION, DALLAS, TEXAS, DECEMBER 9-13, 1968

Speeches presented at a series of general meetings concerned with secondary education programs are included. "Innovations in Business" by Mary Witherow describes the business education program at the O'Fallon Skill Center. "The Senior Intensified Program--Detroit Public Schools," by Vastene Woodhouse, outlines this combined distributive education and business education program which operates as a 3-year demonstration project using simulated facilities rather than the cooperative education format. "Innovative Programs in Industrial Arts" by Walter C. Brown reviews six diverse programs that were selected from a large group which will be reported in a later bulletin by the Industrial Arts Division. "Providing Individual Services for Vocational Students with Special Needs" by Christine W. Wallace outlines the resources and services needed to provide individual educational experiences for disadvantaged students. "A Businessman's View of Vocational Education" by Stanley Puddiford presents a personal reaction to several issues involving vocational education. (EM)

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Speeches Presented At The

62nd Annual Vocational Convention

Of The

American Vocational Association

Dallas, Texas

December 10-11, 1968

Secondary Department General Meetings

VT008211

Innovations in Business[1]

by

Mary Witherow

Consultant, Business and Distributive Education

St. Louis, Missouri Public Schools

3725 Gustine

St. Louis, Missouri 63116

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

[1]Presented at the 62nd Annual Vocational Convention, Dallas, Texas, December 10, 1968.

Most businesses have as their ultimate purpose for existence a co-aim of (1) developing a product or providing a service, and (2) of doing so at a profit. I would like to submit today the possibility of making this a tri-aim, including on an equal basis (1) the training to develop a product or provide a service (2) the profit motive, and (3) the development of people.

This development of people is actually what we feel we are trying to do at the O'Fallon Skill Center. Our Skill Center is really an Area Vocational School and includes many areas of training besides business education, but the business education program has 4 sections -- accounting, clerical, data processing, and secretarial. These are not new to any of you, but because our literature has presented the scope and sequence of training in a little different light, I brought some of the folders for you to see if you are interested. The jobs for which the training will qualify the students are listed first and then the sequence of subjects required for each year in the program.

St. Louis, as is the case in all major cities, has a dropout problem -- the figures are staggering, and frightening. When a student passes the legal limit of 16, he's had it with books. Last year we lost a total of 3,500 students as dropouts. To this number add 1,500 as those suspended for various reasons, and you have a total of 5,000 restless teenagers.

This shows we've failed in our tri-aim of development at least of 5,000 students to any entry employment level. To help combat this, we created 2 new classes in the clerical training program. These are new this fall, so the opportunity for evaluation has been limited.

The freshman course entitled office orientation meets 7½ periods per week. This is really a simulated office situation with limited equipment -- trapezoidal tables in place of traditional arm chairs, a receptionist desk and chair, a fluid duplicator, four typewriters, three adding machines, and an overhead projector.

In this course every attempt is made to have the classroom assume an office atmosphere, and the problems and assignments are presented as prepared as if they are part of the work in an office. Students take turns serving as receptionist for the class, and the trapezoidal tables are placed in various arrangements to facilitate group work, demonstrations, and individual study as the instructional needs indicate.

Desirable office traits are stressed daily in the classroom, and the student is given actual practice in completing essential business forms. The general terminology applicable to most offices, and practical applications of mathematics and communications are stressed.

Actually this freshman foundation course is an attempt to make the training realistic for the student, keep the student motivated and hold him in school.

Following this introductory freshman class for the sophomore year the course is entitled junior clerk and consists of 4 ten-week areas of instruction for entry type employment. The four areas are -- cashiering, filing, payroll and stock and inventory.

In these four 10-week periods the students strive to acquire the knowledge, skills, attitudes, and characteristics needed for initial employment in any one of the four areas covered. The rooms are elaborately equipped with the latest in equipment -- automated checkout

lanes, cash registers, dummy stock merchandise (food and containers) calculators, typewriters, 10-key adding machines, typewriter billers, all types of files - visible, suspension, lateral, compartment, etc.

No one textbook provides the necessary instruction or drill material for this course. Last summer I supervised a committee of 5 teachers who wrote the curriculum guide, equipment companies provided training manuals and drill materials, and teachers have been preparing and sharing suitable materials.

Besides the regular office and distributive co-op programs which we have had for years in St. Louis, where the students attend school half a day and are employed half a day, this year emphasis has been placed on innovative work-study programs -- let me tell you about a few. These are inter-departmental in scope -- Bell Telephone, Stix, Baer and Fuller, a Standard Filling Station, house rennovation project, and a 3 building complex.

Yes, I would repeat our innovations in training center around development of people -- we stress behavioral and attitudes improvement and hope that in so doing we are contributing to the tri-aim of education.

FOR THE RECORDER

THE SENIOR INTENSIFIED PROGRAM -- Detroit Public Schools

by Mrs. Vastene Woodhouse

Perhaps one of the most important challenges facing us as business educators is program development. I have had the pleasure of being an integral part of the Senior Intensified Program since its inception in the Detroit Public Schools in 1966, and I have seen that this approach is a worth-while idea to the concept of business education. We in the Detroit metropolitan area have experienced a first-hand glimpse of a curriculum pattern which prepared senior high school students for employment.

There are some questions that I think that you would want answered in reference to the Senior Intensified Program:

What is Sip?

Why was it organized?

What does it offer to the students?

How does it operate?

SIP is a curriculum pattern designed to prepare high school students for employment in the following clusters of entry occupations:

Distributive Education--salespersons

Office Education--clerk stenographers/ clerk typists

Data Processing--console operators

Northern was the only high school in Detroit with the four programs in operation--so in a sense we were considered a pilot school.

The purpose of SIP WAS TO demonstrate that those minimal essential business skills demanded by employers for entry into todays' office and distributive occupations can successfully be taught in a speciall developed Senior

Intensified Program.

This development was made possible through the findings of a study made by Wayne State University entitled "Opportunities and Requirements for Initial Employment of School Leavers with Emphasis on Office and Retail Jobs" or sometimes referred to as Oreos. This was a cooperative study by business education representatives of the Detroit Public Schools, the University of Michigan and Wayne State University.

Employers of high school leavers (drop-outs or high school graduates) demand relatively few skills for the jobs available to youth with no previous work experience. Where specific skills are demanded--as in the distributive and office occupations--no data have been available on the minimal requirements for securing employment prior to the Oreos study. Consequently, the schools have taught skill courses that are often out of touch with the specific needs of the business community. In most cases, this combination of skill courses had taken an inordinate amount of the high school student's time. The SIP program, saves two-thirds of the time presently devoted to the now discrete, unarticulated and sometimes unrealistic course requirements.

As a three-year curriculum demonstration project, the Senior Intensified Program required that the entire content material be taught in a minimum of 80 minutes and/or a maximum of 120 minutes per day for not more than one school year. However, during the second year, 1967, it was found that in teaching the MUST and not the MIGHT of the curriculum patterns, we could shorten the three periods to two for the clerk-typists and distributive education clusters. A period in Detroit is usually 40 minutes.

The major differences in SIP and the already developed COOP curriculum patterns are as follows:

a. Students will not be required to have previous preparatory courses in the office occupations.

b. The minimal essential subject matter will be taught in its entirety in the senior school year.

c. Time will be used in varying patterns to allow the maximum fusion of several subject areas.

d. Methods, materials, and time allocations will be evaluated and revised to reflect innovations in business and education brought about by technological changes in educational facilities.

e. The focus will not be concerned with covering a book since there are no books used, but rather with teaching the essentials nneeded for entry occupations.

f. Each student will be placed in an on the job training station (cooperative work-study program) for one semester only.

I have found the SIP program rewarding, exciting, and frustrating. It has been rewarding in that I have seen the growth of youngsters with no previous business background, and their ability to perform satisfactorily in an on-the-job training stations. It has been exciting because the lessons were developed so that the content materials taught have been fused together so that there is continuity in a given subject area. It has been frustrating at times when a lesson plan called for a particular film or a transparency and it was unavailable or missing. But these were minor irritations in an innovative venture which helped me to change my outlook and my role as a business education teacher.

The proof of any pudding is in the eating--and I would say that our youngsters were that proof. I had 24 students in last year's class, 21 of whom worked as clerk/typists. I was very proud of them, and they were proud of themselves as they acted as good will ambassadors for Northern High School.

INDUSTRIAL ARTS DIVISION

American Vocational Association

INNOVATIVE PROGRAMS IN INDUSTRIAL ARTS

Walter C. Brown
Chairman
Innovative Program Committee

December 10, 1968

A committee was appointed in December, 1967 by the Industrial Arts Division of AVA to survey and report innovative programs in industrial arts. The committee has completed the survey and is in the process of reviewing and selecting those programs to be included in the report from those of the 118 submitted. The report today is only a sampling of some of the innovative programs which will be reported later in bulletin form.

1. Mass Production -- Serramonte High School, Daly City, California.

   The classes consist of two basic areas; Engineering Design in the Mechanical Drawing area and the Production Job Shop in the Wood-Metal-Plastics areas. Included in the course are departments of accounting, programming, design, engineering, drafting, sales, and production.

   Although manufacturing enterprises and mass production units are not new in industrial arts, the innovative feature in this program is that their work includes production of goods and services including an efficiency study of the school cafeteria.

2. Motivating Disadvantaged Pupils -- Wichita, Kansas.

   Students were given considerable freedom in the selection of projects. Parents were invited to join their sons in working on the projects. Metal and woods classes were operated evenings and Saturdays at four points in the disadvantaged areas of the city. Tuition and cost of materials were paid from Title I funds.

3. Team Teaching - Mass Production -- Parma, Ohio.

Two regular classes of seventh and eighth grade students were combined on a full-time basis for the entire semester. A regular class of ninth grade students participated intermittently as engineering consultants, and also assisted the three industrial arts instructors with instruction for seventh and eighth grade boys. Three c orporations were formed and products manufactured.

4. Research -- Cleveland Heights, Ohio.

In this program, a study is made of innovations which comprise our present technology and how these innovations may affect industry. Consideration is given to a favorable climate in which student can learn. Content centers around basic elements which provide a student with a better understanding of the latest technological developments and how these developments aid man in his mastery of materials and processes.

After the unit has been selected, students choose a topic within the unit for research study and reporting.

5. Individualized Programming -- Ft. Lauderdale, Florida.

There are two main features in the program which help in allowing for the individual differences. First, is the modular scheduling. This provides flexibility in the total school schedule and allows flexibility for meeting the time needs of a single student. Second, is the Learning Activity

Package or LAP as it is called at Nova.

This LAP is a form of programmed instruction, but with some special characteristics. The teacher is built in as an integral part of the LAP. It uses clearly stated behavior objectives arranged in order by learning level so the student understands what is expected of him. A variety of media and modes are used to help the student master the objectives. And, of great importance, the student is given the opportunity of making choices. These choices cover such things as taking a self-test or starting directly on assignments, which assignments he needs to do in order to meet the objectives, which of the media and modes are best suited for him, and to what depth he will work in a LAP beyond the required objectives.

6. Materials Fabrication -- Ft. Lauderdale, Florida.

The Materials Febrication Laboratory is equipped with the facilities necessary for a comprehensive study of technology in the areas of metals, plastics, and woods.

The heart of the program is the testing laboratory which enables the student to achieve a thorough understanding of the materials. A second area of study is processes and a third is fabrication.

December 11, 1968

Mrs. Christine W. Wallace
Coordinator of Special Programs
Bureau of Vocational Education
State Department of Education
Frankfort, Kentucky

AVA CONVENTION -- DALLAS

Secondary Education Program

Panel: The Disadvantaged

Topic: Providing Individual Services for Vocational Students with Special Needs

Look at the secondary student with special needs. Look at them; masses of them; numberless teenagers existing in every state -- concentrated in the cities -- scattered in the mountains and rural areas, migrating along the nation's highways. This is an important segment of the youth population.

Today, this panel calls them the disadvantaged. Let us change the pronoun from them to him. The term "disadvantaged" merely labels him. To serve him, the individual, requires that we deal with all of his uniquenesses. Individuality is the key to unlock his potential.

To help you see the individual, I've selected three from the mass of disadvantaged youth -- Geraldine, Crumby, and Lottie. Each is an individual with a preponderance of unmet needs. Providing individual educational experiences for them calls for:

1. Extensive assessment and diagnosis. Programs have failed, now we move to the individual and his learning problem. How does this person go about learning?
2. A tailored program to remove his educational blocks.
3. Instructional personnel -- a teacher -- a team.
   - A differentiated staff, including teacher aides
   - Over-trained teachers

. Empathy, understanding, and interest in working with persons with special needs

. Knowledge and versatility in subject matter

. Flexibility in methods of teaching and remedial techniques

. Pre-service training. Move the setting from the campus to the area of the disadvantaged. Rich background in psychology, sociology, and anthropology.

. All vocational education areas need sections in methods courses on the use of skills as a vehicle to teach the disadvantaged learner.

. In-service training

4. Administrators dedicated to the proposition that the problems of teaching the disadvantaged will not be solved with more of the same.

. Willing to innovate

- Flexible scheduling
- Differentiated staffing
- More intensive guidance services
- Facilities, etc.
- All-faculty member involvement

5. All agencies working together to serve him. Education; Child Welfare; Mental Health; Public Assistance; Public Health; ESEA I, III, and VIII; Etc.

6. His community, including his parents, working together. The real evaluation, in terms of the individual, the product. We must be willing to be held accountable!

62nd ANNUAL VOCATIONAL CONVENTION
DALLAS, TEXAS
December 11, 1968

Panel on Safety and Work Hazard Implications of Vocational Education

CHAIRMAN: James O. Reynolds
Dayton Public Schools
Dayton, Ohio 45202

Speaker: Bruce F. Hillenbrand, Chief
Division of Youth Safety
Office of Occupational Safety
Bureau of Labor Standards
U. S. Department of Labor
Washington, D. C. 20210

I would like to direct my remarks toward the role of the Youth Safety Division as it relates to the recent amendments to the Vocational Education Act. First, Section G relating to cooperative vocational education programs and more specifically to Section H on the work-study programs.

The programs of youth, especially disadvantaged youth, have received intensive studies by many agencies and organizations. We have learned some things and indeed have much more to learn. We know that youth, for whom bridges from school to work are smoothest, are those with the intensive preparation provided by professional training at the secondary and college level and beyond. For them, careers are virtually assured and unemployment is very low. Vocational

preparation at the secondary level offers a great challenge to educators. As you know, for many of these youth, graduation from high school represents a termination of their educational career. The recent amendments to the Act obviously are directed toward improving job preparation for many more youth, thereby making the transition from school to work easier. We, in the Youth Safety Division, feel that we can and do have a unique role to play in the job preparation process. In this connection, let me first give you a run down on what we do and why we do it.

Under the Fair Labor Standards Act, which sets 16 as a basic minimum age for employment, the Congress gave additional authority to the Secretary of Labor to find and determine which jobs are too hazardous for youth 16 and 17 years of age in nonagricultural occupations. Additionally, the Secretary was given authority to determine occupations and the conditions under which 14- and 15-year-olds might be employed.

In 1966, the Congress included in its amendments to the Fair Labor Standards Act authority for the Secretary to determine those occupations in agriculture which are too hazardous for youth under 16. The Youth Safety Division of the Bureau of Labor Standards has been delegated responsibility for carrying out the Secretary's mandate under this Federal law. The procedures involved in developing regulations and orders are very detailed and include: Intensive research and study; on-site observations; consultation with safety officials, educators, labor officials, and experts in various fields; and public hearings.

Much has been made of the barriers which child-labor laws place in the way of youth employment, particularly during summer months and school vacation periods when large numbers of young people are seeking jobs. Arguments have been advanced that many of the child-labor laws are outdated, and a modification of them would substantially increase employment opportunities for youth. In addition, arguments have been advanced that suitable work experience in connection with

schooling might be appropriate. Present laws, including the Federal law which does not permit youth under 16 to work during school hours, make it almost impossible for 14- and 15-year-olds to participate in a combined school and work-experience type program. For these and many other reasons the Federal orders and regulations are under constant review, and numerous amendments have been made over the years to improve and keep them in line with technological and other changes.

With any change in Legislation involving young workers, we always try to see what modifications, if any, are needed to adapt our regulations. For example, with the 1966 amendments to the Economic Opportunity Act, Neighborhood Youth Corps enrollees can participate in work-experience programs conducted by private industry as well as by public and private nonprofit agencies. This change spurred us to review Federal orders and regulations affecting young workers. We wanted to assure that the child-labor provisions of the Federal Fair Labor Standards Act would protect youth against undue hazards to his

schooling, health, and well-being; but that they do not, through obsolescence, unnecessarily restrict their employment opportunities.

Some 17 Hazardous-Occupations Orders have been adopted since 1938 when the Act was passed for persons under 18. Some of these orders have been revised; but as you know industry is dynamic -- our technology is ever-changing. Some of the questions we were faced with were: Have any of the technological changes rendered the orders and regulations obsolete? Could youth under 18 now work safely at previously prohibited occupations?

Obviously, we didn't want to open up job opportunities which would kill or injure our youth. Obviously, we didn't <u>then</u> and don't <u>now</u> want to allow kids under 18 to manufacture explosives, although the industry has an excellent safety record. Or mine coal or copper or other extractive raw materials in an industry which has the highest injury rate of all. We don't want our youth exposed to radioactive substances and so on.

Let me just give you a brief run down on the changes that we have made during the last year. Order No. 7, which covers operating elevators, was changed to allow 16- and 17-year-olds to operate automatic elevators. Secondly, 14- and 15-year-olds are now permitted to work until 9 p.m. instead of 7 p.m. during the summer from June 1 through Labor Day. As you can see, this coincides with the months that have Daylight Saving Time and the usual summer school vacation period.

These two modifications were included in what I might call the first "batch" of revisions following initiation of a review of all of the regulations. They became effective November 1, 1967.

Adopted in this first group were three other changes. One allows 16- and 17-year-olds to work as helpers on motor vehicles on public or private roads as long as they ride inside the vehicle cab; and under certain conditions to drive motor vehicles on private property, such as light pick-up trucks around motel grounds.

The second change was our first effort to coordinate labor standards with manpower training of Neighborhood Youth Corps enrollees. Fourteen and 15-year-olds can now participate in Neighborhood Youth Corps work-training programs during school hours if there is adequate assurance that the employment will not interfere with the youth's schooling, health, and well-being.

The final change announced in this group was a brand new venture for the Labor Department -- that is regulating youth employment in agriculture. We had long been familiar with industrial hazards, but farm hazards were a new problem. On January 1, 1968, an interim agricultural order was issued in response to the 1966 amendments to the Fair Labor Standards Act in which the Congress directed the Secretary to identify farm occupations particularly hazardous to youth under 16 years of age.

The interim order deals with handling chemicals presenting serious health hazards; blasting agents; serving as flagman for

aircraft spraying crops; driving cars, trucks, or buses on public roads; operating large tractors and their equipment; working from ladders or scaffolds above 20 feet and so on.

I would like to underscore the fact that the interim order exempts students enrolled in cooperative vocational agricultural programs. In fact, on June 6 of this year, the Secretary modified the order to permit 14- and 15-year-olds to drive tractors and operate other farm machinery provided they complete formal training in the safe use of such equipment. This exemption or program is administered by the U. S. Department of Agriculture's Federal Extension Service and its cooperative units. Employers of such youth must instruct them in the safe and proper operation of the specific equipment they will use, check on their performance at least three times a day, and keep on file certificates showing the youth has been trained.

In case you might wonder why we have an "interim" order -- we wanted to get experience with agricultural occupations. In fact, we

have recently initiated a review of this order to determine if it is fulfilling its intended purpose, namely, to protect young persons under 16 years of age from undue hazards in agricultural employment.

On September 5, following a complete review of all our orders and regulations, the Secretary approved certain further modifications. First, the order dealing with motor-vehicle driving was amended to allow 16- and 17-year-olds to drive cars and light trucks during daylight hours as occasional and incidental parts of their duties, provided they hold a State driver's license and have completed a State-approved driver education course. The vehicles, however, must be equipped with seat belts for the driver and helper.

Another modification stemmed from the 1966 Congressional extension of the Fair Labor Standards Act coverage to certain State employees. Some 16 States had permitted youth under 18 to drive school buses and desired to continue. Following surveys of equipment and driver selection, training, and supervision practices in these States

as well as their accident experience, 16- and 17-year-olds will now be permitted to drive school buses upon approval granted by the Secretary of Labor. This approval will be based upon applications filed by the Governor of any State desiring to employ minors of this age group as school bus drivers. Approval of the applications will be based upon whether certain safety standards are met.

And to complete the record, another modification, of particular interest to you perhaps, exempts vocational educational student-learners graduating from high school before their 18th birthday from the hazardous orders for occupations in which they have completed training as student-learners. In this connection, I would like to point out that seven of the 17 existing orders for 16- and 17-year-olds now contain exemptions for apprentices and student-learners enrolled in bona fide cooperative vocational education programs. I might also add that consideration is being given to extending these exemptions to other orders. This is an example of how we have recognized the need for

making adjustments in our regulations for young employees who perform their work under safely guarded and properly supervised conditions. Even more important, now we will need to take a hard look at these exemptions to see if they can be made applicable to the work-study programs authorized under the new amendments to the Educational Act. In this area, you can be of valuable assistance to us. Suggestions on changes to Federal child-labor regulations -- or questions on their application -- will be most welcome, and will receive prompt attention. Your cooperation will help assure that the Federal regulations provide maximum protection without unnecessarily restricting educational and employment opportunities for our youth.

62nd ANNUAL CONVENTION
AMERICAN VOCATIONAL ASSOCIATION
DALLAS, TEXAS
DECEMBER 10, 1968
STANLEY PUDDIFORD

Ladies and Gentlemen, thank you for the privilege of being with you.

A short time ago, I read a report written by James A. Stone, a college president, and directed to fellow educators. In it he asked these questions --

"--1. Who shall be educated?

--2. What shall be taught?

--3. How shall the work be done?

--4. By whom shall it be done?"

Then he went on and I quote --

"-- We ought to have a mutual understanding in reference to these subjects; and the public have a right to know our opinions, and to compare them with our practice.

"-- We shall seek to find out whatever may be made useful, and to teach it; what things belong to a progressive civilization and to incorporate them into our system.

"-- In educating the young, all systems aim at discipline, instruction, and communication of knowledge. But in modes and plans, general and special, we must vary according to the age in which we live, and the circumstances under which we find ourselves. Government, religion, race, national spirit -- the very mountains, lakes, rivers and prairies of a land must and will make a difference.

"-- We must understand our American youth, their cast of mind, and the sphere in which they are destined to move, as also the spirit of her institutions and her laws." End of quote.

I believe many in this room have been challenged by questions and opinions similar to those which James Stone shared with his colleagues January 1, 1857 -- one hundred and eleven years ago.

Yes, answers are being sought today as then. But the scene has changed. Reflect for a moment on the changes which have come about during our life time -- many of which we take for granted. In communication -- and incidentally tools of education -- we have gained the use of radio, talking pictures, television, recording devices, and most recently color has been added to television and the small camera. Even the term electronics did not exist when I was in college. All of this causes one to wonder about the meanings that those same words might have conveyed had they been written and considered 25, 50, or 75 years ago. Surely, the intent would be similar. And at each stage, people would attempt to adjust the meaning to their time.

May we assume that all would seek to determine a Degree of Relevance? Much as you seek to determine the Degree of Relevance of the work you and your colleagues do in the classroom, shop or laboratory.

When speaking of Relevance, the educator involved in vocational education is on the front line. He is close to the World of Work. This is particularly true for the men and women engaged in co-operative education as they go about selecting related training material, plan its use in the classroom then evaluate, with the employer, the Relevance of the students experiences and job preparation.

Let me say that the supervisors in my Company look forward to these evaluation meetings with Mrs. Woodhouse and her fellow teachers. They all consider this to be most important and a real opportunity to insure they will get better employees in the future.

Frankly, I suggest that you have a tremendous responsibility.

For example, I understand that 60 percent of the current graduates of Detroit high schools are available for employment directly upon graduation -- at least they do not request transcripts of their credits for college. While, 60 percent is the average, the range is from 90 percent to 10 percent. Most will agree that the number of students -- graduates and drop-outs -- who enter the labor force directly from the high school classroom is increasing.

Let us examine James Stone's second point, "What shall they be taught?"

Vocational education people are in the position to develop and demonstrate outstanding competence in providing the many answers to this question. Continuing detailed examination of the specific occupations will be required. Prerequisites outlined by employment people will have to be up-dated -- even challenged in many instances, if real Relevance is to be determined. The development of effective channels of communication with the workers and supervisors of any given occupation suggests a relationship far beyond a once a year, half hour conference. Business and industrial management people, and school administrators will have to be sold on the necessity for very close cooperation. Both will have to be more aware of the ultimate and short range values to be obtained. The need for nearly complete objectivity will become evident if effective adjustments are to be made promptly. The business and industrial people will be called upon to cast aside their image of the classroom which they left, and become familiar with the activities of today and tomorrow. Perhaps, some school system will use its facilities and personnel to develop an adult education course which will up-date management people, improve appreciation for the work of today's educator, and provide a forum for exchange and study of examples of the motivational,

the academic and the skill development of their future employees.

I am reminded of a survey made by the Department of Labor a few years ago which revealed that the average male worker had been in his present job 5.5 years and can be expected to hold more than eight jobs during his working life. In addition, the dimensions and content of each of the eight jobs will undergo significant change during the worker's tenure in them. As a result of both the evolutionary changes and the conscious shifts in direction by the worker, these eight jobs may fall into as many as three distinct career categories.

Does this movement of workers suggest that the specialist may be passed by? Specialization, in the conventional sense, may limit the background of a person enough to impede adjustment to rapid changes.

In commenting on this thought, Daniel Parker, said, "...a reorientation of the curricula on both high school and college levels is needed to provide students with a basic type of education and training -- a knowledge of fundamentals broadly applicable to a large number of occupational areas, each of which is in a continuing state of transition. In a sense, therefore, the traditional concept of training for a vocation will have to be supplanted by a kind of occupational orientation adaptable to the changes wrought by technology."

Yes, I agree, this appears to present a pragmatic dilemma. But, let us temper our judgement with the thought that James Stone gave us, namely, "...we must vary according to the age in which we live, and the circumstances under which we find ourselves."

Some would say that we must face relentless, revolutionary Change in our society, in contrast to the more evolutionary transition of earlier times.

It seems to me that the vocational educator's prime role can be that of the skilled observer, communicator, and the driving force in future action programs of the educational community.

I have been impressed by the shift made by business. No longer is there just talk. Today there is a nation-wide action program directed toward employing the disadvantaged. Under the National Alliance of Businessmen there are aggressive, outreaching programs, which recruit the under-achiever. Pre-employment procedures have been changed. Supervisors are being trained to better understand and assist. New training techniques are being used, while others are being developed.

So we come to the one strangely lasting question of Stone's, "Who shall be taught?"

With business and industry's recent commitment to finding a place for the underprepared in its employment ranks, that question becomes one of the most urgent faced by inventive educators, today.

They're a new kind of candidate for learning. He's not a volunteer, exactly. He's more likely to be a despairing, angry, perhaps even militant drop-out who's giving it one more try. He's wondering if there's something that he can learn to do that will get him either more money or respect from his peers than stealing, or pimping, or pushing dope.

And he won't necessarily be a student you've chosen. He may have been sent, a recruit, some zealous government agent or business missionary sent your way.

He's going to present special problems of discipline, motivation and placement.

But I think that's just the special kind of mission vocational education has been proposing for a long time. For years, I'm afraid, the

sad but true fact of the matter has been that vocational education had the back room assignment of keeping the non-college bound student on the payroll and off the public dole. And its been a three-sided struggle, with the student who's underestimated, the commercial interests who've wondered why you aren't offering them the cream of the intellectual crop, and the educational administration concerned with getting these non-movers and shakers through as cheaply as possible.

Now society's business and industrial complex is beginning to make noises which, if followed through, will make vocational education the focal point of attention. It's going to be brought right out into the front room of life. Their mission can't be simply that of rescuing individuals, if I may use an item that I intend as a compliment in every sense, but the mission will be that of recovering a most human resource that we've only now begun to recognize as nearly wasted.

I believe that vocational education is going to use that challenge. And that for several years to come vocational education is going to be at the cutting edge rather than the trailing edge of the educational enterprise. We'll meet the challenge because we have been preparing for these times -- perhaps without realizing it -- for many years. We can't fail at this. And we won't.

This past fall an alumnus of a Big Ten university's school of engineering returned to his campus, as old grads are want to do during the football season.

Having a few moments to kill, the old grad thought he'd drop by the Dean's office and talk over old times.

As it turned out, the good Dean had a meeting in progress, so he had to cool his heels in the outer office for a time. While he waited, he happened to pick up a sheet of paper that had slipped from the secretary's desk and he glanced through its contents.

The alumnus was bemused to discover that the sheet contained a list of exam questions. Then, shocked at what he read, he almost shouted at the secretary:

> "Why these questions are the same ones that were being asked when I was a student here 20 years ago."
>
> "Yes," replied the secretary, "that's right; those are the same questions. But, you see, now all the answers have changed."

It seems to me that that's the situation with all human education. Most of the questions about sustaining life, caring for our bodies, feeding and clothing ourselves, finding outlets for our emotions, acquiring knowledge, are not new. They've been asked for thousands of years. But now the answers are different. And the challenge is to keep supplying the information and techniques that are relevant to the questions that we are being asked. Not only relevant to the questions, but also relevant to the new information and new techniques that respond to those old questions with always the newest answers.

Please let me say in conclusion that I am grateful indeed for the opportunity that this occasion, and your patience, have given me to review some of my concerns. Thank you.

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*POST SECONDARY EDUCATION; *VOCATIONAL EDUCATION; *PROGRAM DESCRIPTIONS; *EDUCATIONAL NEEDS; COST EFFECTIVENESS; TECHNICAL EDUCATION; PROGRAM DEVELOPMENT; EXPERIMENTAL PROGRAMS; DEVELOPMENTAL PROGRAMS; *SPEECHES
*AMERICAN VOCATIONAL ASSOCIATION CONVENTION, DALLAS, TEXAS, DECEMBER 9-13, 1968; WISCONSIN

Speeches reported are: (1) "Programs in Post Secondary Preparatory Vocational Education," by C.L. Greiber, containing a description of the development of post secondary vocational education in Wisconsin, (2) "Need for Developmental and Experimental Vocational Programs at the Post Secondary Level," by R. Yarborough, containing the view of Congress toward vocational education and a discussion of trends, including the shift of emphasis from the secondary to the post secondary level, the thousands of disadvantaged young people who drop out of high school, and the improbability of a single-purpose terminal secondary school program adequately preparing students for a lifetime career, and (3) "The Economics of Vocational Education at the Post Secondary Level," by A.B. Wooten, stating that vocational education can accelerate major improvements in our production process by making people more receptive to new techniques and innovations, promoting the specialization and intensification of labor use, promoting labor mobility geographically and between industries, and insuring that those individuals who are responsible for making major technical and economic decisions possess the necessary knowledge. (DM)

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Speeches Presented At The

62nd Annual Vocational Convention

Of The

American Vocational Association

Dallas, Texas

December 10-11, 1968

Post Secondary Department General Meetings

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1968 AVA Convention - Dallas, Texas
December 10, 1968

PROGRAMS IN POST-SECONDARY PREPARATORY VOCATIONAL EDUCATION

by
C. L. Greiber, Director
Wisconsin Board of Vocational, Technical and Adult Education

MORE THAN 28,000 DIFFERENT INDIVIDUALS ARE PRESENTLY ENROLLED IN FULL-TIME ONE AND TWO YEAR POST SECONDARY PROGRAMS IN WISCONSIN'S AREA VOCATIONAL AND TECHNICAL SCHOOLS, TECHNICAL INSTITUTES AND TECHNICAL COLLEGES.

OUR STATE HAS DEVELOPED A PHILOSOPHY OF OFFERING A BALANCED PROGRAM OF VOCATIONAL AND TECHNICAL EDUCATION TO ALL THE PEOPLE. EVERY ATTEMPT IS BEING MADE TO FULFILL THE PURPOSES OF THE FEDERAL GRANTS WHICH INCLUDE THE DEVELOPMENT OF PROGRAMS SO THAT PERSONS OF ALL AGES, IN ALL COMMUNITIES OF THE STATE; THOSE IN HIGH SCHOOL, THOSE WHO HAVE COMPLETED OR DISCONTINUED THEIR FORMAL EDUCATION AND ARE PREPARING TO ENTER THE LABOR MARKET BUT NEED TO UPGRADE THEIR SKILLS OR LEARN NEW ONES, WILL HAVE READY ACCESS TO VOCATIONAL TRAINING OR RETRAINING WHICH IS OF HIGH QUALITY AND REALISTIC IN LIGHT OF ANTICIPATED OPPORTUNITIES FOR GAINFUL EMPLOYMENT.

STATE LEGISLATION IN WISCONSIN INCLUDES THIS SAME CHARGE TO THE VOCATIONAL AND TECHNICAL EDUCATION SYSTEM; TO MEET THE NEEDS OF ALL THE PEOPLE WITH TRAINING WHICH IS REALISTIC TO THEIR NEEDS. AS A RESULT, ALL PEOPLE IN WISCONSIN HAVE AVAILABLE TO THEM TRAINING OPPORTUNITIES WHICH WILL ENABLE THEM TO PREPARE FOR THE WORLD OF WORK AND TO ADEQUATELY MEET THEIR SOCIAL AND CIVIC RESPONSIBILITIES.

EMPHASIS IS GIVEN TO DEVELOPMENT OF ADEQUATE VOCATIONAL AND TECHNICAL EDUCATION OPPORTUNITIES FOR HIGH SCHOOL AGE YOUTH INCLUDING HIGH SCHOOL DROP OUTS; YOUTH WHO HAVE GRADUATED AND NEED ADDED TRAINING TO PREPARE FOR A SKILLED OR TECHNICAL OCCUPATION AND OUT-OF-SCHOOL ADULTS. IN THIS WAY WE IN WISCONSIN

FEEL THAT VOCATIONAL AND TECHNICAL EDUCATION IS FULFILLING THE CHARGE IT HAS BEEN GIVEN, TO PROVIDE EDUCATIONAL OPPORTUNITIES TO ALL THE PEOPLE OF THE STATE WHICH IS REALISTIC IN LIGHT OF THEIR NEEDS AND THE MANPOWER REQUIREMENTS OF BUSINESS AND INDUSTRY.

OUR STATE IS MOST FORTUNATE IN THAT THE VALUES OF VOCATIONAL AND TECHNICAL EDUCATION ARE RECOGNIZED BY MANY OF OUR RESPONSIBLE ADMINISTRATORS OF HIGHER EDUCATION. DR. CURTIS W. TARR, PRESIDENT OF LAWRENCE UNIVERSITY AND CHAIRMAN OF THE GOVERNOR'S TASK FORCE ON TAX REVISION, RECENTLY MADE THE FOLLOWING STATEMENT IN THE OFFICIAL UNIVERSITY PUBLICATION:

"TOO MANY OF OUR YOUNG PEOPLE ARE BEING LED INTO LIVES OF FRUSTRATION BY WAY OF UNDERGRADUATE WORK IN A LIBERAL ARTS INSTITUTION. A MUCH HIGHER SHARE OF PRESENT AMERICAN COLLEGE STUDENTS, AS WELL AS THEIR COUNTERPARTS AWAY FROM SCHOOL, SHOULD BE ENROLLED IN PROGRAMS PREPARING THEM FOR THE JOBS WHICH OUR TECHNOLOGICAL SOCIETY OFFERS BUT CANNOT FILL. A MORE EFFECTIVE PROGRAM OF VOCATIONAL EDUCATION COULD ASSIST OUR NATION TO OVERCOME ITS MOST COSTLY LOSS; THE CREATIVE TALENT OF THAT SUBSTANTIAL FRACTION OF OUR PEOPLE WHO ARE NOW UNEMPLOYABLE.

"VOCATIONAL INSTITUTES SHOULD PROVIDE THESE ADVANTAGES JUST AS OTHER COLLEGES DO: THEY COULD SPONSOR NEWSPAPERS, RADIO STATIONS, ATHLETIC TEAMS, STUDENT GOVERNMENT, AND A SPIRITED SOCIAL LIFE. LIVING FACILITIES SHOULD SURROUND THE CAMPUS SO THAT A YOUNG PERSON CAN LIVE AWAY FROM HOME IF HE WISHES. DEGREES CAN BE GRANTED FOR THE WORK DONE. EVERY EFFORT SHOULD BE MADE TO EMPHASIZE THE VOCATIONAL COLLEGE AS A WORTHWHILE ALTERNATIVE TO THE LIBERAL ARTS COLLEGE."

SENATOR WAYNE MORSE IN THE JUNE ISSUE OF COMPACT MADE SEVERAL SIGNIFICANT STATEMENTS REGARDING VOCATIONAL EDUCATION AND ITS FUTURE DEVELOPMENT. HE STATED THAT THERE ARE THREE FACETS OF THAT ACT (THE VOCATIONAL EDUCATION ACT OF 1963) WHICH ARE OF PRIME IMPORTANCE:

1. A RECOGNITION OF POST SECONDARY AND ADULT EDUCATION AS THE AREAS OF FUTURE GROWTH.
2. SPECIAL PROGRAMS TO MEET SPECIAL NEEDS OF PERSONS WHO BY REASON OF DISADVANTAGE OR HANDICAP HAVE DIFFICULTY IN SUCCEEDING IN REGULAR PROGRAMS.
3. PROVISION FOR A COMPLETE PROFESSIONAL EVALUATION AFTER FIVE YEARS OF OPERATION.

SENATOR MORSE THEN POINTED TO THE FACT THAT AN EVALUATION WAS COMPLETED IN JANUARY, 1968 AND THAT THE IMPORTANCE OF POST SECONDARY VOCATIONAL EDUCATION MUST NOW BE RECOGNIZED AND DEALT WITH IN CONSIDERING VOCATIONAL EDUCATION. HE STATED FURTHER "POST SECONDARY EDUCATION HAS REPLACED SECONDARY EDUCATION AS THE TERMINAL PROGRAM FOR A MAJORITY OF AMERICAN YOUNG PEOPLE. HIGH SCHOOL VOCATIONAL EDUCATION PROGRAMS SHOULD REFLECT THIS CHANGE."

IN ORDER THAT VOCATIONAL AND TECHNICAL EDUCATION OPPORTUNITIES MIGHT BE EXPANDED AND FURTHER DEVELOPED ON THE POST SECONDARY LEVEL, THE WISCONSIN LEGISLATURE IN 1965 ADOPTED THE RECOMMENDATIONS OF GOVERNOR KNOWLES BY PASSING A MODERN AND COMPREHENSIVE LAW FOR THE AREA ADMINISTRATION OF VOCATIONAL AND TECHNICAL POST SECONDARY EDUCATION PROGRAMS. UNDER THE OLD LAW, VOCATIONAL AND ADULT EDUCATION DISTRICTS WERE CONTIGUOUS WITH CITY BOUNDARIES, OR IN A FEW INSTANCES SCHOOL DISTRICT BOUNDARIES, AND WERE LARGELY MUNICIPALLY SUPPORTED AND CONTROLLED. UNDER THE NEW LAW ALL AREAS OF WISCONSIN MUST, BY JULY 1, 1970, BE INCLUDED IN AREA

VOCATIONAL AND TECHNICAL EDUCATION DISTRICTS CONFORMING TO A STATE PLAN, WITHIN BOUNDARIES APPROVED BY THE STATE BOARD.

CRITERIA FOR ESTABLISHING A DISTRICT HAVE BEEN DEVELOPED BY THE STATE BOARD AND THE COORDINATING COUNCIL FOR HIGHER EDUCATION. THEY PROVIDE FOR:

1. MINIMUM POPULATION OF 180,000 PERSONS
2. AT LEAST 3,200 STUDENTS ENROLLED IN THE 12th YEAR OF THE SECONDARY EDUCATION PROGRAMS WITHIN THE DISTRICT, TO PRODUCE A MINIMUM POST SECONDARY STUDENT BODY OF AT LEAST 750 TO 800 IN EACH TECHNICAL INSTITUTE OR TECHNICAL COLLEGE.
3. MINIMUM EQUALIZED DISTRICT VALUATION OF $450,000,000.

BY APPLYING THESE CRITERIA, A STATE PLAN WAS DEVELOPED WHICH PROVIDES FOR DIVIDING THE STATE, WHICH HAS A TOTAL POPULATION OF APPROXIMATELY 4,400,000 PERSONS AND A TOTAL AREA OF 56,000 SQUARE MILES, INTO EIGHTEEN AREA VOCATIONAL-TECHNICAL DISTRICTS.

PRIOR TO JULY 1, 1970 DISTRICTS MAY BE ESTABLISHED BY VOLUNTARY ACTION TAKEN BY ONE OR MORE COUNTY BOARDS OR ONE OR MORE SCHOOL DISTRICT BOARDS OPERATING HIGH SCHOOLS, SUBJECT TO MEETING MINIMUM CRITERIA AND APPROVAL BY THE STATE BOARD AND THE COORDINATING COUNCIL FOR HIGHER EDUCATION.

AT THE PRESENT TIME APPROXIMATELY 3,500,000 OF THE STATE'S POPULATION RESIDE IN POST-SECONDARY VOCATIONAL AND TECHNICAL EDUCATION DISTRICTS. ABOUT 900,000 PERSONS RESIDE IN DISTRICTS ORGANIZED UNDER THE OLD LEGISLATION, LARGELY IN MILWAUKEE COUNTY AND 2,600,000 RESIDE IN NEWLY CREATED AREA DISTRICTS. THESE DISTRICTS INCORPORATE APPROXIMATELY THREE-FOURTHS OF THE AREA OF THE STATE. DISTRICTS RANGE IN SIZE FROM SINGLE COUNTY UNITS IN THE MORE POPULOUS SOUTHEASTERN AREA OF THE STATE TO DISTRICTS WITH AS MANY AS EIGHT COUNTIES IN THE LESS POPULOUS NORTHWESTERN SECTION OF OUR STATE.

DISTRICTS ARE GOVERNED BY BOARDS COMPOSED OF REPRESENTATIVES OF LABOR, MANAGEMENT AND THE PUBLIC, WITH MEMBERS APPOINTED BY CHAIRMEN OF EITHER COUNTY OR SCHOOL DISTRICT BOARDS. THE APPOINTING AUTHORITIES ARE EITHER COUNTY OR SCHOOL DISTRICT BOARD CHAIRMEN.

EACH BOARD, AFTER APPOINTMENT, HAS FISCAL INDEPENDENCE AND THE AUTHORITY TO LEVY UP TO TWO MILLS ON THE EQUALIZED VALUATION FOR THE SUPPORT OF THE PROGRAM. IN ADDITION, STATE LAW PROVIDES FOR METHODS OF RAISING ADDITIONAL FUNDS FOR FACILITY CONSTRUCTION. IT IS INTENDED THAT EACH DISTRICT HAVE ONE COMPREHENSIVE AREA SCHOOL WHICH IS USUALLY A TECHNICAL INSTITUTE.

ENROLLMENTS IN MOST OF THE FULL-TIME POST SECONDARY INSTITUTIONS WILL VARY FROM A MINIMUM OF 700 TO A MAXIMUM OF 12,000 STUDENTS (IN MILWAUKEE). PROGRAM OFFERINGS INCLUDE ONE AND TWO YEAR VOCATIONAL PROGRAMS AND TWO YEAR ASSOCIATE DEGREE TECHNICAL PROGRAMS. THREE OF THE SCHOOLS ARE APPROVED BY THE NORTH CENTRAL ASSOCIATION OF COLLEGES AND UNIVERSITIES TO OFFER LIBERAL ARTS PARALLEL PROGRAMS.

THE VOCATIONAL AND TECHNICAL OFFERINGS RANGE FROM BARBERING AND SHOE REPAIRING TO DATA PROCESSING AND TELECASTING. THE SYSTEM PROVIDES A WIDE RANGE OF OFFERINGS IN THE HEALTH OCCUPATIONS, AGRI-BUSINESS, OFFICE OCCUPATIONS, MARKETING AND DISTRIBUTION, AND INDUSTRIAL OCCUPATIONS AND TECHNOLOGIES.

EXTENSIVE USE IS MADE OF ADVISORY COMMITTEES IN THE ESTABLISHMENT OF NEW PROGRAMS, THE DEVELOPMENT OF CURRICULUM, AND IN PROVIDING INFORMATION TO BUSINESS, INDUSTRY, PARENTS AND POTENTIAL STUDENTS. MORE THAN 4,000 PERSONS SERVE ON STATE AND LOCAL ADVISORY COMMITTEES AND ATTEND MEETINGS, WITHOUT HONORARIUM OR EXPENSE REIMBURSEMENT. TYPICAL COMMITTEES ON THE STATE LEVEL INCLUDE: HEALTH, MARKETING AND DISTRIBUTION, OFFICE EDUCATION AND DATA PROCESSING TO NAME ONLY A FEW.

NO NEW PROGRAMS ARE CONSIDERED FOR ESTABLISHMENT UNTIL A REQUEST IS RECEIVED FROM REPRESENTATIVES OF THE OCCUPATIONAL FIELD OR TECHNOLOGY INDICATING A NEED FOR THE TRAINING.

TYPICAL OF PROGRAM DEVELOPMENT IS THE METHOD WHICH WAS USED IN THE ESTABLISHMENT OF DENTAL ASSISTANT PROGRAMS IN THE STATE. A REQUEST FOR TRAINING WAS RECEIVED FROM THE EXECUTIVE COMMITTEE OF THE STATE DENTAL ASSOCIATION IN 1963. AFTER THE REQUEST WAS RECEIVED IT WAS CAREFULLY EVALUATED AND A COMMITTEE COMPOSED OF LOCAL DIRECTORS, REPRESENTATIVES OF THE STATE DENTAL SOCIETY, MARQUETTE UNIVERSITY AND THE STATE BOARD STAFF MET TO REVIEW THE NEED FOR TRAINING. AFTER THE NEED WAS CLEARLY ESTABLISHED, PILOT PROGRAMS WERE DEVELOPED IN THE MADISON AND MILWAUKEE SCHOOLS. AFTER SUCCESSFUL OPERATION FOR TWO YEARS, WHICH INCLUDED PLACEMENT OF GRADUATES, ADDITIONAL PROGRAMS WERE APPROVED IN THE STATE TO MEET THE NEED FOR THIS TYPE OF TRAINED PERSONNEL. SIMILAR METHODS HAVE BEEN USED IN THE DEVELOPMENT OF PROGRAMS IN DATA PROCESSING, DENTAL HYGIENIST, TRUCK DRIVER TRAINING, ELECTRONIC TECHNOLOGY, MECHANCIAL DESIGN, LIBRARY ASSISTANTS, HORTICULTURE AND MANY OTHERS.

A SYSTEMATIC PLAN OF PERIODIC EVALUATION HAS BEEN DEVELOPED WHICH UTILIZES THE SERVICES OF REPRESENTATIVES OF LABOR, MANAGEMENT AND OTHER EDUCATIONAL INSTITUTIONS IN DETERMINING THE QUALITY OF THE PROGRAM OFFERINGS. EVALUATIONS ARE CONDUCTED BY THE STATE STAFF, WITH THE ASSISTANCE OF INVITED CONSULTANTS, OF THE TOTAL SCHOOL PROGRAM INCLUDING ADMINISTRATION, FACILITIES, STAFF QUALIFICATIONS, CURRICULUM AND PLACEMENT. SPECIFIC PROGRAM EVALUATIONS ARE ALSO CONDUCTED BY COMMITTEES APPOINTED BY THE STATE DIRECTOR COMPOSED OF REPRESENTATIVES OF THE OCCUPATIONS OR TECHNOLOGIES IN WHICH THE TRAINING IS PROVIDED. REPRESENTATIVES OF INSTITUTIONS OF HIGHER EDUCATION WHO HAVE KNOWLEDGE IN THE PROGRAM FIELDS TO BE EVALUATED ARE ALSO INCLUDED ON THESE COMMITTEES. THIS PLAN IS USED TO DETERMINE

WHETHER PROGRAMS MEET QUALITY STANDARDS, ELIGIBILITY FOR THE ASSOCIATE DEGREE, ETC.

THE WISCONSIN LEGISLATURE IN 1963 ENACTED LEGISLATION AUTHORIZING THE STATE BOARD TO GRANT THE ASSOCIATE DEGREE FOR SUCCESSFUL COMPLETION OF TWO YEAR TECHNICAL PROGRAMS WHICH HAVE BEEN EVALUATED AND APPROVED IN ACCORDANCE WITH THE PROCEDURES ESTABLISHED BY THE BOARD. STATE BOARD AUTHORIZATION IS GRANTED TO LOCAL AND AREA BOARDS TO GRANT DIPLOMAS AND CERTIFICATES TO GRADUATES OF ONE AND TWO YEAR VOCATIONAL PROGRAMS BASED UPON THE STATE PLAN OF COMMITTEE EVALUATION AND APPROVAL.

THE GROWTH AND DEVELOPMENT OF WISCONSIN'S PROGRAMS IN FULL-TIME POST SECONDARY VOCATIONAL AND TECHNICAL EDUCATION HAS BEEN SPECTACULAR. IN 1958 THE TOTAL ENROLLMENT WAS 4,144 STUDENTS. IN 1960 ENROLLMENTS HAD INCREASED TO 5,319. IN 1962 ENROLLMENTS HAD INCREASED TO 11,284. IN 1966 TO 19,584 AND IN SEPTEMBER, 1968, 27,700. ENROLLMENT PROJECTIONS INDICATE THAT BY 1975 THESE ENROLLMENTS WILL EXCEED 50,000 DIFFERENT INDIVIDUALS.

PROGRAM DEVELOPMENT, AS PREVIOUSLY POINTED OUT, IS BASED UPON THE EMPLOYMENT NEEDS OF THE STATE. EMPLOYMENT OF GRADUATES IS GENERALLY IN THE FIELD OF TRAINING AND IN MANY CASES STUDENTS HAVE THEIR CHOICE OF WELL PAYING JOBS.

BUSINESS AND INDUSTRY EAGERLY SEEK THE GRADUATES OF WISCONSIN'S POST SECONDARY VOCATIONAL AND TECHNICAL PROGRAMS BECAUSE, THEY STATE, THESE GRADUATES ARE SUPERIOR IN MANY WAYS IN MEETING BUSINESS AND EDUCATIONAL NEEDS THAN ARE GRADUATES OF FOUR YEAR INSTITUTIONS.

FINANCIAL SUPPORT FOR OUR PROGRAM HAS ALSO KEPT PACE WITH EXPANDED ENROLLMENTS. IN 1958 STATE AID WAS APPROPRIATED IN THE AMOUNT OF $900,000 FOR THE BIENNIUM. THE 1969-71 BUDGET OF THE STATE BOARD, WHICH HAS BEEN APPROVED BY THE COORDINATING COUNCIL FOR HIGHER EDUCATION FOR SUBMISSION TO THE 1969 LEGISLATURE, INCLUDES STATE SUPPORT FOR THESE PROGRAMS OF $21,000,000. IT IS INTERESTING TO NOTE THAT THE BUDGET REQUEST SUBMITTED TO THE COORDINATING COUNCIL FOR HIGHER EDUCATION FOR SUPPORT DURING THE COMING BIENNIUM WAS THE ONLY ONE WHICH WAS NOT REDUCED.

IN MY DISCUSSION OF THE POST SECONDARY PROGRAM IN WISCONSIN, I HAVE REFERRED TO SEVERAL DIFFERENT TYPES OF INSTITUTIONS. THESE INCLUDED THE TECHNICAL COLLEGES OPERATED IN THREE CENTERS IN THE STATE WHICH OFFER BOTH LIBERAL ARTS TRANSFER AND VOCATIONAL AND TECHNICAL PROGRAMS, AND THE TECHNICAL INSTITUTES ESTABLISHED IN FIFTEEN LOCATIONS WHICH DO NOT INCLUDE THE LIBERAL ARTS PARALLEL TRACK. IN ADDITION, WE HAVE SATELLITE SCHOOLS IN SEVERAL COMMUNITIES IN THE STATE WHICH PROVIDE LIMITED OFFERINGS ON A FULL-TIME BASIS, GENERALLY TO RESIDENTS OF THE IMMEDIATE AREA.

IN WISCONSIN MUCH CONCERN HAS BEEN EXPRESSED DURING RECENT YEARS OVER THE POSSIBLE DEVELOPMENT OF A COMMUNITY COLLEGE SYSTEM WHICH WOULD EMPHASIZE THE FIRST TWO YEARS OF LIBERAL ARTS TRANSFER EDUCATION AND REDUCE EMPHASIS ON OCCUPATIONAL PREPARATORY PROGRAMS. EXAMPLES ARE POINTED TO IN OTHER STATES WHERE THE TWO YEAR POST SECONDARY INSTITUTIONS WHICH COMBINE BOTH LIBERAL ARTS AND TECHNICAL EDUCATION GIVE MAJOR ATTENTION TO TRANSFER PROGRAMS AND HAVE MINOR CONCERN FOR THE OCCUPATIONAL TRAINING NEEDS OF THE PEOPLE IN THE COMMUNITY AND AREA. EVERY ATTEMPT IS BEING MADE IN WISCONSIN TO CONTINUE A MAJOR EMPHASIS ON VOCATIONAL AND TECHNICAL POST SECONDARY TRAINING PROGRAMS EVEN THOUGH AN

ACCREDITED LIBERAL ARTS TRANSFER PROGRAM IS CONDUCTED BY THE INSTITUTION. HOWEVER, CONSIDERATION IS BEING GIVEN TO THE POSSIBLE ESTABLISHMENT OF A RATIO BETWEEN LIBERAL ARTS AND VOCATIONAL AND TECHNICAL OFFERINGS SO THAT THE IMBALANCE WHICH IS FEARED BY MANY OF OUR LEGISLATIVE LEADERS WILL NOT RESULT.

I HAVE EVERY CONFIDENCE THAT OUR SYSTEM IN WISCONSIN WILL CONTINUE TO DEVELOP POST SECONDARY PREPARATORY PROGRAMS WHICH WILL MEET THE NEEDS OF THE PEOPLE IN THE ENTIRE STATE. IT IS IMPORTANT THAT WE RECOGNIZE THESE NEEDS AND TAKE STEPS TO MEET THEM, DEVELOPING NEW PROGRAMS WHERE NECESSARY AND CHANGING PROGRAMS TO MEET NEW NEEDS BROUGHT ABOUT BY A CHANGING ECONOMY OR CHANGING SOCIAL CONDITIONS. IN THIS WAY WE WILL MEET THE CHALLENGES WHICH HAVE BEEN GIVEN IN THE RECENTLY ENACTED FEDERAL LEGISLATION.

NEED FOR DEVELOPMENTAL AND EXPERIMENTAL VOCATIONAL PROGRAMS AT THE POST SECONDARY LEVEL:

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Remarks for Senator Ralph Yarborough, to be delivered as one of four presentations before the Post Secondary Departmental Program during the American Vocational Association Convention in Dallas, Wednesday, December 11, in the Embassy Ballroom of the Statler Hilton Hotel from 9 a.m. to 11:30 a.m.

Thank you. What I am about to say is reflective of what my colleagues and I on the Senate Education Committee learned during this past session of Congress. I am happy to report that because we learned, we acted; the Vocational Education Amendments of 1968 were the end product. It would not be unfair to say that in passing these amendments the United States Congress underwent some vocational education.

The topic you have asked me to address myself to is "The need for developmental and experimental

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vocational programs at the post-secondary level." Assigning such a subject presumes that a need exists. The presumption is correct.

Perhaps the three most important lessons that were hammered home to the Committee during this past session were that:

1) the area of American education of the greatest overall importance has shifted from the secondary level to the post-secondary level;

2) Thousands of disadvantaged young people drop out of school before high school graduation; and

3) the manpower needs of our economy are becoming so highly technical, varied, and shifting that it is highly improbable that a single-purpose terminal secondary school training program can

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adequately prepare students for a lifetime career.

Poastsecondary education has replaced secondary education as the terminal program for a majority of American young people. High school vocational programs should reflect this change. All to few have done so. The new technology has made many of the occupations for which high school training is adequate almost obsolete. The vast majority of American young people want to continue their education beyond high school. Why should they be enrolled in terminal training programs in high school?

Vocational programs can be of more use to these students if they are designed to prepare students for post secondary technical programs. Basic principles of applied science would be of

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more use than lathe operation to a student who would like to continue his education.

Failure to recognize the shift from secondary to postsecondary education on the part of vocational educators has led to failure on the part of the general public to recognize the importance of technical education at the post-secondary level.

Young people, for whom a college education appears only a distant improbability, are in despair when they think of their future. The importance which has been placed upon a college degree in the marketplace is a disservice both to colleges and universities and to the young people who feel compelled to obtain a degree.

All too often the employer unrealistically

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demands the college degree for its presumed social status value regardless of the actual job requirements. More adequate recognition should be given to a degree other than the bachelor's, such as those issued by the postsecondary 2-year institution. There is or should be room for a 4-year degree similar to those granted by polytechnic institutes that have been so successful in many European countries.

Post-secondary vocational and technical institutions are in a position to play a major role in the future of our society. These institutions are in a unique position--a position in which they can train young people to enter the labor market and at the same time offer an education to prepare

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them to meet crises in skilled manpower arising from the rapidly changing technology and expanding economy.

A view of the occupations in which there is a current shortage of manpower will indicate the direction occupational education must take: physicians, nurses, health service personnel, teachers, social workers, engineers, draftsmen and mathematicians.

Projections of employment growth over the next 10 years indicate that the fastest growing occupational groups are professional and technical workers, service workers, clerical workers, and managerial and proprietary workers. It is possible in the not-too-far-distant future that our technology will have advanced to the point that all of the

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present "skilled labor" occupations will be obsolete. Persons who are now in, or are tarining for, those occupations will have to be retrained unless they have an education which will permit them to change with the needs of the economy.

The recent period of revolutionary discoveries and innovations in science and technology has resulted in such an accumulation of knowledge that even scientists and engineers are threatened with inability to keep up with their fields. If this problem is facing scientists and engineers, persons in the occupations ancillary to those fields are faced with an almost insurmountable task in keeping up. This means that post-secondary vocational and technical schools are going to have to adapt to

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continuing education programs in the technical fields. It means that education is going to become a facet of everybody's career which continues throughout an entire lifetime.

One of the most exciting areas of post-secondary training which is ripe for development and experiment is that of New Careers. The new Vocational Education Amendments containing a section I authored which provides funds for projects of research and training in the development of new careers and occupations--Section 132 (6).

The new careers I speak of are in public service-connected areas of the economy. They are careers in the sense that a young person is provided a job as a non-professional in such fields as

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mental and physical health, drug prevention and correction, welfare, education, municipal services, child care, or recreation--to name just a few--and then is given training on-the-job. Perhaps part of his day is spent in a classroom type situation; most of it is spent working; working with professionals as an aide.

It would be possible for this New Careerist, concomitant with training and experience, to move up a career ladder. At the heart of the New Careers concept is the "ladder"--the structuring of tasks and responsibilities in sequence so that the gradations between tasks are not too great--but are great enough to warrant an increase in salary and status. Thus, a young woman might enter a New

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Careers program in conjunction with a junior college and a local hospital and, over a period of time not only obtain high school credit but credit for college level courses--and at the same time become a licensed practical nurse, or a registered nurse.

The potential of New Careers is great; but it needs work--it needs development and experiment. Beyond the potential for New Careers being great, the need for it is even greater. In February, 1966, the National Commission on Technology, Automation, and Economic Progress estimated that there were 5.3 million potential sources of new jobs through public service employment. Couple that with the pronouncements which come at us almost daily that by 1975 or 1980 the shortage of trained teachers, of trained nurses, or trained policemen

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will be overwhelming and the taxpayers becomes a most important and significant undertaking.

It should be the men and women here at this conference who assume a leadership role in this field, for this field is the future; virtually all of the increase in employment from 48 million in 1947 to some 75 million at present has occurred in the service areas of the economy: Hospitals, schools, social work, and many fields of business, while employment in the production of goods has remained relatively stable.

By passing this New Careers amendment, Congress recognized that there is a need for developmental and experimental vocational programs at the post-

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secondary level.

And by passing the new part D of the amendments: "Exemplary Programs and Projects" Congress pushed in exactly the same direction that I sense the vocational education community wants to move. Permit me to read the introductory section of part D, for I believe it sums up most concisely what the Committee learned:

"The Congress finds that it is necessary to reduce the continuing seriously high level of youth unemployment by developing means for giving the same kind of attention as is now given to the college preparation needs of those young persons who go on to college, to the job preparation needs of the two out of three young persons who end their education

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at or before completion of the secondary level, too many of whom face long and bitter months of job hunting or marginal work after leaving school. The purposes of this part, therefore, are to stimulate, through Federal financial support, new ways to create a bridge between school and earning a living for young people, who are still in school, who have left school either by graduation or by dropping out, or who are in postsecondary programs of vocational preparation, and to promote cooperation between public education and manpower agencies.

In sum, it seems to me that this is a very exciting time for vocational education--and for post secondary vocational education in particular. The simple realization that continuing education

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is going to become a factor of more and more importance in vocational education, and the understanding that the field of New Careers holds great promise, taken alone would indicate that YES, there is a great need for developmental and experimental vocational programs at the post-secondary level.

Acknowledging that need, the time has come for action. I am confident that when the Vocational Education Act once again comes before the Congress in 1973, action will have been taken and the promise of post-secondary vocational education will have come true.

Thank you.

THE ECONOMICS OF VOCATIONAL EDUCATION AT THE POST-SECONDARY LEVEL*

SUMMARY OF COMMENTS

By

Alvin B. Wooten
Professor of Agricultural Economics
Texas A&M University

Our founding fathers in creating a democratic form of government emphasized the fact that an educated citizenry was essential to the successful operation of such a government thus establishing the basis for and encouraging a public educational system more comprehensive and with greater impact on the life of each citizen than could have been imagined at the time. Through the years our educational system has been subjected to a two-fold pressure which is more acute today than ever before: to the pressure of numbers and at the same time to the pressure exerted by the advances of technology in a world for which education must prepare people. Education has become a mass problem, it takes on an economic dimension by reason both of the resources it absorbs and of the training demands it is required to meet. Along with its accepted task of developing the personal abilities of each individual it now has to ensure adaptation to economic requirements both in the interest of the individual and in the interest of society.

Economists are particularly interested in education because of its substantial impact upon the productivity of people as a labor input into

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*Presented at the American Vocational Association Convention in Dallas, Texas, December 11, 1968.

our production process and its impact on people as ultimate consumers of the production. We would expect that vocational education would have its greatest impact directly upon the quality of a man's labor and only indirectly upon his consumption habits.

Education, particularly vocational education, can accelerate major improvements in our production process by:

1. making people more receptive to new techniques and innovations,
2. promoting the specialization and intensification of labor use with machinery,
3. promoting labor mobility geographically and between industries,
4. insuring that those individuals who are responsible for making major technical and economic decisions possess the knowledge which enable them to avoid costly mistakes.

Economists have long been puzzled by the fact that the observed rate of growth in output in an economy was much greater than the rate of increase in the principal resources of land and capital that were measured. In the last decade it has become clear that the "X factor" omitted from the calculations was the increase in the quality of the labor resource being used. This increase in quality is attributable to the general and vocational educational system. In his "Reflections on Investment in Man" T. W. Schultz maintains that man's economic capabilities are predominantly a produced means of production and that, except for some differences in inherited capabilities, most of the differences in earnings are the result

of differences in the amounts that have been invested in people through education and other social services.

The United States has long led the other countries of the world in its per capita expenditures on general education. It has been among the leaders in the proportion of its national income that is allocated to education. However it lagged far behind the other developed countries on the amount of expenditures for vocational education. According to the latest information available, the United States has devoted less than one percent of its educational expenditure to other than primary, secondary and higher education, while countries such as Germany and Belgium were devoting 15 percent and 24 percent respectively to vocational education. This probably is not a true picture since much of the expenditure on vocational education in the United States is included in the secondary and higher education categories. It does however point up the lack of emphasis placed on post-secondary vocational education in the United States.

Professor E. F. Denison of the Brookings Institution in Washington, D.C., has made a major study, "Measuring the Contribution of Education to Economic Growth," which points up vividly the need for post-secondary vocational education. He says that from 1929 to 1957 the real national income increased at an annual rate of 2.93 percent. He estimated that 73 percent of the national income was represented by the earnings of labor and managers, while earnings of land is 4.5 percent and capital 22.5 percent. During this same period the quality of labor increased by 30

percent primarily due to education. He then asks the question, what would be the easiest way to increase real national income by $20 billion by 1980? Since labor is the major input in our production process the $20 billion increase could be obtained if anyone of the following could be accomplished:

1. prevent half the deaths that would otherwise occur between now and 1980 among individuals less than 65 years of age; or
2. cut in half time lost from work because of sickness and accidents; or
3. draw into the labor force one-tenth of all able-bodied persons over twenty years of age who will not otherwise be working in 1980; or
4. double the rate of net immigration over the next twenty years; or
5. operate with a work week one hour longer than otherwise; or
6. add one and a half years to the average time that would be spent in school by everyone completing school between now and 1980, or make equivalent improvement in the quality of education.

Certainly all of these alternatives may not be attainable in the time under consideration nor or they necessarily additive in their impact on national income. However, if we could choose only one--draw into the labor force one-tenth of all able-bodied persons over twenty years of age who will not otherwise be working in 1980--as a focal point of attack with vocational education programs for the next decade it seems reasonable to believe that this goal could be accomplished.

One of the great dilemmas of our time is the transformation of our citizens from an overprotected, inexperienced, untrained adolescent to

an economically and socially productive adult. This transformation period continues to grow shorter and the technical requirements for effective production grow greater.

We often forget that in a capitalistic economy there are three basic ways for people to earn a livlihood. A man can own land and receive an income for its use. He can own capital goods and receive on income for their use. Owning neither of these he must sell his labor. In an industrialized economy such as ours untrained labor is not readily marketable and will be at a greater disadvantage in the future. Labor untrained and unused is not only disastrous for the individual associated with it but certainly is a serious loss for the economy.

Vocational education programs cannot only convert untrained labor into a useful product for economic growth but can accomplish this task in a shorter time period than other known methods. The evidence seems to indicate quite clearly that our economic progress can be stimulated to a greater degree, in a shorter period of time and with fewer resources invested by increasing the quality of our labor resource through vocational education programs than any other method.

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*AMERICAN VOCATIONAL ASSOCIATION CONVENTION, DALLAS, TEXAS, DECEMBER 9-13, 1968

Speeches presented were: (1) "A Model for Continuous Evaluation of Vocational Programs by State Departments of Education," by Harold Starr, describing a project of the Center for Vocational and Technical Education at the Ohio State University to develop evaluative criteria, (2) "Cost Effectiveness Analysis as a Method for the Evaluation of Vocational and Technical Education," by Jacob Kaufman, containing the logic and meaning of cost benefit analysis, misconceptions of cost benefit analysis, the meaning of evaluation, resistance to evaluation, and objectives of cost effectiveness study, (3) "Research Policy: Should It be Determined by State Directors or by the Bureau of Research? A Position," by Joseph Impellitteri, proposing a twofold approach to research including study based upon immediate solutions to practical problems of the practitioner and a focus upon the understanding of the underlying principles and theories upon which this complex is based, and (4) "Exploration with a Computer-Assisted Occupational Information System," by Joseph Impellitteri, containing a description of a Pennsylvania project to provide occupational information to students utilizing a computer-assisted career exploration system. (DM)

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A MODEL FOR CONTINUOUS EVALUATION OF VOCATIONAL PROGRAMS BY STATE DEPARTMENTS OF EDUCATION

By

Harold Starr, Ph.D.

The Center For Vocational and Technical Education

The Ohio State University

Prepared For The Program On Evaluation,

Department of Research and Evaluation

AVA Convention

Dallas, Texas

December 10, 1968

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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A Model For Continuous Evaluation of Vocational Programs By State Departments of Education

The Center For Vocational and Technical Education at The Ohio State University is currently involved in the development of an evaluation model designed to assess the effectiveness of state programs of vocational education. The central purpose of this evaluation effort has been to develop instruments and procedures which can be utilized in the administrative mainstream as a means for contributing essential information required in decision making for state vocational education program planning.

The focus of the project has been on the development of evaluation instruments and procedures which can enable a state vocational education agency to assess, on a continuous basis, the effectiveness of its vocational education efforts in terms of national and state interests, student benefits and manpower requirements.

The Center is concerned with the importance of the periodic evaluations called for in the National Vocational Education Act. It also recognizes the pressing need for evaluation and program planning methodologies to meet the accountability requirements set by this act as well as by state vocational education agencies, governing boards, state legislatures, and the public. Thus, The Center, by achieving its aim of developing a self-initiated evaluation system for state level usage, should provide a vehicle whereby essential information can be made more readily available to governmental agencies and the public while meeting the need for a mechanism to assist states in their program planning activities.

The present evaluation system was conceptualized after a review of existing evaluation system methodologies. This review of the literature indicated that vocational educators have long been concerned with the need for the evaluation of vocational education and training efforts for improving the effectiveness of vocational programs. In almost all instances the evaluation techniques employed have concerned themselves with assessing by expert opinion the adequacy of organizational structures, educational processes, and program activities, whether at the state agency or local school levels in terms of standards of goodness using judgmental procedures. Effectiveness measures have usually been neglected in these evaluation procedures. These "process" evaluation studies seem to assume that when vocational programs meet accepted standards in terms of curricula organization, staff organizational activities, and physical facilities, desirable program outcomes would inevitably ensue. Little attention has been directed toward verifying this assumption. Process evaluations, in themselves, do not gauge program effectiveness. Traditional vocational program process evaluations conducted at the local level do not provide the type of data required by state vocational education agencies for rationally redirecting programatic efforts at the state level. To be useful in state program planning, an evaluation system requires the formulation of measurable objectives against which to gauge program effectiveness. Most currently existing evaluation procedures in vocational education do not provide this essential methodological component.

In consideration of these factors, The Center has undertaken the design of a viable evaluation model for the assessment of state programs

of vocational education which provide measurable indices of program effectiveness in terms of specific, predetermined objectives. The Model focuses on the dynamic mix between program processes and activities, educational product outcomes, target population characteristics and additional data inputs required in the program planning process. The continuous input of evaluation data will signal the need for programatic change. Examples of these signals will be such factors as changes in the pouplations to be served, fluctuating manpower requirements, changes in program effectiveness indices or the failure of program objective outcomes to reach projected levels. Because of the nature of the Project, it was desirable in the initial stages to have significant involvement of agencies, groups and individuals external to The Center. Thus, two national advisory committees were utilized to react to project developments. One committee consisted of state directors of vocational education selected by the National Association of State Directors within the American Vocational Association; the other committee consisted of recognized authorities in the vocational education profession whose areas of expertise included teacher education, research, supervision and administration. Meetings continue to be scheduled with staff from the U. S. Office of Education. A review of the report and recommendations of the National Advisory Council on vocational education provided an additional source for data inputs into the Evaluation Model.

To insure that the Model would be practical and useful, the cooperation of several states was elicited to assist in field testing the program objectives, evolving data set and program planning procedures. The state directors of vocational education of Colorado, Kentucky and New Jersey entered into an agreement with The Center whereby they each identified a full-time, jointly-funded evaluation specialist to be available for work-

shops at The Center and to assist Project staff in carrying through the field test procedures in the states.

The first step in the development of the Model was the formulation of a set of program goals for vocational education from which measurable program objectives and finally an actual data set could be organized. In the Fall of 1967, a set of six state level program goals was mailed to state directors of vocational education and head state supervisors within each state department of education. The returns from this national survey were evaluated and a finalized set of five state level program goals were produced. These goals for vocational education are as follows:

Program Goals

1. To provide vocational-technical education and training to youth and adults who will be entering the labor force and to those who seek to upgrade their occupational competencies or learn new skills.

2. To provide comprehensive curricula which relate general and vocational-technical education offerings to the vocational objectives of students.

3. To provide increased accessibility to programs of vocational-technical education to meet the needs of those to be served.

4. To provide quality instructional programs which meet the vocational aspirations of people while being compatible with employment opportunities.

5. To provide a systematic and continuous evaluation of vocational-technical education in terms of national and state interests, student benefit, and manpower requirements as a means for making decisions concerning alternative investments of human and economic resources and the redirection of program objectives.

For each goal, a set of program objectives was formulated. These objectives are used to measure the extent to which goal achievement is

realized. Key program need indicators were formulated and these were simply computed measures of the gap between projected and actual program objective outcomes. Examples of such objectives for a given goal are as follows:

GOAL I

TO PROVIDE VOCATIONAL-TECHNICAL EDUCATION AND TRAINING TO YOUTH AND ADULTS WHO WILL BE ENTERING THE LABOR FORCE AND TO THOSE WHO SEEK TO UPGRADE THEIR OCCUPATIONAL COMPETENCIES OR LEARN NEW SKILLS.

OBJ.	
A	____ employment-bound secondary school students are enrolled in vocational education programs.
B	____ adults identified as requiring vocational education to increase their opportunities for securing or retaining full-time employment are enrolled in vocational programs to meet their needs.
C	____ adults in full-time employment whose rate of pay is below the federal minimum wage standard are identified and enrolled in vocational education programs to meet their needs.
D	____ adults identified as having mental or physical handicaps which act as barriers to their securing full-time employment are enrolled in vocational education programs to meet their needs.

A data set was then developed for each objective. The data system was designed to avoid the necessity of requiring local school visitations, and was organized by program level, vocational service area and, where applicable, by facility type, sex, grade level and by "district". A district as used in this Project refers to a geographical subdivision of the state whose economic and social cohesiveness warrants its receiving separate attention in terms of educational program planning. The data set contained both process and product measures.

The program planning phase of the Model involved the formulation of procedures to utilize data results for initiating projected plans of activities in terms of vocational education agency goal and program objective priorities. These procedures would need to consider, in addition to data results, such constraints upon the Vocational Education Agency as personnel resources, potential funding levels and competing service area needs, among others. The evaluation results and the internal and external agency constraints provide a basis for developing strategies to achieve projected levels of accomplishment.

Field testing of the initial data set and program planning procedures took place between February and May of 1968. It was evident from this reality check that the program objectives and the data set required revision in order to increase the Model's operational effectiveness. Because of time limitations and prior agreements with the states, field testing of the data set involved only data already available at the state agency and did not require involvement of local schools. The program planning procedures were reviewed with the pilot state staffs for their reactions.

No attempt was made to formally work through this phase of the Model because the amount of evaluation data actually available for adequately testing the program planning procedures was too limited.

The experience gained in the initial development and field testing of the Evaluation Model provided The Center Project staff with the needed background for improving the effectiveness and efficiency of the Model. The Evaluation Project has been refunded for the period November, 1968 to March, 1970. The major aims of the continuation project are to refine the data collection instruments and procedures and to introduce machine processing for data analysis.

At the present time the program objectives and the data set have been revised. Data collection instruments have been developed and these will be pilot tested in several local schools in the states of Colorado and Kentucky during January, 1969. These instruments are designed for data processing procedures. The present timetable for the Project calls for state-wide collection of data to be accomplished immediately following the close of the school year in June. The data collected in the two pilot states will then be forwarded to The Center for analysis. The program planning procedures will be tested during the Summer of 1969. A final revision of the materials will then be accomplished on the basis of the field test tryouts and the final product readied for widespread distribution.

Cost-Effectiveness Analysis as a Method for the Evaluation of Vocational and Technical Education

by

Jacob J. Kaufman

Professor of Economics and Director,
Institute for Research on Human Resources
The Pennsylvania State University

A paper presented at the annual meetings of the American Vocational Association in Dallas, Texas on December 10, 1968. It is based, in part, on views expressed at a conference sponsored by the Upjohn Institute, at Atlantic City on October 8, 1968.

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Cost-Effectiveness Analysis as a Method for the Evaluation of Vocational and Technical Education*

It is the purpose of this paper to discuss cost-benefit analysis in terms of (1) its logic and meaning; (2) some of the misconceptions which prevail concerning this method of evaluation; (3) some of the problems and limitations of this method; and (4) the conclusions of a study, conducted by the Institute for Research on Human Resources at The Pennsylvania State University, which attempted to determine whether or not there is pay-off from an investment in vocational and technical education.

Logic and Meaning of Cost-Benefit Analysis

Under a free enterprise economy most private wants are satisfied through the workings of the market mechanism. Under this system it is assumed that, as a result of consumer choice, goods and services will be produced to satisfy these private wants and that the limited resources of the economy will be allocated through the operations of the market in a manner which will yield the greatest output with a minimum use of resources.

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* In the preparation of this paper the author had the assistance of Anne F. Brown and David Gumpper, Research Assistants.

There are, on the other hand, certain needs and wants which cannot, (or society prefers not to) be satisfied by the private sector. Certain wants, described as social wants, are those which "must be satisfied by services that must be consumed in equal amounts by all." These services are such that some people can benefit from them even if they do not pay for them. And there is no reason to think that such persons would make voluntary payments. Governmental expenditures of this type might include expenditures for flood control, defense, sanitation, etc.

Another group of wants which could be provided by the private sector but, for a variety of reasons, are handled by the public sector because society considers them meritorious, may be referred to as "merit" wants. Included in this category are such items as low-cost housing and "free" education. In these instances the wants could be satisfied by the private sector but society apparently thinks that there are certain social benefits which flow from these activities and therefore society should assume the responsibility to satisfy these wants.

It is not the purpose of this paper to discuss the pro's and con's of whether the government should concern itself with these "merit" wants. But it is the purpose of this paper to concern itself with the method by which it can be determined whether the provision of certain social and merit wants by the government are carried on efficiently, consistent with the objectives for which it has assumed the responsibility. And by efficiency is meant the attainment of an objective at the lowest possible cost.

In the private sector of the economy the market place, in general, is the place where these evaluations take place. The inefficient firm may have to go out of business. The firm that does not produce goods and services which satisfy the needs of the consumers may not survive. But what tests for efficiency and survival do we have when the government provides the goods and services?

The only alternative to the market place for the purpose of testing the efficiency of production or the quality of the product is by cost-benefit or cost-effectiveness analysis. Such an analysis is nothing more than an attempt to establish the equivalent of a system of market principles for various types of government activities. It might be reasonable to assert that the method of analysis is crude and that adequate data are not available. Such charges, however, do not negate the necessity to develop appropriate tools and to obtain data to judge a particular government activity.

The fact is that there is a tendency on the part of some educators to talk simply in terms of the "needs" of education. Their position is simple: the governmental agency should raise whatever funds are necessary to meet these "needs". On the other hand, there are some politicians who assert that there is a fixed sum of money available for educators to spend on education. The fact is that one should not talk about education in terms of cost or needs alone. No cost can be justified without a reference to payoff. And the satisfaction of any need cannot be justified without reference to cost.(1)

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(1) See Charles J. Hitch and Roland N. McKean, The Economics of Defense in the Nuclear Age, Atheneum Press, New York, 1965, pp. 46-47.

This means that one cannot discuss the need for or the payoff from vocational education without relating them to costs. Nor can one talk about the costs of vocational education without relating them to payoffs. If private vocational schools survive it is reasonable to assume that these schools operate at a profit and that the private sector of the economy is willing to pay the price of tuition. It is not unreasonable to assume, further, that the buyers of the education find that it pays off. We can also assume that the profit motive will be a sufficient stimulant to the owner of the private vocational school to keep costs as low as possible.

But what controls do we have over the public education? What incentives are there for the public educator to keep his costs down? What evidence is there that public education is being provided efficiently? What evidence is there that the objectives are being achieved?

It is being suggested that these are legitimate questions to ask during a period in our society when there are many demands for the provision of social and merit goods by the government. And, even within education, there are many demands for different forms of education. This means that decisions must be made as to the allocation of resources among competing educational programs. The only appropriate method for making these decisions is on the basis of a cost-benefit analysis.

One aspect of cost-benefit analysis which should be stressed is that it is basically a "way of thinking". It tends, first, to force an administrator to think through his objectives. This does not mean

that the objectives are easy to state. Too frequently they are expressed too broadly and do not reflect the "real" objectives. It is not enough, for example, to state that the schools educate for the so-called "whole man". We must be more specific. Nor can it be stated that, for example, vocational education is designed to place a youngster in a job. Is it a job related to his training? Is it a job solely in terms of an initial placement or are we concerned with the duration of the job? Is it simply the first job or a series of jobs? Is it a job that leads to promotion? Is it a job that is satisfying to the graduate?

Second, cost-benefit analysis, as a "way of thinking", tends to force an administrator to concentrate on costs as well as objectives. The point need not be repeated that inputs and outputs are interrelated.

Third, cost-benefit analysis, as a "way of thinking", forces an administrator to think in terms of "alternatives", that is, to think in terms of alternative ways of achieving the same objective. To refer to the satisfying of wants in the private sector again, it should be noted that the pressures of competition tend to force private enterprise to seek other and better means of producing a good or a service. Similarly, the concentration on alternatives forces the educational administrator to seek other and better means for the education of youth. In this way we can get change and innovation in education. In fact, it is the failure to evaluate educational curricula that leads to stagnation. It is only through constant evaluation that we can obtain innovation.

The above comments are designed to indicate in a constructive manner the logic and meaning of cost-benefit analysis. Despite what appears to be a rather logical case for this type of analysis there is still considerable opposition to the technique. Such opposition reflects, first, certain misconceptions about the method. Second, educators have a different (and erroneous) view of evaluation. And, finally, educators view evaluation as a threat to their institutions. Each of these points will be discussed briefly.

Misconceptions of Cost-Benefit Analysis

One of the most serious misconceptions about cost-benefit analysis is that it is merely a subterfuge for seeking to conduct education on a "least-cost" basis. This is a complete misunderstanding of the notion of efficiency. To an economist efficiency means the achievement of a given objective with the least cost or the maximization of a given objective with a given cost. Efficiency combines both input and output.

A second misconception is that benefit is measured only in dollar terms, and that this is a form of crass materialism. Cost-benefit analysis recognizes that there are non-economic benefits which should be taken into account. Such non-economic benefits may include voting behavior, job satisfaction, cultural values, etc. However, it is essential these objectives should be established on the basis of decisions of the community to determine whether it wants to spend its funds (and how much) for the explicitly stated objectives, economic or non-economic.

A third criticism usually advanced against cost-benefit analysis is that there are some things that are not quantifiable. Presumably, this means that there is no way in which one can determine whether or not a given objective has been attained. If this is so, what justification exists to continue expenditures for objectives which cannot be quantified? Why the assumption that non-quantifiable objectives are automatically good? Although certain objectives may be difficult to quantify, every effort should be made to develop "inferential" (or proxy) indexes. For example, the extent of "interest" of students in a curriculum might be inferred from an index of absenteeism. Psychologists can be of great assistance not only in the development of such indexes, but also in the creation of the necessary instruments designed to compute them.

A fourth criticism frequently mentioned is that the cost-benefit technique has not been fully developed and, therefore, should not be applied. The first part of the statement is correct, but the conclusion does not follow. The fact is that once a decision is made to spend more on, say, vocational education an <u>implicit</u> decision has been made that the benefits exceed the costs. Therefore, the issue is not whether cost-benefit analysis should be applied to vocational education. It is being done every day when an educational administrator decides to spend a dollar on vocational education rather than on another type of education. The only question is whether the vocational education administrator should be required to state <u>explicitly</u> the manner in which he arrived at the decision. When the process of decision-making is made

explicit then others have an opportunity to judge the correctness of the process. It is only in this way that better decisions can be made on the allocation of limited resources for educational objectives. The rejection of an explicit cost-benefit analysis simply means a refusal to expose oneself to an evaluation of a decision-making process. In a democratic society this is unacceptable. In a democratic society the notion that the expert knows best is not tenable.

Fifth, there is a misconception that the cost-benefit analyst substitutes his judgment for that of the decision-maker. The analyst may ask the administrator some pertinent (possibly impertinent) questions. In no instance, however, does he substitute his values for those of the administrator. The analyst simply provides information--costs and benefits--of alternative lines of action designed to achieve the objectives as outlined by the administrator. The analyst simply assists the educational administrator in meeting the objectives of the community in the most efficient manner.

Finally, it is sometimes argued that cost-benefit analysis tends to ignore political considerations. Although the analyst ignores the political aspects of a program it does not necessarily follow that the decision-maker should ignore "politics". This type of analysis will, however, tend to reveal the cost of a political decision and may well tend to minimize the role of politics in the decision-making process.

The Meaning of Evaluation

The literature on the subject of evaluation is overwhelming. And it is not the purpose here to review this literature. However, the term "evaluation" appears to have several commonly accepted meanings. One must make it clear from the outset in what sense the term is employed in order to avoid misunderstanding. In terms of definition, evaluation must be separated from closely related concepts with which it is often confused.

A major distinction must be made between evaluation of individuals and evaluation of processes. Most educators still tend to think of evaluation only in terms of testing, or in terms of discriminating among individual students for administrative or instructional purposes. Indeed, most of the professional literature concerning evaluation uses this concept as its focal point. This probably reflects the fact that most publications in the area have been done by educational psychologists, who are mainly concerned with problems of testing. Another type of evaluation is on an evaluation of the educational process as it is carried out within certain institutions (i.e., within certain schools or school systems). The goal is not the assessment of the individuals but rather the assessment of the progress of all students within a program and the determination of reasons for the relative success of various aspects of this program.

The definitional problem centers around a distinction between measurement and evaluation. To a large extent these two terms are used as equivalents by educators. But the distinction between the two is

important. Measurement implies only quantity, while evaluation implies quantity plus quality. Measurement is a necessary part of evaluation, but evaluation requires both pre-measurement and post-measurement considerations. Before measurement commences, evaluation requires the formulation of a basic educational philosophy (and its attendant goals) and the statement of specific behavioral objectives to be measured. After measurement is completed, evaluation requires (1) the analysis of measured quantities in terms of the attainment of objectives and progress toward goals, (2) an estimate of the value of existing programs in determining this progress and (3) an estimate of the costs involved in the conducting of these programs.

Resistance to Evaluation

We live in a world of rapid change. Within the past half-century, the pace of technological and social change has increased tremendously. In the face of this, the educational establishment still tends to resist change. This resistance is perhaps best exemplified by the rates of development and acceptance of evaluation techniques. The first large scale attempt at evaluation was the National Study's development of the Evaluative Criteria, about thirty years ago. Since then, the criteria have been updated somewhat, but still are largely in their original format. Few other substantial techniques have been devised, and those which are available are utilized mainly for special research projects rather than for ongoing evaluations by interested school districts.

Apparently one of the major obstacles to evaluation research is the interest in the maintenance of a program held by its administrators. Many school administrators seem to view evaluation as an attack upon their institutions, and they erect a shield of defensive attitudes against such an event. This circumstance arises as a result of a failure to separate conceptually the particular educational institution from the process of education which goes on within it. These are two quite different entities, yet both administrators and evaluators too often neglect to view the situation in this manner.

The purpose of evaluation is to point out the strengths and weaknesses of a process, not to police the institutions in which the process occurs. But much of the evaluative effort appears to be just such a policing action. It has been shown that evaluators have been trying to get along with data of an administrative type (such as average class size, average teacher salary, etc.) rather than data of a process type. From these considerations, there would seem to be two paths to greater acceptance of evaluation. One of these is to assure the school administrator that the evaluation is to be used to study the process of education within his school and to help him improve this process, and that it is not to be used for the purpose of making value judgements about his school. The other path to acceptance lies in following up this assurance by utilizing evaluation procedures which really are aimed at collecting only those data relevant to the educational process. In doing so, the evaluator may have to give up some data he would like to have

but the increased acceptance and cooperation should more than make up for this. Much of the data which are presently collected under the guise of evaluation is mainly used to sustain the existing state and national educational bureaucracies; their educational relevance may be quite low.

Furthermore, even when the process is being evaluated little or no consideration is given to costs, a necessary ingredient in any evaluation process.

The remainder of this paper will summarize a recent study of cost-effectiveness of vocational education.

Objectives of Cost-Effectiveness Study

This study of the cost-effectiveness of vocational education had two fundamental objectives. First, it was designed to develop an appropriate methodology for the conduct of such a study. Second, it was designed to obtain data in order to demonstrate the extent to which a study can actually be carried on, and to indicate the magnitude and direction of results. In this paper the former will be ignored and consideration will be given the second objective.

In order to determine the optimum allocation of public resources in education in general and between vocational-technical education and alternative curricula for non-college attending students in particular, measurement is needed of both costs and benefits. Costs by themselves can neither be taken as an indication of quality, nor can benefits be evaluated without taking account of costs. Thus, although costs and benefits are discussed separately, no conclusion as to the worth of the two curricula can be made until the relationship of costs with benefits is considered.

Cost data were obtained from senior high schools in two cities. The current cost of instructing an additional student, that is, the marginal cost, was shown to be greater in the vocational-technical senior high school curricula than the respective costs for the nonvocational-technical senior high school curricula. The difference was between 100 to 200 dollars. Thus, unless the benefit obtained from the vocational-technical senior high school curricula was much greater than from the nonvocational-technical senior high school curricula, it is possible that the nonvocational-technical senior high school curricula are more worthwhile, and should receive a greater allocation of funds. This will be examined later.

An analysis of cost data can also reveal the optimal scale of operation of a senior high school, that is, the level of output, in this case average daily attendance, at which average cost is a minimum. If the statistical results derived in this study are reliable, the optimal scale of size of a nonvocational-technical senior high school is about 3,000 students, although there is a considerable margin of error. No optimal scale of size could be determined for vocational-technical senior high schools because of the small number of observations in this study.

It is important to know the optimal scale of operation because in performing the cost-effectiveness study it is assumed that each school is operating at its most efficient point, and that costs can only be reduced by changing the allocation of funds between curricula, and not by changing the size of the school. Further studies may give greater justification to this assumption.

The benefit data were based on labor market histories reported by mail questionnaires from a sample of high school graduates. Earnings and employment were used as proximate measures of benefit because of the absence of a unique objective measure. After making allowances for variations in the socio-demographic characteristics of the sample, it was shown that nonvocational-technical graduates earned less than vocational-technical graduates during the first year after graduation. By the sixth year, however, the difference in earnings between curricula was slight. Over the long run, the graduate's performance in the labor market is highly related to his labor market experience and socio-demographic characteristics, rather than to the kind of training received in the relatively distant past.

Nevertheless over the six years, given that both sets of graduates have the same socio-demographic backgrounds, vocational-technical graduates earned $3,456 more than graduates of the non-vocational-technical curricula. Similarly over the six years, vocational-technical graduates were employed 4.3 months more than graduates of the nonvocational-technical curricula.

Thus, for the study sample, given that earnings and employment are appropriate indices of the benefit of education, vocational-technical graduates earned significantly more and were employed significantly longer than the graduates of the other curricula during the six-year post graduate period. The vocational-technical curricula, therefore, not only costs more in relation to the nonvocational-technical curricula, but also

yields greater benefit. It is still not possible, however, to determine whether additional funds should be allocated to the vocational-technical curricula or to the nonvocational-technical curricula.

In order to analyze vocational-technical education as an investment in the human agent, the relationship between costs and benefits must be determined when taking account of time, depreciation, risk and uncertainty. Investment criteria are utilized for this purpose. There is no single one which is theoretically or practically correct for all investment situations. Each is limited by a different set of assumptions. In the study, therefore, several criteria were employed. Each of them, separately, showed that additional public funds should be spent on vocational-technical students rather than students in nonvocational-technical senior high schools.

It is asserted by some that students who might normally have dropped out when following the nonvocational-technical program might become successful graduates within a vocational-technical program. In this study the comparison can only be made for students of any curriculum who graduate and those of the same curriculum who drop out. Employment and earnings benefits of the dropouts were measured from the time when they would have graduated.

Over the six-year period, vocational-technical dropouts were employed 11.6 months more than the nonvocational-technical dropouts. The difference in employment between nonvocational-technical graduates and dropouts is greater than the difference between vocational-technical

graduates and dropouts. Thus, while nothing can be said about the dropout saving propensity of the vocational-technical curriculum, one may be able to assert that dropouts from this curriculum fare better in the market place than dropouts from other curricula. However this may be because vocational-technical students drop out in response to a perceived labor market opportunity, and not necessarily because of a fundamental inability to successfully complete high school.

Many consider that one of the major benefits of a vocational-technical school is the ability of these schools to rectify short-run shortages in needed skills. A total of 129 employers were interviewed and their replies indicated that on-the-job training for employees from vocational-technical senior high schools was on the average 12 to 64 weeks shorter than for other employees. For the firms in the sample which had any type of training program, vocational-technical training not only shortened the training program, but also resulted in a higher wage rate while in training. In fact, during the training period it cost employees of vocational-technical graduates about $245 less to receive the necessary training.

Both of the above factors give further justification to the major conclusion of this study--that additional funds should be allocated to the vocational-technical curricula--by indicating further benefits accruing to the vocational-technical curriculum which had not previously been taken into account. A final potential source of bias in measuring benefits to vocational-technical education may lie in non-monetary and non-economic factors. These were also examined.

An improvement in citizenship and an increase in social participation were considered as possible non-economic benefits resulting from different educational curricula. Voting behavior, in the 1966 primary elections and in the 1964 Presidential election, was assumed to be a suitable measure. It was shown that if this assumption is justified, curriculum does not have any significant impact upon citizenship or social participation. Career satisfaction was also considered as a possible benefit. It was shown that vocational-technical graduates had .28 fewer jobs that did not fit in at all with their career interests than did nonvocational-technical graduates. Thus vocational-technical training has in part done what it set out to do--to prepare workers for employment in specific skill areas, so workers do in fact find employment in their areas of training.

The evidence, therefore, suggested that there was little difference in non-economic benefits between vocational-technical and other curricula. Thus, the economic benefits, as discussed earlier, may represent a fairly close estimate of total monetary and non-economic benefits. Again, it can be said that, for the study sample, vocational-technical education is an economically worthwhile investment for individuals and for society.

However, although this study has shown that vocational-technical education is economically worthwhile <u>for this study sample</u>, one cannot necessarily generalize on the basis of these results. If further studies corroborate these findings, then generalizations can be made on safer ground, but considerable refinement is still needed of both concepts and data.

Research Policy: Should it be Determined by State Directors or by the Bureau of Research?
-A POSITION-

Joseph T. Impellitteri
Department of Vocational Education
The Pennsylvania State University

Presented at
The 62nd American Vocational Association Convention
Dallas, Texas
December 11, 1968

The role that I perceived myself filling in this session today was in providing some middle ground in this concern over research policy in vocational education. In writing this paper I attempted to fulfill that role in a similar fashion as I had in my younger football playing days as a defensive middle guard. In that role all I did was put my head down and churn forward. I usually kicked up a heck of a lot of dust, but very rarely tackled anyone. So it was with this paper. I plunged ahead, not knowing where my left tackle and right tackle were heading, and hoping I was staying between them.

My position, of course, has its advantages. In not knowing the positions represented at the so-called extremes, I can carve out for myself a comfortable middle ground, and accuse Arnold or Tuckman or both for either going too far or not going far enough. Resolving any of the issues confronting us in this session then becomes secondary to the gamemanship involved. I have thus chosen to plunge ahead like in the old days. I'll try to keep the dust down, but I won't promise a thing.

My remarks have been organized under four main headings: 1. "Setting the stage"; 2. "Let's take a look at the extremes"; 3. "Where is the middle ground?" and 4. "Some recommendations." Generally, what I've tried to do is to proceed from the question of, "Where have we been?" to "Where are we now?" to that of "Where can we go?" and finally to answer the question, "Where should we be going?"

It is not necessary for me to go into a prolonged discussion of vocational education's history. Most of you are well acquainted with it, and many of you are probably better acquainted with it than I. There are a few points I'd like to make regarding the implications of that history to our situation today.

First I'd like to focus on the traditional concept of vocational education as it has evolved. If I asked any of you if you are a vocational educator, you'd in all probability say, "Yes." Was not your educational and training background, however, either in an industry program, or an agriculture program, or a distributive program, or another one of the specialized service areas? Very few of us could answer no to that particular question. The reason is that vocational education has traditionally been organized and administered under that pattern at the state level and within university structures. Vocational education as a complex discipline within the educational system has, as a consequence, neither been acknowledged nor accepted. The effort of the graduate program at Rutgers (Professor Tuckman's institution) is one of the few encouraging exceptions to this pattern. We have been so occupied with feeding heavy doses of specialization to our students, that the substance included within the discipline of vocational education has been bypassed.

Within the last five years we have been encouraged in our research efforts to utilize interdisciplinary approaches. In doing so, in attracting the sociologist, psychologist or economist to work with us, how many have had to throw up their hands with frustration? "They just don't understand our field," is a typical comment. The fact is that interdisciplinary approaches which assume that a psychologist and a sociologist who know nothing about vocational education can work with a vocational educator who knows little about psychology or sociology are doomed to failure. What I hope this lesson has taught us is that we can no longer afford to neglect building breadth into our vocational education programs, breadth in the discipline, breadth in education and breadth in the related disciplines. With the encouraging passage of the Vocational Amendments recently, and

its accompanying bet that vocational education will be a partial cure to many of our major societal problems, how can we ignore what this implies?

The view of research in vocational education prior to the passage of the VEA of 1963 was primarily a social bookkeeping chore. The need for research was synonymous with the need for information. Research was perceived as a fact-gathering process. If a State director wanted to know what the graduates of secondary level reimbursed programs in the state were doing a year after graduation, he had somebody do some research. If a teacher educator felt it would be nice to know what the states were doing about certification for trade and industrial teachers, he sent out questionnaires to all the state directors.

When, in 1964 funds for problem-oriented research became available, where were the vocational educators who had the training and background to conduct such research? The AVA's research committee immediately became active in initiating a number of seminars designed to provide vocational educators with some minimal research competencies. When are we going to learn that we must build into our graduate programs experiences which make it possible for our students to acquire these competencies initially?

A common misconception which has evolved in our field is that the person typically called a researcher is perceived to be a technician, equipped with his bag of research tools, who goes hopping from problem to problem, toubleshooting his way through a maze of the practitioner's problems. This distorted view of the researcher does not acknowledge the importance of scholarly research to the discipline. It presupposes that the only important research in the field is research of the social bookkeeping type described previously. I maintain that the proper domain of the researcher in vocational education is in the area of scholarly research which contributes to the discipline

rather than to the solution of immediate problems. As Bereiter (1) has indicated, ". . . in allowing problems to determine research we skip over the vital step without which research is meaningless. Problems may motivate one to search for ideas, but it is the ideas which should determine the research." This position is also consistent with Travers' statement:

> Educational research conducted within an institution for solving local problems usually contributes little to the development of a body of knowledge of broad significance to education as a whole. The pressure to solve one local problem after another prevents the development of a broad program consisting of a series of related studies. (2).

The researcher as viewed in this framework is primarily a content specialist and secondarily a competent conductor of research. His conception of the content may be more abstract than that of the practitioner. However, his primary strength must lie in his knowledge and understanding of the discipline in which he is operating.

In discussing the determination of research policy I am assuming that such policy will affect only that research which is supported by federal dollars appropriated for research in vocational education. Let us examine the alternate possibilities for determining policy.

First, I'd like to discuss the Bureau of Research as a policy setting body. Most of you have either been involved with or at least are familiar with some of the interdisciplinary projects funded by the Bureau under the '63 act. Many of these projects allowed for only a nominal involvement of a vocational educator. Others showed no practical involvement at all. These studies were funded on behalf of vocational education apparently as a medicinal agent. That is, this might not taste too good to you now, but you'll later be thankful we gave it to you. Well, it's now later, and I don't see any great vote of confidence being offered by vocational educators yet. Maybe we should wait a while longer for the fruit bearing stage.

Actually I have no quarrel with the Bureau of Research. They placed their big bets on the proven performers rather than go with the longshots. It just so happens that the proven research performers were not vocational educators. More are now. Many more will be in the days to come. But we have awakened a little late. I truly believe that given a substantial number of vocational educators with sophisticated research competencies, the Bureau of Research would support their scholarly efforts. As I have already indicated, I see this as an area of desperate need in our field.

The State Director, on the other hand, undoubtedly perceives a different set of research problems and priorities. Necessity dictates the focus of research interest of the director. Since he deals with day-to-day, recurring educational and administrative problems he becomes attuned to the here and now, and feels strongly about the need for immediate answers. Although directors' need for research differ from that of the discipline, the former is extremely crucial. I thus propose that we can no longer refer to a global need for research in vocational education. The need, to me, seems to be two-fold: the need for research focusing upon immediate solutions to practical problems of the practitioner; and the need for research to focus upon the understanding of the underlying principles and theories upon which this complex is based. Therefore, there must be a share in the determination of research policy. In practice such a division of responsibility is accomplished by dividing the funds to be distributed for research.

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EXPLORATION WITH A COMPUTER-ASSISTED OCCUPATIONAL INFORMATION SYSTEM*

Joseph T. Impellitteri
Department of Vocational Education
The Pennsylvania State University

Presented at
The 62nd American Vocational Association Convention
Dallas, Texas
December 11, 1968

*The project described herein was conducted with financial support and cooperation from the Pennsylvania Vocational Education Research Coordinating Unit and the Bureau of Vocational, Technical and Continuing Education.

Based upon the needs of today's youth to explore the world of work and the increasing importance of vocational guidance in their development, the Computer-Assisted Career Exploration System was developed. The purpose of the system is threefold: to provide an easily updated individualized occupational information retrieval system; to develop through an essentially heuristic approach a process whereby youth could develop their own individualized frameworks of the occupational structure; and to provide an experience for youth to acquire, by simulated practice, operational strategies in relating their abilities and interests to occupational opportunities.

The project was initiated on January 1, 1966 with financial support from the Pennsylvania Department of Public Instruction. In April, 1967 the first phase of the project, the development and debugging of the prototype model was completed. The student terminal provides the means by which a student interacts with the system. The terminal, tied into an IBM 1401 computer by telephone lines, is composed of a typewriter-like device, a tape recorder, and a slide projector, all under computer control.

The computer relates selected materials to the student, who is seated at the terminal, by either typing out a message through the typewriter, displaying a particular image on the slide projector, or by playing a previously recorded message on the tape recorder. The student relates meaningful messages to the computer by typing a short response on the typewriter. This short response required of the student is considered to be essential since longer typed messages would require a level of typing skill not ordinarily achieved by most ninth grade boys.

Information related to a certain students' abilities, preferences and educational plans are stored in the computer before the student begins the interactive phase. The student is oriented to the purposes of the system before he begins the first

session. At that time, he is given a list of 40 occupations with corresponding codes representing his primary entry into the system. The computer's first request to the student is to ask him to select one of the 40 occupations on the list about which he would like to know more. After the student responds by typing an occupational code number, the computer then types out a short paragraph very briefly describing the occupation. The student is then asked if he wishes to find out more about the occupation. If the student responds positively, four operations are activated in the following order: 1) discrepancies which may exist between the student's ability-preference profile and the requirements for the particular occupation are typed out; 2) a two-minute taped interview with a worker in the occupation is played; 3) an image is projected on the slide projector screen depicting the worker undertaking four typical tasks in the occupation and 4) a 150 to 200 word description of the occupation is typed out for the student to read, and to keep for later use.

The student is allowed to proceed through as many occupations as he wishes during as many 40-minute sessions as he wishes. He may, at any point in the process, indicate that he would like the computer to select for him those occupations from the list of 40 which he might be interested in exploring further. The computer, by comparing the aptitude-preference profile for the student with the 40 occupational profiles seeks those occupations for which no discrepancies exist. It lists those occupations for the student.

The system as described was tested in two separate trials in the Altoona, Pennsylvania School District. The first trial, approximately ten weeks in length, was held in the spring of 1967 at Keith Junior High School. The youngsters scheduled for the system experience were 72 ninth grade boys who had indicated that they were interested in selecting a vocational or technical course of study the following year at the senior high school.

The second field trial was conducted at Roosevelt Junior High School involving the scheduling of 140 ninth grade boys between October, 1967 and May 1968. These boys also were selected on the basis of their having indicated a preference for a vocational or technical course of study the following year.

On the basis of the Keith trial, several revisions were made on the system during the summer of 1967. Utilizing the revised system in the Roosevelt trial (N=140 boys), it was found that:

1. The average number of 40-minute sessions the boys scheduled was five.
2. Of the 40 occupational descriptions stored, the youngsters, on the average, chose 16 of them--eleven complete, and five partial.
3. Sixty-five per cent of the boys utilized the opportunity to request the computer to select occupations which they might have pursued further.
4. The boys generally felt that the terminal experience was interesting and valuable.
5. The boys felt that as a result of the experience they were considering more rather than fewer occupations.
6. The boys were generally stimulated to seek out additional occupational information on their own.
7. The typeouts were perceived to be the most helpful and most interesting component of the terminal configuration, the slides least helpful and least interesting.
8. Many of the boys missed the opportunity while in a terminal session to discuss problems which arose.
9. The discrepancy statements were useful in that they appeared to force a boy to examine himself.
10. The boys did not appear to develop any consistent strategy of exploration while working with the system.
11. As compared to a group of similar boys who were not scheduled on the system, the experimental groups stated occupational goals and choice of course of study did not seem to be affected by the experience.
12. Specific items of occupational information can be taught by using the CACE system.
13. The boys generally perceived the system as the best way to explore occupations, second only to on-the-job experience.

Based upon the results of the field trials at Keith and Roosevelt, it may be concluded that the computer-assisted career exploration system is an effective and feasible device in assisting youth to explore occupational opportunities. It also may be concluded that the lack of a sound theoretical foundation in vocational psychology impeded the investigators in drawing any implications of the study with regard to such factors as vocational maturity. It is thereby recommended that future efforts in this area be focused upon a theoretical as well as a problem orientation.

VT 008 214
Mills, Chester O., And Others
Speeches Presented at the Annual Vocational Convention of the American Vocational Association (62nd, Dallas, December 10-11, 1968). Adult Education Department Meetings.

MF AVAILABLE IN VT-ERIC SET.
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*ADULT VOCATIONAL EDUCATION; *PROGRAM DEVELOPMENT; *AGRICULTURAL EDUCATION; RECRUITMENT; *PROGRAM DESCRIPTIONS; GUIDELINES; YOUNG FARMER EDUCATION; ADULT FARMER EDUCATION; TEACHER SALARIES; CASE STUDIES (EDUCATION); *SPEECHES; PROGRAM ADMINISTRATION
*AMERICAN VOCATIONAL ASSOCIATION CONVENTION, DALLAS, TEXAS, DECEMBER 9-13, 1968

Speeches presented at the Adult Education Department Meetings included: (1) "The Successful Promotion of Adult Vocational Education Programs," by C.O. Mills, containing a discussion of the basic fundamentals for successful promotion, criteria for effective program administration, criteria for instructor selection, steps in organizing and conducting a course, some proven methods for identifying local needs, and methods of publicizing programs, (2) "Adult Program Design and Recruitment in Agriculture for Different Age Level Groups," by J.E. Dougan, containing sections on the importance of agriculture, adult education in agriculture, benefits of adult education for all age groups, principles of program planning in adult education, guidelines for designing adult education programs for different age groups, separate programs for young and adult farmers, and recruitment in adult education, (3) "Teacher Recruitment and Problems Relating to Salaries of Teachers of Adult Classes," by H.D. Bearden, concerning teacher qualifications, sources of teachers, and salary incentives for teaching, and (4) "Adult Vocational Education, Success Stories of Local Programs and Course Offerings," by L. Farone, containing case studies of successful adult vocational education students. (DM)

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Speeches Presented At The

62nd Annual Vocational Convention

Of The

American Vocational Association

Dallas, Texas

December 10-11, 1968

Adult Education Department Meetings

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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THE SUCCESSFUL PROMOTION OF ADULT VOCATIONAL EDUCATIONAL PROGRAMS

by Chester O. Mills

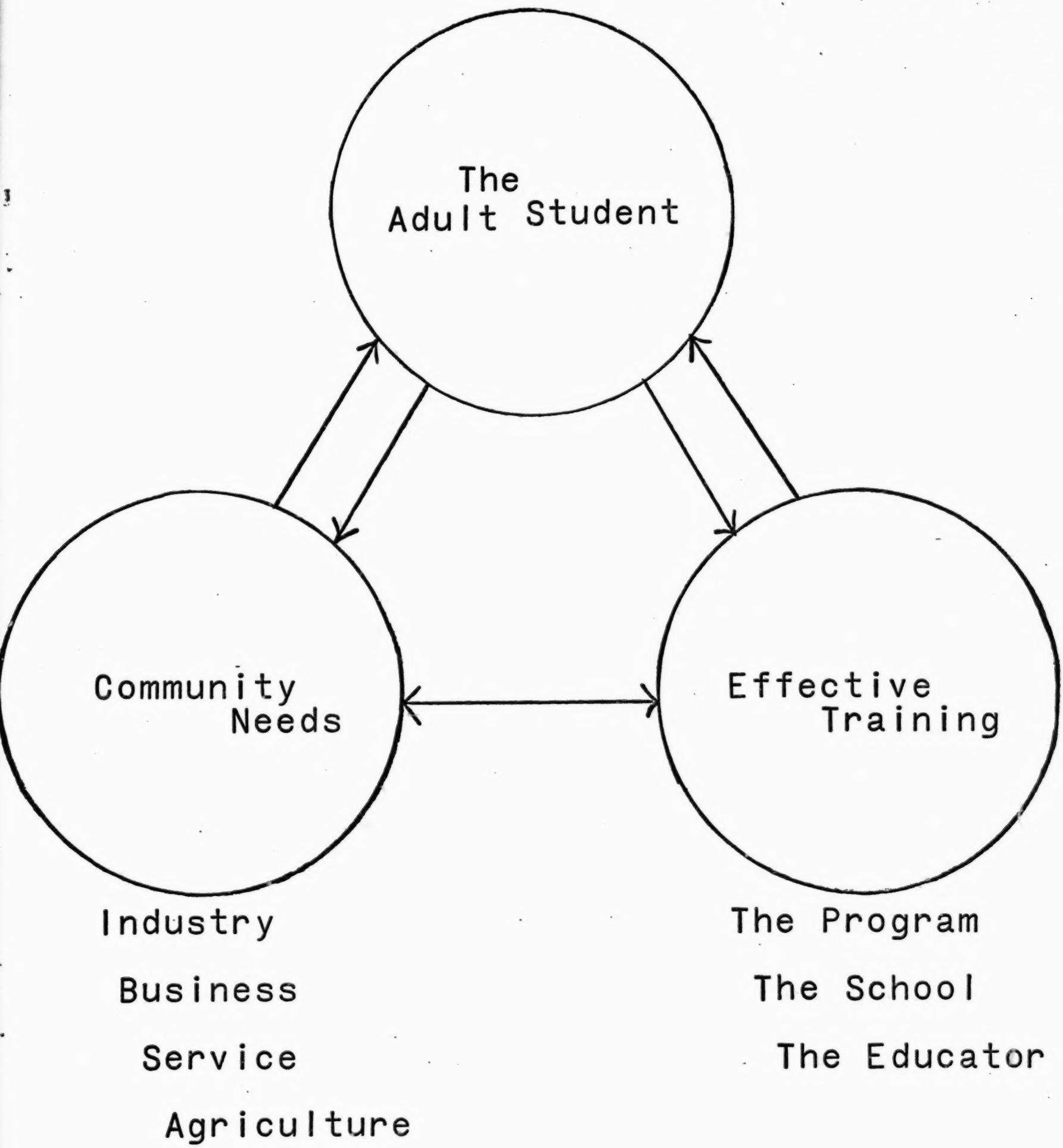
The subject of my talk today was given to me as somewhat of a surprise; as I expected the topic to be more complicated. Actually, it is quite simple since we must find the beginning place and procede with orderly deliberation. This may sound silly, but obviously when one is given a topic such as this he is bewildered as to where to begin and where to end. It takes a whole college academic term to discuss a few elements involved, and even then only guidelines may be depended upon in Adult Vocational Education programing. Each community is different--the inter-city, the suburbs, the small villages and towns, the rural areas, and so forth. All have such unique characteristics in that no definite pattern can be set to successfully promote and develop a local vocational adult education program. As in football, the coach says that a team performs best when it perfects its fundamentals. I believe that vocational adult education has certain fundamentals common to all communities, and this is where we should begin. Too many programs have been started without a proper plan, or from the so-called "hunch" approach, and without first reviewing the fundamentals and procedures which have proven to be successful. We have studied and we understand the characteristics of the adult learner, and this is one of the basic fundamentals, but remember, it is only one of the many facets unique to the basic intricacies in any vocational program at the adult level.

In my limited time, let me leave with you a few basic fundamentals which no doubt you are familar, but need reassurance that they are not out of style. The first, of course, is the adult student, and without him and his needs and differences we would have no adult programs in any sense. Taking a look at the adult student and placing him in a chart called The Inevitable Cycle, seen here in Chart Number 1, you will note that his needs and his preferences are based upon the community needs and effective training. You will note that community needs come from what industry, business and service industries require, and the needs in agriculture and other occupations. The student does not make these needs. He must conform to the requirements of that occupation which he is interested. You will also note that the arrows running from the adult student circle to the circle of community needs and back again, are significent. You will note there is only one arrow running both ways between community needs and the third area, the training required by the adult student.

The effective training, as indicated, requires a comprehensive program. It calls for full cooperation of the school and certainly the effective performance of the adult educator. This inevitable cycle gives an indication that the simpleness of the basic requirements of the adult student really are only affected by the two circles indicated, and any change, any additions, any implementation that takes place would be insignificant, although it may be necessary.

Chart Number 1

THE INEVITABLE CYCLE



The relationship between these two circles is only the beginning. One compliments the other, however, the effective training circle is the result of well-laid plans of the educator.

Successful promotion depends on many things, but the basic fundamentals are always present. Other elements will develop and implimentation must take place, therefore; let's look at some of the fundamentally successful promotion areas indicated in Chart Number 2. The Administrator heads the list because without him no program could exist, even though it may have students, it may have teachers, and it may have the other necessary components; but without someone to guide and direct the program it will not be successful. The community, business and industrial, agriculture, and others are included in the next area of importance; then comes the school community, the adult student, the committees of advisement, which are many and varied in their characteristics, having different responsibilities and knowledges necessary to make them effective. The administrator must know how to determine the areas of need. These are the skilled techniques involved, and he also must know these methods for using and serving this information. Such procedures might be accomplished many ways, too numerous to discuss at this time, however; the use of the media in all of its forms is the most important and is normally available.

Since the administrator is the key person in any successful program, he must be technically competent, professionally

Chart Number 2

SUCCESSFUL PROMOTION

The Administrator

The Community

The School Community

The Student

Committees of Advisement

Administrators Knowledge for Determining Areas of Need

Administrators Techniques for Serving Information

Use of Media

competent, and enthusiastic about his work. Looking at Chart Number 3, The Effectiveness of the Vocational and Technical Education Administrator depends upon his knowledge of the community, knowledge of adult student psychology, and student counseling, knowledge of the broad scope of vocational and technical education, knowledge of the program planning, knowledge of budgeting, and I might add at this point, that budgeting does not necessarily mean that there is a common panacea for solving budgeting problems. The administrator must be able to determine costs then look at those sources readily available to him to make his program solvent.

The administrator must have a knowledge of evaluating techniques, which is a continuous process and a knowledge of promotional methods, much of which has been practiced many years ago but is still in vogue.

Homer Kempher listed his 13 ways of promoting a program and determining needs while with the U.S. Office of Education a number of years ago. He laid down these fundamental guidelines which stated that the administrator must have the knowledge of selecting and training adult education instructors as he knew the great majority of adult instructors would normally come from the work-a-day world and who lacked classroom techniques and the necessary methods to hold the attention and the interest of the adult student. He knew that some type of program, such as adult instructor training,

Chart Number 3

THE EFFECTIVENESS OF THE VOCATIONAL AND TECHNICAL EDUCATION ADMINISTRATOR

Depends upon his:

- Knowledge of Community
- Knowledge of Adult Student Psychology and Student Counseling
- Knowledge of the Broad Scope of Vocational and Technical Education
- Knowledge of Program Planning
- Knowledge of Budgeting
- Knowledge of Evaluating Techniques
- Knowledge of Promotional Methods
- Knowledge of Selecting and Training Adult Education Instructors
- Knowledge of the Effective Use of Advisory Groups
- Self Improvement

should be provided those adult instructors in order that they may perform a better job of imparting knowledges to his students. Further, the administrator must have the knowledge of the effective use of advisory groups, whether they be joint apprenticeship committees, craft committees, occupational committees, general advisory committees, or others; and in addition, and least but not least, he must be constantly solving problems unique to his own program.

Let us look at this individual, known as the instructor, as he may make or break a program. Chart Number 4 indicates that a successful adult vocational program always has as its cornerstone the adult instructor since he is occupationally competent, he is respected by those in his field, he is intellectually competent, he possesses the adult teaching skills, he understands the adult as a learner and he has an infectious personality. But to say these nice things about the adult instructor can only be done so when the administrators are able to recruit such a person, train them, and then know how to supervise them. Not only are they hard to find, they are hard to get, as we must look for them principally in business and industry and agriculture. Other sources of teachers may involve the various fields related to vocational home economics, the school, former teachers, college instructors and other near-by adult vocational programs. We must look for quality as these instructors are necessary for successful programs, since they have the personal contact with the student, who as we all know is a

Chart Number 4

THE ADULT INSTRUCTOR MAKES A PROGRAM SUCCESSFUL

Because

He is Occupationally Competent

He is Respected by Those in His Field

He is Intellectually Competent

He Possesses the Adult Teaching Skills

He Understands the Adult as a Learner

He Has an Infectious Personality

voluntary type of individual, and if he is not getting what he wants, when and how he wants it, he will get up and walk out. He has no more time to waste on those types of offerings.

Many vocational administrators have no thoughtful or systematic plan to organize courses or plan programs, whether they be long- or short-range. The course is the fundamental aspect of any program. It must be organized with precision. These courses may be an activity or academic in nature, but nevertheless, they require a specific procedure in organizing, so that they will be successful.

Looking at Chart Number 5 and beginning at the botton, you will note that here in step one of the many steps leading to a successful conduction of the adult vocational course is to establish supervision for any course; that is, who will visit it; who will make the final evaluation; who will determine whether the student is getting that what he needs; etc. This is what we mean by supervision.

The second step is determining training needs, and if you'll look briefly at Chart Number 6 you will note several aspects, or facets that must be considered by the administrator for identifying local needs. Your own advisory committee, use of interest finders, receiving individual requests, conferences with business leaders, conferences with labor organizations, use of business reports, conferences with trade associations, are some of the areas of determining needs. Conferences with other community educators, and

Chart Number 5

STEPS IN ORGANIZING AND CONDUCTING A COURSE

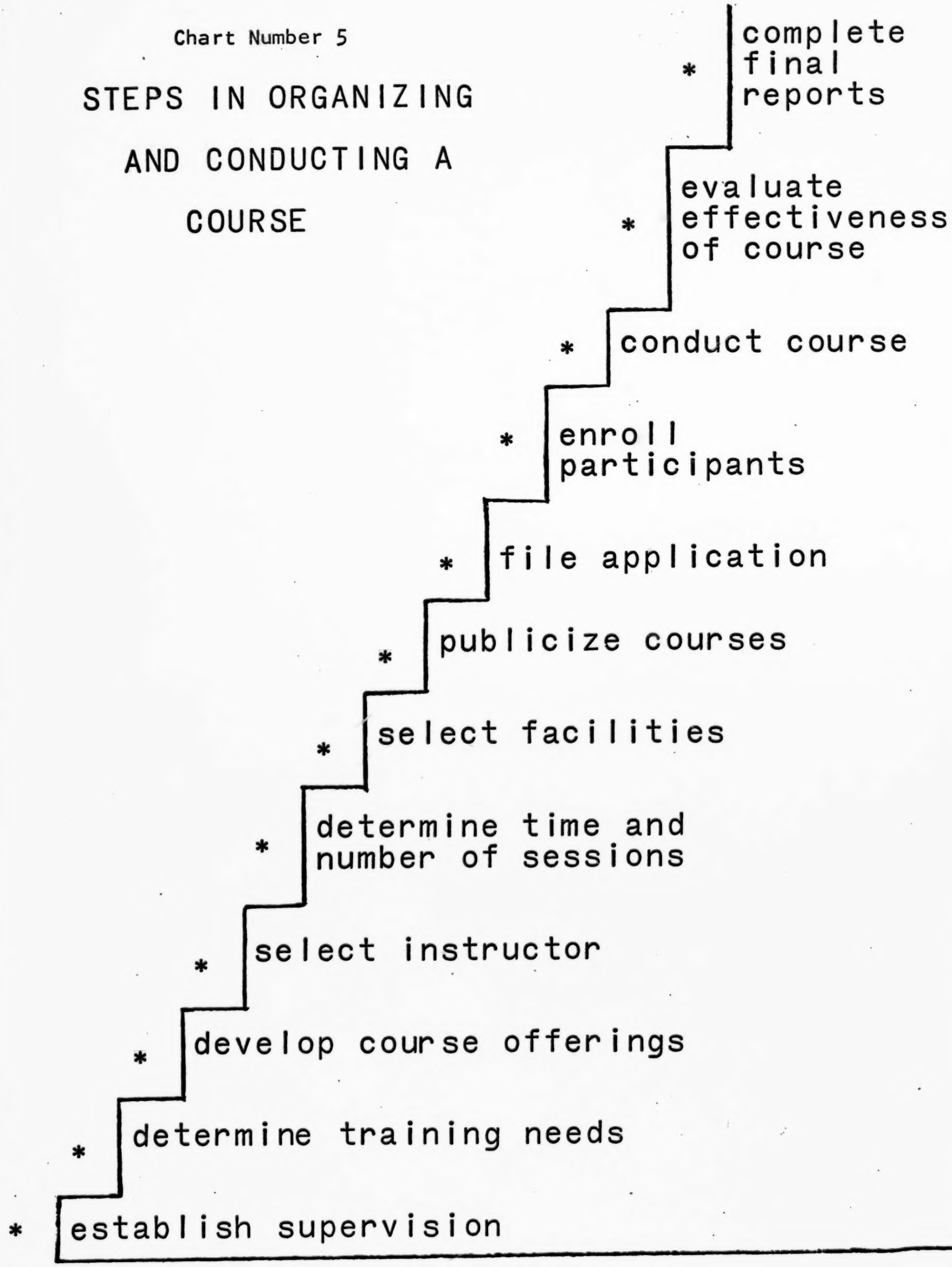


Chart Number 6

SOME PROVEN METHODS FOR IDENTIFYING LOCAL NEEDS

Your Own Advisory Committees

Use of Interest Finders

Receiving Individual Requests

Conferences with Business Leaders

Conferences with Labor Organizations

Use of Business Reports

Conferences withTrade Associations

Conferences with Other Community Adult Educators

Cooperation and Assistance with Local Vocational Leaders

Conferences with Community Agencies

Successful Programs Built on Experience

And if you will look at Chart Number 7 you will find a few of the aspects for publicizing your program or courses such as using the services of the advisory and special committees, using the media in a timely way, and using those agencies whose members benefit from the program. Individual contact technique which might be over the telephone, by letters, flyers, posters, newsletters, etc., are proven the best publicizers, but if you will allow me to use this term, "former students," who will say, it helped me and I am sure it will help you.

The next step requires some form of report of application, as most vocational courses in the various states require some form of communication indicating that it is a vocational course and reimbursement is normally forthcoming. These items must be accomplished and sent to the proper authorities. The next step is to enroll the participants and then conduct the course, and of course, during the course, and after the course, an evaluation takes place; and this in itself takes a long time. Evaluation is quite precise and intricate, but we are only listing the fundamentals today.

Last, but not least, the necessary final reports that must be sent to the necessary authorities who require them; and there may be several. However, like any other type of business, reports and paper work are always required.

You cannot do all of this alone, you are not superhuman, you are not technically competent in all fields.

Chart Number 7

THE ADULT ADMINISTRATOR MUST PUBLICIZE WELL

Using:

The Services of Advisory and Special Committees

The Media Timely

Those Agencies Whose Members Benefit from Program

Individual Contact Techniques

1. telephone
2. letters
3. flyers
4. posters
5. newsletters
6. etc.

Former Students as Promoters

Therefore, you need help from people who know. Those people may be in advisory committees of one form or another. They may be business leaders, or they may come from various walks of life, and certainly they come from the occupations who are in need of personnel that meet their demands.

Great football coaches stress fundamentals. Let us trust the fundamentals in promoting a successful vocational adult education program. We can always implement, we can always improve, we can always utilize additional and more sophisticated methods as each situation arises, but we cannot use these methods unless we have the basic foundations in order to conduct the successful program. Follow these fundamentals and I am sure you will be on the right road.

Chester O. Mills
PhD

ADULT PROGRAM DESIGN AND RECRUITMENT IN AGRICULTURE

FOR DIFFERENT AGE LEVEL GROUPS

Presented at the American Vocational Education Conference, Dallas, Texas, Wednesday, December 11, 1968, by James E. Dougan, Director, Ohio Agricultural Education Service, State Department of Education, Columbus, Ohio.

Importance of Agriculture

The agricultural industry which furnishes our food and fiber is the largest and most basic industry we have in this country. On November 20, 1967, we passed the two hundred million population mark. It took 17 years to get the last 50 million and it is estimated it will take 12 years to get the next 50 million. The investment in farms is 240 billion dollars with cash receipts of 50 billion dollars each year. The agribusiness industry does a 250 billion dollar business each year. Stated another way, for every one dollar of agricultural products sold, we have an increase in our economy of approximately $5.00.

Adult Education in Agriculture

Today learning throughout life is as much a necessity as it is a prerogative in the future. Learning throughout life will be imperative.

Traditionally, adult education in agriculture is for persons who have completed or left full-time schooling and this type of education has been a vital part of our public school systems.

Over 40% of the persons served by Vocational Education in Agriculture are adults and considering the meager time, effort and money devoted to adult education, this percentage of the total number served is noteworthy.

With new programs emerging in agricultural education, broadened purposes, and new clientele, it is imperative that appropriate education programs be developed for all adults whose vocational or avocational interest involves knowledge and skills in agricultural subjects. I am sure that designing programs that will expand and improve adult education in agriculture will be dependent upon more adequate financing of these programs, more use of specialist, resource people, materials and adequate facilities.

Adult education programs in agriculture will continue as a part of the high school program and tremendous growth will take place in area vocational centers and post high school institutions. Designing programs for various age level groups should not only have as a major objective the imparting of specialized knowledge and skills but the developing of further interest in and ability for learning throughout life. We should strive to develop the abilities of adults to learn continually throughout life by themselves as well as through formal public school sponsored programs.

Additional Benefits Adult Education Programs Should Provide To All Age Level Groups

Adult education programs should not only impart technical knowledge and skills but should perform a function of developing the cultural aspects of the individual such as:

1. Expanding communication skills - These programs must assume the task of increasing the ability of the participants to communicate in many forms and by many means.
2. Develop flexibility - The ability and willingness of the individual to change in a technical and economic world is essential.
3. Improve human relations - Some of the most serious and difficult problems of adults in agriculture are in this area.
4. Facilitate participation - The involvement of the individual in the improvement of their communities and their schools, understanding of and participation in politics and effective participation in agricultural and civic organizations. The involvement of people is important in designing adult education programs for all people.
5. Expedite personal growth - Adult education programs in agriculture has rendered its best service to people who have well developed interests and who have sought out places where their curiosities and interests could be fulfilled.

Principles of Program Planning in Adult Education - In designing adult education programs for groups of different age levels, there are five simple principles that should be considered:

1. Determine the needs of the constituents.
2. Enlist their participation in the planning.
3. Determine clear and specific objectives.
4. Develop or design a program plan.
5. Plan and carry out a system of appraisal.

Guidelines for Designing Adult Education Programs for Different Age Level Groups

In Ohio, we have developed the following guidelines to assist in developing adult programs in agriculture for different age level groups:

1. Major emphasis in adult learning is placed on the practical rather than the academic, on the applied rather than theory and on skills rather than on knowledge or information.
2. Adults do not generally study vocational subjects on their own, therefore, they need direction and supervision where the learning is taking place, on-the-job instruction and supervision.
3. Adults from the lower echelon of the social class feel a certain reluctance to expose themselves to formal learning situations.
4. Younger and more knowledgeable persons are the ones most likely to consider the possibility of enrolling in adult education programs to satisfy their learning interests.
5. In a recent study of over 300 young and adult farmers enrolled in organized instruction, 70% said the reason they were enrolled was to upgrade themselves on new innovations in agriculture and to become a better informed person.

6. In a recent survey, three factors distinguish the participants in adult education from the non-participants.

   A. Age - nearly 4 out of 5 were under 50 and over 1/2 of the total group were under 40.

   B. Better educated: - There is a greater number enrolled who have graduated from high school than the non-participants.

   C. Employment - Approximately 95% were employed and 75% held full-time jobs in some phase of agriculture.

7. On-The-Farm Instruction - On-the-farm instruction and supervision must be a part of the adult program in production agriculture. Indications are that this is also true in programs to train and re-train individuals in non-production agriculture.

8. I am sure that as we design programs in the future for both young and adult farmers which are to be successful and have real meaning, we must concentrate our efforts on management strategies rather than the traditional farm management. This instruction must benefit the individual and in turn the community, as has been proved in Farm Management strategy programs. The benefit cost ratio for farm operators enrolled in the Minnesota Vocational Agriculture Farm Business Management adult education program is about 4 to 1. For every dollar invested by the farm operator in the business management program, either in actual cash expense or in hours of classroom and individual instruction, the enrollee received about $4.00 in increased labor and management income. It was also found that for every dollar expended in conducting such a program, the community can expect to generate $9.00 in increased business activity.

9. In Ohio, we have just completed a series of regional seminars for Presidents of local Young Farmer associations, inwhich 200 outstanding leaders in agriculture were in attendance. They were unanimous in

stating that the local vocational agriculture teachers should become the director of the total agricultural education program in the school district and that the young farmers would assume the responsibility for assisting the teacher in designing an educational program and would see that sufficient enrollment was obtained.

Separate Programs For Young and Adult Farmers

In Ohio, we are rather specific in our recommendation to local schools and Agricultural Education teachers in regard to designing separate educational programs for young and adult farmers. Our decision for recommending separate educational programs for these two groups has been based on the following:

1. The young farmer is more progressive and more eager in his quest for agricultural knowledge and skills.
2. Young farmers feel "free-er" to discuss their problems and concerns by themselves.
3. Older farmers dominate the discussions in a mixed group.
4. Separate programs for young and adult farmers enable the teacher to develop and conduct a series of meetings covering the specific areas requested by each group.
5. The young farmer may need discussions in areas where the adult farmer is already proficient. Example : Young farmers like to discuss fertilizer and the chemistry involved in soils. Adult farmers, on the other hand, are more interested in farm law, deeds, wills, and social security.
6. In the area of finance, young farmers particularly have different concerns.
7. Young farmers are more interested in farm mechanics and request laboratory experience in this area more readily. Many young farmers can completely service a tractor and other agricultural equipment.

8. The young farmer program needs to meet the social needs of this group. Adult farmers are often already members of many organizations. Young farmers may be just beginning to become active in community and social activities.
9. Separate classes provide a better opportunity to get the entire young farm family involved in agricultural tours, field days, etc.
10. Separate classes provide a better opportunity to more fully utilize the leadership abilities developed while they were FFA members.
11. Separate classes are an advantage often in a multiple teacher department because one teacher may be more competent with the younger group.
12. Separate classes provide a better opportunity for team teaching to be used effectively.

It is granted that combining the two groups will reduce teacher load, many of the young farmers can benefit from the experiences of the older farmers and that there are problems or concerns that are similar for both groups, but our findings have caused us to conclude that generally speaking, different educational programs should be developed for these two different age groups.

RECRUITMENT IN ADULT EDUCATION

Personal contact is the most used and most valued method of obtaining enrollment in adult programs. Study after study has shown that personal contact, letters, post cards, reviewing course outlines at the first meeting, and old members recruiting are methods most used and of the most value in obtaining attendance in adult education classes.

We have found that there seems to be some degree of success in recruiting enrollees by using mimeographed letters to individuals. This seems to have a degree of effectiveness with young adults and those that came from farms with a rather high capital outlay.

It is an established fact that the better the adult education program, the more successful the recruitment drive. The individual teacher is the vital factor in a successful recruitment campaign. By creating a stimulating and challenging environment in which adults can learn with dignity and enjoyment, the teacher is laying the ground work for future enrollment; because the adult, who senses an attitude of understanding, confidence, and respect on the part of the instructor is the best and most convincing public relations person for the program.

In a recent survey of adult classes in agriculture, we found that 70% of the enrollees had heard of the adult class from former students, but 22% had learned of the class by the way of posters in public businesses or newspaper announcements.

Teachers are good conversation pieces. When the adult students talk to friends or neighbors, they can either spread the good word about the friendly help the teacher has given them, or they can present a situation that will turn people away from the program. Another technique that has been used rather successfully is to arrange for a calling committee that will call individuals prior to the meeting informing them of the date, time, place, and the topic that will be discussed at the meeting. Recreational and social activities have proven to be valuable in retaining present enrollment particularly with younger adults. Other techniques that have been successful in retaining adult students are:

1. Treat students as adults and as peers. This can be done without dampening the student-teacher relationship.
2. Telephone students who are absent showing a genuine interest in their reason for missing the class session. Explain the importance of their regular attendance.
3. Send get-well cards to adult students when they are ill.
4. Review what happened in the previous class session at the beginning of each class period. This encourages absentees to return by easing their fear that they have fallen behind the rest of the class.

5. Stimulate the formation of friendship among the students. This develops a feeling of warmth and loyalty that brings them back.

6. At the end of each class session, give them a reason to return by telling them what is going to happen next time.

7. Whenever possible, give the adult students some pertinent material to take home to read or do. This would not be homework but a kind of fringe benefit.

8. Make sure that every class session gives each student a feeling of accomplishment. It is up to the teacher to diagnose each class members need. Then try to meet that need.

9. Classes for adults must show tangible evidence of providing the adult student with immediate rewards. Ideally, the adult student should get from each class session some knowledge or skill that he can put to practical use immediately.

10. Adults can teach others as they come to class with a background of knowledge which can often help the entire group.

11. As stated previously, a personal visit by the teacher to a prospective adult student is most effective. Adults enrolled in educational classes want and need on-the-job supervision and instruction.

mm

12/11/68

TEACHER RECRUITMENT AND PROBLEMS RELATING TO SALARIES OF TEACHERS OF ADULT CLASSES

by
H. D. Bearden

Certain basic ingredients are necessary to provide the type and quality of instruction that must be offered to best serve the interest and needs of adults. The people who do the instructing are by far the most important of these ingredients and are in reality the keystone to a successful program. For this reason the planning and implementation of the many types and levels of adult education must include careful consideration of the competency of instructors needed to teach the various offerings. Failure to recruit capable instructors is no doubt a common cause of program ineffectiveness or failure.

It must be kept in mind, however, that the effectiveness of any instructors efforts is determined to a significant degree by the availability and support of other important items which may definitely influence the interest or willingness of capable individuals in accepting or not accepting a teaching assignment. Some of the most important of these essentials include:

> Suitable facilities for class meetings with appropriate equipment, tools, laboratory apparatus, teaching aids or whatever is needed for class activities.
>
> Carefully selected instructional content to meet the specific needs of the participants.
>
> Trainees who are interested in the instruction, who are aware of their needs and who are seeking help.
>
> Suitable class schedules with the allotment of sufficient time to effectively give the planned instruction.

These are basic ingredients for good, effective teaching - but will amount to little or nothing without the <u>heart</u> of the teaching process, <u>the instructor</u>.

It is true that a uniquely qualified instructor can teach with some degree of success even when confronted with serious handicaps - but a weak instructor may fail almost completely even when supported by all the other essentials for good teaching and learning.

If we accept the viewpoint that the instructor is really the heart of the program then we must agree that the selection of the right person for each teaching assignment is a most important aspect for program planning and administration.

The important task of recruiting teachers presents several major questions to which there are no clearly defined answers. For example:

*What kind of teachers do we need to teach adult classes? - What qualifications should we look for?
*How and where do we find such teachers?
*How selective can we be in recruiting teachers?
*Who is responsible for selecting teachers of adult classes?
*How important is the level of funding in teacher recruitment and program operation?
*What can we do with inexperienced teachers who have little knowledge of teaching responsibilities?

With the broad variation in the kinds and levels of instruction needed by adults it would be unwise and foolish to attempt to prescribe specific qualifications for the many kinds of teachers needed. This would be like prescribing a patented medicine as a cure for all ailments.

There are, however, certain fundamental qualifications that a teacher of adult classes should have if he is to function successfully.

1. He must have a mastery of the subject area, skills or activity he is to teach.

2. He must be able to make appropriate application of his instruction to the specific area of interest or needs of the participants.

3. He should be able to organize his instruction and present it in a simple and clear manner.

4. He must be able to play the role of a leader exercising tact and patience in developing maximum participation of class members.

5. He must have physical stamina to stand the strain of teaching in the evening after a full days work.

6. He must have pride in his regular employment field and a sincere interest in teaching others his knowledge and skills.

7. He must be able to use instructional techniques that have proven successful with adults including the use of appropriate teaching aids.

How and where do we find teachers with these basic qualifications? This has always been a problem but perhaps more difficult now than ever before because of the great demand and competition for people who have leadership ability and who can function well in a productive assignment.

An examination of adult education across the nation will reveal that a major portion of the teaching of adult classes is done by persons who are not trained professionally for this specialty. A typical adult education instructor is one who makes his living in some profession or occupation other than teaching. Part-time or evening school instructors are most common. Some are most sincere in wanting to teach to help others; some are drafted into the teaching assignment by the professional or occupational groups they represent; some agree to teach simply to make a little extra money. Sometimes the results are excellent but too often the results are inferior teaching for people who expect and deserve better.

Recruiting instructors is the responsibility of the local administrator. In many instances it can be a most difficult task to find available qualified people who are interested in teaching adult classes. Wise and aggressive administrators will look at every possible source for teachers, will use

every ethical means of contact, and will use the help of any individual or group who can be of assistance to find the best available prospects in his search for competent teachers. Less than maximum efforts in recruiting will often result in the selection of readily available persons who are probably the least qualified to teach.

The most effective assistance in locating and selecting instructors with the desired skill and technical qualifications can come from advisory committees representing the field in which the instruction is to be given. This is logical because the committee members are usually leaders or substantial representatives of the occupational field in which the training is to be offered and therefore know the type of instruction needed. They also know the best qualified people in the field who may be prospective instructors.

The help of business, industrial or trade groups such as associations and other occupational representatives should be solicited. Of course, the use of news media such as newspapers, radio and television may result in immediate contact with qualified people who are interested in instructing.

Other possible sources of teachers include (1) day school teachers, (2) college and private school teachers and (3) former teachers. It should be remembered, however, that just because these people are experienced in the profession of teaching does not necessarily qualify them to teach adult classes in specialized fields. The lack of application of instruction and the lack of understanding of the special techniques of teaching adults are common causes of their failure.

Some major industries retire certain personnel while they are still in their middle fifties. Many of these people have excellent skill and technical backgrounds and may be good prospective instructors. Persons leaving the Military Services may be well qualified in technical fields and may be interested in teaching.

In reality there resides in every locality well qualified people who could render the needed instructional services, if they were available, for most any group of adults. Unfortunately, these individuals are either too busy or they are not interested in taking on the additional responsibility of teaching.

There must be a strong incentive and we cannot overlook the fact that good pay for services rendered is one of the best incentives known in this country. Yes, the most significant factor in teacher recruitment in adult education is the level of program funding. With the exception of a few states, insufficient financing of local programs causes serious restrictions in securing the services of the best qualified teachers. It must be recognized that good, sound, effective teaching is not a small responsibility and therefore cannot be treated as a cheap commodity. People who are capable and can render excellent service should be paid and paid well. The most justified expenditure in program operation is the pay necessary to obtain good instructors. The local administrator should utilize all sources of funds available including higher level enrollment fees, if needed, to finance the necessary salaries to secure the services of the best instructors.

It is true that there are some highly qualified people in their particular fields of work who are willing to contribute time and efforts to teach adult groups and expect little or no pay for their services. These are rare individuals and substantial programs cannot be developed and carried forward on the basis of free or low cost instructor services.

A great percent of our instructors for adult groups in trade and industrial fields are people who hold jobs in the industrial or business community and teach part-time or in the evenings after work hours. A great many of these people have had no teaching experience or professional training for a teaching assignment. They agree to serve as an instructor in their occupational fields without realizing the extent of the responsibilities involved in a teaching assignment. Without professional assistance these inexperienced instructors, in due course of time, begin to realize they have accepted an assignment that requires them to contribute much more time and work than anticipated. Consequently, their enthusiasm, interest and efforts begin to decline and eventually result in poor preparation and poor teaching.

This situation is common in adult trade and industrial education and too often is allowed to develop into difficulties and problems to all concerned. The best solution to the problem is professional teacher training assistance. The greatest need for help of beginning teachers of adult classes concerns the use of available instruction materials, of teaching plans, the techniques of teaching adults, and how to use available visual and other teaching aids. If teacher training assistance can be given in these areas at an early date the person who has the necessary technical and skill qualifications has a good chance of becoming a successful instructor.

In summary, we must increase our efforts to expand adult education to serve the increasing needs of our productive population for continuing specialized and applied education. The expansion of the program will depend to a major degree upon the quality of services offered. To provide the kind of program needed the best available instructors must be recruited and sufficient financing must be available to pay them for their services. Continued and increased emphasis must be placed on instructor improvement activities through professional teacher training services. These are major essentials for future program development. Without them the future will be about the same as the past.

ADULT VOCATIONAL EDUCATION

Success Stories of Local Programs and Course Offerings[1]

Just what is "success" in Adult Vocational Education? The dictionary defines success as "the favorable or prosperous termination of attempts or endeavors." But the word "termination" is not valid in the field of education if the concepts of career progression and self-actualization are to be integral components of instructional programs. Continuing education is the nomenclature frequently used to designate adult programs and this term seems more indicative of ongoing success in vocational education.

The criterion of success in public school sponsorship of vocational programs for post-secondary students is frequently just a number designating how many students have completed a particular course with resultant job placement or successful advancement to a senior institution. More realistic, it seems to me, is the approach of State Departments of Vocational Education, many of which are involved in follow-up studies of students enrolled in programs. These studies take into account the use that is being made of knowledge and skills gained in any particular educational offering. Success is more individualized with such an approach, as is illustrated by the story of a student who was enrolled in a child development training program at Phoenix College. This young lady's education was interrupted when she left school to be married to her service man fiance. Follow-up procedures disclosed that she was with her husband at Norfolk, Virginia where she was managing a cooperative nursery school for families of service personnel living at the base. She is happily and successfully putting to use vocational training which would not have been termed successful under some evaluative procedures. Information concerning her employment was received from a letter accompanying the returned follow-up card which did not have a category to code what she was doing. Computerized

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[1]Presented by Lois Farone, Chairman, Home Economics Department, Phoenix College, Phoenix, Arizona.

methods of identifying success tend to be impersonal and lacking in ability to identify individual accomplishments which may be making a real contribution to society as well as providing personal satisfaction.

As individual teachers, coordinators or administrators, most of us are sadly remiss in determining and making known the many successes that are happening in vocational education, both adult and secondary. Standards of success need to be realistic, individualized and in line with program objectives. I am reminded of Dr. Mildred Weigle Wood, beloved mentor of Vocational Home Economics in Arizona and throughout the United States, who used to say, "A successful sewing project is a garment a student will wear and a successful cooking project is food that a student will eat." The satisfaction and feeling of success of the individual student is the ingredient which will produce continuing programs that fill both occupational and personal living needs.

A recent AVA Journal editorial stated that vocational education has a built-in evaluation mechanism because the product of the program is the youth or adult who gets a job and/or is able to progress to a higher level of employment. It further states that most teachers are aware of the success of their programs through placement and follow-up activities but reports of these successes rarely reach state, regional, or national level. While these statements are generally true, such methods of evaluation depersonalize the field of vocational education almost completely and more humanistic evaluative procedures need to be found. That the use of follow-up studies is frequently neglected in post-secondary programs was pointed out by research investigations made by Laure H. Sharp in 1966 which disclosed a serious gap in follow-up information in adult education.

When a search was made for success stories, many typical ones were uncovered. The Chicago Tribune under a Washington D.C. byline published an article recently which cited the increase of women trained under the vocational act from 2.1 million in 1963 to 3.8 million in 1967. Similar statistics for men would be even more spectacular. One of the factors giving impetus to adult vocational education has been the tremendous increase in junior colleges with semi-professional curricula and vocational-technical course offerings. California has been the pacemaker for the nation in community college development with 82 junior colleges now in operation in 67 districts. A variety of technical programs are included in their offerings as well as adult education for home and family life and pre-professional training, all of which are considered part of vocational education. Perhaps the explanation should be made for persons not familiar with the discipline of home economics that the vocation of homemaking was brought under the vocational umbrella as long ago as 1917 when federal reimbursement for vocational education was inaugrated under the Smith-Hughes Act. Phoenix, Arizona has had adult education for the vocation of homemaking for about forty years, originally under sponsorship of the secondary school system, now as part of the Maricopa County Junior College District community service offerings. Literally thousands of parents have learned to cope more effectively with problems of child-rearing, the dual role of homemaker and wage-earner, consumer problems and other areas related to successful family living.

The state of Ohio has many adult vocational education classes sponsored and financed jointly by local school systems and the State Department of Education. Through the Division of Vocational Education, training is offered to out-of-school youth and adults in the fields of agriculture, business and office, distributive,

home economics, and trade and industrial education. A project that has received nationwide attention is a pilot program initiated in Cleveland, Ohio to help itself. The Home Economics section of the AVA national convention held in Cleveland in 1967 was given a vivid and moving description of the progress of the program at that stage. A report issued in March, 1968 points up both program and individual successes in the four Metropolitan Housing projects where centers have been established to provide assistance in home and family living problems as well as basic education.[1] In each of the centers classes were initiated according to expressed interests and needs. However, human "connectors", residents of the areas, were used to make personal contacts and extend face-to-face invitations which were needed to encourage people to participate. All offerings were geared to the functional level of the student and an organized effort was made to take home economics education to where families live who need help in coping with complex problems of family life. It was found that when the bond of trust had been developed, residents would begin to enroll in formal classes. Four teachers and twenty part-time assistants personally contacted 4,000 of the 9720 residents in the first four months of the program. This project is moving successfully toward alleviating some of the inbred and self-perpetuating problems related to poverty which must first be met if culturally-deprived individuals and families are to become productive and happy community members.

A recent publication from the Division of Vocational-Technical Education in Tennessee tells the success stories of fifteen persons who received vocational training as adults in programs offered throughout the state.[2] Typical of the

[1] Cole, Sonia N. Helping the Disadvantaged Family Help Itself-One Ohio Project. Columbus, Ohio, March 1968.

[2] Dunn, Charles M. Vocational-Technical Education Brings Success to These Tennesseans. Murfreesboro, Tennessee. 1968.

stories told in this publication is that of a twenty-six year old young woman in Fayetteville, Tennessee. A school dropout at fourteen, married and divorced with five children to care for by age twenty-six, this young woman was faced with the prospect of living on welfare to provide for her family. She desired something better for her children than continuing to live on welfare so availed herself of the opportunity to take a practical nurse training program offered by a local hospital in conjunction with the Tennessee Department of Vocational-Technical Education. The first obstacle to overcome was lack of a high school diploma. After successfully completing the GED examination, she became a very good student in the nursing program even though competing with others with a far better educational background than her own. She has completed her training program, at the same time caring for her family of five.children and has a position in the surgical department of the house as scrub nurse. An intangible effect of her success story is the chance she is giving her children to develop values which will enable them to avoid the problems of her own early life. Occupational education for employment has directly affected six people's lives for the better in this situation and has provided a much-needed, well-trained, dedicated practical nurse for the hospital.

May I briefly describe several programs in the state of Arizona which may be similar to those conducted in your own states but which are illustrative of rather unique offerings in Arizona. In 1965, a one-year pilot program was implemented in a housing development in Phoenix cosponsored by the State Department of Vocational Education, the State Department of Welfare and the Home Economics Department of Phoenix College. This program had dual objectives: to train home management leaders from the inner city area who could work with individual homes in an effort to improve family living practices and to train child care aides to work in day care homes or centers. Thirteen home management advisors were trained and several

of them are still working with both individual families and with groups throughout the state to improve family life and to help prepare women (and men) to train for employment outside the home. One of the child care aides, a young woman, divorced and with a young child to support as well as her aged parents to care for, has continued to pursue an education and is presently working as an aide, with considerable responsibility on the job, for the Phoenix College Day Care and Nursery School Center.

A program to train family health assistants, offered through Arizona State University, with the support of the State Department of Vocational Education, has provided a large number of trained persons who can work effectively with families in times of crisis. More than three hundred persons have been trained to date in this program. A continuing aspect of the program has been the use of five persons, three negro and two of Spanish origin, as teacher aides in a WIN (Work Incentive Program) program recently started in the Phoenix area. The home economics aspect of the WIN program emphasizes preparation for employability and teaches such things as budgeting, planning and organization and pre-preparation so that the mother feels secure in leaving her family for outside employment. Homemakers in the WIN program are encouraged to let their children help them with household responsibilities and to set realistic goals for themselves and their families. Ways of improving personal appearance and understanding of the world of work are included in the training from which trainees may move directly into a job or into basic education or skill training depending on their abilities. They are given two years to complete training under this program; thus far, 150 trainees have moved through the initial phase of training and a total of twelve to fifteen hundred are expected to go through the program.

A Personal and Occupational Improvement Program is being provided for patients on conditional release from the Arizona State Hospital (our mental health facility). This program has dual objectives: to help patients improve their ability to function in their environment and to be able to interrelate with others; to acquaint patients with various job opportunities in different areas of entry-level jobs. These patients are living in approved sheltered homes and are a diverse group, men and women, young adults through late middle-aged. Although no tangible results of this program are yet documented, guidelines have been developed for more effective training for former mental patients and for next-step activities related to this initial program.

The Arizona Republic gives this account of a personal success story: So much failure is inevitable in programs designed to help the disadvantaged, sometimes the successes are lost in gloom. Case in point: Mrs. Prudence Winrow, 53, Negro, formal education eighth grade, and by profession, cleaning woman. With the last of her own five children approaching maturity, the younger ones working their way through college, Mrs. Winrow was induced to enroll in the Manpower Training and Development program at the Skill Center in Phoenix. This program is administered by the Maricopa County Junior College District. First, Mrs, Winrow had to bone up on high-school-level subjects, in order to pass the high school equivalency test. She breezed through, with above-average score, thanks perhaps to the long hours she had spent helping her own children with homework. Between January and June of this year, Mrs. Winrow learned typing, filing, and operation of several systems of duplicating and calculating machines. June was a bad month for employment, what with the summer slump and vacationing student competition. But with the Manpower Development and Training staff seeking out leads, Mrs. Winrow

in September landed a job with the Valley National Bank, as file clerk in the trust department. This month she was promoted on merit, to stockroom clerk. She has her own desk complete with nameplate, her own typewriter, and a position of responsibility as keeper of the stockroom key. The President of the bank had better stay alert. A new employee is upward bound.

Time does not allow even mention of the many programs throughout the United States which are successfully training persons, with the help of Vocational Education, to live and work more effectively in our complex, continually changing society. All levels of occupational endeavor from the teacher aide to the electronics technician or fashion merchandising supervisor are included in the spectrum of adult vocational education. Success is not unusual but communication of ideas and outcomes is sadly lacking. Perhaps what is needed is an internal ERIC network to serve as a clearing house for all the busy teachers and administrators in vocational education. "Nothing succeeds like success" - let's hear about it.

Lois L. Farone
Phoenix College

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*AMERICAN VOCATIONAL ASSOCIATION CONVENTION, DALLAS, TEXAS, DECEMBER 9-13, 1968

Two research studies are reported in these papers presented at the Research Committee meeting of the National Association of Industrial and Technical Teacher Educators. "Effects of Field and Job-Oriented Technical Retraining on Manpower Utilization of the Unemployed" by David C. Bjorkquist summarizes a comparison of two Manpower Development and Training Act technical education programs which involved eight measures of job related behavior in a longitudinal design covering 50 weeks of training and a 2-year followup span. No differences between groups of graduates were found for "level of responsibility," "amount of unemployment," and "additional education." Job-oriented graduates tended to be more satisfied with their work. "Social class identification" was highest for both groups at the time of graduation. Field-oriented graduates had a higher mean starting salary. The second study, "A Comparison of Selected Contemporary Programs in Industrial Education" by Leslie H. Cochran, reviews a dissertation which sought to develop a method for analyzing contemporary programs. Six contemporary secondary industrial education programs were selected and analyzed using the analysis instrument. This instrument covers objectives, content, and teaching methods. Results of the selected analysis are presented. (EM)

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Speeches Presented At The

62nd Annual Vocational Convention

Of The

American Vocational Association

Dallas, Texas

December 9, 1968

NAITTE Research Committee

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62nd Annual Convention
American Vocational Association

December 9-13, 1968
Dallas, Texas

Effects of Field and Job-Oriented Technical Retraining on Manpower Utilization of the Unemployed

N. A. I. T. T. E.
Monday, December 9, 1968
2:00 - 5:00 p.m.

David C. Bjorkquist
Associate Professor of
Industrial Education
University of Missouri
Columbia, Missouri 65201

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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Two years ago at the American Vocational Association Convention in Denver, we presented an interim report on the research project entitled, "Effects of Field and Job-Oriented Technical Retraining on Manpower Utilization of the Unemployed." That report focused on the selection of students, the training programs and initial placement of graduates. The purpose of this presentation is to present data gathered through interviews during the first two years following training. After briefly relating the characteristics of the training programs and the students, and the initial placement of graduates, I will describe the variables used in evaluations, our findings, and the conclusions which we have drawn.

The purpose of this study was to compare a specific job-oriented program with a broad field-oriented program for the preparation of technicians in the field of mechanical technology. Both programs were operated under the Manpower Development and Training Act and were approximately 50 weeks long.

The Training Programs

The job-oriented program was intended to prepare tool designers and was operated by the School District of the City of Allentown, Pennsylvania. Through the use of an industrial advisory committee, subject matter was selected which was considered to be essential for the preparation of a tool designer. Much of the effort of the program administrators was spent in the integration of this subject matter to develop a meaningful total.

The field-oriented program was in machine and tool design technology, and was developed to prepare individuals for a variety of positions in the field of mechanical technology. This program was planned and operated by the Department of Continuing Education in Engineering of The Pennsylvania State University. Courses were included in the curriculum which would develop a broad basic knowledge of mechanical technology. This program was taught on a two-year campus of the University where students shared facilities with approximately 800 full-time students in baccalaureate and associate degree programs.

About one-half of each of the programs of instruction was devoted to drawing and design. The two programs were quite similar also in the amounts of mathematics, applied physics, communications, and production problems which were offered. The job-oriented program did include 230 hours of instruction in machine shop processes.

Though similar in course titles and hours of instruction, the two curriculums were different in that their objective was different. As suggested earlier, the job oriented program focused on the development of skills and knowledges necessary for on-the-job performance in tool designing. In the field-

oriented program emphasis was placed on the success of individuals in each of the courses offered so that application might be made to several occupations within the field of mechanical technology.

The Students

Students were selected from throughout Pennsylvania according to criteria developed by the training institutions. After determining each applicant's eligibility for training under MDTA. Selection of students was based on graduation from high school or equivalency, familiarity with mechanics or machine operation, expressed desire to be retrained as a technician, and satisfactory aptitudes as measured by the General Aptitude Test Battery. The aspirations of the applicants were confirmed through a series of interviews conducted by the Pennsylvania State Employment Service and the research staff.

The 35 students assigned to the job-oriented program and the 40 students assigned to the field-oriented program were similar in aptitudes, amount of previous education, and age. The work histories of 21 field-oriented and eight job-oriented students did not include mechanical or machine operator experience.

Of the 35 entrants into the job-oriented program, 32 were graduated; 25 of 40 field-oriented students were graduated. Twelve of the 15 who were dropped from the field-oriented program had failed a mathematics or a mathematics based course such as mechanics or strength materials.

Initial Placement

Six months after the completion of training 28 job-oriented and 19 field-oriented graduates were employed in industry. Others were in the military service or school while one from each program was unemployed.

The mean starting salary of field-oriented graduates was $110.00 a week and $96.81 for job-oriented graduates. Percentage wise, the field-oriented graduates were twice as mobile as were the job-oriented graduates. Relative to beginning weekly salaries, there was a significant interaction between the training programs and mobility. Mobile field-oriented graduates were earning more than mobile job-oriented graduates and immobile job-oriented graduates were earning more than immobile field-oriented graduates. Although many went to work immediately after training, it required an average of almost four weeks for graduates of the two programs to begin their first industrial jobs.

The Continuing Job

Data relative to the behavior of graduates in their jobs were gathered in the evaluation of the training programs. These data were gathered through personel interviews conducted one and two years after completion of training at the employment location of the graduate. The outputs of the job-oriented and the field-oriented training programs were compared on the basis of eight variables. These were: the level of job responsibility, unemployment, mobility, salary, job satisfaction, employer rating, social class identification, and additional training taken.

In determining the job responsibilities of graduates, a job analysis was used to gather data about the work field, skills used on the job, job functions, and level of involvement with data, people, and things. The analysis technique was structured by the United States Bureau of Employment Security and used in their preparation of the 1965 edition of the Dictionary of Occupational Titles.

Two years after the completion of training, 24 job-oriented and 15 field-oriented graduates were employed in the work fields of drafting and engineering. Other industrially employed graduates were employed in researching, appraising, administering, and machining.

All of the graduates of both programs were using many of the work skills which were specifically taught in the training programs. This was evidenced by the use of drafting, design, and mathematics, and by their job functions. Three-fourths or more of the graduates of both programs were using freehand lettering, sketching, orthographic drawing, sectioning, dimensioning, and scale drawing skills. One-half or more of the job-oriented graduates were designing tools, layouts and templates. The same was true of field-oriented graduates in designing fixtures, jigs, tools, layouts and gauges. Most frequently used mathematical skills were arithmetic, algebra, right triangle trigonometry, and plane geometry.

By observing the output of the worker and asking questions about what he did, how and why he did it, and what skill was involved, the job analyst prepared a job description. A sentence analysis of each job description was prepared to identify the worker's function relative to data, people, and things.

The jobs of the 24 job-oriented and 15 field-oriented graduates employed in drafting or engineering one year after training required copying, computing, compiling, or analyzing data. Twenty-seven of the 39 graduates in drafting or engineering were compiling data. Two years after graduation the level of data involvement had increased for six job-oriented and two field-oriented graduates while decreasing for one graduate of each program.

Seventeen job-oriented and ten field-oriented graduates were not required by their jobs to have a significant involvement with people. Between one and two years after graduation the level of involvement with people had increased for seven graduates and decreased for one.

All graduates of both programs in the work fields of drafting and engineering were precision working with things one and two years after completing training.

There were no significant differences in the level of involvement with data, people, or things between graduates of the two training programs.

During the first year following graduation, there were 16 job-oriented and nine field-oriented graduates who reported that they had been unemployed. These periods of unemployment were as long as 26 weeks for one job-oriented graduate and 21 weeks for one field-oriented graduate. During the second year after training, two job-oriented graduates were unemployed an average of two weeks each. During this same period, four field-oriented graduates were unemployed an average of five and one-half weeks each. The longest period of unemployment for any individual during the second year was nine weeks.

There was a significant relationship between the time required by graduates to secure their first jobs and the mobility of those graduates. It required an average of .81 weeks for mobile graduates and 5.53 weeks for immobile graduates to begin work after training. Twelve job-oriented graduates made a total of 13 moves during the first year after graduation. Twenty moves were made by 13 field-oriented graduates in that same time. Three job-oriented and four field-oriented graduates made one move each during the second year.

Mean weekly starting salaries for field-oriented graduates were $13.19 higher than they were for job-oriented graduates. After two years there was a weekly average difference of $13.18 in favor of the field-oriented group. Two years after graduation average weekly salaries were $120.02 for job-oriented graduates and $133.20 for field-oriented graduates. These average salaries tended to be somewhat lower than salaries for Class B Draftsmen, as reported in Occupational Wage Surveys.

Five aspects of the satisfaction of graduates with their jobs were measured using the Job Description Index. The satisfaction of graduates with the supervision, promotion, work, pay, and people aspects of their jobs were measured. Although there was no significant fluctuation in job satisfaction scores during the first two years after training, scores tended to be slightly higher on the first measure six months after graduation. Job-oriented graduates were

significantly better satisfied with the work aspect of their jobs than were field-oriented graduates six months and one year after the completion of training. After two years on the job, there was no difference between groups in their job satisfaction.

Supervisors rated the on-the-job performance of graduates one year and two years after graduation. More than one-half of the graduates of both programs were rated above average or outstanding during each rating on manipulative work, personal and social qualities, and work qualities and habits. In occupational technology, graduates of both programs tended to be rated average or above average with the exception of ratings for the field-oriented group on manipulative work. There were larger percentages of graduates rated above average or outstanding after two years on the job than there were the year previous. These upward shifts were accompanied by decreasing percentages of average ratings.

With an abrupt change in occupation, as provided for through retraining, and the relationship of occupation to socio-economic status, it was hypothesized that there would be a change in the social class identification of students. A social class identification scale was administered before training, immediately after training, and two years after graduation. There was a significant increase in social class identification of both training groups between pretesting and post-testing and scores two years after graduation. In other words, the peak social class identification scores occured at the conclusion of training.

During the two year period following training, 12 job-oriented and 12 field-oriented graduates were involved in additional formal education. Two field-oriented graduates were full-time college students while the other 22 were industrially employed and studying on a part-time basis. This additional education included part-time college attendance, company sponsored educational conferences, and formal classes conducted at the place of employment.

Conclusions

This study was an evaluation of two technical education programs for the retraining of underemployed and unemployed workers under the Manpower Development and Training Act. Eight measures of the job related behaviors of former students were used to evaluate the effect of training on individuals with differing personal characteristics. Some of these findings were interesting because there were differences while others were interesting because there was no difference between groups.

There was no difference in the level of responsibility held by graduates of the two programs. It was suggested by advocates of field-oriented technical education that preparation in a broad array of basic subject matter would allow graduates of this program to advance further and to find employment in more occupations. Neither of these things happened. Although the field-oriented program served as more of a screening device by dropping more students, it did not produce graduates who operated at higher levels of involvement with data, people, or things. Perhaps 50 weeks did not allow for adequate field-oriented preparation, or maybe two years on the job did not allow those graduates to find their proper level of responsibility. However, as time goes on the effects of training will probably diminish while the effect of intervening variables will increase.

There were no differences in the amount of unemployment experienced by the training groups as measured by weeks to secure first job or in annual average weeks of unemployment.

When the length of time required to secure first job was compared on the basis of mobility, there was a dramatic difference. Mobile graduates required an average of less than one week to secure their first jobs while immobile graduates required five and one-half weeks. Mobile graduates also appeared to earn more money, but this was confounded by the interaction of the effect of training program. If, as these findings suggest, mobility does make persons more employable, the challenge to educators is to increase the mobility of their graduates.

From first employment through the first two years, field-oriented graduates consistently earned more than job-oriented graduates. As suggested earlier, the effect of training program and the effect of mobility interacted. The graduates of the field-oriented program had higher average weekly salaries, but they were also more mobile.

In most aspects of their work, there was no difference in the satisfaction which graduates of the two training programs derived from their jobs. Job-oriented graduates tended to be better satisfied with the work their jobs included than were field-oriented graduates. This difference was significant six months and one year after graduation. It was earlier speculated that as the level of responsibility rose for field-oriented graduates, their level of satisfaction with their work would increase. However, there had not been a sufficient increase in the level of responsibility for those graduates during their first two years on the job to determine if this was true.

After spending a considerable amount of time in gathering supervisor ratings, it became apparent that these ratings would not be useful in comparing training programs. The

ratings were interesting and give some general notion of the acceptability of the graduates, but their reliability is highly suspect. This was largely because an absolute scale was not provided for ratings and each supervisor rated his employee according to some personal reference.

It was anticipated that social class identification scores would increase over the period of training, but it was not expected that they would drop again after two years on the job. This may not be entirely unlike the attitudes of teachers which are most idealistic just before graduation and tend to be less so after some time at work. Perhaps the design technology graduates entered their jobs with an idealized impression of their status, but revised their personal estimates after two years of facing the realities of their work.

There was no difference between training groups in the number of graduates who pursued additional education. This dimension seemed important because of the emphasis on additional education for advancement in technical occupations. Unfortunately, no college credit was given for the course work completed during the initial training programs, and some graduates found that they had to repeat some course work to advance to a higher level. The earning of an associate or bachelors degree was strongly encouraged in some industrial organizations.

One of the more disturbing aspects of this project was the success of several students who did not fully qualify according to the criteria for selection. It is not disturbing that they succeeded, but it is disturbing to know that there probably were prospective students who were not considered for training because of their credentials who could have succeeded in training.

This project demonstrated that individuals could be selected from the ranks of the underemployed and unemployed and be prepared as technicians within one year. Their acceptability in industry was shown by their rate of employment and the level of their job responsibilities. With selected groups of students preparing in occupational fields with high demands for workers, shortening of the training period should be considered. This would be particularily desirable when students are taken from the labor force for training. This training may not prepare them for employment for the rest of their lives, but it should give them the opportunity for employment in occupations in which they may grow and prepare for change.

A COMPARISON OF SELECTED CONTEMPORARY PROGRAMS IN INDUSTRIAL EDUCATION

A Review of a Doctoral Dissertation

Completed at

Wayne State University

Presented by:

Leslie H. Cochran
Department of Industrial Education
Wayne State University

NAITE Research Session
AVA Convention

December 9, 1968
Dallas, Texas

A COMPARISON OF SELECTED CONTEMPORARY PROGRAMS IN INDUSTRIAL EDUCATION

An Abstract by:

Leslie H. Cochran
Department of Industrial Education
Wayne State University

One of the problems that has long plagued industrial educators is their lack of common understanding of what is being promoted in the field. As a result, many plans have been developed with little concern for preceding or existing attempts in curriculum development. Those studies that have focused on the problem have been primarily evaluative in character, and provide only a limited basis for comparison.

And yet, each time an innovative plan or new program is introduced several common questions come to the forefront. For example, how does the plan fit into the total educational program? Is it really new or is it only a new title to disguise old practices? How is it different from the old practices? Or, what implications will it have for students and staff? These and other questions cannot be answered by evaluating a particular plan, but need to be considered by comparing various programs on a uniform framework.

Statement of the Problem

In this respect, it was the purpose of this study to compare and analyze selected contemporary programs in industrial education in an attempt to determine the common elements, basic directions, and their significance to the field. More specifically, the study focused upon three major objectives: (1) To review historically industrial education programs on the secondary level to illustrate the position and character of current plans; (2) to develop a conceptual framework for industrial education that could be used to analyze any of the contemporary programs in the field; and (3) to apply the framework to the selected programs that meet the pre-established criteria for an analysis of each.

Methodology for the Study

To attain the stated objectives it was necessary to develop a systematic operational plan. This called for a historical review, an identification and selection of programs to be studied, the development of an instrument to compare the selected programs, and methods for collecting, analyzing, and interpreting the data.

Historical Review

A review was made of library bulletins, periodicals, and references to historically trace the development of industrial education programs at the secondary school level. This overview focused primarily on approaches, movements, and programs prior to 1960 in an attempt to provide a historical perspective for the study and to suggest basic relationships between current curriculum plans.

Identification and Selection of Programs

Two major sources were utilized to identify the secondary school programs to be studied. This involved, first of all, a continuation of the review of literature. Secondly, a paper by Marcus V. McWaters titled a "Survey and Brief Descriptive Analysis of Curricular Innovations for Secondary School" that was presented at the Fifty-Fourth Mississippi Valley Industrial Arts Conference, November 9, 1967 was reviewed.

Thirty-five programs were identified. Following a request for further descriptive materials, the programs were compared with the pre-established selection criteria which included five factors:

(1) That the program had been developed and implemented since 1960.

(2) That the home base (sponsoring university or public school system) was located within Region V, U. S. Office of Education (which includes Indiana, Illinois, Michigan, Ohio, and Wisconsin).

(3) That the program was under study and evaluation in an industrial teacher education program.

(4) That the program was at the experimentation and testing stage in the secondary schools.

(5) That the descriptive material concerning the program was available either in the form of articles or official releases.

The programs selected included the American Industry Project, Functions of Industry, Galaxy Plan, Industrial Arts Curriculum Project, Industriology Project, Orchestrated Systems Approach, and the Partnership Vocational Education Project.

Development of the Instrument

Prior to the formal construction of an instrument to compare the selected programs, an extensive review was made of related research, textbooks, and articles in the fields of curriculum and industrial education. The data collected in this review provided a basis for this research, and suggested the rationale for a systematic study of the programs in industrial education.

Based on the findings of this review, a 119-item check-list was developed. This tentative instrument was presented to members of the doctoral committee and a committee of judges. Through a series of individual conferences with the judges and doctoral committee members, these items were reduced to fifty. In structuring this sample every effort was made to maintain the representativeness of the original items. Attention was focused on the elimination of duplication, improved clarity, and concisement. A certain amount of homogeneity in the sample was stressed so that no item could be picked out because of extraneous or incidental grounds. As the appraisal and refinement continued, concern was expressed by the judges over the lack of specificity in the instrument.

Based upon the suggestion to make the instrument more specific, consideration was given to the Q-technique. The Q-Sort method was adapted to provide a forced-choice procedure for the study. In this way each participant could use his own frame of reference to characterize a particular situation by arranging the predetermined statements in their order of importance.

As a result, the fifty statements were place on individual cards, refined again by the judges, and sent out on a pilot basis to three programs that had not met all of the selection criteria. Based upon the responses of the participants to the pilot instrument, minor revisions and improvements were made.

Data Collection and Interpretation

Three basic procedures were utilized to obtain descriptive material to compare to seven selected programs. (1) An initial request was sent to each of the leaders associated with the programs to secure articles, and other materials describing their program. (2) The fifty statements, in Q-Sort form, were sent to each of the participants. (3) Upon the return of each of the initial instruments, a follow-up interview was scheduled with each of the leaders.

The data collected and reported were interpreted in two distinct forms. This involved a brief overview of each of the programs on the basis of the interview and other descriptive materials. Secondly, the cards received from each of the selected programs were sorted according to the prearranged frequency distribution.

Selected Findings

The findings in this study can be grouped under three major sections: (1) historical, (2) program descriptions, and (3) program comparisons. The first two of these headings provided rationale for, and a description of many of the programs reviewed in the study. For the purposes of this report, however, focus was directed on the specific comparison made between the seven selected programs. The data summarized in Tables 1, 2, and 3 project the positions taken by the representative of each program in respect to the fifty statements. In this respect, a statement ranked in column A would represent the highest degree of support, while those dispersed in columns B through G would represent descending degrees of support.

TABLE 1

RANKING OF STATEMENTS PERTAINING TO OBJECTIVES ACCORDING TO PROGRAM CODINGS[a]

Statements	Rating Cards						
	A	B	C	D	E	F	G
5) The program is based on selected experiences that provide for an understanding and appreciation of industry and its workers.		1,2 & 5	3 & 7	6	4		
8) The program is directed toward the development of specific salable technical and manipulative skills designed to aid the student in entering employment at the completion of the program.			3	4	6	1,5 & 7	2
11) The students develop ability to select, purchase, and use wisely the products of industry.			1 & 3	4,6 & 7	2 & 5		
15) The program provides for both male and female students.		1,3 & 5		2,4 6 & 7			
20) Activities in the courses are directed toward outcomes for avocational interests and hobbies in the crafts.					4 & 7	3 & 5	1,2 & 6
25) The program studies life needs as created by or related to industry.	4	5	1 & 6	3 & 7	2		
28) The program promotes occupational guidance by helping the student assess his occupational potential, interests, and capabilities.	2	1,3 &4	6	5	7		

TABLE 1--(Continued)

Statements	Rating Cards						
	A	B	C	D	E	F	G
37) A student is allowed to choose an area of concentration according to his interests and abilities.	3		2 & 6	1,4 & 7	5		
40) Consideration is focused on the development of an appreciation for good design and craftmanship.				1,3 4,5 6 & 7	2		
46) The program is directed toward providing exploratory experiences in selected industrial type activities.	2	4	1,5 6 & 7	3			
47) The development of desirable work and safe habits are integrated into the courses of study.		3	1,4 & 6	2 & 7	5		
49) The program is designed to provide the student with basic technical skills and occupational guidance information on a pre-vocational basis.		2		3,4 5 & 6	1 & 7		

[a]The rating of each of the programs is reported according to the following code: 1--American Industry Project, 2--Functions of Industry, 3--Galaxy Plan, 4--Industrial Arts Curriculum Project, 5--Industriology Project, 6--Orchestrated Systems Approach, and 7--Partnership Vocational Education Project.

TABLE 2

RANKING OF STATEMENTS PERTAINING TO CONTENT ACCORDING TO PROGRAM CODINGS[b]

Statements	Rating Cards						
	A	B	C	D	E	F	G
1) Content is organized so that the major emphasis is placed on manipulative type activities (operational rather than informational).				4,5 & 6	3	7	1 & 2
2) The content in industrial education courses is closely correlated with subject matter taught in other departments in the areas of science, mathematics, and English.	7			1	2,5 & 6	3 & 4	
3) The program provides for experiences in research and development as they are utilized in the manufacturing industries.		2 & 6	1 & 7	3,4 & 5			
4) The program provides occupational information about job requirements, working conditions, salaries, and how to get a job.		4	2,3 & 5		1 & 6	7	
6) The content is predetermined by the teacher alone with problems selected that relate to the needs of students and the community.				1,2 & 4	7	3,5 & 6	
10) The program provides for practical applications of scientific principles.		7	1,3 4 & 6	2 & 5			

TABLE 2--(Continued)

Statements	Rating Cards						
	A	B	C	D	E	F	G
17) The program provides for instruction in the use of common hand and machine tools used in industry.			3 & 4	1,2 & 6	5 & 7		
21) Curriculum content is derived through an analysis of job positions in an occupational cluster as identified by the Dictionary of Occupational Titles.			2		3 & 4	1,5 6 & 7	
22) Content is primarily concerned with informational topics (technical, guidance, and general) rather than manipulative type activities.				4 & 7		1,2 3,5 & 6	
26) The content is determined through a team approach involving the teacher and an advisory committee representing management and labor.		3		1,2 & 4	6 & 7		5
29) The program focuses on a study and the use of industrial materials and processes.			5	3,4 6 & 7	1	2	
30) Industry is studied by concentrating on the production of goods and the servicing of products.	2 & 6	7	5	3	1 & 4		
31) The program considers industry in its totality, including labor, capital, and distribution.	1 & 5	2,4 & 7		3 & 6			

TABLE 2 -- (Continued)

Statements	Rating Cards						
	A	B	C	D	E	F	G
32) The program is based on a wide variety of selected experiences that sample several industries.	5	6	2 & 7	1,3 & 4			
39) The program provides experiences with selected basic manufacturing processes.		2	5	1,3 6 & 7	4		
41) Content is identified through an instructional analysis of major industrial activities or trades such as welding (trade) or activities in industrial arts (plastics).	3		5		2 & 6	1	4 & 7
42) The dominant technologies such as mechanical, chemical, and electrical are the basic source for content.				3,5 & 7	2 & 6	1 & 4	
44) Content is classified under such instructional areas as woodworking, metalworking, and drafting.					3 & 5	2 & 7	1,4 & 6
45) A study of industry is made by concentrating on the construction and manufacturing industries.	4			6 & 7	1,2 3 & 5		
48) Industry is studied through an in-depth concentration on one industry.				2 & 5	1,6 & 7	3 & 4	
50) Content is identified from an analysis of selected industrial payroll jobs.			2	3	5	1 & 6	4 & 7

[b]The rating of each of the programs is reported according to the following code: 1--American Industry Project, 2--Functions of Industry, 3--Galaxy Plan, 4--Industrial Arts Curriculum Project, 5--Industriology Project, 6--Orchestrated Systems Approach, and 7--Partnership Vocational Education Project.

TABLE 3

RANKING OF STATEMENTS PERTAINING TO TEACHING METHODS ACCORDING TO PROGRAM CODINGS[c]

Statements	Rating Cards						
	A	B	C	D	E	F	G
7) Application of the content is made in two or more laboratories within the department. For example, drawings needed for the development of a product are completed in a drafting room prior to construction in another laboratory.		5	7	1 & 2	4 & 6		3
9) Students make use of research principles and techniques as they undertake projects, experiments, or reports.		1 & 7	2,4 5 & 6			3	
12) Students are grouped for class activities according to standardized test scores, including intelligence quotient, and verbal and quantitative scores.			4		1	2,3 & 7	5 & 6
13) Multiple "tracks" are built-in to the program to accommodate individual differences in ability and interest.		3	4 & 6	2,5 & 7	1		
14) Focus is placed on individualized instruction through programed instruction or individual progression at a work station.			7	1 & 6	3 & 4	2 & 5	
16) The class organization and major activities are managed and directed by students with the teacher remaining in the background.		6	3	1,2 5 & 7		4	

TABLE 3 --(Continued)

Statements	Rating Cards						
	A	B	C	D	E	F	G
18) Students develop desired outcomes through experimentation with, and testing of, industrial materials.		7	1 & 3	2,5 & 6	4		
19) Instruction is oriented around problem solving experiences.		1,4 6 & 7		3 & 5	2		
23) A team of science and industrial education teachers is used to correlate content taught in the two fields.	7				1,2 3 & 6	4	5
24) Activities included in the courses are jointly planned by the student and teacher.			5 & 6	1,2 & 7	3	4	
27) Provision for individual ability differences is made through a multi-activity organization.		5 & 6	1,2 3,4 & 7				
33) The program encourages students to work and plan together as a team.	6	3	1,4 5 & 7	2			
34) Emphasis is placed in the various units on the use of instructional sheets (assignment, operation, and information).				1 & 5	3,4 & 7	2 & 6	
35) Role playing is advocated as a method to more accurately interpret industry.		1,2 & 6	4		3,5 & 7		

TABLE 3 --(Continued)

Statements	Rating Cards						
	A	B	C	D	E	F	G
36) Instruction is focused largely on units to be studied by the entire class at one time.			2	1,4 & 5		3 & 6	7
38) Instruction is focused on basic generalizations (concepts) covering an understanding of industry.	1,4 & 7	5		2,3 & 6			
43) The student progresses from a general understanding of industry (or a system) to specific units (or components).	1,3 5 & 6	4	2 & 7				

[c]The rating of each of the programs is reported according to the following code: 1--American Industry Project, 2--Functions of Industry, 3--Galaxy Plan, 4--Industrial Arts Curriculum Project, 5--Industriology Project, 6--Orchestrated Systems Approach, and 7--Partnership Vocational Education Project.

Interpretation of the Findings

Based on the historical review of early industrial education programs, the descriptive overview of on-going programs, and the systematic comparison of selected programs found in this study, numerous conclusions could be made. It is not the purpose of this research, however, to make a prolific listing of these. Instead, four major conclusions have been identified which warrant the attention of the profession.

Conclusions

(1) The field of industrial education has been in a constant state of flux and reorientation since its early inception in the secondary schools. In the period since 1960, however, more modifications with wider implications have been produced than in any of the preceding decades during the twentieth century.

(2) There are identifiable curriculum elements in the field of industrial education that can be incorporated into a conceptual framework to systematically compare contemporary industrial education programs.

(3) There is general agreement between individual leaders associated with the selected programs under study on at least fifty percent of the items in the conceptual framework. Although this agreement is evident, it must be remembered, however, that the structure of these programs may vary greatly since different positions may be taken on key issues.

(4) There is general agreement among all of the selected programs, as demonstrated by the identified leaders, on specified items in the conceptual framework. In general these similarities may be stated as follows:

> (a) A lesser degree of emphasis is placed on manipulative type activities, while the emphasis on the application of scientific principles through experiences in research and development has been increased.
>
> (b) Provision for individual differences is made through multi-activity organization so the student can progress from a general understanding of industry to more specific tasks.
>
> (c) The classification of instructional content under such areas as "woodworking" and "metalworking," and the focus on activities directed toward avocational interests and the crafts are de-emphasized.

(d) A "middle-of-the-road" position is evidenced in regards to the emphasis placed on good design and craftsmanship, the use of common hand and machine tools, and consumer knowledges as related to the selection, purchasing, and wise use of industrial products.

Observations

In conducting this research several observations were made in regard to this study. Although these are not directly or conclusively supported by the findings, there was sufficient support to warrant their inclusion.

(1) The selected programs under study revealed an increased amount of emphasis on the interpretation of industry as one of the dominant objectives for industrial education. The basis for this shift was because of the increased complexity of the technological society, and the need for greater occupational information to properly understand and interpret the role of industry.

(2) In general, the selected programs represent a reaction to the conventional industrial education programs of preceding decades. This general trend, represented by the programs under study, is illustrated by the standard terms, such as "metal-working," "instructional sheets," and even "industrial arts" which are in various degrees of disrepute. Concern is also evidenced in respect to basic experiences and craft-oriented activities included in conventional programs.

(3) Each of the programs present a structure that reveals particular strengths, but none of the programs is ready for final evaluation since they are in the development and implementation stages.

(4) The similarities and differences between the programs suggest the need for further attempts in curriculum development. Each of these illustrate the need for continual development and refinement to project future industrial education programs.

(5) The thirty-five identified programs concerned with innovative approaches reviewed in this study suggest the dissatisfaction of the profession with on-going industrial education programs in secondary schools. There is a genuine searching for the direction and role of industrial education in the total educational program.

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Morse, Wayne
Education for Jobs in a Technological Society.

MF AVAILABLE IN VT-ERIC SET.
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*VOCATIONAL EDUCATION; *EDUCATIONAL LEGISLATION; *SCHOOL INDUSTRY RELATIONSHIP; *EDUCATIONAL PHILOSOPHY; *SPEECHES; TECHNOLOGICAL ADVANCEMENT; PROGRAM IMPROVEMENT
*AMERICAN VOCATIONAL ASSOCIATION CONVENTION, DALLAS, TEXAS, DECEMBER 9-13, 1968

The concept of an educational "partnership" was the partnership of business and education which gave vocational education its first national mandate with the Smith-Hughes Act of 1917. It was a kind of partnership between the American Vocational Association and Congress which developed the two principal vocational enactments of this decade, in 1963 and 1968, and it will be the continued partnership of business, industry, vocational educators, and government which will be needed to translate 1968 amendments into action which is educationally relevant to our times. If America is to survive as a free democracy in this new technological society in which we live, we must thoroughly re-examine our education philosophy. We must overhaul our educational system and design programs which are calculated to prepare our citizens, and particularly our youngsters, for life in a world of work which demands skilled workers. (CH)

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Second General Session

VT008216

Address of Senator Wayne Morse (D.-Ore.)

American Vocational Association

Dallas, Texas, December 10, 1968

EDUCATION FOR JOBS IN A TECHNOLOGICAL SOCIETY

Last year the administration sent to Congress its 1968 vocational education legislative proposals, under the title of: "The Partnership For Learning and Earning Act."

Thanks in large part to the contributions of Lowell Burkett and the American Vocational Association, the Congress did not pass that law but rather, after nearly two years of hearings, we developed and passed a much broader and much more important one -- The Vocational Education Amendments of 1968.

I think, however, the concept of an educational "partnership" is a good one to dwell upon for a moment. It was the partnership of business and education which gave vocational education its first national mandate with the Smith-Hughes Act of 1917. It was a kind of partnership between the American Vocational Association and the Congress which developed the two principal vocational enactments of this decade, in 1963 and 1968. And it will be the continued

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partnership of business, industry, vocational educators and government which will be needed to translate the 1968 Amendments into action which is educationally relevant to our times. Our educational programs must be brought more into line with the needs created by the modern Twentieth Century America.

If America is to survive as a free democracy in this new, technological society in which we live, we must thoroughly re-examine our educational philosophy. We must overhaul our educational system and design programs which are calculated to prepare our citizens -- and particularly our youngsters -- for life in a world of work which demands skilled workers.

"Education for education's sake" is a luxury which, unfortunately, only the twenty percent of our population which completes college can even dream of, let alone enjoy. For the remaining four out of five of us, public education must be made more meaningful, more practical, more job-oriented.

I believe that public education should be the <u>means</u>, and not an end in itself. The real job of education is to prepare people for life in our technological society; and that means, for most of us, preparing people for living in the "world of work."

The finest education system in the world -- which is ours -- is the source of very little pride to the five out of every ten college students who don't graduate; to the 900,000 annual high school

drop-outs; to the one million high school graduates who enter the labor force every June without a marketable skill and who are consigned to the laborer's unemployment lines; to the millions of under-employed youths and adults who do have unskilled, underpaid jobs, but who are the last to be hired, the first to be fired, and who never quite earn a living wage.

The Age of Technology is here. It's coming signifies a great new era of prosperity and, perhaps, unheard of leisure and luxury for many. But it also has tolled the death knell for the unskilled workers. Our general education high school diploma is no longer an adequate preparation for the skills which business and industry are looking for. It is no longer a ticket to success.

We do not lack for jobs in America. In any newspaper we find jobs aplenty for skilled workers. But we desperately lack adequately trained and educated people to fill those jobs.

Today the Federal Government is spending nearly $300 million to train youngsters through the Job Corps program. The Poverty Program expends another $400 million on training programs for adults. And we spend almost an identical sum to train and retrain more than a quarter of a million others through our regular manpower training programs.

These programs are essential and must be continued and expanded -- at least for the present. They are designed to remedy the past and current failures of our educational systems; and remedial programs are always more expensive than doing the job right the first time. But our long-range goal must be to render these expensive manpower and poverty crash programs largely unnecessary.

Ours has become the Technological Society and our problem is, how do we educate our children to take advantage of our vast, new knowledge -- how can we protect and promote the individual freedom and opportunity of every citizen to benefit from this new technology -- to share to the fullest the fruits and blessings of our society. And, how can we combat one of the bitterest fruits of our new technological society -- the alienation of our citizens: the frustration that comes from civil rights won but full opportunity still not enjoyed; the crime of job opportunities going begging for lack of skills; the desperation of poor jobs and no jobs amidst good jobs aplenty.

During the period of the Johnson-Humphrey Administration, we have put more laws on the books to strengthen the educational opportunities of our young people than all prior periods combined. But five years of progress cannot overcome fifty years of false complacency; nor can it be expected wholly to keep pace with technological advances.

I look forward to a re-ordering of our educational priorities so that the majority will have the same options to pursue

meaningful, relevant courses of instruction leading to job opportunities which our relatively few, college-bound students now enjoy. We need a new educational policy for our technological society--an "action" policy which will make us put into practice all that we know and can learn about educating people for useful and rewarding lives.

The Vocational Education Amendments of 1968 go a long way toward such a re-ordering; and they nave the potential for providing such an "action" policy and program.

Perhaps the most important single implication of this legislation stems from its comprehensiveness. As you know, it directs Federal funds to a wide variety of services and programs at every level of education. This says, in effect, that vocational education must now be considered by the education community at large to be one of the major missions of the public schools.

Certainly, this law addresses itself to the task of encouraging fundamental changes in educational philosophy. For example, cooperative education programs, when properly implemented, will utilize concepts of direct experience--perhaps the best method yet devised for learning. John Dewey, once noted that, "The development within the young of attitudes and dispositions necessary to the continuous and progressive life of a society cannot take place by direct conveyance of beliefs, emotions and knowledge. It takes place through the intermediary of the environment."

The application of Public Law 90-576 can bring relevance to the entire process of education. Through its exemplary and innovative programs, for instance, which may begin at the elementary level, students can begin to relate "academic work" to real life situations. Reading, writing and arithmetic can be taught in the context of

occupational preparation or orientation. In many cases, vocational ducation will be the factor which motivates learning.

By this process, schools and teachers can help students to integrate the practical and the theoretical--a result which well may increase the school's ability to hold the potential drop-out. To broaden the scope of vocational education, school personnel must learn to work together to find new approaches for providing experiences that will expand the occupational aspirations of youth and give them a basis for making occupational choices

Another major implication of this new act lies in its provision for citizen participation in establishing goals and priorities for our schools, and in the utilization of public and private resources and the community to prepare students for employment. For example, through broadly representative advisory councils--state and national--itizen participation is assured in the decision-making processes.

The instructional program is geared to efficient employment standards, and employers will be called upon to participate both in establishing the curriculum and in providing on-the-job training. Here, of course, it is the emphasis rather than the practice which is new. But now there will be public bodies of citizens who will measure how well our schools perform their mission of occupational preparation.

The act also calls for the participation of private training resources and for the use of resources of industry and other employers in making opportunities accessible to all. If we are to bridge the gap between education and earning a decent and dignified living, if we are to build more bridges between education and business, we must create a more viable industry-education partnership. Obviously government and school systems cannot do the job alone. We must make the maximum possible use of all the most appropriate, economical and

effective community resources. And this new law requires that we do so.

We will be hearing a lot more about involving industry in job training. And, clearly, industry can and does play a role in training people for work "on the job". It must do more.

But we can no longer afford to lose the advantage of a public school system which has custody of virtually every school-age child. We must move toward the ideal that the public schools will do the job right the first time, thus avoiding the painful and expensive process of crash retraining projects.

In addition to providing in-service training of its own employees, and working with the schools in cooperative, part-time vocational education programs, industry must press its rights as the employer-consumer of the educational product: namely, the student. It must participate in advisory councils. It must help in the development of new curricula. It must explore released-time programs both for employees to return, part-time for further continuing education, and for supervisory personnel and skilled workers to share their skills with students as part-time teachers.

All of the initiatives, opportunities, and challenges are contemplated by the Vocational Education Amendments of 1968, and more.

I see this legislation as a challenge, perhaps the best challenge, to the viability of the public school system as we know it. Time is running out, and perhaps should run out, for a system which consistently fails one-half of the college population and, in addition, many millions of high school students. The public cannot much longer permit such a system to attempt to shift the blame for inadequate results to the students alone.

If our nation could not endure, one hundred years ago, half slave and half free, it cannot now long survive with only half of our citizens free to benefit but with half ill-prepared to survive economically in our technological society.

Every newspaper we read today bears witness that we have, in our society, an open wound of ignorance stemming from poor preparation for today's life. If we do not apply the healing powers of education to that lesion, the infection will spread and contaminate our entire body politic.

We in the Congress have enacted many public laws in the educational area. President Johnson signed P. L. 90-576 as the sixtieth of his tenure. I think each is needed and I am proud of my role in their enactment. But it will be you and your colleagues in education who must make our new systems work. As a legislator I salute you. As a parent and grandfather I pray for your success in learning quickly and effectively to meet the needs of our children. Given the quality of your dedication as citizen-statesmen I have no fear for the future. I know that you will go through those doors which have been opened by the new legislation confident that through your strengthened efforts your students can build in America that "green and pleasant land" that is our ideal for the 21st Century.

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Kramer, Ernest G., And Others
Speeches Presented at the Annual Vocational Convention of the American Vocational Association (62nd, Dallas, December 9-11, 1968). Supervision and Administration.

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*AMERICAN VOCATIONAL ASSOCIATION CONVENTION, DALLAS, TEXAS, DECEMBER 9-13, 1968

Speeches presented at the Supervision and Administration Meetings included: (1) "Role of the Vocational Education Administrator in Developing Successful Patterns of Organization," by E.G. Kramer, (2) "Patterns and Principles of Organization for Vocational Education," by B.R. Shoemaker, (3) "The Way It Is," by F.A. Miller, (4) "Definition of Vocational and Technical Education," by B.R. Shoemaker, and (5) "Problems of Administration and Supervision of Industrial Arts: The Role of the State Department of Education Vocational Consultant," by E.T. Brown. (DM)

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Role of the Vocational Education Administrator in Developing Successful Patterns of Organization[1]

by

Ernest G. Kramer
State Director of Vocational Education
State Board for Vocational Education
Box 248
Olympia Washington 98501

For Presentation at The
62nd Annual Vocational Convention
of the
American Vocational Association
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[1]Presented by Mr. Archie G. Breslin, Assistant Director for Secondary Vocational Education, State of Washington.

ROLE OF THE VOCATIONAL EDUCATION ADMINISTRATOR IN DEVELOPING SUCCESSFUL PATTERNS OF ORGANIZATION

Any consideration of successful organizational patterns for vocational education administration should take into account at the start the nature of the program. Vocational education is probably the most sensitive part of the total program of public education insofar as community reaction is concerned, but more significantly insofar as being able to react quickly and effectively to the individual needs for vocational training as well as the business and industry needs for skilled manpower. It follows, then, that there are certain fundamentals that should be taken into account.

Any organizational structure should be so designed as to make possible this kind of an effective relationship between a community and the vocational education program. The administrative head of the vocational program on the local level must be in a position to be able to make commitments on the spot as they have to do with the establishment of classes, development of instructional materials, employment of teachers, and other similar matters. Without such authority to respond, the effectiveness of the vocational program, both in terms of its service to people as well as its economic contribution, is severely restricted. Often times, however, vocational educators insist that the director of a vocational education program in a local situation must be answerable directly to the superintendent and must be given equivalent title and salary status with other assistant superintendents who also report direct. This tends to become a controversial request and more often than not is interpreted by the general education establishment as being a bureaucratic attempt on the part of the vocational man to take over. It would seem to be a more prudent position to seek authority with responsibility and not bid for precise job title. This is to say that if an individual is going to have the responsibility generally inherent in the vocational program, then to be effective he must likewise have the authority to go with it. Equal pay for equal work is laudable, but is a separate issue.

Basic to this consideration is the assumption that vocational education is an integral part of the total program of public education. If we believe that it is, then thought must be given to conducting ourselves in all respects as a member of the total team and not give the image of being "the man who came to dinner". The significance and complexity of this becomes even more critical on the state level. In situations where the total public education responsibility from K - 14 rests with one single State Board of Education, then it would appear that the same basic fundamentals of administrative organization that have appropriateness in the local school district would likewise apply on the state level. However, when this K - 14 responsibility is fragmented amongst two or three separate boards, then life becomes exceedingly complicated.

Experiences we are currently having in the State of Washington are most interesting. It is likewise most curious that in most of the discussions having to do with who is in charge of what and how should fragmented board responsibilities be coordinated, what makes for the best educational experience for the youth and adult hardly ever gets into the conversation.

Is it possible that we could start with the focus on the client, so to speak, and begin by asking ourselves what is the best kind of educational program from the students' point of view. It would seem that certainly one of the ingredients that one would have to consider would be a high degree of articulation throughout the entire educational program. This is to say, in terms of vocational education, there should be reflections at least in the kindergarten that would be related to in-depth preparatory programs in the 14th grade, let's say. How does one accomplish this when the responsibility for this educational range is divided amongst three agencies?

In the over-all I would submit that the proper role of the vocational education responsibility is to insure that people who have need for this kind of instruction should be able to have it available, and that it should be bona fide, efficient, and effective. In a multiple

board situation on the state level, assuming that vocational education is a part of the total range of education experience K - 14, then it would seem that the vocational education responsibility is largely a support role to the other two boards. In the event there is a separate system of state vocational schools operated directly by the State Board for Vocational Education, then we have a situation that is less complicated and perhaps it is principally a philosophical question as to whether it is good to so separate or in the long look to conduct vocational education as a part of the total comprehensive public education effort.

Vocational education as we look to the future must, it seems to me, make a basic decision. Are we a part of the total program of public education? If we are, then I think we must give more thought to how we can work effectively as an integral part of that system rather than completely retreat to a position of splendid isolation. There are those who would immediately say, "Well, there is much history to point out that this kind of an attempt has never been successful and that all that would result would be a watered-down vocational education program." This has occurred in times past and probably will be a problem again in the future. I am wondering, however, if it is always the case that the general education establishment is the villain of the peace, or if it isn't quite possible that vocational education practitioners could work more intelligently and more nearly as a full blood brother of the total team.

Prepared by Ernest G. Kramer, Director of Vocational Education, Washington State, for delivery at the American Vocational Association Convention, December 11, 1968, Dallas, Texas

(In the absence of Mr. Kramer, this presentation will be made by Mr. Archie G. Breslin, Assistant Director ~~of~~ for Secondary Vocational Education, State of Washington)

PATTERNS AND PRINCIPLES OF ORGANIZATION

FOR

VOCATIONAL EDUCATION

Byrl R. Shoemaker
Director of Vocational Education
State Department of Education
Columbus, Ohio

PATTERNS AND PRINCIPLES OF ORGANIZATION FOR VOCATIONAL EDUCATION

Vocational Education

The issue today is not "shall we hold on to the comprehensive high school" but "how can we provide a comprehensive educational program". There are very few "comprehensive" high schools in our nation. Outside of our large cities very few school districts as they are now constituted in most of our States can offer a comprehensive program in vocational education. Studies would indicate that a minimum of 500 students should be enrolled in vocational education programs in order to provide for even a minimum scope of offerings. Experiences in Ohio would indicate that the enrollment of 500 students in vocational education at the eleventh and twelfth grade level would require an enrollment of 1500 students in the upper two grades of the school or schools participating in the vocational programs. Likewise, to meet a desirable program enrollment of 1300 students in a two-year program would require an enrollment of 4,000 students in the upper two grades of the high school. A vocational program is dependent upon its breadth in order to reach the different interests and ability levels of the students. The opportunity to provide this breadth is based upon:

1. The availability of sufficient tax base to support the necessary construction, equipment, and operation.

2. A sufficient student base to provide an economical enrollment in the individual programs offered.

Experiences in Ohio have indicated that area centers can be established to serve a number of school districts with the area centers serving as an extension of each of the participating schools. Under this plan, students in the last two years of their public school experience may enroll in the vocational center on a full-time basis, but continue their registry and official relationship with the local school district. The students are officially members of the school districts participating in the area centers and may play athletics and participate in extra curricular activities. Students graduate from the local school district, rather than from the area vocational school. A pattern of taxation provides for the funding of local tax levies and bond issues in the same manner as they are voted by other school districts, even though the area school district is superimposed over that of the participating school districts. On the basis of the broad tax base gained by the joining together of a number of districts, the tax rate for construction and operation normally will run someplace between two to three mills on the total tax.

Experience within Ohio would indicate that joint vocational school districts can include an area measured in time of travel of thirty to forty minutes from the farthest home school to the area vocational center. Experience has indicated that joint vocational school districts can provide many services to the participating districts. In addition to that of vocational education programs for out-of-school youth and adults, in some cases, they serve as a center for post-high school technical education. The area vocational school becomes a center for not only high school youth, but also for retraining of unemployed out-of-school youth and adults, and upgrading instruction for employed workers.

In sections of many States, it is impossible to bring together sufficient students from the high school level to provide even a minimum comprehensiveness in the field

of vocational education. In these cases, the travel distances make daily commuting an impossibility. There is no evidence or experience which indicates that mobile units can do more than orient students to occupational areas. Mobile units can neither provide the type of equipment or the breadth of equipment necessary to prepare for adequate entrance into a vocation. Likewise, the amount of time a mobile unit would be available to a school would not give the opportunity to develop any depth of skill or technical knowledge. In areas of such sparse population, consideration must be given to residential centers at either the high school or post-high school level.

Large cities of 200,000 population or over normally can offer a comprehensive vocational program without joining with other school districts. Some organizational patterns for vocational education in the larger cities and their strengths and limitations are as follows:

I. A series of vocational high schools, with broad programs corresponding to the needs of the students, with the district high schools providing limited vocational education programs, such as distributive education.

The areas of vocational education included in each district high school would need to be limited to those areas in which the possibilities for employment are adequate within the city or region for the number that would be prepared. In both the vocational high school and in the district high schools, the vocational programs would be limited to the eleventh and twelfth years, or the last two years of a student's school career.

A. Strengths
   1. Provides administration by people highly qualified to direct vocational education activities.
   2. Provides economy of equipment and facilities.
   3. Recognizes vocational education programs as an important field of education not to be delegated to secondary citizenship.
   4. Provides direct relationships with business and industry.
   5. Serves the needs of out-of-school youth and adults, as well as the needs of high school youth on an economical and effective basis for day, late afternoon, evening, or night programs, since vocational education areas are concentrated.
   6. Develops a necessary emotional state of belonging to, a pride in, and a satisfaction of participating in extra curricular activities within the vocational high school.

B. Possible Limitations
   1. Affects the entrance into certain colleges for a few students due to the lack of certain college preparatory offerings in the curriculum such as foreign languages.
   2. In vocational high schools, separates students planning to enter employment upon graduation from those planning to enter college upon graduation.
   3. In general high schools, enrolls qualified youth in proportion to the understanding that administrators have of vocational education and to the encouragement of qualified youth to attend.

Item three is a limitation only when administration of the school system does not understand the place of vocational education in the total program, and, therefore,

has not provided the necessary administrative relationships and in-service teacher education so that professional personnel will encourage students to enroll in vocational high schools on the basis of goals, interests, and abilities.

II. Vocational education service centers offering vocational programs and enrolling students from a number of district high schools in the eleventh and twelfth years, or the last two years of a student's school career.

Under such an arrangement, each of the district high schools would offer areas in vocational education as described in "I". Under this organizational pattern, schools could be organized either on a pattern such as 6-4-2 or pupils could be encouraged to enroll in the vocational education service center at the beginning of the eleventh year on the basis of needs and interests. Under this arrangement, the students could either become members of the vocational education service center or remain members of the district high school for purposes of extra curricular activities, sports, and graduation.

A. Strengths

1. Provides more effective use of expensive equipment and facilities than the vocational high school, because the facilities and equipment are used only by students enrolled in the vocational program and not by pre-vocational students in the ninth and tenth grades of a vocational high school.
2. Provides possibility for students participating in such vocational education service centers to take the required academic subjects at the vocational service center or in their district high school.
3. Provides administration by people highly qualified to direct vocational education activities.
4. Provides direct relationships with business and industry.
5. Serves the needs of out-of-school youth and adults, as well as the needs of high school youth for day, late afternoon, and evening programs on an economical and effective basis, since vocational education areas are concentrated.

B. Possible Limitations

1. Enrolls qualified youth in proportion to the understanding administrators and teachers have of vocational education and to the encouragement of qualified youth to attend. (This can be minimized through proper guidance and counseling and administration and teacher attitudes as evidenced by enrollments in joint vocational school districts.)
2. Limits extra curricular activities, since pupils change schools in the middle of their high school career, except for those who return to their district high schools.
3. Separates students enrolled in vocational education service centers from those completing their college preparatory programs in the district high schools.
4. Affects the entrance into certain colleges for a few students due to a lack of certain college preparatory offerings in the curriculum, such as foreign languages.

III. A vocational education service center combined with one of the district schools of the school system.

Under this organizational pattern, a vocational education service center, such as that identified in "II" above, would be attached to a district high school which would be offering the usual high school program including college preparatory, etc. Under this organizational pattern, students from other district high schools would attend the service center for vocational education purposes, and would remain attached to their own district high school.

A. Strengths

1. Provides effective use of expensive equipment and facilities.
2. Provides possibility for students participating in such vocational education service centers to take the required academic subjects at the vocational service center or in their district high school.
3. Provides administration by people highly qualified to direct vocational education activities.
4. Provides direct relationships with business and industry.
5. Serves the needs of out-of-school youth and adults as well as the needs of high school youth for day, late afternoon and evening programs on an economical and effective basis, since vocational education areas are concentrated.
6. Maintains relationships of vocational education students with students in college preparatory programs.

B. Possible Limitations

1. Leaves students from the district high schools other than those to which the service center is attached virtually in an "enemy camp" as concerns sports, extra curricular activities, loyalties, etc., unless they transfer to the district high school.
2. Affects the organization and operation of the vocational education programs by the more restrictive scheduling practices of the district high school programs.
3. Provides an atmosphere for the operation of the law of social gravity in which emphasis tends to flow toward the highest level of academic training, so that the vocational education programs become secondary citizenship.

IV. <u>Offer some vocational programs in each district high school, with enrollment of students into these high schools on a full-time basis determined by interests, goals, and abilities.</u>

Under this organizational pattern, students would enroll in their district high schools, and at the eleventh year they would be encouraged to transfer to and become a member of a district high school in keeping with their interests, goals, and abilities.

A. Strengths

1. Maintains relationships of vocational education students with students in college preparatory programs.
2. Develops loyalties and relationships within the one high school.
3. Enables the school district to show on an overall basis a rather comprehensive vocational education offering.

B. Limitations

1. Requires transporting students at times across town to a different district high school to enter an area of instruction of their choice.

2. Serves inefficiently the needs of out-of-school youth and adults for preparatory vocational and technical education, retraining for the unemployed, related instruction for apprentices, and up-grading instruction for adults.
3. Diverts attention from administration of vocational education programs, because the school is concerned predominately with academic facets of the school program.
4. Restricts flexibility for vocational education curriculum, due to the many scheduling problems within a district high school.
5. Leaves students from the district high schools other than those to which the vocational program is attached virtually in an "enemy camp" as concerns sports, extra curricular activities, loyalties, etc.
6. Restricts in a sense the offerings in vocational education programs to those offerings within the school district because of the likelihood that students would attend their own district high school.
7. Transfers pupils so frequently that they fail to establish loyalties, a necessary emotional state of belonging to or the satisfaction of identifying themselves with any school.

V. <u>Offer some vocational education programs in each district high school with students enrolling in their school district and attending another district for vocational education, but remaining a member of their own district high school.</u>

Under this organizational pattern, students would enroll in their district high school, and at the eleventh year would be encouraged to attend for vocational education purposes only, the district high school which offers the area of vocational education in which they are interested. The students would remain members of their district high school for purposes of sports, graduation, and extra curricular activities.

A. Strengths
1. Maintains relationships of vocational students with students in the college preparatory program.
2. Provides an economical comprehensive vocational education program, looking at the city as a whole.

B. Possible Limitations
1. Serves inefficiently the needs of out-of-school youth and adults for preparatory vocational and technical education, apprentices, and upgrading instruction for adults.
2. Requires transporting students at times across town to different district high schools to enroll in the area of instruction of their choice.
3. Diverts attention from administration of vocational education programs because the school is concerned predominately with academic facets of the school program.
4. Restricts in a sense the offerings in vocational education programs to those offerings within the school district, because of the likelihood that students would attend their own district high school.
5. Restricts flexibility for the vocational curriculum, due to the many scheduling problems within a district high school.
6. Requires students from one district high school to be divided among several other high schools in terms of their educational goals.

7. Requires student enrollment in district high schools in which pupils have no loyalties and are not a part of the extra curricular activities.
8. Leaves students from the district high schools other than those to which the vocational program is attached virtually in an "enemy camp" as concerns sports, extra curricular activities, loyalties, etc.
9. Provides an atmosphere for the operation of the law of social gravity in which emphasis tends to flow toward the highest level of academic training, so that the vocational education programs would become secondary citizenship.

In considering any organizational pattern, the following principles should be considered:

1. The organizational pattern should provide for a comprehensive program of vocational education.
2. The pattern of organization should not force students to enroll in an "enemy camp", (i.e. a rival "comprehensive" school which they play in competitive athletics).
3. The pattern of organization should not establish impossible transportation systems.
4. The pattern of organization must have the support of administrators, guidance counselors and parents, and the acceptance by the teacher group.
5. The pattern of organization must provide for administration of the vocational programs by persons competent in the field of vocational education.
6. The pattern or organization must provide for freedom of scheduling essential in the area of vocational education without the straight-jacket of the normal high school subject-centered curriculum.
7. The pattern of organization must be such as to provide for services to out-of-school youth and adults on a broad basis.

Technical Education

The most common organizational pattern for technical education and some of their strengths and limitations are described as follows:

I. A technical education center functioning in cooperation with an area vocational education center, both administered by one authority with one tax base for both.

Under this arrangement the local taxing authority is normally required to pay a portion of the building costs and operating costs. Such programs normally receive reimbursement from State and Federal agencies through the State Board of Education and/or a State Board of Higher Education. The technical institute programs in such joint ventures should be permitted to grant the associate degree for those programs meeting the standards of the State operating units.

A. Possible Strengths
   1. One tax base and taxing authority for both the area vocational and technical education programs.
   2. One board of education to administer the two programs.
   3. Possible savings in administrative costs for direction and supervision.

4. Possible savings in costs of materials and supplies.
5. Dual use of certain expensive laboratory facilities and of certain common service centers, such as heating, cafeteria, laboratories, etc.
6. A service center providing a continuing education in non-baccalaureate degree education, starting with vocational education at the high school level, and with provisions for vocational and technical education of a preparatory and upgrading nature on the post-high school level.
7. One relationship with industry for programs in which their advice and counsel must be sought on a continuing basis.
8. Technical education becomes a premium program in this organizational pattern, since it is the unit of highest status.
9. Emphasis in technical education in this organizational pattern tends to remain focused on its purpose of preparing youth for entrance into technical employment rather than upon continuation toward a baccalaureate degree.
10. There is less chance for the programs to become inclined toward a duplication of the first two years of a baccalaureate degree program.
11. The administration of the program will be in the hands of people concerned with vocational and technical education rather than baccalaureate degree education.
12. The local control inherent in this organizational pattern will encourage adjustment of the programs to meet the needs of both people and business and industry.
13. Local funds assist with both the construction and operation of the program.
14. Technical education is placed within a reasonable driving distance of the homes of the students.
15. Due to local and State participation in the construction and operation, the cost of technical education to the student is maintained at a reasonable rate.

B. Possible Limitations

1. The State Board of Regents is reluctant to approve the granting of the associate degree to any educational agency except those operating under the control of an institution of higher learning or operating under the direct administrative supervision of the State Board of Regents.
2. Under this arrangement technical education must be sold to students on the basis of the merits of a technical education program without the stimulation that occurs when students believe they are enrolling in a baccalaureate degree program.
3. Students from such programs will not automatically acquire baccalaureate degree credit, but, must have their credits evaluated by an institution of higher learning if they decide to go on to a baccalaureate degree program.
4. The present organizational pattern at the State level involving the State Board of Education and the State Board of Regents presents a problem of relationships when cooperative efforts of this type are established.

II. Technical Institutes

Separate technical institutes can be organized to provide for post-high school technical education. Under this plan, technical institutes become separate administrative units normally with the taxing authority separate from

any other educational unit in a city, county, or counties covered by the technical institute district. Such technical institutes may be assisted financially and supervised by either a State Board of Education or a Board of Higher Education within a State.

A. Possible Strengths
   1. The purpose of the institute is clearly in the area of post-high school technical education.
   2. Under this plan there would be a single administrative organization.
   3. The technical education program is the premium program in the institute, since it is the only program.
   4. The administration of the program would be concerned primarily with technical education.
   5. Relationships can be established with business and industry with regard to this facet of education.
   6. The element of local control will encourage the adjustment of the technical education program to both the needs of people and the needs of business and industry.

B. Possible Limitations
   1. Establishes a separate tax authority for the same tax base as that established for a joint vocational school district.
   2. Requires an administrative organization specifically for this one type of education.
   3. Certain of the laboratories needed for short periods of time are expensive for use for this one purpose only.
   4. There is a duplication of certain laboratories and shop facilities included in a joint vocational school.
   5. A curriculum developed with transferability in mind will likely not produce quality technical education.
   6. There is a history of the desire of such technical institutes to become four-year degree granting engineering centers.

III. Community Colleges

Community colleges are normally organized to provide: (1) transfer programs giving credit toward baccalaureate degree programs at universities and colleges; (2) technical education programs preparing people for para-professional occupations, which programs may or may not accrue college credit toward the baccalaureate degree; (3) vocational training; and (4) community service programs of an adult education nature. In such institutions both the transfer collegiate curriculum and the technical education curriculum lead to a granting of the associate degree upon the completion of a two-year program.

A. Possible Strengths
   1. The community college is community oriented and will give careful consideration to the interests of people and of business and industry in the areas served.
   2. The community college provides partial local financing for both construction and operation.
   3. Technical education is placed within a reasonable driving distance of the homes of the students.

4. Due to local and State participation in the construction and operation, the cost of technical education to the student is maintained at a reasonable rate.
5. Costs of administration for a college transfer program and the technical education program are reduced by reason of the one administrative board.
6. Under this plan there would be a single administrative authority.
7. The program remains responsive to changing needs within the local area.

B. Possible Limitations
1. A curriculum developed with transferability in mind will likely not produce quality technical education.
2. The community college represents a separate tax authority which may be in addition to a joint vocational school district, and could be in addition to a branch university center.
3. Such community colleges may tend to grow into four-year collegiate institutions, in which cases the two-year technical programs receive less emphasis, since the emphasis tends to be placed upon the professional areas.
4. On the basis of the law of social gravity, finances and emphasis in a community college tend to move toward a collegiate transfer program, rather than a technical education program. Also, enrollment tends to follow the law of social gravity unless the students in the technical programs are pacified by the granting of baccalaureate degree credit for the curriculum completed.

IV. University Branches

A university branch is a local part of a sponsoring university, but located in an urban area separate from the main campus. The purpose of the university branch is to decentralize the lower division of instructional activities in a State assisted university. The university branch is tied to and administered by the parent university and the programs and standards are expected to be those of the parent university. The university branches in some States can legally offer technical education programs.

A. Possible Strengths
1. Technical education students who change their goals and decide to pursue baccalaureate degree programs may find it easier to obtain recognition of course credits by the parent university.
2. The status symbol attached to the university will tend to encourage enrollment of students into the programs, many on a part-time basis.
3. The administration and funding of the branch is provided through the parent university under the direction of the State Board of Regents.

B. Possible Limitations
1. The tendency in the branch is to organize technical education on the basis of courses offered in the lower divisions of the baccalaureate degree programs.
2. If the baccalaureate degree standards maintained at the central campus are maintained at the branch, many students who could succeed in technical education will be denied entrance or be unable to achieve at an acceptable level.

3. A number of students will enroll in the technical education curriculum on the basis of the status symbol of the university, believing they are enrolling in a university program. Such students will have little interest in preparing for a technical occupation upon graduation. A great number will enroll on a part-time basis and will never graduate.
4. Most university branches are not adequately equipped with the necessary laboratories and shop facilities to provide for a sound technical education program.
5. Finances available to a university and to a university branch will tend to flow to the programs of highest status, the transfer programs in the branch and the graduate programs on the parent campus.
6. There is a tendency for programs in the university branch to be central campus oriented, with little direct contact in relationship with business and industry in the local area to be served, and close relationships with business and industry are necessary for the further development of sound technical education programs.
7. Since the status programs are transfer programs, enrollment in the technical education programs would generally decrease as students feel that they are secondary citizens in relationship to the transfer programs.

V. Colleges and Universities

Technical education programs operated by universities and colleges tend to have the same possible strengths and possible limitations as identified for the university branch.

Technical education will grow best if it is identified as a unique program, in a unit separate and apart from institutions offering transfer programs to universities and in a unit in which the students are not looked upon as second class citizens. There is a tendency for technical education organized in relationship to a university to become perverted to the issuance of college credit for the baccalaureate degree.

Technical education in the community college also can be placed in a secondary citizenship role unless there is an intensive effort made on the part of the administration to promote enrollment in identifiable technical education programs and to maintain strong relationships with business and industry in relationship to the goals, curriculum organization, and staffing of the technical education programs.

CONCLUSIONS

Acceptance of the ideas or concepts expressed within this position paper would lead to the following conclusions:

1. Vocational and technical education are essential parts of the modern curriculum for public education.

2. Public education has a responsibility for and an obligation to vocational education for high school youth, out-of-school youth and adults, in terms of preparatory training, retraining, and upgrading instruction for employed workers.

3. The needs of youth and adults for vocational education suggest that a minimum scope of programs requires an enrollment of approximately 500 youth in a center for vocational education. An optimum program of vocational education can be reached with an enrollment of 1300.

4. Needs of out-of-school youth and adults for technical education and the needs of business and industry for graduates of such programs suggest a minimum enrollment of 500 post-high school technical students in order to achieve minimum scope of program.

5. Large cities of 200,000 or more normally have sufficient tax base and student base to provide for a comprehensive vocational education program. Several options are available to large cities in terms of adequate organization for vocational education, but the pattern selected must provide for comprehensiveness of the vocational program in keeping with the nature of the students and the community, and for continuing services to out-of-school youth and adults.

6. Most suburban and rural communities do not have sufficient student base or tax base to provide for vocational education unless such districts join together to provide sufficient student base and tax base to support a comprehensive vocational program.

7. In some sparsely populated areas, it will be impossible to provide even a minimum comprehensiveness of vocational program at the high school level due to the great distances between the school districts involved. In such cases, residential type programs must be considered, either on a high school basis or on a post-high school basis for both vocational and technical education.

8. Vocational and technical education programs are sound educational programs planned to serve the needs of people and of business and industry and deserve the full support of people concerned with the modernizing of the educational program throughout the Nation.

Just as nature deplores a vacuum and makes every effort to fill the vacuum, so society deplores a vacuum in terms of the needs of that society and makes every effort to fill such needs. Public education within the fifty States has a short time in which to accept its responsibility for the total student, including his preparation for employment, and the responsibility for continuing education for out-of-school youth and adults. Unless this need is met by the individual States such an educational program will be provided under the auspices of the Federal Government.

The Way It Is[1]

by

Floyd A. Miller

Commissioner of Education

State Department of Education

Lincoln, Nebraska 68509

[1] Presented at the 62nd Annual Vocational Convention, Dallas, Texas, December 7, 1968.

THE WAY IT IS

State Vocational Education Directors
Dallas, Texas
December 7, 1968

I don't really have the words to tell you how much I appreciate the invitation to be here today. Perhaps some of you can realize how much fun it is to get far enough away from home to be an expert and perhaps thus to be somewhat appreciated. (Story of Get-Well card.)

When I think of the invitation I feel compelled to tell you a story that I haven't used for some time, but it seems appropriate now. (Cowboy twirling the rope.)

Having made very clear, then, that Cecil Stanley is responsible for my being here, I must quickly and most seriously tell you of my very high regard for him. If he is at all typical or representative of this group of vocational educators, or perhaps I should say if you are all cut of the same fine cloth he is, then this is one of the finest leagues I have ever worked in. In fact, it makes me wonder how I ever got into the auditorium and reminds me of the story of the Nebraska Vocational Agriculture teacher who entered his mule in the Kentucky Derby some years ago. When asked why he had done this, he answered that he thought it would be a very fine educational experience for his mule to associate with such outstanding horses.

Some years ago I read an old Chinese proverb which goes something like this -- There are five points to the compass: North, South, East, West, and Where You Are. I haven't used this for years but it seems rather appropriate as I begin my assignment today.

We are in Dallas, Texas -- a great City in a great State -- on December 7, 1968 in the sunset weeks of a year many people will be glad to leave behind -- a year which can well be characterized by such key words as violence, frustration, revolution, brutality, power, controversy, disadvantage, relevance, credibility, change.

In another revolutionary time citizen Tom Paine said: "These are times that try men's souls." And surely 1968 is such a time and among those men whose souls are being tried, we must include those of us who are in this room today.

Another writer-philosopher, in speaking of a more recent period, said (and I quote rather loosely): "These are the best of times and the worst of times. Nobody knows and everybody guesses", etc.

There are some elements, factors, developments, truths -- call them what you will -- which relate to one of those most significant key words - change - and which help describe where we are or the way it is. These are matters which cannot be shouted out of existence, which cannot be distorted or ignored into oblivion, which cannot be solved by change and counter-change nor by retreat nor appeasement. They will have to be faced; if not today -- tomorrow; if not tomorrow -- the day after. If not the day after -- the year after and the decade after. But they will have to be faced.

In "Focus on the 70's" Harrison Brown of the World Book Year Book Board of Education pointed out that world society is fissioning with two kinds of human beings evolving -- the affluent and the miserable.

In the developed countries research, development and industry all accelerate to provide a positive feedback cycle in which richness breeds richness according to Brown. In the undeveloped, there is a negative feedback whereby poverty appears to intensify poverty.

Similar kinds of fissioning are going on -- some , if not all, of extreme importance to government, to education, and especially to vocational education. For example, large cities are growing larger while small cities and villages grow smaller. Within metropolitan

areas the suburban fringes are growing wealthier while the inner city is losing wealth and gaining human liabilities.

Farms are getting larger and fewer in number. Farmers are more technical, professional or sophisticated, but fewer in number. Yields are becoming greater from a smaller number of acres. The United States and Nebraska as well are classified as urban rather than agrarian, and the big impact of the one man--one vote idea is yet to come.

In anything that requires transportation, time has become a much more significant factor than distance. Watch your highway signs, especially on the freeways -- so many minutes or hours to tourist attractions, food stops, motels or cities. Trans-oceanic flights are planned in terms of hours and minutes, cross-winds, head-winds, tail-winds.

The lines which circumscribe governmental units become more artificial by the day. State lines in the Chicago, New York and Washington, D.C. areas are probably more negative to good government than helpful. County lines in many areas, especially metropolitan areas, are similarly obsolete, their obsolescence perhaps showing most in school district organization and in law enforcement.

A major problem in 1968 is that of national minds in an international world, of 18th and 19th century thinking in a 20th century world which needs to be educating for the unknown needs of the 21st.

The role of government in our society is changing and the capacity of people to govern themselves is being challenged as never before. The idea that that government governs best which governs least was most relevant and accurate in 1787. Now in 1968 it is as out of date as yesterday's newspaper, as obsolete as button shoes, as 18th century as a lamplighter making his rounds when darkness falls. To me it is not a bit too idealistic to say that government governs best which is most responsive to the ever-changing needs of the people from which it comes.

Because of the knowledge explosion and technological advances in communications and transportation, we live in the day of the revolution of rising expectations on the part of have-not nations, minority groups, disadvantaged children, of parents whose children are captives of an inferior school district in Nebraska (and in our 1995 districts there are a few inferior ones).

The church, the school, the State of Nebraska and all the other states represented here, Commissioners of Education, State Departments of Education, Divisions of Vocational Education, are not immune to challenge and change. No person, no idea, no institution can say as I did years ago in some of our boyhood games -- Kings' Ex -- and then be free from the impact and the reality of change.

In between a consideration of these changing times and the influence of these times upon education and vocational education, I should like to take a moment to mention some things that are completely stabilized, completely solid, as far as I am concerned. I am thinking about my long-time commitment to vocational education as an important viable, integral part of a comprehensive program in education. I am thinking about my belief that excellence in education is not the monopoly of academic education, but can be found and must be always sought in vocational education. I am thinking about my commitment to having vocational education be an integral, wholesome, significant part of the organization of a state educational agency. I am thinking about the only justifiable role of any state educational agency -- that of providing enlightened leadership.

This is the season for Christmas greetings and good wishes for 1969. I wish that every Chief State School Officer in the United States could have the fine kind of personnel and leadership in his Division of Vocational Education as we in Nebraska have in ours. I wish every Chief could have the high type of working relationships that I have with our Vocational Education people.

Last summer there was a very important meeting held at the University of Nebraska. It was attended by less than 100 persons, some of whom might not have realized how significant it was. But let me assure you that it was more important than another meeting where 67,000 people saw K-State manhandle Big Red from Cornhuskerland. If any of you are from Oklahoma, I apologize for not citing the Nebraska-Oklahoma game. You see there were fewer people there and it was in Norman.

JARRING STATEMENTS came from Congressman Roman C. Pucinski (D.-Ill.) last June when he spoke to the National Seminar for Selected College Deans here in Lincoln. The very title of his talk was the initial jolt-- *"Career Education - Key to Our Survival as a Free People."* These words would suggest a most precarious state of the nation, and that certain changes needed in our educational curriculum are matters of the gravest concern.

The Congressman referred to the Poor Peoples March, which was held in our nation's capital last June:

> . . . one of the root causes of that march is simply this: our nation's educational system has failed the very people who . . . camped in Resurrection City . . . . It has provided them with no marketable skill. Nothing with which to provide them a decent living wage. No sound notions of how to go about looking for a job. Dressing for a job. Acting on the job. Or holding a job.

The Senator went on:

> Unemployment is always a tragedy because it is a waste of human resources. But *youth* unemployment is a national tragedy.
>
> . . . Almost $2 billion has gone to the states for vocational and technical education. The federal contribution has jumped since 1963 from 16 to 26 percent of total expenditures for vocational education. And we have multiplied high school enrollments in vocational education by 42 percent. Why then not congratulate ourselves? Why not boast of our achievements? And assume a job well done?
>
> --Because students with special needs -- the ones with the greatest unemployment -- have been forgotten. Fully one-third of our local school districts have no program at all for these hard core, youthful unemployed.
>
> --Because only a quarter of our high school students take vocational education. Just 3 million of a total 12 million students receive career education, even though 80 percent of them will never receive a college diploma.
>
> --Because technical fields are crying for manpower, But only four percent of vocational students are training for them . . . .
>
> --Because 50 to 60 percent of the high school graduates who go job hunting immediately following commencement are ill-prepared for work.

With the passage of the Vocational Education Act of 1968 Vocational Education really takes its place in the sun.

Actually, it has always had a bright place in the sun, but that place has been obscured by the smog of:

insufficient moral and financial support

intellectual snobbery - educational segregation

ineffective and inadequate communication resulting in a lack of understanding and appreciation

lack of relevance of too much that was labeled vocational education

over-sensitivity and defensiveness of some vocational educators.

So, in spite of the explosiveness of these days, the AVA meets in Dallas when the opportunity for rejoicing is bigger even than the great State of Texas. You -- we -- can rejoice very much as a successful candidate rejoices with election results.

And then morning comes -- the moment of truth -- the realization of tremendous responsibility that always accompanies opportunity. Now to use a homely and trite phrase -- it's put up or shut up.

In the next few minutes I'd like to place out in front of you -- on the counter so to speak -- some notions I have about what we need to do and why we need to do them.

WE WHO ARE CHIEF STATE SCHOOL OFFICERS:

Must do everything we can to keep vocational education in the ball park of comprehensive education. It is not an appendage. It never has been and must never be permitted to become one.

Must correlate, coordinate, integrate the several divisions in our state agencies better than ever before. (This is no small task -- ex. 6 or 8 different Federal programs for disadvantaged.) This means doing more than coming to Dallas to make a speech or listening approvingly to someone else make one.

We need to encourage a meaningful dialogue about society's educational effort in its entirety. This will not be easy for we have perhaps been too successful in making school and education synonymous. But unless and until we do accept and work with this total picture, says Lawrence A. Cremin (World Book Year Book Board, referred to earlier), we will not "recognize the incredible potential of the classrooms that have developed in industry, in churches, and in fraternal organizations, of some form of universal national service, of educational television." (Refer to World Herald clipping.)

Must do what we can to bring about necessary changes in teacher education for without well-trained, highly committed vocational teachers in the classrooms we shall do little more than spin our wheels.

Must do what we can to help our general school administrators in each of our states develop and act upon the insights we have spoken

briefly about and which will loom very importantly in these next few days.

WE WHO ARE DIRECTORS OF VOCATIONAL EDUCATION MUST:

See that our staff members renew, modify and enlarge their commitments to educational excellence, generally to comprehensive education and very specifically to vocational education so that they in turn can do the same for their colleagues at the local level.

Make the comprehensive high school live up to its promise

Begin in the elementary school to develop a meaningful, positive understanding of the world of work

Enlarge our concern for career development as opposed to sheer job skill training

Keep our instruction updated and relevant. (Rigidity, stuffiness, irrelevance are bad enough in the so-called liberal arts, but they're downright sinful and wasteful in vocational education. And they show up about as fast and about as disastrously as pre-forward pass football would on any Friday night or Saturday afternoon in October.) Again, parenthetically, Cecil Stanley and I to the extent of our budget, approve every legitimate request that will get our State House and Technical School staffs back into the world of work -- we're not sure this is as sufficiently well done at the local level.

Individualize instruction so that we can do a better job with the youngsters at the margins. We need to open up and loosen up opportunity for more education; "education that can start and stop and start again; education in which a student can enter the system easily and leave it easily; short-term education, long-term education, education of every sort and variety."

Involve actively the entire community and use it as the natural laboratory it really is.

Think bigger about vocational education, taking into account the fast-developing service and technical fields, as well as the broad range of vocational options beyond the high school

(Tell story of drunk who was jailed.)

Answer again the question of why are we here. State education agencies have many roles, many responsibilities, but the major one is that of providing "enlightened leadership." That's why we're here! And our attitude should be one of "Let's get at it!"

How important is it that we don't muff the golden opportunity vocational education now has?

First, we may never have a better opportunity if, indeed, we have another.

The continued success of public elementary and secondary education might very well be riding on how well we carry out the provisions and promises of the Vocational Education Act of 1968.

And in my mind there are no mights about the continued existence of public school vocational education. If we don't succeed -- you have, we have, I have had it, and I have some strong notions as to who is waiting in the wings to pick up the pieces.

These changing, explosive, terrible, wonderful times are a challenge to everyone but especially to those of us who in some small way are agents of change.

As you meet in 1968 and consider your role in 1969, may I suggest that you lift your head toward the stars, place your shoulder to the wheel, see that your sleeves are rolled up, keep your eyes on the ball and your feet on the ground.

If you are not contortionist enough to accomplish that, let me put it another way, somewhat more professionally -- let us do everything we can whoever we are, wherever we are, with whomever we work, to look at things as they are and to plan with courage and objectivity for what they should be.

Definition of Vocational and Technical Education[1]

by

Byrl R. Shoemaker

Director of Vocational Education

State Department of Education

Columbus, Ohio

[1]Presented at the 62nd Annual Vocational Convention, Dallas, Texas, December 11, 1968.

DEFINITIONS OF VOCATIONAL AND TECHNICAL EDUCATION

Technical Education

Technical education is an area of education more practical than the professional and more theoretical than that of the craftsman. A new area of education, not a watering down of professional education, and not an upward extension of trade or vocational education. A level of education to prepare for new levels of employment in business, industry, agriculture, distribution, health and the social sciences concerned with functions of design, development, testing, supervision. A program to prepare people to work as para-professionals in a team relationship with a professional.

Technical education is a level of education that is growing in keeping with our technological revolution. It's growth is based on the concept of the increasing requirements and changes in assignments in the professional field, and the shrinking number of professional people per thousand of population. This level of education is planned to prepare para-professional people in two-year post-high school programs to work in a team relationship with professional people in engineering, business,agriculture, distribution, health, social science, and public service.

Vocational Education

The primary purpose of vocational education is to equip persons for useful employment. The program is designed to serve the needs of people in two distinct groups. First, adults who have entered upon, and second, youth and adults who are preparing to enter occupations in agriculture, business, homemaking, distribution, trade, technical, and industrial fields requiring less than a college degree.

Vocational education is concerned with the preparation of people for construction, maintenance, repair and servicing occupations.

Vocational education helps to give definite purpose and meaning to education by relating it to occupational goals. It provides the technical knowledge and work skills necessary for employment; but is more inclusive than training for job skills. It develops abilities, attitudes, work habits, and appreciations which contribute to a satisfying and productive life.

Vocational education contributes to the general education needs of youth, such as citizenship, respect for others, acceptance of responsibilities; but it makes its unique contribution in the field of the preparation for work.

Examples of Team Relationships in Employment

Industrial

Professional	-	Mechanical Engineer
Technical	-	Tool and Die Designer
Skilled	-	Tool and Die Maker
Semi-Skilled	-	Drill Press Operator

Business

Professional	-	Accountant (College Graduate)
Technical	-	Business Data Computer Programmer
Skilled	-	Unit Record Operator
Semi-Skilled	-	Clerk

Agriculture

Professional	-	Agriculture Engineer
Technician	-	Agriculture Equipment Distributor

Skilled	-	Agriculture Equipment Repair
Semi-Skilled	-	Agriculture Equipment Delivery

Health

Professional	-	Dentist
Technician	-	Dental Hygienist
Skilled	-	Dental Assistant
Semi-Skilled	-	Dental Office Clerk

Social Science

Professional	-	Lawyer
Technical	-	Tax Technician
Skilled	-	Stenographer
Semi-Skilled	-	File Clerk

PROBLEMS OF ADMINISTRATION AND SUPERVISION OF INDUSTRIAL ARTS: THE ROLE OF THE STATE DEPARTMENT OF EDUCATION VOCATIONAL CONSULTANT

Edward T. Brown
Regional Curriculum Project
156 Trinity Avenue, S. W.
Atlanta, Georgia 30303

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THE ROLE OF THE STATE DEPARTMENT OF EDUCATION CONSULTANT

First let me report to you the source of my data for this report, the portions of the data that I will use, and then the two major questions that I will try to answer.

The Regional Curriculum Project is a six state cooperative activity centered in Atlanta, Georgia. The participating states are Georgia and the states that border on it. Our purpose was to help strengthen state department of education instructional consultant staffs (including the vocational education divisions) in their work with local schools.

As part of our status study we interviewed 180 of these consultants; sixty of them were in the vocational divisions and six of them were consultants of industrial arts. We also interviewed the directors of the instructional or curriculum services divisions and the vocational divisions.

Today, I will compare the vocational responses with those of instructional services, and then compare the vocational consultants' responses with those of their bosses—the directors of the vocational divisions. Thus my two questions are:

> How does the vocational consultant differ or work differently from the academic area consultant?
>
> Does the director have an accurate picture of how his vocational consultants work?

To begin the answer to question one, let's look at the first open response question asked by the interviewer when rapport with the interviewee had been developed. What did the consultant see the purpose of his job to be? The responses were recorded and later transcribed. A general summary of responses from instructional division staff would classify them as more general in describing the mode of performing the functions, as well as broader in scope and content than those from vocational division staffs. Instructional consultants used the terms "help," "provide," "give leadership," "work with," for example. Vocational staff used the terms "supervise," "interpret," "administer," "place," "coordinate," "set standards," "expand programs," and "serve as consultant;" in their context these latter terms seemed to be more definitive than those from the instructional consultants. In scope and content, instructional staff more frequently mentioned the whole school program, accreditation, awareness of a good curriculum, and awareness of new and changing curricula. Vocational staff, in contrast, more frequently restricted their comments to their program, the state plan, and instructional and program improvement. The emphases of vocational staff were on installing new specific programs, and expanding and improving existing programs. Instructional staff seemed to be more concerned with leading, assisting, and advising school staff in the total school program.

The first checklist type question concerned where requests for services came from and with what frequency; and I'll use the five-point continuum of never (1), rarely (2), sometimes (3), often (4), and frequently (5) to report results.

The two divisions were alike in getting requests from

principals - often,
superintendents - often,
SDE colleagues - often,
professional organizations - often,

colleges - sometimes,
lay groups - sometimes,

school boards - rarely.

Vocational consultants got frequent requests from teachers (4.22 mean response) but instructional staff received requests from teachers only sometimes (2.92). Also, vocational consultants often (3.06) were requested to do regulatory work but instructional staff were requested to do so only sometimes (2.32).

In contrast, instructional consultants got frequent (4.24) requests from supervisors while vocational staff received requests only often (3.16). And, instructional consultant staff often (3.60) received requests from district office staff but vocational people receive requests from them only sometimes (2.91).

Now, let's see with whom consultants work. The two divisions are alike in working with

groups of teachers - frequently,
individual principals - often,
SDE colleagues - often,
individual supervisors - often,

groups of superintendents - sometimes,
lay groups - sometimes,
college groups - sometimes,
professional organizations - sometimes,

school boards - rarely.

Now let's look at the differences—vocational staff work frequently with individual teachers (4.41) and individual superintendents (4.00) but instructional staff only work with these individually often (3.08 and 3.45). In contrast, instructional staff work with the following persons often while vocational staff only work sometimes with each group:

groups of principals (3.25 and 2.39),
groups of supervisors (3.37 and 2.70),
individual district office staff (3.10 and 2.67).

Also the instructional group sometimes worked with groups of district office staff while vocational staff only rarely (1.94) worked with them.

The next item concerned how SDE consultants contacted or maintained contact with local school people. As you would expect visits, mail (letters and newsletters), and telephone were frequently the means; team visits were often used; and TV only rarely was used. Vocational staff used the mail with slightly greater frequency than instructional services staff.

In following up initial contacts vocational staff made subsequent visits with greater frequency than did instructional people, who did so only often (4.11 vs. 3.75).

The consultants also were asked the extent to which they themselves and the department evaluated their work. Unfortunately, we did not ask also how evaluation was conducted. The responses on extent of personal evaluation were very similar: about half of the respondents in each group reported that they made extensive personal evaluation of their work; only about ten per cent in each group reported limited evaluation.

Consultants' reports on the extent to which the department evaluated their work varied. About one-third of the vocational staff reported extensive evaluation and only about ten per cent reported limited evaluation. In contrast, about ten per cent of the instructional consultants reported extensive evaluation and about 40 per cent reported only limited evaluation. The vocational division staff apparently received more evaluation. In case you're wondering, only eight per cent said no evaluation occurred and the others checked the rating moderate.

Another item asked the consultants to check the frequencies with which seventeen activities were performed in their work. Vocational and instructional consultants reported similar frequencies for eleven of them, including

participate in workshops - frequently,

assist in accrediting evaluations - often,
assist in evaluation - but not accreditation - often,
help develop curriculum guides - often,
write and distribute curriculum materials - often,
prepare bibliographical listings - often,
collect and distribute curriculum information - often,
provide names of resource people - often,

teach demonstration lessons - sometimes,
arrange inter-system visitation - sometimes,
work with lay groups - sometimes.

Vocational consultants performed each of six activities more frequently than did instructional consultants. Five of these six were performed frequently by the vocational staff and only often by the instructional staff:

visit in classroom (4.39 vs. 3.63),
help plan workshops (4.27 vs. 3.95),
participate in professional organizations (4.04 vs. 3.86).
help plan programs for Federal funding (4.03 vs. 3.45),
orient new personnel (4.03 vs. 3.04).

One other, "help select textbooks," was often done by vocational staff but only sometimes (2.53) done by instructional consultants.

Another list of these same activities was given to each consultant with the request that he check the five he considered most valuable—most productive for his work. Generally—that is, in most items—there was little correlation between the frequency with which the vocational consultant performed an activity and the relative importance he assigned to it. Here are some that were performed frequently, with the percentages of respondents who categorized them as being among the five most valuable:

visit in the classroom (78%)
orient new personnel (56%)
help plan workshops (56%)

In contrast, some of the activities performed frequently did not rate high in value:

help develop programs for federal funding (34%)
participate in professional organizations (14%)

Several activities that were often performed were rated to have high relative value—and this might be a suggestion that these activities should be emphasized more:

help evaluate programs (other than accreditation) (44%)
help develop curriculum guides (52%)

The longest list is of activities which vocational consultants reported performing often, but which very few of them included in their choices of the five most valuable activities:

work with lay groups (16%)
write and distribute curriculum materials (12%)
help in accreditation (8%)
help select textbooks (6%)
provide names of resource people (6%)
prepare bibliographical lists (4%)

This might be a suggestion that the vocational staff does too much of some things.

Thus ends the data report for the first question.

The second question had to do with whether the division directors knew what vocational consultants did. The six directors—one in each state department—were interviewed with the same instrument.

Their responses indicated that they knew consultants received requests from

principals - often,
SDE colleagues - often,
supervisors - often,
professional organizations - often;

and from lay groups - sometimes;

and from school boards - rarely.

Directors thought consultants got more requests from superintendents than they actually did.

Directors said frequently (4.17); consultants reported only often (3.68).

In contrast, directors thought consultants got fewer requests from teachers, for regulatory duty, from district office staff, and from colleges than the consultants reported.

Directors said consultants often (3.83) got requests from teachers; consultants reported frequent requests (4.22).

Directors thought consultants only sometimes got three kinds of requests that were really often made:

for regulatory duty (3.06 vs. 2.83),
from district office staff (2.91 vs. 2.33),
from colleges (2.87 vs. 2.17).

Directors' perceptions of whom consultants work with also was not as accurate as it could be; of the fifteen items in the checklist, the director thought consultants worked more often with seven categories than they actually did.

Directors were correct in their perceptions that consultants worked

frequently with individual teachers,
frequently with groups of teachers,
frequently with individual superintendents;

often with individual principals,
often with SDE colleagues,
often with professional organizations;

sometimes with college groups.

Now let's enumerate the directors' incorrect perceptions. Consultants reported often working with individual supervisors, rather than frequently as the directors said (3.33 vs. 4.17).

Consultants reported working with several categories sometimes while directors said often:

groups of supervisors (2.70 vs. 3.33),
individual district office staff (2.67 vs. 3.33),
groups of principals (2.39 vs. 3.33),
groups of superintendents (2.08 vs. 3.33),
lay groups (2.49 vs. 3.00).

Consultants reported working only rarely with groups of district office staff, but the directors thought this sometimes occurred (1.94 vs. 2.83).

The next items concerned how consultants contacted local school people and followed up their work. Directors and consultants agreed, except on the following points:

Directors didn't realize that consultants used the telephone as frequently as they did (4.18); directors estimated only often (3.67).

Directors thought consultants contacted local school people in teams only sometimes (2.83), though this occurred often (3.16).

In follow-up activities, directors did not know the extent to which consultants made subsequent visits. Consultants reported doing so frequently (4.11), and directors estimated often (3.83).

The directors of the vocational divisions had excellent perceptions of the extent to which the various work activities were performed by the vocational consultant staffs. For thirteen of the seventeen listed activites, directors' perceptions agreed closely with the consultants' reports.

Directors thought consultants performed two activities less frequently than the consultants reported performing them:

> Consultants frequently visited the classroom; directors said often (3.67).
>
> Consultants frequently oriented new personnel; directors said often (3.33).

With two other activities, directors thought the frequency of performance was greater than that reported:

> Directors said consultants helped develop curriculum guides frequently (4.67); consultants reported doing it only often (3.84).
>
> Directors said consultants collected and distributed curriculum materials frequently (4.17); consultants reported doing it only often (3.76).

From the same list of activities each director was also asked to select the five he thought most valuable to his staff. Except for three of the seventeen activities the directors' and consultants' perceptions can be said to have been in agreement; the proportions selecting each activity were comparable.

Directors placed less value than consultants did on "visiting the classroom" (50% vs. 78%).

A greater proportion of the directors than of the staff considered "helping to develop curriculum guides" to be valuable (38% vs. 52%).

Directors, more than staff, considered "collecting and distributing curriculum information" to be valuable (50% vs. 24%).

In quick summary, then, let's answer the two questions.

How do vocational division consultant staff differ from instructional division consultant staff?

Vocational staff receive requests from teachers and for regulatory visits more often, and less frequently receive requests from supervisors and district office staff. They more frequently work with individual teachers and individual superintendents and less frequently work with groups of principals, supervisors and district office staff, and with individual district office staff. To contact local school people they use the mails and team visits more often, and more frequently follow up initial contacts with subsequent visits. The vocational divisions make more extensive evaluation of the work of the consultants. They perform more frequently these activities: visiting the classroom, helping develop programs for federal funding, orienting new personnel, participating in professional organizations, helping plan workshops, and helping select textbooks. It should also be added that vocational staff perform with some frequency some activities which they do not consider to be valuable.

The second question was:

Does the vocational director know what vocational consultants do?

The director thinks the consultants get more requests from superintendents than they do; and he thinks they get fewer requests from teachers, district office staff, for regulatory duty, and from colleges than they do. He thinks the consultants work more frequently than they do with individual supervisors, groups of principals, groups of supervisors, individual district office staff, and groups of superintendents. Consultants work more frequently than the director thinks with groups of district office staff, school boards, and lay groups. The director doesn't know his staff uses the telephone, visit in teams, or follow up by subsequent visit as much as they do. The director is not aware that consultants visit classrooms and orient new personnel as much as they do; and the director thinks they help develop curriculum guides, and collect and distribute curriculum materials more than they do. Also, it should be added that the vocational consultants rate visiting classrooms higher, and helping develop curriculum guides and collecting and distributing curriculum information lower, than the director does.

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Speeches presented at the Board Members Meeting of the American Vocational Association's Annual Convention included: (1) "Economics of Vocational Education," by J. Robert Warmbrod, containing Some Quotes About the Economics of Vocational Education, Board Members' Concerns About the Economics of Vocational Education, Economics of Education, Benefits and Costs of Vocational Education, Measuring the Benefits of Vocational Education, Determining the Cost of Vocational Education, Reports of Research, and Some Conclusions, and (2) "Vocational-Technical Education: A Partner in Economic Development," by William H. Seals, containing a description of the South Carolina vocational-technical program. (DM)

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ECONOMICS OF VOCATIONAL EDUCATION*

J. Robert Warmbrod
Professor of Agricultural Education
The Ohio State University
Columbus, Ohio

Some Quotes About the Economics of Vocational Education

"Vocational education . . . is an expensive terminal training program . . . alternative programs for . . . on-the-job training should be considered" (Corazzini, 1966). These quotes are some of the conclusions from a case study, published in 1966, of the benefits and costs of vocational education in Worcester, Massachusetts.

Another study of the costs and benefits of vocational education resulted in these conclusions: "Our findings about the value of the vocational program in New York City high schools . . . are disquieting . . . our review . . . suggests that returns have been meager relative to the considerable social investment in the program . . . solid evidence in support of the city's vocational program is sadly lacking" (Taussig, 1968). These findings were first reported during a conference on vocational education held in 1967.

"Most studies indicate that vocational education costs about twice as much as other secondary education . . . . research also indicates that the monetary benefits are similar for the major secondary education curricula. If . . . monetary benefits are accepted as a proper performance index, . . . educational resources are being badly allocated. Greater educational benefits in monetary terms could be gained by shifting resources away from vocational education in high schools to other types of education, perhaps toward academic programs or

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work-study programs using the capital facilities of employers" (Kotz, 1967).

At best, these statements by economists cannot be construed as complimentary to vocational education. In fact, each questions seriously the economic value of vocational education in the public schools.

The foregoing statements, made in 1966 and 1967, should be considered in light of the following statement made by another economist in 1965. "I wish I could report that economists had taken a thorough look at the whole system of vocational training in the United States . . . . I wish I had a fistful of statistics to throw at you, including the effects of certain types of training on unemployment and earnings, and the costs and benefits of alternative training systems . . . but right now it is not possible. The plain fact is that economists have ignored the whole subject of vocational education almost completely and are just beginning to recognize its importance" (Rivlin, 1965).

The quotes I have cited are evidence that since 1965 the economists have not ignored vocational education. But let us take a further look at what other persons and groups have to say about the economics of vocational education. The Advisory Council on Vocational Education (1968) in their national assessment of vocational education mandated by the Vocational Education Act of 1963 concluded in their report, issued in 1968, that "Studies relating the costs of vocational education to the benefits derived have given it solid support. When controlled for differences in native ability, vocational students profit substantially as compared to others in both employment and earnings." So we get a different assessment of the economic value of vocational education from a group composed primarily of vocational and general educators and representatives of business and industry.

I shall quote the conclusions of one additional study in this overview of the economics of vocational education. This study, the most recent that I am

aware of, was conducted by an economist to compare the cost-effectiveness of vocational and nonvocational education in secondary schools. The conclusions read as follows: ". . . additional public funds should be spent on the vocational-technical curricula rather than on the nonvocational-technical senior high school curricula . . . . by comparing the costs of the different curricula with benefits measured in terms of earnings, the return to investment in vocational-technical education was shown to be considerably greater than the return to investment in the alternative curricula . . . . the evidence is clear. Vocational-technical education is an economically worthwhile investment for individuals and for society" (Kaufman, Hu, Lee, and Stromsdorfer, 1968).

Note that this economist's conclusions were different from the conclusions quoted earlier. I believe comments later in the paper will show that the study just quoted is not only the most recent but also the best designed and most thorough. These factors may have something to do with the conclusions reached.

Board Members' Concerns About the Economics of Vocational Education

With this overview of what some persons, primarily economists, are saying about the economics of vocational education, I want to make clear the context within which I am speaking. I conceive the primary role of members of boards of education to be policy development and enactment. I am sure that a great deal of the policy decisions with which you are concerned have to do with money--decisions about tax rates, allocation of funds to vocational education, and the allocation of vocational funds to the various programs and occupational categories within vocational education.

So it is within this context that I shall attempt two purposes. First, I want to acquaint you with what is being said and written about the economics of vocational education. Hopefully, this has been partially accomplished, but I shall summarize additional research later in the report. Second, I want to

acquaint you with some of the problems and concepts involved in the study and analysis of the economics of vocational education. Since as board members you must assess the findings and recommendations of others about vocational education, I hope a consideration of some of the problems and issues involved will enable you to evaluate critically the data and recommendations that are made available to you.

Most of my remarks are drawn from a review and synthesis of research on the economics of vocational-technical education which I prepared for the Center for Vocational and Technical Education at The Ohio State University (Warmbrod, 1968). Since most of the research and writing to which I refer is by economists, I wish to make it clear that I am not speaking for economists. My task is to report, as a vocational educator, what they are saying about the economics of vocational education. Naturally there will be some interpretation on my part.

Economics of Education

There are two basic questions underlying much of the research on the economics of investment in education. The first question is: How much more or how much less should we be investing in education? The second question which has specific and direct implications for vocational education is: How much more or how much less should we be investing in specific types of education? A substantial amount of funds was made available for vocational education for the first time by the Vocational Education Act of 1963. The maximum amounts authorized by the recently enacted Vocational Education Amendments of 1968 for grants to states for vocational education programs and research are three times the amount authorized by the 1963 legislation. So you can see that questions like Are these expenditures worthwhile? What returns can be expected from this program? Would an increase or decrease in funds for this particular type of vocational education result in

greater benefits? are very relevant, particularly for board members who are charged with making the final decisions about crucial policy issues.

The research of economists has consistently shown a favorable relationship between an individual's educational attainment and his prospects for employment and subsequent income. In other words, as the number of years of schooling completed increases so does a person's annual income and total lifetime income. Also, it is generally agreed that education yields rates of return on investment both from the point of view of society as a whole and for the individual that are at least as great as the financial returns to investment in corporate enterprise. Education produces a labor force that is more skilled, more adaptable to change, and more likely to develop imaginative ideas, techniques, and products that are critical to the process of expansion, growth, and adaptation to change. So education by contributing to worker productivity, in turn, has positive effects on economic growth. Economists estimate that about one-fifth of the growth in total national income in the United States during the past three or four decades can be attributed to the increased education of the labor force.

Benefits and Costs of Vocational Education

With these rather simplified generalizations about the economic value of education, perhaps we should take a closer look at the economics of vocational education. As with many public social programs today, vocational-technical education is being subjected to rigorous economic analysis. This analysis necessitates that both costs and benefits of vocational education be identified and quantified and, when possible, reduced to monetary terms. The assertion by some persons is that vocational education programs, particularly programs in the secondary schools, should be required to meet the test of economic efficiency, and that alternative methods for achieving the objectives of vocational education should be identified. The questions being raised pertain not only to the

efficient use of resources allocated to vocational education but also to a consideration of alternative programs to which present and additional funds could be allocated for accomplishing the objectives set forth for vocational education.

I shall describe briefly two approaches or techniques being used to measure the benefits and costs of vocational education. Probably the most familiar is cost-benefit analysis. Cost-benefit analysis, first used to assess the costs and probable benefits of natural resource development projects, has as its main concern the optimum allocation of resources. Stated simply, it is an evaluative technique that relates the total value of benefits of a program to the total costs of the program. Its application to vocational education requires that benefits as well as costs be expressed in monetary terms. It will be evident shortly that this requirement creates some difficult if not insurmountable problems. All costs and benefits of the program occurring over time are converted to a present value through discounting so that the present value of net benefits can be divided by the present value ~~to~~ of costs to yield a benefit-cost ratio. In general terms, then, the decision rule states that when the benefit-cost ratio exceeds one, the corresponding activity is economically superior to an alternative activity with a lower benefit-cost ratio. There are a number of conceptual and practical problems associated with the application of cost-benefit analysis to vocational education which it is not necessary to describe here.

Given the conceptual and practical constraints on the application of cost-benefit analysis to educational programs, economists propose that a more appropriate technique for the objective evaluation of vocational education is cost-effectiveness analysis. In cost-effectiveness analysis, indices of benefits of educational programs are retained in their raw form. The output variables or benefits do not need to be economic in nature nor do they have to be expressed in monetary terms. Examples of this type of output variable are trainee's

knowledge as measured on a written test, an employer's rating of the trainee, or some measure of the trainee's level of motivation. The outcome of cost-effectiveness analysis is a statement concerning the effect that a particular program or activity has on the selected output variables and on the cost of the activity. The statement could be in the form of a ratio but more often will take the form of a statement which specifies certain effects associated with the costs of the program.

Measuring the Benefits of Vocational Education

In treating education as a form of investment in human capital, economists differentiate between a consumption component and an investment component. By consumption is meant the immediate satisfaction or enjoyment that people obtain from schooling. On the other hand, investment is the use of resources not for consumption or immediate enjoyment but to increase future productivity. For example, it is argued that general education not only contributes to future productivity but makes life more enjoyable, hence general education is a mixture of consumption and investment. Some economists argue that vocational education, by definition, is undertaken to enhance future productivity and not for immediate satisfaction or enjoyment--or "not for fun" as one economist put it--therefore, expenditures ~~of~~ for vocational education are clearly classified as an investment (Rivlin, 1965).

This rationale makes vocational education very amenable to economic analysis for the return on investment in vocational education is not difficult to measure. In this context, returns to investment in vocational education can be expressed in the form of higher wages to the individual than he would have earned without training. So when data are available on the earnings of similar persons with and without vocational education, the rate of return on investment in vocational

education can be calculated. In other words, the cost-benefit model is appropriate for assessing the economic value of vocational education for benefits as well as costs can be reduced to monetary terms.

But there are others, including vocational educators as well as economists, who argue that there are benefits to vocational education other than directly observable monetary benefits. The monetary value of some of these benefits can be estimated while it is virtually impossible to place a monetary value on others. Some of these additional benefits include reduced unemployment, the holding in school of students who have little or no interest in academic subjects, reduced vandalism and juvenile delinquency, reduced welfare payments, increased motivation on the part of students for further schooling, and the like. Also not to be overlooked are those benefits of education to persons other than the recipient of the education--the recipient's immediate and future family, his neighbors, his employer and co-workers, and society in general. These benefits have been termed external benefits of education (Weisbrod, 1964).

Vocational education surely contributes to the nonmonetary and external benefits of education as does general education. The point I wish to make is this: the assessment of the benefits of vocational education should include outcomes other than monetary. I urge you to consider those benefits as you assess the economic value of vocational education in policy-development and policy-making.

There are other cautions that should be observed when reading studies on the economics of vocational education. A very crucial problem has to do with the use of control or comparison groups. The effects of an educational program on output variables cannot be estimated quantitatively and with a great deal of accuracy unless a control group is used in the design of the study. When graduates of vocational programs are compared with graduates of academic programs, it is rather obvious that these two groups of students may possess different socio-

demographic characteristics and different values, motivations, and other characteristics that affect labor market performance. Again I urge you to take particular notice of this element when vocational graduates are compared to graduates of academic and other nonvocational programs. This fact was overlooked or ignored in some of the studies cited at the beginning of the paper which found that vocational education graduate's performance in the labor market did not differ from graduates of other secondary school programs.

Determining the Costs of Vocational Education

I do not intend to go into any detail about the costs which should properly be considered in assessing the economic value of vocational education. It is important to realize, however, that costs to the individual and to the community include earnings foregone by students in addition to capital costs and current costs such as teachers' salaries, instructional materials, heat, and lights. The matter is far from being simple or resolved, however, for there is not agreement among economists conceptually or operationally concerning what constitutes social costs when cost-benefit and cost-effectiveness analysis is applied to vocational education. Those who have made special studies of this matter (Dueker and Altman, 1967) report that available cost data do not readily lend themselves to coherent analysis and that cost data pertaining to vocational education are not kept in a way which make them accessable for rigorous analytic and evaluative purposes. In fact, the researchers to whom I refer concluded that data are not easily obtained for realistic cost-effectiveness studies of vocational education. This conclusion makes clear another caution that should be observed in assessing cost-benefit and cost-effectiveness analyses of vocational education. That caution is that studies which rely on readily available data indicating cost or benefits, or both, have probably oversimplified the data system required by rigorous economic analysis.

Reports of Research

Now I wish to review briefly findings of some additional studies pertaining to the economics of vocational education. The case studies of benefits and costs of vocational education from which I quoted at the beginning of the paper revealed that (a) vocational education was relatively expensive, and (b) there were not significant differential wage rates in entry jobs for persons with and without vocational education. Hence, the conclusions which questioned the economic value of vocational education. Other pertinent and significant conclusions from these studies are that there were statistical and conceptual problems to be resolved and that there were major gaps in the data used. The researchers were aware of these conceptual and methodological problems, but since these studies were the first relating to the economics of vocational education, the conclusions about the economic value of vocational education received wider publication than did the conclusions of the methodological and conceptual deficiencies of the research.

By way of contrast, you will be interested in more details of the last study from which I quoted in my introductory remarks. As you recall the conclusions of that study about the economic value of vocational education were in rather sharp contrast to the conclusions of the studies just mentioned. The study to which I now refer, directed by Professor Kaufman at The Pennsylvania State University, had as its purpose the comparison, through cost-effectiveness techniques, of vocational and nonvocational education in secondary schools. The labor market performance of graduates of vocational curricula was compared to the labor market performance of noncollege attending graduates of nonvocational curricula, particularly the academic curriculum. An important feature of the design of the study was that the influence of socio-demographic variables such as sex, race, intelligence quotient, marital status, and socio-economic status on labor market

performance was investigated through regression analysis. The findings indicate that over a six-year period following graduation, given both sets of graduates with the same socio-demographic backgrounds, vocational graduates earned $3,456 more than graduates of the nonvocational curriculum, specifically the academic curriculum. Also during the six-year period, vocational graduates were employed 4.3 months more than graduates of the nonvocational curriculum. Hence, the conclusion that the return to investment in vocational education was considerably greater than the return to investment in nonvocational education. Another unique feature of this study is that nonmonetary and noneconomic benefits of the vocational and nonvocational curricula were investigated also (Kaufman, et. al., 1968).

Other studies appear to support vocational education as a sound investment. A study of the costs and returns from investments in a two-year post-secondary technical education program in North Carolina revealed social and private rates of return varying from 17 per cent to 25 per cent depending on the procedures used for projecting future earnings of technical education graduates. Each technical education graduate in this study was paired with a high school graduate of similar academic ability and geographic background (Carroll and Ihnen, 1967). Investigators studying the costs and returns from investment in rural technical schools in Minnesota found that both private and social rates of return on investment in the technical education programs were above or about equal to rates of return from other forms of investment (Pejovich and Sullivan, 1966).

Vocational educators at the University of Minnesota studying the returns to investment in education for farmers found that for each dollar invested by a farmer in a farm business management education program the farmer received a return of $4.20. When community benefits of the farm management education program were investigated, it was found that for each dollor invested in farm business manage-

ment education the community could expect to receive $9.06 in increased business activity (Persons, Swanson, Kittleson, and Leske, 1968).

Closely related to research on the economics of vocational education in the public schools is a considerable body of research using cost-benefit and cost-effectiveness models to evaluate manpower training and retraining programs. These studies, conducted by economists, have been well designed thereby allowing valid conclusions. Generally, the findings reveal benefits attributable to the manpower training programs sufficiently large over costs to leave little doubt but that the training programs are a sound economic investment. When the social-psychological benefits accruing from an unemployed worker returning to the labor market are considered, the researchers note that there is little doubt but that benefits heavily outweigh the costs of retraining (Mangum, 1967; Somers, 1965).

Some Conclusions

What conclusions can be drawn from the research and writings on the economics of vocational education? I propose the following for your consideration.

Research on the economics of vocational education is necessary if adequate and complete data are to be available for making informed decisions concerning the allocation of resources to vocational education. This kind of data will undoubtedly bear heavily on policy decisions about occupational education including the question of which agencies, public schools or otherwise can conduct occupational education programs most efficiently.

Cost-benefit and cost-effectiveness studies of public school programs of vocational education which have been reported to date yield findings which question the economic value of vocational education on the one hand and label it as a sound investment on the other. The number of studies that support the latter position exceed the number which support the former. If cost-benefit and

cost-effectiveness studies of manpower training and retraining programs are considered also, the evidence strongly supports occupational education as a sound investment. From a research point of view there is little doubt but that those studies which find vocational education to be a sound investment are, in general, designed to avoid to a greater degree the conceptual and practical problems mentioned earlier that limit the generalizations that can be drawn from the research. I urge you as policy-makers for vocational education not to accept without question the findings of research on the economics of vocational education.

The usefulness of cost-benefit analysis as an evaluative technique in vocational education is limited by the requirement that all benefits as well as costs be expressed in monetary terms. All benefits of vocational education are not monetary. Some benefits of vocational education, like the benefits of general education, are virtually impossible to quantify monetarily or otherwise. I propose that vocational education, like general education, also has a consumption component, if I may use the economist's term. By consumption component I mean that individuals receive immediate enjoyment and satisfaction from vocational education just as they do from general education. Anyone, economist or board member, who does not think that students enroll in vocational education "for fun" --if I may use a term referred to earlier--as well as to enhance future productivity has not had much contact with students enrolled in vocational courses--or English, mathematics, or history courses--in secondary schools. I urge you in assessing the effectiveness of vocational education to consider, in addition to monetary returns, those benefits which are nonmonetary in nature and difficult if not impossible to measure quantatively. Cost-effectiveness analysis is much superior to cost-benefit analysis as an approach for evaluating vocational education.

And finally, I maintain that vocational educators have a prominent role to play in designing and conducting studies pertaining to the evaluation of vocational education. The vocational educator should apply his expertness to the identification and measurement of benefits of vocational education, both monetary and nonmonetary, that are now overlooked or ignored. Vocational educators and economists can and should work together in designing cost-effectiveness studies of vocational education. Let us not overlook or forget that the chief concern of education, including vocational education, is the nurture and development of individuals. Then the chief concern in evaluating the effectiveness of vocational education is the assessment of change in behavior of individuals and not on measuring the monetary returns the investment yields. The following quote puts it well: "Vocational educators need to look at their teaching more in terms of what it does for the child, and less in terms of how well it meets someone's forecast of the community's industrial needs" (Meade and Feldman, 1966).

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VOCATIONAL-TECHNICAL EDUCATION: A PARTNER IN ECONOMIC DEVELOPMENT

By: William H. Seals, Chairman
South Carolina State Board of Education

Economic development is dependent on many factors, however, the most important of all factors is the availability of trained and/or trainable people. Therefore, an inventory of human resources is the first requirement in any plan for expansion or further development of an economic base.

Next in importance is a decision as to what part public education should play in the training of these human resources in an expanded development of programs in Industry, Businceess and Agriculture. At the same time, consideration must be given to what Industry, Business and Agriculture must do for themselves in sharing training responsibilities. In many states public education has made its commitment to an important role in ecomonic development through training programs of both quality and quantity. Perhaps no state in the nation has made a greater commitment than has South Carolina in the further development of its vocational program at secondary and adult levels and its development of a system of Technical Education Centers.

As is the case in all important programs, there must be solid cooperation with all agencies that have the potential for contributing to the program objective. The State Board of Education in South Carolina has been most fortunate in receiving splendid cooperation with County and local School Boards, State and County Development Boards, State Universities, the General Assembly, the Committee for Technical Education, The Employment Security Commission, professional organizations in Industry, Business and Agriculture, Service Clubs, and many other groups.

Planning for economic development must of necessity begin at the "grass roots" level in the area to be served. This is essential if objectives are to be met.

There must be research, studies and/or surveys, to determine the kind of training needed that will promote further economic growth in the particular area.

Only those courses that will meet manpower needs in the community, County or State should be offered in the beginning. This, however, should by no means eliminate training to meet National manpower needs. The process of determining the training to be offered requires close cooperation with Industry, Business and Agriculture. Not only have they contributed to the determination of what courses should be offered but they have assisted in determining course content. Many have gone further by helping to secure instructors. Others have permitted the use of their own personnel for instructional programs. Leaders in the above fields have also assisted greatly in determining space requirements for the various courses to be offered.

The organization and use of local advisory committees made up of personnel of employing agencies has proven most beneficial in all Vocational Programs in both Area and Technical Centers. Such committees assure that the training centers will be continually upgraded and kept up-to-date and that the programs will not become stagnant or meaningless. Advisory Committees can well serve as "built-in" systems of program evaluation. Advisory Committees offer the opportunity to become a safeguard against a very real problem in South Carolina, particularly with adults and out-of-school youth. That problem is the employment of such students before they complete their full training programs. Although such practices can be expected in a tight labor market, it is a very bad one. Such a practice is unfair to both the student and the training institution. The work of a student who accepts employment before he is fully trained may reflect very unfavorably on both the student and the Area Vocational Center or Technical Center and its instructional program.

All Vocational and Technical Education programs are supported by Federal, State and local funds. I believe it is both our responsibility and challenge to provide

the facilities, the equipment, the personnel, and the instructional programs necessary to provide job-skill training to all high school students, those who will enter employment after graduation, as well as college-bound students, and to make available continuous educational opportunities for post-high school students and adults to qualify for job skills or upgrade present skills. All this I believe should be done as a part of a comprehensive high school program. Why is job-skill training so necessary? The reason is twofold - first, to provide students not going to college with a skill to earn a living, and, secondly, to meet the tremendous manpower needs of Agriculture, Business and Industry. Today, there are more jobs than skilled people to fill them. I make no claim that Vocational Education can take a high school student and make a finished product of him or her, but surveys and studies have proven that we can make a boy or girl employable upon graduation from the 12th grade. It is, then, up to the individual student to further improve his or her skills in some form of post-high school training which we can provide.

In my State, recent studies show that students who graduated in recent years represented only 40% of those who began school 12 years earlier. The other 60% went out into a world of work without even the benefit of a high school education. Of the 40% who graduated, only approximately one-third went on to college. On a national basis, I am told that about 50% of those who enter the first grade remain to graduate and that only about one-third of those go on to college.

These statistics emphasize the opportunity and the challenge we have to prepare high school students for job entry and to prepare dropouts, post-high school students, and adults for jobs or to upgrade their skills in their present jobs.

It is my belief that the vast majority of the schools in our nation offering vocational training have been limited by finances, space, equipment, and trained personnel

to expand and offer the courses demanded by current times. These limitations have made it very difficult for most high schools to provide, in a single school system, a wide variety of courses to qualify students for job skills required by Agriculture, Business, Industry and other occupational fields.

Efforts to find a solution to these limitations led to the development of the Area Center concept. Passage of the Vocational Education Act of 1963, which provided matching funds for construction, gave impetus to the area centers. When I speak of "area centers", I think of two kinds or types of schools. The first is the area school that offers both vocational skills and the basic or academic skills that qualify students for a high school diploma. The other type is the center where students take their basic-education subjects in their home schools and are transported to the area center for vocational instruction and related work experience in the school shops and laboratories. Which type of center better serves the people varies with conditions within the states. The density of population and the distance between schools are, perhaps, the most important factors in making a determination. In my home state students take their basic training in their home schools and are transported to the centrally-located area center for their vocational training and work experience.

The area center does not eliminate previously established courses at the local high school, but serves to expand present offerings by adding new courses and special courses that cannot be economically provided in an individual high school. It is not a device to consolidate all vocational training under one roof or at one location.

The area school offers many advantages over single school programs. The centrally-located center:

I Makes vocational education available to more students.

II Is more economical in that only one facility and one instructional staff is needed, and one set of equipment serves several high schools.

III Provides for a broader curriculum and gives students a wider choice of courses.

IV Provides for more and better vocational guidance.

V Provides for the development of a more flexible vocational curriculum to enable students to receive instruction in other vocational areas which are related to their major fields of interest.

VI The area center, with its new and modern facilities, greatly improves the image and status of Vocational Education and brings pride and prestige to the community and the students by dignifying preparation for occupational life.

Since the passage of the Vocational Education Act of 1963, much has been and is being accomplished in the establishment of area centers throughout the nation. In South Carolina we have fourteen area centers completed and in operation, with eight more under contract and scheduled to be completed by September, 1969. The costs of the 22 schools vary from $400,000 to $1,000,000 each. Projected plans call for 52 schools within the next five years. To date a total of $13,701,186 has been expended and/or earmarked for construction of area centers since the passage of the 1963 Act.

I would now like to leave the high school program and talk about our Technical Education program.

The General Assembly created in 1961 the Advisory Committee for Technical Training, which led to the development of our present State Committee for Technical Education. Initially, this Committee was given two basic missions. To accomodate these responsibilities, two distinct programs were developed: (1) Special Schools, to meet the immediate manpower needs of new and expanding industry, and (2) Technical Education Centers, to assure industry that the State would be able to meet its short-range and long-range needs for middle management technicians.

The flexibility inherent in South Carolina's concept of Technical Education quickly established Special Schools as one of the most effective industrial development tools in the nation. Although this program is custom tailored to meet the needs of each individual industry, Special Schools generally provide full-scale recruitment and specific job training - - at no cost to the manufacturer - - while the new plant or addition is still under construction.

We've trained South Carolinians to become productive workers in virtually every type of industry in every section of the state - - metal working - - food processing - - chemical - - textiles - - candymaking - - and heavy machinery manufacturing.

In addition to the two programs just mentioned, the TEC Mission was broadened in 1961. This was through the assignment to the State Committee of the S.T.E.P. Program by Governor Russell. This is a federally financed program under the Manpower Development and Training Act, and is essentially a literacy program.

The industrial development program, started in South Carolina less than a decade ago, has already produced astounding results for the State and her people. We hear a lot about teamwork, but this industrialization has truly come about as the result of a team effort. TEC is just one part of this team, along with Governmental leadership, the State Board of Education, The State Development Board, Local Development Groups, and interests in the private sector.

The end result of this effort is reflected in the phenomenal growth statistics registered by our State in recent years, and - - more important - - in the bigger paychecks now being taken home by our industrial workers.

TEC's role in this industrialization has been primarily related to the Special Schools program which accomodates new incoming industry on a crash basis. But what about our TEC Centers? What kind of job are they doing?

As I mentioned, TEC Centers are designed to serve the needs of Business and Industry within their particular geographic area. The Centers provide their immediate labor market with highly trained technicians, who fill a critical vacuum in industry between the skilled worker and the professional engineer. In addition, the Centers make their facilities available for special schools training, where applicable, and a wide range of non-degree upgrading and development courses which are offered to meet a particular demand within the community when it arises.

The Centers share with our unique Special Schools a common philosophy: to meet the needs of industry, when and where they exist. In addition, both Special School and TEC Centers are built on the cornerstone of flexibility. They provide what new incoming and expanding industry need when and where it is needed.

In general, a TEC Center is a local institution which makes use of some state funds and whose activities are coordinated - - not dictated - - at the State level. Facilities, curricula, admissions requirements - - all are conceived at the local level, to meet local demands and standards.

There are eleven Centers in operation at this time with one more under construction in the Chesterfield-Marlboro area to go into limited operation in September, 1969. Four more have been proposed to fill the void of such facilities in the southwestern section of the State.

While our State's industrialization effort is conducted on a broad front by many cooperating agencies and groups, TEC's contribution is specific, emphatically demonstrating that South Carolina receives a quick and continuing return on its investment in Technical Education.

If we in the State of South Carolina expect to develop a position of national leadership in the production and distribution of goods and services, we must expand and improve our efforts to develop intelligent, skilled workers. If we hope even to

just maintain our present standards of growth, we must give more attention to technically educating our human resources.

One valuable lesson learned from World War II which must not be forgotten is that our final strength as a Nation, and as a State, in war or in peace, lies in the effective work skills and adaptability of our citizens. If we are to retain our position as a State, proud of our heritage and confident of our destiny, it is imperative that we continue to maintain our ability to produce, and the faculty of adjusting to demands of technological change placed upon our manpower and womanpower.

We can no longer afford to waste any of our South Carolina resources, least of all our human ones.

Occupation oriented education, in the post-high school area, Technical Education is one bulwark of our progress in which South Carolina may place her faith.

I must say that for too long in South Carolina we thought and acted as though every high school graduate must go to college and graduate - - now we know this is not true and never was. We believe that at last we have found a better answer than yesteryears' answer.

All evidence points up the fact that Vocational and Technical Education is the blue-print for economic growth and development in a State or sub-division. There is no substitute that has yet been found. Statewide programs of Vocational Education, and Technical Education, administered through State Boards for Vocational Education and directed by competent State and local personnel with desire, vision and ability and willingness to work, can be the most potent force in the economic growth and development of any State.

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Harris, Jo Anne
A Report on Project CVIS (Computerized Vocational Information System) In Operation at Willowbrook High School, Villa Park, Illinois.

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Pub Date - Mar69 72p.; Prepared for National Convention of Research Coordinating Unit Directors (Salt Lake City, March 25-27, 1969).

*OCCUPATIONAL GUIDANCE; *COMPUTER ORIENTED PROGRAMS; *OCCUPATIONAL INFORMATION; DECISION MAKING; *CAREER PLANNING; HIGH SCHOOL STUDENTS; *INFORMATION SYSTEMS; COUNSELOR FUNCTIONS; STUDENT RECORDS; STUDENT ATTITUDES; COUNSELOR ATTITUDES; QUESTIONNAIRES; OCCUPATIONS; COMPUTER ASSISTED INSTRUCTION
*PROJECT COMPUTERIZED VOCATIONAL INFORMATION SYSTEM; PROJECT CVIS; WILLOWBROOK HIGH SCHOOL; VILLA PARK; ILLINOIS

The purpose of this project is: (1) to provide a system by which a student may explore a wide range of occupations with some feedback from his own record of ability, achievement, and interest, (2) to teach a decision making process, (3) to accomplish these goals in an interesting manner, and (4) to assign to the computer the data retrieval and comparison functions it performs best, thus giving human counselors more time to perform the counseling which requires sensitivity and human communication. The sections of the report include theoretical framework, student use of the system, counselor use of the system, student reaction, and system design and programming. Examples of the 400 occupational briefs, computer programs, and scripts which allow students to learn and make decisions about the gateways to careers, military training opportunities, apprenticeships, local jobs, technical and specialized schools, community college occupational curricula, and 4-year colleges are provided. (CH)

VT008285

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A REPORT ON PROJECT CVIS [1]

(Computerized Vocational Information System)

In operation at Willowbrook High School

Villa Park, Illinois

Prepared for the National Convention

of Research Co-ordinating Unit Directors

Salt Lake City, Utah

March 25-27, 1969

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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VT008285

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[1] Presented by Miss Jo Anne Harris, Guidance Director, Willowbrook High School, Villa Park, Illinois.

INDEX

		Page
I.	Statement of Goals	1
II.	Summary of Development to Date	2
III.	The Theoretical Framework	5
IV.	The Student Use of the System	9
V.	The Counselor Use of the System	11
VI.	The Student Reaction to CVIS	13
VII.	System Design and Programming	14

APPENDICES

Script

Beginning List of Occupations

Sample Brief

Student-Record Displays

Questionnaire

1. Statement of Goals

It has been our experience in a real-life counseling situation at Willowbrook High School in Villa Park, Illinois, that the dissemination of meaningful information about occupations is our most difficult guidance task. Lack of counselor time, counselor knowledge about occupations, student interest in traditional vocational exploration, and ways to relate data about students to data about occupations are powerful deterrants to the development of relevant vocational guidance programs.

The Willowbrook team which created and designed CVIS has adopted the computer as a tool to help students explore occupations in the light of their own student records. In so doing, the CVIS team has defined the following goals:

1. To provide a system by which a student may explore (not choose) a wide range of occupations with some feedback from his own record of ability, achievement and interest.
2. To teach a decision-making process.
3. To accomplish the preceding goals in a way that is innovative enough to capture student interest.
4. To assign to the computer the data retrieval and comparison functions it performs best and to give human counselors more time to perform the counseling functions which require sensitivity and human communication.

We invite you to help us measure the degree of our success in accomplishing these goals.

II. Summary of Development to Date

The preliminary ideas about CVIS were formulated in the fall of 1966 by three counselors at Willowbrook High School - Miss Lorraine Foster, Vocational Counselor; Mr. Willis Farnham, and Miss JoAnn Harris, Director of Guidance. Later, the school psychologist, Mr. Robert Austin, and the Chairman of the Mathematics Department, Mr. James Boyd, were added to the team.

In December, 1966, the first proposal was submitted to the Research Co-ordinating Unit of the Illinois State Board of Vocational Education and Rehabilitation. The development of the project was outlined in five phases as follows:

Phase I - January-June, 1967

Two members of the team (Harris & Foster) were to investigate all other computer-based guidance projects in the United States and become cognizant of their goals and development. In addition, these two took an introductory course in computer programming in an attempt to understand the computer and its possible application to the guidance field.

Phase II - August, 1967

The five-member team proposed to spend three weeks in a brain-storming mode. The result was to be the theoretical and technical blueprint for Project CVIS, which is summarized later in this report.

Phase III - September, 1967-September, 1968

The purpose of this phase was to make all the preparations necessary for operational phase. The work accomplished in this phase was:

1. Writing of the computer program.

2. Investigation and ordering of appropriate computer equipment.

3. The formation of a computerized student record. This involved joint planning by all pupil personnel workers; the meshing of information from Guidance, registrar, health, reading, deans and psychological files onto one common worksheet; Key-punching of 1800 records; and planning of the format to be displayed on counselor terminals.

4. The securing of 400 occupational briefs. Three hundred-fifty of these were written for the project by the J.G. Ferguson Company (New York and Chicago) free of charge. Fifty were written by the Project Director. All were read, corrected, and key-punched.

5. Writing and testing of scripts.

Phase IV - October 1, 1968-September 30, 1969

This phase is the one in which we are currently engaged. It is the first year of operation with students. The computer equipment was installed in late October. November and December were de-bugging and technical problem months. Smooth operation of the system with both students and counselors began in January. Since January 6, 1969, 531 students have used CVIS on a voluntary basis. Also, during this phase the project team is involved in preliminary evaluation of the system and in massive development (script writing and programming) of the next phase.

Phase V - October 1, 1969-June 30, 1970

This phase will implement the decision-making scripts which

were written in Phase IV. These scripts and programs will allow students to learn and make decisions about all the gateways to careers-military training opportunities, apprenticeships, local jobs, technical and specialized schools, community college occupational curricula, and four-year colleges. This phase will also include the updating of vocational information, further evaluation, and the writing of some computer-assisted instruction courses for vocational education.

The work has been carried out on schedule as proposed in the original proposal. Further, the Board of Vocational Education has continued to support the project, currently at the 75% level, as proposals and reports are submitted one phase at a time.

III. The Theoretical Framework

After consideration of numerous systems of job classification, the Committee decided to use the two-dimensional classification system developed by Dr. Anne Roe, formerly of Harvard Graduate School of Education, and explained in her book, The Psychology of Occupations (John Wiley & Sons:New York, 1956). Roe's classification divided occupations into six levels by amount of training required and degree of responsibility assumed by the worker. Briefly, the six levels are as follows:

Level 1: Professional and Managerial 1. This level requires high-level policy-making decisions and independent, varied responsibilities. If education is a relevant factor, it is at the doctoral level or equivalent.

Level 2: Professional and Managerial 2. The distinction between this level and the above one is one of degree. These jobs may have autonomy, but the responsibility is less than in Level 1. These occupations normally require policy interpretation and education at or above the bachelor level, but below the doctoral.

Level 3: Semi-Professional & Small Business. These jobs have a low degree of responsibility for other people and application of policy or determination for self only. Education is normally high school plus technical school or the equivalent.

Level 4: Skilled. This and the following levels are classic subdivisions. Skilled occupations require apprenticeships or other special training experience.

Level 5: Semi-skilled. These occupations require some training and experience but markedly less than the occupations in Level 4. In addition, there is much less autonomy and initiative permitted in these occupations.

Level 5: Unskilled. These occupations require no special training or education and not much more ability than is needed to follow simple directions and to engage in simple repetitive actions.

Further, Roe divided occupations into eight categories of interest which are to some extent contiguously arranged. The eight interest categories are as follows:

1. Service. These occupations are primarily concerned with serving and attending to the personal tastes, needs, and welfare of other persons. Included are occupations in guidance, social work, domestic and protective services.
2. Business Contact. These occupations are primarily concerned with face-to-face sale of commodities, investments, real estate, and services. Also included are such occupations as demonstrator, auctioneer, and some kinds of agents. A distinction is made in sales occupations between those in which the job is personal persuasion, which belong here, and those in which the selling is routine, and the person-to-person relation relatively unimportant, which belong in the next group.
3. Organization. These are the managerial and white collar jobs in industry, business, and government, the occupations concerned primarily with the organization and efficient functioning of commercial enterprises, and of government activities.
4. Technology. This group includes occupations concerned with the

production, maintenance, and transportation of commodities and utilities. Here are occupations in engineering, crafts (including repair work), and the machine trades, as well as transportation and communication. Whether a physical scientist belongs in this group or in group 6 depends upon the setting in which he is working.

5. Outdoor. This group includes agricultural, fishery, forestry, mining and kindred occupations: the occupations primarily concerned with the cultivation, preservation and gathering of crops, of marine or inland water resources, of forest products, and other natural resources, and with animal husbandry.

6. Science. These are the occupations primarily concerned with scientific theory and its application under specified circumstances, other than technology.

7. General Cultural. These occupations are primarily concerned with the preservation and transmission of the general cultural heritage. The group embraces occupations concerning the subject usually called the humanities in college catalogues, but is broader than these. It includes occupations in education, journalism, jurisprudence, the ministry, linguistics, and so on. All elementary and high school teachers are included in this group. At higher levels teachers of science and art are placed in Groups 6 and 8.

8. Arts & Entertainment. These occupations include those primarily concerned with the use of special skills in the creative arts and in the field of entertainment. Both creators and performers are included.

At the time Roe published her book, she classified approximately 350 occupations in this way. In 1966, Dr. Roe and her associates at

Harvard reworked the list of occupations in accordance with the new Dictionary of Occupational Titles, and the new list consists of 650 occupations. An example of the classification system follows:

Level	Service	Business Contact	Organ-ization	Tech-nology	Outdoor	Science	General Cultural	Arts & Entertain-ment
I	Psychia-trist					Anthro-pologist	Lawyer	Architect
II	Social Worker	Public Relations Worker	Hospital Admini-strator	Airplane Pilot	Surveyor	Nurse,RN	Teacher	Actor
III	Police Chief	Sales Auto	Steno-grapher	Drafts-man	Forest Ranger	Dental Hygienist	Radio Announcer	Photo-grapher
IV	Practical Nurses	Driver Salesman	Book-keeper	Jeweler	Miner	Optician		Letterer
V	Waiter		Typist	Truck Driver	Chainman			
VI	Orderly		Mail Machine Operator	Cement Mason	Lumber-jack			Pinboy

Given this two-dimensional classification system, the Willowbrook Committee began to study the ways in which objective data available about every student could be related to it. It was decided to put student permanent records in computer storage, so that parts of the record can be used in helping a student make realistic vocational choices. In beginning operation, the committee decided to make use of cumulative class rank, composite score on a battery of tests, and an interest inventory, possibly the Kuder Preference Record. After data are gathered over years of experience, other items on the student record, such as grades in specific courses and personality ratings, may be used. The battery of tests which will be administered to sophomores yields a verbal and non-verbal ability score and six achievement scores

(Mathematics, Science, Reading, English, Social Studies, Solving Everyday Problems). The relationship of data to Roe's six levels will be as follows:

Cumulative Rank in Class									Composite Test Battery Score %
Top-One Quarter	1								Top Quartile 76-99%
1st-2nd Quarter	11								1st-2nd Quartile 51-99%
2nd-3rd Quarter	111								2nd-3rd Quartile 26-75%
2nd-3rd Quarter	1V								2nd-3rd Quartile 26-75%
3rd Quarter	V								3rd Quartile 26-50%
4th Quarter	VI								4th Quartile 1- 25%
KUDER		SOCIAL SERVICE	PERSUA -SIVE	CLER. COMPU- TATION	SCIENCE MECH. COMPU.	OUT- DOOR	SCIEN- TIFIC	LITER- ARY	ARTISTIC MUSIC LITERARY

The computer is instructed to use the higher of the two criteria (rank or composite score) for its reactions, which will be explained later, in case of discrepancy. Should the test score be considerably higher than the rank in class, the computer will call this to the attention of the student.

IV. The Student Use of the System

Any student who wants to use the computer terminals may do so by scheduling an appointment with Mrs. Morgan, our full-time CVIS secretary. Students may come in person to set an appointment or may fill out a department form called "Request to see Counselor." Student response has been very enthusiastic. In spite of using three terminals on an eight-hour day, we are currently booked solid for the next five weeks.

The first time the student comes to the system, he goes through the entire script as included in the appendix. The second time he comes to the system, he receives the message "Hi, John Jones, the last time you were exploring occupations in the field of technology that require technical school training. In case you've forgotten, here's that list again (appears on screen). What would you like to do today?" From this point, the student may continue with that list, recall new lists by choosing different areas of interest and/ or different educational plans, or recall the occupational briefs of any occupation which he may select from an alphabetical list. For your information in this report, we have included in the appendix a list of our 400 occupations by Roe category, and a sample occupational brief.

In addition to voluntary use of the system by any Willowbrook student, its use is being interwoven with a three-week vocational unit in the sophomore English curriculium. Our vocational counselor, Al Cocks, gives a general introduction to vocational exploration at the beginning of the English unit. He also administers and interprets the Kuder Preference Record. Next, he shows a 10-minute

tape-film presentation which has been developed by Willowbrook counselors to explain Roe interest categories by showing a sampling of jobs in our community which fall in each category. Then the CVIS secretary schedules all members of the class for use of the computer terminals. Finally, the class goes to the library, so that each student can explore an occupation of his choice in depth by use of resource material, and write a paper about it.

Next fall Willowbrook students will be able to get computer assisted instruction, make decisions and get information about military vocational training programs, entry jobs in DuPage County, technical and specialized schools within a 50-mile radius, local apprenticeships, the occupational curricula at the local College of DuPage and others, and 450 four-year institutions.

V. The Counselor Use of the System

Each of Willowbrook's twelve full-time counselors has an IBM 2260 display terminal in his office. On this terminal he can recall the student record of any one of his counselees. These displays are illustrated in the appendix. We have found that this capibility is not only time-saving to the counselor, but much more effective with the student. The test information display seems to do a much more adequate job with the student than any paper interpretation.

We have just added the records of our incoming Freshman class. The counselors are now holding half-hour interviews with each of our 900 incoming Freshmen and their parents. The personal data section is recalled during the interview for verification by the parents. Correction can be made by the counselor on-line. Next the test information frame is recalled for interpretation to student and parent. The third frame available now is "Recommendations for Sectioning". Here the counselor finds the computer recommendation for the selection of a Freshman Math course, Science course and English sectioning. These recommendations are possible because these three departments have outlined the selection variables based on past experience and follow-up. The programmer has written a program which instructs the computer to look at the appropriate sections of the test battery (ability score, Math achievement, and battery composite for Math) and the 8th grade teacher recommendation, to assign priority to the variables, and to make a recommendation.

In addition to student records, the counselor can recall any

one of the 400 occupational briefs on the screen by typing in JOB 101, for example. In this way he can discuss job duties, training requirements, employment outlook, etc. with a student in an interview situation.

Next year the counselor will also be able to recall information about all the kinds of training opportunities stored in the system.

VI. Student Reaction to CVIS.

We have enclosed here a copy of the questionnaire which each student is invited to fill out after using the computer system. Also enclosed on the following page is a tally sheet of the questionnaires which we have to date. Although this summary will capture the general highly positive attitude of the students, the real proof of acceptance is watching and listening to the student users.

They are saying some unexpected things, too. For example, it is easier to find out that you are in the 3rd or 4th quarter by ability or achievement from a machine than from a human. Second, the computer could care less about which occupations the student chooses to explore while human counselors make value judgments, or at least the kids think they do. A pretty girl said, "I wanted to read about being a nun. The computer didn't care, but my counselor would have laughed at me." A third reaction is that they want to "talk or type back to <u>him</u>." Our script has apparently succeeded in giving the computer a degree of human personality, which oddly enough is masculine in spite of its feminine unpredictability in the opening weeks of operation.

VII. System Design and Programming.

Here's a brief summary of the hardware we have:

At the College of DuPage (Naperville, Illinois, 15 miles away)

1 - 2030 360 Model 30 - 65K

2 - 2311 Files

1 - 2841 File Control

1 - 2701 for teleprocessing

1 - 1403 Printer

1 - 2540 Reader & Punch

1 - 2821 Reader Punch Printer Control

At Willowbrook High School

1 - 2848 Display Control Unit

1 - 1053 Typewriter Printer

14 - 2260 Cathode ray tubes

The Willowbrook equipment is connected to the computer by means of a private, high grade phone line with a data set at each end of the line.

The CVIS program is written in Basic Assembly Language in order to save space in core. The remote relay is controlled by another program which is written in B-Tam. These programs occupy 24K positions of core storage and operate in the foreground of the computer. Willowbrook is on-line from 7:30 A.M. until 10:00 P.M. five days per week.

Counselors use the system during the evening for 8th grade interviews, and the College of DuPage students are invited to use the Willowbrook equipment during this time.

Plans are being laid to invite high school students from all over the County to use the CVIS system during the summer months.

Project for the Computerization of Vocational Information
Beginning Script - October 1968

Hello. Please type in your student number and press the EOB key.

O.K. I think I've got your number. Is this right 456-123-789? If so, please press EOB. If not, please re-type your number.

1. (If first number was not correct) I now have your number recorded as _____. If this is right, press EOB. If not re-type your number and press EOB.
2. (If number is still incorrect) Since I am having difficulty getting your number right, please see the attendant.
3. I do not find your record in my memory, so we've got a problem. Please see the attendant.

Hi! Mary Swanson. That is your name isn't it? If yes, press EOB. If not, we've got problems. Type SOS and request help from the person in charge of the room.

By now you've learned that I'm not very sensitive about human relations. The only way that I know that you're ready for me to reply to you is for you to press the EOB key.

Welcome to CVIS. That stands for Computerized Vocational Information System. I'm an automated library of information about jobs. I have information stored in my memory about 400 jobs.

The information in my memory has been arranged in several ways - by area of interest, by amount of training required for the job, by job title.

You may decide what information you would like to look at. Since one of my best qualities is speed, I'll get any information you want very quickly.

In order to help guide you in your search for jobs, I've also made a mental note of all your semester grades since you entered high school and the results of ability & achievement tests which you have taken.

Ability, achievement and grades may or may not predict future success on the job, but they are the best things we now have to help you make selections.

Before we go to work I'd like to challenge you to a game of tic-tac-toe. I'll let you decide whether you want to move first or not.

1. I'll move first
2. I'll let CVIS move first
3. I don't want to play

(If student wants to play) Make your move by typing in the number of the "box" where you want to place your mark.

LOST - Maybe you'd like to try again at another time. Here's my record of wins. I'm so good at the game because I practice while you're out on dates.

WIN - Congratulations! You beat me! I want to show you my record though. I'm pretty good at the game. I practice while you're out on dates.

TIE - So, we've tied. Maybe we'll have a chance to play this off another day. Look at my total score.

We'd better get to work. You know how school is .....

Since there is probably a relationship between occupational level and your success as a learner, let's begin by looking at your school learning ability. We've tried to measure this by tests.

Try to remember how you did on the last tests you took. If you can't remember, I'll help you.

How do you think you did compared to students of your grade level in the nation?

1. Top Quarter
2. Second quarter
3. Third quarter
4. Bottom quarter

O.K. message - Good Show! You've got a good memory.

HIGH - Whoops! the last test placed you in the ..... quarter. You may want to check this out with a counselor.

LOW - No, you're in the ..... quarter. It's easy to under-rate yourself. Feel free to discuss this with a counselor.

We know that high school grades do well in predicting your success in further schooling. We really don't know how well they relate to your success on the job.

Try to think where you fit in your whole class based on your grade average at the end of last semester. Think about your semester grades in all your courses. Try to figure an average.

Now which quarter of the class do you think you'd be in?

1. Top quarter
2. Second quarter
3. Third quarter
4. Bottom quarter

O.K. - you're right. You may ask a counselor for your exact grade point average and rank if you'd like to.

HIGH - Maybe you forgot about some of your semester grades. Actually you are in the ..... quarter of your class. Talk this over with your counselor if you'd like to.

LOW - I have a pleasant surprise for you. You're in the ..... quarter.

Next we should think about your plans after high school. These plans will have a very definite relationship to the kind of job that you can get.

Keeping in mind what we have just reviewed about your school ability and achievement select the amount of education and job training you are planning immediately after high school.

Later of course, you may decide to continue your education. But for now just think of your initial plans and type the number of your choice from the list that follows.

1. No further training after high school
2. Some training on the job (2-6months)
3. Trade school or apprenticeship.
4. Junior College (2 years) or technical school (6-18months)
5. Four years of college.
6. Advanced degrees after college (PhD.orMD.)

(If test information and grades agree or if grades are the higher of the two)

The plan you have chosen seems fine.

(If test scores are higher than grades)

This plan seems fine based on your ability as measured by tests. At this time your grades are not as high as your ability predicts they could be.

OR

Your high school record indicates that you could successfully complete more education. Let's go ahead and look at the jobs available with this kind of training. You may want to dicuss this with a counselor.

OR

That's not going to be easy for you considering your grades this far. Your choice of school will be important. You may want to discuss this with a counselor. Let's go ahead and see what kind of occupations there are with this kind of training.

OR

Your choice puzzles me somewhat. I've compared it with your high school record, and the two don't seem to match. The best way to clear up this problem would be to see a counselor.

You may decide what you'd like to do. Just type in the number of your choice (only applies to the previous message)

1. Continue with this plan of education.
2. Sign off and see a counselor.
3. See the list of educational plans again.

Work can be fun if it's interesting to you. The occupations in my memory are divided into 8 broad areas of interest. I'm going to give you a brief description of each area. Then I'll give you the whole list again and ask you to choose one interest area which you wish to explore.

1. Service - People in these occupations help other people or serve their personal needs. Examples are beauty operator, policemen , social worker, counselor and psychologist.

2. Business Contact - People in these jobs sell products or services by face to face contact with other people. This includes real estate, stocks & bonds, services and all kinds of products.

3. Organization - These are the "white collar" jobs in business, industry, and government. They are typically "desk jobs" which are necessary for the smooth running of business and government activities. Examples are hotel manager, stenographer, typist, and certified public accountant.

4. Technology - People in these jobs are concerned with the production, maintenance, and transportation of goods and utilities. They are often those who put scientific theory into action and like to work with things rather than people. Engineers, pilots, electricians, plumbers, computer programmers are included in this group.

5. Outdoor - People who work outside are included in this group. They include forest rangers, surveyors, landscape architects, construction workers and farmers.

6. Science - People in these occupations do scientific research, develop scientific theory and apply it. This group includes all the health careers. Other examples are chemists, biologists, dental hygenists, and X-ray technicians.

7. General Cultural - People in these occupations attempt to pass on to others the culture of our society. These occupations are related to the kind of subject matter called "Humanities" Examples are elementary school teachers, high school teachers, lawyers, ministers and journalists.

8. Arts & Entertainment- This group includes the performing artists, such as actors, T.V. performers and musicians. It also includes artistic occupations such as architects, interior decorator and photographers.

Now I'll show you the list again.

1. Service
2. Business Contact
3. Organization
4. Technology
5. Outdoor
6. Science
7. General Cultural
8. Arts & Entertainment

Please choose one that you would like to explore and type in the number.

You showed significant interest in this field on the last interest inventory you took

OR

This is a new area of interest for you. The interest inventory which you recently took showed interest in .....go ahead and explore this new one.

Now I'm ready to give you a list of suggested jobs to explore. I'm going to type these for you so that you can keep the list. I can only type at 180 wpm so please be patient with me.

I'll tell you more about any or all of the occupations on this list, or, if you don't see any jobs that you are interested in, you can get a new list by changing your choice of interest area and/or amount of education beyond high school.

Your wish is my command:

1. I would like to find out more about some occupations on this list.
2. I want to receive a new list in this category.
3. I want to make new decisions about education and/or interest and receive a new list.
4. I want to sign off.

Please type in the number of your choice.

(If number 1) - Just type in the number of the occupation on the list which you wish to explore.

I'm going to give you a short definition of this job first.

Now do you want to know more about this job, or do you want to choose another job on your list?

1. I want more information
2. I want to choose another job on the list.
3. I want to make new decisions and receive a new list.
4. I want a new list in this category of interest and education.
5. I want to sign off.

Please type in the number of your choice.

(If number 1) O.K. I'm going to type this for you so that you may keep it.

You may tear off what I have just typed for you and take it home with you. If you want more information, check the vocational resource room.

I am interested in your reaction to this occupation.

What did you like about it? You may type in as many answers as you like:

1. The things I would do on the job.
2. The amount of training required for the job.
3. The salary.
4. The future of the occupation.
5. The kind of life I would have in this occupation.
6. The kind of people I would meet.

What did you dislke about this occupation? You may type in as many answers as you wish:

1. The things I would do on the job.
2. The amount of training required for the job.
3. The salary.
4. The future of the occupation.
5. The kind of life I would have in this occupation.
6. The kind of people I would meet.

SECOND TIME ON SYSTEM

You liked me well enough to come back again,huh! Good. The last time you had me chasing occupations in the interest category of ..... with..... level of training. In case you've forgotten, here's that list again.

You may continue with this list, get a new one, or explore individual occupations. Which one would you like to do?

THIRD TIME ON THE SYSTEM

So this is your 3rd trip! I'm glad you find me useful. What would you like to do today?

1. Look at your list again.
2. Get a new list of occupations.
3. Choose any occupation from my 400.

Computerized Vocational Information System

Beginning List of Occupations

September, 1968

SERVICE 1-6

100 Lawyer

102 Physician

104 Psychiatrist

106 Psychologist

108 Veterinarian

SERVICE 1-5

120 Agricultural Extension Worker

110 Caseworker

112 Child Welfare Worker

114 Counselor, Rehabilitation

116 Counselor, School

118 Counselor, Vocational

122 FBI Agent

124 Home Demonstration Agent

126 Librarian

128 Minister

130 Mortician

139 Nun

650 Nurse, RN

132 Occupational Therapist

136 Physical Therapist

138 Priest

106 Psychologist

140 Pupil Personnel Worker

142 Rabbi

143 Social Worker, Community

145 Social Worker, Group

*

152 Teacher, Elementary

154 Teacher, Kindergarten

156 Teacher, Secondary

158 Teacher, Special Education

160 Travel Agent

*150 Social Worker, School

SERVICE 1-4

650 Nurse, RN

160 Travel Agent

168 Policeman

170 Policewoman

174 Steward, Airline

176 Stewardess, Airline

SERVICE 1-3

162 Barber

164 Beautician

178 Cook, Restaurant

168 Policeman

170 Policewoman

172 Practical Nurse

174 Steward, Airline

176 Stewardess, Airline

SERVICE 1-2

178 Cook, Restaurant

180 Firefighter

182 Service Station Attendant

184 Taxi Driver

186 Waiter

188 Waitress

SERVICE 1-1

190 Bellman

194 Nurses' Aide

196 Orderly

186 Waiter

188 Waitress

BUSINESS CONTACT 2-6

No Occupations

BUSINESS CONTACT 2-5

212 Buyer

214 Manufacturers' Salesman

216 Public Relations Worker

218 Traffic Agent

160 Travel Agent

BUSINESS CONTACT 2-4

212	Buyer
220	Insurance Agent
222	Salesman, Auto
224	Salesman, Real Estate
226	Salesman, Securities
214	Salesman, Wholesale
160	Travel Agent

BUSINESS CONTACT 2-3

224 Salesman, Real Estate

226 Salesman, Securities

BUSINESS CONTACT 2-2

230 Retail Sales Clerk

232 Routeman

234 Salesman, Door to Door

BUSINESS CONTACT 2-1

230 Retail Sales Clerk

ORGANIZATION 3-6

300 Economist

ORGANIZATION 3-5

310 Account Executive

312 Actuary

* 314 Certified Public Accountant

316 Computer Programmer

318 Controller, Bank

728 Editor, Book

729 Editor, Magazine

730 Editor, Newspaper

320 Hospital Administrator

322 Hotel Manager

324 Industrial Traffic Manager

325 Interpreter

326 Loan Officer, Bank

330 Personnel Worker

332 Production Manager, Advertising

216 Public Relations Worker

334 Purchasing Agent

328 Research Director, Advertising

218 Traffic Agent, Air

* 340 Bank Cashier

ORGANIZATION 3-4

338	Accountant
342	Bank Clerk
344	Bank Teller
351	Buyer
316	Computer Programmer
034	Dispatcher, Airline
346	Employment Interviewer
367	Food Store Manager
348	Hotel Housekeeper
322	Hotel Manager
324	Industrial Traffic Manager
373	Restaurant Manager
350	Secretary-Stenographer

ORGANIZATION 3-3

352	Adding Machine Operator
342	Bank Clerk
354	Billing Machine Operator
356	Bookkeeper
358	Bookkeeping Machine Operator
351	Buyer
360	Calculating Machine Operator
362	Clerk Biller
364	Computer Console Operator
366	Conductor, Railroad
367	Food Store Manager
368	Hi Speed Printer Operator
370	Hotel Clerk
348	Hotel Housekeeper
334	Purchasing Agent
372	Receptionist
373	Restaurant Manager
230	Retail Sales Clerk
374	Station Agent, Railroad
376	Tape Librarian

ORGANIZATION 3-2

378	Cashier, Box Office
380	Cashier, Check-out
382	Clerk typist
384	Clerk, Mortgage
386	Clerk, Shipping
388	Clerk, Waybill
389	Duplicating Machine Operator
390	Key Punch Operator
391	Mail Carrier
392	PBX Operator
393	Policy Writer
394	Postal Clerk
372	Receptionist
232	Routeman
395	Tabulating Machine Operator
396	Tape Perforator Operator
446	Telegrapher - Teletypist
398	Telephone Operator
399	Ticket Agent, Airline

ORGANIZATION 3-1

309 Sorting Machine Operator

TECHNOLOGY 4-6

001 Aerospace Engineer

002 Agricultural Engineer

003 Ceramic Engineer

004 Chemical Engineer

005 Civil Engineer

006 Electrical Engineer

007 Industrial Engineer

008 Mechanical Engineer

009 Metallurgical Engineer

010 Mining Engineer

TECHNOLOGY 4-5

015	Air Traffic Controller
316	Computer Programmer
016	Dispatcher
001	Engineer, Aerospace
002	Engineer, Agricultural
003	Engineer, Ceramic
004	Engineer, Chemical
005	Engineer, Civil
006	Engineer, Electrical
007	Engineer, Industrial
008	Engineer, Mechanical
009	Engineer, Metallurgical
010	Engineer, Mining
011	Engineer, Ship
017	Medical Laboratory Technician
018	Pilot
019	Systems Analyst
020	Technical Writer

TECHNOLOGY 4-4

025	Appliance Serviceman
035	Computer Console Operator
026	Computer Personnel
316	Computer Programmer
027	Dental Hygienist
028	Dental Laboratory Technician
034	Dispatcher, Airline
029	Draftsman
011	Engine Occupations, Ship
096	Engineering Technician
030	Flight Engineer
031	Ground Radio Operator
032	Layout Man
033	Machinist
676	Medical X-ray Technician
018	Pilot
404	TV-Radio Repairman

TECHNOLOGY 4-3

040 Aircraft Mechanic
025 Appliance Serviceman
042 Arc Cutter
044 Auto Body Repairman
045 Auto Mechanic
046 Blacksmith
047 Boilermaker
048 Bookbinder
049 Bricklayer
050 Broadcast Technician
408 Cable Splicer - Electric Power
052 Cable Splicer - Telephone
053 Cameraman
054 Carman
055 Carpenter
056 Compositor
057 Conductor, Freight
058 Coremaker
059 Detailer
060 Electrician - Construction
061 Electrician - Maintenance
062 Electroplater
063 Electrotyper
064 Elevator Contructor
011 Engine Occupations, Ship
067 Instrument maker
068 Instrument repairman
069 Jeweler
070 Lather
032 Layout Man
409 Lineman, Electric Power
071 Lineman, Telephone
072 Locomotive Engineer
073 Locomotive Fireman
033 Machinist
074 Make up Man
075 Marble Setter
410 Mechanic, Air Conditioning & Refrigeration
076 Meter Installer
077 Meter Repairman
078 Meter Tester
079 Millwright
411 Moulder, Foundry
081 Optical Mechanic
082 Ornamental Iron Worker
083 Patternmaker
084 PBX Installer & Repairman
085 Plumber, Pipefitter
086 Printer
087 Proofer
473 Re-inforcing Iron Worker
088 Roofer
089 Set-up Man
090 Sheetmetal Worker

TECHNOLOGY 4-3 contd.

441 Stationary Engineer
191 Stonehand
092 Stonemason
093 Stripper
094 Structural Iron Worker
096 Technician, Engineering
097 Telephone Installer
098 Telephone Repairman
400 Tool & Die Maker
401 Tool Designer
402 Tracer
403 Troubleman
404 TV-Radio Repairman
405 Watch Engineer
406 Watch Repairman
407 Welder

TECHNOLOGY 4-2

042 Arc Cutter
420 Asbestos Insulation Worker
422 Boiler Operator
423 Brakeman, passenger
424 Bus Driver, Inter City
475 Bus Driver, Local
051 Business Machine Serviceman
056 Compositor
428 Floor covering Installer
427 Glazier
428 Inspector
429 Linotype Operator
430 Load Dispatcher
* 431 Machine Tool Operator
432 Monotype Operator
453 Oxygen Cutter
454 Painter
433 Paper Hanger
434 Photo Typeset Operator
435 Plasterer
436 Platemaker
437 Powerplant Equipment Operator
438 Power Truck Operator
439 Pressman
440 Proofreader
090 Sheet Metal Worker
441 Stationary Engineer
442 Stationary Fireman
443 Stereotyper
091 Stonehand
092 Stonemason
444 Sub-station Operator
445 Switchboard Operator
446 Telegrapher - Teletypist
448 Telephoner, Railroad
449 Terrazzo Worker
450 Towerman, Railroad
402 Tracer
451 Turbine Operator
452 Welding Machine Operator

* 074 Make-up Man
474 Mechanic, Diesel
469 Milling Machine Operator

TECHNOLOGY 4-1

421	Brakeman, Freight
460	Concrete Paver
461	Coremaker Helper
465	Frameman
466	Groundman
467	Hod Carrier
475	Mechanic, Diesel
468	Meter Reader
470	Painter, Production
471	Platter
472	Power Shovel Operator
474	Truck Driver

OUTDOOR 5-6

500	Archaeologist
503	Geologist
613	Geophysicist
622	Petrologist

OUTDOOR 5-5

506	Agronomist
546	Deckman, Ship
540	Farmer, Corn & Wheat
541	Farmer, Cotton & Tobacco
543	Farmer, Dairy
544	Farmer, Livestock
507	Fish & Wildlife Specialist
509	Forester
512	Hydrologist
515	Landscape Architect
010	Mining Engineer
622	Petrologist
518	Professional Athlete
521	Range Manager
524	Recreation Worker
525	Ship Captain
536	Soil Conservationist
527	Soil Scientist
530	Surveyor
656	Tectonophysicist

OUTDOOR 5-4

546 Deckman, Ship

533 Forest Technician

518 Professional Athlete

525 Ship Captain

530 Surveyor

OUTDOOR 5-3

049 Bricklayer

539 Bulldozer Operator

052 Cablesplicer, Telephone

055 Carpenter

540 Farmer, Corn & Wheat

541 Farmer, Cotton & Tobacco

543 Farmer, Dairy

544 Farmer, Livestock

409 Lineman, Electric Power

071 Lineman, Telephone

473 Re-inforcing Iron Worker

403 Troubleman

530 Surveyor

OUTDOOR 5-2

539 Bulldozer Operator

542 Cement Mason

554 Construction Laborer

546 Deckman, Ship

473 Re-inforcing Iron Worker

454 Painter

OUTDOOR 5-1

548 Brakeman, Freight

554 Construction Laborer

466 Groundman

467 Hod Carrier

551 Trackworker, Railroad

SCIENCE 6-6

600	Anatomist
601	Anthropologist
500	Archaeologist
603	Astronomer
604	Astrophysicist
605	Biochemist
630	Biologist
606	Biophysicist
607	Botanist
670	Cartogtapher
608	Chemist
641	Dentist
609	Ethnologist
610	Geochemist
644	Geodesist
611	Geographer
503	Geologist
645	Geomagnetician
612	Geomorphologist
613	Geophysicist
614	Linguist
648	Mathematician
615	Meteorologist
616	Microbiologist
617	Mineralologist
618	Oceanographer
652	Optometrist
619	Osteopathic Physician
620	Paleontologist
621	Pathologist
622	Petrologist
102	Physician
623	Physicist
624	Physiologist
629	Podiatrist
104	Psychiatrist
106	Psychologist
625	Sedamentologist
626	Statistician
627	Stratographer
108	Veterinarian
628	Zoologist

SCIENCE 6-5

506 Agronomist
600 Anatomist
630 Biologist
607 Botanist
670 Cartographer
608 Chemist
640 Climatologist
120 County Agricultural Agent
641 Dentist
642 Dietitian
643 Entomologist
644 Geodesist
611 Geographer
645 Geomagnetician
613 Geophysicist
124 Home Demonstration Agent
646 Home Economist
647 Horticulturist
512 Hydrologist
648 Mathematician
017 Medical Laboratory Technician
649 Medical Record Librarian
673 Medical Technologist
615 Meteorologist
616 Microbilogist
130 Mortician
650 Nurse, R.N.
651 Nutritionist
618 Oceanographer
652 Optometrist
653 Pharmacist
654 Pharmacologist
136 Physical Therapist
623 Physicist
655 Seismologist
626 Statistician
656 Techtonophysicist
658 Wood Scientist
657 Wood Technologist

SCIENCE 6-4

671	Chiropractor
027	Dental Hygienist
028	Dental Laboratory Technician
672	Laboratory Technician
649	Medical Record Librarian
673	Medical Technologist
650	Nurse, R.N.
674	Podiatrist
675	Reporter
096	Science Technician
536	Soil Conservationist
676	Medical X-ray Technician

SCIENCE 6-3

672	Laboratory Technician
690	Optician
172	Practical Nurse
096	Science Technician

SCIENCE 6-2

No Occupations

SCIENCE 6-1

No Occupations

GENERAL CULTURAL 7-6

500	Archaeologist
300	Economist
700	Historian
100	Lawyer
702	Librarian
704	Political Scientist
706	Professor, College
708	Sociologist

GENERAL CULTURAL 7-5

728	Editor, Book
729	Editor, Magazine
730	Editor, Newspaper
325	Interpreter
126	Librarian, Public
128	Minister
739	Newspaper reporter
139	Nun
704	Political Scientist
138	Priest
706	Professor, College
142	Rabbi
760	Radio-TV Announcer
152	Teacher, Elementary
154	Teacher, Kindergarten
156	Teacher, Secondary
158	Teacher, Special Education
740	Urban Planner
742	Writer

GENERAL CULTURAL 7-4

760 Radio-TV Announcer

GENERAL CULTURAL 7-3

No Occupations

GENERAL CULTURAL 7-2

No Occupations

GENERAL CULTURAL 7-1

No Occupations

ARTS & ENTERTAINMENT 8-6

800 Architect

ARTS & ENTERTAINMENT 8-5

310 Account Executive, Advertising

810 Actor

812 Actress

814 Art Director

816 Commercial Artist

818 Dancer

820 Fashion Designer

824 Interior Decorator

826 Layout man, Advertising

828 Musician

518 Professional Athlete

760 Radio-TV Announcer

830 Singer, Singing Teacher

832 Teacher, Art

834 Teacher, Music

742 Writer

ARTS & ENTERTAINMENT 8-4

810 Actor

812 Actress

816 Commercial Artist

850 Copywriter, Advertising

818 Dancer

852 Floral Designer

824 Interior Decorator

826 Layout man, Advertising

854 Model

856 Photographer

518 Professional Athlete

ARTS & ENTERTAINMENT 8-3

852 Floral Designer

854 Model

518 Professional Athlete

ARTS & ENTERTAINMENT 8-2

No Occupations

ARTS & ENTERTAINMENT 8-1

No Occupations

MAINTENANCE ELECTRICIANS

MAINTENANCE ELECTRICIANS MAINTAIN AND KEEP MANY DIFFERENT TYPES OF ELECTRICAL EQUIPMENT IN GOOD WORKING ORDER PRINCIPALLY BY DETECTING AND REPAIRING DEFECTIVE EQUIPMENT BEFORE A BREAKDOWN OCCURS.

MANY WORK IN MANUFACTURING PLANTS, ESPECIALLY OF TRANSPORTAION EQUIPMENT, CHEMICAL AND ALLIED PRODUCTS, AND NONELECTRICAL MACHINERY. OTHERS WORK IN COMMUNICATIONS, PUBLIC UTILITIES, MINES, AND WHOLESALE AND RETAIL TRADE ESTABLISHMENTS.

THE MAINTENANCE ELECTRICIAN MAY READ BLUEPRINTS OF WIRING, MAKE MATHEMATICAL CALCULATIONS, AND SPLICE, SOLDER, BUT, BEND, MEASURE, AND INSTALL WIRE AND CONDUIT. HE MAY REPAIR OR REPLACE WIRING, FUSES, TRANSFORMERS, COILS, OR SWITCHES. HE USES PLIERS, WRENCHES, SCREW-DRIVERS, KNIFE, DRILLS, AND OTHER HAND TOOLS FOR INSTALLATION AND REPAIR WORK; AND TEST LAMPS, AMMETERS, VOLT-OHM METERS, AND OSCILLO-SCOPES TO TEST EQUIPMENT.

A PROSPECTIVE MAINTENANCE ELECTRICIAN NEEDS GOOD HEALTH, COLOR VISION, MANUAL DEXTERITY, AND MECHANICAL APTITUDES. HE SHOULD HAVE A KEEN SENSE OF RESPONSIBILITY AND BE SELF-RELIANT. AT LEAST A HIGH SCHOOL EDUCATION IS NECESSARY, INCLUDING SUCH COURSES AS ALGEBRA, TRIGONOMETRY, PHYSICS, ELECTRICITY, AND SCIENCE. ABILITY TO READ BLUEPRINTS IS IMPORTANT. BECAUSE ELECTRICAL WORK IS CHANGING, IT IS ALSO IMPORTANT THAT THE MAINTENANCE ELECTRICIAN ACQUIRE ADDITIONAL FORMAL TRAINING FROM TIME TO TIME.

OFTEN THIS ELECTRICIAN NEEDS TO KNOW LOCAL BUILDING CODES, AND WHERE A LICENSE IS REQUIRED, IT CAN BE OBTAINED BY PASSING A COMPREHENSIVE EXAMINATION.

MOST MAINTENANCE ELECTRICIANS APPLY FOR APPRECTICESHIPS THROUGH THE UNION OR THROUGH THEIR EMPLOYER, BUT IT IS DIFFICULT TO GET ACCEPTED INTO THIS PROGRAM AS THE NUMBER OF APPRECTICES ARE LIMITED TO A PROPORTION OF THE NUMBER OF JOURNEYMEN EMPLOYED BY A UNION SHOP.

ADVANCEMENT DEPENDS TO A LARGE DEGREE ON OPENINGS AND ON SENIORITY IN THE UNION.. THEY MAY ADVANCE TO CONSTRUCTION ELECTRICIAN, FOREMAN, OR PLANT MAINTENANCE SUPERINTENDENT.

THERE IS AN INCREASE IN JOBS EXPECTED IN THIS FIELD DURING THE NEXT DECADE DUE PRIMARILY TO THE EXPECTED INCREASE IN IDUSTRIAL ACTIVITY, THE NUMBER OF NEW HOMES TO BE BUILT, AND THE CONTINUAL INCREASE IN ELECTRICAL DEVICES. MANY NEW JOBS WILL OCCUR IN THE PRIMARY METAL, FABRICATED METAL, MACHINERY, AND CHEMICAL INDUSTRIES.

THE HOURLY WAGE FOR MAINTENANCE ELECTRICIANS IN A SURVEY OF 77 CITIES IN 1964 RANGED FROM $2.07 TO $3.63. APPRENTICES START AT ABOUT 60 PERCENT OF THE JOURNEYMANS WAGE.

A MAINTENANCE ELECTRICIAN SPENDS MOST OF HIS 40 HOUR WORKWEEK INSIDE, IN A VARIETY OF CONDITIONS SUCH AS A CLEAN, CARPETED OFFICE, OR A NOISY, DRAFTY INDUSTRIAL PLANT. THE WORK MAY INCLUDE CLIMBING LADDERS, WORKING IN CRAMPED QUARTERS, OR IN SPACIOUS COMFORTABLE SURROUNDINGS. THIS ELECTRICIAN MAY WORK AT NIGHT OR OVER WEEKENDS, BUT OVERALL HE IS LESS AFFECTED BY SEASONAL WORK THAN THE CONSTRUCTION ELECTRICIAN.

THE WORK OF THE MAINTENANCE ELECTRICIAN IS NOT CONSIDERED A ROUTINE JOB. HE WILL NOT USUALLY WORK IN ANY ONE LOCATION FOR ANY LENGTH OF TIME, AND WILL COME IN CONTACT WITH A VARIETY OF PEOPLE WORKING IN DIFFERENT CAPACITIES IN HIS PLACE OF EMPLOYMENT.

S T U D E N T R E C O R D D I S P L A Y S

PROJECT CVIS

January, 1969

Willowbrook High School
Villa Park, Illinois

I. Personal Data

```
098634926          PERSONAL DATA

DOE, JOHN CHARLES                    M        10-24-43
17W211 SUNSET DR., LOMBARD
MR. & MRS. ALEXANDER DOE
ELECTRICAL ENGINEER                   BUS:  627-4340
CHILDREN:  08                        HOME:  834-6210
BIRTH:  CHICAGO, ILL.

HEALTH:        HLL     EPL           R     D     P
ENTRY:  09-14-66    JEFFERSON          06-15-70
RE:                WD                  WD
```

II. Test Information - EDS Display

EDS LOCAL	1	2	3	4	5	6	7	8	9
NON VERBAL			xxx						
VERBAL				xxx					
ABL COMP				xxx					
READING				xxx					
ENGLISH			xxx						
MATH				xxx					
BASIC COMP				xxx					
SCIENCE			xxx						
SOC STUD				xxx					
SOLVING					xxx				
TOTAL COMP				xxx					

II. Cont. Test Information: National Merit and ACT

NATL NORMS			1	2	3	4	5	6	7	8	9
NMSQT	ENG	26						xxx			
	M	25					xxx				
02-68	S	25					xxx				
	SS	24					xxx				
	COMP	25						xxx			
ACT	ENG	22				xxx					
	M	24					xxx				
10-68	S	27						xxx			
	SS	26						xxx			
	COMP	26						xxx			

II. Cont. Test Information: College Boards and PSAT

CEEB NATIONAL NORMS

		1	2	3	4	5	6	7	8	9
PSAT VERB	48					xxx				
MATH	47					xxx				
CEEB VERB	500						xxx			
MATH	510						xxx			
03-68										

II. Test Information - Cont. - Kuder

KUDER INTEREST 09-68

	1	2	3	4	5	6	7	8	9
OUTDOOR	xxx								
MECHANICAL		xxx							
COMPUTATION							xxx		
SCIENTIFIC								xxx	
PERSUASIVE		xxx							
ARTISTIC			xxx						
LITERARY			xxx						
MUSICAL		xxx							
SOC SERV		xxx							
CLERICAL				xxx					

II. Test Information - Cont. - Composite Display

COMPOSITES	1	2	3	4	5	6	7	8	9
EDS ABL						xxx			
EDS BASIC						xxx			
EDS TOTAL						xxx			
PSAT V 51					xxx				
PSAT M 49						xxx			
NM C 26					xxx				
ACT C 27						xxx			
SAT V 490					xxx				
SAT M 510						xxx			
RANK				xxx					
GRADE EQUIV	F		D		C		B		A

III. Course and Grade Information
By Year

FRESHMAN YEAR 1967-68

	SEM 1	2		CR
ENGLISH 9	B	B		200
GENERAL SCIENCE 9	C	B		200
ALGEBRA 9	D	C		200
INTRO BUS 9	B	C		200
P E 9 HEALTH	B	B	C	100
				900

GPA 2.45
RANK 225/898

III. Course and Grade Information
By Department

MATHEMATICS

		SEM 1	2	CR
66-67	ALGEBRA 9	B	B	200
67-68	GEOMETRY 10	B	C	200
SS-68	MATH 11	C	C	200
68-69	COMP PROG I		B	100
69-70	MATH 12	C	C	200
				900

III. Course and Grade Information - Continued - Health & P.E. Display

PHYSICAL EDUCATION

		1	2	H	CR
66-67	P E 9	B	B	C	100
67-68	P E 10	C	B	C	100
68-69	P E 11	C	C	F	75
69-70	HEALTH 11			D	25
69-70	P E 12	C	C	D	100
					400

III. Course and Grade Information - Continued - Current Schedule

CURRENT SCHEDULE

PER	COURSE	TEACHER	ROOM
1	ENG 11	DCL	122
2	AMER HIST 11	FCC	212
3	CONC ORCH	PCS	4C
4	HR/LUNCH	FNH	132
5	P E 11-10		GYM
6	MATH 11	DMK	324
7	BUS PSYCH 11	JMV	316
8			

IV. Attendance and Tardiness

ATTENDANCE & TARDINESS

	DAYS ABS	TIMES
1	10	0
2	12	1
3	8	2
4	7	0
5		

V. Personality Ratings

PERSONALITY	EXC				ABV				AVER				BLW				POOR			
	F	S	J	S	F	S	J	S	F	S	J	S	F	S	J	S	F	S	J	S
PURPOSE					1	2	3		2	2	1		1							
INITIATIVE					1	2	3		1	1	1		1				1	1		
LEADERSHIP					2	1	1		2	2	1			1	1				1	
RELIABILITY					2	1	3		2	3	1									
WORKING OTHERS					2	1	3		2	1	1			2						
CONCERN OTHERS					1	2	3		2	2				1	1					
EMOTIONAL HLTH					4	2	3			2					1					
APPEARANCE					4	3	2			1					2					
COURTESY	1	1	2		1	2	2		2	1										

VI. Extra Curricular Activities

	ACTIVITIES
FR	MEMBER, GIRLS CLUB
SOPH	PRES, GIRLS CLUB; MEM, SPANISH CLUB
JR	REP, STUDENT COUNCIL; TREAS, DEBATE CLUB
SR	

WILLOWBROOK HIGH SCHOOL
GUIDANCE DEPARTMENT

The following questions are being asked in order to find out how valuable Project CVIS has been to you and to help us improve it for you and others. We appreciate your time in answering these questions:

1. Did you learn anything about yourself from using the computer?

   Yes 63% No 22% Don't Know 15% If yes, please explain _____

   _____

2. Did you learn anything new about occupations? Yes 68.7% No 17%

   Don't Know 14.3% If Yes, please explain _____

   _____

3. If you received a list of occupations today, did it give you some new ideas which you had not had before? Yes 46.8% No 42.6% Don't Know 10.6%
   If Yes, please explain _____

4. Will you explore these further? Yes 77.5% No 11.6% Don't Know 10.9%

   How? Counselor 22.2% Computer 30.8% Vocational Library 33.3%
   Other 13.7%

   Please explain _____

5. What was your reaction to "machine counseling" _____

   Student reaction to Question 5:
   Exciting, Neat, Cool, Real Great, Fun, Enjoyable - 100
   Friendly - 2
   Amazing, outstanding, Hard to Believe-7
   Lots of good information - 11
   Confusing - 2
   O.K. or Pretty good - 9
   Not impressed - 1
   Accurate & Objective - 2

   What did you like about it? :
   Everything - 8
   Good, accurate information - 52
   Interesting & different - 18
   Fun - 5
   Speed & Ease - 34
   Helped me make a decision - 5
   Mechanical perfection - 2

5. What did you like about it? : It knows a lot - 4
The way it talks - 11
Friendliness, knows my name - 3
I can control it - 2
It's honest - 1
It knows my capabilities - 1

5. What did you dislike about it? : Nothing - 96
Record not stored - 4
Not enough information about occupations - 6
Machine too slow - 1
Machine too fast - 2
Did not have desired occupations - 5
Student didn't have enough time - 4
Operation was complicated - 4
Machine won at Tic-Tac-Toe - 4
Machine gets mixed up - 2
Machine did not make a choice for student - 1

6. Were you locking for some occupations which you did not find in our beginning selections? Yes 26% No 74% If yes, which ones _____

_____

7. Was the "conversation" with the computer interesting? Yes 97.3% No 2.7%

Do you have some suggestions for improving it? _____

_____

8. Were the occupational briefs informative? Yes 96% No 4%
Were they interestingly written? Yes 97.8% No 2.2%
Do you have any suggestions for improving the occupational briefs?

_____

_____

9. What could we do to make this experience more helpful to you? _____

_____

_____

10. Please make any comment about today's use of the computer which would help us know how you feel about CVIS. _____

_____

_____

_____

Student reaction to Question 10:

" CVIS is a new and unique experience, and will be helpful to every student".

"I think this service is great! It gives you information in a "fun" sort of way".

"I think it is great, and maybe in the future itwill be in every school".

"The computer is an unfortunate by-product of our age. We have to live with it, maybe even like it".

"I'm glad there is a computer like CVIS that can give us an idea about our future".

"This is one of the best ways a school can help a student find out what he can be. It tells him what requirements are necessary, which I feel the student wants to know first".

"I thought it was a real experience. I have never done anything of the kind before and it has helped me quite a bit".

"It is quick, students don't have much other time".

"Unfortunately it's impersonal, but it is probably more exact, and unbiased toward the individual".

"He is very helpful and useful, and I think that they should get one in every school to help out other students as well as Willowbrook's".

VT 008 387

Proceedings of the National Association of Industrial and Technical Teacher Educators (NAITTE) Executive Committee Business Meetings at the Annual Vocational Convention of the American Vocational Association (62nd, Dallas, Dec. 8-13, 1968).

MF AVAILABLE IN VT-ERIC SET.
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*CONFERENCE REPORTS; INFORMATION DISSEMINATION; TECHNICAL EDUCATION; *INDUSTRIAL ARTS; *TRADE AND INDUSTRIAL EDUCATION; *TEACHER EDUCATORS; *POLICY; DIARIES; ORGANIZATIONS (GROUPS)
NATIONAL ASSOCIATION OF INDUSTRIAL AND TECHNICAL TEACHER EDUCATORS; *AMERICAN VOCATIONAL ASSOCIATION CONVENTION, DALLAS, TEXAS, DECEMBER 9-13, 1968; NAITTE

These proceedings of the 1968 National Association of Industrial and Technical Teacher Educators convention include: (1) NAITTE Constitution and By-Laws and Directory of Officers, (2) minutes of three executive committee meetings, (3) minutes of two General Session and Business Meetings, (4) treasurer's report for 1967, (5) "Industrial Arts Policy and Planning Committee Summary Report" by Lowell Carver, (6) Trade and Industrial Education Policy and Planning Committee Summary Report, (7) 1968 annual report of the "Journal of Industrial Teacher Education," (8) Annual Membership and Circulation Report 1967-1968, (9) "A Preliminary Report on the Industrial Teacher Education Directory 1968-1969" by G.S. Wall, (10) "A Comparison of Selected Contemporary Programs in Industrial Education" by Leslie H. Cochran, and (11) "Effects of Field and Job-Oriented Technical Retraining on Manpower Utilization of the Unemployed" by David Bjorkquist. VT 008 388 (ARM Summer 1969) is the 1967 proceedings. (EM)

VT008387

ED0 31587

Proceedings

of the

National Association of Industrial
and Technical Teacher Educators (NAITTE)
Executive Committee Business Meetings
at the 62nd Annual Vocational Convention

of the

American Vocational Association

Dallas, Texas

December 8-13, 1968

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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VT008387

The National Association of Industrial and Technical Teacher Educators

- Industrial Arts Teacher Educators
- Vocational-Industrial Teacher Educators
- Technical Teacher Educators

Constitution and By-laws
Directory of Officers

1969

The National Association of Industrial
and Technical Teacher Educators

CONSTITUTION AND BY-LAWS

Article I. Name, Affiliation, and Meetings.

Section 1. This professional group shall be known as the National Association of Industrial and Technical Teacher Educators.

Section 2. It shall exist under affiliation with the Industrial Arts Division and Trade and Industrial Division of the American Vocational Association, Inc., and shall hold its major annual meeting in connection with the annual convention of that Association.

Section 3. Other meetings may be called by the President and shall be called by him upon petition signed by twenty members of the Association.

Article II. Aims or Purposes.

Section 1. This Association shall earnestly endeavor:

a. To bring about closer cooperation among those engaged in preparing and improving teachers and other workers in health occupations, industrial arts, technical education, and trade and industrial education;

b. To stimulate and to take appropriate action concerning practices and proposals in industrial and technical teacher education and in other educational phases related thereto;

c. To increase the contribution of the group to the extension and perfection of all phases of industrial arts and vocational and technical education;

d. To foster research and recording of experiences in line with professional interests;

e. To promote other common desires of the group.

Article III. Membership

Section 1. Eligibility for membership shall be assumed to embrace all persons interested in the problems relating to the preparation of teachers for health occupations, industrial arts, technical education, and trade and industrial education.

Section 2. There shall be only two types of memberships: active and honorary.

Section 3. An active member is a member whose dues in the Association are paid to date.

Section 4. Honorary Membership.

a. Honorary members must:

(1) Be nominated by an active member. The nomination must be presented to the Secretary in writing. Recommendations including detailed specifics concerning the achievements of individuals nominated for honorary life membership are the responsibility of the individual or group making the nomination. The application deadline is two months prior to the annual meeting. Individuals to be honored will be notified.

(2) Be approved for honorary membership by a majority of the Executive Committee.

b. Nominees for honorary membership shall be drawn from three categories of persons:

(1) Industrial and technical teacher educators who have retired by reason of age or disability or who have at least twenty-five (25) years of service in this field, and have:

(a) Made significant contributions to this organization.

(b) Been paid active members during the last ten years of their careers. Individuals who enter the profession late in life (generally after 55 years of age) are exempted from this criterion. Failure to comply

with this criterion due to illness, foreign service or other extenuating circumstances will not operate against a person who is recommended.

(2) Other industrial and technical teacher educators who have made contributions which are clearly outstanding, such as:

(a) Promotion to positions of distinction which lend prestige and direction to industrial and technical teacher education, as a college presidency, vice presidency, deanship or similar office.

(b) Successful completion of research projects which are of monumental value to the field.

(3) Those persons outside the field of industrial and technical teacher education who have made contributions of outstanding value to the organization and its efforts.

Article IV. Dues and Assessments

Section 1. Membership dues or assessments shall be fixed by the Executive Committee except when the Association, at an annual meeting, shall act in these matters. There shall be no dues or assessments required of honorary members.

Section 2. Only members whose current and past dues and assessments have been paid in full shall be eligible for election to office or appointment to committee.

Article V. Officers and Committees.

Section 1. The officers shall consist of:

* president
* four vice-presidents (two from industrial arts education; two from trade and industrial and technical education)
* editor JITE
* secretary-treasurer
* three trustees

Section 2. The three trustees shall act as an Auditing Committee.

Section 3. There shall be such standing committees as may be designated in the By-Laws or authorized at an annual meeting and such special committees as may be appointed by the President.

Section 4. The office of secretary-treasurer shall be continuous.

Article VI. Amendments

Section 1. Any member may propose amendment to this Constitution or to its By-Laws at any annual meeting. There need be no advance notice of such intention. The proposal shall be read and submitted in writing, signed by the member.

Section 2. A two-thirds vote of members present shall be necessary for amendments. Twenty members shall be the minimum number present and voting.

By-Laws

Item 1. Election of Officers.

Officers shall be elected by a majority vote at the annual meeting, and they shall serve until their successors have been duly chosen.

Item 2. Election of Trustees.

One trustee shall be elected each year for a three-year term, by majority vote, at the annual meeting.

Item 3. Nominating of Officers and Trustees.

The President shall appoint a nominating committee of three at the opening of each annual meeting. This committee shall offer one person in nomination for each vacancy. Other nominations may be made from the floor at the business session before the vote.

Item 4. Duties of Officers.

Officers shall perform the usual duties and have the customary powers, respectively.

Item 5. Vacancies.

In case the President is absent from any meeting or unable to complete his term, the

other members of the Executive Committee shall request one of the vice-presidents to serve as president. Other offices which may become vacant shall so remain until the next election, and the President shall assume or delegate the duties and powers interrupted. In case the office of president becomes vacant, the position shall be filled by a vice-president chosen by vote of the Executive Committee.

Item 6. Ex Officio Service.

The President shall be, ex officio, a member of all standing or special committees, except the Nominating Committee, with power to vote. He shall not serve as chairman.

Item 7. Committee Reports.

Chairman of all committees shall make their own reports to the annual meeting and shall file such reports with the secretary-treasurer.

Item 8. Rules of Order.

Roberts' Rules of Order shall be in effect, except as the Association may otherwise direct.

Item 9. American Vocational Association Advisory Council representative.

The President shall each year appoint two members to serve as representative and alternate, respectively, to the American Vocational Association Advisory Council. One of the representatives shall be the Immediate Past President.

Item 10. Term of Office.

The terms of office for the President and the Vice-Presidents shall be one year and two years, respectively.

Item 11. Executive Committee.

The elected officers and trustees, the Immediate Past President and editor of the Journal, shall constitute the Executive Committee of the Association and shall meet immediately following the annual meeting during the AVA Convention. In addition to the duties stated and implied in the Constitution and By-Laws, they shall plan the program and determine policies for the ensuing year, review present projects, and approve or

reject new projects of the Association. They shall prepare plans to implement all projects undertaken by the Association.

Item 12. Fiscal Year.

The fiscal year of the Association shall be established as starting November 15 and ending November 14 of the following year.

Item 13. The Industrial Arts Policy and Planning Committee and the Trade and Industrial Education Policy and Planning Committee Representatives.

When a vacancy is anticipated, the nominating committee shall offer one person in nomination and one person as an alternate to serve as representative to the Policy and Planning Committee. The appointment shall be for a term of three years.

Item 14. The Vocational Industrial Clubs of America Advisory Council Representatives.

When a vacancy is anticipated, the nominating committee shall offer one person in nomination from trade and industrial education and one person as an alternate from trade and industrial education to serve as representative to the Vocational Industrial Clubs of America Advisory Council. The appointment shall be for a term of one year.

Item 15. AVA Council on Teacher Education Representatives.

Through the AVA Council on Teacher Education, the Association shall be affiliated with the Associated Organizations of Teacher Education. Four representatives (two from industrial arts education and two from trade and industrial and technical education shall represent the Association on the AVA Council on Teacher Education. When a vacancy occurs, the President shall appoint the replacement. The appointment shall be for a term of four years.

The National Association of Industrial Teacher Educators

OFFICERS (1937-1968)

President— 1937
George E. Myers, University of Michigan

Vice Presidents—
Robert W. Selvidge, University of Missouri
Oakley W. Furney, Asst. Commissioner for Vocational Education, New York State Education Department, Albany

Sec.-Treas.—
Homer J. Smith, University of Minnesota

Trustees—
Russell L. Greenley, Purdue University
V. P. McKinley, University of Alabama
Lynn E. Stockwell, University of California

President— 1938
George E. Myers, University of Michigan

Vice President—
V. P. McKinley, University of Alabama
Lynn E. Stockwell, University of California

Sec.-Tres.—
Homer J. Smith, University of Minnesota

Trustees—
Laura Murray, University of Texas
F. Theodore Struck, The Pennsylvania State College
Arthur B. Mays, University of Illinois

President— 1939
V. P. McKinley, University of Alabama

Vice Presidents—
David F. Jackey, University of California
Verne C. Fryklund, Wayne State University
E. L. Williams, Texas A. & M. College

Sec.-Treas.—
Homer J. Smith, University of Minnesota

Trustees—
A. B. Mays, University of Illinois
F. Theodore Struck, The Pennsylvania State College
Helen Livingstone, New York State Education Department

President— 1940
Verne C. Fryklund, Wayne State University

Vice Presidents—
Kenneth C. Beach, Louisiana State University
Lynn A. Emerson, Cornell University
Mack Stoker, University of California

Sec.-Treas.—
E. L. Williams, Texas A. & M. College

Trustees—
George B. Cox, Oregon State College
Helen Livingstone, New York State Education Department
A. B. Mays, University of Illinois

President— **1941**
F. Theodore Struck, The Pennsylvania State College

Vice Presidents—
Lawrence F. Ashley, Director of Vocational Education, Yonkers, New York
Thomas Diamond, University of Michigan
George B. Cox, Oregon State College

Sec.-Treas.—
E. L. Williams, Texas A. & M. College

Trustees—
Helen Livingston, New York State Education Department
Clyde A. Bowman, Stout Institute
Anthony M. Goldberger, University of Pittsburgh

President— **1942**
Lynn A. Emerson, Cornell University

Vice Presidents—
Clyde Wilson, University of Tennessee
C. L. Wetzel, St. Louis Board of Education
Herbert Sotzin, San Jose State Teachers College

Sec.-Treas.—
Charles Cyrus, University of Texas

Trustees—
Cleo Murtland, University of Michigan
Helen Livingston, New York State Education Department
Clyde A. Bowman, The Stout Institute

President— **1943**
Clyde H. Wilson, University of Tennessee

Vice Presidents—
E. E. Erickson, Santa Barbara, California
Gilbert Weaver, New York State Education Department
Harold Silvius, Wayne State University

Sec.-Treas.—
Walter B. Jones, University of Pennsylvania

Trustees—
U. G. Whiffen, Washington State College
Clyde A. Bowman, Stout Institute
Cleo Murtland, University of Michigan

President— **1944**

Gilbert Weaver, New York State Education Department

Vice Presidents—

Charles Crumpton, University of Kentucky
Harry Paine, University of Cincinnati
Felix Averill, New York State Education Department

Sec.-Treas.—

Walter B. Jones, University of Pennsylvania

Trustees—

Laura Murray, University of Texas
U. G. Whiffen, Washington State College
Clyde A. Bowman, The Stout Institute

President— **1945**

Walter B. Jones, University of Pennsylvania

Vice Presidents—

Edward L. Williams, Texas A. & M.
Raymond W. Phipps, Teachers College of Connecticut
E. C. Jeppsen, Utah State Agricultural College

Sec.-Treas.—

S. Lewis Land, The Pennsylvania State College

Trustees—

U. G. Whiffen, Washington State College
Clyde A. Bowman, The Stout Institute
G. Harold Silvius, Wayne State University

President— **1946**

S. Lewis Land, The Pennsylvania State College

Vice Presidents—

David Jackey, University of California
Merritt W. Haynes, Teacher Trainer for Trade and Industrial Education, Georgia
Herb Heilig, Colorado A. & M. College

Sec.-Treas.—

Thomas Diamond, University of Michigan

Trustees—

Clyde A. Bowman, The Stout Institute
G. Harold Silvius, Wayne State University
E. L. Williams, Texas A. & M. College

President— **1947**

E. L. Williams, Texas A. & M. College

Vice Presidents—

Clyde Bowman, The Stout Institute
Merritt W. Haynes, Teacher Trainer for Trade and Industrial Education, Georgia
Melvin Barlow, University of California, L. A.

Sec.-Treas.—

Thomas Diamond, University of Michigan

Trustees–
Eugene Fink, New York State Education Department
Charles Crumpton, University of Kentucky

President– **1948**
G. Harold Silvius, Wayne State University

Vice Presidents–
C. Kenneth Beach, Cornell University, N. Y.
Merritt W. Haynes, Teacher Trainer for Trade and Industrial Education, Georgia
John Lundington, U. S. Office of Education

Sec.-Treas.–
Thomas Diamond, University of Michigan

Trustees–
Charles Crumpton, University of Kentucky
Eugene Fink, New York State Education Department
Thomas A. Hippaka, Iowa State College

President– **1949**
Homer J. Smith, University of Minnesota

Vice Presidents–
C. Kenneth Beach, Cornell University
DeWitt Hunt, Oklahoma A. & M. College
Leonard Booker, South Carolina University

Sec.-Treas.–
Thomas Diamond, University of Michigan

Trustees–
Eugene Fink, New York State Education Department
Thomas Hippaka, Iowa State College
M. L. Barlow, University of California, L. A.

President– **1950**
C. Kenneth Beach, Cornell University

Vice Presidents–
Dewey Barich, Kent State University
Kenneth L. Bing, E. Carolina Teachers College
Chris H. Groneman, Texas A. & M. College
William J. Micheels, University of Minnesota

Sec.-Treas.–
Willard M. Bateson, University of Michigan

Trustees–
Thomas A. Hippaka, Iowa State College
M. L. Barlow, University of Carlifornia, L. A.
George B. Cox, Oregon State College

President– **1951**
Dewey Barich, Kent State University

Vice Presidents–
Clarence T. Baab, Colorado State College
James R. D. Eddy, University of Texas
R. Lee Hornbake, University of Maryland
David F. Jackey, University of California

Sec.-Treas.—
Willard M. Bateson, University of Michigan

Trustees—
M. L. Barlow, University of California, L. A.
George B. Cox, Oregon State College
H. H. London, University of Missouri

President— **1952**
James R. D. Eddy, University of Texas

Vice Presidents—
Clarence T. Baab, Colorado State College
A. P. Twogood, Iowa State College
Clyde A. Bowman, The Stout Institute
H. C. Thayer, New York State Board of Vocational Education

Sec.-Treas.—
Willard M. Bateson, University of Michigan

Trustees—
William J. Micheels, University of Minnesota
George B. Cox, Oregon State College
H. H. London, University of Missouri

President— **1953**
Clarence T. Baab, Colorado State College

Vice Presidents—
Arthur P. Twogood, Iowa State College
Arthur I. Martin, State Teachers College, Gorham, Maine
E. F. Mitchell, Mississippi State College
E. W. Tishendorf, Kent State College

Sec.-Treas.—
Willard M. Bateson, University of Alabama

Trustees—
H. H. London, University of Missouri
William J. Micheels, University of Minnesota
Gordon O. Wilber, Oswego State Teachers College

President— **1954**
Arthur P. Twogood, Iowa State College

Vice Presidents—
E. F. Mitchell, Mississippi State College
E. W. Tishendorf, Kent State College
M. L. Barlow, University of California, L. A.
Duane Chamberlain, Michigan State Normal College

Sec.-Treas.—
Willard M. Bateson, University of Alabama

Trustees—
William J. Micheels, University of Minnesota
Gordon O. Wilber, Oswego State Teachers College
Glenn Smith, Oklahoma A. & M. College

President— **1955**
E. W. Tishendorf, Kent State College

Vice Presidents—
M. L. Barlow, University of California
Duane Chamberlain, Michigan State Normal College
Edward Hankin, Florida State University
H. H. London, University of Missouri

Sec.-Treas.—
Willard M. Bateson, University of Alabama

Trustees—
Gordon O. Wilber, Oswego State Teachers College
Glenn Smith, Oklahoma A. & M. College
M. Ray Karnes, University of Illinois

President— **1956**
M. L. Barlow, University of California

Vice Presidents—
Edward Hankin, University of Florida
H. H. London, University of Missouri
John A. Jarvis, Stout State College
C. Thomas Olivo, State University of New York at Albany

Sec.-Treas.—
Willard M. Bateson, University of Alabama

Trustees—
Glen Smith, Oklahoma A. & M. College
M. Ray Karnes, University of Illinois
James J. Hammond, State Teachers College, Fitchburg, Massachusetts

Representative to Trade and Industrial Policy and Planning Committee:
C. E. Highlen, Purdue University

President— **1957**
H. H. London, University of Missouri

Vice Presidents—
John A. Jarvis, Stout State College
C. Thomas Olivo, State University of New York at Albany
Herbert L. Benson, Colorado State University
Kermit A. Seefeld, University of California

Sec.-Treas.—
Rupert N. Evans, University of Illinois

Trustees—
M. Ray Karnes, University of Illinois
James J. Hammond, Massachusetts State Teachers College at Fitchburg
Howard F. Nelson, University of Minnesota

Representative to Trade and Industrial Policy and Planning Committee:
C. E. Highlen, Purdue University

President— **1958**
C. Thomas Olivo, University of the State of New York, Albany

Vice Presidents—
Herbert L. Benson, Colorado State University
Kermit A. Seefeld, University of California
H. R. Kinker, Indiana University
Ralph W. Whalin, Eastern Kentucky State College

Sec.-Treas.—
Robert Tinkham, University of Illinois

Trustees—
James J. Hammond, Massachusetts State Teachers College at Fitchburg
Howard F. Nelson, University of Minnesota
H. H. London, University of Missouri

Representative to Trade and Industrial Policy and Planning Committee:
W. M. Bateson, Wayne State University

President— **1959**
Kermit A. Seefeld, University of California

Vice President—
H. R. Kinker, Indiana University
Ralph W. Whalin, Eastern Kentucky State College
Ivan Hostetler, North Carolina State College
Robert M. Reese, The Ohio State University

Sec.-Treas.—
Rupert N. Evans, University of Illinois

Trustees—
Howard F. Nelson, University of Minnesota
H. H. London, University of Missouri
Joe L. Reed, University of Texas

Representative to Trade and Industrial Policy and Planning Committee:
Willard Bateson, Wayne State University

President— **1960**
Robert M. Reese, The Ohio State University

Vice Presidents—
Ivan Hostetler, North Carolina State College
Gordon O. Voss, University of Minnesota at Duluth
Willard M. Bateson, Wayne State University
Ralph C. Bohn, San Jose State College

Sec.-Treas.—
Rupert N. Evans, University of Illinois

Trustees—
H. H. London, University of Missouri
Joe L. Reed, University of Tennessee
Rutherford E. Lockette, Trenton State College

Representative to Trade and Industrial Policy and Planning Committee:
Willard Bateson, Wayne State University

President— **1961**
Rupert N. Evans, University of Illinois

Vice Presidents—
Gordon O. Voss, University of Minnesota, Duluth
Robert Worthington, Trenton State College
Willard M. Bateson, Wayne State University
Ralph C. Bohn, San Jose State College

Sec.-Treas.—
Calvin J. Cotrell, Ferris Institute, Michigan

Trustees—
Durwin M. Hanson, North Carolina State College
Rutherford E. Lockette, Trenton State College
Joe L. Reed, University of Tennessee

Representative to Trade and Industrial Policy and Planning Committee:
George L. Brandon, Michigan State University

Representative to Industrial Arts Policy & Planning Committee
John Mitchell, Gorham State College, Maine

President— **1962**
Willard M. Bateson, Wayne State University

Vice Presidents—
Lee D. Bodkin, University of California, L. A.
Walter J. Robinson, Northwestern State College of Louisiana
Gordon O. Voss, University of Minnesota, Duluth
Robert Worthington, Trenton State College

Sec.-Treas.—
Calvin J. Cotrell, Ferris Institute, Michigan

Trustees—
Edward K. Hankin, Florida State University
Durwin M. Hanson, North Carolina State College
Rutherford E. Lockette, Trenton State College

Representative to Trade and Industrial Policy and Planning Committee:
George L. Brandon, Michigan State University

Representative to Industrial Arts Policy & Planning Committee
John Mitchell, Gorham State Teachers College, Maine

President— **1963**

Robert M. Worthington, Trenton State College

Vice Presidents—

Lee D. Bodkin, University of California, Berkley

Walter J. Robinson, Northwestern State College of Louisiana

E. Robert Rudiger, Stout State College

Carl J. Schaefer, The Pennsylvania State University

Sec.-Treas.—

Calvin J. Cotrell, Ferris Institute, Michigan

Trustees—

Edward K. Hankin, Florida State University

Durwin M. Hanson, North Carolina State College

Frederick D. Kagy, Colorado State College

Representative to Trade and Industrial Policy and Planning Committee:

George L. Brandon, Michigan State University

Representative to Industrial Arts Policy & Planning Committee

John Mitchell, Gorham State Teachers College, Maine

President— **1964**

Walter J. Robinson, Northwestern State College of Louisiana

Vice Presidents—

F. J. Konecny, Texas A. & M. College

John D. Rowlett, Eastern Kentucky State College

E. Robert Rudiger, Stout State College

Carl J. Schaefer, Rutgers-The State University

Sec.-Treas.—

Calvin J. Cotrell, American Institute for Research, Pittsburgh

Trustees—

Edward K. Hankin, Florida State University

Lowell L. Carver, Iowa State University

Frederick D. Kagy, Colorado State College

Representative to Trade and Industrial Policy and Planning Committee:

Joe L. Reed, The University of Tennessee

Representative to Industrial Arts Policy & Planning Committee

John Mitchell, Gorham State Teachers College, Maine

Editor-Journal of Industrial Teacher Education

Ralph C. Bohn, San Jose State College

President— **1965**

E. Robert Rudiger, Stout State University, Menomonie, Wisconsin

Vice Presidents—

F. J. Konecny, Texas A. & M. University

John Rowlett, Eastern Kentucky State College

Carl Bartel, Utah State University

Denver Sams, Purdue University

Sec.-Treas.—

Calvin J. Cotrell, American Institute for Research, Pittsburgh

Trustees—

Frederick D. Kagy, Colorado State College

Lowell L. Carver, Iowa State University

Cyrus Taylor, Lincoln University, Missouri

Representative to Trade and Industrial Policy and Planning Committee:

Joe Reed, University of Tennessee

Representative to Industrial Arts Policy & Planning Committee

John Mitchell, Gorham State Teachers College, Maine

Editor-Journal of Industrial Teacher Education

Robert Worthington, Trenton State College

President— **1966**

Calvin J. Cotrell, The Ohio State University

Vice Presidents—

Carl R. Bartel, Utah State University

Gordon G. McMahon, State University College at Oswego

William P. Spence, Kansas State College at Pittsburg

Denver Sams, Purdue University

Sec.-Treas.—

W. R. Miller, University of Missouri - Columbia

Trustees—

Lowell L. Carver, Iowa State University

Frank J. Konecny, James Connally Technical Institute, Waco, Texas

Cyrus Taylor, Lincoln University, Missouri

Representative to Trade and Industrial Policy and Planning Committee:

Joe Reed, University of Tennessee

Representative to Industrial Arts Policy & Planning Committee

John Mitchell, Gorham State Teachers, Maine

Editor-Journal of Industrial Teacher Education

Robert M. Worthington, New Jersey State Department of Education

President— **1967**

Denver Sams, Purdue University

Vice Presidents—

W. Carlisle Anderson, San Diego State

Gordon G. McMahon, State University College at Oswego

William P. Spence, Kansas State College at Pittsburg

William A. Williams, The Pennsylvania State University

Sec.-Treas.—

W. R. Miller, University of Missouri - Columbia

Trustees—

Frank J. Konecny, James Connally Technical Institute, Waco, Texas

Cyrus S. Taylor, Lincoln University, Missouri

Lewis W. Yoho, Indiana State University, Terre Haute

Representative to Trade and Industrial Policy and Planning Committee:

Durwin Hanson, North Carolina State University, Raleigh, North Carolina

Representative to Industrial Arts Policy & Planning Committee

Lowell Carver, Iowa State University

Editor-Journal of Industrial Teacher Education

Carl J. Schaefer, Rutgers-The State University, New Jersey

President— **1968**

William P. Spence, Kansas State College at Pittsburg

Vice Presidents—

W. Carlisle Anderson, San Diego State

Durwin Hanson, North Carolina State University

Rutherford E. Lockette, Trenton State College

William A. Williams, The Pennsylvania State University

Sec.-Treas.—

W. R. Miller, University of Missouri - Columbia

Trustees—

Frank J. Konecny, New Mexico State Department of Education

Lewis W. Yoho, Indiana State University, Terre Haute

Walter C. Brown, Arizona State University, Tempe

Representative to Trade and Industrial Policy and Planning Committee:

Durwin Hanson, North Carolina State University

Representative to Industrial Arts Policy & Planning Committee

Lowell Carver, Iowa State University

Editor-Journal of Industrial Teacher Education

Carl J. Schaefer, Rutgers-The State University, New Jersey

President— **1969**

Carl J. Schaefer, Rutgers-The State University, New Jersey

Vice Presidents—

Pat H. Atteberry, Oregon State University

Durwin Hanson, North Carolina State University

Rutherford E. Lockette, Trenton State College

Joe L. Reed, University of Tennessee

Sec.-Treas.—

W. R. Miller, University of Missouri - Columbia

Trustees—

Lewis W. Yoho, Indiana State University, Terre Haute

Walter C. Brown, Arizona State University, Tempe

H. C. Kazanas, University of Missouri - Columbia

Representative to Trade and Industrial Policy and Planning Committee:

Durwin Hanson, North Carolina State University

Representative to Industrial Arts Policy & Planning Committee

Lowell Carver, Iowa State University

Editor-Journal of Industrial Teacher Education

Jerome Moss, University of Minnesota

David C. Bjorkquist, Associate Editor, University of Missouri - Columbia

TO: Members of the National Association of Industrial and Technical Teacher Educators

FROM: W. R. Miller, Secretary-Treasurer

RE: Information of Interest to NAITTE Members

For a number of years your organization has supported a plan whereby all NAITTE members are informed of the business matters that take place at the annual convention.

The results of executive committee action are especially significant since the officers are functioning in your behalf and this is your only opportunity to be informed about their actions.

The contents of this packet are most helpful to those of us who may not be able to attend the convention at all, or who have conflicts and find it necessary to miss one or more NAITTE sessions.

The following items, in the order listed, are included:

1. NAITTE Constitution and By-Laws: Directory of Officers

2. Minutes of the First Executive Committee Meeting
   Minutes of the First General Session and Business Meeting
   Minutes of the Second General Session and Business Meeting
   Minutes of the Second Executive Committee Meeting
   Minutes of the Third Executive Committee Meeting

3. Report of the Treasurer for the Fiscal Period November 15, 1967 - November 14, 1968.

4. Industrial Arts Policy and Planning Committee Summary Report - Mr. Lowell Carver

5. Trade and Industrial Education Policy and Planning Committee Summary Report

6. Annual Report (1968), Journal of Industrial Teacher Education

7. Annual Membership and Circulation Report 1967 - 1968

8. A Preliminary Report on the Industrial Teacher Education Directory 1968 - 1969 - G. S. Wall

9. A Comparison of Selected Comtemporary Programs in Industrial Education, - Dr. Leslie H. Cochran

10. Effects of Field and Job-Oriented Technical Retraining on Manpower Utilization of the Unemployed - Dr. David Bjorkquist

MINUTES OF THE FIRST EXECUTIVE COMMITTEE MEETING

NATIONAL ASSOCIATION OF
INDUSTRIAL AND TECHNICAL TEACHER EDUCATORS

December 8, 1968 (2:00 - 4:00 p.m.)
Dallas, Texas

Members Present: Spence, Anderson, Lockette, Sams, Hanson, Williams, Miller, Yoho, Konecny. Guests: Calvin Cotrell, Roy Butler, S. R. Collins

1.0 Meeting called to order by President Spence.

1.1 Minutes of previous executive meeting approved as distributed.

2.0 Report of vice-president Hanson on plans for First General Session.

2.1 Vice-president Anderson distributed printed list of program participants for the Monday morning general session.

2.2 Vice-president Williams discussed the plans for the Tuesday breakfast session. It was suggested that a photograph be taken of all NAITTE officers.

2.3 Vice-president Lockette reported on final plans for the session devoted to research reporting.

3.0 President Spence appointed the following persons to the nominating committee: Denver Sams, Calvin Cotrell, Lewis Yoho, and Walter Brown.

4.0 The previous AVA requirement that members of affiliated organizations must be AVA members no longer applies; therefore, NAITTE will encourage AVA membership by its membership through notation on membership forms, but that no attempt will be made to assure AVA membership of NAITTE members.

5.0 The continuance of the annual NAITTE breakfast session was discussed. It was the consensus of the committee that the breakfast was a tradition that we did not want to interrupt. The possibilities of finding a sponsor for the breakfast were discussed. Several firms were suggested. but Philco-Ford will be contacted by Vice-President Hanson.

6.0 The need for a descriptive brochure for NAITTE was discussed. The committee concurred that a brochure was highly desirable. Vice-president Williams moved that Wayne Detwiler be asked to develop a brochure. Denver Sams seconded the motion, which was passed.

6.1 Vice-President Lockette moved that an editorial committee be appointed to review the work of Mr. Detwiler, and further that a $400.00 limit be placed upon the production of the brochure. Seconded by Hanson and passed.

7.0 The necessity of a membership list was discussed. The possibilities of the list being prepared by the mailing service which handles the JITE mailing was suggested. No recommendations were made.

8.0 A discussion of the honorary membership provisions of the constitution was held. Walter Brown moved to limit the total number of honorary memberships to be granted in any one year to one percent of the paid memberships from the preceeding year. Seconded by Sams and passed.

9.0 Denver Sams moved that a life membership category not be added to the constitution. Vice-President Anderson seconded the motion.

10.0 Secretary Miller reminded the four Vice-Presidents who served as program chairmen to see that reports and papers are made available to the secretary. Either 650 copies of the material to be distributed or the reproduction masters from which copies may be prepared by the secretary.

10.1 Vice-President Lockette moved that the new president of NAITTE contact the T & I Division Vice President, the IA Division Vice President and the appropriate officer for Technical Education to discuss the possibilities of a publication of the convention proceedings related to these three fields. Motion was seconded and passed.

11.0 Meeting declared adjourned by President Spence.

Respectfully Submitted,

W.R. Miller

W. R. Miller
Secretary-Treasurer

MINUTES OF THE FIRST GENERAL SESSION AND BUSINESS MEETING

NATIONAL ASSOCIATION OF
INDUSTRIAL AND TECHNICAL TEACHER EDUCATORS

Sunday, December 8, 1968 (8:00 - 10:00 p.m.)
Dallas, Texas

1.0 Meeting called to order by Vice-President Durwin Hanson. Convention program announcements were made.

2.0 Highlights of the year's activity were reviewed by NAITTE President Bill Spence.

3.0 The report of the Secretary was presented by W. R. Miller (a copy is enclosed).

3.1 The financial report was presented and reviewed by W. R. Miller, Jack Konecny, chairman of the Auditing Committee (composed of NAITTE trustees) moved the acceptance of the financial report. The motion was seconded and was passed (a copy is enclosed).

4.0 The NAITTE representative to the Industrial Arts Policy and Planning Committee, Lowell Carver, reported the activities of IAPPC during 1968 (a copy is enclosed).

5.0 The NAITTE representative to the Trade and Industrial Policy and Planning Committee, Gordon McMahon, reported the activities of the T & I Policy and Planning Committee during 1968. (a copy is enclosed)

6.0 The NAITTE representative to the Advisory Council for Vocational Industrial Clubs of America, Joe L. Reed, introduced VICA President Mr. Brock Grimes, who described the activities of VICA, and Miss Virginia Croft, who described the VICA publication headquartered at 105 Virginia Avenue in Falls Church, Virginia.

7.0 JITE Editor, Jerome Moss, reported on the activities and plans of the Journal staff and urged the submission of research related articles for publication consideration (a copy is enclosed).

8.0 A joint report of the Membership Chairman, Bill Mason, and the Circulation Manager, Howard McVicker, was reported by W. R. Miller in the absence of the authors (a copy is enclosed).

9.0 The chairman of the NAITTE Research Committee, Calvin Cotrell, reported on the activation of that committee after a lapse in reporting since 1965. Dr. Cotrell cited the committee's plans for cooperating with the Research Committee of AIAA, Dr. David Jelden, in an effort to acquire research reports and summaries for inclusion by ERIC-VT

in ARM. In addition, a bibliography 1966, 1967 and 1968 will be prepared for distribution to the membership. A plan is under way to prepare 100-word abstract for doctoral research completed in this field of industrial and technical education.

10.0 Dr. G. S. Wall, compiler of the Directory of Industrial Teacher Education summarized some of the gross data gathered in preparation of the Directory. It was indicated that it would be distributed early in 1969. (summary enclosed)

11.0 A report of the status of the Accident Prevention Manual for Shop Teachers was presented by Vice President William A. Williams. In addition, announcements of a safety course offered at Pennsylvania State University, as well as an American Safety Council publication for administrators of accident prevention programs was reported.

12.0 Meeting adjourned.

Respectfully Submitted,

W R Miller

W. R. Miller
Secretary-Treasurer

MINUTES OF THE SECOND GENERAL SESSION AND BUSINESS MEETING

NATIONAL ASSOCIATION OF
INDUSTRIAL AND TECHNI CAL TEACHER EDUCATORS

Tuesday, December 10, 1968 (7:00 - 8:30 a.m.)
Dallas, Texas

1.0 Vice-President Williams opened the session with an introduction of Dean Lewis Yoho of the School of Technology, Indiana State University, Terre Haute, Indiana, who described the National Seminar for College Deans held in June, 1969, at Lincoln, Nebraska.

1.1 Dean Yoho emphasized the need for direction in Vocational and Technical Teacher Education. The direction pointed to by the speakers at the Seminar was toward unified and coordinated Vocational-Technical Teacher Education programs in the colleges and universities of the United States.

2.0 Vice-President Williams introduced Dr. Harold Silvius who made the presentation of Honorary Membership certificates to the following individuals:

Lowell Carver	John Jarvis
Shriver Coover	Tom Olivo
Charles Cyrus	Kenneth Perry
C. Thomas Dean	Howard Reed
Chris Groneman	Wesley Stephens
Ivan Hostetler	Alvin I. Thomas

2.1 In addition to the recognition of these twelve honorary members, Mr. Floyd Mix, an honorary member inducted in 1967, who was not present at that time, was recognized by Vice-President Williams. The contribution of the Goodheart-Wilcox Company to the production of the Industrial Teacher Education Directory was acknowledged.

3.0 President Spence presented the past editor, Carl Schaefer, with a bound copy of the 1967-68 JITE.

4.0 Past President Denver Sams, chairman of the Nominating Committee, presented the following slate of prospective officers: Trustee, H. C. Kazanas; Vice-presidents (2), Joe L. Reed and Pat Atteberry; President, Carl Schaefer. Dr Lockette moved that nominations cease and that the secretary be instructed to cast a unamimous ballot for the nominees. The motion was duly seconded and passed.

4.1 Dr. Thomas Olivo, in a competent and professional manner, conducted the installation ceremony for new officers.

5.0 President Spence declared the meeting adjourned at 8:35 a.m.

Respectfully Submitted,

W R Miller

W. R. Miller
Secretary-Treasurer

SECOND EXECUTIVE COMMITTEE MEETING

NATIONAL ASSOCIATION OF
INDUSTRIAL AND TECHNICAL TEACHER EDUCATORS

Monday, December 9, 1968 (5:00 - 6:00 p.m.)
Dallas, Texas

Members Present: Spence, Williams, Yoho, Konecny, Hanson, Brown, Lockett, Sams.

1.0 Vice-President Williams requested that funds be made available for clerical work in conjunction with revisions preliminary to reprinting the Accident Prevention Manual. Jack Konecny moved that approximately $100.00 be authorized for expenditures in typing the changed manuscript for the Accident Prevention Manual. Seconded by Yoho and passed.

2.0 Considerable discussion was held with regard to the nature of the First General Session and Business Meeting. It was recommended that the program be composed of Presidential comments, Secretary-Treasurer's report, other business approved by the Executive Committee, and an appropriate guest speaker or other type of presentation.

3.0 After considerable discussion, it was recommended that the three-hour research session be organized into three distinct 50 minute periods.

4.0 The activities of the JITE board were discussed, and it was recommended that the JITE board meet at least one day prior to the third NAITTE Executive Committee at the annual convention.

5.0 A previous recommendation that a facilities planning guide be developed by NAITTE was brought before the committee for discussion. After considerable discussion it was moved by Lockette that a committee be appointed by President Spence with a charge to review the literature on facilities planning, develop a bibliography to be distributed at the 1969 convention, and recommend further appropriate action by NAITTE. Seconded by Brown and passed.

6.0 Adjourned 6:00 p.m.

Respectfully Submitted,

W. R. Miller

W. R. Miller
Secretary-Treasurer

MINUTES OF THE THIRD EXECUTIVE COMMITTEE MEETING

NATIONAL ASSOCIATION OF
INDUSTRIAL AND TECHNICAL TEACHER EDUCATORS

Tuesday, December 10, 1968 (4:00 - 5:00 p.m.)
Dallas, Texas

Members Present: Schaefer, Spence, McMahon, Brown, Atteberry, Yoho, Lockette, Kazanas, Moss, Miller, Hanson, Reed.

1.0 President Spence reviewed the 1969 Convention plan proposed by the AVA Board of Directors. It was agreed that we would schedule and plan the same type of program as in the past even though it may occur on different days.

1.1 Vice Presidential responsibilities for program planning and session chairmanships were assigned as follows:

Opening Session and Business Meeting - Pat Atteberry
General Session - Joe Reed
Research Session - Rutherford Lockette
Breakfast Session - Durwin Hanson

1.2 Vice-Presidents and committee chairmen will provide the secretary with 650 copies of presentations and reports for distribution by mail with no distribution at the convention.

2.0 Editor Moss reported on JITE board activities. The dedicatory statememts for honorary memberships which appear in the Journal will be increased from one to two in an effort to clear out the backlog of dedicatory statements. It was moved by Hanson and seconded by Reed that this recommendation be accepted. Harold Silvius, who prepares the statements was authorized to secure assistance in the preparation of the increased number of statements

2.1 Lockette moved that the JITE Board recommendation of Alan Suess and Joseph Impellitteri to serve as assistant editors to replace Larson and Littrell be approved. Brown seconded the motion and it passed.

2.2 It was the recommendation of the committee that the JITE board be authorized to contact department chairmen to secure names of last year's doctoral students and work with the chairman of the Research Committee to secure abstracts of doctoral studies for inclusion in the JITE if the JITE Board desires to continue this practice.

2.3 A change in the JITE cover design was recommended and Walter Brown moved that the recommended cover design be accepted. Lockette seconded and motion passed.

3.0 After considerable discussion of the problems associated with adequate funding for vocational teacher education at the state and federal level, it was recommended that a statement be prepared to express the needs for adequate funds to carry out vocational teacher education. This statement would be directed to the AVA Council on Teacher Education and other appropriate agencies. It was moved by McMahon and seconded by Reed that the recommendation be implemented by President Schaefer.

Respectfully Submitted,

W R Miller

W. R. Miller
Secretary-Treasurer

NATIONAL ASSOCIATION OF INDUSTRIAL & TECHNICAL TEACHER EDUCATORS

Report of the Treasurer for the Fiscal Period
November 15, 1967 - November 14, 1968

Balance, November 14, 1967		
In account with Boone County National Bank, Columbia, Missouri 65201	$5,570.57	
		$ 5,570.57
Receipts		
Membership Dues	1,720.15	
Subscription to JITE and Sales	936.02	
American Technical Society (Royalty Payment for ACCIDENT PREVENTION MANUAL FOR SHOP TEACHERS & Guides)	589.94	
American Technical Society (Contribution for JITE production costs)	3,200.00	
Goodheart-Wilcox Company (Contribution for production costs of Teacher Education Directory)	1,560.90	
Directory Sales ($8.00 from ACIATE)	77.00	
Interest on Certificate of Saving	100.00	
Reimbursement for Mailing from The Center	38.63	
Total Receipts	$8,222.64	
Gross Balance		$13,793.21
Disbursements		
JITE Production Expenses	3,139.52	
JITE Expenses (promotion, mailing, etc.)	211.73	
Membership Promotion Expenses	218.48	
Secretarial Expenses (Typing, clerical work, preparation for mailing)	242.38	
Office Supplies and Expenses	295.01	
Directory Expenses	1,710.90	
Miscellaneous Expenses	9.28	
Total Disbursements	$5,827.30	
		$ 5,827.30
NET BALANCE		$ 7,965.91

See page 4 of report for additional assets.

NATIONAL ASSOCIATION OF INDUSTRIAL & TECHNICAL TEACHER EDUCATORS

Report of the Treasurer for the Fiscal Period
November 15, 1967 - November 14, 1968

ANALYSIS OF EXPENDITURES

JITE

$ 3139.52	Publication Expenses
152.78	Related Postage, Mailing and Phone Expenses
14.45	Refund of Cancelled and Overpaid Subscriptions
44.50	Periodical Exhibit and Clerical ($25.00)
$ 3351.25	

MEMBERSHIP PROMOTION

$ 36.60	Membership Promotion Envelopes
67.01	Membership Cards (1968 and 1969)
114.87	Related Postage and Membership Record Cards ($11.05)
$ 218.48	

OFFICE EXPENSE

$ 110.36	Office Supplies
242.38	Secretarial and Clerical Labor
82.76	Postage, Mailing and Shipping Expense
52.35	Telephone
49.54	Honorary Membership Certificates and Frame
$ 537.39	

DIRECTORY EXPENSES

$ 150.00	Honorarium to G. S. Wall
116.90	Preparation and Mailing
1444.00	Printing of Directory
$ 1710.90	

MISCELLANEOUS

$ 2.15	Overpayment of Dues
6.00	Complimentary Breakfast Tickets
.58	Canadian Discount on Check
.55	Foreign Exchange Charge on Check
$ 9.28	

TOTAL EXPENDITURES $ 5827.30

NATIONAL ASSOCIATION OF INDUSTRIAL TEACHER EDUCATORS
Report of the Treasurer for the Fiscal Period
November 15, 1967 - November 14, 1968

Check No.	DISBURSEMENTS BY CHECK	Amount
187	Johnson Publishing Company (Fall JITE)	$ 775.96
188	University of Missouri (Steno Service)	7.20
189	Dr. G. S. Wall (Dir.)	48.30
190	Mrs. Anita Moores (Clerical)	17.00
191	Howard McVicker (Postage-$15.00 + Phone-$3.75)	18.75
192	Lafayette Mailing Service	11.05
193	Lafayette Mailing Service (JITE Labels)	5.47
194	University of Missouri (Membership Certificates)	12.20
195	Howard McVicker (Postage and Phone)	15.00
196	University of Missouri (Clerical)	27.95
197	Dr. G. S. Wall (Honorarium-$150 + Expenses-$68.60)	218.60
198	Timothy M. Keane (overpayment of dues)	2.15
199	University of Missouri (Clerical)	17.60
200	Lafayette Mailing Service (JITE)	23.87
201	The Dunn County News (Dir.)	1444.00
202	Howard McVicker (Clerical Expense)	25.00
203	Anita Moores (Clerical Services)	30.00
204	W. R. Miller (Postage-$9.15, Frame-$6.97 + Phone-$6.05)	22.17
205	Lafayette Mailing Membership Promotion	36.60
206	University of Missouri (Membership Cards-$23.51 + Letterhead-27.13)	50.64
207	Dr. Fred Kagy (JITE Postage)	7.44
208	University of Missouri (Clerical)	16.68
209	Fred Kagy (JITE Postage)	7.28
210	University of Missouri (Clerical)	51.72
211	Lafayette Mailing Service	12.10
212	Johnson Publishing Company (Winter-JITE)	694.65
213	University of Missouri (Print Certificates + Cards)	73.87
214	University of Missouri (Postage-Membership)	29.13
215	University of Missouri (Clerical)	49.16
216	Dr. C. J. Cotrell (Tickets-$6.00, Phone-$18.05 + Postage-$5.45)	29.50
217	Howard McVicker (Phone-$3.00 and Stamps-$7.00)	10.00
218*	Void	-----
219	National Publishing Company (Dup. Sub.)	4.25
220	University of Missouri (Mimeo Paper)	40.77
221	University of Missouri (Postage)	3.12
222	University of Missouri (Mailing)	11.91

Check No.	DISBURSEMENTS BY CHECK	Amount
223	University of Missouri (Mailing)	$ 18.63
224	Johnson Publishing Company (Spring JITE)	706.70
225	University of Missouri (Envelopes)	2.34
226	Dr. Fred Kagy (JITE Mailing)	7.92
227	Lafayette Mailing Service (JITE)	6.13
228	Dr. Carl Schaefer (JITE Mailing)	11.73
229	F. W. Faxon Company (JITE Refund Sub.)	10.20
230	Comb. Book Exhibit (Display JITE)	19.50
231	H. W. McVicker (JITE Postage)	20.00
232	W. R. Miller (Stamps and Postage)	34.50
233	W. R. Miller (Phone Calls)	28.25
234	C. P. Lesh Paper Company (JITE Envelopes)	7.09
235	Lafayette Mailing Service (Membership Billing)	12.36
236	Lafayette Mailing Service (Membership Mailing)	62.33
237	Johnson Publishing Company (Summer-JITE)	962.21
238	Central Office Equipment (Files)	31.31
239	University of Missouri (Clerical)	25.07
240	Central Office Equipment (Supplies)	8.81
---	Non-check disbursements**	1.13
		$ 5827.30

* Check No. 218, which was voided, was written incorrectly.

** Canadian Discount on Check	$ .58
Foreign Exchange Charge on Check	.55
	$1.13

Balance, November 14, 1968

In account with Boone County National Bank, Columbia, Missouri 65201	$7,965.91
Additional Asset - Certificate of Saving	($2,000.00)

Report has been examined and found to be correct:

Auditing Committee:

s/ Frank J. Konecny

s/ Walter C. Brown

s/ Lewis W. Yoho

Date December 8, 1968

W. R. Miller

W. R. Miller, Treasurer

INDUSTRIAL ARTS POLICY AND PLANNING COMMITTEE
SUMMARY REPORT
Mr. Lowell Carver
Made in Dallas, Texas; December 8, 1968

The following report is made to the National Association of Industrial Teacher Educators in order to highlight some of the activities that may be of interest and timely to N.A.I.T.T.E. This report will primarily cover the activities of the various committees that have functioned during the past year. My report is made from material submitted by committee chairman within the past four or six weeks.

A. Membership Committee

Dr. Will Miller, Chairman, this committee's activities for the year centered around the implementation of policies and procedures previously established.

1. The nation-wide network of industrial arts membership representatives came closer to reality as twenty (20) individuals were added. A total of forty-two (42) state and territorial representatives are now tied into the membership committee's promotional activities.

2. The committee continued to work with the AVA membership secretary in Washington Office, Mr. Robert Banks, to correct misclassification of industrial arts professionals.

3. The IA Division Membership brochure approved at the 1967 Convention was printed and distributed to the state representatives in time for fall, 1968, promotional activities.

4. As a member of the AVA Membership Committee, the chairman of the IA Division Membership Committee continued to press for alterations in the AVA policy regarding affiliated memberships for industrial arts personnel.

5. The IA Division continues to receive full support of both the AVA Membership Committee and the AVA Washington staff. Your divisional membership chairman has received immeasurable support from these groups in efforts to increase IA Division membership affiliation.

B. Publications Committee (Ernest L. Minelli, Chairman)

The purpose and function of the IA Publications Committee is to review what other special divisional committees are or will be doing, coordinating the publication efforts of the Division, and make recommendations to the IAPPC concerning our divisional publication needs.

1. A Guide to Improving Instruction in Industrial Arts

During August, the AVA published the long-awaited "A Guide to Instruction in Industrial Arts." The fourth edition of this important work. The booklet updates the unique goals, basic content and the philosophical approach of industrial arts, and is intended to be a guide for the field as the title implies.

This is a product of five years of study, research and evaluation by many individuals in the field, the volume turned its attention to the new but didn't discount completely the traditional which has served industrial arts so well in the past.

2. Innovative Programs in Industrial Arts (Available through AVA Office)

a. Recognizing change is the keynote of our times, with no segment of our society immuned to its effects, the Planning and Policy Committee of the Division authorized the Publications Committee, on its recommendation, to prepare a bulletin which would report innovative programs in industrial arts education. One purpose of the bulletin would be to highlight some of the innovative programs in industrial arts at all levels. These programs have special implications for all in making needed changes and to ease the transition from old to the new.

b. Chairmanship for this Committee was accepted by Dr. Walter C. Brown.

c. During the year reports were received on 118 programs and these reports are now being studied and categorized in preparation for their review by the committee members at this convention.

It is expected that the editing and finalizing of the study will be completed early in 1969 and that the materials can be forwarded to the publication committee for action.

3. Recommendations

a. That "Industrial Arts in Education" (1964) be revised.)

b. That a new publication The Teacher in Social and Educational Change be considered.

C. Awards Committee (Carl R. Wallis, Chairman)

The frame work within which the awards committee functions.

1. Certificate of appreciation -- Purpose is to recognize secondary school instructors participating in the programs of the national convention.

2. Leadership recognition

a. Professional Leadership

(1) Officers

It is the policy of the Industrial Arts Division to recognize its Vice-President, Chairman of IAPPC, and its Secretary-Treasurer at the time of the last National Convention at which they will preside.

(2) Non-Officers

It is the policy to recognize one or two leaders for outstanding contributions made as a non-officer or non-official capacity.

b. Service Award

(1) Emphasizing the term "Service", this award was approved in order to recognize "for the good of the cause" kind of activity.

(2) The framework approved was that the officers together with the cabinet members (total six members) of IAPPC select recipients through executive action. Selection has been completed and will be presented Thursday, December 12, 1968.

D. Recommended Practices Committee, Committee on Slow and Reluctant Learners--(Stig Emil Ralston, Chairman)

1. Purpose of the Committee

The primary function of the Committee on Slow and Reluctant Learners is to identify and describe those practices and/or programs in industrial arts that can or do contribute substantially to furthering the education of slow and reluctant learners.

2. Past Activities

In 1965-66, through the cooperative efforts of the Recommended Practices Committees on (1) Dropouts and Reluctant Learners, and (2) Slow Learners--together with selected personnel from the Research Council of the Great Cities Program for School Improvement--the plan of the committee was to determine those teaching practices that could change slow learners and reluctant learners into active learners.

A report of the final findings of this planned study will be presented at the Industrial Arts Division--"Teaching Practices that Can Prevent Dropouts" meeting that is scheduled for Wednesday, December 11, 1968, 2:00-4:30 p.m. Gold Room, Statler Hilton at the American Vocational Association's Convention in Dallas.

3. Future activities

Several issues were formulated at the Cleveland meeting for consideration by the Committee, and to be reported on in Dallas. We, no doubt, will be hearing much about the work of this committee at a later date.

E. Safety Education Committee (James O. Reynolds, Chairman)

Action #1: The committee approved a program on Safety Education to be presented to the Industrial Arts Division at the AVA Convention on Thursday, December 12, 1968, under the direction of the chairman.
2:00-3:30 p.m. "Safety: In School and on the Job"-- Harold Heldreth, National Safety Council, and James O. Reynolds, Dayton Public Schools, co-chairmen. Panel: Herb Siegel, Leonard C. Smith, Dan Irwin.

Action #2: A report of Dr. William A. Williams' success in having his Accident Prevention Program for School Shops and Laboratories published by the National Safety Council.

Action #3: The Chairman of the committee, who is also Chairman of the Joint AVA-NSC Committee, Denis Kigin and William A. Williams, who are members of the National Safety Council Committee, attended the National Safety Congress in Chicago, October 27-30, 1968. The Chairman of the Industrial Arts Division Safety Committee will serve as Chairman of the General Departmental meeting of Secondary Education on Wednesday, December 11, 1968, at the American Vocational Association in Dallas on "Safety and Work Hazard Implications" 9-11:30 a.m. This involves new legislative implication.

F. Editorial Committee (Robert Rudiger, Chairman)

1. The major work of this committee centers around the planning, make-up, and distribution of the A-V Journal as it relates to industrial arts. In order to do this a joint meeting of all division editors is held in Washington, D. C. each spring. At this meeting a review is made of the past year's efforts and plans are formulated for the next year.

2. Many problems are brought to the attention of the committee for consideration; such as deadlines, quality of articles submitted, space to publish all the articles submitted, securing good authors, nature of articles, publishing articles of non-members, and public service advertising.

   Our representative has a very responsible task as you can see. I am sure we can be assured that Dr. Rudiger will look out for our interests.

G. Legislative Committee (Walter Brown, Chairman)

A resolution in support of federal legislation for state supervision of industrial arts was discussed and agreed upon by the Legislative Committee at its meeting in Cleveland, Ohio, last year. The resolution was further refined and presented to the IA cabinet at its 1968 summer meeting.

The Legislative Committee will again meet on the subject of legislative support for state supervision with the hope that the American Vocational Association will adopt a resolution and include the subject in their program of legislative work.

H. Evaluative Committee (Dr. Walter Robinson, Chairman)

The Committee on Revision of Evaluative Criteria is considering criteria for instruction, physical plant and facilities, and objectives. Prepared material has been prepared and circulated to all members of the committee as a whole for suggestions and criticism. A revised draft will be considered at the Dallas meeting. Following the Dallas meeting copies will be circulated strategically for teacher reaction.

I. Research Committee -- Sub-Committee on Research Awards (Ralph O. Gallington, Chairman)

This committee has collected, examined and discussed reports which have been submitted for examination and have made recommendations for the awards. Final action will be taken at this convention and publicity given at a later date.

SUMMARY REPORT
TRADE AND INDUSTRIAL EDUCATION
POLICY AND PLANNING COMMITTEE
PRESENTED AT
NAITTE BUSINESS MEETING
AVA, DALLAS, TEXAS
DECEMBER 8, 1968

The T & I Policy and Planning Committee held three meetings in Cleveland, Ohio on December 2, 4, and 7, 1967. Three additional meetings were held in Washington, D. C., February 29, March 1 and 2, 1968.

The following reports were presented during the meeting in Cleveland:

Report of AVA Journal -- Dr. Melvin Barlow

Report of Advisory Council Report -- Dr. Melvin Barlow

Vocational Education, The Bridge Between Man and His Work -- Dr. Melvin Barlow

Report of the Vice President -- Dr. Lee Ralston

AVA Developments and Plans

Trade and Industrial Education Yearbook

New Designs for the Challenge of the 1970's

Financial and Budget Report

T & I Committee Replacements

T & I Committee Reports

AVA Committees

AVA-BAT Committee

National Advisory Council

Mid-year Meeting -- All P & P Committees

AVA General Report -- Dr. Lowell Burkett

VICA Report -- Mr. Larry Johnson

T & I Research Committee Report -- Dr. Carl Schaefer

U. S. Office of Education Report -- Dr. Merle Strong

Program Services -- Dr. Merle Strong

Program Planning & Development -- Dr. Sherrill McMillen

T & I Education Program -- Dr. Ernest Studebaker

AVA, T & I Membership -- Dr. Robert Reese

Report of Publications -- Dr. Von H. Robertson

AVA Publications

T & I Publications -- T & I Yearbook on sale through American Technical Society. Need expressed to continue the T & I Yearbook. Information was given that the AVA publications committee was interested in national guide for developing evaluative criteria as stated in the VEA of 1963.

Dr. Robert Reese moved that a statement be prepared by the Policy and Planning Committee regarding the functions and activities of the USOE as it currently relates to the operation of vocational-technical programs in the United States and to be presented to the proper person in the U. S. Office of Education. Dick Nelson seconded the motion; the motion passed.

Chairman Robertson appointed a committee to prepare this report. The committee is to be composed of Bob Reese, Chairman; Harry Lewis and Dick Nelson as members.

This report as prepared and accepted by the Policy and Planning Committee is as follows:

"The Policy and Planning Committee of the Trade and Industrial Education Division of the American Vocational Association has made a careful review of the function and activities of the U.S.O.E. as it is currently relating to operations of vocational-technical programs in the United States.

The increasing role of vocational education in the expanding technology of the American economy and manpower development would suggest that provisions should be made for the strongest possible leadership and that this leadership must, of practical necessity, be provided by persons who have engaged in and experienced vocational activities which enable them to become fully knowledgeable in the field of vocational education.

The recognition of the need for and the status of vocational education is evidenced by the continuing action of the Congress in providing funds for expanding and developing programs.

The Policy and Planning Committee notes with dismay that the current organization of the U.S.O.E. does not provide for the utilization of vocational education leadership at the policymaking level. Thus, policy decisions are being made by persons without appropriate knowledge or experience on which to base decisions.

This condition is amplified by the fact that although the Congress has identified certain needs in vocational education in passing important legislation, the U.S.O.E. proceeds to implement this new legislation without consideration to the expressed wishes of the Congress.

For example, in passing the Professions Development Act, the House Education and Labor Committee made specific mention of the need for preparing leadership personnel for vocational-technical education. The act calls for an advisory committee to advise the U. S. Commissioner of Education as to needs in the profession and administrative guidelines for the Act. Nevertheless, when the committee was appointed, not one single person knowledgeable in vocational education was named to this committee.

The Policy and Planning Committee is further concerned over the low administrative level of vocational education personnel within the present structure which greatly reduces their effectiveness in joint decision-making with other governmental agencies on vocational education and manpower development problems.

The Secretary of HEW is on record as recommending that certain manpower training functions in recent social security legislation be assigned to the Department of Labor even though, in most states, public vocational programs would be called on to provide the instruction.

The AVA Policy and Planning Committee for Trade and Industrial Education is vitally interested in the evident policy of the Secretary of HEW that educational programs should be assigned to non-educational agencies.

Further concern involves the elimination of the regional conference concept which for many years provided among other things a continuity of purpose, a problem-solving forum and an opportunity to become identified with a program of manpower development of national economic and social purpose. This spirit is no longer being passed on to new vocational educators."

Fred Gordon reported that the National Association of State Supervisors of Trade and Industrial Education in annual session at this Convention passed the following resolution unanimously: "NASSTIE approved the proposed establishment of a National Leadership Center for VICA youth, recommending:

(1) That the Administrative Board of VICA have educational specifications prepared and solicit external support and resources which will lead to the establishment, operation, and maintenance of the Center, and

(2) That NASSTIE advise the Executive Board of AVA (through the Vice-President for Trade and Industrial Education) of its action and solicit their endorsement of the project so essential for the maximum development of youth in trade, industrial-technical education."

Von Robertson moved acceptance of the report and that the Policy and Planning Committee go on record as approving the concept of a youth development center for VICA. Harry Lewis seconded the motion; motion passed.

Dick Nelson moved that the Policy and Planning Committee be adjourned to meet next on February 29, 1968 in Washington, D. C. Charles Bates seconded the motion; motion passed.

The Policy and Planning Committees of the various divisions of the American Vocational Association met in general session in the Statler Hilton Hotel in Washington, D. C., on Thursday evening, February 29, 1968, to hear AVA staff reports. This meeting was in session from 7:30 p.m. to 9:30 p.m. Mr. Lowell Burkett presided for this session.

The Policy and Planning Committee of the Trade and Industrial Education Division of the American Vocational Association convened in the Ohio Room of the Statler Hilton Hotel, Washington, D. C., Friday, March 1, 1968, 9:00 a.m. with Chairman Von H. Robertson presiding. All of the members of the committee were present except Howard F. Nelson.

Chairman Robertson welcomed the group to the committee meeting including Tom Olivo, Vice-President Elect, and Robert McAbee, Trade and Industrial Education Program Chairman for the 1968 convention in Dallas. It was stated that Howard Nelson was out of the country on an assignment and would not be present for this meeting.

The T & I Policy and Planning Committee meeting held in Washington included the following items:

The Chairman had Vice-President Ralston appoint representatives to the scheduled meeting of the AVA Departments. The Departmental meetings to begin at 1:30 p.m. and last until 5:00 p.m. on this date.

The Departments listed below will be represented by the individuals listed beside each Department:

. Adult - Herbert Donaghay

. Secondary - Rosalie Risinger
Charles D. Bates

. Post-Secondary - Walter Bialobrzeski
Fred Gordon

. Supervision and Administration - Dick Nelson
Lee Ralston

. Research and Evaluation - Durwin Hanson

. Teacher Education - Von Robertson

. Related and Special Programs - Catherine Grant

Plans for the 1968 Convention to be held in Dallas were outlined by Robert McAbee.

Fred Gordon discussed the "Program on Disadvantaged" held in Minnesota.

Concern was indicated for the AVA Convention to present programs for vocational teachers.

Officers of the T & I Planning Committee for 1968 were elected:

Chairman - Walter Bialobrzeski

Vice Chairman - Charles D. Bates

Secretary - Rosalie C. Resinger

Mr. Larry Johnson reported on VICA activities which included:

1968 VICA Week - March 10 - 16, 1968

1968 VICA Convention, June 23-26, 1968, Oklahoma City, Oklahoma

Promotional materials for VICA

Progress on VICA Youth Development Center

Dick Nelson presented promotional materials, including a proclamation from the Governor of California designating a week for Industrial Education.

Meeting adjourned at 3:00 p.m., March 2, 1968.

NAITTE

JOURNAL OF INDUSTRIAL TEACHER EDUCATION

December 8, 1968

TO: NAITTE Membership

FROM: Jerry Moss, Editor

SUBJECT: Annual Report (1968), Journal of Industrial Teacher Education

The editorial staff is happy to announce that the American Technical Society has agreed to continue supporting our Journal for another year. We know that the entire membership joins us in thanking the Society for its generous assistance. (That cloud-like ring hovering near Mr. Paul's head is not smoke rising from his cigar!)

I am sure that you are all proud of the fact that the Journal is gaining scholarly recognition in the field. Articles from it are being cited increasingly in reviews of research and in research reports dealing with occupational education. Lest we become too satisfied, however, it is well to remember that ours is the only publication in the whole field of occupational education which purports to report scholarly papers, and that your editorial staff is becoming very concerned over the lack of manuscripts which we have been receiving. Since becoming Editor in June, I have received a total of only twenty-three unsolicited manuscripts for publication in the Journal. After review by three editors, about 52% were accepted as submitted, 17% were accepted after major revisions had been completed by the authors, 22% are still in the hands of the authors after being returned for major revisions, and 10% were rejected outright. And, of the twenty-three manuscripts received, almost 40% emanated from just three institutions.

The present rate of submission is inadequate to maintain a high-quality publication. In order to help alleviate our problem, the staff has decided to act in three ways. First, we are publishing two special issues of the Journal this year and are soliciting articles from specific people for them. The Fall issue is devoted to "research policy" and the Spring or Summer issue will focus upon "program evaluation". Without these two special issues we would probably not have enough manuscripts for four issues this year -- certainly not four good ones.

Second, I am taking this opportunity to request your help. The largest untaped publication resource is degree research, especially doctoral studies. In the interest of gaining proper recognition for the efforts of your students, your departments, and the advancement of the profession, I urge you to have each of your candidates submit an article to us based upon his dissertation. The Dissertation Abstracts does not provide enough information about each study to be very useful, and ERIC's Research in Education will make available, at most, a two hundred word abstract. The only worthwhile, reasonably available outlet is the Journal. You should therefore attempt to make the preparation of a five to fifteen page

manuscript standard practice for your candidates. All of us will benefit. Directly related to this idea, the Editorial Staff agreed last year that doctoral students in residence should receive the Journal free of charge. Milton Larson has been conducting a survey of department chairmen to uncover the names of eligible doctoral students, if you haven't received or returned this survey form please contact Dr. Larson.

As a third means to improve the quality of the Journal, the editorial staff is beginning to explore the implications of increasing the scope of its editorial concerns and its constituency. For example, we are starting to investigate the possibility of becoming the outlet for scholarly works in the broad field of vocational, technical, and practical arts education.

Finally, I should report that we are utilizing the name change of our organization as an opportunity to redesign the Journal cover. One of the forthcoming issues, in the not-to-distant future, should reveal a face-lifting.

The entire staff is anxious to continue the good works of its predecessors. You can help greatly by using the Journal as an outlet for your scholarly writings, and by giving us the benefit of your counsel; we need and welcome your suggestions and criticisms on any relevant matters.

Annual Report
Membership and Circulation Report
1967-68

On November 15, 1968, the terminal date for the past year's efforts, the NAITTE paid membership was 610 compared to 569 a year ago at the same time, an increase of about 7% for the year. This increase can probably be attributed to many reasons or causes, but it is felt that getting out the two-way envelope reminders earlier than in past years has contributed greatly. The renewal rate is up considerably.

The mailing picture is as follows:

610 paid memberships
34 honoraries
164 paid subscriptions (libraries, etc.)
808 total mailing

We also have several persons who were members prior to 1967-68 but did not join this past year. Efforts are being made to bring them back into the fold. A reminder is going out to arrears members advising them that the NAITTE Journal <u>will</u> <u>not</u> be forthcoming unless they pay dues.

Currently we are receiving very few complaints concerning problems of circulation as compared to the quantity received prior to our present system of records and communications with the treasurer. Apparently our card system is proving successful.

We do have some difficulty with people who change addresses without notification and then complain that the Journal is not being received at their new address. This is not widespread but is disturbing when a complaint arrives and we have no evidence that the individual had moved - as a result the Journals have been sent to an old address.

At the present time NAITTE does not have any appropriate promotional literature. If we are to continue to attract new members, we must develop some promotional material that can be distributed to potential members. Without this material recruitment of new membership is under a severe handicap. It is therefore suggested that the president appoint a committee to study this problem and to develop a brochure, folder, and/or other material to stimulate interest and promote membership in our organization.

We plan to send letters to department heads at all colleges and universities that offer degrees in industrial education requesting their assistance in promoting NAITTE membership. A sample Journal and several membership forms will be sent to each institution for promotional purposes.

Carl Schaefer on his agenda for the December 10 meeting indicated "special distribution to doctoral students," as a topic I (McVicker) should report on. Very specific guidelines for distribution to doctoral students should be developed. Non-college or university staff, full-time students, only those in last year of work , or all doctoral candidates are categories for consideration when developing distribution guidelines. We would like to suggest a possible solution: provide the Journal to graduate (doctoral) students who are not regular employees of a college or university at a reduced cost of $1.00 per person yearly. Have all issues to any one institution bulk mailed (the $1.00 fee would about cover mailing). Each institution would be responsible for providing the necessary information (name and status) concerning each doctoral candidate and as issues (Journal) become available the proper quantity will be sent to the department for distribution.

We feel we have made progress in systematizing the membership and circulation procedures which has resulted in increased efficiency in maintaining each member's status and getting correspondence to him. We would like to suggest numbering the membership cards. By chronological numbering an accurate count can be arrived at without time consuming effort.

We wish to thank Dr. Wilbur Miller for his patience and cooperation during the past year.

Respectfully submitted,

William H. Mason
Membership Chairman
Department of Industrial Education
Michael Golden Labs
Purdue University
Lafayette, Indiana 47907

Howard E. McVicker
Circulation Manager
Department of Industrial Education
Bldg. C, South Campus Courts
Purdue University
Lafayette, Indiana 47907

A Preliminary Report on the

Industrial Teacher Education Directory - 1968-69

by G. S. Wall

NAITTE
Dallas--1968

It is necessary for me to limit my report to some of the general aspects as the Directory is still in the process of being produced. It is hoped that it will reach you during the first week in January.

The format remains the same. Excluded this year are those institutions which do not grant at least a bachelor's degree with a major in industrial arts education. Institutions offering only vocational industrial certification work are still included. (I think there is only one)

The 53 state departments (including the District of Columbia, Puerto Rico and the Virgin Islands) are included. Of these, five do not have any institutions providing industrial teacher education. These are Alaska, Delaware, the District of Columbia, Vermont and the Virgin Islands, The other 48 states have a total of 221 institutions--231 departments, as 10 have separate industrial arts and vocational teacher education. Unhappily, 4 institutions and 11 state departments failed to send data, so their 1967-68 data is reported.

Nine states have only 1 institution. About one-fourth (53) of the institutions listed are found in five states--the largest number of institutions in one state is 14, this being Texas; California has 11 included; Ohio--10; and Michigan and Oklahoma each have 9.

The 1967-68 Directory listed 225 institutions or 4 more than this year--seven institutions having been dropped because of the new policy and only 3 additions were made. These institutions, however, have more teacher educators employed.

Of the 2,747 personnel listed (this is a preliminary count), only 126 are state department personnel, the remaining 2,621 being persons on a college staff. This is a gain in total of about 230 over the 1967-68 number of 2,517. Interestingly, in preparing the index it was necessary to list about 570 names which did not appear in the 1967-68 index. It was also necessary to strike out over 335 names that were in the 1967-68 edition but were not listed currently.

It appears that industrial teacher education continues to expand--the departments are larger in that the average department in 1968-69 has almost 12 members on its staff, which is 2 more than the almost 10 average found in 1967-68. There is only one institution listed in 1968-69 as having only one person as an industrial teacher educator. At the other extreme, one institution has 88; the next largest having 71.

Again, it is regretted that the schedule of publication of the Directory and the holding of this meeting precludes extracting more detailed information for presentation. It is hoped that the Directory will serve you well in the year to come.

A COMPARISON OF SELECTED CONTEMPORARY PROGRAMS IN INDUSTRIAL EDUCATION

A Review of a Doctoral Dissertation

Completed at

Wayne State University

Presented by:

Leslie H. Cochran
Department of Industrial Education
Wayne State University

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A COMPARISON OF SELECTED CONTEMPORARY PROGRAMS IN INDUSTRIAL EDUCATION

An Abstract by:

Leslie H. Cochran
Department of Industrial Education
Wayne State University

One of the problems that has long plagued industrial educators is their lack of common understanding of what is being promoted in the field. As a result, many plans have been developed with little concern for preceding or existing attempts in curriculum development. Those studies that have focused on the problem have been primarily evaluative in character, and provide only a limited basis for comparison.

And yet, each time an innovative plan or new program is introduced several common questions come to the forefront. For example, how does the plan fit into the total educational program? Is it really new or is it only a new title to disguise old practices? How is it different from the old practices? Or, what implications will it have for students and staff? These and other questions cannot be answered by evaluating a particular plan, but need to be considered by comparing various programs on a uniform framework.

Statement of the Problem

In this respect, it was the purpose of this study to compare and analyze selected contemporary programs in industrial education in an attempt to determine the common elements, basic directions, and their significance to the field. More specifically, the study focused upon three major objectives: (1) To review historically industrial education programs on the secondary level to illustrate the position and character of current plans; (2) to develop a conceptual framework for industrial education that could be used to analyze any of the contemporary programs in the field; and (3) to apply the framework to the selected programs that meet the pre-established criteria for an analysis of each.

Methodology for the Study

To attain the stated objectives it was necessary to develop a systematic operational plan. This called for a historical review, an identification and selection of programs to be studied, the development of an instrument to compare the selected programs, and methods for collecting, analyzing, and interpreting the data.

Historical Review

A review was made of library bulletins, periodicals, and references to historically trace the development of industrial education programs at the secondary school level. This overview focused primarily on approaches, movements, and programs prior to 1960 in an attempt to provide a historical perspective for the study and to suggest basic relationships between current curriculum plans.

Identification and Selection of Programs

Two major sources were utilized to identify the secondary school programs to be studied. This involved, first of all, a continuation of the review of literature. Secondly, a paper by Marcus V. McWaters titled a "Survey and Brief Descriptive Analysis of Curricular Innovations for Secondary School" that was presented at the Fifty-Fourth Mississippi Valley Industrial Arts Conference, November 9, 1967 was reviewed.

Thirty-five programs were identified. Following a request for further descriptive materials, the programs were compared with the pre-established selection criteria which included five factors:

(1) That the program had been developed and implemented since 1960.

(2) That the home base (sponsoring university or public school system) was located within Region V, U. S. Office of Education (which includes Indiana, Illinois, Michigan, Ohio, and Wisconsin).

(3) That the program was under study and evaluation in an industrial teacher education program.

(4) That the program was at the experimentation and testing stage in the secondary schools.

(5) That the descriptive material concerning the program was available either in the form of articles or official releases.

The programs selected included the American Industry Project, Functions of Industry, Galaxy Plan, Industrial Arts Curriculum Project, Industriology Project, Orchestrated Systems Approach, and the Partnership Vocational Education Project.

Development of the Instrument

Prior to the formal construction of an instrument to compare the selected programs, an extensive review was made of related research, textbooks, and articles in the fields of curriculum and industrial education. The data collected in this review provided a basis for this research, and suggested the rationale for a systematic study of the programs in industrial education.

Based on the findings of this review, a 119-item check-list was developed. This tentative instrument was presented to members of the doctoral committee and a committee of judges. Through a series of individual conferences with the judges and doctoral committee members, these items were reduced to fifty. In structuring this sample every effort was made to maintain the representativeness of the original items. Attention was focused on the elimination of duplication, improved clarity, and concisement. A certain amount of homogeneity in the sample was stressed so that no item could be picked out because of extraneous or incidental grounds. As the appraisal and refinement continued, concern was expressed by the judges over the lack of specificity in the instrument.

Based upon the suggestion to make the instrument more specific, consideration was given to the Q-technique. The Q-Sort method was adapted to provide a forced-choice procedure for the study. In this way each participant could use his own frame of reference to characterize a particular situation by arranging the predetermined statements in their order of importance.

As a result, the fifty statements were place on individual cards, refined again by the judges, and sent out on a pilot basis to three programs that had not met all of the selection criteria. Based upon the responses of the participants to the pilot instrument, minor revisions and improvements were made.

Data Collection and Interpretation

Three basic procedures were utilized to obtain descriptive material to compare to seven selected programs. (1) An initial request was sent to each of the leaders associated with the programs to secure articles, and other materials describing their program. (2) The fifty statements, in Q-Sort form, were sent to each of the participants. (3) Upon the return of each of the initial instruments, a follow-up interview was scheduled with each of the leaders.

The data collected and reported were interpreted in two distinct forms. This involved a brief overview of each of the programs on the basis of the interview and other descriptive materials. Secondly, the cards received from each of the selected programs were sorted according to the prearranged frequency distribution.

Selected Findings

The findings in this study can be grouped under three major sections: (1) historical, (2) program descriptions, and (3) program comparisons. The first two of these headings provided rationale for, and a description of many of the programs reviewed in the study. For the purposes of this report, however, focus was directed on the specific comparison made between the seven selected programs. The data summarized in Tables 1, 2, and 3 project the positions taken by the representative of each program in respect to the fifty statements. In this respect, a statement ranked in column A would represent the highest degree of support, while those dispersed in columns B through G would represent descending degrees of support.

TABLE 1

RANKING OF STATEMENTS PERTAINING TO OBJECTIVES ACCORDING TO PROGRAM CODINGS[a]

Statements	Rating Cards						
	A	B	C	D	E	F	G
5) The program is based on selected experiences that provide for an understanding and appreciation of industry and its workers.		1,2 & 5	3 & 7	6	4		
8) The program is directed toward the development of specific salable technical and manipulative skills designed to aid the student in entering employment at the completion of the program.			3	4	6	1,5 & 7	2
11) The students develop ability to select, purchase, and use wisely the products of industry.			1 & 3	4,6 & 7	2 & 5		
15) The program provides for both male and female students.		1,3 & 5		2,4 6 & 7			
20) Activities in the courses are directed toward outcomes for avocational interests and hobbies in the crafts.					4 & 7	3 & 5	1,2 & 6
25) The program studies life needs as created by or related to industry.	4	5	1 & 6	3 & 7	2		
28) The program promotes occupational guidance by helping the student assess his occupational potential, interests, and capabilities.	2	1,3 &4	6	5	7		

TABLE 1--(Continued)

Statements	Rating Cards						
	A	B	C	D	E	F	G
37) A student is allowed to choose an area of concentration according to his interests and abilities.	3		2 & 6	1,4 & 7	5		
40) Consideration is focused on the development of an appreciation for good design and craftmanship.				1,3 4,5 6 & 7	2		
46) The program is directed toward providing exploratory experiences in selected industrial type activities.	2	4	1,5 6 & 7	3			
47) The development of desirable work and safe habits are integrated into the courses of study.		3	1,4 & 6	2 & 7	5		
49) The program is designed to provide the student with basic technical skills and occupational guidance information on a pre-vocational basis.		2		3,4 5 & 6	1 & 7		

[a]The rating of each of the programs is reported according to the following code: 1--American Industry Project, 2--Functions of Industry, 3--Galaxy Plan, 4--Industrial Arts Curriculum Project, 5--Industriology Project, 6--Orchestrated Systems Approach, and 7--Partnership Vocational Education Project.

TABLE 2

RANKING OF STATEMENTS PERTAINING TO CONTENT ACCORDING TO PROGRAM CODINGS[b]

Statements	Rating Cards						
	A	B	C	D	E	F	G
1) Content is organized so that the major emphasis is placed on manipulative type activities (operational rather than informational).				4,5 & 6	3	7	1 & 2
2) The content in industrial education courses is closely correlated with subject matter taught in other departments in the areas of science, mathematics, and English.	7			1	2,5 & 6	3 & 4	
3) The program provides for experiences in research and development as they are utilized in the manufacturing industries.		2 & 6	1 & 7	3,4 & 5			
4) The program provides occupational information about job requirements, working conditions, salaries, and how to get a job.		4	2,3 & 5		1 & 6	7	
6) The content is predetermined by the teacher alone with problems selected that relate to the needs of students and the community.				1,2 & 4	7	3,5 & 6	
10) The program provides for practical applications of scientific principles.		7	1,3 4 & 6	2 & 5			

TABLE 2--(Continued)

Statements	Rating Cards						
	A	B	C	D	E	F	G
17) The program provides for instruction in the use of common hand and machine tools used in industry.			3 & 4	1,2 & 6	5 & 7		
21) Curriculum content is derived through an analysis of job positions in an occupational cluster as identified by the Dictionary of Occupational Titles.			2		3 & 4	1,5 6 & 7	
22) Content is primarily concerned with informational topics (technical, guidance, and general) rather than manipulative type activities.				4 & 7		1,2 3,5 & 6	
26) The content is determined through a team approach involving the teacher and an advisory committee representing management and labor.		3		1,2 & 4	6 & 7		5
29) The program focuses on a study and the use of industrial materials and processes.			5	3,4 6 & 7	1	2	
30) Industry is studied by concentrating on the production of goods and the servicing of products.	2 & 6	7	5	3	1 & 4		
31) The program considers industry in its totality, including labor, capital, and distribution.	1 & 5	2,4 & 7		3 & 6			

TABLE 2 -- (Continued)

Statements	Rating Cards						
	A	B	C	D	E	F	G
32) The program is based on a wide variety of selected experiences that sample several industries.	5	6	2 & 7	1,3 & 4			
39) The program provides experiences with selected basic manufacturing processes.		2	5	1,3 6 & 7	4		
41) Content is identified through an instructional analysis of major industrial activities or trades such as welding (trade) or activities in industrial arts (plastics).	3		5		2 & 6	1	4 & 7
42) The dominant technologies such as mechanical, chemical, and electrical are the basic source for content.				3,5 & 7	2 & 6	1 & 4	
44) Content is classified under such instructional areas as woodworking, metalworking, and drafting.					3 & 5	2 & 7	1,4 & 6
45) A study of industry is made by concentrating on the construction and manufacturing industries.	4			6 & 7	1,2 3 & 5		
48) Industry is studied through an in-depth concentration on one industry.				2 & 5	1,6 & 7	3 & 4	
50) Content is identified from an analysis of selected industrial payroll jobs.			2	3	5	1 & 6	4 & 7

[b]The rating of each of the programs is reported according to the following code: 1--American Industry Project, 2--Functions of Industry, 3--Galaxy Plan, 4--Industrial Arts Curriculum Project, 5--Industriology Project, 6--Orchestrated Systems Approach, and 7--Partnership Vocational Education Project.

TABLE 3

RANKING OF STATEMENTS PERTAINING TO TEACHING METHODS ACCORDING TO PROGRAM CODINGS[c]

Statements	Rating Cards						
	A	B	C	D	E	F	G
7) Application of the content is made in two or more laboratories within the department. For example, drawings needed for the development of a product are completed in a drafting room prior to construction in another laboratory.		5	7	1 & 2	4 & 6		3
9) Students make use of research principles and techniques as they undertake projects, experiments, or reports.		1 & 7	2,4 5 & 6			3	
12) Students are grouped for class activities according to standardized test scores, including intelligence quotient, and verbal and quantitative scores.			4		1	2,3 & 7	5 & 6
13) Multiple "tracks" are built-in to the program to accommodate individual differences in ability and interest.		3	4 & 6	2,5 & 7	1		
14) Focus is placed on individualized instruction through programed instruction or individual progression at a work station.			7	1 & 6	3 & 4	2 & 5	
16) The class organization and major activities are managed and directed by students with the teacher remaining in the background.		6	3	1,2 5 & 7		4	

TABLE 3 -- (Continued)

Statements	Rating Cards						
	A	B	C	D	E	F	G
18) Students develop desired outcomes through experimentation with, and testing of, industrial materials.		7	1 & 3	2,5 & 6	4		
19) Instruction is oriented around problem solving experiences.		1,4 6 & 7		3 & 5	2		
23) A team of science and industrial education teachers is used to correlate content taught in the two fields.	7				1,2 3 & 6	4	5
24) Activities included in the courses are jointly planned by the student and teacher.			5 & 6	1,2 & 7	3	4	
27) Provision for individual ability differences is made through a multi-activity organization.		5 & 6	1,2 3,4 & 7				
33) The program encourages students to work and plan together as a team.	6	3	1,4 5 & 7	2			
34) Emphasis is placed in the various units on the use of instructional sheets (assignment, operation, and information).				1 & 5	3,4 & 7	2 & 6	
35) Role playing is advocated as a method to more accurately interpret industry.		1,2 & 6	4		3,5 & 7		

TABLE 3 —(Continued)

Statements	Rating Cards						
	A	B	C	D	E	F	G
36) Instruction is focused largely on units to be studied by the entire class at one time.			2	1,4 & 5		3 & 6	7
38) Instruction is focused on basic generalizations (concepts) covering an understanding of industry.	1,4 & 7	5		2,3 & 6			
43) The student progresses from a general understanding of industry (or a system) to specific units (or components).	1,3 5 & 6	4	2 & 7				

[c]The rating of each of the programs is reported according to the following code: 1--American Industry Project, 2--Functions of Industry, 3--Galaxy Plan, 4--Industrial Arts Curriculum Project, 5--Industriology Project, 6--Orchestrated Systems Approach, and 7--Partnership Vocational Education Project.

Interpretation of the Findings

Based on the historical review of early industrial education programs, the descriptive overview of on-going programs, and the systematic comparison of selected programs found in this study, numerous conclusions could be made. It is not the purpose of this research, however, to make a prolific listing of these. Instead, four major conclusions have been identified which warrant the attention of the profession.

Conclusions

(1) The field of industrial education has been in a constant state of flux and reorientation since its early inception in the secondary schools. In the period since 1960, however, more modifications with wider implications have been produced than in any of the preceding decades during the twentieth century.

(2) There are identifiable curriculum elements in the field of industrial education that can be incorporated into a conceptual framework to systematically compare contemporary industrial education programs.

(3) There is general agreement between individual leaders associated with the selected programs under study on at least fifty percent of the items in the conceptual framework. Although this agreement is evident, it must be remembered, however, that the structure of these programs may vary greatly since different positions may be taken on key issues.

(4) There is general agreement among all of the selected programs, as demonstrated by the identified leaders, on specified items in the conceptual framework. In general these similarities may be stated as follows:

> (a) A lesser degree of emphasis is placed on manipulative type activities, while the emphasis on the application of scientific principles through experiences in research and development has been increased.
>
> (b) Provision for individual differences is made through multi-activity organization so the student can progress from a general understanding of industry to more specific tasks.
>
> (c) The classification of instructional content under such areas as "woodworking" and "metalworking," and the focus on activities directed toward avocational interests and the crafts are de-emphasized.

(d) A "middle-of-the-road" position is evidenced in regards to the emphasis placed on good design and craftsmanship, the use of common hand and machine tools, and consumer knowledges as related to the selection, purchasing, and wise use of industrial products.

Observations

In conducting this research several observations were made in regard to this study. Although these are not directly or conclusively supported by the findings, there was sufficient support to warrant their inclusion.

(1) The selected programs under study revealed an increased amount of emphasis on the interpretation of industry as one of the dominant objectives for industrial education. The basis for this shift was because of the increased complexity of the technological society, and the need for greater occupational information to properly understand and interpret the role of industry.

(2) In general, the selected programs represent a reaction to the conventional industrial education programs of preceding decades. This general trend, represented by the programs under study, is illustrated by the standard terms, such as "metal-working," "instructional sheets," and even "industrial arts" which are in various degrees of disrepute. Concern is also evidenced in respect to basic experiences and craft-oriented activities included in conventional programs.

(3) Each of the programs present a structure that reveals particular strengths, but none of the programs is ready for final evaluation since they are in the development and implementation stages.

(4) The similarities and differences between the programs suggest the need for further attempts in curriculum development. Each of these illustrate the need for continual development and refinement to project future industrial education programs.

(5) The thirty-five identified programs concerned with innovative approaches reviewed in this study suggest the dissatisfaction of the profession with on-going industrial education programs in secondary schools. There is a genuine searching for the direction and role of industrial education in the total educational program.

62nd Annual Convention
American Vocational Association

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Effects of Field and Job-Oriented Technical Retraining on Manpower Utilization of the Unemployed

N.A.I.T.T.E.
Monday, December 9, 1968
2:00 - 5:00 p.m.

David C. Bjorkquist
Associate Professor of
Industrial Education
University of Missouri
Columbia, Missouri 65201

Two years ago at the American Vocational Association Convention in Denver, we presented an interim report on the research project entitled, "Effects of Field and Job-Oriented Technical Retraining on Manpower Utilization of the Unemployed." That report focused on the selection of students, the training programs and initial placement of graduates. The purpose of this presentation is to present data gathered through interviews during the first two years following training. After briefly relating the characteristics of the training programs and the students, and the initial placement of graduates, I will describe the variables used in evaluations, our findings, and the conclusions which we have drawn.

The purpose of this study was to compare a specific job-oriented program with a broad field-oriented program for the preparation of technicians in the field of mechanical technology. Both programs were operated under the Manpower Development and Training Act and were approximately 50 weeks long.

The Training Programs

The job-oriented program was intended to prepare tool designers and was operated by the School District of the City of Allentown, Pennsylvania. Through the use of an industrial advisory committee, subject matter was selected which was considered to be essential for the preparation of a tool designer. Much of the effort of the program administrators was spent in the integration of this subject matter to develop meaningful total.

The field-oriented program was in machine and tool design technology, and was developed to prepare individuals for a variety of positions in the field of mechanical technology. This program was planned and operated by the Department of Continuing Education in Engineering of The Pennsylvania State University. Courses were included in the curriculum which would develop a broad basic knowledge of mechanical technology. This program was taught on a two-year campus of the University where students shared facilities with approximately 800 full-time students in baccalaureate and associate degree programs.

About one-half of each of the programs of instruction was devoted to drawing and design. The two programs were quite similar also in the amounts of mathematics, applied physics, communications, and production problems which were offered. The job-oriented program did include 230 hours of instruction in machine shop processes.

Though similar in course titles and hours of instruction, the two curriculums were different in that their objective was different. As

suggested earlier, the job oriented program focused on the development of skills and knowledges necessary for on-the-job performance in tool designing. In the field-oriented program emphasis was placed on the success of individuals in each of the courses offered so that application might be made to several occupations within the field of mechanical technology.

The Students

Students were selected from throughout Pennsylvania according to criteria developed by the training institutions. After determining each applicant's eligibility for training under MDTA, election of students was based on graduation from high school or quivalency, familiarity with mechanics or machine operation, expressed desire to be retrained as a technician, and satisfactory aptitudes as measured by the General Aptitude Test Battery. The aspirations of the applicants were confirmed through a series of interviews conducted by the Pennsylvania State Employment Service and the research staff.

The 35 students assigned to the job-oriented program and the 40 students assigned to the field-oriented program were similar in aptitudes, amount of previous education, and age. The work histories of 21 field-oriented and eight job-oriented students did not include mechanical or machine operator experience.

Of the 35 entrants into the job-oriented program, 32 were graduated; 25 or 40 field-oriented students were graduated. Twelve of the 15 who were dropped from the field-oriented program had failed a mathematics or a mathematics based course such as mechanics or strength materials.

Initial Placement

Six months after the completion of training 28 job-oriented and 19 field-oriented graduates were employed in industry. Others were in the military service or school while one from each program was unemployed.

The mean starting salary of field-oriented graduates was $110.00 a week and $96.81 for job-oriented graduates. Percentage wise, the field-oriented graduates were twice as mobile as were the job-oriented graduates. Relative beginning weekly salaries, there was a significant interaction between the training programs and mobility. Mobile field-oriented graduates were earning more than mobile job-oriented graduates and immobiel job-oriented graduates were earning more than immobiel field-oriented graduates. Although many went to work immediately after training, it required an average of almost four weeks for graduates of the two programs to begin their first industrail jobs.

The Continuing Job

Data relative to the behavior of graduates in their jobs were gathered in the evaluation of the training programs. These data were gathered through personel interviews conducted one and two years after completion of training at the employment location of the graduate. The outputs of the job-oriented and the field-oriented training programs were compared on the basis of eight variables. These were: the level of job responsibility, unemployment, mobility, salary, job satisfaction, employer rating, social class identification, and additional training taken.

In determing the job responsibilities of graduates, a job analysis was used to gather data about the work field, skills used on job, job functions, and level of involvement with data, people, and things. The analysis technique was structured by the United States Bureau of Employment Security and used in their preparation of the 1965 edition of the Dictionary of Occupational Titles.

T

Two years after the completion of training, 24 job-oriented and 15 field-oriented graduates were employed in the work fields of drafting and engineering. Other industrially employed graduates were employed in researching, appraising, administering, and machining.

All of the graduates of both programs were using many of the work skills which were specifically taught in the training programs. This was evidenced by the use of drafting, design, and mathematics, and by their job functions. Three-fourths or more of the graduates of both programs were using freehand lettering, sketching, orthographic drawing, sectioning, dimensioning, and scale drawing skills. One-half or more of the job-oriented graduates were designing tools, layouts and templates. The same was true of field-oriented graduates in designing fixtures, jigs, tools, layouts and gauges. Most frequently used mathematical skills were arthmetic, algebra, right triangle trigonometry, and plane geometry.

By observing the output of the worker and asking questions about what he did, how and why he did it, and what skill was involved, the job analyst prepared a job description. A sentence analysis of each job description was prepared to identify the worker's function relative to data, people, and things.

The jobs of the 24 job-oriented and 15 field-oriented graduates employed in drafting or engineering one year after training required copying, computing, compiling, or analyzing data. Twenty-seven of the 39 graduates in drafting or engineering were compiling data. Two years after graduation the level of data involvement had increased for six job-oriented and two field-oriented graduates while decreasing for one graduate of each program.

Seventeen job-oriented and ten field-oriented graduates were not required by their jobs to have a significant involvement with people. Between one and two years after graduation the level of involvement with people had increased for seven graduates and decreased for one.

All graduates of both programs in the work fields of drafting and engineering were precision working with things one and two years after completing training.

There were no significant differences in the level of involvement with data, people, or things between graduates of the two training programs.

During the first year following graduation, there were 16 job-oriented and nine field-oriented graduates who reported that they had been unemployed. These periods of unemployment were as long as 26 weeks for one job-oriented graduate and 21 weeks for one field-oriented graduate. During the second year after training, two-job-oriented graduates were unemployed an average of two weeks each. During this same period, four field-oriented graduates were unemployed an average of five and one-half weeks each. The longest period of unemployment for any individual during the second year was nine weeks.

There was a significant relationship between the time required by graduates to secure their first jobs and the mobility of those graduates. It required an average of .81 weeks for mobile graduates and 5.53 weeks for immobile graduates to begin work after training. Twelve job-oriented graduates made a total of 13 moves during the first year after graduation. Twenty moves were made by 13 field-oriented graduates in that same time. Three job-oriented and four field-oriented graduates ma e one move each during the second year.

Mean weekly starting salaries for field-oriented graduates were $13.19 higher than they were for job-oriented graduates. After two years there was a weekly average difference of $13.18 in favor of the field-oriented group. Two years after graduation average weekly salaries were $120.02 for job-oriented graduates and $133.20 for field-oriented graduates. These average salaries tended to be somewhat lower than salaries for Class B. Draftsmen, as reported in Occupational Wage Surveys.

Five aspects of the satisfaction of graduates with their jobs were measured using the Job Description Index. The satisfaction of graduates with the supervision, promotion, work, pay, and people aspects of their jobs were measured. Although there was no significant fluctuation in job satisfaction scores during the first two years after training, scores tended to be slightly higher on the first measure six months after graduation. Job-oriented graduates were significantly better satisfied with the work aspect of their jobs than were field-oriented

graduates six months and one year after the completion of training. After two years on the job, there was no difference between groups in their job satisfaction.

Supervisors rated the on-the-job performance of graduates one year and two years after graduation. More than one-half of the graduates of both programs were rated above average or outstanding during each rating on manipulative work, personal and social qualities, and work qualities and habits. In occupational technology, graduates of both programs tended to be rated average or above average with the exception of ratings for the field-oriented group on manipulative work. There were larger percentages of graduates rated above average or outstanding after two years on the job than there were the year previous. These upward shifts were accompanied by decreasing percentages of average ratings.

With an abrupt change in occupation, as provided for through retraining, and the relationship of occupation to socio-economic status, it was hypothesized that there would be a change in the social class identification of students. A social class identification scale was administered before training, immediately after training, and two years after graduation. There was a significant increase in social class identification of both training groups between pretesting and post-testing and scores two years after graduation. In other words, the peak social class identification scores occured at the conclusion of training.

During the two year period following training, 12 job-oriented and 12 field-oriented graduates were involved in additional formal education. Two field-oriented graduates were full-time college students while the other 22 were industrial employed and studying on a part-time basis. This additional education included part-time college attendance, company sponsored educational conferences, and formal classes conducted at the place of employment.

Conclusions

This study was an evaluation of two technical education programs for the retraining of underemployed and unemployed workers under the Manpower Development and Training Act. Eight measures of the job related behaviors of former students were used to evaluate the effect of training on individuals with differeing personal characteristics. Some of these findings were interesting because there were differences, while others were interesting because there was no difference between groups.

There was no difference in the level of responsibility held by graduates of the two programs. It was suggested by advocates of field-

oriented technical education that preparation in a broad array of basic subject matter would allow graduates of this program to advance further and to find employment in more occupations. Neither of these things happened. Although the field-oriented program served as more of a screening device by dropping more students, it did not produce graduates who operated at higher levels of involvement with data, people, or things. Perhaps 50 weeks did not allow for adequate field-oriented preparation, or maybe two years on the job did not allow those graduates to find their proper level of responsibility. However, as time goes on the effects of training will probably diminish while the effect of intervening variables will increase.

There were no differences in the amount of unemployment experienced by the training groups as measured by weeks to secure first job or in annual average weeks of unemployment.

When the length of time required to secure first job was compared on the basis of mobility, there was a dramatic difference. Mobile graduates required an average of less than one week to secure their first jobs while immobile graduates required five and one-half weeks. Mobile graduates also appeared to earn more money, but this was confounded by the interaction of the effect of training program. If, as these findings suggest, mobility does make persons more employable, the challenge to educators is to increase the mobility of their graduates.

From first employment through the first two years, field-oriented graduates consistently earned more than job-oriented graduates. As suggested earlier, the effect of training program and the effect of mobility interacted. The graduates of the field-oriented program had higher average weekly salaries, but they were also more mobile.

In most aspects of their work, there was no difference in the satisfaction which graduates of the two training programs derived from their jobs. Job-oriented graduates tended to be better satisfied with the work their jobs included than were field-oriented graduates. This difference was significant six months and one year after graduation. It was earlier speculated that as the level of responsibility rose for field-oriented graduates, their level of satisfaction with their work would increase. However, there had not been a sufficient increase in the level of responsibility for those graduates during their first two years on the job to determine if this was true.

After spending a considerable amount of time in gathering supervisor ratings, it became apparent that these ratings would not be useful in comparing training programs. The ratings were interesting and give some general notion of the acceptability of the graduates, but their reliability is highly suspect. This was largely because an absolute

scale was not provided for ratings and each supervisor rated his employee according to some personal reference.

It was anticipated that social class identification scores would increase over the period of training, but it was not was not expected that they would drop again after two years on the job. This may not be entirely unlike the attitudes of teachers which are most idealistic just before graduation and tend to be less so after some time at work. Perhaps the design technology graduates entered their jobs with an idealized impression of their status, but revised their personal estimates after two years of facing the realities of their work.

There was no difference between training groups in the number of graduates who pursued additional education. This dimension seemed important because of the emphasis on additional education for advancement in technical occupations. Unfortunately, no college credit was given for the course work completed during the intitial training programs, and some graduates found that they had to repeat some course work to advance to a higher level. The earning of an associate or bachelors degree was strongly encouraged in some industrial organizations.

One of the more disturbing aspects of this project was the success of several students who did not fully qualify according to the criteria for selection. It is not disturbing that they succeeded, but it is disturbing to know that there probably were prospective students who were not considered for training because of their credentials who could have succeeded in training.

This project demonstrated that individuals could be selected from the ranks of the underemployed and unemployed and be prepared as technicians within one year. Their acceptability in industry was shown by their rate of employment and the level of their job responsibilities. With selected groups of students preparing in occupational fields with high demands for workers, shortening of the training period should be considred. This would be particularily desirable when students are taken from the labor force for training. This training may not prepare them for employment for the rest of their lives, but it should give them the opportunity for employment in occupations in which they may grow and prepare for change.